



Catalogue 2017

# Pressure & Volume Flow

measuring & regulating, Air Treatment

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## The Company

AirCom has been a reliable global partner in pneumatics for decades. AirCom specialises in compressed air treatment, as well as pressure and flow rate control for gas and liquid media. AirCom supplies a variety of instruments and pressure regulators which are used in many areas of industry, such as mechanical engineering, medical technology, the chemical and pharmaceutical industry and testing and laboratory equipment.

AirCom products can be found in every industry.

Experienced specialists in electronics, pneumatics, hydraulics and control technology are available to help you choose devices for your specific applications and tasks.

Many of the pressure regulators and instruments are in stock, for direct shipment.

The delivery time as well as further documentation and technical data can also be accessed in the AirCom online shop

<b>Product line</b>	FRL <b>A</b>	FRL <b>B</b>	Coalescing filters SST products <b>C</b>	Precision regulators Miniature valves <b>D</b>	Electronic products <b>E</b>
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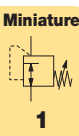


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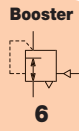
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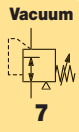
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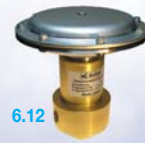
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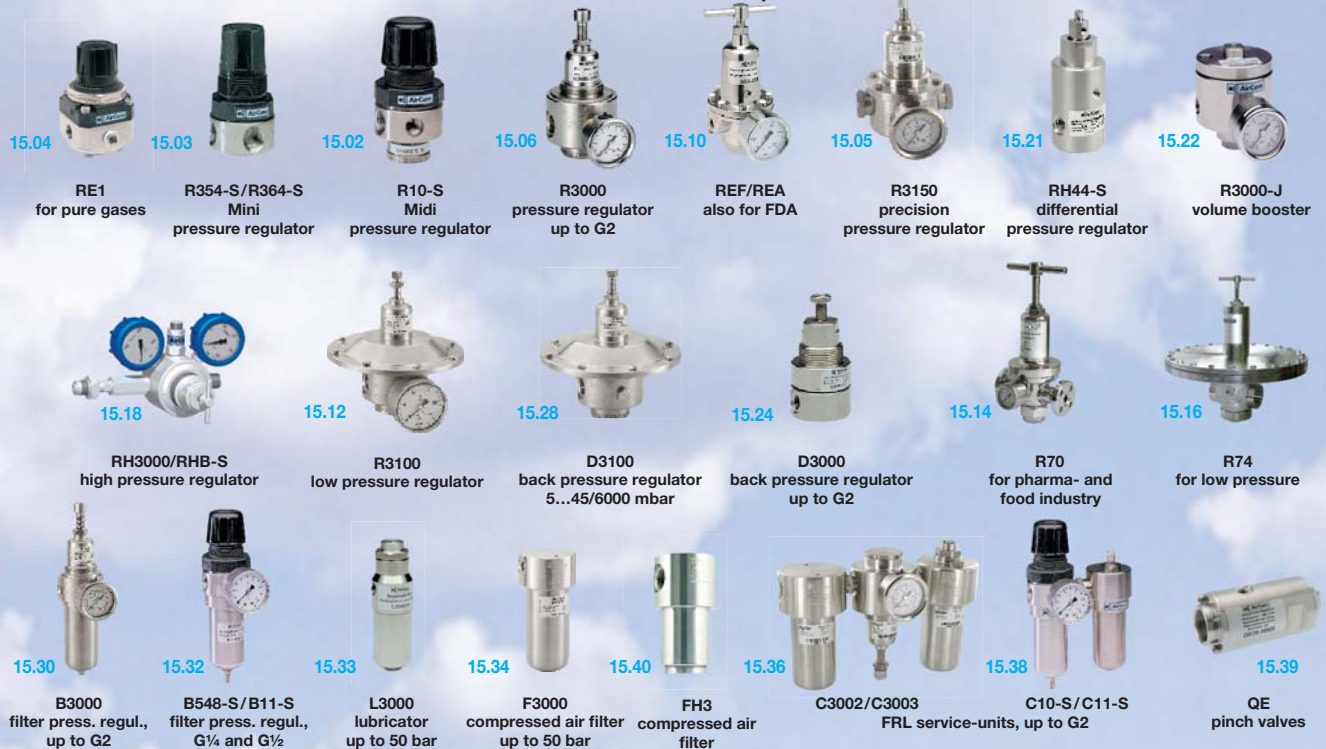
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15.03

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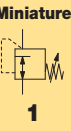


### Micro-/Miniature-Devices

#### Chapter 20



# Miniature Pressure Regulator



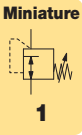
	Description		Pressure range bar	Connection thread	Device	Page
<b>factory-set outlet pressure</b>	Cartridge regulator		2 / 3 / 4 / 6	Cartridge	233	<b>1.02</b>
	without exhaust	17 x 25	2 / 3 / ... / 10	G $\frac{1}{4}$ ia	R13	<b>1.03</b>
	for liquids	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	239A	<b>1.04</b>
	for oxygen	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	239M	<b>1.04</b>
	for compressed air	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	231	<b>1.05</b>
	relieving		2 / 3 / ... / 8	G $\frac{1}{4}$ - G $\frac{3}{8}$	232	<b>1.06</b>
<b>slim design</b>	extremely small	19 x 40	0.2 ... 2 / 8	M5	RR-M5	<b>1.07</b>
	also with FKM and EPDM	18 x 65	0.2 ... 1.4 / 7	M5 / $\frac{1}{8}$ "NPT	MAR	<b>1.08</b>
<b>very accurate</b>	very leightweight		0.03 ... 0.24 / 6	$\frac{1}{8}$ "NPT	R800	<b>1.09</b>
	very leightweight		0.03 ... 0.24 / 6	10-32" and flange	R900	<b>1.09</b>
	slim design		0 ... 0.35 / 7	M5 and flange	RT	<b>1.10</b>
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	without constant bleed		0.2 ... 2 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	<b>1.14</b>
	inlet pressure compensated		0.1 ... 3 / 6	G $\frac{1}{8}$	R309	<b>1.16</b>
	up to 25 bar supply pressure		0.1 ... 3 / 16	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	<b>1.16</b>
	FDA approved		0.1 ... 1 / 12	G $\frac{1}{8}$	R037	<b>1.17</b>
	very accurate		0.05 ... 2 / 8	G $\frac{1}{8}$	RI	5.02
	very accurate		0.05 ... 2 / 8	G $\frac{1}{8}$ and flange	R90	5.03
<b>standard</b>	increased accuracy		0.1 ... 1 / 12	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	<b>1.11</b>
	also for water,	brass	0.1 ... 1 / 11	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364	<b>1.15</b>
	made of aluminium		0.1 ... 1 / 11	G $\frac{1}{8}$ and G $\frac{1}{4}$	R374	<b>1.15</b>
	even for oxygen		0.2 ... 2.5 / 8	G $\frac{1}{8}$	R307	<b>1.18</b>
	even for oxygen		0 ... 0.25 / 8	flange	R308	<b>1.19</b>
<b>Cartridge</b>	upt 260 l/min		1 ... 8	G $\frac{1}{8}$ u. G $\frac{1}{4}$	RC	<b>1.20</b>



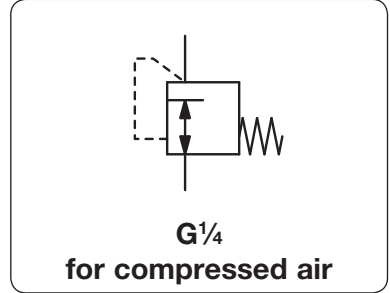
# 1

## Miniature Pressure Regulator





<b>Description</b>	Cartridge pressure regulator suitable for assembly block.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 12 bar		
<b>Adjustment</b>	Select the pressure regulator according to the desired outlet pressure. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.		
<b>Relieving function</b>	non-relieving		
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F		
<b>Material</b>	Body: brass Elastomer: NBR/Buna-N	Piston: brass Filter: stainless steel	



Dimensions		Flow rate	Supply pressure	Connection thread	Outlet pressure	Order number
A	A/F					
mm	mm	l/min*1	max. bar	G	bar*2	

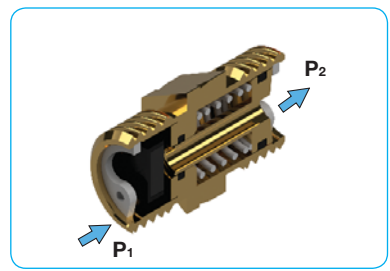
Factory-set outlet pressure						P <sub>1</sub> : max. 12 bar, non-relieving, outlet pressure accuracy *2	233
24	14	350	12	G $\frac{1}{4}$ a	2	233G0220	
					3	233G0230	
					4	233G0240	
					6	233G0260	



233

## Special options, add the appropriate letter

<b>NPT</b>	connection thread	233GX2.0
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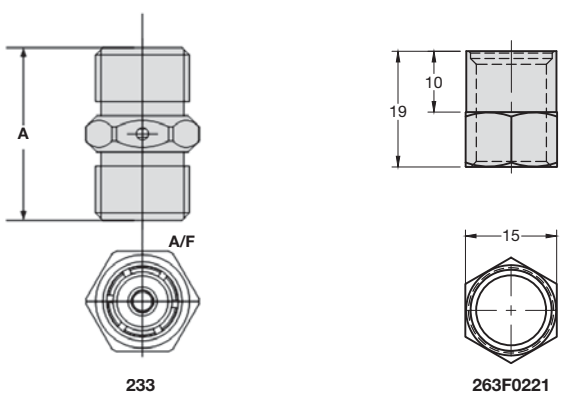
cross section

## Accessories

<b>Adapter G<math>\frac{1}{4}</math></b>	263F0221
--	----------

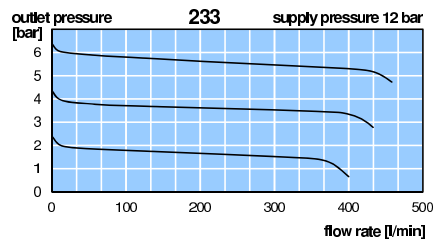


233 incl. Adapter



233

263F0221



\*1 P<sub>e</sub> = 12 bar; Δp = 0.5 bar

\*2 Tolerance: 2 bar ± 0,6 bar (air, P<sub>e</sub> = 6 bar, 10 NI/min)  
4 bar ± 0,8 bar (air, P<sub>e</sub> = 6 bar, 10 NI/min)  
6 bar ± 1,0 bar (air, P<sub>e</sub> = 10 bar, 10 NI/min)

# In-Line Regulator with Factory-Set Outlet Pressure

R13

**Description** In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 10 bar to 5 bar. The regulator R13 is suited for basic pressure control only with an outlet pressure tolerance of  $\pm 30\%$ . The outlet pressure stated below is valid for 12 bar inlet pressure. For other inlet pressure please refer to the according item from the diagram.

**Benefits**

- Higher safety through lower pressure. Tools and equipment protected against pressure damages.
- Cost reduction through substantially reduced air consumption. Longer service life.
- Noise reduction for tools.

**Media** compressed air or non-corrosive gases

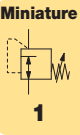
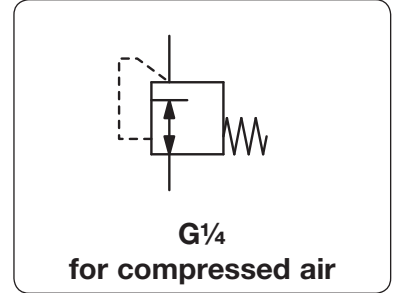
**Supply pressure** max. 15 bar

**Adjustment** Select the pressure regulator according to the desired outlet pressure. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.

**Relieving function** non-relieving, therefore not recommended for applications such as nailers

**Temperature range** 0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F

**Material**  
 Body: brass  
 Elastomer: NBR/Buna-N, optionally FKM



Dimensions			Flow rate	Supply pressure	Connection thread	Outlet pressure	Order number
ØA	B	SW	l/min*1	max. bar	G	bar	
mm	mm	mm					

Basic accuracy regulator						P: max. 15 bar, non-relieving, outlet pressure accuracy $\pm 30\%$ , made of brass	R13
17	34	17	300	15	G1/4	2	R13-02D
						3	R13-02E
						4	R13-02F
						5	R13-02G
						6	R13-02H
						7	R13-02I
						8	R13-02K
						10	R13-02M



R13

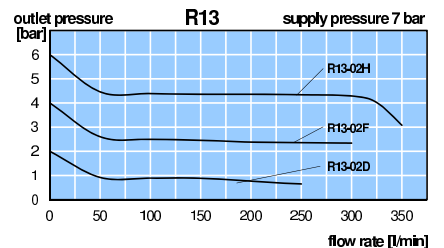
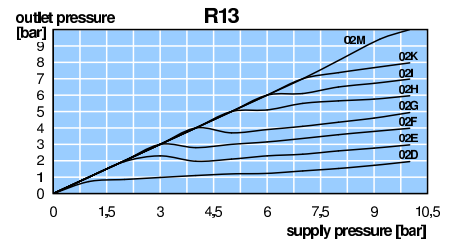
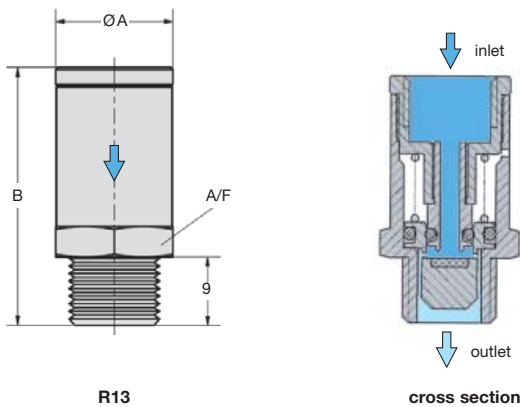
## Special options, add the appropriate letter

**FKM elastomer** R13-02 . V

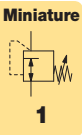
**for oxygen** specially cleaned, with oxygen grease R13-02 . 15



R13



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 2 bar pressure drop



**General information** In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 10 bar to 5 bar. The regulator is suited for basic pressure control only with an outlet pressure tolerance of approx.  $\pm 10\%^{*2}$ . The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.

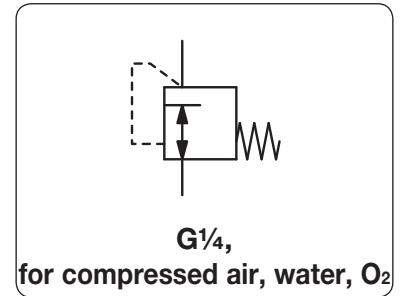
**Description** 239A: regulator for liquids, compressed air and non-corrosive gases  
239M: medical industry and pharmaceuticals

**Application** water, hydraulic and sprinkler systems, cooler, cleaning systems

**Supply pressure** max. 10 bar for liquids or oxygen  
max. 18 bar for compressed air and non-corrosive gases

**Temperature range** 0 °C to 60 °C / 32 °F to 140 °F

**Material** Body: nickel-plated brass  
Inner parts: brass  
Elastomer: NBR/Buna-N for 239A, FKM for 239M



Dimensions			Flow rate		Supply pressure	Connection thread	Outlet pressure	Order number
ØA	B	A/F	water	air	max. bar	G	bar*2	
mm	mm	mm	l/min*1					

## Regulator for compr. air / water made of brass, P<sub>i</sub>: max. 18 bar / 10 bar, NBR/Buna-N, outlet pressure accuracy \*2 **239A**

ØA	B	A/F	water	air	Supply pressure	Connection thread	Outlet pressure	Order number
34	52	17	3	400	18/10	G1/4	1	239A0210
			4	600			2	239A0220
			4	700			3	239A0230
			4	700			4	239A0240
			4	700			5	239A0250
			4	800			6	239A0260
			4	800			7	239A0270
			4	800			8	239A0280



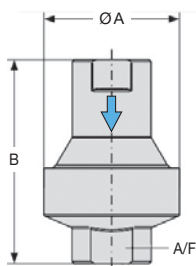
## Regulator for oxygen made of brass, P<sub>i</sub>: max. 10 bar, FKM, outlet pressure accuracy \*2 **239M**

ØA	B	A/F	water	air	Supply pressure	Connection thread	Outlet pressure	Order number
34	52	17	-	400	10	G1/4	1	239M0210
			-	600			2	239M0220
			-	700			3	239M0230
			-	700			4	239M0240
			-	700			5	239M0250
			-	800			6	239M0260
			-	800			7	239M0270
			-	800			8	239M0280

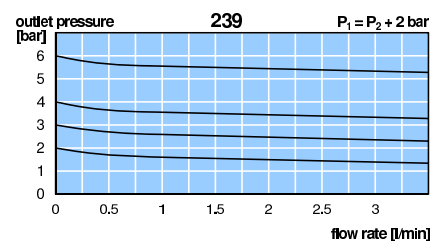
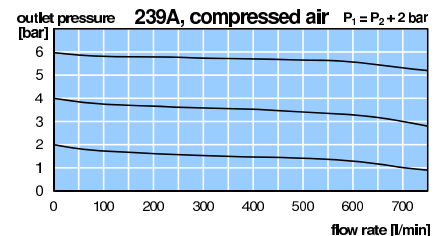
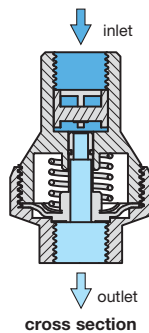
## Special options, add the appropriate letter

**NPT** connection thread 239A1 . . .

**deviant pressure range** indicate on order 239 . . . 2XX



239A / 239M



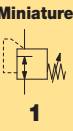
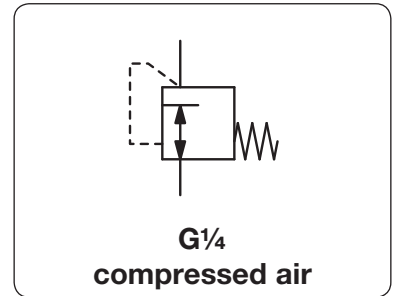
\*1 P<sub>i</sub> = 10 bar; Δp = 0.8 bar

\*2 Tolerance: < 4 bar ± 0.3 bar (air, P<sub>e</sub> = 6 bar, 10 NI/min)  
≥ 4 bar ± 10% (air, P<sub>e</sub> = 10 bar, 10 NI/min)





<b>Description</b>	In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 15 bar to 5 bar. The regulator is suited for basic pressure control only with an outlet pressure tolerance of approx. $\pm 10\%$ <sup>2</sup> . Non-relieving function, therefore not recommended for applications such as nailers
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Higher safety through lower pressure. Tools and equipment protected against pressure damages</li> <li>• Cost reduction through substantially reduced air consumption</li> <li>• Noise reducing for tools</li> </ul>
<b>Media</b>	compressed air, non-corrosive gases
<b>Supply pressure</b>	max. 18 bar
<b>Adjustment</b>	Select the pressure regulator according to the desired outlet pressure. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.
<b>Relieving function</b>	non-relieving
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: zinc Elastomer: NBR/Buna-N



Dimensions			Flow rate	Supply pressure	Connection thread	Outlet pressure	Order number
ØA	B	A/F	l/min*1	max. bar	G	bar*2	

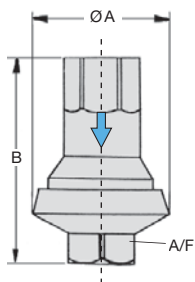
Regulator for air „SaveAir®“				P: max. 18 bar, non-relieving, accuracy *2, made of zinc		231	
34	52	17	400	18	G1/4	1	231A0210
			600			2	231A0220
			700			3	231A0230
			700			4	231A0240
			700			5	231A0250
			800			6	231A0260
			800			7	231A0270
			800			8	231A0280



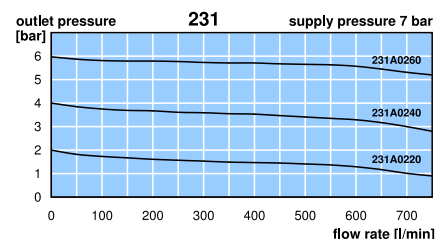
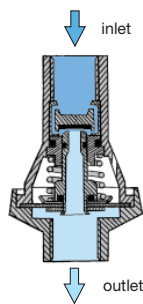
231

## Special options, add the appropriate letter

NPT	connection thread	231A 12 . .
deviant pressure range	indicate on order	231A . 2XX



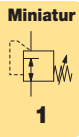
231



\*1  $P_o = 12 \text{ bar}$ ;  $\Delta p = 0.5 \text{ bar}$

\*2 Tolerance:  $< 4 \text{ bar} \pm 0.3 \text{ bar}$  (air,  $P_o = 6 \text{ bar}$ , 10 NI/min)  
 $\geq 4 \text{ bar} \pm 10\%$  (air,  $P_o = 10 \text{ bar}$ , 10 NI/min)





**Description** In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 15 bar to 6 bar. With an outlet pressure tolerance of only ±10% <sup>2</sup> it is especially suitable for nailing machines.

**Benefits**

- Higher safety through lower pressure. Tools and equipment protected against pressure damages.
- Cost reduction through substantially reduced air consumption. Longer service life.
- Noise reduction for tools.

**Media** compressed air or non-corrosive gases

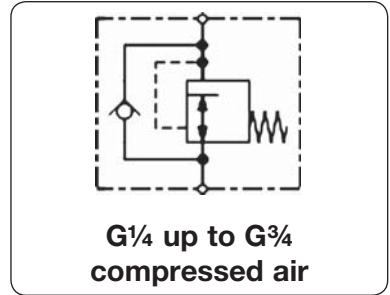
**Supply pressure** max. 25 bar

**Adjustment** Select the pressure regulator according to the desired outlet pressure. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.

**Relieving function** relieving at removal of supply pressure

**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F

**Material** Body: aluminium  
Elastomer: NBR/Buna-N



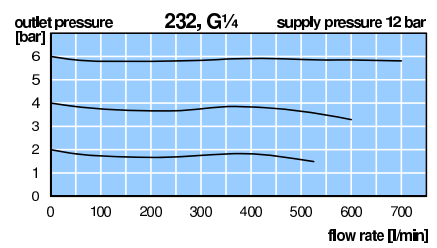
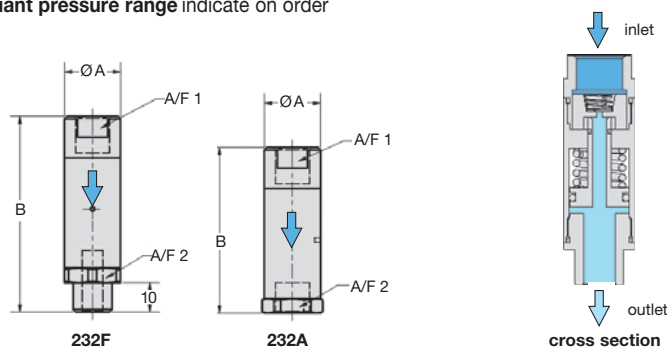
Dimensions				Flow rate	Supply pressure	Connection thread	Outlet pressure	Order number
ØA	B	A/F 1	A/F 2					
mm	mm	mm	mm	l/min*1	max. bar	G	bar*2	

Regulator with relieving function				P: max. 25 bar, accuracy*2, aluminium		232		
19	69	16	19	500	25	G <sup>1</sup> / <sub>4</sub> ia	2	232F0220
				550			3	232F0230
				600			4	232F0240
				650			5	232F0250
				700			6	232F0260
				750			7	232F0270
				800			8	232F0280
				19			59	16
550	3	232A0230						
600	4	232A0240						
650	5	232A0250						
700	6	232A0260						
750	7	232A0270						
800	8	232A0280						
25	63	22	25		1400	25		
				1600	3		232A0330	
				1800	4		232A0340	
				2000	5		232A0350	
				2200	6		232A0360	
				2400	7		232A0370	
				2600	8		232A0380	
				30	68		27	30
1600	3	232A0430						
1800	4	232A0440						
2000	5	232A0450						
2200	6	232A0460						
2400	7	232A0470						
2600	8	232A0480						
40	102	34	40			2500		
				3200	4	232A0540		
				3900	6	232A0560		
				4600	8	232A0580		



## Special options, add the appropriate letter

**NPT** connection thread 232. 1 . . .  
**deviant pressure range** indicate on order 232. . . X X

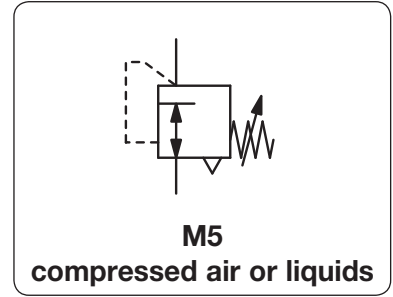


\*1 P<sub>s</sub> = 12 bar; Δp = 0.5 bar  
 \*2 Tolerance: < 4 bar ± 0.3 bar (air, P<sub>s</sub> = 6 bar, 10 Nl/min)  
 ≥ 4 bar ± 10% (air, P<sub>s</sub> = 10 bar, 10 Nl/min)

# Micro Pressure Regulator

RR-M5

<b>Description</b>	Highly compact piston-operated regulator, suitable for panel mounting and basic pressure regulation.
<b>Media</b>	compressed air, non-corrosive gases or liquids
<b>Supply pressure</b>	max. 6 bar at 0.2 ... 2 bar pressure range, max. 10 bar at 1 ... 8 bar pressure range
<b>Adjustment</b>	by knurled-head screw with locknut
<b>Relieving function</b>	relieving for air, non-relieving for water
<b>Gauge port</b>	not available
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: nickel-plated brass Elastomer: NBR/Buna-N Inner valve: stainless steel and brass



Dimensions			Flow rate	Supply pressure	Connection	Pressure range	Order number
A	B	A/F	l/min*1	max. bar	thread	bar	
mm	mm	mm			M5		

Pressure regulator for air				supply pressure max. 6 / 10 bar, relieving	RR-M5
19	40	17	70	6	RR-M5A
17	40	17	70	10	RR-M5C



RR-M5

Pressure regulator for water				supply pressure max. 6 / 10 bar, non-relieving	RR-M5
19	40	17	1.2	6	RR-M5AK
17	40	17	1.2	10	RR-M5CK



RR-M5

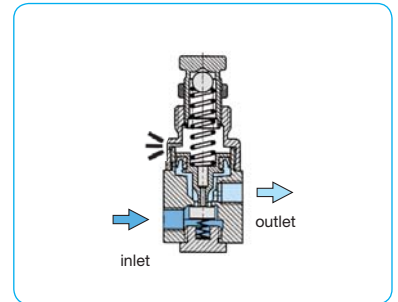
## Special options, add the appropriate letter

for oxygen specially cleaned, with oxygen grease minimum purchase 50 pieces RR-M5 . . K15

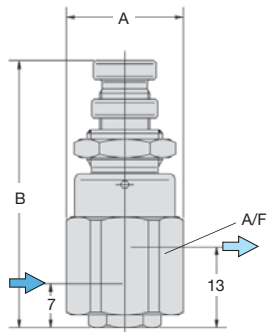
## Accessories

plastic panel nut

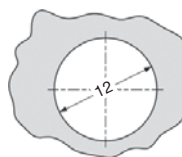
M12x1K



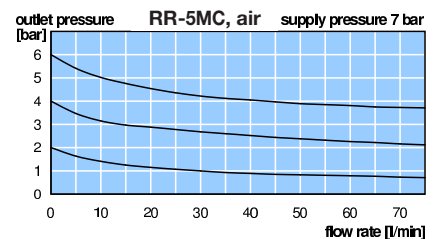
cross section



RR-M5



panel cut-out



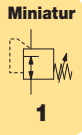
\*1 for compressed air: 7 bar supply pressure and 6 bar outlet pressure and 2 bar pressure drop  
for water: supply pressure 2 bar above outlet pressure

PDF CAD  
www.aircom.net

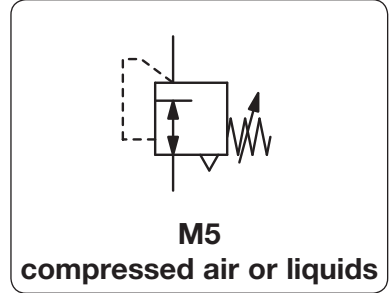


Order example:  
RR-M5A





<b>Description</b>	Piston-operated compact pressure regulator with special seals for applications in the chemical and medical industry. Mounting nut included.
<b>Media</b>	compressed air, non-corrosive gases or liquids
<b>Supply pressure</b>	max. 21 bar
<b>Adjustment</b>	by knurled-head screw
<b>Relieving function</b>	relieving or non-relieving
<b>Gauge port</b>	not available
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for NBR/Buna-N 0 °C to 110 °C / 32 °F to 230 °F for EPDM for appropriately conditioned compressed air down to -30°C / -22°F
<b>Material</b>	Body: brass Elastomer: NBR/Buna-N, optionally FKM or EPDM Inner valve: stainless steel and brass



Dimensions			Description	Flow rate	Connection thread		Pressure range	Order number
A	B	A/F			Inlet	Outlet		
mm	mm	mm		l/min*1	M5 / NPT	M5 / 10-32"	bar	

Regulator with male thread				supply pressure max. 21 bar				MAR-1P	
18	71	9.5	relieving	120	1/8" NPTa	10-32"	0.2 ... 1.4	<b>MAR-1P-20</b>	
							0.2 ... 3.5	<b>MAR-1P-50</b>	
							0.2 ... 7.0	<b>MAR-1P</b>	
18	71	9.5	non-relieving	120	1/8" NPTa	M5	0.2 ... 1.4	<b>MAR-1PNR-20</b>	
							0.2 ... 3.5	<b>MAR-1PNR-50</b>	
							0.2 ... 7.0	<b>MAR-1PNR</b>	



MAR-1P, with male thread

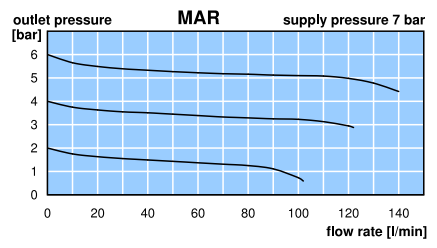
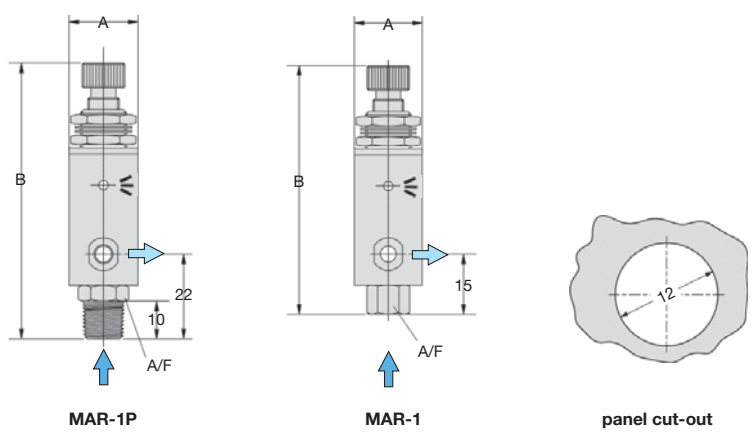
Regulator with female thread				supply pressure max. 21 bar				MAR-1	
18	65	9.5	relieving	120	M5	M5	0.2 ... 1.4	<b>MAR-1-20</b>	
							0.2 ... 3.5	<b>MAR-1-50</b>	
							0.2 ... 7.0	<b>MAR-1</b>	
18	65	9.5	non-relieving	120	M5	M5	0.2 ... 1.4	<b>MAR-1NR-20</b>	
							0.2 ... 3.5	<b>MAR-1NR-50</b>	
							0.2 ... 7.0	<b>MAR-1NR</b>	



MAR-1, with female thread

**Special options,** add the appropriate letter

for oxygen	specially cleaned, with oxygen grease	MAR-...-...15
FKM elastomer		MAR-...-...V
EPDM elastomer		MAR-...-...E
chemically nickel-plated	throughout	MAR-...-...X13



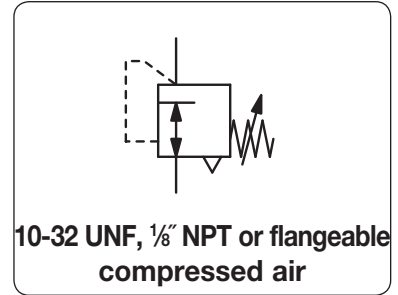
\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

# Plastic Miniature Precision Pressure Regulator

## R800 / R900



<b>Description</b>	Miniature precision regulator with high supply sensitivity, small dimension, light weight. Hysteresis-free adjustment up to 20 turns. compressed air or non-corrosive gases max. 10 bar	
<b>Media</b>	compressed air or non-corrosive gases max. 10 bar	
<b>Supply pressure Accuracy</b>	<b>R800 / R900 / R901</b>	<b>R810 / R910 / R911</b>
	at supply pressure variation of 1 bar: < 7 mbar pressure deviation	< 20 mbar pressure deviation
	at supply pressure removal/reapplication: < 7 mbar pressure deviation	< 17 mbar pressure deviation
	setting accuracy: < 2.5 mbar	< 5 mbar
<b>Air consumption</b>	0.35 l/min at 7 bar supply	0 l/min, flow > 20 ml/min recommended
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Relief capacity</b>	15 l/min at 0.35 bar outlet above set-point	
<b>Temperature range</b>	4 °C to 66 °C / 40 °F to 150 °F	
<b>Material</b>	Body: polysulfones Elastomer: NBR/Buna-N Inner valve: stainless steel and acetal	



Dimensions			Pressure adjustment	Flow rate	Pressure range	Order number for manifold with o-ring	Order number 10-32 UNF standard
A	B	C	by	l/min*1	bar		
mm	mm	mm					

Precision pressure regulator						supply pressure max. 10 bar, relieving, with constant bleed	R900
29	78	8	knob	65	0.03 ... 0.24	R900-3,5MWK	R900-3,5WK
					0.03 ... 0.7	R900- 10MWK	R900- 10WK
					0.03 ... 2.1	R900- 30MWK	R900- 30WK
					0.03 ... 4.2	R900- 60MWK	R900- 60WK
					0.03 ... 6.2	R900- 90MWK	R900- 90WK
29	60	8	spindle	65	0.03 ... 0.24	R900-3,5WOS	R900-3,5WOS
					0.03 ... 0.7	R900- 10WOS	R900- 10WOS
					0.03 ... 2.1	R900- 30WOS	R900- 30WOS
					0.03 ... 4.2	R900- 60WOS	R900- 60WOS
					0.03 ... 6.2	R900- 90WOS	R900- 90WOS
29	43	8	preset	65	to be indicated	R901- .. M	R901- ..



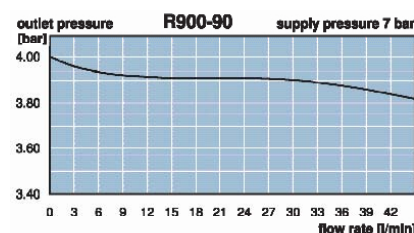
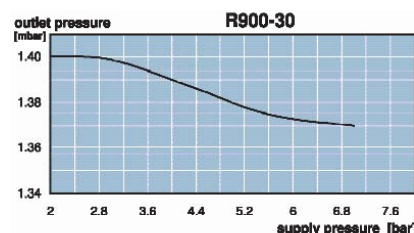
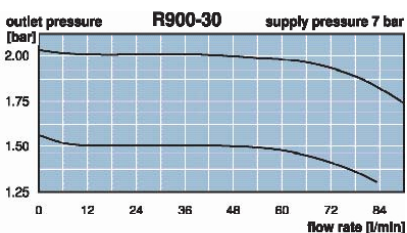
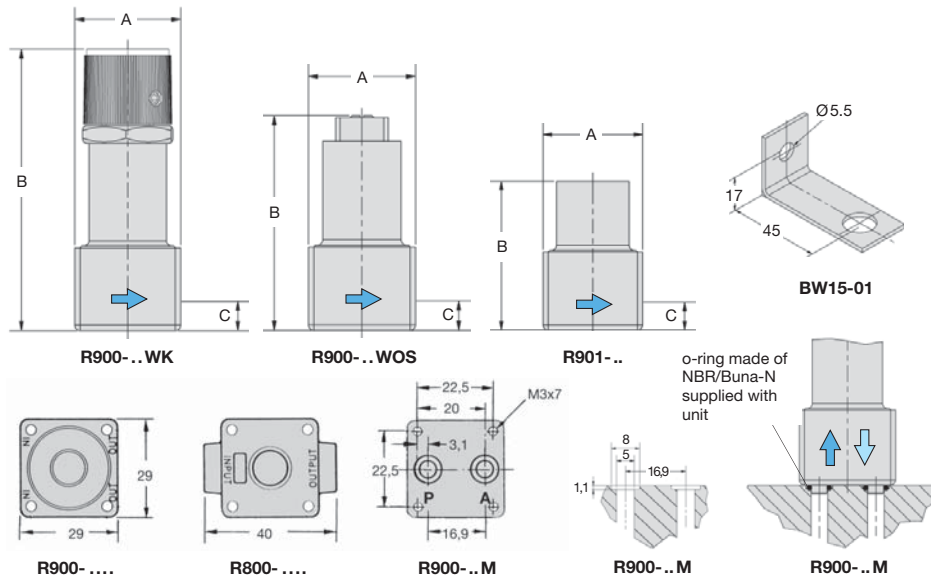
**Special options,** add the appropriate letter

1/8" NPT	connection thread, width 40 mm	R8...W...
non-relieving	without constant bleed	R.1-.....
for oxygen	specially cleaned	R.....15



### Accessories

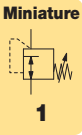
mounting bracket made of steel for R800 and R900 BW15-01



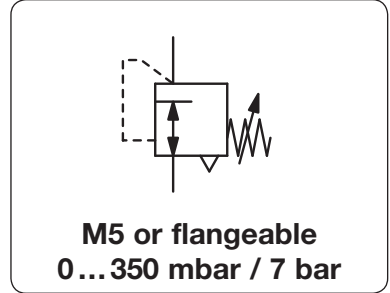
\*1 at 7 bar supply pressure and max. outlet pressure

PDF CAD  
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Order example:  
R900-3,5MWK



<b>Description</b>	Compact, high-precision, diaphragm-operated pressure regulator for panel-mounting.	
<b>Media</b>	non-corrosive gases, filtered, lubricated or unlubricated compressed air	
<b>Supply pressure</b>	max. 17 bar	
<b>Air consumption</b>	ca 1.5 l/min at 7 bar supply pressure	
<b>Adjustment</b>	by handwheel with locknut	
<b>Relieving function</b>	relieving	
<b>Gauge port</b>	RT-M5: gauge port M5	RT-MF: not available
<b>Mounting position:</b>	any	
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: anodized aluminium Elastomer: FKM Inner valve: stainless steel and brass	



Dimensions			Flow rate	Supply pressure	Connection	Pressure range	Order number
A	B	C	l/min*1	max. bar	thread	bar	
mm	mm	mm			M5 / Flansch		

Pressure regulator M5				supply pressure max. 17 bar, with constant bleed		RT	
25	83	14.5	100	17	M5	0... 0.35	RT-M5A
						0... 1.1	RT-M5B
						0... 2.1	RT-M5C
						0... 4.2	RT-M5D
						0... 7.0	RT-M5E



**RT-M5C  
with mounting nut**

Regulator with flange				supply pressure max. 17 bar, with constant bleed		RT	
25	83	-	100	17	flange	0... 0.35	RT-MFA
						0... 1.1	RT-MFB
						0... 2.1	RT-MFC
						0... 4.2	RT-MFD
						0... 7.0	RT-MFE

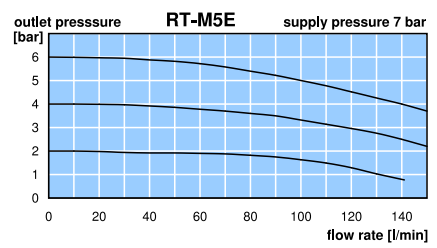
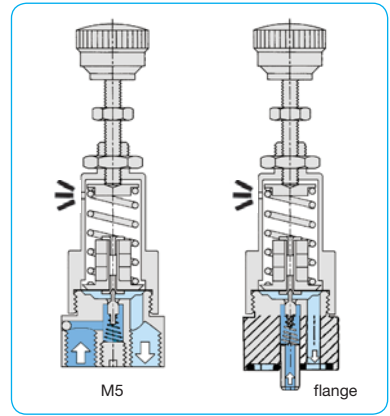
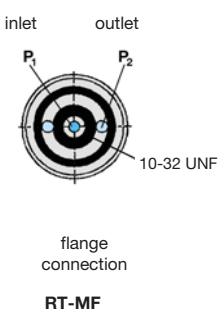
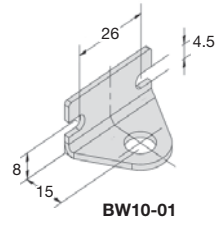
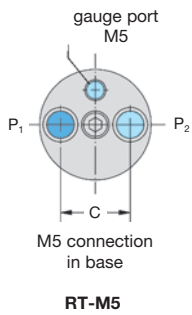
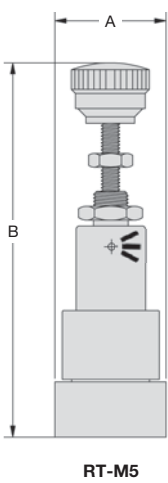


**RT-MFC  
with flange and mounting nut**

Special options, add the appropriate letter		
side connection	M5 or o-ring	RT-M. .X14
1/16" NPT	ports with female threads	RT-M. .X61

## Accessories

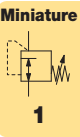
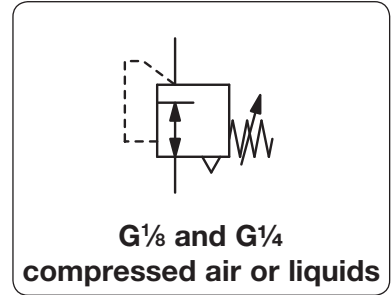
**mounting bracket** made of steel, mounting nut at the device **BW10-01**



\*1 for compressed air: 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop



<b>Description</b>	Diaphragm miniature pressure regulator of small and lightweight design. The regulator has increased accuracy due to a rolling diaphragm and a piston compensated to inlet pressure.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 16 bar	
<b>Air consumption</b>	without constant bleed	R039-F with max. 3 l/min air consumption
<b>Adjustment</b>	by plastic knob with snap-lock	
<b>Relieving function</b>	relieving for compressed air, non-relieving for liquids,	red adjusting knob black adjusting knob
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied	
<b>Mounting position</b>	any	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for NBR/Buna-N	
<b>Material</b>	Body: POM with brass thread insert Elastomer: NBR/Buna-N Inner valve: brass	



Dimensions			Flow rate		Connection	Pressure	Order number	Order number
A	B	C	water	air	thread	range	for water	for compressed air
mm	mm	mm	l/min*1	l/min*1	G	bar	non-relieving	relieving

Regulator w. increased accuracy							supply pressure max. 16 bar, w. rolling diaphragm, inlet pressure-compensated			R039
41	86	11	5	350	G $\frac{1}{8}$	0.1 ... 1	R039-010K	R039-010		
						0.2 ... 2	R039-01AK	R039-01A		
						0.2 ... 4	R039-01BK	R039-01B		
						0.3 ... 8	R039-01CK	R039-01C		
						0.3 ... 12	R039-01DK	R039-01D		
41	86	11	5	380	G $\frac{1}{4}$	0.1 ... 1	R039-020K	R039-020		
						0.2 ... 2	R039-02AK	R039-02A		
						0.2 ... 4	R039-02BK	R039-02B		
						0.3 ... 8	R039-02CK	R039-02C		
						0.3 ... 12	R039-02DK	R039-02D		



R039

Precision pressure regulator							3 l/min air consumption, P <sub>i</sub> : max. 16 bar, w. rolling diaphragm, inlet pressure-compensated			R039-F
41	86	11	5	350	G $\frac{1}{8}$	0.1 ... 1	R039-010KF	R039-010F		
						0.2 ... 2	R039-01AKF	R039-01AF		
						0.2 ... 4	R039-01BKF	R039-01BF		
						0.3 ... 8	R039-01CKF	R039-01CF		
						0.3 ... 12	R039-01DKF	R039-01DF		
41	86	11	5	380	G $\frac{1}{4}$	0.1 ... 1	R039-020KF	R039-020F		
						0.2 ... 2	R039-02AKF	R039-02AF		
						0.2 ... 4	R039-02BKF	R039-02BF		
						0.3 ... 8	R039-02CKF	R039-02CF		
						0.3 ... 12	R039-02DKF	R039-02DF		

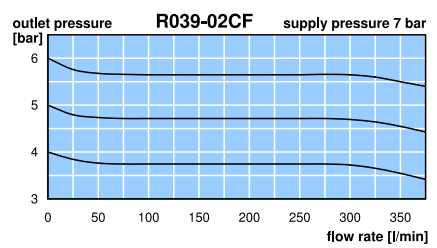
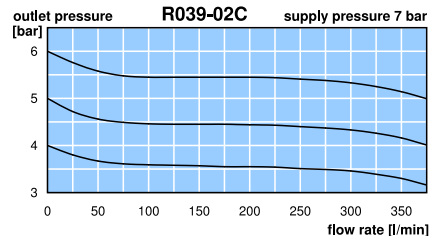
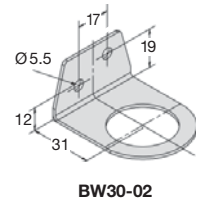
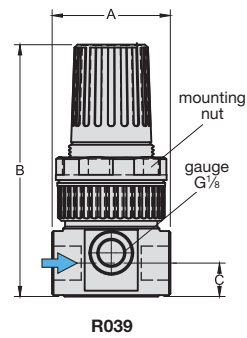


R039-K

Special options, add the appropriate letter			
adjustment lock	non-adjustable knob		R039-0..T
without gauge port			R039-0..X02
for oxygen	specialy cleaned, with oxygen grease	not for R039-0..F	R039-0..K15

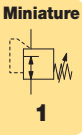
## Accessories

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	MA4001-...*2
mounting bracket	made of steel	BW30-02
mounting nut	made of plastic	M30x1,5K
	made of aluminium	M30x1,5A



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop, for water: supply pressure 2 bar above outlet pressure  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

# Modular Miniature Pressure Regulator „AirLogic“ R6 / RP / M5000



## Description

**Pressure regulator R6** Design as R7 but for bottom-sided flange assembly via fittings and o-rings made of NBR/Buna-N. Mounting through four screws (M3) with extremely small screw heads.

**Pressure regulator RP** This model guards against unauthorised tampering of pressure. Alternatively available with preset pressure. The pressure is to be set between 30 mbar and 2.8 bar. Its headroom is reduced to 49 mm.

**Diverter block M5000** M3000 features four ports sideways and one on top. All ports can be provided with threads or blank slides, the ports sideways optionally with connector slides.

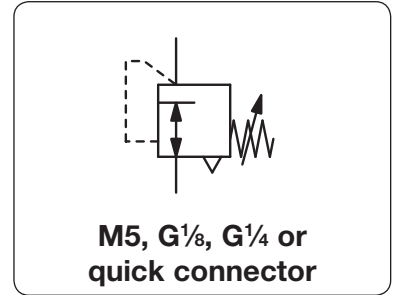
**Top cover**

**Connector slide**

**Assembly** After loosening the bottom screw any placements of threads, connector and blank slides are possible. Sealing results from o-rings made of NBR/Buna-N.

**Temperature range** 4 °C to 70 °C / 39.2 °F to 158 °F

**Material** Body: glass fiber-reinforced Celcon Inner valve: stainless steel and Celcon  
Elastomer: NBR/Buna-N



Dimensions			Flow rate l/min*1	Supply pressure max. bar	Connection thread G/ flange	Pressure range bar	Order number
A	B	C					
mm	mm	mm					

Precision regulator with flange					with adjusting knob, relieving, gauge port G $\frac{1}{8}$ on one side	R6	
47	92	-	140	10	flange	0.01 ... 0.7 0.02 ... 2.1 0.03 ... 4.1 0.03 ... 7.0	R6-010-B1BB R6-030-B1BB R6-060-B1BB R6-100-B1BB



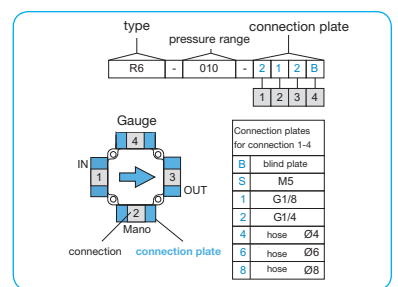
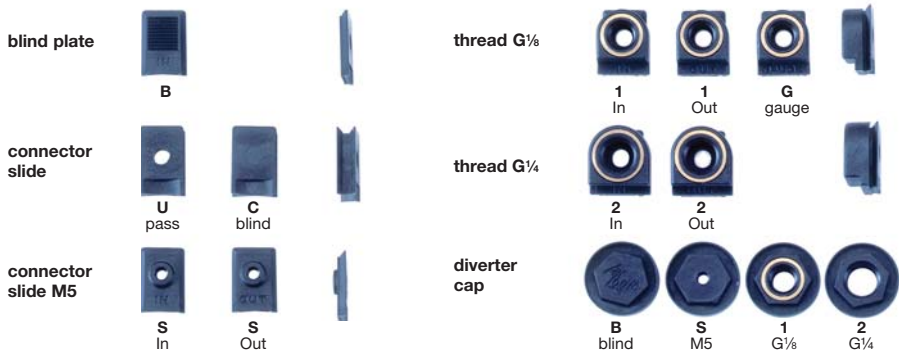
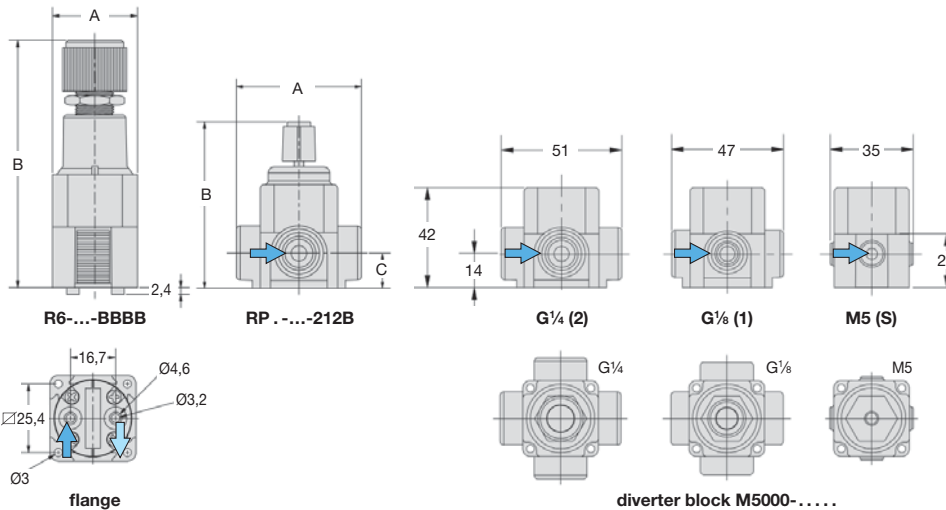
Regulator with adjustment lock					adjustment with socket wrench, relieving, gauge port G $\frac{1}{8}$ on one side	RP	
47	49	14	140	10	G $\frac{1}{8}$	0.03 ... 2.8 *2	RP7-040-111B
32	49	-			flange	0.03 ... 2.8 *2	RP6-040-B1BB



Diverter block G $\frac{1}{8}$				e.g. all ports G $\frac{1}{8}$	M5000		
47	42	14	without filter	-	G $\frac{1}{8}$	-	M5000-11111
			with filter, 380 $\mu$ m		connection		M5001-11111

## Special options and accessories

see adjoining page



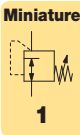
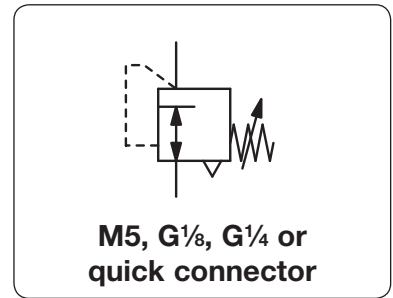
\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 indicate preset pressure on order

PDF CAD  
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Order example:  
R6-010-B1BB

<b>Description</b>	Miniature pressure regulator with unique modular dovetail design allowing its individual use or assembly into a modular combination of pneumatic components through connector slides.	
<b>Identification marking</b>	The item no. includes a four-digit number starting with the input port and continuing counterclockwise. The digit corresponds with the type of connector slide, e.g. <b>1</b> for G $\frac{1}{8}$ , <b>2</b> for G $\frac{1}{4}$ or <b>B</b> for blank.	
<b>Pressure regulator R7</b>	Designed for precise regulation of pressure. The regulator possesses a 20 turn adjustment range and excellent repeatability. The valve seat is protected by a filter/strainer at the input port.	
<b>Media</b>	5 $\mu$ m filtered compressed air and non-corrosive gases	<b>Supply pressure</b> max. 10 bar
<b>Accuracy</b>	at supply pressure variation of 1 bar: at supply pressure removal/reapplication: at variations in temperature of 25 °C / K:	< 10 mbar pressure deviation < 10 mbar pressure deviation < 10 mbar pressure deviation
<b>Air consumption</b>	0.3 l/min at 7 bar supply pressure	<b>Adjustment</b> by knob
<b>Relieving function</b>	relieving	<b>Mounting position</b> any
<b>Gauge port</b>	G $\frac{1}{8}$ via threaded slide	



Dimensions			Flow rate	Supply pressure	Connection thread	Pressure rang	Order number
A	B	C					
mm	mm	mm	l/min*1	max. bar	G	bar	

Precision regulator				with adjusting knob, relieving, gauge port G $\frac{1}{8}$ on one side		R7	
47	92	14	140	10	G $\frac{1}{8}$	0.01 ... 0.7 0.02 ... 2.1 0.03 ... 4.1 0.03 ... 7.0	R7-010-111B R7-030-111B R7-060-111B R7-100-111B
51	92	14	140	10	G $\frac{1}{4}$	0.01 ... 0.7 0.02 ... 2.1 0.03 ... 4.1 0.03 ... 7.0	R7-010-212B R7-030-212B R7-060-212B R7-100-212B



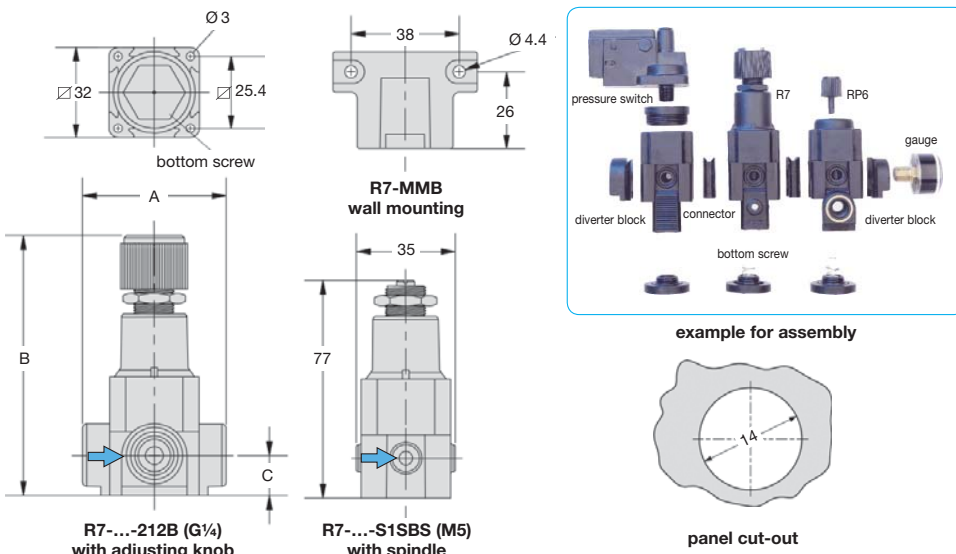
**Special options, add the appropriate letter or number**

<b>with spindle thread</b>	M5 G $\frac{1}{8}$ G $\frac{1}{4}$	screwdriver adjustment, height 77 mm connection thread	R-...-... S R-...-S ... R-...-1 ... R-...-2 ... R-...-4 ... R-...-6 ... R-...-8 ... R-...-B ... R-...-U ... R-...-C ... R-...-W ...
<b>quick connector</b>	$\varnothing$ 4 $\varnothing$ 6 $\varnothing$ 8	external diameter of hose	
<b>breach plate connection plate</b>		with permanent pressure supply without passage, modular combination of two devices	
<b>wall mounting</b>		at breach plate	



**Accessories**

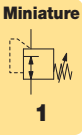
<b>pressure gauge</b>	$\varnothing$ 23 mm, 0...*2 bar, G $\frac{1}{8}$	MA2301-...*2
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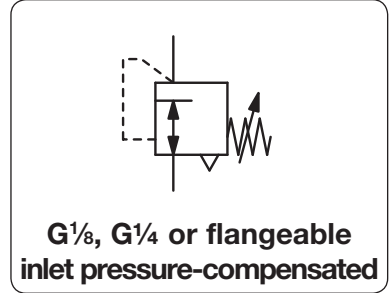
\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar



# Precision Regulator with Inlet Pressure Compensation R342 / R344



<b>Description</b>	Compact diaphragm regulator for quick regulating operations. Due to the pressure-compensated piston fluctuations on inlet pressure have only marginal effect on the outlet pressure's stability.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 17 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied. Without gauge port at regulator with flange.
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: aluminium Spring cage: glass fibre-reinforced plastic Elastomer: NBR/Buna-N Inner valve: steel, brass, plastic Valve seat: acetal



Dimensions			Flow rate l/min	Connection thread G / flange	Pressure range bar	Order number
A	B	C				

Regulator w. inlet pressure compensation				supply pressure max. 17 bar, relieving, without constant bleed		<b>R344</b>
40	83	14	500	G $\frac{1}{8}$	0.2...2	<b>R344-01A</b>
					0.2...4	<b>R344-01B</b>
					0.3...9	<b>R344-01C</b>
40	83	14	500	G $\frac{1}{4}$	0.2...2	<b>R344-02A</b>
					0.2...4	<b>R344-02B</b>
					0.3...9	<b>R344-02C</b>

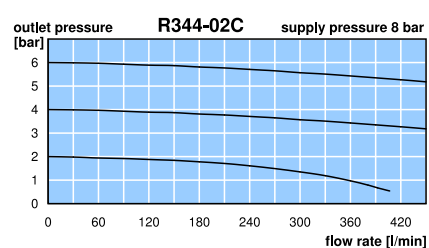
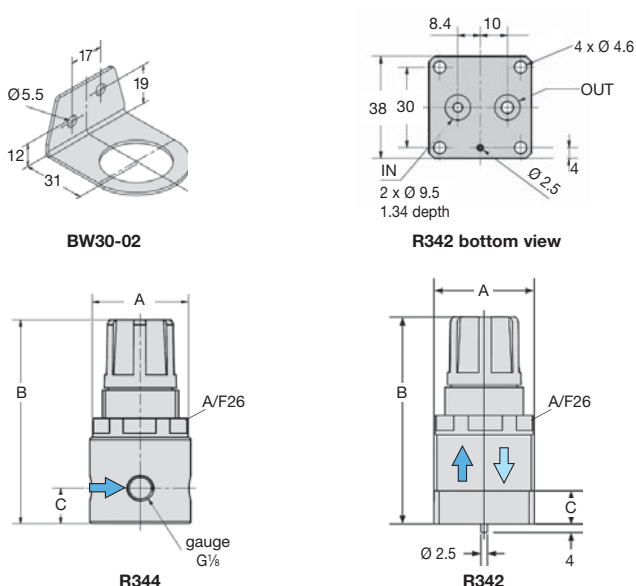


Regulator with flange				supply pressure max. 17 bar, relieving, without constant bleed, inlet pressure compensation		<b>R342</b>
38	83	13	500	flange	0.2...2	<b>R342-0MA</b>
					0.2...4	<b>R342-0MB</b>
					0.3...9	<b>R342-0MC</b>



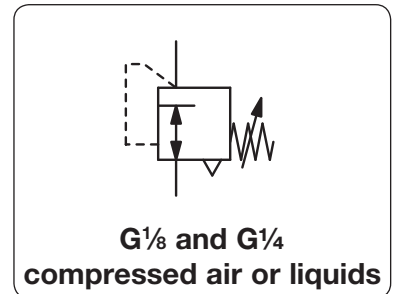
Special options, add the appropriate letter or number		
<b>NPT</b>	connection thread	R344-0 . . N
<b>non-relieving for oxygen</b>	without relieving function	R34.-0 . . K
	specially cleaned, with oxygen grease	R34.-0 . . K15
<b>FKM elastomer</b>		R34.-0 . . X64

Accessories		
<b>pressure gauge</b>	Ø 40 mm, 0... <sup>*2</sup> bar, G $\frac{1}{8}$	R344 only <b>MA4001-...<sup>*2</sup></b>
<b>mounting bracket</b>	made of steel	R344 only <b>BW30-02</b>
<b>mounting nut</b>	made of plastic	R344 only <b>M30x1,5K</b>
	made of aluminium	R344 only <b>M30x1,5A</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop      \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10

<b>Description</b>	Compact regulator with diaphragm.
<b>Media</b>	compressed air, non-corrosive gases or liquids
<b>Supply pressure</b>	max. 21 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F 0 °C to 80 °C / 32 °F to 176 °F, for spring cage made of brass
<b>Material</b>	Body: brass at R364, aluminium at R374 Spring cage: glass fibre reinforced plastic, optionally brass Elastomer: NBR/Buna-N, optionally FKM Inner valve: brass, optionally stainless steel



Dimensions			Flow rate		Connection	Pressure	Order
A	B	C	m <sup>3</sup> /h*1	l/min*1	thread	range	number
mm	mm	mm			G	bar	

Brass pressure regulator					supply pressure max. 21 bar, relieving	R364
35	76	12	27	450	G $\frac{1}{8}$	R364-010 R364-01A R364-01B R364-01C R364-01D
35	76	12	27	450	G $\frac{1}{4}$	R364-020 R364-02A R364-02B R364-02C R364-02D



R364  
made of brass

Aluminium pressure regulator					supply pressure max. 21 bar, relieving	R374
35	76	12	27	450	G $\frac{1}{8}$	R374-010 R374-01A R374-01B R374-01C R374-01D
35	76	12	27	450	G $\frac{1}{4}$	R374-020 R374-02A R374-02B R374-02C R374-02D



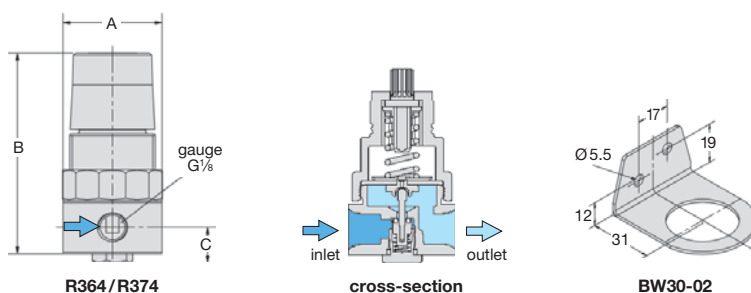
R374  
made of aluminium

**Special options, add the appropriate letter**

<b>NPT</b>	connection thread	R3.4-0...N
<b>non-relieving</b>	without relieving function	R3.4-0...K
<b>adjustment lock</b>	socket wrench adjustment, height 64 mm	R3.4-0...T
<b>free of grease and oil</b>	specially cleaned, suitable for oxygen	R3.4-0...L
<b>FKM elastomer</b>	inner parts made of brass	R3.4-0...X64
	inner parts made of brass	R3.4-0...X08
<b>EPDM elastomer</b>	inner parts m. o. brass, PTFE-diaphragm, W270, KTW, DVGN approval	R364-01...X37
<b>brass spring cage</b>	including brass adjusting screw, max. 80 °C / 176 °F	R3.4-0...X82

**Accessories**

<b>pressure gauge</b>	Ø 40 mm, 0... <sup>*2</sup> bar, G $\frac{1}{8}$	<b>MA4001-...<sup>*2</sup></b>
<b>mounting bracket</b>	made of steel	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic	<b>M30x1,5K</b>
	made of aluminium	<b>M30x1,5A</b>



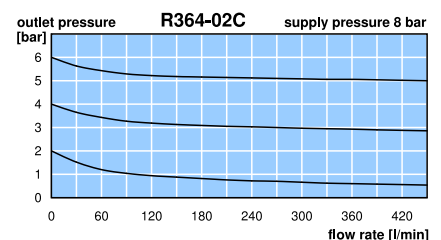
R364/R374

cross-section

BW30-02



R364-02CT with adjustment lock      R364-02CX82 brass throughout

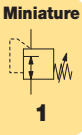


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 01 = 0...1 bar, 02 = 0...2,5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

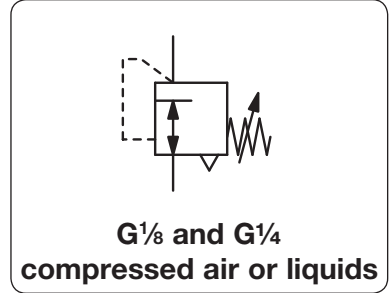
Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R364-010



<b>Description</b>	R310: Diaphragm pressure regulator made of brass without constant bleed. R309: Precision pressure regulator with highly accurate inner valve and sensitive convoluted diaphragm. Of proven reliability and durability and designed for precise pressure regulation in the event of disturbances in flow, supply pressure or temperature. With very high capacity relief valve.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 25 bar for R310, max. 14 bar for R309 and R310-15	
<b>Adjustment</b>	by plastic knob with snap-lock	
<b>Relieving function</b>	relieving, optionally non-relieving for R310	
<b>Gauge port</b>	R310: G $\frac{1}{8}$ on both sides of the body, one screw plug supplied	R309: not available
<b>Mounting position</b>	any	
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F for NBR / Buna-N 0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: brass Spring cage: POM	Elastomer: NBR/Buna-N, optionally FKM or EPDM, e.g. for brake fluid Inner valve: stainless steel and brass



Dimensions			Flow rate	Supply pressure	Connection	Pressure range	Order number
A	B	C	l/min*1	max. bar	thread	bar	
mm	mm	mm			G		

Pressure regulator							supply pressure max. 25 bar, relieving, gauge port G $\frac{1}{8}$ , inlet pressure-compensated	R310
40	80	16.5	220	25	G $\frac{1}{8}$	0.1... 3	R310-01B	
						0.4... 10	R310-01D	
						0.5... 16	R310-01E	
40	80	16.5	220	25	G $\frac{1}{4}$	0.1... 3	R310-02B	
						0.4... 10	R310-02D	
						0.5... 16	R310-02E	

Precision press. regulator							P1: max. 14 bar, relieving, inlet pressure-compensated without constant bleed, suitable for oxygen	R309
36	77	15	220	14	G $\frac{1}{8}$	0.1... 3	R309-01B	
						0.4... 6	R309-01C	



R310

**Wahlweise Ausführung,** es ist der entsprechende Buchstabe hinzuzufügen

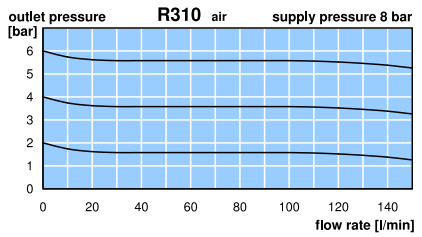
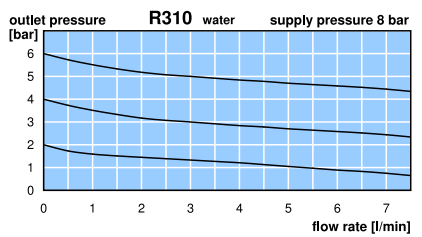
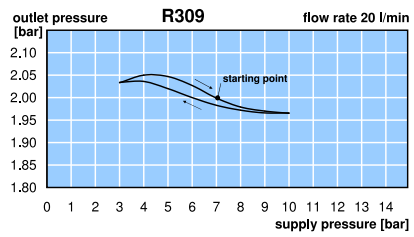
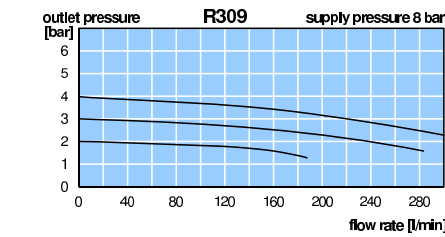
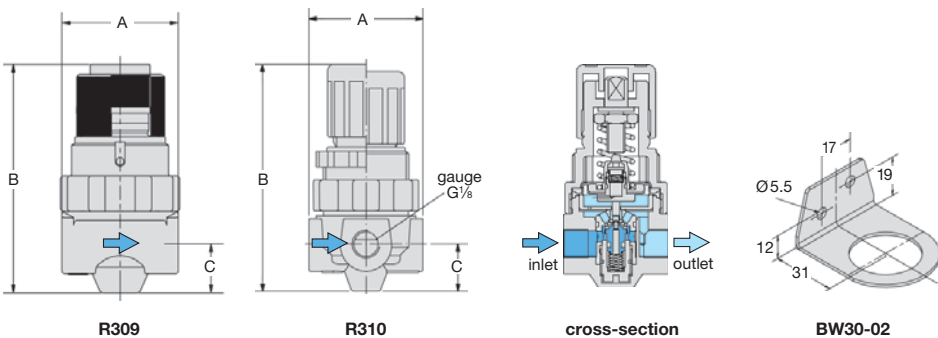
non-relieving	without relieving function	R310-0...K
for oxygen	specially cleaned, P <sub>1</sub> : max. 14 bar, P <sub>2</sub> : max. 10 bar	R310-0...K15
FKM elastomer		R310-0...V
EPDM elastomer	non-relieving, e.g. for brake fluid	R310-0...KE



R309  
accessory: mounting nut

**Accessories**

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	R310 only	MA4001-...*2
mounting bracket	made of steel		BW30-02
mounting nut	made of plastic made of brass		M30x1,5K M30x1,5M

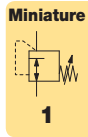
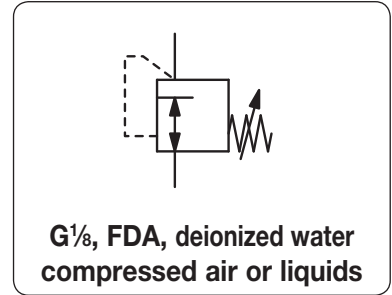


\*1 for compressed air: 8 bar supply pressure, 4 bar outlet pressure and 1 bar pressure drop  
\*2 01 = 0...1 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

# Miniature Pressure Regulator with FDA Approval

R037

<b>Description</b>	Diaphragm miniature pressure regulator made of plastic and of small and lightweight design. All fluid-contact parts are approved by the FDA.
<b>Application area</b>	food industry and water circulation, e.g. for dialysis devices
<b>Media</b>	compressed air, non-corrosive gases, deionized water or other liquids
<b>Supply pressure</b>	max. 16 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	not available
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F
<b>Material</b>	Body: POM technopolymer with thread insert of SST 316, approved by FDA and WRAS Elastomer: EPDM with thread insert of SST 316, approved by FDA and KTW Valve and o-ring: Hytrel and EPDM, FDA-approved Grease: Klüber, UH184-201



Dimensions			Flow rate		Connection	Pressure	Order
A	B	C	water	air	thread	range	number
mm	mm	mm	l/min*1	l/min	G	bar	

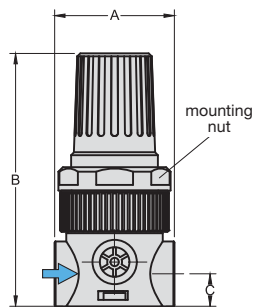
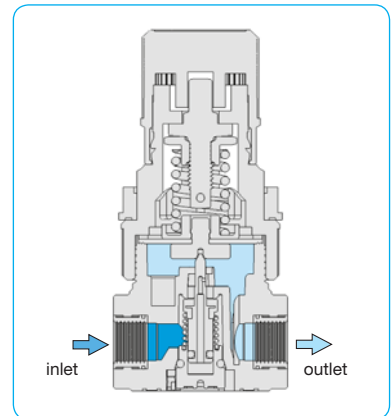
Pressure regulator w. FDA approval							supply pressure max. 16 bar, non-relieving EPDM, with inlet pressure compensation	R037
41	86	11	5	350	G <sup>1</sup> / <sub>8</sub>	0.1 ... 1	R037-010K	
						0.1 ... 2	R037-01AK	
						0.2 ... 4	R037-01BK	
						0.3 ... 8	R037-01CK	
						0.4 ... 12	R037-01DK	



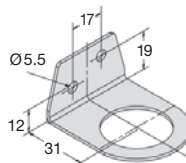
R037

## Accessories

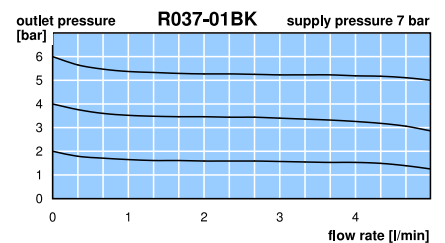
mounting bracket	made of steel	BW30-02
mounting nut	made of plastic	M30x1,5K
	made of aluminium	M30x1,5A



R037



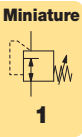
BW30-02



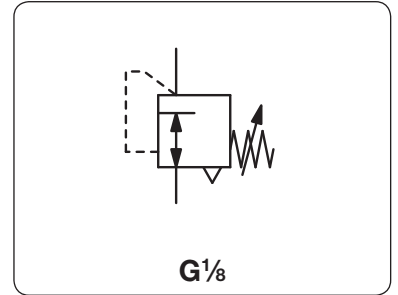
\*1 supply pressure 1 bar above outlet pressure







<b>Description</b>	Precision pressure regulator made of plastic, diaphragm-operated, with tamper-proof knob and without constant bleed. Excellent for portable systems thanks to small size and light weight of only 70 g. The regulator is suitable for oxygen and air.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 10 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: POM Elastomer: NBR/Buna-N Inner valve: brass



G $\frac{1}{8}$

Dimensions			Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. bar	G	bar	
mm	mm	mm					

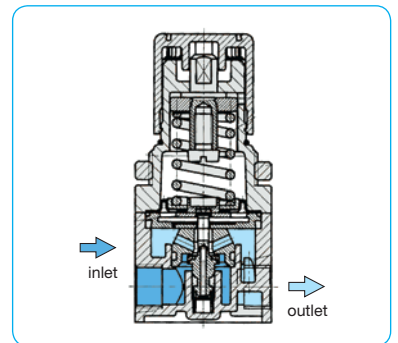
Miniature pressure regulator	supply pressure max. 10 bar, relieving, without constant bleed	R307					
30	64	8	360	10	G $\frac{1}{8}$	0.2 ... 2.5	R307-01B
						0.2 ... 3.5	R307-01C
						0.2 ... 8.0	R307-01D

Special options, add the appropriate letter		
non-relieving	without relieving function	R307-01 . K
for oxygen	specially cleaned, with oxygen grease	R307-01 . K15

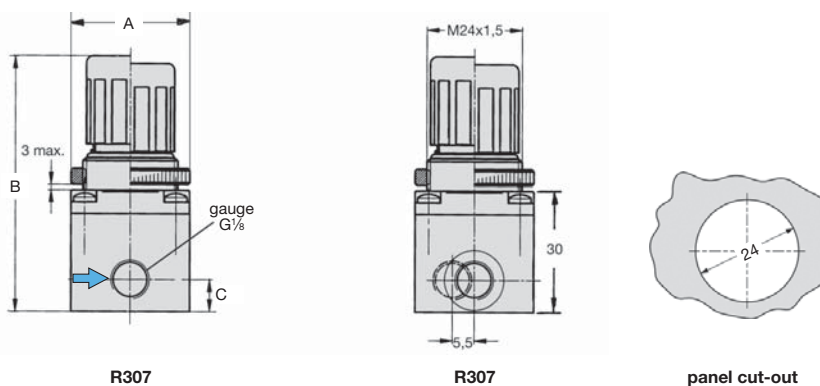


R307 accessories: gauge and mounting nut

Accessories		
pressure gauge	$\varnothing$ 23 mm, 0...*2 bar, G $\frac{1}{8}$	MA2301-...*2
mounting nut	made of brass	M24x1,5M



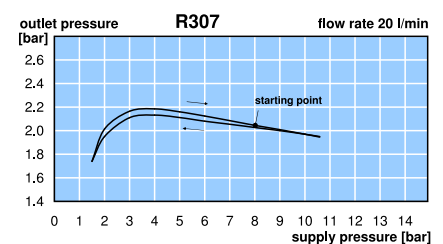
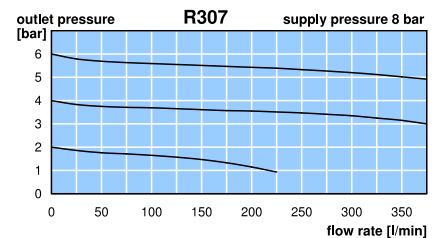
cross-section



R307

R307

panel cut-out

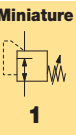
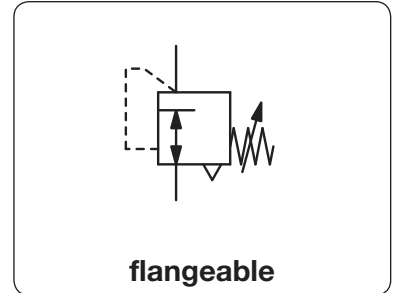


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 10 = 0...10 bar

# Miniature Precision Pressure Regulator $\square$ 30 mm, with flange

R308

<b>Description</b>	Precision pressure regulator, made of plastic, diaphragm-operated, with tamper-proof knob and without constant bleed. Excellent for portable systems thanks to small size and light weight of only 70 g. The regulator is suitable for oxygen and air.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 10 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	not available
<b>Mounting position</b>	any
<b>Temperature range</b>	0° C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: POM Elastomer: NBR/Buna-N Inner valve: brass



Dimensions		Flow rate	Supply pressure	Connection	Pressure range	Order number
A	B	l/min*1	max. bar	flange	bar	
mm	mm					

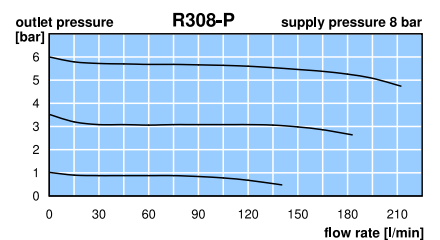
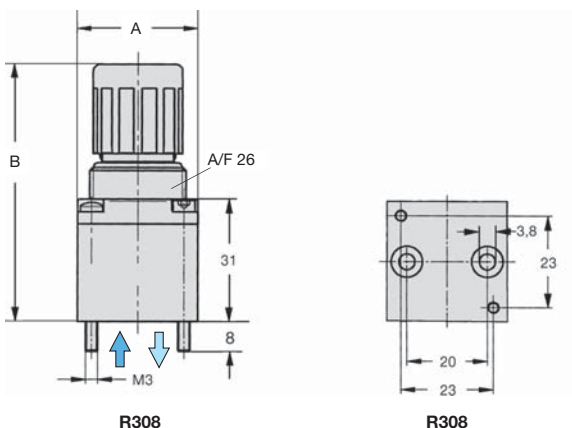
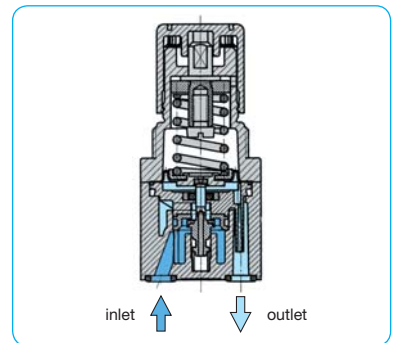
Precision regulator with flange				supply pressure max. 10 bar, relieving, without constant bleed	R308
30	64	200	10	flange	0 ... 0.25 R308-P00
					0.2 ... 2.5 R308-P0B
					0.2 ... 3.5 R308-P0C
					0.2 ... 8.0 R308-P0D



R308, flangeable

## Special options, add the appropriate letter

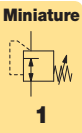
<b>non-relieving</b>	without relieving function	R308-P0. K
<b>or oxygen</b>	specially cleaned, with oxygen grease	R308-P0. K15



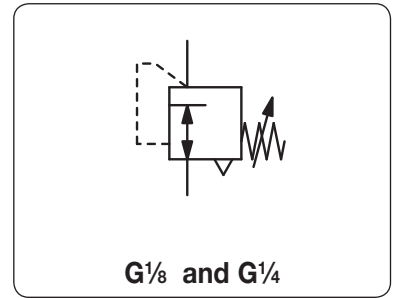
\*1 for compressed air: 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

# Cartridge Pressure Regulator

RC



<b>Description</b>	Piston-operated cartridge pressure regulator suitable for assembly block.
<b>Media</b>	compressed air filtered to 50 µm, lubricated or unlubricated
<b>Supply pressure</b>	max. 10 bar
<b>Adjustment</b>	by knurled-head screw with locknut
<b>Relieving function</b>	relieving
<b>Gauge port</b>	not available
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: nickel-plated brass Elastomer: NBR/Buna-N

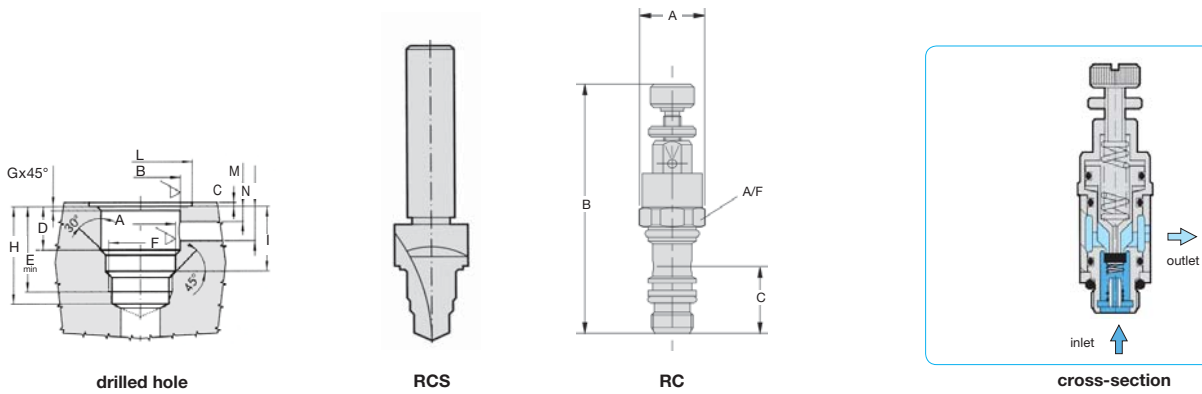


Dimensions				Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	A/F	l/min*1	max. bar	G	bar	

Cartridge regulator								supply pressure max. 10 bar, relieving, without constant bleed	RC
15	57	15	14	150	10	G <sup>1</sup> / <sub>8</sub>	1... 8 bar		RC-01C
19	63	18	17	260	10	G <sup>1</sup> / <sub>4</sub>	1... 8 bar		RC-02C

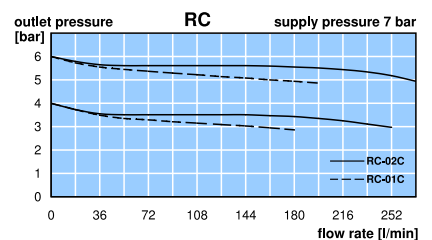


Step drill for cartridge seat						RCS
16	-	-	-	-	G <sup>1</sup> / <sub>8</sub>	RCS-01
20	-	-	-	-	G <sup>1</sup> / <sub>4</sub>	RCS-02



drill	F	A	B	C	D
RCS-01	1/8	9.8 - 0.1/-0	11.2 ± 0.05	0.5 ± 0.5	15.6 ± 0.07
RCS-02	1/4	13.5 + 0.1/-0	14.4 ± 0.05	0.5 ± 0.5	17.5 ± 0.07

drill	E	G	H	I	L	M	N
RCS-01	24.6	0.3	27	18.1 ± 0.2	15.4	3.5	12
RCS-02	28	0.4	31.2	20.8 ± 0.2	19.4	3.5	13.5



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

## Standard Pressure Regulators

Description	Supply pressure max. bar	Pressure range bar	Connection thread	Device	Page
„Maxi“-Series, robust, interlockable	21	0.2 ... 1.8 / 17	G $\frac{1}{4}$ - G1	R20, R21	<b>2.02</b>
made of plastic, also for liquids	12,5	0 ... 4 / 12	G $\frac{1}{8}$ - G1	R035 ... R095	<b>2.03</b>
with external feedback	16	0.2 ... 7.0	G $\frac{1}{4}$	R218	<b>2.04</b>
„Midi“-Series	21	0.2 ... 1.8 / 17	G $\frac{1}{4}$ - G $\frac{1}{2}$	R10, R11	<b>2.05</b>
extremely robust, high flow rate	21	0.2 ... 1.8 / 17	G $\frac{1}{4}$ - G3	R119	<b>2.06</b>
Series „D“, made of aluminium /die-cast zinc	30	0.2 ... 1.5 / 15	G $\frac{1}{8}$ - G2	RD	<b>2.08</b>
with joint supply	16	0.1 ... 3 / 16	G $\frac{1}{8}$ - G $\frac{1}{2}$	RB, R035	<b>2.10</b>
gauge pressure regulator	25	0.1 ... 3 / 16	G $\frac{1}{4}$ and G $\frac{3}{8}$	RM	<b>2.11</b>
270° adjustment dial pressure regulator	21	0 ... 3 / 11	G $\frac{1}{4}$ - G2	R11 ... R41	<b>2.12</b>



# 2

## Standard Regulators

Standard



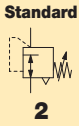
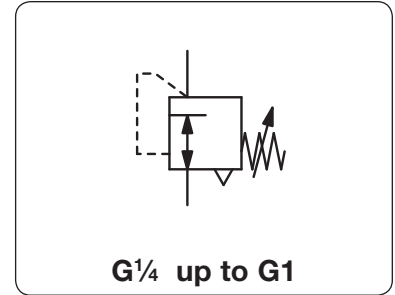
2



# "Maxi" Pressure Regulator

R20 / R21

<b>Description</b>	Piston-operated high-capacity regulator of modular design with exchangeable inserts. Can be interlocked with filter or lubricator without double nipples. Each "maxi" regulator may be taken from a fixed line in seconds simply by removing the mounting bolts.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 21 bar	
<b>Adjustment</b>	R20: by plastic knob with snap-lock	R21: by T-handle with locknut
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	
<b>Mounting position</b>	any	
<b>Temperature range</b>	R20: 0 °C to 50 °C / 32 °F to 122 °F	R21: 0 °C to 80 °C / 32 °F to 176 °F
<b>Material</b>	Body: zinc die-cast Spring cage: zinc die-cast, adjusting knob made of with glass fibre-reinforced plastic Elastomer: NBR/Buna-N Inner valve: brass and plastic	



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

"Maxi" pressure regulator							supply pressure max. 21 bar, relieving, without pressure gauge	R20
89	162	38	3.4	240	4000	G $\frac{1}{4}$	0.2 ... 1.8 0.2 ... 4.0 0.3 ... 9.0 0.5 ... 17	R20-02A R20-02B R20-02C R20-02D
89	162	38	4.2	300	5000	G $\frac{3}{8}$	0.2 ... 1.8 0.2 ... 4.0 0.3 ... 9.0 0.5 ... 17	R20-03A R20-03B R20-03C R20-03D
89	162	38	5.2	372	6200	G $\frac{1}{2}$	0.2 ... 1.8 0.2 ... 4.0 0.3 ... 9.0 0.5 ... 17	R20-04A R20-04B R20-04C R20-04D
111	162	38	6.1	432	7200	G $\frac{3}{4}$	0.2 ... 1.8 0.2 ... 4.0 0.3 ... 9.0 0.5 ... 17	R20-06A R20-06B R20-06C R20-06D
111	162	38	6.3	450	7500	G1	0.2 ... 1.8 0.2 ... 4.0 0.3 ... 9.0 0.5 ... 17	R20-08A R20-08B R20-08C R20-08D

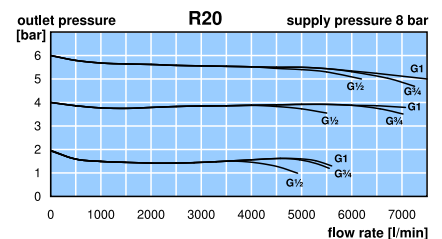
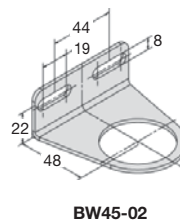
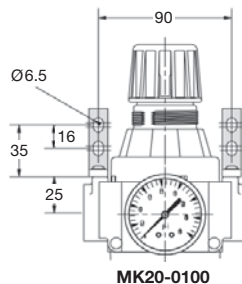
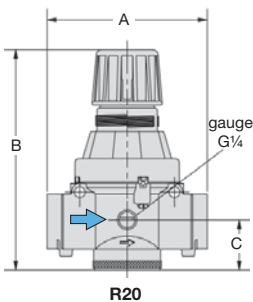


## Special options, add the appropriate letter

<b>T-handle</b>	including locknut	R21-0..
<b>NPT</b>	connection thread	R2.-0..N
<b>non-relieving</b>	without relieving function	R2.-0..K

## Accessories

<b>pressure gauge</b>	Ø 63 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$ up to 16 bar	<b>MA6302-...<sup>*2</sup></b>
<b>mounting bracket</b>	Ø 63 mm, 0...25 bar, G $\frac{1}{4}$ up to 25 bar	<b>MA6302-...25</b>
<b>mounting nut</b>	assembly at spring cage	<b>BW45-02</b>
<b>set of brackets</b>	made of plastic	<b>M45x1,5K</b>
	made of aluminium	<b>M45x1,5A</b>
	made of steel	<b>MK20-0100</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar

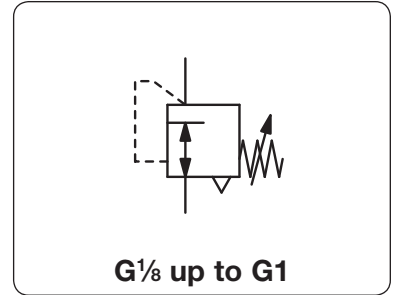
Gauges: see chapter for measuring devices PDF CAD  
www.aircom.net

**Order example:  
R20-02A**

# Plastic Pressure Regulator

R035... R095

<b>Description</b>	Modular regulator easy to interlock with other regulators, filters or filter regulators of the same series, without the need for double nipples or any other fittings. A sensitive rolling diaphragm allows good pressure regulation.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 12,5 bar, max. 10 bar for R035, max. 16 bar bei R042		
<b>Adjustment</b>	by plastic knob with snap-lock, R035 without snap-lock		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body (G $\frac{1}{4}$ at R095), one screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 177 °F		
<b>Material</b>	Body: nylon, Elastomer: NBR/Buna-N Inner valve: brass Thread insert: brass	POM at R035 and R042	



Dimensions			Kv-value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

Pressure regulator							supply pressure max. 12,5 bar, for series R035 max. 10 bar, for series R042 max. 16 bar, relieving, without pressure gauge	R0
36	61	12	0.11	15	250	G $\frac{1}{8}$	0... 6	R035-01B
for battery assembly, see also catalogue page "regulator for joint supply"							0... 6	R035-01RB
42	102	20	0.36	51	850	G $\frac{1}{4}$	0... 4	R042-02B
							0... 8	R042-02C
							0... 12	R042-02D
52	129	38	0.59	84	1400	G $\frac{3}{8}$	0... 4	R050-03B
							0... 8	R050-03C
							0... 12	R050-03D
52	129	38	0.63	90	1500	G $\frac{1}{2}$	0... 4	R052-04B
							0... 8	R052-04C
							0... 12	R052-04D
63	145	42	1.0	138	2300	G $\frac{1}{2}$	0... 4	R075-04B
							0... 8	R075-04C
							0... 12	R075-04D
137	145	42	1.0	144	2400	G $\frac{3}{4}$	0... 4	R080-06B
							0... 8	R080-06C
							0... 12	R080-06D
115	222	48	6.3	900	15000	G1	0... 4	R095-08B
							0... 8	R095-08C
							0... 12	R095-08D

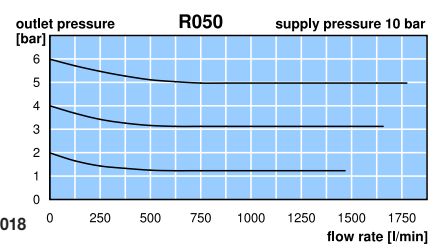
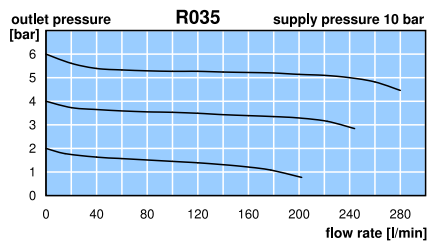
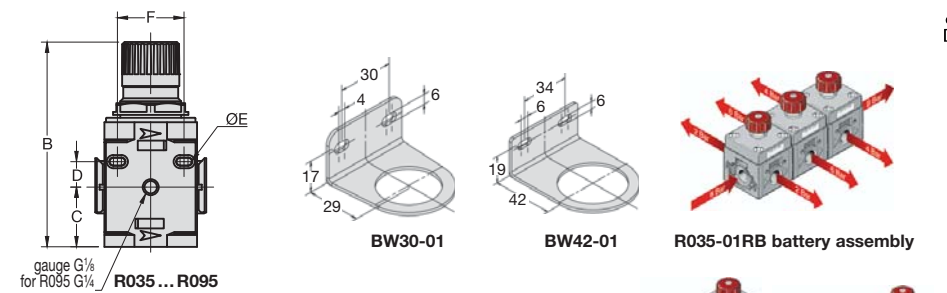


## Special options, add the appropriate letter

**non-relieving** without relieving function, also for liquids R0..-0..K

## Accessories

<b>pressure gauge</b>	Ø 23 mm, 0... <sup>*2</sup> bar, G $\frac{1}{8}$ , max. 12 bar Ø 40 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$ Ø 50 mm, 0... <sup>*2</sup> bar, G $\frac{1}{2}$ Ø 63 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$	for R035 for R042 for R050 to R080 for R095	<b>MA2301-...<sup>*2</sup></b> <b>MA4001-...<sup>*2</sup></b> <b>MA5001-...<sup>*2</sup></b> <b>MA6302-...<sup>*2</sup></b>
<b>mounting bracket</b>	made of steel, mounting nut at the device	for R042 for R050 to R080	<b>BW30-01</b> <b>BW42-01</b>
<b>set of brackets</b>	made of steel	for R095	<b>BW42-01</b> <b>BW00-02</b>
<b>connection clips</b>		for R035	<b>C350100018</b>



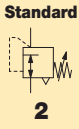
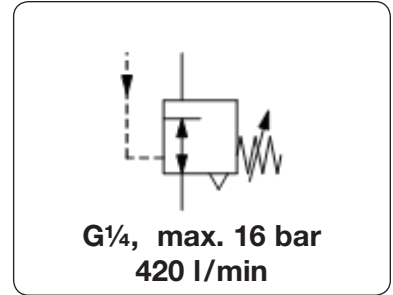
series	D	Ø E	F	K	L
R035	8	3.5	20	-	36
R042	10.5	4.5	31	-	42
R050/52	16	5.5	41	63	52
R075	17.5	5.5	45	75	63
R080	17.5	5.5	45	-	63
R095	65	8.5	174	115	95

\*1 at 10 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

# Pressure Regulator with External Feedback

R218

<b>Description</b>	Diaphragm pressure regulator in small design for "feedback systems" in conjunction with volume flow boosters. Due to the external feedback, regulation is significantly improved and the flow rate increased.			
<b>Media</b>	compressed air and non-corrosive gases			
<b>Supply pressure</b>	max. 16 bar	<b>Air consumption</b>	approx. 3 bis 6 l/min	
<b>Adjustment</b>	by handwheel with snap-lock, for panel mounting			
<b>External Feedback</b>	should be installed at the outlet of the booster, e.g. at the gauge port, or at the outlet pipe. This will measure the pressure drop at the output of the booster and the pilot pressure will be readjusted.			
<b>Relieving function</b>	relieving			
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	<b>Feedback connection</b>	G $\frac{1}{4}$	
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F		<b>Mounting position</b>	any
<b>Material</b>	Body: zinc die-casting	Spring cage: zinc die-casting	Elastomer: FKM	



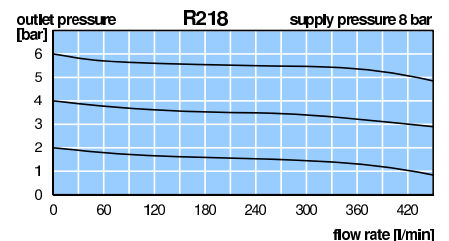
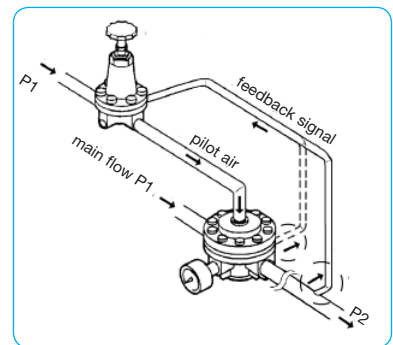
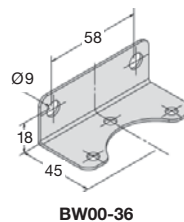
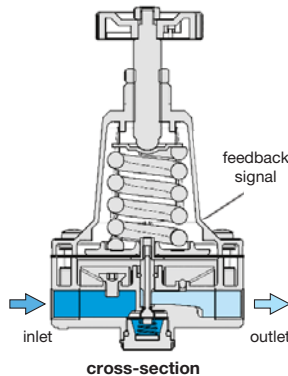
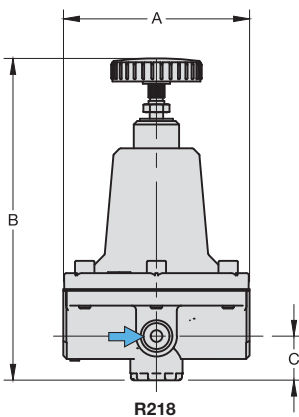
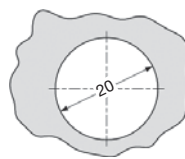
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					
mm	mm	mm					

Regulator with external feedback							supply pressure max. 16 bar, relieving, with air consumption		R218
82	154	19	0,3	25	420	G $\frac{1}{4}$	0.2 ... 7.0	R218-02C	



## Accessories

pressure gauge	Ø 63 mm, 0 ... 10 bar, G $\frac{1}{4}$	MA6302-10
mounting bracket	made of steel	BW00-36
mounting nut	made of brass	M20x1,5M

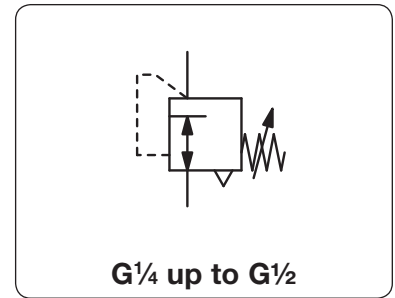


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

# "Midi" Pressure Regulator

R10 / R11

<b>Description</b>	All-purpose, high-performance, diaphragm regulator with high flow.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 21 bar		
<b>Adjustment</b>	R10: by plastic knob with snap-lock R11: by T-handle with locknut		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	R10: 0 °C to 50 °C / 32 °F to 122 °F R11: 0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compr. air down to -30 °C / -22 °F		
<b>Material</b>	Body:	zinc die-cast	
	Spring cage:	glass fibre-reinforced plastic at R10,	zinc die-cast at R11
	Elastomer:	NBR/Buna-N, optionally FKM	Inner valve: brass, optionally stainless steel



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

"Midi" pressure regulator			supply pressure max. 21 bar, relieving, without pressure gauge				R10	
60	124	35	1.8	132	2200	G $\frac{1}{4}$	0.2 ... 1.8	R10-02A
							0.2 ... 4.0	R10-02B
							0.3 ... 9.0	R10-02C
							0.5 ... 17	R10-02D
60	124	35	1.9	138	2300	G $\frac{3}{8}$	0.2 ... 1.8	R10-03A
							0.2 ... 4.0	R10-03B
							0.3 ... 9.0	R10-03C
							0.5 ... 17	R10-03D
60	124	35	2.0	144	2400	G $\frac{1}{2}$	0.2 ... 1.8	R10-04A
							0.2 ... 4.0	R10-04B
							0.3 ... 9.0	R10-04C
							0.5 ... 17	R10-04D

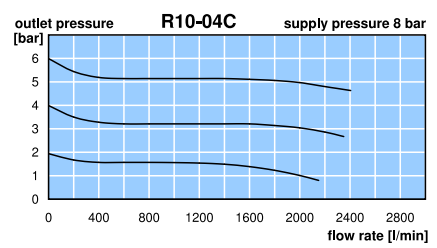
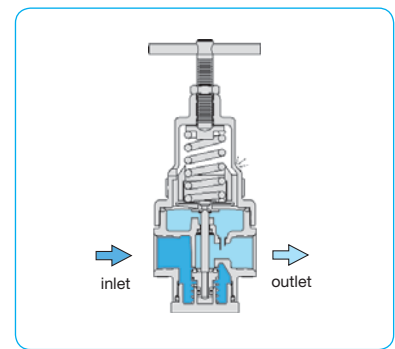
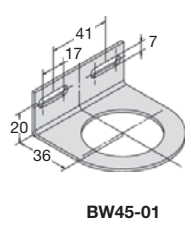
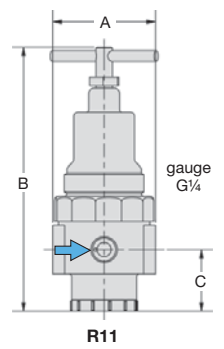
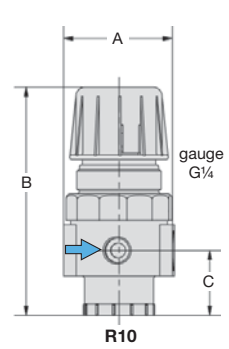


## Special options, add the appropriate letter

<b>T-handle</b>	including locknut	R11-0..
<b>NPT</b>	connection thread	R1.-0..N
<b>non-relieving</b>	without relieving function	R1.-0..K
<b>FKM elastomer</b>	inner parts made of brass	R1.-0..X64
	inner parts made of stainless steel	R1.-0..X08

## Accessories

<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	up to 10 bar	<b>MA5002-...*2</b>
	Ø 50 mm, 0...25 bar, G $\frac{1}{4}$	up to 25 bar	<b>MA5002-...25</b>
<b>mounting bracket</b>	made of steel		<b>BW45-01</b>
<b>mounting nut</b>	made of plastic		<b>M45x1,5K</b>
	made of aluminium		<b>M45x1,5A</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar



# Standard Pressure Regulator

R119

**Description** High-capacity diaphragm regulator of solid design suitable for many applications. Ideal for installations where constant line pressure at wide flow variations. From size G2 on it is a pilot-operated piston regulator with an excellent regulation characteristic curve.

**Media** compressed air or non-corrosive gases

**Supply pressure** max. 21 bar

**Air consumption** from size G2 on the regulator's air consumption is about 0.1 l/min.

**Adjustment** by T-handle with locknut  
from size G2 on by plastic knob with snap-lock on the pilot regulator  
up to size G½ optionally by handwheel for control panel integration

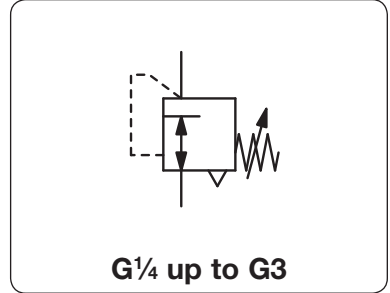
**Relieving function** relieving, optionally non-relieving

**Gauge port** G¼ on both sides of the body, screw plugs supplied

**Temperature range** 0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F

**Material** Body: zinc die-cast  
Diaphragm: NBR/Buna-N

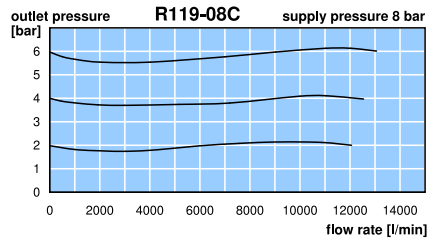
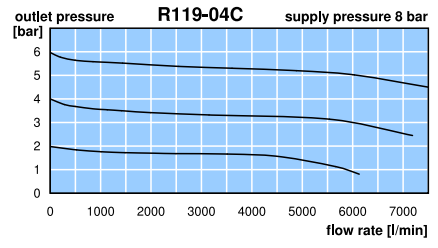
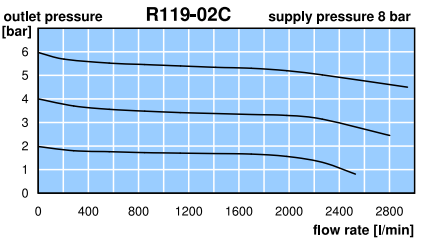
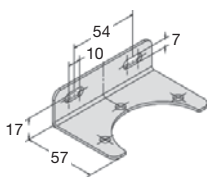
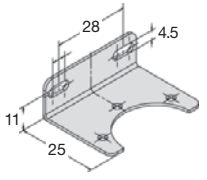
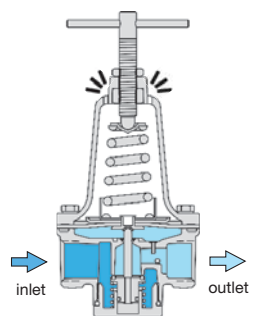
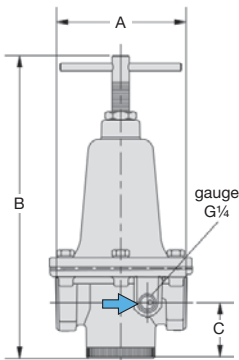
**Mounting position** any  
Inner valve: brass  
Bottom screw: reinforced nylon



Standard  
2

Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m³/h*1	l/min*1			

Standard pressure regulator						supply pressure max. 21 bar, relieving, without pressure gauge		R119
70	157	35	1.5	150	2500	G¼	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-02A R119-02B R119-02C R119-02D
70	157	35	1.7	168	2800	G¾	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-03A R119-03B R119-03C R119-03D
83	172	38	3.6	360	6000	G½	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-04A R119-04B R119-04C R119-04D
113	265	49	5.4	540	9000	G¾	0.3...9.0 0.5...17	R119-06C R119-06D
113	265	49	6.0	600	10000	G1	0.3...9.0 0.5...17	R119-08C R119-08D

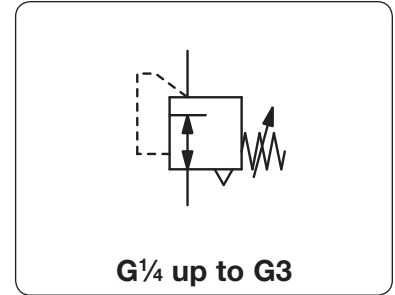


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

PDF CAD  
www.aircom.net

Order example:  
R119-02A

<b>Description</b>	High-capacity diaphragm regulator of solid design suitable for many applications. Ideal for installations where constant line pressure at wide flow variations. From size G2 on it is a pilot-operated piston regulator with an excellent regulation characteristic curve.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 21 bar	
<b>Air consumption</b>	from size G2 on the regulator's air consumption is about 0.1 l/min.	
<b>Adjustment</b>	by T-handle with locknut from size G2 on by plastic knob with snap-lock on the pilot regulator up to size G½ optionally by handwheel for control panel integration	
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Gauge port</b>	G¼ on both sides of the body, screw plugs supplied	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: zinc die-cast Diaphragm: NBR/Buna-N	Inner valve: brass Bottom screw: reinforced nylon



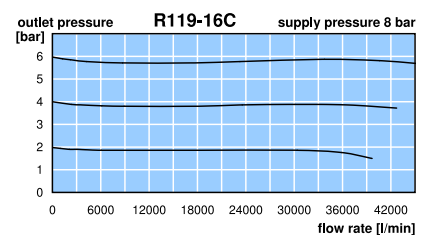
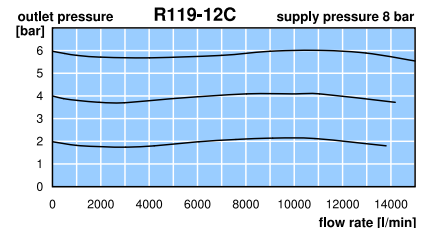
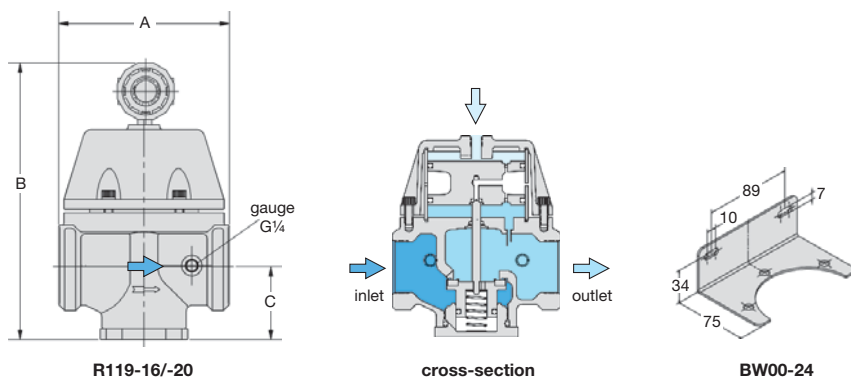
Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m³/h*1	l/min*1			

Standard pressure regulator								supply pressure max. 21 bar, relieving, without pressure gauge	R119
126	275	48	7.2	720	12000	G1½	0.3...9.0 0.5...17	R119-12C R119-12D	
186	300	79	35.4	2520	42000	G2	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-16A R119-16B R119-16C R119-16D	
186	300	79	37.1	2640	44000	G2½	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-20A R119-20B R119-20C R119-20D	
214	360	95	56.0	6600	110000	G3	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	R119-24A R119-24B R119-24C R119-24D	



Special options, add the appropriate letter		
<b>NPT</b>	connection thread	R119-...N
<b>non-relieving</b>	without relieving function	for G¼ to G2½ for G3 R119-...K
<b>FKM elastomer</b>		for G¼ to G1½ for G3 R119-...X64 R119-24.X64
<b>panel mounting</b>	with handwheel, hole diameter 16 mm	for G¼ to G½ R119-...P
<b>flange connection</b>	see chapter SST devices / flanges	R119-...F.
<b>PWIS-free</b>	for painting plants	R119-...LA

Accessories		
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G¼ Ø 63 mm, 0...*2 bar, G¼	for G¼ to G½ for G¾ to G2½ for G¼ and G¾ for G½ for G¾ to G1½
<b>mounting bracket</b>	made of steel	<b>MA5002-...*2</b> <b>MA6302-...*2</b> <b>BW00-22</b> <b>BW00-23</b> <b>BW00-24</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

**Description** Good value pressure regulator of solid design. RD1 and RD3 are equipped with diaphragms, RD4 is piston-operated. Wall mounting through two drilled holes in the bodies of RD1 to RD3.

**Media** compressed air or non-corrosive gases

**Supply pressure** max. 30 bar

**Adjustment** RD1/RD2: by plastic knob with snap-lock  
RD3: by handwheel  
RD4: by T-handle

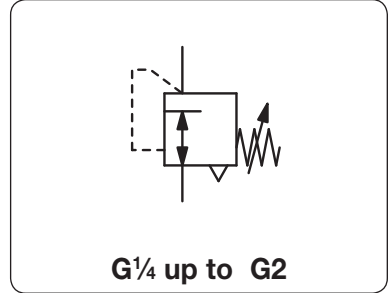
**Relieving function** relieving, optionally non-relieving

**Gauge port** G $\frac{1}{4}$  on both sides of the body, G $\frac{1}{2}$  at RD1

**Mounting position** any

**Temperature range** -10 °C to 50 °C / 14 °F to 122 °F for RD1, RD2 and RD4  
-20 °C to 60 °C / -4 °F to 140 °F for RD3

**Material** Body: zinc die-cast at RD1, aluminium at RD2, RD3 and RD4  
Spring cage: plastic reinforced with glass fibre at RD1, nylon at RD2, aluminium at RD3/RD4  
Elastomer: NBR/Buna-N Inner valve: brass

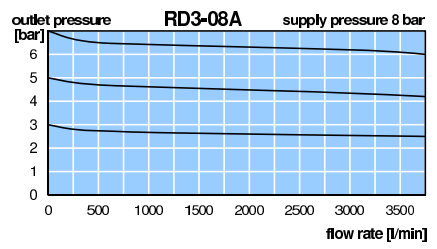
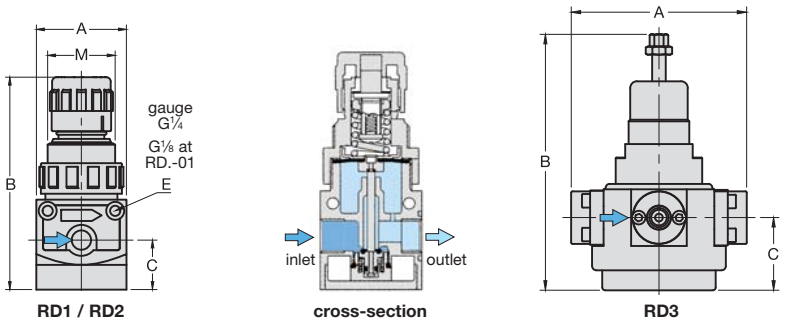


Dimensions			K <sub>v</sub> -value	Flow rate		P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C		m <sup>3</sup> /h*	l/min*				

Pressure regulator										supply pressure max. 20 / 30 bar, relieving, without pressure gauge	RD1...RD4
40	95	22	0.3	27	450	20	G $\frac{1}{2}$	0.2...1.5	RD1-01A		
								0.3...3.0	RD1-01B		
								0.5...8.0	RD1-01D		
								1.5... 15	RD1-01E		
40	95	22	0.3	27	450	20	G $\frac{1}{4}$	0.2...1.5	RD1-02A		
								0.3...3.0	RD1-02B		
								0.5...8.0	RD1-02D		
								1.5... 15	RD1-02E		
64	151	48	1.5	108	1800	20	G $\frac{3}{8}$	0.2...1.5	RD2-03A		
								0.3...3.0	RD2-03B		
								0.5...8.0	RD2-03D		
								1.5... 15	RD2-03E		
64	151	48	1.5	108	1800	20	G $\frac{1}{2}$	0.2...1.5	RD2-04A		
								0.3...3.0	RD2-04B		
								0.5...8.0	RD2-04D		
								1.5... 15	RD2-04E		
130	187	54	3.0	195	3250	30	G $\frac{3}{4}$	0.2...1.5	RD3-06A		
								0.3...3.0	RD3-06B		
								0.5...8.0	RD3-06D		
								1.5... 15	RD3-06E		
130	187	54	3.0	195	3250	30	G1	0.2...1.5	RD3-08A		
								0.3...3.0	RD3-08B		
								0.5...8.0	RD3-08D		
								1.5... 15	RD3-08E		
241	187	54	3.0	195	3250	30	G1 $\frac{1}{4}$	0.2...1.5	RD3-10A		
								0.3...3.0	RD3-10B		
								0.5...8.0	RD3-10D		
								1.5... 15	RD3-10E		
241	187	54	3.0	195	3250	30	G1 $\frac{1}{2}$	0.2...1.5	RD3-1AA		
								0.3...3.0	RD3-1AB		
								0.5...8.0	RD3-1AD		
								1.5... 15	RD3-1AE		

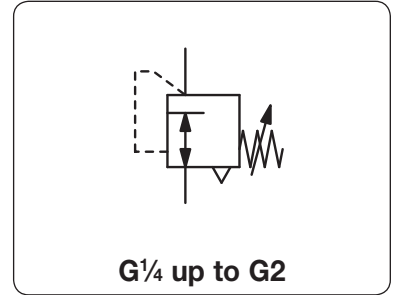


series	D	Ø E	M
RD1	30	4.5	M30x1,5
RD2	51	5.5	M50x1,5
RD3	76	6.5	-
RD4	76	8.5	-



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

<b>Description</b>	Good value pressure regulator of solid design. RD1 and RD3 are equipped with diaphragms, RD4 is piston-operated. Wall mounting through two drilled holes in the bodies of RD1 to RD3.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 30 bar
<b>Adjustment</b>	RD1/RD2: by plastic knob with snap-lock RD3: by handwheel RD4: by T-handle
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ at RD1
<b>Mounting position</b>	any
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F for RD1, RD2 and RD4 -20 °C to 60 °C / -4 °F to 140 °F for RD3
<b>Material</b>	Body: zinc die-cast at RD1, aluminium at RD2, RD3 and RD4 Spring cage: plastic reinforced with glass fibre at RD1, nylon at RD2, aluminium at RD3/RD4 Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			K <sub>v</sub> -value	Flow rate	P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	bar	G	bar

Pressure regulator								supply pressure max. 20 / 30 bar, relieving, without pressure gauge	RD1...RD4
215	385	130	18.6	1320	22 000	30	G $\frac{1}{2}$	0.2...1.5	RD4-12A
								0.3...3.0	RD4-12B
								0.5...8.0	RD4-12D
								1.5... 15	RD4-12E
215	385	130	18.6	1320	22 000	30	G2	0.2...1.5	RD4-16A
								0.3...3.0	RD4-16B
								0.5...8.0	RD4-16D
								1.5... 15	RD4-16E

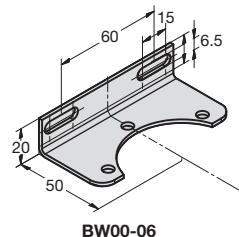
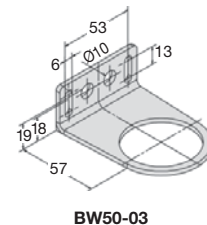
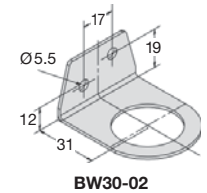


**Special options, add the appropriate letter**

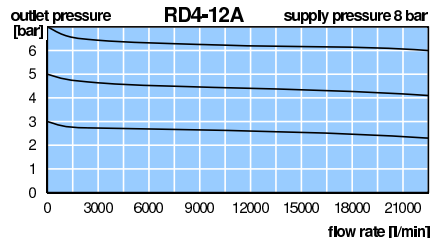
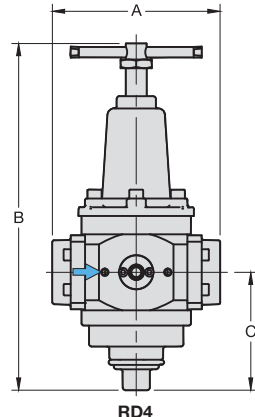
non-relieving without relieving function RD . . . . K  
30 bar operating pressure RD . . . . H

**Accessories**

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for RD1	MA4001-..*2
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for RD2	MA5002-..*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for RD3 and RD4	MA6302-..*2
mounting bracket	made of steel	for RD1	BW30-02
mounting nut	made of plastic	for RD1	M30x1,5K
mounting bracket	made of steel	for RD2	BW50-03
mounting nut	made of plastic	for RD2	M50x1,5K
mounting bracket	made of steel	for RD3	BW00-06



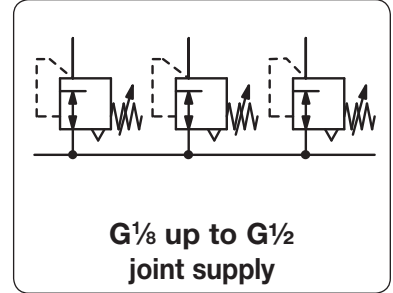
series	D	Ø E	M
RD1	30	4.5	M30x1,5
RD2	51	5.5	M50x1,5
RD3	76	6.5	-
RD4	76	8.5	-



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar



<b>Description</b>	Diaphragm pressure regulator, with joint pressure supply. Modular assembly without need for double nipples or other fittings. Outlet at rear side, gauge port in the front.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 16 bar, max. 10 bar for R035		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	by plastic knob with snap-lock, R035 without snap-lock		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{8}$ at R035 and RB-02, G $\frac{1}{4}$ at all others		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F		
<b>Material</b>	Body: zinc die-cast, POM at R035	Adjusting knob: plastic	Inner valve: brass
	Elastomer: NBR/Buna-N		
	Thread insert: brass at R035		



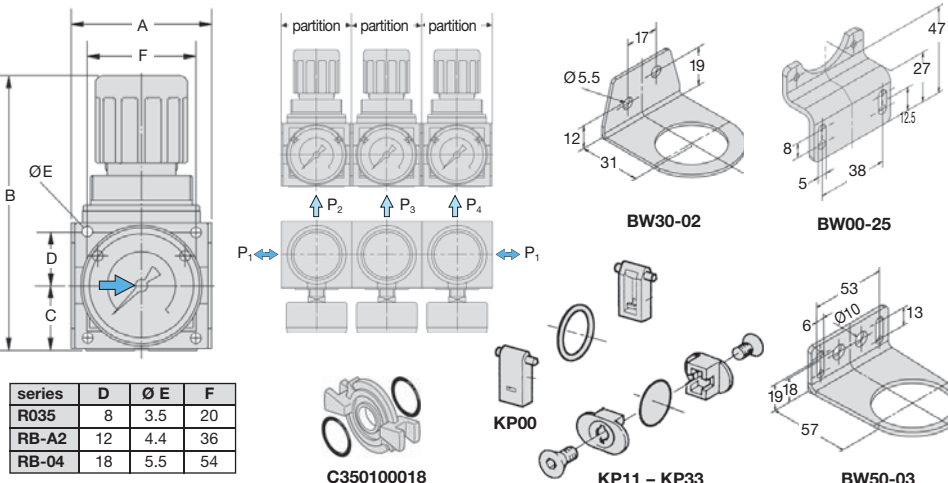
Dimensions			K <sub>v</sub> -	Flow	Connection	Pressure	Order
A	B	C	splitting value	rate	thread	range	number
mm	mm	mm	mm (m <sup>3</sup> /h)	m <sup>3</sup> /h*1 l/min*1	G	bar	

Pressure regulator		supply pressure max. 16 bar, relieving Series R035 max. 10 bar, without pressure gauge				RB / R035	
36	61	12	36	0.11	15	250	G $\frac{1}{8}$ 0 ... 6 <b>R035-01RB</b>
40	84	12	40	0.60	60	1000	G $\frac{1}{4}$ 0.1 ... 3 <b>RB-02B</b> 0.2 ... 6 <b>RB-02C</b> 0.5 ... 10 <b>RB-02D</b>
48	94	22	45	1.3	126	2100	G $\frac{1}{4}$ 0.1 ... 3 <b>RB-A2B</b> 0.2 ... 6 <b>RB-A2C</b> 0.5 ... 10 <b>RB-A2D</b> 0.5 ... 16 <b>RB-A2E</b>
58	114	27	55	1.9	192	3200	G $\frac{3}{8}$ 0.1 ... 3 <b>RB-03B</b> 0.2 ... 6 <b>RB-03C</b> 0.5 ... 10 <b>RB-03D</b> 0.5 ... 16 <b>RB-03E</b>
70	133	36	66	2.4	240	4000	G $\frac{1}{2}$ 0.1 ... 3 <b>RB-04B</b> 0.2 ... 6 <b>RB-04C</b> 0.5 ... 10 <b>RB-04D</b> 0.5 ... 16 <b>RB-04E</b>



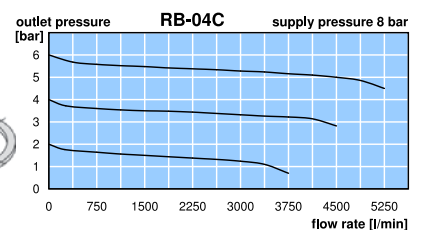
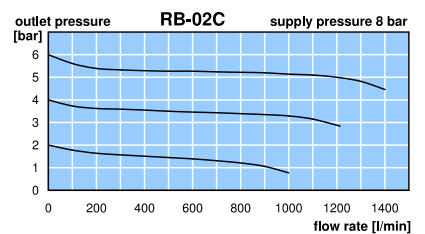
## Accessories

<b>pressure gauge</b>	Ø 23 mm, 0... <sup>*2</sup> bar, G $\frac{1}{8}$	for RB-02 / R035	<b>MA2301-...<sup>*2</sup></b>
	Ø 40 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$ , connection parts required	for RB-A2	<b>MA4001-...<sup>*2</sup></b>
	Ø 50 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$	for RB-03 / RB-04	<b>MA5001-...<sup>*2</sup></b>
<b>connection parts</b>	adapter for MA4001, G $\frac{1}{4}$ m to G $\frac{1}{8}$ f		<b>VI-0201</b>
<b>mounting bracket</b>	made of steel	for RB-02 / RB-A2	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic	for RB-02 / RB-A2	<b>M30x1,5K</b>
<b>mounting bracket</b>	made of steel	for RB-03	<b>BW00-25</b>
<b>mounting nut</b>	made of plastic	for RB-03	<b>M42x1,5K</b>
<b>mounting bracket</b>	made of steel	for RB-04	<b>BW50-03</b>
<b>mounting nut</b>	made of plastic	for RB-04	<b>M50x1,5K</b>
<b>connection clips</b>	made of plastic	for R035	<b>C350100018</b>
<b>connector kit</b>	for RB-02 <b>KP00</b>	for RB-03	<b>KP22</b>
	for RB-A2 <b>KP11</b>	for RB-04	<b>KP33</b>



series	D	Ø E	F
R035	8	3.5	20
RB-A2	12	4.4	36
RB-04	18	5.5	54

\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar



Gauges: see chapter for measuring devices

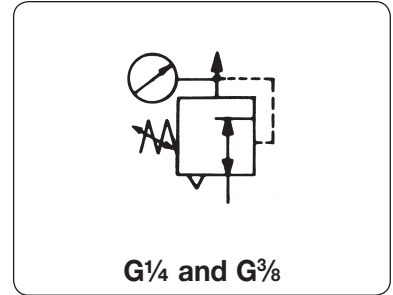
PDF CAD  
www.aircom.net

Order example:  
**R035-01RB**

# Gauge Pressure Regulator

RM

<b>Description</b>	Diaphragm-operated pressure regulator with integrated gauge in the handwheel. The regulator is user-friendly and saves on space for a gauge in panel.	
<b>Adjustment</b>	Knob with integrated gauge. The RM1 regulator has a tamper-proof knob with snap-lock.	
<b>Relieving function</b>	relieving as standard	
<b>Supply pressure</b>	RM1: max. 16 bar	RM2: max. 25 bar
<b>Pressure gauge</b>	RM1: scale in bar	RM2: scale in bar and psi readable down to 3 bar for 10/16 bar range
<b>Temperature range</b>	RM1: -10 °C to 60 °C / 14 °F to 140 °F	RM2: -10 °C to 90 °C / 14 °F to 190 °F
<b>Material</b>	RM1: body: zinc die-cast elastomer: NBR/Buna-N	RM2: body: zinc die-cast and aluminium elastomer: NBR/Buna-N

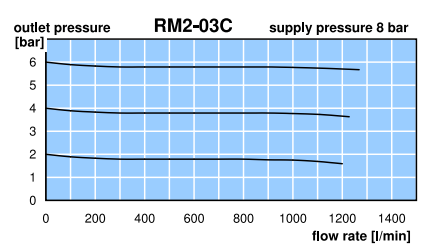
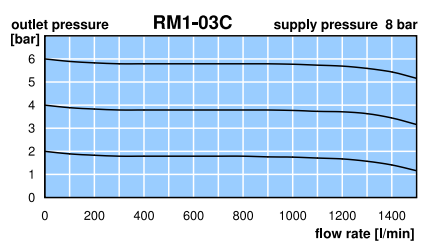
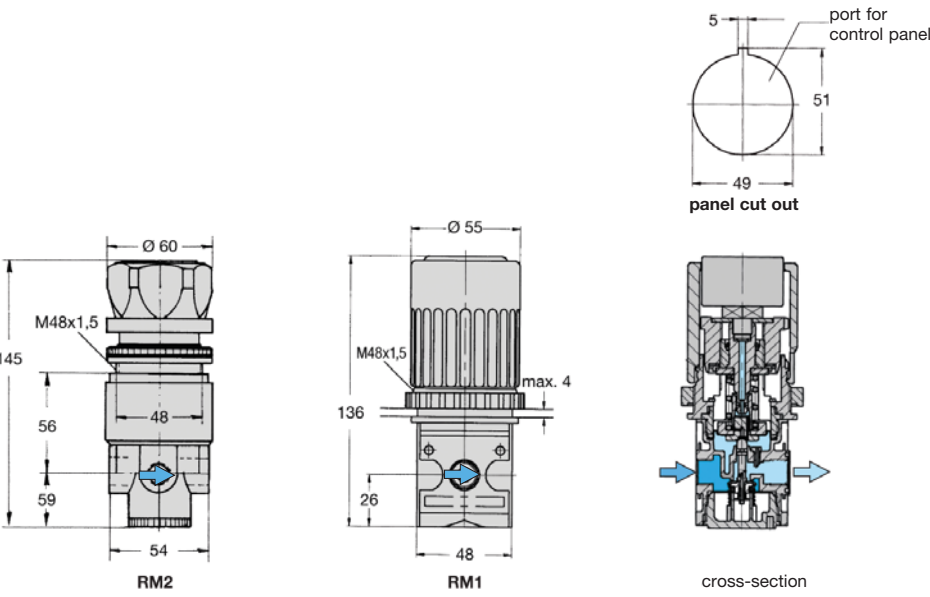


Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

Pressure regulator, P <sub>1</sub> max. 16 bar							including nut, gauge range approx. 30% above pressure range		RM1
48	136	26	1.2	84	1400	G <sup>1</sup> / <sub>4</sub>	0.1... 3	RM1-02A	
							0.2... 6	RM1-02B	
							0.3...10	RM1-02C	
48	136	26	1.3	90	1500	G <sup>3</sup> / <sub>8</sub>	0.1... 3	RM1-03A	
							0.2... 6	RM1-03B	
							0.3...10	RM1-03C	



Pressure regulator, P <sub>1</sub> max. 25 bar							including nut, gauge range approx. 30% above pressure range		RM2
54	145	30	0.9	66	1100	G <sup>1</sup> / <sub>4</sub>	0.1... 3	RM2-02A	
							0.2... 6	RM2-02B	
							0.3...10	RM2-02C	
							0.5...16	RM2-02D	
54	145	30	1.0	72	1200	G <sup>3</sup> / <sub>8</sub>	0.1... 3	RM2-03A	
							0.2... 6	RM2-03B	
							0.3...10	RM2-03C	
							0.5...16	RM2-03D	



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

**Description** Piston-operated regulator with balanced valve design and high-relief flow. Features include a transparent pressure-calibrated, non-rising adjusting dial which can be mounted in any position so the dial face is always visible. Pressure setting in steps is possible.

**Media** compressed air

**Supply pressure** max. 21 bar, minimum 1 bar above outlet pressure

**Air consumption** R21/R31/R41: max. 1.4 l/min depending on outlet pressure R11: without constant bleed

**Adjustment** The full secondary pressure range can be dialed in less than a 270° turn proportional to handwheel with scale in bar or psi. This is advantageous if secondary pressure must be changed frequently.

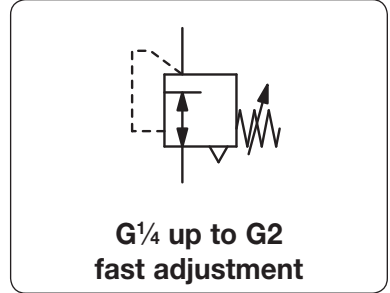
**Relieving function** relieving

**Gauge port** G $\frac{1}{4}$  on both sides of the body, not available at R11

**Mounting position** any

**Temperature range** 0 °C to 65 °C / 32 °F to 149 °F

**Material** Body: zinc die-cast  
Piston: acetal  
Valve seat: acetal, brass and NBR/Buna-N  
O-ring: NBR/Buna-N



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A mm	B mm	C mm		m <sup>3</sup> /h*1	l/min*1			

Adjustment dial regulator							supply pressure max. 21 bar, relieving, with constant bleed, adjusting dial 270° turn wheel		R11...R41
66	71	10	0.02	1.2	20	G $\frac{1}{4}$	0... 3	0... 11	R11-C2-L R11-C2-O
81	104	24	2.5	180	3000	G $\frac{1}{4}$	0... 3	0... 11	R21-C2-L R21-C2-O
81	104	24	3.8	270	4500	G $\frac{3}{8}$	0... 3	0... 11	R21-C3-L R21-C3-O
81	104	43	4.2	300	5000	G $\frac{1}{2}$	0... 3	0... 11	R21-C4-L R21-C4-O
109	132	43	6.8	480	8000	G $\frac{3}{4}$	0... 3	0... 11	R31-C6-L R31-C6-O
109	132	43	7.6	540	9000	G1	0... 3	0... 11	R31-C8-L R31-C8-O
135	173	71	18.5	1320	22000	G1 $\frac{1}{2}$	0... 3	0... 11	R41-CB-L R41-CB-O
135	173	71	20.0	1440	24000	G2	0... 3	0... 11	R41-CC-L R41-CC-O



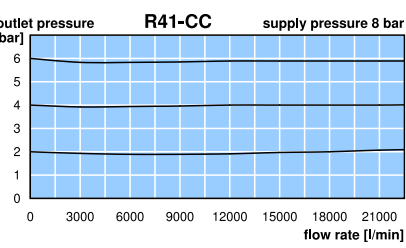
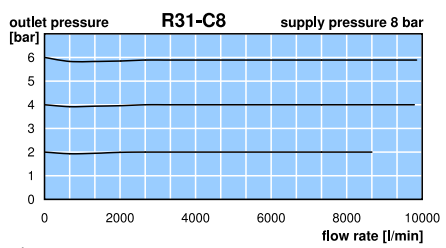
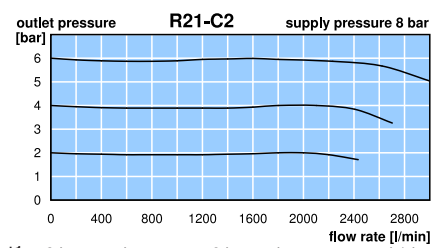
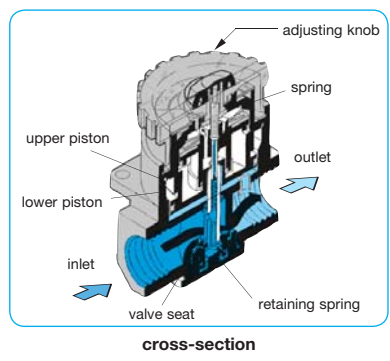
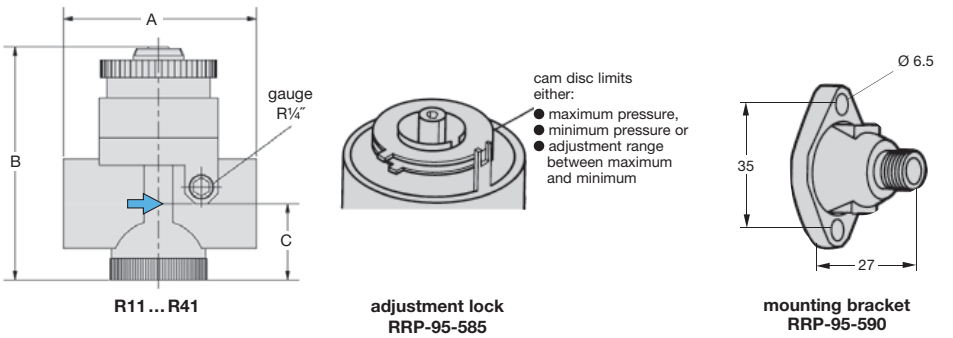
**Special options, add the appropriate letter**

adjustment lock RRP-95-585 R. 1-C . . T

**Accessories**

pressure gauge Ø 50 mm, 0...\*2 bar, G $\frac{1}{4}$  for R21 to R41 MA5002-..\*2

mounting bracket mounting through the gauge port at the back for R21 to R41 RRP-95-590



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 16 = 0...16 bar

## Low Pressure Regulators

	Description	Supply pressure max. bar	Pressure range mbar	Connection thread	Device	Page
<b>standard</b>	also for propane and other gases	16	factory-set 50	G $\frac{1}{4}$ - G $\frac{1}{2}$	R01	<b>3.02</b>
	miniature, manually adjustable	16	25 ... 50 / 1400	G $\frac{1}{4}$ and G $\frac{3}{8}$	R01-5/-6	<b>3.03</b>
	miniature	10	20 ... 1500 / 500	G $\frac{1}{2}$ and G $\frac{3}{4}$	R01-2/-4	<b>3.03</b>
	for oil	10	preset 100 / 2500	G $\frac{1}{4}$ and G $\frac{3}{8}$	RL13	<b>3.03</b>
	for many different gases	0.4	2 ... 16 / 160	G $\frac{1}{2}$ - G2	RGDJ	<b>3.04</b>
	for many different gases	4	5 ... 12 / 350	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4	<b>3.05</b>
	for many different gases	7	5 ... 45 / 3000	G $\frac{1}{2}$ - G2	R160	<b>3.06</b>
	for many different gases	20	10 ... 18 / 4400	G1 - flange DN50	RZ	<b>3.08</b>
<b>precise</b>	with relieving function	10	2 ... 45 / 350	G $\frac{3}{8}$ - G $\frac{3}{4}$	R4100	<b>3.09</b>
	for pure gases 5.0	20	5 ... 50 / 1500	G $\frac{1}{2}$	RR	<b>3.10</b>
	Nullmatic	35	2 ... 120 / 31000	$\frac{1}{4}$ "NPT	R40	5.12
	relatively small	10	2 ... 35 / 800	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.15
<b>made of stainless steel</b>	for many different gases	7	5 ... 45 / 3000	G $\frac{1}{2}$ - G2	R3100	15.12
<b>volume booster</b>	for many different gases	20	10 ... 350 / 1000	G1 - G2	RZ	6.10
	for many different gases	0.4	2 ... 55 / 100	G $\frac{1}{2}$ - G2	RGDJ-J	6.13
	for many different gases	4	5 ... 350	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	6.13
<b>back pressure regul.</b>	precise	10	2 ... 35 / 800	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB110	8.08
	precise	6	5 ... 45 / 3000	G $\frac{1}{2}$ - G2	DBC	8.11

Low  
pressure



3



# 3

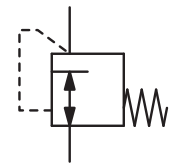
## Low Pressure Regulators



# Low Pressure Regulator with Factory-Set Outlet Pressure of 50 mbar

R01

<b>Description</b>	Low pressure regulator with factory-set outlet pressure of 50 mbar and an integrated safety valve, (except for regulator R01-415), thus not for gas pressure regulation in closed rooms.	
<b>Media</b>	compressed air, propane, butane or other non-corrosive gases	
<b>Supply pressure</b>	max. 16 bar at R01-415, R01-310/-405/-406,	max. 2.5 bar bei R01-319/-407/-604/-641
<b>Accuracy</b>	at max. supply pressure and flow: < 15 % FS pressure deviation	< 25 % FS pressure deviation
	at max. supply pressure without flow: < 25 % FS pressure deviation	< 5 % FS pressure deviation
	at min. supply pressure and flow:	
<b>Air consumption</b>	without constant bleed	
<b>Relieving function</b>	non-relieving	
<b>Gauge port</b>	G $\frac{1}{4}$ on one side of the body, except on R01-319/-415	
<b>Mounting position</b>	any	
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F	
<b>Material</b>	Body: zinc die-cast, chrome-plated	Inner valve: brass
	Elastomer: NBR/Buna-N	



G $\frac{1}{4}$  and G $\frac{1}{2}$   
50 mbar

Dimensions			Flow rate		Supply pressure	Connection thread	Outlet pressure	Order number
A	B	ØT	m <sup>3</sup> /h	l/min	max. bar	G	mbar	

Low pressure regulator								
supply pressure max. 2.5 / 16 bar, non-relieving, 50 mbar factory-set								R01
100	44	86	1.2	20	16	G $\frac{1}{4}$	50	R01-415
138	92	118	3.0	50	2.5	G $\frac{1}{2}$	50	R01-604
138	92	118	4.8	80	2.5	G $\frac{1}{2}$	50	R01-407
138	117	118	9.6	160	2.5	G $\frac{1}{2}$	50	R01-641
160	133	145	19.8	330	2.5	G $\frac{1}{2}$	50	R01-319
138	92	118	3.0	50	16	G $\frac{1}{2}$	50	R01-405
138	92	118	4.8	80	16	G $\frac{1}{2}$	50	R01-406



R01-415



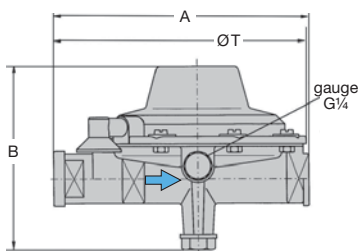
R01-319



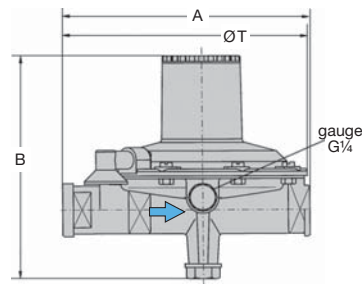
R01-406

## Accessory

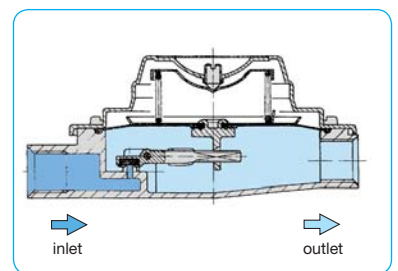
pressure gauge      Ø 63 mm, 0...60 mbar, G $\frac{1}{4}$       not for R01-319/-415      MA6302-B6



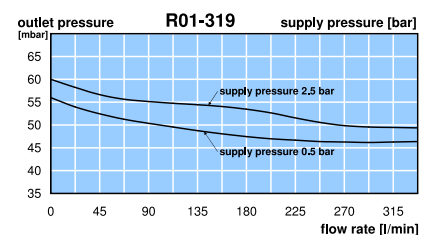
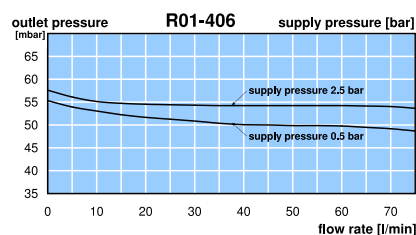
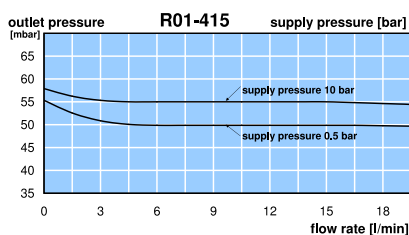
R01-405 / -406 / -604



R01-641



cross-section



Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

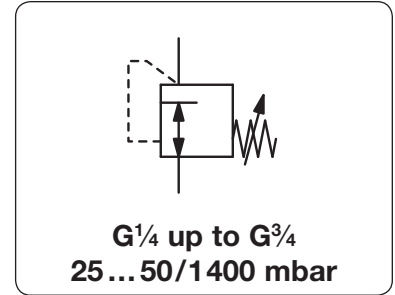


Order example:  
R01-415

# Low Pressure Regulator from 20 mbar, also for Oil

R01 / RL13

<b>Description</b>	The low pressure regulator is manually adjustable. Version R01-2/-3/-4 has an integrated safety valve which opens at a pressure of 1.5 times of the max. outlet pressure, thus not suitable for gas pressure regulation in closed rooms.		
<b>Media</b>	compressed air, propane, butane or other non-corrosive gases as well as oil		
<b>Supply pressure</b>	max. 16 bar at R01-5/-6,	max. 10 bar at R01-2/-3/-4 and RL13-5,	max. 6 bar at RL13-0
<b>Accuracy</b>	at min. supply pressure and flow: < 5% FS pressure deviation at max. supply pressure and flow: < 15% FS pressure deviation at max. supply pressure without flow: < 25% FS pressure deviation		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	RL13-0: no individual settings	Mounting position any	
<b>Relieving function</b>	R01-5/-6: by adjusting knob a. dial enabling eleven settings for different outlet pressures R01-2/-3/-4 and RL13-5: by T-handle with locknut		
<b>Gauge port</b>	non-relieving		
<b>Temperature range</b>	G $\frac{1}{4}$ on one side of the body, except on R01-5/-6 and RL13-0 -20 °C to 60 °C / -4 °F to 140 °F		
<b>Material</b>	Body: zinc die-cast	Elastomer: NBR/Buna-N	Inner valve: brass



Dimensions			Flow rate l/min	Supply pressure empfohlen	Connection thread G	Pressure range mbar	Order number
A mm	B mm	ØT mm					

Low pressure regulator			supply pressure max. 16 bar, non-relieving, without gauge port		R01-5/-6		
100	68	68	13	2.5	G $\frac{1}{4}$	25... 50	R01-524-00
100	68	68	7	6.0	G $\frac{1}{4}$	20... 200	R01-524-05
100	68	68	26	6.0	G $\frac{1}{4}$	70... 200	R01-522-01
100	68	68	50	2.5	G $\frac{1}{4}$	30... 200	R01-524-06
100	68	68	7	2.5	G $\frac{1}{4}$	20... 1400	R01-524-08
103	50	83	40	6.0	G $\frac{3}{8}$ *1	350... 1400	R01-626
103	50	83	140	6.0	G $\frac{3}{8}$ *1	350... 1400	R01-627



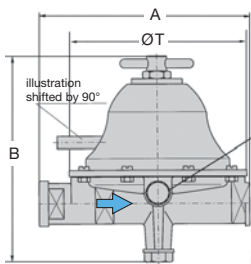
Low pressure regulator			supply pressure max. 10 bar, non-relieving		R01-2/-3/-4		
138	127	117	140	2.5	G $\frac{1}{2}$	20... 150	R01-411-01
138	127	117	140	2.5	G $\frac{1}{2}$	20... 500	R01-211
160	136	145	280	2.5	G $\frac{3}{4}$ *2	50... 500	R01-321



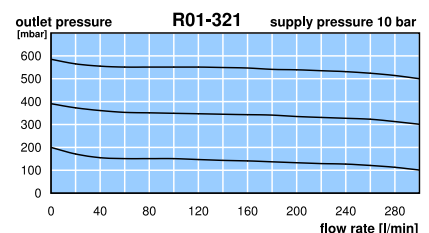
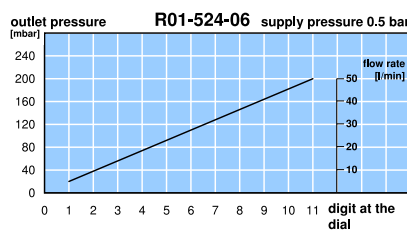
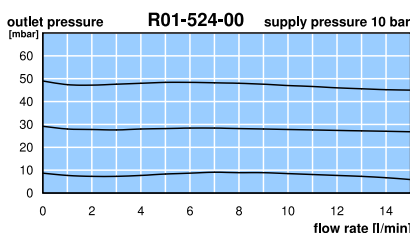
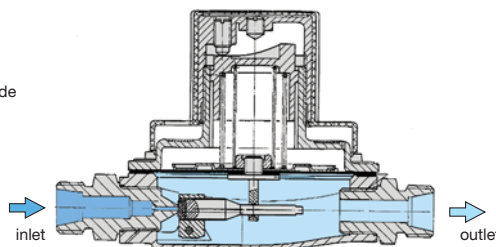
Oil pressure regulator			supply pressure max. 6/10 bar, non-relieving		RL13		
65	32	59	0.3	max. 6	G $\frac{1}{4}$	fest 100	RL13-001
65	70	68	3.0	max. 10	G $\frac{3}{8}$ *1	0... 2500	RL13-504



Accessory							
pressure gauge	Ø 50 mm, 0... 4 bar,	G $\frac{1}{4}$ , Bourdon tube	for RL13-504	MA5002-04			
	Ø 63 mm, 0... 250 mbar, G $\frac{1}{4}$ , capsule type		for R01-411-01	MA6302-C3			
	Ø 63 mm, 0... 0.6 bar, G $\frac{1}{4}$ , Bourdon tube		for R01-2/-3	MA6302-C6			



R01-211 / -321 / -411



\*1 G $\frac{1}{4}$  eingangsseitig    \*2 G $\frac{1}{2}$  eingangsseitig

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

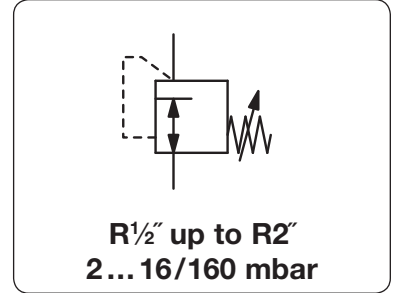


Order example:  
R01-524-00

# Low Pressure Regulator, Supply Pressure max. 400 mbar

RGDJ

<b>Description</b>	Highly sensitive low pressure regulator with inlet pressure compensation for high precision regulation. Zero shut-off prevents outlet pressure from increasing.	
<b>Media</b>	compressed air or non-corrosive gases, dryly biogas H <sub>2</sub> S < 200 ppm	
<b>Supply pressure</b>	max. 400 mbar	
<b>Air consumption</b>	without constant bleed	
<b>Adjustment</b>	manual by turning the spindle under the cover of the spring cage	
<b>Relieving function</b>	non-relieving	
<b>Accuracy</b>	at maximum volume flow: < 20% FS pressure deviation	
<b>Gauge port</b>	none as standard, optionally gauge port G $\frac{1}{4}$ on one side from size R $\frac{3}{4}$ on	
<b>Mounting position</b>	any, preferably bonnet upwards	
<b>Temperature range</b>	-20 °C to 70 °C / -4 °F to 158 °F	
<b>Material</b>	Body: aluminium Elastomer: NBR/Buna-N	Inner valve: aluminium and plastic



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	R	mbar	

Low pressure regulator									
supply pressure max. 400 mbar, non-relieving									
RGDJ									
100	120	30	15	0.66	12	200	1/2"	2... 16	RGDJ-04A
								10... 20	RGDJ-04B
								16... 28	RGDJ-04C
								22... 40	RGDJ-04D
								40... 55	RGDJ-04E
134	166	34	20	1.49	27	450	3/4"	5... 15	RGDJ-06A
								12... 25	RGDJ-06B
								22... 35	RGDJ-06C
								30... 50	RGDJ-06D
								45... 65	RGDJ-06E
								60... 80	RGDJ-06G
								75... 100	RGDJ-06I
								100... 160	RGDJ-06L
134	166	34	25	2.6	51	850	1"	pressure range see R3/4	RGDJ-08.
185	194	45	40	4.9	90	1500	1 1/2"	5... 15	RGDJ-12A
								12... 25	RGDJ-12B
								22... 35	RGDJ-12C
								30... 50	RGDJ-12D
								45... 65	RGDJ-12E
								60... 80	RGDJ-12G
								75... 100	RGDJ-12I
								100... 160	RGDJ-12L
234	219	52	50	6.6	120	2000	2"	5... 15	RGDJ-16A
								12... 25	RGDJ-16B
								22... 35	RGDJ-16C
								30... 50	RGDJ-16D
								45... 65	RGDJ-16E
								60... 80	RGDJ-16G
								75... 100	RGDJ-16I

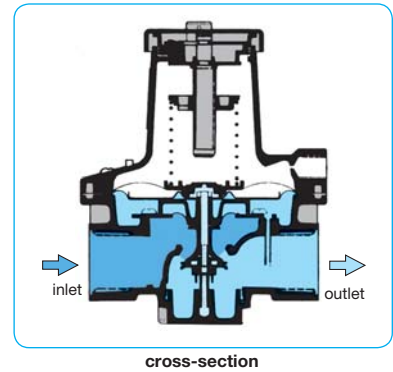
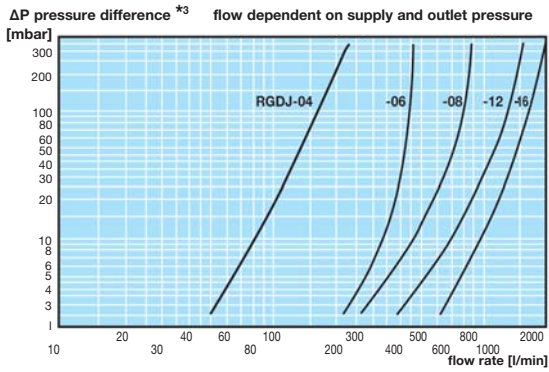
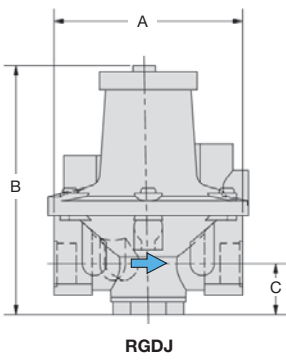


## Special options, add the appropriate letter

Connection thread G $\frac{1}{4}$	for pressure gauge	not for R $\frac{1}{2}$ "	RGDJ - . . . M
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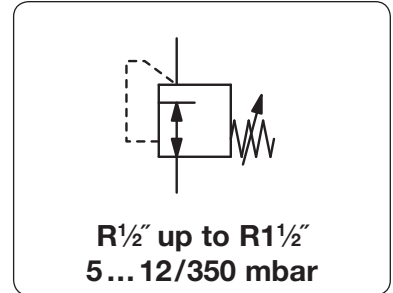
## Accessory

pressure gauge	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$	from R $\frac{3}{4}$ "	MA6302-..*2
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\*1 at 350 mbar supply pressure and 100 mbar outlet pressure  
 \*2 B6 = 0...60 mbar, C2 = 0...160 mbar  
 \*3  $\Delta p = P_1 - P_2$ , difference between supply and outlet pressure

<b>Description</b>	Highly sensitive low pressure regulator with inlet pressure compensation for high precision regulation. Zero shut-off prevents outlet pressure from increasing.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 4 bar	
<b>Air consumption</b>	without constant bleed	
<b>Adjustment</b>	manual by turning the spindle under the cover of the spring cage	
<b>Relieving function</b>	non-relieving	
<b>Accuracy</b>	max. 20% pressure drop at full flow	
<b>Gauge port</b>	none as standard, optionally gauge port G $\frac{1}{4}$ on one side at R $\frac{1}{2}$ " and R1", standard G $\frac{1}{4}$ at R $\frac{1}{2}$ "	
<b>Mounting position</b>	any, preferably bonnet upwards	
<b>Temperature range</b>	-15 °C to 60 °C / 5 °F to 140 °F	
<b>Material</b>	Body: aluminium Elastomer: NBR/Buna-N	Inner valve: aluminium and plastic



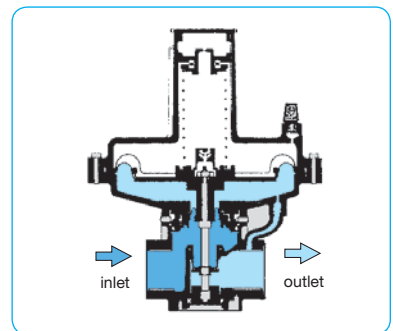
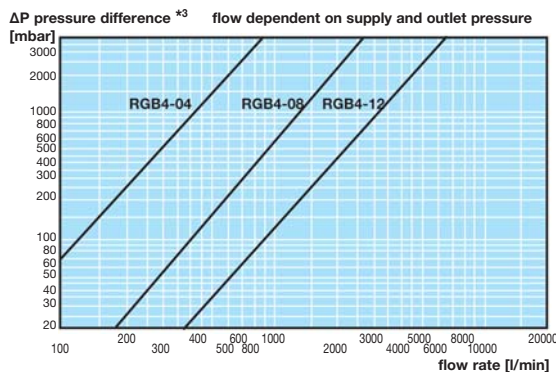
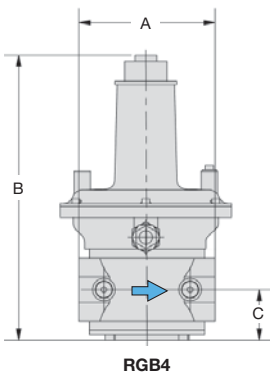
Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	R	mbar	

Low pressure regulator								supply pressure max. 4 bar, non-relieving	RGB4
132	174	24	15	0.62	42	700	1/2"	5 ... 12	RGB4-04A
								10 ... 30	RGB4-04C
								25 ... 45	RGB4-04D
								40 ... 60	RGB4-04E
								55 ... 75	RGB4-04F
								70 ... 90	RGB4-04G
								85 ... 105	RGB4-04H
								100 ... 160	RGB4-04I
								150 ... 230	RGB4-04K
								220 ... 350	RGB4-04L
190	230	33	25	2.5	168	2800	1"	5 ... 12	RGB4-08A
								10 ... 30	RGB4-08C
								25 ... 45	RGB4-08D
								40 ... 60	RGB4-08E
								55 ... 75	RGB4-08F
								70 ... 90	RGB4-08G
								85 ... 105	RGB4-08H
								100 ... 160	RGB4-08I
								150 ... 230	RGB4-08K
								220 ... 350	RGB4-08L
190	265	55	40	5	336	5600	1 1/2"	5 ... 12	RGB4-12A
								10 ... 30	RGB4-12C
								25 ... 45	RGB4-12D
								40 ... 60	RGB4-12E
								55 ... 75	RGB4-12F
								70 ... 90	RGB4-12G
								85 ... 105	RGB4-12H
								100 ... 160	RGB4-12I
								150 ... 230	RGB4-12K
								220 ... 350	RGB4-12L



**Special options**, add the appropriate letter  
connection thread G $\frac{1}{4}$  for pressure gauge for R $\frac{1}{2}$ " and R1" RGB4-...M

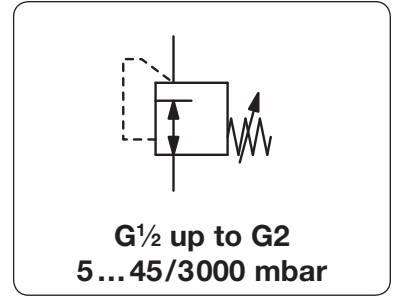
**Accessory**  
pressure gauge  $\varnothing$  63 mm, 0...\*2 mbar, G $\frac{1}{4}$  MA6302-..\*2



\*1 at 4 bar supply pressure and 100 mbar outlet pressure  
\*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar  
\*3  $\Delta P = P_1 - P_2$  difference between supply and outlet pressure



**Description** Low pressure regulator with large diaphragm for good accuracy and high sensitivity.  
**Media** compressed air or non-corrosive gases  
**Supply pressure** max. 7 bar, min. 1 bar  
**Air consumption** without constant bleed  
**Adjustment** for G½ and G¾: by handwheel with locknut  
 from G1: by hexagon head screw with locknut  
**Relieving function** non-relieving  
**Gauge port** G¼ on both sides of the body, screw plug supplied  
**Mounting position** any  
**Temperature range** -20 °C to 80 °C / -4 °F to 176 °F  
**Material** Body: aluminium coated  
 O-rings: NBR/Buna-N, optionally FKM or EPDM  
 Diaphragm: NBR/Buna-N with PTFE coating  
 Inner valve: stainless steel / brass  
 Spring cage: stainless steel



Dimensions			K <sub>v</sub> -value	Flow rate		P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C		m³/h*	l/min*1				

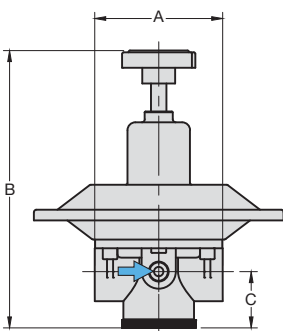
Low pressure regulator										supply pressure max. 6 / 7 bar, non-relieving, without constant bleed	R160
82	188	38	0.4	60	1000	6	G½*3	5 ... 45	R160-04A		
								20 ... 200	R160-04B		
								150 ... 700	R160-04C		
154	233	69	1.8	180	3000	7	G¾	5 ... 45	R160-06A		
								10 ... 120	R160-06B		
								10 ... 400	R160-06C		
154	292	53						15 ... 700	R160-06D		
								200 ... 1200	R160-06E		
154	233	69	1.8	180	3000	7	G1	5 ... 45	R160-08A		
								10 ... 120	R160-08B		
								10 ... 400	R160-08C		
154	292	53						15 ... 700	R160-08D		
								200 ... 1200	R160-08E		
263	233	69	1.8	180	3000	7	G1¼	5 ... 45	R160-10A		
								10 ... 120	R160-10B		
								10 ... 400	R160-10C		
263	292	53						15 ... 700	R160-10D		
								200 ... 1200	R160-10E		
263	233	69	1.8	180	3000	7	G1½	5 ... 45	R160-1AA		
								10 ... 120	R160-1AB		
								10 ... 400	R160-1AC		
263	292	53						15 ... 700	R160-1AD		
								200 ... 1200	R160-1AE		



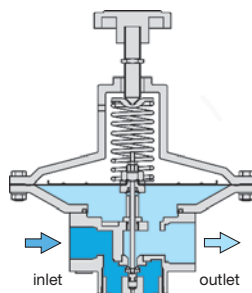
R160-04  
Zubehör Manometer



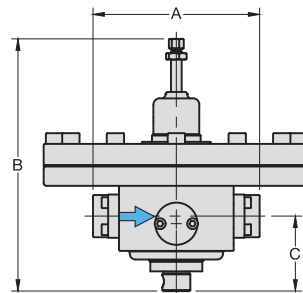
R160-06 /-08 /-10 /-1A



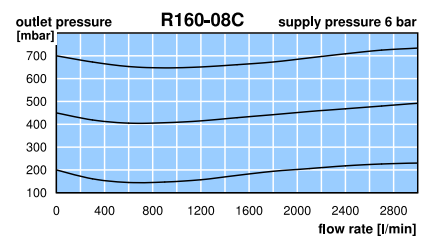
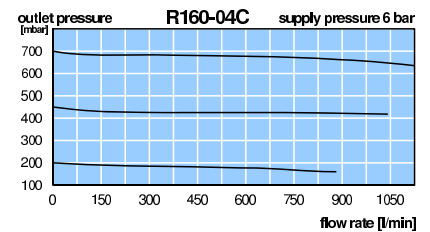
R160-04



cross-section

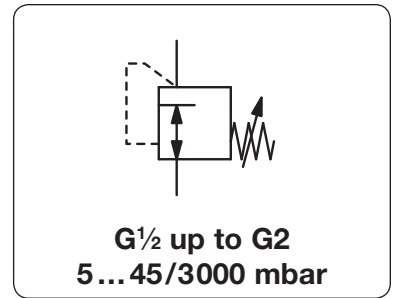


R160-06/-08/-10/-1A (A/B/C)



\*1 at 6 bar supply pressure and max. outlet pressure \*2 see description above \*3 thread at outlet G¾

**Description** Low pressure regulator with large diaphragm for good accuracy and high sensitivity.  
**Media** compressed air or non-corrosive gases  
**Supply pressure** max. 7 bar, min. 1 bar  
**Air consumption** without constant bleed  
**Adjustment** for G $\frac{1}{2}$  and G $\frac{3}{4}$ : by handwheel with locknut  
 from G1: by hexagon head screw with locknut  
**Relieving function** non-relieving  
**Gauge port** G $\frac{1}{4}$  on both sides of the body, screw plug supplied  
**Mounting position** any  
**Temperature range** -20 °C to 80 °C / -4 °F to 176 °F  
**Material** Body: aluminium coated  
 O-rings: NBR/Buna-N, optionally FKM or EPDM  
 Diaphragm: NBR/Buna-N with PTFE coating  
 Inner valve: stainless steel / brass  
 Spring cage: stainless steel



Dimensions			K <sub>v</sub> -value	Flow rate	P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	bar	G	mbar

Low pressure regulator									supply pressure max. 6 / 7 bar, non-relieving, without constant bleed	R160
215	472	128	5.7	480	8000	6	G1 $\frac{1}{2}$	20 ... 50	R160-12A	
								50 ... 150	R160-12B	
								150 ... 300	R160-12C	
								300 ... 3000	R160-12D	
215	472	128	5.7	480	8000	6	G2	20 ... 50	R160-16A	
								50 ... 150	R160-16B	
								150 ... 300	R160-16C	
								300 ... 3000	R160-16D	

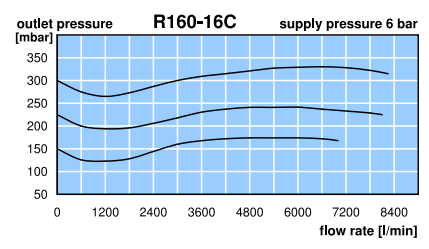
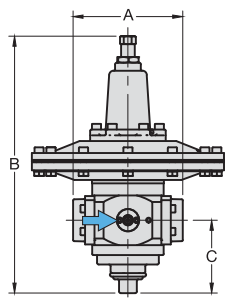
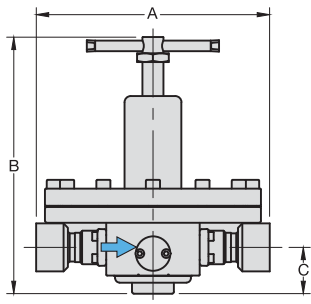
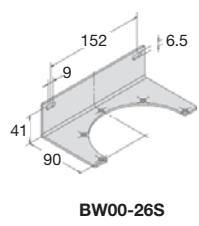


**Special options, add the appropriate letter**

NPT	connection thread	for G1	to G2	R160-... N
SST inner parts	for ammonia NH <sub>3</sub>	for G $\frac{1}{2}$	and G1 $\frac{1}{2}$ (-1A)	R160-... .02
		for G1 $\frac{1}{2}$ (-12)	and G2	R160-1. .02
FKM -o-ring	PTFE diaphragm			R160-... T
EPDM-o-ring				R160-... TE
EPDM-o-ring	FDA-approval			R160-... TD
carbon dioxide CO <sub>2</sub>				R160-... .03
argon	Ar			R160-... .05
nitrogen	N <sub>2</sub>			R160-... .07
helium	He			R160-... .09
hydrogen	H <sub>2</sub>			R160-... .11
methane	CH <sub>4</sub>			R160-... .13
natural gas *4				R160-... .14
oxygen	O <sub>2</sub>			R160-... .15
propane	C <sub>3</sub> H <sub>6</sub>			R160-... .16
nitrous oxide	N <sub>2</sub> O			R160-... .17
flange connection	see chapter for stainless steel devices			R160-... F.

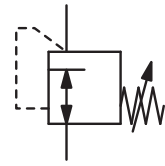
**Accessory**

pressure gauge	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ , capsule type, connection parts required	MA6302-... *2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube, connection parts required	MA6302-... *2
connection parts	for pressure gauge, made of brass, not for NH <sub>3</sub>	for G $\frac{1}{2}$ AM-01
connection parts	for pressure gauge, made of stainless steel, for NH <sub>3</sub>	for G $\frac{1}{2}$ AM-03S
mounting bracket	made of stainless steel	for G $\frac{1}{2}$ BW00-26S



\*1 at 6 bar supply pressure and max. outlet pressure  
 \*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, 01 = 0...1 bar, 04 = 0...4 bar, 06 = 0...6 bar  
 \*4 without DVGW approval

**Description** Highly sensitive diaphragm pressure regulator.  
**Media** compressed air or non-corrosive gases  
**Supply pressure** max. 20 bar depending on the accuracy range AR: the smaller P<sub>1</sub> the higher the accuracy, min. 1 bar  
 max. 10 bar at pressure range < 120 mbar  
**Accuracy** at maximum volume flow < e.g. 10% FS pressure deviation  
**Air consumption** without constant bleed  
**Adjustment** manual by turning the spindle under the cover of the spring cage  
**Relieving function** non-relieving, optionally relieving  
**Relief capacity** Can be adjusted independently of outlet pressure. On non-relieving designs: blocked exhaust valve.  
**Gauge port** not available  
**Temperature range** -20 °C to 60 °C / -4 °F to 140 °F  
**Material** Body: SG cast iron GGG50, GGG40 at DN50 Elastomer: NBR/Buna-N, optionally FKM  
 Spring cage: aluminium Inner valve: brass and stainless steel  
**Mounting position** any



**G1 up to flange DN50**  
**15...20/4400 mbar**

Dimensions			Accuracy	Nominal size	Flow rate	P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C	%	DN	l/min*1	bar*2	G	mbar	

**Low press. regulator w. positioning spring** P<sub>1</sub>: max. 20 bar, non-relieving **RZ**

185	245	30	10	17	1800	10	G1	15 ... 20	<b>RZ1-08A</b>								
								20 ... 30	<b>RZ1-08B</b>								
								30 ... 40	<b>RZ1-08C</b>								
								40 ... 70	<b>RZ1-08D</b>								
								70 ... 110	<b>RZ1-08E</b>								
								110 ... 180	<b>RZ2-08F</b>								
								180 ... 300	<b>RZ2-08G</b>								
								300 ... 700	<b>RZ3-08H</b>								
185	245	30	10	17	2700	10	G1½*3	15 ... 20	<b>RZ1-12A</b>								
								20 ... 30	<b>RZ1-12B</b>								
								30 ... 40	<b>RZ1-12C</b>								
								40 ... 70	<b>RZ1-12D</b>								
								70 ... 110	<b>RZ1-12E</b>								
								110 ... 180	<b>RZ2-12F</b>								
								180 ... 300	<b>RZ2-12G</b>								
								300 ... 700	<b>RZ3-12H</b>								
								254	460	80	5	22	15000	10	flange	10 ... 18	<b>RZ1-16AF</b>
																15 ... 30	<b>RZ1-16BF</b>
25 ... 49	<b>RZ1-16CF</b>																
40 ... 75	<b>RZ1-16DF</b>																
62 ... 120	<b>RZ1-16EF</b>																
100 ... 170	<b>RZ1-16FF</b>																
145 ... 270	<b>RZ1-16GF</b>																
230 ... 350	<b>RZ1-16HF</b>																
280 ... 720	<b>RZ2-16IF</b>																
840 ... 1250	<b>RZ2-16KF</b>																
			5	34	28000	20		280 ... 720	<b>RZ2-16IF</b>								
								840 ... 1250	<b>RZ2-16KF</b>								



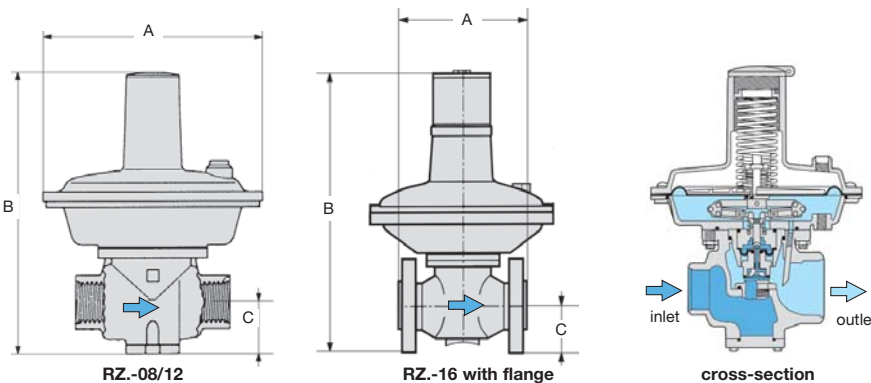
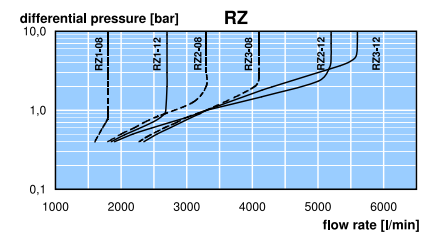
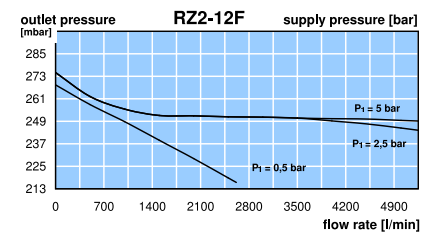
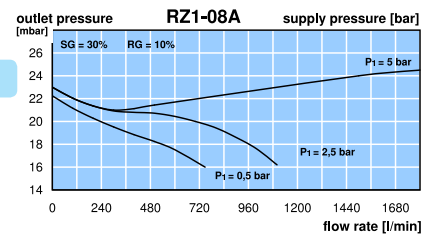
RZ2-08F



RZ1-16AF

**Special options,** add the appropriate letter

- further ranges** RZ3-08 / -12 700...1100 I 1100...2000 J 2000...3000 RZ3-... K
- further ranges** RZ2-16 1050...2300 L 2000...4400 RZ3-16M
- relieving** with relieving function, adjustable RZ-... R
- FKM elastomer** RZ-... V
- flange connection** see chapter for stainless steel devices / flanges RZ-... F.
- nitrogen** N<sub>2</sub>: 07 **carbon dioxide** CO<sub>2</sub>: 03 **argon** Ar: RZ-... 05
- helium** He: 09 **hydrogen** H<sub>2</sub>: 11 **methane** CH<sub>4</sub>: RZ-... 13
- oxygen** O<sub>2</sub>: 15 **propane** C<sub>3</sub>H<sub>8</sub>: 16 **nitrous oxide** N<sub>2</sub>O: RZ-... 17

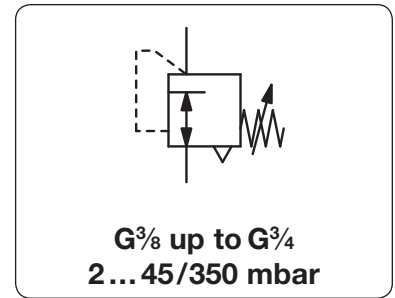


\*1 at 4 bar supply pressure and max. outlet pressure \*2 see description above \*3 G1 thread at inlet

# Precision Low Pressure Regulator, with relieving function

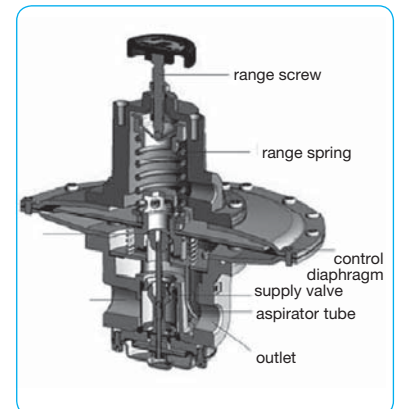
R4100

<b>Description</b>	High precision diaphragm pressure regulator with high flow, without zero shut-off (counterpressure is required).
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 10 bar
<b>Accuracy</b>	sensitivity < 2 mbar
<b>Air consumption</b>	without constant bleed
<b>Adjustment</b>	by handwheel with locknut
<b>Relieving function</b>	relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194°F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N Inner valve: stainless steel, brass, aluminium and steel



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range mbar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

Precision low pressure regulator								P1: max. 10 bar, relieving, without constant bleed	R4100
87	219	40	0.24	30	500	G $\frac{3}{8}$	2... 45	R4100-03A	
							2... 95	R4100-03B	
							5... 210	R4100-03C	
							5... 350	R4100-03D	
87	219	40	0.27	36	600	G $\frac{1}{2}$	2... 45	R4100-04A	
							2... 95	R4100-04B	
							5... 210	R4100-04C	
							5... 350	R4100-04D	
87	219	40	0.30	42	700	G $\frac{3}{4}$	2... 45	R4100-06A	
							2... 95	R4100-06B	
							5... 210	R4100-06C	
							5... 350	R4100-06D	

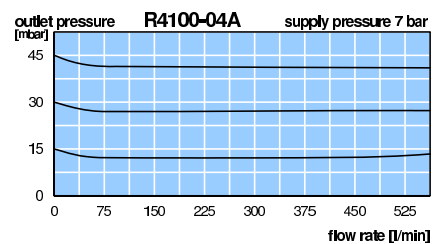
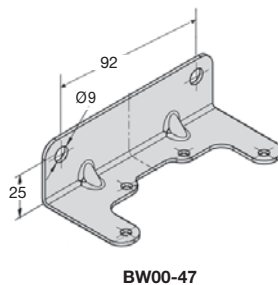
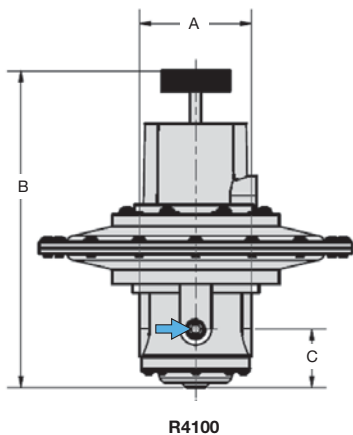


## Special options, add the appropriate letter

<b>NPT</b>	connection thread	R4100-...N
<b>tapped exhaust</b>	connection thread G $\frac{1}{4}$	R4100-...X12
<b>tamper-proof cap</b>	made of aluminium, adjustment by screwdriver, height 295 mm	R4100-...T
<b>FKM elastomer</b>		R4100-...V
<b>flange connection</b>	see chapter for stainless steel devices / flanges	R4100-...F.

## Accessory

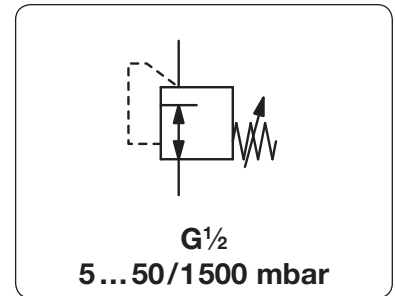
<b>pressure gauge</b>	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$	MA6302-...*2
<b>mounting bracket</b>	made of steel	BW00-47



\*1 at 10 bar supply pressure and max. outlet pressure \*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar



<b>Description</b>	Precision regulator in mbar range without auxiliary power. Accurate and reliable regulation with large diaphragm for high sensitivity compressed air or non-corrosive gases up to 5.0 purity (99.999% vol.)
<b>Media</b>	compressed air or non-corrosive gases up to 5.0 purity (99.999% vol.)
<b>Supply pressure</b>	max. 20 bar
<b>Air consumption</b>	without constant bleed
<b>Adjustment</b>	by handwheel with locknut
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	G $\frac{1}{2}$ on the bottom side of the body, screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	-20 °C to 70 °C / -4 °F to 158 °F, for CO $_2$ up to 40 °C / 104 °F
<b>Material</b>	Body: grey-coated brass Diaphragm: EPDM with PTFE coating O-rings: NBR/Buna-N Inner valve: brass



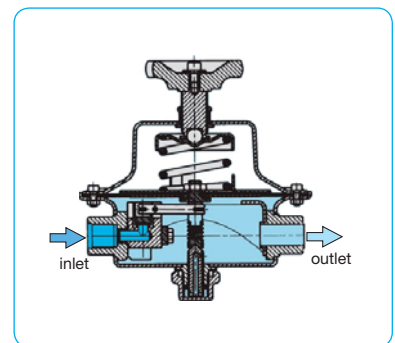
Dimensions			Flow rate		Connection thread	Pressure range	Order number
A	B	C	m $^3$ /h*1	l/min*1	G	mbar/bar	

Low pressure regulator				supply pressure max. 20 bar, non-relieving, without constant bleed		RR	
164	156	41	5	75	G $\frac{1}{2}$	5 ... 50 mbar	RR-04A
			12	200		10 ... 100 mbar	RR-04B
			30	500		50 ... 500 mbar	RR-04C
			45	750		0.1 ... 1 bar	RR-04D
			51	850		0.2 ... 1.5 bar	RR-04E



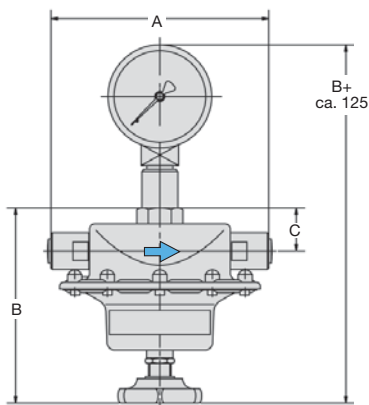
RR

Special options, add the appropriate letter		
free of grease and oil	suitable for oxygen and flammable gases	RR-...L
pressure gauge	Ø 100 mm, 0... bar, handwheel at the bottom	RR-...G

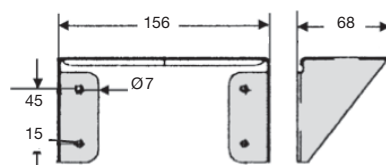


cross-section

Accessory		
mounting bracket	made of steel	for RR-04 BW00-64

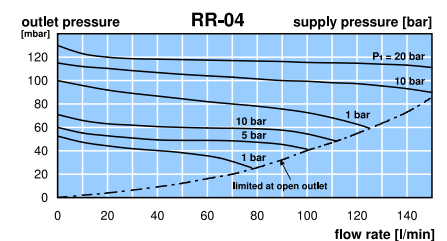
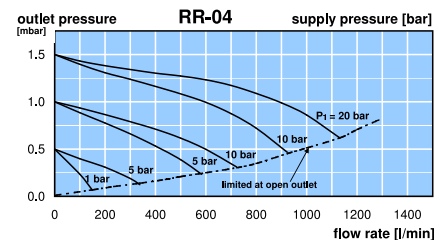


RR-04 with gauge



BW00-64

\*1 at 6 bar supply pressure and open outlet



## High Pressure Regulators

	Description		Supply pressure max. bar	Pressure range bar	Connection thread	Device	Page
<b>press. regulator</b>	also for liquids and O <sub>2</sub>	Kv: 0.3 - 25.6	40	0.2 ... 3 / 35	G $\frac{1}{4}$ - G2	R280	<b>4.02</b>
	for many different gases	Kv: 0.2 - 70	50	0.1 ... 1.5 / 50	G $\frac{1}{4}$ - G4	R120	<b>4.04</b>
	also for liquids	Kv: 1.3 - 3.2	60	0.5 ... 12 / 50	G $\frac{1}{4}$ - G1	R286	<b>4.08</b>
	low cost	Kv: 0.02	207	0.1 ... 3.5 / 12	$\frac{1}{4}$ "NPT	RH83	<b>4.09</b>
	for many different gases	Kv: 0.05 - 3.5	200	0.1 ... 1.5 / 200	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH10	<b>4.10</b>
	gas cylinder pressure regulator		200	0 ... 1.5 / 40	DIN 477	RH201/202	<b>4.12</b>
	gas cylinder pressure regulator		300	0 ... 1.5 / 40	DIN 477	RH300	<b>4.13</b>
	gas cylinder pressure regulator		100	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147	<b>4.14</b>
	gas cylinder pressure regulator		200	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-247	<b>4.14</b>
	gas cylinder pressure regulator		300	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347	<b>4.14</b>
	miniature	Kv: 0.05	241	0.2 ... 2 / 7	$\frac{1}{8}$ "NPT and $\frac{1}{4}$ "NPT	RH0	<b>4.15</b>
	miniature	Kv: 0.05	414	0.5 ... 5 / 124	$\frac{1}{4}$ "NPT	RH1	<b>4.15</b>
	for pure gases 5.0	Kv: 0.9	207	0.2 ... 1.7 / 14	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH2	<b>4.16</b>
	different pressure ranges	Kv: 0.05	414	0.3 ... 35 / 414	$\frac{1}{4}$ "NPT	HP300	<b>4.17</b>
	made of brass	Kv: 0.05	414	0.7 ... 104 / 172	$\frac{1}{4}$ "NPT	HP400	<b>4.17</b>
	different pressure ranges	Kv: 0.05	300	0.1 ... 1.7 / 35	$\frac{1}{4}$ "NPT	HP500	<b>4.18</b>
	large nominal size	Kv: 1.7	260	0.7 ... 21 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3	<b>4.19</b>
	large nominal size	Kv: 1.7	345	3 ... 172	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-U	<b>4.19</b>
	made of brass	Kv: 0.3	414	0 ... 14 / 28	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH4	<b>4.20</b>
	robust	Kv: 0.13	380	0.3 ... 2 / 35	$\frac{1}{4}$ "NPT	RHB	<b>4.21</b>
<b>made of SST</b>	for many different gases	Kv: 0.05 - 3.5	200	1 ... 8 / 200	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH3000	15.18
	large nominal size	Kv: 1.7	310	0.7 ... 21 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-S1	<b>4.19</b>
	robust	Kv: 0.13	380	0.3 ... 2 / 35	$\frac{1}{4}$ "NPT	RHB-S	15.20
	large nominal size	Kv: 1.7	410	3 ... 172	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-S2	<b>4.19</b>
	different pressure ranges		690	0.3 ... 35 / 414	$\frac{1}{4}$ "NPT	HP300-S	<b>4.17</b>
	for different gases, wide variety		60	0.1 ... 1.5 / 50	G $\frac{1}{8}$ - G2	R3000	15.06
<b>vacuum regulator</b>	made of brass		4	0.06...1 bar <sub>abs</sub>	$\frac{1}{4}$ "NPT	RDV	www
<b>differential press.</b>	brass or stainless steel	Kv: 0.7 / 2.0	414	0 ... 1 / 24	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44	<b>4.22</b>
<b>volume booster</b>	ratio 1:2 to 1:19	Kv: 1.7	260	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-J	6.12
	SST 1:2 to 1:19	Kv: 1.7	310	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-JS1	6.12
	SST	Kv: 2.9	100	0.1 ... 24 / 99	G1	RLM, RLE	6.14
	made of brass		50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R120-J	6.15



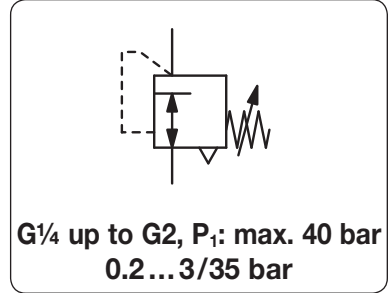
# 4

## High Pressure Regulators



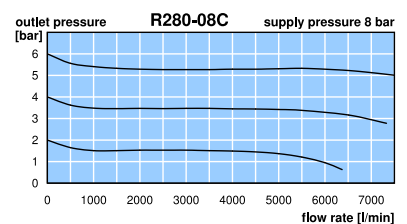
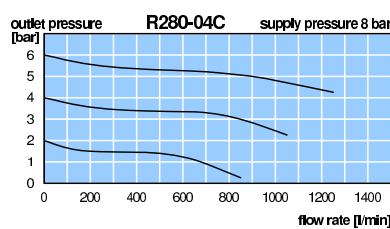
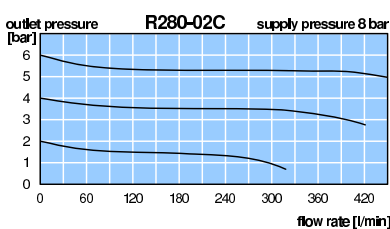
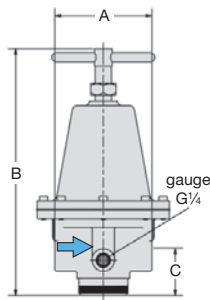
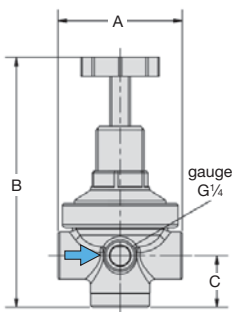
4

<b>Description</b>	Diaphragm pressure regulator for supply pressure up to 40 bar, of solid design, completely made of brass.
<b>Media</b>	compressed air, non-corrosive gases or liquids. Regulator R280-16 is not suitable for liquids.
<b>Supply pressure</b>	max. 40 bar, for liquids $\Delta P_{max.} = 25$ bar
<b>Adjustment</b>	by handwheel for G $\frac{1}{4}$ and G $\frac{1}{2}$ , with locknut by T-handle for G $\frac{3}{4}$ up to G1 $\frac{1}{2}$ by knob for G2 by hexagonal spindle for range 0.5...16/25 bar, up to size G $\frac{1}{2}$ 14 mm A/F, otherwise 19 mm A/F
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	-10 °C to 90 °C / 14 °F to 194 °F
<b>Material</b>	Body: brass, aluminium die-cast at G2 regulator Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Pressure adjustment	K <sub>v</sub> -value	Flow-rate	Connection thread	Pressure range	Order number
A	B	C	mit	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	bar	*
mm	mm	mm			l/min*1			

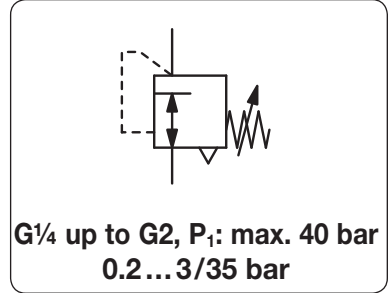
Brass pressure regulator							supply pressure max. 40 bar, for compressed air relieving, without pressure gauge	R280		
45	104	23	handwheel	0.3	26	430	G $\frac{1}{4}$	0.2... 3	R280-02A	
								0.2... 6	R280-02B	
								0.5... 10	R280-02C	
								0.5... 16	R280-02D	
								0.5... 25	R280-02E	
72	145	30	handwheel	0.8	75	1250	G $\frac{1}{2}$	0.2... 3	R280-04A	
								0.2... 6	R280-04B	
								0.5... 10	R280-04C	
								0.5... 16	R280-04D	
								0.5... 25	R280-04E	
			hexagonal spindle							
95	216	41	T-handle	4.8	450	7500	G $\frac{3}{4}$ *2	0.2... 3	R280-06A	
								0.2... 6	R280-06B	
								0.5... 10	R280-06C	
								0.5... 16	R280-06D	
								0.5... 25	R280-06E	
			hexagonal spindle							
95	216	41	T-handle	5.0	468	7800	G1	0.2... 3	R280-08A	
								0.2... 6	R280-08B	
								0.5... 10	R280-08C	
								0.5... 16	R280-08D	
								0.5... 25	R280-08E	
			hexagonal spindle							
128	240	50	T-handle	7.1	660	11000	G1 $\frac{1}{4}$ *2	0.2... 3	R280-10A	
								0.2... 6	R280-10B	
								0.5... 10	R280-10C	
								0.5... 16	R280-10D	
								0.5... 25	R280-10E	
			hexagonal spindle							



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 reduced from next bigger thread

<b>Description</b>	Diaphragm pressure regulator for supply pressure up to 40 bar, of solid design, completely made of brass.
<b>Media</b>	compressed air, non-corrosive gases or liquids. Regulator R280-16 is not suitable for liquids.
<b>Supply pressure</b>	max. 40 bar, for liquids $\Delta P_{max.} = 25$ bar
<b>Adjustment</b>	by handwheel for G $\frac{1}{4}$ and G $\frac{1}{2}$ , with locknut by T-handle for G $\frac{3}{4}$ up to G1 $\frac{1}{2}$ by knob for G2 by hexagonal spindle for range 0.5...16/25 bar, up to size G $\frac{1}{2}$ 14 mm A/F, otherwise 19 mm A/F
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	-10 °C to 90 °C / 14 °F to 194 °F
<b>Material</b>	Body: brass, aluminium die-cast at G2 regulator Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Pressure adjustment	K <sub>v</sub> -value	Flow-rate	Connection thread	Pressure range	Order number
A	B	C	mit	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	bar	*
mm	mm	mm			l/min*1			

Brass pressure regulator		supply pressure max. 40 bar, for compressed air relieving, without pressure gauge					R280		
114	240	50	T-handle	7.7	720	12000	G1 $\frac{1}{2}$	0.2... 3 0.2... 6 0.5... 10 0.5... 16 0.5... 25	R280-12A R280-12B R280-12C R280-12D R280-12E
		hexagonal spindle							
160	248	78	knob	25.6	2400	40000	G2	0.5... 6 0.5... 10 0.5... 16 0.5... 25 0.5... 35	R280-16B R280-16C R280-16D R280-16E R280-16F

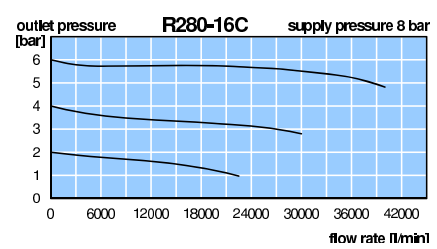
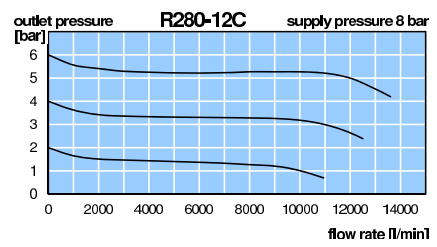
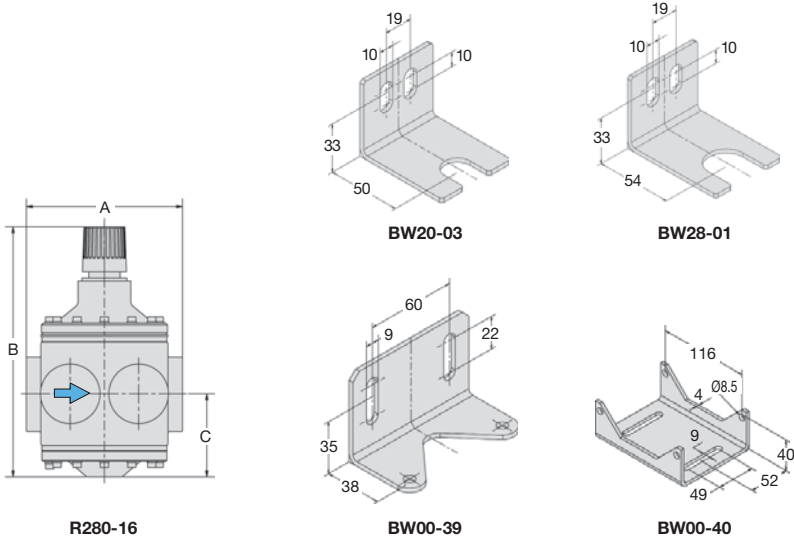


### Special options, add the appropriate letter

<b>non-relieving for oxygen</b>	without relieving function specially cleaned, with oxygen grease, max. 60 °C/140 °F up to G1 $\frac{1}{2}$	not for G2	R280-... K R280-... K15
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### Accessories

<b>pressure gauge</b>	Ø 50 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$ Ø 50 mm, 0...25 bar, G $\frac{1}{4}$ Ø 63 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$ Ø 63 mm, 0...25 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$ for G $\frac{1}{4}$ and G $\frac{1}{2}$ from G $\frac{3}{4}$ from G $\frac{3}{4}$	MA5002-... <sup>*2</sup> MA5002- 25 MA6302-... <sup>*2</sup> MA6302- 25
<b>mounting bracket</b>	made of steel	for G $\frac{1}{4}$	BW20-03
<b>mounting nut</b>	made of brass	for G $\frac{1}{4}$	M20x1,5M
<b>mounting bracket</b>	made of steel	for G $\frac{1}{2}$	BW28-01
<b>mounting nut</b>	made of brass	for G $\frac{1}{2}$	M28x1,5M
<b>mounting bracket</b>	made of steel	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$	BW00-39
<b>mounting bracket</b>	made of steel	for G2	BW00-40



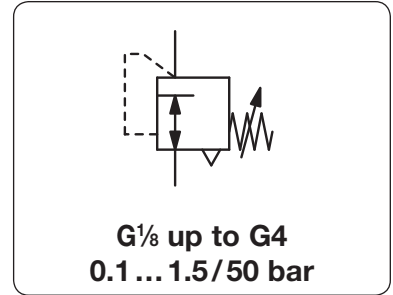
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar



# Brass Pressure Regulator up to 50 bar

R120

<b>Description</b>	Pressure regulator of solid design. Made of brass or bronze. Series R120-0..A to -0..E and R120-16 and -32 are equipped with diaphragms, all other are piston-operated.
<b>Media</b>	compressed air, non-corrosive gases or liquids
<b>Adjustment</b>	<b>Supply pressure</b> see chart, max. 50 bar, for liquids $\Delta p_{max} = 25$ bar R120-01/-A2: with adjusting screw, at R120-02 with black knob R120-04 to -B6: with T-handle R120-16: with hexagonal spindle (spanner size 24 mm) R120-16/-24/-32: by pilot pressure regulator
<b>Relieving function</b>	R120-16/-24/-32: non-relieving
<b>Gauge port</b>	R120-B6: relieving R120-01/-A2: G $\frac{3}{8}$ on both sides of the body, all others G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	<b>Mounting position</b> any 0 °C bis 80 °C / 32 °F to 176 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F, optionally high temperature version up to 130 °C / 266 °F
<b>Material</b>	Body: brass at R120-02 to -04, bronze at R120-06 to -16, aluminium at R120-24/-32 O-ring: FKM, optionally EPDM Spring cage: brass at R120-01 to -04, aluminum at R120-06 to -32 Inner valve: brass Diaphragm: NBR/Buna-N with PTFE coating

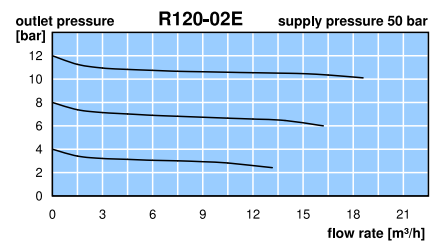
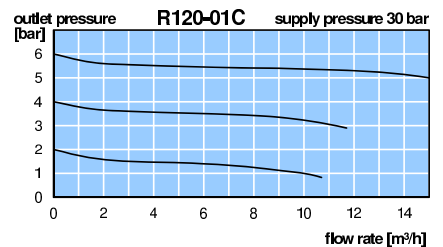
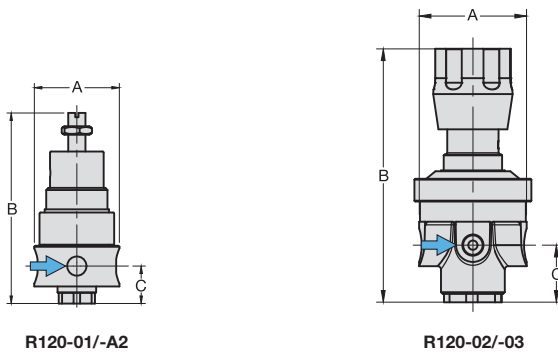


Dimensions			Regul. system	K <sub>v</sub> -	Flow	Connection	P <sub>1</sub>	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	bar	bar	

Brass pressure regulator			for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge						R120	
40	88	18	D	0.20	8	130	G $\frac{3}{8}$	30	0.1 ... 1.5	R120-01A
			D		10	160		30	0.2 ... 3.0	R120-01B
			D		15	250		30	0.5 ... 8.0	R120-01C
			D		20	330		30	1 ... 15	R120-01E
40	88	18	D	0.20	8	130	G $\frac{1}{4}$	30	0.1 ... 1.5	R120-A2A
			D		10	160		30	0.2 ... 3.0	R120-A2B
			D		15	250		30	0.5 ... 8.0	R120-A2C
			D		20	330		30	1 ... 15	R120-A2E
63	140	34	D	0.35	16	260	G $\frac{1}{4}$	30	0.1 ... 1.5	R120-02A
			D		20	320		30	0.2 ... 3.0	R120-02B
			D		30	500		30	0.5 ... 8.0	R120-02C
			D		40	660		50	1 ... 15	R120-02E
63	141	34	P		50	840		50	2 ... 30	R120-02F
63	156	34	P		60	1000		50	3 ... 50	R120-02G
63	140	34	D	0.35	16	260	G $\frac{3}{8}$	30	0.1 ... 1.5	R120-03A
			D		20	320		30	0.2 ... 3.0	R120-03B
			D		30	500		30	0.5 ... 8.0	R120-03C
			D		40	660		50	1 ... 15	R120-03E
63	141	34	P		50	840		50	2 ... 30	R120-03F
63	156	34	P		60	1000		50	3 ... 50	R120-03G



## Special options and Accessories, see separate page



\*1 at max. supply pressure and max. outlet pressure

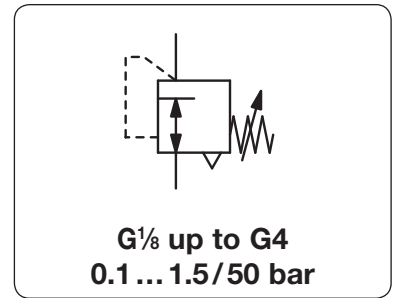
Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
R120-01A

<b>Description</b>	Pressure regulator of solid design. Made of brass or bronze. Series R120-0..A to -0..E and R120-16 and -32 are equipped with diaphragms, all other are piston-operated.
<b>Media</b>	compressed air, non-corrosive gases or liquids
<b>Adjustment</b>	R120-01/-A2: with adjusting screw, R120-04 to -B6: with T-handle, R120-16/-24/-32: by pilot pressure regulator
<b>Relieving function</b>	R120-16/-24/-32: non-relieving
<b>Gauge port</b>	R120-01/-A2: G $\frac{1}{8}$ on both sides of the body, all others G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C bis 80 °C / 32 °F to 176 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F, optionally high temperature version up to 130 °C / 266 °F
<b>Material</b>	Body: brass at R120-02 to -04, bronze at R120-06 to -16, aluminium at R120-24/-32 O-ring: FKM, optionally EPDM Spring cage: brass at R120-01 to -04, aluminium at R120-06 to -32 Inner valve: brass Diaphragm: NBR/Buna-N with PTFE coating

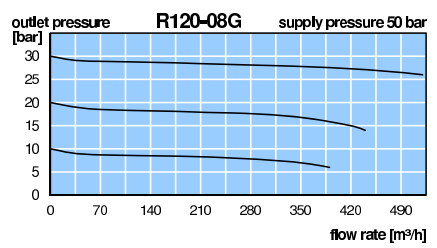
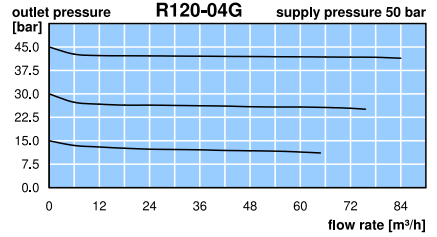
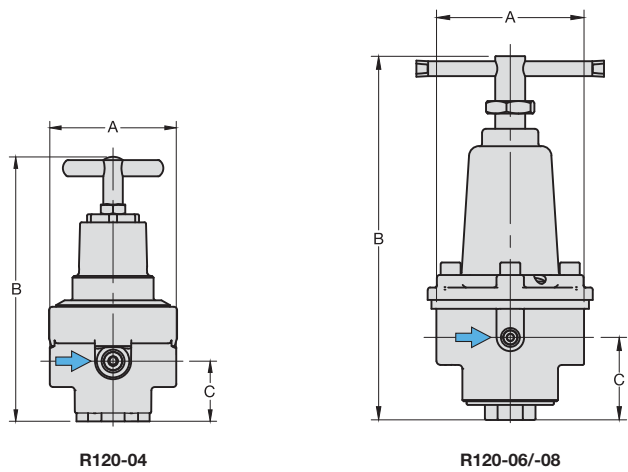


Dimensions			Regul. system	K <sub>v</sub> -	Flow	Connection	P <sub>1</sub>	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	bar	bar	

Brass pressure regulator										for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge	R120
78	163	37	D	1.0	27	450	G $\frac{1}{2}$	30	0.1 ... 1.5	R120-04A	
			D		30	600		30	0.2 ... 3.0	R120-04B	
			D		40	830		30	0.5 ... 8.0	R120-04C	
			D		60	1250		50	1 ... 15	R120-04E	
78	159	37	P		100	2080		50	2 ... 30	R120-04F	
			P		120	2500		50	3 ... 50	R120-04G	
118	291	66	D	5.5	75	1250	G $\frac{3}{4}$	30	0.1 ... 1.5	R120-06A	
			D		98	1600		30	0.2 ... 3.0	R120-06B	
			D		170	2800		30	0.5 ... 8.0	R120-06C	
			D		280	4600		50	1 ... 15	R120-06E	
118	316	66	P		400	6600		50	2 ... 30	R120-06F	
			P		500	8300		50	3 ... 50	R120-06G	
118	291	66	D	5.5	75	1250	G1	30	0.1 ... 1.5	R120-08A	
			D		98	1600		30	0.2 ... 3.0	R120-08B	
			D		170	2800		30	0.5 ... 8.0	R120-08C	
			D		280	4600		50	1 ... 15	R120-08E	
118	316	66	P		400	6600		50	2 ... 30	R120-08F	
			P		500	8300		50	3 ... 50	R120-08G	



## Special options and Accessories, see separate page



\*1 at max. supply pressure and max. outlet pressure

**Description** Pressure regulator of solid design. Made of brass or bronze. Series R120-0..A to -0..E and R120-16 and -32 are equipped with diaphragms, all other are piston-operated.

**Media** compressed air, non-corrosive gases or liquids

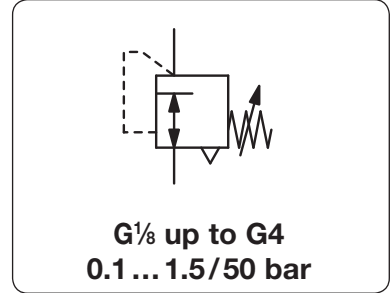
**Adjustment** **Supply pressure** see chart, max. 50 bar, for liquids  $\Delta p_{max} = 25$  bar  
 R120-01/-A2: with adjusting screw, at R120-02 with black knob  
 R120-04 to -B6: with T-handle, R120-16: with hexagonal spindle (spanner size 24 mm)  
 R120-16/-24/-32: by pilot pressure regulator

**Relieving function** R120-16/-24/-32: non-relieving

**Gauge port** R120-01/-A2: G $\frac{1}{8}$  on both sides of the body, all others G $\frac{1}{4}$  on both sides of the body, one screw plug supplied

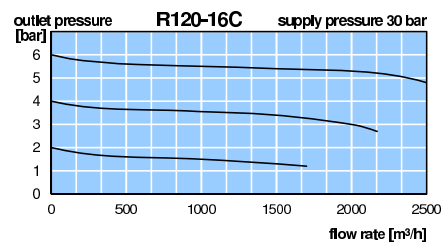
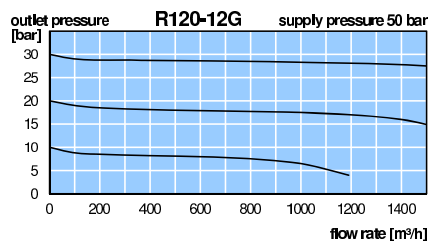
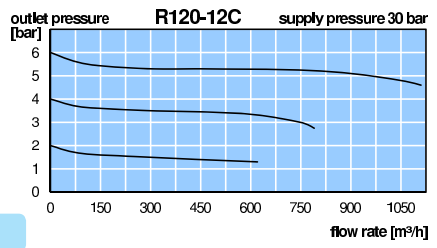
**Temperature range** **Mounting position** any  
 0 °C bis 80 °C / 32 °F to 176 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F, optionally high temperature version up to 130 °C / 266 °F

**Material** Body: brass at R120-02 to -04, bronze at R120-06 to -16, aluminium at R120-24/-32  
 O-ring: FKM, optionally EPDM  
 Spring cage: brass at R120-01 to -04, aluminium at R120-06 to -32  
 Inner valve: brass  
 Diaphragm: NBR/Buna-N with PTFE coating

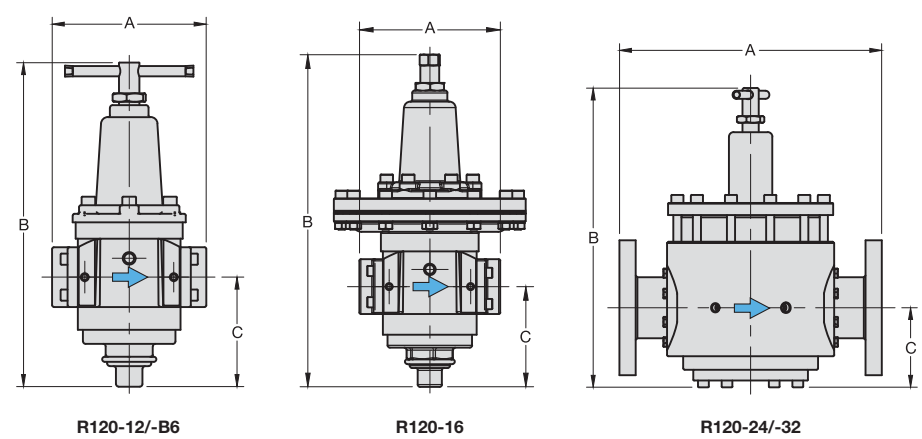


Dimensions			Regul. system	K <sub>v</sub> -	Flow	Connection	P <sub>1</sub>	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	bar	bar	

Brass pressure regulator										for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge	R120
180	387	128	P	12.6	400	6600	G1½	30	0.1 ... 1.5	R120-12A	
			P		670	11000		30	0.2 ... 3.0	R120-12B	
			P		1000	16600		30	0.5 ... 8.0	R120-12C	
			P		1500	25000		50	1 ... 15	R120-12E	
180	402	128	P		1600	27000		50	2 ... 30	R120-12F	
			P		2000	33000		50	3 ... 50	R120-12G	
180	387	128	P	12.6	400	6600	G2	30	0.1 ... 1.5	R120-B6A	
			P		670	11000		30	0.2 ... 3.0	R120-B6B	
			P		1000	16600		30	0.5 ... 8.0	R120-B6C	
			P		1500	25000		50	1 ... 15	R120-B6E	
180	402	128	P		1600	27000		50	2 ... 30	R120-B6F	
			P		2000	33000		50	3 ... 50	R120-B6G	
180	425	128	D	26	1800	30000	G2	30	0.1 ... 1.5	R120-16AK	
			D		2500	40000		30	0.3 ... 6.0	R120-16CK	
180	379	128	D		3500	50000		30	1 ... 15	R120-16DK	
389	463	118	D	70	2400	40000	flange	30	0.1 ... 1.5	R120-24AKF	
			D		5000	83000	DN80	30	0.3 ... 6.0	R120-24CKF	
			D		6000	99000		30	1 ... 15	R120-24DKF	
389	463	118	D	70	2400	40000	flange	30	0.1 ... 1.5	R120-32AKF	
			D		5000	83000	DN100	30	0.3 ... 6.0	R120-32CKF	
			D		6000	99000		30	1 ... 15	R120-32DKF	



## Special options and Accessories, see separate page



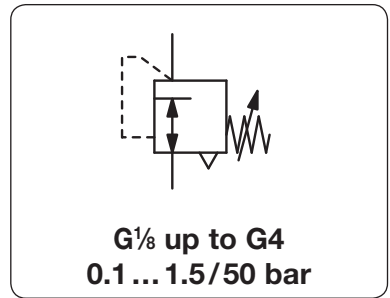
\*1 at max. supply pressure and max. outlet pressure

Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
**R120-12A**

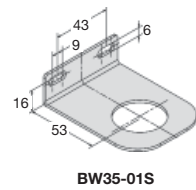
<b>Description</b>	Pressure regulator of solid design. Made of brass or bronze. Series R120-0..A to -0..E and R120-16 and -32 are equipped with diaphragms, all other are piston-operated.
<b>Media</b>	compressed air, non-corrosive gases or liquids <b>Supply pressure</b> see chart, max. 50 bar, for liquids $\Delta p_{max} = 25$ bar
<b>Adjustment</b>	R120-01/-A2: with adjusting screw, <b>at R120-02 with black knob</b> R120-04 to -B6: with T-handle <b>R120-16: with hexagonal spindle (spanner size 24 mm)</b> R120-16/-24/-32: by pilot pressure regulator
<b>Relieving function</b>	R120-B6: relieving <b>R120-16/-24/-32: non-relieving</b>
<b>Gauge port</b>	R120-01/-A2: G $\frac{1}{8}$ on both sides of the body, all others G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C bis 80 °C / 32 °F to 176 °F, <b>for appropriately conditioned compressed air down to -20 °C / -4 °F</b> or low temperature version down to -40 °C / -40 °F, optionally high temperature version up to 130 °C / 266 °F
<b>Material</b>	<b>Mounting position</b> any Body: brass at R120-02 to -04, bronze at R120-06 to -16, aluminium at R120-24/-32 O-ring: FKM, optionally EPDM Spring cage: brass at R120-01 to -04, aluminium at R120-06 to -32 Inner valve: brass Diaphragm: NBR/Buna-N with PTFE coating



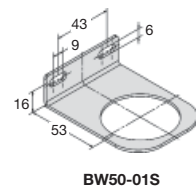
Dimensions			Regul. system	K <sub>v</sub> -	Flow	Connection	P <sub>1</sub>	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	bar	bar

## Special options, add the appropriate letter

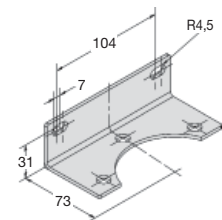
<b>NPT</b>	connection thread								R120-...N
<b>non-relieving</b>	without relieving function						up to R120-B6		R120-...K
<b>down to -40 °C</b>	low temperature version						up to R120-04		R120-...X51
<b>up to 130 °C</b>	high temperature version						up to R120-04		R120-...X54
<b>EPDM o-ring</b>	PTFE diaphragm								R120-...E
<b>T-handle</b>	instead of plastic knob						for R120-02		R120-02.T
<b>PWIS-free</b>	for painting plants								R120-...LA
<b>carbon dioxide</b>	CO <sub>2</sub>								R120-...K03
<b>argon</b>	Ar								R120-...K05
<b>nitrogen</b>	N <sub>2</sub>								R120-...K07
<b>helium</b>	He								R120-...K09
<b>hydrogen</b>	H <sub>2</sub>								R120-...K11
<b>methane</b>	CH <sub>4</sub>								R120-...K13
<b>natural gas *3</b>									R120-...K14
<b>oxygen</b>	O <sub>2</sub>								R120-...K15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>								R120-...K16
<b>nitrous oxide</b>	N <sub>2</sub> O								R120-...K17
<b>water</b>	H <sub>2</sub> O								R120-...KW
<b>flange connection</b>	standard for R120-32, otherwise see chapter SST devices /flanges								R120-...F.



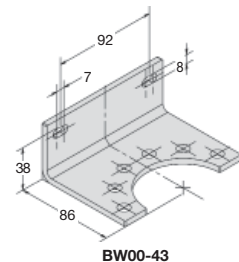
BW35-01S



BW50-01S



BW00-42



BW00-43



## Accessories

<b>pressure gauge</b>	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>MA4001-...*2</b>
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ (02) and G $\frac{1}{2}$	<b>MA5002-...*2</b>
	Ø 50 mm, 0...60 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	<b>MA5002-60</b>
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G4	<b>MA6302-...*2</b>
	Ø 63 mm, 0...60 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G4	<b>MA6302-60</b>
<b>gauge up to 130 °C</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ , stainless steel		<b>MS6302-...*2</b>
<b>mounting bracket</b>	made of stainless steel	for G $\frac{1}{4}$	<b>BW35-01S</b>
<b>mounting nut</b>	made of stainless steel	for G $\frac{1}{4}$	<b>M35x1,5S</b>
<b>mounting bracket</b>	made of stainless steel	for G $\frac{1}{2}$	<b>BW50-01S</b>
<b>mounting nut</b>	made of stainless steel	for G $\frac{1}{2}$	<b>M50x1,5S</b>
<b>mounting bracket</b>	made of steel	for G $\frac{3}{4}$ and G1	<b>BW00-42</b>
		for G $\frac{1}{2}$ and G2 (B6)	<b>BW00-43</b>

\*1 at max. supply pressure and max. outlet pressure

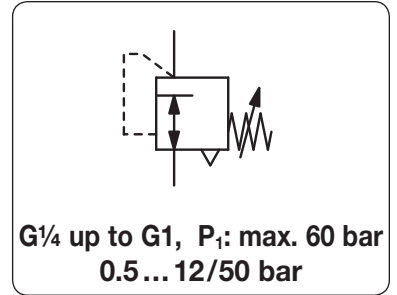
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

\*3 without DVGW approval





<b>Description</b>	Piston-operated pressure regulator of solid design, completely made of brass. For inlet pressure up to 60 bar.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 60 bar, for liquids $\Delta p_{max.} = 25$ bar		
<b>Adjustment</b>	by handwheel, T-handle or hexagonal spindle, with locknut		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Mounting position</b>	any	<b>Inlet filter</b>	stainless steel, 500 $\mu$ m
<b>Temperature range</b>	-10 °C to 90 °C / 14 °F to 194 °F		
<b>Material</b>	Body: brass Elastomer: NBR/Buna-N	Intermediate ring: Inner valve:	brass at G $\frac{1}{4}$ , anodized aluminium at G1 brass



Dimensions			Pressure adjustment	K $_v$ -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	mit	(m $^3$ /h)	m $^3$ /h*1	G	bar	

Brass pressure regulator								supply pressure max. 60 bar, for compressed air relieving, without pressure gauge	R286
72	164	31	handwheel	1.3	120	2000	G $\frac{1}{4}$	0.5 ... 12	R286-02C
			hexagonal spindle					1.0 ... 20	R286-02E
								2.0 ... 35	R286-02F
								3.0 ... 50	R286-02G
72	164	31	handwheel	1.6	150	2500	G $\frac{3}{8}$	0.5 ... 12	R286-03C
			hexagonal spindle					1.0 ... 20	R286-03E
								2.0 ... 35	R286-03F
								3.0 ... 50	R286-03G
72	156	35	handwheel	2.3	216	3500	G $\frac{1}{2}$	0.5 ... 12	R286-04C
			hexagonal spindle					1.0 ... 20	R286-04E
								2.0 ... 35	R286-04F
								3.0 ... 50	R286-04G
118	257	51	handwheel	3.2	300	5000	G1	0.5 ... 12	R286-08C
			hexagonal spindle					1.0 ... 20	R286-08E
								2.0 ... 35	R286-08F
								3.0 ... 50	R286-08G

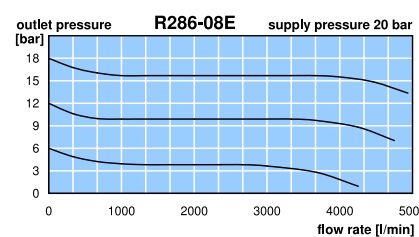
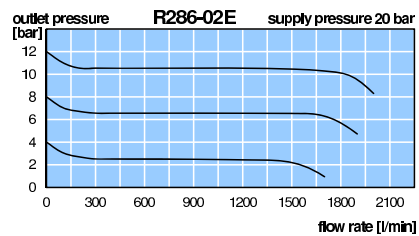
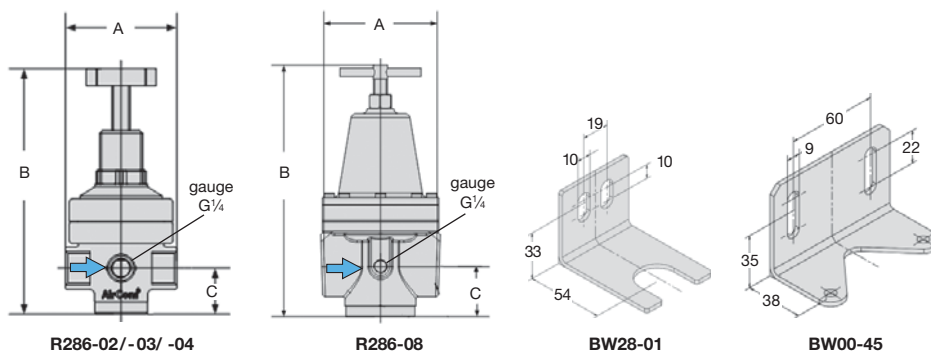


**Special options,** add the appropriate letter

**non-relieving** without relieving function, for liquids R286-0 . . K

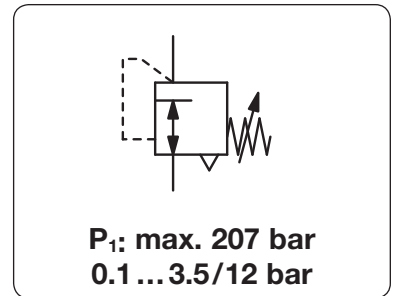
**Accessories**

<b>pressure gauge</b>	$\varnothing$ 50 mm, 0...10 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>MA5002- 10</b>
	0...25 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>MA5002- 25</b>
	0...60 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>MA5002- 60</b>
	$\varnothing$ 63 mm, 0...16 bar, G $\frac{1}{4}$	for G1	<b>MA6302- 16</b>
	0...25 bar, G $\frac{1}{4}$	for G1	<b>MA6302- 25</b>
	0...60 bar, G $\frac{1}{4}$	for G1	<b>MA6302- 60</b>
<b>mounting bracket</b>	made of steel, mounting nut required	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>BW28-01</b>
<b>mounting nut</b>	made of brass	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>M28x1,5M</b>
<b>mounting bracket</b>	made of steel, assembly at spring cage	for G1	<b>BW00-45</b>



\*1 at 20 bar supply pressure, 10 bar outlet pressure and 4 bar pressure drop

<b>Description</b>	Diaphragm-operated high pressure regulator made of brass .		
<b>Media</b>	compressed air	Optionally: nitrogen, helium, krypton, carbon dioxide, neon, xenon	
<b>Supply pressure</b>	max. 207 bar		
<b>Adjustment</b>	by slotted screw with locknut		
<b>Relieving function</b>	standard, optionally non-relieving		
<b>Connection thread</b>	¼" NPT, two high pressure inlet ports and two regulated pressure outlet ports.		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-34 °C to 60 °C / -29.2 °F to 140 °F		
<b>Material</b>	Body: brass	Diaphragm: NBR/Buna-N and acetal	Seals: NBR/Buna-N
	Spring cage: zinc die-cast	Valve seat: teflon, brass and stainless steel	



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

High pressure regulator 207 bar						for compressed air, relieving made of brass, NBR/Buna-N	RH83
48	110	10	0.02	19.2	320	¼" NPT	RH83-02A RH83-02B RH83-02C



RH83

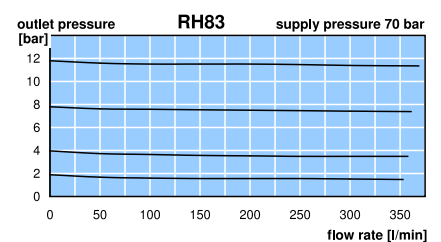
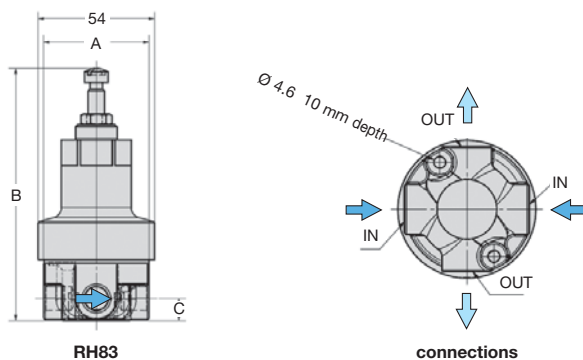


## Special options, add the appropriate letter

non-relieving	without relieving function	RH83-02. K
carbon dioxide	CO <sub>2</sub>	RH83-02. K03
argon	Ar	RH83-02. K05
nitrogen	N <sub>2</sub>	RH83-02. K07
helium	He	RH83-02. K09
inert gas	krypton, neon, xenon	RH83-02. K31

## Accessories

pressure gauge Ø 50 mm, ¼" NPT MA5002- ..\*2N



\*1 bei P<sub>1</sub> = 70 bar, P<sub>2</sub> = 4 bar und Δp = 0.35 bar

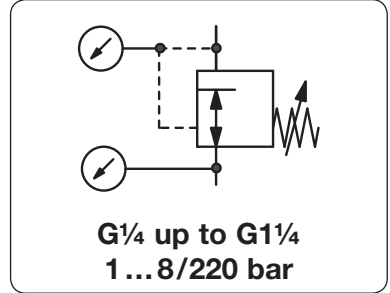
\*2 04 = 0...4 bar, 11 = 0...11 bar, 16 = 0...16 bar



# High Pressure Regulator for Outlet Pressure up to 200 bar

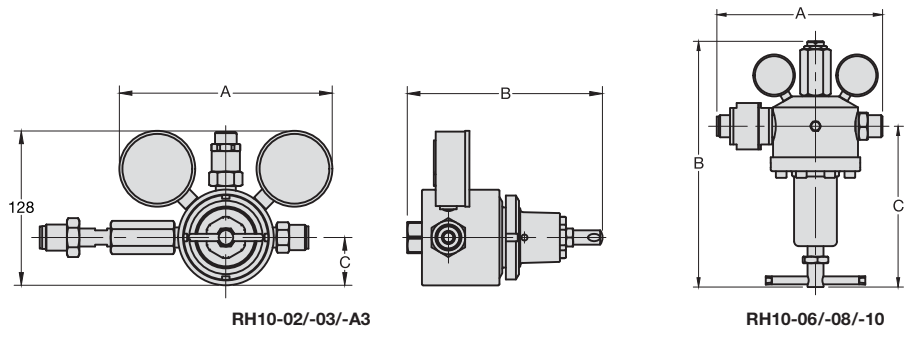
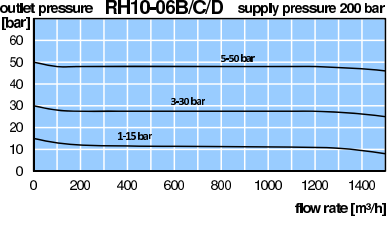
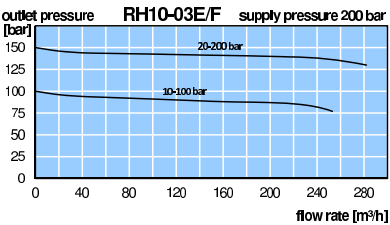
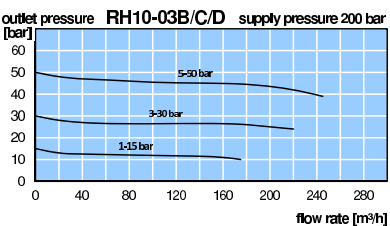
RH10

<b>Description</b>	For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 220 bar	
<b>Adjustment</b>	RH10-02: by black plastic knob	all others: by T-handle with locknut
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
<b>Safety relief valve</b>	prevents from overpressure, see chart	
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F	
<b>Material</b>	Body: brass, nickel-plated at RH10-02 Piston: brass at RH10-02 Valve seat: nylon Diaphragm: stainless steel at RH10-02, NBR/Buna-N at all others	<b>Mounting position</b> any Inlet filter: sintered bronze O-rings: EPDM or FKM, dependent on media



Dimensions			Safety relief valve	K <sub>v</sub> -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	bar	

High pressure regulator 220 bar										non-relieving, for compressed air, pressure gauges supplied	RH10
175	150	32	S	0.05	80	1300	DIN 477 / G <sub>1/4</sub>	1 ... 8	RH10-02A		
			S					1 ... 15	RH10-02B		
			S					3 ... 30	RH10-02C		
			S					5 ... 50	RH10-02D		
			S					10 ... 100	RH10-02E		
			-					20 ... 200	RH10-02F		
181	162	34	S	0.15	228	3800	DIN 477 / G <sub>1/2</sub> a	0.1 ... 1.5	RH10-030		
			S					1 ... 15	RH10-03B		
181	164	34	S				DIN 477 / G <sub>3/8</sub> i	3 ... 30	RH10-03C		
			S					5 ... 50	RH10-03D		
181	182	34	-					10 ... 100	RH10-03E		
			-					20 ... 200	RH10-03F		
181	231	102	S	0.25	422	7000	G <sub>3/4</sub> i / G <sub>1/2</sub> a	0.1 ... 1.5	RH10-A30		
			S					1 ... 15	RH10-A3B		
181	233	102	S				G <sub>3/4</sub> i / G <sub>3/8</sub> i	3 ... 30	RH10-A3C		
			S					5 ... 50	RH10-A3D		
181	184	35	-					10 ... 100	RH10-A3E		
			-					20 ... 200	RH10-A3F		
166	346	113	S	1.5	2000	33000	G <sub>3/4</sub> a / G <sub>3/4</sub> a	1 ... 8	RH10-06A		
			S					1 ... 15	RH10-06B		
			S					3 ... 30	RH10-06C		
			S					5 ... 50	RH10-06D		
			S					10 ... 100	RH10-06E		
250	370	242	S	2.5	3000	48000	G <sub>1</sub> a / G <sub>1</sub> a	1 ... 8	RH10-08A		
			S					1 ... 15	RH10-08B		
250	406	278	S					3 ... 30	RH10-08C		
			S					5 ... 50	RH10-08D		
250	387	276	-					20 ... 200	RH10-08F		

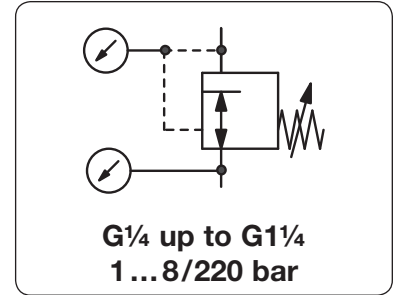


\*1 at 200 bar supply pressure and 15 bar outlet pressure      \*2 max. 80 bar outlet pressure

# High Pressure Regulator for Outlet Pressure up to 200 bar

RH10

<b>Description</b>	For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 220 bar	
<b>Adjustment</b>	RH10-02: by black plastic knob	all others: by T-handle with locknut
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
<b>Safety relief valve</b>	prevents from overpressure, see chart	
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F	
<b>Material</b>	Body: brass, nickel-plated at RH10-02 Piston: brass at RH10-02 Valve seat: nylon Diaphragm: stainless steel at RH10-02, NBR/Buna-N at all others	<b>Mounting position</b> any Inlet filter: sintered bronze O-rings: EPDM or FKM, dependent on media



Dimensions			Safety	K <sub>v</sub> -	Flow	Connection	Pressure	Order
A	B	C	relief valve	value	rate	thread	range	number
mm	mm	mm	S: with valve	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	bar	

High pressure regulator 220 bar								non-relieving, for compressed air, pressure gauges supplied	RH10
246	385	269	S	3.5	5000	80000	G1 a / G1 <sub>1</sub> / <sub>4</sub>	1... 8	<b>RH10-10A</b>
			S					1... 15	<b>RH10-10B</b>
			S					3... 30	<b>RH10-10C</b>
246	426	310	S					5... 50	<b>RH10-10D</b>

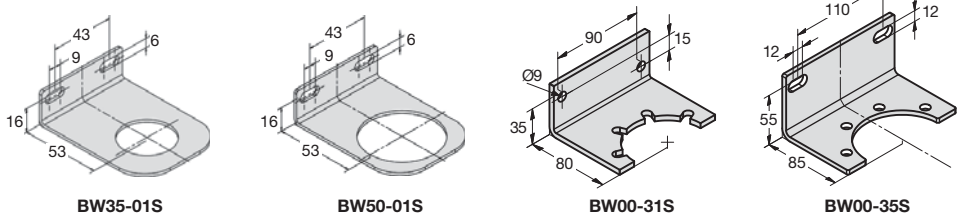
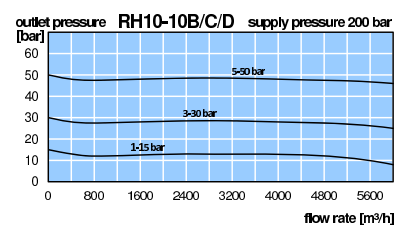
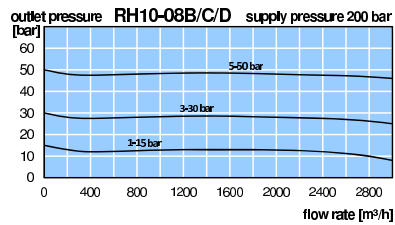


## Special options, add the appropriate letter

relieving diaphragm	with relieving function, for compressed air up to max. 50 bar	RH10-... R
relieving piston	with relieving function, for compressed air up to max. 50 bar	RH10-... R
FKM elastomer		RH10-... V
PTFE elastomer		RH10-... T
SST diaphragm	from RH10-03	RH10-... S
for panel mounting	for RH10-02 to -A3	RH10-... P
carbon dioxide *2	CO <sub>2</sub>	RH10-... 03
argon	Ar	RH10-... 05
nitrogen	N <sub>2</sub>	RH10-... 07
helium	He	RH10-... 09
hydrogen	H <sub>2</sub>	RH10-... 11
methane	CH <sub>4</sub>	RH10-... 13
oxygen	O <sub>2</sub>	RH10-... 15
propane	C <sub>3</sub> H <sub>8</sub>	RH10-... 16
nitrous oxide	N <sub>2</sub> O	RH10-... 17
without flange connection		RH10-... X40

## Accessories

mounting bracket	made of stainless steel	for RH10-02	<b>BW35-01S</b>
mounting nut		for RH10-02	<b>M35x1,5S</b>
mounting bracket		for RH10-03 and -A3	<b>BW50-01S</b>
mounting nut		for RH10-03 and -A3	<b>M50x1,5S</b>
mounting bracket		for RH10-06	<b>BW00-31S</b>
		for RH10-08	<b>BW00-35S</b>



\*1 at 200 bar supply pressure and 15 bar outlet pressure      \*2 max. 80 bar outlet pressure

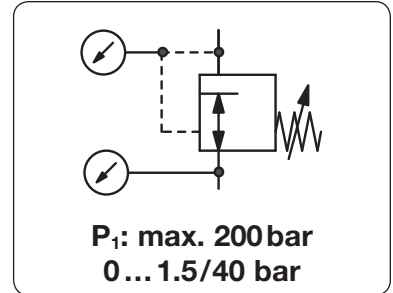
**Stainless steel version: see chapter for stainless steel devices**      PDF CAD      www.aircom.net

**Order example: RH10-10A**



# Gas Cylinder Pressure Regulator up to 200 bar RH201 / RH202

<b>Description</b>	High pressure regulator for gas cylinders for reducing pressure of compressed air or liquid gases from a high level to the required pressure.	
<b>Supply pressure</b>	max. 200 bar	
<b>Media</b>	compressed air, oxygen or different gases	
<b>Connections</b>	according to DIN 477	
<b>Adjustment</b>	by T-handle	
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
<b>Leakage rate</b>	10 <sup>-8</sup> mbar l/s	
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
<b>Temperature range</b>	-30 °C to 60 °C / -22 °F to 140 °F	
<b>Material</b>	Body: brass	O-rings: NBR/Buna-N and EPDM
	Diaphragm: 65NBR4550, PTFE for outlet > 10 bar, stainless steel for pure gases up to 5.0	Spring cage: brass



Dimensions			Version	Flow rate		Supply pressure	Pressure range	Order number
A	B	C	1-step	m <sup>3</sup> /h*2	l/min*2	max. bar	bar	
mm	mm	mm	2-step					

## Cylinder pressure regulator 200 bar for compressed air, connections DIN 477, with inlet / outlet gauges RH201/RH202

210	190	100	1-step	48	800	200	0 ... 10	RH201-00C
210	210	120		75	1250		0 ... 20	RH201-00D
				120	2000		0 ... 40	RH201-00E
240	190	100	2-step	8	133	200	0 ... 15	RH202-00A
				48	800		0 ... 10	RH202-00C



RH201, 1-step

## Regulator for propane and acetylene connections DIN 477, with inlet / outlet gauges RH201

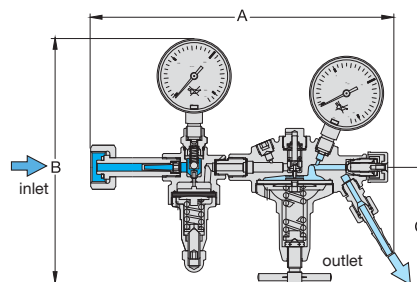
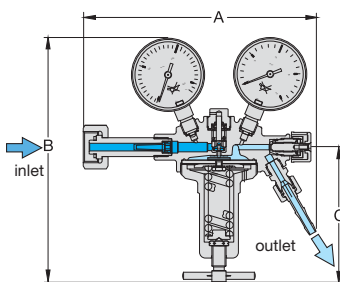
210	190	100	1-step	propane	C <sub>3</sub> H <sub>8</sub>	max. 8	0 ... 4.0	RH201-00B16
210	190	100	1-step	azetylene	C <sub>2</sub> H <sub>2</sub>	max. 26	0 ... 1.5	RH201-00A19

## Special options, change the appropriate letter

carbon dioxide	CO <sub>2</sub>	RH20	.-...03
inert gas		RH20	.-...04
argon	Ar	RH20	.-...05
fuel gas		RH20	.-...06
nitrogen	N <sub>2</sub>	RH20	.-...07
forming gas		up to 40 bar	RH20
helium	He	up to 40 bar	RH20
hydrogen	H <sub>2</sub>		RH20
testing gas		up to 40 bar	RH20
oxygen	O <sub>2</sub>	up to 20 bar	RH20
chrome-plated body	inside and outside	1-step	RH201 -C...
chrome-plated body	inside and outside	2-step	RH202 -C...
metal diaphragm	5.0 purity	1-step	RH201 - .M...
		2-step	RH202 - .M...



RH202, 2-step

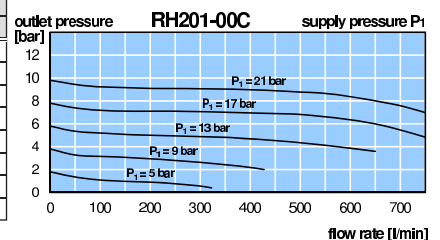


RH201-C..., chrome-plated

connection thread up to 200 bar		
gas type	inlet *1	outlet
compressed air	G <sup>3</sup> / <sub>4</sub> a	G <sup>1</sup> / <sub>4</sub>
oxygen	G <sup>3</sup> / <sub>4</sub> i	G <sup>1</sup> / <sub>4</sub>
inert gas	W21, 8x <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
CO <sub>2</sub> / argon	W21, 8x <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
helium	W21, 8x <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
fuel gas	W21, 8x <sup>1</sup> / <sub>4</sub> LH	G <sup>3</sup> / <sub>4</sub> LH
hydrogen	W21, 8x <sup>1</sup> / <sub>4</sub> LH	G <sup>3</sup> / <sub>4</sub> LH
forming gas	W21, 8x <sup>1</sup> / <sub>4</sub> LH	G <sup>3</sup> / <sub>4</sub> LH

connection thread up to 200 bar		
gas type	inlet *1	outlet
nitrogen	W24,32x <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
testing gas	M19x1,5 LH	G <sup>3</sup> / <sub>4</sub> LH
nitrous oxide	G <sup>3</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>4</sub>
azetylene	clamp (cylinder)	G <sup>3</sup> / <sub>4</sub> a LH

flow rate - correction factor	
gas type	factor
compr. air	1.00
oxygen	O <sub>2</sub> 0.95
carbon dioxide	CO <sub>2</sub> 0.81
hydrogen	H <sub>2</sub> 3.80
argon	Ar 0.85
helium	He 2.70
propane	C <sub>3</sub> H <sub>8</sub> 0.80
nitrous oxide	N <sub>2</sub> O 0.80

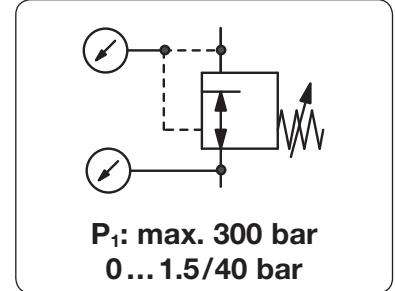


\*1 Thread according to DIN 477, only left hand thread is marked LH, right hand RH is not marked.  
\*2 at supply pressure of 2x outlet pressure + 1 bar

PDF CAD  
www.aircom.net

Order example:  
RH201-00C

<b>Description</b>	High pressure regulator for gas cylinders for reducing pressure of compressed air or liquid gases from a high level to the required pressure.	
<b>Supply pressure</b>	max. 300 bar	
<b>Media</b>	compressed air, oxygen or different gases	
<b>Connections</b>	according to DIN 477	
<b>Adjustment</b>	by T-handle	
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
<b>Leakage rate</b>	10 <sup>-6</sup> mbar l/s	
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
<b>Temperature range</b>	-30 °C to 60 °C / -22 °F to 140 °F	
<b>Material</b>	Body: brass	O-rings: NBR/Buna-N and EPDM
	Diaphragm: 65NBR4550, PTFE for outlet > 10 bar, stainless steel for pure gases up to 5.0	Spring cage: brass



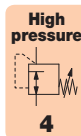
Dimensions			Version	Flow rate		Supply pressure	Pressure range	Order number
A	B	C	1-step	m <sup>3</sup> /h*2	l/min*2	max. bar	bar	
mm	mm	mm	2-step					

## Cylinder pressure regulator 300 bar for compressed air, connections DIN 477, with inlet / outlet gauges **RH300**

210	190	100	1-step	48	800	300	0 ... 10	<b>RH301-00C</b>
210	210	120		75	1250		0 ... 20	<b>RH301-00D</b>
				120	2000		0 ... 40	<b>RH301-00E</b>
240	190	100	2-step	8	133	300	0 ... 1,5	<b>RH302-00A</b>
				48	800		0 ... 10	<b>RH302-00C</b>



RH301, 1-step

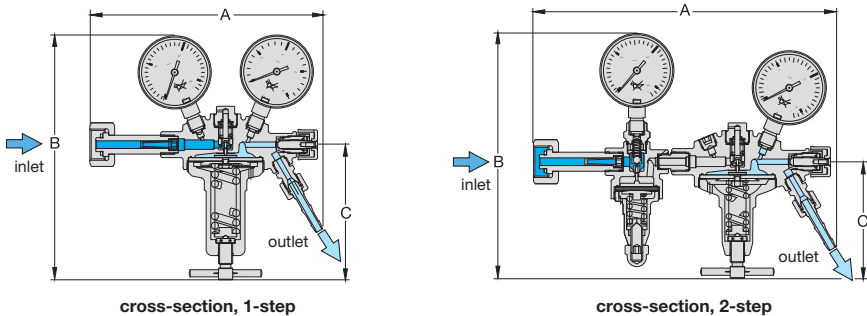


## Special options, change the appropriate letter

carbon dioxide	CO <sub>2</sub>	RH30	.-...03
inert gas		RH30	.-...04
argon	Ar	RH30	.-...05
fuel gas		RH30	.-...06
nitrogen	N <sub>2</sub>	RH30	.-...07
forming gas		up to 40 bar	RH30
helium	He	up to 40 bar	RH30
hydrogen	H <sub>2</sub>		RH30
testing gas		up to 40 bar	RH30
oxygen	O <sub>2</sub>	up to 20 bar	RH30
chrome-plated body	inside and outside	1-step	RH301 - C...
chrome-plated body	inside and outside	2-step	RH302 - C...
metal diaphragm	5.0 purity	1-step	RH301 - .M...
		2-step	RH302 - .M...



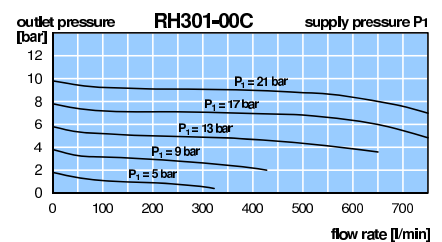
RH302, 2-step



RH301-C.., chrome-plated

connection thread up to 300 bar		
gas type	inlet *1	outlet
fuel gas	W30x2 LH	G½ LH
all others	W30x2	G¼

flow rate - correction factor	
gas type	factor
compressed air	1.00
oxygen	O <sub>2</sub> 0.95
carbon dioxide	CO <sub>2</sub> 0.81
hydrogen	H <sub>2</sub> 3.80
argon	Ar 0.85
helium	He 2.70
propane	C <sub>3</sub> H <sub>8</sub> 0.80
nitrous oxide	N <sub>2</sub> O 0.80

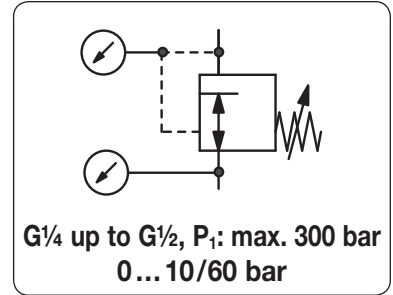


\*1 Thread according to DIN 477, only left hand thread is marked LH, right hand RH is not marked.  
\*2 at supply pressure of 2x outlet pressure + 1 bar

# Main Pressure Regulator up to 300 bar

RH

<b>Description</b>	Main pressure regulator according to ISO 7291 up to 300 bar with G½ connection thread. A filter at the inlet port protects against contamination.
<b>Media</b>	compressed air, oxygen or different gases on request
<b>Supply pressure</b>	see chart, max. 300 bar
<b>Connections</b>	G¼ to G½, optionally according to DIN 477
<b>Adjustment</b>	by T-handle for RH-...7.510 / 520 / 525 by hexagonal spindle (spanner size 20 mm) for RH-...7.545 / 565
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.
<b>Leakage rate</b>	10 <sup>-6</sup> mbar l/s
<b>Compensation</b>	without supply pressure variation compensation
<b>Temperature range</b>	-30 °C to 60 °C / -22 °F to 140 °F
<b>Material</b>	Body: brass O-rings: NBR/Buna-N Spring cage: brass Diaphragm: 65NBR4550, stainless steel for oxygen > 20 bar



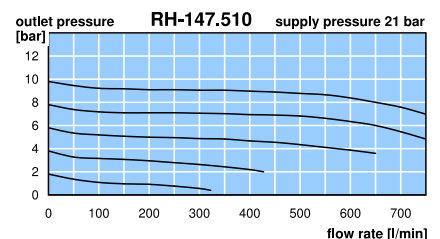
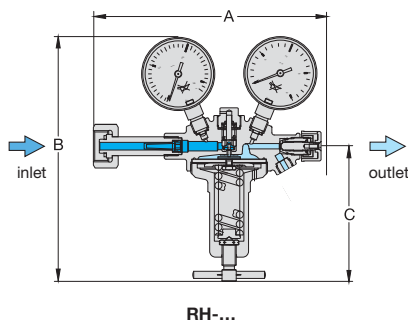
Dimensions			Flow rate		Supply pressure	Connection thread	Pressure range	Order number
A	B	C	m³/h*1	l/min*1	max. bar	G	bar	

Main pressure regulator					for compressed air, supply and outlet pressure gauge supplied	RH		
150	205	115	50	830	100	G½	0 ... 10	RH-147.510
			75	1250			0 ... 20	RH-147.520
200	310	215	170	2830	200	G½	0 ... 20	RH-147.525
			290	4830			15 ... 40	RH-147.545
			450	7500			15 ... 60	RH-147.565
150	205	115	50	830	300	G½	0 ... 10	RH-247.510
			75	1250			0 ... 20	RH-247.520
200	310	215	170	2830	300	G½	0 ... 20	RH-247.525
			290	4830			15 ... 40	RH-247.545
			450	7500			15 ... 60	RH-247.565
150	205	115	50	830	300	G½	0 ... 10	RH-347.510
			75	1250			0 ... 20	RH-347.520
200	310	215	170	2830	300	G½	0 ... 20	RH-347.525
			290	4830			15 ... 40	RH-347.545
			450	7500			15 ... 60	RH-347.565



## Special options, add the appropriate letter

G¼	connection thread, max. 100 bar	RH-. 27...
G½	connection thread	RH-. 37...
carbon dioxide	CO <sub>2</sub>	RH-. 47... .03
inert gas		RH-. 47... .04
argon	Ar	RH-. 47... .05
fuel gas		up to 40 bar
nitrogen	N <sub>2</sub>	RH-. 47... .06
forming gas		up to 40 bar
helium	He	RH-. 47... .07
hydrogen	H <sub>2</sub>	RH-. 47... .08
testing gas		up to 40 bar
natural gas *2		RH-. 47... .09
oxygen	O <sub>2</sub>	up to 20 bar
chrome plated body	inside and outside	RH-. 47... .11
metal diaphragm	5.0 purity	RH-. 47... .12
		RH-. 47... .14
		RH-. 47... .15
		RH-. 47... .C
		RH-. 41... .M



\*1 at supply pressure of 2 x outlet pressure + 1 bar

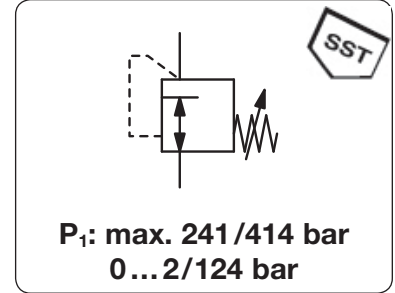
\*2 without DVGW-approval

PDF CAD  
www.aircom.net



Order example:  
RH-147.510

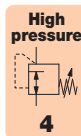
<b>Description</b>	Diaphragm-operated high pressure regulator of small and light design.	
<b>Adjustment</b>	by black plastic knob	
<b>Relieving function</b>	non-relieving	
<b>Gauge port</b>	1/4" NPT for inlet and outlet pressure	
	<b>RH0</b>	<b>RH1</b>
<b>Media</b>	corrosive or non-corrosive gases up to purity 5.0	compressed air, non-corrosive gases or liquids
<b>Supply pressure</b>	max. 241 bar	max. 414 bar
<b>Leakage rate</b>	< 1 x 10 <sup>-6</sup> mbar l/s He	< 1 x 10 <sup>-4</sup> mbar l/s He
<b>Temperature range</b>	-40 °C to 60 °C / -40 °F to 140 °F	-25 °C to 75 °C / -13 °F to 167 °F
<b>Body</b>	brass, optionally stainless steel or aluminium	nickel-plated aluminium
<b>Regulating system</b>	diaphragm made of stainless steel	piston with EPDM o-ring, as option NBR/Buna-N or FKM
<b>Valve seat</b>	PFA or CTFE as option	CTFE or Vespel as option
<b>Inner valve</b>	brass, optionally stainless steel	stainless steel and aluminium
	<b>Weight</b>	aluminium 200 g, brass 430 g
	<b>Mounting position</b>	any



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h	l/min	Connection thread NPT	Pressure range bar	Order number
A	B	C						

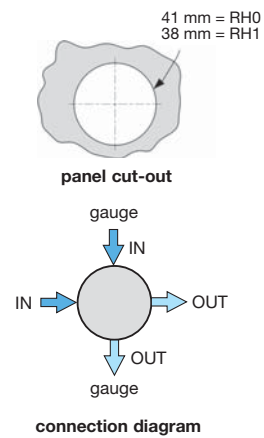
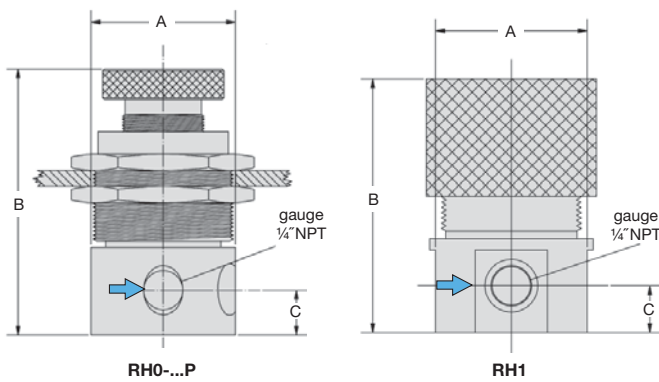
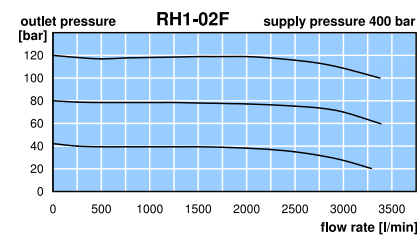
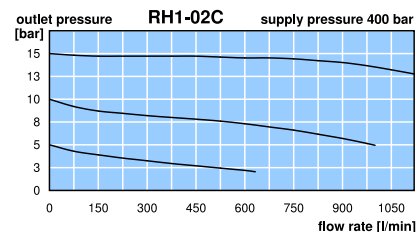
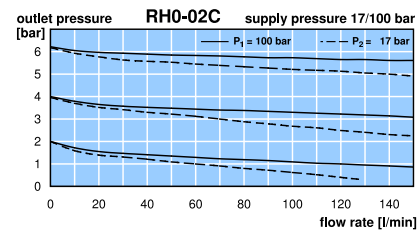
High pressure regulator 241 bar						for gases, non-relieving brass, stainless steel diaphragm	<b>RH0</b>	
41	82	14	0.05	9*1	150*1	1/4" NPT	0.2 ... 2 0.4 ... 4 0.6 ... 7	<b>RH0-02A</b> <b>RH0-02B</b> <b>RH0-02C</b>

High pressure regulator 414 bar						for gases and liquids, non-relieving aluminium, piston with EPDM	<b>RH1</b>	
41	76	13	0.05	84*2	1400*2	1/4" NPT	0.5 ... 5 0.5 ... 10 1.5 ... 15	<b>RH1-02A</b> <b>RH1-02B</b> <b>RH1-02C</b>
41	76	13	0.05	192*3	3200*3	1/4" NPT	4.0 ... 48 8.0 ... 83 10 ... 124	<b>RH1-02D</b> <b>RH1-02E</b> <b>RH1-02F</b>



### Special options, add the appropriate letter

1/8" NPT	connection thread	für RH0	RH0-01.
aluminium body		für RH0	RH0-02. A
stainless steel body		für RH0	RH0-02. S
CTFE seat		für RH0	RH0-02. X52
CTFE seat	for stainless steel body	für RH0	RH0-02. SX52
Vespel seat		für RH1	RH1-02. X45
NBR o-ring		für RH1	RH1-02. N
FKM o-ring		für RH1	RH1-02. V
free of grease and oil	suitable for oxygen,	für RH0	RH0-02. L
for oxygen	especially cleaned,	für RH1	RH1-02. 15
brass pressure gauge	inlet side	outlet side	RH. -02. GM
SST pressure gauge	inlet side	outlet side	RH. -02. G
for panel mounting		für RH0	RH0-02. P



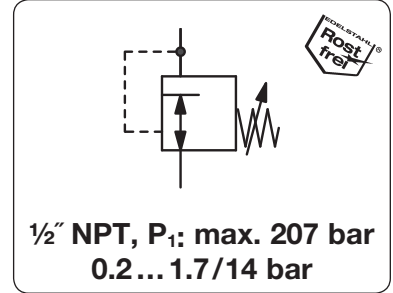
\*1 at 100 bar supply pressure and 6 bar outlet pressure  
\*2 at 400 bar supply pressure and 15 bar outlet pressure  
\*3 at 400 bar supply pressure and 120 bar outlet pressure



# High Pressure Regulator for Pure Gases, up to 207 bar

RH2

<b>Description</b>	Diaphragm-operated high pressure regulator of small design and with high flow.		
<b>Media</b>	compressed air, non-corrosive gases or pure gases up to 5.0		
<b>Supply pressure</b>	max. 207 bar		
<b>Test pressure</b>	150% of maximum supply pressure		
<b>Leakage rate</b>	< 2 x 10 <sup>-6</sup> mbar l/s He		
<b>Adjustment</b>	by black plastic knob		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	¼" NPT for inlet and outlet pressure, shifted by 60°		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-40 °C to 75 °C / -40 °F to 167 °F		
<b>Material</b>	Body: brass or stainless steel 316	Spring cage: nickel-plated brass	
	Diaphragm: stainless steel 316	Seals: PTFE	
	Valve seat: CTFE	Inner valve: stainless steel 316	



Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m³/h*1	l/min*1			

Brass pressure regulator, ½" NPT							supply pressure max. 207 bar, non-relieving	RH2
66	150	26	0.9	330	5500	½" NPT	0.2... 1.7	RH2-04A
							0.2... 3.5	RH2-04B
							0.5... 7.0	RH2-04C
							1.0... 10	RH2-04D
							1.0... 14	RH2-04E

SST pressure regulator, ½" NPT							supply pressure max. 207 bar, non-relieving	RH2
66	150	26	0.9	330	5500	½" NPT	0.2... 1.7	RH2-04AS
							0.2... 3.5	RH2-04BS
							0.5... 7.0	RH2-04CS
							1.0... 10	RH2-04DS
							1.0... 14	RH2-04ES



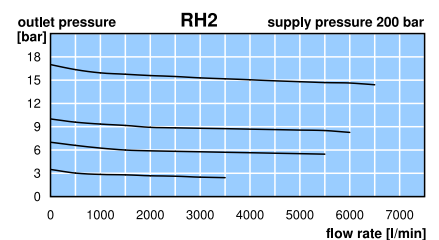
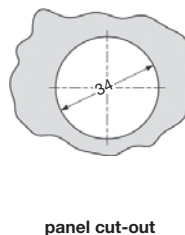
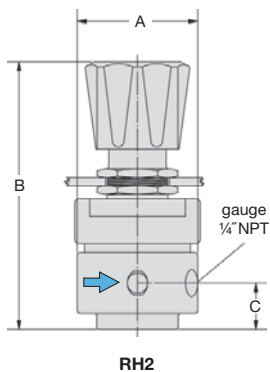
RH2

## Special options, add the appropriate letter

¾" NPT	connection thread		RH2-03.
brass pressure gauge	for brass body,	outlet side	RH2-0...GM
SST pressure gauge	for stainless steel body,	outlet side	RH2-0...G

## Accessories

mounting nut	for panel mounting, made of stainless steel	8686-1
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\*1 at 200 bar supply pressure and 14 bar outlet pressure

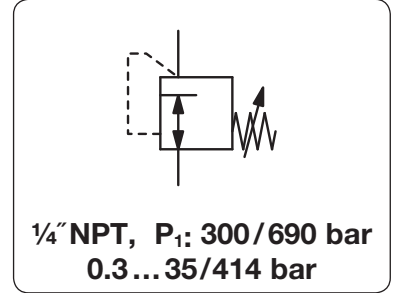
PDF CAD  
www.aircom.net

Order example:  
RH2-04A

# High Pressure Regulator up to 690 bar

HP300 / HP400

<b>Description</b>	Piston-operated high pressure regulator HP300 / HP400 are marked by high flow and great reliability.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 690 bar at HP300,	max. 414 bar at HP400
<b>Accuracy</b>	at supply pressure variation of 7 bar: < 5 mbar pressure deviation at HP300, < 250 mbar pressure deviation at HP400	
<b>Adjustment</b>	by black plastic knob	
<b>Relieving function</b>	non-relieving, optionally relieving	
<b>Mounting position</b>	any	
<b>Temperature range</b>	- 5 °C to 75 °C / 23 °F to 167 °F for HP300	-25 °C to 75 °C / -13 °F to 167 °F for HP400
<b>Material</b>	Body: brass, optionally stainless steel (spring cage brass), stainless steel completely on request	
	Seals: NBR at HP300 (relieving), FKM at HP300 (non-relieving) / HP400	
	Spring cage: brass at HP300, nickel-plated at HP400	
	Valve seat: Vespel at HP300 / HP400 (relieving), Teflon PFA at HP400 (non-relieving)	
	Inner valve: stainless steel	
	<b>Leakage rate</b>	< 10 <sup>-4</sup> mbar l/s He
	<b>Gauge port</b>	1/4" NPT for inlet / outlet pressure, shifted by 70°



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	NPT	bar	
mm	mm	mm		l/min*1			

High pressure regulator 414 bar							non-relieving, brass	HP300
55	175	19	0.05	90	1500	1/4" NPT	0.3 ... 35	HP300-035
							0.6 ... 55	HP300-055
							0.7 ... 104	HP300-105
							1.0 ... 172	HP300-175
							1.7 ... 276	HP300-280
							3.4 ... 414	HP300-415



HP300, accessory: set of mount. brackets

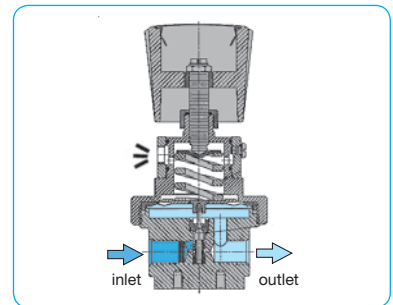
High pressure regulator 414 bar							non-relieving, brass	HP400
50	137	13	0.05	90	1500	1/4" NPT	0.7 ... 104	HP400-104
							1.0 ... 172	HP400-170



HP400

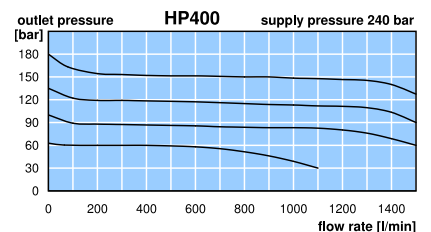
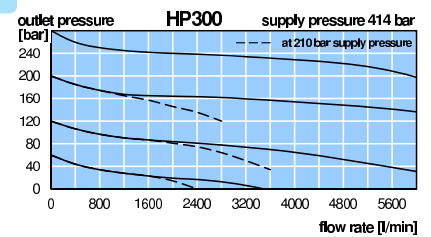
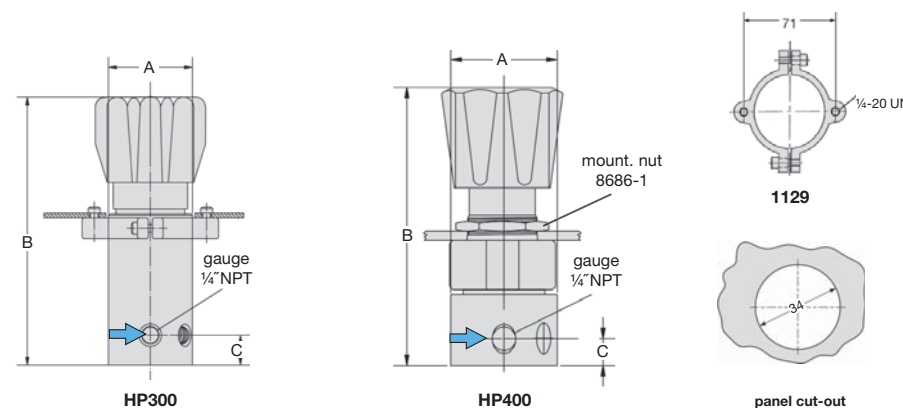
## Special options, add the appropriate letter

relieving		HP300-...R
		HP400-...R
body made of SST	(690 bar)	HP300-...S
	(414 bar)	HP400-...S
for oxygen	specialy cleaned, P <sub>1</sub> < 200 bar	for HP300/400 HP.00-...15
for liquids	w/o filter at inlet, valve seat of Nylatron	for HP300 HP300-...W
	w/o filter at inlet, valve seat of Vespel	for HP400 HP400-...W
brass pressure gauge	for brass body, inlet side	HP.00-...HM
	for brass body, outlet side	HP.00-...GM
SST pressure gauge	for stainless steel body, inlet side	HP.00-...H
	for stainless steel body, outlet side	HP.00-...G



## Accessories

set of mounting brackets	aluminium	for HP300	1129
mounting nut	for panel mounting, made of stainless steel	for HP400	8686-1

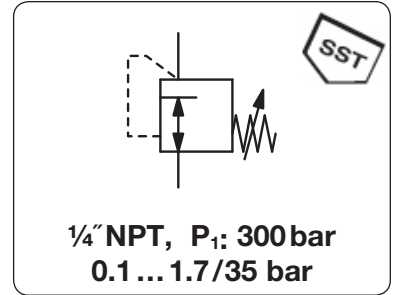


\*1 at 240 bar supply pressure and 30 bar outlet pressure

PDF CAD  
www.aircom.net

Order example:  
HP300-035

<b>Description</b>	Piston-operated high pressure regulator HP500R and diaphragm-operated HP500 are marked by high flow and great reliability.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 300 bar	
<b>Accuracy</b>	at supply pressure variation of 7 bar: < 120 mbar pressure deviation	
<b>Adjustment</b>	by black plastic knob	<b>Leakage rate</b> < 2x 10 <sup>-8</sup> mbar l/s He
<b>Relieving function</b>	non-relieving, optionally relieving	<b>Gauge port</b> 1/4" NPT for inlet / outlet pressure, shifted by 70°
<b>Mounting position</b>	any	
<b>Temperature range</b>	-40 °C to 75 °C / -40 °F to 167 °F	
<b>Material</b>	Body: brass, optionally stainless steel (spring cage brass), stainless steel completely on request	
	Seals: FKM	
	Spring cage: nickel-plated	Valve seat: Teflon PFA
	Inner valve: stainless steel	Diaphragm: stainless steel



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

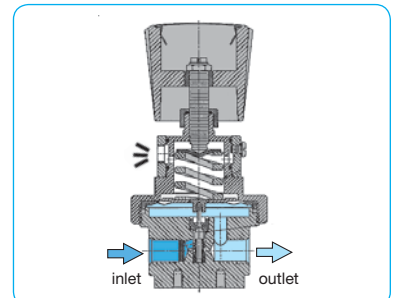
High pressure regulator 300 bar							non-relieving, brass	HP500
50	137	19	0.05	90	1500	1/4" NPT	0.1 ... 1.7	HP500-002
							0.1 ... 3.5	HP500-004
							0.1 ... 7.0	HP500-007
							0.2 ... 17	HP500-017
							0.3 ... 35	HP500-035



HP500

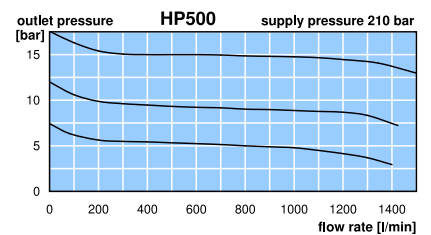
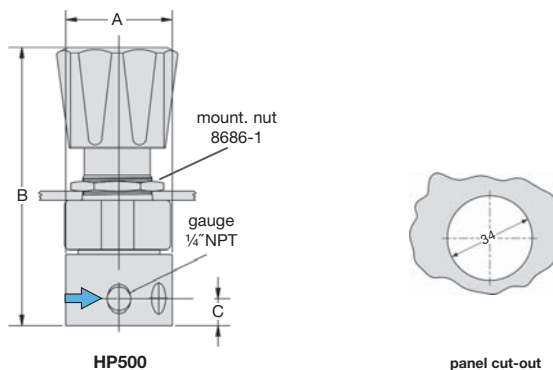


Special options, add the appropriate letter	
relieving	HP500-...R
body made of SST	HP500-...S
free of grease and oil	HP500-...L
for liquids	HP500-...W
brass pressure gauge	HP500-...HM
	HP500-...GM
SST pressure gauge	HP500-...H
	HP500-...G



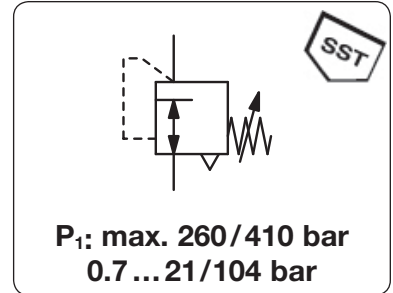
## Accessories

mounting nut	for panel mounting, made of stainless steel	8686-1
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\*1 at 240 bar supply pressure and 30 bar outlet pressure

<b>Description</b>	High pressure regulator with high flow and high reliability. Large piston sensor for high sensitivity and balanced stem design for constant downstream pressure.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 260 bar, optionally up to 345 bar or 410 bar	
<b>Leakage rate</b>	< 1 x 10 <sup>-4</sup> mbar l/s He	
<b>Adjustment</b>	by black plastic knob	
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Gauge port</b>	none, optionally 1/4" NPT for inlet and outlet	
<b>Mounting position</b>	any	
<b>Temperature range</b>	-25 °C to 100 °C / -13 °F to 212 °F	
<b>Material</b>	Body: brass, optionally stainless steel	O-rings: NBR/Buna-N and FKM
	Main valve seat: CTFE, PTFE at RH3-04B	Relieving valve: CTFE, PTFE at RH3-04B/-04C
	Inner valve: PTFE and brass, optionally stainless steel	



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread NPT	Pressure range bar	Order number
A	B	C					

High pressure regulator 260 bar, 1/2" NPT							relieving, brass	RH3
76	203	45	1.7	420	7000	1/2" NPT	0.7 ... 21	<b>RH3-04B</b>
							1.0 ... 42	<b>RH3-04C</b>
							1.4 ... 70	<b>RH3-04D</b>
							3.4 ... 104	<b>RH3-04E</b>

### Special options, add the appropriate letter

3/4" NPT	connection thread		RH3-0 .6
non-relieving	without relieving function		RH3-0 .K
stainless steel, 310 bar	body: stainless steel 316		RH3-0 .S1
stainless steel, 410 bar	body: stainless steel 316,	pressure range 3 ... 172 bar	RH3-0 .S2
brass, 345 bar	body: brass,	pressure range 3 ... 172 bar	RH3-0 .U
gauge port	1/4" NPT for inlet and outlet		RH3-0 .M
brass pressure gauge	inlet side <b>HM</b>	outlet side	RH3-0 .MGM
SST pressure gauge	inlet side <b>H</b>	outlet side	RH3-0 .MG

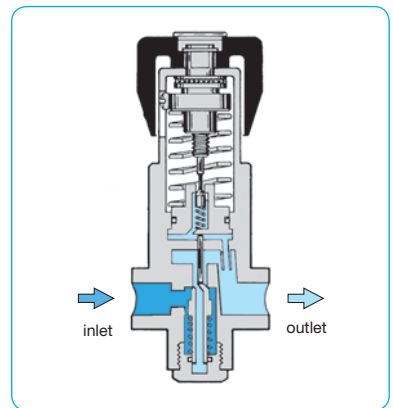


RH3

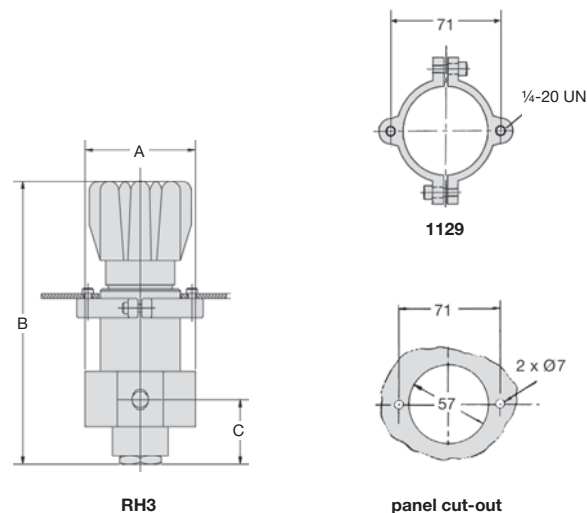


### Accessories

set of mounting brackets	for panel mounting	1129
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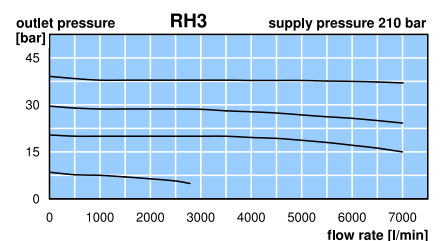
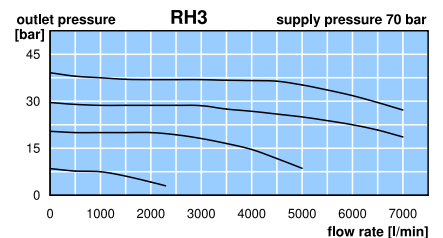
cross-section



RH3

panel cut-out

gauge port, option "M"



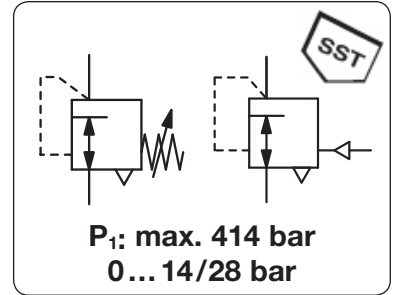
\*1 at 210 bar supply pressure and 40 bar outlet pressure



# High Pressure Regulator up to 414 bar

RH4

<b>Description</b>	High pressure regulator with balanced valve design ensuring stable downstream pressure. Excellent for low pressure.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 414 bar		
<b>Exhaust</b>	for compressed air or gases: 1/4" NPT tapped exhaust for inlet and outlet		
<b>Leakage</b>	bubble-tight		
<b>Adjustment</b>	by black plastic knob, optionally pneumatical control through diaphragm or piston		
<b>Relieving function</b>	for compressed air or gases: relieving for liquids: non-relieving		
<b>Gauge port</b>	non, optionally 1/4" NPT for inlet and outlet		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-26 °C to 74 °C / -15 °F to 165 °F		
<b>Weight</b>	2.2 kg		
<b>Material</b>	Body: brass, optionally 316 stainless steel	O-rings: NBR/Buna-N, on request FKM, Kalrez, E.P.	
	Main valve seat: Vespel SP21	Relieving valve: Vespel SP21	
	Inner valve: Monel, stainless steel	Filter: bronze, 40 µm, only for liquids	



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

High pressure regulator 414 bar							brass body, Vespel SP21, NBR/Buna-N relieving, without gauge port	RH4
76	159	19	0.3	510	8500	3/8" NPT	0 ... 14	RH4-03A
							0 ... 28	RH4-03B
						1/2" NPT	0 ... 14	RH4-04A
							0 ... 28	RH4-04B



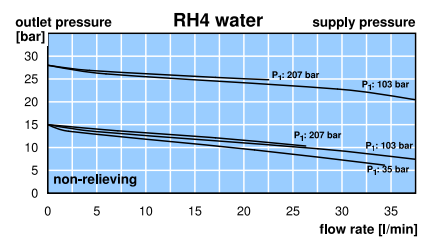
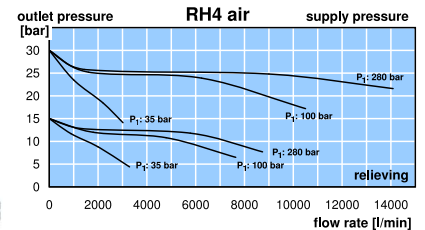
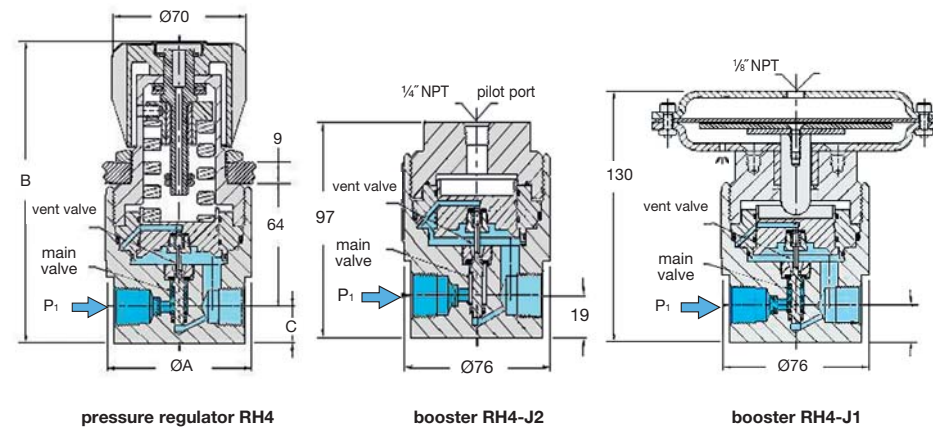
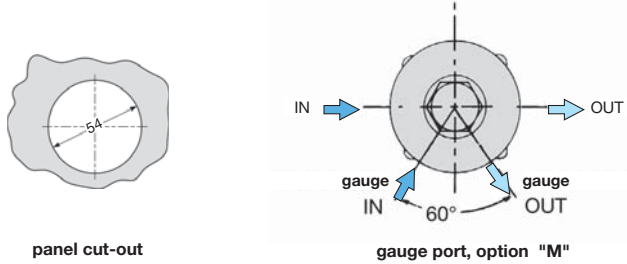
RH4

## Special options, add the appropriate letter

<b>booster version</b>	1/2" NPT, 0...41 bar, brass, diaphragm control, P <sub>St.</sub> = 5.8 bar	RH4-04J1
	piston control	RH4-04J2
<b>non-relieving</b>	without relieving function	RH4-0 . .K
<b>stainless steel body</b>		RH4-0 . .S
<b>gauge port</b>	1/4" NPT for inlet and outlet	RH4-0 . .M
<b>brass pressure gauge</b>	inlet side <b>HM</b>	outlet side RH4-0 . .MGM
<b>SST pressure gauge</b>	inlet side <b>H</b>	outlet side RH4-0 . .MG

## Accessories

mounting nut for panel mounting **62634**



\*1 at 280 bar supply pressure and 14 bar outlet pressure

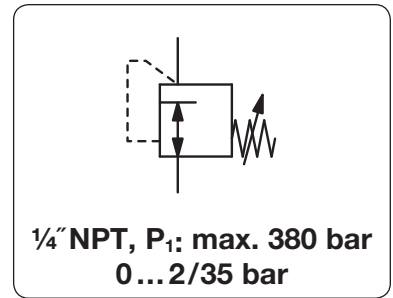
PDF CAD  
www.aircom.net

Order example:  
RH4-03A

# Brass High Pressure Regulator up to 380 bar

RHB

<b>Description</b>	Diaphragm-operated high pressure regulator made of brass.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 380 bar		
<b>Adjustment</b>	by T-handle with locknut		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	1/4" NPT on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 106 °C / 32 °F to 223 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
<b>Material</b>	Body: brass	O-rings: NBR/Buna-N	Valve seat: nylon, optionally PTFE
	Diaphragm: stainless steel 302		



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

High pressure regulator 380 bar			made of brass, with T-handle non-relieving, nylon seat, NBR/Buna-N				RHB
85	156	60	0.13	240	4000	1/4" NPT	0.3 ... 2 <b>RHB-02A</b>
							0.3 ... 4 <b>RHB-02B</b>
							0.3 ... 8 <b>RHB-02C</b>
							0.3 ... 10 <b>RHB-02D</b>
							0.3 ... 15 <b>RHB-02E</b>
85	177	60					0.3 ... 35 <b>RHB-02F</b>



RHB-02D

## Special options, add the appropriate letter

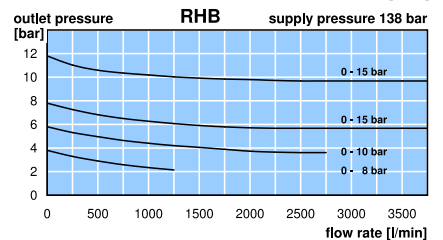
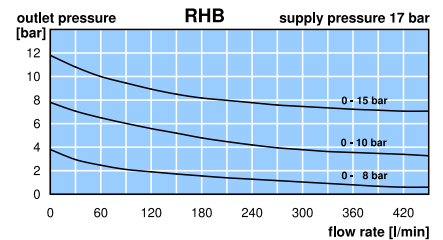
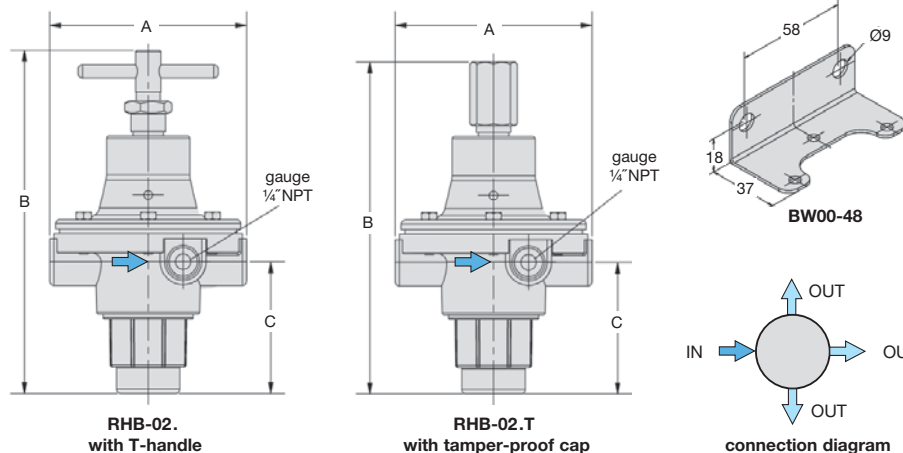
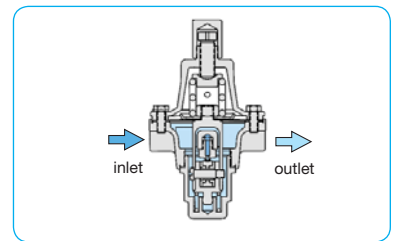
<b>nickel-plated</b>	outer surface	RHB-02 . X25
<b>tamper-proof cap</b>	made of brass, total high 150 mm or 172 mm	RHB-02 . T
<b>PTFE valve seat *2</b>	nickel plated surface	RHB-02 . X52



RHB-02DT

## Accessories

<b>mounting bracket</b>	made of steel	BW00-48
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\*1 P<sub>1</sub> = 138 bar, P<sub>2</sub> = 10 bar und Δp = 3 bar

\*2 1.5 ... 35 bar pressure range for RHB-02F

Stainless steel version: see chapter for stainless steel devices

PDF CAD  
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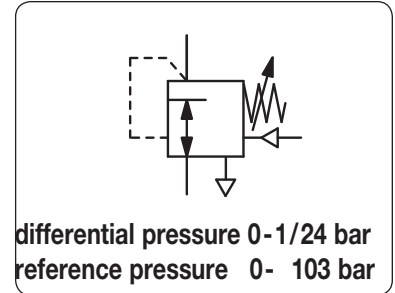


Order example:  
RHB-02A

# Differential Pressure Regulator P<sub>1</sub>: max. 414 bar, P<sub>2</sub>: 0-103 bar

RH44

<b>Description</b>	The dome loaded, spring biased regulator is designed for pressure tracking applications to maintain a constant differential pressure. Venting allows for pressure tracking increases and decreases.		
<b>Media</b>	compressed air or gases according to the selected material		
<b>Supply pressure</b>	max. 414 bar	<b>Outlet pressure</b>	max. 103 bar
<b>Exhaust</b>	tapped exhaust 1/4" NPT	<b>Control port</b>	1/8" NPT
<b>Adjustment</b>	hexagonal screw for spring tension	<b>Leakage</b>	bubble-tight
<b>Gauge port</b>	not available	<b>Mounting position</b>	any
<b>Temperature range</b>	-26 °C to 74 °C / -14 °F to 165 °F		
<b>Material</b>	Body: brass, optionally stainless steel 302		
	Valve seat and gasket: CTFE, Vespel		
	O-Rings: FKM		



Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate l/min*1	Connection thread NPT	Differential pressure range bar	Order number
A mm	B mm	C mm					

Differential pressure regulator							
P <sub>1</sub> max: 414 bar, P <sub>A</sub> max: 103 bar, brass relieving, P <sub>2</sub> : 0 ... 103 bar, FKM / CTFE							
76	212	46	0.7	10000	1/2" NPT	0... 1 bar	RH44-04A
						0... 7 bar	RH44-04B
						0... 14 bar	RH44-04C
						0... 24 bar	RH44-04D
76	212	46	2.0	21000	3/4" NPT	0... 1 bar	RH44-06A
						0... 7 bar	RH44-06B
						0... 14 bar	RH44-06C
						0... 24 bar	RH44-06D



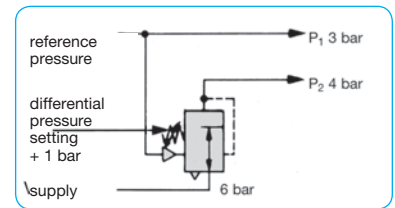
RH44



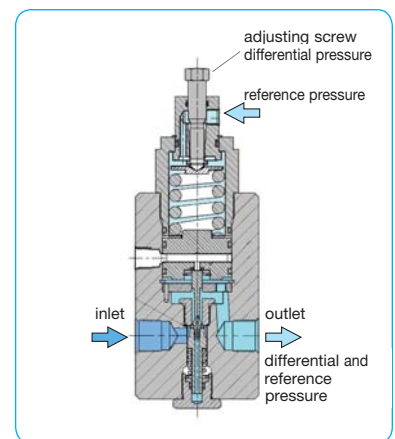
## Special options, add the appropriate letter

stainless steel body

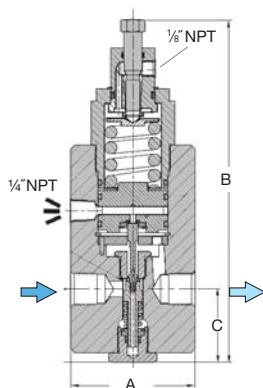
RH44-0..S



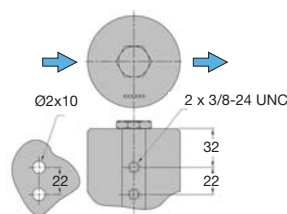
Example: differential pressure constant 1 bar



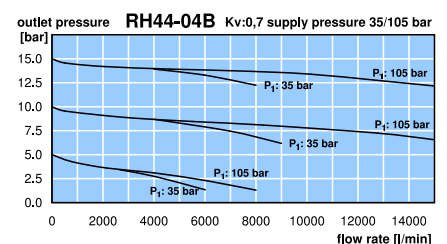
cross-section



RH44



panel-mounting



\*1 bei P<sub>1</sub> = 105 bar, P<sub>2</sub> = 15 bar and Δp = 1 bar

Stainless steel version: see chapter for stainless steel devices

PDF CAD  
www.aircom.net



Order example:  
RH44-04A

## Precision Pressure Regulators

	Description	Pressure range bar	Connection thread	Device	Page
<b>with constant bleed</b>	miniature	0.05 ... 2 / 8	G $\frac{1}{8}$	RI	<b>5.02</b>
	miniature	0.05 ... 2 / 8	G $\frac{1}{8}$ and flange	R90	<b>5.03</b>
	proven	0.02 ... 0.5 / 10	G $\frac{1}{4}$	11-818	<b>5.06</b>
	proven	0.14 ... 1.7 / 8	G $\frac{1}{4}$ and $\frac{1}{4}$ "NPT	53.10	<b>5.07</b>
	very precise	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10	<b>5.08</b>
	many variations	0.01 ... 0.14 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230	<b>5.09</b>
	small design	0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	R300	<b>5.10</b>
	Nullmatic	0.002 ... 0.12 / 31	$\frac{1}{4}$ "NPT	R40	<b>5.12</b>
	high ventilation	0.01 ... 3 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03	<b>5.14</b>
	low pressure	0.002 ... 0.35 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	<b>5.15</b>
	high volume flow	0.001 ... 0.7 / 10	G1 and G $1\frac{1}{2}$	R102	<b>5.16</b>
	miniature	0.01 ... 0.35 / 7	M5 and flange	RT	1.10
	miniature	0.005 ... 0.05 / 1.5	G $\frac{1}{2}$	RR	3.10
	clean room environment, SST	0.05 ... 2 / 4	G $\frac{1}{8}$ , M5	RE1	15.04
	stainless steel	0.02 ... 1.5 / 10	G $\frac{1}{4}$ and G $\frac{1}{2}$	R3150	15.05
	<b>without constant bleed</b>	robust	0.01 ... 1 / 16	G $\frac{1}{4}$	R217
robust, low cost		0.01 ... 0.6 / 3.5	G $\frac{1}{4}$ and G $\frac{3}{8}$	R216	<b>5.05</b>
non-relieving		0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10-N	<b>5.08</b>
non-relieving		0.01 ... 0.14 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-K	<b>5.09</b>
small design		0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	R300-K	<b>5.10</b>
high volume flow		0.03 ... 0.7 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R100	<b>5.11</b>
high-precision		0.03 ... 0.7 / 17	G $\frac{3}{8}$ - G $\frac{3}{4}$	R400	<b>5.13</b>
non-relieving		0.002 ... 0.35 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110-K	<b>5.15</b>
non-relieving		0.001 ... 0.7 / 10	G1 and G $1\frac{1}{2}$	R102-K	<b>5.16</b>
differential pressure regulator		0.01 ... 1 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	6.02
miniature		0.2 ... 2 / 9	flange	R342	1.14
miniature		0.2 ... 2 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	1.14
miniature		0.1 ... 3 / 6	G $\frac{1}{8}$	R309	1.16
miniature		0.2 ... 2.5 / 8	G $\frac{1}{8}$	R307	1.18
miniature		0.2 ... 0.25 / 8	flange	R308	1.19



# 5

## Precision Pressure Regulators

Precision



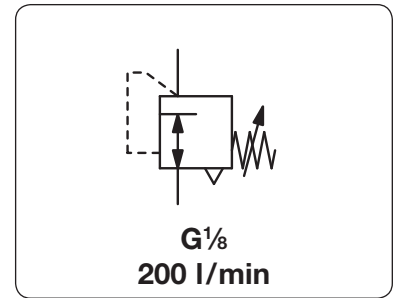
5



# Miniature Precision Pressure Regulator $\nabla$ 35 mm

RI

<b>Description</b>	Diaphragm precision pressure regulator of very small design and low air consumption
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 10 bar
<b>Accuracy</b>	response sensitivity: $\pm 0.2\%$ FS reproducibility: $\pm 0.5\%$ FS
<b>Air consumption</b>	max. 5 l/min at 10 bar supply pressure. Consumption depends on supply pressure.
<b>Adjustment</b>	by handwheel with locknut
<b>Relieving function</b>	relieving
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: zinc die-cast Elastomer: NBR/Buna-N Inner valve: stainless steel and brass



Dimensions			Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. bar	G	bar	
mm	mm	mm					

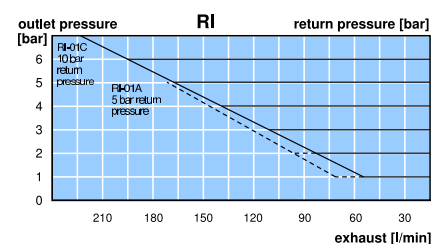
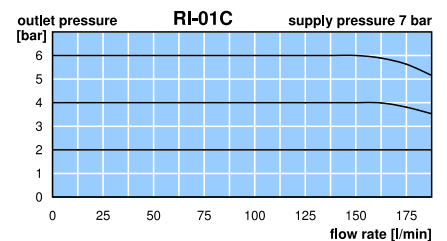
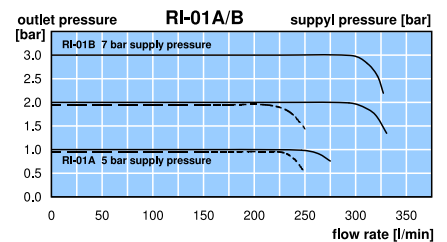
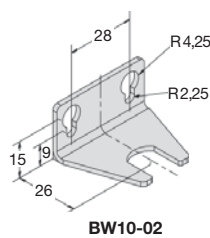
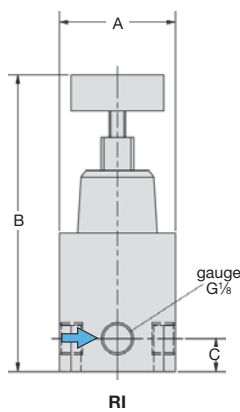
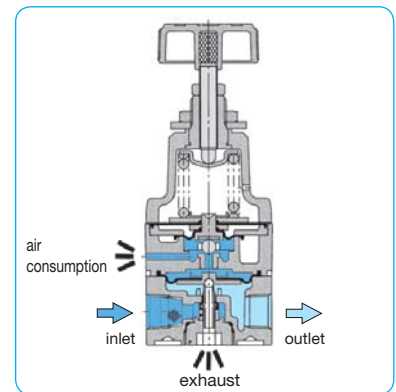
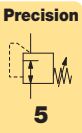
Precision pressure regulator	supply pressure max. 10 bar, relieving, with constant bleed, with mounting nut	RI
35 90 10 200 10 G $\frac{1}{8}$ 0.05...2		RI-01A
		RI-01B
		RI-01C



RI-01, with mounting nut  
accessory: gauge

## Accessories

pressure gauge	$\varnothing$ 23 mm, 0...*2 bar, G $\frac{1}{8}$	MA2301-...*2
mounting bracket	made of steel, mounting nut at the device	BW10-02



\*1 for compressed air: 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



Order example:  
RI-01A

**Description** Diaphragm precision pressure regulator of very small design and low air consumption compressed air or non-corrosive gases

**Media** max. 10 bar

**Supply pressure** max. 10 bar

**Accuracy** response sensitivity:  $\pm 0.2\%$  FS  
repeatability:  $\pm 0.3\%$  FS  
supply sensitivity: 35 mbar for a 7 bar supply pressure change

**Air consumption** max. 3 l/min at 10 bar supply pressure. Consumption depends on supply pressure.

**Adjustment** by handwheel with locknut

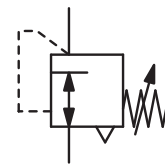
**Relieving function** relieving

**Gauge port** G $\frac{1}{8}$  on both sides of the body, screw plug supplied

**Mounting position** any

**Temperature range** 10 °C to 70 °C / 50 °F to 158 °F

**Material** Body: zinc die-cast  
Elastomer: NBR/Buna-N  
Inner valve: stainless steel and brass



**G $\frac{1}{8}$  or flange**  
**0.05 ... 2 / 4 / 8 bar**

Dimensions			Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. bar	G / flange	bar	

Precision pressure regulator							supply pressure max. 10 bar, relieving, with constant bleed	R90
35	94	10	200	10	G $\frac{1}{8}$	0.05...2		R90-01A
						0.08...4		R90-01B
						0.10...8		R90-01C



R90

Precision pressure regulator with flange							supply pressure max. 10 bar, relieving, with constant bleed	R90-P
35	106	12	200	10	Flansch	0.05...2		R90-P1A
						0.08...4		R90-P1B
						0.10...8		R90-P1C

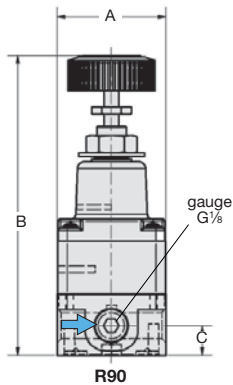


R90-P

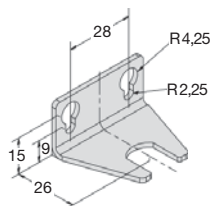
## Accessories

**pressure gauge**  $\varnothing$  23 mm, 0...\*2 bar, G $\frac{1}{8}$  **MA2301-...\*2**

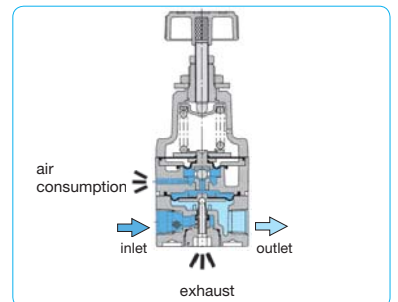
**mounting bracket** made of steel, mounting nut at the device **BW10-02**



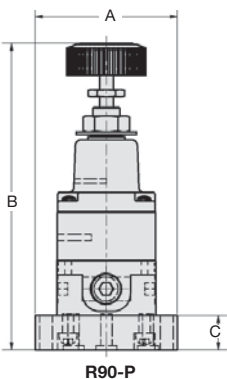
R90



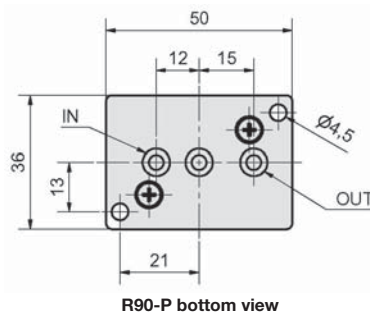
BW10-02



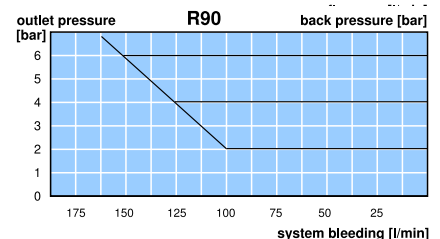
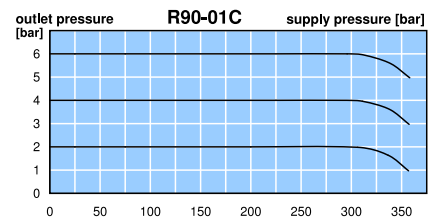
cross-section



R90-P



R90-P bottom view



\*1 for compressed air : 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
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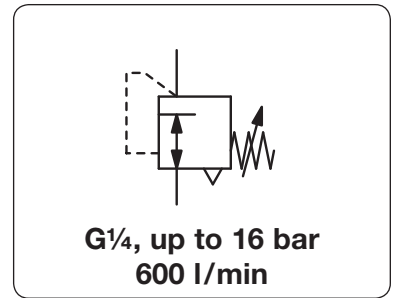


Order example:  
R90-01A

# Precision Regulator without Constant Bleed, up to 16 bar Outlet Pressure

**R217**

<b>Description</b>	Diaphragm pressure regulator with good regulation accuracy at varying volume flow.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 16 bar		
<b>Accuracy</b>	response sensitivity: < 350 mbar		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	by handwheel with locknut, suitable for panel mounting		
<b>Relieving function</b>	relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F		
<b>Material</b>	Body: zinc die-cast	O-ring: NBR/Buna-N	
	Spring cage: zinc die-cast	Bottom screw: POM	
	Diaphragm: FKM		



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					

Precision pressure regulator							supply pressure max. 16 bar, relieving, without constant bleed	<b>R217</b>
82	148	20	0,3	36	600	G $\frac{1}{4}$	0.01 ... 1	<b>R217-02A</b>
							0.20 ... 3	<b>R217-02B</b>
							0.40 ... 6	<b>R217-02C</b>
							0.50 ... 10	<b>R217-02D</b>
							0.70 ... 16	<b>R217-02E</b>



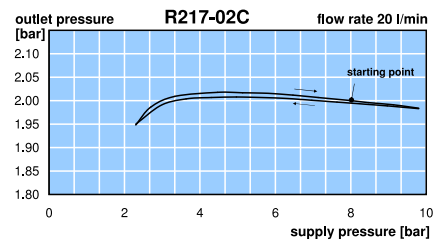
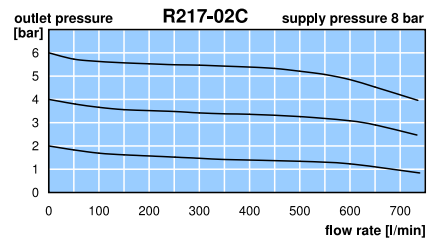
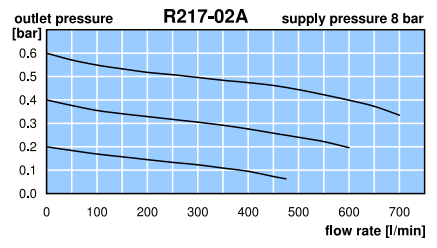
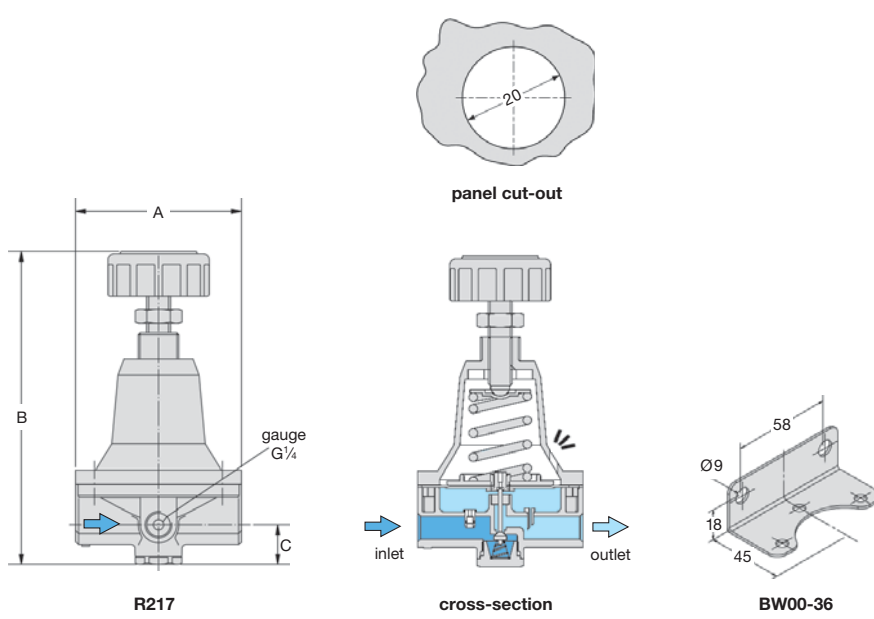
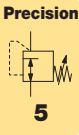
## Special options, add the appropriate letter

ree of grease and oil specially cleaned **R217-0...L**

**R217**  
with mounting nut

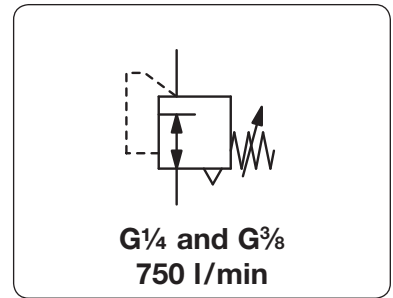
## Accessories

pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	<b>MA6302-...*2</b>
mounting bracket	made of steel	<b>BW00-36</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure und 1 bar pressure drop  
\*2 01 = 0...1 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

<b>Description</b>	Diaphragm pressure regulator with good regulation accuracy at varying volume flow, especially at low pressure.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 21 bar		
<b>Accuracy</b>	response sensitivity: < 100 mbar		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	by T-handle with locknut, mounting bracket not possible by handwheel, suitable for panel mounting		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{3}{8}$ on the bottom side of the body, one screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for handwheel version 0 °C to 80 °C / 32 °F to 176 °F for T-handle version		
<b>Material</b>	Body: zinc die-cast	Elastomer: NBR/Buna-N	Bottom screw: brass



Dimensions			Adjustment	Kv-value	Flow rate		Connection thread	Pressure range	Order number
A	B	C	by	(m $^3$ /h)	m $^3$ /h*1	l/min*1	G	bar	

Precision pressure regulator									
supply pressure max. 21 bar, relieving, without constant bleed									
108	162	32	<b>T-handle</b>	0.39	42	700	G $\frac{1}{4}$	0.01 ... 0.6	<b>R216-02E</b>
								0.01 ... 1.6	<b>R216-02F</b>
								0.01 ... 3.5	<b>R216-02H</b>
				0.42	45	750	G $\frac{3}{8}$	0.01 ... 0.6	<b>R216-03E</b>
								0.01 ... 1.6	<b>R216-03F</b>
								0.01 ... 3.5	<b>R216-03H</b>
108	162	32	<b>handwheel</b> for panel mounting	0.39	42	700	G $\frac{1}{4}$	0.01 ... 0.6	<b>R216-02EP</b>
								0.01 ... 1.6	<b>R216-02FP</b>
								0.01 ... 3.5	<b>R216-02HP</b>
				0.42	45	750	G $\frac{3}{8}$	0.01 ... 0.6	<b>R216-03EP</b>
								0.01 ... 1.6	<b>R216-03FP</b>
								0.01 ... 3.5	<b>R216-03HP</b>

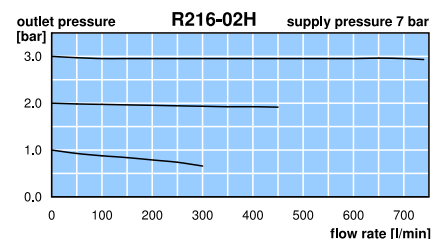
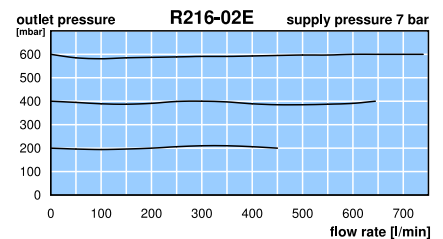
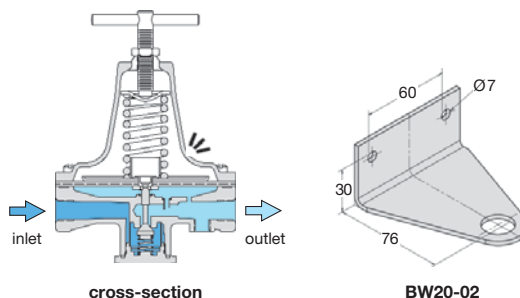
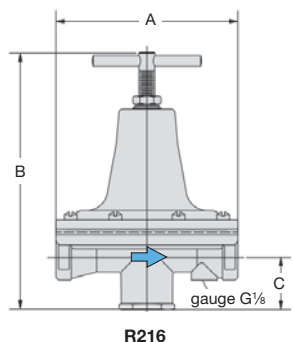
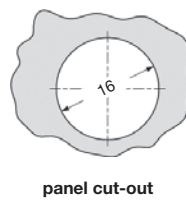
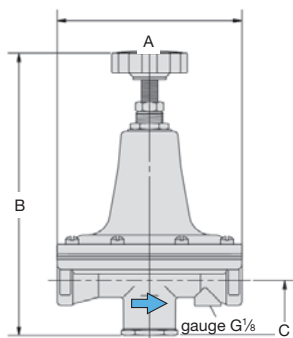


### Special options, add the appropriate letter

<b>non-relieving</b>	without relieving function	R216-0...K
<b>NPT</b>	connection thread	R216-0...N
<b>free of oil and grease</b>	specially cleaned	R216-0...L

### Accessories

<b>pressure gauge</b>	Ø 63 mm, 0... <sup>2</sup> bar, G $\frac{1}{4}$ , connection parts required	<b>MA6302-...<sup>2</sup></b>
<b>connection parts</b>	for pressure gauge	<b>AM-02</b>
<b>mounting bracket</b>	made of steel, mounting nut at the device for R216-0...P	<b>BW20-02</b>



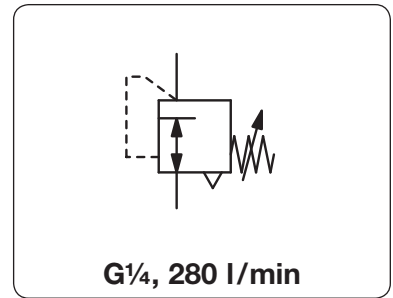
\*1 at 7 bar supply pressure and 3 bar outlet pressure

\*2 01 = 0...1 bar, 02 = 0...2,5 bar, 04 = 0...4 bar

# Precision Pressure Regulator

11-818

<b>Description</b>	Precision pressure regulator designed for precise pressure control in the event of changes in flow and supply pressure. Due to constant bleed slight blow-off sounds existing.	
<b>Media</b>	dry, oil-free and 25 µm filtered compressed air	
<b>Supply pressure</b>	max. 8 bar for 0.02...0.5 bar, max. 10 bar for 0.07...4 bar, max. 14 bar for 0.4...10 bar	
<b>Accuracy</b>	at varying supply pressures: < 20 mbar pressure deviation at varying volume flows: < 30 mbar pressure deviation at 5 °C / K temperature variation: < 3 mbar pressure deviation	
<b>Air consumption</b>	max. 2 l/min, subject to outlet pressure	
<b>Adjustment</b>	by handwheel for panel mounting, optionally by spindle	
<b>Relieving function</b>	relieving, 3 mm exhaust diameter	
<b>Gauge port</b>	G¼ on both sides of the body, optionally without gauge port	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: zinc die-cast Elastomer: NBR/Buna-N	Inner valve: brass, plastic



Dimensions			Description	P <sub>1</sub> max.	Flow rate	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm		bar	l/min*1	G	bar	

Precision pressure regulator								P1: max. 8 / 10 / 14 bar, relieving, with constant bleed, accuracy < 30 mbar, K <sub>v</sub> = 0.16 m³/h	11-818
55	137	13	handwheel	8	280	G¼	0.02 ... 0.5	11-818-999	
				10			0.07 ... 4.0	11-818-100	
				14			0.40 ... 10	11-818-110	
55	137	13	handwheel	8	280	G¼	0.02 ... 0.5	11-818-987	
				10			0.07 ... 4.0	11-818-993	
				14			0.40 ... 10	11-818-991	
55	137	13	spindle	8	280	G¼	0.02 ... 0.5	11-818-998	
				10			0.07 ... 4.0	11-818-101	
				14			0.40 ... 10	11-818-112	



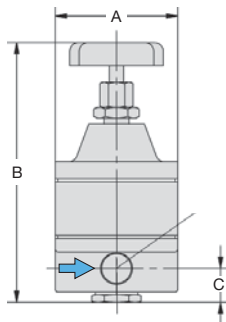
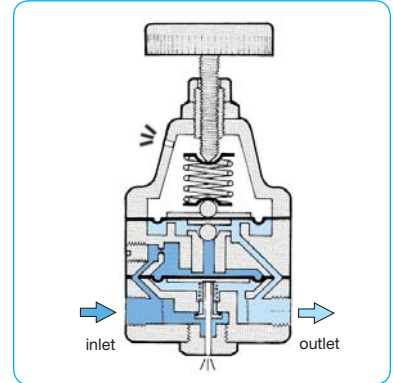
11-818-100

## Special options, add the appropriate letter

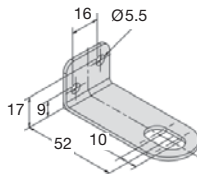
**tamper-proof cap** made of brass, adjustment by screwdriver, total height 108 mm 11-818-...T

## Accessories

**pressure gauge** Ø 50 mm, 0...\*2 bar, G¼ **MA5002-...\*2**  
**mounting bracket** made of steel, mounting nut at the device **BW12-01**  
**tamper-proof cap** for metal sheet thickness from 2.5 up to 6 mm **3081-01**



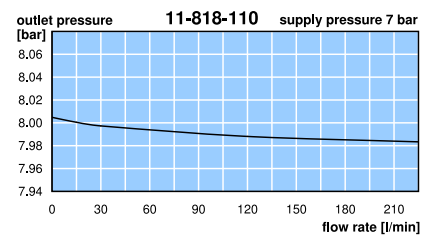
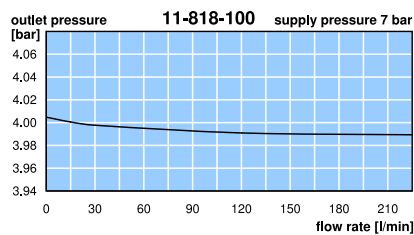
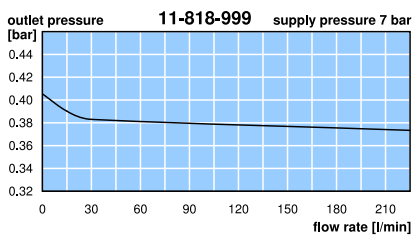
11-818



BW12-01



tamper-proof cap



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure

\*2 01 = 0...1 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

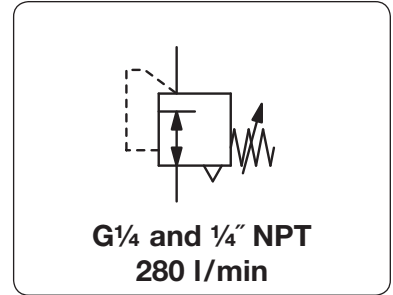
PDF CAD  
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Order example:  
11-818-999

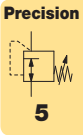
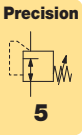


<b>Description</b>	Regulator of proven reliability and durability designed for precise pressure regulation in the event of changes in flow, supply pressure and temperature. Slight exhaust sounds are normal.	
<b>Note</b>	To avoid leaks the mounting nut must be screwed tight.	
<b>Media</b>	dry, oil-free and 25 µm filtered compressed air	
<b>Supply pressure</b>	max. 10 bar	
<b>Accuracy</b>	at varying supply pressures: < 1 mbar pressure deviation at varying volume flows: < 5 mbar pressure deviation	
<b>Air consumption</b>	max. 2 l/min, subject to outlet pressure	
<b>Adjustment</b>	by handwheel with locknut, for panel mounting	<b>Mounting position</b> any
<b>Relieving function</b>	relieving, the exhaust valve's diameter is six times greater than the regulating valve's diameter	
<b>Gauge port</b>	G¼ or ¼" NPT on both sides of the body, identical with the connection thread	
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: zinc die-cast Elastomer: NBR/Buna-N	Measuring capsule: beryllium copper



Dimensions			Description	Kv-value (m³/h)	Flow rate m³/h*1 l/min*1	Connection thread G/NPT	Pressure range bar	Order number
A	B	C						

Precision pressure regulator				supply pressure max. 10 bar, relieving, with constant bleed, accuracy 5 mbar				Manostat	
54	70	14	standard	0.16	17	280	G¼	0.14 ... 1.7	<b>53.1002.4X</b>
								0.14 ... 4.0	<b>53.1002.5X</b>
								0.14 ... 8.0	<b>53.1002.6X</b>
54	70	14	standard	0.16	17	280	¼" NPT	0.14 ... 1.7	<b>53.1002.00</b>
								0.14 ... 4.0	<b>53.1003.00</b>
								0.14 ... 8.0	<b>53.1004.00</b>

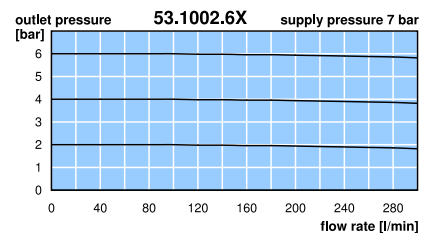
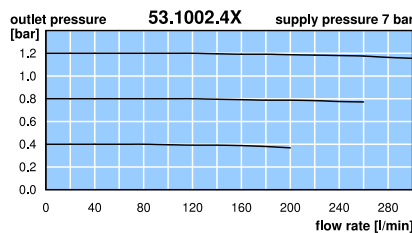
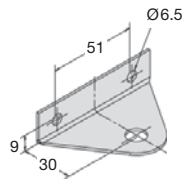
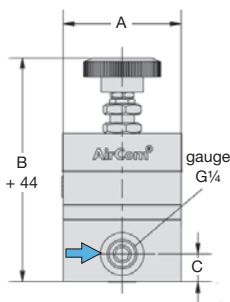
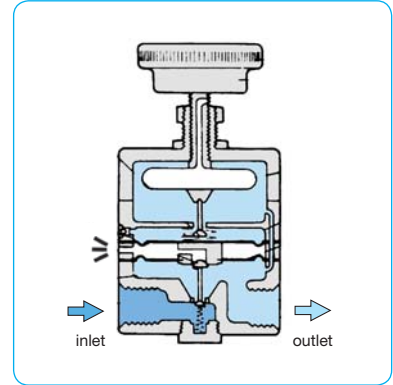


## Special options, add the appropriate letter

**tamper-proof cap** aluminium, adjustment by screwdriver, total height 109 mm **53.1.....T**

## Accessories

**pressure gauge** Ø 50 mm, 0...\*2 bar, G¼ **MA5002-...\*2**  
**connecting parts gauge** for NPT ports, adapter ¼" NPT - G¼ female **VP-0202N**  
**mounting bracket** made of steel, mounting nut at the device **BW11-01**



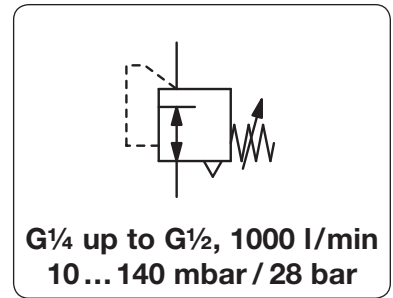
\*1 at 7 bar supply pressure and 1.4 bar outlet pressure  
 \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
**53.1002.4X**

<b>Description</b>	The diaphragm pressure regulator provides precision regulation in high flow applications. A balanced inner valve, sensitive rolling diaphragm and carefully positioned aspirator tube ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 35 bar	
<b>Accuracy</b>	response sensitivity: < 2 mbar	
<b>Air consumption</b>	max. 6 l/min, subject to outlet pressure	
<b>Adjustment</b>	by handwheel with locknut	
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Relief capacity</b>	150 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, optionally $\frac{1}{4}$ " NPT	
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast	Inner valve: stainless steel and brass
	Elastomer: NBR/Buna-N, optionally FKM	



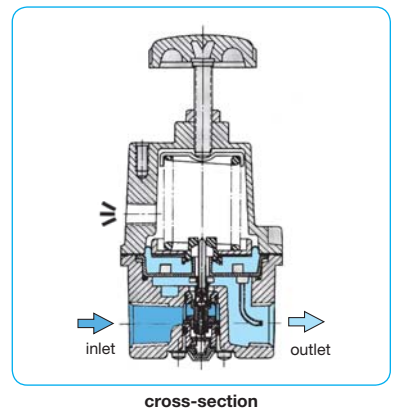
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number *
A	B	C					

Precision pressure regulator				supply pressure max. 35 bar, relieving, with constant bleed		Model 10		
67	169	26	0.64	60	1000	G $\frac{1}{4}$	0.01... 0.14 0.01... 0.7 0.01... 1.4 0.01... 2.1 0.07... 4.1 0.14... 10 0.20... 14	<b>10212H</b> <b>10222H</b> <b>10202H</b> <b>10232H</b> <b>10242H</b> <b>10262H</b> <b>10272H</b>
67	178	26	0.64	60	1000	G $\frac{1}{4}$	0.30... 21 0.30... 28	<b>10282H</b> <b>10292H</b>



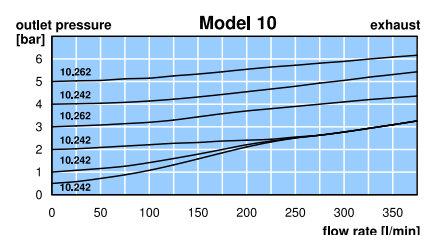
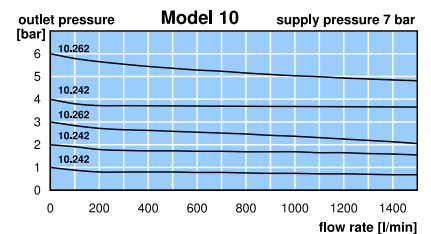
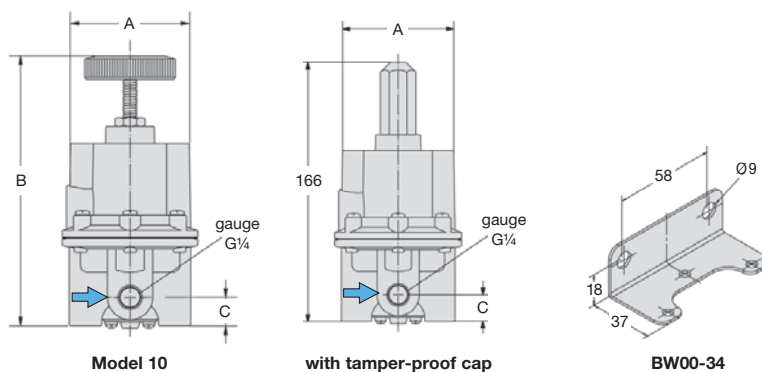
**Special options, add the appropriate letter**

<b>G<math>\frac{3}{8}</math></b>	connection thread	102.3H
<b>G<math>\frac{1}{2}</math></b>	connection thread, recommended for mbar-range	102.4H
<b>NPT</b>	connection thread	102.2
<b>non-relieving</b>	and without constant bleed	102.2.N
<b>reduced bleeding</b>	approx. 2 l/min	102.2.B
<b>for small flow rate</b>	high constant bleed for more sensitivity	102.2.L
<b>tapped exhaust</b>	G $\frac{1}{4}$ connection thread	102.2.E
<b>FKM elastomer</b>		102.2.J
<b>tamper-proof cap</b>	aluminium, adjustment by screwdriver, total height 166 mm	102.2.T
<b>for oxygen</b>	specially cleaned	102.2.SC
<b>non-ferrous metal-free</b>	FKM elastomer	102.2.X63



**Accessories**

<b>pressure gauge</b>	Ø 63 mm, 0...160 mbar, G $\frac{1}{4}$ , capsule type	<b>MA6302-C2</b>
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube	<b>MA5002-...*2</b>
<b>gauge connectors</b>	for NPT ports, adapter $\frac{1}{4}$ " NPT - G $\frac{1}{4}$ female	<b>VP-0202N</b>
<b>mounting bracket</b>	made of steel	<b>BW00-34</b>



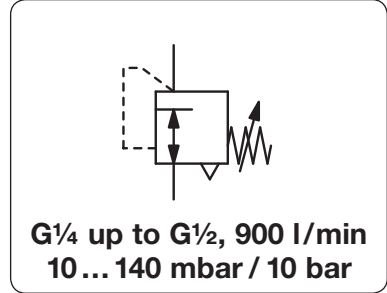
\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar

Gauges: see chapter for measuring devices

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**Order example:**  
10212H

<b>Description</b>	The diaphragm pressure regulator provides precision regulation in high flow applications. A balanced inner valve, sensitive rolling diaphragm and carefully positioned aspirator tube ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 17 bar	
<b>Accuracy</b>	response sensitivity: < 4 mbar	
<b>Air consumption</b>	max. 6 l/min, subject to outlet pressure	
<b>Adjustment</b>	by handwheel with locknut	
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Relief capacity</b>	110 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, optionally $\frac{1}{4}$ " NPT	
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N	Mounting position any Inner valve: stainless steel and brass



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					

Precision pressure regulator							supply pressure max. 17 bar, relieving, with constant bleed	R230
67	154	16	0.5	54	900	G $\frac{1}{4}$	0.01 ... 0.14	R230-020
							0.01 ... 1.0	R230-02A
							0.01 ... 2.0	R230-02B
							0.07 ... 4.0	R230-02C
							0.14 ... 10	R230-02D

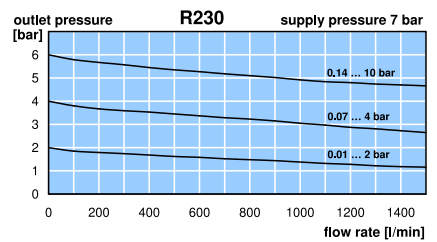
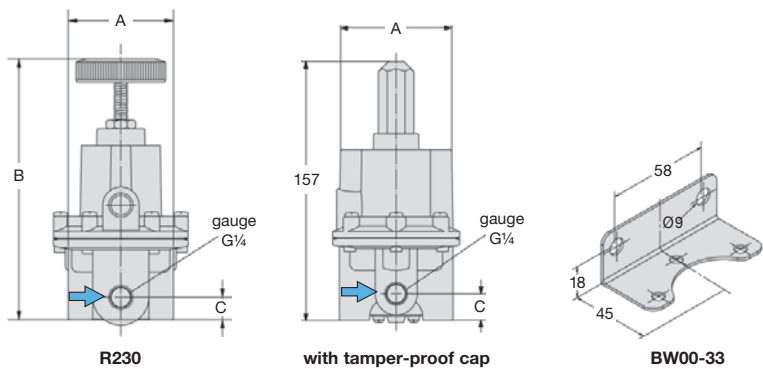
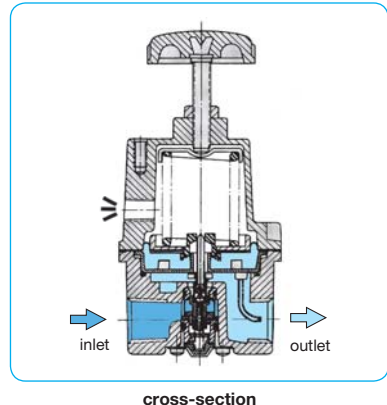


### Special options, add the appropriate letter

<b>G<math>\frac{3}{8}</math></b>	connection thread	R230-03 .
<b>G<math>\frac{1}{2}</math></b>	connection thread, recommended for mbar range	R230-04 .
<b>NPT</b>	connection thread	R230-0 . .N
<b>non-relieving</b>	and without constant bleed	R230-0 . .K
<b>reduced bleeding</b>		R230-0 . .X19
<b>tapped exhaust</b>	connection thread G $\frac{1}{4}$	R230-0 . .X12
<b>tamper-proof cap</b>	aluminium, adjustment by screwdriver, total height 157 mm	R230-0 . .T
<b>check valve</b>	quick exhaust at supply pressure removal	R230-0 . .X80

### Accessories

<b>pressure gauge</b>	Ø 63 mm, 0...160 mbar, G $\frac{1}{4}$ , capsule type	<b>MA6302-C2</b>
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube	<b>MA5002-...*2</b>
<b>gauge connectors</b>	NPT connection thread, adapter $\frac{1}{4}$ " NPT to G $\frac{1}{4}$ female	<b>VP-0202N</b>
<b>mounting bracket</b>	made of steel	<b>BW00-33</b>



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 06 = 0...6 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R230-020

**Description** Diaphragm pressure regulator of small and lightweight design with high flow capacity. It provides sensitive adjustment accurate to 2 mbar.

**Media** compressed air or non-corrosive gases

**Supply pressure** max. 18 bar

**Accuracy** setting accuracy: < 2 mbar  
response sensitivity: < 2 mbar

**Air consumption** max. 3 l/min, subject to outlet pressure

**Adjustment** by handwheel with locknut

**Relieving function** relieving

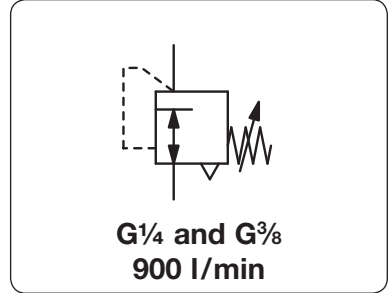
**Relief capacity** 55 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint

**Gauge port** G $\frac{1}{8}$  on both sides of the body, screw plugs supplied

**Temperature range** 0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F

**Material** Body: aluminium die-cast  
Inner valve: stainless steel, brass and steel  
Elastomer: NBR/Buna-N, optionally FKM

**Mounting position** any

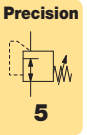


Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					

Precision pressure regulator							supply pressure max. 18 bar, relieving with constant bleed	R300
57	133	25	0.5	54	900	G $\frac{1}{4}$	0.001 ... 0.14	R300-020
							0.01 ... 0.7	R300-021
							0.03 ... 2.0	R300-02A
							0.07 ... 4.0	R300-02B
							0.14 ... 7.0	R300-02C
57	133	25	0.5	54	900	G $\frac{3}{8}$	0.001 ... 0.14	R300-030
							0.01 ... 0.7	R300-031
							0.03 ... 2.0	R300-03A
							0.07 ... 4.0	R300-03B
							0.14 ... 7.0	R300-03C



R300

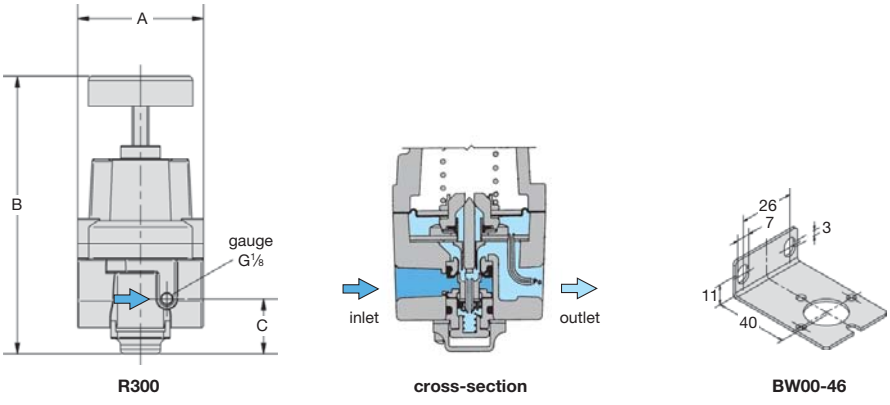
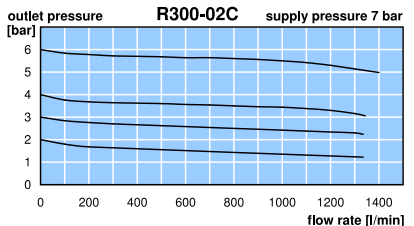
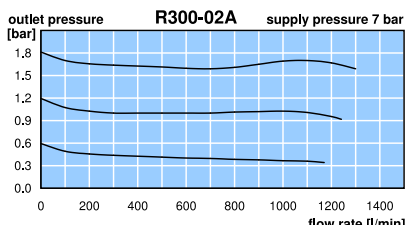
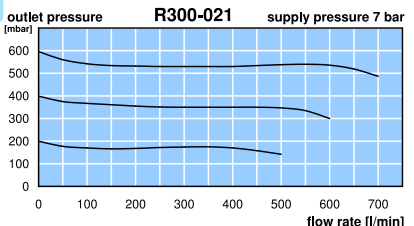
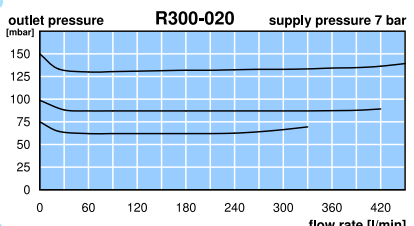


**Special options,** add the appropriate letter

without constant bleed	non-relieving, for small flow rate	R300-0...K
NPT	connection thread	R300-0...N
tamper-proof cap	aluminium, adjustment by screwdriver, total height 141 mm	R300-0...T
FKM elastomer		R300-0...V
for oxygen	specially cleaned, with oxygen grease	R300-0...K15

**Accessories**

pressure gauge	Ø 63 mm, 0 ... 160 mbar, G $\frac{1}{4}$ -connection parts required	MA6302-C2
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{8}$	MA5001-...*2
gauge connection parts	for MA6302-C2	AM-04
mounting bracket	made of steel	BW00-46



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure  
\*2 01 = 0...1 bar, 02 = 0...2,5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, C2 = 160 mbar





# Precision Pressure Regulator / Booster with Excellent Pressure Stability "Nullmatic" R40

**Description** Highly sensitive, two-step precision pressure regulator working in the flapper-nozzle principle. Solid construction for low-maintenance operation with compressed air or non-corrosive gases.

**Booster version** In option A version the regulator can also be controlled by pilot pressure up to 7 bar in addition to range spring control. Thereby the regulator becomes a volume booster with double loop, parallel zero point shift

**Supply pressure** minimum: 0.3 bar above outlet pressure maximum: see chart

**Air consumption** Constant bleed only when flow is circulating. The greater the difference between supply and outlet pressure the greater is the air consumption, e.g. 9 bar inlet and 7 bar outlet resulting in 3 l/min air consumption.

**Exhaust** 50 l/min at 1.7 bar outlet pressure and 20 mbar overpressure to outlet pressure

**Pressure stability** 10 mbar pressure drop when changing flow rate from "0" to "max".

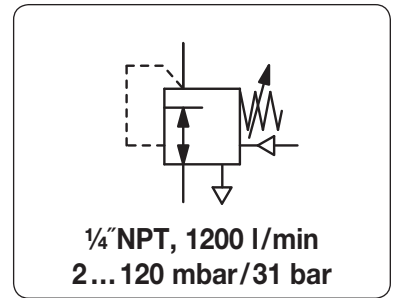
**Setting accuracy** < 0.03 % outlet pressure. Ten adjusting knob turns for the setting of the whole adjustment range.

**Gauge port** 1/4" NPT on both sides, screw plugs supplied **Mounting position:** any

**Temperature range** Operating pressure : -4 °C to 80 °C / 25 °F to 176 °F Storage temperature: -20 °C to 100 °C / -4 °F to 212 °F

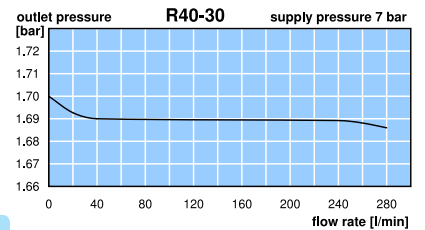
**Temperature sensitivity** 1 % pressure deviation at temperature change of 30 K, 0.1 % deviation for isotherm spring (please inquire)

**Material** fluid-contact: brass, stainless steel, neoprene, aluminium and zinc



Dimensions	Flow rate	Supply pressure recommended	Connection thread	Pressure range	Order number
Höhe mm	Ø mm	l/min*1 bar*2	NPT	mbar / bar	

Precision regulator "Nullmatic"					$K_v = 0.16$ $K_v = 0.66$ for version „H“	<b>R40</b>
189	86	300	0.7	1.7	1/4" NPT	2...120 mbar <b>R40-2</b>
189	86	300	3.5	7	1/4" NPT	10...500 mbar <b>R40-7</b>
189	86	300	5	10	1/4" NPT	0.03... 1 bar <b>R40-15</b>
189	86	300	8	10	1/4" NPT	0.07... 2 bar <b>R40-30</b>
189	86	300	8	10	1/4" NPT	0.07...3.5 bar <b>R40-50</b>
189	86	1200	8	10	1/4" NPT	0.07...3.5 bar <b>R40-50H</b>
189	86	300	10	35	1/4" NPT	0.1... 7 bar <b>R40-100</b>
189	86	1200	10	35	1/4" NPT	0.1... 7 bar <b>R40-100H</b>
192	86	300	17	35	1/4" NPT	0.2... 14 bar <b>R40-200</b>
192	86	300	24	35	1/4" NPT	0.5... 21 bar <b>R40-300</b>
192	86	300	35	35	1/4" NPT	1... 31 bar <b>R40-450</b>

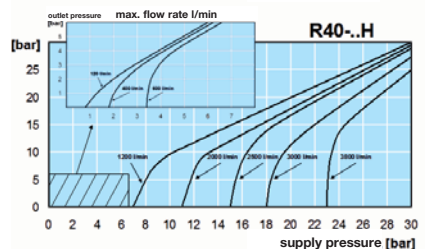
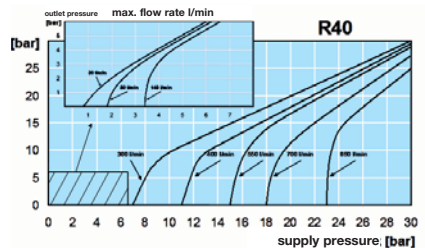
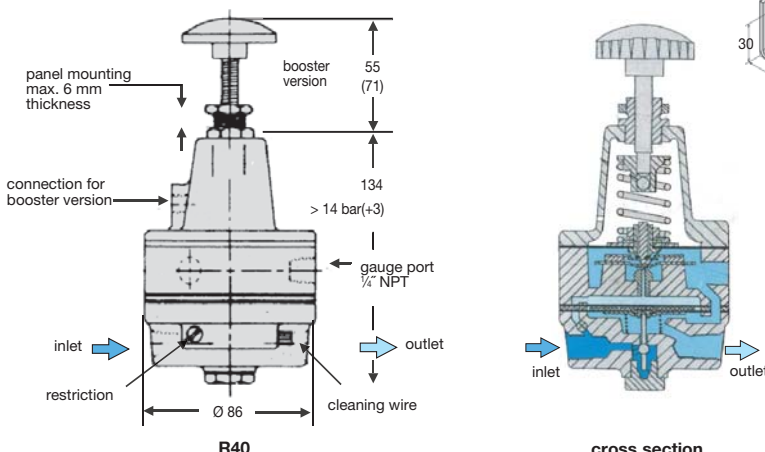
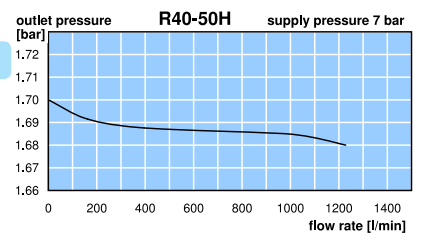


## Special options, add the appropriate letter

**volume booster** version: up to max. 7 bar pilot pressure **R40A-...**

## Accessories

- pressure gauge** Ø 50 mm, 0...\*2 bar, G1/4 **MA5002-...\*3**
- pressure gauge** Ø 63 mm, 0... 160 mbar, G1/4- connection parts required, for R40-2 **MA6302-C2**
- gauge connectors** for NPT ports, adapter 1/4" NPT to G1/4 female **VP-0202N**
- mounting bracket** **BW20-02**



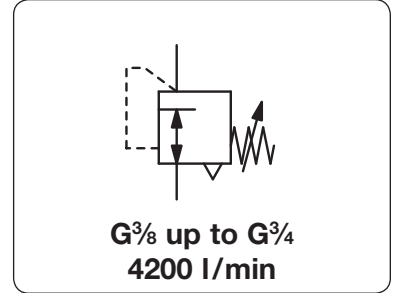
\*1 at 7 bar supply pressure, 1.7 bar outlet pressure and 20 mbar pressure drop  
\*2 lowest outlet pressure will only be reached when applying the recommended inlet pressure  
\*3 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar

Gauges: see chapter for measuring devices

PDF CAD  
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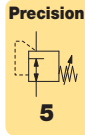
Order example:  
R40-2

<b>Description</b>	The diaphragm regulator provides high-precision regulation in high flow and high relief applications. A sensitive rolling diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 18 bar	
<b>Accuracy</b>	response sensitivity: < 2 mbar	
<b>Air consumption</b>	without constant bleed	
<b>Adjustment</b>	by handwheel with locknut	
<b>Relieving function</b>	relieving	
<b>Relief capacity</b>	1000 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast	Elastomer: NBR/Buna-N, optionally FKM
	Inner valve: stainless steel, brass, aluminium and steel	



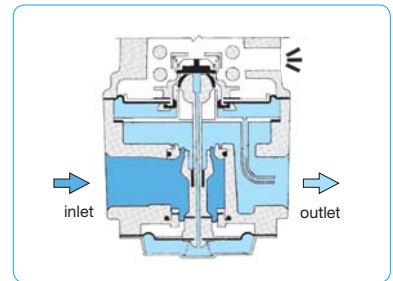
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

Precision pressure regulator							supply pressure max. 18 bar, relieving, without constant bleed	R400
89	206	39	2.12	228	3800	G $\frac{3}{8}$	0.03 ... 0.7	R400-031
							0.03 ... 2.0	R400-03A
							0.07 ... 4.0	R400-03B
							0.15 ... 10	R400-03C
							0.35 ... 17	R400-03D
89	206	39	2.23	240	4000	G $\frac{1}{2}$	0.03 ... 0.7	R400-041
							0.03 ... 2.0	R400-04A
							0.07 ... 4.0	R400-04B
							0.15 ... 10	R400-04C
							0.35 ... 17	R400-04D
89	206	39	2.34	252	4200	G $\frac{3}{4}$	0.03 ... 0.7	R400-061
							0.03 ... 2.0	R400-06A
							0.07 ... 4.0	R400-06B
							0.15 ... 10	R400-06C
							0.35 ... 17	R400-06D



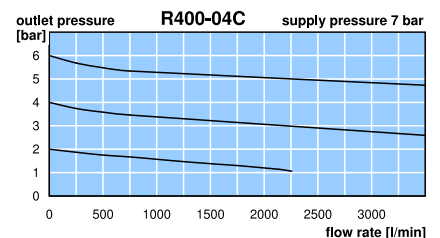
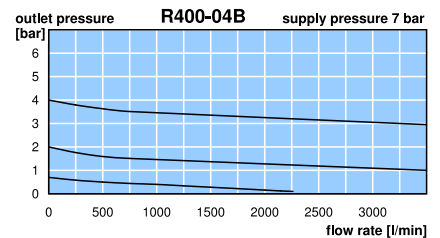
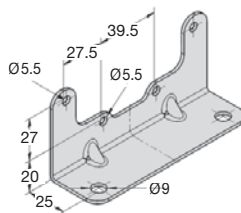
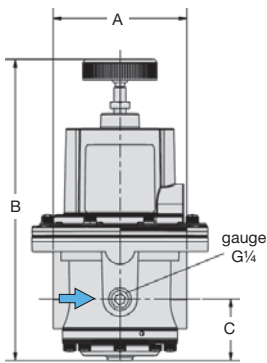
## Special options, add the appropriate letter

<b>tapped exhaust</b>	connection thread G $\frac{1}{4}$	R400-0 . . X12
<b>NPT</b>	connection thread	R400-0 . . N
<b>tamper-proof cap</b>	of aluminium, adjustment by screwdriver, total height 295 mm	R400-0 . . T
<b>FKM elastomer</b>	up to 10 bar	R400-0 . . V



## Accessories

<b>pressure gauge</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-...*2
<b>mounting bracket</b>	made of steel	BW00-47



# Precision Pressure Regulator with High Flow Rate and Exhaust

R03

**Description**

Regulator provides precision regulation in high flow and high relief applications. A sensitive rolling diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations. The regulator is silicone-free and suitable for panel mounting.

**Media**

oil-free and 5 µm filtered compressed air or non-corrosive gases

**Supply pressure**

max. 16 bar

**Accuracy**

at supply pressure change from 2 bar to 7 bar: < 6 mbar pressure deviation  
at volume flow change from 0 l/min to 20 l/min: < 20 mbar pressure deviation

**Air consumption**

< 1.5 l/min at P<sub>i</sub>= 5 bar, < 2 l/min at P<sub>i</sub>= 7 bar, < 4 l/min at P<sub>i</sub>= 10 bar, < 1% of volume flow

**Adjustment**

by handwheel with locknut, suitable for panel mounting

**Relieving function**

relieving

**Relief capacity**

700 l/min at 6 bar outlet and 0.35 bar overpressure above setpoint

**Gauge port**

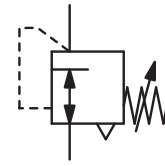
G<sub>1/4</sub> on both sides of the body, one screw plug supplied

**Mounting position**

any compressed air down to -35 °C / -31 °F

**Temperature range**

Body: zinc die-cast  
Elastomer: NBR/Buna-N



G<sub>1/4</sub> up to G<sub>1/2</sub>  
4500 l/min

Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

**Precision pressure regulator**

supply pressure max. 16 bar, relieving, with constant bleed

R03

82	200	41	2.1	198	3300	G <sub>1/4</sub> *3	0.01 ... 3	R03-02A
							0.02 ... 5	R03-02B
							0.04 ... 7	R03-02C
							0.05 ... 10	R03-02D
82	200	41	2.4	228	3800	G <sub>3/8</sub> *3	0.01 ... 3	R03-03A
							0.02 ... 5	R03-03B
							0.04 ... 7	R03-03C
							0.05 ... 10	R03-03D
82	200	41	2.9	270	4500	G <sub>1/2</sub>	0.01 ... 3	R03-04A
							0.02 ... 5	R03-04B
							0.04 ... 7	R03-04C
							0.05 ... 10	R03-04D



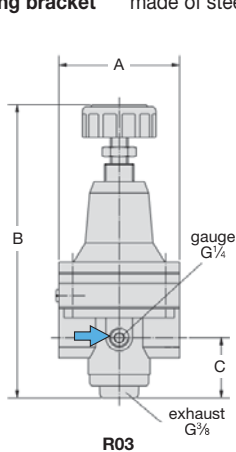
R03

**Special options, add the appropriate letter**

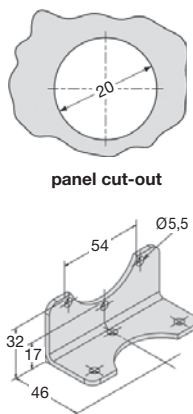
tamper-proof cap total height 204 mm R03-0..T

**Accessories**

pressure gauge Ø 50 mm, 0...\*2 bar, G<sub>1/4</sub> MA5002-...\*2  
mounting bracket made of steel BW00-36

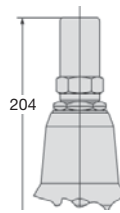


R03

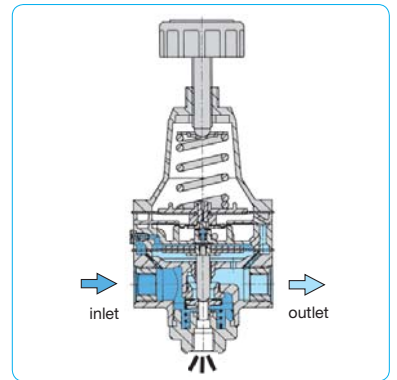


panel cut-out

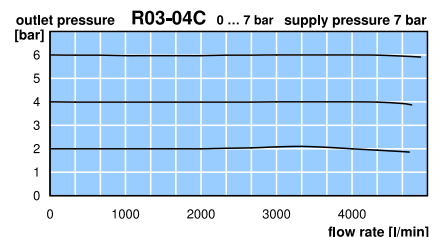
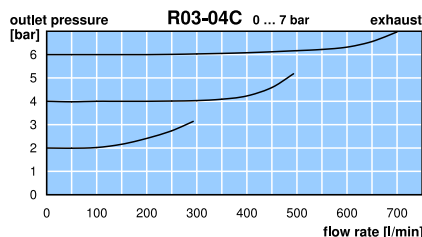
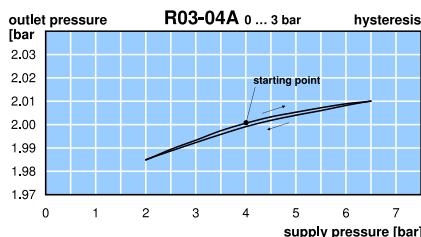
BW00-36



tamper-proof cap



cross-section



\*1 at 7 bar supply pressure and 6 bar outlet pressure

\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

\*3 standard unit G<sub>1/2</sub> is reduced to smaller threads by fittings

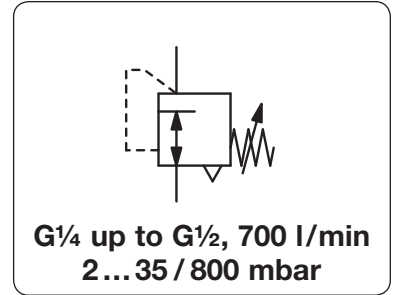
Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
R03-02A

<b>Description</b>	Diaphragm regulator with small dimensions. Suitable for low pressure applications, with high relief capacity. A sensitive rolling diaphragm ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Recommendation</b>	connection thread G $\frac{1}{2}$ for pressure range 0...35 / 140 / 280 mbar	
<b>Supply pressure</b>	max. 10 bar	
<b>Accuracy</b>	response sensitivity: < 0,2 mbar	<b>Air consumption</b> max. 2 l/min depending on outlet pressure
<b>Adjustment</b>	by handwheel with locknut	
<b>Relieving function</b>	relieving, optionally non-relieving	<b>Relief capacity</b> 14 l/min at 7 mbar above setpoint 70 mbar
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, optionally $\frac{1}{4}$ NPT	
<b>Mounting position</b>	any	
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast Inner valve: stainless steel and galvanised steel Elastomer: NBR/Buna-N, optionally FKM	



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range mbar	Order number
A	B	C					

Precision regulator for low pressure							supply pressure max. 10 bar, relieving, with constant bleed	R110
67	180	25	0,4	42	700	G $\frac{1}{4}$	2... 35	R110-020
							2... 140	R110-02A
							2... 280	R110-02B
							2... 400	R110-02C
							2... 800	R110-02D
67	180	25	0,4	42	700	G $\frac{1}{2}$	2... 35	R110-040
							2... 140	R110-04A
							2... 280	R110-04B
							2... 400	R110-04C
							2... 800	R110-04D

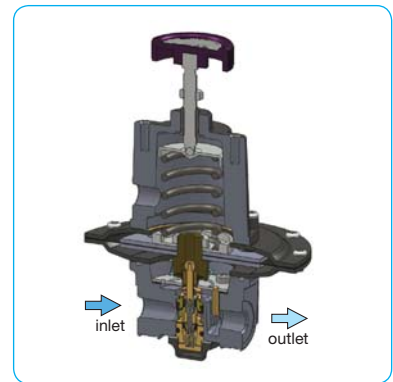


R110

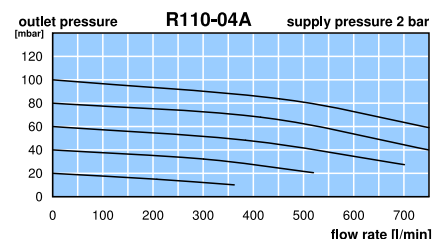
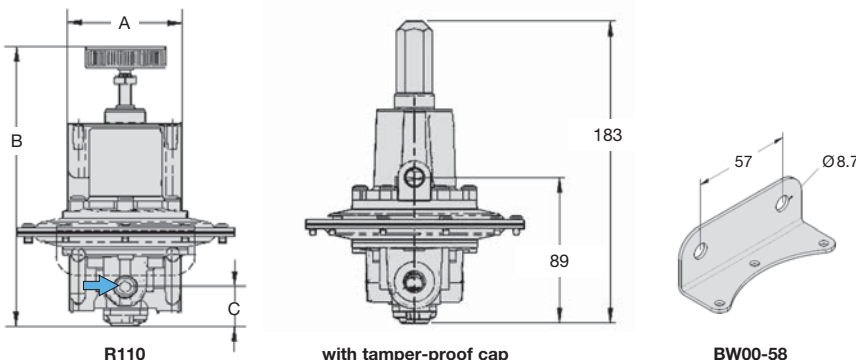


Special options, add the appropriate letter		
G $\frac{3}{8}$	connection thread	R110-03 .
NPT	connection thread	R110-0 . . N
non-relieving		R110-0 . . K
reduced bleeding	ca. 1 l/min	R110-0 . . X19
tapped exhaust	connection thread G $\frac{1}{4}$	R110-0 . . X12
FKM elastomer		R110-0 . . V
tamper-proof cap	aluminium, adjustment by screwdriver, total height 183 mm	R110-0 . . T

Accessories		
pressure gauge	Ø 63 mm, 0... *2 mbar, G $\frac{1}{4}$ , capsule type	MA6302-... *2
	Ø 63 mm, 0...600 mbar, G $\frac{1}{4}$ , Bourdon tube	MA6302-C6
	Ø 63 mm, 0... 1 bar, G $\frac{1}{4}$ , Bourdon tube	MA6302-01
gauge connectors	NPT connection thread, adapter $\frac{1}{4}$ " NPT to G $\frac{1}{4}$ female	VP-0202N
mounting bracket	made of steel	BW00-58

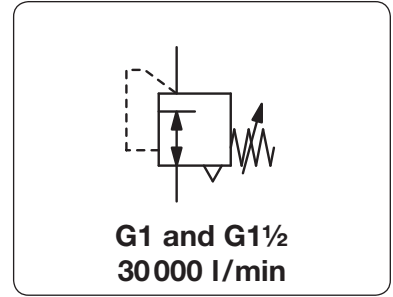


cross-section



\*1 at 7 bar supply pressure, 800 mbar outlet pressure and 40 mbar pressure drop  
\*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar

<b>Description</b>	Provides precision regulation in high flow and high relief applications. A sensitive rolling diaphragm and balanced inner valve assure constant outlet pressure even with supply pressure and flow fluctuations.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 18 bar, optionally max. 35 bar	
<b>Accuracy</b>	response sensitivity: < 2 mbar	
<b>Air consumption</b>	0.5% of volume flow, max. 15 l/min	
<b>Adjustment</b>	by T-handle with locknut	
<b>Relieving function</b>	relieving, optionally non-relieving	
<b>Relief capacity</b>	1200 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
<b>Gauge port</b>	G¼ for outlet pressure	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N, optionally FKM at 35 bar version Inner valve: stainless steel, brass, aluminium and steel	

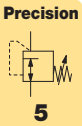


Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate m³/h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					

Precision pressure regulator							supply pressure max. 18 bar, relieving, with constant bleed	R102
141	287	56	11.4	1680	28000	G1	0.001 ... 0.7	R102-081
							0.03 ... 2.0	R102-08A
							0.07 ... 4.0	R102-08B
							0.14 ... 7.0	R102-08C
							0.14 ... 10	R102-08D
141	287	56	12.2	1800	30000	G1½	0.001 ... 0.7	R102-121
							0.03 ... 2.0	R102-12A
							0.07 ... 4.0	R102-12B
							0.14 ... 7.0	R102-12C
							0.14 ... 10	R102-12D

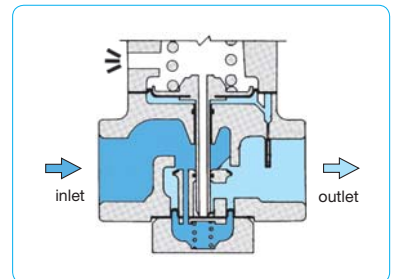


R102

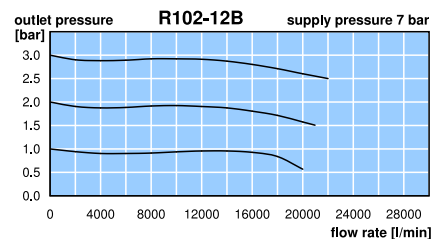
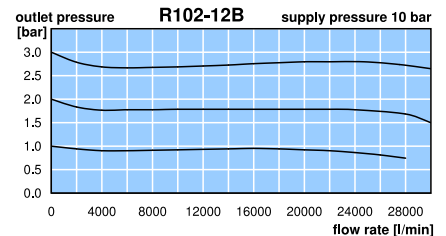
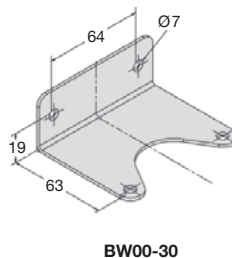
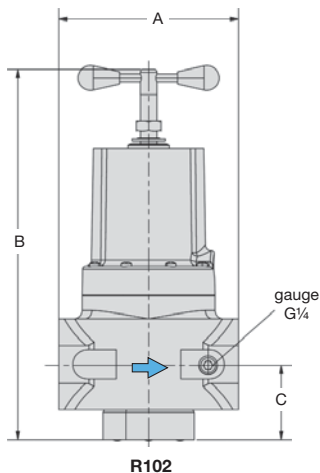


Special options, add the appropriate letter		
NPT	connection thread	R102-... N
non-relieving	and without constant bleed	R102-... K
supply pressure 35 bar	free of non-ferrous metal, FKM elastomer	R102-... X62
tamper-proof cap	aluminium, adjustment by screwdriver, total height 295 mm	R102-... T

Accessories		
pressure gauge	Ø 63 mm, 0...*2 bar, G¼	MA6302-...*2
mounting bracket	made of steel	BW00-30



cross-section



\*1 at 10 bar supply pressure and 2.8 bar outlet pressure  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R102-081



## Volume Booster

	Description	Supply pressure max. bar	Pressure range bar	Connection thread	Device	Page
<b>precise</b>	differential pressure also ratio 1:1 up to 1:6	17	0 ... 1 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	<b>6.02</b>
	differential pressure also different ratio	17	0 ... 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R750	<b>6.03</b>
	differential pressure also high exhaust capacity	17	0 ... 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208	<b>6.04</b>
	differential pressure also different ratio, high-precision	16	0 ... 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J	<b>6.05</b>
	high exhaust capacity	17	0 ... 10	G $\frac{3}{4}$ and G1	R490	<b>6.06</b>
	different ratio, high-precision	17	0 ... 10	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450	<b>6.07</b>
	high exhaust capacity	28	0.2 ... 18	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	R116	<b>6.08</b>
	high volume flow	17	0 ... 10	G1 and G1 $\frac{1}{2}$	R200	<b>6.09</b>
high exhaust capacity	17	0 ... 10	1 $\frac{1}{2}$ "NPT	R201	<b>6.09</b>	
<b>standard</b>	high volume flow	21	0.2 ... 18	G $\frac{1}{4}$ - G3	R119-J	<b>6.11</b>
<b>with ratio</b>	1:1 up to 1:6	17	max. 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R750	<b>6.03</b>
	1:1 up to 1:6 and 2:1 up to 5:1	17	max. 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208	<b>6.04</b>
	1:1 up to 1:3 and 2:1 up to 3:1	17	max. 10	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450	<b>6.07</b>
<b>low pressure</b>	also for gases	20	10 ... 350/1000 mbar	G1 - G2	RZ-J	<b>6.10</b>
	also for gases	0,4	2 ... 55/ 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	<b>6.13</b>
	also for gases	4	5 ... 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	<b>6.13</b>
<b>high pressure</b>	ratio 1:2 up to 1:19	260	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-J	<b>6.12</b>
	made of brass	100	0.1 ... 24 / 99	G1	RLM	<b>6.14</b>
	made of brass	50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R120-J	<b>6.15</b>
<b>miniature</b>	also for liquids	10	0 ... 6	G $\frac{1}{8}$	R035-J	www
	also for liquids	21	0.1 ... 11	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364-J	www
<b>stainless steel</b>	ratio 1:2 up to 1:19	310	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-J	<b>6.12</b>
	made of stainless steel	100	0.1 ... 24 / 99	G1	RLE	<b>6.14</b>
	made of stainless steel	50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R3000-J	15.22
<b>pressure booster</b>	1:2 up to 1:10	12	4 ... 100	G $\frac{1}{4}$ - G $\frac{3}{4}$	AM	<b>6.16</b>
	1:2 up to 1:5, with storage	12	4 ... 40	G $\frac{3}{8}$ and G $\frac{1}{2}$	AP	<b>6.17</b>
	1:2, small design	10	3 ... 16	G $\frac{1}{8}$ - G $\frac{1}{2}$	AB	<b>6.18</b>



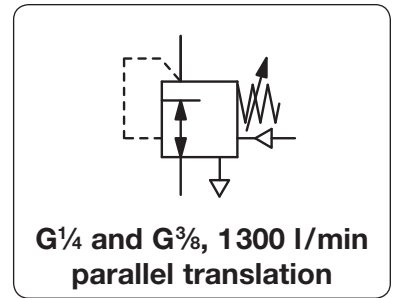
# 6 Volume Booster

Booster



6

<b>Description</b>	Signal-operated regulator designed to provide outlet pressure which is the sum of the input signal pressure plus a preset bias. As an option, the relay can start with bias range -0.3 bar / -4 psi. The relay can also be used as a differential pressure regulator.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 17 bar	
<b>Pilot pressure</b>	max. 10 bar, pilot port G $\frac{1}{4}$	
<b>Accuracy</b>	response sensitivity: < 1 mbar	
<b>Air consumption</b>	without constant bleed	
<b>Relief capacity</b>	110 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	<b>Relieving function</b> relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N Inner valve: brass	



Dimensions			Flow rate	Connection thread	Supply recommended	Positive bias	Pressure range	Order number
A	B	C	m $^3$ /h*1	l/min*1	G	bar	bar	

Positive bias relay									supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1	R650
68	170	16	72	1200	G $\frac{1}{4}$	5	0... 1	0... 10	R650-02C	
						5	0... 2		R650-02D	
						8	0... 4		R650-02E	
						15	0... 10		R650-02F	
68	170	16	78	1300	G $\frac{3}{8}$	5	0... 1	0... 10	R650-03C	
						5	0... 2		R650-03D	
						8	0... 4		R650-03E	
						15	0... 10		R650-03F	

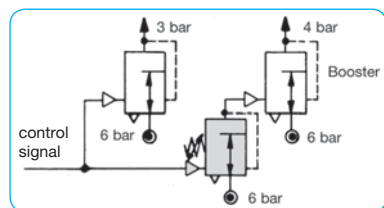


### Special options, add the appropriate letter

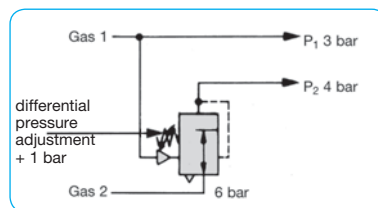
<b>negative bias</b>	factory-set to -0.3 bar	R650-0..Y
<b>NPT</b>	connection thread	R650-0..N
<b>tapped exhaust</b>	connection thread G $\frac{1}{8}$	R650-0..X12
<b>tamper-proof cap</b>	above spindle, total height 174 mm	R650-0..T

### Accessories

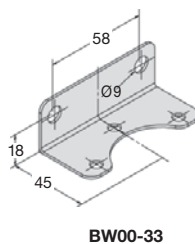
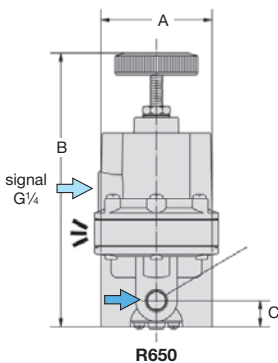
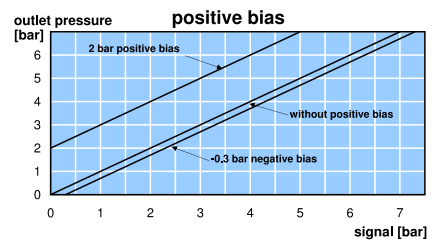
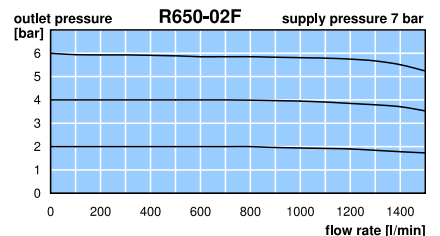
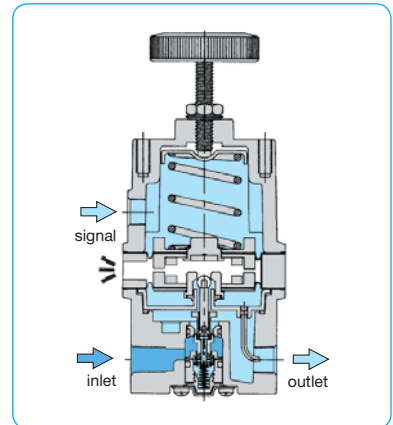
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
<b>mounting bracket</b>	made of steel	BW00-33



**Example 1:** constant differential pressure of 1 bar at high flow



**Example 2:** constant differential pressure of 1 bar



\*1 at 7 bar supply pressure and 6 bar outlet pressure  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

# Precision Volume Booster with Transmission Ratio

R750

## Description

The volume booster with transmission ratio amplifies the outlet pressure at a 1:1 up to 1:6 ratio by a pneumatic pilot pressure, which has no constant bleed. That signal pressure has the same function as a spring in a common regulator: generating counter pressure on the diaphragm. This force is compensated by the outlet pressure on the diaphragm's bottom side. The ratio of pilot pressure to outlet pressure depends on the size of the operating diaphragms.

## Media

compressed air or non-corrosive gases

Supply pressure max. 17 bar

## Pilot pressure

max. 10 bar at 1:1 ratio, 5 bar at 1:2, 3.3 bar at 1:3, 1.7 bar at 1:6, pilot port G $\frac{1}{4}$

## Accuracy

at supply variation of 3.5 bar: < 7 mbar 1:1, < 10 mbar at 1:2, < 21 mbar at 1:3, < 41 mbar at 1:6  
response sensitivity: < 2 mbar 1:1, < 3 mbar at 1:2, < 17 mbar at 1:3, < 23 mbar at 1:6

## Air consumption

max. 3 l/min, subject to outlet pressure

## Relieving function

relieving

## Relief capacity

170 l/min at 1.5 bar outlet and 0.7 bar overpressure above setpoint

## Gauge port

on both sides of the body, thread equal to regulator thread

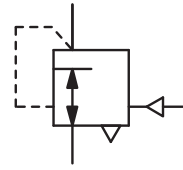
Mounting position any

## Temperature range

0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F

## Material

Body: zinc die-cast Elastomer: NBR/Buna-N Inner valve: brass and stainless steel



G $\frac{1}{4}$  and G $\frac{3}{8}$ , 1000 l/min  
1:1 up to 1:6

Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Signal pressure	Transmission ratio	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	max. bar	signal : outlet

## Booster

with transmission ratio, supply pressure max. 17 bar, relieving, with constant bleed, pressure range 0...10 bar

## R750

68	102	16	0.5	60	1000	G $\frac{1}{4}$	10	1:1	R750-02I
							5.0	1:2	R750-02K
							3.3	1:3	R750-02C
							1.7	1:6	R750-02M
68	102	16	0.5	60	1000	G $\frac{3}{8}$	10	1:1	R750-03I
							5.0	1:2	R750-03K
							3.3	1:3	R750-03C
							1.7	1:6	R750-03M



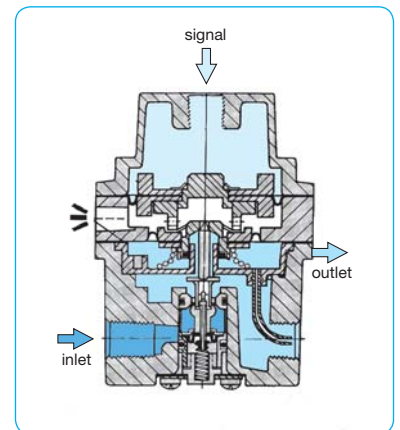
R750

## Special options, add the appropriate letter

negative bias	factory-set to -0,3 bar	R750-0. .Y
NPT	connection thread	R750-0. .N
tapped exhaust	connection thread G $\frac{1}{4}$	R750-0. .X12

## Accessories

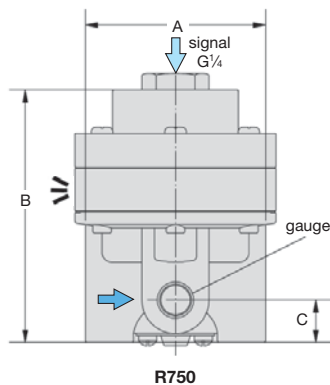
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-33



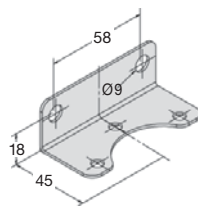
cross-section

Booster

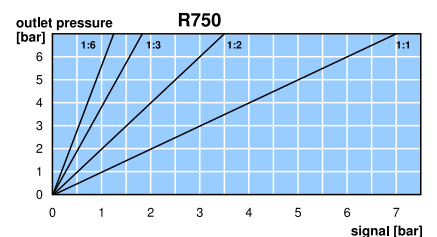
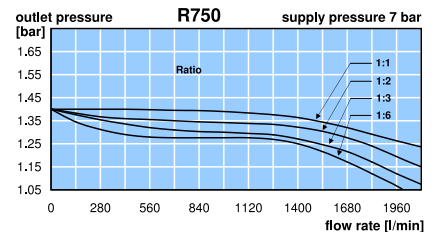
6



R750



BW00-33



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure

\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



Order example:  
R750-02I

**Description** The volume booster amplifies the volume at a 1:1 ratio of pilot pressure to outlet pressure. The pilot pressure has no constant bleed and shows the same function as a spring in a common regulator: generating counter pressure on the diaphragm.

**Media** compressed air or non-corrosive gases

**Supply pressure** max. 17 bar

**Pilot pressure** max. 10 bar at 1:1 ratio, 5 bar at 1:2, 3.3 bar at 1:3, 2.5 bar at 1:4, 1.7 bar at 1:6 **Pilot port** G $\frac{1}{4}$

**Accuracy** at supply pressure variation of 7 bar: < 7 mbar pressure deviation  
 transmission error: 1% from 1:1 to 1:3 ratio, 2% at greater or inverse transmission  
 response sensitivity: 1 mbar at 1:1, 2 mbar at 1:2, 3 mbar at 1:3 and at inverse transmission

**Air consumption** max. 3 l/min, subject to outlet pressure

**Relief capacity** 310 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint

**Gauge port** G $\frac{1}{4}$  on both sides of the body, screw plugs supplied

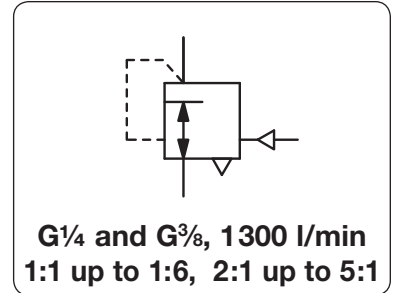
**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F, NBR, for appropriately conditioned compr. air down to -40 °C / -40 °F  
 0 °C to 90 °C / 32 °F to 194 °F, FKM, for appropriately conditioned compr. air down to -40 °C / -40 °F

**Material** Body: aluminium die-cast  
 Inner valve: brass and zinc-plated steel

**Relieving function** relieving

**Mounting position** any

**Elastomer:** NBR/Buna-N, optionally FKM



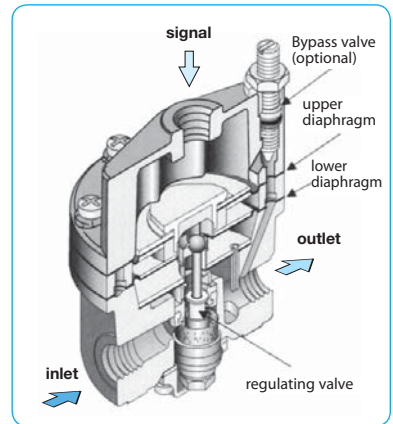
Dimensions			K <sub>v</sub> -value	Flow rate	Connection	Pilot pressure	Transmission ratio	Order number
A	B	C	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	thread	max. bar	signal : outlet	
mm	mm	mm		l/min*1	G			

Booster			with transmission ratio, relieving, with constant bleed, pressure range 0...10 bar				R208		
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	1 : 1	R208-02I
							5.0	1 : 2	R208-02K
							3.3	1 : 3	R208-02L
76	110	24	0.7	78	1300	G $\frac{1}{4}$	2.5	1 : 4	R208-02M
							2.0	1 : 5	R208-02N
							1.7	1 : 6	R208-02O
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	2 : 1	R208-02R
								3 : 1	R208-02S
76	110	24	0.7	78	1300	G $\frac{1}{4}$	10	4 : 1	R208-02T
								5 : 1	R208-02U



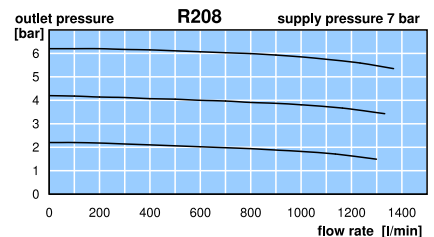
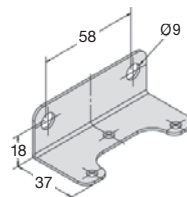
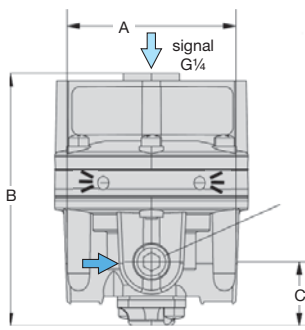
**Special options, add the appropriate letter**

G $\frac{3}{8}$	connection thread	R208-03 .
NPT	connection thread	R208-02 .N
non-relieving*3	without relieving function	R208-02 .K
tapped exhaust*3	connection thread G $\frac{1}{4}$	R208-02 .X12
bypass with restrictor	between control chamber and outlet, 1:1 only	R208-02 .X16
negative bias*3	preset to -0,24 bar, adjustable by 30 mbar	R208-02 .Y
silicone elastomer	supply pressure max. 5 bar, 1:1 only	R208-02 .A
FKM elastomer		R208-02 .V



**Accessories**

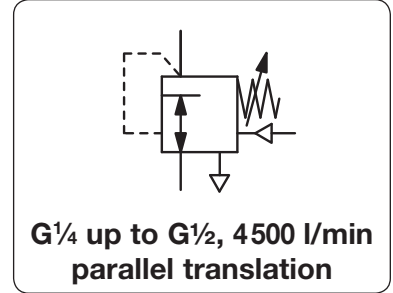
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-34



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure  
 \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

\*3 only for 1:1, 1:2, 1:3, 2:1 and 3:1

<b>Description</b>	Pilot-operated volume booster with positive bias designed to supply outlet pressure equal to signal pressure plus an adjustable preset spring constant. With very high forward and reverse flow characteristics and excellent sensitivity. If requested the system pressure can also manually be adjusted up to 6 bar adding to the pilot pressure.	
<b>Media</b>	oil-free and 5 µm filtered compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 16 bar	<b>Pilot port</b> G $\frac{1}{8}$
<b>Pilot pressure</b>	max. 10 bar, accordingly lower in the case of manual pre-pressure setting	
<b>Accuracy</b>	at supply pressure change from 2 bar to 7 bar: < 6 mbar pressure deviation at flow rate change from 0 l/min to 20 l/min: < 20 mbar pressure deviation response sensitivity: < 2 mbar	
<b>Air consumption</b>	1.5 l/min at P $_1$ = 5 bar, 2 l/min at P $_1$ = 7 bar, 4 l/min at P $_1$ = 10 bar, < 1% of volume flow relieving	
<b>Relieving function</b>	700 l/min at 6 bar outlet and 0.35 bar overpressure above setpoint	
<b>Relief capacity</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied	
<b>Gauge port</b>	<b>Mounting position</b> any	
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
<b>Material</b>	Body: zinc die-cast	Elastomer: NBR/Buna-N



Dimensions			K $_v$ -value	Flow rate	Connection thread	Positive bias	Pressure range	Order number
A	B	C						

Volume booster			supply pressure max. 16 bar, with constant bleed, tapped exhaust, transmission ratio 1:1					R03-J	
82	106	41	2.0	198	3300	G $\frac{1}{4}$ *3	without	0.05 ... 10	R03-02J
			2.3	228	3800	G $\frac{3}{8}$ *3			R03-03J
			2.7	270	4500	G $\frac{1}{2}$			R03-04J



R03-...J

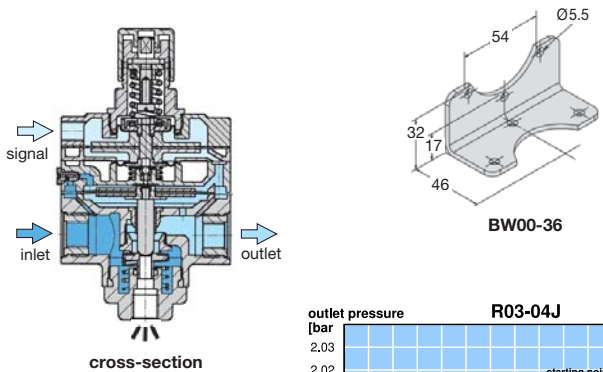
Positive bias booster			supply pressure max. 16 bar, with constant bleed, tapped exhaust, transmission ratio 1:1					R03-J .	
82	142	41	2.0	198	3300	G $\frac{1}{4}$ *3	0 ... 1 bar	0.05 ... 10	R03-02J1
			2.3	228	3800	G $\frac{3}{8}$ *3			R03-03J1
			2.7	270	4500	G $\frac{1}{2}$			R03-04J1
82	180	41	2.0	198	3300	G $\frac{1}{4}$ *3	0 ... 6 bar	0.05 ... 10	R03-02J6
			2.3	228	3800	G $\frac{3}{8}$ *3			R03-03J6
			2.7	270	4500	G $\frac{1}{2}$			R03-04J6



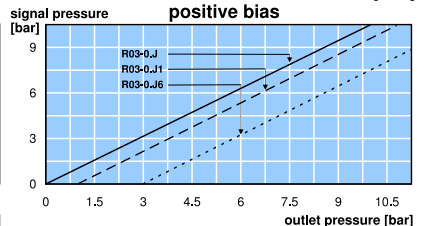
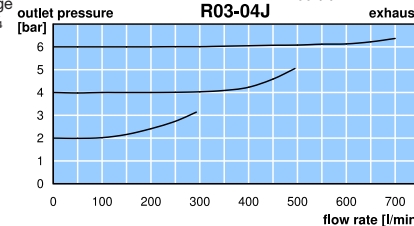
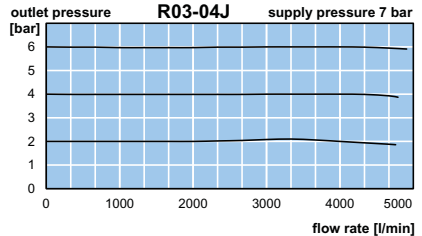
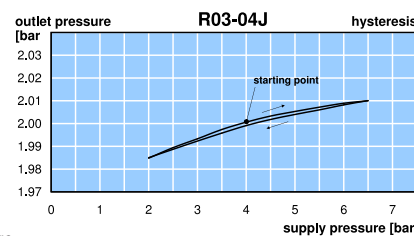
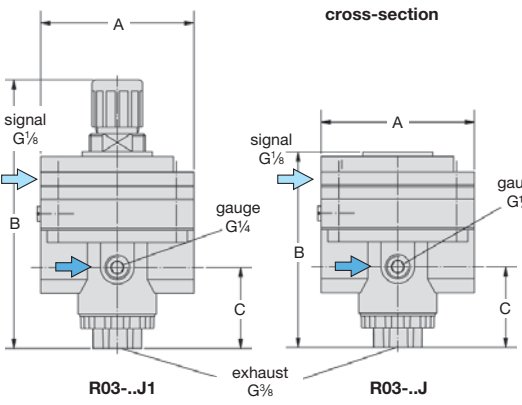
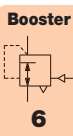
R03-...J1

## Accessories

<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
<b>mounting nut</b>	made of plastic	for R03-...J1 M30x15K
<b>mounting bracket</b>	made of steel	BW00-36



R03-...J6



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar  
\*3 standard unit G $\frac{1}{2}$  reduced to smaller threads by fittings

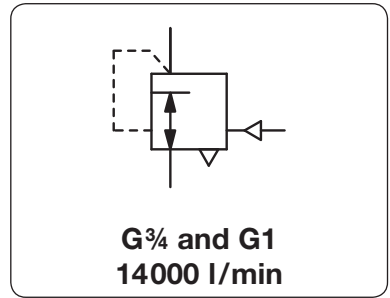


**Description** The volume booster amplifies the volume at a 1:1 ratio of pilot pressure to outlet pressure. The booster is a rugged precision instrument with key features providing reliable, efficient and stable operation. Very low deadband between the operation of the supply valve and exhaust valve providing excellent pressure control. High capacity exhaust valve provides efficient dynamic reverse flow characteristics. Pressure balanced supply valve prevents changes in control characteristics when supply pressure changes. Damped diaphragm control chamber provides stable operation and protects valves from damaging oscillation under high flow conditions.

**Media** compressed air or non-corrosive gases  
**Pilot pressure** max. 17 bar; pilot port G $\frac{1}{4}$   
**Accuracy** at supply pressure variation of 7 bar: < 7 mbar pressure deviation  
 response sensitivity: 2.5 mbar

**Air consumption** max. 3 l/min subject to outlet pressure  
**Relief capacity** 2800 l/min at 0.35 bar overpressure above setpoint of 1.5 bar  
**Gauge port**  $\frac{1}{4}$ " NPT on both sides of the body, screw plugs supplied  
**Temperature range** -40 °C to 93 °C / -40 °F to 199 °F  
**Material** Body: aluminium die-cast Diaphragm: NBR/Buna-N on Polyester, optionally FKM  
 Inner valve: zinc-plated steel, optionally stainless steel

**Supply pressure** max. 17 bar  
**Relieving function** relieving  
**Mounting position** any



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Supply pressure	Pressure range	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	max. bar	signal : outlet

Booster			transmission ratio 1:1, supply pressure max. 17 bar, relieving, with constant bleed					R490	
143	188	44	9	850	14100	G $\frac{3}{4}$	17	0 ...10	R490-06
143	188	44	9	850	14100	G1	17	0 ...10	R490-08



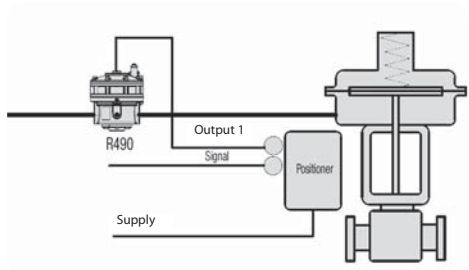
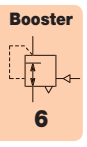
R490

### Special options, add the appropriate letter

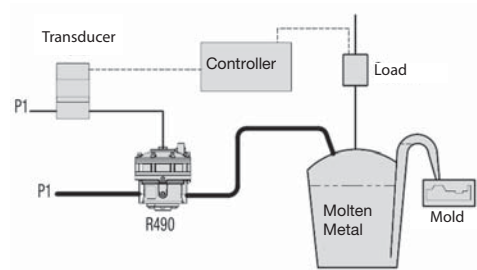
- NPT connection thread R490-0 . N
- external feedback with connection thread G $\frac{1}{4}$  R490-0 . X27
- FKM elastomer R490-0 . V
- inner parts SST all R490-0 . S

### Accessories

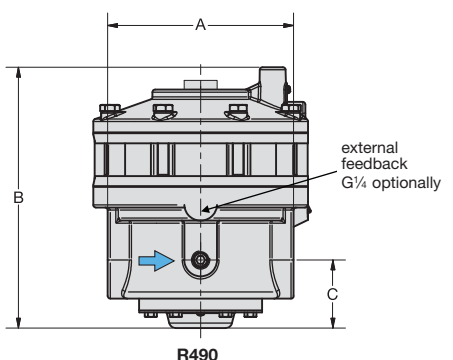
- pressure gauge Ø 63 mm, 0...\*2 bar, G $\frac{1}{4}$  MA6302-..\*2



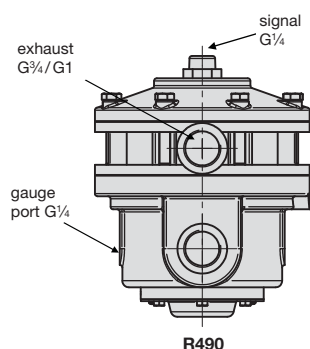
Volume booster with single acting positioner and diaphragm actuator



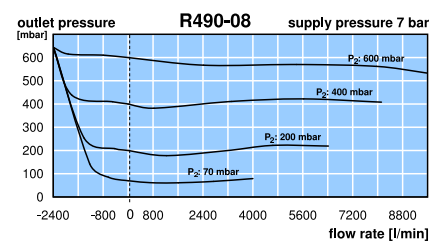
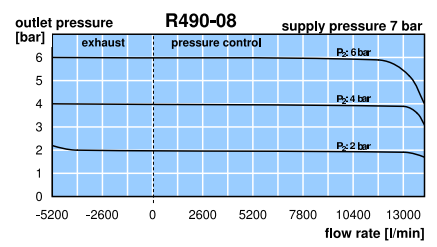
Volume booster: casting implements



R490

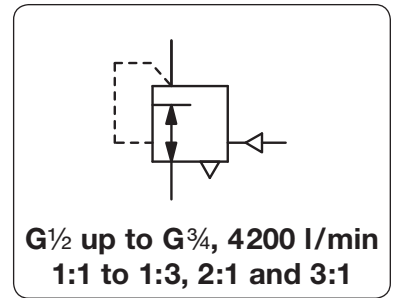


R490



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure  
 \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

<b>Description</b>	The volume booster amplifies the volume at a 1:1 ratio of pilot pressure to outlet pressure. The pilot pressure has no constant bleed and shows the same function as a spring in a common regulator: generating counter pressure on the diaphragm. This force is compensated by the outlet pressure on the diaphragm's bottom side. The ratio of pilot pressure to outlet pressure depends on the size of the operating diaphragms.		
<b>Media</b>	compressed air or non-corrosive gases	<b>Supply pressure</b>	max. 17 bar
<b>Pilot pressure</b>	max. 10 bar at 1:1, 2:1 and 3:1 ratio, 5 bar at 1:2,	3.3 bar at 1:3,	<b>pilot port:</b> G $\frac{1}{4}$
<b>Accuracy</b>	at supply pressure variation of 7 bar: < 7 mbar pressure deviation response sensitivity: 2.5 mbar		
<b>Internal air consumption</b>	max. 3 l/min, depending on outlet pressure		
<b>Relief capacity</b>	1100 l/min at 0.35 bar overpressure above setpoint		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied		
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
<b>Material</b>	Body: aluminium die-cast	Elastomer: NBR/Buna-N, optionally FKM	<b>Relieving function</b> relieving
	Inner valve: brass and aluminium		<b>Mounting position</b> any



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Pilot pressure	Transmission ratio	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	max. bar	signal : outlet

Booster			with transmission ratio, supply pressure max. 17 bar relieving, with constant bleed, pressure range 0...10 bar				R450		
87	129	40	2.16	240	4000	G $\frac{1}{2}$	10	1 : 1	<b>R450-04I</b>
							5.0	1 : 2	<b>R450-04K</b>
							3.3	1 : 3	<b>R450-04L</b>
							10	2 : 1	<b>R450-04M</b>
							10	3 : 1	<b>R450-04N</b>
87	129	40	2.16	252	4200	G $\frac{3}{4}$	10	1 : 1	<b>R450-06I</b>
							5.0	1 : 2	<b>R450-06K</b>
							3.3	1 : 3	<b>R450-06L</b>
							10	2 : 1	<b>R450-06M</b>
							10	3 : 1	<b>R450-06N</b>



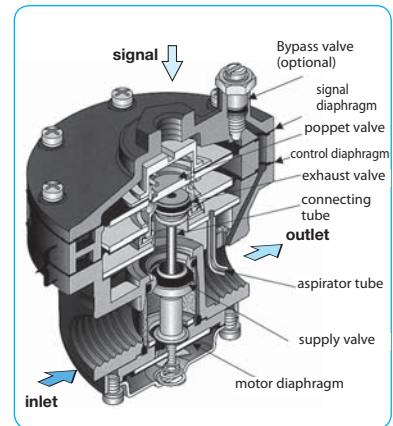
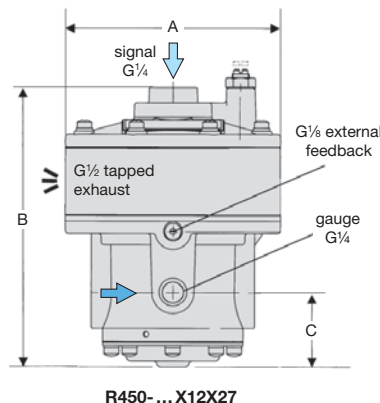
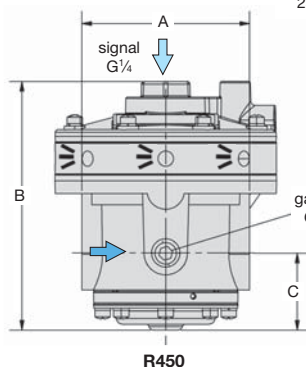
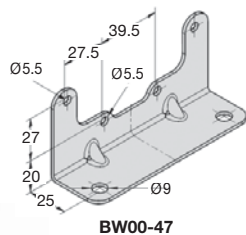
R450

## Special options, add the appropriate letter

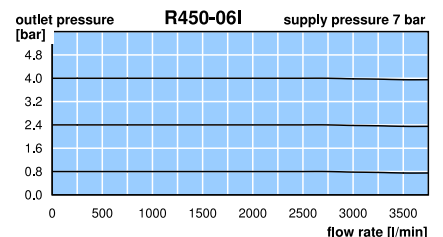
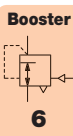
<b>NPT</b>	connection thread	R450-0..N
<b>tapped exhaust</b>	G $\frac{1}{2}$ connection thread, total height 148 mm	R450-0..X12
<b>bypass with restrictor</b>	from control chamber to outlet	1:1 only R450-0..X16
<b>external feedback</b>	with connection thread G $\frac{1}{8}$	R450-0..X27
<b>FKM elastomer</b>		R450-0..V

## Accessories

<b>pressure gauge</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	<b>MA6302-..*2</b>
<b>mounting bracket</b>	made of steel	<b>BW00-47</b>



cross section



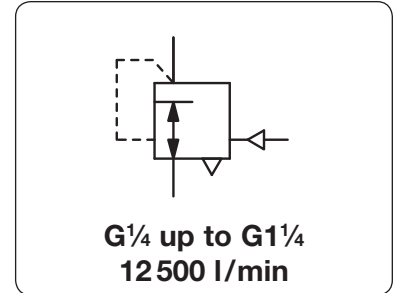
\*1 at 7 bar supply pressure and 1.4 bar outlet pressure  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R450-04I

<b>Description</b>	Pilot-operated regulator adapted for control by small remote pilot regulator or by proportional pressure valve. Ideal for continuous high-capacity requirements where reduced pressure must be held constant over wide variations in flow. The booster is equipped with a diaphragm. Transmission ratio 1:1 (pilot pressure to outlet pressure).		
<b>Media</b>	compressed air or non-corrosive gases	<b>Mounting position</b>	any
<b>Supply pressure</b>	max. 28 bar	<b>Pilot pressure</b>	max. 18 bar
<b>Outlet pressure</b>	0.2... 18 bar	<b>Air consumption</b>	without constant bleed
<b>Relieving function</b>	6500 l/min at 6 bar, see diagram		
<b>Ports</b>	inlet / outlet: see chart gauge P <sub>2</sub> : G <sub>1/4</sub>	<b>exhaust:</b>	G <sub>1/2</sub> (up to overall size G <sub>1/2</sub> ), G <sub>3/4</sub> (from size G <sub>3/4</sub> on)
<b>Temperature range</b>	-18 °C to 70 °C / 0 °F to 158 °F		
<b>Material</b>	Body: zinc die-cast Elastomer: NBR/Buna-N	<b>Inner valve:</b>	brass
		<b>Bottom screw:</b>	reinforced nylon



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Connection thread	Order number
A	B	C	DN	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	

Booster with high relief capacity								P <sub>1</sub> : max. 28 bar, P <sub>2</sub> : 0.2... 18 bar, ratio 1:1 relieving	R116
80	129	39	15	4.3	270	4500	G <sub>1/4</sub>	<b>R116-02</b>	
				4.4	290	4800	G <sub>3/8</sub>	<b>R116-03</b>	
				4.5	300	5000	G <sub>1/2</sub>	<b>R116-04</b>	
93	149	48	25	9.5	690	11500	G <sub>3/4</sub>	<b>R116-06</b>	
				10.0	720	12000	G <sub>1</sub>	<b>R116-08</b>	
				10.4	750	12500	G <sub>1 1/4</sub>	<b>R116-10</b>	



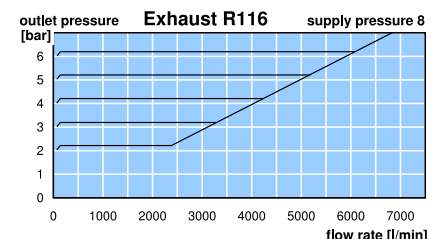
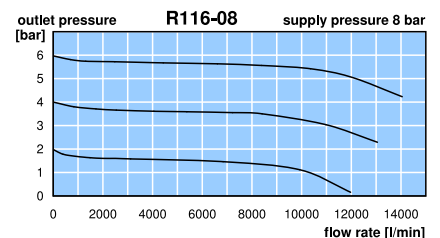
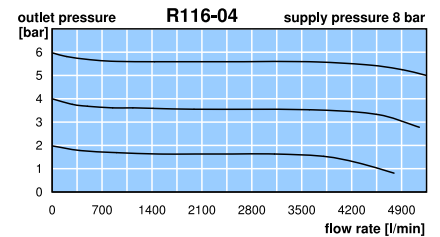
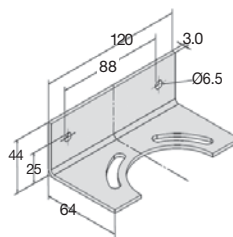
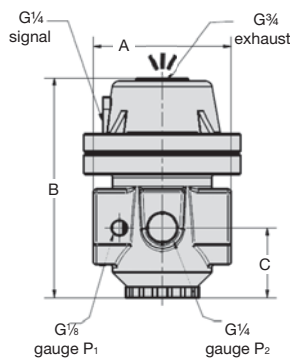
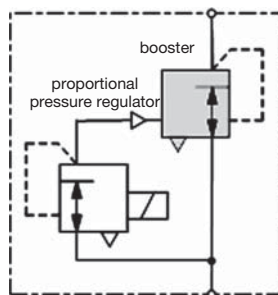
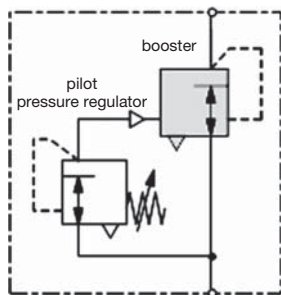
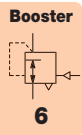
### Special options, add the appropriate letter

<b>NPT</b>	connection thread	R116-..N
<b>flange connection</b>	see chapter SST devices / flanges	R116-..F



### Accessories

<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G <sub>1/4</sub>	for G <sub>1/4</sub> to G <sub>1/2</sub>	<b>MA5002</b> -*2
	Ø 63 mm, 0...*2 bar, G <sub>1/4</sub>	for G <sub>3/4</sub> to G <sub>1 1/4</sub>	<b>MA6302</b> -*2
<b>mounting bracket</b>	made of aluminium		<b>BW00-32</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
**R116-02**

# Precision Volume Booster with High Volume Flow

R200 / R201

### Description

The volume booster amplifies the volume at a 1:1 ratio of pilot pressure to outlet pressure. The pilot pressure has no constant bleed. The bias spring at booster R200 generates a positive shift of the pressure range between pilot pressure and outlet pressure. Booster R201 with great relief capacity is a combination of two R200 boosters. When the output pressure increases above the signal pressure, the diaphragm assembly moves upward to close the supply valve and open the exhaust valve. Excess output pressure exhausts through the exhaust port until it reaches the setpoint.

### Media

compressed air or non-corrosive gases

**Supply pressure** max. 17 bar

### Pilot pressure

max. 10 bar, pilot port G $\frac{1}{4}$  at R200;  $\frac{1}{4}$ " NPT at R201

### Accuracy

at supply pressure variation of 7 bar: < 20 mbar pressure deviation

**Response sensitivity** 30 mbar

### Air consumption

without constant bleed

**Relieving function** relieving, optionally non-relieving

### Relief capacity

1 800 l/min at 0.3 bar overpressure above setpoint at R200, 9 000 l/min at R201

### Gauge port

G $\frac{1}{4}$  on both sides of the body at R200;  $\frac{1}{4}$ " NPT at R201

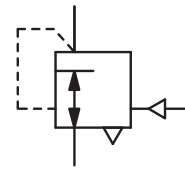
**Mounting position** any

### Temperature range

0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F

### Material

Body: aluminium die-cast Elastomer: NBR/Buna-N-Dacron, optionally FKM  
Inner valve: stainless steel, cadmium-plated steel and brass



G1 and G1½, 1½" NPT  
30 000 l/min

Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Supply pressure	Pressure range	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	max. bar	bar

Booster w. high volume flow						supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1	R200		
141	198	57	11.4	1680	28000	G1	17	0...10	R200-08I
141	198	57	12.2	1800	30000	G1½	17	0...10	R200-12I

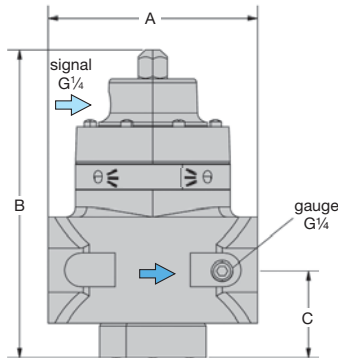
Booster w. high exhaust capacity						supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1	R201		
250	240	57	12.2	1800	30000	1½" NPT	17	0...10	R201-12I

### Special options, add the appropriate letter

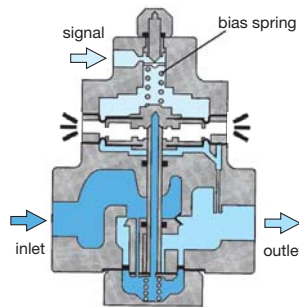
NPT	connection thread	for R200	R200-..IN
non-relieving	without relieving function	for R200	R200-..IK
tapped exhaust	connection thread G $\frac{3}{8}$	for R200	R200-..IX12
FKM elastomer		for R200	R200-..IV

### Accessories

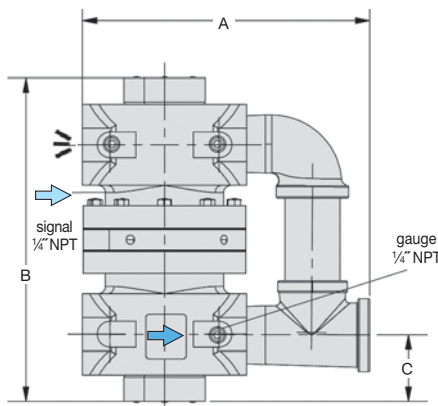
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-..*2
adapter	¼" NPT male / G $\frac{1}{4}$ female	for R201 VP-0202N
mounting bracket	made of steel	for R200 BW00-41



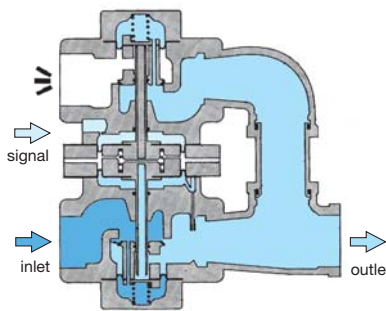
R200



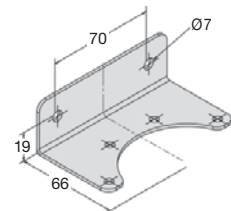
cross-section



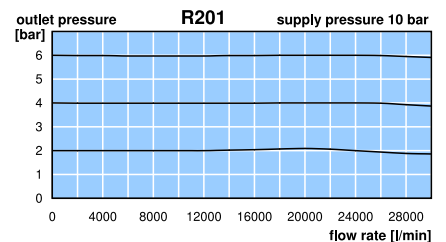
R201



cross-section



BW00-41



\*1 at 10 bar supply pressure and 2.8 bar outlet pressure

\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

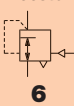
Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
R200-08I

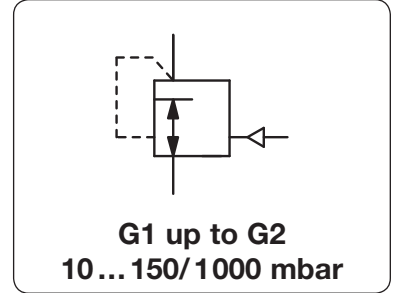
Booster



6



<b>Description</b>	Highly sensitive diaphragm low pressure volume booster with excellent regulating characteristics.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 20 bar depending on the accuracy: the smaller P <sub>1</sub> , the higher the accuracy max. 10 bar at pressure range < 150 mbar		
<b>Accuracy</b>	at max. flow rate	< e.g. 10% pressure deviation of full scale	
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	manual by turning the spindle under the cover of the spring cage		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	not available		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-20 °C bis 60 °C / -4 °F to 140 °F		
<b>Material</b>	Body: SG cast iron GGG50, GGG40 at G2	Elastomer: NBR/Buna-N, optionally FKM	Inner valve: brass and stainless steel
	Spring cage: aluminium		



Dimensions			Accuracy %	Nominal size DN	Flow rate l/min*1	P <sub>1</sub> max. bar*2	Connection thread G	Pressure range mbar	Order number
A	B	C							

Low pressure volume booster						supply max. 20 bar, non-relieving, 1:1 transmission ratio	RZ-J			
100	245	30	10	17	1800	10	G1	15 ... 110	RZ1-08J	
			5					180 ... 1000	RZ3-08J	
130	250	30	10	17	2700	10	G1½*3	15 ... 110	RZ1-12J	
			5					180 ... 1000	RZ3-12J	
200	385	45	10	34	15000	10	G2	10 ... 350	RZ1-16JF	
			5					350 ... 1000	RZ2-16JF	



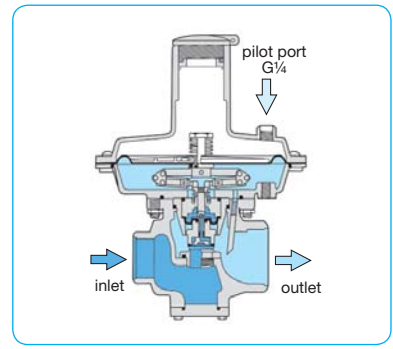
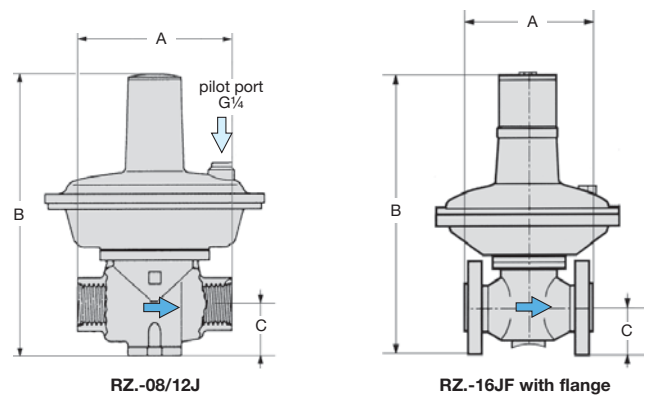
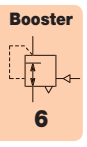
RZ1-08J

**Special options, add the appropriate letter**

relieving	with relieving function	RZ . . . R
FKM elastomer		RZ . . . V
flange connection	see chapter for SST devices / flanges (not for RZ.-16J)	RZ . . . F.
carbon dioxide	CO <sub>2</sub>	RZ . . . 03
argon	Ar	RZ . . . 05
nitrogen	N <sub>2</sub>	RZ . . . 07
helium	He	RZ . . . 09
hydrogen	H <sub>2</sub>	RZ . . . 11
methane	CH <sub>4</sub>	RZ . . . 13
oxygen	O <sub>2</sub>	RZ . . . 15
propane	C <sub>3</sub> H <sub>8</sub>	RZ . . . 16
nitrous oxide	N <sub>2</sub> O	RZ . . . 17



RZ1-16JF



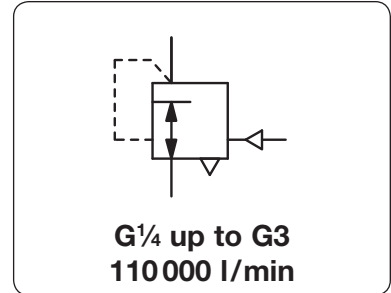
\*1 at 4 bar supply pressure and max. outlet pressure    \*2 see description above    \*3 G1 thread at inlet

**PDF CAD**  
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**Order example:**  
RZ1-08J



<b>Description</b>	Pilot-operated regulator adapted for control by small remote pilot regulator or by proportional pressure valve. Ideal for continuous high-capacity requirements where reduced pressure must be held constant over wide variations in flow. Booster with diaphragm up to regulator size G1½, with piston from regulator size G2 on. The booster is silicone-free.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 21 bar	
<b>Pilot pressure</b>	max. 18 bar	
<b>Pilot port</b>	G¼ at regulator size G¼ and G¾, pilot port G¼ from regulator size G½ on	
<b>Air consumption</b>	approx. 1 l/min of pilot signal	
<b>Relieving function</b>	relieving as standard, optionally non-relieving	
<b>Gauge port</b>	G¼ on both sides of the body	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	up to 80 °C / 176 °F at G3
<b>Material</b>	Body: zinc die-cast, aluminium at G3 Diaphragm: NBR/Buna-N, optionally FKM	Inner valve: brass Bottom screw: reinforced nylon
	<b>Mounting position</b>	any



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Connection thread	Order number
A	B	C	DN	(m³/h)	m³/h*1	l/min*1	G	

Booster			supply pressure max. 21 bar, outlet pressure 0.2 ... 18 bar with constant bleed, transmission ratio 1:1, relieving			R119-J		
70	86	35	5	2.1	102	1700	G¼	R119-02J
70	86	35	10	2.8	150	2500	G¾	R119-03J
83	98	37	15	5.0	340	5600	G½	R119-04J
113	123	49	20	7.6	540	9000	G¾	R119-06J
113	123	49	25	8.4	600	10000	G1	R119-08J
186	225	79	50	35.4	2520	42000	G2	R119-16J
186	225	79	65	37.1	2640	44000	G2½	R119-20J
214	282	95	80	56.0	6600	110000	G3	R119-24J

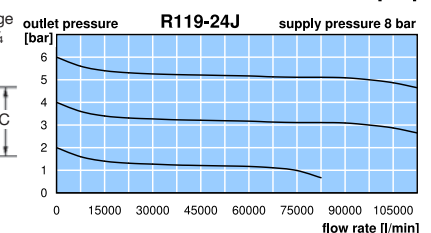
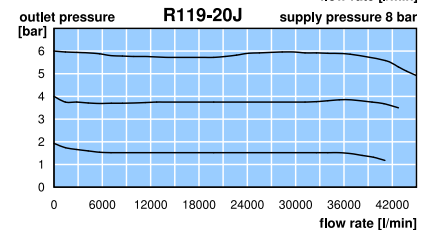
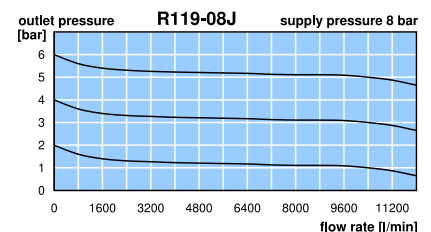
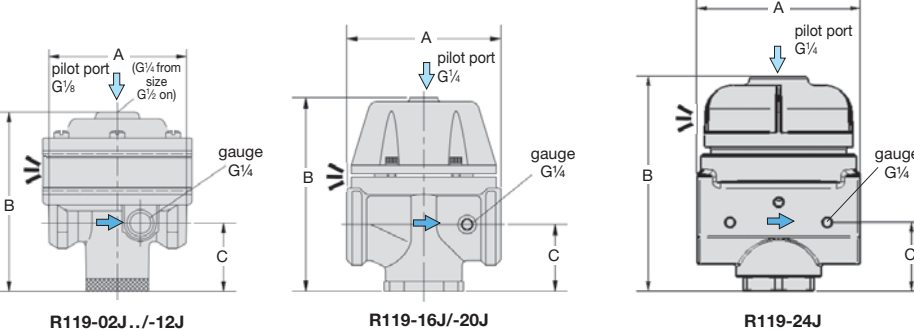
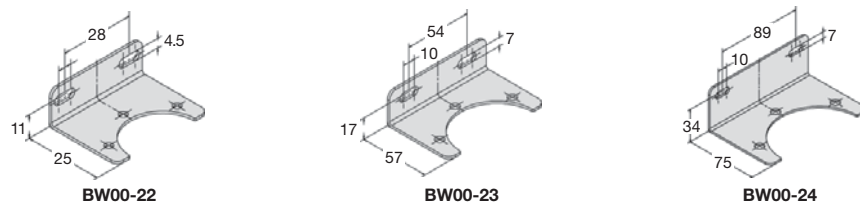
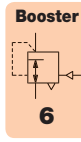


**Special options,** add the appropriate letter

<b>NPT</b>	connection thread	R119-...JN
<b>non-relieving</b>	without relieving function	R119-...JK
<b>FKM elastomer</b>		R119-...JX64
	for G¼ to G1½	R119-24JX64
	for G3	R119-...JX71
<b>without constant bleed</b>	insided the pilot chamber	R119-...JF
<b>flange connection</b>	see chapter for SST devices / flanges	R119-...JF
<b>external feedback</b>	for faster and increased accuracy	R119-24JX27
<b>pre-pressure regulation</b>	340 mbar, advisable if P <sub>1</sub> is close to P <sub>2</sub>	R119-24JX06
	for G3	

**Accessories**

<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G¼	for G¼ to G½	<b>MA5002</b> -*2
	Ø 63 mm, 0...*2 bar, G¼	for G¾ to G3	<b>MA6302</b> -*2
<b>mounting bracket</b>	made of steel	for G¼ and G¾	<b>BW00-22</b>
		for G½	<b>BW00-23</b>
		for G¾ to G1½	<b>BW00-24</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

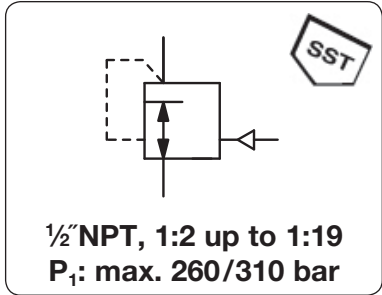
Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R119-02J

# High Pressure Volume Booster with Transmission Ratio, up to 310 bar RH3-J

<b>Description</b>	Highly reliable high pressure volume booster with diaphragm and high flow. In addition, the booster features high sensitivity and excellent regulating characteristics.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 260 bar, optionally 345 bar or 310 bar	
<b>Test pressure</b>	150% of maximum supply pressure according to regulations ANSI / ASME B31.3	
<b>Pilot pressure</b>	see chart, pilot port G $\frac{1}{8}$ "	
<b>Leakage rate</b>	< 1x 10 <sup>-4</sup> mbar l/s He	
<b>Air consumption</b>	without constant bleed	
<b>Relieving function</b>	non-relieving	
<b>Gauge port</b>	not available, optionally 1/4" NPT at inlet and outlet	
<b>Mounting position</b>	any	
<b>Temperature range</b>	-25 °C to 100 °C / -13 °F to 212 °F	
<b>Material</b>	Body: brass, optionally stainless steel	Elastomer: FKM
	Inner valve: PTFE, brass or optionally stainless steel	



Dimensions			K <sub>v</sub> -value	Flow rate	Pilot pressure	Pressure range	Transmission ratio	Order number
A	B	C	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	max. bar	signal : outlet	

High pressure booster								supply pressure max. 260 bar, non-relieving, 1/2" NPT without constant bleed, without gauge port	RH3-J
76	170	45	1.7	420	7000	21	3... 42	1 : 2	<b>RH3-J402</b>
						17	5... 70	1 : 4	<b>RH3-J404</b>
						5	3... 42	1 : 8	<b>RH3-J408</b>
						5	5... 70	1 : 13	<b>RH3-J413</b>
						5	10... 104	1 : 19	<b>RH3-J419</b>



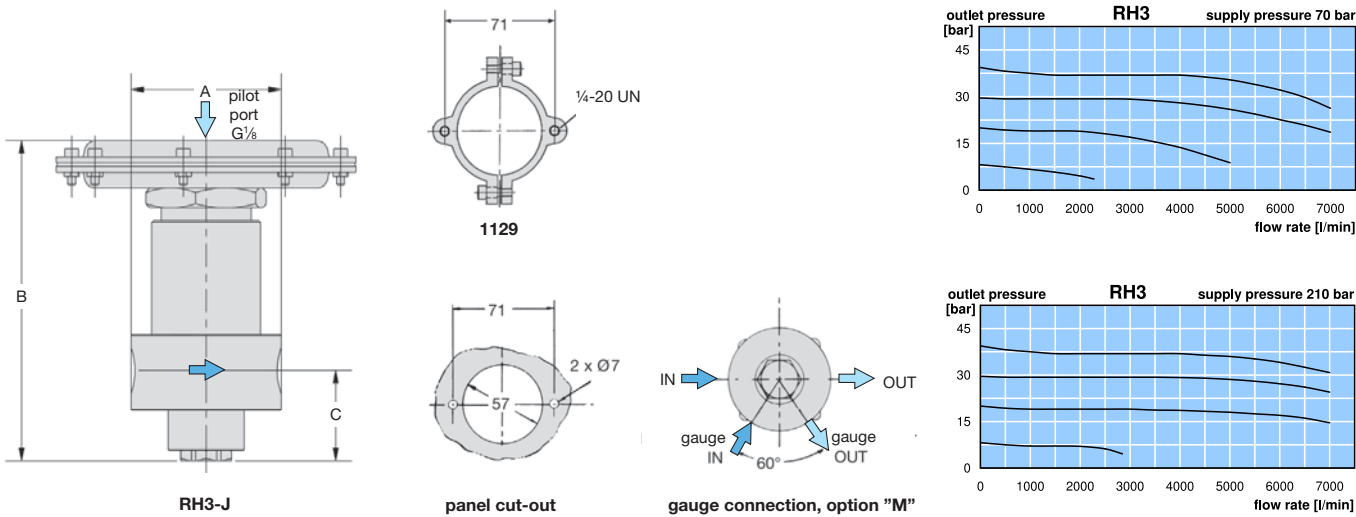
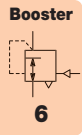
RH3-J

## Special options, add the appropriate letter

1/4" NPT	connection thread			RH3-J6 . .
SST, 310 bar	body made of stainless steel 316			RH3-J . . .S1
for liquids	no filter at inlet port			RH3-J . . .W
gauge port	1/4" NPT for inlet and outlet			RH3-J . . .M
brass gauge	for brass body, on the input side	MHM	output side	RH3-J . . .MGM
SST gauge	for SST body, on the input side	MH	output side	RH3-J . . .MG

## Accessories

set of brackets	for panel mounting	1129
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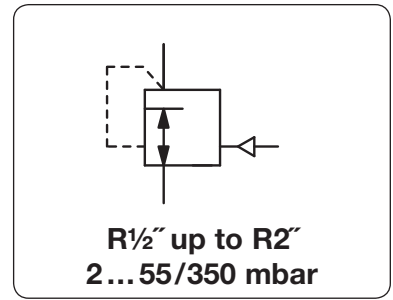


\*1 at 210 bar supply pressure and 40 bar outlet pressure

# Low Pressure Volume Booster up to 350 mbar

# RGDJ-J / RGB4-J

<b>Description</b>	Highly sensitive low pressure volume booster with diaphragm and a 1:1 transmission ratio. Zero shut-off prevents the outlet pressure from increasing when there is no flow circulating.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 400 mbar at RGDJ-J,	max. 4 bar at RGB4-J	
<b>Pilot pressure</b>	max. 100 mbar at RGDJ-J,	max. 350 mbar at RGB4-J,	pilot port G $\frac{1}{4}$ "
<b>Air consumption</b>	without constant bleed		
<b>Relieving function</b>	non-relieving		
<b>Accuracy</b>	at maximum volume flow: < 20% pressure deviation of full scale		
<b>Gauge port</b>	not available, optionally G $\frac{1}{4}$ " on one side of the body from regulator size G $\frac{3}{8}$ " on any		
<b>Mounting position</b>	any		
<b>Temperature range</b>	RGDJ-J: -20 °C to 70 °C / -4 °F to 158 °F	RGB4J: -15 °C to 60 °C / -4 °F to 140 °F	
<b>Material</b>	Body: aluminium	Inner valve: aluminium and plastic	Elastomer: NBR/Buna-N



Dimensions			Nominal size	Kv-value	Flow rate		Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	R	mbar	

Low pressure booster <i>P<sub>1</sub> max. 400 mbar</i>									non-relieving, without constant bleed, transmission ratio 1:1	RGDJ-J
100	120	30	15	0.66	12	200	½"	2... 55		RGDJ-04J
134	166	34	20	1.49	27	450	¾"	5... 160		RGDJ-06J
134	166	34	25	2.6	51	850	1"	5... 160		RGDJ-08J
185	194	45	40	4.9	90	1500	1½"	5... 160		RGDJ-12J
234	219	52	50	6.6	120	2000	2"	5... 100		RGDJ-16J



RGDJ-04J

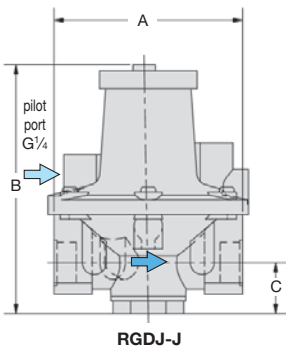
Low pressure booster <i>P<sub>1</sub> max. 4 bar</i>									non-relieving, without constant bleed, transmission ratio 1:1	RGB4-J
132	174	24	15	0.62	42	700	½"	5... 350		RGB4-04J
190	230	33	25	2.5	168	2800	1"	5... 350		RGB4-08J
190	265	55	40	5	336	5600	1½"	5... 350		RGB4-12J



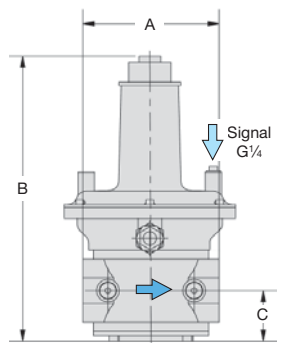
RGB4-12JM  
accessory: gauge

**Special options,** add the appropriate letter  
 connection thread G $\frac{1}{4}$ " for pressure gauge not for RGDJ-04J RG...M

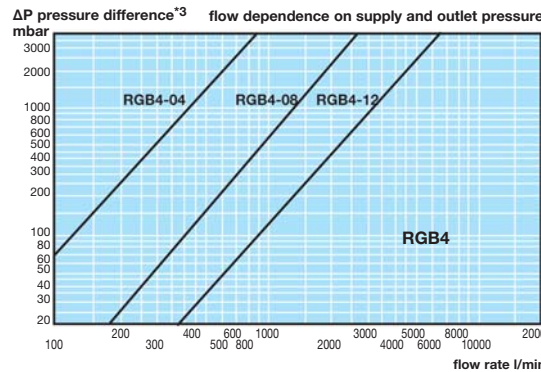
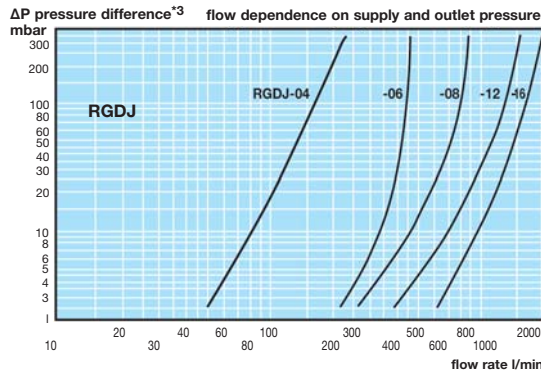
**Accessories**  
 pressure gauge Ø 63 mm, 0...\*2 mbar, G $\frac{1}{4}$ " for R¾" up to R2" MA6302-..\*2



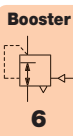
RGDJ-J



RGB4-J



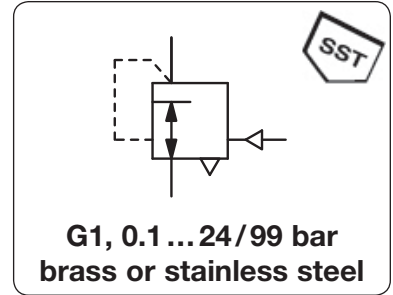
\*1 bei 350 mbar Eingangsdruck und 100 mbar Ausgangsdruck  
 \*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar  
 \*3 ΔP= P<sub>1</sub> - P<sub>2</sub> Druckdifferenz von Eingangsdruck und Ausgangsdruck



# High Pressure Booster up to 100 bar

RLM/RLE

<b>Description</b>	The pilot pressure regulator / booster regulates the outlet pressure through a signal pressure at ratio of 1:1. Functioning as a pressure regulator the pilot pressure may either be internally inducted from the inlet pressure or externally. The dome chamber is closed by a needle valve. Functioning as a volume booster the dome is controlled by a proportional pressure regulator or a pilot pressure regulator.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Supply pressure</b>	max. 25 bar for RL-0.J1,	max. 100 bar for RL-0.J2, max. 40 bar for oxygen, max. 1.5 bar for acetylene
<b>Pilot pressure</b>	max. 24 bar for RL-0.J1, max. 99 bar for RL-0.J2, pilot port G¼	
<b>Accuracy</b>	at supply pressure variation of 10 bar: at temperature variation of 3 °C / K:	0.1 bar pressure deviation 1% pressure deviation at internal pilot pressure
<b>Air consumption</b>	without constant bleed	<b>Relieving function</b> non-relieving
<b>Gauge port</b>	not available	<b>Mounting position</b> any, dome preferably mounted up
<b>Temperature range</b>	-20 °C to 100 °C / -4 °F to 212 °F for FKM, -40 °C to 130 °C / -40 °F to 266 °F for EPDM	
<b>Material</b>	Body: brass or stainless steel 1.4571 Inner valve: brass or stainless steel 1.4571	Elastomer: FKM, optionally EPDM



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Supply pressure max. bar*2	Pressure range bar	Order number
A	B	C						

Brass pressure regulator								supply pressure max. 25 / 100 bar, non-relieving, without constant bleed, transmission ratio 1:1, FKM		RLM
127	170	54	2.9	340	5600	G1	25	0.1 ... 24		<b>RLM-08J1</b>
				2500	60000	G1	100	0.5 ... 99		<b>RLM-08J2</b>



RLM, made of brass

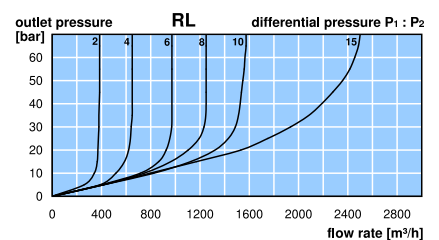
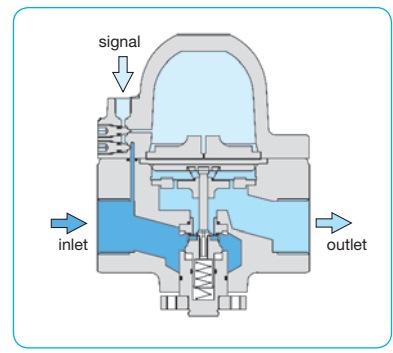
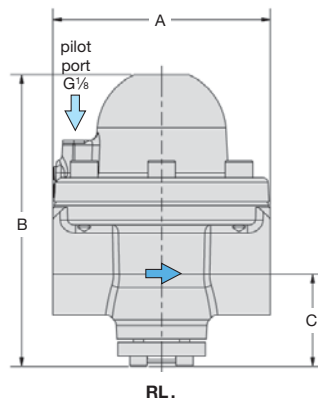
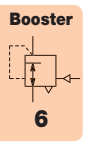
SST pressure regulator								supply pressure max. 25 / 100 bar, non-relieving, without constant bleed, transmission ratio 1:1, FKM		RLE
127	170	54	2.9	340	5600	G1	25	0.1 ... 24		<b>RLE-08J1</b>
				2500	60000	G1	100	0.5 ... 99		<b>RLE-08J2</b>



RLE, made of stainless steel

## Special options, add the appropriate letter

<b>EPDM elastomer</b>		RL . -0 . J . E
<b>carbon dioxide</b>	CO <sub>2</sub>	RL . -0 . J . 03
<b>argon</b>	Ar	RL . -0 . J . 05
<b>nitrogen</b>	N <sub>2</sub>	RL . -0 . J . 07
<b>helium</b>	He	RL . -0 . J . 09
<b>hydrogen</b>	H <sub>2</sub>	RL . -0 . J . 11
<b>oxygen</b>	O <sub>2</sub>	RL . -0 . J . 15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>	RL . -0 . J . 16
<b>nitrous oxide</b>	N <sub>2</sub> O	RL . -0 . J . 17



\*1 RL-J1: at 25 bar supply pressure and 5 bar outlet pressure  
RL-J2: at 85 bar supply pressure and 70 bar outlet pressure

\*2 supply pressure max. 40 bar for oxygen  
supply pressure max. 1.5 bar for acetylene

PDF CAD  
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**Order example:**  
RLM-08J1



**Description** Solid volume booster made of brass or bronze throughout with a 1:1 transmission ratio. R120-02J2 to R120-08J2 are diaphragm-operated, R120-12J, R120-16J and R120-...J5 are piston-operated.

**Media** compressed air, non-corrosive gases or liquids

**Supply pressure** max. 50 bar, for liquids  $\Delta p_{max} = 25$  bar

**Pilot pressure** max. 15 bar for R120-...J2, max. 50 bar for R120-...J5, pilot port G $\frac{1}{4}$

**Air consumption** without constant bleed

**Relieving function** non-relieving, optionally relieving

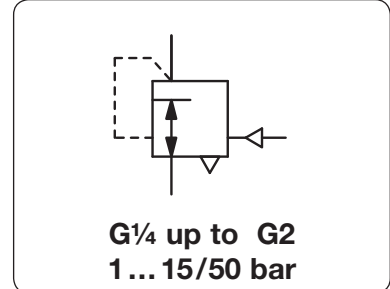
**Relief size** DN2

**Gauge port** G $\frac{1}{4}$  on both sides of the body, one screw plug supplied

**Mounting position** any

**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM  
0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, optionally low temperature version down to -40 °C / -40 °F

**Material** Body: brass up to G $\frac{1}{2}$ , bronze from G $\frac{3}{4}$  on O-rings: FKM, optionally EPDM  
Diaphragm: NBR/Buna-N with PTFE coating Inner valve: brass



Dimensions			Regul. system	K <sub>v</sub>	Flow rate	Connection	Pilot pressure	Pressure range	Order number
A	B	C	D: diaphragm	value	m <sup>3</sup> /h*1	thread	max. bar	bar	
mm	mm	mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G			

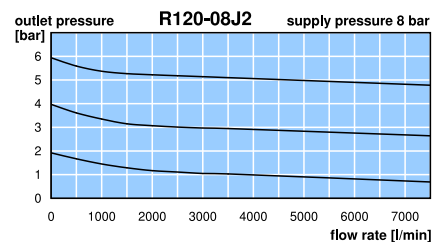
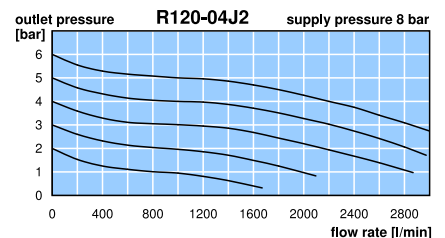
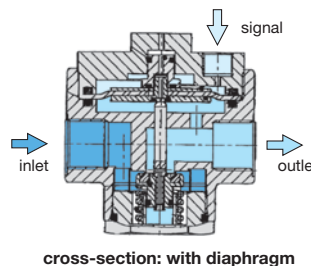
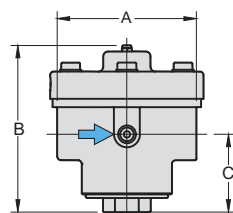
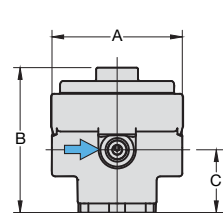
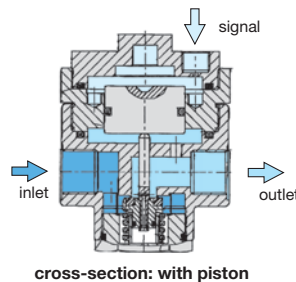
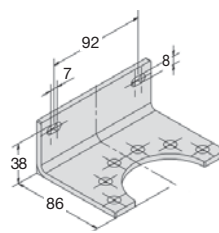
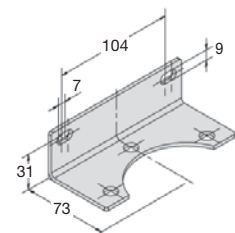
Booster made of brass										supply pressure max. 50 bar, non-relieving, without constant bleed, transmission ratio 1:1	R120-J
64	79	38	D	0.35	25	420	G $\frac{1}{4}$	15	1...15	R120-02J2	
64	92	38	P					50	1...50	R120-02J5	
80	86	38	D	1	72	1200	G $\frac{1}{2}$	15	1...15	R120-04J2	
80	107	38	P					50	1...50	R120-04J5	
116	136	65	D	3.5	252	4200	G $\frac{3}{4}$	15	1...15	R120-06J2	
116	150	65	P					50	1...50	R120-06J5	
116	136	65	D	4.2	300	5000	G1	15	1...15	R120-08J2	
116	150	65	P					50	1...50	R120-08J5	
195	140	84	P	11.8	840	14000	G1 $\frac{1}{2}$	50	1...50	R120-12J5	
195	190	84	P	12.6	900	15000	G2	50	1...50	R120-16J5	

### Special options, add the appropriate letter

diaphragm relieving			for R120-02J2 up to R120-08J2	R120-...J.R	
piston relieving			for R120-12J, R120-16J and R120-...J5	R120-...J.R	
down to -40 °C			low temperature version	R120-...J.X51	
up to 130 °C			high temperature version	R120-...J.X54	
EPDM elastomer			not for G2	R120-...J.E	
tapped exhaust				R120-...J.RX12	
nitrogen N <sub>2</sub> :	07	carbon dioxide CO <sub>2</sub> :	03	argon Ar:	R120-...J.05
helium He:	09	hydrogen H <sub>2</sub> :	11	methane CH <sub>4</sub> :	R120-...J.13
natural gas	14	oxygen O <sub>2</sub> :	15	propane C <sub>3</sub> H <sub>8</sub> :	R120-...J.16
		nitrous oxide N <sub>2</sub> O:	17	water H <sub>2</sub> O:	R120-...J.W

### Accessories

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	MA5002-..*2
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G2	MA6302-..*2
mounting bracket	made of steel	for G $\frac{3}{4}$ and G1	BW00-42
		for G1 $\frac{1}{2}$ and G2	BW00-43



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R120-02J2



**Description** The air amplifier compresses air or nitrogen from a standard pressure of 10 bar max. to the desired outlet pressure of 60 bar max. This is realised by cylinders with different ratios - simple, safe and economical. No electrical installation is required and there is no energy consumption once the final pressure has been reached. Service life 3 million cycles, full load operation 12 min max. per hour.

**Media** lubricated, unlubricated and 50 µm filtered compressed air or nitrogen

**Mounting position** any

**Power device** Cylinder with integrated reversing valve, check valve and silencer. The pressure will be increased selective to the consumer. No energy consumption once final pressure is attained.

**Drive pressure P<sub>A</sub>** system air to drive the air amplifier, 2...10 bar

**Supply pressure P<sub>1</sub>** max. 12 bar, for instance nitrogen or compressed air

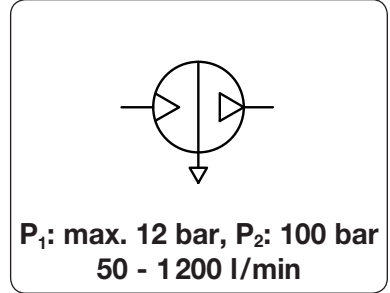
**Outlet pressure P<sub>2</sub>** amplified outlet or operating pressure of 20 bar to 100 bar maximum

**Continuous operation** 20% of the diagram values should maximally be realised at permanent running

**Temperature range** 0 °C to 60 °C / 32 °F to 140 °F

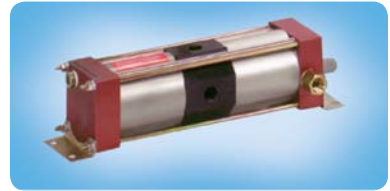
**Sound level** max. 79 dB (A)

**Material** Body: aluminium  
Seals: NBR/Buna-N



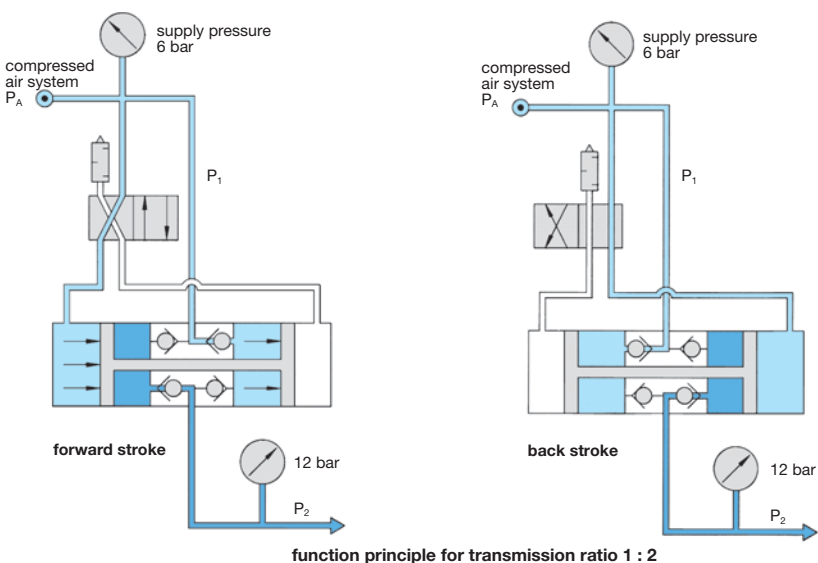
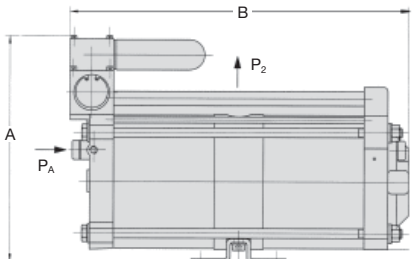
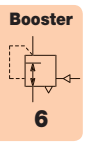
Dimensions			Weight kg	Connection thread G	Transmission ratio P <sub>A</sub> : P <sub>2</sub>	Flow rate l/min	P <sub>2</sub> max. bar	Order number
A mm	B mm	C mm						

Pressure booster / Air amplifier								AM
supply pressure P <sub>1</sub> max. 12 bar, for compressed air								
drive pressure P <sub>A</sub> 2...10 bar								
86	343	84	3.3	G <sup>3</sup> / <sub>8</sub>	1 : 2	580 <sup>*1</sup>	20	AM20-0580
187	324	135	8.5	G <sup>1</sup> / <sub>2</sub>	1 : 2	960 <sup>*1</sup>	20	AM20-0960
285	427	180	21	G <sup>3</sup> / <sub>4</sub>	1 : 2	1200 <sup>*1</sup>	20	AM20-1200
180	392	135	8.5	G <sup>1</sup> / <sub>2</sub>	1 : 3	230 <sup>*2</sup>	32	AM32-0230
80	220	80	2.2	G <sup>3</sup> / <sub>8</sub>	1 : 4	50 <sup>*3</sup>	40	AM40-0050
251	471	176	16	G <sup>3</sup> / <sub>8</sub>	1 : 5	360 <sup>*4</sup>	60	AM60-0360
180	421	135	20	G <sup>1</sup> / <sub>4</sub>	1 : 10	280 <sup>*5</sup>	100	AM100-0250



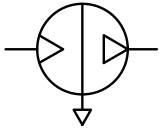
## Special options, add the appropriate letter

- unlubricated operation seals FEC seals for dry compressed air or nitrogen AM . . . . . T
- Ex-Atex e.g. Ex II 3G/3D IIB x, more specifications possible AM . . . . . EX
- pressure booster for gas up to max. 1500 bar outlet pressure AM . . . . .
- pressure booster for liquids AM . . . . .



\*1 at 6 bar supply and 8 bar outlet pressure under full load  
 \*2 at 8 bar supply and 20 bar outlet pressure under full load  
 \*3 at 6 bar supply and 16 bar outlet pressure under full load  
 \*4 at 8 bar supply and 30 bar outlet pressure under full load  
 \*5 at 8 bar supply and 40 bar outlet pressure under full load

<b>Description</b>	The air amplifier compresses air or nitrogen from a standard pressure of 10 bar max. to the desired outlet pressure of 40 bar max. This is realised by cylinders with different ratios - simple, safe and economical. No electrical installation is required and there is no energy consumption once the final pressure has been reached. Service life 3 million cycles, full load operation 12 min max. per hour.		
<b>Media</b>	lubricated, unlubricated and 50 µm filtered compressed air		
<b>Amplifier station</b>	The pressure booster has an additional tank, pressure regulator, filter, gauge, relief valve and switch-on valve. Pressure pulsation rates are low, air consumption peaks are compensated and the operating pressure can be adjusted.		
<b>Drive pressure P<sub>A</sub></b>	system air to drive the air amplifier, 2...10 bar		
<b>Supply pressure P<sub>1</sub></b>	max. 12 bar, for instance nitrogen or the system air		
<b>Outlet pressure P<sub>2</sub></b>	amplified outlet or operating pressure of 20 bar to 40 bar maximum		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F		<b>Sound level</b> max. 79 dB (A)
<b>Material</b>	Body: aluminium	Seals: NBR/Buna-N	Tank: coated steel, SST at AP40-0050



**P<sub>1</sub>: max. 12 bar, P<sub>2</sub>: 40 bar  
50 - 1200 l/min**

Dimensions			Weight	Tank	Connection	Transmission	Flow	P <sub>2</sub>	Order
A	B	C	kg	volume	thread	ratio	rate	max.	number
mm	mm	mm		l	drive	P <sub>1</sub> / P <sub>2</sub>	l/min <sup>1</sup>	bar <sup>5</sup>	

Air amplifier station									AP	
supply pressure P <sub>1</sub> max. 12 bar, for compressed air										
drive pressure P <sub>A</sub> 2...10 bar										
220	400	360	13	3	G <sup>3</sup> / <sub>8</sub>	G <sup>3</sup> / <sub>8</sub>	1 : 2	580 <sup>*1</sup>	20	AP20-0580
235	400	360	16	3	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>2</sub>	1 : 2	960 <sup>*1</sup>	20	AP20-0960
656	844	381	49	40	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	1 : 2	1200 <sup>*1</sup>	20	AP20-1200
655	844	381	58	40	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>2</sub>	1 : 3	230 <sup>*2</sup>	20	AP20-0230
365	400	133	5.3	0.8	G <sup>3</sup> / <sub>8</sub>	G <sup>3</sup> / <sub>8</sub>	1 : 4	50 <sup>*3</sup>	40	AP40-0050
655	844	381	45	40	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>8</sub>	1 : 5	360 <sup>*4</sup>	40	AP40-0360




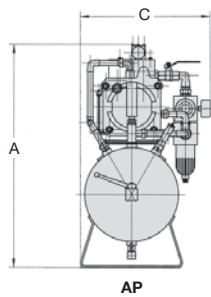
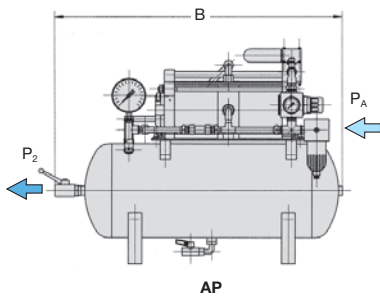
AP20-0580 similar AP20-0960 and AP40-0360



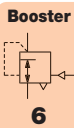
AP20-1200 similar AP40-0360 and AP20-0230

### Special options, add the appropriate letter

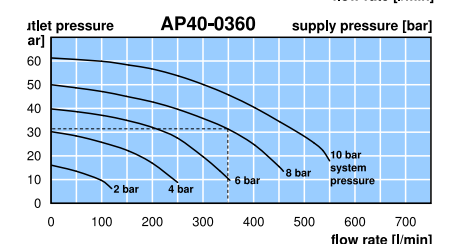
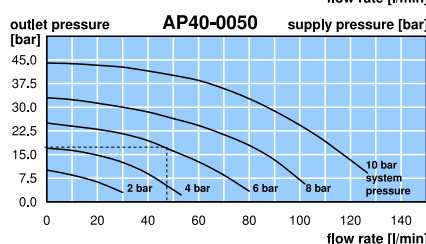
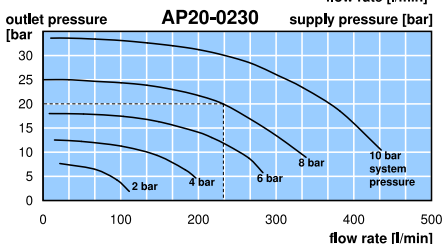
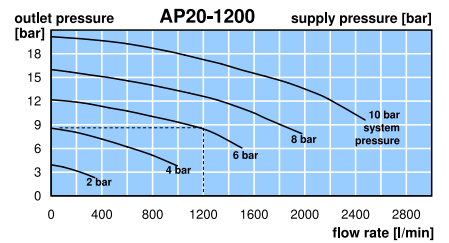
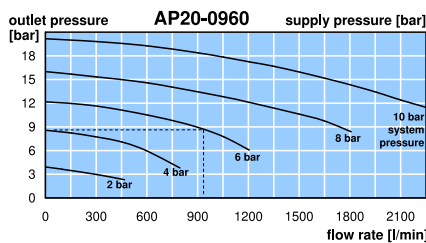
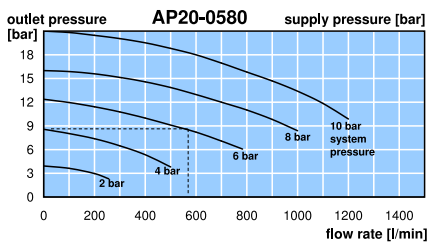
- unlubricated operation seals    FEC seals for dry compressed air or nitrogen    AP . . . . . T
-  Atex    e.g. Ex II 3G/3D IIB x, further specifications possible    AP . . . . . EX
- pressure booster for gasbiss    P<sub>2</sub> max. 1500 bar    AP . . . . .



AP40-0050

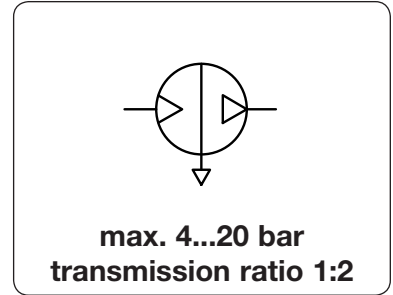


### Performance diagrams for full load operations, max. 12 min/h. 20% of the values at permanent running



\*1 at 6 bar supply and 8 bar outlet pressure under full load  
 \*2 at 8 bar supply and 20 bar outlet pressure under full load  
 \*3 at 6 bar supply and 16 bar outlet pressure under full load  
 \*4 at 8 bar supply and 30 bar outlet pressure under full load  
 \*5 outlet pressure P<sub>2</sub> limited by the pressure stage of the accumulator, higher pressure ranges on request

<b>Description</b>	The pressure booster doubles the system pressure of e.g. 5 bar to an outlet pressure of 10 bar. The pumping force of two cylindrical chambers compresses the air down to the set outlet pressure within the third chamber while the fourth chamber is vented. Upon reaching the outlet pressure it is turned off, when falling below it is turned on automatically. Pressure boosters are used for occasional demand of compressed air.		
<b>Media</b>	lubricated and 50 µm filtered compressed air	<b>Mounting position</b>	any
<b>Drive</b>	double piston intensifier, ratio 1:2	Reversing, check and switching valves provide for automatic control. Life time approx. 20 million switching cycles.	
<b>Inlet pressure P<sub>1</sub></b>	2...8 bar	<b>Outlet pressure P<sub>2</sub></b>	4...16 bar
<b>Air tanks</b>	are recommended. They compensate pressure fluctuations and allow short-term high volume flows. See circuit below.		
<b>Tank filling time</b>	is a measure of booster performance. To reduce the filling time of the tank, it has to be pre-filled with input pressure P <sub>1</sub> . See circuit below.		
<b>Temperature range</b>	-5 °C to 50 °C / 23 °F to 122 °F		
<b>Material</b>	Cylinder: anodized aluminium	seals:	NBR/Buna-N



Dimensions			Weight	Connection	Transmission	Flow	Fill	Pressure	Order
A	B	C	kg	thread	ratio	rate	time	range	number
mm	mm	mm		G	P <sub>A</sub> : P <sub>2</sub>	l/min*1	s	bar	

Pressure booster									
P <sub>1</sub> max. 8 bar, for compressed air <b>AB</b>									
100	192	70	1.5	G½	1 : 2	130	30	4...16	<b>AB040</b>
117	284	90	3.0	G¾	1 : 2	260	15	4...16	<b>AB063</b>
176	468	155	12	G½	1 : 2	440	6	4...16	<b>AB100</b>



**AB040**

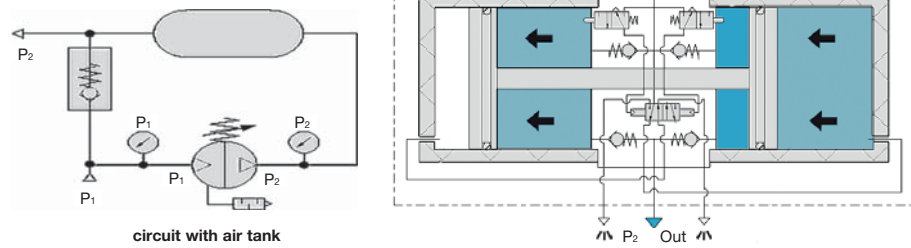
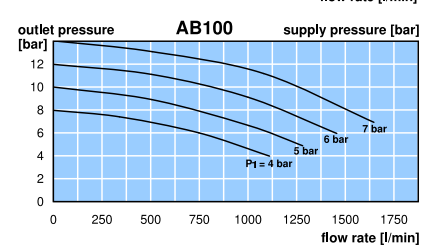
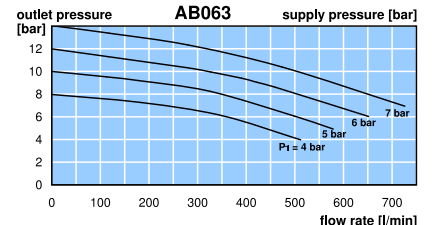
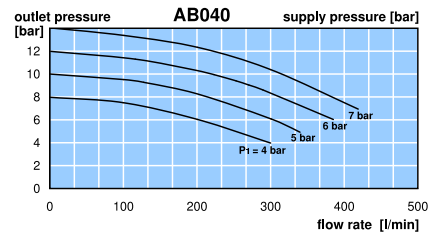
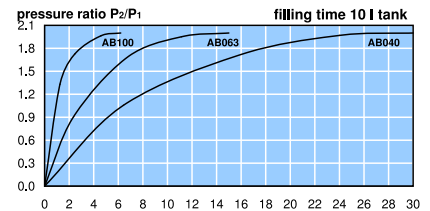
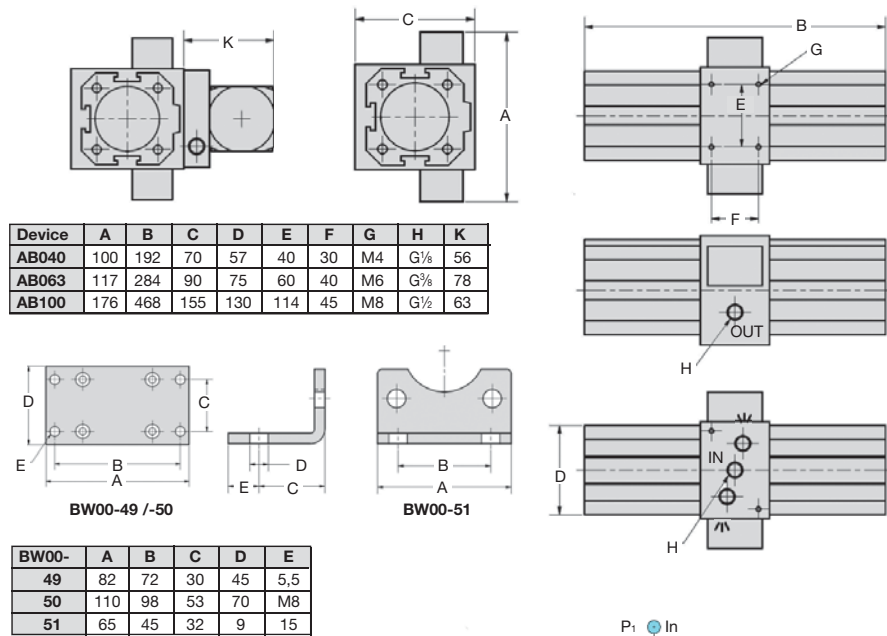
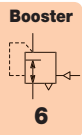
Pressure booster with regulator and gauge									
P <sub>1</sub> max. 8 bar, for compressed air <b>AB-D</b>									
100	192	126	1.5	G½	1 : 2	130	30	4...16	<b>AB040D</b>
117	284	168	3.0	G¾	1 : 2	260	15	4...16	<b>AB063D</b>
176	468	218	12	G½	1 : 2	440	6	4...16	<b>AB100D</b>



**AB040D**

## Accessories

<b>Mounting plate</b>	made of steel, central attachment below	for AB040	<b>BW00-49</b>
		for AB063	<b>BW00-50</b>
<b>Mounting bracket</b>	made of steel, mounting at the side, 1 piece	for AB100	<b>BW00-51</b>



\*1 at P<sub>2</sub> = 8 bar and 1 bar pressure drop

**Pressure booster with 2 l to 20 l tank on request**

**PDF CAD**  
www.aircom.net

**Order example:  
AB040**

## Vacuum Pressure Regulator

	Description	Pressure range	Connection thread	Device	Page
max. 22 l/min	miniature	-850 ... 0 mbar	1/8"NPT	V800	7.02
max. 22 l/min	miniature	-850 ... 0 mbar	10-32" and flange	V900	7.02
max. 70 l/min	precise	-1 ... +0,4 / 10 bar	G1/4	R250	7.03
max. 330 l/min	precise	-990 ... 0 mbar	G1/4 - G1/2	V170	7.04
max. 800 l/min	precise	-1 ... +0.7 / 10 bar	G1/2 and G3/4	R251	7.05
	vacuum adjustment valve	-1 ... -0.3 / 0 bar	G1/8 - G1	V04/V05	7.06

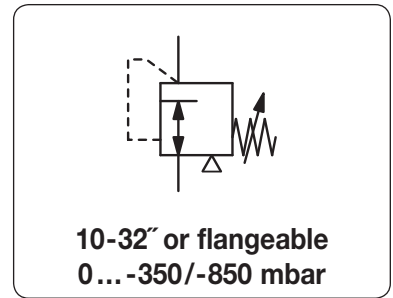


# 7 Vacuum Pressure Regulator



# Miniature Vacuum Pressure Regulator, made of Plastic V800 / V900

<b>Description</b>	Miniature precision vacuum regulator with diaphragm and high outlet pressure constancy, small dimensions, low weight. 20-turn hysteresis-free adjustment range allows sensitive pressure setting.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. -1000 mbar		
<b>Accuracy</b>	at supply pressure variation of 170 mbar:	< 4 mbar pressure deviation	
	at supply pressure removal/reapplication:	< 7 mbar pressure deviation	
	setting accuracy:	< 2.5 mbar	
<b>Air consumption</b>	0.3 l/min at -1000 mbar supply pressure		
<b>Adjustment</b>	by plastic knob, adjusting screw or preset		
<b>Gauge port</b>	not available		
<b>Mounting position</b>	any		
<b>Temperature range</b>	4 °C to 66 °C / 39 °F to 151 °F		
<b>Material</b>	Body: polysulfone	Elastomer: NBR/Buna-N	
	Inner valve: stainless steel and acetal		



Dimensions			Pressure adjustment by	Flow rate l/min	Vacuum range mbar	Order number
A	B	C				

Vacuum regulator 10-32"			supply pressure max. -1000 mbar, with constant bleed		V900-W	
29	78	8	adjusting knob	22	-350 ... 0	V900-10WK
					-850 ... 0	V900-30WK
29	60	8	adjusting screw	22	-350 ... 0	V900-10WOS
					-850 ... 0	V900-30WOS
29	43	8	preset	22	indicate on order	V901-..



Vacuum regulator with flange			supply pressure max. -1000 mbar, with constant bleed		V900-M	
29	78	8	adjusting knob	22	-350 ... 0	V900-10MWK
					-850 ... 0	V900-30MWK
29	60	8	adjusting screw	22	-350 ... 0	V900-10MWOS
					-850 ... 0	V900-30MWOS
29	43	8	preset	22	indicate on order	V901-..M

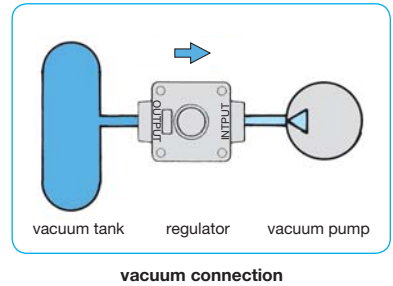
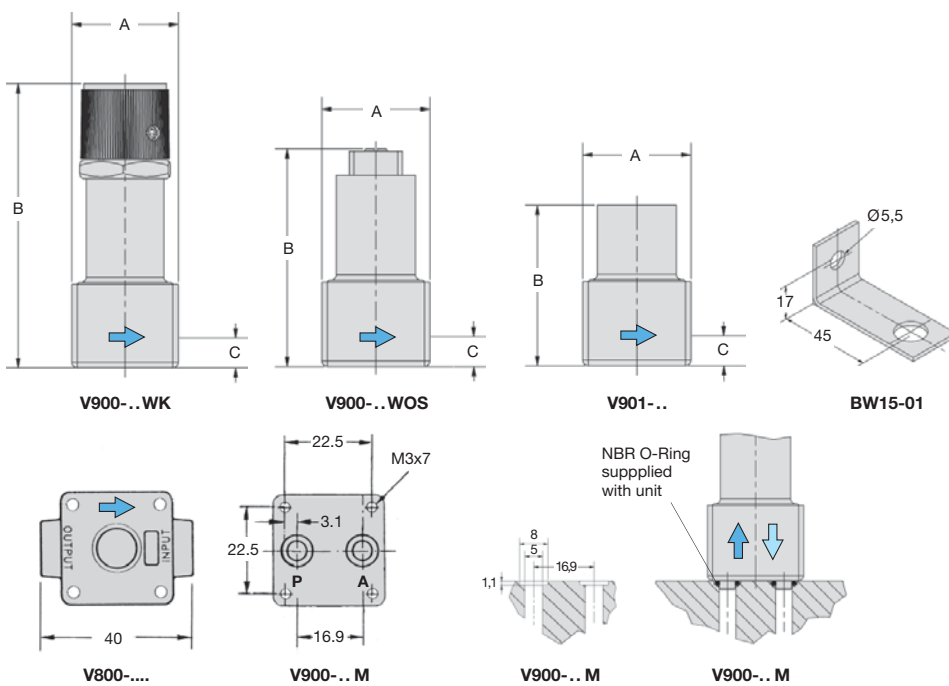


**Special options,** add the appropriate letter or number

1/8" NPT      connection thread, width 40 mm      V8...-...-...

**Accessories**

mounting bracket      made of steel      BW15-01

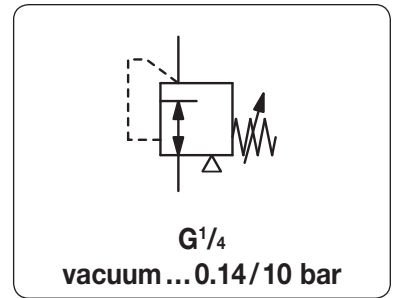




# Precision Vacuum Pressure Regulator 70 l/min

R250

<b>Description</b>	Diaphragm vacuum regulator ensuring high precision in both vacuum and positive pressure range.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 17 bar		
<b>Accuracy</b>	response sensitivity: < 2 mbar		
<b>Adjustment</b>	by handwheel with locknut		
<b>Air consumption</b>	max. 2.8 l/min in positive pressure range		
<b>Flow rate</b>	70 l/min*1 in vacuum range,	900 l/min*2 in positive pressure range	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-40 °C to 90 °C / -40 °F to 194 °F		
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N	Inner valve: stainless steel and brass	



Dimensions				K <sub>v</sub> value	Flow rate	Connection thread	Vacuum range	Order number
A	B	C	D	m <sup>3</sup> /h	m <sup>3</sup> /h*1 l/min*1	G	bar	

Vacuum pressure regulator								supply pressure max. 17 bar, with constant bleed	R250
68	184	20	65	0,78	4	70	G $\frac{1}{4}$	-1 ... +0.14	R250-020
								-1 ... +0.7	R250-02A
								-1 ... +2.0	R250-02B
								-1 ... +7.0	R250-02C
								-1 ... +10	R250-02D



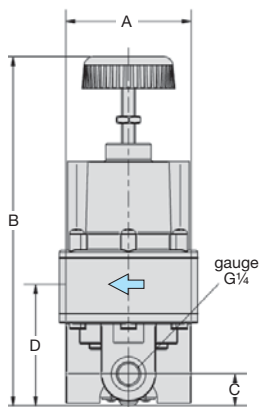
R250

## Special options, add the appropriate letter

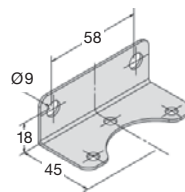
<b>NPT</b>	connection thread	R250-0..N
<b>tamper-proof cap</b>	made of aluminium, adjustment by screwdriver, total height 189 mm	R250-0..T

## Accessories

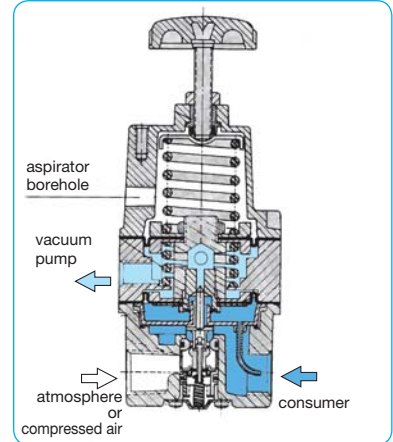
<b>pressure gauge</b>	Ø 63 mm, -1 ... 0 bar, G $\frac{1}{4}$	MA6302-00
<b>mounting bracket</b>	made of steel	BW00-33



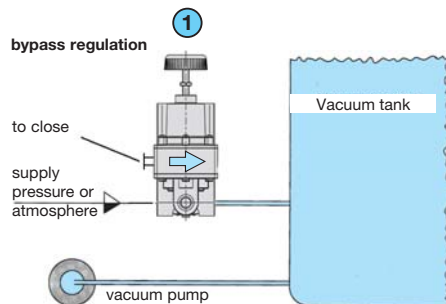
R250



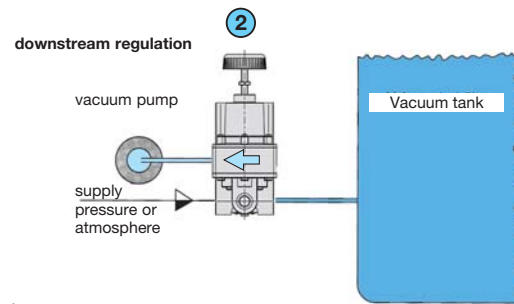
BW00-33



cross-section connection for downstream regulation



**1 Bypass regulation**  
Upstream installation is preferred when rapid exhaust of a tank or system is required. That way the vacuum pump acts directly upon the tank and is not being throttled by the vacuum regulator.



**2 Downstream regulation**  
The regulator is located between the pump and the tank. The vacuum pump is energy-saving and it is easy to fill the tank to its optimal level with pressure or vacuum.

**Note**  
A strainer is provided on the atmospheric or pressure side, but an additional filter is recommended.

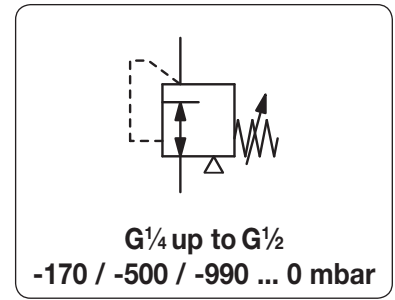
\*1 for compressed air at -0.98 bar supply pressure and 0 bar outlet pressure  
\*2 for compressed air at 7 bar supply pressure and 1.4 bar outlet pressure

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
R250-020

<b>Description</b>	High precision diaphragm vacuum regulator with high flow capacity. A balanced vacuum valve minimizes the effects of variation.
<b>Media</b>	compressed air or non-corrosive gases
<b>Accuracy</b>	response sensitivity: < 2 mbar
<b>Adjustment</b>	by handwheel with locknut
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F for appropriately conditioned compressed air down to -40 °C / -40°F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N, optionally FKM Inner valve: stainless steel, brass, aluminium and steel



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Pressure range mbar	Order number
A	B	C		m <sup>3</sup> /h*	l/min*			

Precision vacuum regulator								supply pressure max. -1000 mbar, without constant bleed	V170
67	152	25	1.1	20	330	G $\frac{1}{4}$	-170 ... 0	V170-02A	
							-500 ... 0	V170-02B	
							-990 ... 0	V170-02C	
67	152	25	1.1	20	330	G $\frac{3}{8}$	-170 ... 0	V170-03A	
							-500 ... 0	V170-03B	
							-990 ... 0	V170-03C	
67	152	25	1.1	20	330	G $\frac{1}{2}$	-170 ... 0	V170-04A	
							-500 ... 0	V170-04B	
							-990 ... 0	V170-04C	



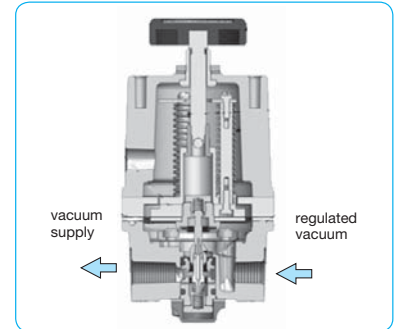
V170

## Special options, add the appropriate letter

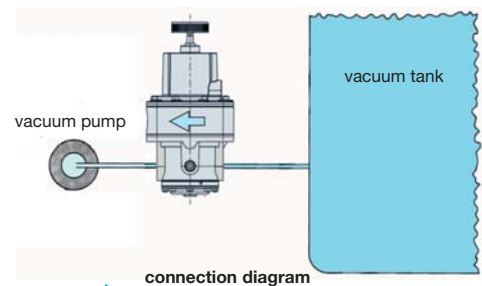
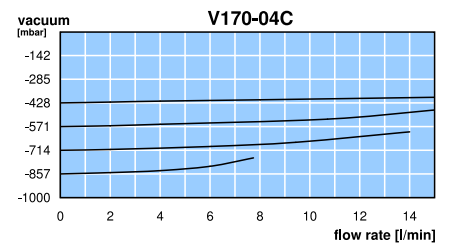
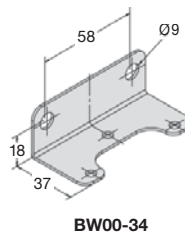
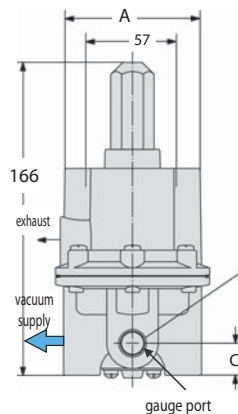
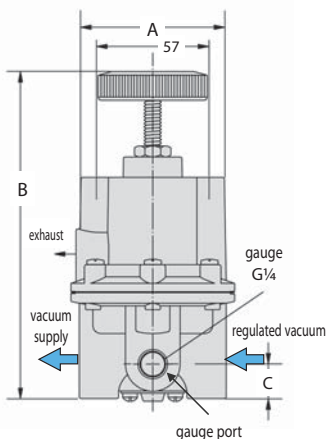
<b>NPT</b>	connection thread	V170-0 . . N
<b>Verstellsicherung</b>	made of aluminium, adjustment by screwdriver, total height 160 mm	V170-0 . . T
<b>FKM-Elastomere</b>		V170-0 . . V

## Accessories

<b>pressure gauge</b>	Ø 63 mm, 0 bar down to -1bar, G $\frac{1}{4}$	<b>MA6302-00</b>
<b>mounting bracket</b>	made of steel	<b>BW00-34</b>



cross-section

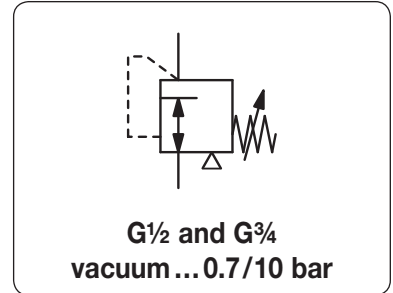


Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
V170-02A

<b>Description</b>	Diaphragm vacuum regulator ensuring high precision in both vacuum and positive pressure range.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 17 bar		
<b>Accuracy</b>	response sensitivity: < 2.5 mbar		
<b>Adjustment</b>	by handwheel with locknut		
<b>Air consumption</b>	without constant bleed		
<b>Flow rate</b>	800 l/min*1 in vacuum range,	4200 l/min*2 in positive pressure range	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-40 °C to 90 °C / -40 °F to 194 °F		
<b>Material</b>	Body: aluminium die-cast	Inner valve: stainless steel and brass	
	Elastomer: NBR/Buna-N		



Dimensions				K <sub>v</sub> value	Flow rate	Connection thread	Vacuum range	Order number
A	B	C	D					
mm	mm	mm	mm	m <sup>3</sup> /h	m <sup>3</sup> /h*1 l/min*1	G	bar	

Vacuum pressure regulator								supply pressure max. 17 bar, without constant bleed	R251
87	238	40	98	2,5	48	800	G $\frac{1}{2}$	-1 ... +0.7	R251-04A
								-1 ... +2.0	R251-04B
								-1 ... +10	R251-04D
87	238	40	98	2,5	48	800	G $\frac{3}{4}$	-1 ... +0.7	R251-06A
								-1 ... +2.0	R251-06B
								-1 ... +10	R251-06D



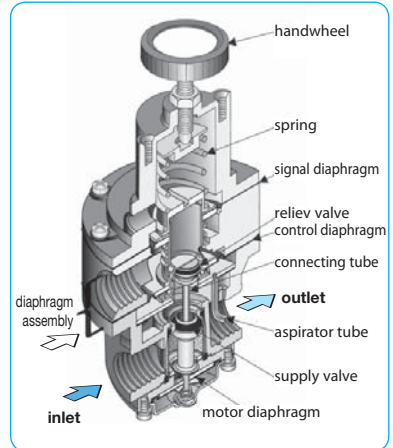
R251

### Special options, add the appropriate letter

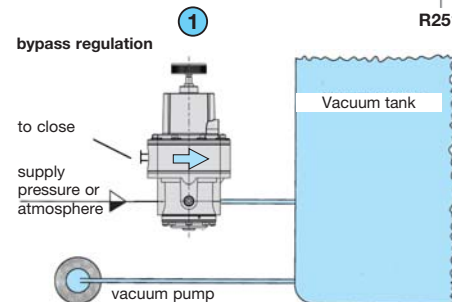
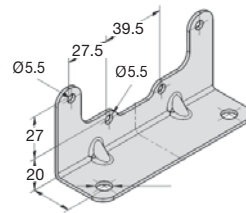
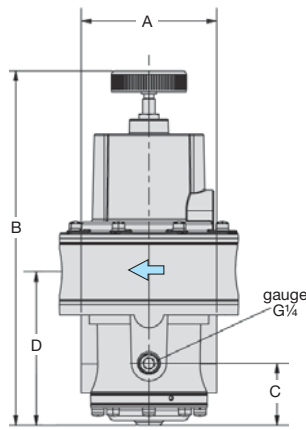
<b>NPT</b>	connection thread	R251-0 . . N
<b>tamper-proof cap</b>	made of aluminium, adjustment by screwdriver, total height 240 mm	R251-0 . . T
<b>FKM elastomer</b>		R251-0 . . V

### Accessories

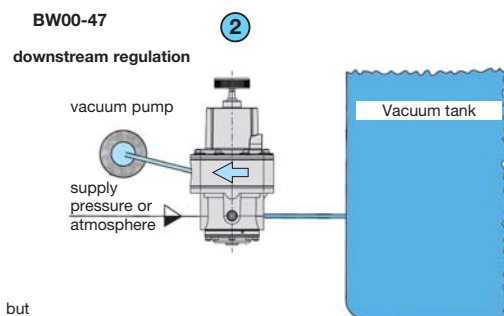
<b>pressure gauge</b>	Ø 63 mm, -1 ... 0 bar, G $\frac{1}{4}$	MA6302-00
<b>mounting bracket</b>	made of steel	BW00-47



cross section connection for downstream regulation



**1 Bypass regulation**  
Upstream installation is preferred when rapid exhaust of a tank or system is required. That way the vacuum pump acts directly upon the tank and is not being throttled by the vacuum regulator.



**2 Downstream regulation**  
The regulator is located between the pump and the tank. The vacuum pump is energy-saving and it is easy to fill the tank to its optimal level with pressure or vacuum.

**Note**  
A strainer is provided on the atmospheric or pressure side, but an additional filter is recommended.

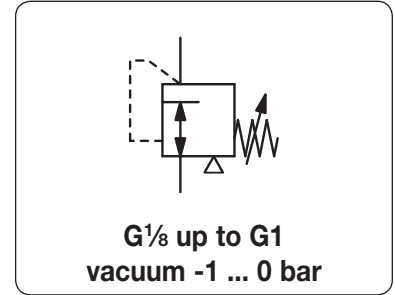
\*1 for compressed air at -0.98 bar supply pressure and 0 bar outlet pressure  
\*2 for compressed air at 7 bar supply pressure and 1.4 bar outlet pressure

Gauges: see chapter for measuring devices

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Order example:  
R251-04A

<b>Description</b>	When these valves reach a certain precalibrated vacuum degree, they introduce atmospheric air into the circuit to prevent the increase of the set value and keep it constant.	
<b>Application</b>	They are used as safety valves on non-commissioned tanks or containers at high vacuum level and on vacuum cup lifting systems.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Adjustment</b>	V04: by rotating the knurled bush in both directions V05: by knurled head screw or adjusting knob on spindle with fine thread	
<b>Mounting position</b>	any	
<b>Temperature range</b>	-20 °C to 80 °C / -4 °F to 176 °F	
<b>Material</b>	Body: nickel-plated brass Elastomer: NBR/Buna-N	Inner valve: spring steel and brass



Dimensions			Flow rate		Connection thread	Vacuum-range	Order number
A	B	SW	m <sup>3</sup> /h*1	l/min*1	G	bar	

Vacuum adjustment valve						Vacuum regulator with external leakage	V04
45	7	12	4	60	G <sup>1</sup> / <sub>8</sub>	-1 ... -0.3	V04-01
57	15	24	20	330	G <sup>1</sup> / <sub>2</sub>	-1 ... -0.3	V04-04
60	12	30	40	660	G <sup>3</sup> / <sub>4</sub>	-1 ... -0.3	V04-06
65	12	35	70	1100	G1	-1 ... -0.3	V04-08



V04-01 V04-04

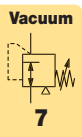
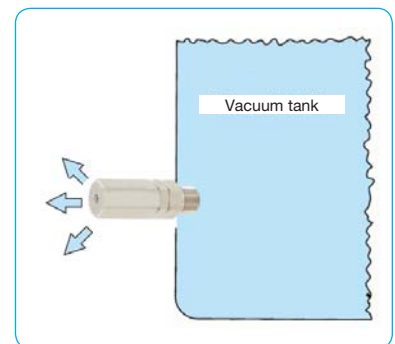
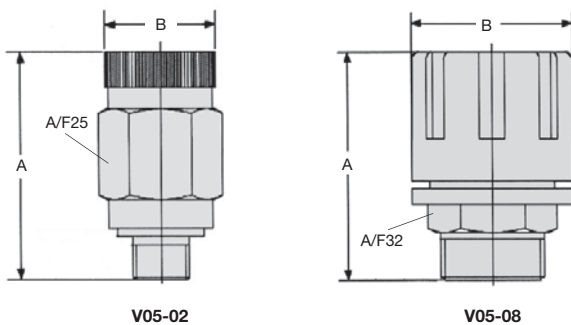
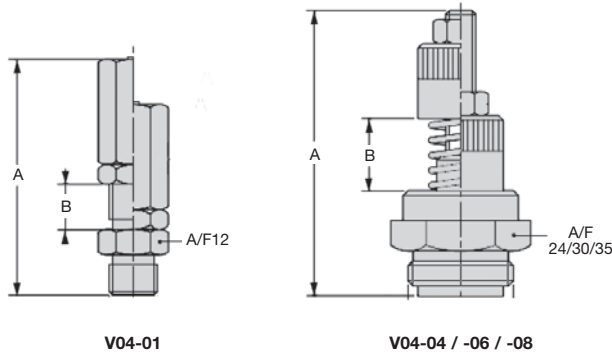
Vacuum adjustment valve, precise						Vacuum regulator with external leakage	V05
63	26	25	4	260	G <sup>1</sup> / <sub>4</sub>	-1 ... 0	V05-02
82	52	32	20	700	G1	-1 ... 0	V05-08



V04-06 V04-08



V05-02 V05-08



## Back Pressure Regulators

	Description	Overpressure max. bar	Adjustment range bar	Connection thread	Device	Page
<b>standard</b>	aluminium	30	0.2 ... 1.5 / 15	G $\frac{1}{8}$ - G2	DBC	<b>8.02</b>
	brass	65	0.2 ... 1.5 / 50	G $\frac{1}{8}$ - G2	DBM	<b>8.04</b>
	+130 °C	65	0.2 ... 1.5 / 50	G $\frac{1}{8}$ - G $\frac{1}{2}$	DBM-X54	<b>8.05</b>
<b>precise</b>	high-precision	35	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10BP	<b>8.06</b>
	free of non-ferrous metal	35	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10BP-X63	<b>8.06</b>
	aluminium	17	0.01 ... 0.14 / 10	G $\frac{1}{4}$ - $\frac{1}{2}$ "NPT	DB240	<b>8.07</b>
	aluminium	10	0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	DB300	<b>8.09</b>
	aluminium	17	0.03 ... 0.7 / 10	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB400	<b>8.10</b>
<b>low pressure</b>	precise	10	0.002 ... 0.035 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB110	<b>8.08</b>
	precise	6	0.005 ... 0.045 / 3	G $\frac{1}{2}$ - G2	DBC	<b>8.11</b>
<b>pilot-operated</b>	precise	17	0 ... 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB208	<b>8.12</b>
	precise	17	0 ... 10	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB450	<b>8.13</b>
<b>miniature</b>	screw-in, knurled screw	21	1.7 ... 2.4 / 14	G $\frac{1}{4}$ a	59	<b>8.14</b>
	screw-in, plastic knob	21	0 ... 3.5 / 7	G $\frac{1}{4}$ a	130	<b>8.14</b>
	tapped exhaust	21	0 ... 1.0 / 7	G $\frac{1}{4}$	134	<b>8.14</b>
<b>stainless steel</b>	for many gases, FDA also	65	0.1 ... 1.5 / 50	G $\frac{1}{8}$ - G2	D3000	15.24
	+130 °C	65	0.1 ... 1.5 / 50	G $\frac{1}{4}$ - G2	D3000-X54	15.27
	low pressure	6	0.005 ... 0.045 / 3	G $\frac{1}{2}$ - G2	D3100	15.28

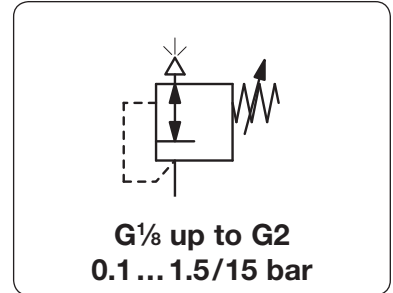


# 8

## Back Pressure Regulators

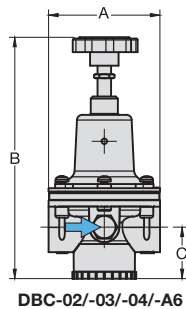
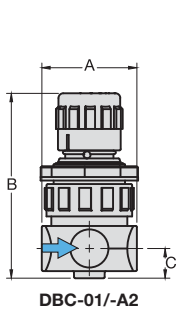
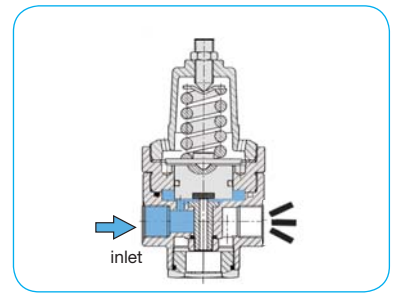
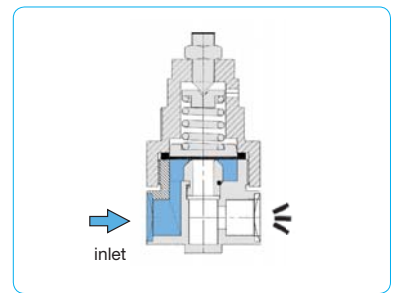


<b>Description</b>	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Overpressure</b>	max. 30 bar		
<b>Adjustment</b>	by plastic knob with snap-lock for DBC-01, by handwheel for DBC-02 to -A6 by T-handle with locknut for DBC-06 to -16		
<b>Gauge port</b>	G $\frac{1}{8}$ at DBC-01, G $\frac{1}{4}$ from DBC-02 on, on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F		
<b>Material</b>	Body: aluminium	O-rings: NBR/Buna-N, optionally FKM or EPDM	Inner valve: brass
	Diaphragm: NBR/Buna-N with PTFE coating		



Dimensions			Regul. system	Relief capacity	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	D: diaphragm P: piston	l/min*1	max. bar	G	bar	

Aluminium back pressure regulator							overpressure max. 30 bar	DBC
40	82	13	D	200	30	G $\frac{1}{8}$	0.2 ... 1.5	DBC-01A
							0.3 ... 3.0	DBC-01B
							0.8 ... 8.0	DBC-01D
							1.5 ... 15	DBC-01E
40	82	13	D	200	30	G $\frac{1}{4}$	0.2 ... 1.5	DBC-A2A
							0.3 ... 3.0	DBC-A2B
							0.8 ... 8.0	DBC-A2D
							1.5 ... 15	DBC-A2E
78	167	33	D	400	30	G $\frac{1}{4}$	0.2 ... 1.5	DBC-02A
							0.3 ... 3.0	DBC-02B
							0.8 ... 8.0	DBC-02D
							1.5 ... 15	DBC-02E
78	167	33	D	500	30	G $\frac{3}{8}$	0.2 ... 1.5	DBC-03A
							0.3 ... 3.0	DBC-03B
							0.8 ... 8.0	DBC-03D
							1.5 ... 15	DBC-03E
82	178	38	D	2200	30	G $\frac{1}{2}$	0.2 ... 1.5	DBC-04A
							0.3 ... 3.0	DBC-04B
							0.8 ... 8.0	DBC-04D
							1.5 ... 15	DBC-04E
82	178	38	D	2500	30	G $\frac{3}{4}$	0.2 ... 1.5	DBC-A6A
							0.3 ... 3.0	DBC-A6B
							0.8 ... 8.0	DBC-A6D
							1.5 ... 15	DBC-A6E



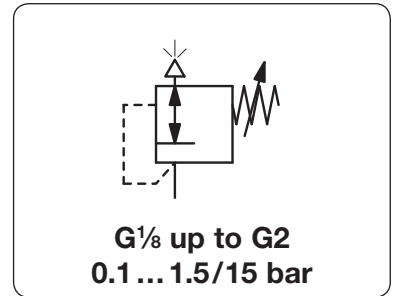
\*1 at 7 bar overpressure and open outlet  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
DBC-01A

<b>Description</b>	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Overpressure</b>	max. 30 bar		
<b>Adjustment</b>	by plastic knob with snap-lock for DBC-01, by T-handle with locknut for DBC-06 to -16	by handwheel for DBC-02 to -A6	
<b>Gauge port</b>	G $\frac{1}{8}$ at DBC-01, G $\frac{1}{4}$ from DBC-02 on, on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F		
<b>Material</b>	Body: aluminium Diaphragm: NBR/Buna-N with PTFE coating	O-rings: NBR/Buna-N, optionally FKM or EPDM	Inner valve: brass



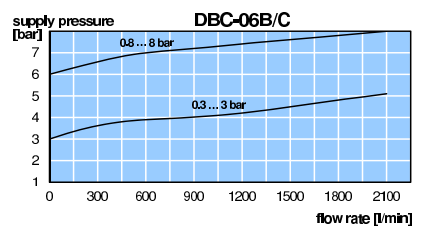
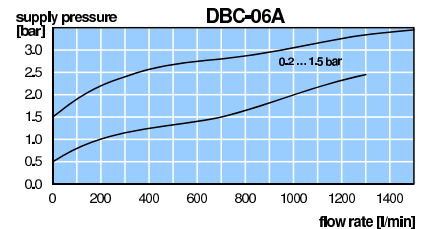
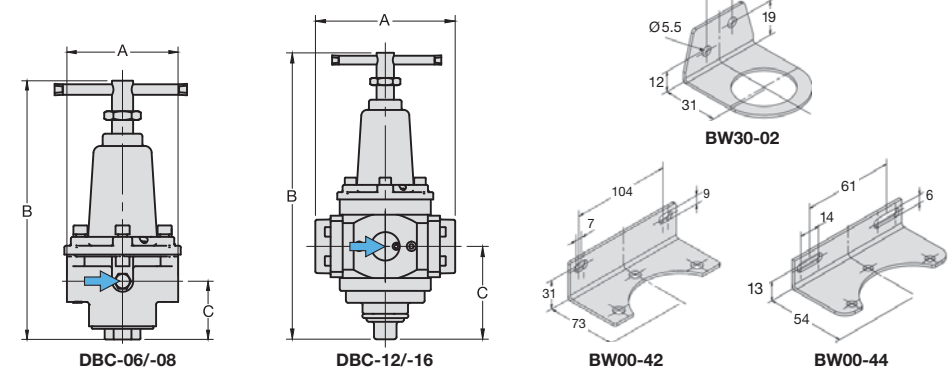
Dimensions			Regul. system	Relief capacity	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	D: diaphragm P: piston	l/min*1	max. bar	G	bar	

Aluminium back pressure regulator								overpressure max. 30 bar	DBC
126	293	66	D	4000	30	G $\frac{3}{4}$	0.2 ... 1.5	DBC-06A	
							0.3 ... 3.0	DBC-06B	
							0.8 ... 8.0	DBC-06D	
							1.5 ... 15	DBC-06E	
126	293	66	D	4000	30	G1	0.2 ... 1.5	DBC-08A	
							0.3 ... 3.0	DBC-08B	
							0.8 ... 8.0	DBC-08D	
							1.5 ... 15	DBC-08E	
215	393	128	P	12000	30	G1 $\frac{1}{2}$	0.2 ... 1.5	DBC-12A	
							0.3 ... 3.0	DBC-12B	
							0.8 ... 8.0	DBC-12D	
							1.5 ... 15	DBC-12E	
215	393	128	P	12000	30	G2	0.2 ... 1.5	DBC-16A	
							0.3 ... 3.0	DBC-16B	
							0.8 ... 8.0	DBC-16D	
							1.5 ... 15	DBC-16E	

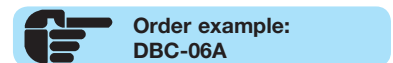


Special options, add the appropriate letter			
<b>NPT</b>	connection thread	from G $\frac{1}{4}$ (02)	DBC-... N
<b>FKM o-ring</b>	PTFE-diaphragm		DBC-... V
<b>EPDM o-ring</b>	PTFE-diaphragm		DBC-... E
<b>flange connection</b>	see chapter for stainless steel devices / flanges		DBC-... F.

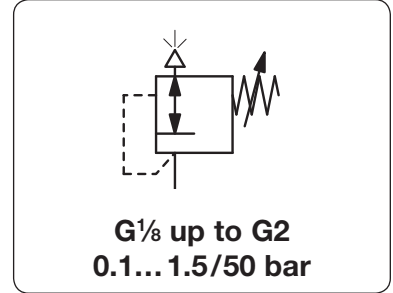
Accessories			
<b>pressure gauges</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$	<b>MA5002-...*2</b>
<b>pressure gauges</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	from G $\frac{1}{2}$	<b>MA6302-...*2</b>
<b>mounting bracket</b>	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>BW30-02</b>
<b>mounting nut</b>	made of aluminium	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>M30x1,5A</b>
<b>mounting bracket</b>	made of steel	for G $\frac{1}{4}$ (02) to G $\frac{3}{4}$ (A6)	<b>BW00-44</b>
		for G $\frac{3}{4}$ (06) and G1	<b>BW00-42</b>
		for G1 $\frac{1}{2}$ and G2	<b>BW00-61</b>
<b>set of mount. brackets</b>	made of steel		



\*1 at 7 bar overpressure and open outlet  
 \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar  
 \*3 G $\frac{3}{4}$  thread at outlet

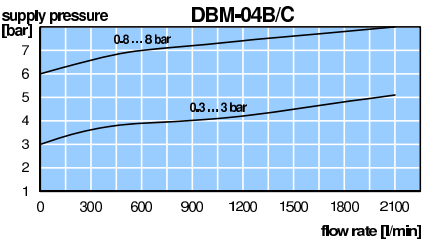
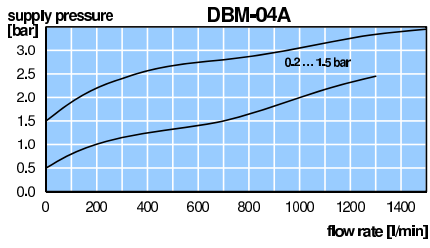
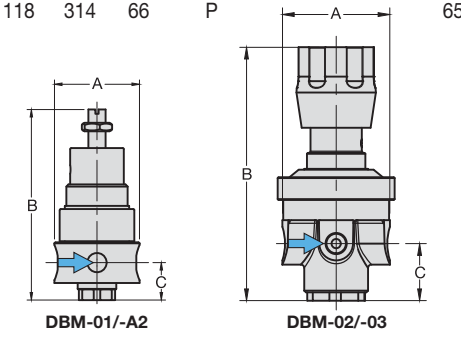
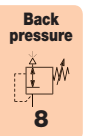


<b>Description</b>	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air, non-corrosive gases or liquids <b>Overpressure</b> see chart, max. 65 bar		
<b>Adjustment</b>	by spindle with locknut for DBM-01	by black plastic knob with snap-lock for DBM-02	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, from DBC-02 on G $\frac{1}{8}$ at DBM-01, screw plugs supplied		
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F		
<b>Mounting position</b>	any		
<b>Material</b>	Body: brass	O-rings: FKM, optionally EPDM	Inner valve: brass
	Diaphragm: NBR/Buna-N with PTFE coating		



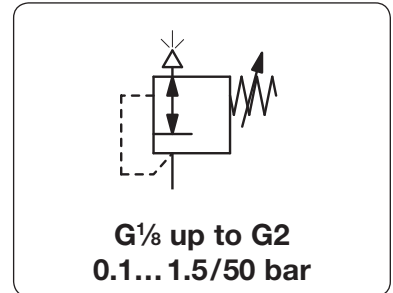
Dimensions			Regul. system	Relief capacity	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	D: diaphragm P: piston	l/min*1	max. bar	G	bar	

Brass back pressure regulator			overpressure max. 30/50 bar		DBM			
40	82	10	D	400	30	G $\frac{1}{8}$	0.2 ... 1.5	DBM-01A
							0.3 ... 3.0	DBM-01B
							0.8 ... 8.0	DBM-01D
							1.5 ... 15	DBM-01E
40	82	10	D	400	30	G $\frac{1}{4}$	0.2 ... 1.5	DBM-A2A
							0.3 ... 3.0	DBM-A2B
							0.8 ... 8.0	DBM-A2D
							1.5 ... 15	DBM-A2E
63	140	34	D	800	30	G $\frac{1}{4}$	0.2 ... 1.5	DBM-02A
							0.3 ... 3.0	DBM-02B
							0.8 ... 8.0	DBM-02D
							1.5 ... 15	DBM-02E
63	141	34	P		65		3.0 ... 30	DBM-02F
63	156	34					5.0 ... 50	DBM-02G
63	140	34	D	800	30	G $\frac{3}{8}$	0.2 ... 1.5	DBM-03A
							0.3 ... 3.0	DBM-03B
							0.8 ... 8.0	DBM-03D
							1.5 ... 15	DBM-03E
63	141	34	P		65		3.0 ... 30	DBM-03F
63	156	34					5.0 ... 50	DBM-03G
78	161	38	D	2500	30	G $\frac{1}{2}$	0.2 ... 1.5	DBM-04A
							0.3 ... 3.0	DBM-04B
							0.8 ... 8.0	DBM-04D
							1.5 ... 15	DBM-04E
78	157	38	P		65		3.0 ... 30	DBM-04F
							5.0 ... 50	DBM-04G
118	289	66	D	8000	30	G $\frac{3}{4}$	0.2 ... 1.5	DBM-06A
							0.3 ... 3.0	DBM-06B
							0.8 ... 8.0	DBM-06D
							1.5 ... 15	DBM-06E
118	314	66	P		65		3.0 ... 30	DBM-06F
							5.0 ... 50	DBM-06G
118	289	66	D	8000	30	G1	0.2 ... 1.5	DBM-08A
							0.3 ... 3.0	DBM-08B
							0.8 ... 8.0	DBM-08D
							1.5 ... 15	DBM-08E
							3.0 ... 30	DBM-08F
							5.0 ... 50	DBM-08G



\*1 at 7 bar overpressure and open outlet  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar

<b>Description</b>	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air, non-corrosive gases or liquids	<b>Overpressure</b>	see chart, max. 65 bar
<b>Adjustment</b>	by spindle with locknut for DBM-01 by T-handle with locknut for DBM-04/-08	by black plastic knob with snap-lock for DBM-02 by hexagonal spindle (spanner size 24 mm) with locknut for DBM-12/-16	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, from DBC-02 on	G $\frac{1}{2}$ at DBM-01, screw plugs supplied	
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F		
<b>Mounting position</b>	any		
<b>Material</b>	Body: brass Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM, optionally EPDM Inner valve: brass	

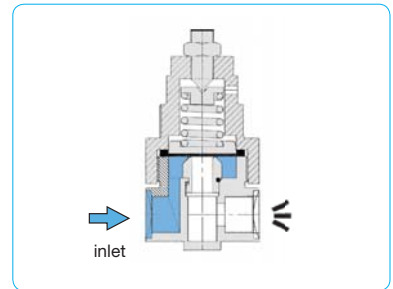


Dimensions			Regul. system	Relief capacity	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	D: diaphragm P: piston	l/min*1	max. bar	G	bar	

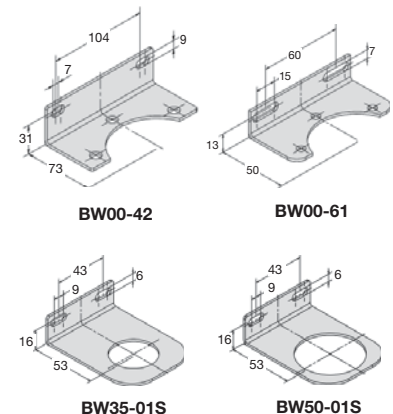
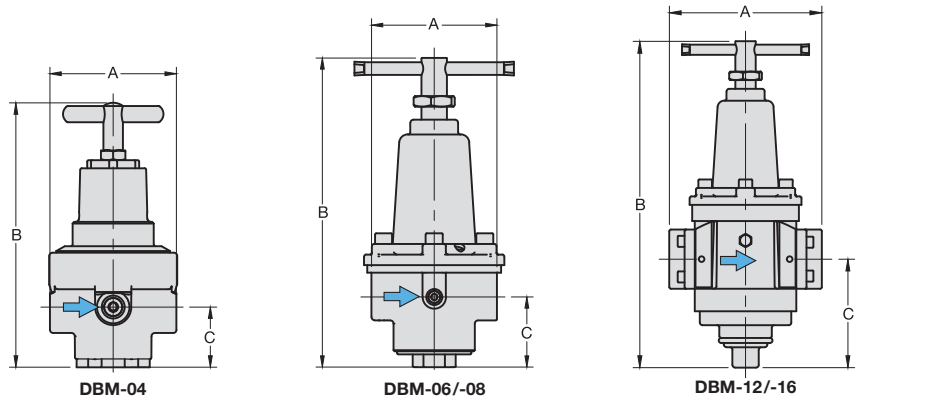
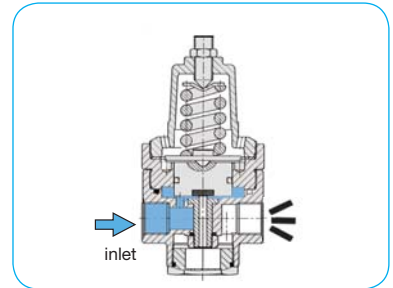
Brass back pressure regulator							overpressure max. 30/50 bar	DBM
180	385	128	D	25 000	30	G $\frac{1}{2}$	0.2... 1.5	<b>DBM-12A</b>
							0.3... 3.0	<b>DBM-12B</b>
							0.8... 8.0	<b>DBM-12D</b>
							1.5... 15	<b>DBM-12E</b>
180	400	128	P		65		3.0... 30	<b>DBM-12F</b>
							5.0... 50	<b>DBM-12G</b>
180	385	128	D	25 000	30	G2	0.2... 1.5	<b>DBM-16A</b>
							0.3... 3.0	<b>DBM-16B</b>
							0.8... 8.0	<b>DBM-16D</b>
							1.5... 15	<b>DBM-16E</b>
180	400	128	P		65		3.0... 30	<b>DBM-16F</b>
							5.0... 50	<b>DBM-16G</b>



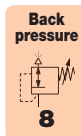
Special options, add the appropriate letter			
<b>NPT</b>	connection thread		from G $\frac{1}{4}$ (02)
<b>down to -40 °C / -40 °F</b>	low temperature version		
<b>up to 130 °C / 266 °F</b>	high temperature version		up to DBM-04
<b>EPDM o-ring</b>	PTFE diaphragm		
<b>T-handle</b>	instead of knob		DBM-02 only
<b>flange connection</b>	see chapter for stainless steel devices / flanges		
<b>nitrogen</b>	N $_2$ : 07	<b>carbon dioxide</b>	CO $_2$ : 03
<b>helium</b>	He: 09	<b>hydrogen</b>	H $_2$ : 11
<b>oxygen</b>	O $_2$ : 15	<b>propane</b>	C $_3$ H $_8$ : 16
		<b>argon</b>	Ar: DBM-... 05
		<b>methane</b>	CH $_4$ : DBM-... 13
		<b>nitrous oxide</b>	N $_2$ O: DBM-... 17
		<b>water</b>	H $_2$ O: DBM-... W



Accessories			
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ on the back	for G $\frac{1}{4}$ and G $\frac{1}{2}$	<b>MA5002-...*2</b>
<b>pressure gauge</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ on the back	for G $\frac{3}{4}$ to G2	<b>MA6302-...*2</b>
<b>mounting bracket</b>	made auf stainless steel	for G $\frac{1}{4}$ and G $\frac{3}{8}$	<b>BW35-01S</b>
<b>mounting nut</b>	made auf stainless steel	for G $\frac{1}{4}$ and G $\frac{3}{8}$	<b>M35x1,5S</b>
<b>mounting bracket</b>	made auf stainless steel	for G $\frac{1}{2}$	<b>BW50-01S</b>
<b>mounting nut</b>	made auf stainless steel	for G $\frac{1}{2}$	<b>M50x1,5S</b>
<b>mounting bracket</b>	made of steel	for G $\frac{3}{4}$ and G1	<b>BW00-42</b>
<b>set of mount. brackets</b>	made of steel	for G $\frac{1}{2}$ and G2	<b>BW00-61</b>



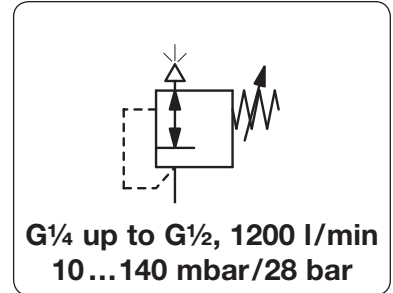
\*1 at 7 bar overpressure and open outlet  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar



# Precision Back Pressure Regulator of Advanced Accuracy, up to 35 bar

10BP

<b>Description</b>	The back pressure regulator is a high-flow, high-precision pneumatic relief valve with adjustable setpoint. It provides protection against overpressure in the downstream section of pneumatic systems. A convoluted diaphragm provides the sensitivity for venting to the atmosphere in response to the slightest upstream change.
<b>Media</b>	compressed air or non-corrosive gases
<b>Overpressure</b>	max. 21 bar up to pressure range of 14 bar, max. 35 bar beyond
<b>Adjustment</b>	by handwheel with locknut
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N, optionally FKM Inner valve: stainless steel and brass



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range bar	Order number
A	B	C					

Precision back pressure regulator							overpressure max. 21/35 bar	Model 10BP
67	162	19	1200	21	G $\frac{1}{4}$	0.01 ... 0.14	10212BPH	
						0.01 ... 0.7	10222BPH	
						0.01 ... 2.1	10232BPH	
						0.07 ... 4.1	10242BPH	
						0.14 ... 10	10262BPH	
67	171	19	1200	35	G $\frac{1}{4}$	0.20 ... 14	10272BPH	
						0.30 ... 21	10282BPH	
						0.30 ... 28	10292BPH	

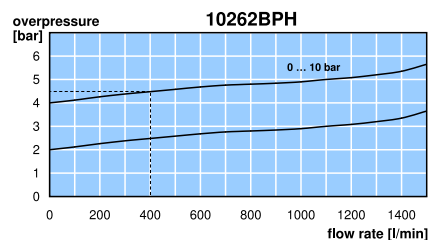
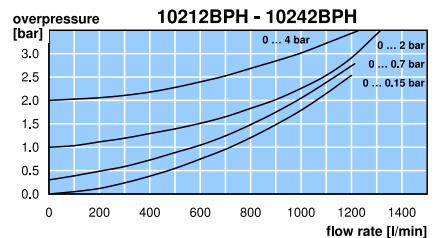
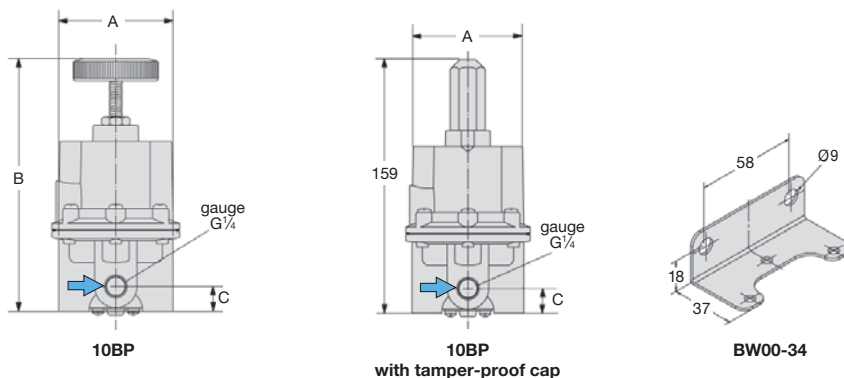
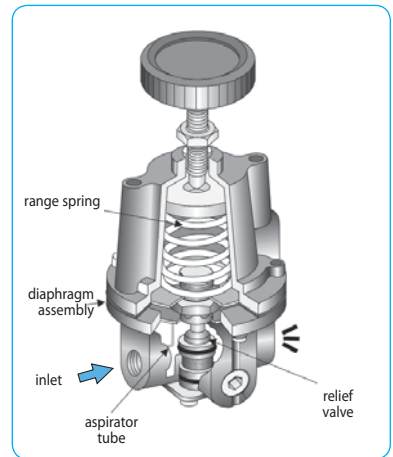


## Special options, add the appropriate letter

G $\frac{3}{8}$	connection thread	102.3BPH
G $\frac{1}{2}$	connection thread, recommended for mbar range	102.4BPH
NPT	connection thread	102.2BP
FKM elastomer		102. .BP . J
free of non-ferrous metal	FKM elastomer	102. .BP . X63
tamper-proof cap	aluminium, adjustment by screwdriver, total height 159 mm	102. .BP . T

## Accessories

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
	Ø 63 mm, 0...160 mbar, G $\frac{1}{4}$	MA6302- C2
mounting bracket	made of steel	BW00-34



\*1 at 5 bar overpressure and open outlet  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar

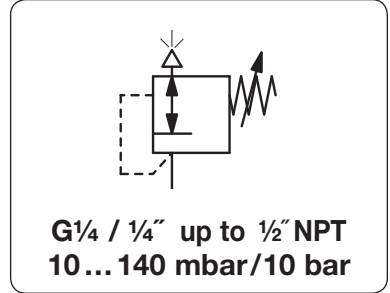
Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
10212BPH



<b>Description</b>	The back pressure regulator is a high-flow, high-precision pneumatic relief valve with adjustable setpoint. It provides protection against overpressure in the downstream section of pneumatic systems. A convoluted diaphragm provides the sensitivity for venting to the atmosphere in response to the slightest upstream change.
<b>Media</b>	compressed air or non-corrosive gases
<b>Overpressure</b>	max. 17 bar
<b>Adjustment</b>	by handwheel with locknut
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N Inner valve: stainless steel and brass



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range bar	Order number
A	B	C					

Precision back pressure regulator							overpressure max. 17 bar	DB240
67	154	19	1100	17	G $\frac{1}{4}$	0.01 ... 0.14	DB240-020	
						0.01 ... 1.0	DB240-02A	
						0.01 ... 2.0	DB240-02B	
						0.07 ... 4.0	DB240-02C	
						0.14 ... 10	DB240-02D	



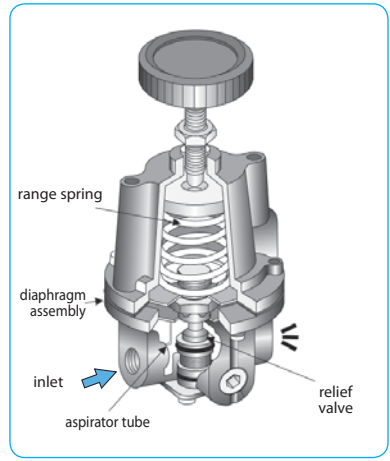
DB240

### Special options, add the appropriate letter

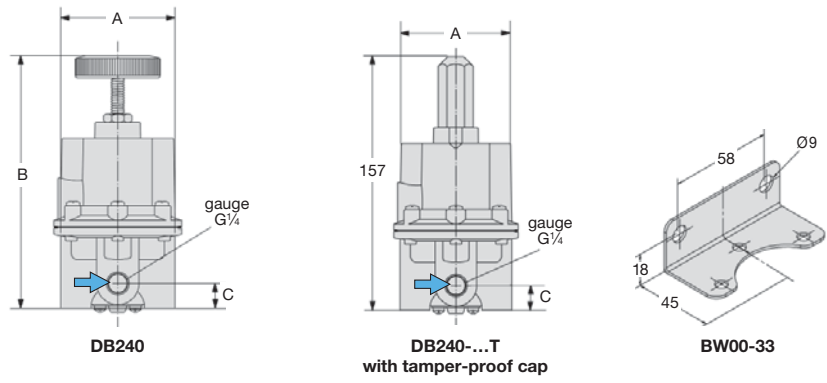
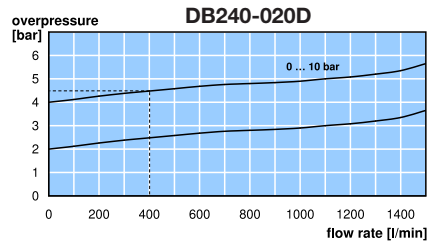
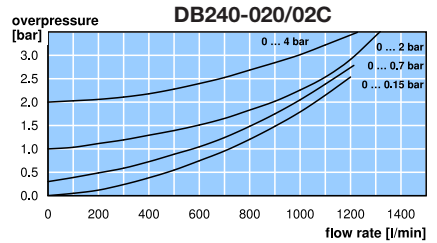
<b><math>\frac{1}{4}</math>" NPT</b>	connection thread	DB240-02 . N
<b><math>\frac{3}{8}</math>" NPT</b>	connection thread	DB240-03 . N
<b><math>\frac{1}{2}</math>" NPT</b>	connection thread, recommended for mbar range	DB240-04 . N
<b>tamper-proof cap</b>	aluminium, adjustment by screwdriver, total height 157 mm	DB240-0 . . T

### Accessories

<b>pressure gauge</b>	$\varnothing$ 50 mm, 0 ... *2 bar, G $\frac{1}{4}$ , Bourdon tube, from 1 bar on	MA5002-...*2
	$\varnothing$ 63 mm, 0 ... 160 mbar, G $\frac{1}{4}$ , capsule type	MA6302- C2
<b>mounting bracket</b>	made of steel	BW00-33



cross-section



\*1 at 5 bar overpressure and open outlet  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

**Description** Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.

**Media** compressed air or non-corrosive gases

**Recommendation** connection thread G½ for pressure range 0...35 / 140 / 280 mbar

**Overpressure** max. 10 bar

**Accuracy** response sensitivity <2 mbar

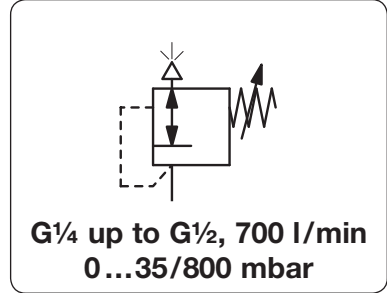
**Adjustment** by handwheel with locknut

**Gauge port** G¼ on both sides of the body, screw plugs supplied

**Mounting position** any

**Temperature range** 0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F

**Material** Body: aluminium die-cast  
Elastomer: NBR/Buna-N, optionally FKM  
Inner valve: stainless steel and brass



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					

Low back pressure regulator				overpressure max. 10 bar	DB110		
67	180	25	700	10	G¼	2... 35	DB110-020
						2... 140	DB110-02A
						2... 280	DB110-02B
						2... 400	DB110-02C
						2... 800	DB110-02D
67	180	25	700	10	G½	2... 35	DB110-040
						2... 140	DB110-04A
						2... 280	DB110-04B
						2... 400	DB110-04C
						2... 800	DB110-04D



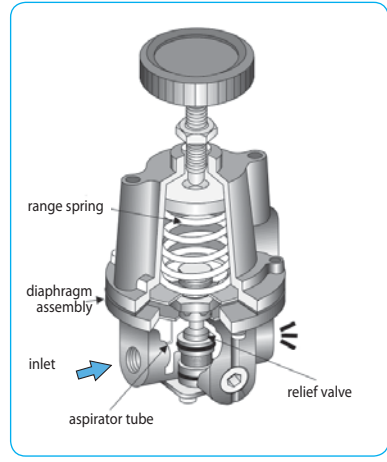
DB110

**Special options, add the appropriate letter**

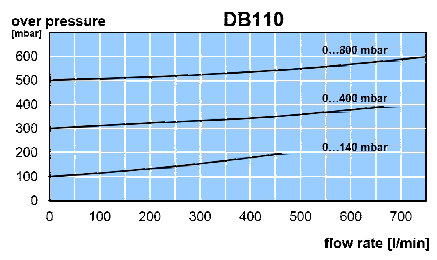
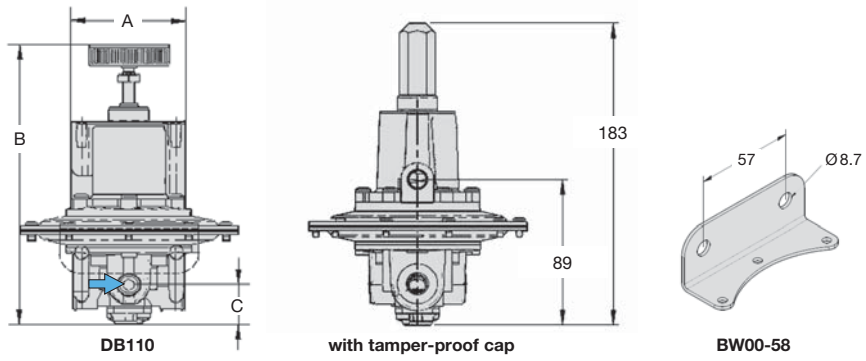
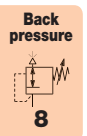
G¾	connection thread	DB110-0.. 3
NPT	connection thread	DB110-0.. N
FKM elastomer		DB110-0.. V
tamper-proof cap	aluminium, adjustment by screwdriver, total height 183 mm	DB110-0.. T

**Accessories**

pressure gauge	Ø 63 mm, 0...*2 mbar, G¼, capsule type	MA6302-...*2
	Ø 63 mm, 0... 1 bar, G¼, Bourdon tube	MA6302-01
connecting parts gauge	at NPT connection thread, adapter ¼" NPT - G¼i	VP-0202N
mounting bracket	made of steel	BW00-58



functional principle

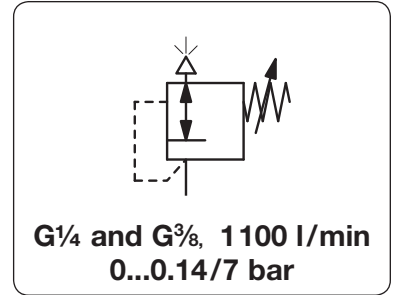


\*1 at 200 mbar overpressure and open outlet  
\*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar

# Precision Back Pressure Regulator, small and lightweight

DB300

<b>Description</b>	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.
<b>Media</b>	compressed air or non-corrosive gases
<b>Overpressure</b>	max. 10 bar
<b>Accuracy</b>	response sensitivity <2 mbar
<b>Adjustment</b>	by handwheel with locknut
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N, optionally FKM Inner valve: brass



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					

Precision back pressure regulator							overpressure max. 10 bar	DB300
57	126	19	1100	10	G $\frac{1}{4}$	0.001... 0.14	DB300-020	
						0.01 ... 0.7	DB300-021	
						0.03 ... 2.0	DB300-02A	
						0.07 ... 4.0	DB300-02B	
						0.14 ... 7.0	DB300-02C	
57	126	19	1100	10	G $\frac{3}{8}$	0.001... 0.14	DB300-030	
						0.01 ... 0.7	DB300-031	
						0.03 ... 2.0	DB300-03A	
						0.07 ... 4.0	DB300-03B	
						0.14 ... 7.0	DB300-03C	



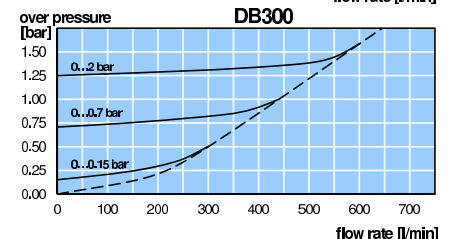
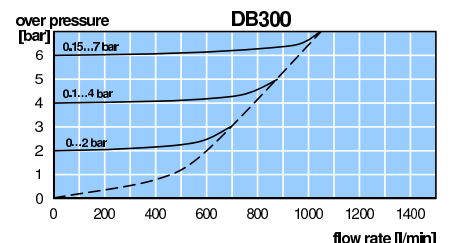
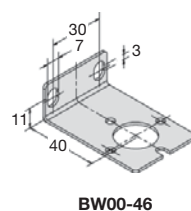
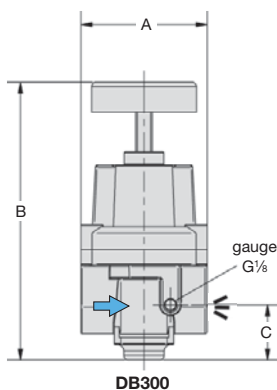
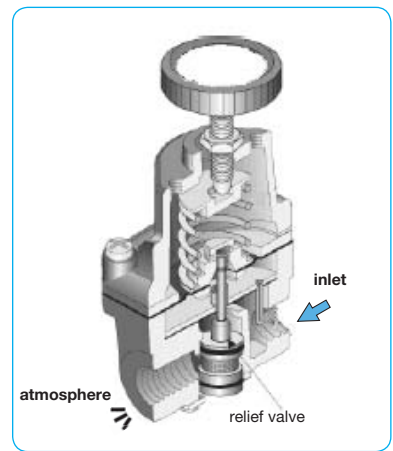
DB300

**Special options, add the appropriate letter**

NPT	connection thread	DB300-0..N
tamper-proof cap	aluminium, adjustment by screwdriver, total height 141 mm	DB300-0..T
FKM elastomer		DB300-0..V

**Accessories**

pressure gauge	Ø 63 mm, 0... 160 mbar, G $\frac{1}{4}$ -connecting parts required	MA6302-C2
	Ø 50 mm, 0...*2 bar, G $\frac{1}{8}$	MA5001-..*2
connecting parts gauge	for MA6302-C2	AM-04
mounting bracket	made of steel	BW00-46



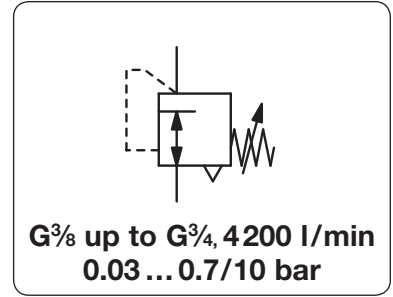
\*1 at 7 bar overpressure and open outlet  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
DB300-020

<b>Description</b>	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.
<b>Media</b>	compressed air or non-corrosive gases
<b>Overpressure</b>	max. 17 bar
<b>Adjustment</b>	by handwheel with locknut
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Material</b>	Body: aluminium die-cast Elastomer: NBR/Buna-N, optionally FKM Inner valve: stainless steel, brass, aluminium and cadmium-plated steel



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					
mm	mm	mm					

Precision back pressure regulator							overpressure max. 17 bar	DB400
89	206	39	3800	17	G $\frac{3}{8}$	0.03 ... 0.7		DB400-031
						0.03 ... 2.0		DB400-03A
						0.07 ... 4.0		DB400-03B
						0.15 ... 10		DB400-03C
89	206	39	4000	17	G $\frac{1}{2}$	0.03 ... 0.7		DB400-041
						0.03 ... 2.0		DB400-04A
						0.07 ... 4.0		DB400-04B
						0.15 ... 10		DB400-04C
89	206	39	4200	17	G $\frac{3}{4}$	0.03 ... 0.7		DB400-061
						0.03 ... 2.0		DB400-06A
						0.07 ... 4.0		DB400-06B
						0.15 ... 10		DB400-06C



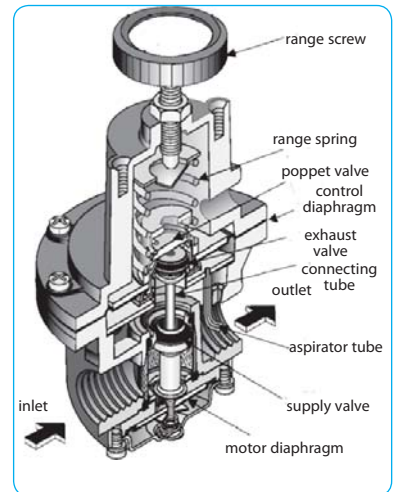
DB400

## Special options, add the appropriate letter

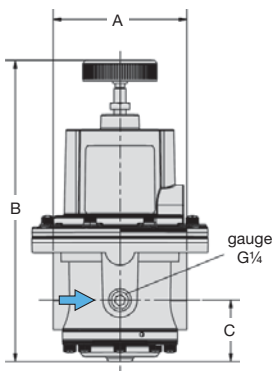
<b>NPT</b>	connection thread	DB400-0..N
<b>tamper-proof cap</b>	aluminium, adjustment by screwdriver, total height 295 mm	DB400-0..T
<b>FKM elastomer</b>		DB400-0..V

## Accessories

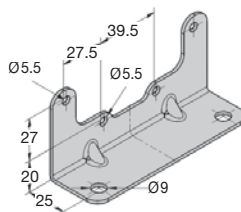
<b>pressure gauge</b>	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-...*2
<b>mounting bracket</b>	made of steel	BW00-47



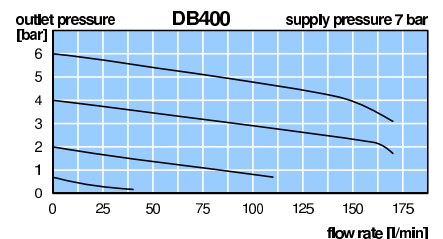
cross-section



DB400



BW00-47



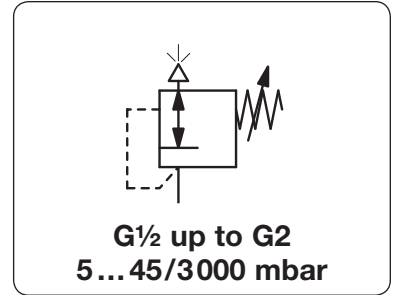
\*1 at 7 bar inlet pressure and 1.4 bar outlet pressure  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
DB400-031

<b>Description</b>	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.
<b>Media</b>	compressed air or non-corrosive gases
<b>Overpressure</b>	max. 6 bar
<b>Adjustment</b>	by handwheel with locknut for DBC-04 by hexagonal spindle (spanner size 24 mm) with locknut for DBC-08/-16
<b>Gauge port</b>	G $\frac{1}{4}$ for operation pressure, on both sides of the body, connection parts required
<b>Mounting position</b>	any
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F
<b>Material</b>	Body: aluminium Diaphragm: NBR/Buna-N with PTFE coating O-rings: NBR/Buna-N, optionally FKM or EPDM Inner valve: brass



Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					
mm	mm	mm					

Aluminium back pressure regulator			NBR/Buna-N with PTFE coating	DBC			
82	191	38	300	6	G $\frac{1}{2}$	5 ... 45	DBC-04N
			500			20 ... 200	DBC-04P
			1000			150 ... 700	DBC-04Q
161	299	45	1300	6	G $\frac{3}{4}$	50 ... 300	DBC-06P
			2300			100 ... 700	DBC-06Q
			5000			200 ... 1200	DBC-06R
161	299	45	1300	6	G1	50 ... 300	DBC-08P
			2300			100 ... 700	DBC-08Q
			5000			200 ... 1200	DBC-08R
265	299	45	1300	6	G $1\frac{1}{4}$	50 ... 300	DBC-10P
			2300			100 ... 700	DBC-10Q
			5000			200 ... 1200	DBC-10R
265	299	45	1300	6	G $1\frac{1}{2}$	50 ... 300	DBC-1AP
			2300			100 ... 700	DBC-1AQ
			5000			200 ... 1200	DBC-1AR
215	444	128	2500	6	G $1\frac{1}{2}$	20 ... 50	DBC-12N
			5000			50 ... 150	DBC-12P
			7500			150 ... 300	DBC-12Q
			10000			300 ... 3000	DBC-12R
215	444	128	2500	6	G2	20 ... 50	DBC-16N
			5000			50 ... 150	DBC-16P
			7500			150 ... 300	DBC-16Q
			10000			300 ... 3000	DBC-16R



DBC-04



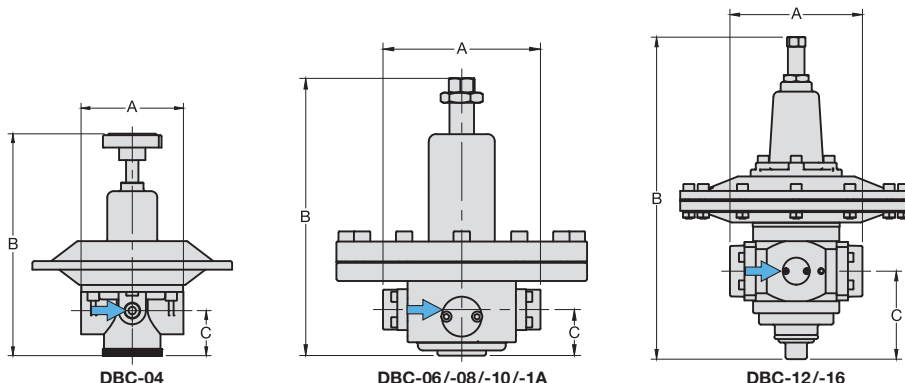
DBC-06/-08



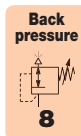
DBC-12/-16

Special options, add the appropriate letter			
NPT	connection thread	for G $\frac{1}{2}$ , G $1\frac{1}{2}$ (12) and G2	DBC-... N
NPT	connection thread	for G $\frac{3}{4}$ to G $1\frac{1}{2}$ (1A)	DBC-... N
FKM o-ring	PTFE-diaphragm		DBC-... V
EPDM o-ring	PTFE-diaphragm		DBC-... E
flange connection	see chapter for stainless steel devices / flanges		DBC-... F.

Accessories			
pressure gauge	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ , capsule type, up to 400 mbar	MA6302-...*2	
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube, up 1 bar	MA6302-...*2	
connection parts	required for pressure gauge	AM-01	
mounting bracket	made of stainless steel	BW00-26S	for G $\frac{1}{2}$

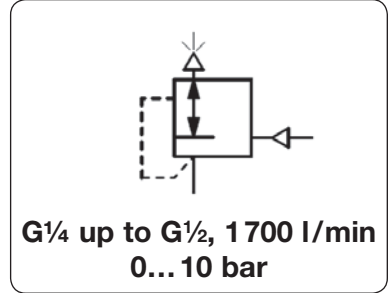


\*1 at 6 bar overpressure and open outlet  
\*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar, C01 = 0...1 bar, 04 = 0...4 bar, 06 = 0...6 bar





<b>Description</b>	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Overpressure</b>	max. 17 bar	<b>Pilot pressure</b>	0 ... 10 bar
<b>Accuracy</b>	1% at 7 bar pilot pressure	<b>Response sensitivity</b>	1 mbar
<b>Adjustment</b>	depending on the level of signal pressure the response value will change accordingly		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
<b>Material</b>	Body: aluminium die casting O-rings: NBR/Buna-N, optionally FKM	Elastomer:	NBR/Buna-N Inner valve: brass and zinc-plated steel



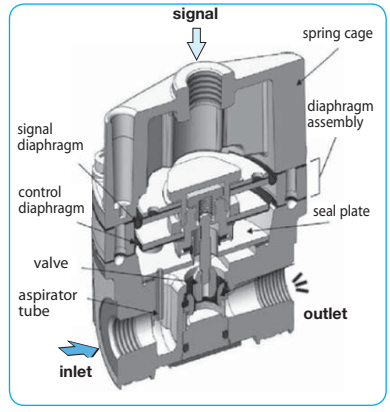
Dimensions			Relief capacity	Over-pressure	Adjustment range	Connection thread	Order number
A	B	C	l/min*1	max. bar	bar	G	

Back pressure regulator, pilot-operated							pilot pressure overpressure	0...10 bar max. 17 bar	DB208
76	98	24	1700	17	0... 10	G $\frac{1}{4}$		DB208-02	
						G $\frac{3}{8}$		DB208-03	
						G $\frac{1}{2}$		DB208-04	



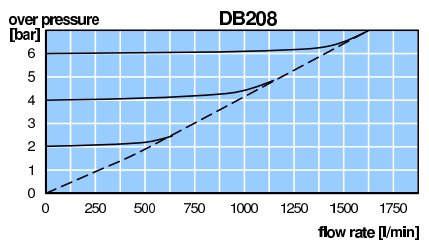
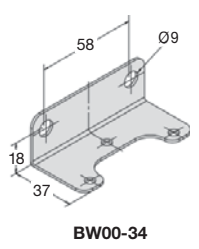
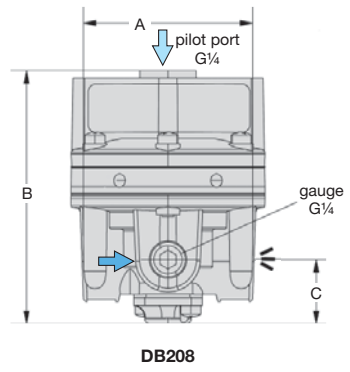
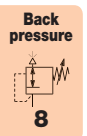
**Special options, add the appropriate letter**

NPT connection thread	DB208-0.N
FKM elastomer	DB208-0.V



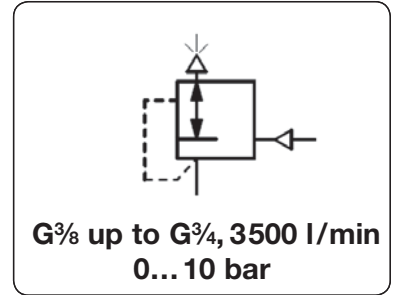
**Accessories**

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-34



\*1 at 7 bar inlet pressure and open outlet  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

<b>Description</b>	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Overpressure</b>	max. 17 bar	<b>Pilot pressure</b>	0 ... 10 bar
<b>Accurcay</b>	3% at 7 bar pilot pressure	<b>Response sensitivity</b>	2.5 mbar
<b>Adjustment</b>	depending on the level of signal pressure the response value will change accordingly		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body , screw plugs supplied	<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F , for appropriately conditioned compressed air down to -40 °C / -40 °F		
<b>Material</b>	Body: aluminium die casting O-rings: NBR/Buna-N, optionally FKM	Elastomer:	NBR/Buna-N
		Inner valve:	brass and aluminium



Dimensions			Relief capacity	Over-pressure	Adjustment range	Connection thread	Order number
A	B	C	l/min*1	max. bar	bar	G	
mm	mm	mm					

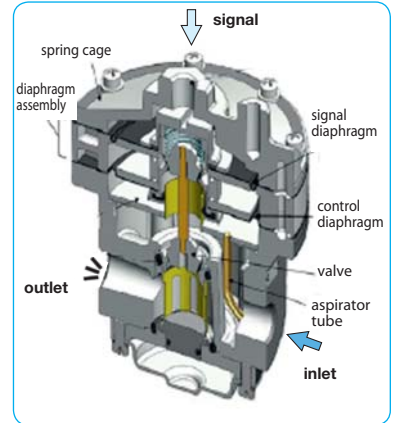
Back pressure regulator, pilot-operated							pilot pressure overpressure	0...10 bar max. 17 bar	DB450
87	129	40	3500	17	0... 10	G $\frac{3}{8}$		DB450-03	
						G $\frac{1}{2}$		DB450-04	
						G $\frac{3}{4}$		DB450-06	



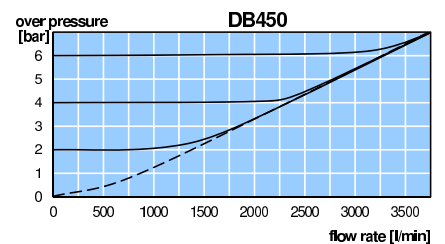
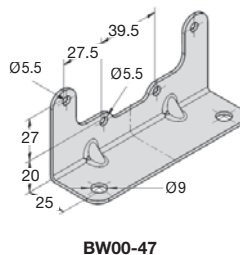
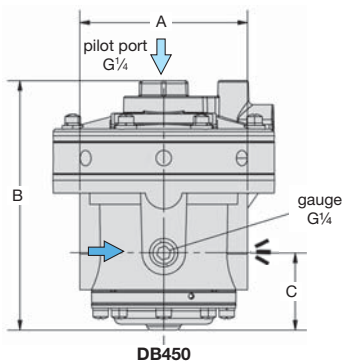
DB450

Special options, add the appropriate letter		
NPT	connection thread	DB450-0. N
FKM elastomer		DB450-0. V

Zubehör, lose beigelegt		
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-..*2
mounting bracket	made of steel	BW00-47



cross-section



\*1 at 6 bar inlet pressure and open outlet      \*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

# Miniature Back Pressure Regulator

Model 59/130/134

**Description**

Pressure relief valve for protecting compressed air devices from overpressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.

**Model 59**  
**Model 130 / 134**

Low-cost piston-operated valve of small size and high relief capacity. Small, sensitive diaphragm-type valve made to screw in. Relief flow is proportional to overpressure. Model 134 features a tapped exhaust.

**Media**  
**Overpressure Adjustment**

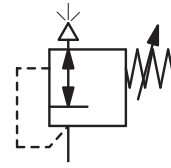
compressed air or non-corrosive gases, model 134 also for liquids  
max. 21 bar  
by knurled screw at model 59  
by plastic knob with snap-lock at model 130 and 134

**Gauge port**

model 134: for inlet pressure G $\frac{1}{8}$  on both sides of the body  
model 59/130: not available

**Temperature range**  
**Material**

0 °C to 50 °C / 32 °F to 132 °F  
Body: aluminium at model 59 and 130, brass at model 134  
Elastomer: NBR/Buna-N at model 130 and 134  
Spring cage: plastic at type 130 and 134  
**Mounting position** any  
Seal: silicone at model 59  
Inner valve: brass



G $\frac{1}{4}$

Dimensions			relief capacity	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	l/min*1	max. bar	G	bar	
mm	mm	mm					

Back pressure regulator				overpressure max. 21 bar, with male thread	Model 59		
20	50	-	1500	21	G $\frac{1}{4}$ a	1.7... 2.4	59-02A- 35
						2.8... 3.5	59-02A- 50
						3.8... 14	59-02A-200

Back pressure regulator				overpressure max. 21 bar, with male thread	Model 130		
43	88	-	540	21	G $\frac{1}{4}$ a	0...3.5	130-02- 50
						0...7.0	130-02-100

Back pressure regulator				overpressure max. 21 bar with tapped exhaust and gauge port	Model 134		
40	76	10	540	21	G $\frac{1}{4}$	0...1.0	134-02- 15
						0...1.8	134-02- 25
						0...3.5	134-02- 50
						0...7.0	134-02-100

**Special options, add the appropriate letter**

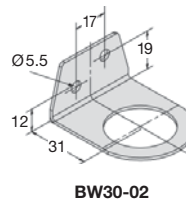
free of grease and oil specially cleaned, suitable for oxygen for 130 and 134 13.-02-... L

**Zubehör, lose beigelegt**

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for 134	MA4001-...*2
mounting bracket	made of steel	for 130 and 134	BW30-02
mounting nut	made of plastic	for 130 and 134	M30x1,5K
	made of aluminium	for 130 and 134	M30x1,5A

Model 59			relief		
range	set pressure	capacity	bar	Druck	l / min
3.8... 14	1.8 bar	500			
	3.6 bar	900			
	5.4 bar	1 100			
	7.0 bar	1 500			
	8.6 bar	1 700			
	10.0 bar	2 000			

Model 130			relief		
range	set pressure	capacity	bar	Druck	l / min
0...3.5	0.7 bar	50			
	1.8 bar	190			
	3.6 bar	310			
0...7	3.6 bar	280			
	5.2 bar	385			
	7.0 bar	540			



BW30-02



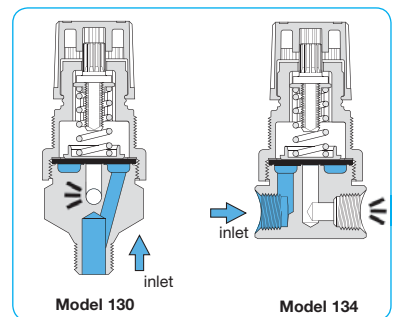
Model 59



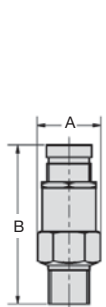
Model 130



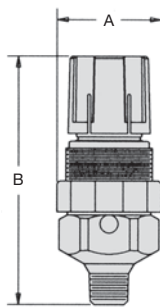
Model 134



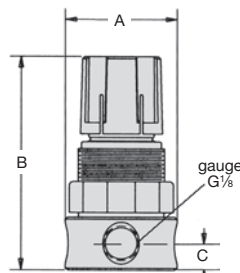
cross-section



Model 59



Model 130



Mode 134

\*1 at 7 bar overpressure and open outlet  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



Order example:  
59-02A-35

## Water Pressure Regulators

	Description	Supply pressure max. bar	Pressure range bar	Connection thread	Device	Page
<b>miniature</b>	for drinking water	10	0.1 ... 3.5 / 8.5	G $\frac{1}{4}$	R91	<b>9.02</b>
	preset, for drinking water	10	1 / 2 / 3... 8	G $\frac{1}{4}$	239K	<b>9.03</b>
	made of plastic	11	0 ... 1 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R25	<b>9.04</b>
	made of plastic	11	0 ... 1.8 / 9	G $\frac{1}{4}$ and G $\frac{3}{8}$	R45	<b>9.04</b>
<b>standard</b>	solid	40	0.5 ... 6	G $\frac{1}{2}$ - G $\frac{1}{4}$	RW	<b>9.05</b>
	female thread	60	0.2 ... 2 / 45	G $\frac{1}{4}$ - G2	RWI	<b>9.06</b>
	male thread	25	0.2 ... 2 / 20	R $\frac{3}{8}$ " - R $2\frac{1}{2}$ "	RWA	<b>9.08</b>
	flange	40	0.2 ... 2 / 20	DN 8-DN125	RWF	<b>9.10</b>
	stainless steel, flange	40	0.2 ... 2 / 20	DN15-DN50	RAF	<b>9.12</b>
	stainless steel, female thread	40	0.2 ... 2 / 20	G $\frac{1}{2}$ - G2	RAI	<b>9.13</b>
<b>steam pressure regulator</b>	spheroidal graphite iron	19	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU	<b>9.14</b>
	red brass	17	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU-R	<b>9.14</b>
	stainless steel	19	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU-S	<b>9.14</b>



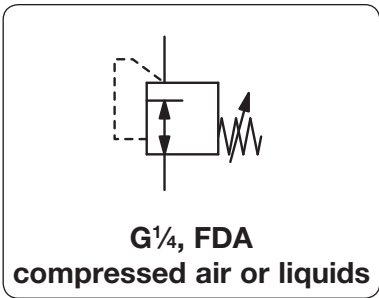
# 9

## Water Pressure Regulators

Special



<b>Description</b>	Diaphragm miniature pressure regulator of small and lightweight design. All fluid-contact parts of R91-..K are approved by the FDA.	
<b>Application area</b>	food industry and water circulation, e.g. for dialysis devices	
<b>Media</b>	compressed air, non-corrosive gases, deionized water or other liquids.	
<b>Supply pressure</b>	max. 10 bar	<b>Adjustment</b> by plastic knob with snap-lock
<b>Relieving function</b>	non-relieving for drinking water (FDA), relieving for compressed air	<b>Mounting position</b> any
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body	
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F	
<b>Material for</b>	<b>drinking water</b>	<b>compressed air</b>
	Body: acetal	acetal
	Elastomer: acetal and nylon-reinforced nitrile	acetal and nylon-reinforced nitrile
	NBR/Buna-N	not FDA-approved
	Valve and o-ring: stainless steel and EPDM, FDA-approved	brass, nitrile and NBR/Buna-N



Dimensions			Flow rate		Connection	Pressure	Order
A	B	C	water	air	thread	range	number
mm	mm	mm	l/min*1	l/min*1	G	bar	

Press. regulator w. FDA approval for drinking water							P <sub>i</sub> : max. 10 bar, EPDM non-relieving	R91-K
42	76	11	6	380	G $\frac{1}{4}$	0.1 ... 3.5	R91-02BK	
						0.1 ... 8.5	R91-02CK	

Press. regulator for compressed air							P <sub>i</sub> : max. 10 bar, NBR/Buna-N relieving	R91
42	76	11		380	G $\frac{1}{4}$	0.1 ... 3.5	R91-02B	
						0.1 ... 8.5	R91-02C	



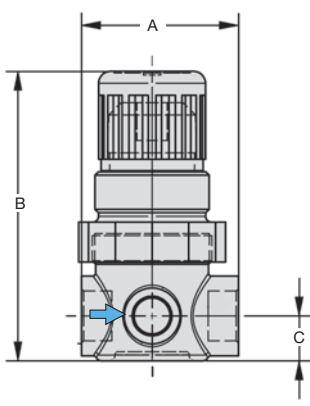
R91

## Special options, add the appropriate letter

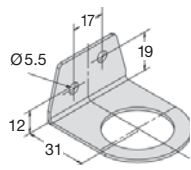
NPT	connection thread	R91-02 . N
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## Accessories

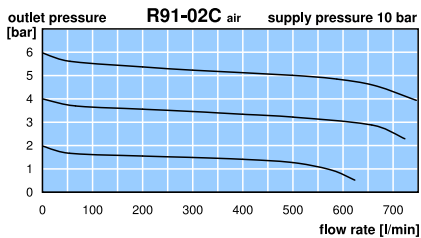
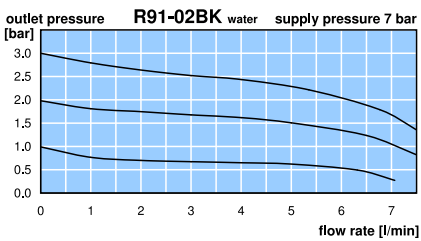
pressure gauge	Ø 40 mm, G $\frac{1}{8}$	0... 4 bar	MA4001-04
		0...10 bar	MA5002-10
mounting bracket	made of steel		BW30-02
mounting nut	made of plastic		M30x1,5K
	made of aluminium		M30x1,5A



R91



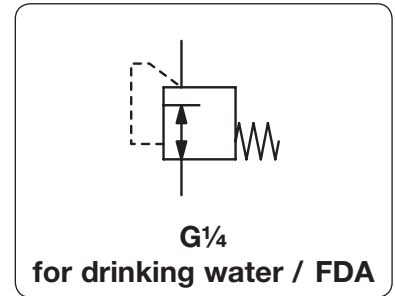
BW30-02



\*1 supply pressure 1 bar above outlet pressure



<b>General</b>	In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 10 bar to 5 bar. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.
<b>Description</b>	regulator for <b>drinking water</b> conforms to the FDA, EU and DIN 50930-6, TÜV drinking water directives
<b>Application</b>	applications areas such as drinking water, food and medical industry
<b>Supply pressure</b>	max. 10 bar
<b>Accuracy</b>	± 0.3 bar, for compressed air P <sub>1</sub> : 6 bar and 10 l/min
<b>Temperature range</b>	4 °C to 60 °C / 39.2 °F to 140 °F
<b>Material</b>	Body: Grivory® GV-5 FWA Inner parts: Stainless steel DIN 1.4404 / AISI 316L Elastomer: FPM



Dimensions			Flow rate	Supply	Connection	Outlet	Order
ØA	B	A/F	water	pressure	thread	pressure	number
mm	mm	mm	l/min*1	max. bar	G	bar*2	

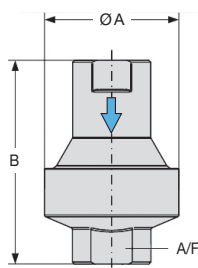
Regulator for drinking water				Grivory, accuracy *2	P <sub>1</sub> : max. 10bar,	239K
34	52	17	3	10	G <sup>1</sup> / <sub>4</sub>	239K0210
			4			239K0220
			4			239K0230
			4			239K0240
			4			239K0250
			4			239K0260
			4			239K0270
			4			239K0280



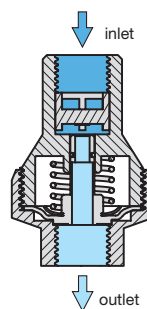
239K

## Special options, add the appropriate letter

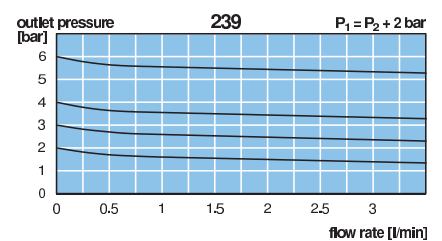
<b>NPT</b>	connection thread	239K1 . . .
<b>deviant pressure range</b>	indicate on order	239K . . <b>XX</b>



239K



cross-section

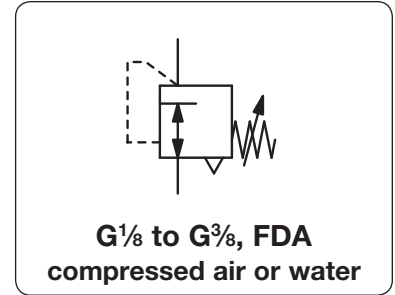


\*1 P<sub>1</sub> = 10 bar; Δp = 0.8 bar

\*2 Tolerance: < 4 bar ± 0.3 bar (air, P<sub>0</sub> = 6 bar, 10 l/min)  
≥ 4 bar ± 10% (air, P<sub>0</sub> = 10 bar, 10 l/min)



<b>Description</b>	Miniature pressure regulator with diaphragm, designed for compressed air and water applications. All internal wetted sections are corrosion-resistant, lead free and without any brass components. Material approved by the NSF and FDA. Regulator for modular application with many integrated fixing holes.	
<b>Media</b>	compressed air, non-corrosive gases or water	
<b>Supply pressure</b>	max. 11 bar	
<b>Adjustment</b>	by plastic knob with snap-lock	
<b>Relieving function</b>	relieving for air, non-relieving for water	
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of R25,	G $\frac{1}{4}$ on both sides of R45, screw plugs supplied
<b>Mounting position</b>	any	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	
<b>Material</b>	Body: glass fibre-reinforced acetal Inner valve: glass fibre-reinforced acetal	Elastomer: NBR/Buna-N



Dimensions			Flow rate		Connection	Pressure	Order no.	Order no. for
A	B	C	water	air	thread	range	for water	compressed air
mm	mm	mm	l/min*1	l/min*1	G	bar	non-relieving	relieving

Pressure regulator							supply pressure max. 11 bar		R25
40	78	12	3	150	G $\frac{1}{8}$	0...1.0	<b>R25-010K</b>	<b>R25-010</b>	<b>R25-010</b>
						0...1.8	<b>R25-01AK</b>	<b>R25-01A</b>	<b>R25-01A</b>
						0...4.0	<b>R25-01BK</b>	<b>R25-01B</b>	<b>R25-01B</b>
						0...9.0	<b>R25-01CK</b>	<b>R25-01C</b>	<b>R25-01C</b>
40	78	12	3	150	G $\frac{1}{4}$	0...1.0	<b>R25-020K</b>	<b>R25-020</b>	<b>R25-020</b>
						0...1.8	<b>R25-02AK</b>	<b>R25-02A</b>	<b>R25-02A</b>
						0...4.0	<b>R25-02BK</b>	<b>R25-02B</b>	<b>R25-02B</b>
						0...9.0	<b>R25-02CK</b>	<b>R25-02C</b>	<b>R25-02C</b>



R25

Pressure regulator for high flow							supply pressure max. 11 bar		R45
52	87	13	10	680	G $\frac{1}{4}$	0...1.8	<b>R45-02AK</b>	<b>R45-02A</b>	<b>R45-02A</b>
						0...4.0	<b>R45-02BK</b>	<b>R45-02B</b>	<b>R45-02B</b>
						0...9.0	<b>R45-02CK</b>	<b>R45-02C</b>	<b>R45-02C</b>
52	87	13	13	960	G $\frac{3}{8}$	0...1.8	<b>R45-03AK</b>	<b>R45-03A</b>	<b>R45-03A</b>
						0...4.0	<b>R45-03BK</b>	<b>R45-03B</b>	<b>R45-03B</b>
						0...9.0	<b>R45-03CK</b>	<b>R45-03C</b>	<b>R45-03C</b>



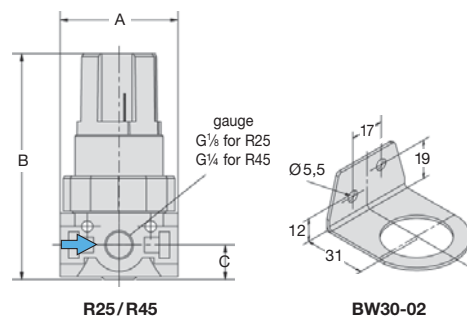
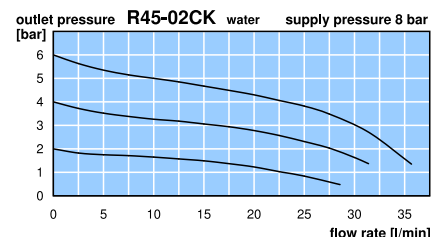
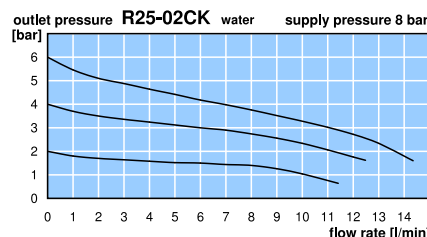
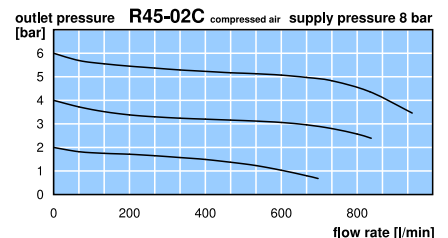
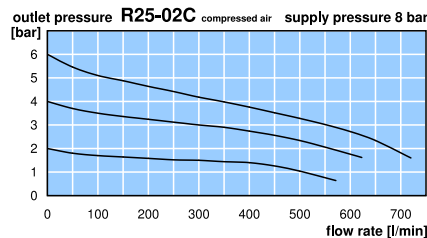
R45

**Special options, add the appropriate letter**

<b>adjustment lock</b>	socket wrench adjustment, height 64 mm	R25 only R25-0..T
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**Accessories**

<b>pressure gauge</b>	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$ Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for R25 <b>MA4001-..*2</b> for R45 <b>MA5002-..*2</b>
<b>mounting bracket</b>	made of steel	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic made of aluminium	<b>M30x1,5K</b> <b>M30x1,5A</b>



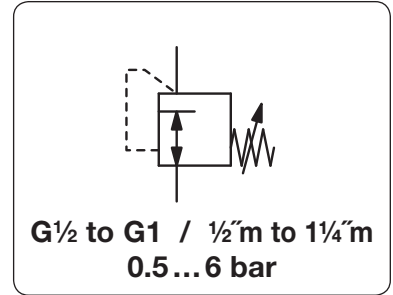
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop, for water supply pressure 2 bar above outlet pressure  
\*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

Order example:  
**R25-010K**

<b>Description</b>	Pressure regulator with diaphragm for drinking water. Regulator RW1 is of low cost and small size. Regulator RW2 features an indicator of the preset outlet pressure inside its knob and a filter.		
<b>Media</b>	water		
<b>Supply pressure</b>	max. 40 bar at RW1, max. 25 bar at RW2		
<b>Adjustment</b>	by plastic knob		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on the outlet side, slantwise outgoing, screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	-10 °C to 85 °C / 14 °F to 185 °F		
<b>Material</b>	Body: sandblasted brass Elastomer: NBR/Buna-N	Adjustment knob: acrylic plastic Inner valve: brass and stainless steel	



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate water	Connection thread	P <sub>1</sub> max.	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	l/min*1	G / nipple	bar	bar	

Pressure regulator for water									supply: max. 40 bar at RW1, max. 25 bar at RW2, non-relieving, brass	RW
68	122	18	15	2.5	25	G $\frac{1}{2}$	40	0.5...6		<b>RW1-04</b>
78	134	18	20	3.5	45	G $\frac{3}{4}$				<b>RW1-06</b>
81	137	20	25	5.8	80	G1				<b>RW1-08</b>
140	152	49	15	2.8	25	$\frac{1}{2}$ "m	25	0.5...6		<b>RW2-04</b>
160	173	55	20	4.2	45	$\frac{3}{4}$ "m				<b>RW2-06</b>
185	175	57	25	6.8	80	1"m				<b>RW2-08</b>
194	178	60	32	11	120	1 $\frac{1}{4}$ "m				<b>RW2-10</b>



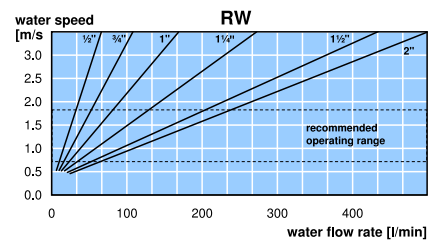
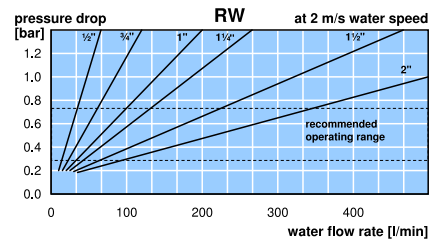
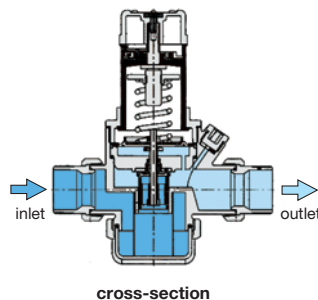
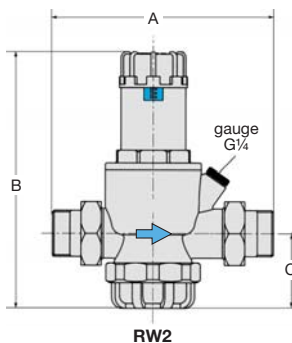
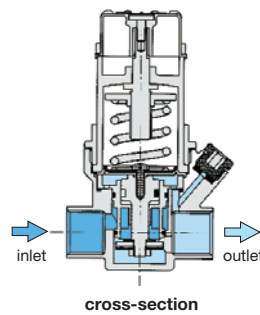
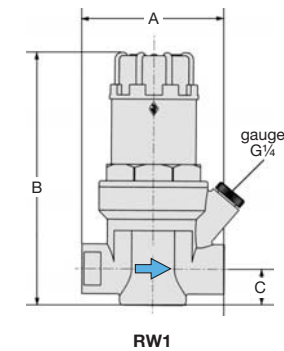
RW1



RW2

## Accessories

<b>pressure gauge</b>	Ø 50 mm, 0... 6 bar, G $\frac{1}{4}$	for RW . -04	<b>MA5002-06</b>
	Ø 63 mm, 0... 6 bar, G $\frac{1}{4}$	for RW . -06 to -10	<b>MA6302-06</b>



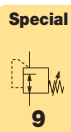
\*1 at 2 m/s water speed

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



Order example:  
RW1-04



### Description

Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated. particularly all regulators RWI...C with outlet range 1.5 ...6 bar

### Drinking water

### Media

preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. Especially suitable for compressed air are regulators RWI...D. It has to be considered that these regulators are non-relieving.

### Pressure difference

1 bar, between inlet and outlet pressure

**Mounting position** any, preferably vertical

### Reduction ratio

between supply and outlet pressure should not be greater than:  
20:1 for RWI...A, 10:1 for RWI...D, 6:1 for RWI...G/H, 3:1 for RWI...I

### Gauge port

G $\frac{1}{4}$  on both sides of the body for outlet pressure, ports are closed with screw plugs.

### ATEX

according to ATEX94/9EG, EN1127, EN13463 for zone 1, 2, 21 and 22

### PED

according to EU directives DGRL/PED for liquids and gases of group 2

### Temperature range

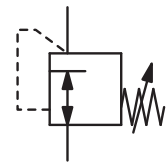
0 °C to 80 °C / 32 °F to 176 °F

**Screw standard** according to DIN ISO 228

### Material

see opposite page

drinking water



G $\frac{1}{4}$  up to G2  
0.2... 2/45 bar

Dimensions			Flow rate	Kvs-	Nominal	Connection	Pressure		Order
A	B	C	recommended	value	size	thread	inlet	outlet	number
mm	mm	mm	(m <sup>3</sup> /h)*1	(m <sup>3</sup> /h)*2	DN	G	max. bar	bar	

## Regulator with female thread

gunmetal, NBR/Buna-N  
drinking water: RWI...C

## RWI

70	186	46	0.2	0.5	DN 8	G $\frac{1}{4}$	25	0.2 ... 2	RWI-02A
	167	47					25	1.5 ... 8	RWI-02D
	188	47					40	2.0 ... 20	RWI-02H
	191	48					60	20 ... 45	RWI-02I
70	186	46	0.2	0.6	DN 10	G $\frac{3}{8}$	25	0.2 ... 2	RWI-03A
	167	47					25	1.5 ... 8	RWI-03D
	188	47					40	2.0 ... 20	RWI-03H
	191	48					60	20 ... 45	RWI-03I
85	154	27	1.3	2.9	DN 15	G $\frac{1}{2}$	16	0.2 ... 2	RWI-04A
	168	27	1.3	2.9			25	0.5 ... 4	RWI-04B
	168	27	1.3	2.9			25	1.5 ... 6	RWI-04C
	189	47	0.5	1.2			25	1.5 ... 8	RWI-04D
	163	27	1.3	2.9			25	1.5 ... 10	RWI-04E
	182	27	1.3	2.9			25	1.5 ... 12	RWI-04F
	233	27	1.3	2.9			25	2.0 ... 20	RWI-04G
	229	47	0.5	1.2			40	2.0 ... 20	RWI-04H
	218	47	0.5	1.2			60	20 ... 45	RWI-04I
95	157	27	2.3	3.9	DN 20	G $\frac{3}{4}$	16	0.2 ... 2	RWI-06A
	169	27	2.3	3.8			25	0.5 ... 4	RWI-06B
	169	27	2.3	3.9			25	1.5 ... 6	RWI-06C
	190	47	0.6	1.3			25	1.5 ... 8	RWI-06D
	164	27	2.3	3.9			25	1.5 ... 10	RWI-06E
	182	27	2.3	3.9			25	1.5 ... 12	RWI-06F
	234	27	2.3	3.9			25	2.0 ... 20	RWI-06G
	229	47	0.6	1.3			40	2.0 ... 20	RWI-06H
	218	47	0.6	1.3			60	20 ... 45	RWI-06I
105	156	29	3.6	5.4	DN 25	G1	16	0.2 ... 2	RWI-08A
	105	170	29	5.2			25	0.5 ... 4	RWI-08B
	105	170	29	5.4			25	1.5 ... 6	RWI-08C
	95	242	56	1.6			25	1.5 ... 8	RWI-08D
	105	164	29	5.4			25	1.5 ... 10	RWI-08E
	105	184	29	5.4			25	1.5 ... 12	RWI-08F
	105	235	29	5.4			25	2.0 ... 20	RWI-08G
	95	256	55	1.6			40	2.0 ... 20	RWI-08H



RWI-02...03A

RWI-04...10A

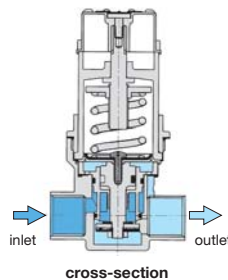
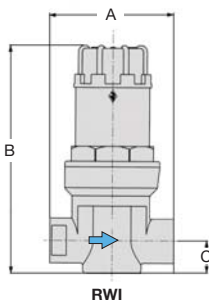
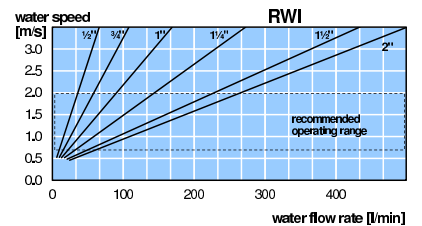
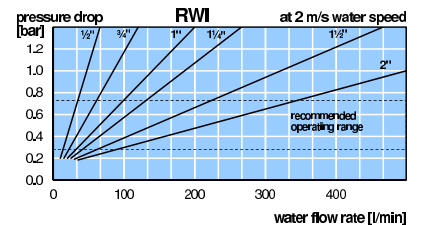


RWI-02...08D

RWI-02...08H / I



RWI-02...10B / C / E / F / G

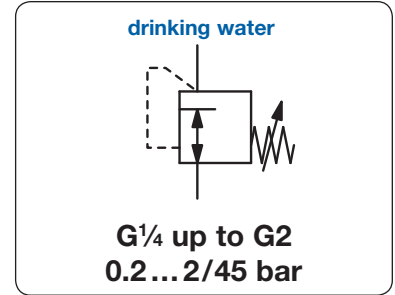


\*1 at 2 m/s water speed

\*2 for compressed air the flow is 70 times greater



		Material									
Regulator	RW	RWI...A	RWI...B	RWI...C	RWI...D	RWI...E	RWI...F	RWI...G	RWI...H	RWI...I	
Nominal size	DN	DN 8-10	DN 15-20	DN 15-50	DN 15-50	DN 8-50	DN 15-50	DN 15-50	DN 15-50	DN 8-50	DN 8-20
Body	all	gunmetal CnSn5Zn5Pb2-C-GS / CC499K (Rg5)									
Spring cage	< DN 32	Ms (< DN 25)	PA	Ms	PA	Ms (< DN 25)	Ms	Ms (< DN 25)	Ms (< DN 25)	Ms (< DN 25)	
	> DN 40	-	Rg	GG	GG (> DN 32)	GG	GG (> DN 32)	GG (> DN 32)	GG (> DN 32)	GG (> DN 32)	
Seals	all	NBR/Buna N									
Diaphragm	< DN 25	CR	NBR/Buna N		CR	NBR/Buna-N		piston / NBR/Buna-N			
	> DN 32	NBR/Buna N		CR	NBR/Buna-N		piston / NBR/Buna-N				
Spring cage	< DN 32	Ms	Ms, SS, Ho	Ms	Ms	Ms, SS, Ho (< DN 25 Ms)	Ms	Ms	Ms	Ms	
	> DN 40	-	Ms, SS	Ms, Rg, SS	Ms, SS	Ms, SS	Ms, Rg, SS	Ms, SS	Ms, Rg, SS	-	
Reg. assembly	< DN 32	cartridge		valve seat	cartridge	valve seat		valve seat			
removable	> DN 40	valve seat									
Legend:	Ms: brass	SS: stainless steel	Rg: gunmetal	GG: grey cast iron	Ho: Hostaform C						



Dimensions			Flow rate	Kvs-	Nominal	Connection	Pressure		Order
A	B	C	recommended	value	size	thread	inlet	outlet	number
mm	mm	mm	(m³/h)*1	(m³/h)*2	DN	G	max. bar	bar	

Regulator with female thread							gunmetal, NBR/Buna-N drinking water: RWI...C	RWI		
120	174	47	5.8	6.1	DN 32	G1 1/4	16	0.2 ... 2	2	RWI-10A
120	187	47	5.8	6.0			25	0.5 ... 4	4	RWI-10B
120	186	47	5.8	6.1			25	1.5 ... 6	6	RWI-10C
104	323	61	3.0	4.2			25	1.5 ... 8	8	RWI-10D
120	182	47	5.8	6.1			25	1.5 ... 10	10	RWI-10E
120	200	47	5.8	6.1			25	1.5 ... 12	12	RWI-10F
120	252	47	5.8	6.1			25	2.0 ... 20	20	RWI-10G
104	385	61	3.0	4.2			40	1.5 ... 20	20	RWI-10H
150	371	60	9.0	9.0	DN 40	G1 1/2	16	0.2 ... 2	2	RWI-12A
150	301	60	9.0	9.0			25	0.5 ... 4	4	RWI-12B
150	293	52	9.0	9.0			25	1.5 ... 6	6	RWI-12C
108	323	61	3.2	4.5			25	1.5 ... 8	8	RWI-12D
150	365	52	9.0	9.0			25	1.5 ... 10	10	RWI-12E
150	361	60	9.0	9.0			25	1.5 ... 12	12	RWI-12F
150	386	60	9.0	9.0			25	2.0 ... 20	20	RWI-12G
108	392	61	3.2	4.5			40	1.5 ... 20	20	RWI-12H
160	371	60	14	13	DN 50	G2	16	0.2 ... 2	2	RWI-16A
160	301	60	14	13			25	0.5 ... 4	4	RWI-16B
160	293	52	14	13			25	1.5 ... 6	6	RWI-16C
147	378	72	6.9	7.2			25	1.5 ... 8	8	RWI-16D
160	365	52	14	13			25	1.5 ... 10	10	RWI-16E
160	361	60	14	13			25	1.5 ... 12	12	RWI-16F
160	386	60	14	13			25	2.0 ... 20	20	RWI-16G
147	421	72	6.9	7.2			40	1.5 ... 20	20	RWI-16H



RWI-10...16D RWI-10...16H



RWI-12...16A RWI-12...16B / C / E



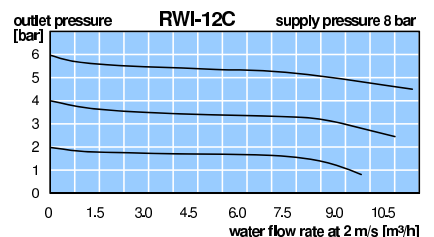
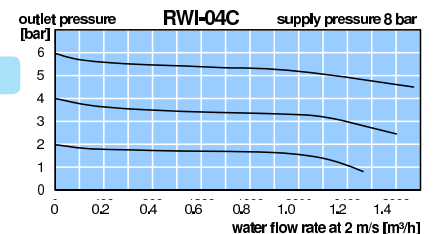
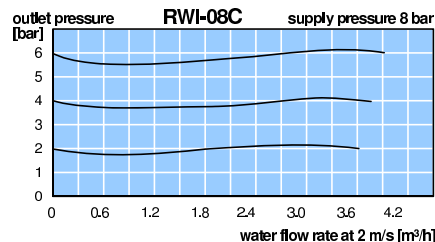
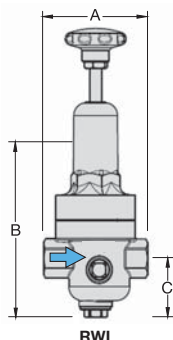
RWI-12...16F / G

## Special options, add the appropriate letter

NPT	connection thread	RWI-...N
Elastomer	CR: C FKM: V	RWI-...V
for different media	warm-, hot-, and see water, acids, bases, oil, petrol glue, food, foam, gases etc.	RWI-...X

## Accessories



pressure gauge	Ø 50 mm, rear 0... <sup>*3</sup> bar, G1/4	up to G1/2 MA5002-... <sup>*3</sup>
	Ø 63 mm, rear 0... <sup>*3</sup> bar, G1/4	from G3/4 MA6302-... <sup>*3</sup>



\*1 at 2 m/s water speed \*2 for compressed air the flow is 70 times greater  
<sup>\*3</sup> 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar



**Description** Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated. particularily all regulators RWA-...C with pressure range 1.5 ...6 bar. Regulators with DN 15 up to DN 25 have the same constructions dimensions as D06F from Honeywell, according to DVGW up to DN 32.

**Drinking water**  

**Media** preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. It has to be considered that these regulators are non-relieving.

**Pressure difference** 1 bar, between inlet and outlet pressure

**Gauge port** G $\frac{1}{4}$  on both sides of the body for outlet pressure, ports are closed with screw plugs.

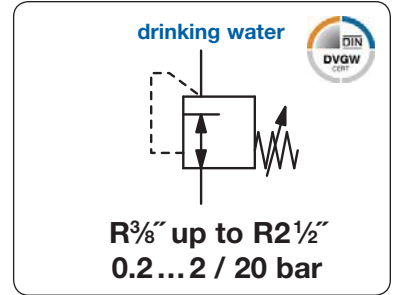
**Mounting position** any, preferably vertical

**ATEX** according to ATEX94/9EG, EN1127, EN13463 for zone 1, 2, 21 and 22

**PED** according to EU directives DGRL/PED for liquids and gases of group 2

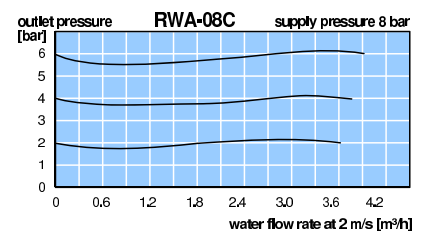
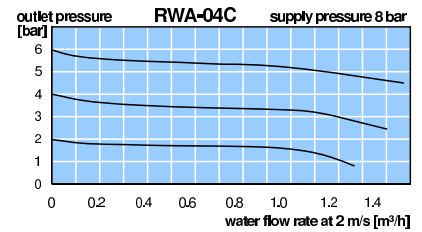
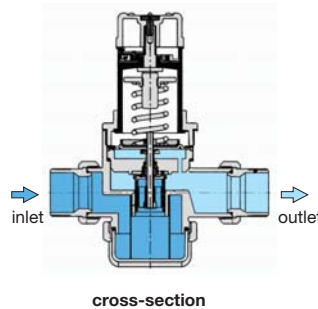
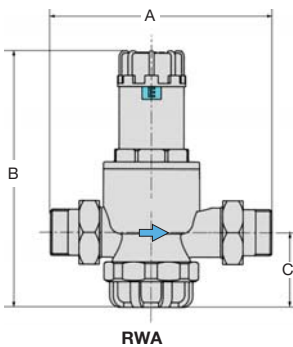
**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F

**Material** see opposite page



Dimensions			Flow rate	Kvs-	Nominal Connection	Pressure		Order	
A	B	C	recommended	value	size	thread	inlet	outlet	number
mm	mm	mm	(m <sup>3</sup> /h)*1	(m <sup>3</sup> /h)*2	DN	R	max. bar	bar	

Regulator with male thread							gunmetal, NBR/Buna-N	drinking water: RWA-...C		RWA
137	154	27	1,3	2.9	DN 10	3/8"	16	0.2 ... 2	2	RWA-03A
	163						25	0.5 ... 4	4	RWA-03B
	168						25	1.5 ... 6	6	RWA-03C
	163						25	1.5 ... 10	10	RWA-03E
	182						25	1.5 ... 12	12	RWA-03F
	233						25	2.0 ... 20	20	RWA-03G
137	154	27	1,3	2.9	DN 15	1/2"	16	0.2 ... 2	2	RWA-04A
	163						25	0.5 ... 4	4	RWA-04B
	168						25	1.5 ... 6	6	RWA-04C
	163						25	1.5 ... 10	10	RWA-04E
	182						25	1.5 ... 12	12	RWA-04F
	233						25	2.0 ... 20	20	RWA-04G
141	156	27	2,3	3.9	DN 20	3/4"	16	0.2 ... 2	2	RWA-06A
	163						25	0.5 ... 4	4	RWA-06B
	168						25	1.5 ... 6	6	RWA-06C
	163						25	1.5 ... 10	10	RWA-06E
	182						25	1.5 ... 12	12	RWA-06F
	233						25	2.0 ... 20	20	RWA-06G
161	155	29	3,6	5.4	DN 25	1"	16	0.2 ... 2	2	RWA-08A
	164						25	0.5 ... 4	4	RWA-08B
	168						25	1.5 ... 6	6	RWA-08C
	164						25	1.5 ... 10	10	RWA-08E
	182						25	1.5 ... 12	12	RWA-08F
	233						25	2.0 ... 20	20	RWA-08G
177	156	47	5,8	6.1	DN 32	1 1/4"	16	0.2 ... 2	2	RWA-10A
	219						25	0.5 ... 4	4	RWA-10B
	222						25	1.5 ... 6	6	RWA-10C
	219						25	1.5 ... 10	10	RWA-10E
	234						25	1.5 ... 12	12	RWA-10F
	252						25	2.0 ... 20	20	RWA-10G




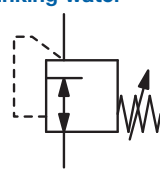
\*1 at 2 m/s water speed      \*2 for compressed air the flow is 70 times greater



Regulator	Material						
	RW	RWA-..A	RWA-..B	RWA-..C	RWA-..E	RWA-..F	RWA-..G
Nominal size	DN	DN 10-65	DN 15-65	DN 10-65	DN 15-65	DN 15-100	DN 10-65
Body	all	gunmetal CnSn5ZN5Pb2-C-GS / CC499K (Rg5)					
Spring cage	< DN 32	PA	Ms	PA	Ms	Ms (< DN 25)	Ms (< DN 25)
	> DN 40	Rg	GG	GG	GG	GG (> DN 32)	GG (> DN 32)
Seals	all	NBR/Buna N					NBR/Buna-N
Diaphragm	< DN 25	NBR/Buna N			NBR/Buna-N	piston / NBR/Buna-N	
	> DN 32	NBR/Buna N			NBR/Buna-N	piston / NBR/Buna-N	
Inner valve	< DN 32	Ms, SS, Ho			Ms, SS, Ho (< DN 25 Ms)		
	> DN 40	Ms, SS			Ms, SS		
Reg. assembly removable	< DN 32	cartridge				valve seat	
	> DN 40	valve seat				valve seat	

Legend: **Ms**: brass    **SS**: stainless steel    **Rg**: gunmetal    **GG**: grey cast iron    **Ho**: Hostaform C    **NBR/Buna-N**: nitrile rubber

drinking water 



**R<sup>3</sup>/<sub>8</sub>" up to R2<sup>1</sup>/<sub>2</sub>"**  
**0.2... 2 / 20 bar**

Dimensions			Flow rate	K <sub>vs</sub>	Nominal Connection		Pressure		Order
A	B	C	recommended	value	size	thread	inlet	outlet	number
mm	mm	mm	(m <sup>3</sup> /h)*1	(m <sup>3</sup> /h)*2	DN	R	max. bar	bar	

Regulator with male thread							gunmetal, NBR/Buna-N	drinking water: RWA-..C	RWA
210	370	59	9,0	9,0	<b>DN 40</b>	1½"	16	0.2 ... 2	<b>RWA-12A</b>
	301	51					25	0.5 ... 4	<b>RWA-12B</b>
	293	51					25	1.5 ... 6	<b>RWA-12C</b>
	361	51					25	1.5 ... 10	<b>RWA-12E</b>
	361	51					25	1.5 ... 12	<b>RWA-12F</b>
	386	51					25	2.0 ... 20	<b>RWA-12G</b>
210	372	61	14	13	<b>DN 50</b>	2"	16	0.2 ... 2	<b>RWA-16A</b>
	372	61					25	0.5 ... 4	<b>RWA-16B</b>
	294	53					25	1.5 ... 6	<b>RWA-16C</b>
	363	53					25	1.5 ... 10	<b>RWA-16E</b>
	364	53					25	1.5 ... 12	<b>RWA-16F</b>
	388	53					25	2.0 ... 20	<b>RWA-16G</b>
273	394	68	24	20	<b>DN 65</b>	2½"	16	0.2 ... 2	<b>RWA-20A</b>
	324						25	0.5 ... 4	<b>RWA-20B</b>
	324						25	1.5 ... 6	<b>RWA-20C</b>
	392						25	1.5 ... 10	<b>RWA-20E</b>
	384						25	1.5 ... 12	<b>RWA-20F</b>
	408						25	2.0 ... 20	<b>RWA-20G</b>

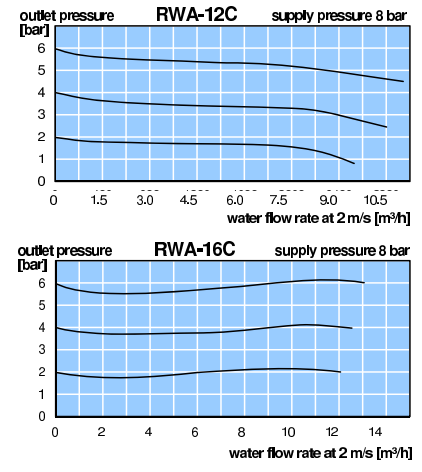
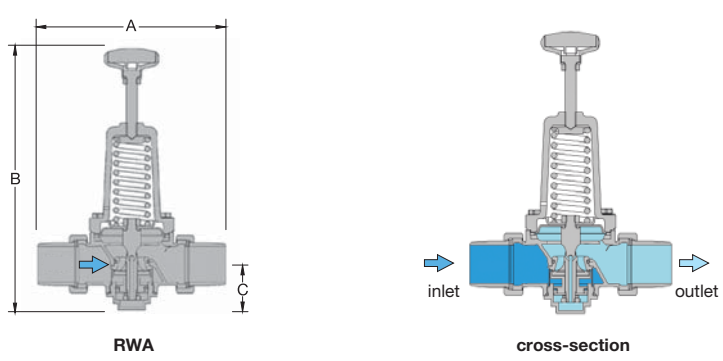


### Special options, add the appropriate letter

<b>NPT</b>	connection thread	RWA-.. .N
<b>Elastomer</b>	CR: <b>C</b>	RWA-.. .V
<b>for different media</b>	warm-, hot-, and see water, acids, bases, oil, petrol glue, food, foam, gases etc.	RWA-.. .X
	FKM: <b>V</b>	

### Accessories

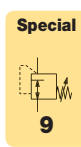
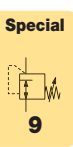
<b>pressure gauge</b>	Ø 50 mm, rear 0... <sup>*3</sup> bar, G¼	up to G½ <b>MA5002-..<sup>*3</sup></b>
	Ø 63 mm, rear 0... <sup>*3</sup> bar, G¼	from G¾ <b>MA6302-..<sup>*3</sup></b>



\*1 at 2 m/s water speed    \*2 for compressed air the flow is 70 times greater  
\*3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

**Gauges: see chapter for measuring devices**      **PDF CAD**      [www.aircom.net](http://www.aircom.net)

**Order example: RWA-12A**



**Description** Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated. particularly all regulators RWF-..C with pressure range 1.5 ...6 bar.

**Drinking water** preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. It has to be considered that these regulators are non-relieving.

**Media** preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. It has to be considered that these regulators are non-relieving.

**Pressure difference** 1 bar, between inlet and outlet pressure

**Gauge port** G $\frac{1}{4}$  on both sides of the body for outlet pressure, ports are closed with screw plugs.

**Mounting position** any, preferably vertical

**ATEX** according to ATEX94/9EG, EN1127, EN13463 for zone 1, 2, 21 and 22

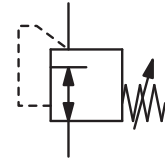
**PED** according to EU directives DGRL/PED for liquids and gases of group 2

**Flanges** according to DIN 1092. length according to DIN558-1

**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F

**Material** see opposite page

drinking water



**DN 8 up to DN 125**  
**0.2 ... 2/20 bar**

Dimensions				Flow rate	K <sub>vs</sub> -	Nominal	Pressure		Order
A	B	C	D	recommended	value	size	inlet	outlet	number
mm	mm	mm	mm	(m <sup>3</sup> /h)*1	(m <sup>3</sup> /h)	DN	max. bar	bar	

Pressure regulator with flange							gunmetal, NBR/Buna N, w/o gauge drinking water: RWF-..C	RWF	
130	178	48	80	0.2	0.5	DN 8	25	0.8 ... 8	RWF-02D
							40	1.5 ... 20	RWF-02G
				0.2	0.5	DN 10	25	0.8 ... 8	RWF-03D
							40	1.5 ... 20	RWF-03G
130	175	48	95	1.3	2.9	DN 15	16	0.2 ... 2	RWF-04A
							25	0.5 ... 4	RWF-04B
								1.5 ... 6	RWF-04C
								1.5 ... 10	RWF-04E
								1.5 ... 12	RWF-04F
								2.0 ... 20	RWF-04G
150	183	53	105	2.3	3.9	DN 20	16	0.2 ... 2	RWF-06A
							25	0.5 ... 4	RWF-06B
								1.5 ... 6	RWF-06C
								1.5 ... 10	RWF-06E
								1.5 ... 12	RWF-06F
								2.0 ... 20	RWF-06G
160	185	58	115	3.6	5.4	DN 25	16	0.2 ... 2	RWF-08A
							25	0.5 ... 4	RWF-08B
								1.5 ... 6	RWF-08C
								1.5 ... 10	RWF-08E
								1.5 ... 12	RWF-08F
								2.0 ... 20	RWF-08G
180	197	70	140	5.8	6.1	DN 32	16	0.2 ... 2	RWF-10A
							25	0.5 ... 4	RWF-10B
								1.5 ... 6	RWF-10C
								1.5 ... 10	RWF-10E
								1.5 ... 12	RWF-10F
								2.0 ... 20	RWF-10G
200	386	75	150	9.0	9.0	DN 40	16	0.2 ... 2	RWF-12A
							25	0.5 ... 4	RWF-12B
								1.5 ... 6	RWF-12C
								1.5 ... 10	RWF-12E
								1.5 ... 12	RWF-12F
								2.0 ... 20	RWF-12G



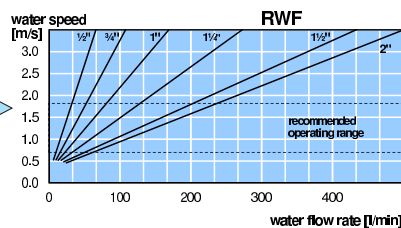
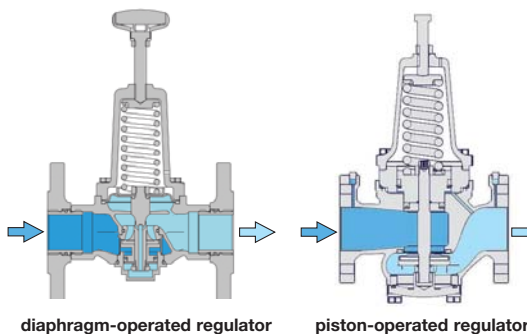
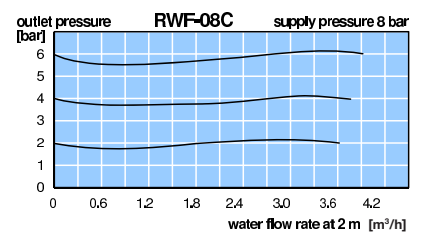
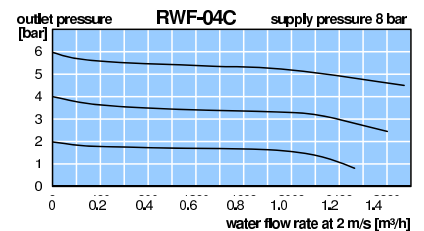
RWF-02...08D / G



RWF-...10...16G



RWF-24A  
Zubehör Manometer



\*1 at 2 m/s water speed      \* for compressed air the flow is 70 times greater

Special

9

PDF CAD  
www.aircom.net

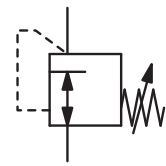


Order example:  
RWF-02D

Regulator	RW	Material						
		RWF-..A	RWF-..B	RWF-..C	RWF-..E	RWF-..F	RWF-..G	
Nominal size	DN	DN 8-10	DN 15-80	DN 15-125	DN 15-125	DN 15-125	DN 15-100	DN 8-80
Body	all	gunmetal CnSn5Zn5Pb2-C-GS / CC499K (Rg5)						
Spring cage	< DN 32 > DN 40	Ms (< DN 25) -	PA Rg	Ms	PA	Ms	Ms (< DN 25) GG (> DN 32)	
Seals	all	NBR/Buna-N						
Diaphragm	< DN 25 > DN 32	CR	NBR/Buna-N				piston / NBR/Buna-N	
Inner valve	< DN 32 > DN 40	Ms	Ms, SS, Ho			Ms, SS, Ho (< DN 25 Ms) Ms, SS		
Reg. assembly removable	< DN 32 > DN 40	cartridge					valve seat	

Legend: Ms: brass SS: stainless steel Rg: gunmetal GG: grey cast iron Ho: Hostaform C CR: chlorprene rubber, NBR/Buna-N: nitrile rubber

drinking water



DN 15 up to DN 125  
0.2 ... 2/20 bar

Dimensions				Flow rate	Kvs-	Nominal	Pressure		Order
A	B	C	D	recommended	value	size	inlet	outlet	number
mm	mm	mm	mm	(m³/h)*1	(m³/h)	DN	max. bar	bar	

Pressure regulator with flange									
gunmetal, NBR/Buna N, w/o gauge drinking water: RWF-..C							RWF		
230	394	83	165	14	13	DN 50	16	0.2 ... 2	RWF-16A
324							25	0.5 ... 4	RWF-16B
324								1.5 ... 6	RWF-16C
396								1.5 ... 10	RWF-16E
384								1.5 ... 12	RWF-16F
411								2.0 ... 20	RWF-16G
290	420	93	185	24	20	DN 65	16	0.2 ... 2	RWF-20A
349							25	0.5 ... 4	RWF-20B
349								1.5 ... 6	RWF-20C
418								1.5 ... 10	RWF-20E
411								1.5 ... 12	RWF-20F
429								2.0 ... 20	RWF-20G
310	427	100	200	26	24	DN 80	16	0.2 ... 2	RWF-24A
	518	136		60	60			0.5 ... 4	RWF-24B
	356	100		26	24			1.5 ... 6	RWF-24C
	518	136		60	60			1.5 ... 6	RWF-25C
	521			60	60			3.0 ... 10	RWF-24E
	545			60	60		25	4.0 ... 12	RWF-24F
	436			24	24		25	2.0 ... 20	RWF-24G
350	540	140	200	80	80	DN 100	16	0.5 ... 4	RWF-32B
	540							1.5 ... 6	RWF-32C
	542							3.0 ... 10	RWF-32E
	600	135						4.0 ... 12	RWF-32F
400	730	165	270	130	130	DN 125	16	0.5 ... 4	RWF-40B
	540							1.5 ... 6	RWF-40C
	542							3.0 ... 10	RWF-40E



RWF-.. 24B / C / E  
accessories: pressure gauge



RWF-.. 12...16F / G  
accessories: pressure gauge



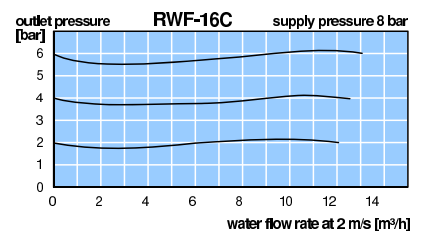
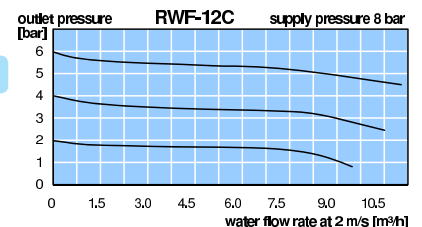
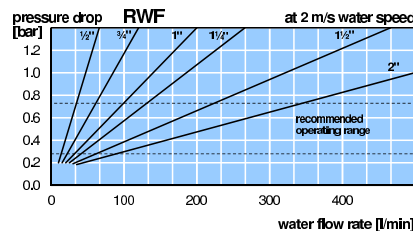
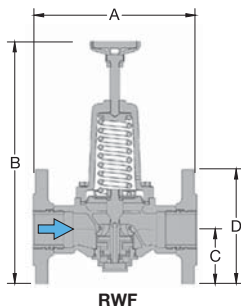
RWF-24F  
accessories: pressure gauge

## Special options, add the appropriate letter

Elastomer	EPDM: E	CR: C	FKM: V	RWF-.. .V
flange connection	ANSI			RWF-.. .F2
for different media	warm-, hot-, and see water, acids, bases, oil, petrol, glue, food, foam, gases etc.			

## Accessories

pressure gauge Ø 63 mm, vertical 0...\*2 bar, G¼ MT6302-..\*2



\*1 at 2 m/s water speed \* for compressed air the flow is 70 times greater  
\*2 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices PDF CAD www.aircom.net

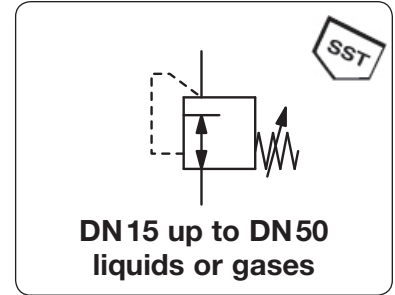
Order example: RWF-16A



# Flange Pressure Regulator Made of Stainless Steel Throughout

RAF

<b>Description</b>	Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable. With stainless-steel dirt-trap / strainer
<b>Medium</b>	aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!
<b>Supply pressure</b>	see chart, max. 40 bar
<b>Minimum press. difference</b>	$P_1 : P_2 = 1$ bar
<b>Adjustment</b>	with hexagon socket, with locknut
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any, preferably vertical
<b>Flange</b>	according DIN 1092, overall length according DIN 558-1
<b>Temperature range</b>	0 °C to 190 °C / 32 °F to 374 °F media and ambient temperature
<b>Material</b>	Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L Elastomer and seals: FKM / FPM



Dimensions			Kv-value (m <sup>3</sup> /h)*1	Flow rate water l/min*2	Supply pressure max. bar	Mounting flange DN	Pressure range bar	Order number
A	B	C						

## Regulator with flange

for liquids, supply pressure max. 25/40 bar non-relieving, 1.4408 / V4A / 316L, FKM

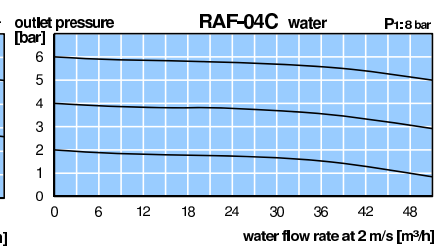
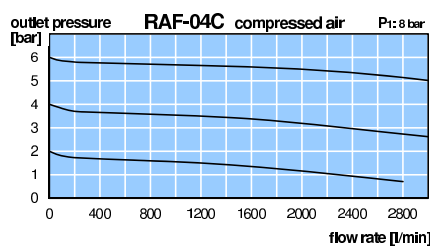
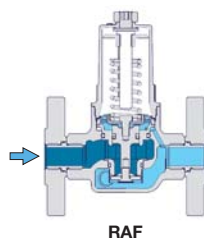
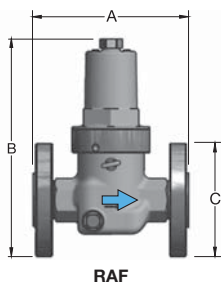
RAF

130	137	95	2.9	50	25	DN 15	0.2 ... 2	RAF-04A	
	118	118						0.5 ... 4	RAF-04B
	118	118						1.5 ... 6	RAF-04C
	118	118						1.5 ... 10	RAF-04D
	136	136						2.0 ... 20	RAF-04F
150	137	105	3.9	65	25	DN 20	0.2 ... 2	RAF-06A	
	118	118						0.5 ... 4	RAF-06B
	118	118						1.5 ... 6	RAF-06C
	118	118						1.5 ... 10	RAF-06D
	137	137						2.0 ... 20	RAF-06F
160	150	115	5.4	90	25	DN 25	0.2 ... 2	RAF-08A	
	118	118						0.5 ... 4	RAF-08B
	118	118						1.5 ... 6	RAF-08C
	118	118						1.5 ... 10	RAF-08D
	137	137						2.0 ... 20	RAF-08F
180	150	140	6.1	102	25	DN 32	0.2 ... 2	RAF-10A	
	118	118						0.5 ... 4	RAF-10B
	118	118						1.5 ... 6	RAF-10C
	118	118						1.5 ... 10	RAF-10D
	137	137						2.0 ... 20	RAF-10F
200	269	150	9.0	150	25	DN 40	0.2 ... 2	RAF-12A	
	219	219						0.5 ... 4	RAF-12B
	219	219						1.5 ... 6	RAF-12C
	219	219						1.5 ... 10	RAF-12D
	247	247						2.0 ... 20	RAF-12F
230	269	165	13	216	25	DN 50	0.2 ... 2	RAF-16A	
	219	219						0.5 ... 4	RAF-16B
	219	219						1.5 ... 6	RAF-16C
	219	219						1.5 ... 10	RAF-16D
	247	247						2.0 ... 20	RAF-16F



## Accessories

**SST pressure gauge**      Ø 50 mm, 0...<sup>\*3</sup> bar, G $\frac{1}{4}$ , for DN 15      MS5002-...<sup>\*3</sup>  
 Ø 63 mm, 0...<sup>\*3</sup> bar, G $\frac{1}{4}$ , and all the rest of them      MS6302-...<sup>\*3</sup>



\*1 at 2 m/s water speed      \*2 for compressed air the flow is 70 times greater  
 \*3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD  
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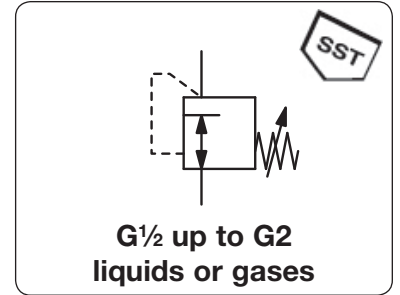
Order example:  
RAF-04A



# Pressure Regulator Made of Stainless Steel Throughout

RAI

<b>Description</b>	Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable. With stainless-steel dirt-trap / strainer
<b>Medium</b>	aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!
<b>Supply pressure</b>	see chart, max. 40 bar
<b>Minimum press. difference</b>	$P_1 : P_2 = 1$ bar
<b>Adjustment</b>	with hexagon socket, with locknut
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any, preferably vertical
<b>Temperature range</b>	0 °C to 190 °C / 32 °F to 374 °F medium and ambient temperature
<b>Material</b>	Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L Elastomer and seals: FKM / FPM



Dimensions			Kv-value (m³/h)*1	Flow rate water l/min	Supply pressure max. bar	Nominal size DN	Connection thread G	Pressure- range bar	Order number
A	B	C							

## Regulator with female thread

for liquids, supply pressure max. 25/40 bar  
non-relieving, 1.4408 / V4A / 316L, FKM

RAI

95	166	29	2,9	50	25	DN 15	G $\frac{1}{2}$	0.2 ... 2	<b>RAI-04A</b>
95	147	29			25			0.5 ... 4	<b>RAI-04B</b>
95	147	29			25			1.5 ... 6	<b>RAI-04C</b>
95	147	29			25			1.5 ... 10	<b>RAI-04D</b>
95	165	29			40			2.0 ... 20	<b>RAI-04F</b>
95	166	29	3,9	65	25	DN 20	G $\frac{3}{4}$	0.2 ... 2	<b>RAI-06A</b>
95	147	29			25			0.5 ... 4	<b>RAI-06B</b>
95	147	29			25			1.5 ... 6	<b>RAI-06C</b>
95	147	29			25			1.5 ... 10	<b>RAI-06D</b>
95	165	29			40			2.0 ... 20	<b>RAI-06F</b>
110	189	39	5,4	90	25	DN 25	G1	0.2 ... 2	<b>RAI-08A</b>
110	157	39			25			0.5 ... 4	<b>RAI-08B</b>
110	157	39			25			1.5 ... 6	<b>RAI-08C</b>
110	157	39			25			1.5 ... 10	<b>RAI-08D</b>
110	176	39			40			2.0 ... 20	<b>RAI-08F</b>
120	189	39	6,1	102	25	DN 32	G1 $\frac{1}{4}$	0.2 ... 2	<b>RAI-10A</b>
120	157	39			25			0.5 ... 4	<b>RAI-10B</b>
120	157	39			25			1.5 ... 6	<b>RAI-10C</b>
120	157	39			25			1.5 ... 10	<b>RAI-10D</b>
120	176	39			40			2.0 ... 20	<b>RAI-10F</b>
150	306	37	9,0	150	25	DN 40	G1 $\frac{1}{2}$	0.2 ... 2	<b>RAI-12A</b>
150	256	37			25			0.5 ... 4	<b>RAI-12B</b>
150	256	37			25			1.5 ... 6	<b>RAI-12C</b>
150	256	37			25			1.5 ... 10	<b>RAI-12D</b>
150	284	37			40			2.0 ... 20	<b>RAI-12F</b>
160	306	37	13,0	150	25	DN 50	G2	0.2 ... 2	<b>RAI-16A</b>
160	256	37			25			0.5 ... 4	<b>RAI-16B</b>
160	256	37			25			1.5 ... 6	<b>RAI-16C</b>
160	256	37			25			1.5 ... 10	<b>RAI-16D</b>
160	284	37			40			2.0 ... 20	<b>RAI-16F</b>



RAI-04...10A

RAI-04...10B/C/D



RAI-04...10D

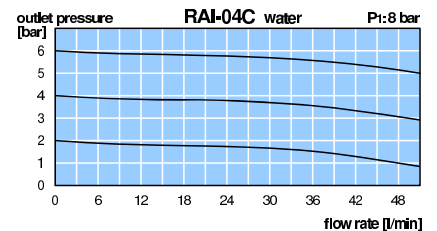
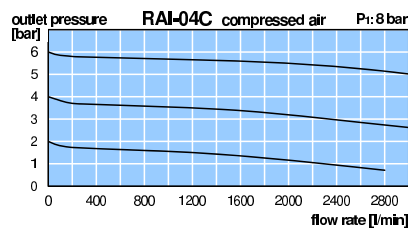
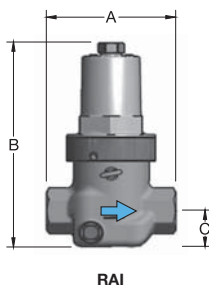
RAI-12/16A



RAI-12/16B/C/D

RAI-12/16F

Accessories, see opposite side



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 for compressed air the flow is 65 times greater

PDF CAD  
www.aircom.net



Order example:  
RAI-04A

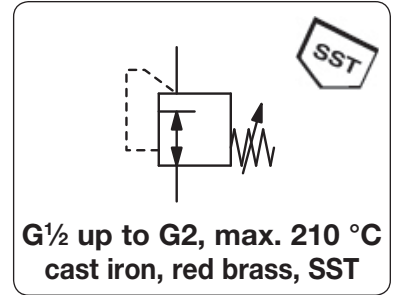
Special



# Pressure Regulator for Steam up to 210 °C / 410 °F

RU

<b>Description</b>	Directly acting pressure regulator with stainless steel inner parts suitable for steam and compressed air.		
<b>Media</b>	compressed air, non-corrosive gases or steam with dryness of at least 98%		
<b>Supply pressure</b>	RUG: max. 19 bar at 210 °C / 410 °F, max. 17 bar for red brass version RUH: max. 10 bar at 184 °C / 363 °F		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	by plastic knob	<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	not available	<b>Mounting position</b>	any
<b>Temperature range</b>	RUG: max. 210 °C / 410 °F,		RUH: max. 184 °C / 363 °F
<b>Material</b>	Body: spheroidal cast iron EN-GJS-400-18-LT (GGG40.3), optionally red brass Rg5 or stainless steel 1.4404 at RUG epoxy-coated aluminium, nickel-plated aluminium at RUG stainless steel 1.4404 and 1.4571 Spring cage: Inner valve / bellows: stainless steel 1.4404 and 1.4571 O-ring / seal: EPDM and PTFE		



Dimensions			Nominal size	K <sub>v</sub> -value	P <sub>1</sub> max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	bar	G	bar	
mm	mm	mm						

Pressure regulator for steam								RU
								supply pressure max. 10 / 19 bar, non-relieving, spheroidal cast iron
83	182	55	15	1.5	19	G <sup>1/2</sup>	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-04A RUG-04B RUG-04C
96	182	55	20	2.5	19	G <sup>3/4</sup>	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-06A RUG-06B RUG-06C
108	182	55	25	3.0	19	G <sup>1</sup>	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-08A RUG-08B RUG-08C
134	220	67	25	6.8	10	G <sup>1</sup>	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-08A RUH-08B RUH-08C
134	220	67	40	11.5	10	G <sup>1 1/2</sup>	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-12A RUH-12B RUH-12C
134	220	67	50	15.0	10	G <sup>2</sup>	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-16A RUH-16B RUH-16C



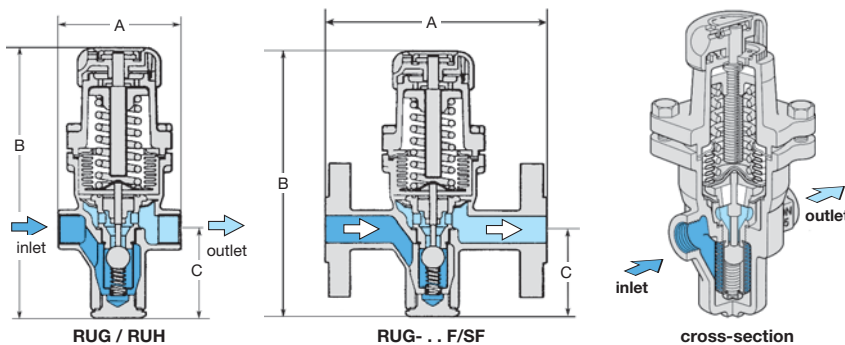
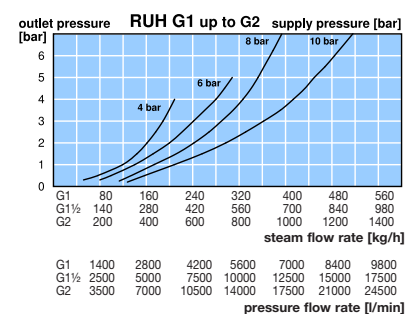
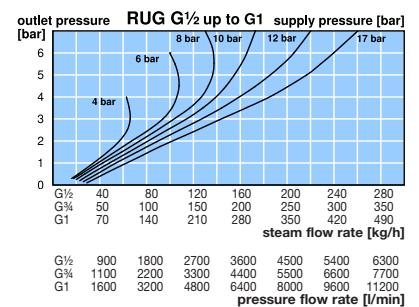
RUG-04B



RUG-04BSF  
made of stainless steel, with flange

## Special options, add the appropriate letter

stainless steel 1.4404	body with connection thread	for RUG	RUG-0 . . S
	body with flange	for RUG	RUG-0 . . SF
red brass Rg5	body of red brass Rg5, P <sub>1</sub> max. 17 bar	for RUG	RUG-0 . . R
flange of spheroidal cast iron	GGG40.3	for RUG	RUG-0 . . F



Model	A	B	C
RUG-04R/S	83	192	62
RUG-06R/S	96	192	62
RUG-08R/S	108	192	62

Model	A	B	C
RUG-04F/SF	150	182/192	55/62
RUG-06F/SF	150	192/192	55/62
RUG-08F/SF	160	192/192	55/62

Special

9

PDF CAD  
www.aircom.net



Order example:  
RUG-04A

## Proportional Pressure Regulators

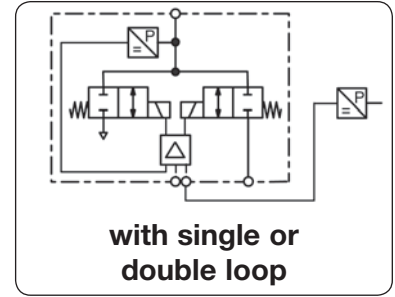
Principle	Description	Accuracy max.	Pressure range bar	Connection thread	Device	Page
<b>control valve</b> high accuracy	on PCB	± 0.2 %	0 ... 0.005/ 10	G $\frac{1}{8}$	PM	<b>10.02</b>
	falling characteristic	± 0.2 %	0 ... 0.005/ 35	G $\frac{1}{8}$	PQ1	<b>10.04</b>
	with double loop	± 0.2 %	0 ... 0.005/ 35	G $\frac{1}{8}$	PQ2	<b>10.05</b>
	up to 2000 l/min	± 0.25 %	0 ... 0.1 / 35	¼"NPT - ¾"NPT	PQ3...PQ6	<b>10.07</b>
<b>proport. magnet</b> very robust	proven, many options	± 0.5 %	0 ... 0.5 / 1	G $\frac{1}{8}$ - G1	PR	<b>10.09</b>
	for flow applications	± 0.5 %	0 ... 6 / 50	G $\frac{3}{8}$	PF	<b>10.11</b>
	digital control, also SST	± 0.5 %	0 ... 0.1 / 50	G $\frac{1}{8}$ - G1	PP	<b>10.13</b>
	programmable	± 0.5 %	0 ... 1 / 12	G $\frac{1}{8}$ - G $\frac{3}{8}$	PD	<b>10.15</b>
<b>flapper/nozzle</b> highly sensitive	integrated booster, Atex	± 0.5 %	0,2... 1 / 8	¼"NPT	PT6	<b>10.18</b>
<b>piezo-operated</b> very fast	high accurate, Atex	± 0.25 %	0,2... 1 / 8	¼"NPT	PT7	<b>10.19</b>
	minimal power consumption	± 0.2 %	0 ... 0.1 / 16	G $\frac{1}{8}$ and G $\frac{1}{4}$	PRE	<b>10.21</b>
<b>motorised regul.</b>	failfreeze	± 1 %	0,14... 1.8 / 8	¼"NPT	P180	<b>10.22</b>
<b>high pressure</b>	proportional magnet	± 0.5 %	0 ... 30 / 50	G $\frac{1}{4}$	PP0	<b>10.13</b>
	control valves	± 0.5 %	0 ... 40 / 70	G $\frac{1}{8}$	PQH	<b>10.17</b>
<b>ATEX</b>	control valves	± 1 %	0 ... 2 / 6	G $\frac{1}{8}$	PCEX	<b>10.16</b>
	flapper / nozzle	± 0.5 %	0,2... 1 / 8	¼"NPT	PT6	<b>10.18</b>
	piezo-operated	± 0.25 %	0,2... 1 / 8	¼"NPT	PT7	<b>10.19</b>
<b>vacuum</b>	on PCB	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PM	<b>10.02</b>
	control valves	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PQ1	<b>10.04</b>
	with double loop	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PQ2	<b>10.05</b>
	proportional magnet	± 0.5 %	-1 ... 0 / + 1	G $\frac{1}{8}$ - G1	PR	<b>10.09</b>
	digital control	± 0.5 %	-1 ... 0 / + 1	G $\frac{1}{8}$ - G1	PP	<b>10.13</b>
	piezo-operated	± 0.2 %	-1 ... 1 / +10	G $\frac{1}{8}$ and G $\frac{1}{4}$	PRE	<b>10.21</b>
<b>setpoint</b>	with 10-speed-potentiometer				PPB	<b>10.23</b>



# 10

## Proportional Pressure Regulators

<b>Description</b>	Proportional control valve with closed loop control technology for better control of pressurised gases. The instrument can be built as single closed loop or dual closed loop control valve. dry, lubricated or unlubricated and 5 µm filtered compressed air or non-corrosive gases	
<b>Media</b>	constant outlet pressure at voltage drop	
<b>Fail freeze</b>	0...10 V, impedance 4.7 kΩ,	ratio of internal to external relationship is 10% to 90%
<b>Second loop</b>	15...24 V DC, residual ripple < 10%, with reverse voltage protection	
<b>Supply voltage</b>	0...10 V / 4.7 kΩ, 4...20 mA / 100 Ω,	jumper selectable command
<b>Impedance</b>	0...10 V at max. 10 mA	
<b>Monitor signal</b>	terminal strip for 2.5 mm <sup>2</sup>	
<b>Electrical connection</b>	3.6 W regulating, 0.5 W non-regulating	<b>Air consumption</b> without constant bleed
<b>Power consumption</b>	< 0.15% FS	<b>Repeatability</b> < 0.02 FS
<b>Linearity / Hysteresis</b>	< 1% FS at 0 °C to 50 °C / 32 °F to 122 °F	<b>Adjustment</b> zero point and span
<b>Temperature influence</b>	0 °C to 70 °C / 32 °F to 158 °F	<b>Mounting position</b> any, vibration-resistant
<b>Temperature range</b>	Ports: brass	<b>Elastomer:</b> FKM
<b>Material</b>	Transducer: aluminium and silicon	<b>Valves:</b> nickel-plated brass



Dimensions			Flow rate	Supply pressure	Accuracy	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. mbar/bar	%	G	mbar/bar	
mm	mm	mm						

Proportional press. regulator								
0-10 V input and monitor signal, supply voltage 24 V DC, fail freeze, single loop for DIN rail								
56	78	54	35	10 mbar	0.2	G $\frac{1}{2}$	0... 5 mbar	<b>PM1DE-A5</b>
				20 mbar			0... 10 mbar	<b>PM1DE-B1</b>
				200 mbar			0... 100 mbar	<b>PM1DE-C1</b>
				1 000 mbar			0... 600 mbar	<b>PM1DE-C6</b>
56	78	54	35	2 bar	0.2	G $\frac{1}{2}$	0... 1 bar	<b>PM1DE-01</b>
				3 bar			0... 2 bar	<b>PM1DE-02</b>
				9 bar			0... 4 bar	<b>PM1DE-04</b>
				9 bar			0... 6 bar	<b>PM1DE-06</b>
				15 bar			0... 10 bar	<b>PM1DE-10</b>
56	78	54	35	2 bar	0.2	G $\frac{1}{2}$	0... -1 bar	<b>PM1DE-V0</b>
				2 bar			-1... +1 bar	<b>PM1DE-V1</b>

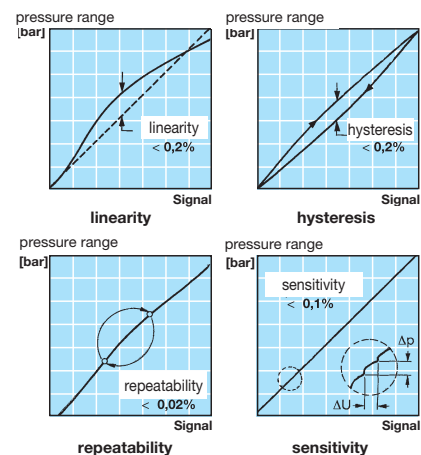
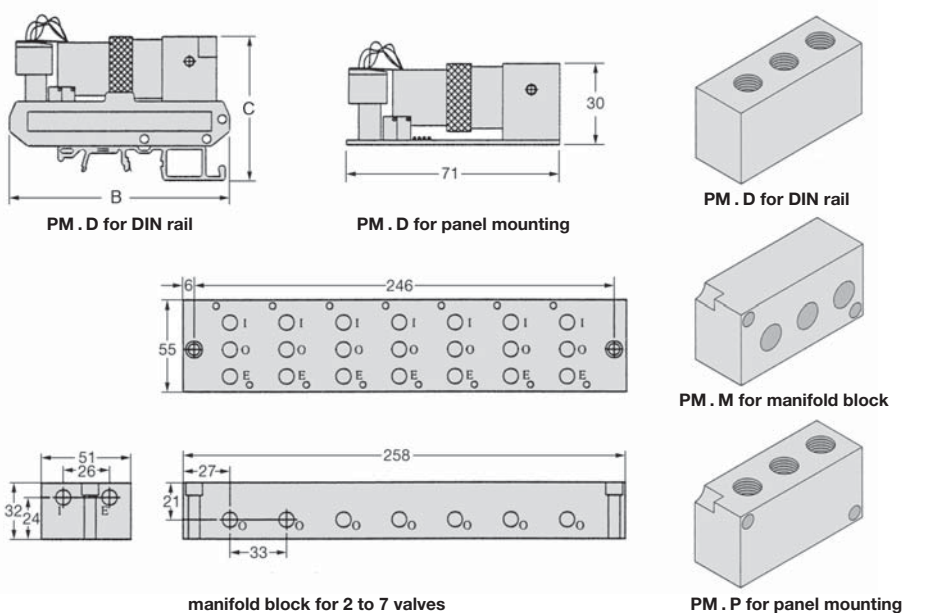


**Special options,** add the appropriate letter

<b>double loop</b>	second loop feedback 0...10 V	PM2 . . . .
<b>4-20 mA</b>	supply signal, jumper selectable command	PM . . . . I . . .
<b>flow 100 l/min</b>	increased flow rate	PM . . . . HF
<b>panel mounting</b>	on plane level	PM . P . . . .
<b>mounting for manifolds</b>	connections downwards	PM . M . . . .

**Zubehör,** lose beigelegt

**manifold block** for 2 to 7 valves number of valves added to order number **SBM-**



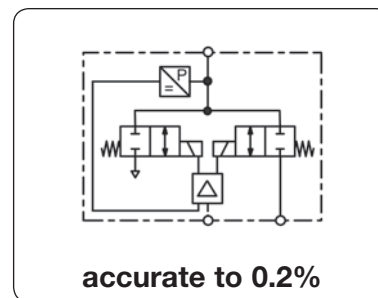
\*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min  
\*2 higher supply pressures on request





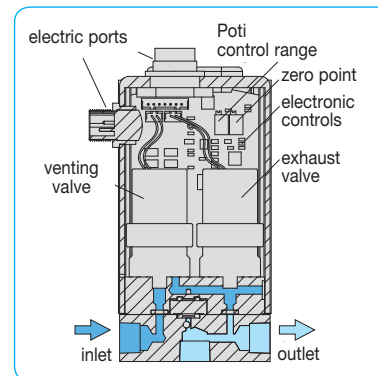
### Technical features

• <b>Pressure range</b>	0...10 mbar up to 0...35 bar	• <b>Linearity</b>	± 0.15% FS
• <b>Input signal</b>	0...10 V and 4...20 mA	• <b>Hysteresis</b>	± 0.15% FS
• <b>Security</b>	constant outlet pressure at voltage drop	• <b>Response sensitivity</b>	< 0.1% FS
• <b>Response time</b>	10 to 15 ms	• <b>Repeatability</b>	± 0.02% FS
• <b>Adjustment</b>	zero point and span	• <b>Protection class</b>	IP 65
• <b>Sensitivity</b>	immune to shock and vibration up to 25 g	• <b>Air consumption</b>	without constant bleed



## General technical features

<b>Description</b>	Two solenoid valves control the system pressure. One valve is for inlet control, the other for outlet control. A strain gauge pressure transducer measures system pressure and provides a feedback signal to the electronic controls. Any difference between command and feedback signals causes one of the solenoid valves to open, causing system pressure to increase or decrease.		
<b>Mounting position</b>	any, immune to shock and vibration up to 25 g		
<b>Protection class</b>	IP 65 housing		
<b>Temperature range</b>	-5 °C to 70 °C / 23 °F to 158 °F		
<b>Material</b>	Body: aluminium	Elastomer: FKM	Ports: brass
	Transducer: aluminium and silicon	Valves: nickel-plated brass	

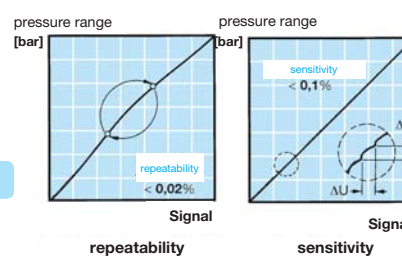
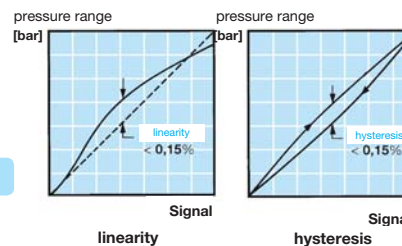


## Pneumatic features

<b>Media</b>	dry, un lubricated and 5 µm filtered compressed air or non-corrosive gases
<b>Supply pressure</b>	see chart, minimum 10% above outlet pressure
<b>Flow rate</b>	35 l/min at 7 bar supply pressure and open outlet, optionally 100 l/min 3 l/min at controlled outlet pressure
<b>Exhaust</b>	same nominal size as on inlet valve, thus same relief capacity
<b>Air consumption</b>	without constant bleed

## Electrical features

<b>Supply voltage</b>	15...24 V DC, reverse voltage protection existing
<b>Power consumption</b>	3.6 W for regulation, 0.5 W non-regulating
<b>Signal range</b>	0...10 V, optionally 4...20 mA
<b>Impedance</b>	4.7 kΩ at voltage signal, 100 Ω at current signal 10 kΩ at voltage signal, 100 Ω at current signal, for external feedback
<b>Monitor signal impedance</b>	> 4.7 kΩ at voltage signal, < 100 Ω at current signal
<b>Electrical connector</b>	plug M16x0.75, 7-pin, with coupling socket
<b>Monitor signal</b>	0...10 V, optionally 4...20 mA
<b>Security</b>	constant outlet pressure at voltage drop



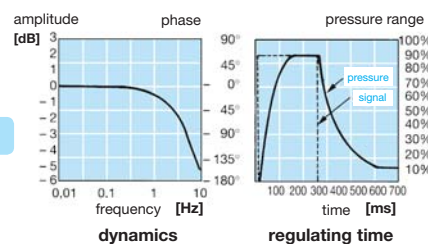
## Accuracy

<b>Linearity/Hysteresis</b>	± 0.15% FS
<b>Response sensitivity</b>	< 0.1% FS
<b>Response time</b>	10 to 15 ms
<b>Repeatability</b>	± 0.02% FS
<b>Temperature influence</b>	< 0.01% FS per °C/K at 0 °C to 50 °C / 32 °F to 122 °F < 1.00% FS per °C/K at 50 °C to 70 °C / 122 °F to 158 °F
<b>Accuracy over all</b>	± 0.2 % FS
<b>Regulating time</b>	< 2 s to fill 0.1 l volume to 90% of the initial pressure (or to exhaust) < 40 s to fill 2 l volume to 90% of the initial pressure (< 80 s to exhaust)

## Adjustment

<b>Zero point</b>	The zero point can be increased by up to 20% of full scale, e.g. from 0 bar to 1.2 bar at a 6 bar regulator. External adjustment via potentiometer Z "zero".
<b>Span</b>	The maximum pressure value of the control range can be reduced by up to 20% depending on the selected pressure range, e.g. from 6 to 4.8 bar. External adjustment via

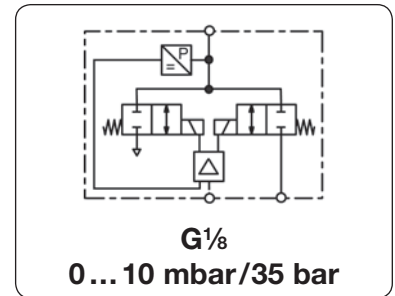
\*1 at 7 bar supply pressure and 3 bar outlet pressure





# Proportional Pressure Regulator with Single Loop, Accurate to 0.2% PQ1

<b>Description</b>	The pneumatic proportional valve produces outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system consisting of valves, manifold, housing and electronic controls.
<b>Single loop</b>	Pressure is controlled by two solenoid valves. One valve functions as inlet control, the other as exhaust. The pressure outlet is measured by an internal pressure transducer which provides a feedback signal to the electronic controls. This feedback signal is compared with the command input signal. Any difference between the two signals causes one of the two solenoid valves to open, allowing flow into or out of the system. Accurate pressure is maintained by these two valves.
<b>Accuracy</b>	Linearity / Hysteresis: $\pm 0.15\%$ FS Response sensitivity: $< 0.1\%$ FS Repeatability: $\pm 0.02\%$ FS Accuracy over all: $\pm 0.2\%$ FS



Dimensions			Flow rate	Supply pressure	Accuracy	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. mbar/bar*2	%	G	mbar/bar	

Single loop regulator			0 ... 10 V input and feedback signal, supply voltage 24 V DC, 35 l/min*1, with coupling socket		PQ1			
51	106	8	35	10 mbar	0.2	G $\frac{1}{8}$	0 ... 5 mbar	<b>PQ1EE-A5</b>
				20 mbar			0 ... 10 mbar	<b>PQ1EE-B1</b>
				40 mbar			0 ... 20 mbar	<b>PQ1EE-B2</b>
				100 mbar			0 ... 50 mbar	<b>PQ1EE-B5</b>
				200 mbar			0 ... 100 mbar	<b>PQ1EE-C1</b>
				400 mbar			0 ... 200 mbar	<b>PQ1EE-C2</b>
				800 mbar			0 ... 400 mbar	<b>PQ1EE-C4</b>
	1000 mbar	0 ... 600 mbar	<b>PQ1EE-C6</b>					
51	106	8	35	2 bar	0.2	G $\frac{1}{8}$	0 ... 1 bar	<b>PQ1EE-01</b>
				3 bar			0 ... 2 bar	<b>PQ1EE-02</b>
				9 bar			0 ... 4 bar	<b>PQ1EE-04</b>
				9 bar			0 ... 6 bar	<b>PQ1EE-06</b>
				9 bar			0 ... 8 bar	<b>PQ1EE-08</b>
				15 bar			0 ... 10 bar	<b>PQ1EE-10</b>
				15 bar			0 ... 12 bar	<b>PQ1EE-12</b>
				24 bar			0 ... 16 bar	<b>PQ1EE-16</b>
				24 bar			0 ... 20 bar	<b>PQ1EE-20</b>
				38 bar			0 ... 25 bar	<b>PQ1EE-25</b>
				38 bar			0 ... 30 bar	<b>PQ1EE-30</b>
				38 bar			0 ... 35 bar	<b>PQ1EE-35</b>
51	106	8	35	0 bar	0.2	G $\frac{1}{8}$	0 ... -1 bar	<b>PQ1EE-V0</b>
				2 bar			-1 ... +1 bar	<b>PQ1EE-V1</b>



PQ1

## Special options, add the appropriate letter or number

4-20 mA input and monitor signal	PQ1 IC-...
flow 100 l/min increased flow rate, max. 10 bar, not combinable with Opt. ...X58	PQ1 ... .HF
continuous regulation improved characteristic curve through proportional inlet valve, max. 10 bar	PQ1 ... .X58
declining curve inverted outlet	PQ1 ... .X59

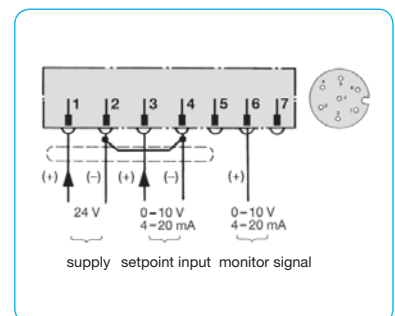
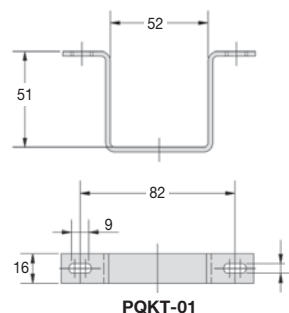
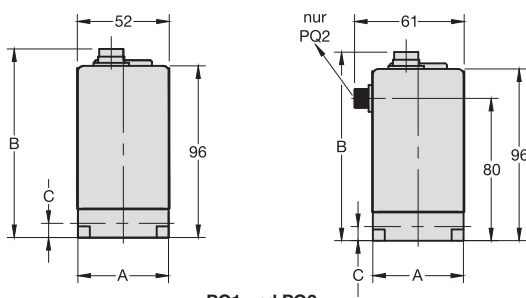
## Accessories

<b>coupling socket</b>	M16x0,75, 7-pin with 2 m cable	straight	<b>PRK-A2L</b>
		angular	<b>PRK-C2L</b>
<b>mounting bracket</b>	made of steel		<b>PQKT-01</b>



PRK-A

PRK-C



\*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min  
\*2 higher supply pressure on request  
\*3 air consumption

Technical details: see previous page

PDF CAD  
www.aircom.net

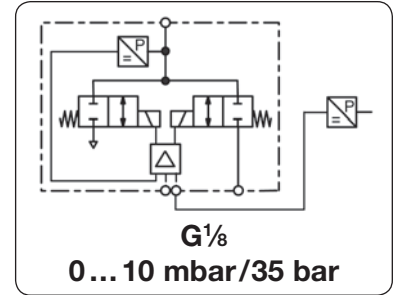
Order example:  
PQ1EE-A5

# Proportional Pressure Regulator with Double Loop, Accurate to 0.2% PQ2

**Description** The pneumatic proportional valve produces outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system consisting of valves, manifold, housing and electronic controls.

**Double loop** The servo valve expands in single loop operation by combining an additional feedback from an external sensing device with the internal transducer. The external sensor provides information on the control status. The PQ2 then compares the command signal with the second loop feedback signal. Should there be a difference in the signal comparisons, the servo valve will make adjustments to the internal loop to bring the system into balance. This provides accurate final outlet. The acceptance of electrical feedback from an external sensor enables precise control of conditions such as pressure, force, torque, position or flow.

**External pressure transducer** Any pressure transducer for 0-10 V and 4-20 mA output signal and suitable for 15-24V DC supply voltage can be applied. An appropriate coupling socket plus cable is required.



Dimensions			Flow rate	Supply pressure	Accuracy	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. mbar/bar*2	%	G	mbar/bar	
mm	mm	mm						

Double loop regulator			0 ... 10 V input / feedback / second loop signal, supply voltage 24 V DC, 35 l/min*1, with both coupling sockets		PQ2			
51	106	8	35	10 mbar	0.2	G <sup>1</sup> / <sub>8</sub>	0 ... 5 mbar	PQ2EE-A5
				20 mbar			0 ... 10 mbar	PQ2EE-B1
				40 mbar			0 ... 20 mbar	PQ2EE-B2
				100 mbar			0 ... 50 mbar	PQ2EE-B5
				200 mbar			0 ... 100 mbar	PQ2EE-C1
				400 mbar			0 ... 200 mbar	PQ2EE-C2
				800 mbar			0 ... 400 mbar	PQ2EE-C4
				1000 mbar			0 ... 600 mbar	PQ2EE-C6
51	106	8	35	2 bar	0.2	G <sup>1</sup> / <sub>8</sub>	0 ... 1 bar	PQ2EE-01
				3 bar			0 ... 2 bar	PQ2EE-02
				9 bar			0 ... 4 bar	PQ2EE-04
				9 bar			0 ... 6 bar	PQ2EE-06
				9 bar			0 ... 8 bar	PQ2EE-08
				15 bar			0 ... 10 bar	PQ2EE-10
				15 bar			0 ... 12 bar	PQ2EE-12
				24 bar			0 ... 16 bar	PQ2EE-16
				24 bar			0 ... 20 bar	PQ2EE-20
				38 bar			0 ... 25 bar	PQ2EE-25
				38 bar			0 ... 30 bar	PQ2EE-30
				38 bar			0 ... 35 bar	PQ2EE-35
51	106	8	35	0 bar	0.2	G <sup>1</sup> / <sub>8</sub>	0 ... -1 bar	PQ2EE-V0
				2 bar			-1 ... +1 bar	PQ2EE-V1

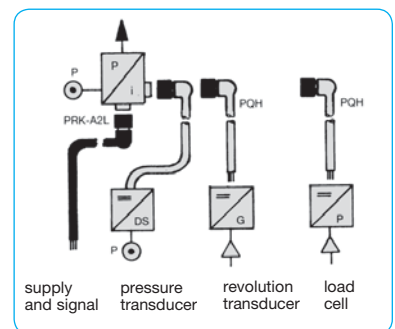
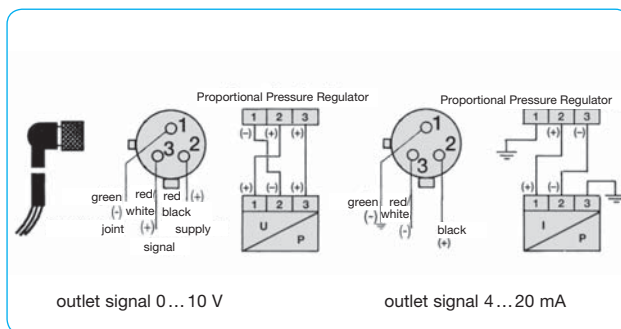


## Special options, add the appropriate letter or number

4-20 mA	input / feedback / second loop signal	PQ2 IC- . . .
flow 100 l/min	increased flow rate, max. 10 bar	PQ2 . . . . HF
continuous regulation	improved characteristic curve through proportional inlet valve, max. 10 bar	PQ2 . . . . X58
declining curve	inverted outlet	PQ2 . . . . X59

## Accessories

coupling socket	M16x0.75,	7-pin with 2.0 m cable,	supply and signal,	straight	PRK-A2L
				angular	PRK-C2L
coupling socket	½" UNF,	3-pin with 0.9 m cable,	for second loop,	straight	PQH-L1
				angular	PQH-L2
mounting bracket	made of steel				PQKT-01



\*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min  
\*2 higher supply pressures on request

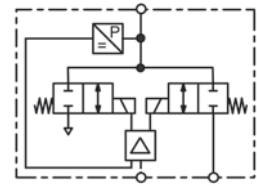
Technical details: see previous page

PDF CAD  
www.aircom.net

Order example:  
PQ2EE-A5

### Technical features

- **Pressure range** -1... 35 bar
- **Input signal** 0-10 V; 4-20 mA
- **Protection class** IP65
- **Response time** 15 ... 20 ms
- **Power consumption** 6 W
- **Accuracy**  $\pm 0.4\%$
- **Mounting position** any
- **Adjustment** zero point, span, hysteresis
- **Air consumption** without air consumption



**accurate 0.4%**

### General technical features

- Description** Two solenoid valves control the system pressure. One valve is for inlet control, the other for outlet control. In order to achieve high volume flow the regulator is pilot-controlled, i.e. the valves control an integral volume booster. Extraordinary accuracy is reached by measuring the outlet pressure of the booster and feeding back the according signal.
- Mounting position** any, preferably upright
- Protection class** IP65
- Temperature range** 0 °C to 70 °C / 32 °F to 158 °F
- Material** Booster body: nickel-plated aluminium      Elastomer: FKM, NBR/Buna-N  
 Transducer: aluminium and silicon                      Valves: nickel-plated brass

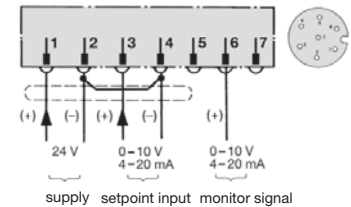


### Pneumatic features

- Media** dry, unlubricated and 40 µm filtered compressed air or non-corrosive gases
- Supply pressure** see chart, minimum 10% above outlet pressure
- Flow rate** **PQ3:** 700 l/min at 8 bar supply pressure and 6 bar outlet pressure  
**PQ4 / PQ6:** 2000 l/min at 8 bar supply pressure and 6 bar outlet pressure
- Exhaust** nearly same relief capacity as ventilation capacity
- Air consumption** without constant bleed

### Electrical features

- Supply voltage** 15-24 V DC
- Power consumption** max. 6 W
- Command signal** 0-10 V, optionally 4-20 mA
- Command signal impedance** 10 kΩ at voltage signal, 100 Ω at current signal
- Electrical connector** plug M16x0.75, 7-pin, with coupling socket, optionally plug M12
- Monitor signal** 0-10 V, optionally 4-20 mA
- Security** constant outlet pressure at voltage drop



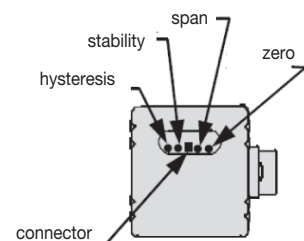
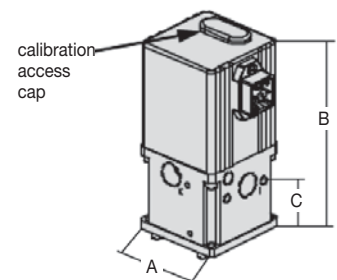
connection diagram for supply and signal

### Accuracy

- Linearity / Hysteresis**  $\pm 0.3\%$  FS > 7 bar outlet pressure  $\pm 0.5\%$  FS
- Response sensitivity** < 0.1% FS
- Response time** 10 ... 15 ms
- Repeatability**  $\pm 0.2\%$  FS
- Accuracy**  $\pm 0.4\%$  FS

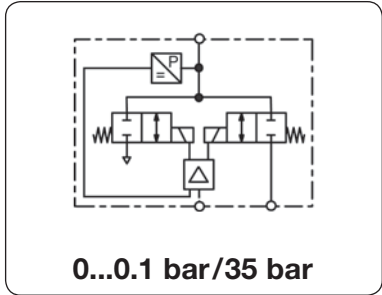
### Adjustment

- Adjustment** Adjustment by calibration access cap on the top of the valve.
- Zero point** The zero point can be changed by up to 10% of full scale, e.g. from 0 bar to 0.6 bar at a 6 bar regulator. External adjustment via potentiometer Z "zero".
- Span** The maximum pressure value of the control range can be reduced by up to 10%, e.g. from 6 bar to 5.4 bar. External adjustment via potentiometer S "span".
- Hysteresis** Response sensitivity can be adjusted via potentiometer H "hysteresis".



**Description** Closed loop electronic pressure regulator consisting of two solenoid valves, an internal pressure transducer, and an electronic control circuit mounted to an integral volume booster. The pressure is controlled by activating the solenoid valves, which apply pressure to the pilot side of the volume booster.

**Single loop** Pressure is controlled by two solenoid valves. One valve functions as inlet control, the other as exhaust. The pressure outlet is measured by an internal pressure transducer which provides a feedback signal to the electronic controls. This feedback signal is compared with the command input signal. Any difference between the two signals causes one of the two solenoid valves to open, allowing flow into or out of the system. Accurate pressure is maintained by these two valves.



Dimensions			Flow rate l/min*1	Supply pressure max. bar	Accuracy %	Connection thread G/NPT	Pressure range bar	Order number
A	B	C						
mm	mm	mm						

Single loop regulator				0 ... 10 V input and feedback signal supply voltage 24 V DC, with coupling socket			PQ3/PQ4/PQ6		
51	123	34	700	0.2	0.25	1/4" NPT	0...0,1	PQ3EE-C1	
				1.0			0...0,5	PQ3EE-C5	
				2.0			0...1,0	PQ3EE-01	
				3.0			0...2,0	PQ3EE-02	
				9.0			0...4,0	PQ3EE-04	
				9.0			0...6,0	PQ3EE-06	
				9.0			0...8,0	PQ3EE-08	
				15			0...10	PQ3EE-10	
				15			3/8" NPT	0...12	PQ3EE-12
				24				0...16	PQ3EE-16
				24				0...20	PQ3EE-20
				38				0...25	PQ3EE-25
				38				0...30	PQ3EE-30
38	0...35	PQ3EE-35							
77	175	65	2000	0.2	0.4	1/2" NPT	0...0,1	PQ4EE-C1	
				1.0			0...0,5	PQ4EE-C5	
				2.0			0...1,0	PQ4EE-01	
				3.0			0...2,0	PQ4EE-02	
				9.0			0...4,0	PQ4EE-04	
				9.0			0...6,0	PQ4EE-06	
				9.0			0...8,0	PQ4EE-08	
15	0...10	PQ4EE-10							
77	175	65	2000	0.2	0.4	3/4" NPT	0...0,1	PQ6EE-C1	
				1.0			0...0,5	PQ6EE-C5	
				2.0			0...1,0	PQ6EE-01	
				3.0			0...2,0	PQ6EE-02	
				9.0			0...4,0	PQ6EE-04	
				9.0			0...6,0	PQ6EE-06	
				9.0			0...8,0	PQ6EE-08	
				15			0...10	PQ6EE-10	



PQ3EE-10



PQ4EE-10

**Special options, add the appropriate letter**

4-20 mA	input and monitor signal	PQ . IC- . .
M12 connector	5-pin (coupling socket not included)	PQ . . . . M12

**Accessories**

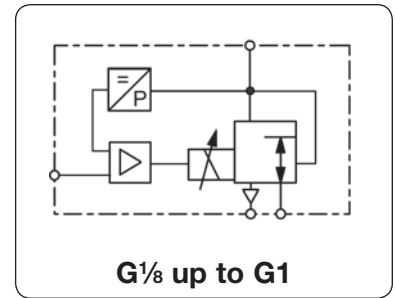
coupling socket	M16x0.75, 7-pin with 2 m cable	straight	PRK-A2L
		angular	PRK-C2L
coupling socket	M12x1, 5-pin with 2 m cable, 5 x 0.25	angular	KM12-C5-2
	5-pin with 5 m cable, 5 x 0.25	angular	KM12-C5-5
mounting bracket	made of steel	for PQ3	PQKT-01
mounting bracket	made of steel	for PQ4/PQ6	PQKT-02



PRK-A

PRK-C

<b>Description</b>	The pneumatic proportional valve controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact monoblock assembly with proportional solenoid valve, electronic regulator and internal pressure transducer.  In the process, the outlet pressure is transformed into a proportional electrical signal and compared with the input signal. If the outlet pressure exceeds the preset setpoint, the valve exhausts down to the pressure desired.  The valve has no constant bleed. At absence of input signal or supply voltage the valve exhausts. The power supply of the setpoint potentiometer is provided by the proportional valve via connector pin number 5.
<b>Pressure transducer</b>	Open transducers: 100 mbar, 500 mbar, 1 bar and vacuum
<b>Application examples</b>	Proportional pressure regulators are being used for blowing machines, ultrasonic equipments, testing machines, painting systems, contouring systems, laser welding machines, textile machines, cheese presses, pneumatic brakes, clamping devices and medical engineering.



## General technical features

<b>Description</b>	3-port/2-way valve with proportional magnet, integrated hybrid PCB and closed loop with pressure transducer in compact monoblock assembly.
<b>Mounting position</b>	any, preferably upright
<b>Protection class</b>	IP 54 with standard connector, IP 65 with special connector
<b>Temperature range</b>	0 °C up to 50 °C / 32 °F to 122 °F, high temperature version on request
<b>Material</b>	Body: brass (G <sup>1</sup> / <sub>8</sub> ) and aluminium (G <sup>1</sup> / <sub>4</sub> , G <sup>1</sup> / <sub>2</sub> u. G1) Inner valve: brass and SST Seals: NBR/Buna-N, on request EPDM or FKM FKM for 50 bar version

## Pneumatic features

<b>Media</b>	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases
<b>Supply pressure</b>	see chart, min. 10% above outlet pressure
<b>Flow rate</b>	see chart, at 7 bar inlet pressure and open outlet
<b>Exhaust</b>	same nominal size as on inlet valve, thus same relief capacity
<b>Air consumption</b>	without air consumption

## Electrical features

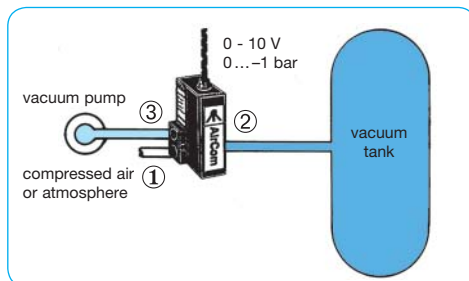
<b>Supply voltage</b>	24 V DC + 15% - 10%, residual ripple max. 10%
<b>Power consumption</b>	12 W at G <sup>1</sup> / <sub>8</sub> , 22 W at G <sup>1</sup> / <sub>4</sub> , 30 W at G <sup>1</sup> / <sub>2</sub> , 44 W at G1
<b>Current consumption</b>	0.5A at G <sup>1</sup> / <sub>8</sub> , 1.0A at G <sup>1</sup> / <sub>4</sub> , 1.25A at G <sup>1</sup> / <sub>2</sub> , 1.7A at G1
<b>Command signal</b>	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA, digital or Profibus DB rising curve as standard, optionally declining curve
<b>Impedance</b>	100 kΩ at voltage signal (0.1 mA current consumption) 500 Ω at current signal
<b>Electrical connector</b>	circular plug according to DIN 43651, 7-pin plug for analogue signal 16-pin plug for digital signal

## Accuracy

<b>Linearity/Hysteresis</b>	< 1% FS
<b>Response sensitivity</b>	< 0.1% FS
<b>Repeatability</b>	< 0.1% FS
<b>Over all accuracy</b>	± 0.5%
<b>Regulating time</b>	< 1 s over the range, 70 ms at 10 to 90% or 90 to 10% of the range

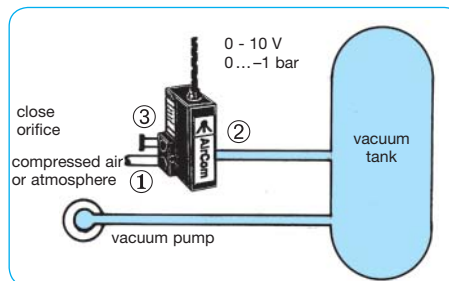
## Adjustment

<b>Zero point</b>	calibration ± 10% FS via potentiometer P2
<b>Range</b>	calibration + 5% FS or -10% FS via potentiometer P1
<b>Amplification</b>	calibration 1:1 up to 1:10 via potentiometer P7



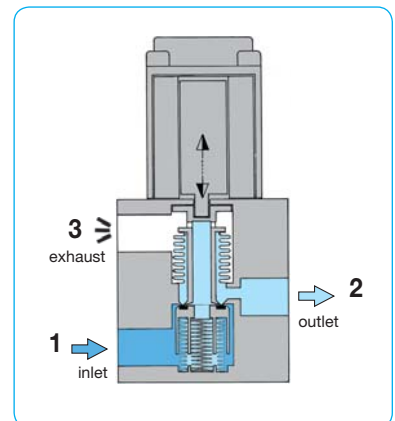
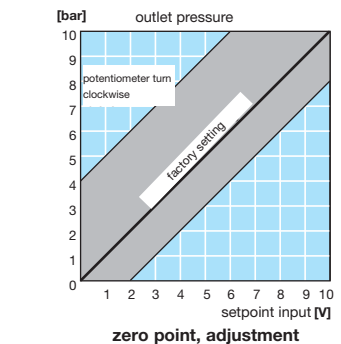
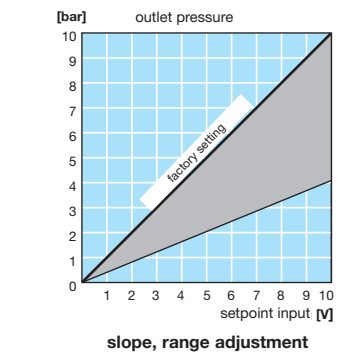
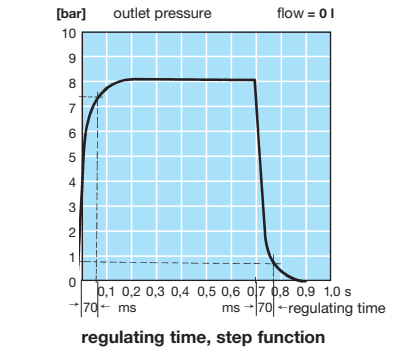
### Downstream regulation (V1)

The vacuum pump saves energy and it is easy to fill the tank either with vacuum or pressure. A filter is recommended at orifice ①.



### Upstream regulation (V2)

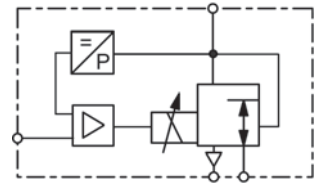
Upstream installation is preferred if rapid evacuation of a tank or system is required. A filter is recommended at orifice ①.





### Technical features

• <b>Pressure range</b>	0...-1.0 bar to 0... 1.0 bar	• <b>Linearity / Hysteresis</b>	< 1% FS
• <b>Command signal</b>	0... 10 V, 0... 20 mA, 4... 20 mA, digital	• <b>Response sensitivity</b>	± 0,5% FS
• <b>Feedback signal</b>	0... 10 V, 0... 20 mA, 4... 20 mA	• <b>Repeatability</b>	± 0,5% FS
• <b>Adjustment</b>	zero point, range and amplification	• <b>Regulating time</b>	< 1 s
• <b>Pressure sensors</b>	100 / 500 mbar, 1 bar	• <b>Power consumption</b>	12 / 22 / 30 / 44 W
• <b>Flow rate</b>	250 / 820 / 1700 / 6500 l/min	• <b>Exhaust</b>	full nominal size



**G<sup>1</sup>/<sub>8</sub> up to G1**  
**0... 100 mbar/50 bar**

Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	l/min*1	bar	G	bar	
mm	mm	mm							

### Proportional pressure valve

0-10 V input signal, supply voltage 24 V DC, with coupling socket

### PR

35	80	63	3	0.18	210	-1	G <sup>1</sup> / <sub>8</sub>	0... -1.0	PRA00-00V1
						-1		0... -0.5	PRA00-00V1A5
						-1		0... -0.1	PRA00-00V1A1
						3		-1.0... 1.0	PRA00-01V1
						1		0... 0.1	PRA00-A100
						2		0... 0.5	PRA00-A500
						2		0... 1.0	PRA00-0100
52	105	74	6	0.6	700	-1	G <sup>1</sup> / <sub>4</sub>	0... -1.0	PR000-00V1
						-1		0... -0.5	PR000-00V1A5
						-1		0... -0.1	PR000-00V1A1
						3		-1.0... 1.0	PR000-01V1
						1		0... 0.1	PR000-A100
						2		0... 0.5	PR000-A500
						2		0... 1.0	PR000-0100
70	150	101	12	1.2	1400	-1	G <sup>1</sup> / <sub>2</sub>	0... -1.0	PR100-00V1
						2		0... 1.0	PR100-0100
96	190	115	20	4.8	5600	-1	G1	0... -1.0	PR200-00V1
						2		0... 1.0	PR200-0100



PRA



PR1



example: combination PR with booster

### Special options, add the appropriate letter or number

<b>input signal</b>	0-20 mA 4-20 mA 8 bit digital with hold function Profibus DP			PR...1-.... PR...2-.... PR...3-.... PR...8-....
<b>feedback signal</b>	0-10 V 0-20 mA 4-20 mA			PR.1-.... PR.2-.... PR.3-....
<b>external feedback signal</b>	0-10 V 0-20 mA 4-20 mA			PR.4-.... PR.5-.... PR.6-....
<b>deviant pressure range for vacuum</b>	indicate on order Bypass version		G <sup>1</sup> / <sub>8</sub> and G <sup>1</sup> / <sub>4</sub> G <sup>1</sup> / <sub>2</sub> G1	PR...-XX.. PR...-..V2 PR1...-..V2 PR2...-..V2 PR...-..0A PR...-..06
<b>for absolute pressure protection class IP65</b>	special cable box, PRK-IP65			PR...-..SS
<b>body made of stainless steel</b>	valve body and inner parts, 1.4304, EPDM seals, G <sup>1</sup> / <sub>4</sub> and G <sup>1</sup> / <sub>2</sub>			PR...-..19
<b>body made of aluminium for oxygen</b>	nly valve body, max. 20 bar specially cleaned, FKM elastomer		G <sup>1</sup> / <sub>4</sub> only	PR...-..15

### Accessories

<b>coupling socket</b>	7-pin with 2 m cable 7-pin with 5 m cable 7-pin with 2 m cable, IP65 7-pin with 2 m cable 7-pin with 5 m cable	straight straight straight angular angular	PRK-A2L PRK-A5L PRK-I2L PRK-C2L PRK-C5L
<b>other cable length</b>	e.g. 10 m available		

\*1 at 6 bar supply pressure and 5 bar outlet pressure

Technical details: see previous page

PDF CAD  
www.aircom.net



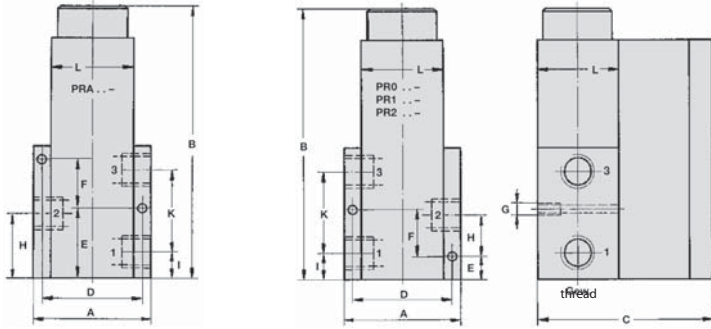
Order example:  
PRA00-00V1



PRK-A

PRK-C

# Dimensions and Connection Diagram "AirTronic"®



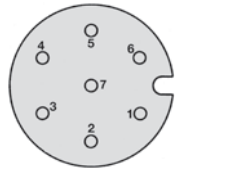
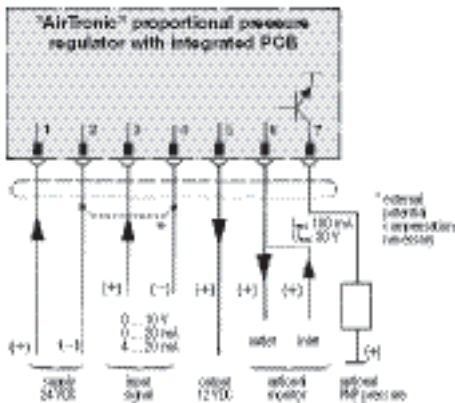
1: inlet  
2: outlet  
3: exhaust

Proport. regulator	thread	A	B	C	D	E
PRA ...	G 1/2	35	80	63	29	18
PR0 ...	G 1/4	52	105	74	43	10
PR1 ...	G 1/2	70	150	101	57.5	12
PR2 ...	G 1	96	190	115	79	15

Proport. regulator	F	G	H	I	K	L
PRA ...	7	M 4	15	10	16.6	25
PR0 ...	20	M 4	16	11*	34	36
PR1 ...	28	M 6	23	15	48.5	45
PR2 ...	33	M 8	30	20	60	60

\* 14 mm from 30 bar pressure range on

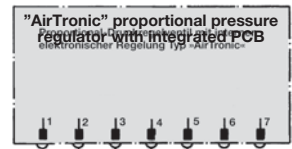
"AirTronic"® proportional pressure regulator with integrated PCB



colour of wire		
pin	4-wire	7-wire
1	white	grey
2	brown	blue
3	yellow	yellow
4	green	green
5	-	brown
6	-	white
7	-	pink

pin numbers seen from solder pin side

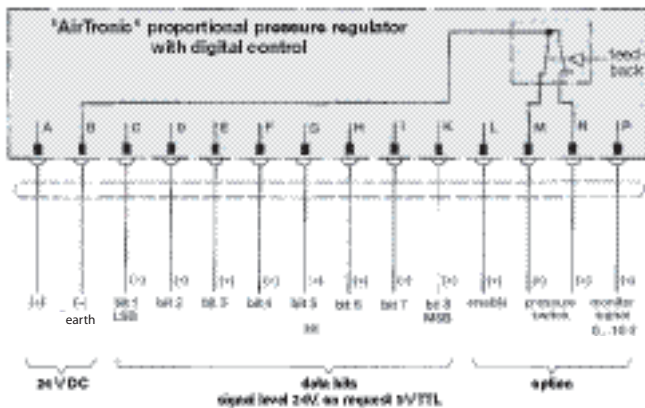
"AirTronic"® connection diagram



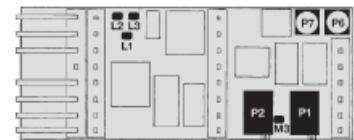
\* external potential compensation necessary

potentiometer for adjusting the pressure range

Connection diagram with potentiometer

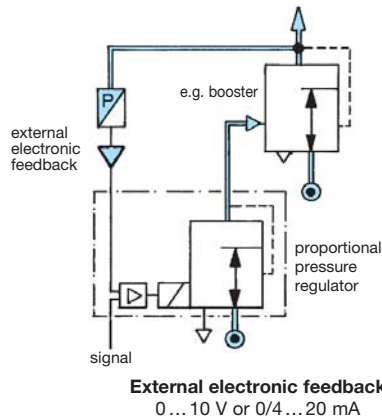


Connection diagram for digitally controlled proportional pressure regulator

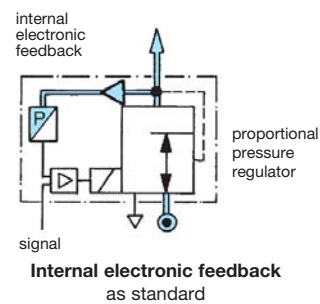


- P1 range: -10%...+5%
- P2 zero point: ± 10%
- P6 option pressure switch: 5...15%
- P7 proportional amplification: 1...11
- M3 measuring point offset zero
- L1 earth (GND)
- L2 solenoid +24 V
- L3 solenoid (pulse width modulation) PWM

Adjustment of the proportional regulator

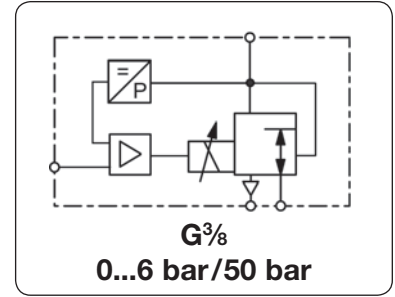


External electronic feedback  
0...10 V or 0/4...20 mA



Internal electronic feedback  
as standard

<b>Description</b>	The pneumatic proportional valve controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact mono block assembly with proportional solenoid valve, electronic regulator and internal pressure transducer. The valve works as a slide valve and is designed for flow applications such as thermal cutting. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, RS232 adapter and software. Data record can be saved and used for further valves. The valve has a constant bleed. At absence of input signal or supply voltage the valve exhausts.		
<b>Software</b>	Display: signal, outlet pressure, PID parameters, pressure switch signal etc.		
<b>Scope function</b>	view setpoint, outlet pressure, internal signals from PID control		
<b>Media</b>	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases		
<b>Supply voltage</b>	24 V DC ± 10 V, residual ripple < 10%	<b>Power consumption</b>	14 W (810mA current consumption)
<b>Signal range</b>	0-10 V, 100 kΩ impedance	0/4-20 mA, 250 Ω impedance	
<b>Electr. connection</b>	plug M12x1, 5-pin (protection class IP65)	<b>Mounting position</b>	any, preferably solenoid on top
<b>Accuracy</b>	hysteresis: 0.5% FS	<b>Linearity/repeatability</b>	< ± 0.5% FS
<b>Temp. range</b>	fluid / ambient: 0 °C to 60 °C / 32 °F to 140 °F	<b>Material</b>	Body: aluminium Elastomer: NBR/Buna-N



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m³/h)	l/min*1	bar	G	bar	

Proportional pressure regulator									
0-10 V command signal, supply voltage 24 V DC, without M12 coupling socket									
60	160	78	8	1,45	1700	12	G3/8	0 ... 6	PF000-0600
						18		0 ... 10	PF000-1000
						18		0 ... 16	PF000-1600
						22		0 ... 20	PF000-2000
						40		0 ... 30	PF000-3000
						50		0 ... 40	PF000-4000
						60		0 ... 50	PF000-5000



PF000-1000

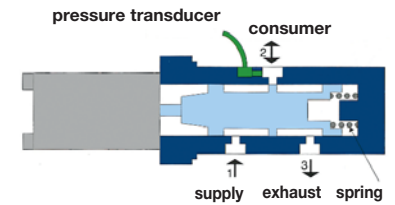


## Special options, add the appropriate letter or number

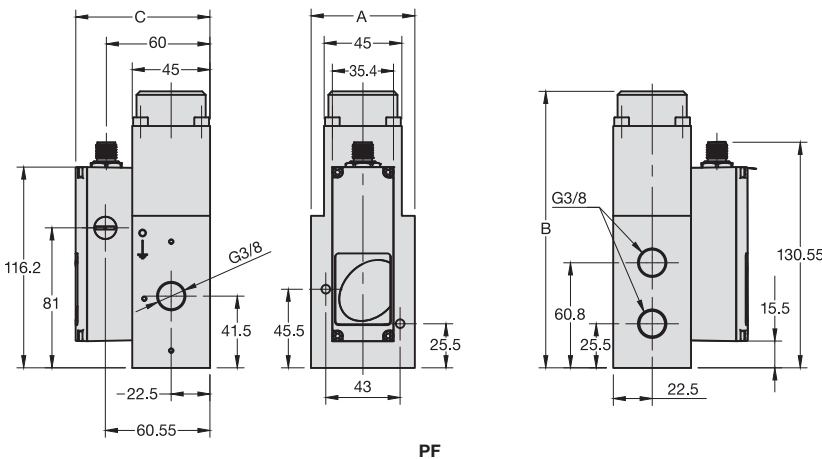
<b>command signal</b>	0-20 mA	PF .. 1-....
	4-20 mA	PF .. 2-....
<b>monitor signal</b>	0-10 V	PF . 1.-....
	4-20 mA	PF . 3.-....
<b>deviant pressure range for oxygen</b>	indicate on order	PF ...-XX .
	specialy cleaned, FKM elastomers	PF ...-...15

## Accessories

<b>RS232 module software</b>	with 9-pin D-sub plug and 2 m cable	<b>PDRS232</b>
<b>coupling socket</b>	basic version "light"	<b>PDSOFT1</b>
	M12x1, 5-pin, with 2 m cable, 5 x 0.25	angular <b>KM12-C5-2</b>
	M12x1, 5-pin, with 5 m cable, 6 x 0.25	angular <b>KM12-C5-5</b>

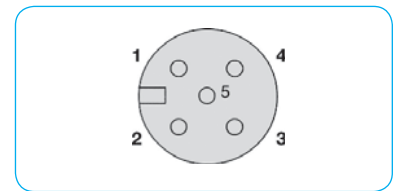


The position of the slide is continuously shifting according to command signal and pressure change at the outlet. Thereby a constant outlet pressure is achieved.



PF

\*1 at 6 bar supply pressure and 5 bar outlet pressure

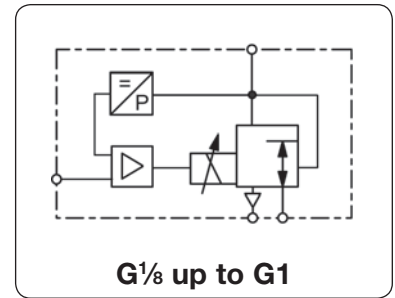


view from solder pin side

pin	description	5-wire cable (2m)	6-wire cable (5m)
1	24 V supply voltage	brown	brown
2	analog input signal	white	white
3	supply ground	blue	green
4	analog ground		yellow
5	analog outlet signal	black	pink
	digital pressure switch signal	grey	grey
housing	EMC shield	shield	shield

connection diagram

<b>Description</b>	The pneumatic proportional valve controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact mono block assembly with proportional solenoid valve, electronic regulator and internal pressure transducer. The valve works as a 3-port/2-way valve with proportional magnet. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, RS232 adapter and software. Data record can be saved and used for further valves. The valve has no constant bleed. At absence of input signal or supply voltage the valve exhausts.
<b>Software</b>	Display: signal, outlet pressure, parameter, pressure switch signal etc. Scope function: view setpoint, outlet pressure, internal signals from PID control Parameters: command signal, zero point, overload threshold, ramp Valve diagnosis: parameters factory set or customised, optimization of the valve



## General technical features

<b>Description</b>	3-port/2-way valve with proportional magnet and digital control
<b>Mounting position</b>	any, preferably vertical
<b>Protection class</b>	IP65 with mounted coupling socket
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, fluid / ambient temperature
<b>Material</b>	Body: brass (for G <sup>1/8</sup> and G <sup>1/4</sup> ) or aluminium (for G <sup>1/2</sup> and G1) Inner valve: brass and stainless steel Seals: NBR/Buna-N, EPDM or FKM on request, FKM for 50 bar version

## Pneumatic features

<b>Media</b>	dry, lubricated, unlubricated and 5 µm filtered compressed air or non-corrosive gases
<b>Supply pressure</b>	see chart
<b>Flow rate</b>	see chart, at 7 bar supply pressure and open outlet
<b>Exhaust</b>	same nominal size as on inlet valve, thus same relief capacity
<b>Air consumption</b>	without air consumption

## Electrical features

<b>Supply voltage</b>	24 V DC ±10%
<b>Electrical connection</b>	M12, 5-pin coupling socket
<b>Power consumption</b>	12 W at G <sup>1/8</sup> , 24 W at G <sup>1/4</sup> , 34 W at G <sup>1/2</sup> , 44 W at G1
<b>Current consumption</b>	500 mA at G <sup>1/8</sup> , 1000 mA at G <sup>1/4</sup> , 1400 mA at G <sup>1/2</sup> , 1800 mA at G1
<b>Command signal</b>	0-10 V, 0-20 mA, 4-20 mA
<b>Impedance</b>	100 kΩ at voltage signal (0.1 mA current consumption) 250 Ω at current signal
<b>Setpoint input</b>	0-10 V, 0-20 mA, 4-20 mA

## Accuracy

<b>Linearity/Hysteresis</b>	< ± 0.5% FS
<b>Repeatability</b>	± 0.5% FS
<b>Response sensitivity</b>	± 0.5% FS
<b>Over all accuracy</b>	± 0.5% FS

## Adjustment and parameter settings

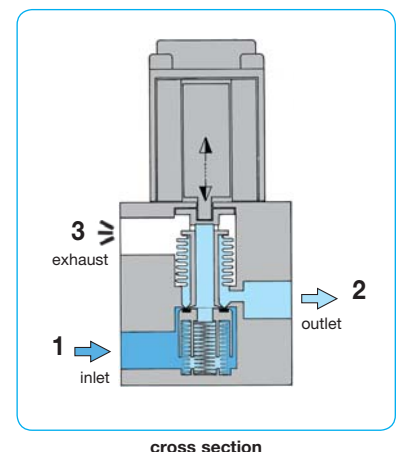
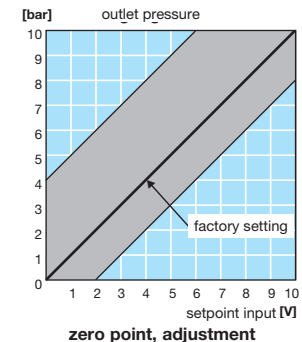
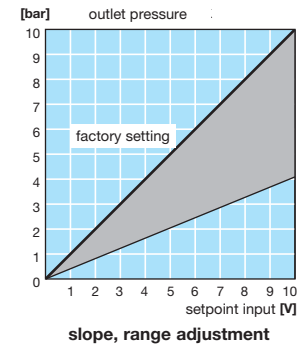
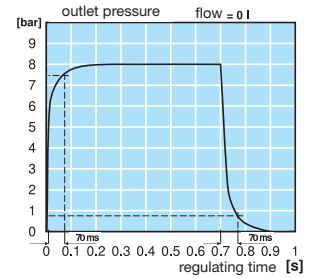
<b>Zero point / range</b>	Zero point and range can be calibrated percentagewise.
<b>Control mode / Amplification</b>	Through the software different control modes may be chosen. All parameters of P/PI/PID controllers can be tuned.
<b>Diagnosis</b>	A diagnostic tool including data recording is available within the software.
<b>Characteristic curve</b>	Increasing or decreasing curve can be set (increasing by standard).

### Downstream regulation for vacuum/positive pressure regulators (V1)

Recommended when tank shall be evacuated or filled with positive pressure. At inlet port (1) either compressed air or atmosphere has to be applied. The use of a filter is advisable.

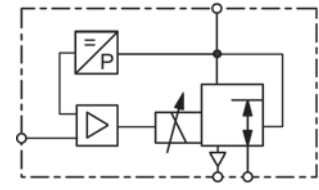
### Downstream regulation for vacuum regulators (V3)

Recommended when tank shall be evacuated. Exhaust port (3) will be closed. Inlet port (1) must be connected with vacuum pump. Outlet port (2) has to be connected with consumer or tank.



### Technical features

- **Pressure range** 0...0.1 bar bis 0...50 bar
- **Command signal** 0-10 V, 0-20 mA, 4-20 mA
- **Output signal** 0-10 V, 0-20 mA, 4-20 mA
- **Regulating time** < 1 s
- **Pressure sensor** 100 / 500 mbar, 1 / 5 / 10 / 16 / 20 / 30 / 50 bar
- **Flow rate** 250 / 820 / 1700 / 6500 l/min
- **Linearity / Hysteresis** ± 0.5% FS
- **Response sensitivity** ± 0.5% FS
- **Repeatability** ± 0.5% FS
- **Rated input** 12 / 22 / 30 / 44 W
- **Relief capacity** full nominal size



**G<sup>1</sup>/<sub>8</sub> up to G1**  
**0 ... 100 mbar/50 bar**

Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m³/h)	l/min*1	bar	G	bar	

### Proportional pressure regulator

0-10 V command signal, supply voltage 24 V DC, with coupling socket

### PP

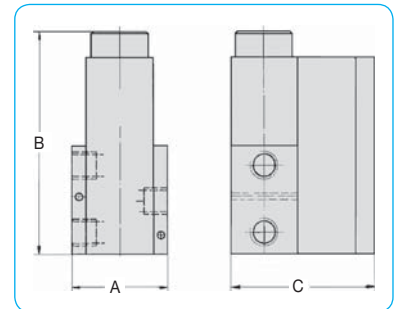
35	83	57	3	0.18	210	-1	G <sup>1</sup> / <sub>8</sub>	0...-1.0	PPA00-00V3
								0... 0.1	PPA00-A100
								0... 0.5	PPA00-A500
								0... 1.0	PPA00-0100
								0... 3.0	PPA00-0300
								0... 6.0	PPA00-0600
								0... 10	PPA00-1000
								0... 16	PPA00-1600
								0... 20	PPA00-2000
								0... 25	PPA00-2500
52	105	68	6	0.6	700	-1	G <sup>1</sup> / <sub>4</sub>	0...-1.0	PP000-00V3
								0... 0.1	PP000-A100
								0... 0.5	PP000-A500
								0... 1.0	PP000-0100
								0... 3.0	PP000-0300
								0... 6.0	PP000-0600
								0... 10	PP000-1000
								0... 16	PP000-1600
								0... 20	PP000-2000
								0... 30	PP000-3000
70	136	85	12	1.2	1400	-1	G <sup>1</sup> / <sub>2</sub>	0...-1.0	PP100-00V3
								0... 1.0	PP100-0100
								0... 3.0	PP100-0300
								0... 6.0	PP100-0600
								0... 10	PP100-1000
								0... 12	PP100-1200
96	190	101	20	4.8	5600	-1	G1	0...-1.0	PP200-00V3
								0... 1.0	PP200-0100
								0... 3.0	PP200-0300
								0... 6.0	PP200-0600
								0... 10	PP200-1000
								0... 12	PP200-1200



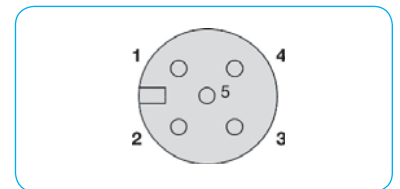
PPA



PP0



dimensions



view from solder pin side

### Special options, add the appropriate letter or number

setpoint input	0-20 mA	1	4-20 mA	PP . . 2- . . . .
feedback output	0-10 V	1	0-20 mA	PP . 3- . . . .
deviant pressure range for absolute pressure	indicate on order	2	4-20 mA	PP . . . -XX . .
body made of stainless steel	P <sub>2</sub> = max. 20 bar, body / inner parts, 1.4304, EPDM, G <sup>1</sup> / <sub>4</sub> and G <sup>1</sup> / <sub>2</sub>			PP . . . . .0A
body made of aluminium	valve body only, max. 20 bar		G <sup>1</sup> / <sub>4</sub> only	PP . . . . .SS
for oxygen	specialy cleaned, FKM elastomer			PP 0 . . . . .19
for dynamic application	P <sub>2</sub> = for 30 bar- up to 50 bar version		G <sup>1</sup> / <sub>4</sub> only	PP . . . . .15
cascade regulation	w/o monitor signal 2. sensor, electr. feedback 0-10 V			PP 0 . . . . .DY
	w/o monitor signal 2. sensor, electr. feedback 4-20 mA			PP . . . . .KI

### Zubehör, lose beigelegt

S232 module software	with D-sub plug and basic version "light"	2 m cable		PDRS232
coupling socket	M12x1, 5-pin with	2 m cable, 5 x 0.25	angular	PDSOFT1
		5 m cable, 5 x 0.25	angular	KM12-C5-2
adapter cable	M12x1, 5-pin with	0.2 m cable		KM12-C5-5
				PRK-PR-PP

\*1 at 6 bar supply pressure and 5 bar outlet pressure

Technical details: see previous page

PDF CAD  
www.aircom.net



Order example:  
PPA00-00V3

pin	description	5-wire cable (2m)	6-wire cable (5m)
1	24 V supply voltage	brown	brown
2	analog input signal	white	white
3	supply earth	blue	green
	analog earth		yellow
4	analog outlet signal	black	pink
5	digital pressure switch signal	grey	grey
housing	EMC shield	shield	shield

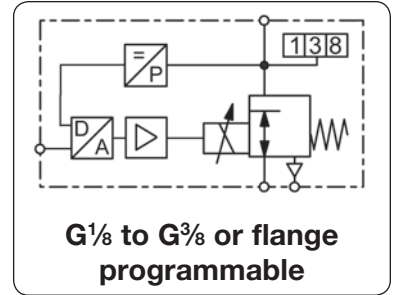
connection diagram



**Description** The proportional pressure regulator is digitally controlled and works as a 3/2 valve with proportional magnet and closed loop. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, RS232 adapter and software.

**Software** Display: signal, outlet pressure, PID parameters, pressure switch signal etc.  
Scope function: view setpoint, outlet pressure, internal signals from PID control

**Parameters** command signal, zero point, overload threshold, ramp  
Valve diagnosis: parameters factory-set or customised, optimization of the valve.

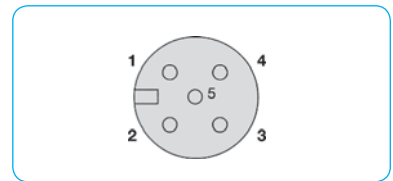


## General technical features

**Description** 3-port/2-way valve with proportional magnet and digital control  
**Mounting position** any, preferably upright  
**Protection class** IP65 with mounted coupling socket  
**Temperature range** 0 °C to 50 °C / 32 °F to 122 °F ambient  
**Material** Body: aluminium Inner valve: POM (Polyacetal)  
Elastomer: NBR/Buna N and FPM

## Pneumatic features

**Media** dry, lubricated or unlubricated and 50 µm filtered compressed air or non-corrosive gases  
**Supply pressure** see chart  
**Flow rate** see chart, at 7 bar supply pressure and open outlet  
**Exhaust** same nominal size as on inlet valve, thus same relief capacity  
**Air consumption** without air consumption



view from solder pin side

## Electrical features

**Supply voltage** 24 V DC ± 10%  
**Electrical connection** M12x1, 5-pin plug, with coupling socket  
**Power consumption** 12 W at nominal size 4, 40 W at nominal size 8  
**Current consumption** 850 mA at nominal size 4, 1640 mA at nominal size 8  
**Command signal** 0-10 V, 0-20 mA, 4-20 mA  
**Impedance** 100 kΩ at voltage signal (0.1 mA current consumption)  
500 Ω at current signal  
**Feedback output** 0-10 V = 3 bar only, 6 bar and 10 bar pressure range possible

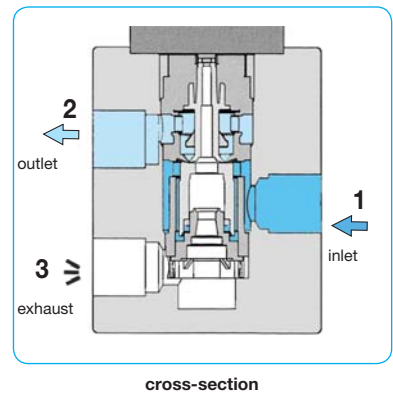
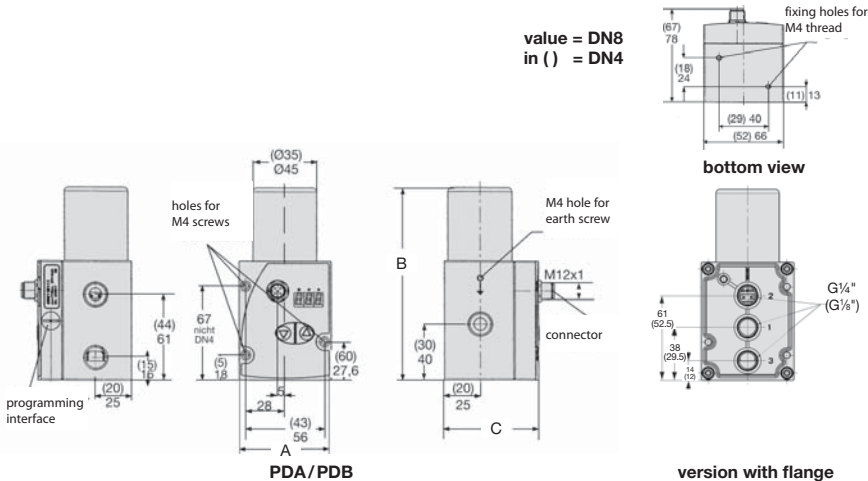
pin	description	5 wire cable (2m)	6 wire cable (5m)
1	24 V supply voltage	brown	brown
2	analog input signal	white	white
3	supply earth	blue	green
	analog earth		yellow
4	analog outlet signal	black	pink
5	digital pressure switch signal	grey	grey
housing	EMC shield	shield	shield

## Accuracy

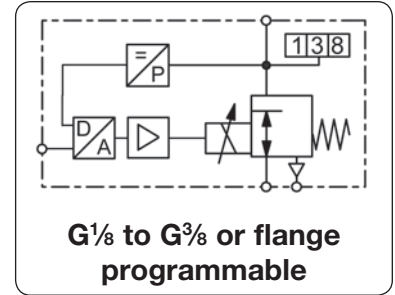
**Linearity/Hysteresis** < 1,0% FS  
**Repeatability** < 0,5% FS  
**Minimum outlet pressure** 1% FS  
**Response sensitivity** < 0,5% FS  
**Minimum setpoint** 100 mV (0.2 mA / 4.2 mA)  
**Over all accuracy** ± 0,5% FS

## Adjustment and parameter settings

**Zero point / range** Zero point and range can be calibrated percentagewise.  
**Control mode / Amplification** Through the software different control modes may be chosen. All parameters of P/PI/PID controllers can be tuned.  
**Diagnosis** A diagnostic tool including data recording is available within the software.  
**Characteristic curve** Increasing or decreasing curve can be set (increasing by standard).



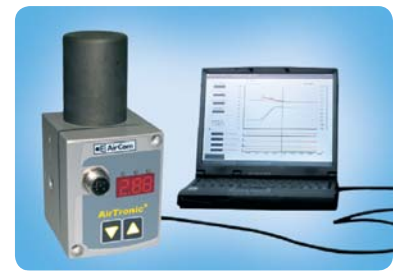
<b>Description</b>	The proportional pressure regulator is digitally controlled and works as a 3/2 valve with proportional magnet and closed loop. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, RS232 adapter and software.		
<b>Media</b>	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases		
<b>Supply voltage</b>	24 V DC ± 10 V, residual ripple < 10%		
<b>Signal range</b>	0-10 V, 100 kΩ impedance, 0/4-20 mA, 250 Ω impedance		
<b>Electrical connection</b>	plug M12x1, 5-pin, with coupling socket	<b>Pressure switch</b>	PNP, adjustable ± 5% from setpoint
<b>Power consumption</b>	21 W at DN4, 40 W at DN8		
<b>Linearity/Hysteresis</b>	< 0.5% FS / < 1% FS		
<b>Mounting position</b>	any		
<b>Temperature range</b>	fluid: 0 °C to 60 °C / 32 °F to 140 °F ambient: 0 °C to 50 °C / 32 °F to 122 °F		
<b>Material</b>	Body: aluminium	Elastomer: NBR/Buna-N	Inner valve: POM



Dimensions			Nominal size	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	l/min*1	bar	G	bar	

**Proportional pressure regulator** 0-10 V input and outlet signal, supply 24 V DC, without display, with coupling socket **PD**

52	112	67	4	0.43	470	6	G <sup>1</sup> / <sub>8</sub>	0 ... 1	PDA41-010
						6		0 ... 3	PDA41-030
						9		0 ... 5	PDA41-050
						9		0 ... 6	PDA41-060
						13		0 ... 8	PDA41-080
						13		0 ... 10	PDA41-100
						13		0 ... 12	PDA41-120
						6	G <sup>1</sup> / <sub>4</sub>	0 ... 1	PDA42-010
						6		0 ... 3	PDA42-030
						9		0 ... 5	PDA42-050
						9		0 ... 6	PDA42-060
						13		0 ... 8	PDA42-080
						13		0 ... 10	PDA42-100
						13		0 ... 12	PDA42-120
66	138	78	8	1.2	1300	6	G <sup>1</sup> / <sub>4</sub>	0 ... 1	PDA82-010
						6		0 ... 3	PDA82-030
						9		0 ... 5	PDA82-050
						9		0 ... 6	PDA82-060
						13		0 ... 8	PDA82-080
						13		0 ... 10	PDA82-100
						13		0 ... 12	PDA82-120
						6	G <sup>3</sup> / <sub>8</sub>	0 ... 1	PDA83-010
						6		0 ... 3	PDA83-030
						9		0 ... 5	PDA83-050
						9		0 ... 6	PDA83-060
						13		0 ... 8	PDA83-080
						13		0 ... 10	PDA83-100
						13		0 ... 12	PDA83-120

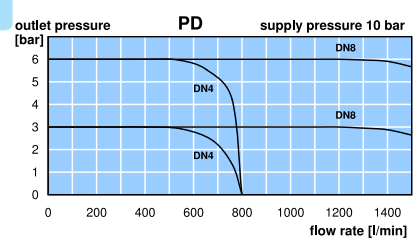


**Special options, add the appropriate letter or number**

<b>display</b>	3-digit, red	PDB. . . . .
<b>flange version</b>		PD. . . F. . . .
<b>NPT</b>	connection thread	PD. . . . . N
<b>0-20 mA</b>	setpoint input and monitor signal	PD. . . . . 1
<b>4-20 mA</b>	setpoint input and monitor signal	PD. . . . . 2
<b>cascade regulation</b>	w/o monitor signal 2. sensor, electr. feedback 0-10 V	PD. . . . . KU
	w/o monitor signal 2. sensor, electr. feedback 4-20 mA	PD. . . . . KI

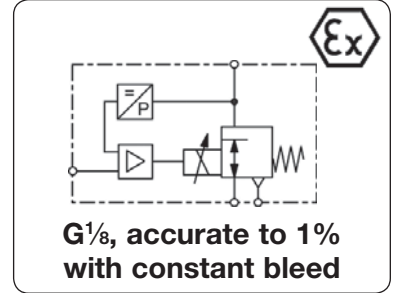
**Accessories**

<b>RS232 module</b>	with D-sub plug and 2 m cable	<b>PDRS232</b>
<b>software</b>	basic version "light"	<b>PDSOFT1</b>
<b>coupling socket</b>	M12x1, 5-pin, with 2 m cable, 5 x 0.25 angular	<b>KM12-C5-2</b>
	5 m cable, 5 x 0.25 angular	<b>KM12-C5-5</b>



\*1 at 6 bar supply pressure and 5 bar outlet pressure

<b>Description</b>	Piezo-operated proportional pressure valve with closed loop in a two-wire system. Outlet pressure is proportional to an electrical input signal. The valve can be mounted in any position and is immune to shock or vibration. It is pilot-controlled to reach a higher flow rate.		
<b>Media</b>	lubricated or unlubricated and 50 µm filtered compressed air or non-corrosive gases		
<b>Supply voltage</b>	not necessary due to two-wire system (supply through 4...20 mA command signal)		
<b>Electrical connector</b>	coupling socket, 4-pin according to DIN 43651, size 15 x 15 mm	connector turnable in 90° steps	
<b>ATEX classification</b>	Compliance with directive 94/9/EC for use in potentially explosive atmosphere of group IIC, temperature classification T4.		
<b>Power consumption</b>	< 200 mW	<b>Ignition protection type:</b>	I11G Ex ia IIC T4; I11D Ex D20 T135°C
<b>Linearity/Hysteresis</b>	< 1% FS	<b>Failsafe feature</b>	exhaust at power breakdown
<b>Mounting position</b>	any	<b>Repeatability</b>	< 0.5% FS
<b>Air consumption</b>	The pilot valve has an air consumption of 1.6 l/min	<b>Protection class</b>	IP 65
<b>Temperature range</b>	Media: 0 °C to 60 °C / 32 °F to 140 °F	<b>Ambient:</b>	0 °C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: aluminium and plastic	<b>Elastomer:</b>	NBR/Buna-N and FKM
	Inner valve: stainless steel and plastic		



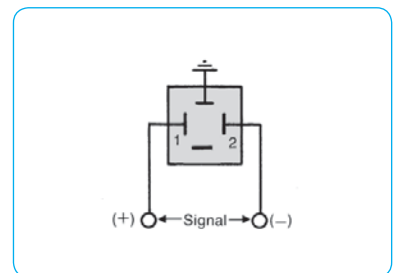
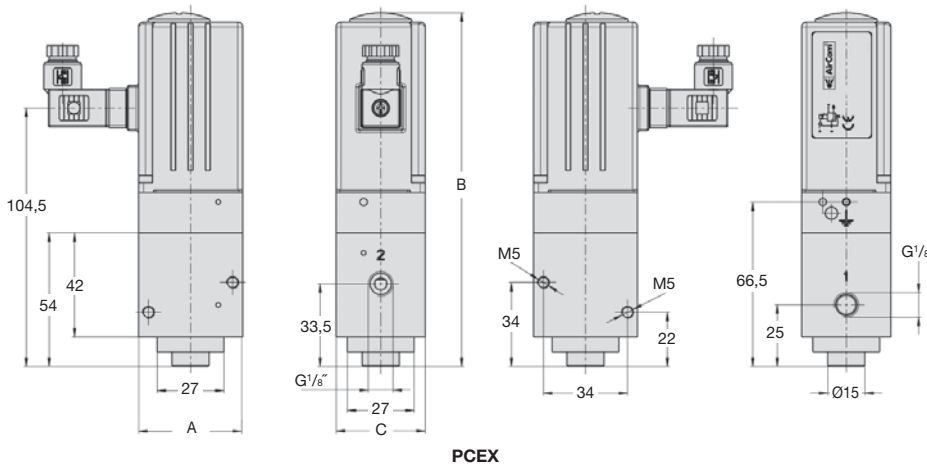
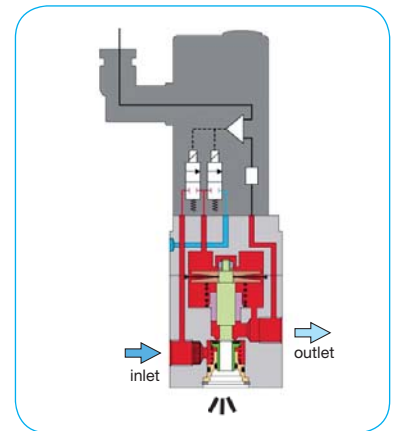
Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Supply min./max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	l/min*1	bar	G	bar	

Proportional pressure regulator									4-20 mA input signal, ATEX with coupling socket, with constant bleed	PCEX
42	143	36	4	0.5	550	2.5 / 3.0	G <sup>1</sup> / <sub>8</sub>	0...2	PCEX-02	
						3.5 / 5.0		0...3	PCEX-03	
						4.5 / 6.0		0...4	PCEX-04	
						5.5 / 8.0		0...5	PCEX-05	
						6.5 / 8.0		0...6	PCEX-06	



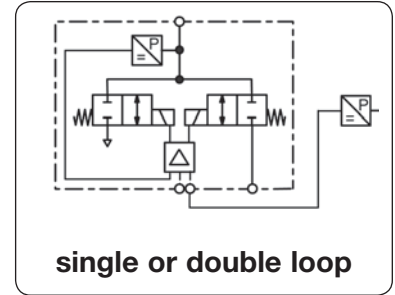
PCEX

- 1: supply port
- 2: outlet port
- 3: exhaust



\*1 at 6 bar supply pressure, 5 bar outlet pressure, equal exhaust forward flow

<b>Description</b>	Proportional control valve with closed loop control technology for better control of pressurised gases. The instrument can be built as single closed loop or dual closed loop control valve. dry, lubricated or unlubricated and 20 µm filtered compressed air or non-corrosive gases constant outlet pressure at voltage drop	
<b>Media</b>	0-10 V, impedance 4.7 kΩ, ratio of internal to external relationship is 10% to 90%	
<b>Fail freeze</b>	15-24 V DC, residual ripple < 10%, with reverse voltage protection	
<b>Second loop</b>	0-10 V / 10 kΩ, 4-20 mA / 100 Ω	
<b>Supply voltage</b>		
<b>Impedance</b>		
<b>Protection class</b>	IP65	
<b>Electrical connector</b>	M12, 6-pin	
<b>Power consumption</b>	24 W (985mA) regulating, 2.4W (100mA) non-regulating	
<b>Linearity/Hysteresis</b>	< 0.5% FS	
<b>Adjustment</b>	zero, span, hysteresis	
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F	
<b>Material</b>	Ports: brass	<b>Mounting position</b> any, vibration-resistant
	Transducer: silicon	Elastomer: FKM
		Valves: stainless steel



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate (l/min*1)	Supply pressure max. bar	Accuracy %	Connection thread G	Pressure range bar	Order number
A	B	C							

Proportional pressure valve									
0-10 V input and monitor signal, w. coupling socket supply voltage 24 V DC, single loop									
76	122	15	0.016	280	75	0.5	G½	0...40	<b>PQH1EE-40</b>
								0...50	<b>PQH1EE-50</b>
								0...60	<b>PQH1EE-60</b>
								0...70	<b>PQH1EE-70</b>

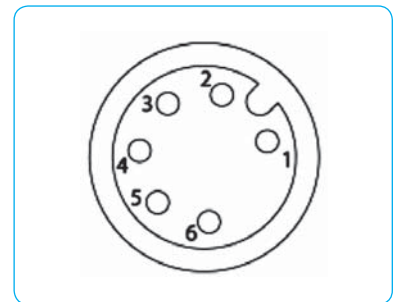
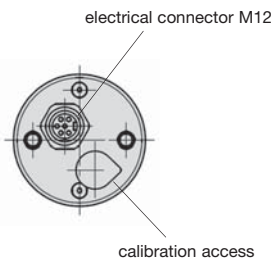
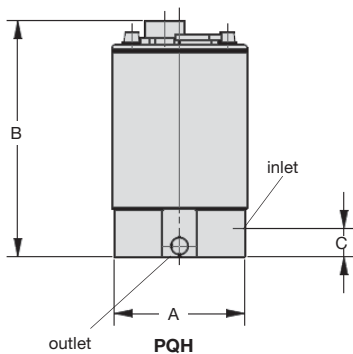


**PQH1**

Proportional pressure valve									
0-10 V input, monitor- and feedback signal, with coupling socket, supply volt. 24 V DC, double loop									
76	122	15	0.016	280	75	0.5	G½	0...40	<b>PQH2EE-40</b>
								0...50	<b>PQH2EE-50</b>
								0...60	<b>PQH2EE-60</b>
								0...70	<b>PQH2EE-70</b>

### Special options, add the appropriate letter or number

4-20 mA	input and feedback signal	PQH .IC-..
for oxygen		PQH ...-..15
stainless steel manifold		PQH ...-..SS



view from solder pin side

Pin	Description
1	TTL output
2	set point +
3	set point ground
4	supply 24V DC
5	supply earth
6	analogue output signal

connection plan

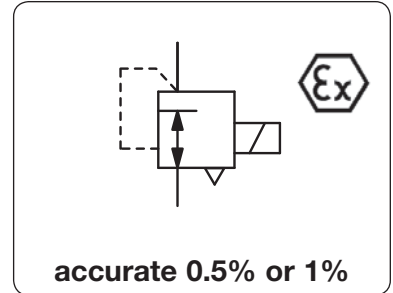
\*1 at 70 bar supply pressure and open outlet

For further details about double loop see end of the chapter

PDF CAD  
www.aircom.net

Order example:  
**PQH1EE-40**

<b>Description</b>	The proportional pressure transducer translates a direct current or voltage input signal into a proportional pneumatic outlet signal. The valve uses proven moving coil and flapper nozzle technology with a built-in pneumatic relay with slight amplification and positive bias. Additional supply voltage is not necessary. The device has to be protected against vibration.	
<b>Media</b>	5 µm filtered compressed air or non-corrosive gases	
<b>Supply voltage</b>	not required	
<b>Electrical connector</b>	plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket 30 x 30 mm	
<b>Command signal</b>	0...10 V / 1.1 kΩ at PT6...-B, otherwise 900 Ω	4...20 mA / 200 Ω at PT6...-B, otherwise 260 Ω
<b>Failsafe</b>	exhaust at power breakdown	
<b>Linearity</b>	< 0.5 % FS at 0.2...2 bar, otherwise < 1% FS	
<b>Hysteresis</b>	< 0.25% FS at 0.2...2 bar, otherwise < 1% FS	
<b>Adjustment</b>	Zero point: by 0.3 bar      Range: 40% FS	
<b>Temperature range</b>	-30 °C to 65 °C / -22 °F to 149 °F	
<b>Material</b>	Body: chromated aluminium Nozzle: sapphire in nickel-plated brass plate	<b>Response sensitivity</b> < 0.2% FS <b>Repeatability</b> < 0.1% FS <b>Vibration sensitivity</b> < 2% FS, for 10 g and 15...500 Hz <b>Mounting position</b> upright ± 15° <b>Protection class</b> IP 65 Elastomer: NBR/Buna-N Inner valve: stainless steel, brass, zinc-plated steel

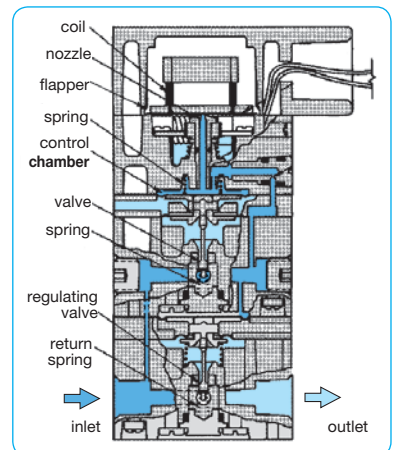


Dimensions			Flow rate	Supply pressure	Command signal	Pressure range	Order number
A	B	C	l/min*1	max. bar	V/mA	bar	
mm	mm	mm					

Proportional pressure regulator 0-10 V							¼ NPT, depending on pressure range air consumption 2...8 l/min	PT600
57	93	13	250	8	0-10 V	0.2...1	PT600-B100	
						0.2...2	PT600-B200	
57	132	13	300	10	0-10 V	0...2	PT600-0200	
						0...4	PT600-0400	
						0...8	PT600-0800	



Proportional press. regulator 4-20 mA							¼ NPT, depending on pressure range air consumption 2...8 l/min	PT602
57	93	13	250	8	4-20 mA	0.2...1	PT602-B100	
						0.2...2	PT602-B200	
57	132	13	300	10	4-20 mA	0...2	PT602-0200	
						0...4	PT602-0400	
						0...8	PT602-0800	



**Special options, change the appropriate number**

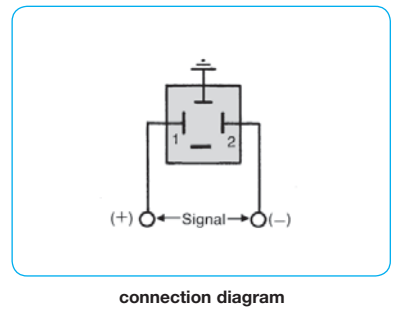
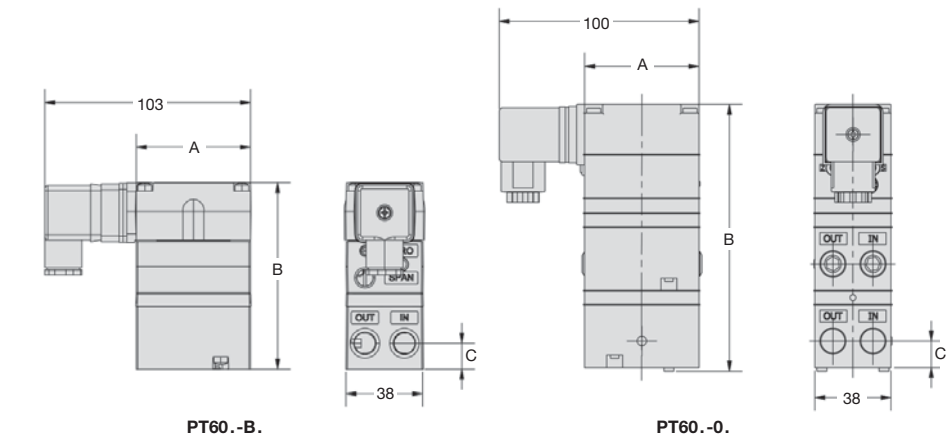
Ex-i-Atex      Atex II 1G Ex ia IIC T4      4-20 mA only      PT602-..01

**Accessories**

mounting bracket      made of steel, for standard version      SA-PT1

isolate transmitter      made of steel, for Din rail      SA-PT2

Ex ia II C, E/A: 0-20 mA, 24 V DC, EX 1-32      KFD2-CD



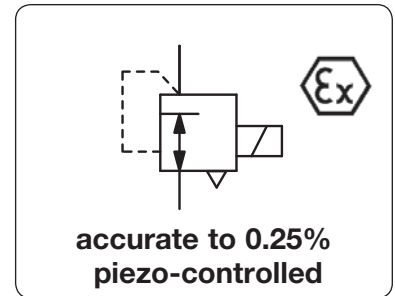
\*1 at 7 bar supply pressure and 1.4 bar outlet pressure





# Proportional Pressure Regulator with Piezo Element and Electrical Feedback PT7

<b>Description</b>	The proportional valve translates a direct current or voltage signal into a linear proportional pneumatic outlet signal. With rapid response controls using low-powered piezo microelectronics, flapper nozzle and solid state control circuit. The proportional valve has internal electronic with an electrical feedback sensor and is housed in NEMA4X (IP65) enclosure with six outlet ranges, jumper selectable. Input and outlet ports on both ends of the body simplify pneumatic piping.	
<b>Media</b>	5 µm filtered compressed air or non-corrosive gases	
<b>Supply voltage</b>	7...30 V DC, 90 mW,	required for 0...10 V setpoint input only, with reverse voltage protection
<b>Electrical connector</b>	plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket 30 x 30 mm	
<b>Command signal</b>	0...10 V / 10 kΩ, 3-pin, 24 V DC supply voltage,	4...20 mA / 330 Ω, two-wire, min. 7 V DC on input
<b>Failsafe</b>	exhaust at power breakdown	
<b>Linearity</b>	< 0.25% FS	
<b>Hysteresis</b>	< 0.1% FS at 0.2...0.5 bar, otherwise < 0.25% FS	
<b>Adjustment</b>	Zero point: by 0.3 bar	Range: 40% FS
<b>Temperature range</b>	-40 °C to 70 °C / -40 °F to 158 °F	
<b>Material</b>	Body: chromated aluminium	Nozzle: sapphire in nickel-plated brass plate
	<b>Response sensitivity</b>	< 0.2% FS
	<b>Repeatability</b>	< 0.1% FS
	<b>Vibration sensitivity</b>	< 1% FS, for 10 g and 15...500 Hz
	<b>Mounting position</b>	any
	<b>Protection class</b>	IP 65
	<b>Elastomer:</b>	NBR/Buna-N
	<b>Inner valve:</b>	stainless steel, brass, zinc-plated steel



Dimensions			Flow rate l/min*1	Supply pressure max. bar	Command signal V/mA	Pressure range bar	Order number
A	B	C					

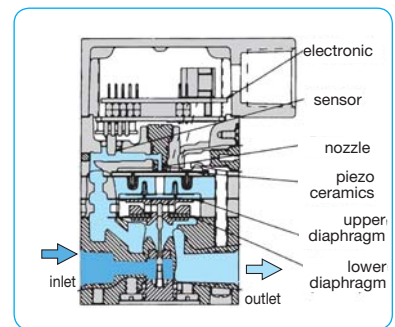
Proportional pressure regulator 0-10 V							¼" NPT, air consumption 2...8 l/min subject to pressure range	PT780
57	95	13	250	8	0-10 V	0.2...1	PT780-B100	
						0.2...2	PT780-B200	
57	133	13	300	10	0-10 V	0...2	PT780-0200	
						0...4	PT780-0400	
						0...8	PT780-0800	

Proportional press. regulator 4-20 mA							¼" NPT, air consumption 2...8 l/min subject to pressure range	PT782
57	95	13	250	8	4-20 mA	0.2...1	PT782-B100	
						0.2...2	PT782-B200	
57	133	13	300	10	4-20 mA	0...2	PT782-0200	
						0...4	PT782-0400	
						0...8	PT782-0800	



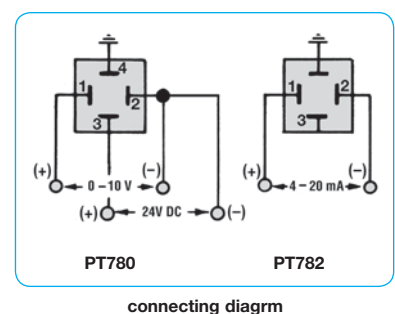
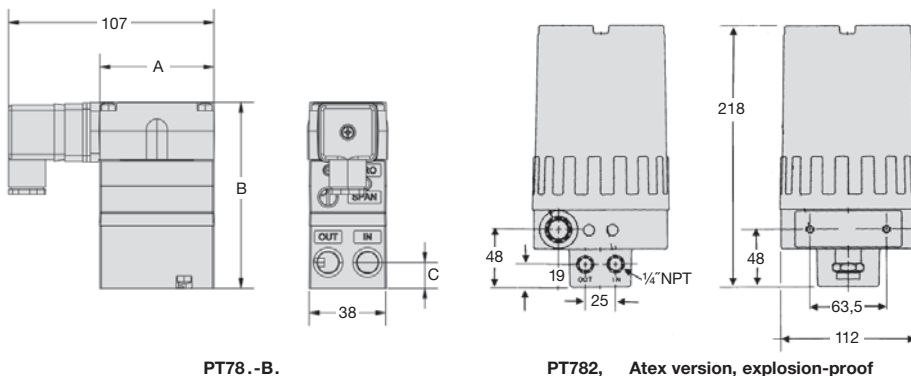
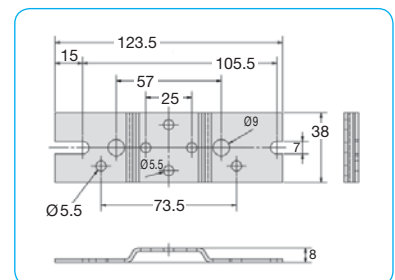
## Special options, change the appropriate number

<b>-i-Atex</b>	Atex II 1G Ex ia IIB T4	4-20 mA only	PT782-...01
<b>-d-Atex</b>	Atex ds IIC T6	max. 2 bar	4-20 mA only PT782-...0E



## Accessories

<b>mounting bracket</b>	made of steel, for standard version	<b>SA-PT1</b>
	made of steel, for DIN rail	<b>SA-PT2</b>
<b>mounting clip</b>	made of steel, Atex version, explosion-proof	<b>SA-PT3</b>
<b>isolate transmitter</b>	Ex ia II C E/A: 0...20 mA, 24 V DC, EX 1-32	<b>KFD2-CD</b>



\*1 at 7 bar supply pressure and 1.4 bar outlet pressure

### Description

Piezo-operated proportional pressure valve based on the principle of a piezo element which bends when voltage is applied. At the end of the piezo element is a flapper valve, which operates against a precision nozzle to create back pressure on the control diaphragm of a booster relay. A pressure transducer provides feedback of the outlet pressure compared with the setpoint value with correction by the electronic control system if necessary.

### Minimal power consumption

- no self-heating, even none at pressure absence
- safe battery operation over a long period
- almost no power consumption necessary for regulation
- extremely quick regulating operations
- low-noise regulation especially for medical and laboratory technology
- particularly suitable for portable devices in conjunction with battery operation
- ideal for limited space conditions

### Piezo element

### Small and light design

### PRE1

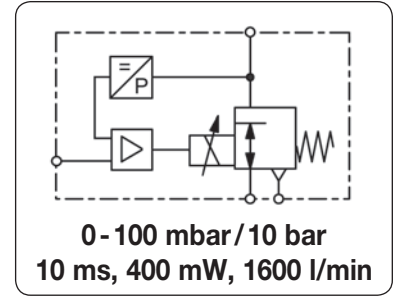
DN 2.5, 350 l/min, coupling socket M8x1, 3-pin,  
monitor signal optionally 0... $P_{2max}$   $\triangleq$  0...10 V,

monitor signal, 4-pin  
max. 1 mA,  $R_a > 1k\Omega$

### PRE2

DN 6, 1600 l/min, coupling socket M12x1.5, 5-pin  
monitor signal standard 0... $P_{2max}$   $\triangleq$  0...10 V,

max. 1 mA,  $R_a > 1k\Omega$



## General features

<b>Description</b>	Piezo-operated 3-port/2-way proportional pressure regulator with internal pressure sensor and closed loop.		
<b>Protection class</b>	IP 30 for PRE1 according to DIN EN 60529 IP 65 for PRE2 according to DIN EN 60529 with coupling socket and tapped exhaust		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F		
<b>Material</b>	Body: plastic	Elastomer: NBR/Buna-N	
	Inner valve: brass and spring steel		

## Pneumatic features

<b>Media</b>	dry, unlubricated and 5 $\mu$ m filtered compressed air or non-corrosive gases		
<b>Supply pressure</b>	min. 1.5 bar (at $P_2 \leq 8$ bar) or 2 bar (at $P_2 \geq 8$ bar) and additional $P_1$ : min. 1 bar greater than $P_2$ max. 2.5 bar up to 17 bar, depending on pressure range according to chart		
<b>Flow rate</b>	PRE1: max. 350 l/min at $P_1 = 10$ bar, $P_2 = 6$ bar and open outlet	DN 2.5	
	PRE2: max. 1600 l/min at $P_1 = 10$ bar, $P_2 = 6$ bar and open outlet	DN 6	
<b>Exhaust</b>	PRE1: 180 l/min at $P_2 = 6$ bar, 20 l/min at $P_2 = 200$ mbar		
	PRE2: 1000 l/min at $P_2 = 6$ bar, 400 l/min at $P_2 = 2$ bar		
<b>Air consumption</b>	PRE1: < 0.4 l/min at 0...200 mbar, < 0.5 l/min at 0...2 bar, < 0.6 l/min at 0...8 bar PRE2: < 1.5 l/min independent of pressure range		

## Electrical features

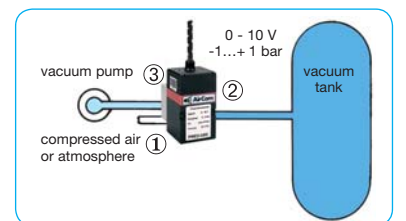
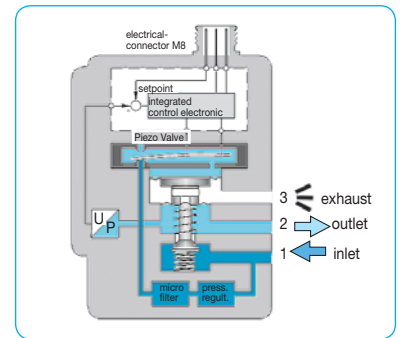
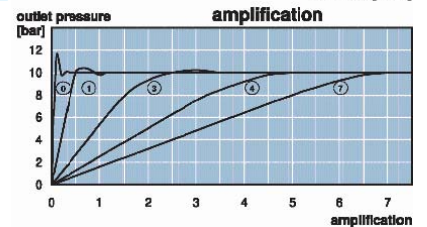
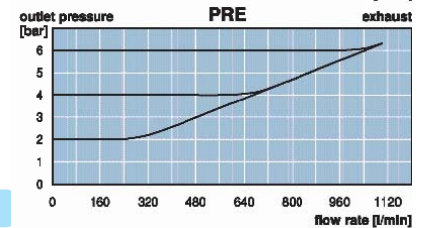
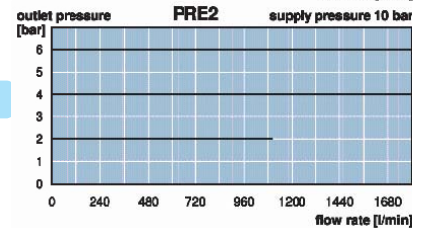
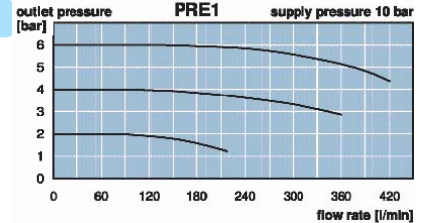
<b>Supply voltage</b>	PRE1: 24 V DC $\pm$ 10%, 0.4 W, current consumption max. 15 mA PRE2: 24 V DC $\pm$ 10%, 0.8 W, current consumption max. 30 mA		
<b>Command signal</b>	4...20 mA or 0...10 V		
<b>Impedance</b>	PRE1: 61 k $\Omega$ at voltage signal, 550 $\Omega$ at current signal		
	PRE2: 55 k $\Omega$ at voltage signal, 500 $\Omega$ at current signal		
<b>Electrical connector</b>	PRE1: coupling socket M8x1, 3-pin	PRE1-R: coupling socket M8x1, 4-pin	
	PRE2: coupling socket M12x1.5, 5-pin		
<b>Monitor signal</b>	PRE1-R: as option	0... $P_{2max}$ / 0...10 V, max. 1 mA, $R_a > 1k\Omega$	
	PRE2: standard	0... $P_{2max}$ / 0...10 V, max. 1 mA	
<b>Electronic switch</b>	PRE2 only, PNP, "on" when setpoint and actual value match in the tolerance range 0 V: off, 23 V = on, output current < 200 mA, tolerance $P_2$ : < 2%		
<b>Failsafe</b>	If signal or electrical supply fails, outlet pressure falls to zero and the regulator exhausts.		
<b>Note</b>	For long connection lines shielding is to be used. Pay attention to voltage drops. As the case may be, current signal is preferable.		

## Accuracy

<b>Linearity</b>	< 0.5% FS,	at 0.1 and 0.2 bar range	< 1 % FS
<b>Hysteresis</b>	< 0.2% FS,	at 0.1 and 0.2 bar range	< 0.5% FS
<b>Response sensitivity</b>	< 0.1% FS,	at 0.1 and 0.2 bar range	< 0.5% FS at PRE1 < 0.2% FS at PRE2
<b>Repeatability</b>	< 0.2% FS,	at 0.1 and 0.2 bar range	< 0.5% FS
<b>Response time</b>	10 ms		
<b>Over all accuracy</b>	$\pm$ 0.2% FS		

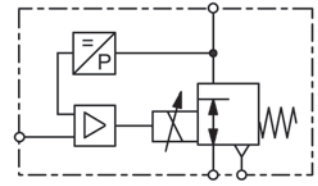
## Adjustment

<b>Zero point</b>	calibration only by factory
<b>Range</b>	calibration only by factory



### Technical features

- Highly dynamic** 10 ms, critical frequency 43 Hz
- Low power consumption** 400 mW / 800 mW nominal power
- No self-heating** due to low power consumption
- Battery operation** due to low power consumption
- For portable devices** up to 3 bar pressure range
- No over-oscillation** adjustable closed loop amplification
- No resonance oscillation** adjustable closed loop amplification
- Linearity** < 0.5% or 1% FS
- Hysteresis** < 0.2% or 0.5% FS
- Response sensitivity** < 0.1% or 0.5% FS
- Repeatability** < 0.2% or 0.5% FS
- Failsafe** exhaust at power breakdown
- Protection class** IP 30 or IP 65
- Two-wire system** for signal 4...20 mA



**0 ... 100 mbar / 10 bar**  
**10 ms, 400 mW, 1600 l/min**

Dimensions			Supply pressure	Flow rate	Connection thread	Pressure range	Order number for inlet signal	
A	B	C	max. bar	l/min*1	G	bar	4-20 mA	0-10 V

Proportional valve							supply voltage 24 V DC, constant bleed, with straight coupling socket and 5 m cable	PRE	PRE
36	61	54	2.5	50	G $\frac{1}{8}$	0...0.1	PRE1-IA1	PRE1-UA1	
				100	0...0.2	PRE1-IA2	PRE1-UA2		
			6.0	200	0... 2	PRE1-I02	PRE1-U02		
				250	0... 5	PRE1-I05	PRE1-U05		
				280	0... 6	PRE1-I06	PRE1-U06		
46	84	68	2.5	800	G $\frac{1}{4}$	-1... 1	PRE2-IV1	PRE2-UV1	
				1500	-1... 6	PRE2-I06V1	PRE2-U06V1		
			12	1700	-1... 10	PRE2-I10V1	PRE2-U10V1		
			2.5	300	-0.2... 0.2	PRE2-IA2V1	PRE2-UA2V1		
			2.5	900	0... 1	PRE2-I01	PRE2-U01		
7.0	10	1500	1100	0... 2	PRE2-I02	PRE2-U02			
			10	0... 6	PRE2-I06	PRE2-U06			
			12	0... 10	PRE2-I10	PRE2-U10			
			17	0... 16	PRE2-I16	PRE2-U16			
			2400						



PRE1



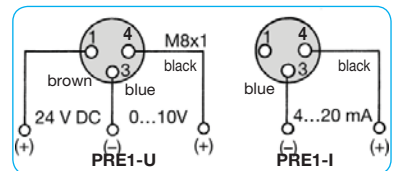
PRE2

### Special options, add the appropriate letter

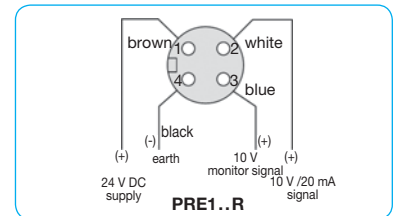
- monitor signal** 0-10 V, standard at PRE2 for PRE1 PRE1...R
- flange connection** without manifold PRE...F
- w/o coupling socket** and without cable PRE...H
- mounting clips** for DIN rail PRE...C
- deviant pressure ranges** PRE...XX

### Accessories

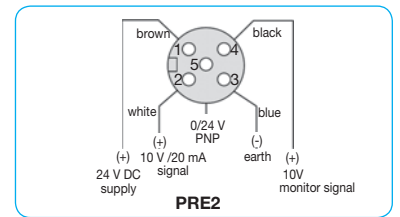
- coupling socket** with 5 m cable, angular M8x1, 3-pin for PRE1 **KM08-C3-5**
- M8x1, 4-pin for PRE1-R **KM08-C4-5**
- M12x1.5, 5-pin for PRE2 **KM12-C5-5**



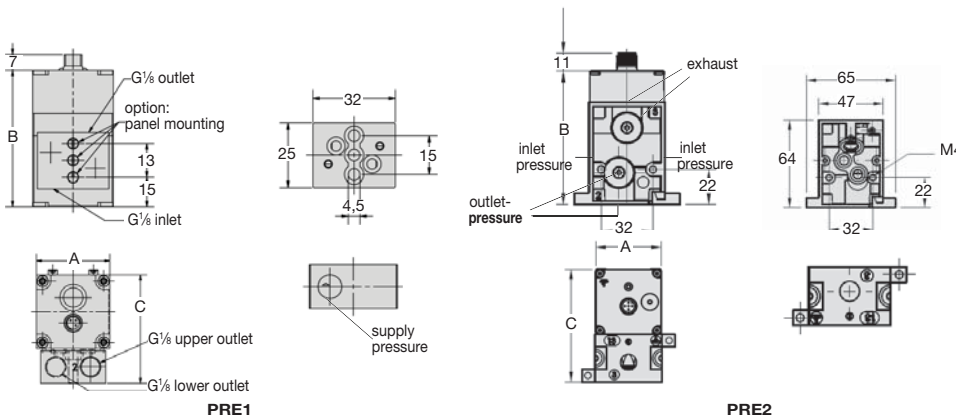
connection diagram



connection diagram



connection diagram



\*1 at open outlet

Technical details: see previous page

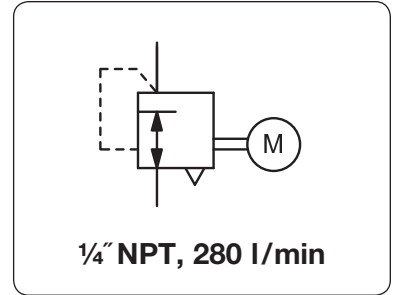
PDF CAD  
www.aircom.net



Order example:  
PRE1-IA1



<b>Description</b>	Motorised air pressure regulator designed for precise pneumatic control using an electrical signal from a remote location. A slip clutch prevents from motor damages at overload or end position limitations. dry, oil-free and 5 µm filtered compressed air or non-corrosive
<b>Media</b>	dry, oil-free and 5 µm filtered compressed air or non-corrosive
<b>Operation</b>	With no electrical power the regulator maintains a precise setpoint despite variable supply pressure and flow rates. When power is applied to the motor the pressure outlet changes.
<b>Power consumption</b>	6 W for 6 rpm motor as standard, 4 W for 2 rpm motor
<b>Control signal</b>	220 V AC, optionally 24 V DC, 24 V AC or 110 V AC
<b>Electrical connector</b>	4 single wires, optionally plug according to DIN 43650A, contact gap 18 mm, 3-pin with coupling socket
<b>Accuracy</b>	at varying supply pressures: < 1 mbar pressure deviation
<b>Air consumption</b>	max. 2.3 l/min, subject to outlet pressure, < 1% of volume flow
<b>Relieving function</b>	relieving
<b>Relief capacity</b>	140 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint, any, preferably upright optionally 280 l/min
<b>Gauge port</b>	¼"NPT on both sides of the body
<b>Material</b>	Body: zinc die-cast Inner valve: stainless steel and brass
	<b>Mounting position</b> any, preferably upright <b>Temperature range</b> -18 °C to 60 °C / 0 °F to 140 °F <b>Elastomer:</b> NBR/Buna-N <b>Mounting bracket:</b> black-coated steel



Dimensions			Power	Flow	Switching	Connection	Pressure	Order
A	B	C	consumption	rate	time	thread	range	number
mm	mm	mm	W	l/min*1	s	NPT	bar	

Motorised pressure regulator								P <sub>1</sub> max. 10 bar, relieving, with constant bleed, control signal 220 V AC, 6 rpm	P180
62	195	14	6	280	40	¼"NPT	0.14...1.8		P180-02A
					30		0.14...4.0		P180-02B
					50		0.14...8.0		P180-02C

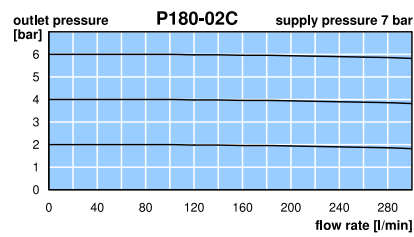
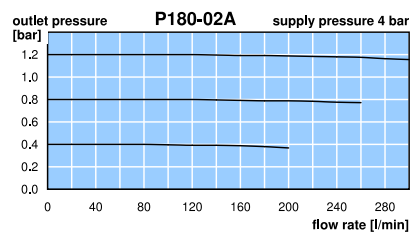
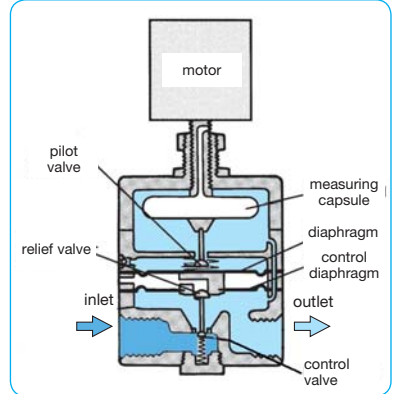
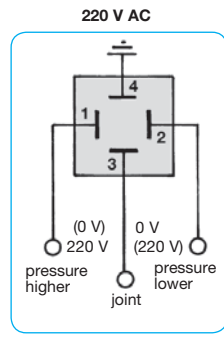
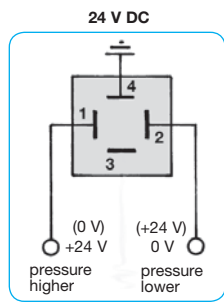
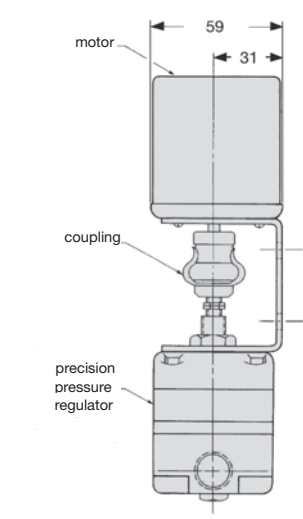
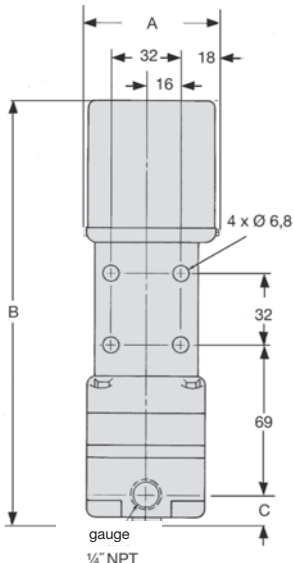


### Special options, add the appropriate letter

<b>24 V DC</b>	control signal		P180-02 . V
<b>110 V AC</b>	control signal		P180-02 . W
<b>switching time</b>	three times greater than standard	not for 24 V	P180-02 . T
<b>higher exhaust</b>	two times greater than standard		P180-02 . H
<b>DIN connector</b>	connection with DIN plug 30x30 mm		P180-02 . D

### Accessories

<b>pressure gauge</b>	Ø 50 mm, 0... *2 bar, G¼, connecting parts necessary	MA5002-..*2
<b>gauge connecting parts</b>	adapter ¼"NPT - R¼f	VP-0202N

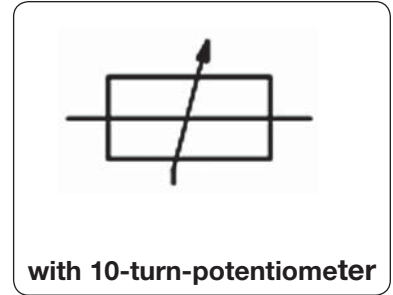


\*1 bei 7 bar Eingangsdruck und 6 bar Ausgangsdruck  
\*2 02 = 0...2,5 bar, 06 = 0...6 bar, 10 = 0...10 bar





<b>Description</b>	The series line of potentiometers are designed for use as a command signal for control valves. A 10 volt reference is used to provide excitation to the potentiometer. An op-amp measures the output on the wiper of the potentiometer and provides buffering to eliminate external components from affecting the linearity of the potentiometer. A three wire cord is provided and is attached to the pc board to make necessary power signal and common connections		
<b>Field of application</b>	0-10 V version PPB-U is compatible with all proportional pressure regulators. 4-20 mA version PPB-I is compatible with all valves of Series PQ and PM. For all other valves, e.g Series PP, PR, PRE, a setpoint of 4.1 ... 18.5 mA is generated.		
<b>Measuring range</b>	0 ... 999	<b>Supply voltage</b>	15 - 24 V DC
<b>Current consumption</b>	max. 30 mA	<b>Linearity/Hysteresis</b>	± 0.25% FS
<b>Mounting position</b>	any	<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F



Dimensions			Output signal V / mA	Order number
F	H	G		
mm	mm	mm		

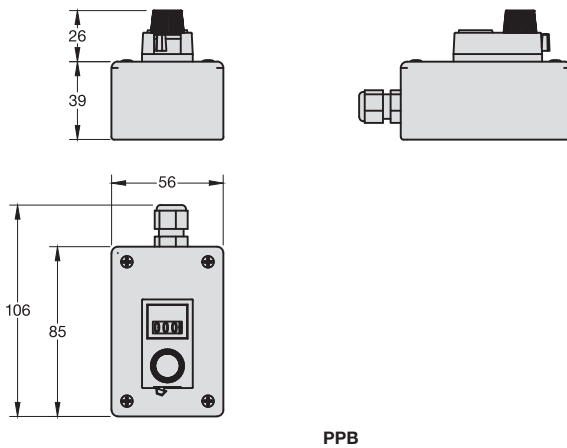
Setpoint Potentiometer			supply voltage 15 - 24 V DC	PPB
85	55	40	0-10 V	PPB-U
85	55	40	4-20 mA	PPB-I



PPB-U



PPB-I



Pin	Description	3-pin cable
1	voltage supply 24V DC	black
2	analogue setpoint	white
3	supply earth	green

connecting plan





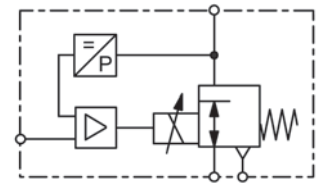
# Volume Booster / Proportional Valve Combination

## What are volume booster / proportional valve combinations used for?

Combinations of volume boosters and proportional valves lend themselves for electronically regulating high volume flows. On the one hand common proportional valves are not available with connection sizes big enough, on the other hand combinations are in most cases more economic. There are two ways of regulating: Single loop systems are suitable for standard applications without high requirements for accuracy and without consideration of pressure drop at high flow. Double loop regulations on the contrary are much more accurate and also qualified for dynamic processes.

### General operational description:

The volume booster and proportional valve are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional valve and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.



**G<sup>1</sup>/<sub>4</sub> up to G3  
compressed air or liquids**

## Single loop

At single loop combinations the pressure difference between command signal and outlet pressure is being ignored because the proportional valve only refers to its own outlet pressure within the pilot chamber. The outlet pressure performance is dependent of the volume booster's accuracy.

## Double loop

Combinations with a second feedback have the possibility to balance pressure differences. For this a pressure transducer is installed in the outlet line of the booster. The electrical signal of the transducer is applied as a feedback signal onto the proportional valve. The valve detects any pressure differences and compensates them automatically. In high flow applications a pressure drop at the outlet of the pilot regulator is thus minimised.

## General features

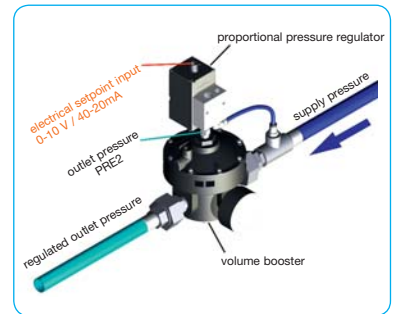
<b>Construction type</b>	The volume booster / proportional valve combinations are delivered completely assembled and calibrated.
<b>Mounting position</b>	preferred horizontal (see figure)
<b>Protection class</b>	IP 54 with ordinary coupling socket as standard, optionally IP 65 for some devices (see according product information sheets)
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for all proportional valves, for booster ranges refer to according product sheets

## Pneumatic features

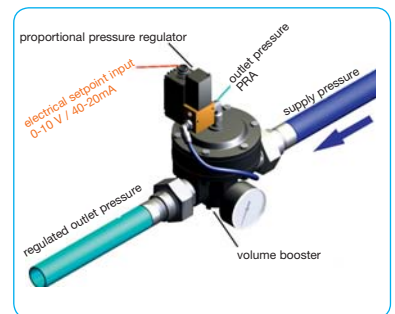
<b>Command signal</b>	The proportional valves may only be fed with dry and 5 µm filtered compressed air. The pneumatic command signal must always be air!
<b>Media</b>	Preferred dry, 5 µm filtered compressed air for supply of the proportional valves. The volume boosters can operate with air or non-corrosive gases, model R120 even with liquids. The respective air consumption and the relieving function strongly have to be regarded.
<b>Inlet pressure</b>	dependent of the according combination (see according product information sheets)
<b>Pressure supply</b>	The proportional valve has to be separately supplied with compressed air with regard to the valve's maximum inlet pressure.
<b>Exhaust</b>	The proportional valve exhausts only the booster's pilot chamber. The booster, if in relieving version, exhausts the volume of the supply pressure line. The relief capacity is subject to the differential pressure.
<b>Volume flow</b>	see specifications of the according volume booster

## Electrical features

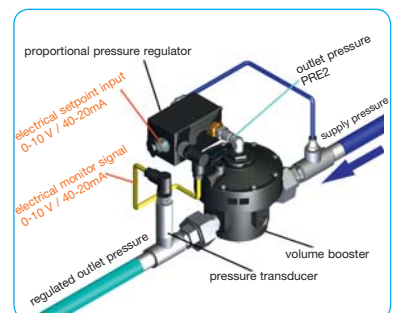
<b>Supply voltage</b>	All valves have to be supplied with 24 V DC.
<b>Power consumption</b>	see according product information sheets
<b>Setpoint input</b>	0-10 V as standard, optionally 4-20 mA for all valves
<b>Monitor signal</b>	A feedback signal is not reasonable for the single loop version because here only the pressure of the booster's pilot chamber is monitored. That value does not give any information about the outlet pressure behind the booster.



**PRE2, R450 with single loop**



**PRA, R119 with single loop**

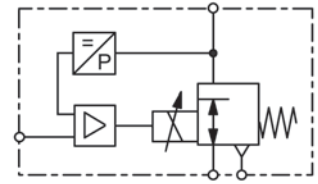


**PQ2, R450 with double loop**

**General operational description:**

The volume booster and proportional valve are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional valve and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.

At single loop combinations the pressure difference between command signal and outlet pressure is being ignored because the proportional valve only refers to its own outlet pressure within the pilot chamber. The outlet pressure performance is dependent of the volume booster's accuracy.



**G<sup>1</sup>/<sub>4</sub> up to G3  
compressed air or liquids**

## Single loop combination examples

Flow rate l/min	Connection thread G	Outlet pressure bar	Part number Booster	Part number Prop.valve	Order number of combination
--------------------	---------------------------	---------------------------	------------------------	---------------------------	--------------------------------

**R750 with PRE1, for compressed air or non-corrosive gases** setpoint 0-10 V, P<sub>1</sub> max. 17 bar

1000	G <sup>1</sup> / <sub>4</sub>	0... 8	R750-02I	PRE1-U08	<b>BP1U750-02</b>
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**R450 with PRE1, for compressed air or non-corrosive gases** setpoint 0-10 V, P<sub>1</sub> max. 17 bar

4000	G <sup>1</sup> / <sub>2</sub>	0... 8	R450-04I	PRE1-U08	<b>BP1U450-04</b>
------	-------------------------------	--------	----------	----------	-------------------

**R119 with PPA, for compressed air or non-corrosive gases** setpoint 0-10 V, P<sub>1</sub> max. 21 bar

5600	G <sup>1</sup> / <sub>2</sub>	0... 10	R119-04J	PPA00-1000	<b>BP1U119-04</b>
9000	G <sup>3</sup> / <sub>4</sub>	0... 10	R119-06J	PPA00-1000	<b>BP1U119-06</b>
10000	G1	0... 10	R119-08J	PPA00-1000	<b>BP1U119-08</b>
12000	G1 <sup>1</sup> / <sub>2</sub>	0... 10	R119-12J	PPA00-1000	<b>BP1U119-12</b>
42000	G2	0... 10	R119-16J	PPA00-1000	<b>BP1U119-16</b>
44000	G2 <sup>1</sup> / <sub>2</sub>	0... 10	R119-20J	PPA00-1000	<b>BP1U119-20</b>
110000	G3	0... 10	R119-24J	PPA00-1000	<b>BP1U119-24</b>

**RGB4 with PRE1-.A2, for compressed air or gases** setpoint 0-10 V, P<sub>1</sub> max. 4 bar

700	G <sup>1</sup> / <sub>2</sub>	0...0,2	RGB4-04J	PRE1-UA2	<b>BP1UGB4-04</b>
2800	G1	0...0,2	RGB4-08J	PRE1-UA2	<b>BP1UGB4-08</b>
5600	G1 <sup>1</sup> / <sub>2</sub>	0...0,2	RGB4-12J	PRE1-UA2	<b>BP1UGB4-12</b>

**RZ1 with PRE1-.01/02, for compressed air or gases** setpoint 0-10 V, P<sub>1</sub> max. 16 bar

2900	G1	0... 1	RZ1-08J	PRE1-U02	<b>BP1UZ-08</b>
5700	G1 <sup>1</sup> / <sub>2</sub>	0... 1	RZ1-12J	PRE1-U02	<b>BP1UZ-12</b>
21000	G2	0... 1	RZ1-16J	PRE1-U02	<b>BP1UZ-16</b>

**R120 with PPA, for compressed air, gases or liquids** setpoint 0-10 V, P<sub>1</sub> max. 50 bar

1200	G <sup>1</sup> / <sub>2</sub>	0... 15	R120-04J2	PPA00-1600	<b>BP1U120-04</b>
4200	G <sup>3</sup> / <sub>4</sub>	0... 15	R120-06J2	PPA00-1600	<b>BP1U120-06</b>
5000	G1	0... 15	R120-08J2	PPA00-1600	<b>BP1U120-08</b>
1200	G <sup>1</sup> / <sub>2</sub>	0... 50	R120-04J5	PP000-5000	<b>BP1U120-04J5</b>
4200	G <sup>3</sup> / <sub>4</sub>	0... 50	R120-06J5	PP000-5000	<b>BP1U120-06J5</b>
5000	G1	0... 50	R120-08J5	PP000-5000	<b>BP1U120-08J5</b>
14000	G1 <sup>1</sup> / <sub>2</sub>	0... 50	R120-12J5	PP000-5000	<b>BP1U120-12J5</b>
15000	G2	0... 50	R120-16J5	PP000-5000	<b>BP1U120-16J5</b>

**Special options,** add the appropriate letter

4-20 mA	input signal	BP1I...-....
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BP1U450-04



BP1U119-16



BP1UZ-08



BP1U120-08J5

Gauges: see chapter for measuring devices  
Further details: see chapter for single devices

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Order example:  
BP1U750-02

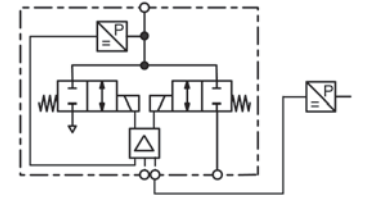


10

### General operational description:

The volume booster and proportional valve are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional valve and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.

Combinations with a second feedback have the possibility to balance pressure differences. For this a pressure transducer is installed in the outlet line of the booster. The electrical signal of the transducer is applied as a feedback signal onto the proportional valve. The valve detects any pressure differences and compensates them automatically. In high flow applications a pressure drop at the outlet of the pilot regulator is thus minimised.



**G $\frac{1}{2}$  up to G2**  
compressed air or non-corrosive gases

### Double loop combination example

Flow rate l/min	Connection thread G	Outlet pressure bar	Sensor	Part number Booster	Prop.valve	Order number of combination
--------------------	---------------------------	---------------------------	--------	------------------------	------------	--------------------------------

#### R450 with PQ2, for compressed air or non-corrosive gases setpoint 0-10 V, P<sub>1</sub> max. 17 bar

4 000	G $\frac{1}{2}$	0... 1	DAV-01H	R450-04I	PQ2EE-01	<b>BP2U450-0401</b>
		0... 6	DAV-06H	R450-04I	PQ2EE-06	<b>BP2U450-0406</b>
		0... 10	DAV-10H	R450-04I	PQ2EE-10	<b>BP2U450-0410</b>



BP2U450-0406

#### R200 with PQ2, for compressed air or non-corrosive gases setpoint 0-10 V, P<sub>1</sub> max. 17 bar

28 000	G1	0... 1	DAV-01H	R200-08I	PQ2EE-01	<b>BP2U200-0801</b>
		0... 6	DAV-06H	R200-08I	PQ2EE-06	<b>BP2U200-0806</b>
		0... 10	DAV-10H	R200-08I	PQ2EE-10	<b>BP2U200-0810</b>



BP2U200-0806

#### RGB4 with PQ2, for compressed air or gases setpoint 0-10 V, P<sub>1</sub> max. 4 bar

700	G $\frac{1}{2}$	0...0.35	DAV-C4H	RGB4-04J	PQ2EE-C4	<b>BP2UGB4-04</b>
2 800	G1	0...0.35	DAV-C4H	RGB4-08J	PQ2EE-C4	<b>BP2UGB4-08</b>
5 600	G $\frac{1}{2}$	0...0.35	DAV-C4H	RGB4-12J	PQ2EE-C4	<b>BP2UGB4-12</b>



BP2UGB4-12

#### RZ1 with PQ2, for compressed air or gases setpoint 0-10 V, P<sub>1</sub> max. 16 bar

2 900	G1	0...1	DAV-01H	RZ1-08J	PQ2EE-01	<b>BP2UZ-08</b>
5 700	G $\frac{1}{2}$	0...1	DAV-01H	RZ1-12J	PQ2EE-01	<b>BP2UZ-12</b>
21 000	G2	0...1	DAV-01H	RZ1-16J	PQ2EE-01	<b>BP2UZ-16</b>

### Special options, add the appropriate letter

4-20 mA      input signal      BP2I ...-....



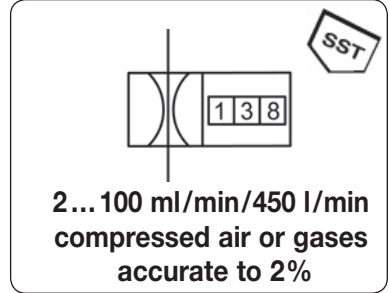
	Description	DN/Ø	Flow rate l/min	Connection thread	Device	Page
<b>Measuring devices</b>	portable		0.02 ... 0.1/ 450	G¼ and G½	VGM	<b>11.02</b>
	portable, hand-operated		0.02 ... 0.1/ 450	G¼ and G½	VGR	<b>11.03</b>
	for many gases		0.05 ... 0.1/ 6000	G¼ - G1	PVM	<b>11.06</b>
	with proportional regulator		0.05 ... 0.1/ 2000	G¼ - G½	PVR	<b>11.07</b>
	differential pressure principle		0.03 ... 0.3/ 7000	G¼ - G¾	VPF	<b>11.08</b>
<b>Prop. flow valves</b>	for air and water	0.1 /.../ 20	0 ..... 0.3 / 1185	G½ - G1	PV21...PV40	<b>11.10</b>
	extremely small, 7 mW	0.3/ 0.4	0 ... 6 / 7	flange	PV630, PV631	<b>11.12</b>
	pulse-width-modulated, mini	0.2 /.../ 0.8	0 ... 1 / 20	flange	PV202	<b>11.13</b>
	pulse-width-modulated	1.2 /.../ 7.1	0 ... 70 / 420	G½ - G¾	PV202	<b>11.14</b>
	stainless steel	1.2/ 7.1	0 ... 70 / 420	G½ - G¾	PV202-S	<b>11.14</b>
	for water	12.5	0 ... 35 / 37	G¾ u. G½	PV203	<b>11.14</b>
	motorised, for liquids	15 / 20	0 ... 1000 / 3500	G½ - G1	P8	<b>11.15</b>
	w/o power consumption	0.2 /.../ 1.5	0 ... 3 / 24	M5	PVK	<b>11.16</b>
	flow valve, Y-type	15 /.../ 65	0 ... 14 / 1233	G½ - G2½	PVE	<b>11.17</b>
<b>Needle valves</b>	compact	Ø 1.0 - 6.5	0 ..... 0.3 / 425	G¼ and G½	VR6	<b>11.04</b>
<b>Pinch valves</b>	POM or Aluminium			G¾ - G3, DN150 Q		<b>11.18</b>



# 11

# Proportional Flow Valves

<b>Description</b>	Thermal mass flow meter based on high precision MEMS technology (CMOS sensor). Pressure and temperature-insensitive according to the CTA constant temperature principle. Also insensitive to pressure surges.		
<b>Media</b>	compressed air or non-corrosive gases	<b>Operating pressure</b>	max. 10 bar
<b>Supply voltage</b>	Standard AA battery or Micro-USB power supply (DIN62684), optionally external power +12 ...+30 V DC (max. 200 mA)		
<b>Display</b>	Touch-display 128 x 64 px, backlighted only with external power supply (Micro-USB or 24 V DC)		
<b>Electrical connector</b>	optionally length 2.0 m, with free ends at 24 V DC	<b>Function</b>	totalisator included, physical units can be changed
<b>Alarm functions</b>	3 configurable alarms, programmable as : low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: delay and alarm duration. Relais: switching current up to 1A, switching voltage 30 V DC		
<b>Accuracy</b>	± 2% FS, from 200 l/min ± 3% FS	<b>Response time</b>	500 ms at 99% accuracy
<b>Turndown ratio</b>	1:50 (Eco) or 1:1000 (Special)	<b>Protection class</b>	IP 50
<b>Flow regulation</b>	manual fine adjustment by 15 turns	<b>Mounting position</b>	any, horizontal from 5 bar on
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	<b>Warm-up time</b>	< 1 sec. for full accuracy
<b>Material</b>	Body: aluminium, optionally electropolished stainless steel 316 Elastomer: FKM, optionally EPDM		



Dimensions			Operating pressure	Accuracy	Connection thread	Flow rate	Order number
A	B	C					
mm	mm	mm	max. bar	%	G	ml/min / l/min	

Mass flow meter							w/o manual control valve, LCD-Display, battery mode, portable, aluminium, FKM	VGM*1
114	44	12.5	10	2	G¼	2 ... 100 ml/min	VGM-A1	
						4 ... 200 ml/min	VGM-A2	
						10 ... 500 ml/min	VGM-A5	
						0.02 ... 1 l/min	VGM-B1	
						0.04 ... 2 l/min	VGM-B2	
						0.1 ... 5 l/min	VGM-B5	
160	54	17.5	10	2	G½	0.2 ... 10 l/min	VGM-C1	
						0.4 ... 20 l/min	VGM-C2	
						1 ... 50 l/min	VGM-C5	
						2 ... 100 l/min	VGM-D1	
						4 ... 200 l/min	VGM-D2	
						4 ... 300 l/min	VGM-D3	
				3		9 ... 450 l/min	VGM-D4	



VGM-G¼ mass flow meter

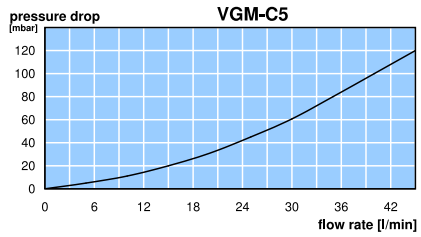
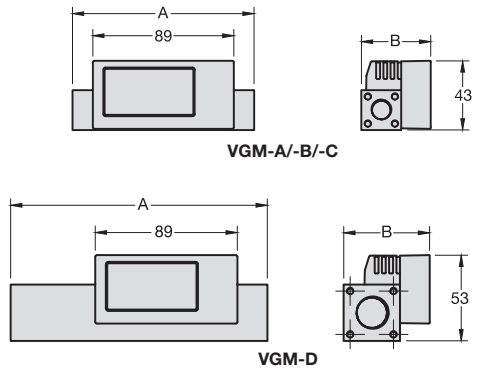


VGM-G½ mass flow meter

**Special options,** add the appropriate letter oder number

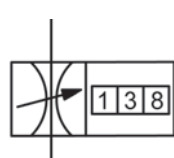
<b>deviant volume flow</b>	indicate on order	VGM-XX
<b>limit switch</b>	min. / max.-alarm, 1 A SPDT switch, incl. 24 V DC supply	VGM- . . 2 G
<b>stainless steel body</b>	electropolished throughout	VGM- . . S
<b>EPDM elastomer</b>	for VGM-A1 to -C5	VGM- . . E
<b>24 V DC supply</b>	cable attached on the device, length 2 m, with free ends	VGM- . . 2
<b>panel mounting</b>	cut-out 48 x 96 mm, protection class IP50 in the front	VGM- . . T
<b>0.1% accuracy</b>		VGM- . . H
<b>carbon dioxide</b>	CO <sub>2</sub>	VGM- . . 03
<b>argon</b>	Ar	VGM- . . 05
<b>nitrogen</b>	N <sub>2</sub>	VGM- . . 07
<b>helium</b>	He	VGM- . . 09
<b>hydrogen</b>	H <sub>2</sub>	VGM- . . 11
<b>methane</b>	CH <sub>4</sub>	VGM- . . 13
<b>oxygen</b>	O <sub>2</sub>	VGM- . . 15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>	VGM- . . 16
<b>nitrous oxide</b>	N <sub>2</sub> O	VGM- . . 17
<b>gases</b>	see above	VGM- D . . .
		for G½

Specific gas calibration			
gas species			max. l/min
nitrogen	07	N <sub>2</sub>	450
oxygen	15	O <sub>2</sub>	450
argon	05	Ar	300
helium	09	He	450
hydrogen	11	H <sub>2</sub>	300
carbon dioxide	03	CO <sub>2</sub>	150
propane	16	C <sub>3</sub> H <sub>8</sub>	80
methane	13	CH <sub>4</sub>	100





<b>Description</b>	Thermal mass flow meter based on high precision MEMS technology (CMOS sensor). Pressure and temperature-insensitive according to the CTA constant temperature principle. Also insensitive to pressure surges.		
<b>Media</b>	compressed air or non-corrosive gases	<b>Operating pressure</b>	max. 10 bar
<b>Supply voltage</b>	Standard AA battery or Micro-USB power supply (DIN62684), optionally external power +12 ...+30 V DC (max. 200 mA)		
<b>Display</b>	Touch-display 128 x 64 px, backlit only with external power supply (Micro-USB or 24 V DC)		
<b>Electrical connector</b>	optionally length 2.0 m, with free ends at 24 V DC	<b>Function</b>	totalisator included, physical units can be changed
<b>Alarm functions</b>	3 configurable alarms, programmable as : low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: delay and alarm duration. Relais: switching current up to 1A, switching voltage 30 V DC		
<b>Accuracy</b>	± 2% FS, from 200 l/min ± 3% FS	<b>Response time</b>	500 ms at 99% accuracy
<b>Turndown ratio</b>	1:50 (Eco) or 1:1000 (Special)	<b>Protection class</b>	IP 50
<b>Flow regulation</b>	manual fine adjustment by 15 turns	<b>Mounting position</b>	any, horizontal from 5 bar on
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	<b>Warm-up time</b>	< 1 sec. for full accuracy
<b>Material</b>	Body: aluminium, optionally electropolished stainless steel 316 Elastomer: FKM, optionally EPDM		



**2 ... 100 ml/min/450 l/min  
compressed air or gases  
accurate to 2%**

Dimensions			Operating pressure	Accuracy	Connection thread	Flow rate	Order number
A	B	C					
mm	mm	mm	max. bar	%	G	ml/min / l/min	

Mass flow meter			with manual control valve, LCD-Display, needle valve battery mode, portable, aluminium, FKM			VGR*1	
114	44	12.5	10	2	G¼	2 ... 100 ml/min	VGR-A1
				2		4 ... 200 ml/min	VGR-A2
				2		10 ... 500 ml/min	VGR-A5
				2		0.02 ... 1 l/min	VGR-B1
				2		0.04 ... 2 l/min	VGR-B2
160	54	17.5	10	2		0.1 ... 5 l/min	VGR-B5
				2		0.2 ... 10 l/min	VGR-C1
				2		0.4 ... 20 l/min	VGR-C2
				2	G½	1 ... 50 l/min	VGR-C5
				3		2 ... 100 l/min	VGR-D1
				2		4 ... 200 l/min	VGR-D2
				3		4 ... 300 l/min	VGR-D3
				3		9 ... 450 l/min	VGR-D4



VGR-G¼  
mass flow meter  
with manual control valve

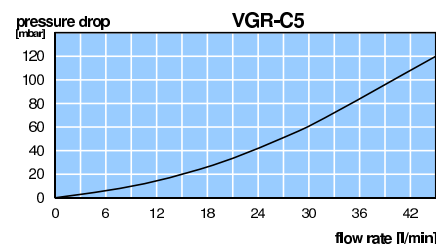
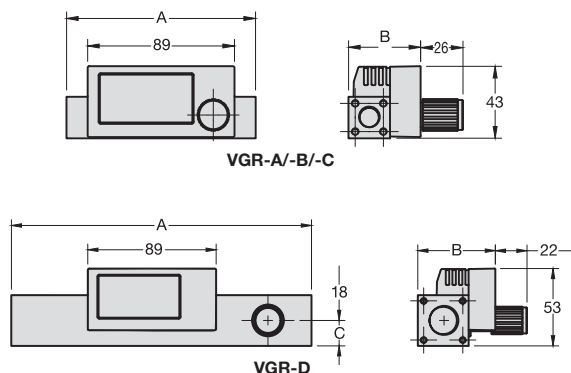


VGR-G½  
mass flow meter

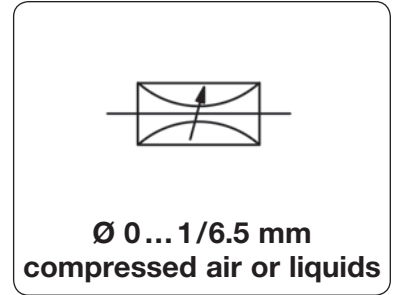
## Special options, add the appropriate letter oder number

<b>deviant volume flow</b>	indicate on order	VGR-XX
<b>limit switch</b>	min. / max.-alarm, 1 A SPDT switch, incl. 24 V DC supply	VGR-..2G
<b>stainless steel body</b>	electropolished throughout	VGR-..S
<b>EPDM elastomer</b>	for VGR-A1 to -C5	VGR-..E
<b>24 V DC supply</b>	cable attached on the device, length 2 m, with free ends	VGR-..2
<b>panel mounting</b>	cut-out 48 x 96 mm, protection class IP50 in the front	VGR-..T
<b>0.1% accuracy</b>		VGR-..H
<b>carbon dioxide</b>	CO <sub>2</sub>	VGR-..03
<b>argon</b>	Ar	VGR-..05
<b>nitrogen</b>	N <sub>2</sub>	VGR-..07
<b>helium</b>	He	VGR-..09
<b>hydrogen</b>	H <sub>2</sub>	VGR-..11
<b>methane</b>	CH <sub>4</sub>	VGR-..13
<b>oxygen</b>	O <sub>2</sub>	VGR-..15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>	VGR-..16
<b>nitrous oxide</b>	N <sub>2</sub> O	VGR-..17
<b>gases</b>	see above	VGR- D ...

Specific gas calibration			
gas species			max. l/min
nitrogen	07	N <sub>2</sub>	450
oxygen	15	O <sub>2</sub>	450
argon	05	Ar	300
helium	09	He	450
hydrogen	11	H <sub>2</sub>	300
carbon dioxide	03	CO <sub>2</sub>	150
propane	16	C <sub>3</sub> H <sub>8</sub>	80
methane	13	CH <sub>4</sub>	100



<b>Description</b>	The modular, compact micro needle valve is for fine-flow adjustment of gases and liquids. It consists of an inner valve and body with straight or angle connector. The valve is free from oil and grease.		
<b>Media</b>	5 µm filtered compressed air, non-corrosive gases or liquids		
<b>Operating pressure</b>	vacuum up to positive pressure of max. 20 bar		
<b>Adjustment</b>	The micro valve has a 15-turn spindle to fully open from a closed condition. It operates with virtually no hysteresis and closes clockwise or optionally counterclockwise. The valve needle is non-rotating and thus provides a stable adjustment.		
<b>Panel mounting</b>	borehole 15 mm,	mounting through two screws M4x10	
<b>Temperature range</b>	-20 °C to 150 °C / - 4 °F to 302 °F for FKM,	-40 °C to 150 °C / -40 °F to 302 °F for EPDM	
<b>Material</b>	Body: anodized aluminium, optionally stainless steel Inner valve: nickel-plated brass, optionally stainless steel	Elastomer: FKM, optionally EPDM	Knob: plastic



Dimensions			Needle size mm	K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread G	Order number
A	B	C			water l/min*2	air l/min*1		

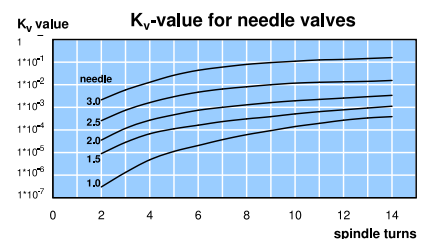
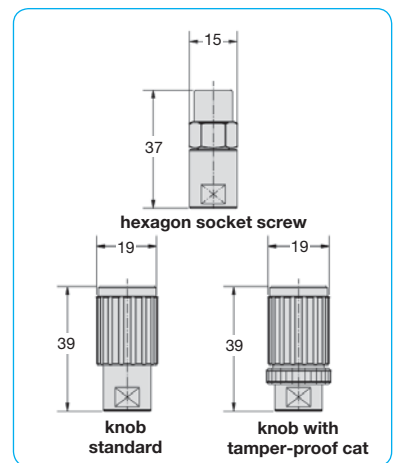
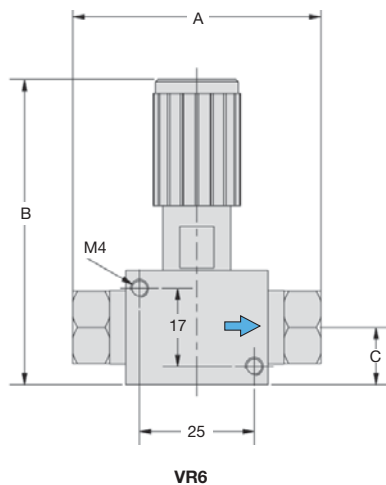
Precision needle valve					with straight pass, right-hand closing, with knob, aluminium/brass/FKM, supply: max. 20 bar			VR
54	64	10	1.0	0.0007	0... 0.01	0... 0.3	G¼	<b>VR6-02A</b>
			1.5	0.005	0... 0.10	0... 2.5		<b>VR6-02B</b>
			2.0	0.01	0... 0.15	0... 7.0		<b>VR6-02C</b>
			2.5	0.04	0... 0.60	0... 17		<b>VR6-02D</b>
			3.0	0.10	0... 2.30	0... 60		<b>VR6-02E</b>
62	80	17.5	4.0	0.58	0... 8.00	0... 250	G½	<b>VR6-04A</b>
			6.5	1.00	0... 16	0... 425		<b>VR6-04B</b>



**VR6  
straight-way valve**

### Special options, add the appropriate letter

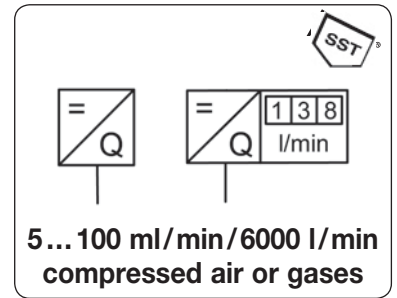
<b>stainless steel body</b>	body and valve made of stainless steel 316	for G¼	<b>VR6-02.S</b>
<b>EPDM elastomer</b>	-40 °C to 90 °C / -40 °F to 194 °F, SST body only	for G¼	<b>VR6-02.SE</b>
<b>amper-proof cap</b>	on valve with knob, standard		<b>VR6-02.T</b>
<b>hexagon socket screw</b>	and locknut		<b>VR6-02.I</b>



\*1 at 1 bar operating pressure and open outlet  
\*2 at 1 bar pressure difference

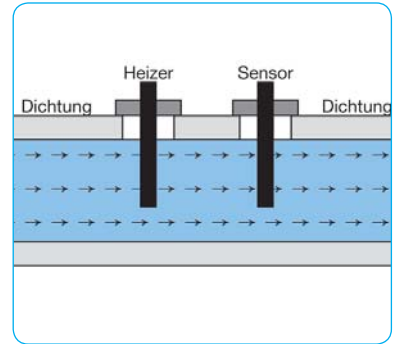
### Technical features

- Benefits:**
- suitable for nearly all gases and gas mixtures
  - no moving parts
  - short response time
  - unaffected of mounting position
  - optionally with unit counter and / or flow meter
  - maintenance-free
  - low pressure drop



## General technical features

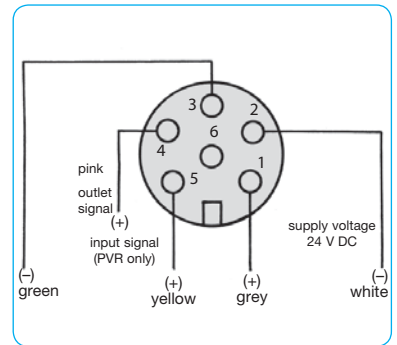
<b>Mounting position</b>	any
<b>Protection class</b>	IP 40
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F
<b>Material</b>	Body: aluminium, optionally stainless steel 316L Elastomer: FKM, optionally EPDM or Kalrez Sensor: stainless steel 316L Filter/strainer: stainless steel



functional principle

## Pneumatic features

<b>Media</b>	compressed air as well as virtually all gases and mixtures of gases
<b>Operating pressure</b>	max. 10 bar
<b>Differential pressure</b>	max. 5 bar
<b>Mass flow rate</b>	0 ... 100 ml/min / 2000 l/min, for PVR 0 ... 100 ml/min / 6000 l/min, for PVM



PVM and PVR connecting plan

## Electrical features

<b>Supply voltage</b>	24 V DC + 10%
<b>Current consumption</b>	max. 75 mA for PVM 11, all other devices max. 250 mA
<b>Signal ranges</b>	4-20 mA, optionally 0 ... 5 V DC
<b>Impedance</b>	> 10 kΩ at voltage signal, < 375 Ω at current signal
<b>Connection</b>	round connector M16x1, 6-pin
<b>EMC</b>	according to CE
<b>Note</b>	at < 100 mbar inlet path is required (PVM only)

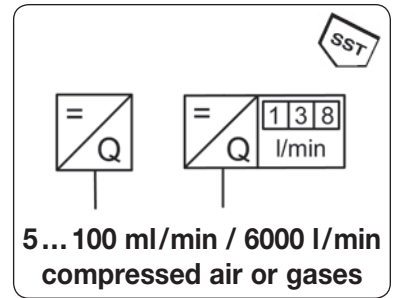
## Accuracy

<b>Linearity / Hysteresis</b>	> ± 3 % FS
<b>Repeatability</b>	> ± 0.5% FS
<b>Pressure sensitivity</b>	> ± 0.3% FS/bar typ. (air)
<b>Temperature sensitivity</b>	< ± 0.3% / °C (air)
<b>Mounting sensitivity</b>	< 0.3% FS at 90°
<b>Operating time</b>	25 s at 100% of the range
<b>Tightness</b>	< 2 x 10 <sup>-8</sup> mbar l/s He

model	PVM23 - PVM27	PVM11
gas		
air	1.00	1.00
argon	2.01	1.40
CO <sub>2</sub>	1.20	0.74
helium	/	1.41
hydrogen	/	1.01
NH <sub>3</sub>	0.80	0.77
N <sub>2</sub> O <sub>2</sub>	1.00	1.00
C <sub>2</sub> H <sub>2</sub>	0.75	0.61
C <sub>3</sub> H <sub>6</sub>	/	0.34
C <sub>3</sub> H <sub>8</sub>	0.63	0.34
CH <sub>4</sub>	0.67	0.76
CO	1.04	1.00
C <sub>2</sub> H <sub>4</sub>	0.89	0.60
NO	1.02	0.97
HCL	1.58	0.99

conversion factors for max. flow rate for other gases

<b>Description</b>	Mass flow meter directly measuring flow according to constant temperature anemometer principle. PVM 11 measures via a bypass, the other types measure the flow directly.
<b>Features</b>	Low pressure drop and immunity against dirt and humidity. Measurement unaffected by pressure and temperature changes. No moving parts, installation in virtually any position.
<b>Principle</b>	Two stainless steel probes - a heater and temperature probe - protrude inside the bore. A constant difference in temperature is created. The energy required is proportional to flow.
<b>Media</b>	compressed air, air as well as virtually all gases and gas mixtures
<b>Compensation</b>	Neither temperature nor pressure have to be compensated. There are no moving parts within the flow meter, therefore it is virtually wear-free.
<b>Pressure drop</b>	Low pressure drop because solely two stainless steel probes protrude inside the smooth, round measurement cell. The use of screw connections with a nominal size as big as possible is suggested.
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F
<b>Material</b>	Body: aluminium, optionally SST 316L Sensor: stainless steel 316L
	<b>Operating press.</b> max. 10 bar <b>Differential press.</b> max. 5 bar Elastomer: FKM, optionally EPDM or Kalrez Filter/strainer: stainless steel



Dimensions			Operating pressure max. bar	Connection thread G	Flow rate ml/min*1 / l/min*1	Order number
A	B	C				

Mass flow meter				4-20 mA output signal, supply voltage 24 V DC, w/o display, with coupling socket, for compressed air		PVM*2
95	94.5	15	10	G1/4	5 ... 100 ml/min 10 ... 200 ml/min 25 ... 500 ml/min 50 ... 1 000 ml/min	<b>PVM11-12</b> <b>PVM11-22</b> <b>PVM11-52</b> <b>PVM11-13</b>
95	94.5	15	10	G1/4	0.10 ... 2 l/min 0.25 ... 5 l/min 0.50 ... 10 l/min	<b>PVM11-23</b> <b>PVM11-53</b> <b>PVM11-14</b>
95	94.5	15	10	G1/4	1 ... 20 l/min 2 ... 50 l/min 5 ... 100 l/min	<b>PVM23-24</b> <b>PVM23-54</b> <b>PVM23-15</b>
95	98.5	15	10	G1/2	5 ... 100 l/min 10 ... 200 l/min 20 ... 400 l/min	<b>PVM25-15</b> <b>PVM25-25</b> <b>PVM25-45</b>
116	123	25	10	G1/2	20 ... 400 l/min 50 ... 1 000 l/min 100 ... 2 000 l/min	<b>PVM27-45</b> <b>PVM27-16</b> <b>PVM27-26</b>
130	143	35	10	G1	150 ... 2 000 l/min 200 ... 4 000 l/min 250 ... 5 000 l/min	<b>PVM28-26</b> <b>PVM28-46</b> <b>PVM28-56</b>
160	172	55	10	G1	250 ... 5 000 l/min 300 ... 6 000 l/min	<b>PVM29-56</b> <b>PVM29-66</b>



PVM23



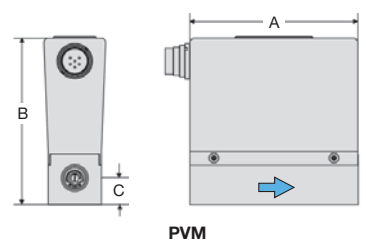
PVM27

### Special options, add the appropriate letter order number

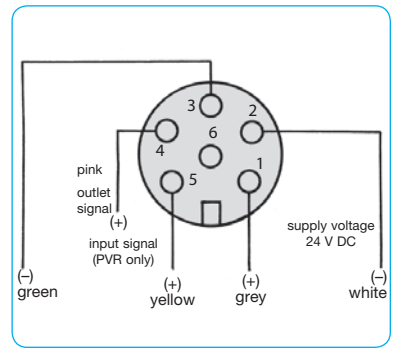
<b>special calibration</b>	range or gas to be indicated on order	PVM . . . . Y
<b>monitor signal</b>	0-5 V, load resistance > 10 kΩ	PVM . . . . U
<b>stainless steel body</b>	316L	PVM . . . . S
		PVM . . . . S
<b>EPDM elastomer</b>		PVM . . . . E
<b>Kalrez elastomer</b>		PVM . . . . K
<b>LCD display</b>		PVM . . . . M
<b>free of oil and grease</b>	for oxygen and different gases	PVM . . . . L
<b>carbon dioxide CO<sub>2</sub></b>	03	argon Ar: 05
<b>nitrogen N<sub>2</sub></b>		nitrogen N <sub>2</sub> : 07
<b>helium He</b>	09	hydrogen H <sub>2</sub> : 11
<b>methane CH<sub>4</sub></b>		methane CH <sub>4</sub> : 13
<b>oxygen O<sub>2</sub></b>	15	propane C <sub>3</sub> H <sub>8</sub> : 16
<b>nitrous oxide N<sub>2</sub>O</b>		nitrous oxide N <sub>2</sub> O: 17

### Accessories

<b>coupling socket</b>	M16x1, 6-pin with 3 m Kabel	straight	<b>KM16-A6-3</b>
<b>other cable length</b>	5 m or 10 m available		



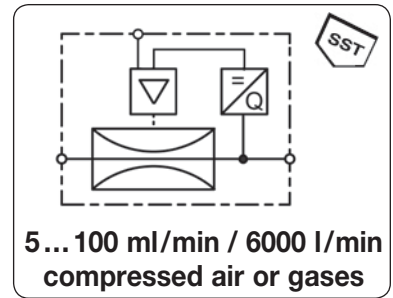
PVM



connecting plan

\*1 valid for compressed air at Δp= 5 bar and open outlet. For other gases please apply conversion factor

<b>Description</b>	Mass flow meter directly measuring flow according to constant temperature anemometer principle. The measured setpoint is compared with the nominal value. The valve will be readjusted accordingly.				
<b>Mechanical Construction</b>	PVR11/12/23: mass flow meter and meter in the same housing PVR 25: mass flow meter and meter together at the measuring bob PVR27: mass flow meter and meter as single components are bolted together				
<b>Media</b>	compressed air, air as well as virtually all gases and gas mixtures				
<b>Compensation</b>	Neither temperature nor pressure have to be compensated. There are no moving parts within the flow meter, therefore it is virtually wear-free.				
<b>Pressure drop</b>	Low pressure drop because solely two stainless steel probes protrude inside the smooth, round measurement cell. The use of screw connections with a nominal size as big as possible is suggested.				
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F				
<b>Material</b>	Body: aluminium, optionally SST 316L	Sensor: stainless steel 316L	Elastomer: FKM, optionally EPDM or Kalrez	Filter/strainer: stainless steel	<b>Operating press.</b> max. 10 bar <b>Differential press.</b> max. 5 bar



Dimensions			K <sub>v</sub> -value (m³/h)	Operating pressure max. bar	Connection thread G	Mass flow ml/min*1 / l/min*1	Order number
A mm	B mm	C mm					

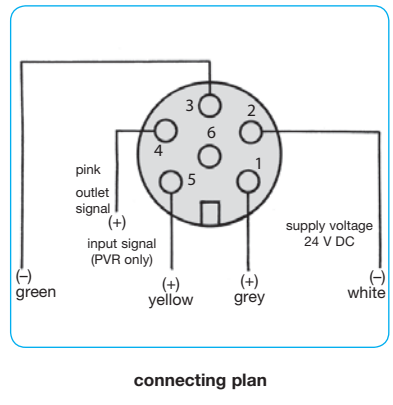
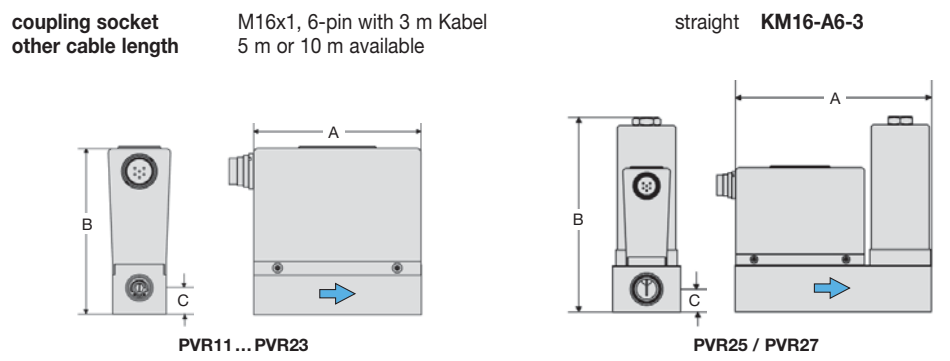
Mass flow regulator							4-20 mA input and output signal, supply voltage 24 V DC, w/o display, with coupling socket, for compressed air	PVR*3
95	94.5	15	0.066	10	G¼	5 ... 100 ml/min 10 ... 200 ml/min 25 ... 500 ml/min 50 ... 1000 ml/min	<b>PVR11-12</b> <b>PVR11-22</b> <b>PVR11-52</b> <b>PVR11-13</b>	
95	94.5	15	0.066	10	G¼	0.10 ... 2 l/min 0.25 ... 5 l/min 0.50 ... 10 l/min	<b>PVR11-23</b> <b>PVR11-53</b> <b>PVR11-14</b>	
95	97	15	0.066	10	G¼*2	0.50 ... 10 l/min 1.00 ... 20 l/min 2.50 ... 50 l/min	<b>PVR12-14</b> <b>PVR12-24</b> <b>PVR12-54</b>	
95	94.5	15	0.066	10	G¼	1 ... 20 l/min 2 ... 50 l/min 5 ... 100 l/min	<b>PVR23-24</b> <b>PVR23-54</b> <b>PVR23-15</b>	
145	132	16	0.30	10	G½	5 ... 100 l/min 10 ... 200 l/min 20 ... 400 l/min	<b>PVR25-15</b> <b>PVR25-25</b> <b>PVR25-45</b>	
257	163	25	1.0	10	G½	25 ... 400 l/min 50 ... 1000 l/min 100 ... 2000 l/min	<b>PVR27-45</b> <b>PVR27-16</b> <b>PVR27-26</b>	



**Special options, add the appropriate letter order number**

<b>special calibration range or gas to be indicated on order</b>		PVR . . . . Y
<b>setpoint /monitor signal 0-5 V, load resistance &gt; 10 kΩ</b>		PVR . . . . U
<b>stainless steel body 316L</b>	for PVR11 to PVR25-25	PVR . . . . S
	for PVR25-45 to PVR27	PVR . . . . S
<b>EPDM elastomer</b>		PVR . . . . E
<b>Kalrez elastomer</b>		PVR . . . . K
<b>LCD display</b>	for flow, 3½-digit	PVR . . . . M
<b>free of oil and grease</b>		PVR . . . . L
<b>potentiometer in cover for oxygen and different gases</b>		PVR . . . . X67
<b>carbon dioxide CO<sub>2</sub>: 03</b>	<b>argon Ar: 05</b>	<b>nitrogen N<sub>2</sub>: 07</b>
<b>helium He: 09</b>	<b>hydrogen H<sub>2</sub>: 11</b>	<b>methane CH<sub>4</sub>: 13</b>
<b>oxygen O<sub>2</sub>: 15</b>	<b>propane C<sub>3</sub>H<sub>8</sub>: 16</b>	<b>nitrous oxide N<sub>2</sub>O: 17</b>

## Accessories

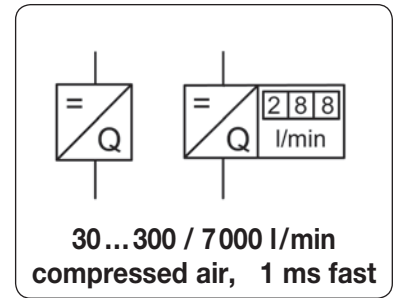


\*1 valid for compressed air at Δp= 5 bar and open outlet. For other gases please apply conversion factor.  
\*2 connection thread G½ on the input side



Prop.-V.  
11

<b>Description</b>	The flow measurement device works with differential pressure technology. It allows active flow control through continuous real time measurement, realised within 1 ms. There are no moving parts within the flow monitor, therefore it is virtually wear-free.		
<b>Media</b>	compressed air		
<b>Operating pressure</b>	max. 11 bar		
<b>Supply voltage</b>	15...24 V DC, max. power consumption 80 mA		
<b>Display</b>	without display as standard, optionally 4-digit LCD display with 12 mm tall, red figures		
<b>Electrical connector</b>	square connector, 6-pin with coupling socket		
<b>Output signal</b>	0...10 V, optionally 4...20 mA or 20...4 mA		
<b>Repeatability</b>	< 0.25% FS		
<b>Detectable flow</b>	> 4% FS		
<b>Response time</b>	1 ms		
<b>Mounting position</b>	any		
<b>Material</b>	Body:	anodized aluminium	
	Transducer:	aluminium	
	<b>Accuracy</b>	< 4% FS at 10% to 100% range	
	<b>Temperature sensitivity</b>	0.25% per °C / K	
	<b>Shock resistance</b>	25 g	
	<b>Protection class</b>	IP 54 / Nema 4	
	<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	
	<b>Elastomer:</b>	NBR/Buna-N	



Dimensions			Operating pressure	Connection thread	Flow rate	Order number
A	B	C				
mm	mm	mm	max. bar	G	ml/min*1	

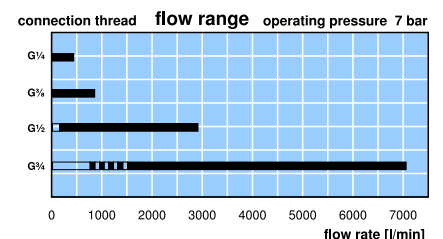
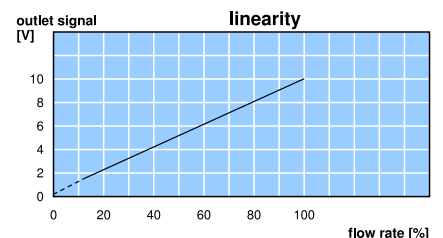
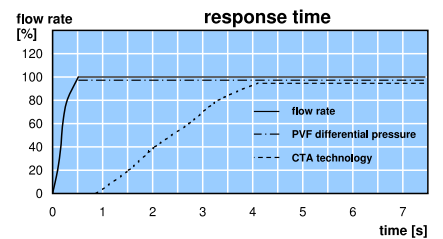
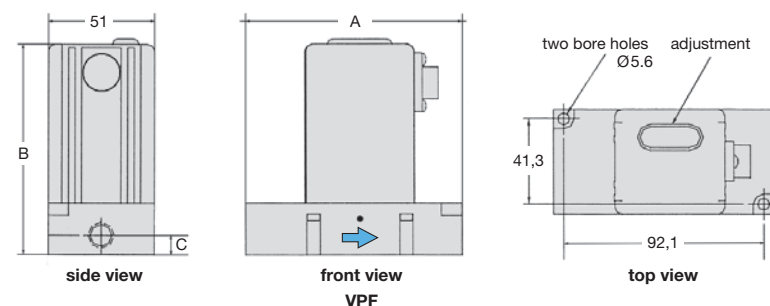
Flow meter						VPF
for compressed air, 0...10 V output signal, supply 24 V DC, without display, with coupling socket, open outlet						
102	106	10	11	G $\frac{1}{4}$	30 ... 300	<b>VPF-2</b>
102	119	19	11	G $\frac{3}{8}$	70 ... 700	<b>VPF-3</b>
102	119	19	11	G $\frac{1}{2}$	300 ... 3000	<b>VPF-4</b>
102	132	25	11	G $\frac{3}{4}$	700 ... 7000	<b>VPF-5</b>

### Special options, add the appropriate letter or number

<b>monitor signal</b>	4-20 mA, proportional to flow rate increase	VPF- . I
	20-4 mA, proportional to flow rate increase	VPF- . L
<b>LED display</b>	4-digit, red figures 12 mm tall	VPF- . A
<b>carbon dioxide</b>	CO <sub>2</sub>	VPF- . 03
<b>argon</b>	Ar	VPF- . 05
<b>nitrogen</b>	N <sub>2</sub>	VPF- . 07
<b>helium</b>	He	VPF- . 09



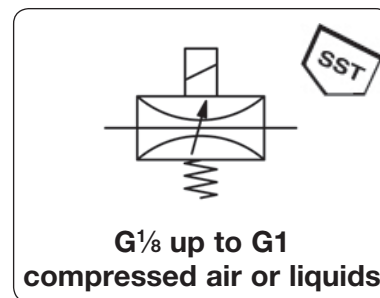
VPF



\*1 at 10 bar operating pressure and open outlet



<b>Description</b>	2-way proportional flow valve controls the volume flow of maximum 1185 l/min for air in proportion to the input signal of 0 to 10 V or 0/4 to 20 mA. The proportional valve and the electronic control unit are ordered separately.
<b>Product selection</b>	To achieve the best linear flow characteristics, it is advisable not to reduce the flow too much and to have enough pressure drop at the valve for good control. Reference value: at the valve > 30% of the total pressure drop.
<b>Installation hint</b>	The nominal width of the orifice following the proportional valve should not be smaller than the nominal width of the valve. A constriction of the cross-section after the valve should be categorically avoided!

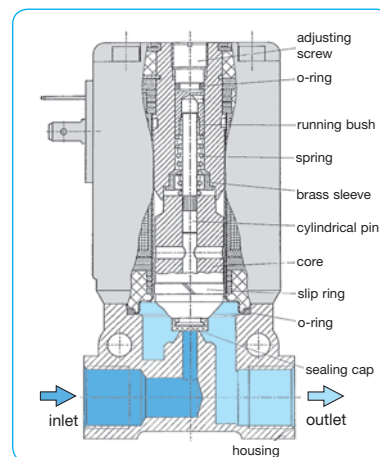


## General technical features

<b>Design</b>	2-way proportional flow valve, normally closed during absence of current, with additional control module in cable plug or in housing for DIN rail mounting.		
<b>Mounting position</b>	any, preferably upright		
<b>Protection class</b>	IP 65 with coupling socket, IP 40 for DIN rail version		
<b>Temperature range</b>	-10 °C to 90 °C / 14 °F to 194 °F for media -10 °C to 55 °C / 14 °F to 131 °F for electronics		
<b>Material</b>	Body: brass Elastomer:	Inner valve: FKM	brass and stainless steel Control housing: plastic

## Pneumatic features

<b>Media</b>	compressed air, non-corrosive gases or liquids, max. viscosity 21 mm <sup>2</sup> /s, <b>PV40 for liquids only</b>
<b>Operating pressure</b>	see chart, max. 16 bar
<b>Flow rate</b>	0...2 / 1185 l/min for air, 0...0.03 / 83 l/min for liquids in detail see chart, at max. supply pressure and Δp = 1 bar



## Electrical features

**Supply voltage** 24 V DC ± 10%, residual ripple max. 5%, with reverse voltage protection

Power consumption	electronic	PV21	PV21	PV22	PV34	PV40-04	PV40-06	PV40-08
	1 W	2 W to DN 0.6	5 W from DN 0.8 on	9 W	16 W	8 W	10 W	15 W

**Command signal** 0-5 V, 0-10 V, 0-20 mA or 4-20 mA selectable

**Impedance** > 20 kΩ at voltage signal  
< 200 Ω at current signal

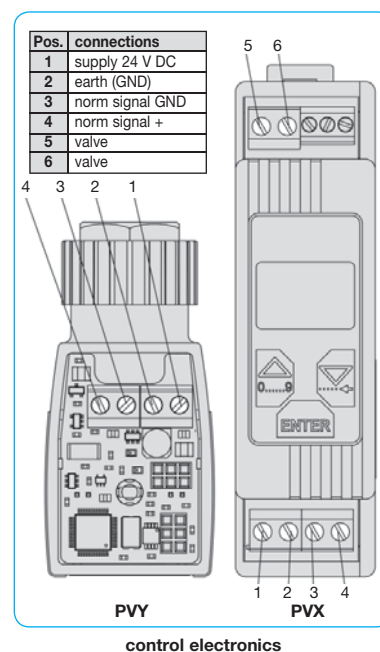
**Electrical connector** PV21: square connector according to DIN 43650 form B  
PV22...PV40: square connector according to DIN 43650 form A

## Accuracy

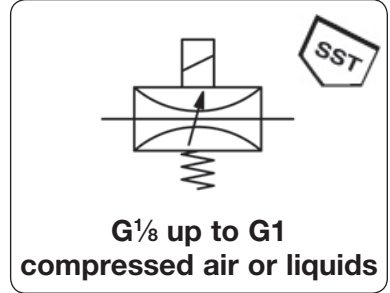
<b>Linearity</b>	< 10 % FS		
<b>Hysteresis</b>	< 5 % FS		
<b>Response sensitivity</b>	< 0.1% FS at DN < 0,8 mm,	< 0.25% FS at DN ≥ 0,8 mm,	< 1% FS at PV40
<b>Repeatability</b>	< 0.25% FS at PV22 < 0.5% FS		
<b>Regulating time</b>	PV21: < 15 ms,	PV22: < 20 ms,	PV34: < 50 ms, PV40: < 200 ms each for 90% of the range

## Adjustment

<b>Zero point</b>	The zero point can be decreased or increased.
<b>Range</b>	The range can be decreased or increased.
<b>Ramp</b>	The ramping potentiometer adjusts the time delay with a range of 0 to 10 s in order to dampen sudden changes of the setpoint. Increasing and decreasing ramps have the same delay.
<b>Zero point switch</b>	Using a DIP switch, the zero point switch can be activated or deactivated. It is not necessary to have another switch-off valve.

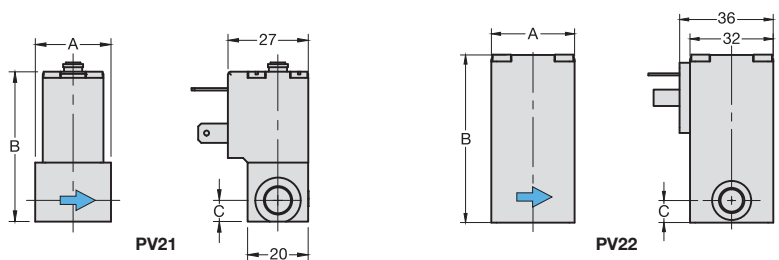


Technical features	
• <b>Media</b>	compressed air, non-corrosive gases or liquids, except for PV40
• <b>Signal range</b>	0-5 V, 0-10 V, 0-20 mA, 4-20 mA
• <b>Pressure range</b>	vacuum ... 2 / 16 bar
• <b>Orifice</b>	DN 0.1 ... DN 20
• <b>Flow rate</b>	max. 1185 l/min for air, max. 90 l/min for water
• <b>Adjustment</b>	zero point, range and ramp
• <b>Zero switch-off</b>	ensures reliable closure of the valve
• <b>Linearity</b>	< 10% FS
• <b>Hysteresis</b>	< 5% FS
• <b>Response sensitivity</b>	< 0.1% FS at DN < 0.8 mm < 0.25% FS at DN ≥ 0.8 mm < 1% FS at PV40
• <b>Repeatability</b>	< 0.25% FS, < 0.5% FS at PV22
• <b>Regulating time</b>	depending on type: < 15 ms, < 20 ms, < 50 ms or < 200 ms
• <b>Protection class</b>	IP65 with plug
• <b>Impedance</b>	> 20 kΩ at V, < 200 Ω at mA

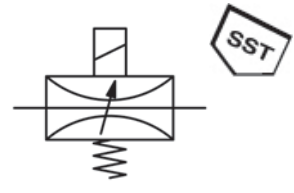


Dimensions		Nominal K <sub>v</sub> -	Flow rate		Operating	Differ.-	Connection	Order
A	B	size	water	air	pressure	press.	thread	number
mm	mm	DN (m <sup>3</sup> /h)	l/min*1	l/min*2	max. bar	max. bar	G	

Proportional flow valve											without electronics, brass, FKM, for compressed air, vacuum or liquids*2	PV
25	50	7	0.1	0.00025	0...	0.004	0...	0.27	10	10	G <sup>1</sup> / <sub>8</sub>	PV21-01
25	50	7	0.2	0.001	0...	0.017	0...	0.1	10	10	G <sup>1</sup> / <sub>8</sub>	PV21-02
25	50	7	0.3	0.002	0...	0.033	0...	2.2	10	10	G <sup>1</sup> / <sub>8</sub>	PV21-03
25	50	7	0.4	0.004	0...	0.067	0...	4.0	8	8	G <sup>1</sup> / <sub>8</sub>	PV21-04
25	50	7	0.6	0.010	0...	0.167	0...	11	6	6	G <sup>1</sup> / <sub>8</sub>	PV21-06
25	50	7	0.8	0.018	0...	0.3	0...	19	12	6	G <sup>1</sup> / <sub>8</sub>	PV21-08
25	50	7	0.8	0.018	0...	0.3	0...	19	12	12	G <sup>1</sup> / <sub>8</sub>	PV21-08B
25	50	7	1.0	0.027	0...	0.3	0...	19	10	5	G <sup>1</sup> / <sub>8</sub>	PV21-10
25	50	7	1.0	0.027	0...	0.3	0...	19	10	10	G <sup>1</sup> / <sub>8</sub>	PV21-10B
25	50	7	1.2	0.038	0...	0.633	0...	41	8	4	G <sup>1</sup> / <sub>8</sub>	PV21-12
25	50	7	1.2	0.038	0...	0.633	0...	41	8	8	G <sup>1</sup> / <sub>8</sub>	PV21-12B
25	50	7	1.6	0.055	0...	0.917	0...	59	6	3	G <sup>1</sup> / <sub>8</sub>	PV21-16
25	50	7	1.6	0.055	0...	0.917	0...	59	6	6	G <sup>1</sup> / <sub>8</sub>	PV21-16B
25	50	7	2.0	0.090	0...	1.5	0...	97	3	1.5	G <sup>1</sup> / <sub>8</sub>	PV21-20
25	50	7	2.0	0.090	0...	1.5	0...	97	3	3	G <sup>1</sup> / <sub>8</sub>	PV21-20B
32	66	8.5	0.8	0.018	0...	0.3	0...	19	16	8	G <sup>1</sup> / <sub>8</sub>	PV22-08
32	66	8.5	0.8	0.018	0...	0.3	0...	19	16	16	G <sup>1</sup> / <sub>8</sub>	PV22-08B
32	66	8.5	1.0	0.027	0...	1.0	0...	65	14	7	G <sup>1</sup> / <sub>8</sub>	PV22-10
32	66	8.5	1.0	0.027	0...	1.0	0...	65	14	14	G <sup>1</sup> / <sub>8</sub>	PV22-10B
32	66	8.5	1.2	0.040	0...	0.67	0...	43	12	6	G <sup>1</sup> / <sub>8</sub>	PV22-12
32	66	8.5	1.2	0.040	0...	0.67	0...	43	12	12	G <sup>1</sup> / <sub>8</sub>	PV22-12B
32	66	8.5	1.5	0.060	0...	1.0	0...	65	10	5	G <sup>1</sup> / <sub>8</sub>	PV22-15
32	66	8.5	1.5	0.060	0...	1.0	0...	65	10	10	G <sup>1</sup> / <sub>8</sub>	PV22-15B
46	72	8.5	2.0	0.10	0...	1.66	0...	108	8	4	G <sup>1</sup> / <sub>4</sub>	PV22-20
46	72	8.5	2.0	0.10	0...	1.66	0...	108	8	8	G <sup>1</sup> / <sub>4</sub>	PV22-20B
46	72	8.5	2.5	0.15	0...	2.5	0...	162	5	2.5	G <sup>1</sup> / <sub>4</sub>	PV22-25
46	72	8.5	2.5	0.15	0...	2.5	0...	162	5	5	G <sup>1</sup> / <sub>4</sub>	PV22-25B
46	72	8.5	3.0	0.22	0...	3.67	0...	237	3.5	1.8	G <sup>1</sup> / <sub>4</sub>	PV22-30
46	72	8.5	3.0	0.22	0...	3.67	0...	237	3.5	3.5	G <sup>1</sup> / <sub>4</sub>	PV22-30B
46	72	8.5	4.0	0.32	0...	5.33	0...	345	2	1	G <sup>1</sup> / <sub>4</sub>	PV22-40
46	72	8.5	4.0	0.32	0...	5.33	0...	345	2	2	G <sup>1</sup> / <sub>4</sub>	PV22-40B



\*1 at max. operating pressure and Δp = 1 bar \*2 at pressure drop from 6 bar down to 5 bar



**G<sup>1</sup>/<sub>8</sub> up to G1**  
compressed air or liquids

		Technical features	
• <b>Media</b>	compressed air, non-corrosive gases or liquids, except for PV40	• <b>Linearity</b>	< 10% FS
• <b>Signal range</b>	0-5 V, 0-10 V, 0-20 mA, 4-20 mA	• <b>Hysteresis</b>	< 5% FS
• <b>Pressure range</b>	vacuum...2 / 16 bar	• <b>Response sensitivity</b>	< 0.1% FS at DN < 0.8 mm < 0.25% FS at DN ≥ 0.8 mm < 1% FS at PV40 < 0.25% FS, < 0.5% FS at PV22
• <b>Orifice</b>	DN 0.1 ... DN 20	• <b>Repeatability</b>	< 0.25% FS, < 0.5% FS at PV22
• <b>Flow rate</b>	max. 1185 l/min for air, max. 90 l/min for water	• <b>Regulating time</b>	depending on type: < 15 ms, < 20 ms, < 50 ms or < 200 ms
• <b>Adjustment</b>	zero point, range and ramp	• <b>Protection class</b>	IP65 with plug
• <b>Zero switch-off</b>	ensures reliable closure of the valve	• <b>Impedance</b>	> 20 kΩ at V, < 200 Ω at mA

Dimensions			Nominal K <sub>v</sub> -	Flow rate		Operating	Differ.-	Connection	Order
A	B	C	size	value	water	pressure	press.	thread	number
mm	mm	mm	DN	(m <sup>3</sup> /h)	l/min*1	max. bar	max. bar	G	

Proportional flow valve										without electronics, brass, FKM, for compressed air, vacuum or liquids*2	PV
55	105	11	4.0	0.45	0... 7.5	0... 485	8	4	G <sup>3</sup> / <sub>8</sub>		<b>PV34-40</b>
55	105	11	4.0	0.45	0... 7.5	0... 485	8	8	G <sup>3</sup> / <sub>8</sub>		<b>PV34-40B</b>
55	105	11	6.0	0.80	0... 13.3	0... 860	4	2	G <sup>1</sup> / <sub>2</sub>		<b>PV34-60</b>
55	105	11	6.0	0.80	0... 13.3	0... 860	4	4	G <sup>1</sup> / <sub>2</sub>		<b>PV34-60B</b>
55	105	11	8.0	1.10	0... 18.3	0... 1185	2	1	G <sup>1</sup> / <sub>2</sub>		<b>PV34-80</b>
55	105	11	8.0	1.10	0... 18.3	0... 1185	2	2	G <sup>1</sup> / <sub>2</sub>		<b>PV34-80B</b>
50	89	12	10	1.4	0... 25.0*3	-	10		G <sup>1</sup> / <sub>2</sub>		<b>PV40-04</b>
58	110	14	13	2.5	0... 45.0*3	-	10		G <sup>3</sup> / <sub>4</sub>		<b>PV40-06</b>
80	155	16	20	5.0	0... 90.0*3	-	10		G1		<b>PV40-08</b>



PV34



PV40

## Special options, add the appropriate letter

**stainless steel body** SST 316, W.-No. 1.4401 for PV21 to PV34 PV...S

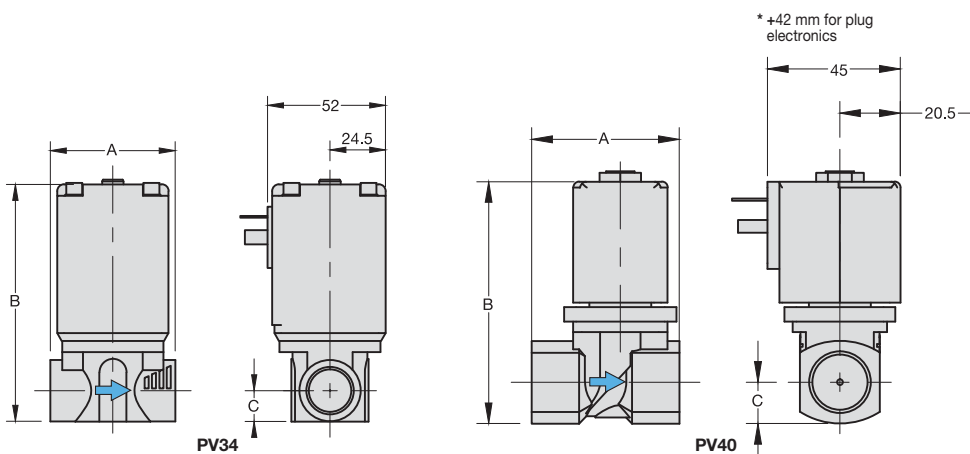
## Accessories

<b>plug electronics</b>	24 V DC, 0-5 V, 0-10 V, 0/4 mA - 20 mA	for PV22 to PV40	<b>PVY-06</b>
<b>clip-on electronics</b>	24 V DC, 0-5 V, 0-10 V, 0/4 mA - 20 mA	for PV21	<b>PVX-01</b>
		for PV22 to PV40	<b>PVX-02</b>
<b>coupling socket</b>	according to DIN 43650 form B	for PV21	<b>2285-0</b>
	according to DIN 43650 form A	for PV22 to PV40	<b>2286-0</b>



PVY

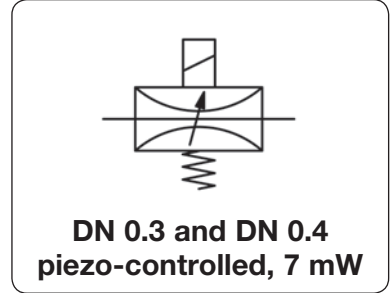
PVX



\*1 at max. operating pressure and Δp = 1 bar \*2 at pressure drop from 6 bar down to 5 bar  
\*3 PV40 is not suitable for compressed air and vacuum, since pilot-controlled



<b>Description</b>	The piezo miniature flow valve is highly reliable and combines precise control of flow rates with power consumption under 7 mW. It is extremely compact and weighs only 23 g. Therefore, it is very suitable for battery-operated portable devices. Preferred application in medical engineering. Electronics are not necessary. 50 µm filtered compressed air or non-corrosive gases	
<b>Media</b>	according to CNOMO E06.36.120N (15 x 15 mm) or CNOMO E06.05.80 (30 x 30 mm) with adapter see chart, max. 8 bar	
<b>Flange connection</b>	0...40 V DC, residual ripple < 10%, without reverse voltage protection	
<b>Operating pressure</b>	plug, contact gap 9.4 mm, 3-pin, with coupling socket (Pg 7P), optionally with wire, red (+), black (-)	
<b>Supply voltage</b>	The current is to be limited by a > 30 Ω resistor connected in series.	
<b>Electrical connector</b>	< 1 billion switching cycles at 6 bar	
<b>Note</b>		
<b>Life cycle</b>		
<b>Power consumption</b>	< 100 µA, i.e. 7 mW	<b>Switch-on consumption</b> 0.6 W
<b>Response time</b>	50 ms	<b>Protection class</b> IP 65 with coupling socket
<b>Mounting position</b>	any	<b>Temperature range</b> 0 °C to 60 °C / 32 °F to 140 °F
<b>Material</b>	Body: PPS plastic Inner valve: piezoelectric ceramics	Elastomer: NBR/Buna-N Manifold block: brass (M5), zinc die-cast (G½), polyamide (Ø4)



Description	Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate l/min*1	Operating pressure max. bar	Nominal size DN	Order number
	A	B	C					

Flow valve	flangeable without manifold block, with coupling socket, 0-40 V DC						PV630		
	NC		15	48	51	0.005	0...6	8	0.3
					0.006	0...7	4	0.4	PV630-04
NO		15	48	51	0.005	0...6	8	0.3	PV631-03
					0.006	0...7	4	0.4	PV631-04



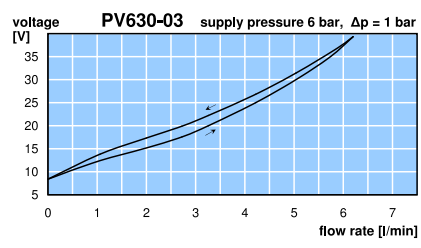
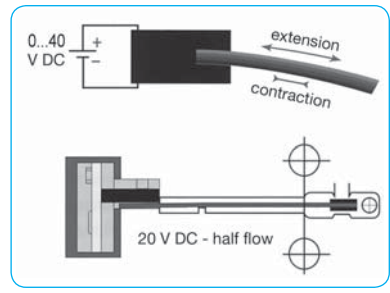
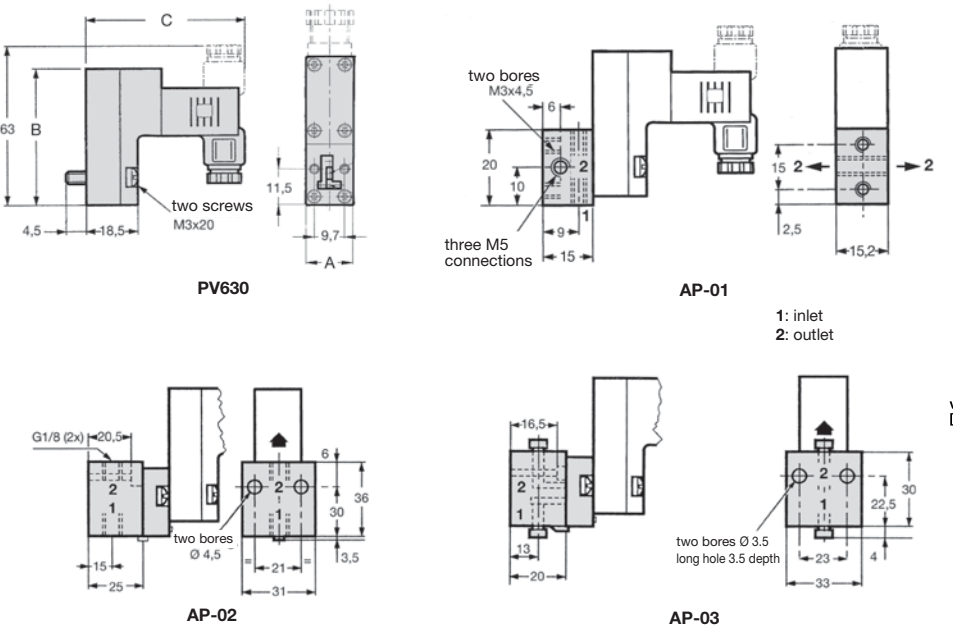
**Special options,** add the appropriate letter

w/o coupling socket	protection class IP00	PV63.-0.X
with wire	length 1 m, red (+), black (-)	PV63.-0.L



**Accessories**

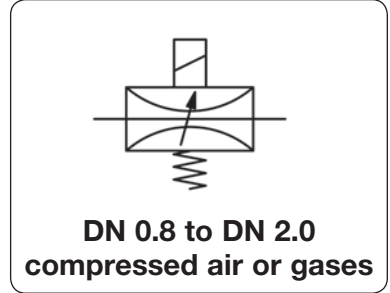
manifold block	M5	AP-01
	G½	AP-02
	Ø4	AP-03
in-line manifold block	Ø4	AP-04
		AP-05
	G½	



\*1 at operating pressure 6 bar and Δp = 1 bar



<b>Description</b>	The miniature flow valve is highly reliable and combines precise control of flow rate with compact design and only 80 g weight. It can be used for vacuum or pressure up to 12 bar. Plug amplifier required.		
<b>Media</b>	50 µm filtered compressed air, vacuum or non-corrosive gases		
<b>Plug amplifier</b>	Conversion of the analogue signal into a pulse-wide modulated current.		
<b>Electrical connector</b>	Supply voltage: 24 V DC, max. 1.1 A	Adjustment:	zero point and range
<b>Operating pressure</b>	Switchable signal: 0...10 V, 0...20 mA, 4...20 mA	Time ramp:	0.1 to 3 s selectable
<b>Repeatability</b>	Close function: < 2% of max. signal	Frequency:	1000 Hz
<b>Response sensitivity</b>	plug, contact gap 9.4 mm, 3-pin, with coupling socket (Pg 7P)	<b>Life cycle</b>	> 100 million cycles
<b>Polarity</b>	see chart, max. 10 bar	<b>Linearity</b>	< 8% FS
<b>Mounting position</b>	< 3% FS	<b>Hysteresis</b>	< 5% FS
<b>Material</b>	< 2% FS	<b>Protection class</b>	IP 65 with coupling socket
	any for valve	<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F
	any		
	Body: brass	Elastomer:	FPM
	Inner valve: stainless steel and brass	Manifold:	brass (M5), zinc die-cast (G½), polyamide (Ø4)



Description	Dimensions			K <sub>v</sub> -value (m³/h)	Flow rate l/min*1	Operating pressure max. bar	Nominal size DN	Order number
	A	B	C					

Proportional flow valve	flangeable, for compressed air, 24 V DC,	w/o manifold block, direct control, w/o amplifier	with coupling socket, direct control, w/o amplifier	PV202								
					NC	A	B	C	K <sub>v</sub>	Flow rate	Operating pressure	Nominal size
					15	48	53	0.0012	0... 1	10	0.2	PV202-002
								0.0048	0... 5	10	0.4	PV202-004
								0.0096	0... 11	10	0.6	PV202-006
								0.0180	0... 20	10	0.8	PV202-008



**Special options, add the appropriate letter**

12 V DC voltage signal PV202-0..V



**Accessories**

plug amplifier 24 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA **PVY-05**

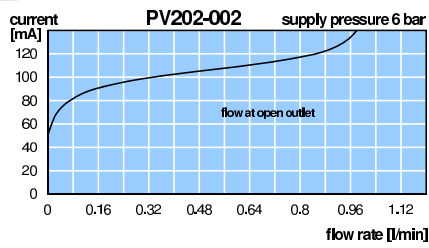
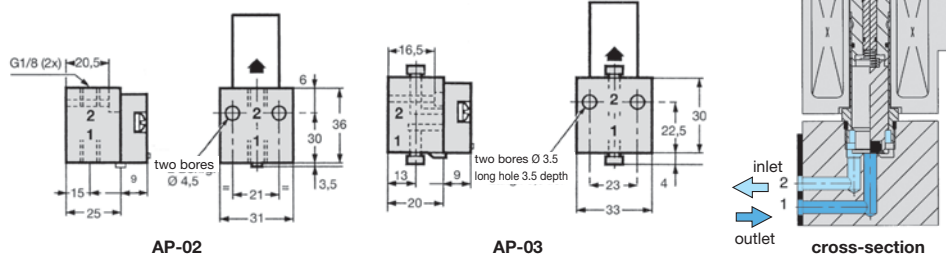
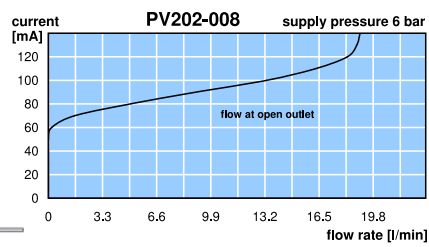
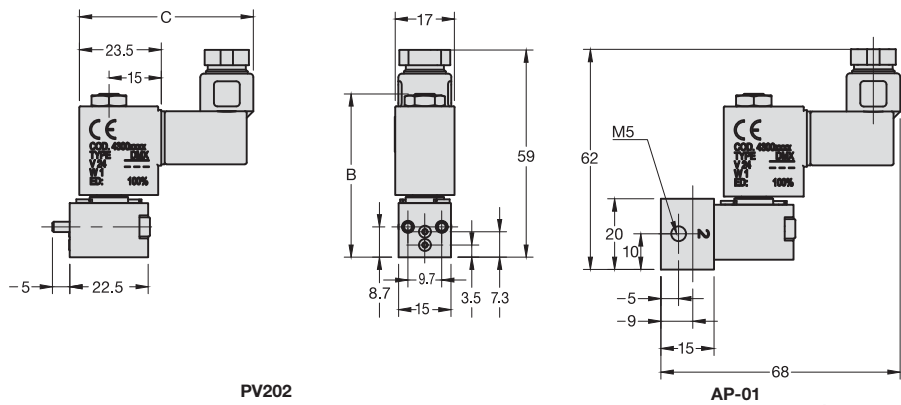
manifold block **M5** **AP-01**

**G½** **AP-02**

**Ø4** **AP-03**

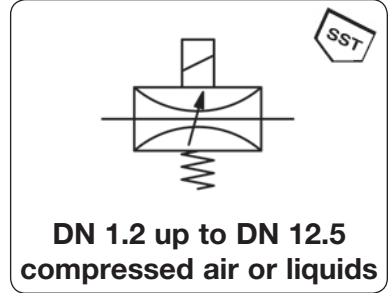
in-line manifold **Ø4** **AP-04**

**G½** **AP-05**



\*1 operating pressure 6 bar and Δp = 1 bar

<b>Description</b>	The proportional flow valve can be controlled either by 24 V DC or optionally by a plug amplifier with switchable signals.		
<b>Media</b>	50 µm filtered compressed air, vacuum, non-corrosive gases or liquids		
<b>Plug amplifier</b>	Conversion of the analogue signal into a pulse-wide modulated current.		
<b>Electrical connector</b>	Supply voltage: 24 V DC, max. 1.1 A	Adjustment:	zero point and range
<b>Protection class</b>	Switchable signal: 0...10 V, 0...20 mA, 4...20 mA	Time ramp:	0.1 to 3 s selectable
<b>Temperature range</b>	Close function: < 2% of max. signal	Hum frequency:	40 to 700 Hz selectable
	plug, 3-pin, with coupling socket (Pg 9P or Pg 11P)	<b>Operating pressure</b>	see chart, max. 12 bar
	IP 65 with coupling socket	<b>Mounting position</b>	any
	-10 °C to 90 °C / 14 °F to 194 °F	at G $\frac{1}{2}$ : 0 °C to 50 °C / 32 °F to 122 °F	
<b>Viscosity max.</b>		<b>PV202, G<math>\frac{1}{8}</math></b>	<b>PV202, G<math>\frac{1}{4}</math> / G<math>\frac{3}{8}</math></b>
<b>Power consumption</b>	100...450 mA, 8.6 W		<b>PV203, G<math>\frac{3}{8}</math> / G<math>\frac{1}{2}</math></b>
<b>Hysteresis / Sensitivity</b>	< 5% FS / < 1% FS	21 mm <sup>2</sup> /s	40 mm <sup>2</sup> /s
<b>Repeatability</b>	< 1% FS	100...500 mA, 11 W	100...500 mA, 11 W
<b>Body / Inner valve</b>	brass/SST, PTFE, FKM	< 5% FS / < 2% FS	< 7.5% FS / < 2% FS
		< 3% FS	< 3% FS
		brass/SST, PTFE, FKM	brass/SST, PTFE, NBR/Buna-N



Dimensions			Media	Nominal size	K <sub>v</sub> -value	Flow rate	Supply max.	Connection thread	Order number
A	B	C	A: air W: water	DN	(m <sup>3</sup> /h)	l/min*1	bar	G	

Proportional flow valve									
24 V DC, direct control, without amplifier, with coupling socket, made of brass									
PV202 / PV203									
25	78	8	A	1.2	0.05	0...70	8.0	G $\frac{1}{8}$	PV202-1-12
				1.6	0.07	0...110	6.0		PV202-1-16
				2.4	0.13	0...70	4.0		PV202-1-24
				3.2	0.18	0...105	2.5		PV202-1-32
40	95	20	A/W*3	1.2	0.05	0...60	16	G $\frac{1}{4}$	PV202-2-12
				2.4	0.12	0...110	8.0		PV202-2-24
				3.2	0.24	0...170	4.0		PV202-2-32
				4.0	0.42	0...280	2.5		PV202-2-40
				5.6	0.72	0...310	1.4		PV202-2-56
				7.1	0.90	0...390	1.0		PV202-2-71
48	97	14	A/W*3	3.2	0.24	0...190	4.0	G $\frac{3}{8}$	PV202-3-32
				4.0	0.42	0...300	2.5		PV202-3-40
				5.6	0.72	0...330	1.4		PV202-3-56
				7.1	0.90	0...420	1.0		PV202-3-71
52	105	14	W	12.5	2.10	0...35*2	10	G $\frac{3}{8}$	PV203-3-125W
				12.5	2.10	0...37*2	10	G $\frac{1}{2}$	PV203-4-125W



**Special options, add the appropriate letter**

for water or oil stainless steel body 12 V DC

for PV202, G $\frac{1}{4}$  and G $\frac{3}{8}$  NPT connection thread, FKM elastomere voltage signal

for PV202, G $\frac{1}{4}$  and G $\frac{3}{8}$  PV202-...W

for PV202 PV202-...S

PV20...12V

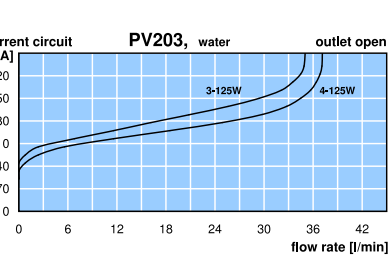
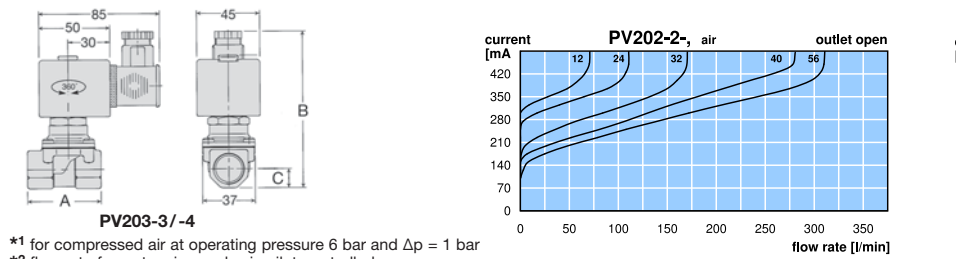
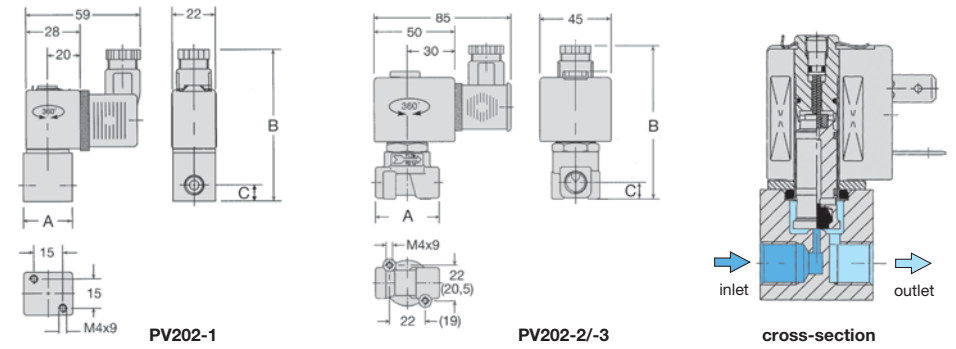
**Accessories**

plug amplifier 24 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA for PV202, G $\frac{1}{8}$  PVY-03

for all others PVY-04

plug amplifier 12 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA für PV202, G $\frac{3}{8}$  PVY-08

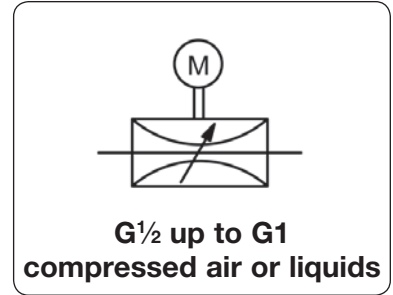
for all others PVY-09



\*1 for compressed air at operating pressure 6 bar and  $\Delta p = 1$  bar  
 \*2 flow rate for water since valve is pilot-controlled  
 \*3 for liquids add W to order number of type PV202-2/-3

Prop.-V.  
11

<b>Description</b>	Motorised proportional flow valve with low power consumption and resistance to contamination. Throttle setting by wear-resistant control drives made of oxide ceramic. Throttling occurs with drip-tight zero shut-off but no gas tightness.	
<b>Media</b>	compressed air, vacuum or liquids up to viscosity of 40 mm <sup>2</sup> /s	Hysteresis ± 4%
<b>Operation</b>	DC, synchronous or stepping motor with standard voltage of 24 V DC or AC ±10% residual ripple. All motors fulfil standards EN50.081-1, EN50.082-2 and 89/336/EEC.	
<b>DC motor (15 / 24)</b>	Motor with feedback potentiometer for servo-amplifier. Resistor 1kΩ ± 20 %, control e.g. by servo-amplifier. Only part of potentiometer range is used. Voltage for potentiometer: 12 V, max. 10 mA.	
<b>DC motor (50 / 51)</b>	With integrated position controller. Setpoint input using jumpers: 0...10 V, 0/4...20 mA. Input resistance: 200 kΩ at voltage signal, 500 Ω at current signal.	
<b>Stepper motor (38)</b>	Bipolar, by means of SAA1042A (Motorola) with drop resistance of 44 Ω per phase at a driver (full-step) operating voltage of 24 V ± 5%. 2028 steps for 90° control disc turn, 200 Hz nominal step frequency.	
<b>Temperature range</b>	10 °C to 90 °C / 14 °F to 194 °F	
<b>Material</b>	Body: brass Elastomer: NBR/Buna-N, optionally FKM or EPDM	<b>Protection class</b> IP 54 Control discs: oxide ceramic



Prop.-V.  
11

Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Supply max.	Connection thread	Order number
A	B	C	DN	(m <sup>3</sup> /h)	water l/min*1	air l/min*1	bar	G	

Proportional flow valve									
DC motor type 15, with potentiometer, 120 Ncm, 24 V DC, switching time 10...14 s*2									
									P8
55	147	13	15	1.1	0...20	0...1000	10	G <sup>1/2</sup>	<b>P822-15</b>
55	147	13	20	3.4	0...60	0...3000	6	G <sup>1/2</sup>	<b>P82A-15</b>
95	164	24	20	4.4	0...70	0...3500	6*3	G <sup>3/4</sup>	<b>P823-15</b>
95	164	24	20	4.4	0...70	0...3500	6*3	G1	<b>P824-15</b>

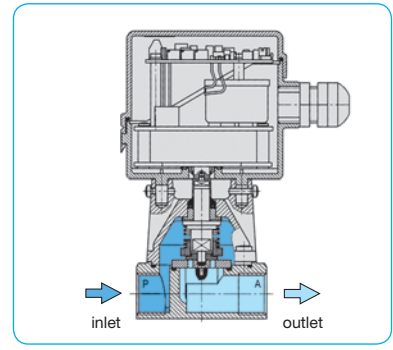


P822-15

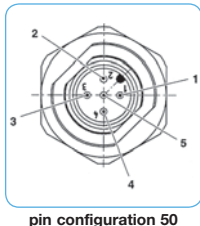
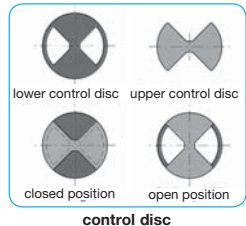
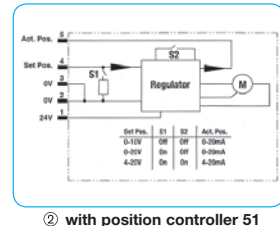
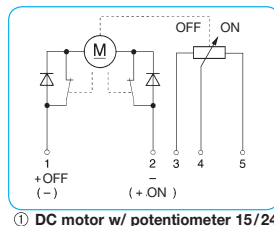
**Special options, add the appropriate letter**

cartridge installation instead of thread for DN 15 P825-..

Description	Figure-No.	Watt	Δp max./Torque	Switching time*2	
DC motor w/ potentiometer, 120 Ncm	①	1,5 W	6 bar / 120 Ncm	10-14 s	P82.-15
DC motor w/ potentiometer, 200 Ncm	①	2,0 W	10 bar / 200 Ncm	13 s	P82.-24
DC motor w/ controller	②	1,5 W	6 bar / 120 Ncm	10-16 s	P82.-50
DC motor w/ controller	②	2,5 W	10 bar / 200 Ncm	13-16 s	P82.-51
AC motor 50 Hz	③	3,0 W	6 bar / 120 Ncm	10 s	P82.-36
stepper motor	④	5,0 W	6 bar / 120 Ncm	10 s	P82.-38
FKM elastomer					P82.-.. V
EPDM elastomer					P82.-.. E
free of grease and oil			especially cleaned, suitable for oxygen		P82.-.. L
body nickel-plated					P82.-.. X25

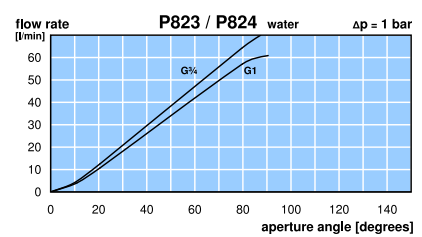
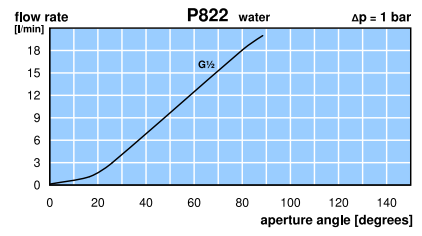
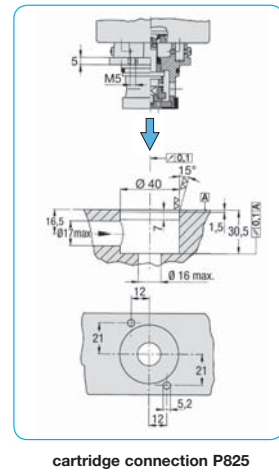
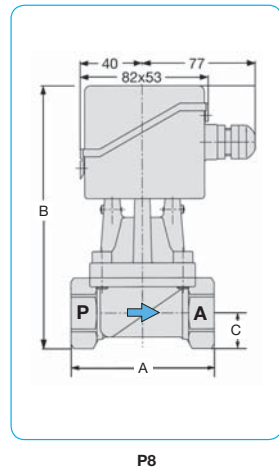
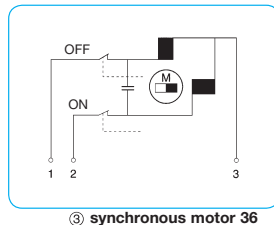


cross-section



PIN	Description
Pin 1	supply voltage 24 Volt
Pin 2	supply voltage 0 Volt
Pin 3	ground potential for set value input and feedback outlet
Pin 4	set value input 0 - 10 V / 0 (4) - 20 mA
Pin 5	feedback outlet 0 (4) - 20 mA

connection diagram



\*1 at 6 bar supply pressure and Δp = 1 bar

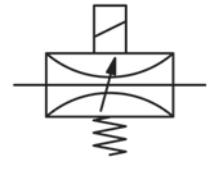
\*2 subject to supply pressure

\*3 10 bar at motor for 200 Ncm

PDF CAD  
www.aircom.net

Order example:  
P822-15

<b>Description</b>	Small proportional flow valve for regulating both air and non-corrosive gases. Voltage signal 10 V as standard or optionally 5 V or 20 V DC.				
<b>Media</b>	50 µm filtered compressed air or non-corrosive gases				
<b>Operating pressure</b>	see chart, max. 7 bar				
<b>Electrical specification</b>	<b>command signal</b>	<b>max. voltage</b>	<b>resistance</b>	<b>current consumption</b>	<b>power consumption</b>
	0 - 5 V DC	0 - 6.2 V DC	13 Ω	0 - 370 mA	1.9 W
	0 - 10 V DC	0 - 12.4 V DC	54 Ω	0 - 185 mA	1.9 W
	0 - 20 V DC	0 - 24.8 V DC	218 Ω	0 - 92 mA	1.9 W
<b>Electrical connection</b>	solder lug or terminal lug, 2.5 x 0.5 mm				
<b>Mounting position</b>	any				
<b>Hysteresis</b>	± 10% FS		<b>Repeatability</b> ± 3% FS		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F				
<b>Material</b>	<b>Body:</b> nickel-plated brass		<b>Elastomer:</b> NBR/Buna-N, optionally FKM or EPDM		
	<b>Inner valve:</b> stainless steel and brass				



**DN 0.2 up to DN 1.5**  
**0 - 5 / 10 / 20 V DC**

Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate	Operating pressure	Connection thread	Order number
A	B	C	DN	(m³/h)	l/min*1	max. bar	M5	
mm	mm	mm						

Volume flow regulator M5								0-10 V DC, 2-port/2-way valve for compressed air or non corrosive gases, with terminal lug, brass, NBR/Buna-N	PVK
20	40	5	0.2	0.03	0...3	1.7	M5	PVK-092	
						3.5		PVK-093	
						7.0		PVK-097	
20	40	5	0.3	0.07	0...7	1.7	M5	PVK-132	
						3.5		PVK-133	
						7.0		PVK-137	
20	40	5	0.6	0.24	0...24	1.7	M5	PVK-252	
						3.5		PVK-253	
						7.0		PVK-257	
20	40	5	1.0	0.18	0...19	1.7	M5	PVK-402	
						3.5		PVK-403	
20	40	5	1.5	0.14	0...14	1.7	M5	PVK-602	



**PVK-257**  
with M5 connection



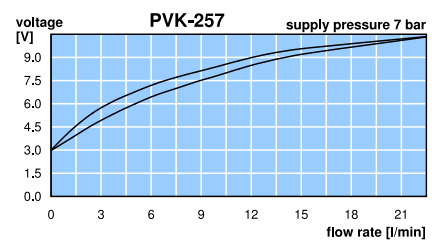
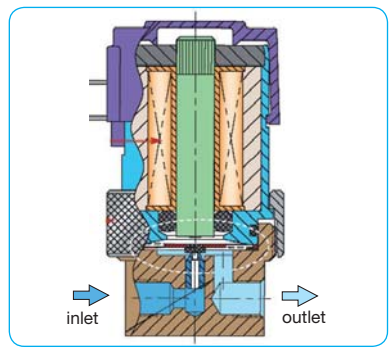
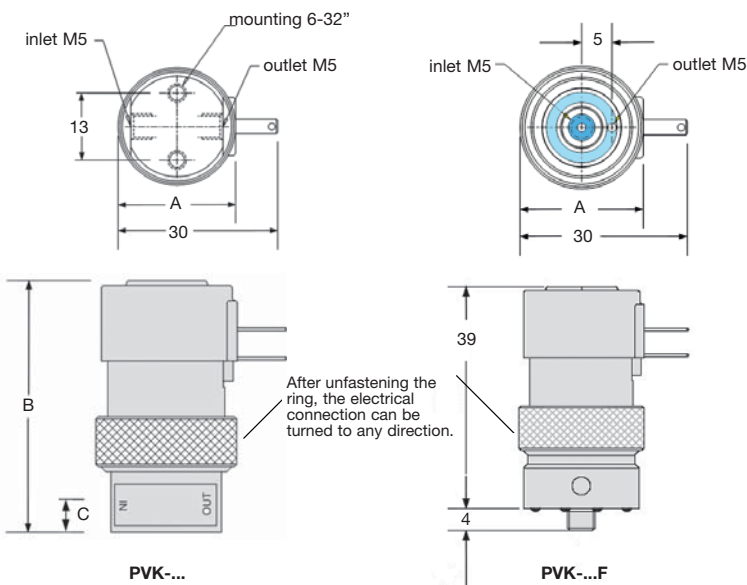
**PVK-092AF**  
with flange connection

### Special options, add the appropriate letter

<b>0 - 5 V</b>	input signal max. 6,2 V,	0 - 370 mA,	13 Ω	PVK-. . . <b>A</b>
<b>0 - 20 V</b>	input signal max. 25 V,	0 - 92 mA,	218 Ω	PVK-. . . <b>C</b>
<b>flange connection</b>	for panel mounting			PVK-. . . <b>F</b>
<b>FKM elastomer</b>				PVK-. . . <b>V</b>
<b>EPDM elastomer</b>				PVK-. . . <b>E</b>

### Accessories

**manifold block** for valve with flange connection, for 2, 4 ... 12 valves



\*1 at max. current consumption and max. operating pressure

More miniature valves: see catalogue MV, also in ATEX version

PDF CAD  
www.aircom.net

Order example:  
**PVK-092**



# Proportional Flow Valve with Y-Type Valve

PVE

Prop.-V.  
11

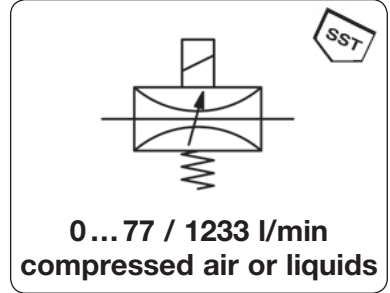
Prop.-V.  
11

**Description** Compact positioner with analogue control. Compressed air for remote control necessary. The stroke is made proportional to the flow through the parabolic contour of the piston. The valve shuts tight and is of anti-water hammer design.

**Media Control** compressed air, vacuum up to 10<sup>-2</sup> mbar or liquids up to viscosity of max. 600 cST (mm<sup>2</sup>/s)  
 pneumatic: lubricated, unlubricated and 50 µm filtered compressed air, 4...8 bar, port G<sup>3/8</sup>  
 electrical: 0-10 V, optionally 4-20 mA, supply 24 V DC ± 10%, power consumption 150 mA/3.6 W  
 analog position feedback signal 0-10 V / 4-20 mA (after automatic balance)

**Control element** 2-port/2-way valve, NC (normally closed) as standard,  
 as option 3-port/2-way valve for mixing different media, with standard piston cable gland, optionally M12

**Electrical connection** any  
**Mounting position** any  
**Linearity / Hysteresis** < 2% FS  
**Protection Class** IP 66  
**Repeatability** < 1.0% FS  
**Fail-safe** valve closes (NC) in the event of voltage failure, optionally outlet fail freeze feature  
**Temperature range** Ambient: 0 °C to 50 °C / 32 °F to 122 °F Medium: -10 °C to 180 °C / 14 °F to 356 °F  
**Material** Control valve body: bronze, optionally SST 316L Cone seal: PTFE  
 Proportional valve body: aluminium, PA and FV



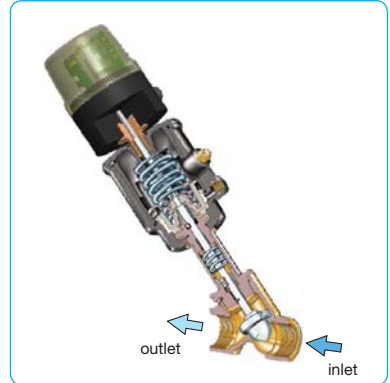
Dimensions			Nominal size	K <sub>v</sub> -value	Supply max.	Flow rate		Connection thread	Order number
A	B	Ø*1	DN	(m <sup>3</sup> /h)	bar	water l/min	air l/min	G	

Volumenstromregler										PVE
2/2-Wege, NC, Bronze, Steuerdruck 4...8 bar, für Luft oder Wasser, 0-10 V, 24 V DC, failsafe										
65	155	63	15	4.6	10	0...	14	5 000	G1/2	PVE1-04B
75	185	63	20	7.1	16	0...	118	7 700	G3/4	PVE1-06C
90	209	90	25	15	16	0...	250	16 250	G1	PVE1-08D
110	246	90	32	21	12	0...	350	22 750	G1 1/4	PVE1-10D
110	298	125	32	22	16	0...	367	23 800	G1 1/4	PVE1-10E
120	245	63	40	29	4	0...	483	31 400	G1 1/2	PVE1-12C
120	262	90	40	29	8	0...	483	31 400	G1 1/2	PVE1-12D
120	314	125	40	44	16	0...	733	47 600	G1 1/2	PVE1-12E
150	259	63	50	40	2	0...	667	43 300	G2	PVE1-16C
150	276	90	50	40	6	0...	667	43 300	G2	PVE1-16D
150	328	125	50	66	10	0...	1 100	71 500	G2	PVE1-16E
190	300	90	65	68	2	0...	1 133	73 600	G2 1/2	PVE1-20D
190	352	125	65	74	6	0...	1 233	80 000	G2 1/2	PVE1-20E



## Special options, add the appropriate letter

- 3-port/2-way valve** for mixing different media, bronze version only
  - fail freeze** if supply voltage fails, outlet pressure will be frozen
  - SST body** stainless steel 316L, material no. 1.4401
  - 4-20 mA** input signal
  - for oxygen \*2** specially cleaned, with oxygen grease, for G<sup>1/2</sup> to G<sup>2</sup>
  - cascade control** double loop, 0-10 V  
 double loop, 4-20 mA  
 double loop, frequency input
  - electr. connection M12** with coupling socket
- PVE3-... 3
  - PVE-... S
  - PVE-... I
  - PVE-... 15
  - PVE-... KU
  - PVE-... KI
  - PVE-... KF
  - PVE-... M12

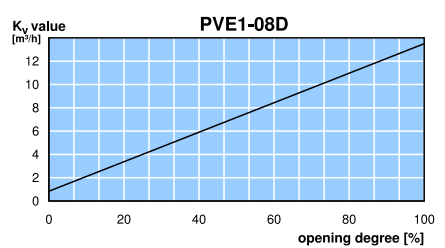
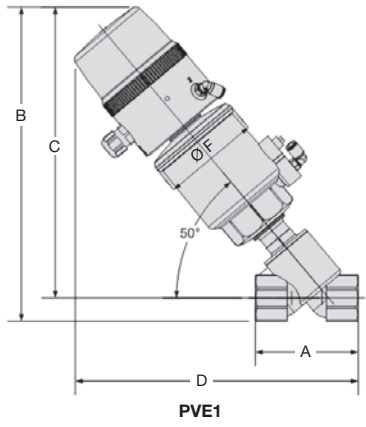


PVE with regulator control	
1	24 V DC supply voltage
2	GND (earth) supply
3	+ setpoint (0-10 V / 4-20 mA)
4	GND (earth) setpoint
5	
6	position feedback
7	+24 V DC ON/OFF output signal

PVE with cascade control	
1	24 V DC supply voltage
2	GND (earth) supply
3	+ setpoint (0-10 V / 4-20 mA)
4	GND (earth) setpoint
5	external signal input
6	
7	+24 V DC ON/OFF output signal

### connecting plan

Ø head*1	thread	C	D	ØF
50 mm	1/2	213	212	69
63 mm	3/4	242	245	85
	1 1/2	287	294	85
	2	296	319	85
90 mm	1	261	267	118
	1 1/4	293	306	118
	1 1/2	304	313	118
	2	313	337	118
	2 1/2	329	369	118
125 mm	1 1/4	445	354	156
	1 1/2	356	361	156
	2	365	385	156
	2 1/2	380	417	156



\*1 Ø of pilot head  
 \*2 max. 15 bar operating pressure and 60 °C / 140 °F media temperature

PDF CAD  
 www.aircom.net

Order example:  
 PVE1-04B



**Description** The flow control valve functions as a pinch valve in a new design of housing with full flow cross-section. Since the straight valve passage has neither constrictions nor back-points, there is no danger of clogging or blockage. Frictional loss is at a minimum.

**Media** Compressed air, non-corrosive gases, liquids or other paste-like or powdery media. Solids are enclosed by the flexible sleeve at shut-off.

**Sleeve** Highly flexible with double-woven reinforcement in eight different grades. Sleeve simple to change.

**Pressures** Operating pressure: max. 4.0 bar Pilot pressure: max. 6.5  
Differential pressure: max. 2.5 bar Closing pressure:  $P_1 + 2.5$  bar to DN32,  $P_1 + 2$  bar from DN40 on

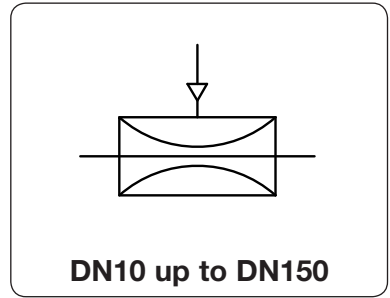
**Vacuum** If vacuum is greater than -100 mbar, vacuum compensation should be provided on the control side.

**Accuracy** In the flow range of 0 to 70% the accuracy of the linearity of pilot pressure to flow is approx. 10%.

**Mounting position** any

**Temperature range** 0 °C to max. 100 °C / 32 °F to max. 212 °F, subject to sleeve material

**Material** Body: POM at model QP or aluminium die-cast at model QS Sleeve: depending on selected version



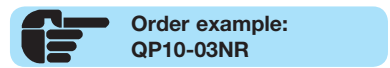
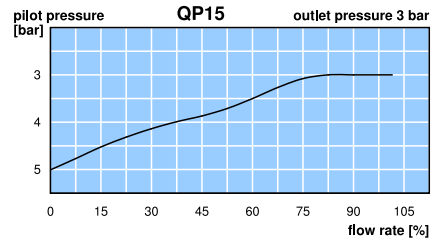
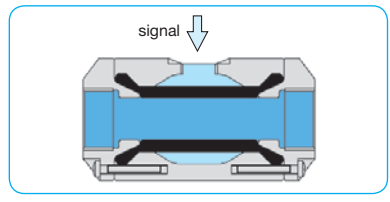
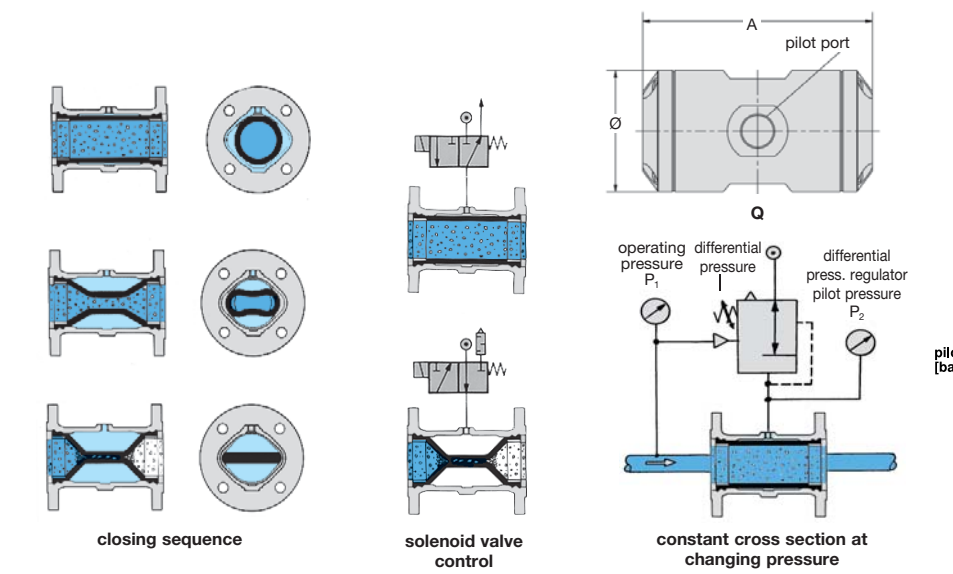
Dimensions		Nominal size DN	Volume of control chamber l	Pilot port G	Operating pressure max. bar	Connection thread G / flange	Order number
A mm	Ø mm						

Flow control valve							Q
operating pressure max. 4 bar, pilot pressure max. 2.5 bar above operating pressure							
80	44	10	0.03	G1/4	4	G3/8	QP10 -03NR
95	50	15	0.04	G1/4	4	G1/2	QP15 -04NR
110	58	20	0.05	G1/4	4	G3/4	QP20 -06NR
125	65	25	0.07	G1/4	4	G1	QP25 -08NR
140	83	32	0.10	G1/4	4	G1 1/4	QP32 -10NR
150	95	40	0.13	G1/4	4	G1 1/2	QP40 -12NR
200	100	50	0.23	G1/4	4	G2	QS50 -16NR
240	134	65	0.49	G1/4	4	G2 1/2	QS65 -20NR
290	154	80	0.95	G1/4	4	G3	QS80 -24NR
280	220	100	1.80	G3/8	4	flange	QS100-FLNR
350	250	125	3.30	G3/8	4	flange	QS125-FLNR
420	285	150	6.40	G3/8	4	flange	QS150-FLNR



**Special options, add the appropriate letter**

<b>flange connection</b>	according to DIN 2532, PN10	from G1 1/4 on	Q ... -FL ...
<b>sleeve NR</b>	natural rubber, black	80 °C / 176 °F	Q ... -NR
<b>sleeve NRL</b>	rubber, suitable for food, black	70 °C / 158 °F	Q ... -NL
<b>sleeve NRLH</b>	rubber, suitable for food, light	70 °C / 158 °F	Q ... -NH
<b>sleeve NBR</b>	nitrile rubber / Buna-N, suitable for food	80 °C / 176 °F	Q ... -NB
<b>sleeve EPDM</b>	ethylene-propylene rubber, suitable for food, black	100 °C / 212 °F	Q ... -EP
<b>sleeve FKM</b>	fluorine rubber, black	100 °C / 212 °F	Q ... -FK
<b>sleeve CR</b>	chloroprene rubber / neoprene, black	80 °C / 176 °F	Q ... -CR
<b>sleeve CSM</b>	natural rubber, chlorosulphonyl polyethylene	80 °C / 176 °F	Q ... -CS



## Pressure Switches

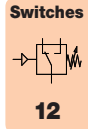
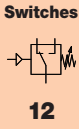
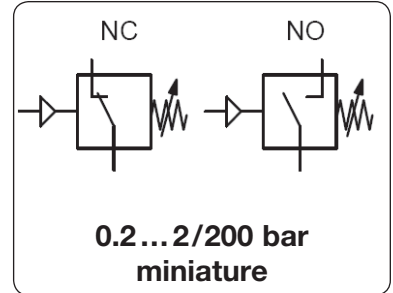
	Description	Pressure range bar	Connection thread	Device	Page
<b>Pressure</b>	miniature, low cost	0.2 ... 2 / 200	G $\frac{1}{8}$ and G $\frac{1}{4}$	DS08...DS46	<b>12.02</b>
	many variations	0.1 ... 1 / 200	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DS16...DS18	<b>12.03</b>
	low pressure, handwheel	0.005 ... 0.02 / 12	G $\frac{1}{8}$ f and G $\frac{1}{4}$ f	DSP	<b>12.05</b>
	low pressure, plastic	0.003 ... 0.03 / 7	$\frac{1}{8}$ "NPT m	F4200	<b>12.06</b>
	small hysteresis	0.014 ... 0.14 / 7	$\frac{1}{8}$ "NPT m	F4300	<b>12.07</b>
	high accuracy	0.004 ... 0.012 / 0.15	nipple	F4000	<b>12.08</b>
	for PCB	0.014 ... 0.14 / 7	nipple	F4400	<b>12.08</b>
<b>Vacuum</b>	many options	-0.2 ... -1	G $\frac{1}{8}$	DS15	<b>12.03</b>
	with handwheel	-0.005... -0.02 / -0.7	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP-V	<b>12.05</b>
	plastic	-0.001... -0.01 / -1	$\frac{1}{8}$ "NPTm	F4200-X	<b>12.06</b>
	also flangable	-0.007... -0.17 / -1	$\frac{1}{8}$ "NPTm	F4300-X	<b>12.07</b>
	with adjustable hysteresis	-0.007... -0.38 / -0.5	nipple	F4000-X	<b>12.08</b>
	with small hysteresis	-0.007... -0.17 / -1	nipple	F4400-X	<b>12.08</b>
<b>Differential press.</b>	with handwheel	5 ... 20 / 50 mbar	nipple	DSP-W	<b>12.05</b>
<b>ATEX</b>	dust, EXII 3D IP65 T90	0.3 ... 1.5 / 150	G $\frac{1}{4}$ a	DS34	<b>12.04</b>
	gas, EXII 2G ExdII C T6	1 ... 6 / 400	G $\frac{1}{4}$ i	DS35	<b>12.04</b>
	gas, EXII 2G Ex ia T4	0.005 ... 0.02 / 12	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP	<b>12.05</b>
<b>Pneum. signal</b>	pressure	0.07 ... 0.35 / 7	$\frac{1}{8}$ "NPTm	PP700/PP701	<b>12.09</b>
	vacuum	-0.03 ... 0.17 / -0.85	$\frac{1}{8}$ "NPTm	VP700/VP701	<b>12.09</b>
<b>Electrical signal</b>	with pressure indicator	-1 ... 1 / 10	G $\frac{1}{8}$ m	DSB/DSC	<b>12.10</b>
<b>Stainless steel</b>	many options	0.5 ... 5 / 200	G $\frac{1}{4}$ m	DS18	<b>12.03</b>
	low pressure, handwheel	0.005 ... 0.02 / 12	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP	<b>12.05</b>



# 12 Pressure Switches



<b>Description</b>	The small-sized pressure switch closes or opens an electrical contact when the desired pressure is reached. If it falls below, the contact will be reset.		
<b>Media</b>	DS10: compressed air	DS13: compressed air and water	All others: compressed air, water hydraulic oil
<b>Burst pressure</b>	min. 20 bar,	DS13: max. 15 bar,	DS40C/D: max. 250 bar
<b>Contact</b>	silver-coated, max. 2A Ohm resistive load, max. 100 VA		
<b>Hysteresis</b>	< 10% FS, DS10 and D40: 10 ... 15% FS		
<b>Mounting position</b>	any		
<b>Life span</b>	10 <sup>6</sup> operating cycle for max. 200 switches / min		
<b>Protection class</b>	IP 00, with protective cap IP 65		<b>Voltage</b> 42 V
<b>Tolerance</b>	± 0.2 bar at 0.2 ... 2 bar, ± 0.5 bar at 1 ... 10 bar ± 3 bar at 10 ... 70 bar, ± 5 bar at 50 ... 200 bar		
<b>Electrical connection</b>	contact pin 2 x 6.3 x 0.8 except for DS10 and DS40: screwed connection M2		
<b>Temperature range</b>	-25 °C to 85 °C / -13 °F to 185 °F DS13: -20 °C bis 75 °C / -4 °F to 167 °F		
<b>Material</b>	Body:	brass for DS08, DS14, DS46 steel for DS25, DS40 plastic for DS13	Elastomer: NBR/Buna-N, optionally EPDM, FKM and Kalrez



Dimensions			Body	Electr.	Connection	Pressure	Measurement	Order number	
A/F	B	C	made	connection	thread	transmission	range	contact	contact
mm	mm	mm	of		G	by	bar	NO	NC

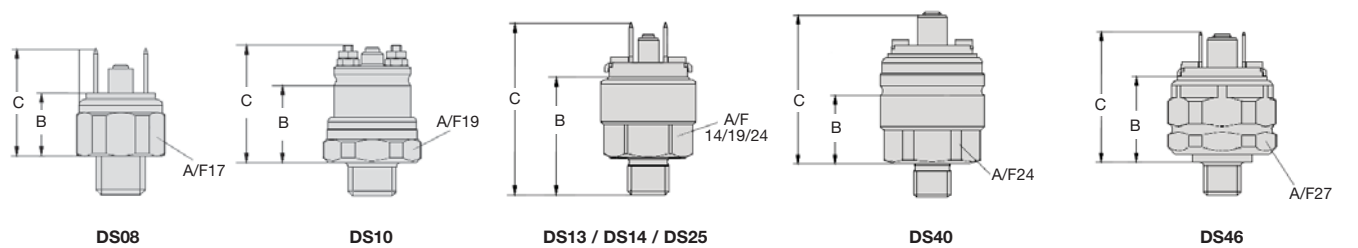
Mini-Pressure switch, 42 V			NBR/Buna-N		DS					
17	13	22	brass	flat plug	G¼	diaphragm	0.3 ... 2	2	DS08-21A	DS08-20A
							1.0 ... 10	10	DS08-21B	DS08-20B
19	16	25	brass	screw connection	G½	diaphragm	1.0 ... 10	10	DS10-11B	
14	23	37	plastic	flat plug	G½	diaphragm	0.2 ... 2	2	DS13-11A	DS13-10A
							1.0 ... 8	8	DS13-11B	DS13-10B
19	21	34	brass	flat plug	G½	diaphragm	0.3 ... 2	2	DS14-11A	DS14-10A
							1.0 ... 10	10	DS14-11B	DS14-10B
24	20	34	steel	flat plug	G½	diaphragm	0.2 ... 2	2	DS25-11A	DS25-10A
							1.0 ... 10	10	DS25-11B	DS25-10B
24	22	31	steel	screw connection	G½	diaphragm	0.3 ... 2	2	DS40-11A	DS40-10A
		37				diaphragm	1.0 ... 10	10	DS40-11B	DS40-10B
						piston	10 ... 70	70	DS40-11C	DS40-10C
						piston	50 ... 200	200	DS40-11D	DS40-10D
27	29	35	brass	flat plug	G¼	diaphragm	0.2 ... 2	2	DS46-21A	DS46-20A
							0.5 ... 10	10	DS46-21B	DS46-20B



Special options, add the appropriate letter			
G¼ male	connection thread	only for DS10 to DS40	DS...-2..
FKM elastomer	for diaphragm	not for DS13	DS...-...V
	for piston	only for DS40 (C/D)	DS...-...V
EPDM elastomer		only for DS10 and DS40	DS...-...E
Kalrez elastomer		only for DS10 and DS40	DS...-...K
gold contact		not for DS08	DS...-...G

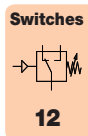
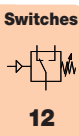
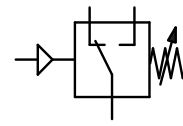
## Accessories

protection cap	for DS10 <b>K210</b>	for DS08, DS13 and DS14 <b>K214</b>
	for DS25 <b>K250</b>	for DS40 and DS46 <b>K400</b>



<b>Description</b>	The pressure switch closes or opens an electrical contact when the desired pressure is reached. If it falls below, the contact will be reset.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Overpressure</b>	see chart for max. static pressure, dynamic pressures are 50% lower	
<b>Switch contact</b>	DS15/16: NO contact, optionally NC contact	DS17/18: SPDT switch
<b>Contact load</b>	DS15/16: 2 A at 42 V DC, DS17: 4 A at 42 V DC, DS18: 4 A at 250 V AC	
<b>Electrical connector</b>	DS15/16: screw terminal, DS17/18: spade terminal 6.3 x 0.8 mm, optionally also for DS15/16	
<b>Hysteresis</b>	DS15/16: 5...20%, DS17/18: adjustable to 10...30% by factory	
<b>Life cycle</b>	10 <sup>6</sup> switching cycles at < 50 bar	<b>Switching frequency</b> max. 200 cycles/min
<b>Vibration resistance</b>	10 g at 5...200 Hz	<b>Shock resistance</b> 30 g
<b>Certifications</b>	CSA-certified and UL-listed	
<b>Protection class</b>	IP 00, with coupling socket IP 65	
<b>Temperature range</b>	-30 °C to 100 °C / -22 °F to 212 °F for NBR/Buna-N, -30 °C to 120 °C / -22 °F to 248 °F for EPDM, -5 °C to 120 °C / 23 °F to 248 °F for FKM	
<b>Material</b>	Body: steel, brass at DS15, optionally stainless steel at DS18 Elastomer: NBR/Buna-N, optionally EPDM or FKM	

0,1 ... 1/200 bar  
-0.2 ... -1 bar



Pressure transmission by	Overpressure protection < bar	Measuring tolerance ± bar	Measurement range bar	Order number
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Pressure switch G <sup>1</sup> / <sub>4</sub> m, NO 42V			steel, NBR/Buna-N, without protective cap	DS16
diaphragm	300	0.2	0.1 ... 1.0	DS16-A
		0.5	1.0 ... 10	DS16-B
		1.0	10 ... 20	DS16-C
		2.0	20 ... 50	DS16-D
piston	600	5.0	50 ... 150	DS16-E

Pressure switch G <sup>1</sup> / <sub>4</sub> m, SPDT 42V			steel, NBR/Buna-N, with coupling socket	DS17
diaphragm	100	0.2	0.3 ... 1.5	DS17-A
		0.5	1.0 ... 10	DS17-B
		1.0	1.0 ... 10	DS17-C
		3.0	10 ... 50	DS17-D
		5.0	10 ... 100	DS17-E
piston	600	5.0	50 ... 200	DS17-H

Pressure switch G <sup>1</sup> / <sub>4</sub> m, SPDT 250V			steel, NBR/Buna-N, with coupling socket	DS18
diaphragm	100	0.2	0.3 ... 1.5	DS18-A
		1.0	1.0 ... 10	DS18-C
		3.0	10 ... 50	DS18-D
		5.0	10 ... 100	DS18-E
		5.0	50 ... 200	DS18-H
piston	600	5.0	50 ... 200	DS18-H

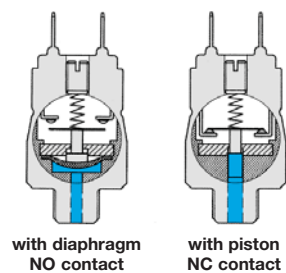
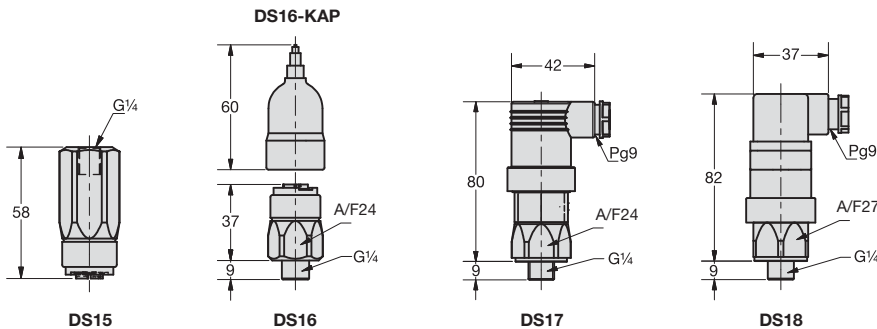
Vacuum switch G <sup>1</sup> / <sub>8</sub> f, NO 42V			brass, FKM, without protective cap	DS15
diaphragm	20	0.1	-0.2 ... -1	DS15-03

### Special options, add the appropriate letter

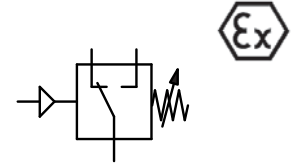
<b>EPDM elastomer</b>		not for DS15	DS1 .-. E
<b>FKM elastomer</b>	Viton	not for DS15	DS1 .-. V
<b>free of oil and grease</b>	suitable for oxygen, max. 10 bar		DS1 .-. L
<b>NC contact</b>	instead of normally open contact	for DS15 and DS16	DS1 .-. 1
<b>spade terminal</b>	6.3 x 0.8 mm, galvanised	for DS15 and DS16	DS1 .-. T
<b>600 bar overpressure</b>	maximum	for DS16	DS16-. U
<b>gold contact</b>	max. 24 V AC/DC, 50 mA	for DS17	DS17-. G
<b>250 V</b>	max. voltage	for DS17	DS17-. W
<b>stainless steel body</b>	0.5...5/200 bar	for DS18	DS18-. S
<b>factory-set pressure</b>	pressure indication falling pressure VF . . rising pressure		DS1 .-. VS . .

### Accessories

protection cap straight, IP65 for DS15 and DS16 **DS16-KAP**



<b>Description</b>	The pressure switch closes or opens an electrical contact when the desired pressure is reached. When the pressure falls below the adjusted setpoint, the contact will be reset.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Overpressure</b>	see chart for max. static pressure,	
<b>Contact load</b>	DS34: 1 A at 230 V AC,	<b>Switch contact</b> SPDT switch
<b>ATEX version</b>	DS34: II 3D IP 65 T90°C	dynamic pressures are 50% lower
<b>Electrical connector</b>	3-wire connection cable, length 2 m, cross-sectional area 0.75 mm <sup>2</sup> at DS34 or 0.5 mm <sup>2</sup> at DS35	DS35: 2 A at 230 V AC
<b>Hysteresis</b>	< 25% FS, ca. 10% FS in the lower range	DS35: II 2G Ex d II C T6/T5
<b>Life cycle</b>	10 <sup>8</sup> switching cycles at < 50 bar	<b>Switching frequency</b> 200 cycles/min
<b>Vibration resistance</b>	10 g at 5...200 Hz	<b>Shock resistance</b> 30 g
<b>Mounting position</b>	any	<b>Protection class</b> IP 65
<b>Temperature range</b>	-20 °C to 80 °C / 23 °F to 176 °F for NBR/Buna-N and EPDM	
	-5 °C to 80 °C / 23 °F to 176 °F for FKM	
<b>Material</b>	Body: zinc-plated steel at DS34, aluminium at DS35	optionally EPDM or FKM
	Elastomer: NBR/Buna-N,	



**0.3... 1.5/400 bar  
dust- and gas-proof**

Switches  
12

Pressure transmission by	Overpressure protection < bar	Measurement tolerance ± bar	Measurement range bar	Order number
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Pressure switch G <sup>1</sup> / <sub>4</sub> male	SPDT switch 230 V AC, 1A	dust-proof	II 3D IP 65 T90°C	DS34
diaphragm	300	0.2	0.3 ... 1.5	DS34-A
		0.5 - 1.0	1.0 ... 10	DS34-B
		1.0	10 ... 20	DS34-C
		2.0	20 ... 50	DS34-D
piston	600	5.0	50 ... 150	DS34-E



DS34, dust protection

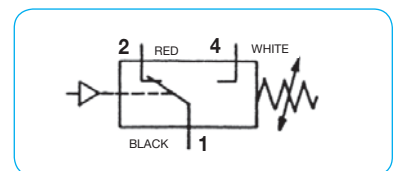
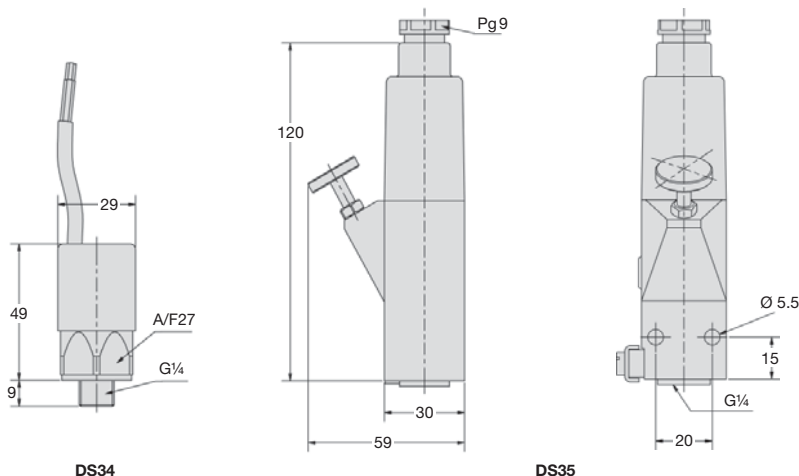
Pressure switch G <sup>1</sup> / <sub>4</sub> female	SPDT switch 230 V AC, 1A	gas-proof	II 2G Ex d II C T6/T5	DS35
diaphragm	200	0.5	1 ... 6	DS35-B
		3.0	5 ... 50	DS35-D
piston	600	3 - 5	20 ... 100	DS35-E
		5 - 9	100 ... 400	DS35-K



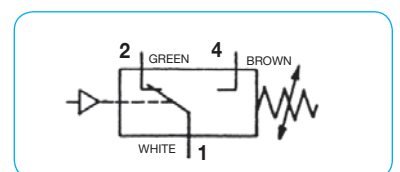
DS35, gas protection

### Special options, add the appropriate letter

<b>EPDM elastomer</b>	-20 °C to 80 °C / -4 °F to 176 °F	DS3. - .E
<b>FKM elastomer</b>	- 5 °C to 80 °C / 23 °F to 176 °F	DS3. - .V
<b>free of oil and grease</b>	suitable for oxygen, max. 10 bar, diaphragm version only	DS3. - .L
<b>adjusted switchpoint</b>	± 5%, indicate on order	DS3. - .X



pin configuration DS34



pin configuration DS35

PDF CAD  
www.aircom.net



Order example:  
DS34-A



<b>Description</b>	Adjustable pressure switch for monitoring pressure, vacuum and differential pressure. From the 6 bar device on two turns of the adjusting knob are necessary for the whole adjustment range, so the scale on the knob is inappropriate.		
<b>Media</b>	compressed air, non-corrosive gases or liquids	<b>Overpressure</b>	see chart
<b>Switch contact</b>	SPDT switch with silver contact, optionally gold contact	<b>Vibration resistance</b>	20 g
<b>Contact load</b>	2 A at 24 V DC, 6 A at 250 V AC	<b>Switching time</b>	30 ms
<b>Electrical connector</b>	AMP spade terminal, 6.3 x 8 mm, according to DIN 46244	<b>Hysteresis</b>	see chart
<b>Life cycle</b>	10 <sup>6</sup> switching cycles	<b>Protection class</b>	IP 65 w/ coupling socket
<b>Certifications</b>	VDE, TÜV design test, optionally Atex		
<b>Mounting position</b>	any, but indication needed for switch point < 100 mbar		
<b>Temperature range</b>	-20 °C to 85 °C / -4 °F to 185 °F for NBR/Buna-N, EPDM and polyamide, up to 130 °C / 266 °F for FKM		
<b>Material</b>	Body: Zytel, a high-quality polyamide Elastomer: NBR/Buna-N, optionally EPDM, FKM or special FKM (saturated steam-resistant) Pressure connection: brass, at DSP-W polyamide, optionally stainless steel or PVDF		

**5 ... 20 mbar / 12 bar**  
**-5 ... -20 / -700 mbar**

Switches  
12

Dimensions		Overpressure protection	hysteresis max.	Measurement range	Order number
B	Ø	< bar	mbar / bar	mbar / bar	
mm	mm				

Pressure switch G <sup>1</sup> / <sub>4</sub> male, for low pressure			wetted sections: brass and NBR/Buna-N, scale toleranz 10%		DSP-D
68	45	0.5	3 mbar	5 ... 20 mbar	DSP-DB2
		0.5	5 mbar	10 ... 50 mbar	DSP-DB5
		0.5	10 mbar	25 ... 100 mbar	DSP-DC1
		1.0	20 mbar	50 ... 250 mbar	DSP-DC2
		1.0	50 mbar	100 ... 500 mbar	DSP-DC5
		10	150 mbar	0.25 ... 1.0 bar	DSP-D01
		10	250 mbar	0.5 ... 1.5 bar	DSP-D02
		10	500 mbar	1 ... 3.0 bar	DSP-D03
		25	0.5 / 2 bar*	1 ... 6.0 bar	DSP-D06
		25	0.5 / 2 bar*	4 ... 9.0 bar	DSP-D09
		25	0.5 / 2 bar*	7 ... 12 bar	DSP-D12



Pressure switch G <sup>1</sup> / <sub>4</sub> male			wetted sections: brass and NBR/Buna-N, scale toleranz 10%		DSP-V
68	45	0.5	3 mbar	-5 ... - 20 mbar	DSP-V02
		0.5	5 mbar	-10 ... - 50 mbar	DSP-V05
		0.5	10 mbar	-25 ... -100 mbar	DSP-V10
		0.5	20 mbar	-50 ... -125 mbar	DSP-V12
		1.0	25 mbar	-75 ... -200 mbar	DSP-V20
		1.0	30 mbar	-100 ... -300 mbar	DSP-V30
		1.0	75 mbar	-200 ... -500 mbar	DSP-V50
		1.0	75 mbar	-300 ... -700 mbar	DSP-V70



Differential press. switch, nipple Ø 6.5			wetted sections: polyamide and NBR/Buna-N, scale toleranz 10%		DSP-W
77	45	0.1	3 mbar	5 ... 20 mbar	DSP-W20
		0.1	5 mbar	10 ... 50 mbar	DSP-W50



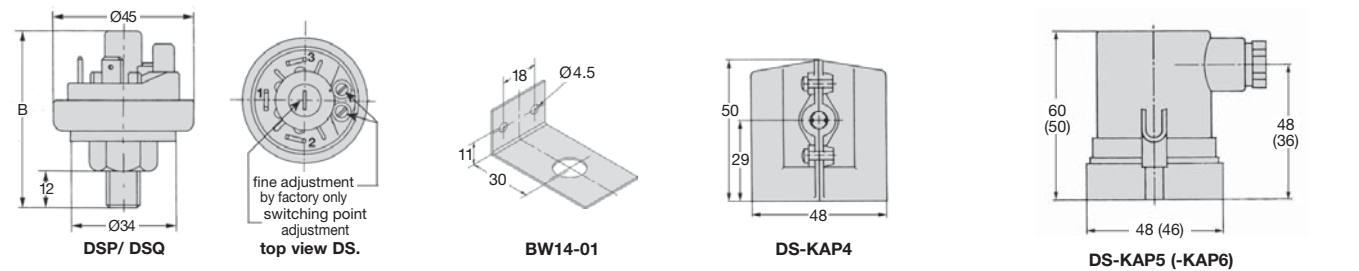
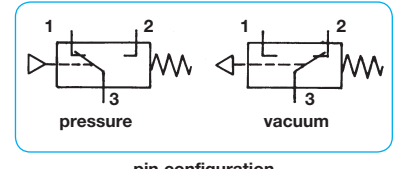
### Special options, add the appropriate letter

<b>factory-set pressure</b>		DSQ- . . .
<b>G<sup>1</sup>/<sub>8</sub> male</b>	pressure port thread, (not for DSP-W)	DSP- . . . 1
<b>stainless steel port</b>	pressure port thread, 1.4401, (not for DSP-W)	DSP- . . . S
<b>FKM elastomer</b>	max. 130 °C / 266 °F	DSP- . . . V
<b>EPDM elastomer</b>		DSP- . . . E
<b>increased overpressure</b>	max. 4 bar for pressure measurement range < 1 bar	DSP- . . . U
<b>gold contact</b>	max. 24 V AC, 100 mA	DSP- . . . G
<b>Ex-i-Atex</b>	Ex II 1/2G Ex ia IIB T4 and Ex II 1/2G Ex ia IIC T4	DSP- . . . EX
<b>Ex-ii-Atex</b>	Ex II 1/2G Ex ia IIB T4 and Ex II 1/2G Ex ia IIC T4	DSP- . . . SEX

DS-KAP5 DS-KAP4

### Accessories

<b>mounting bracket</b>	made of steel, including nut	for G <sup>1</sup> / <sub>4</sub>	<b>BW14-01</b>
<b>protection cap</b>	angular, cable feedthrough Ø 5 mm	IP44	<b>DS-KAP4</b>
	angular, high-strength cable gland Pg 9	IP54	<b>DS-KAP5</b>
		IP65	<b>DS-KAP6</b>

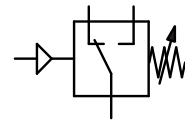


\* 0.5 bar at the beginning, 2 bar at the end of the pressure range

# Miniature Pressure and Vacuum Switch, Type "Airtrol®"

F4200

<b>Description</b>	High-precision pressure and vacuum switch with electrical outlet signal. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Switch contact</b>	micro SPDT switch, covered by plastic cap		
<b>Contact load</b>	3 A at 230 V AC or 1.2 A at 125 V DC 10 A at 230 V AC or 0.5 A at 125 V DC		
<b>Electrical connector</b>	0.187" (4.75 mm) quick connector for Molex connector		
<b>Repeatability</b>	± 2% FS		
<b>Certifications</b>	CSA-certified and UL-listed		
<b>Switching time</b>	25 ms		
<b>Mounting position</b>	any		
<b>Temperature range</b>	4 °C to 66 °C / 40 °F to 150 °F		
<b>Material</b>	Body: polysulphone	Spring: stainless steel	Media non-contact parts: nylon, carbon fibre nylon, acetal
	Diaphragm: polyurethane		



3 ... 30 mbar / 7 bar  
-1 ... -10 mbar / -1 bar

Description	Contact load	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
	max. A	mbar	mbar	max. bar	bar	

Pressure and Vacuum Switch	pressure port 1/8" NPT male, with covering cap, SPDT switch	F4200
pressure switch	3	3 10 1 0.003 ... 0.03 <b>F4200- 0,5PT</b>
	10	7 20 2 0.014 ... 0.14 <b>F4200- 2PT</b>
	10	30 50 2 0.035 ... 0.35 <b>F4200- 5PT</b>
	10	70 110 3 0.035 ... 1.0 <b>F4200- 15PT</b>
	10	120 160 4 0.035 ... 2.1 <b>F4200- 30PT</b>
	10	240 350 8 0.035 ... 4.2 <b>F4200- 60PT</b>
	10	400 500 8 0.070 ... 7.0 <b>F4200-100PT</b>
vacuum switch	3	1 3 -0.3 -0.001 ... -0.01 <b>F4200-X 4PT</b>
	10	17 27 -1 -0.007 ... -0.17 <b>F4200-X 5PT</b>
	10	34 50 -1 -0.015 ... -0.34 <b>F4200-X10PT</b>
	10	68 100 -1 -0.050 ... -1.00 <b>F4200-X30PT</b>



F4200-100PT



F4200-60FEM



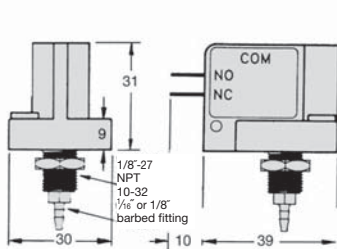
F4200-100PM



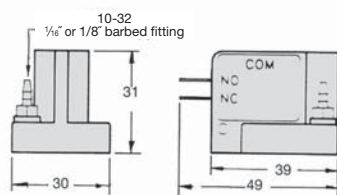
F4200-100MM

## Special options, add or change the appropriate letter

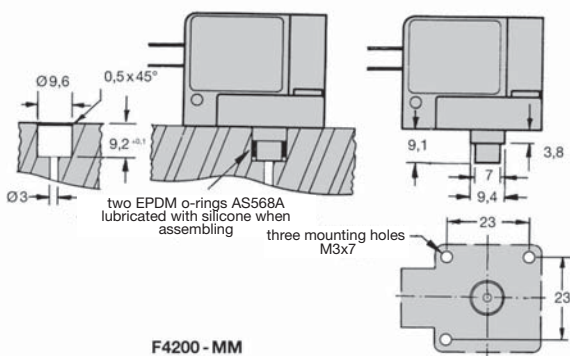
<b>flush mounting</b>	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4200-... <b>FMB80</b>
<b>panel mounting</b>	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4200-... <b>PMB80</b>
<b>manifold mounting</b>		F4200-... <b>MM</b>
<b>barbed fittings</b>	for FM and PM, made of nylon, Ø 1/16", Ø 2 mm	F4200-... <b>B80</b>
	nylon, Ø 1/8", Ø 4 mm	F4200-... <b>B85</b>
	polysulphone, Ø 1/16", Ø 2 mm	F4200-... <b>P80</b>
	polysulphone, Ø 1/8", Ø 4 mm	F4200-... <b>P85</b>
<b>gold contact</b>		F4200-... <b>.1B</b>
<b>factory-set switchpoint</b>	± 5%, indicate on order	F4200-... <b>.X</b>
<b>free of oil and grease</b>	specially cleaned, suitable for oxygen	F4200-... <b>.L</b>



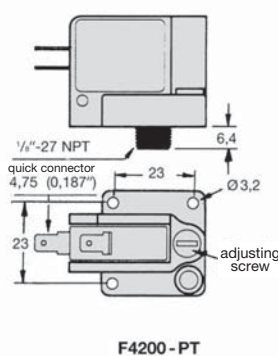
F4200-PM



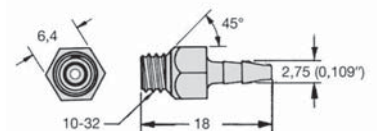
F4200-FM



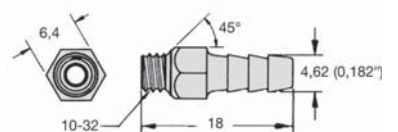
F4200-MM



F4200-PT



B80 / P80



B85 / P85

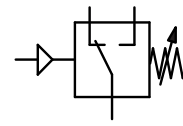
PDF CAD  
www.aircom.net



Order example:  
F4200-0,5PT

# Pressure and Vacuum Switch with Low Hysteresis, Type "Airtrol®" F4300

<b>Description</b>	Pressure and vacuum switch with electrical outlet signal and low hysteresis. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Switch contact</b>	micro SPDT switch, covered by plastic cap		
<b>Contact load</b>	3 A or 4 A at 230 V AC, see chart		
<b>Electrical connector</b>	0.110" (2.8 mm) quick connector for Molex/ETC connector		
<b>Repeatability</b>	± 2% FS		
<b>Certifications</b>	CSA-certified and UL-listed		
<b>Switching time</b>	25 ms		
<b>Mounting position</b>	any		
<b>Temperature range</b>	4 °C to 66 °C / 40 °F to 150 °F		
<b>Material</b>	Body: polysulphone	Spring: stainless steel	
	Diaphragm: polyurethane	Media non-contact parts: nylon, carbon fibre nylon, acetal	



14 ... 140 mbar / 7 bar  
-7 ... -170 mbar / -1 bar

Description	Contact load	Hysteresis		Over-pressure	Measurement range	Order number
		typical	max.			
	max. A	mbar	mbar	max. bar	bar	

Pressure / vacuum switch, low hysteresis	pressure port 1/8" NPT male, w. covering cap, SPDT switch	F4300				
pressure switch	3	7	14	2	0.014 ... 0.14	F4300- 2PT
	4	14	24	2	0.035 ... 0.35	F4300- 5PT
	4	30	41	3	0.035 ... 1.0	F4300- 15PT
	4	40	70	4	0.035 ... 2.1	F4300- 30PT
	4	100	170	8	0.035 ... 4.2	F4300- 60PT
vacuum switch	4	140	240	8	0.070 ... 7.0	F4300-100PT
	4	10	20	-1	-0.007 ... -0.17	F4300-X 5PT
	4	20	34	-1	-0.015 ... -0.34	F4300-X10PT
	4	34	50	-1	-0.050 ... -1.00	F4300-X30PT

## Special options, add or change the appropriate letter

<b>flush mounting</b>	barbed fitting made of nylon, Ø 1/8", Ø 2 mm	F4300-...FMB80
<b>panel mounting</b>	barbed fitting made of nylon, Ø 1/8", Ø 2 mm	F4300-...PMB80
<b>manifold mounting</b>		F4300-...MM
<b>barbed fittings</b>	for FM and PM, made of nylon, Ø 1/8", Ø 2 mm	F4300-...B80
	nylon, Ø 1/8", Ø 4 mm	F4300-...B85
	polysulphone, Ø 1/8", Ø 2 mm	F4300-...P80
	polysulphone, Ø 1/8", Ø 4 mm	F4300-...P85
<b>gold contact</b>		F4300-...1B
<b>factory-set switchpoint</b>	± 5%, indicate on order	F4300-...X
<b>free of oil and grease</b>	specially cleaned, suitable for oxygen	F4300-...L



F4300-5PT



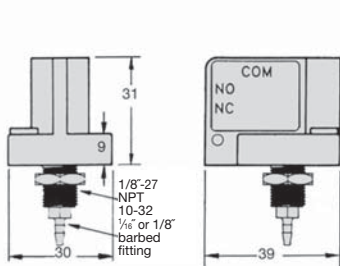
F4300-5FM



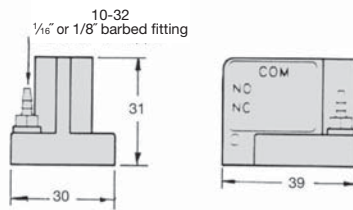
F4300-30PM



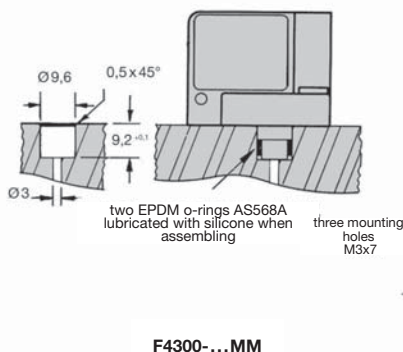
F4300-60MM



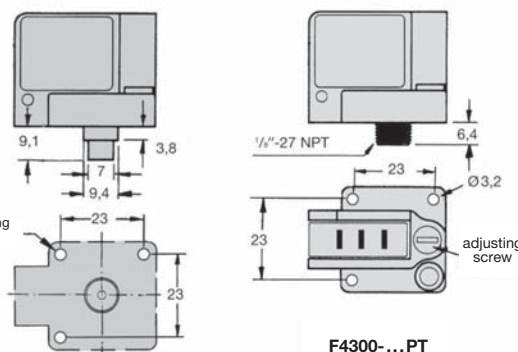
F4300-...PM



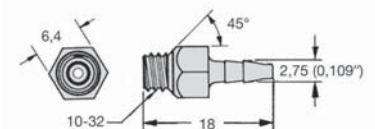
F4300-...FM



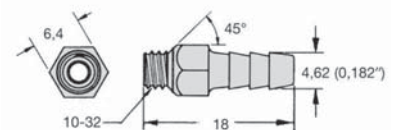
F4300-...MM



F4300-...PT



B80 / P80



B85 / P85

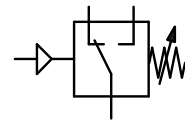
PDF CAD  
www.aircom.net

Order example:  
F4300-2PT



# Pressure Switch with Adjustable Hysteresis for PCB, Type "Airtrol®" F4000 / F4400

<b>Description</b>	High-precision pressure and vacuum switch with electrical outlet signal. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Switch contact</b>	micro SPDT switch, covered by plastic cap		
<b>Contact load</b>	15 A at 230 V AC, 1.2 A at 125 V DC	see chart, consultation needed for AT1004	
<b>Electrical connector</b>	3 A or 4 A at 230 V AC, 0.187" (4.75 mm) quick connector for Molex connector	see chart for F4000 and AT1004	
<b>Repeatability</b>	0.060" (1.52 mm) solder leads	for F4400	
<b>Certifications</b>	± 2% FS		
<b>Switching time</b>	CSA-certified and UL-listed		
<b>Mounting position</b>	25 ms		
<b>Temperature range</b>	any		
<b>Material</b>	4 °C to 66 °C / 40 °F to 150 °F		
	Body: polysulphone	Spring: stainless steel	
	Diaphragm: polyurethane	Media non-contact parts: nylon, carbon fibre nylon, acetal	



**4 ... 12 mbar / 7 bar**  
**-7 ... -170 mbar / -1 bar**

Description	Contact rating	Hysteresis typical	Over-pressure max.	Measurement range off	Measurement range on	Order number
	max. A	mbar	mbar	mbar/bar	mbar/bar	

Pressure and vacuum switch	with adjustable hysteresis nylon fitting, Ø 1/16", Ø 2 mm				F4000	
pressure switch	15	-	-	1	4... 12 mbar 6... 40 mbar	F4000- 20B80
	15	-	-	1	4... 37 mbar 8... 150 mbar	F4000- 30B80
vacuum switch	15	-	-	-1	-70...-380 mbar -135...-500 mbar	F4000- X B80

Pressure switch for PCB	with small hysteresis nylon fitting, Ø 1/16", Ø 2 mm				F4400	
pressure switch	3	7	14	2	0.014 ... 0.14 bar	F4400- 2B80
	4	14	24	2	0.035 ... 0.35 bar	F4400- 5B80
	4	30	41	3	0.035 ... 1.0 bar	F4400- 15B80
	4	40	70	4	0.035 ... 2.1 bar	F4400- 30B80
	4	100	170	8	0.035 ... 4.2 bar	F4400- 60B80
	4	140	240	8	0.070 ... 7.0 bar	F4400-100B80
vacuum switch	4	10	20	-1	-0.007 ... -0.17 bar	F4400-X 5B80
	4	20	34	-1	-0.015 ... -0.34 bar	F4400-X10B80
	4	30	50	-1	-0.050 ... -1.00 bar	F4400-X30B80

Pressure switch, factory-set	nylon fitting, ± 10% tolerance Ø 1/16", Ø 2 mm, SPDT switch		AT1004
pressure switch	switching point to be indicated on order		4...43 mbar AT1004-..B80

Special options, add the appropriate letter			
<b>barbed fitting</b>	made of	nylon, Ø 1/8", Ø 4 mm	F4.00-... B85
		polysulphone, Ø 1/16", Ø 2 mm	F4.00-... P80
		polysulphone, Ø 1/8", Ø 4 mm	F4.00-... P85
<b>gold contact</b>		0.1 A at 125 V AC	F4.00-... 1B
<b>factory-set switch point</b>		± 5%, switching point to be indicated on order	F4.00-... X
<b>free of oil and grease</b>		specially cleaned, suitable for oxygen	F4.00-... L



F4000-30B80



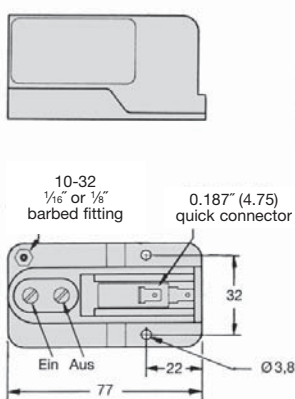
F4400-100B80



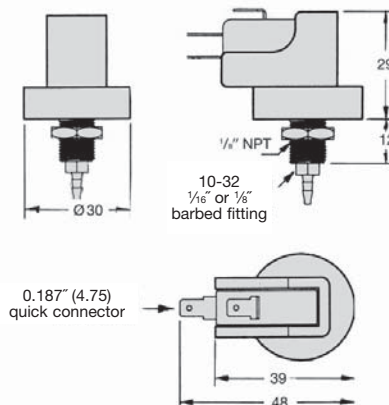
AT1004-17



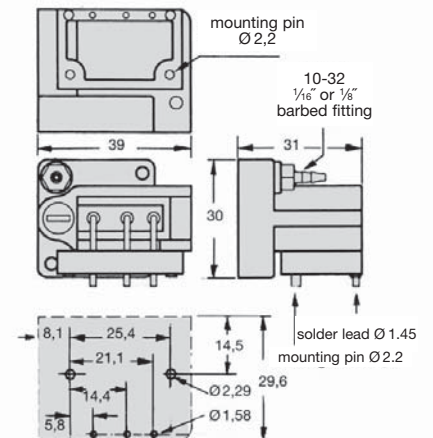
cover cap for pressure switch supplied



F4000



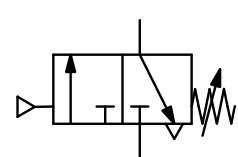
AT1004



F4400


\*1 not adjustable

<b>Description</b>	Pilot-actuated pressure valve with precisely adjustable pilot setpoint. Perfect for applications which require intrinsic safety, pneumatic sequencing or pressure relief. Valves are normally opened or closed. The switch complies with FDA regulations and is suitable for water and food products.		
<b>Media</b>	5 µm filtered compressed air		
<b>Pressure valve</b>	3-port/2-way air-assisted servo valve with exhaust to atmosphere, NO or NC, made of nylon		
<b>Supply pressure:</b>	1.4...8 bar, untapped exhaust		
<b>Air consumption:</b>	max. 0.3 l/min at 2 bar supply pressure or max. 0.7 l/min at 7 bar		
<b>Pneumatic connection:</b>	quick connector for hose external diameter of 4 mm (5/32")		
<b>Flow rate:</b>	70 l/min at 7 bar, nominal size DN 0.2, $K_v = 0.05$		
<b>Switching time:</b>	64 ms at 6 bar supply pressure		
<b>Accuracy</b>	Pressure switch: at supply pressure variation of 0.7 bar: < 7 mbar pressure deviation Vacuum switch: at supply pressure variation of 0.3 bar: < 3 mbar pressure deviation		
<b>Repeatability:</b>	± 2% FS		
<b>Temperature range</b>	4 °C to 60 °C / 40 °F to 140 °F		
<b>Material</b>	Body: polysulphone	Mounting position: any	Spring: stainless steel
	Diaphragm: polyurethane	Media non-contact parts: nylon, carbon fibre nylon, acetal	




**70... 350 mbar / 7 bar**  
**-30... -170 / -850 mbar**

Switches



12

Switches



12

Description	Supply pressure of switching valve	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
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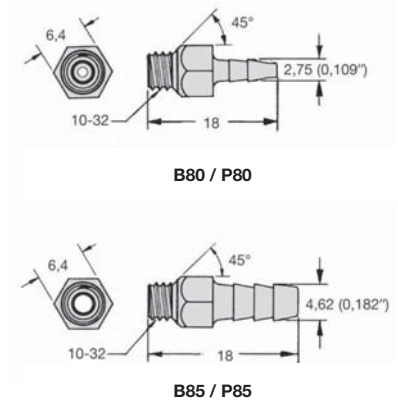
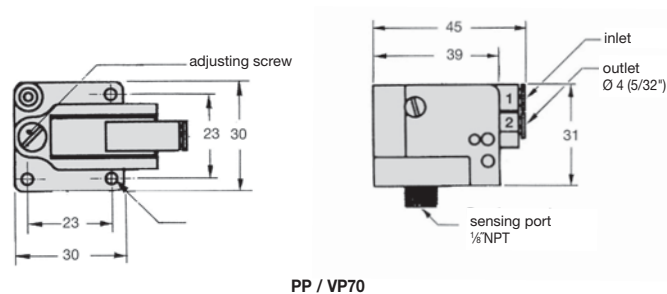
	Supply pressure	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
<b>Switch with pneumatic output, NO</b>						
<b>pressure switch</b>	1.4...8 bar	15	30	2	0.07... 0.35	<b>PP700- 5PT</b>
		20	40	4	0.07... 1.0	<b>PP700- 15PT</b>
		20	70	4	0.07... 2.1	<b>PP700- 30PT</b>
		35	140	8	0.20... 4.2	<b>PP700- 60PT</b>
		50	240	8	0.35... 7.0	<b>PP700-100PT</b>
<b>vacuum switch</b>	1.4...8 bar	15	35	-1	-0.03... -0.17	<b>VP700- 5PT</b>
		20	40	-1	-0.03... -0.34	<b>VP700- 10PT</b>
		35	70	-1	-0.07... -0.85	<b>VP700- 30PT</b>



	Supply pressure	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
<b>Switch with pneumatic output, NC</b>						
<b>pressure switch</b>	1.4...8 bar	15	30	2	0.07... 0.35	<b>PP701- 5PT</b>
		20	40	4	0.07... 1.0	<b>PP701- 15PT</b>
		20	70	4	0.07... 2.1	<b>PP701- 30PT</b>
		35	140	8	0.20... 4.2	<b>PP701- 60PT</b>
		50	240	8	0.35... 7.0	<b>PP701-100PT</b>
<b>vacuum switch</b>	1.4...8 bar	15	35	-1	-0.03... -0.17	<b>VP701- 5PT</b>
		20	40	-1	-0.03... -0.34	<b>VP701- 10PT</b>
		35	70	-1	-0.07... -0.85	<b>VP701- 30PT</b>



- Special options, add or change the appropriate letter**
- flush mounting** barbed fitting made of nylon, Ø 1/16", Ø 2 mm .P70.-... **FMB80**
  - panel mounting** barbed fitting made of nylon, Ø 1/16", Ø 2 mm .P70.-... **PMB80**
  - manifold mounting** .P70.-... **MM**
  - barbed fitting** for FM and PM, nylon, Ø 1/16", Ø 2 mm .P70.-... **B80**
  - nylon, Ø 1/8", Ø 4 mm .P70.-... **B85**
  - polysulphone, Ø 1/16", Ø 2 mm .P70.-... **P80**
  - polysulphone, Ø 1/8", Ø 4 mm .P70.-... **P85**
  - free of grease and oil** specially cleaned, suitable for oxygen .P70.-... **L**



\*1 only output signal in the absence of input signal (positive pressure, vacuum)  
\*2 no output signal in the absence of input signal (positive pressure, vacuum)

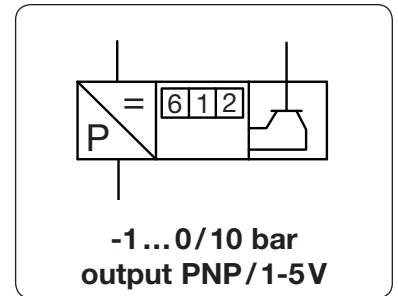
PDF CAD  
www.aircom.net

Order example:  
PP700-5PT



# Programmable Vacuum and Pressure Switch Transducer with Display DSB / DSC

<b>Description</b>	Pressure to the unit is continuously monitored by a piezo-resistive sensor and converted into a proportional voltage signal. The signal is then amplified and delivered as a PNP signal. dry, lubricated or unlubricated compressed air or non-corrosive gases		
<b>Media</b>	12 ... 30 V DC, reverse voltage protection, current consumption max. 30 mA, output current max. 250 mA		
<b>Supply voltage</b>	Mode: hysteresis or window, switching point and hysteresis, NO or NC, closing or opening time, bar, psi, MPa, kg/cm <sup>2</sup> etc. Display: current pressure, highest pressure, measurement errors		
<b>Adjustment</b>	<b>DSB</b>	2x PNP freely programmable as NO or NC, max. contact load 250 mA, short-circuit-proof	
<b>Switching output</b>	<b>DSB</b>	1x PNP as at DSB and 1x analogue output signal 1...5 V, output impedance < 500 Ω	
<b>Switching output</b>	<b>DSC</b>	adjustable from 0% to 100% of set switching point	
<b>Hysteresis</b>	< 0.2% FS		
<b>Repeatability</b>	3-digit, red 7-segment display on DSB, no display on DSC		
<b>LED display</b>	via 7-segment display on DSB, via multicolour LED on DSC		
<b>Error display</b>	-1 °C to 50 °C / 30 °F to 122 °F		
<b>Certifications</b>	CSA-compliant, UL-listed		
<b>Temperature range</b>	-1 °C to 50 °C / 30 °F to 122 °F		
<b>Material</b>	Body: ABS-PC plastic, shockproof		
	<b>Linearity</b>	< 1% FS	
	<b>Switching frequency</b>	200 Hz	
	<b>Mounting position</b>	any	
	<b>Shock resistance</b>	10 g	
	<b>Protection class</b>	IP 65	
	<b>Connection thread:</b>	nickel-plated brass	



Switches  
12

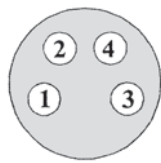
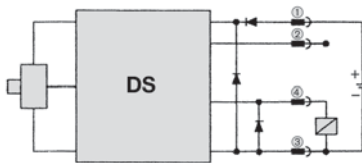
Dimensions	Digital display	Over-pressure	Output signal type	Measurement range	Order number
B	Ø	max. bar	PNP/analogue	max. mA	
mm	mm				

Sensor pressure switch					connection thread G½ male, without coupling socket, M8x1, 4-pin	DS	
57	16	with	5	2x PNP	250	0 ... -1	<b>DSB-V1</b>
						-1 ... +1	<b>DSB-V2</b>
						0 ... 10	<b>DSB-10</b>
						-1 ... 10	<b>DSB-V10</b>
44	16	without	5	1x PNP/1x analog	250	0 ... -1	<b>DSC-V1</b>
						-1 ... +1	<b>DSC-V2</b>
						0 ... 10	<b>DSC-10</b>
						-1 ... 10	<b>DSC-V10</b>



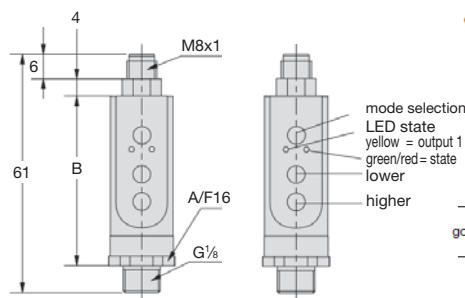
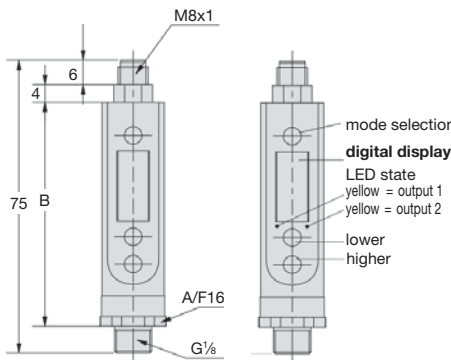
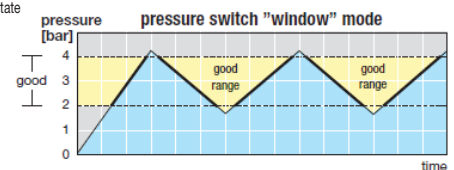
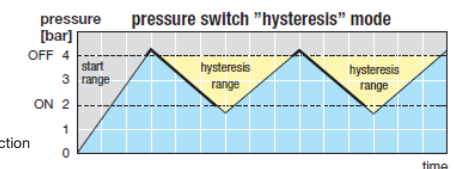
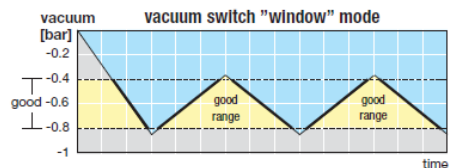
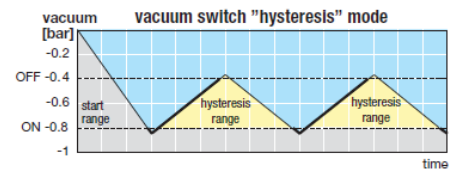
## Accessories

<b>coupling socket</b>	M8x1, 4-pin with 5 m cable	straight	<b>KM8-A4-5</b>
		angular	<b>KM8-C4-5</b>



PIN configuration DIN EN 50044		
pin	colour	configuration
1	brown	24 V DC (+)
2	white	outlet 2 / analog
3	blue	24 V DC (-)
4	black	outlet 1 / digital

PIN configuration according to DIN EN 50044



PDF CAD  
www.aircom.net



Bestellbeispiel:  
**DSB-V1**

## Pressure Transducer

Description	Pressure range	Connection	Device	Seite
low-cost, miniature	0 ... 6 / 600 bar	G $\frac{1}{4}$ m	D0	<b>13.02</b>
for corrosive media	0 ... 0.35 / 35 bar	G $\frac{1}{8}$ m - G $\frac{3}{8}$ m	D9	<b>13.03</b>
for compressed air or liquids	0 ... -1 / 100 bar	G $\frac{1}{8}$ m - G $\frac{3}{8}$ m	D8	<b>13.04</b>
for non-corrosive media	0 ... 10 mbar / 5 bar	G $\frac{1}{8}$ m - G $\frac{3}{8}$ m	D7	<b>13.05</b>
submersible sensor, flush-mounted diaphragm	0 ... -1 / 350 bar	G $\frac{1}{4}$ m and G $\frac{1}{2}$ m	D6	<b>13.06</b>
for differential pressure	0 ... 1 mbar / 10 bar	G $\frac{1}{8}$	D5	<b>13.07</b>
for high temperature, accurate to 0.1%	0 ... 50 mbar / 1000 bar	G $\frac{1}{4}$ m and G $\frac{1}{2}$ m	DA	<b>13.08</b>



# 13

## Pressure Transducer

Transducer



13

**Description** The operating pressure is converted into a proportional, electrical signal by a air-tight thin film measuring cell. After amplification the signal is monitored as an analogue voltage or current signal.

**Media** compressed air, non-corrosive gases or liquids, compatible with ceramic and NBR/Buna-N

**Supply voltage** 14-36 V DC, residual ripple 5%, with reverse voltage protection, max. current consumption 1 mA

**Electrical connector** plug M12x1, 4-pin

**Output signal** 4-20 mA: apparent ohmic resistance max. (supply voltage - 8 V) / 20 mA  
0-10 V:  $R_A > 5k\Omega$

**Accuracy** < 1.0% FS for 6 and 10 bar, < 2.0% for 16 bar  
including non-linearity, hysteresis, non-repeatability, zero point and full scale error

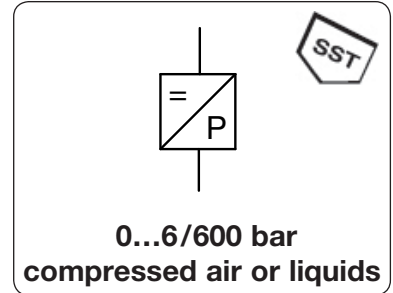
**Non-linearity** < 0.4% FS (BSFL)

**Response time** < 2 ms

**Long-term stability** < 0.3% FS typ.

**Temperature range** Medium: -40 °C to 125 °C / - 40 °F to 257 °F Rated temperature range: 0 °C to 80 °C / 32 °F to 176 °F  
Ambience: -40 °C to 100 °C / - 40 °F to 212 °F

**Material** Body: PBT fiberglass-enforced plastic material, metal pod inside the case  
Measuring cell: thin film, hermetically welded



Dimensions		Accuracy	Over-pressure	Measurement	Order number	
B	Ø	% FS	max. bar	range	for outlet signal	
mm	mm			bar	4-20 mA	0-10 V

for compressed air or liquids				G¼/a, thin film elec. connectr M12x1	D0A	D0V
49	20	1	20	0 ... 6	D0A- 06	D0V- 06
		1	20	0 ... 10	D0A- 10	D0V- 10
		2	32	0 ... 16	D0A- 16	D0V- 16
		2	50	0 ... 25	D0A- 25	D0V- 25
		2	80	0 ... 40	D0A- 40	D0V- 40
		2	120	0 ... 60	D0A- 60	D0V- 60
		2	200	0 ... 100	D0A-100	D0V-100
		2	320	0 ... 160	D0A-160	D0V-160
		2	500	0 ... 250	D0A-250	D0V-250
		2	800	0 ... 400	D0A-400	D0V-400
		2	1200	0 ... 600	D0A-600	D0V-600



D0

### Special options, add the appropriate letter or number

deviant measurement range to be indicated on order **D0 . - XX**

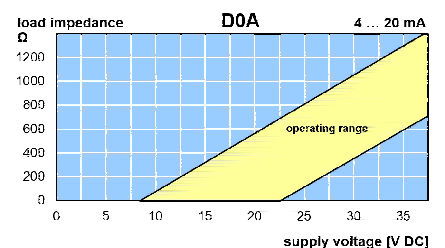
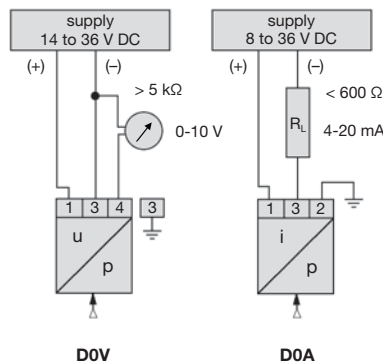
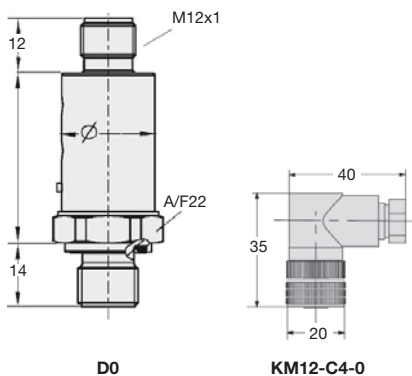
¼" NPT connection thread **D0 . . . . 2**



KM12-C4-0

### Accessories

coupling socket 4-pin	M12x1,	straight	<b>KM12-A4-0</b>	angular	<b>KM12-C4-0</b>
socket with cable	2 m,	straight	<b>KM12-A4-2</b>	angular	<b>KM12-C4-2</b>
	5 m,	straight	<b>KM12-A4-5</b>	angular	<b>KM12-C4-5</b>

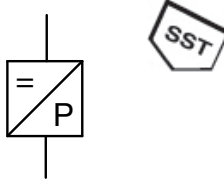


Test chart: see chapter "Technical information"

PDF CAD  
www.aircom.net

Order example:  
D0A-06

<b>Description</b>	The operating pressure is converted into a proportional, electrical signal by a silicon pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.	
<b>Media</b>	all media compatible with stainless steel 316L, material no. 1.4404	
<b>Supply voltage</b>	12...32 V DC, residual ripple 5%, reverse voltage protection, max. current consumption 4 mA	
<b>Electrical connection</b>	plug M12x1, 4-pins, with coupling socket	
<b>Outlet signal</b>	4...20 mA: max. power consumption 260 mW	0...10 V: max. power consumption 50 mW
<b>Linearity/Hysteresis</b>	< 0.1 % FS typ.	
<b>Repeatability</b>	< 0.1 % FS typ.	
<b>Long-term stability</b>	< 0.1 % FS typ.	
<b>Temperature sensitivity</b>	< 0.03% FS typical per °C / K at 0 °C to 70 °C / 32 °F to 158 °F	
<b>Response time</b>	5 ms at 10...90% of measuring range	
<b>Vibration sensitivity</b>	10 g at 5...500 Hz	
<b>Mounting position</b>	any	
<b>Material</b>	Body/Diaphragm: stainless steel 316L, material no. 1.4404	
	<b>Shock resistance</b>	50 g (11 ms)
	<b>Protection class</b>	IP 67 according to DIN EN60529
	<b>Temperature range</b>	-20 °C to 85 °C / -13 °F to 185 °F



**0...35 bar, accurate to 0.3%  
corrosive media**

Dimensions		Over-pressure	Measurement range	Order number	
B	Ø	max. bar	mbar/bar	4-20 mA	0-10 V

For corrosive media		G $\frac{1}{4}$ male, SST, relative pressure, with angular coupling socket	D9A	D9V	
65	21,8	1	0...350 mbar	D9A-C3	D9V-C3
		2	0... 1 bar	D9A-01	D9V-01
		4	0... 2 bar	D9A-02	D9V-02
		10	0... 5 bar	D9A-05	D9V-05
		20	0... 10 bar	D9A-10	D9V-10
		32	0... 16 bar	D9A-16	D9V-16
		40	0... 20 bar	D9A-20	D9V-20
		70	0... 35 bar	D9A-35	D9V-35



D9

### Special options, add the appropriate letter or number

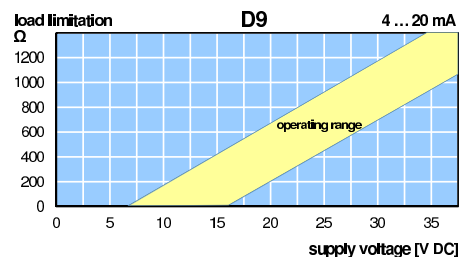
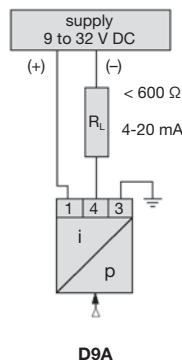
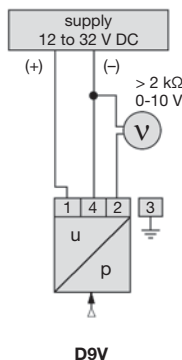
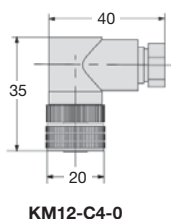
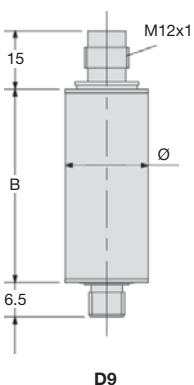
deviant measurement range	to be indicated on order	D9.-XX
absolute pressure range	lowest measurement range 0...1 bar <sub>abs</sub>	D9...A
G $\frac{1}{4}$ male	connection thread	D9...02
G $\frac{3}{8}$ male	connection thread	D9...03
for oxygen	specially cleaned	D9...15



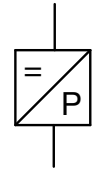
KM12-C4-0

### Accessories

coupling socket 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5



<b>Description</b>	The operating pressure is converted into a proportional, electrical signal by a ceramics pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.	
<b>Media</b>	compressed air, non-corrosive gases or liquids compatible with ceramics and NBR/Buna-N	
<b>Supply voltage</b>	12...32 V DC, residual ripple 5%, with reverse voltage protection, max. current consumption 4 mA	
<b>Electrical connector</b>	plug M12x1, 4-pin, with coupling socket	<b>Protection class</b> IP67 according to DIN EN60529
<b>Output signal</b>	4...20 mA: max. power consumption 260 mW	0...10 V: max. power consumption 50 mW
<b>Linearity/Hysteresis</b>	< 0.1 % FS typ. < 0.2 % FS	<b>Repeatability</b> < 0.1 % FS typ. < 0.2 % FS
<b>Long-term stability</b>	< 0.1 % FS typ. < 0.3 % FS	
<b>Temperature sensitivity</b>	< 0.03% FS typ./°C < 0.06% FS/°C (0...70 °C)	
<b>Vibration resistance</b>	10 g at 5...500 Hz	
<b>Temperature range</b>	-25 °C to 85 °C / -13 °F to 185 °F	
<b>Response time</b>	5 ms for 10...90% of pressure range	<b>Shock resistance</b> 50 g (11ms)
<b>Material</b>	Body: stainless steel 316L, mat. no. 1.4404 Measuring cell: ceramics AL <sub>2</sub> O <sub>3</sub> and NBR/Buna-N o-ring	



**accurate to 0.2%  
compressed air or liquids**

Dimensions		Over-pressure	Measurement range	Order number for output signal	
B	Ø	max. bar	bar	4-20 mA	0-10 V
mm	mm				

for compressed air or liquids			G½ male, ceramic sensor, with angular coupling socket	D8A 0.2% accurate	D8V
52	21.8	2	0... -1	D8A- V0	D8V- V0
		2	-1... 1	D8A- V1	D8V- V1
		2	0... 1	D8A- 01	D8V- 01
		4	0... 2	D8A- 02	D8V- 02
		10	0... 5	D8A- 05	D8V- 05
		20	0... 10	D8A- 10	D8V- 10
		32	0... 16	D8A- 16	D8V- 16
		40	0... 20	D8A- 20	D8V- 20
		50	0... 25	D8A- 25	D8V- 25
		70	0... 35	D8A- 35	D8V- 35
		100	0... 50	D8A- 50	D8V- 50
		140	0... 70	D8A- 70	D8V- 70
		200	0... 100	D8A-100	D8V-100



D8



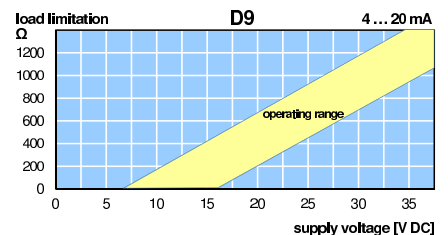
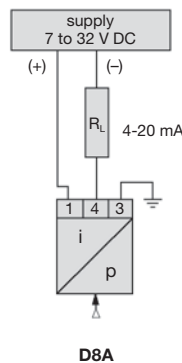
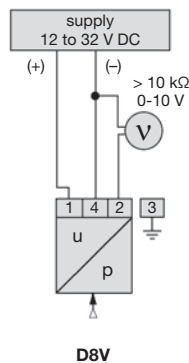
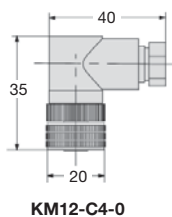
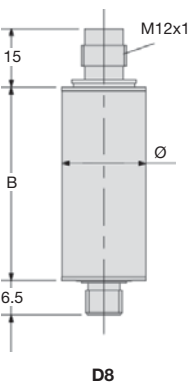
KM12-C4-0

### Special options, add the appropriate letter or number

<b>deviant measurement range</b>	to be indicated on order	D8...XX
<b>absolute pressure range</b>	lowest measurement range 0...1 bar <sub>abs</sub>	D8...A
<b>G¼ male</b>	connection thread	D8...02
<b>G½ male</b>	connection thread	D8...03
<b>for oxygen</b>	specially cleaned, max 40. bar	D8...15

### Accessories

<b>coupling socket 4-pin</b>	M12x1, straight	<b>KM12-A4-0</b>	angular	<b>KM12-C4-0</b>
<b>socket with cable</b>	2 m, straight	<b>KM12-A4-2</b>	angular	<b>KM12-C4-2</b>
	5 m, straight	<b>KM12-A4-5</b>	angular	<b>KM12-C4-5</b>


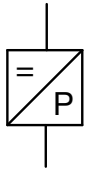




# Miniature Pressure Transducer, Ø 22 mm

D7

<b>Description</b>	The operating pressure is converted into a proportional, electrical signal by a ceramics pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.	
<b>Media</b>	all non-corrosive media compatible with stainless steel, nylon, silicon, silicone and epoxy	
<b>Supply voltage</b>	12...32 V DC, residual ripple 5%, with reverse voltage protection, max. current consumption 4 mA	
<b>Electrical connector</b>	plug M12x1, 4-pin, with coupling socket	<b>Protection class</b> IP67 according to DIN EN60529
<b>Output signal</b>	4...20 mA: max. power consumption 260 mW	0...10 V: max. power consumption 50 mW
<b>Linearity/Hysteresis</b>	< 0.2 % FS typ. < 0.5 % FS	
<b>Repeatability</b>	< 0.2 % FS typ. < 0.3 % FS	
<b>Long-term stability</b>	< 0.5 % FS typ. < 1 % FS	
<b>Temperature sensitivity</b>	< 0.03% FS typ./°C < 0.08% FS/°C (0...50 °C)	
<b>Vibration resistance</b>	2 g at 5...500 Hz	
<b>Temperature range</b>	-25 °C to 85 °C / -13 °F to 185 °F	
<b>Response time</b>	5 ms for 10...90% of pressure range	
<b>Material</b>	Body: stainless steel 316L, mat. no. 1.4404	<b>Shock resistance</b> 50 g (11ms) Measuring cell: silicone and NBR/Buna-N o-ring

**accurate to 0.5%**  
**compressed air or liquids**

Dimensions		Over-pressure	Measurement range	Order number for output signal	
B	Ø	max. bar	bar	4-20 mA	0-10 V
mm	mm				

for non-corrosive media			G <sup>1</sup> / <sub>4</sub> male, open sensor, with angular coupling socket	D7A 0.5% accurate	D7V
52	21.8	0.25	0... 10 mbar	D7A-B1	D7V-B1
		0.25	-10... 10 mbar	D7A-B1V	D7V-B1V
		0.35	0... 25 mbar	D7A-B2	D7V-B2
		0.35	-25... 25 mbar	D7A-B2V	D7V-B2V
		1	0... 70 mbar	D7A-B7	D7V-B7
		1	-70... 70 mbar	D7A-B7V	D7V-B7V
		1	0...350 mbar	D7A-C3	D7V-C3
		1	-350...350 mbar	D7A-C3V	D7V-C3V
		2	0... 1 bar	D7A-01	D7V-01
		2	-1... 1 bar	D7A-V1	D7V-V1
		4	0... 2 bar	D7A-02	D7V-02
		7	0... 5 bar	D7A-05	D7V-05



D7



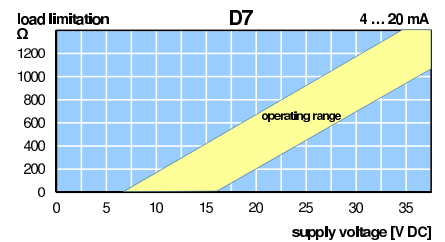
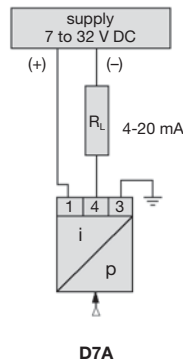
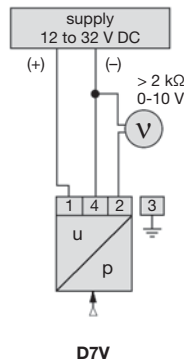
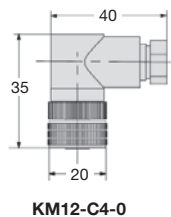
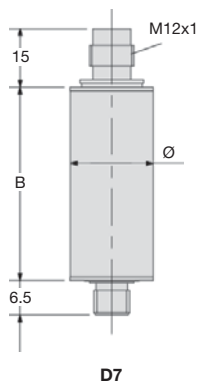
KM12-C4-0

## Special options, add the appropriate letter or number

deviant measurement range	to be indicated on order	D7.-XX
G <sup>1</sup> / <sub>4</sub> male	connection thread	D7.-..02
G <sup>3</sup> / <sub>8</sub> male	connection thread	D7.-..03

## Zubehör, lose beigelegt

coupling socket 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5

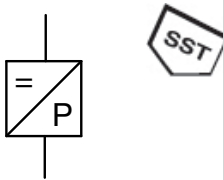


Test chart: see chapter "Technical information"

PDF CAD  
www.aircom.net

Order example:  
D7A-B1

<b>Description</b>	The operating pressure is converted into a proportional, electrical signal by a silicon pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.
<b>Media</b>	all media compatible with stainless steel 316L or 1.4404 D6.-..W: liquids compatible with stainless steel 316L, polyethylene and NBR/Buna-N D6.-..H: light and heavy heating oil
<b>Supply voltage</b>	13...30 V DC at voltage signal, 12...36 V DC at current signal, residual ripple 5%, reverse voltage protection plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket
<b>Electrical connector</b>	4...20 mA: max. power consumption 260 mW      0...10 V: max. power consumption 100 mW
<b>Output signal</b>	
<b>Linearity/Hysteresis</b>	< 0.1 % FS typ.
<b>Repeatability</b>	< 0.1 % FS typ.
<b>Long-term stability</b>	< 0.2 % FS typ.
<b>Temperature sensitivity</b>	< 0.03% FS typ. per °C at 0 to 70 °C / 32 to 158 °F
<b>Response time</b>	1 ms for 10...90% of pressure range
<b>Vibration resistance</b>	10 g at 5...500 Hz
<b>Mounting position</b>	any
<b>Material</b>	Body/Diaphragm: stainless steel 316L/1.4404, D6.-..W: additionally polyethylene and NBR/Buna-N



**-1...350 bar, accurate to 0.5% compressed air or liquids**

Dimensions			Over-pressure max. bar	Measurement range bar	Order number for output signal	
B mm	Ø mm	A/F mm			4-20 mA	0-10 V

Pressure transducer G $\frac{1}{2}$ male			stainless steel, gauge pressure with angular coupling socket		D6A	D6V
142	27	27	2	0... -1	D6A-V0	D6V-V0
			2	-1... 1	D6A-V1	D6V-V1
			2	0... 1	D6A-01	D6V-01
			4	0... 2	D6A-02	D6V-02
			10	0... 5	D6A-05	D6V-05
			20	0... 10	D6A-10	D6V-10
125	27	27	32	0... 16	D6A-16	D6V-16
			40	0... 20	D6A-20	D6V-20
			70	0... 35	D6A-35	D6V-35
			140	0... 70	D6A-70	D6V-70
			200	0...100	D6A-D1	D6V-D1
			400	0...200	D6A-D2	D6V-D2
			700	0...350	D6A-D3	D6V-D3



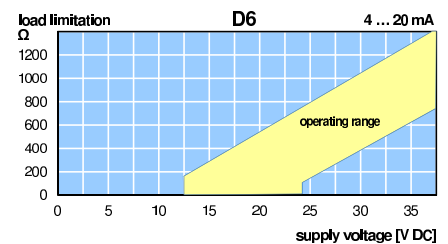
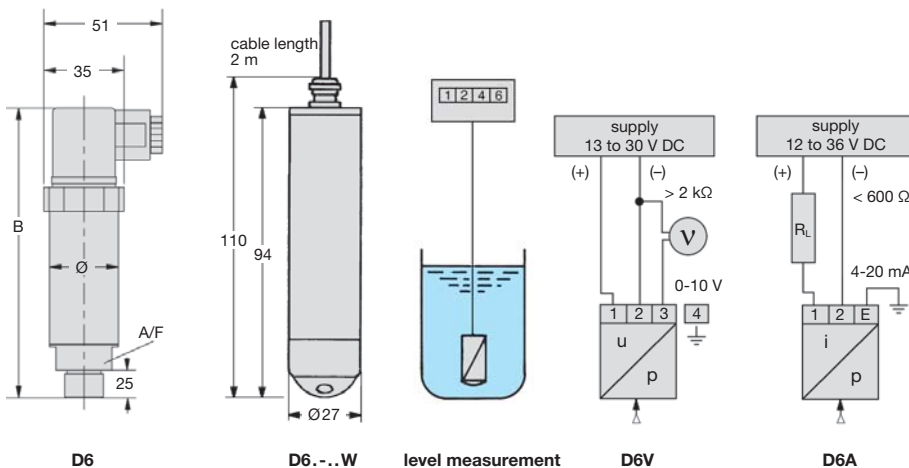
**D6A-01** with male thread      **D6A-01F** with flush-mounted stainless steel diaphragm

### Special options, add the appropriate letter or number

<b>deviant measurement range</b>	to be indicated on order	D6.-..XX
<b>absolute pressure range</b>	lowest measurement range: 0...1 bar <sub>abs</sub>	D6.-..A
<b>G<math>\frac{1}{4}</math> male</b>	connection thread	D6.-..02
<b>for oxygen</b>	specially cleaned, max. 20 bar	D6.-..15
<b>flush-mounted diaphragm</b>	up to 16 bar, G $\frac{3}{4}$ , height 132 mm, A/F 32 mm	D6.-..F
<b>submersible sensor f. water</b>	up to 10 bar, IP 68, with 2 m capillary cable -25 °C to 70 °C / -13 °F to 158 °F	D6.-..W
<b>submersible sensor f. heating oil</b>	up to 10 bar, IP 68, with 2 m capillary cable	D6.-..H




**D6A-01W with cable**

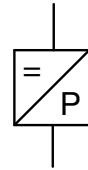


Test chart: see chapter "Technical information"

PDF CAD  
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 Order example:  
**D6A-V0**

<b>Description</b>	The differential pressure between port H and L is converted into a proportional, electrical signal by a silicon pressure transducer, amplified and then monitored as an analogue voltage or current signal.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply voltage</b>	12...32 V DC,	residual ripple 5%,	with voltage protection
<b>Electrical connector</b>	plug M12x1, 4-pin,	optionally 4-wire connection cable	
<b>Output signal</b>	4...20 mA: max. power consumption 260 mW		1...6 V: max. power consumption 60 mW
<b>Linearity/Hysteresis</b>	< 0.1 % FS typ.		
<b>Repeatability</b>	< 0.1 % FS typ.		
<b>Long-term stability</b>	< 0.2 % FS typ.		
<b>Temperature sensitivity</b>	< 0.02% FS typ. per °C at 0 to 50 °C / 32 to 122 °F		
<b>Response time</b>	1 ms for 10...90% of pressure range		
<b>Vibration resistance</b>	10 g at 5...500 Hz		
<b>Mounting position</b>	upright		
<b>Material</b>	Body: aluminium		
<b>Shock resistance</b>	50 g		
<b>Protection class</b>	IP 67 with plug mounted		
<b>Temperature range</b>	-25 °C to 85 °C / -13 °F to 185 °F		



**-1...1 mbar / 10 bar  
compressed air or gases**

Dimensions		Differential pressure	Overpressure	Measurement range	Order number
B	Ø	max. bar	both ports max. bar	mbar/bar	
mm	mm				

Differential pressure transducer 4-20 mA					
G½, 2-wire, with angular coupling socket					D5
86	40	0.25	0.5	0... 1 mbar -1... 1 mbar 0... 2 mbar -2... 2 mbar	D5A-A1 D5A-A1V D5A-A2 D5A-A2V
86	40	0.35	0.75	0... 5 mbar -5... 5 mbar 0... 10 mbar -10... 10 mbar	D5A-A5 D5A-A5V D5A-B1 D5A-B1V
86	40	0.35	3.5	0... 25 mbar -25... 25 mbar	D5A-B2 D5A-B2V
86	40	1.4	12	0... 70 mbar -70... 70 mbar 0... 350 mbar -350... 350 mbar	D5A-B7 D5A-B7V D5A-C3 D5A-C3V
86	40	2	12	0... 1 bar -1... 1 bar	D5A-O1 D5A-V1
86	40	4	12	0... 2 bar	D5A-O2
		10	12	0... 5 bar	D5A-O5
		12	20	0... 10 bar	D5A-10

**Special options,** add the appropriate letter or number

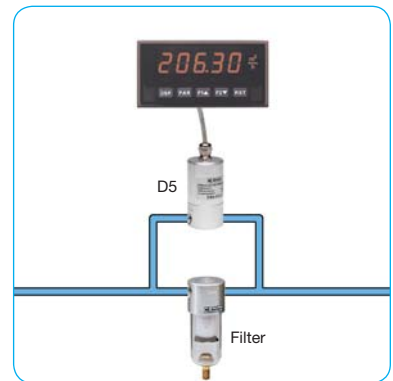
1-6 V	output signal	D5V-..
1 m connection cable	fixed at the device	D5-..L1

**Accessories**

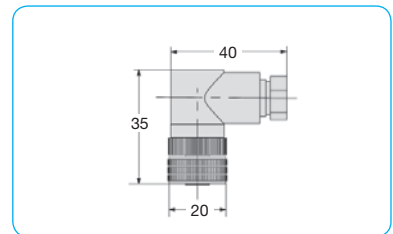
coupling socket 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5



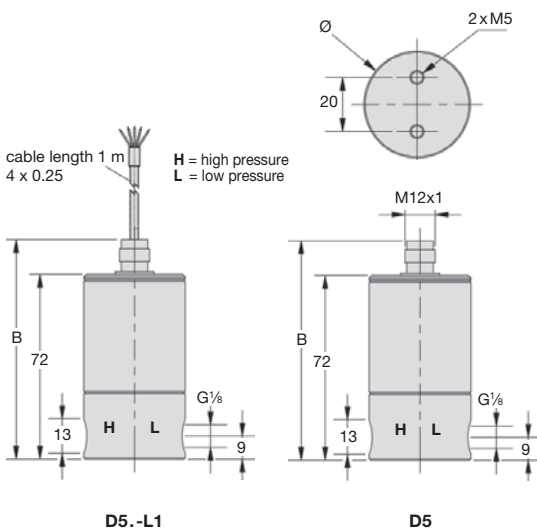
D5 D5-L1



example: filter control

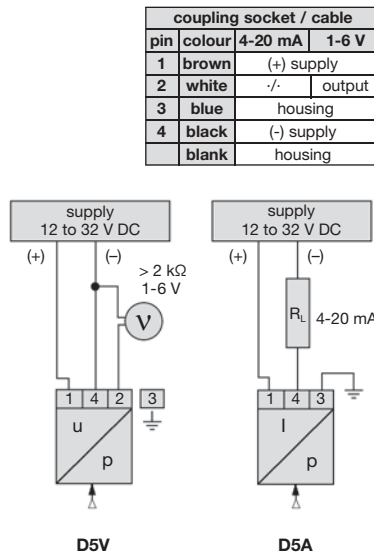


KM12-C4-0



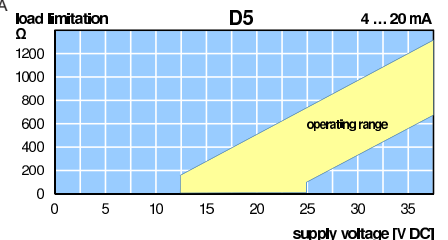
D5-L1

D5



D5V

D5A

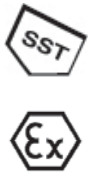


Test chart: see chapter "Technical information"

PDF CAD  
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Order example:  
D5A-A1

<b>Description</b>	Pressure transducer in compact and robust stainless steel housing with piezo-resistive measuring element. Factory-made calibration of zero point and range is possible.	
<b>Media</b>	compressed air, non-corrosive gases or liquids	
<b>Overpressure</b>	max. 3x full scale, min. 3 bar, for DAA-D6 and DAA-E1 max. 1500 bar	
<b>Supply voltage</b>	9...33 V DC at current signal, 15...30 V DC at voltage signal, reverse voltage protection, short-circuit-proof	
<b>ATEX version</b>	only current signal 10...30 V DC, max. 1 W, as per EN 50.014 / EN 50.020: 1974 A1...A5, ATEX 2640-1	
<b>Electrical connector</b>	plug according to DIN 43650, with coupling socket	
<b>Output signal</b>	4...20 mA: max. power consumption 260 mW, 0...10 V: max. power consumption 50 mW	
<b>Linearity/Hysteresis</b>	< 0.1% FS	
<b>Temperature sensitivity</b>	<b>Repeatability</b> < 0.1% FS <b>Long-term stability</b> < 0.1% FS, < 0.5% FS at version up to 500 mbar < 0.02% FS per °C / K, < 0.06% FS at version up to 2 bar per °C / K, at range of 0 °C to 70 °C / 32 °F to 158 °F < 0.1 % FS at version up to 500 mbar per °C / K, 1 ms for 10...90% of pressure range	
<b>Response time</b>	1 ms for 10...90% of pressure range	
<b>Vibration resistance</b>	10 g at 5...500 Hz	
<b>Mounting position</b>	any	
<b>Material</b>	Body/Diaphragm: stainless steel 316L, material no. 1.4435    O-rings: FKM, optionally EPDM	



**-1...1000 bar, accurate to 0.1 %  
compressed air or gases**

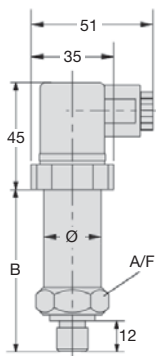
Dimensions			Accuracy	Measurement range	Order number	Measurement range	Order number
B	Ø	A/F	%	mbar/bar	4-20 mA	mbar/bar	4-20 mA
mm	mm	mm	%	mbar/bar	4-20 mA	mbar/bar	4-20 mA

Pressure transducer				G $\frac{1}{2}$ male, SST, overpressure with angular coupling socket, 4-20 mA		DA	
73	24	27	0.1	0... 50 mbar	<b>DAA-B5H</b>		
				0... 100 mbar	<b>DAA-C1H</b>		
				0... 160 mbar	<b>DAA-C2H</b>	0... 10 bar	<b>DAA-10H</b>
				0...250 mbar	<b>DAA-C3H</b>	0... 16 bar	<b>DAA-16H</b>
				0...400 mbar	<b>DAA-C4H</b>	0... 25 bar	<b>DAA-25H</b>
				0...600 mbar	<b>DAA-C6H</b>	0... 40 bar	<b>DAA-40H</b>
				0... 1.0 bar	<b>DAA-01H</b>	0... 60 bar	<b>DAA-60H</b>
				0... 1.6 bar	<b>DAA-02H</b>	0... 100 bar	<b>DAA-D1H</b>
				0... 2.5 bar	<b>DAA-03H</b>	0... 160 bar	<b>DAA-D2H</b>
				0... 4.0 bar	<b>DAA-04H</b>	0... 250 bar	<b>DAA-D3H</b>
				0... 6.0 bar	<b>DAA-06H</b>	0... 400 bar	<b>DAA-D4H</b>
						0... 600 bar	<b>DAA-D6H</b>
73	24	27	0.5			0...1000 bar	<b>DAA-E1</b>

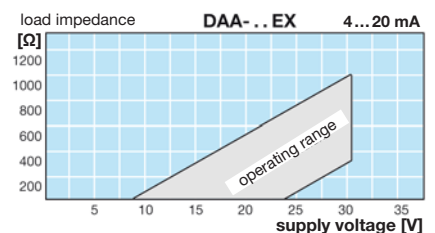
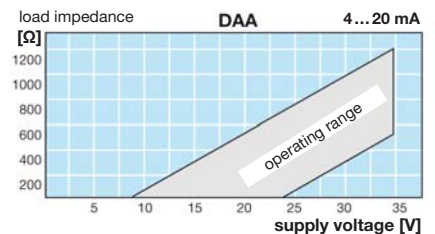
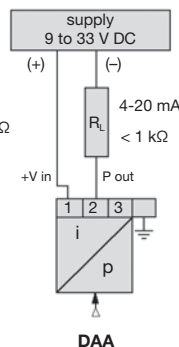
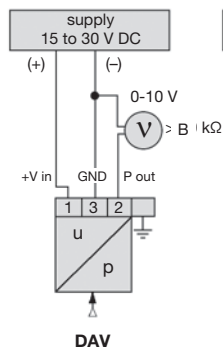
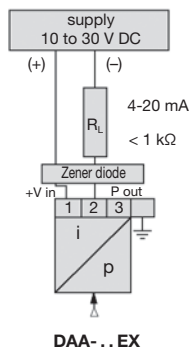


### Special options, add the appropriate letter or number

0-10 V output signal	not for Ex ATEX version	DAV-..
deviant measurement range	to be indicated on order	DA.-XX
absolute pressure range	from 50 mbar on	DA.-.A
vacuum	0...-1 bar	DA.-.V
Ex-Atex version	Ex II 1G Ex ia IIC T6	DAA-..EX
0.25 % linearity	for 100 mbar up to 600 bar	DA.-.G
	for 1000 bar	DA.-E1G
-25 to +100 °C/-13 to 212 °F	media temperature compensated up to 85 °C / 185 °F / T4	DA.-.S
-25 to +150 °C/-13 to 302 °F	media temperature compensated up to 85 °C / 185 °F / T3	DA.-.T
flush-mounted diaphragm	connection thread G $\frac{1}{2}$ , also for vacuum, up to 600 bar	DA.-.F
G $\frac{1}{2}$ male	connection thread	DA.-.04
EPDM elastomer		DA.-.E
silicone-free oil-refill		DA.-.X32



version	B (mm)
standard	73
standard 150 °C	100
Ex	122
Ex, T3	149



## Measuring Devices

	Description	Pressure range	Connection	Device	Page
<b>Digital display</b>	mounting, for low pressure	0 ... 2.5 mbar / 2.5 bar	4 mm tube	MPV, MPA	<b>14.02</b>
	tragbar, Handmanometer	0 ... 1 mbar / 10 bar	4 mm tube	MHA	<b>14.03</b>
	mounting, programmierbar	external sensor		MPAX	<b>14.04</b>
	mounting, auch ext. Sensor	0 ... 1 mbar / 10 bar	4 mm tube	MKA	<b>14.05</b>
<b>Analogue display</b>	mounting, front ring	-1... 0 / 25 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	ME	<b>14.06</b>
	mounting, triangular bezel	-1... 0 / 25 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MF	<b>14.06</b>
	male thread, Ø 23 mm	0 ... 4 / 16 bar	M5 and G $\frac{1}{8}$	MA	<b>14.07</b>
	male thread, Ø 40 mm	0 ... 1 / 16 bar	G $\frac{1}{8}$	MA	<b>14.07</b>
	male thread Ø 50 mm	0 ... 1 / 60 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MA	<b>14.07</b>
	male thread, Ø 63 mm	0 ... 60 mbar / 100 bar	G $\frac{1}{4}$	MA	<b>14.07</b>
<b>Stainless steel</b>	male thread, Ø 40 mm	0 ... 2.5 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MS	<b>14.08</b>
	male thread, Ø 50 mm	0 ... 2.5 / 60 bar	G $\frac{1}{4}$	MS	<b>14.08</b>
	male thread, Ø 63 mm	0 ... 25 mbar / 60 bar	G $\frac{1}{4}$	MS	<b>14.08</b>

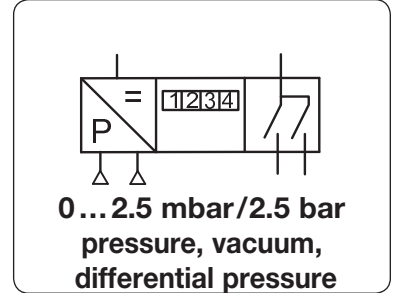


# 14

## Pressure Measuring



<b>Description</b>	A piezo-resistive pressure sensor converts the input pressure into a digital electrical signal.	
<b>Medium</b>	compressed air or non-corrosive gases	<b>Overpressure</b> see chart
<b>Voltage supply</b>	16...32 V DC standard, optionally 230 V AC, optional wall power supply	
<b>Electrical connection</b>	screw terminals for wire up to 1.5 mm <sup>2</sup>	
<b>Pneumatic connection</b>	<b>P+</b> : pos. pressure <b>P-</b> : vacuum <b>P+/P-</b> : differential pressure, the higher pressure is to be connected at P+	
<b>Process connection</b>	4 mm and 6 mm tube connections	
<b>Display</b>	4-digit LCD display, max. ± 1999	
<b>Output signal</b>	0...10 V, optionally 4...20 mA, impedance < 500 Ω	
<b>Linearity/Hysteresis</b>	< 1% FS, optionally < 0.5% FS	
<b>Long-term stability</b>	< 0.5% FS per year at < 10 mbar, < 0.1% FS per year at > 25 mbar	
<b>Temperature sensitivity</b>	see chart, at 0 to 50 °C / 32 to 122 °F	
<b>Response time</b>	< 1 ms for 10...90% of pressure range	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F compensated pressure range	
<b>Material</b>	Housing: glass fibre-reinforced Noryl plastic	
	<b>Repeatability</b>	<b>Protection class</b> IP 20



Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
% FS	% FS	% FS	mbar/bar	mbar/bar	

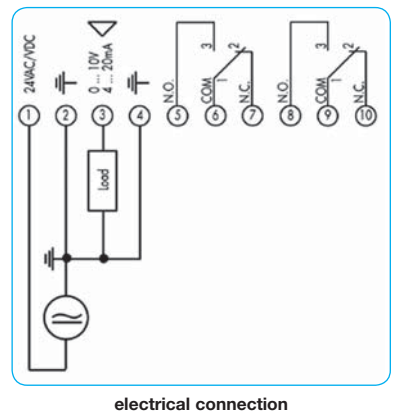
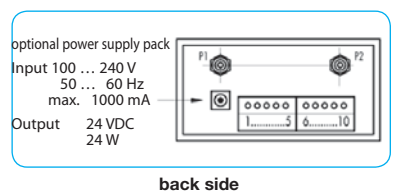
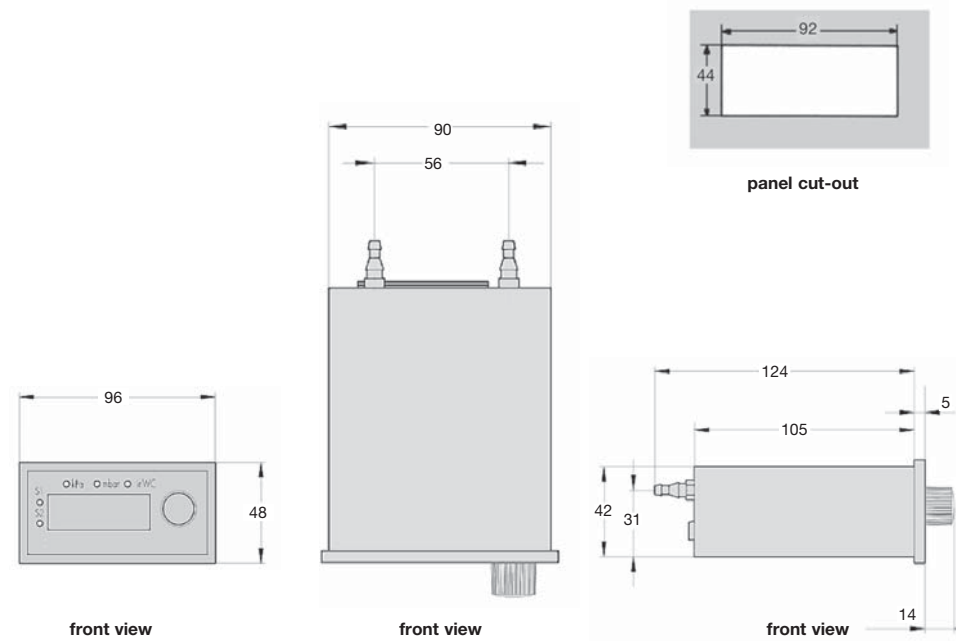
Digital gauge	for compressed air, measurement of positive pressure, vacuum and differential pressure, 24 V DC, outlet signal 0...10 V, 3½-digit display				MPV
0.2	5.0	1.0	25 mbar	0 ... 2,5 mbar	<b>MPV-A2</b>
0.2	5.0	1.0	25 mbar	0 ... 5 mbar	<b>MPV-A5</b>
0.2	2.5	1.0	25 mbar	0 ... 10 mbar	<b>MPV-B1</b>
0.5	1.0	1.0	300 mbar	0 ... 25 mbar	<b>MPV-B2</b>
0.5	1.0	1.0	750 mbar	0 ... 50 mbar	<b>MPV-B5</b>
0.5	1.0	1.0	1 bar	0 ... 100 mbar	<b>MPV-C1</b>
0.5	1.0	1.0	1 bar	0 ... 250 mbar	<b>MPV-C2</b>
0.5	1.0	1.0	1 bar	0 ... 500 mbar	<b>MPV-C5</b>
0.5	1.0	1.0	3 bar	0 ... 1 bar	<b>MPV-01</b>
0.5	1.0	1.0	6 bar	0 ... 2.5 bar	<b>MPV-02</b>



**MPV-C1S**  
with two limit switches

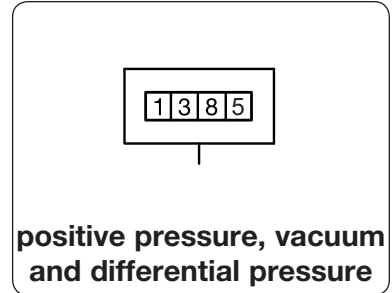
## Special options, add the appropriate letter

<b>4...20 mA output signal</b>		MPA- . .
<b>two limit switches</b>	with LED, 230 V AC, 1 A, adjustable NOC	MP . . . S
<b>linearity 0.5%</b>		MP . . . B
<b>230 V AC</b>	supply voltage	MP . . . V
<b>deviant measurement range</b>	to be indicated on order	MP . . XX



\*1 Handshake on/off, Baudrate 9600

<b>Description</b>	A piezo-resistive pressure sensor converts the input pressure into a digital electrical signal, which is displayed on the LCD. On-off switch is located at the side of the plastic housing.	
<b>Media</b>	compressed air or non-corrosive gases	<b>Overpressure</b> see chart
<b>Pneumatic connection</b>	<b>P+</b> : pos. pressure <b>P-</b> : vacuum <b>P+/P-</b> : differential pressure, the higher pressure to be connected at P+ plug nipple up to 1 bar, sleeve with union nut from 2 bar on, each for hose internal diameter of Ø 4 mm	
<b>Voltage supply</b>	9 V battery, 2.5 mA, type 6F22, PP3 or similar	
<b>Display</b>	3½-digit LCD display, low battery display at low voltage, optionally 0...1 V	max. ± 1999, 12 mm tall, black numbers, red LED lights up at overpressure, then measurement is faulty
<b>Output signal</b>		Impedance: > 2 kΩ terminal for 2.5 mm 2-pin jack plug
<b>Zero point</b>	All devices have a potentiometer for rough adjustment of zero point at the side of the housing.	
<b>Linearity</b>	see chart, optionally 0.2% FS	<b>Hysteresis</b> < 0.1% FS
<b>Long-term stability</b>	< 0.1% FS per year at > 20 mbar,	< 2% FS per year at < 20 mbar
<b>Temperature sensitivity</b>	see chart, at 0 to 50 °C / 32 to 122 °F	<b>Repeatability</b> see chart
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	<b>Resolution</b> 0.05% FS
<b>Material</b>	Housing: plastic	<b>Protection class</b> IP 54



Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
% FS	% FS	% FS	max. bar	mbar/bar	

## Hand-operated gauge for compressed air, measurement of positive pressure, vacuum and differential pressure, with battery, 3½-digit display

Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
1.0	4.0	1.0	0.25	0... 1 mbar	<b>MHA-A1</b>
0.3	2.5	0.8	0.25	0... 2.5 mbar	<b>MHA-A2</b>
0.3	1.2	0.8	0.25	0... 5 mbar	<b>MHA-A5</b>
0.2	1.0	0.8	0.25	0... 10 mbar	<b>MHA-B1</b>
0.1	1.0	0.7	0.35	0... 25 mbar	<b>MHA-B2</b>
0.1	1.0	0.7	0.35	0... 50 mbar	<b>MHA-B5</b>
0.1	1.0	0.5	0.35	0... 100 mbar	<b>MHA-C1</b>
0.1	1.0	0.5	0.75	0... 250 mbar	<b>MHA-C2</b>
0.1	1.0	0.5	1.5	0... 500 mbar	<b>MHA-C5</b>
0.1	1.0	0.5	3.0	-1... 1 bar	<b>MHA-V1</b>
0.1	1.0	0.5	3.0	0... 1 bar	<b>MHA-01</b>
0.1	1.0	0.5	4.0	0... 2 bar	<b>MHA-02</b>
0.1	2.0	0.5	10	0... 8 bar	<b>MHA-08</b>
0.1	2.0	0.5	12	0... 10 bar	<b>MHA-10</b>
0.1	2.3 mbar	1 mbar	3.3	0.7... 1.1 bar <sub>abs</sub>	<b>MHA-S1</b>



MHA

## Special options, add the appropriate letter

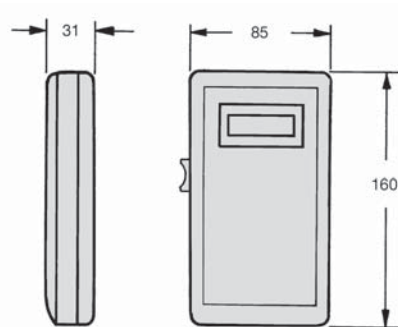
<b>linearity &lt; 0.2% FS</b>	from 100 mbar on	MHA- . . B
<b>0-1 V output signal</b>	at electrical connector	MHA- . . N
<b>P<sub>a</sub> indication</b>	< 20 mbar: indication P <sub>a</sub> > 20 mbar: indication kP <sub>a</sub>	MHA- . . P
<b>zero point fine adjustment</b>	in the front	MHA- . . E
<b>range switch</b>	10:1, from measurement range 1 bar on	MHA- . . D
<b>deviant measurement range</b>	to be indicated on order	MHA-XX



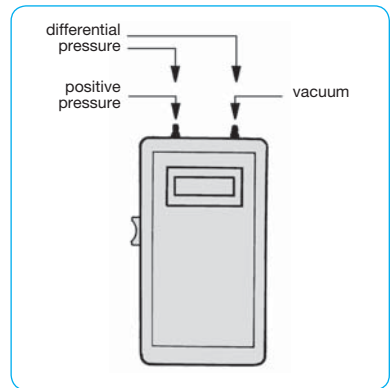
MHA-...E

## Accessories

protective bag	for belt attachment	MHT
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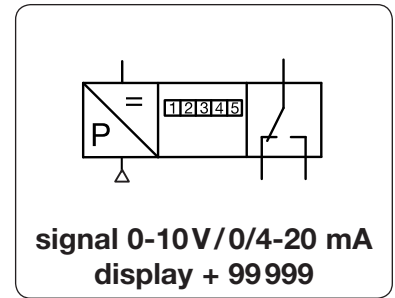


MHA



connection diagram

<b>Description</b>	Digital, programmable display for dual range input 0 to 10 V DC or 0/4 to 20 mA with 24 V DC transmitter power. Min./max. value memory, 16-point scale for non-linear processes. Programmable function keys / user inputs. Four setpoint alarm outlets. Analogue outlet, interface and bus capabilities. data entry by keypad, optionally by serial interface RS232 with PC software and cable or by RS485		
<b>Programming</b>	11 ... 36 V DC, max. power consumption 11 W or 85 ... 250 V AC, max. power consumption 15 VA		
<b>Supply voltage</b>	5-pin LCD display 14 mm tall, red numbers, background lighting		
<b>Display</b>	terminal strip for area 0.14...1.5 mm <sup>2</sup> 0...10 V or 0/4...20 mA		
<b>Electrical connector</b>	<b>Input signal</b>		
<b>Analogue output card</b>	0/4 ... 20 mA or 0 ... 10 V, freely selectable	<b>Relay output card</b>	
<b>Transistor output card</b>	4x NPN, 100 mA or 4x PNP, 30 mA	<b>Sensor supply</b>	
<b>Measuring rate</b>	20 measurements/s	<b>Response time</b>	
<b>Measurement memory</b>	and display of min./max. value	<b>Unit counter</b>	
<b>Display accuracy</b>	0.12% FS at 0 °C to 50 °C / 32 °F to 122 °F	<b>Certifications</b>	
<b>Response time</b>	200 ms	<b>Resolution</b>	
<b>Temperature range</b>	-20 °C to 50 °C / -4 °F to 122 °F	<b>Protection class</b>	
<b>Material</b>	Housing: dark red, shockproof plastic	The electrical plug-in module can be pulled out rearwards.	



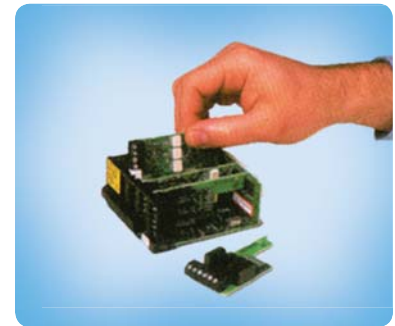
Dimensions			Accuracy	Supply voltage	Input signal	Order number
A	B	C	% FS	V	mA/V	
mm	mm	mm				

Process display				5-digit display, freely scaleable, for external sensor	MPAX
97	50	107	0.12	<b>230 V AC</b>	0/4-20 mA / 0-10 V <b>MPAX-230</b>
97	50	107	0.12	<b>24 V DC</b>	0/4-20 mA / 0-10 V <b>MPAX-24</b>



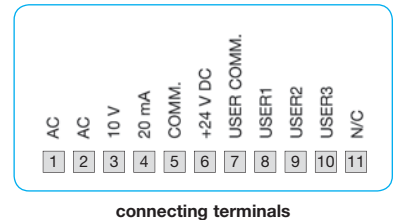
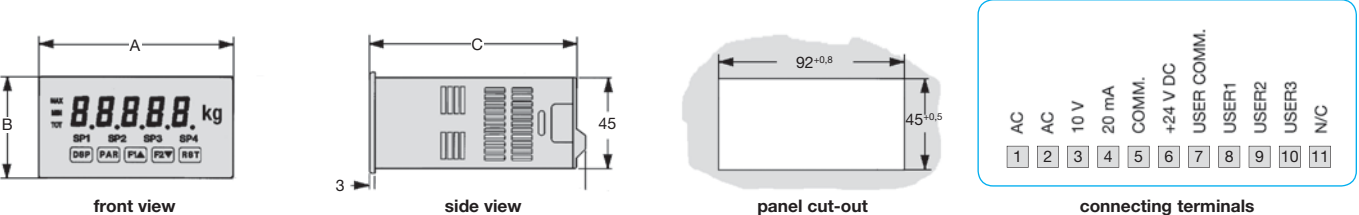
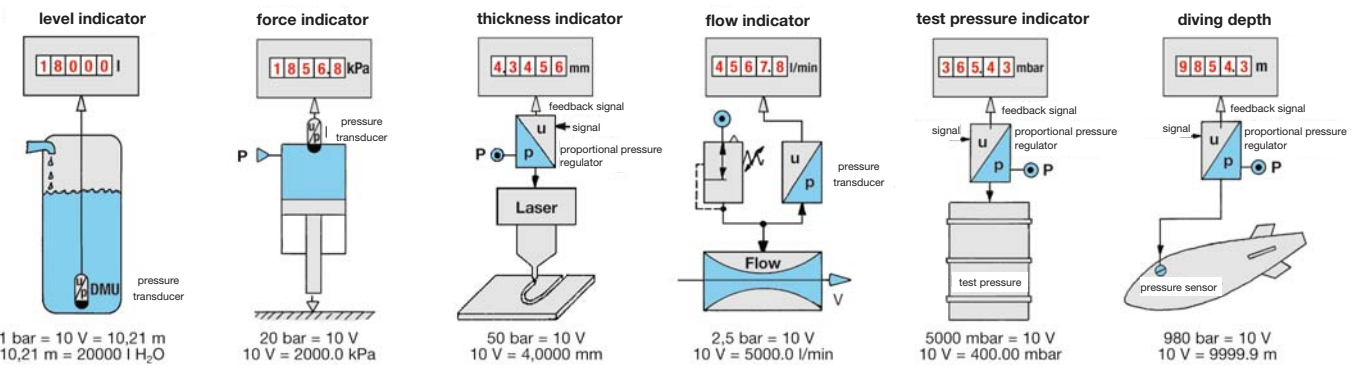
MPAX

Special options, add the appropriate letter		
<b>programming*1</b>	factory-set, e.g. 4-20 mA / 2-10 bar	MPAX-..PR
<b>interface</b>	RS232 with 9-pin D-SUB plug-in card	MPAX-..32
	RS485 with 2 x RJ-11 connectors plug-in card	MPAX-..85
<b>Relay output*2</b>	2 x SPDT 5 A at 230 VAC, plug-in card	MPAX-..2W
	4 x NOC 3 A at 230 VAC, plug-in card	MPAX-..4S
<b>transistor output*2</b>	4 x NPN plug-in card	MPAX-..4N
	4 x PNP plug-in card	MPAX-..4P
<b>output signal</b>	0/4-20 mA oder 0-10 V, free selectable	MPAX-..AA
<b>bus interface</b>	Profibus dp	MPAX-..DP



plug-in card

Accessories		
<b>physical units</b>	label sheet with standard dimensions	<b>MPAX-BK</b>
<b>software</b>	for Microsoft Windows®	<b>MPAX-X1</b>
<b>programming kit</b>	software, interface board RS232 plus cable	<b>MPAX-EM</b>
<b>adapter</b>	software, interface board USB plus cable	<b>MPAX-USB</b>



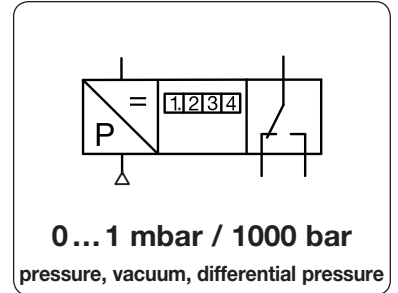
\*1 Signal range, indicated values, dimensions or limit value, rounding factor, resolution, total account etc. to be indicated.  
 \*2 Only one of these two options can be realised.

Calibration or test chart: see chapter "Technical Information"  
 Pressure transducers: see chapter "Pressure Transducers"

PDF CAD  
[www.aircom.net](http://www.aircom.net)

Order example:  
**MPAX-230**

<b>Description</b>	Suitable for measurement of positive pressure, vacuum or differential pressure.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply voltage</b>	15...30 V DC standard, optionally 230 V AC $\pm$ 10%
<b>Electrical connector</b>	plug with 7-pin screw terminal for cable cross-sectional area 0.14...1.5 mm <sup>2</sup>
<b>Pneumatic connection</b>	<b>P+</b> : pos. pressure <b>P-</b> : vacuum <b>P+/P-</b> : differential pressure, the higher pressure is to be connected at P+ plug nipple up to 1 bar, sleeve with union nut from 2 bar on, each for hose internal diameter of $\varnothing$ 4 mm
<b>Display</b>	3½-digit LCD display, max. $\pm$ 1999, 14 mm tall, black numbers
<b>Output signal</b>	0...10 V, impedance > 10 k $\Omega$ , optionally 4...20 mA, impedance < 500 $\Omega$
<b>Linearity</b>	see chart, optionally 0.2% FS
<b>Long-term stability</b>	< 0.1% FS per year at > 25 mbar, < 1% FS per year at > 5 mbar, < 2% FS per year at < 5 mbar range
<b>Temperature sensitivity</b>	see chart, at 0 °C to 50 °C / 32 °F to 122 °F
<b>Response time</b>	100 ms
<b>Temperature range</b>	-20 °C to 50 °C / -4 °F to 122 °F
<b>Material</b>	Housing: aluminium
	<b>Overpressure</b> see chart
	<b>Hysteresis</b> < 0.1% FS
	<b>Repeatability</b> see chart
	<b>Resolution</b> 1 digit
	<b>Protection class</b> IP 54

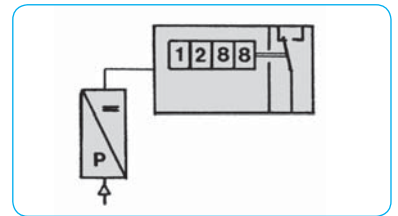


Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
% FS	% FS	% FS	max. bar	mbar/bar	

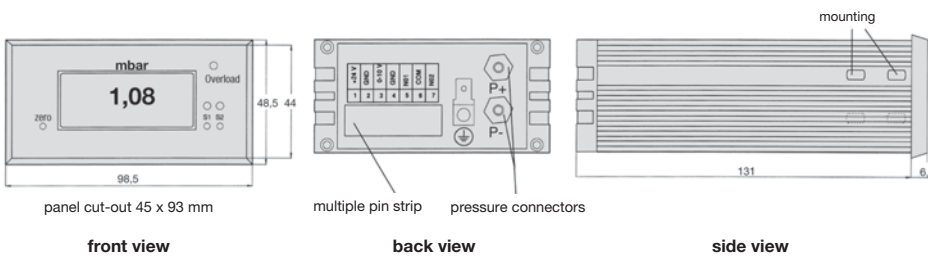
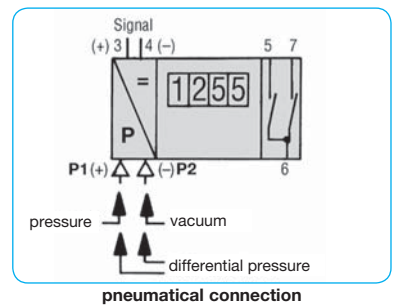
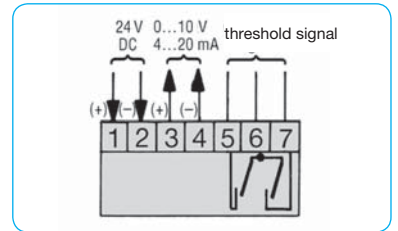
Digital gauge	for compressed air, measurement of positive pressure, vacuum and differential pressure, 24 V DC, outlet signal 0...10 V, 3½-digit display				MKA
1.0	4.0	1.0	0.25	0... 1 mbar	MKA-A1
0.3	2.5	0.8	0.25	0... 2.5 mbar	MKA-A2
0.3	1.2	0.8	0.25	0... 5 mbar	MKA-A5
0.2	1.0	0.8	0.25	0... 10 mbar	MKA-B1
0.1	1.0	0.7	0.35	0... 25 mbar	MKA-B2
0.1	1.0	0.7	0.35	0... 50 mbar	MKA-B5
0.1	1.0	0.5	0.35	0... 100 mbar	MKA-C1
0.1	1.0	0.5	0.75	0... 250 mbar	MKA-C2
0.1	1.0	0.5	1.5	0... 500 mbar	MKA-C5
0.1	1.0	0.5	3.0	-1... 1 bar	MKA-V1
0.1	1.0	0.5	3.0	0... 1 bar	MKA-01
0.1	1.0	0.5	4.0	0... 2 bar	MKA-02
0.1	2.0	0.5	10	0... 8 bar	MKA-08
0.1	2.0	0.5	12	0... 10 bar	MKA-10
0.1	2.3 mbar	1 mbar	3.3	0.7... 1.1 bar <sub>abs</sub>	MKA-S1



Digital gauge for external sensor	0...10 V input signal, supply voltage 24 V DC, 3½-digit display		MKA*2
96	48	137 e.g. for pressure transducer	MKA-00



Special options, add the appropriate letter		MKA-..S
two limit switches	with LED display, 230 V AC, 1 A, hysteresis 2% FS	MKA-..B
linearity < 0.2% FS	from 100 mbar	MKA-..A
4...20 mA output signal	impedance < 500 $\Omega$	MKA-00A
4...20 mA input signal	internal resistance 100 $\Omega$	MKA-..P
P <sub>a</sub> indication	< 20 mbar: indication P <sub>a</sub> > 20 mbar: indication kP <sub>a</sub>	MKA-..V
230 V AC	supply voltage	MKA-..R
RS232*1	interface, 8 bit without parity	MKA-XX
deviant measurement range	to be indicated on order	



\*1 Handshake on/off, Baudrate 9600

\*2 indicate pressure range by order

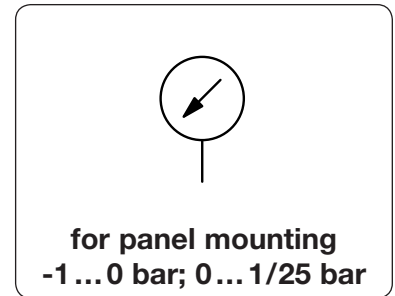
Calibration or test chart: see chapter "Technical Information"  
Pressure transducers: see chapter "Pressure Transducers"

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Order example:  
MKA-A1



<b>Description</b>	Bourdon tube gauge, dust-protected, splash-proof, antirust, oil-resistant and silicone-free.		
<b>Media</b>	all media compliant with brass, e.g. compressed air, non-corrosive gases or fluids		
<b>Scale</b>	white background with black bar scale and red psi scale		
<b>Indicator accuracy</b>	1.6% FS on gauge Ø 63 mm 2.5% FS on gauge Ø 40 mm and Ø 50 mm		
<b>Threaded connection</b>	G $\frac{1}{8}$ or G $\frac{1}{4}$ , on central back		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F		
<b>Material</b>	Housing: ABS plastic Lens: acrylic glass	Connection/Inner parts: brass	



Dimensions				Principle	Indicator accuracy	Display range	Order number	Order number
A	B	C	D	R: Bourdon tube K: capsule tube	% FS	bar	G $\frac{1}{8}$	G $\frac{1}{4}$

Gauge with mounting flange							chrome-plated	ME	ME
40	61	51	46	R	2.5	0 ... 2.5		ME4001-02	
						0 ... 4		ME4001-04	
						0 ... 6		ME4001-06	
						0 ... 10		ME4001-10	
50	71	61	52	R	2.5	0 ... 6			ME5002-06
						0 ... 10			ME5002-10
						0 ... 16			ME5002-16
63	85	75	53	R	1.6	-1 ... 0 vac.			ME6302-00
						0 ... 4			ME6302-04
						0 ... 6			ME6302-06
						0 ... 10			ME6302-10
						0 ... 16			ME6302-16

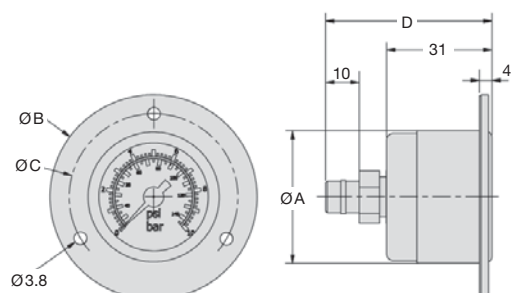


ME5002-10

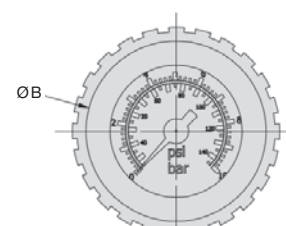
Gauge with triangular bezel							chrome-plated with nut	MF	MF
40	43	-	-	R	2.5	0 ... 2.5		MF4001-02	
						0 ... 4		MF4001-04	
						0 ... 6		MF4001-06	
						0 ... 10		MF4001-10	
50	55	-	-	R	2.5	-1 ... 0 vac.			MF5002-00
						0 ... 6			MF5002-06
						0 ... 10			MF5002-10
						0 ... 16			MF5002-16
63	68	-	-	R	1.6	-1 ... 0 vac.			MF6302-00
				K		0 ... 0.25			MF6302-C2
				R		0 ... 4			MF6302-04
						0 ... 6			MF6302-06
						0 ... 10			MF6302-10
						0 ... 16			MF6302-16
						0 ... 25			MF6302-25



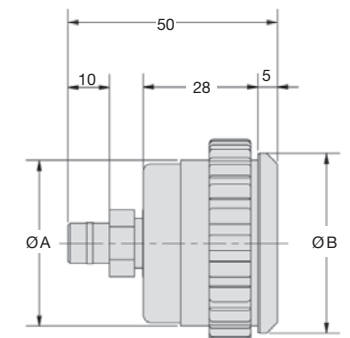
MF5002-10



ME gauge with mounting flange



MF gauge with triangular bezel



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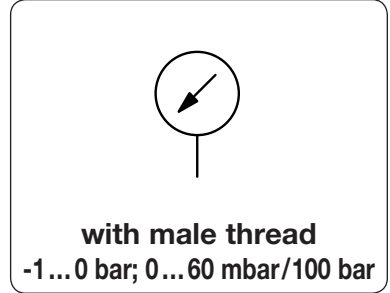
**Order example:**  
ME4001-02



# Pressure Gauge with Male Thread

MA

<b>Description</b>	Pressure gauge with Bourdon tube or capsule, dust-protected, splash-proof, antirust, oil-resistant and silicone-free. The capsule type gauge features an integrated restrictor against pressure peaks.		
<b>Media</b>	all media compliant with brass, e.g. compressed air, non-corrosive gases or fluids		
<b>Scale</b>	Bourdon tube gauge: white background with black bar scale and red psi scale capsule type gauge: white background with black mbar scale		
<b>Indicator accuracy</b>	1.6% FS on gauge Ø 63 mm 2.5% FS on gauge Ø 40 mm and Ø 50 mm, 4% FS on gauge Ø 23 mm		
<b>Connection thread</b>	G½ or G¼, on central back, M5 at gauge Ø 23 mm		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F		
<b>Material</b>	Housing: ABS plastic at Ø 40, Ø 50, Ø 63 mm nickel-plated brass at Ø 23 mm stainless steel 1.4301 at capsule gauge	Lens: acrylic glass Connection/Inner parts: brass Seal: NBR/Buna-N at capsule gauge	



Dimensions	Principle	Indicator accuracy	Display range	Order number	Order number
Ø A	R: Bourdon tube K: capsule tube	% FS	bar/mbar	G½	M5 / G¼

Pressure gauge, round		male thread on central back	MA	MA
23	R	4	0 ... 4 0 ... 6 0 ... 10 0 ... 12 0 ... 16	MA2301-04 MA2301-06 MA2301-10 MA2301-12 MA2301-16
40	R	2.5	0 ... 1 0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16	MA4001-01 MA4001-02 MA4001-04 MA4001-06 MA4001-10 MA4001-16
50	R	2.5	0 ... 1 0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60	MA5001-01 MA5001-02 MA5001-04 MA5001-06 MA5001-10 MA5001-16 MA5001-25 MA5001-60
63	K	1.6	0 ... 60 mbar 0 ... 160 mbar 0 ... 250 mbar 0 ... 400 mbar	MA6302- B6 MA6302- C2 MA6302- C3 MA6302- C4
63	R	2.5	0 ... 0,6 bar	MA6302- C6
63	R	1.6	-1 ... 0 vac. 0 ... 1 0 ... 2,5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60 0 ... 100	MA6302- 00 MA6302- 01 MA6302- 02 MA6302- 04 MA6302- 06 MA6302- 10 MA6302- 16 MA6302- 25 MA6302- 60 MA6302- 100



MA23M5-10



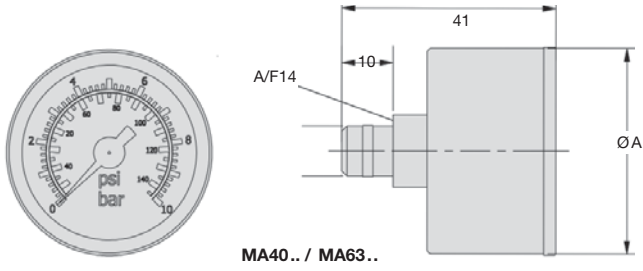
MA5001-16



MA6302-16

## Special options, add the appropriate number

for oxygen      specially cleaned      MA . . . . . 15



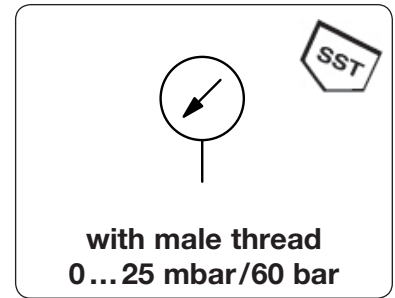
Gauges  
14

Gauges  
14

# Stainless Steel Pressure Gauge with Male Thread

MS

<b>Description</b>	Pressure gauge with Bourdon tube or capsule, dust-protected and splash-proof. The capsule type gauge features an integrated restrictor against pressure peaks.	
<b>Media</b>	all media compliant with stainless steel, e.g. compressed air, gases or fluids	
<b>Scale</b>	Bourdon tube gauge: white background with black bar scale and red psi scale capsule type gauge: white background with black mbar scale	
<b>Indicator accuracy</b>	1.6% FS	<b>Connection thread</b> G $\frac{1}{8}$ or G $\frac{1}{4}$ , on central back
<b>Temperature range</b>	<b>medium</b>	0 °C to 100 °C / 32 °F to 212 °F for capsule type gauge 0 °C to 200 °C / 32 °F to 392 °F for Bourdon tube gauge for appropriately conditioned compressed air down to -40 °C / -40 °F
	<b>ambient</b>	max. 60 °C / 140 °F
<b>Material</b>	Housing:	stainless steel 1.4301
	Inspection glass:	laminated safety glass at MS63, single strength glass at MS40 and MS50
	Connection:	stainless steel 1.4571 Seal: FKM at capsule gauge



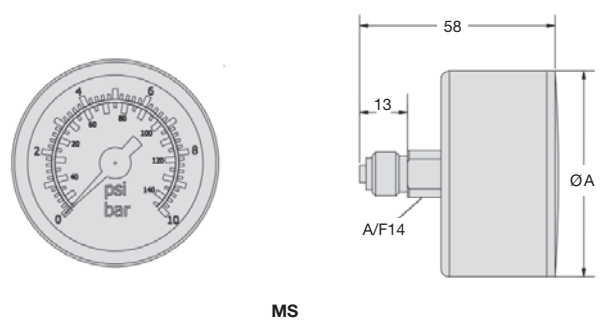
Dimensions	Principle	Indicator accuracy	Display range	Order number	Order number
$\varnothing$ A	R: Bourdon tube	% FS	bar/mbar	G $\frac{1}{8}$	G $\frac{1}{4}$
mm	K: capsule tube				

Pressure gauge		male thread on central back	MS	MS
40	R	1.6	0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16	MS4001-02 MS4001-04 MS4001-06 MS4001-10 MS4001-16
50	R	1.6	0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60	MS5002-02 MS5002-04 MS5002-06 MS5002-10 MS5002-16 MS5002-25 MS5002-60
63	K	1.6	0 ... 25 mbar 0 ... 60 mbar 0 ... 100 mbar 0 ... 160 mbar 0 ... 250 mbar 0 ... 400 mbar 0 ... 600 mbar	MS6302-B2 MS6302-B6 MS6302-C1 MS6302-C2 MS6302-C3 MS6302-C4 MS6302-C6
63	R	1.6	0 ... 1 0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60	MS6302-01 MS6302-02 MS6302-04 MS6302-06 MS6302-10 MS6302-16 MS6302-25 MS6302-60



## Special options, add the appropriate number

for oxygen      specially cleaned      MS . . . . .15



Gauges  
14

## Stainless Steel Devices

	Description	Pressure range bar	Connection	Devices	Page
<b>Pressure regulator</b>	Midi-Series	0.2 ... 4.0 / 17	G½	R10-S	<b>15.02</b>
	Mini-Series	0.2 ... 1.8 / 9	G¼	R364-S	<b>15.03</b>
	for clean room environment, precise	0.05 ... 2 / 4	M5 and G½	RE1	<b>15.04</b>
	precise, also FDA	0.02 ... 1.5 / 10	G¼ and G½	R3150	<b>15.05</b>
	many variations, also FDA	0.1 ... 1.5 / 50	G½ - G2	R3000	<b>15.06</b>
	with flange	0.2 ... 3 / 16	DN15 - DN50	REF	<b>15.10</b>
	also FDA	0.2 ... 3 / 16	G¼ - G2	REA	<b>15.11</b>
	low pressure	0.005 ... 0.045 / 3	G½ - G2	R3100	<b>15.12</b>
<b>Volume booster</b>	for many gases	1 ... 15 / 50	G¼ - G2	R3000-J	<b>15.22</b>
	with transmission ratio	3 ... 42 / 104	½" NPT and ¾" NPT	RH3-JS1	6.12
	pressure reducer	0.1 ... 24 / 99	G1	RLE	6.14
<b>Pressure reducer</b>	for many gases	0.1 ... 1.5 / 50	G½ - G2	D3000	<b>15.24</b>
	low pressure	0.005 ... 0.045 / 3	G½ - G2	D3100	<b>15.28</b>
<b>High pressure</b>	for many gases	1 ... 8 / 200	G¼ - G1¼	RH3000	<b>15.18</b>
	robust P1: 380 bar	0.3 ... 2 / 35	¼" NPT	RHB-S	<b>15.20</b>
	differential pressure regulator	0 ... 1 / 24	½" NPT and ¾" NPT	RH44-S	<b>15.21</b>
	regulator P1: 241 bar	0 ... 2 / 7	⅛" NPT and ¼" NPT	RH0-S	4.15
	regulator P1: 690 bar	0.3 ... 35 / 414	¼" NPT	HP300-S	4.17
	regulator P1: 414 bar	0.7 ... 104 / 172	¼" NPT	HP400-S	4.17
	regulator P1: 300 bar	0.1 ... 1.7 / 35	¼" NPT	HP500-S	4.18
	regulator P1: 260 bar	0.7 ... 21 / 104	½" NPT and ¾" NPT	RH3-S	4.19
<b>for Pharmacy</b>	and food	0.25 ... 0.46 / 53	G¼ - G2½	R70	<b>15.14</b>
	low pressure	0.005 ... 0.007 / 0.45	G¼ - G2½	R74	<b>15.16</b>
<b>FRL Service Units</b>	FR, for many gases, also FDA	0.8 ... 1.5 / 15	G½ - G2	B3000	<b>15.30</b>
	FR, Mini- and Midi-Series	0.2 ... 1.8 / 17	G¼ and G½	B548-S, B11-S	<b>15.32</b>
	lubricator	max. 50	G½ - G2	L3000	<b>15.33</b>
	filter, also FDA	max. 50	G½ - G2	F3000	<b>15.34</b>
	FRL	0.5 ... 8 / 15	G½ - G2	C3002, C3003	<b>15.36</b>
	FRL, Mini- and Midi-Series	max. 21	G¼ and G½	C10-S, F10-S, L10-S	<b>15.38</b>
	filter	max. 220	G¼ - G1	FH3	<b>15.40</b>
<b>Pinch Valves</b>	2/2-solenoid valve	max. 4	G¼ - G2	QE	<b>15.39</b>
<b>Mounting flanges</b>	single or mounted	up to PN100 / ANSI	G½ - G3	F / VS	<b>15.41</b>



# 15 Stainless Steel Devices

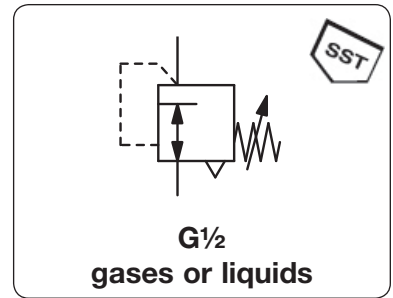
SST



# Stainless Steel Pressure Regulator

R10-S

<b>Description</b>	diaphragm-operated pressure regulator in small design
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 21 bar
<b>Adjustment</b>	by plastic knob with snap-lock
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 65 °C / 32 °F to 149 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F 0 °C to 80 °C / 32 °F to 176 °F for spring cage made of fiberglass or stainless steel
<b>Material</b>	Body: stainless steel 316 Spring cage: glass fibre-reinforced plastic Elastomer: FKM Inner valve: stainless steel 316



Dimensions			Description	K <sub>v</sub> -value	Flow rate		Connection thread	Pressure range	Order number
A	B	C			(m <sup>3</sup> /h)	m <sup>3</sup> /h*1			
mm	mm	mm					G	bar	

## Stainless steel pressure regulator supply pressure max. 21 bar **R10-S**

60	124	35	relieving for compressed air	2.6	180	3000	G $\frac{1}{2}$	0.2 ... 4.0	<b>R10-04BS</b>
								0.3 ... 9.0	<b>R10-04CS</b>
								0.5 ... 17	<b>R10-04DS</b>
60	124	35	non-relieving for liquids	2.6	2.6	43	G $\frac{1}{2}$	0.2 ... 4.0	<b>R10-04BSK</b>
								0.3 ... 9.0	<b>R10-04CSK</b>
								0.5 ... 17	<b>R10-04DSK</b>



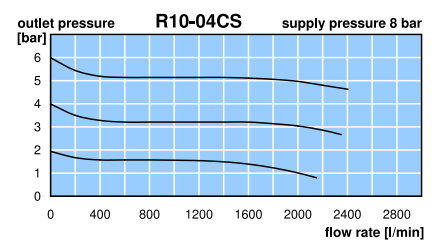
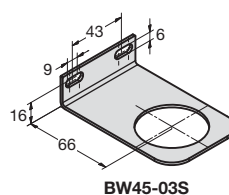
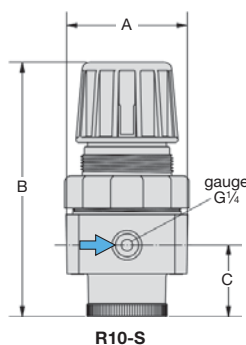
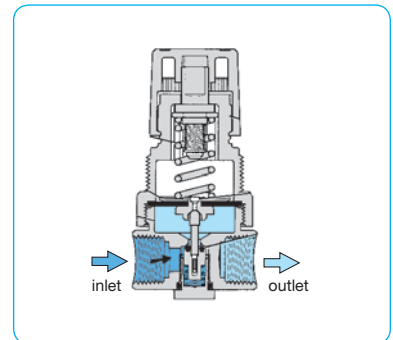
R10-S

## Special options, add the appropriate letter

<b>NPT</b>	connection thread	R1. -0 . . . N
<b>spring cage made of SST</b>	incl. SST-adjusting screw, total height= 154 mm	R11-04 . .

## Accessories

<b>pressure gauge</b>	Ø 50 mm, 0 ... *2 bar, G $\frac{1}{4}$	<b>MS5002-..*2</b>
<b>mounting bracket</b>		<b>BW45-03S</b>
<b>mounting nut</b>		<b>M45X1,5S</b>



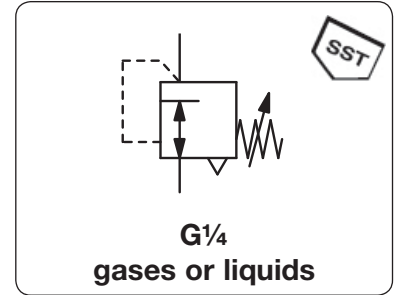
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD  
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Order example  
R10-04BS

<b>Description</b>	diaphragm-operated pressure regulator in small design
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 21 bar
<b>Adjustment</b>	by plastic knob with snap-lock, by hexagonal spindle at R354
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 65 °C / 32 °F to 149 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F 0 °C to 80 °C / 32 °F to 176 °F for spring cage made of fiberglass or stainless steel
<b>Material</b>	Body: stainless steel 316 Spring cage: glass fibre-reinforced plastic at R364, stainless steel 316 at R354, optionally fibreglass at R364 Elastomer: FKM Inner valve: stainless steel 316



Dimensions			Description	K <sub>v</sub> -value	Flow rate		Connection thread	Pressure range	Order number
A	B	C			(m <sup>3</sup> /h)	m <sup>3</sup> /h*1			
mm	mm	mm					G	bar	

Stainless steel pressure regulator									
supply pressure max. 21 bar									
R364-S									
35	75	13	relieving	0.4	27	450	G $\frac{1}{4}$	0.2 ... 1.8	<b>R364-02AS</b>
			for compressed air					0.2 ... 4.0	<b>R364-02BS</b>
								0.3 ... 9.0	<b>R364-02CS</b>
35	75	13	non-relieving	0.4	0,4	6	G $\frac{1}{4}$	0.2 ... 1.8	<b>R364-02ASK</b>
			for liquids					0.2 ... 4.0	<b>R364-02BSK</b>
								0.3 ... 9.0	<b>R364-02CSK</b>

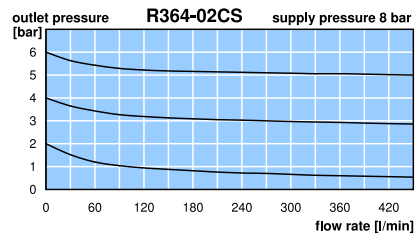
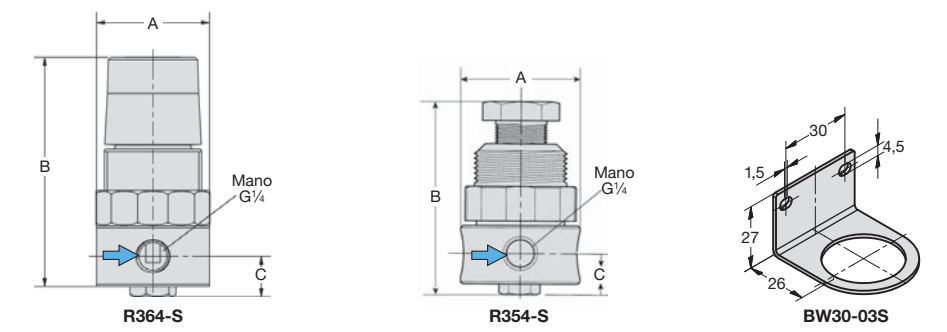
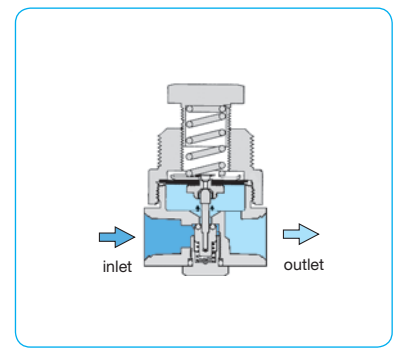
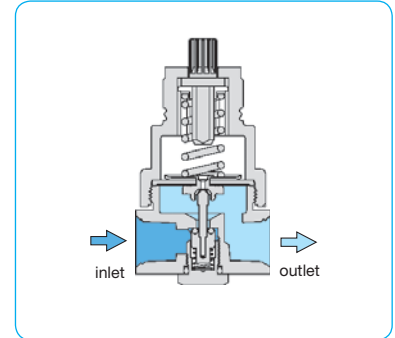


## Special options, add the appropriate letter

<b>NPT</b>	connection thread	R...-0...N
<b>free of oil and grease</b>	speziell gereinigt	R3.4-0...L
<b>spring cage made of SST</b>	incl. SST-adjusting screw, total height = 60 mm	R354-02...

## Accessories

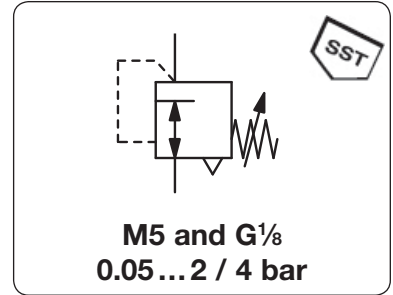
<b>pressure gauge</b>	Ø 40 mm, 0...*2 bar, G $\frac{1}{4}$	<b>MS4002-..*2</b>
<b>mounting bracket</b>		<b>BW30-03S</b>
<b>mounting nut</b>	made of stainless steel	<b>M30x1,5S</b>
	made of plastic	<b>M30x1,5K</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar



<b>Description</b>	Diaphragm pressure regulator made of stainless steel suitable for cleanroom environment and panel mounting.		
<b>Media</b>	compressed air or gases	<b>Supply pressure</b>	max. 10 bar
<b>Accuracy</b>	setting accuracy: < 0.3% FS	<b>Repeatability:</b>	< 1% FS
<b>Air consumption</b>	max. 0.5 l/min, subject to outlet pressure		
<b>Adjustment</b>	The compressed air can be directly transmitted into the cleanroom without any piping. by plastic knob with snap-lock		
<b>Relieving function</b>	relieving	<b>Mounting position</b>	any
<b>Gauge port</b>	M5 or G $\frac{1}{8}$ on both sides of the body, depending on connection thread, screw plugs supplied		
<b>Clean room condition</b>	Cleaned, assembled, inspected and sealed in a class 10,000 environment. All parts without oil use. HFC1416 ultrasonic cleaning of all fluid-contact parts.		
<b>Temperature range</b>	0 °C to 60 °C / 32 °F to 140 °F		
<b>Material</b>	Body: stainless steel 316, material no. 1.4436	Elastomer:	FKM
	Spring cage: PPS plastic	Valve seat:	PTFE



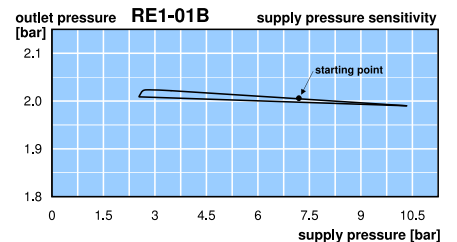
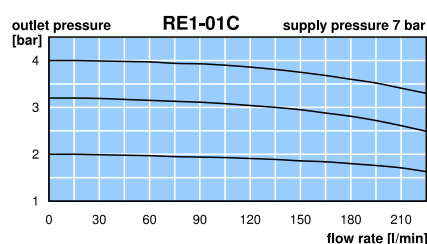
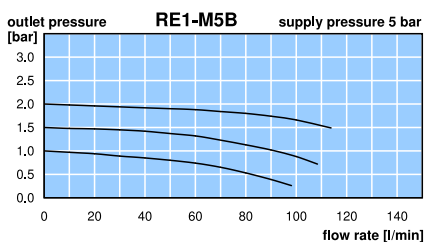
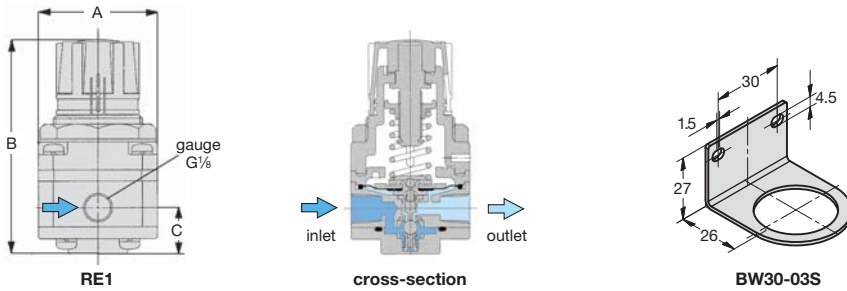
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread M5/G	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

Precision pressure regulator							supply max. 10 bar, relieving, with internal air consumption	RE1
30	75	14	0,20	3.6	60	M5	0.05 ... 2	RE1-M5B
							0.10 ... 4	RE1-M5C
40	75	15	0,25	6	100	G $\frac{1}{8}$	0.05 ... 2	RE1-01B
							0.10 ... 4	RE1-01C



## Accessories

mounting bracket      mounting nut at the device      **BW30-03S**



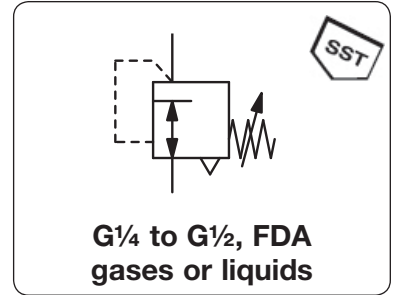
\*1 at 7 bar supply pressure and 4 bar outlet pressure

Gauges: see chapter for measuring devices

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Order example:  
**RE1-M5B**

<b>Description</b>	Diaphragm pressure regulator made of stainless steel in robust design. Pre-pressure compensated and independent of supply pressure fluctuation.		
<b>Media</b>	compressed air, gases or liquids		
<b>Supply pressure</b>	see chart, max. 16 bar		
<b>Accuracy</b>	setting accuracy: < 0.5% FS;	<b>Repeatability:</b>	< 1.5% FS
<b>Air Consumption</b>	without air consumption		
<b>Adjustment</b>	by adjusting screw, with lock nut		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F ,for appropriately conditioned compressed air down to -20 °C / -4 °F		
<b>Material</b>	Body: stainless steel 316L, W.-Nr. 1.4436	O-ring: FKM	Internal parts: stainless steel 302
	Diaphragm: NBR/Buna-N with PTFE coating		



Dimensions			Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	m $^3$ /h*1	l/min*1	max. bar	G	bar

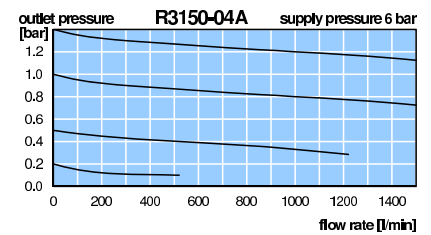
Precision pressure regulator							supply pressure max. 10 bar, relieving	R3150
105	158	39	48	800	10	G $\frac{1}{4}$	0.02 ... 1.5	<b>R3150-02A</b>
			84	1400	10		0.03 ... 3.0	<b>R3150-02B</b>
			132	2600	16		0.05 ... 10	<b>R3150-02C</b>
80	158	39	72	1200	10	G $\frac{1}{2}$	0.02 ... 1.5	<b>R3150-04A</b>
			108	1800	10		0.03 ... 3.0	<b>R3150-04B</b>
			156	2600	16		0.05 ... 10	<b>R3150-04C</b>



**R3150-02**  
Accessory: pressure gauge

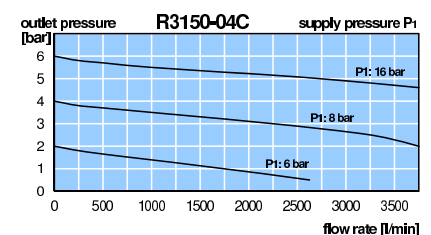
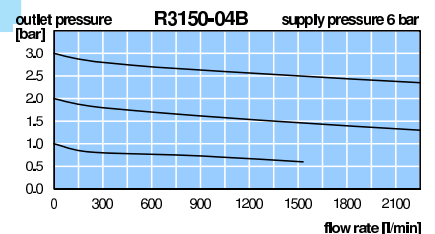
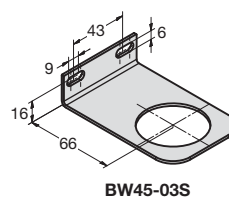
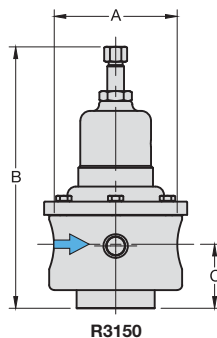
### Special options, add the appropriate letter or number

<b>NPT</b>	Anschlussgewinde	R3150-0..N
<b>non-relieving</b>	für Flüssigkeiten	R3150-0..K
<b>EPDM o-ring</b>		R3150-0..E
<b>EPDM o-ring</b>	FDA-Zulassung	R3150-0..TD
<b>SST diaphragm</b>	FKM -O-Ring	R3150-0...S
	EPDM-O-Ring	R3150-0...SE
<b>ammonia</b>	NH $_3$	R3150-0...K02
<b>carbon dioxide</b>	CO $_2$	R3150-0...K03
<b>argon</b>	Ar	R3150-0...K05
<b>nitrogen</b>	N $_2$	R3150-0...K07
<b>helium</b>	He	R3150-0...K09
<b>hydrogen</b>	H $_2$	R3150-0...K11
<b>methane</b>	CH $_4$	R3150-0...K13
<b>natural gas *3</b>		R3150-0...K14
<b>oxygen</b>	O $_2$	R3150-0...K15
<b>propane</b>	C $_3$ H $_8$	R3150-0...K16
<b>nitrous oxide</b>	N $_2$ O	R3150-0...K17
<b>water</b>	H $_2$ O	R3150-0...KW



### Accessories

<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	<b>MS5002-..*2</b>
<b>mounting bracket</b>		<b>BW45-03S</b>
<b>mounting nut</b>		<b>M45x1,5S</b>



\*1 see diagramm

\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

\*3 without DVGW-approval

Gauges: see chapter for measuring devices

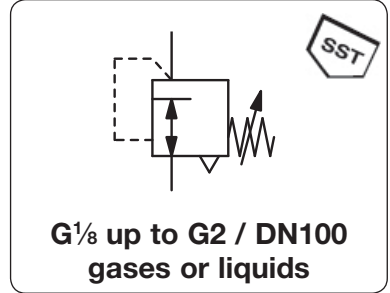
PDF CAD  
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Order example:  
R3150-02A

# Pressure Regulator Made of Stainless Steel Throughout, up to 60 bar R3000

<b>Description</b>	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	see chart, max. 60 bar, for liquids $\Delta p_{max} = 25$ bar
<b>Adjustment</b>	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
<b>Relieving function</b>	non-relieving, optionally relieving
<b>Gauge port</b>	$G\frac{1}{8}$ at R3000-01 and -A2, all others $G\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



Dimensions			Regul. system	$K_v$	Flow	$P_1$	Connection	Pressure	Order
A	B	C	D: Diaphragm	value	rate	max.	thread	range	number
mm	mm	mm	P: Piston	( $m^3/h$ )	$m^3/h^*1$	$l/min^*1$	G	bar	

SST Pressure regulator										supply pressure max. 30/50 bar, non-relieving, PTFE diaphragm and FKM o-ring	R3000
40	92	22	D	0.2	20	350	30	$G\frac{1}{8}$	0.1...1.5	R3000-01AT	
									0.2...3.0	R3000-01BT	
									0.5...8.0	R3000-01DT	
									1.0...15	R3000-01ET	
40	92	22	D	0.2	20	350	30	$G\frac{1}{4}$	0.1...1.5	R3000-A2AT	
									0.2...3.0	R3000-A2BT	
									0.5...8.0	R3000-A2DT	
									1.0...15	R3000-A2ET	
64	161	38	D	0.5	42	700	30	$G\frac{1}{4}$	0.1...1.5	R3000-02AT	
									0.2...3.0	R3000-02BT	
									0.5...8.0	R3000-02CT	
							50		1.0...15	R3000-02DT	
							50		2.0...30	R3000-02ET	
							50		3.0...50	R3000-02FT	
64	175	38	P	0.5	42	700	50	$G\frac{3}{8}$	0.1...1.5	R3000-03AT	
									0.2...3.0	R3000-03BT	
									0.5...8.0	R3000-03CT	
							50		1.0...15	R3000-03DT	
							50		2.0...30	R3000-03ET	
							50		3.0...50	R3000-03FT	
80	164	37	D	1.8	132	2200	30	$G\frac{1}{2}$	0.1...1.5	R3000-04AT	
									0.2...3.0	R3000-04BT	
									0.5...8.0	R3000-04CT	
							50		1.0...15	R3000-04FT	
							50		2.0...30	R3000-04GT	
							50		3.0...50	R3000-04LT	



R3000-01/-A2, accessory: gauge



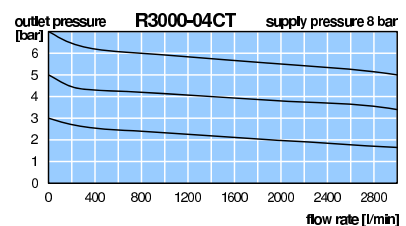
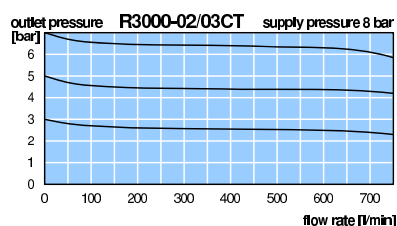
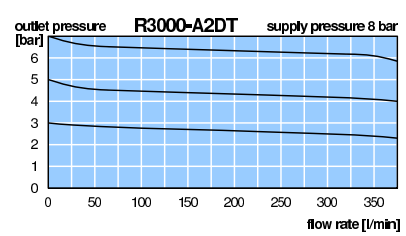
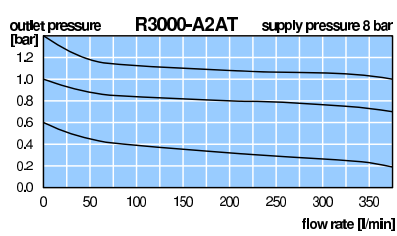
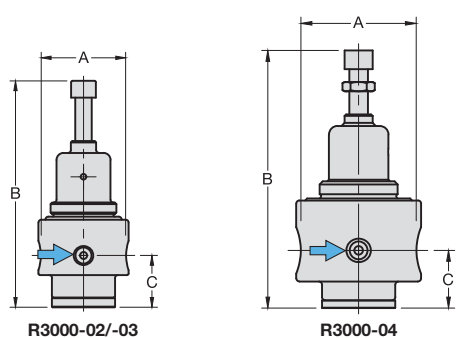
R3000-02/-03, accessory: gauge



R3000-04, accessory: gauge



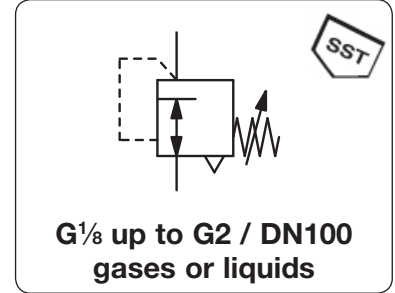
## Accessories, see following pages



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

# Pressure Regulator Made of Stainless Steel Throughout, up to 60 bar R3000

<b>Description</b>	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	see chart, max. 60 bar, for liquids $\Delta p_{max.} = 25$ bar
<b>Adjustment</b>	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
<b>Relieving function</b>	non-relieving, optionally relieving
<b>Gauge port</b>	$G\frac{3}{8}$ at R3000-01 and -A2, all others $G\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



Dimensions	Regul. system	$K_v$	Flow	$P_1$	Connection	Pressure	Order
A B C	D: diaphragm	value	rate	max.	thread	range	number
mm mm mm	P: piston	( $m^3/h$ )	$m^3/h^*1$	bar	G	bar	

SST Pressure regulator		supply pressure max. 30/60 bar, non-relieving, PTFE diaphragm and FKM o-ring				R3000				
137	187	51	P	3.0	228	3800	30	$G\frac{3}{4}$	0.1...1.5	R3000-06AT
									0.2...3.0	R3000-06BT
									0.5...8.0	R3000-06CT
							50		1.0...15	R3000-06FT
									2.0...30	R3000-06GT
									3.0...50	R3000-06LT
137	187	51	P	3.0	228	3800	30	$G1$	0.1...1.5	R3000-A8AT
									0.2...3.0	R3000-A8BT
									0.5...8.0	R3000-A8CT
							50		1.0...15	R3000-A8FT
									2.0...30	R3000-A8GT
									3.0...50	R3000-A8LT
165	286	60	D	6.0	480	8000	60	$G1$	0.1...1.5	R3000-08AT
									0.2...3.0	R3000-08BT
									0.5...8.0	R3000-08CT
									1.0...15	R3000-08FT
									2.0...30	R3000-08GT
									3.0...50	R3000-08LT
165	311	60	P	6.0	480	8000	60		0.1...1.5	R3000-10AT
									0.2...3.0	R3000-10BT
									0.5...8.0	R3000-10CT
									1.0...15	R3000-10FT
									2.0...30	R3000-10GT
									3.0...50	R3000-10LT
269	286	60	D	6.0	480	8000	60	$G1\frac{1}{4}$	0.1...1.5	R3000-1AAT
									0.2...3.0	R3000-1ABT
									0.5...8.0	R3000-1ACT
									1.0...15	R3000-1AFT
									2.0...30	R3000-1AGT
									3.0...50	R3000-1ALT
269	311	60	P	6.0	480	8000	60		0.1...1.5	R3000-1AAAT
									0.2...3.0	R3000-1AABT
									0.5...8.0	R3000-1AACCT
									1.0...15	R3000-1AAFT
									2.0...30	R3000-1AAGT
									3.0...50	R3000-1AALT



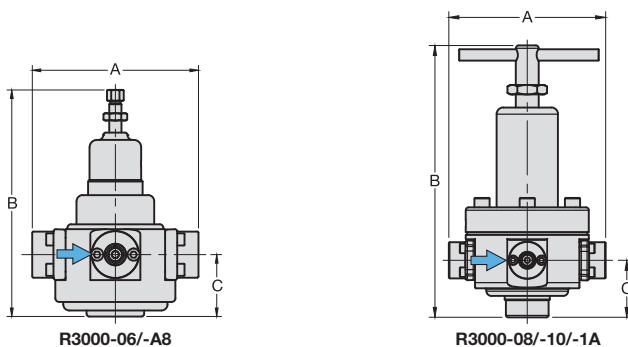
R3000-06/-A8, accessory: gauge



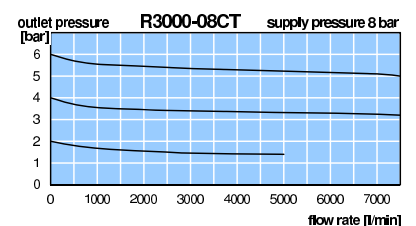
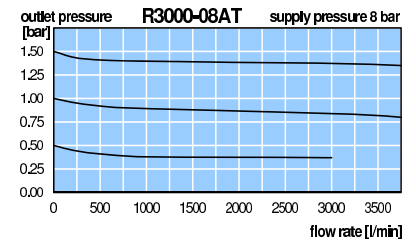
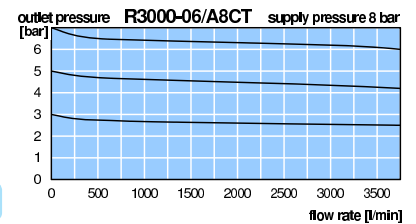
R3000-08/-10/-1A, accessory: gauge



## Accessories, see following pages

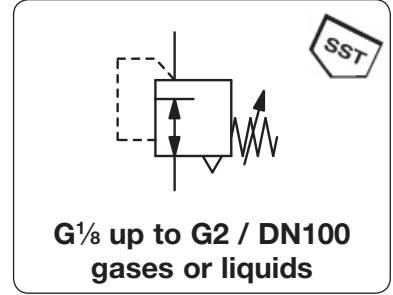


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop



# Pressure Regulator Made of Stainless Steel Throughout, up to 60 bar R3000

<b>Description</b>	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	see chart, max. 60 bar, for liquids $\Delta p_{max.} = 25$ bar
<b>Adjustment</b>	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
<b>Relieving function</b>	non-relieving, optionally relieving
<b>Gauge port</b>	$G\frac{1}{8}$ at R3000-01 and -A2, all others $G\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



Dimensions	Regul. system	$K_v$	Flow	$P_1$	Connection	Pressure	Order
A B C	D: diaphragm	value	rate	max.	thread	range	number
mm mm mm	P: piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	bar	

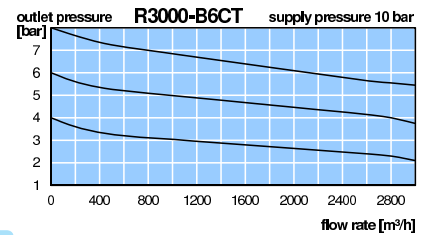
SST Pressure regulator								supply pressure max. 30/50 bar, non-relieving, PTFE diaphragm and FKM o-ring		R3000
171	390	128	P	12.6	900	15000	30	G1½	0.1 ... 1.5	R3000-12AT
									0.2 ... 3.0	R3000-12BT
									0.5 ... 8.0	R3000-12CT
									1.0 ... 15	R3000-12ET
171	400	128	P	12.6	900	15000	50		2.0 ... 30	R3000-12GT
									3.0 ... 50	R3000-12LT
171	390	128	P	12.6	900	15000	30	G2	0.1 ... 1.5	R3000-B6AT
									0.2 ... 3.0	R3000-B6BT
									0.5 ... 8.0	R3000-B6CT
									1.0 ... 15	R3000-B6ET
171	400	128	P	12.6	900	15000	50		2.0 ... 30	R3000-B6GT
									3.0 ... 50	R3000-B6LT
171	421	128	D	21.0	1800	30000	30	G2	0.1 ... 1.5	R3000-16AT
									0.5 ... 6.0	R3000-16CT
									1.0 ... 15	R3000-16DT
389	425	118	D	48.0	4500	75000	30	DN80	0.1 ... 1.5	R3000-24AT
									0.5 ... 6.0	R3000-24CT
									1.0 ... 15	R3000-24DT
389	425	118	D	56.0	5500	90000	30	DN100	0.1 ... 1.5	R3000-32AT
									0.5 ... 6.0	R3000-32CT
									1.0 ... 15	R3000-32DT



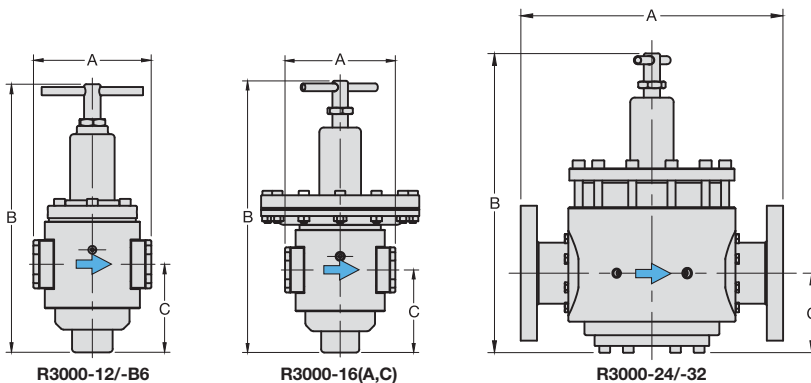
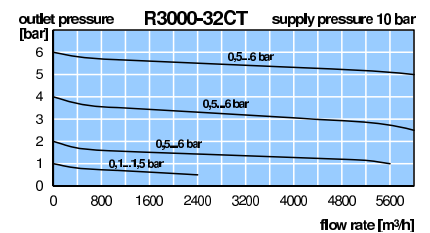
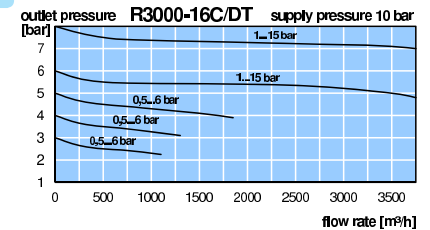
R3000-12/-B6, accessory: gauge



R3000-16, accessory: gauge



## Accessories, see following pages

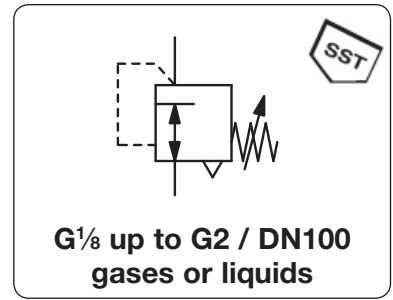


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop



# Pressure Regulator Made of Stainless Steel Throughout, up to 60 bar R3000

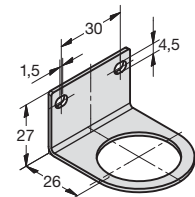
<b>Description</b>	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	see chart, max. 60 bar, for liquids $\Delta p_{max} = 25$ bar
<b>Adjustment</b>	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
<b>Relieving function</b>	non-relieving, optionally relieving
<b>Gauge port</b>	$G\frac{1}{8}$ at R3000-01 and -A2, all others $G\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



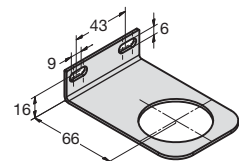
Dimensions	Regul. system	$K_v$	Flow	$P_1$	Connection	Pressure	Order
A B C	D: diaphragm	value	rate	max.	thread	range	number
mm mm mm	P: piston	( $m^3/h$ )	$m^3/h^*1$ $l/min^*1$	bar	G	bar	

## Special options, add the appropriate letter or number

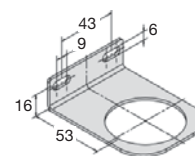
<b>NPT</b>	connection thread	for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	R3000-...N
<b>NPT</b>	connection thread	for $G\frac{1}{4}$ (02) to $G2$	R3000-...N
<b>with T-handle</b>	instead of hexagonal screw	for $G\frac{1}{4}$ (02) to $G\frac{1}{2}$	R3000-...P
<b>diaphragm, relieving</b>		up to $G1$	R3000-...R
<b>piston, relieving</b>			R3000-...R
<b>tapped exhaust</b>		for R3000-01/A2	R3000-...X12
<b>down to -40 °C</b>	low temperature version	from $G\frac{1}{4}$ (02) on	R3000-...X51
<b>up to 130 °C</b>	high temperature version	from $G\frac{1}{4}$ (02) on	R3000-...X54
<b>FKM o-ring</b>	for piston or PTFE diaphragm		R3000-...T
<b>EPDM o-ring</b>			R3000-...TE
<b>EPDM o-ring</b>	FDA-approval		R3000-...TD
<b>SST diaphragm</b>	FKM o-ring	for $G\frac{1}{4}$ (02) to $G1$ (A8)	R3000-...S
	EPDM o-ring	for $G\frac{1}{4}$ (02) to $G1$ (A8)	R3000-...SE
<b>ammonia</b>	$NH_3$		R3000-...02
<b>carbon dioxide</b>	$CO_2$		R3000-...03
<b>argon</b>	Ar		R3000-...05
<b>nitrogen</b>	$N_2$		R3000-...07
<b>helium</b>	He		R3000-...09
<b>hydrogen</b>	$H_2$		R3000-...11
<b>methane</b>	$CH_4$		R3000-...13
<b>natural gas *3</b>			R3000-...14
<b>oxygen</b>	$O_2$		R3000-...15
<b>propane</b>	$C_3H_8$		R3000-...16
<b>nitrous oxide</b>	$N_2O$		R3000-...17
<b>water</b>	$H_2O$		R3000-...W
<b>flange connection</b>	see end of the chapter / flanges		R3000-...F.



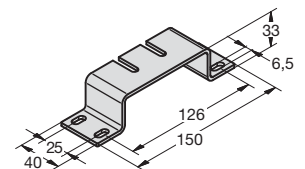
**BW30-03S**



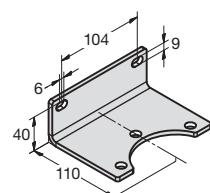
**BW45-03S**



**BW50-01S**



**BW00-59S**



**BW00-62S**

## Accessories

<b>pressure gauge</b>	$\varnothing$ 40 mm, 0...*2 bar, $G\frac{1}{8}$	for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	<b>MS4001-...*2</b>
	$\varnothing$ 50 mm, 0...*2 bar, $G\frac{1}{4}$	for $G\frac{1}{4}$ (02) to $G\frac{1}{2}$	<b>MS5002-...*2</b>
	$\varnothing$ 63 mm, 0...*2 bar, $G\frac{1}{4}$	for $G\frac{3}{4}$ (06) to $G2$	<b>MS6302-...*2</b>
<b>mounting bracket</b>		for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	<b>BW30-03S</b>
<b>mounting nut</b>		for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	<b>M30x1,5S</b>
<b>mounting bracket</b>		for $G\frac{1}{4}$ (02), $G\frac{3}{8}$ , $G\frac{3}{4}$ and $G1$ (A8)	<b>BW45-03S</b>
<b>mounting nut</b>		for $G\frac{1}{4}$ (02), $G\frac{3}{8}$ , $G\frac{3}{4}$ and $G1$ (A8)	<b>M45x1,5S</b>
<b>mounting bracket</b>		for $G\frac{1}{2}$	<b>BW50-01S</b>
<b>mounting nut</b>		for $G\frac{1}{2}$	<b>M50x1,5S</b>
<b>mounting bracket</b>		for $G1$ (08) + $G1\frac{1}{2}$ (1A)	<b>BW00-59S</b>
		for $G1\frac{1}{2}$ (12) + $G2$ (B6)	<b>BW00-62S</b>

\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

\*3 without DVGW-approval

Gauges: see chapter for measuring devices

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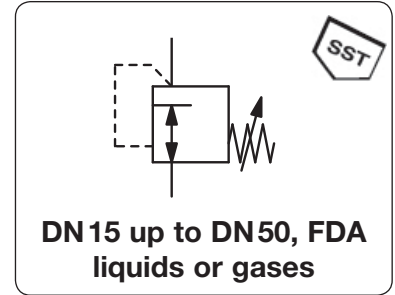


Order example:  
**MS4001-02**

# Pressure Regulator with Flange, made of Special Steel Casting

REF

<b>Description</b>	Diaphragm-operated pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent.
<b>Media</b>	compressed air, neutral gases or liquids
<b>Supply pressure</b>	see chart, max. 25 bar
<b>Adjustment</b>	by T-handle, with locknut
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 120 °C / 32 °F to 248 °F for FKM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 150 °C / 32 °F to 302 °F for EPDM, for appropriately conditioned compr. air down to -30 °C / -22 °F
<b>Material</b>	Body: stainless steel 316L, mat. no. 1.4408 Diaphragm: FKM, optionally EPDM or PTFE



Dimensions			K <sub>v</sub> -value	Flow rate		Supply pressure max. bar	Connection flange DN	Pressure range bar	Order number
A	B	C		air	water				

## Pressure regulator with flange

for liquids, P: max. 8/25 bar, non-relieving, FKM, PN40

REF

210	255	95	4.0	4200	66	8	DN 15	0.2...3.0	REF-04B
						25		2.0... 10	REF-04D
						25		6.0... 16	REF-04E
220	260	105	4.0	4200	66	8	DN 20	0.2...3.0	REF-06B
						25		2.0... 10	REF-06D
						25		6.0... 16	REF-06E
220	265	115	4.0	4200	66	8	DN 25	0.2...3.0	REF-08B
						25		2.0... 10	REF-08D
						25		6.0... 16	REF-08E
220	273	115	7.5	8000	125	8	DN 25	0.2...3.0	REF-A8B
						25		2.0... 10	REF-A8D
						25		6.0... 16	REF-A8E
280	290	150	7.5	8000	125	8	DN 40	0.2...3.0	REF-12B
						25		2.0... 10	REF-12D
						25		6.0... 16	REF-12E
320	298	165	7.5	8000	125	8	DN 50	0.2...3.0	REF-16B
						25		2.0... 10	REF-16D
						25		6.0... 16	REF-16E

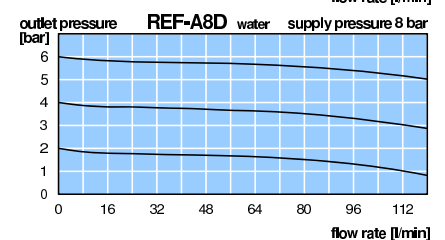
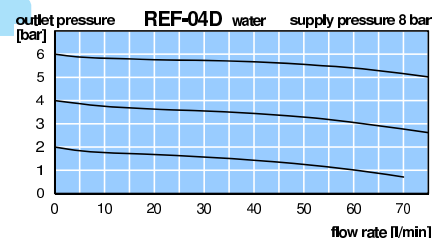
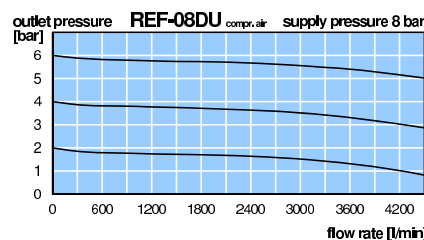
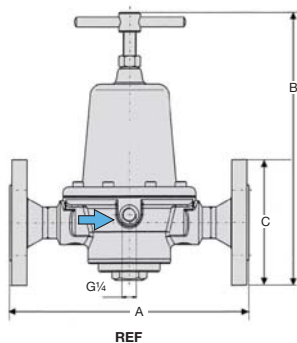


## Special Options, add the appropriate letter

gaseous media	non-relieving, height +43 mm	RE . . . . U
EPDM diaphragm	FDA approved	RE . . . . E
PTFE diaphragm	FKM with PTFE coating and FKM o-ring	RE . . . . I
free of oil and grease	suitable for oxygen	RE . . . . L
flange connection*3	DIN 3239 / DIN 11850-2 / ISO 4200, DN8 to DN25, instead of connection thread	RE . . . . A
milk pipe connection		RE . . . . M

## Accessories

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for DN8 to DN15 (04)	MS5002-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for DN15 (A4) to DN50	MS6302-...*2



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

\*3 version has to be indicate in clear words

Gauges: see chapter for measuring devices

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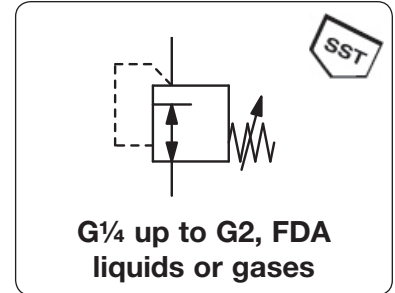


Order example:  
REF-04B

# Pressure Regulator made of Special Steel Casting

REA

<b>Description</b>	Diaphragm-operated pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	see chart, max. 25 bar
<b>Adjustment</b>	by T-handle, with locknut
<b>Relieving function</b>	non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 120 °C / 32 °F to 248 °F for FKM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 150 °C / 32 °F to 302 °F for EPDM, for appropriately conditioned compr. air down to -30 °C / -22 °F
<b>Material</b>	Body: stainless steel 316L, mat. no. 1.4408 Diaphragm: FKM, optionally EPDM or PTFE



Dimensions			K <sub>v</sub> -value	Flow rate air	Flow rate water	Supply pressure	Nom. size	Connection thread	Pressure range	Order number
A	B	C	(m <sup>3</sup> /h)	l/min*1	l/min*1	max. bar	DN	G	bar	

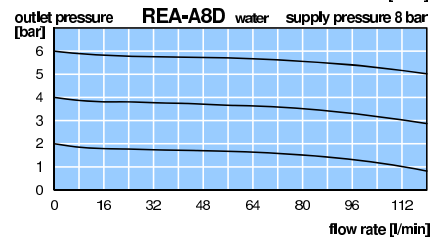
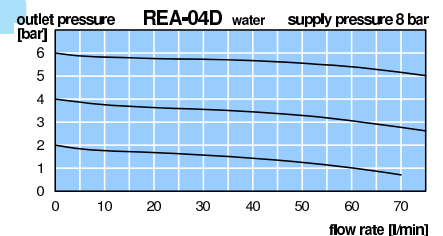
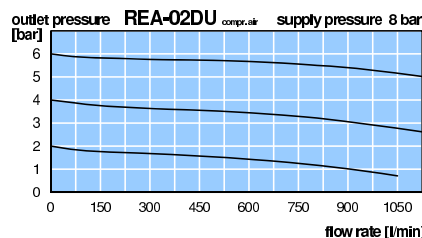
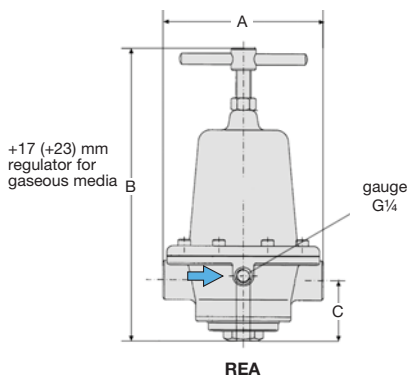
## Regulator made of Special Steel Casting for liquids, P<sub>1</sub>: max. 8/25 bar, non-relieving, FKM REA

92	190	42	1.0	1100	17	8	DN 8	G $\frac{1}{4}$	0.2...3.0	REA-02B												
						25			2.0... 10	REA-02D												
						25			6.0... 16	REA-02E												
						122	240	49	4.0	4200	66	8	DN 10	G $\frac{3}{8}$	0.2...3.0	REA-03B						
												25			2.0... 10	REA-03D						
												25			6.0... 16	REA-03E						
												150	250	53	7.5	8000	125	8	DN 15	G $\frac{1}{2}$	0.2...3.0	REA-04B
																		25			2.0... 10	REA-04D
																		25			6.0... 16	REA-04E
222	250	53	7.5	8000	125													8	DN 20	G $\frac{3}{4}$	0.2...3.0	REA-06B
																		25			2.0... 10	REA-06D
																		25			6.0... 16	REA-06E
						222	250	53	7.5	8000	125							8	DN 25	G1	0.2...3.0	REA-08B
																		25			2.0... 10	REA-08D
																		25			6.0... 16	REA-08E
												222	250	53	7.5	8000	125	8	DN 32	G1 $\frac{1}{4}$	0.2...3.0	REA-10B
																		25			2.0... 10	REA-10D
																		25			6.0... 16	REA-10E
235	250	53	7.5	8000	125													8	DN 40	G1 $\frac{1}{2}$	0.2...3.0	REA-12B
																		25			2.0... 10	REA-12D
																		25			6.0... 16	REA-12E
						235	250	53	7.5	8000	125							8	DN 50	G2	0.2...3.0	REA-16B
																		25			2.0... 10	REA-16D
																		25			6.0... 16	REA-16E



SST  
15

## Special options and Accessories, see page 15.10. REF



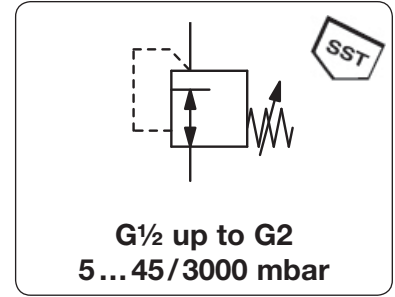
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

PDF CAD  
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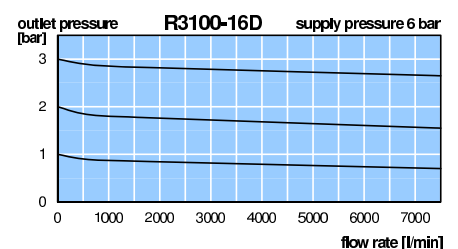
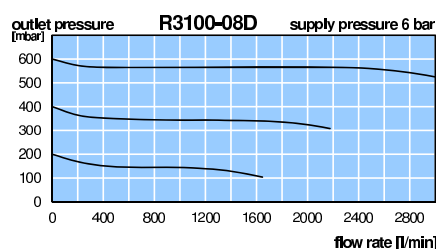
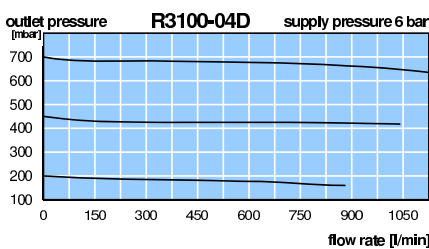
Order example:  
REA-02B

<b>Description</b>	Precision low pressure regulator with large diaphragm, completely made of stainless steel.	
<b>Media</b>	compressed air or gases	
<b>Supply pressure</b>	max. 7 bar, min. 1 bar	
<b>Air consumption</b>	without constant bleed	
<b>Adjustment</b>	by adjusting screw at R3100-04, -06 to -1A (A,B,C), - 12 and -16 by T-handle at R3100-06 to --1A (D,E), with locknut	
<b>Relieving function</b>	non-relieving	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied	
<b>Mounting position</b>	any	
<b>Temperature range</b>	0 °C bis 80 °C / 32 °C to 176 °F, FKM or EPDM 0 °C bis 130 °C / 32 °C to 266 °F, high temperature version, for appropriately conditioned compr. air down to -20 °C / - 4 °F, or low temperature down to -40 °C/-40°F	
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM Inner valve: stainless steel 316L / 1.4404



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 / l/min*1	Supply pressure max. bar	Connection- thread G	Pressure range mbar	Order number
A mm	B mm	C mm						

Low pressure regulator				made of SST, supply pressure max. 7 bar, non-relieving diaphragm NBR/Buna-N with PTFE coating, FKM o-ring				R3100		
80	177	37	0.4	60	1000	6	G $\frac{1}{2}$ *2	5 ... 45	R3100-04A	
								20 ... 200	R3100-04C	
								150 ... 700	R3100-04D	
161	217	68	1.8	180	3000	7	G $\frac{3}{4}$	5 ... 45	R3100-06A	
								10 ... 120	R3100-06B	
								10 ... 400	R3100-06C	
161	296	53						15 ... 700	R3100-06D	
								200 ... 1200	R3100-06E	
161	217	68	1.8	180	3000	7	G1	5 ... 45	R3100-08A	
								10 ... 120	R3100-08B	
								10 ... 400	R3100-08C	
161	296	53						15 ... 700	R3100-08D	
								200 ... 1200	R3100-08E	
265	217	68	1.8	180	3000	7	G1 $\frac{1}{4}$	5 ... 45	R3100-10A	
								10 ... 120	R3100-10B	
								10 ... 400	R3100-10C	
265	296	53						15 ... 700	R3100-10D	
								200 ... 1200	R3100-10E	
265	217	68	1.8	180	3000	7	G1 $\frac{1}{2}$	5 ... 45	R3100-1AA	
								10 ... 120	R3100-1AB	
								10 ... 400	R3100-1AC	
265	296	53						15 ... 700	R3100-1AD	
								200 ... 1200	R3100-1AE	
171	431	97	5.7	480	8000	6	G1 $\frac{1}{2}$	20 ... 50	R3100-12A	
171	467	97						50 ... 150	R3100-12B	
171	430	97						150 ... 300	R3100-12D	
								300 ... 3000	R3100-12G	
171	431	97	5.7	480	8000	6	G2	20 ... 50	R3100-16A	
171	467	97						50 ... 150	R3100-16B	
171	430	97						150 ... 300	R3100-16D	
								300 ... 3000	R3100-16G	



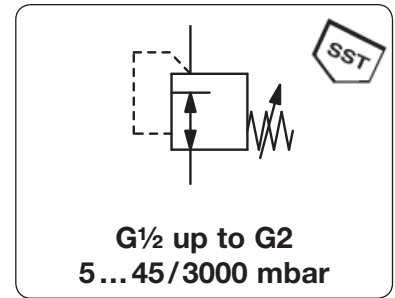
\*1 at 6 bar supply pressure and 1 bar / 0.7 bar (-04) outlet pressure      \*2 G $\frac{3}{4}$  thread at outlet

Gauges: see chapter for measuring devices

PDF CAD  
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Order example:  
R3100-04A

<b>Description</b>	Precision low pressure regulator with large diaphragm, completely made of stainless steel.		
<b>Media</b>	compressed air or gases		
<b>Supply pressure</b>	max. 7 bar, min. 1 bar		
<b>Air consumption</b>	without constant bleed		
<b>Adjustment</b>	by adjusting screw at R3100-04, -06 to -1A (A,B,C), - 12 and -16 by T-handle at R3100-06 to --1A (D,E), with locknut		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C bis 80 °C / 32 °C to 176 °F, FKM or EPDM 0 °C bis 130 °C / 32 °C to 266 °F, high temperature version, for appropriately conditioned compr. air down to -20 °C / - 4 °F, or low temperature down to -40 °C/-40°F		
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404	O-rings: FKM	Inner valve: stainless steel 316L / 1.4404
	Diaphragm: NBR/Buna-N with PTFE coating		



Dimensions			K <sub>v</sub> -value	Flow rate	Supply pressure	Connection- thread	Pressure range	Order number
A	B	C						
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	max. bar	G	mbar

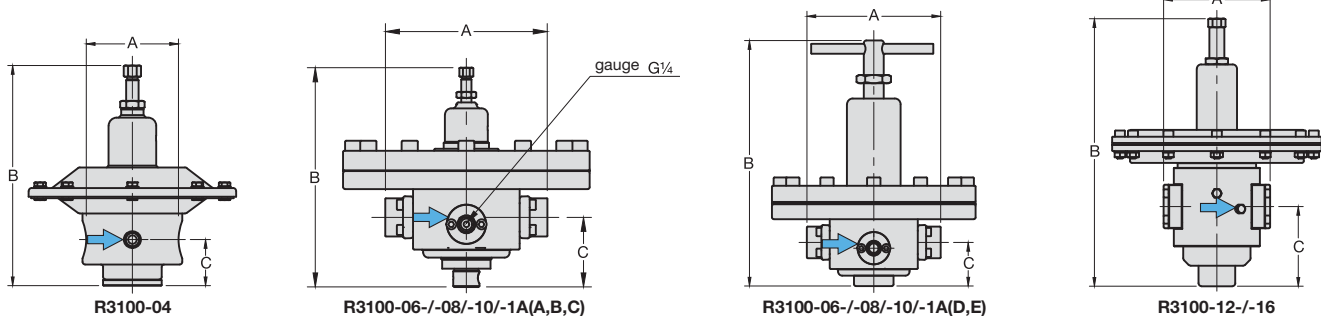
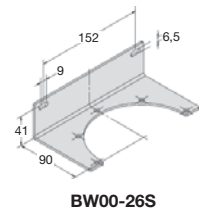
## Special options, add the appropriate letter

<b>NPT</b>	connection thread	R3100- ... <b>N</b>
<b>EPDM o-ring</b>	FDA-approval	R3100- ... <b>TD</b>
<b>down to -40 °C/-40 °F</b>	low temperature version	from G $\frac{1}{4}$ (02) on R3100- ... <b>X51</b>
<b>up to 130 °C/266 °F</b>	high temperature version	from G $\frac{1}{4}$ (02) on R3100- ... <b>X54</b>
<b>ammonia</b>	NH <sub>3</sub>	R3100- ... <b>02</b>
<b>carbon dioxide</b>	CO <sub>2</sub>	R3100- ... <b>03</b>
<b>argon</b>	Ar	R3100- ... <b>05</b>
<b>nitrogen</b>	N <sub>2</sub>	R3100- ... <b>07</b>
<b>helium</b>	He	R3100- ... <b>09</b>
<b>hydrogen</b>	H <sub>2</sub>	R3100- ... <b>11</b>
<b>methane</b>	CH <sub>4</sub>	R3100- ... <b>13</b>
<b>natural gas</b> *3		R3100- ... <b>14</b>
<b>oxygen</b>	O <sub>2</sub>	R3100- ... <b>15</b>
<b>propane</b>	C <sub>3</sub> H <sub>6</sub>	R3100- ... <b>16</b>
<b>nitrous oxide</b>	N <sub>2</sub> O	R3100- ... <b>17</b>
<b>flange connection</b>	see end of the chapter / flanges	R3100- ... <b>F</b> .



## Accessories

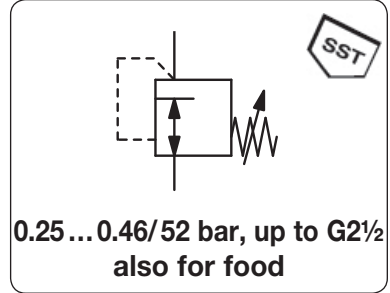
<b>pressure gauge</b>	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ , capsule type	up to 600 mbar	<b>MS6302- ... *2</b>
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube	from 1 bar on	<b>MS6302- ... *2</b>
<b>connect. parts gauge</b>		for G $\frac{1}{2}$	<b>AM-03S</b>
<b>mounting bracket</b>		for G $\frac{1}{2}$	<b>BW00-26S</b>



\*1 at 6 bar supply pressure and 1 bar / 0.7 bar (-04) outlet pressure      \*3 without DVGW-approval  
\*4 B6 = 0...60 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar, 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar

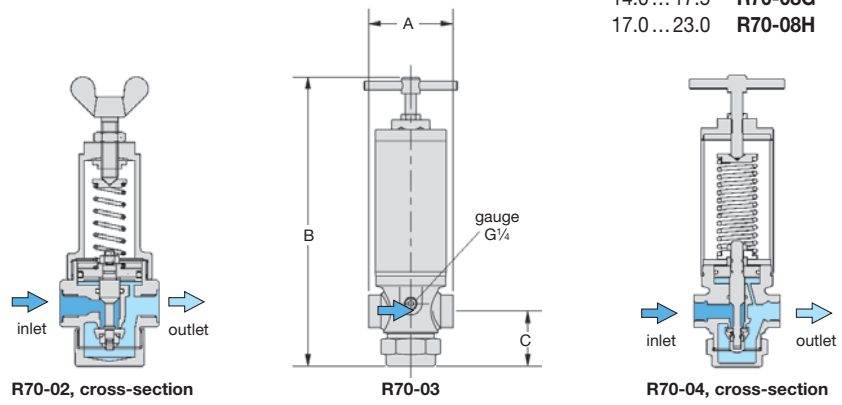
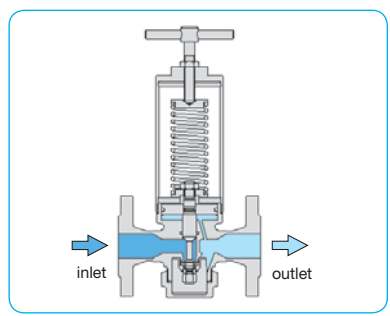


<b>Description</b>	Piston-operated pressure regulator made of stainless steel up to pressure range of 52 bar, independent to inlet pressure.	
<b>Note</b>	It is recommended to select an outlet diameter at least one time larger than the main valve's diameter.	
<b>Media</b>	compressed air, gases, liquids or steam (R70-02 not suitable for steam)	
<b>Supply pressure</b>	max. 16 bar at R70-02,	max. 40 bar at R70-16/-20,
<b>Adjustment</b>	max. 63 bar at R70-03/-06 to -12,	max. 100 bar at R70-04
	by wing screw at R70-02,	with locknut
	by T-handle at R70-03 to -20,	with locknut
<b>Relieving function</b>	non-relieving	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 140 °C / 32 °F to 284 °F, EPDM, steamable, 0 °C to 150 °C / 32 °F to 302 °F, PTFE/EPDM for steam 0 °C to 200 °C / 32 °F to 392 °F, PTFE/AF100/EPDM, for steam	
<b>Material</b>	Body: stainless steel 1.4301 or 1.4571 (R70-02), optionally 1.4435	
	Spring cage: stainless steel 1.4301	Diaphragm: EPDM
	Seals: EPDM, optionally PTFE	O-rings: EPDM



Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Connection thread	P <sub>1</sub> max.	Pressure range	Order number
A	B	C	DN	(m <sup>3</sup> /h)	air	water	G	bar	bar	
mm	mm	mm			l/min*1	l/min*2				

SST pressure regulator											supply pressure max. 16/63/100 bar, non-relieving, for compressed air, gas, water, steam*3	R70
58	185	36	8	0.63	24	3	G $\frac{1}{4}$	16	1.0 ... 2.0	2.0 ... 4.0	R70-02A	
									2.5 ... 5.0	5.0 ... 7.0	R70-02B	
									3.5 ... 7.0		R70-02C	
											R70-02D	
70	253	48	10	2.0	55	6	G $\frac{3}{8}$	*4	0.5 ... 1.2	1.2 ... 1.8	R70-03A	
									0.9 ... 1.8	1.6 ... 3.2	R70-03B	
									3.3 ... 6.5	5.0 ... 10.0	R70-03C	
									10.0 ... 17.0		R70-03D	
											R70-03E	
											R70-03F	
90	333	58	15	3.0	120	15	G $\frac{1}{2}$	*4	0.6 ... 1.2	1.0 ... 2.0	R70-040	
									1.5 ... 3.0	1.5 ... 2.0	R70-04A	
									2.7 ... 5.0	2.7 ... 5.0	R70-04B	
									4.3 ... 8.5	4.3 ... 8.5	R70-04C	
									8.5 ... 17.0	8.5 ... 17.0	R70-04D	
									15.0 ... 25.0	15.0 ... 25.0	R70-04E	
									25.0 ... 38.0	25.0 ... 38.0	R70-04F	
									38.0 ... 53.0	38.0 ... 53.0	R70-04G	
											R70-04H	
90	333	58	20	3.2	200	25	G $\frac{3}{4}$	*4	0.6 ... 1.2	1.0 ... 2.0	R70-060	
									1.5 ... 3.0	1.5 ... 3.0	R70-06A	
									2.7 ... 5.0	2.7 ... 5.0	R70-06B	
									4.3 ... 8.5	4.3 ... 8.5	R70-06C	
									8.5 ... 17.0	8.5 ... 17.0	R70-06D	
									15.0 ... 25.0	15.0 ... 25.0	R70-06E	
									25.0 ... 38.0	25.0 ... 38.0	R70-06F	
									38.0 ... 53.0	38.0 ... 53.0	R70-06G	
											R70-06H	
105	368	68	25	6.3	350	45	G1	*4	0.5 ... 1.1	1.2 ... 2.4	R70-08A	
									2.0 ... 4.2	4.0 ... 8.0	R70-08B	
									8.0 ... 11.5	11.0 ... 14.2	R70-08C	
									14.0 ... 17.5	17.0 ... 23.0	R70-08D	
											R70-08E	
											R70-08F	
											R70-08G	
											R70-08H	



\*1 at flow velocity 10 m/s  
\*2 at 2.5 m/s  
\*3 not for R70-02  
\*4 P<sub>1</sub> max. = P<sub>2</sub> max. + 25 bar

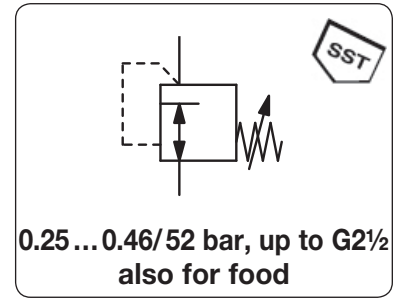
PDF CAD  
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Order example:  
R70-02A



### Pharmacy and food-safe version

<b>Description</b>	The pharmacy version (option P) standard design is completely made of stainless steel, independent of inlet pressure, sealed at zero consumption, with EPDM and steamable up to 140 °C / 284 °F. Media contact parts have roughness of $R_a < 2.6 \mu\text{m}$ .				
<b>Special options</b>	Add the appropriate letter to the order number:				
<b>Outer surface</b>	Valve body: electropolished	<b>FA</b>	glass bead shot-peened	<b>FC</b>	
	Complete valve: electropolished	<b>FB</b>	glass bead shot-peened	<b>FD</b>	ground/polished $R_a 1.2 \mu\text{m}$
<b>Inner surface</b>	Valve body: $R_a < 2.0 \mu\text{m}$	<b>GA</b>	glass bead shot-peened	<b>GC</b>	$R_a < 0.5 \mu\text{m}$
	Media contact parts: $R_a < 1.6 \mu\text{m}$	<b>GB</b>	$R_a < 0.8 \mu\text{m}$	<b>GD</b>	
<b>Connection</b>	Aseptic flange as per DIN 11864-2	<b>F(AS)</b>	as per APV	<b>F(APV)</b>	
	Flange as per DIN 2633 (PN16)	<b>F</b>	as per ANSI B16.5 150 lbs	<b>F150lbs</b>	
	Threaded connection as per DIN 11851	<b>GA</b>			
	Clamp fittings as per DIN 32676	<b>CL</b>			

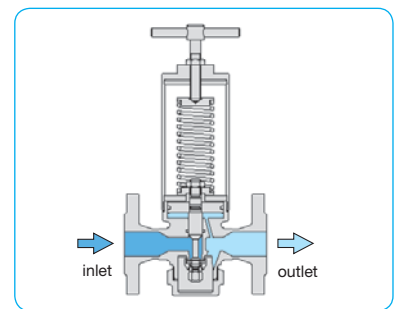


Dimensions	Nominal size	$K_v$ -value	Flow rate air	Flow rate water	Connection thread	$P_1$ max.	Pressure range	Order number
A	B	C	DN	(m³/h)	l/min*1	l/min*2	G	bar

### SST pressure regulator

supply pressure max. 16/63/100 bar, non-relieving, for compressed air, gas, water, steam\*3 **R70**

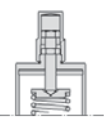
145	410	85	40	12.5	900	120	G1½	*4	1.0 ... 2.2	<b>R70-12A</b>
									1.9 ... 3.5	<b>R70-12B</b>
									3.5 ... 4.3	<b>R70-12C</b>
									4.0 ... 6.7	<b>R70-12D</b>
									6.0 ... 8.8	<b>R70-12E</b>
									8.0 ... 12.3	<b>R70-12F</b>
									11.0 ... 17.0	<b>R70-12G</b>
145	410	85	50	13.0	1300	160	G2	*4	1.0 ... 2.2	<b>R70-16A</b>
									1.9 ... 3.5	<b>R70-16B</b>
									3.5 ... 4.3	<b>R70-16C</b>
									4.0 ... 6.7	<b>R70-16D</b>
									6.0 ... 8.8	<b>R70-16E</b>
									8.0 ... 12.3	<b>R70-16F</b>
									11.0 ... 17.0	<b>R70-16G</b>
220	685	145	65	28.0	3200	420	G2½	*4	0.25 ... 0.46	<b>R70-20A</b>
									0.5 ... 1.1	<b>R70-20B</b>
									1.2 ... 2.4	<b>R70-20C</b>
									2.5 ... 5.5	<b>R70-20D</b>
									4.5 ... 9.1	<b>R70-20E</b>
									6.0 ... 12.0	<b>R70-20F</b>



### Special options, add the appropriate letter

<b>NPT</b>	connection thread	R70-...N
<b>stainless steel 1.4435 up to 150 °C / 302 °F</b>	housing 1.4435, spring cage 1.4301 for G¾ up to G1	R70-...S
<b>up to 200 °C / 392 °F</b>	PTFE seals	R70-...X55
<b>tamper-proof cap</b>	PTFE / AF100 seals	R70-...X56
<b>drainage</b>	adjustment by spanner, height 35 mm lower through bottom screw	R70-...T
<b>volume booster</b>	pneumatic pressure setting	R70-...U
<b>other connections</b>	DIN or ANSI flange, threaded connection or clamp fittings	R70-...J
<b>for pharmacy</b>	forged stainless steel, $R_a < 2.6 \mu\text{m}$ , steamable, EPDM	R70-...F.
<b>CIP cleaning</b>	pressure regulator sterilisable and minimal dead spots	R70-...P
<b>for food industry</b>	EPDM elastomer with FDA approval	R70-...

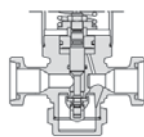
**pressure gauge** Ø 63 mm, 0...\*3 bar, G¼ **MS6302-...\*3**  
for other requirements on request



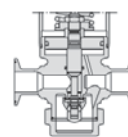
**tamper-proof cap for pressure adjustment**



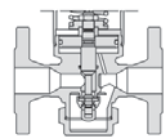
**drainage through bottom screw**



**threaded connection e.g. DIN 11851 / 11864-1**



**clamp fittings e.g. DIN 32676**



**flange e.g. DIN 11864-2**

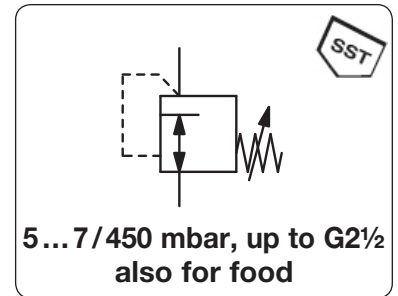
\*1 at flow velocity 10 m/s  
\*2 at 2.5 m/s

\*3 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar  
\*4  $P_1$  max. =  $P_2$  max. + 25 bar



# Low Pressure Regulator Made of Stainless Steel, Suitable for Pharmacy R74

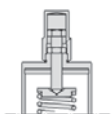
<b>Description</b>	Diaphragm-operated pressure regulator completely made of stainless steel for very low outlet pressure, independent of inlet pressure.		
<b>Note</b>	It is recommended to select an outlet diameter at least one time larger than the main valve's diameter. Mounting position with spring cage downward at pressure range < 100 mbar.		
<b>Media</b>	compressed air or gases		
<b>Supply pressure</b>	max. 25 bar at R74-02 to -A8,	max. 16 bar at R74-08/16	
<b>Adjustment</b>	by T-handle with locknut		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body	<b>Mounting position</b>	spring cage downward
<b>Temperature range</b>	0 °C to 140 °C / 32 °F to 284 °F for EPDM, steamable		
<b>Material</b>	Body: stainless steel 1.4301, optionally 1.4435	Spring cage: stainless steel 1.4301	
	Diaphragm: EPDM	Seals: EPDM	O-rings: EPDM



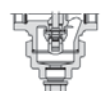
Dimensions			Nominal K <sub>v</sub> -	Flow rate		Connection	Diaphr.	P <sub>1</sub>	Pressure	Order
A	B	C	size	air	water	thread	Ø mm	< bar	range	number
mm	mm	mm	DN	(m <sup>3</sup> /h)	l/min*1	G			mbar	

## Low pressure regulator supply pressure max. 16 / 25 bar, non-relieving, without constant bleed **R74**

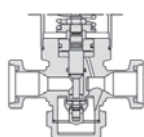
70	368	48	8	1.2	30	1.8	G $\frac{1}{4}$	405	0.5	5 ... 9	<b>R74-02A</b>
									0.5	8 ... 15	<b>R74-02B</b>
									0.5	14 ... 28	<b>R74-02C</b>
							R74-03 for G $\frac{3}{8}$	310	0.8	25 ... 33	<b>R74-02D</b>
									1.2	28 ... 56	<b>R74-02E</b>
							R74-A4 for G $\frac{1}{2}$	235	1.5	50 ... 74	<b>R74-02F</b>
									2.0	60 ... 120	<b>R74-02G</b>
								190	4.0	100 ... 150	<b>R74-02H</b>
									25	130 ... 266	<b>R74-02I</b>
									25	230 ... 450	<b>R74-02K</b>
70	368	48	10	2.0	30	1.8	G $\frac{3}{8}$	...	...	...	<b>R74-03 .</b>
70	368	48	15	2.2	30	1.8	G $\frac{1}{2}$	...	...	...	<b>R74-A4 .</b>
90	368	58	15	3.0	120	7.2	G $\frac{1}{2}$	405	0.5	5 ... 8	<b>R74-04A</b>
									0.5	8 ... 15	<b>R74-04B</b>
									0.5	13 ... 27	<b>R74-04C</b>
							R74-06 for G $\frac{3}{4}$	310	0.8	25 ... 32	<b>R74-04D</b>
									1.2	27 ... 54	<b>R74-04E</b>
							R74-A8 for G1	235	1.5	50 ... 70	<b>R74-04F</b>
									2.0	60 ... 100	<b>R74-04G</b>
								190	4.0	100 ... 140	<b>R74-04H</b>
									25	130 ... 250	<b>R74-04I</b>
									25	220 ... 400	<b>R74-04K</b>
90	368	58	20	3.2	120	7.2	G $\frac{3}{4}$	...	...	...	<b>R74-06 .</b>
90	368	58	25	3.5	120	7.2	G1	...	...	...	<b>R74-A8 .</b>
105	388	68	25	6.3	370	22	G1	405	0.5	5 ... 8	<b>R74-08A</b>
									0.5	7 ... 14	<b>R74-08B</b>
									0.5	13 ... 25	<b>R74-08C</b>
							R74-12 for G1 $\frac{1}{2}$	310	0.8	25 ... 30	<b>R74-08D</b>
									1.2	28 ... 50	<b>R74-08E</b>
								235	1.4	50 ... 65	<b>R74-08F</b>
									2.0	60 ... 110	<b>R74-08G</b>
								190	5.0	100 ... 140	<b>R74-08H</b>
									16	120 ... 230	<b>R74-08I</b>
									16	210 ... 400	<b>R74-08K</b>
105	388	68	32	6.5	370	22	G1 $\frac{1}{4}$	...	...	...	<b>R74-10 .</b>
105	388	68	40	6.7	370	22	G1 $\frac{1}{2}$	...	...	...	<b>R74-12 .</b>



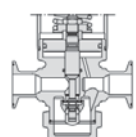
tamper-proof cap for pressure adjustment



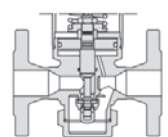
drainage through bottom screw



threaded connection e.g. DIN 11851 / 11864-1



clamp fittings e.g. DIN 32676



flange e.g. DIN 11864-2

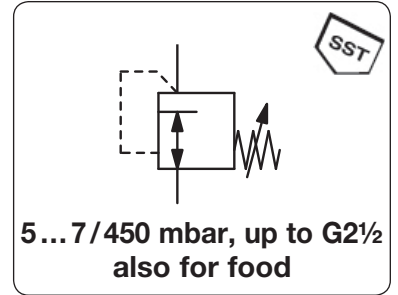
\*1 at 10 m/s flow velocity  
\*2 at 1.5 m/s flow velocity



# Low Pressure Regulator Made of Stainless Steel, Suitable for Pharmacy R74

## Pharmacy and food-safe version

<b>Description</b>	The pharmacy version (option P) standard design is completely made of stainless steel, independent of inlet pressure, sealed at zero consumption, with EPDM and steamable up to 140 °C / 284 °F. Media contact parts have roughness of $R_a < 2.6 \mu\text{m}$ .				
<b>Special options</b>	Add the appropriate letter to the order number:				
<b>Outer surface</b>	Valve body: electropolished	<b>FA</b>	glass bead shot-peened	<b>FC</b>	
	Complete valve: electropolished	<b>FB</b>	glass bead shot-peened	<b>FD</b>	ground/polished $R_a 1.2 \mu\text{m}$
<b>Inner surface</b>	Valve body: $R_a < 2.0 \mu\text{m}$		glass bead shot-peened	<b>GA</b>	
	Media contact parts: $R_a < 1.6 \mu\text{m}$	<b>GB</b>	$R_a < 0.8 \mu\text{m}$	<b>GC</b>	$R_a < 0.5 \mu\text{m}$
<b>Connection</b>	Aseptic flange as per DIN 11864-2	<b>F(AS)</b>	as per APV	<b>F(APV)</b>	
	Flange as per DIN 2633 (PN16)	<b>F</b>	as per ANSI B16.5 150 lbs	<b>F150lbs</b>	
	Threaded connection as per DIN 11851	<b>GA</b>			
	Clamp fittings as per DIN 32676	<b>CL</b>			



Dimensions			Nominal $K_v$ -	Flow rate		Connection	Diaphr.	$P_1$	Pressure	Order
A	B	C	size	value	air	water	thread	recommended	range	number
mm	mm	mm	DN	( $\text{m}^3/\text{h}$ )	$\text{l}/\text{min}^{*1}$	$\text{l}/\text{min}^{*2}$	G	$\text{Ø mm}$	< bar	mbar

Low pressure regulator										supply pressure max. 16 / 25 bar, non-relieving, without constant bleed	R74
145	435	85	50	13.0	1350	81	G2*	405	0.5	5... 7	R74-16A
									0.5	7... 14	R74-16B
									0.5	12... 24	R74-16C
									0.8	21... 26	R74-16D
							310		1.2	25... 28	R74-16E
									2.0	27... 45	R74-16F
									3.0	42... 50	R74-16G
							235		4.0	50... 63	R74-16H
									16	60... 110	R74-16I
									16	100... 180	R74-16K
									16	160... 300	R74-16L
145	435	85	40	12.5	1350	81	G1 1/2	...	...	...	R74-B2.
145	435	85	65	13.5	1350	81	G2 1/2	...	...	...	R74-20.



R74-08IF



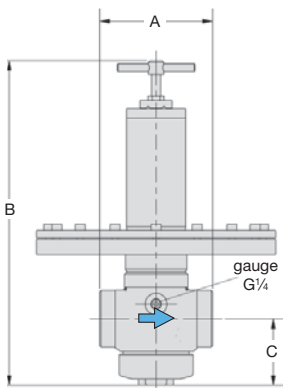
R74-16A

## Special options, add the appropriate letter

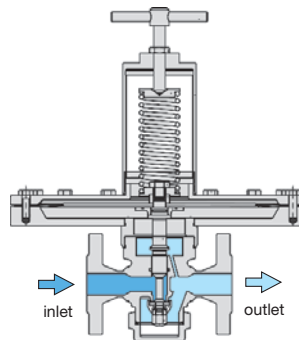
<b>NPT</b>	connection thread	R74-...N
<b>stainless steel 1.4435</b>	housing 1.4435, spring cage 1.4301 for G $\frac{3}{8}$ up to G1	R74-...S
<b>tamper-proof cap</b>	adjustment by spanner, height 40 mm lower	R74-...T
<b>drainage</b>	through bottom screw	R74-...U
<b>volume booster</b>	pneumatic pressure setting	R74-...J
<b>other connections</b>	DIN or ANSI flange, threaded connection or clamp fittings	R74-...F.
<b>for pharmacy</b>	forged stainless steel, $R_a < 2.6 \mu\text{m}$ , steamable, EPDM	R74-...P
<b>CIP cleaning</b>	pressure regulator sterilisable and minimal dead spots	R74-...
<b>for food industry</b>	EPDM elastomer with FDA approval	R74-...

## Accessories

<b>pressure gauge</b>	$\text{Ø } 63 \text{ mm}$ , 0... $^{*3}$ mbar, G $\frac{1}{4}$ , capsule type, 0...100 °C/32...212 °F <b>MS6302-..<math>^{*3}</math></b> for other requirements on request
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R74



cross-section

\*1 at 10 m/s flow velocity

\*2 at 1.5 m/s flow velocity

\*3 B2 = 0...25 mbar, B6 = 0...60 mbar, C1 = 0...100 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar

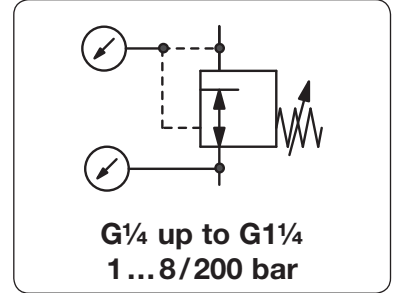
Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



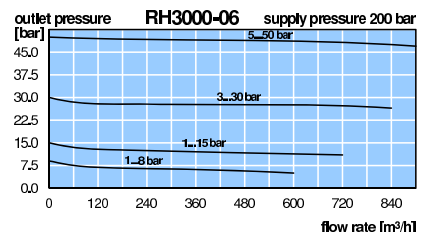
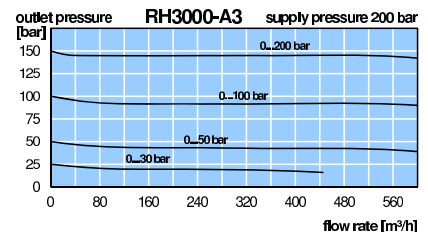
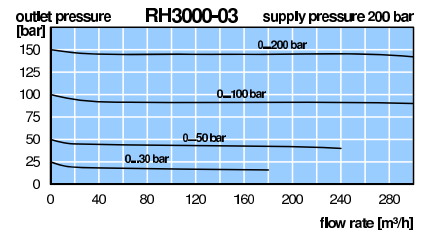
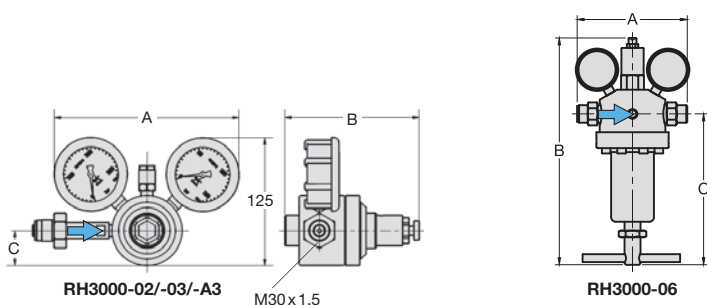
Order example:  
R74-16A

<b>Description</b>	Hand-operated, spring-loaded high pressure regulator for maximum supply pressure of 220 bar and maximum outlet pressure of 200 bar. For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 220 bar	
<b>Adjustment</b>	by hexagon head screw at RH3000-02 to -A3; T-handle at RH3000-06 to -10, with locknut	
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
<b>Safety relief valve</b>	prevents from overpressure, see chart	
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F	
<b>Material</b>	Body: stainless steel 316 Diaphragm: stainless steel 316 O-ring: FKM / PTFE	<b>Mounting position</b> any Filter: stainless steel 316 Valve seat: FKM Piston: stainless steel 316



Dimensions			Safety relief valve	K <sub>v</sub> -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	inlet/outlet	bar	

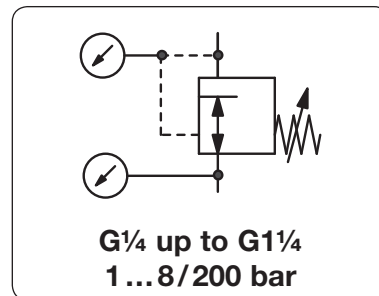
High pressure regulator 220 bar							non-relieving, for compressed air with supply and outlet pressure gauges	RH3000	
177	159	32	S	0.05	30	500	DIN 477 / G <sub>1/4</sub>	1 ... 8	RH3000-02A
			S		45	750		1 ... 15	RH3000-02B
177	173	32	S	60	1000			3 ... 30	RH3000-02C
			S	60	1000			5 ... 50	RH3000-02D
			S	60	1000			10 ... 100	RH3000-02E
			-		60	1000		20 ... 200	RH3000-02F
190	169	40	S	0.15	70	1150	DIN 477 / G <sub>3/8</sub> m	1 ... 8	RH3000-03A
			S		155	2580		1,5 ... 15	RH3000-03B
			S	210	3500		DIN 477 / G <sub>3/8</sub>	3 ... 30	RH3000-03C
190	174	40	S	250	4100			5 ... 50	RH3000-03D
				350	5800			10 ... 100	RH3000-03E
			-		390	6500		20 ... 200	RH3000-03F
182	239	40	S	0.25	370	6170	DIN 477 / G <sub>1/2</sub> m	1 ... 15	RH3000-A3B
182	243	40	S		460	7700	DIN 477 / G <sub>3/8</sub>	3 ... 30	RH3000-A3C
			S		650	10830		5 ... 50	RH3000-A3D
					680	11300		10 ... 100	RH3000-A3E
182	194	40	-		700	11670		20 ... 200	RH3000-A3F
171	342	227	S	1.5	600	10000	G <sub>3/4</sub> m / G <sub>3/4</sub> m	1 ... 8	RH3000-06A
			S		720	12000		1 ... 15	RH3000-06B
171	363	248	S		850	14170		3 ... 30	RH3000-06C
			S		1000	16670		5 ... 50	RH3000-06D
			S		1050	17500		10 ... 100	RH3000-06E



\*1 at 200 bar supply pressure and max. outlet pressure



<b>Description</b>	Hand-operated, spring-loaded high pressure regulator for maximum supply pressure of 220 bar and maximum outlet pressure of 200 bar. For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 220 bar		
<b>Adjustment</b>	by hexagon head screw at RH3000-02 to -A3; T-handle at RH3000-06 to -10, with locknut		
<b>Gauge port</b>	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.		
<b>Safety relief valve</b>	prevents from overpressure, see chart		
<b>Compensation</b>	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.		
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F		
<b>Material</b>	Body: stainless steel 316	Filter: stainless steel 316	<b>Mounting position</b> any
	Diaphragm: stainless steel 316	Valve seat: FKM	
	O-ring: FKM / PTFE	Piston: stainless steel 316	



Dimensions			Safety relief valve	K <sub>v</sub> -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m <sup>3</sup> /h)	m <sup>3</sup> /h* <sup>1</sup>	inlet/outlet	bar	

High pressure regulator 220 bar								non-relieving, for compressed air with supply and outlet pressure gauges	RH3000
250	371	243	S	2.5	1100	18330	G1 m/G1 m	1 ... 8	RH3000-08A
			S			1300		1 ... 15	RH3000-08B
250	410	282	S	1500	25000			3 ... 30	RH3000-08C
			S	1650	27500			5 ... 50	RH3000-08D
250	390	262	-	1850	30830			20 ... 200	RH3000-08F
246	388	272	S	3.5	3850	65830	G1 m/G1 1/4	1 ... 15	RH3000-10B
246	429	313	S	3500	58330			10 ... 100	RH3000-10E



RH3000-08



RH3000-10

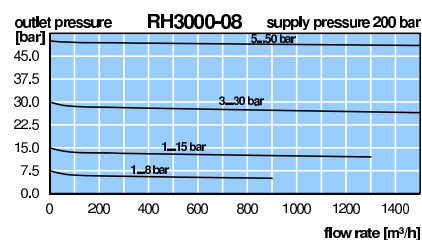
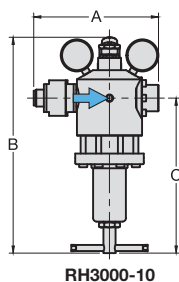
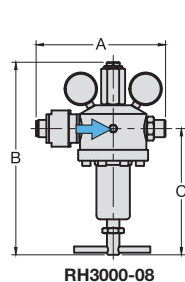
## Special options, add the appropriate letter

diaphragm relieving		RH3000-... R
piston relieving		RH3000-... R
EPDM elastomer		RH3000-... E
for panel mounting	for RH3000-02 to -A3	RH3000-... P
carbon dioxide* <sup>2</sup>	CO <sub>2</sub>	RH3000-... 03
argon	Ar	RH3000-... 05
nitrogen	N <sub>2</sub>	RH3000-... 07
helium	He	RH3000-... 09
hydrogen	H <sub>2</sub>	RH3000-... 11
methane	CH <sub>4</sub>	RH3000-... 13
natural gas * <sup>3</sup>		RH3000-... 14
propane	C <sub>3</sub> H <sub>8</sub>	RH3000-... 16
nitrous oxide	N <sub>2</sub> O	RH3000-... 17



## Accessories

mounting bracket	for RH3000-02	<b>BW45-03S</b>
mounting nut	for RH3000-02	<b>M45x1,5S</b>
mounting bracket	for RH3000-03 and -A3	<b>BW50-01S</b>
mounting nut	for RH3000-03 and -A3	<b>M50x1,5S</b>
mounting bracket	for RH3000-06	<b>BW00-31S</b>
	for RH3000-08	<b>BW00-35S</b>



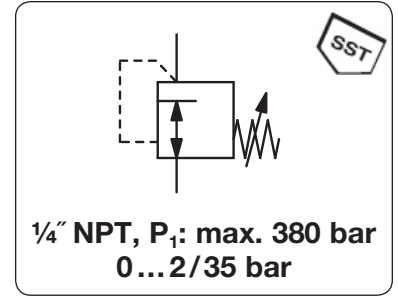
\*1 at 200 bar supply pressure and max. outlet pressure

\*2 max. 80 bar

\*3 without DVGW-approval



<b>Description</b>	Diaphragm-operated high pressure regulator made of stainless steel.		
<b>Media</b>	compressed air or gases		
<b>Supply pressure</b>	max. 380 bar		
<b>Adjustment</b>	by T-handle with locknut		
<b>Relieving function</b>	non-relieving		
<b>Gauge port</b>	1/4" NPT on both sides of the body, screw plugs supplied		
<b>Mounting position</b>	any		
<b>Temperature range</b>	0 °C to 106 °C / 32 °F to 223 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
<b>Material</b>	Body: stainless steel 316, material no. 1.4401 Diaphragm: Monel 400	O-rings: NBR/Buna-N Valve seat: nylon, optionally PTFE	



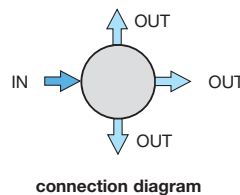
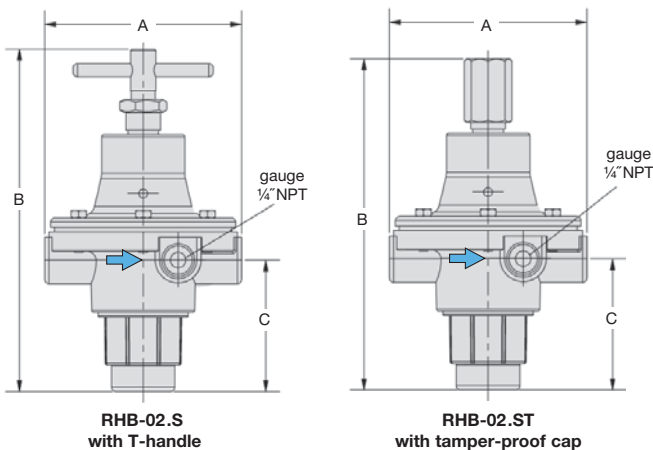
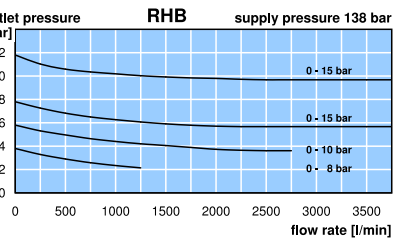
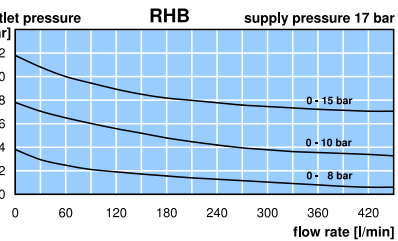
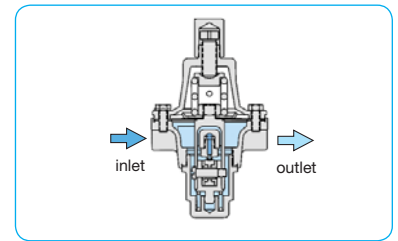
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1			

High pressure regulator, max. 380 bar							non-relieving, without constant bleed	RHB-S
85	156	60	0.13	240	4000	1/4" NPT	0.3 ... 2	RHB-02AS
							0.3 ... 4	RHB-02BS
							0.3 ... 8	RHB-02CS
							0.3 ... 10	RHB-02DS
							0.3 ... 15	RHB-02ES
85	177	60					0.3 ... 35	RHB-02FS



### Special options, add the appropriate letter

<b>tamper-proof cap</b>	made of SST, adjustment by screwdriver, total height 150 mm	RHB-02 . ST
<b>PTFE-valve seat</b>		RHB-02 . S1



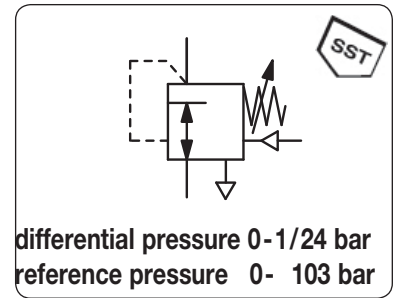
\*1 P<sub>1</sub> = 138 bar, P<sub>2</sub> = 10 bar and Δp = 3 bar



# Differential Pressure Regulator P<sub>1</sub>: max. 414 bar, P<sub>2</sub>: 0-103 bar

RH44-S

<b>Description</b>	The dome loaded, spring biased regulator is designed for pressure tracking applications to maintain a constant differential pressure. Venting allows for pressure tracking increases and decreases.		
<b>Media</b>	compressed air or gases (depending on selected materials)		
<b>Supply pressure</b>	max. 414 bar	<b>Outlet pressure</b>	max. 103 bar
<b>Exhaust</b>	tapped exhaust 1/4" NPT	<b>Control port</b>	1/8" NPT
<b>Adjustment</b>	hexagonal screw for spring tension	<b>Leakage</b>	bubble-tight
<b>Gauge port</b>	not available	<b>Mounting position</b>	any
<b>Temperature range</b>	-26 °C to 74 °C / -14 °F to 165 °F		
<b>Material</b>	Body: stainless steel 302	Valve seat and gasket: CTFE, Vespel	O-Rings: NBR/Buna-N



Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate l/min*1	Connection thread NPT	Differential pressure range bar	Order number
A mm	B mm	C mm					

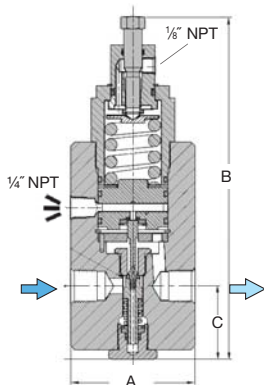
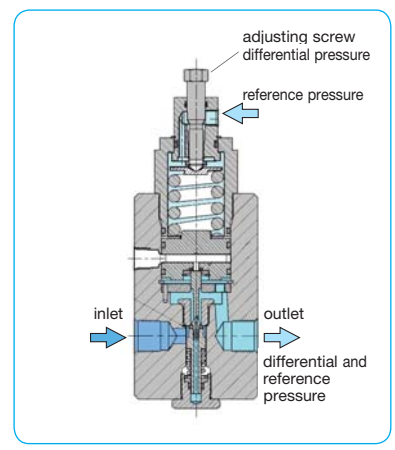
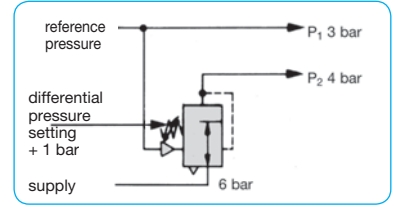
Differential pressure regulator							
P <sub>1</sub> max: 414 bar, P <sub>1</sub> max: 103 bar, SST 302 relieving, P <sub>2</sub> : 0 ... 103 bar, Viton / CTFE							
76	212	46	0.7	10000	1/2" NPT	0... 1 0... 7 0... 14 0... 24	<b>RH44</b> RH44-04AS RH44-04BS RH44-04CS RH44-04DS
76	212	46	2.0	21000	3/4" NPT	0... 1 0... 7 0... 14 0... 24	RH44-06AS RH44-06BS RH44-06CS RH44-06DS



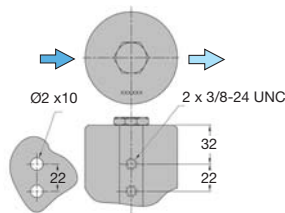
RH44-S

## Special options, add the appropriate letter

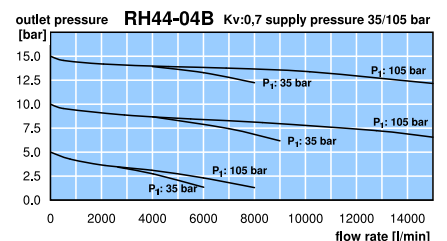
brass body RH44-0.



RH44-S

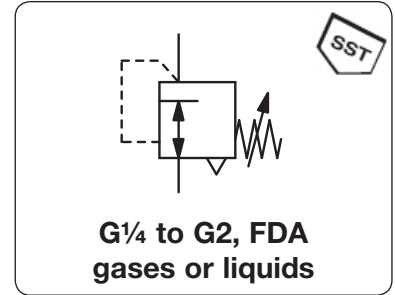


panel mounting



\*1 at P<sub>1</sub> = 105 bar, P<sub>2</sub> = 15 bar and Δp = 1 bar

<b>Description</b>	Volume booster made of stainless steel throughout, without constant bleed, transmission ratio 1:1.		
<b>Media</b>	compressed air, gases or liquids		
<b>Supply pressure</b>	max. 60 bar for R3000-06J/-08J, all others 50 bar, for liquids $\Delta p_{max} = 25$ bar		
<b>Pilot pressure</b>	max. 15 bar for R3000-...J2, max. 50 bar for R3000-...J5, Steueranschluss G $\frac{1}{4}$		
<b>Relieving function</b>	non-relieving, optionally relieving		
<b>Exhaust</b>	DN 2, optionally DN 4		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F		
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM	Inner valve: SST 316L, W.-Nr. 1.4404



Dimensions	Regulating System	K <sub>v</sub> -value	Flow rate	Connection thread	Pilot pressure	Pressure range	Order number
A B C	D: Diaphragm P: Piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1 l/min*1	G	max. bar	bar	

Stainless steel booster							supply pressure max. 60 bar, non-relieving, ratio 1:1, PTFE-diaphragm and FKM-o-ring		R3000-J	
64	79	38	D	0.5	30	500	G $\frac{1}{4}$	15	1...15	R3000-02J2T
64	92	38	P					50	1...50	R3000-02J5T
80	86	38	D	1.0	72	1200	G $\frac{1}{2}$	15	1...15	R3000-04J2T
80	107	38	P					50	1...50	R3000-04J5T
165	138	60	D	6.0	390	6500	G $\frac{3}{4}$	15	1...15	R3000-06J2T
165	173	60	P					60	1...60	R3000-06J5T
165	138	60	D	6.0	390	6500	G1	15	1...15	R3000-08J2T
165	173	60	P					60	1...60	R3000-08J5T
269	138	60	D	6.0	390	6500	G1 $\frac{1}{4}$	15	1...15	R3000-10J2T
269	173	60	P					60	1...60	R3000-10J5T
269	138	60	D	6.0	390	6500	G1 $\frac{1}{2}$	15	1...15	R3000-1AJ2T
269	173	60	P					60	1...60	R3000-1AJ5T
171	237	128	P	12.0	840	14000	G1 $\frac{1}{2}$	50	1...50	R3000-12J5T
171	237	128	P	12.6	900	15000	G2	50	1...50	R3000-B6J5T
171	268	128	P	21.0	1500	25000	G2	50	1...50	R3000-16J5T



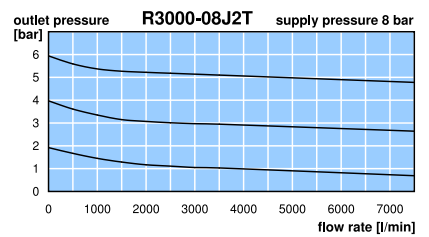
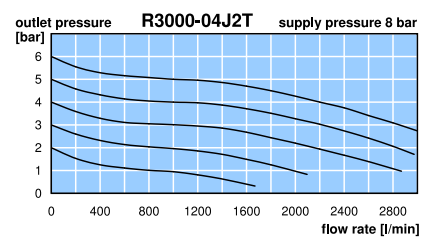
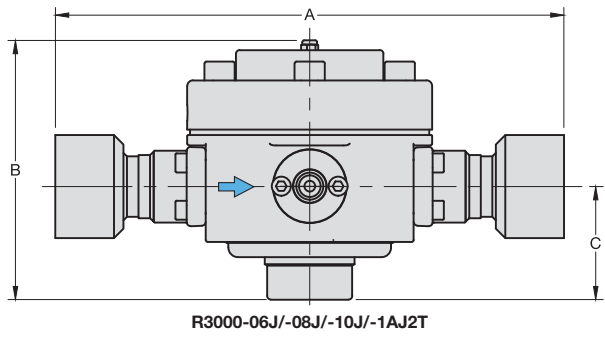
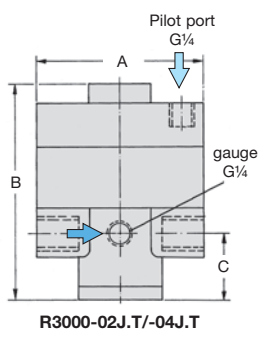
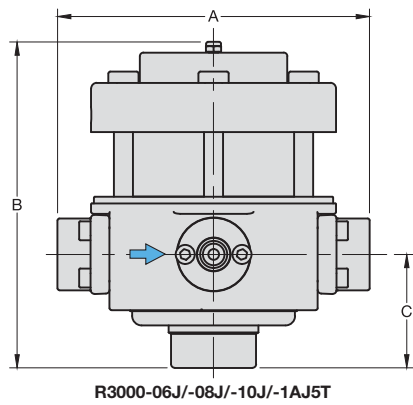
R3000-02J2T, accessory: gauge



R3000-04J2T, accessory: gauge

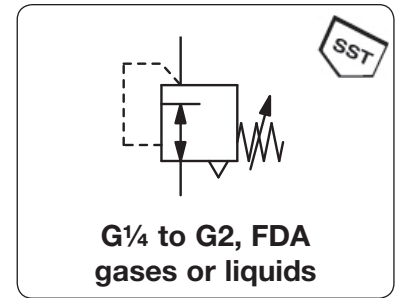


R3000-06J/-08J/-10J/-1AJ2T accessory: gauge



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

<b>Description</b>	Volume booster made of stainless steel throughout, without constant bleed, transmission ratio 1:1.		
<b>Media</b>	compressed air, gases or liquids		
<b>Supply pressure</b>	max. 60 bar for R3000-06J/-08J, all others 50 bar,	for liquids $\Delta p_{\max} = 25$ bar	
<b>Pilot pressure</b>	max. 15 bar for R3000-...J2, max. 50 bar for R3000-...J5,	Steueranschluss G $\frac{1}{4}$	
<b>Relieving function</b>	non-relieving, optionally relieving		
<b>Exhaust</b>	DN 2, optionally DN 4		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied	<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F		
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM	Inner valve: SST 316L, W.-Nr. 1.4404
	Diaphragm: NBR/Buna-N with PTFE coating, optionally SST		



Dimensions	Regulating System	K <sub>v</sub> -	Flow	Connection	Pilot	Pressure	Order
A B C	D: Diaphragm	value	rate	thread	pressure	range	number
mm mm mm	P: Piston	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1 l/min*1	G	max. bar	bar	

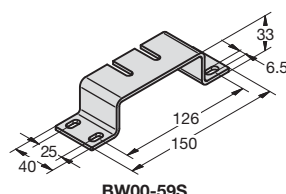
## Special options, add the appropriate letter

diaphragm relieving		for R3000-02J2 to -08J2	R3000-...J2.R
piston relieving		for R3000-...J5	R3000-...J.R
down to -40 °C/ -40°F	low temperature version		R3000-...J.X51
up to 130 °C/266 °F	high temperature version		R3000-...J.X54
FKM -o-ring	for piston regulator or PTFE diaphragm		R3000-...J.T
EPDM-o-ring			R3000-...J.TE
EPDM-o-ring	FDA-approval		R3000-...J.TD
SST diaphragm	FKM -o-ring		R3000-...J.S
	EPDM-o-ring		R3000-...J.SE
tapped exhaust			R3000-...J.X12
ammonia	NH <sub>3</sub>		R3000-...J.O2
carobon dioxide	CO <sub>2</sub>		R3000-...J.O3
argon	Ar		R3000-...J.O5
nitrogen	N <sub>2</sub>		R3000-...J.O7
helium	He		R3000-...J.O9
hydrogen	H <sub>2</sub>		R3000-...J.O11
methane	CH <sub>4</sub>		R3000-...J.O13
natural gas *3			R3000-...J.O14
oxygen	O <sub>2</sub>		R3000-...J.O15
propane	C <sub>3</sub> H <sub>6</sub>		R3000-...J.O16
nitrous oxide	N <sub>2</sub> O		R3000-...J.O17
water	H <sub>2</sub> O		R3000-...J.O1W
flange connection	see end of the chapter / flanges		R3000-...J.O1F.



## Accessories

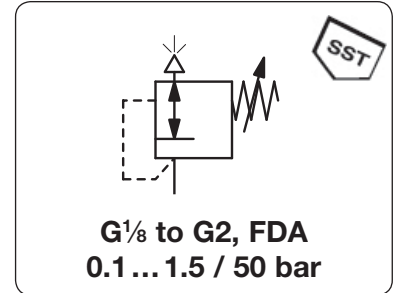
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	MS5002-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ to G2	MS6302-...*2
mounting bracket		for G $\frac{3}{4}$ and G1	BW00-59S



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop      \*3 without DVGW-approval  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar



<b>Description</b>	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.
<b>Media</b>	compressed air, gases or liquids
<b>System pressure</b>	see chart, max. 65 bar
<b>Adjustment</b>	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
<b>Gauge port</b>	for inlet pressure, G $\frac{1}{8}$ on both sides of the body at D3000-01, all others G $\frac{1}{4}$ , screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally NBR/Buna-N or EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

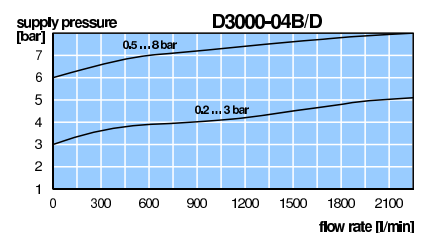
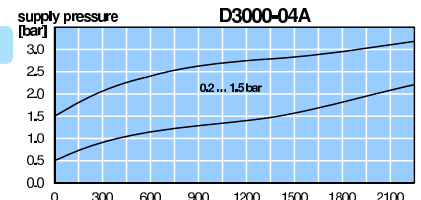
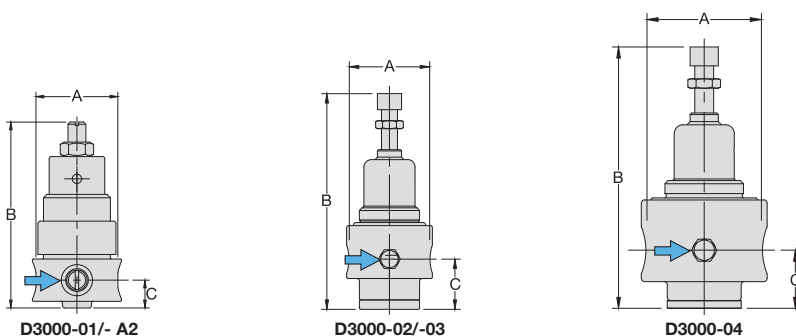


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

Back pressure regulator								overpressure max. 30 / 65 bar, PTFE diaphragm and FKM o-ring	D3000
40	83	13	D	400	30	G $\frac{1}{8}$	0.1 ... 1.5	D3000-01AT	
							0.2 ... 3.0	D3000-01BT	
							0.5 ... 8.0	D3000-01DT	
							1.0 ... 15	D3000-01ET	
40	83	13	D	400	30	G $\frac{1}{4}$	0.1 ... 1.5	D3000-A2AT	
							0.2 ... 3.0	D3000-A2BT	
							0.5 ... 8.0	D3000-A2DT	
							1.0 ... 15	D3000-A2ET	
64	161	38	D	800	30	G $\frac{1}{4}$	0.1 ... 1.5	D3000-02AT	
							0.2 ... 3.0	D3000-02BT	
							0.5 ... 8.0	D3000-02DT	
							1.0 ... 15	D3000-02ET	
64	175	38	P	800	65		2.0 ... 30	D3000-02FT	
							3.0 ... 50	D3000-02GT	
64	161	38	D	800	30	G $\frac{3}{8}$	0.1 ... 1.5	D3000-03AT	
							0.2 ... 3.0	D3000-03BT	
							0.5 ... 8.0	D3000-03DT	
							1.0 ... 15	D3000-03ET	
64	175	38	P	800	65		2.0 ... 30	D3000-03FT	
							3.0 ... 50	D3000-03GT	
80	166	37	D	2500	30	G $\frac{1}{2}$	0.1 ... 1.5	D3000-04AT	
							0.2 ... 3.0	D3000-04BT	
							0.5 ... 8.0	D3000-04DT	
							1.0 ... 15	D3000-04ET	
80	166	37	P	2500	65		2.0 ... 30	D3000-04FT	
							3.0 ... 50	D3000-04GT	



## Accessories, see next pages



\*1 at 7 bar overpressure and open outlet

Gauges: see chapter for measuring devices

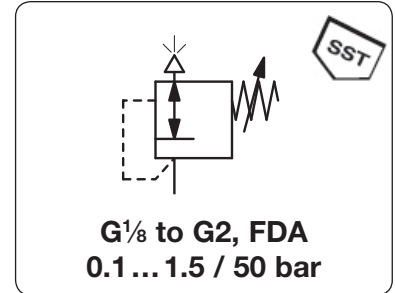
PDF CAD  
www.aircom.net

Order example:  
D3000-01AT

# Back Pressure Regulator Made of Stainless Steel Throughout

# D3000

<b>Description</b>	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible. compressed air, gases or liquids
<b>Media</b>	compressed air, gases or liquids
<b>System pressure</b>	see chart, max. 65 bar
<b>Adjustment</b>	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
<b>Gauge port</b>	for inlet pressure, G $\frac{1}{8}$ on both sides of the body at D3000-01, all others G $\frac{1}{4}$ , screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally NBR/Buna-N or EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

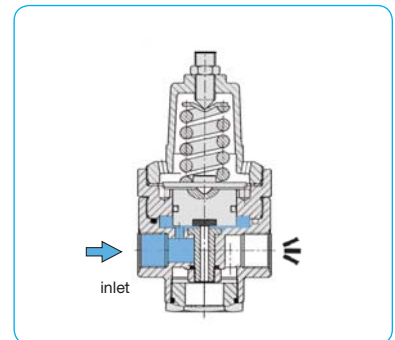
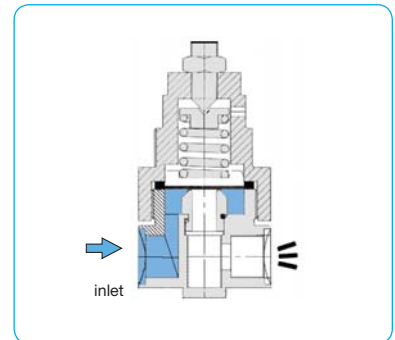


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

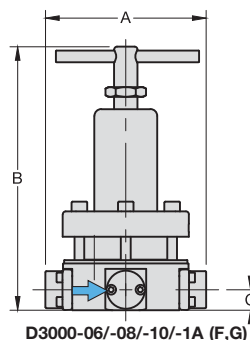
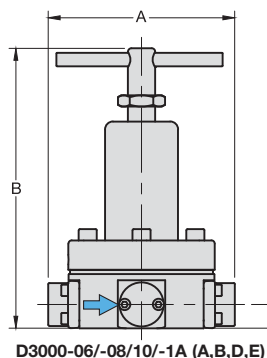
Back pressure regulator				overpressure max. 30 / 65 bar, PTFE diaphragm and FKM o-ring	D3000			
165	257	21	D	8000	30	G $\frac{3}{4}$	0.1 ... 1.5	<b>D3000-06AT</b>
							0.2 ... 3.0	<b>D3000-06BT</b>
							0.5 ... 8.0	<b>D3000-06DT</b>
							1.0 ... 15	<b>D3000-06ET</b>
165	271	21	P	8000	65		2.0 ... 30	<b>D3000-06FT</b>
							3.0 ... 50	<b>D3000-06GT</b>
165	257	21	D	8000	30	G1	0.1 ... 1.5	<b>D3000-08AT</b>
							0.2 ... 3.0	<b>D3000-08BT</b>
							0.5 ... 8.0	<b>D3000-08DT</b>
							1.0 ... 15	<b>D3000-08ET</b>
165	271	21	P	8000	65		2.0 ... 30	<b>D3000-08FT</b>
							3.0 ... 50	<b>D3000-08GT</b>
269	257	21	D	8000	30	G1 $\frac{1}{4}$	0.1 ... 1.5	<b>D3000-10AT</b>
							0.2 ... 3.0	<b>D3000-10BT</b>
							0.5 ... 8.0	<b>D3000-10DT</b>
							1.0 ... 15	<b>D3000-10ET</b>
269	271	21	P	8000	65		2.0 ... 30	<b>D3000-10FT</b>
							3.0 ... 50	<b>D3000-10GT</b>
269	257	21	D	8000	30	G1 $\frac{1}{2}$	0.1 ... 1.5	<b>D3000-1AAT</b>
							0.2 ... 3.0	<b>D3000-1ABT</b>
							0.5 ... 8.0	<b>D3000-1ADT</b>
							1.0 ... 15	<b>D3000-1AET</b>
269	271	21	P	8000	65		2.0 ... 30	<b>D3000-1AFT</b>
							3.0 ... 50	<b>D3000-1AGT</b>



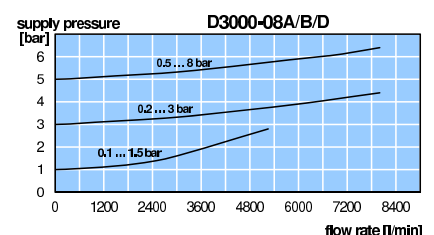
D3000-06/-08/-10/-1A



## Accessories, see next pages



\*1 at 7 bar overpressure and open outlet



Gauges: see chapter for measuring devices

PDF CAD  
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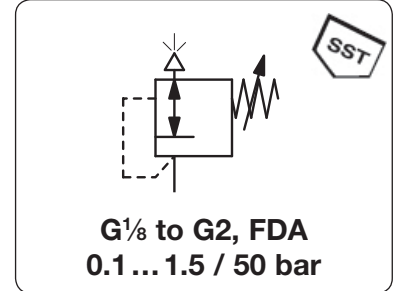


Order example:  
D3000-06AT

# Back Pressure Regulator Made of Stainless Steel Throughout

D3000

<b>Description</b>	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible. compressed air, gases or liquids
<b>Media</b>	compressed air, gases or liquids
<b>System pressure</b>	see chart, max. 65 bar
<b>Adjustment</b>	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
<b>Gauge port</b>	for inlet pressure, G $\frac{1}{8}$ on both sides of the body at D3000-01, all others G $\frac{1}{4}$ , screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally NBR/Buna-N or EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

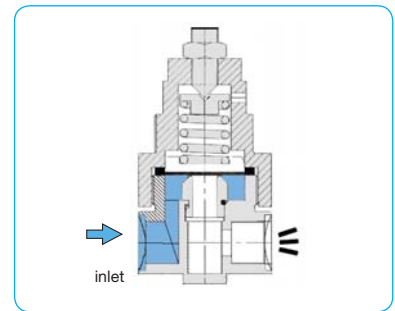


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

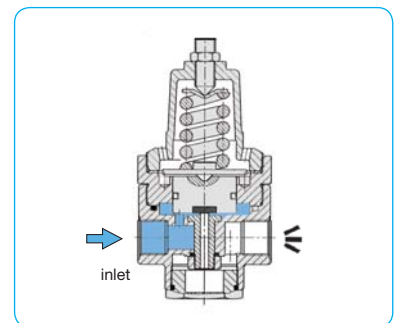
Back pressure regulator								overpressure max. 30 / 65 bar, PTFE diaphragm and FKM o-ring	D3000
171	377	128	P	25 000	30	G1 $\frac{1}{2}$	0.1 ... 1.5	D3000-12AT	
							0.2 ... 3.0	D3000-12BT	
							0.5 ... 8.0	D3000-12DT	
							1.0 ... 15	D3000-12ET	
171	387	128	P	25 000	65		2.0 ... 30	D3000-12FT	
							3.0 ... 50	D3000-12GT	
171	377	128	P	25 000	30	G2	0.1 ... 1.5	D3000-16AT	
							0.2 ... 3.0	D3000-16BT	
							0.5 ... 8.0	D3000-16DT	
							1.0 ... 15	D3000-16ET	
171	387	128	P	25 000	65		2.0 ... 30	D3000-16FT	
							3.0 ... 50	D3000-16GT	



D3000-12/-16

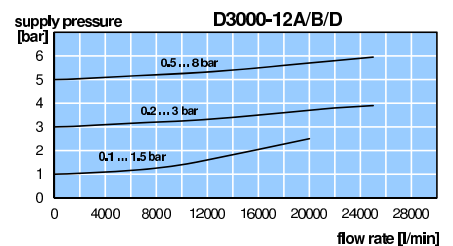
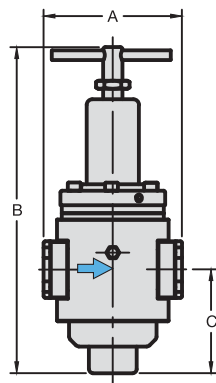


with diaphragm



with piston

Accessories, see next page



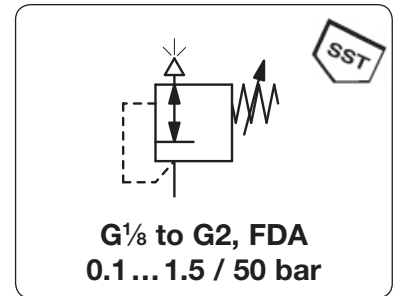
\*1 at 7 bar overpressure and open outlet

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Order example:  
D3000-12AT

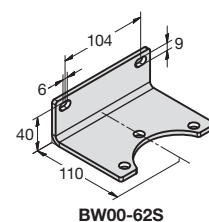
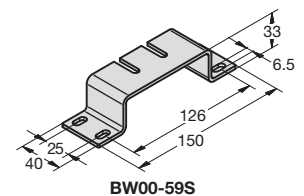
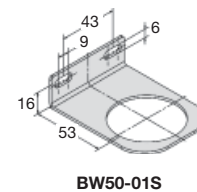
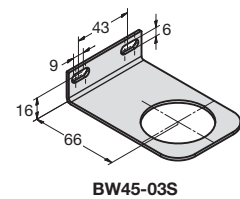
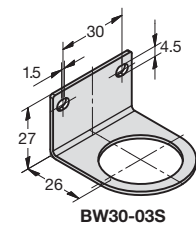
<b>Description</b>	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.
<b>Media</b>	compressed air, gases or liquids
<b>System pressure</b>	see chart, max. 65 bar
<b>Adjustment</b>	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
<b>Gauge port</b>	for inlet pressure, G $\frac{1}{8}$ on both sides of the body at D3000-01, all others G $\frac{1}{4}$ , screw plugs supplied
<b>Mounting position</b>	any
<b>Temperature range</b>	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally NBR/Buna-N or EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404



Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

## Special options, add the appropriate letter

<b>NPT</b>	connection thread	for G $\frac{1}{8}$ to G $\frac{1}{2}$ , G1 $\frac{1}{2}$ (12) and G2	D3000- . . . .N
<b>NPT</b>	connection thread	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	D3000- . . . .N
<b>down to -40 °C / -40 °F</b>	low temperature version	from G $\frac{1}{4}$ (02) on	D3000- . . . .X51
<b>up to 130 °C / 266 °F</b>	high temperature version	from G $\frac{1}{4}$ (02) on	D3000- . . . .X54
<b>FKM -o-ring</b>	for piston regulator or PTFE diaphragm		D3000- . . . .T
<b>EPDM-o-ring</b>			D3000- . . . .TE
<b>EPDM-o-ring</b>	FDA-Zulassung		D3000- . . . .TD
<b>SST diaphragm</b>	FKM -o-ring	for G $\frac{1}{4}$ (02) to G1	D3000- . . . .S
	NBR -o-ring	for G $\frac{1}{4}$ (02) to G1	D3000- . . . .SB
	EPDM-o-ring	for G $\frac{1}{4}$ (02) to G1	D3000- . . . .SE
	EPDM-o-ring, FDA-approval	for G $\frac{1}{4}$ (02)	D3000-02 .SD
<b>ammonia *3</b>	NH <sub>3</sub>		D3000- . . . .02
<b>carbon dioxide</b>	CO <sub>2</sub>		D3000- . . . .03
<b>argon</b>	Ar		D3000- . . . .05
<b>nitrogen</b>	N <sub>2</sub>		D3000- . . . .07
<b>helium</b>	He		D3000- . . . .09
<b>hydrogen</b>	H <sub>2</sub>		D3000- . . . .11
<b>methane</b>	CH <sub>4</sub>		D3000- . . . .13
<b>natural gas *4</b>			D3000- . . . .14
<b>oxygen</b>	O <sub>2</sub>		D3000- . . . .15
<b>propane</b>	C <sub>3</sub> H <sub>6</sub>		D3000- . . . .16
<b>nitrous oxide</b>	N <sub>2</sub> O		D3000- . . . .17
<b>water</b>	H <sub>2</sub> O		D3000- . . . .W
<b>flange connection</b>	see end of the chapter / flanges		D3000- . . . .F.



## Accessories

<b>pressure gauge</b>	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>MS4001-..*2</b>
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ (02) to G $\frac{1}{2}$	<b>MS5002-..*2</b>
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ (06) to G2	<b>MS6302-..*2</b>
<b>mounting bracket</b>		for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>BW30-03S</b>
<b>mounting nut</b>			<b>M30x1,5S</b>
<b>mounting bracket</b>		for G $\frac{1}{4}$ (02) and G $\frac{3}{8}$	<b>BW45-03S</b>
<b>mounting nut</b>			<b>M45x1,5S</b>
<b>mounting bracket</b>		for G $\frac{1}{2}$	<b>BW50-01S</b>
<b>mounting nut</b>			<b>M50x1,5S</b>
<b>mounting bracket</b>		for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	<b>BW00-59S</b>
		for G1 $\frac{1}{2}$ (12) and G2	<b>BW00-62S</b>

\*1 at 7 bar overpressure and open outlet

\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar \*4 without DVGW-approval

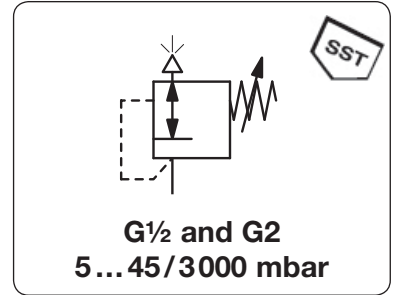
Gauges: see chapter for measuring devices

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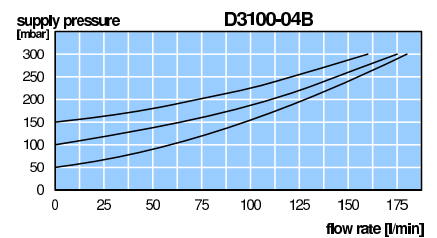
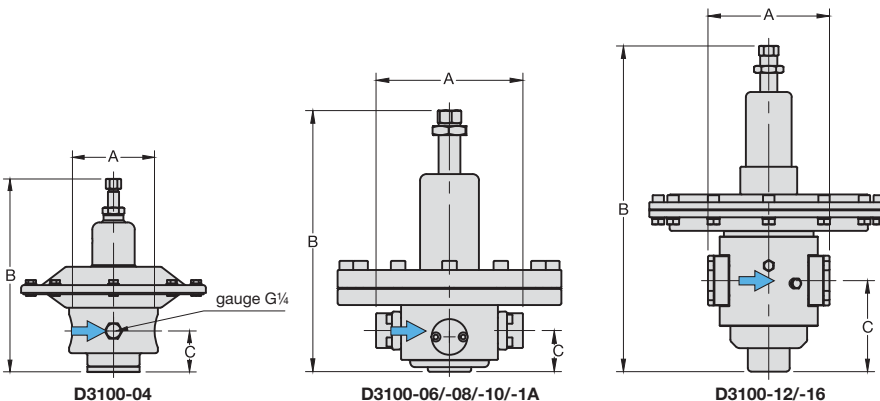
Order example:  
**MS4001-02**

<b>Description</b>	The diaphragm back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.	
<b>Media</b>	compressed air, gases	<b>System pressure</b> max. 6 bar
<b>Adjustment</b>	by adjusting screw for D3100-04 to -1A, with locknut by T-handle for D3100-12 and -16, with locknut	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F, FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F, high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM



Dimensions			Exhaust rate l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					

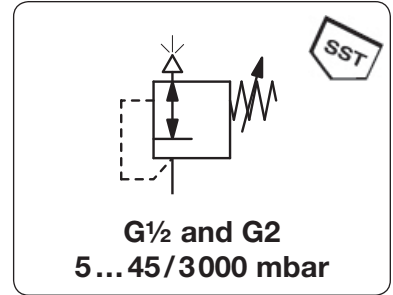
Back pressure regulator							overpressure max. 6 bar, PTFE-diaphragm and FKM-o-ring	D3100
80	174	37	300	6	G $\frac{1}{2}$	5... 45	D3100-04AT	
			500			20... 200	D3100-04BT	
			1000			150... 700	D3100-04CT	
161	289	45	1500	6	G $\frac{3}{4}$	0... 300	D3100-06BT	
			2300			0... 700	D3100-06CT	
			3000			0... 1200	D3100-06DT	
161	289	45	1500	6	G1	0... 300	D3100-08BT	
			2300			0... 700	D3100-08CT	
			3000			0... 1200	D3100-08DT	
265	289	45	2000	6	G1 $\frac{1}{4}$	0... 300	D3100-10BT	
			4100			0... 700	D3100-10CT	
			5000			0... 1200	D3100-10DT	
265	289	45	2000	6	G1 $\frac{1}{2}$	0... 300	D3100-1ABT	
			4100			0... 700	D3100-1ACT	
			5000			0... 1200	D3100-1ADT	
171	460	128	2500	6	G1 $\frac{1}{2}$	20... 50	D3100-12AT	
			5000			50... 150	D3100-12BT	
			7500			150... 300	D3100-12CT	
			10000			300... 3000	D3100-12DT	
171	420	128	2500	6	G2	20... 50	D3100-16AT	
			5000			50... 150	D3100-16BT	
			7500			150... 300	D3100-16CT	
			10000			300... 3000	D3100-16DT	



\*1 at 6 bar overpressure and open outlet  
\*2 B6 = 0...60 mbar, C3 = 0...250 mbar



<b>Description</b>	The diaphragm back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.	
<b>Media</b>	compressed air, gases	<b>System pressure</b> max. 6 bar
<b>Adjustment</b>	by adjusting screw for D3100-04 to -1A, with locknut by T-handle for D3100-12 and -16, with locknut	
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	<b>Mounting position</b> any
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F, FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F, high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM



Dimensions			Exhaust rate	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	rate	max. bar	G	mbar	
mm	mm	mm	l/min*1				

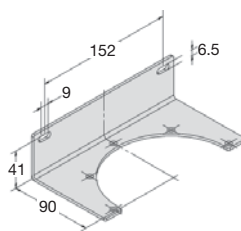
## Special options, add the appropriate letter

<b>NPT</b>	connection thread	D3100-...N
<b>FKM -o-ring</b>		D3100-...T
<b>EPDM-o-ring</b>		D3100-...TE
<b>EPDM-o-ring</b>	FDA-approval	D3100-...TD
<b>down to -40 °C/ -40°F</b>	low temperature version	from G $\frac{1}{4}$ (02) on D3100-...X51
<b>up to 130 °C/266 °F</b>	high temperature version	from G $\frac{1}{4}$ (02) on D3100-...X54
<b>ammonia</b>	NH <sub>3</sub>	D3100-...02
<b>carbon dioxide</b>	CO <sub>2</sub>	D3100-...03
<b>argon</b>	Ar	D3100-...05
<b>nitrogen</b>	N <sub>2</sub>	D3100-...07
<b>helium</b>	He	D3100-...09
<b>hydrogen</b>	H <sub>2</sub>	D3100-...11
<b>methane</b>	CH <sub>4</sub>	D3100-...13
<b>natural gas *3</b>		D3100-...14
<b>Sauerstoff</b>	O <sub>2</sub>	D3100-...15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>	D3100-...16
<b>nitrous oxide</b>	N <sub>2</sub> O	D3100-...17
<b>flange connection</b>	see end of the chapter / flanges	D3100-...F.

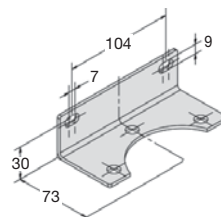


## Accessories

<b>pressure gauge</b>	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ , capsule type	up to 600 mbar	<b>MS6302-...*2</b>
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ , Bourdon tube	from 1 bar on	<b>MS6302-01</b>
<b>gauge connection parts</b>		for G $\frac{1}{2}$	<b>AM-03S</b>
<b>mounting bracket</b>		for G $\frac{1}{2}$	<b>BW00-26S</b>
		for G1	<b>BW00-27S</b>



BW00-26S



BW00-27S

\*1 at 6 bar overpressure and open outlet  
\*2 B6 = 0...60 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar, 01 = 0...1 bar, 02 = 0...2 bar, 04 = 0...4 bar  
\*3 without DVGW-approval

# Filter Regulator Made of Stainless Steel Throughout, P<sub>1</sub>: max. 80 bar B3000

**Description** Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{1}{8}$  on piston-operated.

**Media** compressed air, gases or liquids

**Supply pressure** max. 30 bar, 50 bar or 80 bar (with drain plug only)

**Adjustment** by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar

**Relieving function** relieving, optionally non-relieving

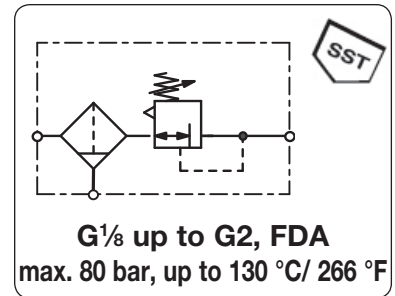
**Gauge port** G $\frac{1}{4}$  on both sides of the body, G $\frac{1}{8}$  for B3000-01/-A2, one screw plug supplied

**Filter element** 50  $\mu$ m and 5  $\mu$ m, made of stainless steel **Bowl** stainless steel version without sight glass

**Drain** manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$  (02) up to G1

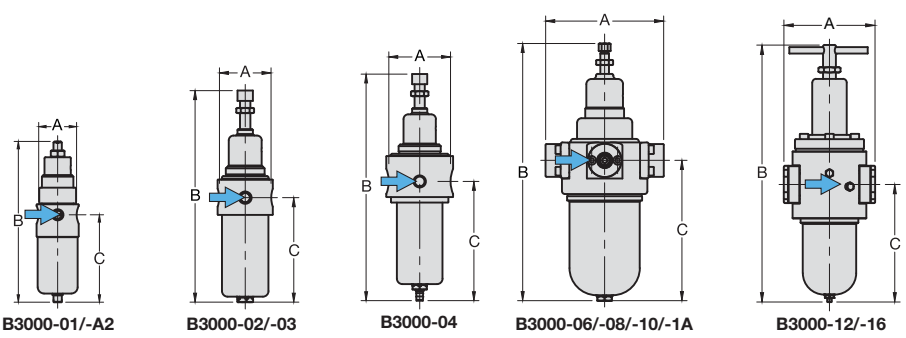
**Temperature range** -20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM  
-20 °C to 130 °C / -4 °F to 266 °F for high temperature version  
or low temperature version down to -40 °C / -40 °F

**Werkstoffe** Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404  
O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



Dimensions			Bowl capacity l	Flow rate l/min*1	Filter element $\mu$ m	Connection thread G	Pressure range bar	Order number
A	B	C						

Filter pressure regulator					with screw plug, relieving, w/o gauge, supply pressure max. 30 / 50 bar,			B3000	
40	155	85	0.03	200	5	G $\frac{1}{8}$	0.8 ... 8	8	B3000-01GH
				280	50		1.5 ... 15		B3000-01GDH
							0.8 ... 8		B3000-01H
							1.5 ... 15		B3000-01DH
40	155	85	0.03	200	5	G $\frac{1}{4}$	0.8 ... 8	8	B3000-A2GH
				280	50		1.5 ... 15		B3000-A2GDH
							0.8 ... 8		B3000-A2H
							1.5 ... 15		B3000-A2DH
64	246	124	0.14	600	5	G $\frac{1}{4}$	0.8 ... 8	8	B3000-02G
				800	50		1.5 ... 15		B3000-02GD
							0.8 ... 8		B3000-02
							1.5 ... 15		B3000-02D
64	246	124	0.14	600	5	G $\frac{3}{8}$	0.8 ... 8	8	B3000-03G
				800	50		1.5 ... 15		B3000-03GD
							0.8 ... 8		B3000-03
							1.5 ... 15		B3000-03D
79	255	128	0.2	2200	5	G $\frac{1}{2}$	0.8 ... 8	8	B3000-04G
				3000	50		1.5 ... 15		B3000-04GD
							0.8 ... 8		B3000-04
							1.5 ... 15		B3000-04D
137	304	168	0.5	4500	5	G1	0.8 ... 8	8	B3000-08G
				6000	50	B3000-06 for G $\frac{3}{4}$	1.5 ... 15		B3000-08GD
							0.8 ... 8		B3000-08
							1.5 ... 15		B3000-08D
241	304	168	0.5	4500	5	G1 $\frac{1}{2}$	0.8 ... 8	8	B3000-1AG
				6000	50	B3000-10 for G1 $\frac{1}{4}$	1.5 ... 15		B3000-1AGD
							0.8 ... 8		B3000-1A
							1.5 ... 15		B3000-1AD
171	482	213	1.0	15500	5	G1 $\frac{1}{2}$	0.8 ... 8	8	B3000-12G
				20000	50		1.5 ... 15		B3000-12GD
							0.8 ... 8		B3000-12
							1.5 ... 15		B3000-12D
171	482	213	1.0	15500	5	G2	0.8 ... 8	8	B3000-16G
				20000	50		1.5 ... 15		B3000-16GD
							0.8 ... 8		B3000-16
							1.5 ... 15		B3000-16D

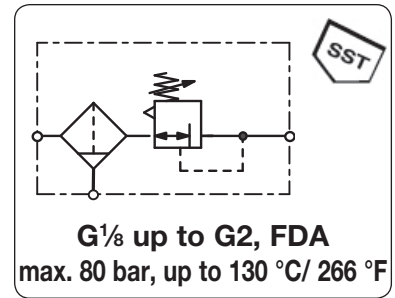


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure



# Filter Regulator Made of Stainless Steel Throughout, P<sub>1</sub>: max. 80 bar B3000

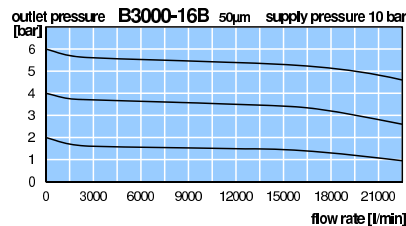
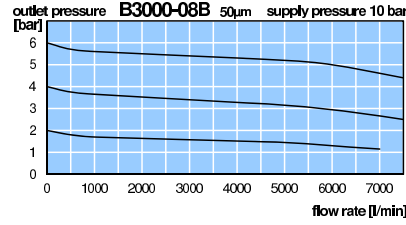
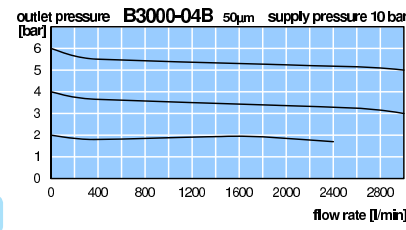
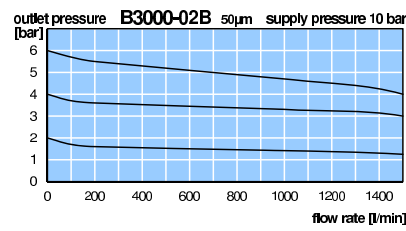
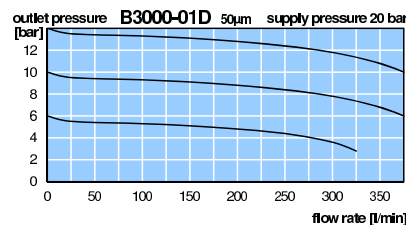
<b>Description</b>	Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{1}{4}$ on piston-operated.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 30 bar, 50 bar or 80 bar (with drain plug only)
<b>Adjustment</b>	by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ for B3000-01/-A2, one screw plug supplied
<b>Filter element</b>	50 $\mu$ m and 5 $\mu$ m, made of stainless steel <b>Bowl</b> stainless steel version without sight glass
<b>Drain</b>	manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$ (02) up to G1
<b>Temperature range</b>	-20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version or low temperature version down to -40 °C / -40 °F
<b>Werkstoffe</b>	Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404 O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



Dimensions			Bowl capacity	Flow rate	Filter element	Connection thread	Pressure range	Order number
A	B	C	l	l/min*1	$\mu$ m	G	bar	
mm	mm	mm						

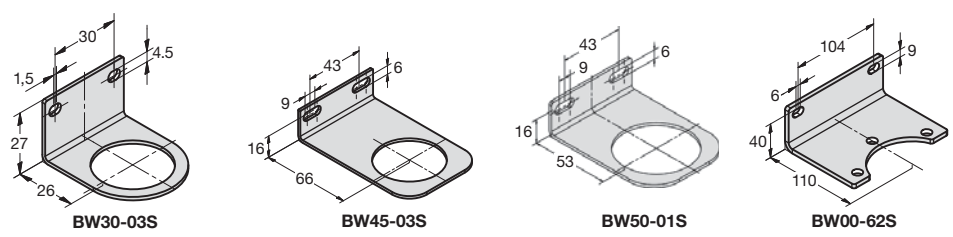
## Special options, add the appropriate letter

<b>NPT</b>	connection thread	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	B3000-... N
<b>NPT</b>	connection thread	for G $\frac{1}{4}$ (02) to G2	B3000-... N
<b>02 ... 3 bar regulating range</b>		for G $\frac{1}{8}$ to G1 $\frac{1}{2}$ (1A)	B3000-... B
<b>manual drain max. 30 bar</b>		for G $\frac{1}{4}$ (02) to G2	B3000-... H
<b>automatic drain</b>	max. 16 bar	for G $\frac{1}{4}$ (02) to G2	B3000-... R
<b>non-relieving</b>	without relieving function		B3000-... K
<b>P<sub>1</sub>: max. 80 bar</b>		for G $\frac{1}{4}$ (02) to G1 $\frac{1}{2}$ (1A)	B3000-... X48
<b>down to -40 °C/ -40 °F</b>	low temperature version	from G $\frac{1}{4}$ (02) on	B3000-... X51
<b>up to 130 °C/ 266 °F</b>	high temperature version		B3000-... X54
<b>EPDM-o-ring</b>			B3000-... E
<b>EPDM-o-ring</b>	FDA-Zulassung		B3000-... TD
<b>SST diaphragm</b>	not suitable for water	for G $\frac{1}{4}$ (02) to G $\frac{1}{2}$	B3000-... S
<b>ammonia</b> *3 NH <sub>3</sub>			B3000-... 02
<b>carbon dioxide</b> CO <sub>2</sub>			B3000-... 03
<b>argon</b> Ar			B3000-... 05
<b>nitrogen</b> N <sub>2</sub>			B3000-... 07
<b>helium</b> He			B3000-... 09
<b>hydrogen</b> H <sub>2</sub>			B3000-... 11
<b>Methan</b> CH <sub>4</sub>			B3000-... 13
<b>natural gas</b> *3			B3000-... 14
<b>oxygen</b> O <sub>2</sub>			B3000-... 15
<b>propane</b> C <sub>3</sub> H <sub>8</sub>			B3000-... 16
<b>nitrous oxide</b> N <sub>2</sub> O			B3000-... 17
<b>flange connection</b>	see end of the chapter / flanges		B3000-... F.



## Accessories

<b>pressure gauge</b>	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>MS4001-..*2</b>
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	<b>MS5002-..*2</b>
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ to G2	<b>MS6302-..*2</b>
<b>mounting bracket</b>		for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	<b>BW30-03S</b>
<b>mounting nut</b>			<b>M30x1,5S</b>
<b>mounting bracket</b>		for G $\frac{1}{4}$ (02), G $\frac{3}{8}$ u. G $\frac{1}{2}$ (1A)	<b>BW45-03S</b>
<b>mounting nut</b>			<b>M45x1,5S</b>
<b>mounting bracket</b>		for G $\frac{1}{2}$	<b>BW50-01S</b>
<b>mounting nut</b>			<b>M50x1,5S</b>
<b>mounting bracket</b>		for G1 $\frac{1}{2}$ (12) and G2	<b>BW00-62S</b>

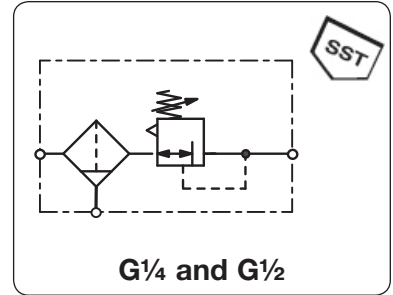


\*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar      \*3 without DVGW-approval

PDF CAD  
www.aircom.net

Order example:  
MS4001-04

<b>Description</b>	Regulator of small, compact design, ideal for limited space conditions. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 21 bar
<b>Adjustment</b>	by plastic knob with snap-lock, optionally by T-handle at B558
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Filter element</b>	20 $\mu$ m at B548, 40 $\mu$ m at B11, made of polypropylene
<b>Bowl</b>	stainless steel version without sight glass
<b>Drainage</b>	manual drain as standard for max. 21 bar, optionally automatic drain for max. 12 bar
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F, max. 50 °C / 122 °F at automatic drain version
<b>Material</b>	Body: stainless steel 316, material no. 1.4401 Spring cage: glass fibre-reinforced plastic at B11 and B548, stainless steel 316 / 1.4401 at B558 Elastomer: FKM Inner valve: stainless steel 316, material no. 1.4401 and plastic



Dimensions			Bowl capacity	Flow rate	Supply Connection	Pressure range	Order number	
A	B	C						
mm	mm	mm	l	m $^3$ /h*1	l/min*1	bar	G	bar

Miniature filter pressure regulator							manual drain, relieving, w/o gauge, 20 $\mu$ m filter element	B548-S	
40	156	95	0.04	27	450	21	G $\frac{1}{4}$	0.2...1.8 0.2...4.0 0.3...9.0	B548-02DHAS B548-02DHBS B548-02DHCS



B548, accessory: gauge

"Midi" filter pressure regulator							manual drain, relieving, w/o gauge, 40 $\mu$ m filter element	B11-S	
62	216	125	0.12	138	2300	21	G $\frac{1}{2}$	0.2...1.8 0.2...4.0 0.3...9.0 0.5...17	B11-04DJAS B11-04DJBS B11-04DJCS B11-04DJDS



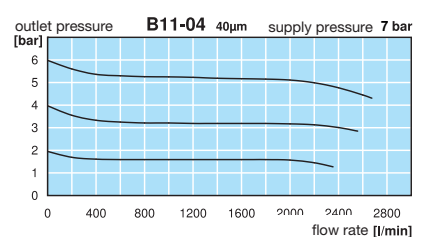
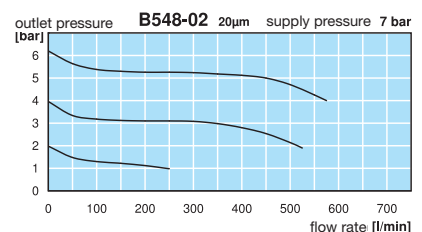
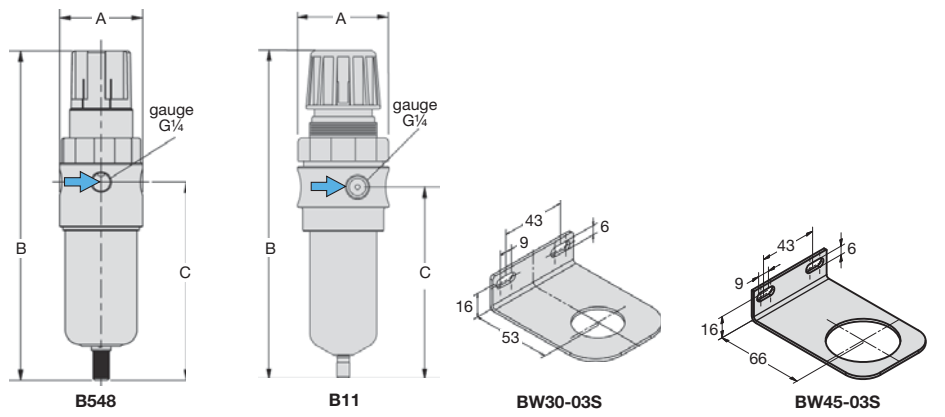
B11, accessory: gauge

### Special options, add the appropriate letter

5 $\mu$ m filter element		B...-0...G...
NPT	connection thread	B...-0...N
automatic drain	made of SST, SA10MDSS, max. 12 bar	for B11 B11-04...R
non-relieving	without relieving function	B...-0...K
SST spring cage	incl. SST adjusting screw, height B =141 mm	for B548 B558-02D...
	incl. SST adjusting screw, height B =246 mm	for B11 B12-04D...

### Accessories

pressure gauge	$\varnothing$ 40 mm, 0...*2 bar, G $\frac{1}{4}$ $\varnothing$ 50 mm, 0...*2 bar, G $\frac{1}{4}$	for B548 MS4002-...*2 for B11 MS5002-...*2
mounting bracket		for B548 BW30-03S
mounting nut		for B548 M30x1,5S
mounting bracket		for B11 BW45-03S
mounting nut		for B11 M45x1,5S



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop      \*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

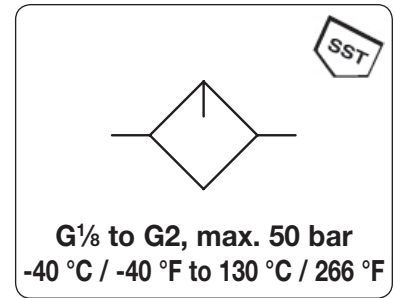
Extensions: see chapter for FRL service units  
Gauges: see chapter for measuring devices  
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net

Order example:  
B548-02DHAS



<b>Description</b>	Lubricator for compressed air with bowl without sight glass, extremely robust, with manual adjustment of oil drip rate.
<b>Bowl</b>	stainless steel version without sight glass
<b>Operating pressure</b>	max. 50 bar
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for NBR/Buna-N, 0 °C to 130 °C / 32 °F to 266 °F for high temperature version for appropriately conditioned air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Bowl: stainless steel 316L, material no. 1.4404 Elastomer: FKM Inner valve: stainless steel 316L, material no. 1.4404



Dimensions			Bowl capacity l	Flow rate		Operating pressure max. bar	Connection thread G	Order number
A	B	C		m³/h*1	l/min*1			

Lubricator			operating pressure max. 50 bar				L3000	
40	124	80	0.04	45	750	50	G1/8	L3000-01
64	174	130	0.14	54	900	50	G1/4	L3000-02
				60	1000		G3/8	L3000-03
79	177	130	0.20	144	2400	50	G1/2	L3000-04
137	202	168	0.50	480	8000	50	G3/4	L3000-06
				480	8000		G1	L3000-08
241	202	168	0.50	480	8000	50	G1 1/4	L3000-10
				480	8000		G1 1/2	L3000-1A
171	278	218	1.00	720	12000	50	G1 1/2	L3000-12
				780	13000		G2	L3000-16



L3000-02/-03

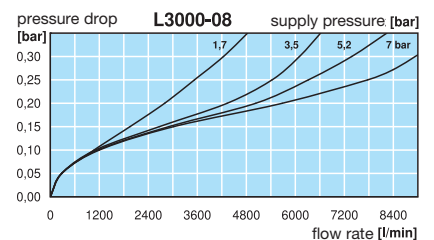
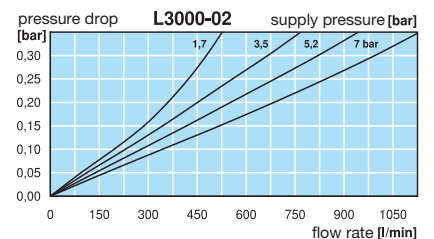
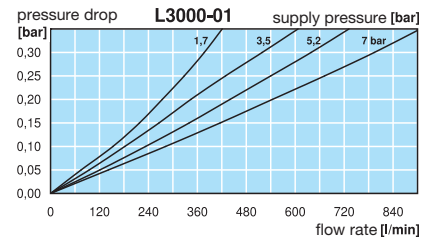
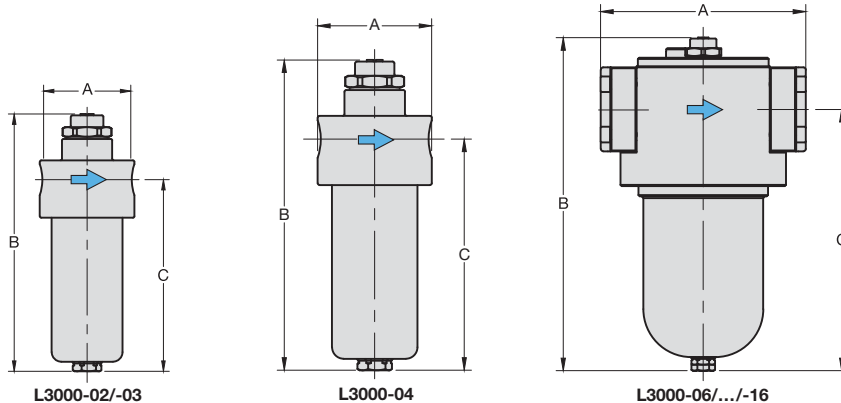


L3000-06/-08/-10/-1A



### Special options, add the appropriate letter

<b>NPT</b>	connection thread	for G1/8 to G1/2	L3000-..N
<b>NPT</b>	connection thread	for G3/4 to G1 1/2 (1A)	L3000-..N
<b>down to -40 °C / -40 °F</b>	low temperature version	from G1/4 on	L3000-..X51
<b>up to 130 °C / 266 °F</b>	high temperature version	from G1/4 on	L3000-..X54
<b>flange connection</b>	see end of the chapter / flanges		L3000-..F.



\*1 at 7 bar operating pressure and 0.33 bar pressure drop

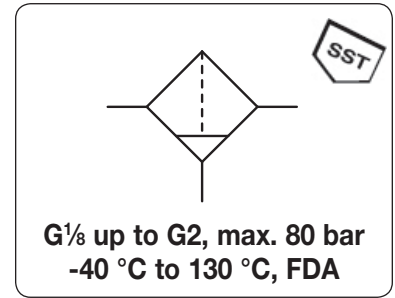
Extensions: see chapter for FRL service units

PDF CAD  
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Order example:  
L3000-01



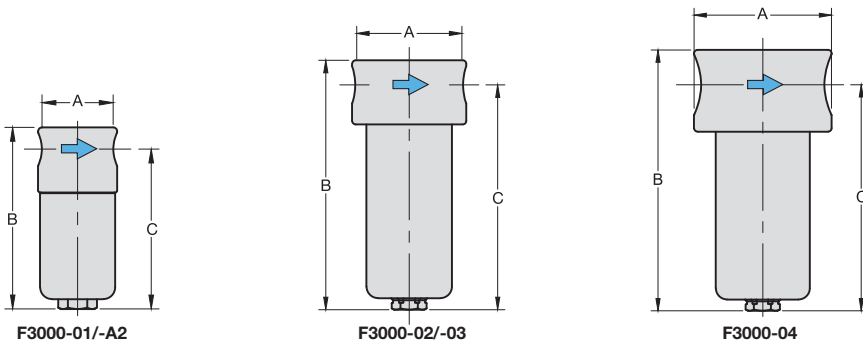
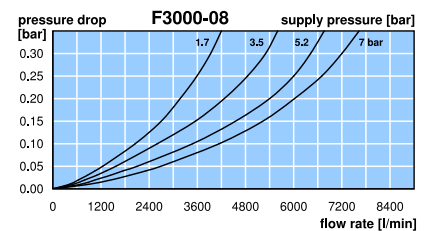
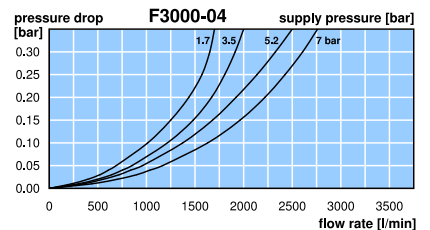
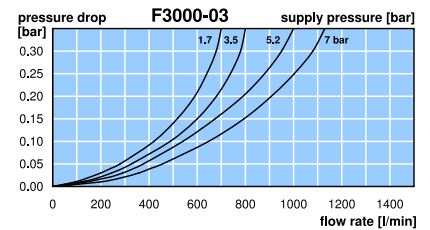
<b>Description</b>	Filter with bowl without sight glass completely made of stainless steel, extremely robust, suitable for compressed air, gases or liquids. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
<b>Filter element</b>	50 µm, optionally 5 µm, made of stainless steel, coalescing filter 0.1 µm at 99,99% stainless steel version without sight glass
<b>Bowl</b>	screw plug as standard,
<b>Drainage</b>	optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)
<b>Operating pressure</b>	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Bowl: stainless steel 316L, material no. 1.4404 Elastomer: FKM, optionally EPDM Inner valve: stainless steel 316L, material no. 1.4404



Dimensions			Bowl capacity l	Flow rate m <sup>3</sup> /h*1 l/min*1	P <sub>1</sub> max. bar	Filter element µm	Connection thread G	Order number
A	B	C						

## Stainless steel filter, up to 50 bar with screw plug **F3000**

40	92	81	0.03	45	750	50	50	G <sup>1</sup> / <sub>8</sub>	<b>F3000-01</b> <b>F3000-01G</b>
40	92	81	0.03	45	750	50	50	G <sup>1</sup> / <sub>4</sub>	<b>F3000-A2</b> <b>F3000-A2G</b>
64	140	125	0.14	54	900	50	50	G <sup>1</sup> / <sub>4</sub>	<b>F3000-02</b> <b>F3000-02G</b> <b>F3000-02I</b>
64	140	125	0.14	60	1000	50	50	G <sup>3</sup> / <sub>8</sub>	<b>F3000-03</b> <b>F3000-03G</b> <b>F3000-03I</b>
79	150	130	0.20	150	2500	50	50	G <sup>1</sup> / <sub>2</sub>	<b>F3000-04</b> <b>F3000-04G</b> <b>F3000-04I</b>
137	194	167	0.50	432	7200	50	50	G <sup>3</sup> / <sub>4</sub>	<b>F3000-06</b> <b>F3000-06G</b> <b>F3000-06I</b>
137	194	167	0.50	432	7200	50	50	G <sub>1</sub>	<b>F3000-08</b> <b>F3000-08G</b> <b>F3000-08I</b>
241	194	167	0.50	432	7200	50	50	G <sup>1</sup> / <sub>4</sub>	<b>F3000-10</b> <b>F3000-10G</b> <b>F3000-10I</b>
241	194	167	0.50	432	7200	50	50	G <sup>1</sup> / <sub>2</sub>	<b>F3000-1A</b> <b>F3000-1AG</b> <b>F3000-1AI</b>
171	254	218	1.00	900	15000	50	50	G <sup>1</sup> / <sub>2</sub>	<b>F3000-12</b> <b>F3000-12G</b>
171	254	218	1.00	960	16000	50	50	G <sub>2</sub>	<b>F3000-16</b> <b>F3000-16G</b>



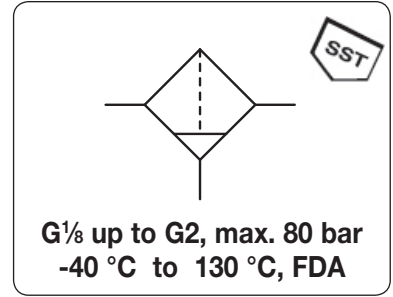
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

**Order example:**  
**F3000-01**

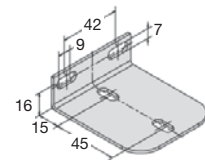
<b>Description</b>	Filter with bowl without sight glass completely made of stainless steel, extremely robust, suitable for compressed air, gases or liquids. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
<b>Filter element</b>	50 µm, optionally 5 µm, made of stainless steel, coalescing filter 0.1 µm at 99,99%
<b>Bowl</b>	stainless steel version without sight glass
<b>Drainage</b>	screw plug as standard, optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)
<b>Operating pressure</b>	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40°C / -40 °F
<b>Material</b>	Body: stainless steel 316L, material no. 1.4404 Bowl: stainless steel 316L, material no. 1.4404 Elastomer: FKM, optionally EPDM Inner valve: stainless steel 316L, material no. 1.4404



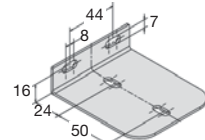
Dimensions			Bowl capacity	Flow rate	P <sub>1</sub> max.	Filter element	Connection thread	Order number
A	B	C						
mm	mm	mm	l	m <sup>3</sup> /h*1	l/min*1	µm	G	

## Special options, add the appropriate letter

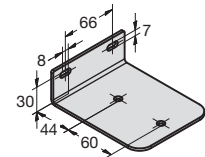
<b>NPT</b>	connection thread	for G <sup>1</sup> / <sub>8</sub> and G <sup>1</sup> / <sub>4</sub> (A2)	F3000-..N
<b>NPT</b>	connection thread	for G <sup>1</sup> / <sub>4</sub> (02) to G <sub>2</sub>	F3000-..N
<b>P<sub>1</sub>: max. 80 bar</b>		for G <sup>1</sup> / <sub>4</sub> (02) to G <sub>2</sub>	F3000-..X48
<b>down to -40 °C / -40 °F</b>	low temperature version		F3000-..X51
<b>up to 130 °C / 266 °F</b>	high temperature version		F3000-..X54
<b>manual drain</b>	max. 30 bar		F3000-..H
<b>automatic drain</b>	max. 16 bar	for G <sup>1</sup> / <sub>4</sub> (02) to G <sub>2</sub>	F3000-..R
<b>EPDM-elastomer</b>			F3000-..E
<b>EPDM-elastomer</b>	FDA-approval		F3000-..TD
<b>ammonia</b>	NH <sub>3</sub>		F3000-...02
<b>carbon dioxide</b>	CO <sub>2</sub>		F3000-...03
<b>argon</b>	Ar		F3000-...05
<b>nitrogen</b>	N <sub>2</sub>		F3000-...07
<b>helium</b>	He		F3000-...09
<b>hydrogen</b>	H <sub>2</sub>		F3000-...11
<b>methane</b>	CH <sub>4</sub>		F3000-...13
<b>natural gas *2</b>			F3000-...14
<b>oxygen</b>	O <sub>2</sub>		F3000-...15
<b>propane</b>	C <sub>3</sub> H <sub>8</sub>		F3000-...16
<b>nitrous oxide</b>	N <sub>2</sub> O		F3000-...17
<b>flange connection</b>	see end of the chapter / flanges		F3000-...F.



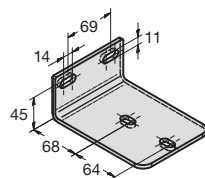
BW00-17S



BW00-18S



BW00-19S

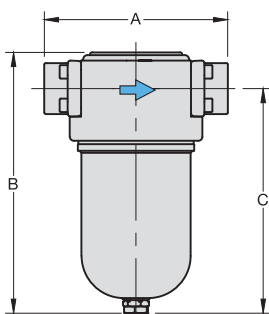


BW00-63S

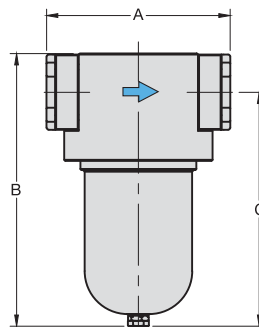


## Accessories

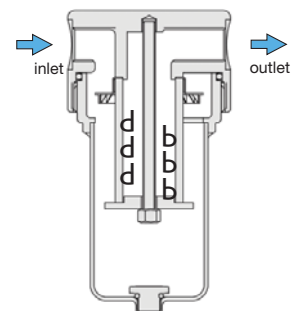
<b>mounting bracket</b>	for G <sup>1</sup> / <sub>4</sub> (02) and G <sup>3</sup> / <sub>8</sub>	<b>BW00-17S</b>
	for G <sup>1</sup> / <sub>2</sub>	<b>BW00-18S</b>
	for G <sup>3</sup> / <sub>4</sub> (06) to G <sup>1</sup> / <sub>2</sub> (1A)	<b>BW00-19S</b>
	for G <sup>1</sup> / <sub>2</sub> (12) and G <sub>2</sub>	<b>BW00-63S</b>



F3000-06/-08/-10/1A



F3000-12/-16



cross-section

\*1 at 7 bar operating pressure and 0.33 bar pressure drop

\*2 without DVWG-approval

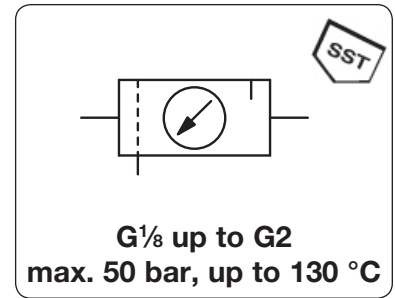
**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

PDF CAD  
www.aircom.net



**Order example:**  
BW00-17S

<b>Description</b>	FRL service unit completely made of stainless steel, very robust. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 50 bar (without drain), optionally max. 30 bar (manual drain), max. 30 bar for C3002-01H
<b>Adjustment</b>	by hexagon socket screw <b>Relieving function</b> relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ at C3002-01, one screw plug supplied
<b>Filter element</b>	50 $\mu$ m, optionally 5 $\mu$ m, made of stainless steel <b>Bowl</b> stainless steel version without sight glass
<b>Drainage</b>	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
<b>Temperature range</b>	-20 °C to 80 °C / -4 °F to 176 °F for FKM or EPDM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version, or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body / Bowl: stainless steel 316L, material no. 1.4404 Inner valve: stainless steel 316L / 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally EPDM or FKM O-rings: FKM, optionally EPDM



Dimensions			Combination existing of	Flow rate m <sup>3</sup> /h*1	l/min*1	Connection thread G	Order number
A	B	C					

FRL unit, 2-part			P <sub>1</sub> : max. 50 bar, screw plug,	P <sub>2</sub> : 0.5...8 bar, relieving,	50 $\mu$ m, with gauge	C3002	
90	155	85	B+L3000	17	280	G $\frac{1}{8}$	C3002-01H
138	246	124		48	800	G $\frac{1}{4}$	C3002-02
138	246	124		48	800	G $\frac{3}{8}$	C3002-03
168	255	128		180	3000	G $\frac{1}{2}$	C3002-04
282	304	168		360	6000	G $\frac{3}{4}$	C3002-06
282	304	168		360	6000	G1	C3002-08
393	304	168		360	6000	G1 $\frac{1}{4}$	C3002-10
393	304	168		360	6000	G1 $\frac{1}{2}$	C3002-1A
362	482	213		1200	20000	G1 $\frac{1}{2}$	C3002-12
362	482	213		1200	20000	G2	C3002-16



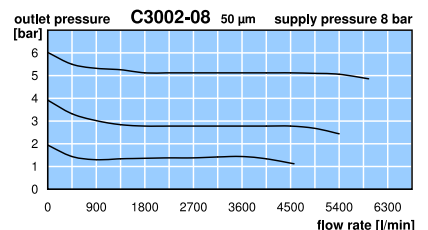
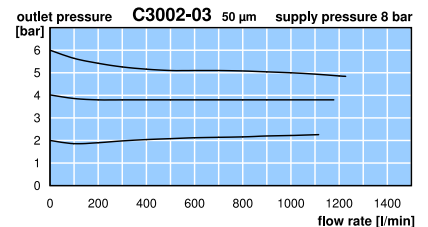
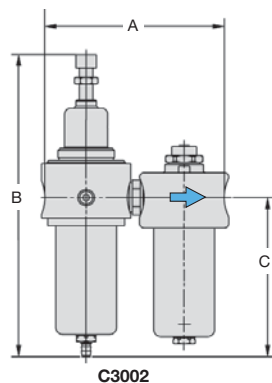
**Special options, add the appropriate letter**

5 $\mu$ m filter element		for G $\frac{1}{4}$ and G $\frac{1}{2}$	C3002-..G
		for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	C3002-..G
		for G1 $\frac{1}{2}$ (12) and G2	C3002-..G
NPT connection thread		for G $\frac{1}{4}$ to G2	C3002-..N
pressure range 0.2... 3 bar			C3002-..B
pressure range 1 ...15 bar	P <sub>1</sub> max. 50 bar		C3002-..D
manual drain	max. 30 bar		C3002-..H
automatic drain	max. 16 bar	for G $\frac{1}{4}$ to G1	C3002-..R
down to -40 °C / -40 °F	low temperature version		C3002-..X51
up to 130 °C / 266 °F	high temperature version		C3002-..X54
EPDM-elastomer			C3002-..E
flange connection	see end of the chapter / flanges		C3002-..F.



**Accessories**

mounting bracket		for G $\frac{1}{8}$	BW30-03S
mounting nut			M30x1,5S
mounting bracket		for G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	BW45-03S
mounting nut			M45x1,5S
mounting bracket		for G $\frac{1}{2}$	BW50-01S
mounting nut			M50x1,5S
mounting bracket		for G1 $\frac{1}{2}$ (12) and G2	BW00-62S



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

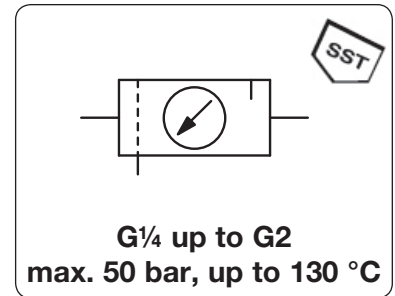
Further details: see chapter for single devices  
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net



Order example:  
C3002-01H

<b>Description</b>	FRL service unit completely made of stainless steel, very robust. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
<b>Media</b>	compressed air, gases or liquids
<b>Supply pressure</b>	max. 30 bar, optionally max. 50 bar (for pressure range up to 15 bar)
<b>Adjustment</b>	by hexagon socket screw <b>Relieving function</b> relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
<b>Filter element</b>	50 $\mu$ m, optionally 5 $\mu$ m, made of stainless steel <b>Bowl</b> stainless steel version without sight glass
<b>Drainage</b>	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
<b>Temperature range</b>	-20 °C to 80 °C / -4 °F to 176 °F for FKM or EPDM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version, or low temperature version down to -40°C / -40 °F
<b>Material</b>	Body / Bowl: stainless steel 316L, material no. 1.4404 Inner valve: stainless steel 316L / 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally EPDM or FKM O-rings: FKM, optionally EPDM



Dimensions			Combination existing of	Flow rate m <sup>3</sup> /h*1	l/min*1	Connection thread G	Order number
A	B	C					

FRL unit, 3-part				P <sub>1</sub> : max. 50 bar, screw plug,	P <sub>2</sub> : 0.5...8 bar, relieving,	50 $\mu$ m, with gauge	C3003
212	168	130	F+R+L3000	42	700	G $\frac{1}{4}$	C3003-02
257	167	130		132	2200	G $\frac{1}{2}$	C3003-04
427	219	168		231	3850	G $\frac{3}{4}$	C3003-06
455	286	226		432	7200	G1	C3003-08
531	286	226		432	7200	G1 $\frac{1}{4}$	C3003-10
531	286	226		432	7200	G1 $\frac{1}{2}$	C3003-1A
553	390	262		720	12000	G1 $\frac{1}{2}$	C3003-12
553	390	262		780	13000	G2	C3003-16



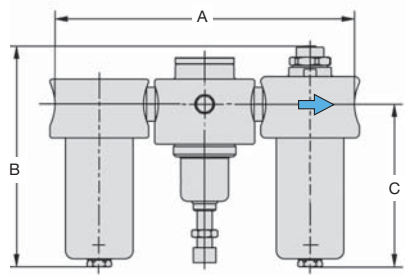
C3003-04

**Special options, add the appropriate letter**

<b>5 <math>\mu</math>m filter element</b>		for G $\frac{1}{4}$ and G $\frac{1}{2}$	C3003-..G
		for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	C3003-..G
		for G1 $\frac{1}{2}$ (12) and G2	C3003-..G
<b>NPT connection thread</b>		for G $\frac{1}{4}$ to G2	C3003-..N
<b>pressure range 0.2... 3 bar</b>			C3003-..B
<b>pressure range 1 ...15 bar</b>	P <sub>1</sub> max. 50 bar		C3003-..D
<b>manual drain</b>	max. 30 bar		C3003-..H
<b>automatic drain</b>	max. 16 bar	for G $\frac{1}{4}$ to G1	C3003-..R
<b>down to -40 °C / -40 °F</b>	low temperature version		C3003-..X51
<b>up to 130 °C / 266 °F</b>	high temperature version		C3003-..X54
<b>EPDM-elastomer</b>			C3003-..E
<b>flange connection</b>	see end of the chapter / flanges		C3003-..F.

**Accessories**

<b>mounting bracket</b>	for G $\frac{1}{4}$	BW45-03S
<b>mounting nut</b>		M45x1,5S
<b>mounting bracket</b>	for G $\frac{1}{2}$	BW50-01S
<b>mounting nut</b>		M50x1,5S
<b>mounting bracket</b>	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	BW00-59S
<b>mounting bracket</b>	for G1 $\frac{1}{2}$ (12) and G2	BW00-62S



C3003

\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

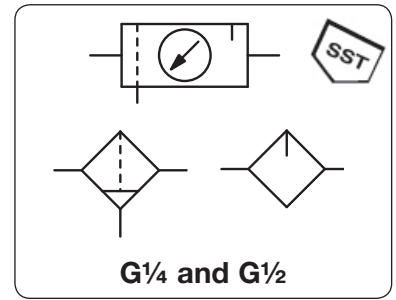
**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

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**Order example:**  
C3003-02



<b>Description</b>	Compact FRL service unit, filter and lubricator made of stainless steel with high volume flow.		
<b>Media</b>	compressed air or gases		
<b>Supply pressure</b>	max. 21 bar		
<b>Adjustment</b>	by plastic knob with snap-lock		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body of (filter) pressure regulator, screw plugs supplied		
<b>Filter element</b>	40 $\mu$ m of polypropylene at C1., 40 $\mu$ m, 20 $\mu$ m and 5 $\mu$ m of polypropylene and 0.3 $\mu$ m of borosilicate stainless steel version without sight glass, optionally with sight glass		
<b>Bowl</b>	manual drain as standard for max. 21 bar, optionally automatic drain for max. 12 bar		
<b>Drainage</b>	0 °C to 50 °C / 32 °F to 122 °F for automatic drain version		
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F for stainless steel bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for stainless steel bowl without sight glass		
<b>Material</b>	Body: stainless steel 316, material no. 1.4401	Elastomer: FKM	
	Spring cage: glass fibre-reinforced plastic	Inner valve: stainless steel and plastic	
	Bowl: stainless steel 316, material no. 1.4401		



Dimensions			Description	Flow rate		Filter element	Connection thread	Order number
A	B	C		m $^3$ /h*1	l/min*1			
mm	mm	mm			$\mu$ m	G		

### FRL service unit supply pressure max. 21 bar, outlet 0.3...9 bar, 40 $\mu$ m, manual drain, relieving, with pressure gauge **C10-S/C11-S**

140	218	127	B11+L10	48	800	40	G $\frac{1}{2}$	<b>C11-04CJS</b>
220	162	127	F10+R10+L10	108	1800			<b>C10-04CJS</b>

### Filter supply pressure max. 21 bar, manual drain, bowl capacity 0.11 l **F504-S/F10-S**

40	108	94	Polypropylen	23	380	20	G $\frac{1}{4}$	<b>F504-02DHS</b>
			Polypropylen	20	340	5		<b>F504-02DGS</b>
			Coalescing	15	250	0.3		<b>F501-02DHS</b>
60	132	127	Polypropylen	114	1900	40	G $\frac{1}{2}$	<b>F10-04DJS</b>
			Polypropylen	102	1700	5		<b>F10-04DGS</b>
			Coalescing	58	960	0.3		<b>F11-04DJS</b>

### Lubricator supply pressure max. 21 bar, bowl capacity 0.11 l **L10-S**

60	173	127		180	3000		G $\frac{1}{2}$	<b>L10-04DS</b>
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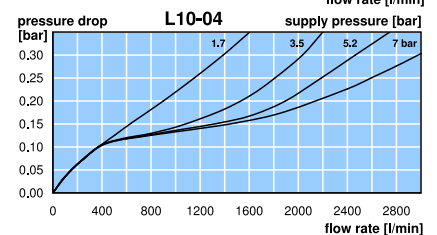
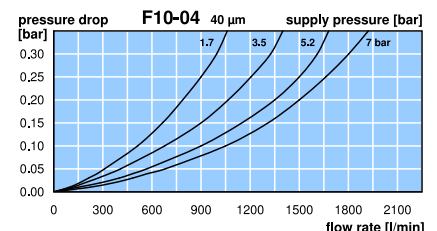
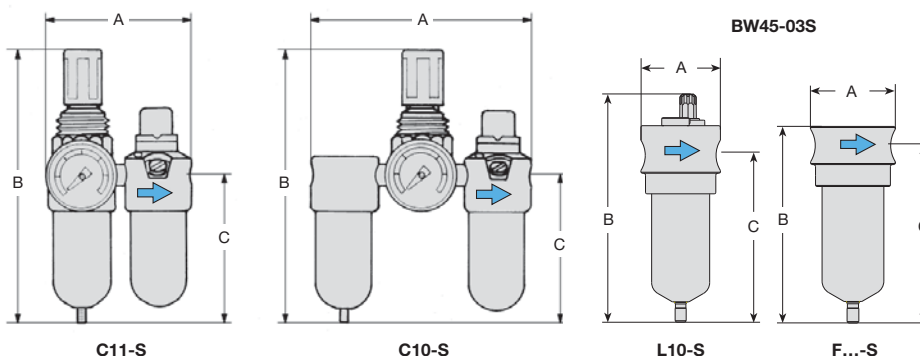
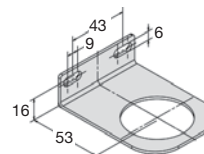


### Special options, add the appropriate letter

<b>bowl with sight glass</b>	max. 17 bar, up to 70 °C / 158 °C	for C1. and F1.	.1 .-04 ... W
<b>NPT</b>	connection thread		... .. N
<b>automatic drain</b>	SA10MDSS, max. 12 bar	for C1. and F1.	.1 .-04 ... R

### Accessories

<b>mounting bracket</b>	for C1.	<b>BW45-03S</b>
<b>mounting nut</b>	for C1.	<b>M45x1,5S</b>



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 0.33 bar pressure drop or 1 bar pressure drop at C10/C11

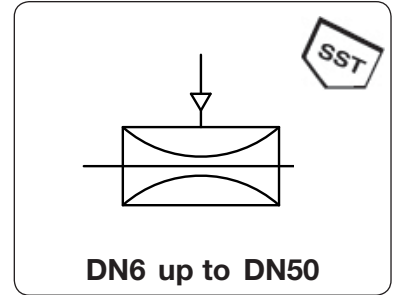
**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
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**Order example:**  
**C11-04CJS**



<b>Description</b>	The flow control valve functions as a pinch valve in a new design of housing with full flow cross-section. Since the straight valve passage has neither constrictions nor back-points, there is no danger of clogging or blockage. Frictional loss is at a minimum.
<b>Media</b>	compressed air, gases, liquids or other paste-like or powdery media Solids are enclosed by the flexible sleeve at shut-off.
<b>Sleeve</b>	Highly flexible with double woven reinforcement in eight different grades. Sleeve simple to change.
<b>Pressures</b>	Operating pressure: max. 4.0 bar Pilot pressure: max. 6.5 Differential pressure: max. 2.5 bar Closing pressure: P <sub>1</sub> + 2.5 bar to DN32, P <sub>1</sub> + 2 bar from DN40 on
<b>Vacuum</b>	If vacuum is greater than -100 mbar, vacuum compensation should be provided on the control side.
<b>Accuracy</b>	In the flow range of 0 to 70% the linearity of pilot pressure to flow is about 10% accurate.
<b>Mounting position</b>	any, at horizontal mounting pilot port preferably at the top
<b>Temperature range</b>	0 °C to max. 100 °C / 32 °F to max. 212 °F, subject to sleeve material
<b>Material</b>	Body: stainless steel 316L, material no. 1.4435 Sleeve: depending on selected version



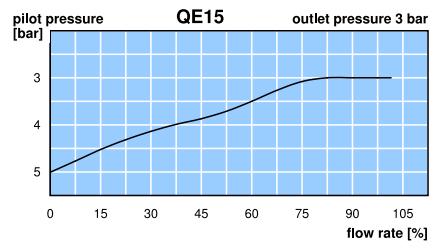
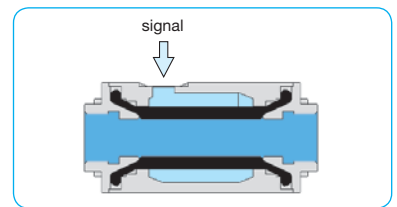
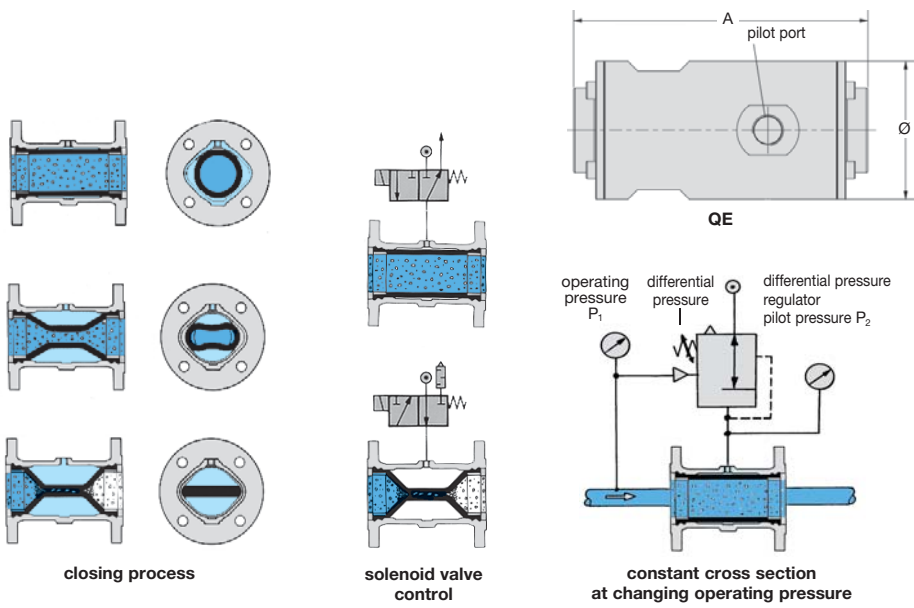
Dimensions	Nominal size	Chamber capacity	Control port	Operating pressure	Connection thread	Order number
A	Ø	DN	l	max. bar	G	
mm	mm		M5/G			

Flow control valve							operating pressure max. 4 bar, pilot pressure max. 2.5 bar above operating pressure	QE
70	26	6	0.01	M5	4	G¼		QE06-02NR
80	38	10	0.03	M5	4	G⅜		QE10-03NR
95	44	15	0.04	G⅜	4	G½		QE15-04NR
110	55	20	0.05	G½	4	G¾		QE20-06NR
125	60	25	0.07	G½	4	G1		QE25-08NR
140	73	32	0.10	G¾	4	G1¼		QE32-10NR
150	83	40	0.13	G¾	4	G1½		QE40-12NR
185	99	50	0.28	G¼	4	G2		QE50-16NR



### Special options, add the appropriate letter

<b>sleeve NR</b>	natural rubber, black	80°C/176 °F	QE...NR
<b>sleeve NRL</b>	rubber, suitable for food, black	70°C/158 °F	QE...NL
<b>sleeve NRLH</b>	rubber, suitable for food, light	70°C/158 °F	QE...NH
<b>sleeve NBR</b>	nitrile rubber/Buna-N, suitable for food	80°C/176 °F	QE...NB
<b>sleeve EPDM</b>	ethylene-propylene rubber, suitable for food, black	100°C/212 °F	QE...EP
<b>sleeve FKM</b>	fluorine rubber, black	not QE06 100°C/212 °F	QE...FK
<b>sleeve CR</b>	chloroprene rubber/neoprene, black	not QE06 80°C/176 °F	QE...CR
<b>sleeve CSM</b>	natural rubber, chlorosulphonyl polyethylene	not QE06 80°C/176 °F	QE...CS



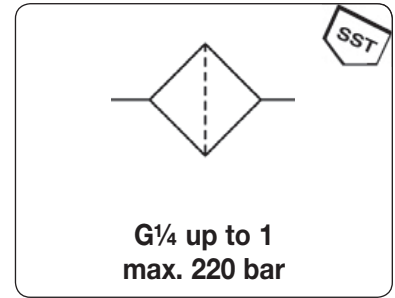
For further pinch valves made of POM or aluminium see chapter for special devices [www.aircom.net](http://www.aircom.net)

**Order example:** QE06-02NR

# Stainless Steel Compressed Air Filter, up to 220 bar

**FH3**

<b>Description</b>	Stainless steel filter, without sight glass, very robust design, for compressed air, gases or liquids. Application areas: Chemical industry, petroleum processing, food industry and medical technology.		
<b>Filter element</b>	50 µm, optionally 5 µm, made of SST or Coalescing 0.01 µm / 99,99 %		
<b>Bowl</b>	made of stainless steel, without sight glass		
<b>Operating pressure</b>	max. 220 bar		
<b>Temperature range</b>	-20 °C to 60 °C / -4 °F to 140 °F		
<b>Material</b>	Body: SST 316L, material-no. 1.4404, Bowl: SST 316L, material-no. 1.4404 Inner valve: SST 316L, material-no. 1.4404	optionally brass Filter elements 5/50 µm: SST 316L Elastomer: FKM, optionally EPDM	



Dimensions			Bowl capacity l	Flow rate m³/h*1 / l/min*1	Filter element µm	Connection thread G	Order number
A	B	C					

SST Filter, up to 220 bar				50 µm / 5 µm		FH3		
70	123	99	0.04	120	2000	5	G¼	<b>FH3-02G</b>
				160	2670	50	G¼	<b>FH3-02</b>
167	123	99	0.04	120	2000	5	G¾	<b>FH3-03G</b>
				160	2670	50	G¾	<b>FH3-03</b>
196	145	125	0.08	240	4000	5	G½	<b>FH3-04G</b>
				320	5530	50	G½	<b>FH3-04</b>
204	145	125	0.08	240	4000	5	G¾	<b>FH3-06G</b>
				320	5530	50	G¾	<b>FH3-06</b>
				240	4000	5	G1	<b>FH3-08G</b>
				320	5530	50	G1	<b>FH3-08</b>



FH3-02/-03/-04



FH3-06/-08

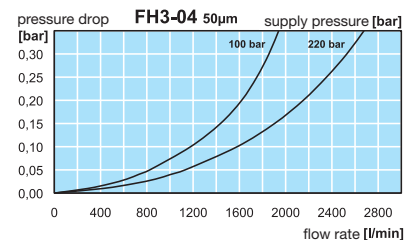
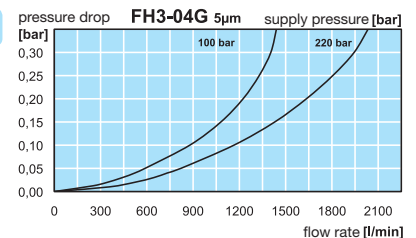
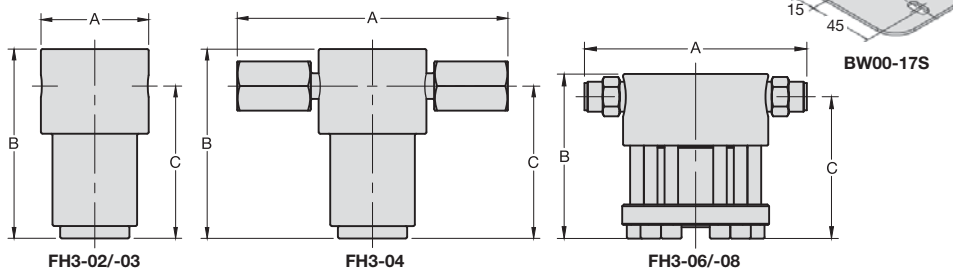
## Special options, add the appropriate letter

<b>Coalescing filter</b>	0.01 µm / 99.99 %, brass version	for G¼ to G½	FH3- .. IMS
	0.01 µm / 99.99 %, SST version	for G¼ to G½	FH3- .. I
	0.01 µm / 99.99 %, SST and brass version	for G¾ to G1	FH3- .. I
<b>NPT</b>	connection thread		FH3- .. N
<b>EPDM-elastomer</b>			FH3- .. E
<b>brass body</b>			FH3- .. MS
<b>ammonia</b>	NH <sub>3</sub>		FH3- ... 02
<b>carbon dioxide</b>	CO <sub>2</sub>		FH3- ... 03
<b>argon</b>	Ar		FH3- ... 05
<b>nitrogen</b>	N <sub>2</sub>		FH3- ... 07
<b>helium</b>	He		FH3- ... 09
<b>hydrogen</b>	H <sub>2</sub>		FH3- ... 11
<b>methane</b>	CH <sub>4</sub>		FH3- ... 13
<b>oxygen</b>	O <sub>2</sub>		FH3- ... 15
<b>propane</b>	C <sub>3</sub> H <sub>6</sub>		FH3- ... 16
<b>nitrous oxide</b>	N <sub>2</sub> O		FH3- ... 17
<b>water</b>	H <sub>2</sub> O		FH3- ... W

## Accessories

**mounting bracket** with screws

**BW00-17S**



\*1 at max. operating pressure

Extensions: see chapter for FRL service units  
Spare parts: see separate spare parts list

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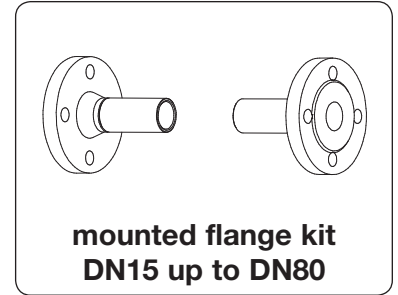
Order example:  
**FH3-02G**



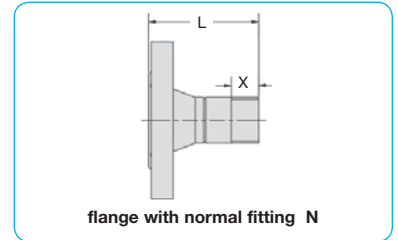
# Mounting Flanges

..F

<b>Total device width</b>	device width between inlet and outlet, see catalogue page, dimension A	
	+ 2x total length of flange fitting, dimension L	
	- 2x screw-in depth of the device (on request)	
	= total device width including flange	
<b>DIN-flange</b>	according to DIN EN 1092-1	according to DIN 2637 at PN100
<b>ANSI flange</b>	optionally according to ASME B16.5 (150 lbs),	according to ASME B16.5 (300 lbs) on request
<b>Material</b>	stainless steel, material-no. 1.4571	

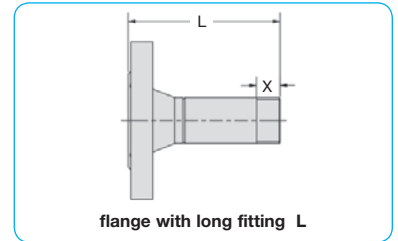


<b>Nominal pressure max.</b>	<b>for Devices</b>	<b>Nominal size DN</b>	<b>Screw-In thread G</b>	<b>Order number affic</b>
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## Flange kit, DIN, completely assembled F

<b>PN40</b>	BD + BM/40	F602	R119	15	G½	<b>F1</b>
	CM/40	F3000/40	R3000	20	G¾	<b>F1</b>
	C3000/40	L606	R3100/L	25	G1	<b>F1</b>
	D3100/L	LM/40	RZ/L	32	G1¼	<b>F1</b>
	DBC/L	L3000/40	R160/L	40	G1½	<b>F1</b>
	R120/40	FM/40		50	G2	<b>F1</b>
				65	G2½	<b>F1</b>
			80	G3	<b>F1</b>	
<b>PN100</b>	BM/100	FM	LM/100	15	G½	<b>F1</b>
	CM/100	F3000/100	L3000/100	20	G¾	<b>F1</b>
	C3000/100	R120/100	R3000/100	25	G1	<b>F1</b>
				32	G1¼	<b>F1</b>
				40	G1½	<b>F1</b>
				50	G2	<b>F1</b>
				65	G2½	<b>F1</b>



thread	fitting N		fitting L		thread
	PN40	PN100	PN40	PN100	
	L mm		L mm		X mm
G½	75	82	90	97	15
G¾	82	94	112	124	17
G1	82	100	112	130	20
G1¼	94	112	114	132	22
G1½	97	114	117	134	22
G2	100	120	120	140	26
G2½	114	138	124	148	32

## Special options

<b>ANSI-flange</b>	150 lbs	<b>F2</b>
	300 lbs	<b>F3</b>
	600 lbs	<b>F4</b>

Filter regulator	PN	fitting*
BD	40	N
BM	40/100	N

Lubricator	PN	fitting*
L606	40	N
LM	40/100	N
L3000	40/100	N

Regulator	PN	fitting*
R119	40	N
R120	40/100	N
R3000	40/100	N

Filter	PN	fitting*
F602	40	N
FM	40/100	N
F3000	40/100	N

Booster	PN	fitting*
R119-J	40	N
R120-J	40/100	N
R3000-J	40/100	N

low pressure regulator	PN	fitting*
R3100	40	L
D3100	40	L
RZ	40	L
R160	40	L
DBC	40	L

FRL service unit	PN	fitting*
CM2	40/100	N
C3002	40/100	N

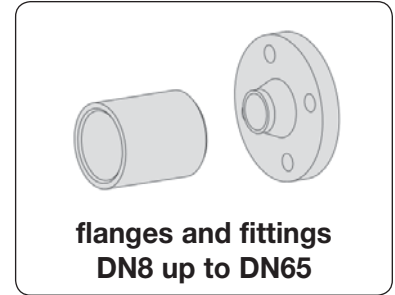
FRL service unit	PN	fitting*
C630	40	N
CM3	40/100	N
C3003	40/100	N

\* N = normal fitting    L = long fitting

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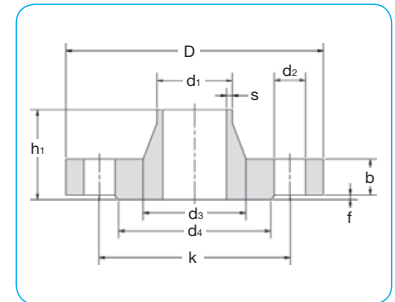
Order example:  
F602-16WJF1

<b>Threaded flange</b>	according to DIN EN 1092-1 ANSI / ASME B16.5 (150 lbs), ASME B16.5 (300 lbs), ASME B16.5 (600 lbs)
<b>Material</b>	1.4571 (316Ti)
<b>Weld-on fitting</b>	with conical Whitworth-thread, according to DIN EN 10241
<b>Material</b>	1.4571



d1/s	Dimensions								Screws	Connection thread Rp	Nominal size DN	Order number
	D	h <sub>1</sub>	b	d <sub>4</sub>	f	k	d <sub>2</sub>	d <sub>3</sub>				

Welding neck flange, as per DIN EN 1092-1 (PN40)											VSV	
21.3 x 2.0	95	36	16	45	2	65	14	32	4 x M12	-	15	<b>VSV-1540</b>
26.9 x 2.3	105	40	18	58	2	75	14	40	4 x M12	-	20	<b>VSV-2040</b>
33.7 x 2.6	115	40	18	68	2	85	14	46	4 x M12	-	25	<b>VSV-2540</b>
42.4 x 2.6	140	42	18	78	2	100	18	56	4 x M16	-	32	<b>VSV-3240</b>
48.3 x 2.6	150	45	18	88	3	110	18	64	4 x M16	-	40	<b>VSV-4040</b>
60.3 x 2.9	165	48	20	102	3	125	18	75	4 x M16	-	50	<b>VSV-5040</b>
76.1 x 2.9	185	52	22	122	3	145	18	90	4 x M16	-	65	<b>VSV-6540</b>
88.9 x 3.2	200	58	24	138	3	160	18	105	8 x M16	-	80	<b>VSV-8040</b>

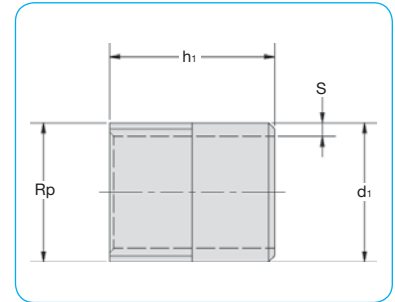


VSV welding neck flange

### Special options, add the appropriate letter or number

<b>PN100</b>	according to DIN 2637	<b>100</b>	VSV-...100
<b>ANSI/ASME-flange</b>	B16.5 150 lbs	<b>150 lbs</b>	VSV-...150 lbs
<b>ANSI/ASME-flange</b>	B16.5 300 lbs	<b>300 lbs</b>	VSV-...300 lbs
<b>ANSI/ASME-flange</b>	B16.5 600 lbs up to DN25	<b>600 lbs</b>	VSV-...600 lbs

Weld-on fitting		as per DIN 2999 with conical Whitworth thread (BSPT)			VSA
13.5 x 2.35	30	PN50	1/4"	8	<b>VSA-02</b>
21.3 x 2.65	35	PN50	1/2"	15	<b>VSA-04</b>
26.9 x 2.65	40	PN50	3/4"	20	<b>VSA-06</b>
33.7 x 3.25	40	PN50	1"	25	<b>VSA-08</b>
42.4 x 3.25	50	PN40	1 1/4"	32	<b>VSA-10</b>
48.3 x 3.25	50	PN40	1 1/2"	40	<b>VSA-12</b>
60.3 x 3.65	50	PN40	2"	50	<b>VSA-16</b>
76.1 x 3.65	60	PN25	2 1/2"	65	<b>VSA-20</b>



VSA weld-on fitting



## Compressed Air Filters

Description	Operating pressure max. bar	Connection thread	Device	Page
bronze In-Line-Filter	21	G $\frac{1}{4}$ - G $\frac{1}{2}$	137	<b>16.02</b>
In-Line-Filter 0,3 $\mu$ m	9	nipple $\varnothing$ 4. 6 mm	F400	<b>16.02</b>
„Miniature“-Series	21	G $\frac{1}{8}$ and G $\frac{1}{4}$	F504	<b>16.03</b>
made of plastic	16	G $\frac{1}{8}$ - G1	F035 ... F095	<b>16.04</b>
made of plastic, with FDA-approval	10	G $\frac{1}{8}$ - G $\frac{3}{4}$	FH	<b>16.06</b>
„Maxi“-Series, robust, block design	17	G $\frac{1}{4}$ - G1	F20	<b>16.07</b>
made of brass, many variations	50	G $\frac{1}{8}$ - G2	FM	<b>16.08</b>
„Standard“-Series, robust	21	G $\frac{1}{4}$ - G2	F602	<b>16.10</b>
Series „D“, made of aluminium/die-cast zinc	30	G $\frac{1}{8}$ - G2	FD	<b>16.12</b>
3 $\mu$ m pre-filter	16	G $\frac{1}{4}$ - G3	FG.V	<b>16.14</b>
1 $\mu$ m fine filter	16	G $\frac{1}{4}$ - G3	FG.Z	<b>16.14</b>
0.01 $\mu$ m fine filter	16	G $\frac{1}{4}$ - G3	FG.X	<b>16.15</b>
activated carbon filter	16	G $\frac{1}{4}$ - G3	FG.A	<b>16.15</b>
high pressure filter, also for oxygen	60	G $\frac{3}{8}$ - G2	F445, F465	<b>16.16</b>
filter silencer	16	G $\frac{1}{4}$ - G2	SFE	<b>16.17</b>
condensate / tank drain	18	G $\frac{1}{2}$	D11, D608	<b>16.18</b>



# 16 Compressed Air Filters





**Micro in-line filter F400**

**Description** Micro in-line filters are widely used in medical and process technology for cleaning compressed air for use in instruments and pneumatic logic systems. The micro in-line filter removes particles, oil and mist from compressed air. Also suitable for vacuum.

**Filter element** The borosilicate micro-filter is manufactured in a special vacuum process which reduces the adhesive properties of the borosilicate fibres down to a minimum in order to achieve outstanding filtering capability. When saturated with oil, the filter turns red to indicate that replacement is required.

**Filtration efficiency** 99.999% based on 0.03 µm particle size

**Operating pressure** max. 9 bar

**Connection** Fitted with nipples able to take up hoses of 4.3 mm (11/16") or 6.3 mm (¼") internal diameter. Flow direction from INside to OUTside to be noted.

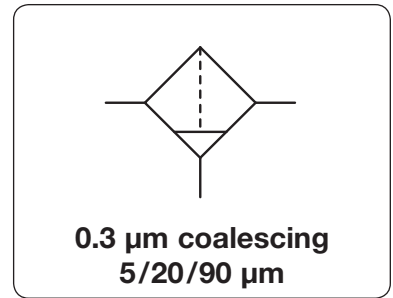
**Bronze in-line filter 137**

**Description** Bronze in-line filter for compressed air with coarse impurities.

**Filter element** 90 µm, 20 µm or optionally 5 µm, made of sintered bronze

**Operating pressure** max. 21 bar

**Drainage** with or without manual drain

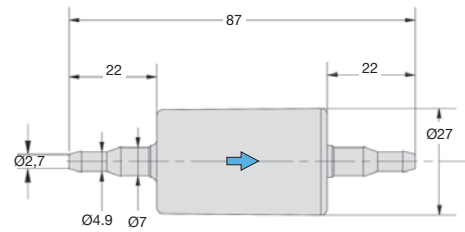


Dimensions			Description	Flow rate		P <sub>1</sub> max. bar	Filter element µm	Connection thread nipple/G	Order number
A	B	C		m <sup>3</sup> /h*1	l/min*1				

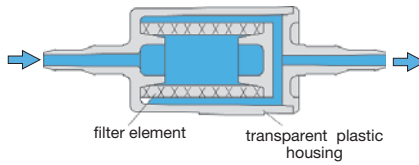
Micro in-line filter			operating pressure max. 9 bar				F400		
87	43	Ø 27	borosilicate-micro filter	4.2	70	9	0.3	Ø 4 and Ø 6	F400



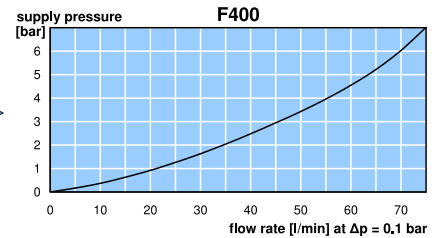
F400



F400



cross section



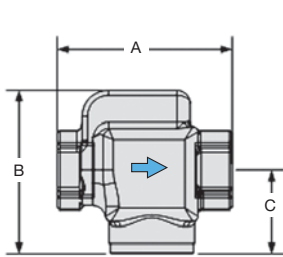
Bronze in-line filter			operating pressure max. 21 bar				137		
67	63	32	without manual drain	39	650	21	90	G¼	137-02
				42	700			G¾	137-03
				44	740			G½	137-04
			with manual drain	39	650	21	20	G¼	137-02H
				42	700			G¾	137-03H
				44	740			G½	137-04H
67	79	48	without manual drain	19	320	21	5	G¼	137-02V
				21	350			G¾	137-03V
				22	370			G½	137-04V
			with manual drain	39	650	21	90	G¼	137-02A
				42	700			G¾	137-03A
				44	740			G½	137-04A
with manual drain	39	650	21	20	G¼	137-02AH			
	42	700			G¾	137-03AH			
	44	740			G½	137-04AH			
with manual drain	19	320	21	5	G¼	137-02AV			
	21	350			G¾	137-03AV			
	22	370			G½	137-04AV			



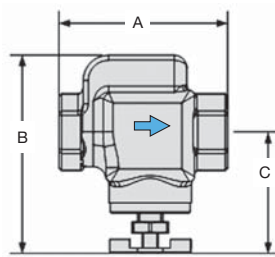
137-04



137-04A



137-...



137-...A.

\*1 at 7 bar operating pressure and 0.1 bar pressure drop

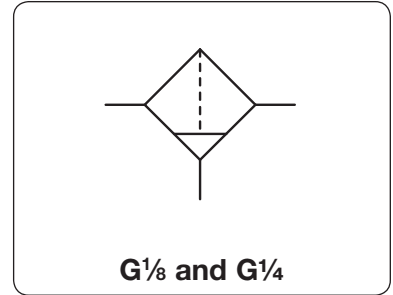
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net



Order example:  
F400

<b>Description</b>	Miniature compressed air filter of small, compact design. Ideal for limited space conditions.
<b>Filter element</b>	20 µm, optionally 5 µm, made of propylene
<b>Bowl</b>	plastic or metal version
<b>Drainage</b>	manual drain as standard, for max. 21 bar optionally semiautomatic drain, for max. 12 bar
<b>Operating pressure</b>	max. 11 bar for plastic bowl max. 21 bar for metal bowl
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and semiautomatic drain version 0 °C to 80 °C / 32 °F to 176 °F for metal bowl for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: aluminium Bowl: polyurethane or zinc die-cast Elastomer: NBR/Buna-N



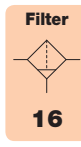
Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of	l	m <sup>3</sup> /h*1	µm	G	

Miniature compressed air filter			with manual drain		F504					
40	106	96	plastic	0.04	36	600	11	20	G <sup>1</sup> / <sub>8</sub>	F504-01AH
			metal				21			F504-01DH
			plastic		29	480	11	5		F504-01AG
			metal				21			F504-01DG
40	106	96	plastic	0.04	38	640	11	20	G <sup>1</sup> / <sub>4</sub>	F504-02AH
			metal				21			F504-02DH
			plastic		31	510	11	5		F504-02AG
			metal				21			F504-02DG



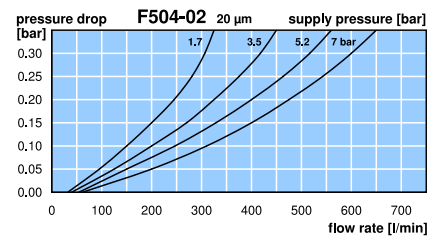
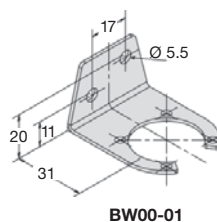
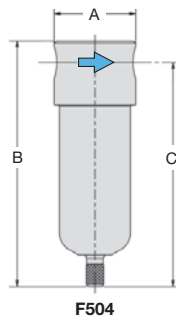
**Special options, add the appropriate letter**

<b>NPT</b>	connection thread	F504-... N
<b>semiautomatic drain</b>	RK500SY, max. 12 bar	F504-... M
<b>automatic drain</b>	RK504SY, max. 12 bar	F504-... R



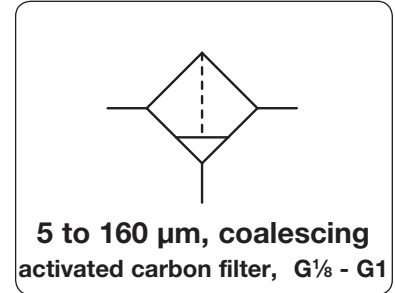
**Accessories**

<b>mounting bracket</b>	made of steel	<b>BW00-01</b>
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\*1 at 7 bar operating pressure and 0.33 bar pressure drop

<b>Description</b>	Filter of modular design which can be interlocked with all other instruments of the same series without need for double nipples. The flow on standard filters is from outside to inside; on coalescing filters 0.1 µm from inside to outside.	
<b>Filter element</b>	5 µm, 20 µm, 80 µm made of sintered polyethylene, 160 µm made of stainless steel, 0.01 µm coalescing filter made of borosilicate and activated carbon filter	
<b>Filtration efficiency</b>	coalescing filter: 99.99% at 0.01 µm particle size,	residual oil content < 5 mg/m <sup>3</sup>
<b>Bowl</b>	plastic version with bayonet catch,	type 042 with connection thread
<b>Drainage</b>	manual drain in conjunction with semiautomatic drain, optionally automatic drain, no drain for water	
<b>Operating pressure</b>	max. 7 bar at series 035, max. 16 bar at series 042, max. 12.5 bar at series 050 to 095	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	
<b>Material</b>	Body: nylon, POM at types 035 and 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass

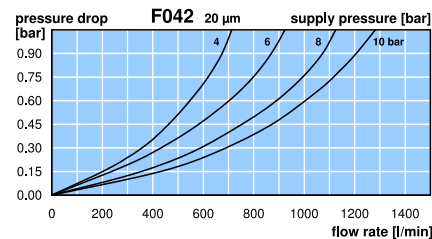
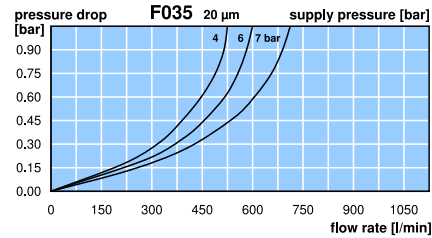
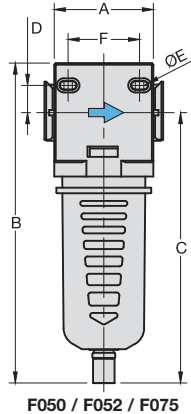
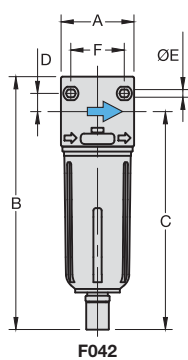
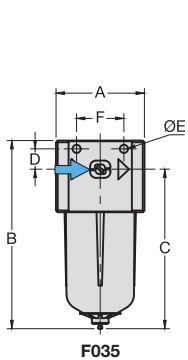
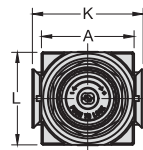


Dimensions			Bowl	Flow	P <sub>1</sub>	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max.	element	thread
mm	mm	mm		l	m <sup>3</sup> /h*1	l/min*1	µm	G

Compressed air filter				manual drain with semiautomatic drain, 99.99% at 0.01 µm							F0
38	79	67	plastic	0.008	45	750	7	20	G <sup>1</sup> / <sub>8</sub>	F035-01H	
			plastic		40	670		5		F035-01G	
			for water w/o drain		50	830		80		F035-01J	
			coalescing		7	115		0.01		F035-01C	
42	146	126	plastic	0.02	75	1250	16	20	G <sup>1</sup> / <sub>4</sub>	F042-02H	
			plastic		63	1050		5		F042-02G	
			for water w/o drain		79	1320		80		F042-02J	
			for water w/o drain		87	1450		160		F042-02K	
			coalescing		11	180		0.01		F042-02C	
			plastic		87	1450		activated carbon		F042-02A	
52	174	148	bowl guard	0.04	150	2500	12.5	20	G <sup>3</sup> / <sub>8</sub>	F050-03H	
					126	2100		5		F050-03G	
					16	500		0.01		F050-03C	
					150	2500		activated carbon		F050-03A	

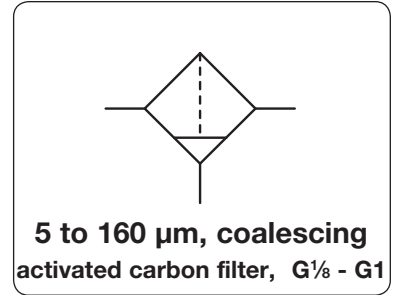


Series	D	ØE	F	K	L
F035	8.5	3.5	20	-	36
F042	10.5	4.5	31	-	42
F050	16.0	5.5	41	63	52



\*1 at 10 bar operating pressure and 1 bar pressure drop, for F035 and filter element 0.01 µm only 7 bar operating pressure

<b>Description</b>	Filter of modular design which can be interlocked with all other instruments of the same series without need for double nipples. The flow on standard filters is from outside to inside; on coalescing filters 0.1 µm from inside to outside.	
<b>Filter element</b>	5 µm, 20 µm, 80 µm made of sintered polyethylene, 160 µm made of stainless steel, 0.01 µm coalescing filter made of borosilicate and activated carbon filter	
<b>Filtration efficiency</b>	coalescing filter: 99.99% at 0.01 µm particle size,	residual oil content < 5 mg/m³
<b>Bowl</b>	plastic version with bayonet catch,	type 042 with connection thread
<b>Drainage</b>	manual drain in conjunction with semiautomatic drain, optionally automatic drain, no drain for water	
<b>Operating pressure</b>	max. 7 bar at series 035, max. 16 bar at series 042, max. 12.5 bar at series 050 to 095	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	
<b>Material</b>	Body: nylon, POM at types 035 and 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Bowl	Flow	P <sub>1</sub>	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max.	element	thread
mm	mm	mm		l	m³/h*1	l/min*1	µm	G

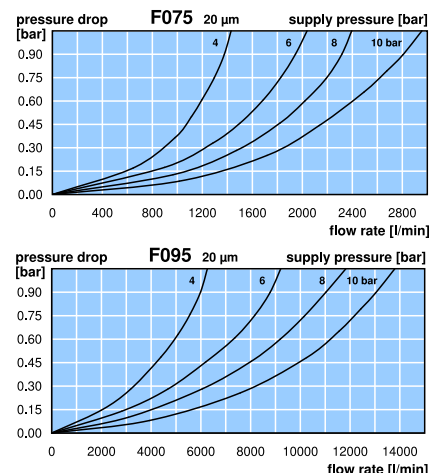
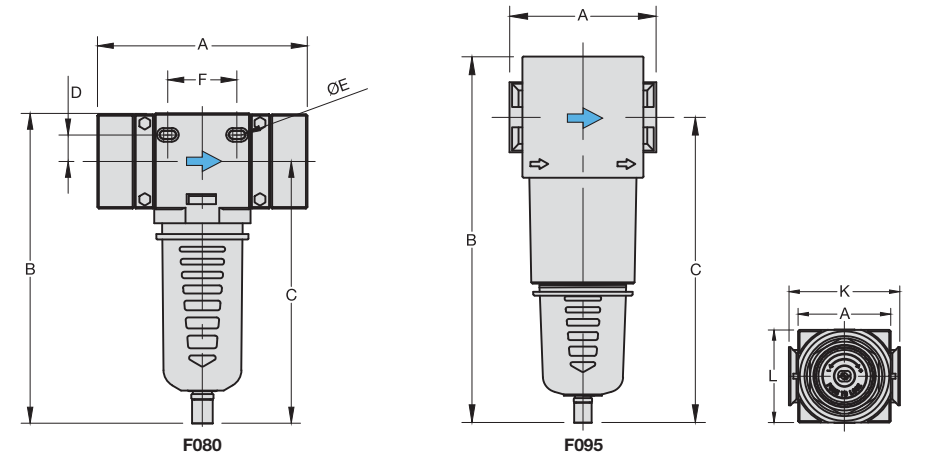
Compressed air filter			manual drain with semiautomatic drain, 99.99% at 0.01 µm				F0			
52	174	148	bowl guard	0.04	156	2600	12.5	20	G <sup>1</sup> / <sub>2</sub>	<b>F052-04H</b>
					132	2200		5		<b>F052-04G</b>
					17	500		0.01		<b>F052-04C</b>
					156	2600		activated carbon		<b>F052-04A</b>
63	204	173	bowl guard	0.10	186	3100	12.5	20	G <sup>1</sup> / <sub>2</sub>	<b>F075-04H</b>
					165	2750		5		<b>F075-04G</b>
					18	800		0.01		<b>F075-04C</b>
					186	3100		activated carbon		<b>F075-04A</b>
137	204	173	bowl guard	0.10	192	3200	12.5	20	G <sup>3</sup> / <sub>4</sub>	<b>F080-06H</b>
					168	2800		5		<b>F080-06G</b>
					18	800		0.01		<b>F080-06C</b>
95	284	237	bowl guard	0.20	828	13800	12.5	20	G <sup>1</sup>	<b>F095-08H</b>
					750	12500		5		<b>F095-08G</b>



**Special options,** add the appropriate letter  
 automatic drain C400200130 for F042 to F095 F0. . - 0 . . R

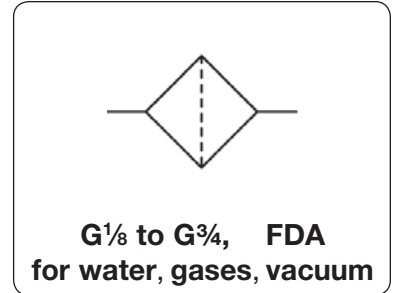
**Accessories**  
 mounting bracket set made of steel for F095 **BW00-02**

Series	D	Ø E	F	K	L
F052	16.0	5.5	41	63	52
F075	17.5	5.5	45	75	63
F080	17.5	5.5	45	-	63
F095	-	-	-	115	95



\*1 at 10 bar operating pressure and 1 bar pressure drop, for F035 and filter element 00.1 µm only 7 bar operating pressure

<b>Description</b>	Filter made of plastic for compressed air, vacuum, non-corrosive gases or liquids. The flow on the filter elements passes from outside to inside. They are largely corrosion-resistant and feature excellent chemical stability. Exposure of the filters to direct sunlight must be avoided. Optionally available with EPDM elastomers approved by the FDA.		
<b>Filter element</b>	5 µm, 35 µm and 80 µm made of PE, 50 µm, 100 µm and 300 µm made of stainless steel		
<b>Bowl</b>	made of transparent Grilamid TR55, three different sizes, screwable, without drain		
<b>Drainage</b>	without drain, as no water separation occurs with compressed air		
<b>Operating pressure</b>	max. 10 bar at 24 °C / 75 °F	<b>Differential pressure</b>	max. 0.7 bar
<b>Temperature range</b>	5 °C to 52 °C / 41 °F to 125 °F		
<b>Cleaning</b>	with lukewarm water and standard rinsing agent		
<b>Material</b>	Body: polypropylene GFV 20% Bowl: Grilamid TR55, transparent	Filter element: polyethylene, optionally stainless steel Elastomer: NBR/Buna-N, optionally FKM or EPDM (FDA)	



Dimensions			Bowl Capacity l	Flow rate		Filter element µm	Connection thread G	Order number
A	B	C		Water l/min*1	Air l/min*1			

Plastic filter			operating pressure max. 10 bar differential pressure max. 0.7 bar	NBR/Buna-N o-ring polyamide, polypropylene		FH		
58	93	83	0.06	6	140	5	G <sup>1</sup> / <sub>8</sub>	FH1-01G FH1-01J FH1-01L
74	95	85	0.06	8	180	5	G <sup>1</sup> / <sub>4</sub>	FH1-02G FH1-02J FH1-02L
74	99	87	0.06	10	220	5	G <sup>3</sup> / <sub>8</sub>	FH1-03G FH1-03J FH1-03L
75	103	89	0.06	12	260	5	G <sup>1</sup> / <sub>2</sub>	FH1-04G FH1-04J FH1-04L
90	124	112	0.17	14	400	5	G <sup>3</sup> / <sub>8</sub>	FH2-03G FH2-03J FH2-03L
90	128	113	0.17	16	480	5	G <sup>1</sup> / <sub>2</sub>	FH2-04G FH2-04J FH2-04L
90	133	116	0.17	18	560	5	G <sup>3</sup> / <sub>4</sub>	FH2-06G FH2-06J FH2-06L



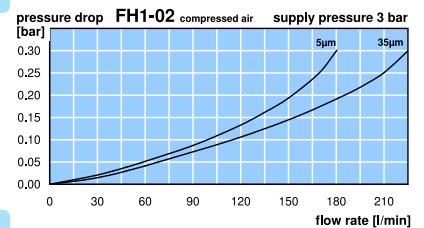
FH1



FH2

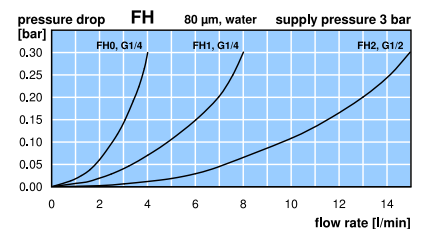
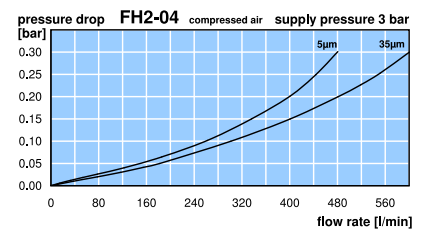
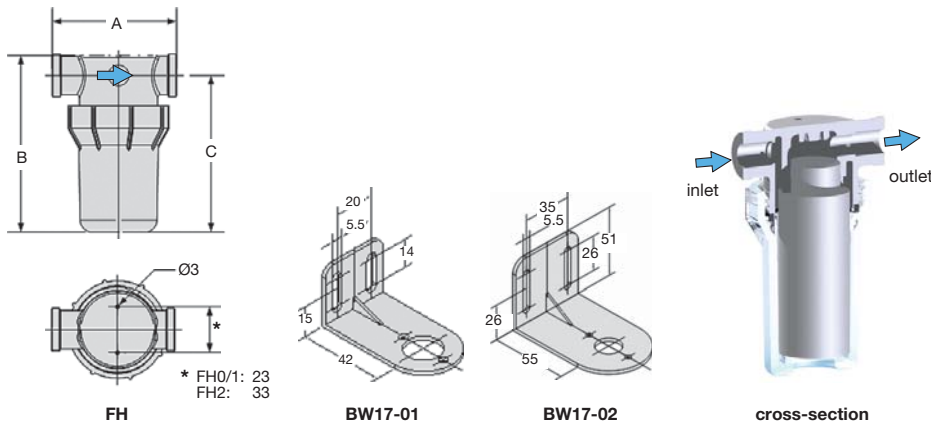
### Special options, add the appropriate letter

<b>with short bowl *2</b>	shorter filter element,	4 l/min water	FH1 only	FH0-...
<b>SST filter element</b>	metallic tissue	50 µm S; 100 µm T;	300 µm	FH0-...U FH1-...U FH2-...U FH...E
<b>EPDM elastomer</b>	FDA approved			
<b>FKM elastomer</b>				



### Accessories

<b>mounting bracket</b>	made of plastic	for FH0 and FH1 for FH2	<b>BW17-01</b> <b>BW17-02</b>
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\*1 at 3 bar operating pressure and 0.3 bar pressure drop  
\*2 flow reduced by 35%, height shortened by 35 mm, bowl capacity 0.014 l

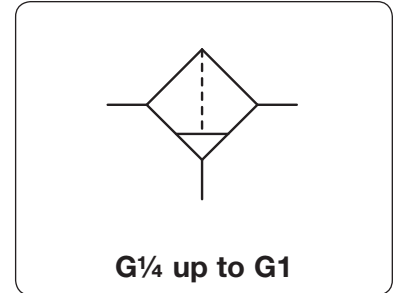
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net

Order example:  
FH1-01G

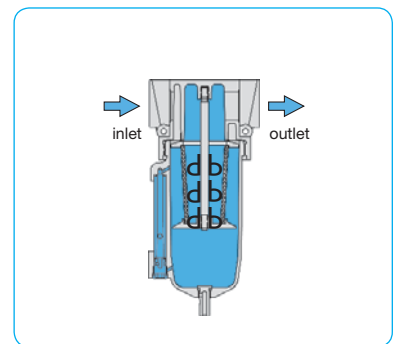


<b>Description</b>	Compressed air filter of modular design with exchangeable inserts. Can be interlocked with regulator or lubricator without need for double nipples. Each "maxi" device may be taken from a fixed line in seconds by simply removing the mounting bolts.
<b>Filter element</b>	40 µm, optionally 5 µm, made of polypropylene
<b>Bowl</b>	metal version with sight glass
<b>Drainage</b>	manual drain as standard, optionally automatic or semiautomatic drain, for max. 12 bar
<b>Operating pressure</b>	max. 17 bar
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F 0 °C to 50 °C / 32 °F to 122 °F for automatic or semiautomatic drain version
<b>Material</b>	Body: zinc die-cast Sight glass: polyurethane Bowl: zinc die-cast Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of / with	l	m³/h*1	l/min*1	bar	µm

"Maxi" compressed air filter									with manual drain supply pressure max. 17 bar	F20
89	191	171	metal/sight glass	0.3	132	2200	17	40	G¼	F20-02WJ
					90	1500				F20-02WG
					186	3100				F20-03WJ
					138	2300				F20-03WG
					288	4800				F20-04WJ
111	191	171	metal/sight glass	0.3	408	6800	17	40	G¾	F20-06WJ
					294	4900				F20-06WG
					420	7000				F20-08WJ
					300	5000				F20-08WG

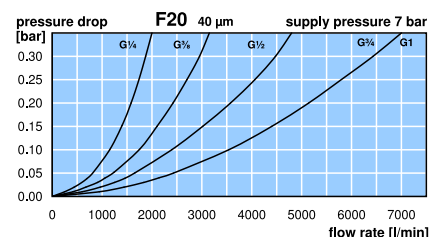
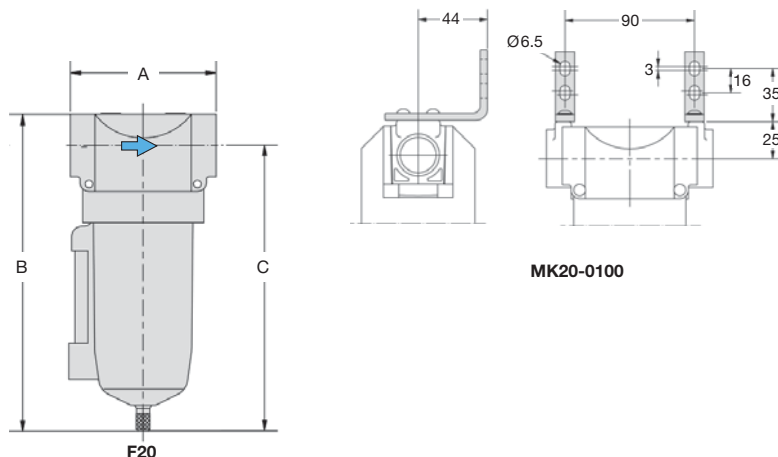


### Special options, add the appropriate letter

<b>NPT</b>	connection thread	F20-0 .W .N
<b>semiautomatic drain</b>	RK500SY, max. 12 bar	F20-0 .W .M
<b>automatic drain</b>	SA605MD, max. 12 bar	F20-0 .W .R

### Accessories

<b>mounting bracket set</b>	made of steel	<b>MK20-0100</b>
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\*1 at 7 bar supply pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

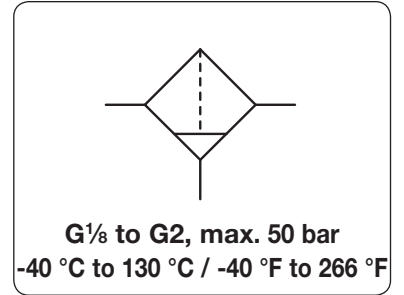
**PDF CAD**  
www.aircom.net

**Order example:**  
F20-02WJ

# Compressed Air Filter Made of Brass, up to 50 bar

FM

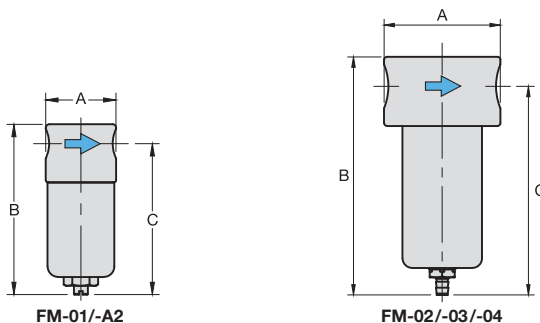
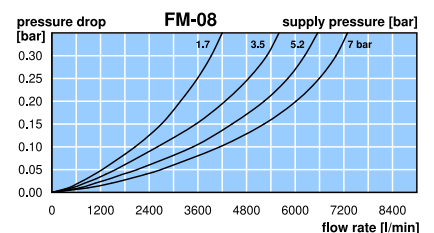
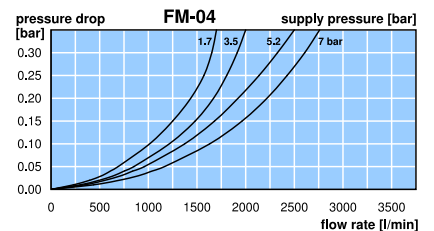
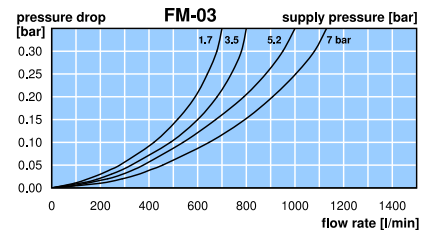
<b>Description</b>	Filter with bowl without sight glass, extremely robust, for compressed air, non-corrosive gases or liquids.
<b>Filter element</b>	50 µm, optionally 5 µm, made of stainless steel <b>Bowl</b> stainless steel version without sight glass
<b>Drainage</b>	screw plug as standard optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)
<b>Operating pressure</b>	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 140 °F, for FKM or EPDM, 0 °C to 130 °C / 32 °F to 266 °F, for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
<b>Material</b>	Body: brass Bowl: stainless steel 316L, material no 1.4404, brass at FM-01/-A2 Elastomer: FKM, optionally EPDM Inner valve: brass and plastic (not at high temperature version)



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of	l	m <sup>3</sup> /h*1	l/min*1	µm	G

**Brass filter** with screw plug, operating pressure max. 50 bar, 50 µm **FM**

40	92	81	brass	0.03	45	750	50	50	G <sup>1</sup> / <sub>8</sub>	<b>FM-01</b> <b>FM-01G</b>
40	92	81	brass	0.03	45	750	50	5	G <sup>1</sup> / <sub>4</sub>	<b>FM-A2</b> <b>FM-A2G</b>
64	140	125	stainless steel	0.14	54	900	50	50	G <sup>1</sup> / <sub>4</sub>	<b>FM-02</b> <b>FM-02G</b> <b>FM-02I</b>
64	140	125	stainless steel	0.14	60	1000	50	5	G <sup>3</sup> / <sub>8</sub>	<b>FM-03</b> <b>FM-03G</b> <b>FM-03I</b>
79	150	130	stainless steel	0.20	150	2500	50	50	G <sup>1</sup> / <sub>2</sub>	<b>FM-04</b> <b>FM-04G</b> <b>FM-04I</b>
137	189	168	stainless steel	0.50	432	7200	50	50	G <sup>3</sup> / <sub>4</sub>	<b>FM-06</b> <b>FM-06G</b> <b>FM-06I</b>
137	189	168	stainless steel	0.50	432	7200	50	50	G1	<b>FM-08</b> <b>FM-08G</b> <b>FM-08I</b>
241	189	168	stainless steel	0.50	432	7200	50	50	G <sup>1</sup> / <sub>4</sub>	<b>FM-10</b> <b>FM-10G</b> <b>FM-10I</b>
241	189	168	stainless steel	0.50	432	7200	50	50	G <sup>1</sup> / <sub>2</sub>	<b>FM-1A</b> <b>FM-1AG</b> <b>FM-1AI</b>
180	297	215	stainless steel	1.00	900	15000	50	50	G <sup>1</sup> / <sub>2</sub>	<b>FM-12</b> <b>FM-12G</b>
180	297	215	stainless steel	1.00	960	16000	50	50	G2	<b>FM-16</b> <b>FM-16G</b>



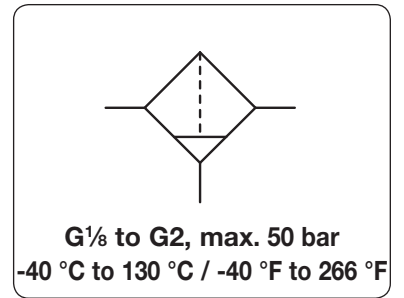
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

PDF CAD  
www.aircom.net

**Order example:**  
**FM-01**

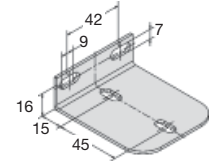
<b>Description</b>	Filter with bowl without sight glass, extremely robust, for compressed air, non-corrosive gases or liquids.	
<b>Filter element</b>	50 µm, optionally 5 µm, made of stainless steel	<b>Bowl</b> stainless steel version without sight glass
<b>Drainage</b>	screw plug as standard optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)	
<b>Operating pressure</b>	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)	
<b>Temperature range</b>	0 °C to 80 °C / 32 °F to 140 °F, for FKM or EPDM, 0 °C to 130 °C / 32 °F to 266 °F, for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
<b>Material</b>	Body: brass Bowl: stainless steel 316L, material no 1.4404, brass at FM-01/-A2 Elastomer: FKM, optionally EPDM Inner valve: brass and plastic (not at high temperature version)	



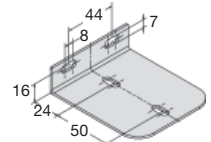
Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of	l	m <sup>3</sup> /h*1	l/min*1	µm	G

## Special options, add the appropriate letter

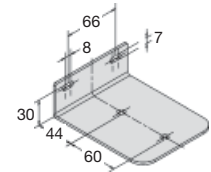
<b>NPT</b>	connection thread	for G $\frac{1}{8}$ to G $\frac{3}{4}$	to G $\frac{1}{2}$ , G1 $\frac{1}{2}$ (12) and G2 to G1 $\frac{1}{2}$ (1A)	FM-..N
<b>P1: max. 80 bar down to -40 °C up to 130 °C</b>	low temperature version			FM-..X48
<b>manual drain</b>	max. 30 bar			FM-..X51
<b>automatic drain</b>	made of SST, max. 16 bar	for G $\frac{1}{4}$ (02)		FM-..X54
<b>EPDM-elastomer</b>				FM-..H
<b>carbon dioxide</b>	CO <sub>2</sub>			FM-..R
<b>argon</b>	Ar			FM-..E
<b>nitrogen</b>	N <sub>2</sub>			FM-..03
<b>helium</b>	He			FM-..05
<b>hydrogen</b>	H <sub>2</sub>			FM-..07
<b>methane</b>	CH <sub>4</sub>			FM-..09
<b>oxygen</b>	O <sub>2</sub>			FM-..11
<b>propane</b>	C <sub>3</sub> H <sub>6</sub>			FM-..13
<b>nitrous oxide</b>	N <sub>2</sub> O			FM-..15
<b>for water</b>	50 µm only	for G $\frac{1}{4}$ (02) to G2		FM-..16
<b>flange connection</b>	see chapter for stainless steel devices / flanges			FM-..17
				FM-..W
				FM-..F.



**BW00-17S**



**BW00-18S**

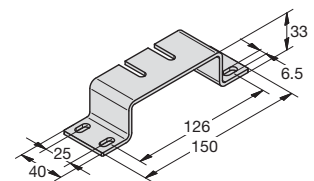


**BW00-19S**

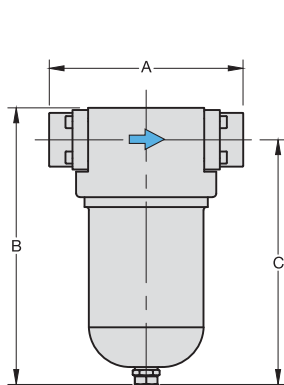


## Accessories

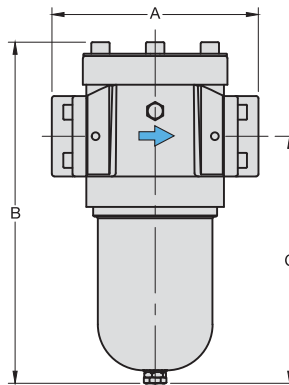
<b>mounting bracket</b>	made of stainless steel	for G $\frac{1}{4}$ (02) and G $\frac{3}{8}$ for G $\frac{1}{2}$	<b>BW00-17S</b>
		for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	<b>BW00-18S</b>
		for G1 $\frac{1}{2}$ (12) and G2	<b>BW00-19S</b>
<b>set of brackets</b>	made of steel		<b>BW00-61</b>



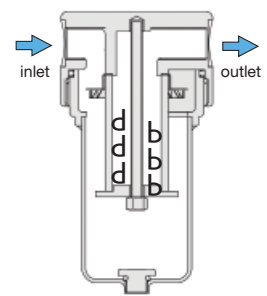
**BW00-61**



**FM-06/-08/-10/-1A**



**FM-12/-16**



**cross-section**

\*1 at 7 bar operating pressure and 0.33 bar pressure drop

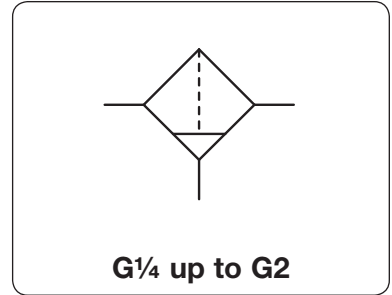
**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

**PDF CAD**  
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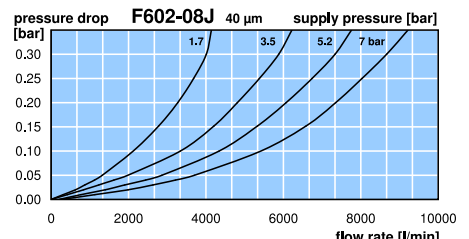
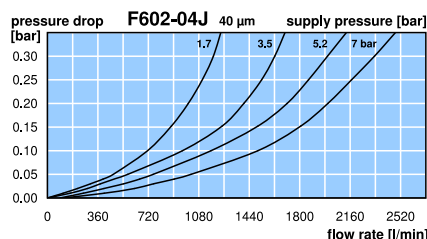
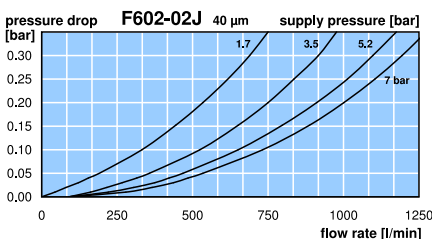
**Order example:**  
**BW00-17S**

<b>Description</b>	Compressed air filter with high flow. Made of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.		
<b>Filter element</b>	40 µm, optionally 5 µm, made of polypropylene		
<b>Bowl</b>	plastic version with or without bowl guard up to size G½, metal version with or without bowl guard		
<b>Drainage</b>	manual drain as standard, for max. 21 bar or external automatic drain, for max. 18 bar		
<b>Operating pressure</b>	max. 11 bar for plastic bowl max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and automatic drain version 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F		
<b>Material</b>	Body: zinc die-cast	Bowl: polyurethane, zinc die-cast or steel	Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	rate	max.	element	thread	number
mm	mm	mm	made of / with	m³/h*1	l/min*1	µm	G	

Standard compressed air filter			with manual drain		F602					
71	158	145	plastic / bowl guard	0.15	84	1400	11	40	G¼	F602-02BJ
			metal / sight glass				17			F602-02WJ
71	158	145	plastic / bowl guard	0.15	66	1100	11	5	G¼	F602-02BG
			metal / sight glass				17			F602-02WG
71	158	145	plastic / bowl guard	0.15	126	2100	11	40	G½	F602-03BJ
			metal / sight glass				17			F602-03WJ
71	158	145	plastic / bowl guard	0.15	102	1700	11	5	G¼	F602-03BG
			metal / sight glass				17			F602-03WG
71	158	145	plastic / bowl guard	0.15	144	2400	11	40	G½	F602-04BJ
			metal / sight glass				17			F602-04WJ
71	158	145	plastic / bowl guard	0.15	108	1800	11	5	G½	F602-04BG
			metal / sight glass				17			F602-04WG
116	223	200	metal / sight glass	0.50	426	7100	17	40	G¾	F602-06WJ
116	295	272	steel	1.00			21			F602-06EJ
			steel / sight glass	1.00			17			F602-06FJ
116	223	200	metal / sight glass	0.50	318	5300	17	5	G¾	F602-06WG
116	295	272	steel	1.00			21			F602-06EG
			steel / sight glass	1.00			17			F602-06FG
116	223	200	metal / sight glass	0.50	588	9800	17	40	G1	F602-08WJ
116	295	272	steel	1.00			21			F602-08EJ
			steel / sight glass	1.00			17			F602-08FJ
116	223	200	metal / sight glass	0.50	438	7300	17	5	G1	F602-08WG
116	295	272	steel	1.00			21			F602-08EG
			steel / sight glass	1.00			17			F602-08FG



\*1 at 7 bar operating pressure and 0.33 bar pressure drop

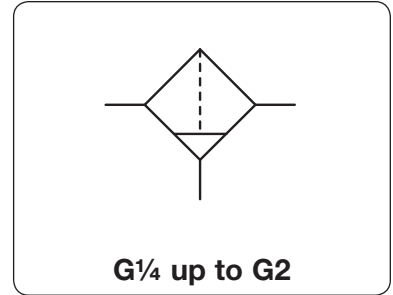
**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net



**Order example:**  
F602-02BJ

<b>Description</b>	Compressed air filter with high flow. Made of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.		
<b>Filter element</b>	40 µm, optionally 5 µm, made of polypropylene		
<b>Bowl</b>	plastic version with or without bowl guard up to size G $\frac{1}{2}$ , metal version with or without bowl guard		
<b>Drainage</b>	manual drain as standard, for max. 21 bar optionally internal automatic drain, for max. 12 / 16 bar or external automatic drain, for max. 18 bar		
<b>Operating pressure</b>	max. 11 bar for plastic bowl max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and automatic drain version 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F		
<b>Material</b>	Body: zinc die-cast	Bowl: polyurethane, zinc die-cast or steel	Elastomer: NBR/Buna-N



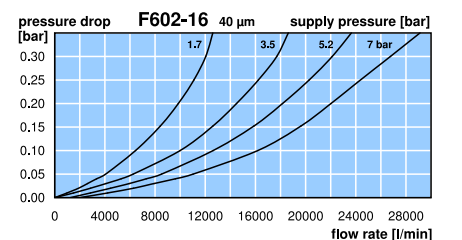
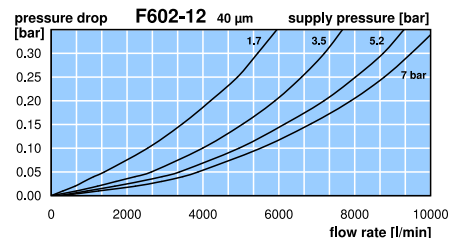
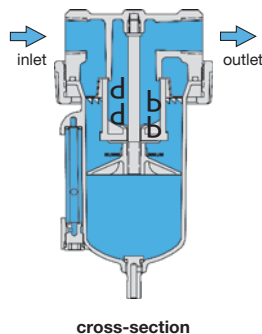
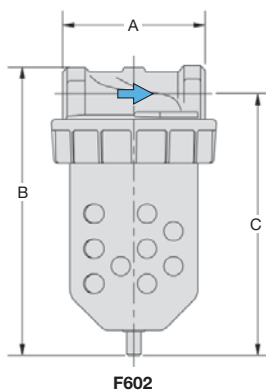
Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of / with	l	m <sup>3</sup> /h*1 l/min*1	µm	G	

Standard compressed air filter									with manual drain	F602
132	242	210	metal / sight glass	0.5	660	11 000	17	40	G $\frac{1}{2}$	<b>F602-12WJ</b>
132	315	283	steel	1.0			21			<b>F602-12EJ</b>
			steel / sight glass	1.0			17			<b>F602-12FJ</b>
132	242	210	metal / sight glass	0.5	492	8 200	17	5	G $\frac{1}{2}$	<b>F602-12WG</b>
132	315	283	steel	1.0			21			<b>F602-12EG</b>
			steel / sight glass	1.0			17			<b>F602-12FG</b>
157	332	284	metal / sight glass	0.5	1 740	29 000	17	40	G2	<b>F602-16WJ</b>
157	405	357	steel	1.0			21			<b>F602-16EJ</b>
			steel / sight glass	1.0			17			<b>F602-16FJ</b>



### Special options, add the appropriate letter

<b>NPT</b>	connection thread		for G $\frac{3}{4}$ to G2 $\frac{1}{2}$	F602-....N
<b>automatic drain</b>	SA605MD,	max. 12 bar	for G $\frac{3}{4}$ to G2 $\frac{1}{2}$	F602-....R
	SA602D, SA603D for steel bowl,	max. 18 bar	for G $\frac{3}{4}$ to G2 $\frac{1}{2}$	F602-....Q
	SA702MD,	max. 16 bar	for G $\frac{3}{4}$ to G2 $\frac{1}{2}$	F602-....W
<b>flange connection</b>	see chapter for stainless steel devices / flanges			F602-....F.



\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

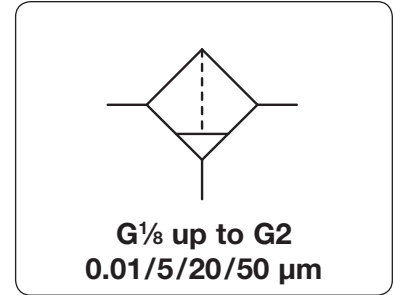
**PDF CAD**  
www.aircom.net



**Order example:**  
**F602-12WJ**



<b>Description</b>	Good value zinc die-cast regulator of solid design.
<b>Filter element</b>	0.01 µm coalescing filter, 5 µm, 20 µm und 50 µm
<b>Filtration efficiency</b>	coalescing filter: 99.99% based on 0.01 µm particle size
<b>Bowl</b>	metal version with and without sight glass
<b>Drainage</b>	semiautomatic drain as standard, for max. 16 bar optionally manual drain, for max. 30 bar or automatic drain, for max. 16 bar
<b>Operating pressure</b>	max. 16 bar for metal bowl with sight glass max. 30 bar for metal bowl without sight glass
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass (-01 bis -04 / -12 / -16) -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass (-06 / -1A) -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
<b>Material</b>	Body: zinc die-cast at sizes G½ and G¾, aluminium at sizes G¾ to G2 Bowl: zinc die-cast Elastomer: NBR/Buna-N

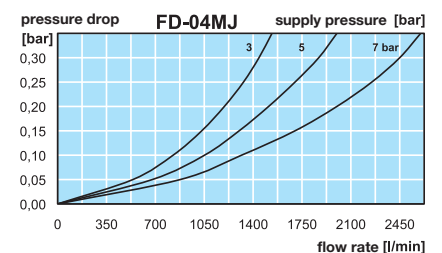
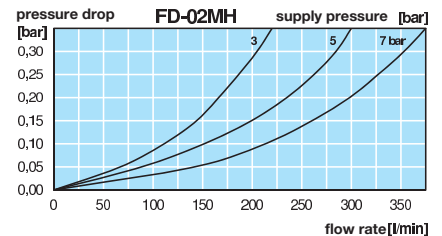
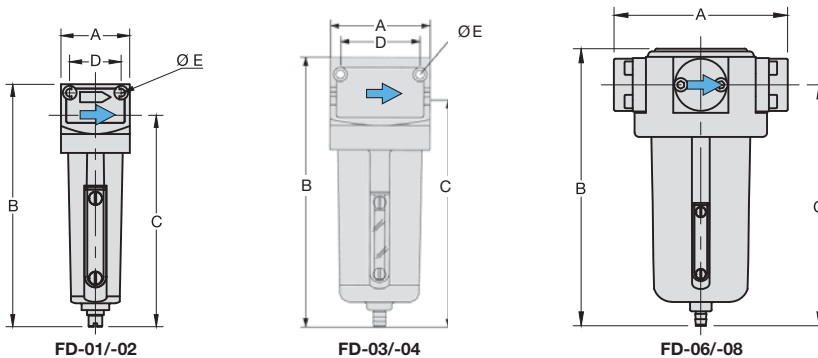


Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m³/h*1	µm	G	

Compressed air filter, series "D"							with semiautomatic drain, 99.99 % at 0.01 µm	FD		
40	146	128	metal/sight glass	0.05	21	350	16	50	G½	FD-01MH
							16	5		FD-01MG
				metal/sight glass	0.05	4	70	16		0.01
40	146	128	metal/sight glass	0.05	24	400	16	50	G¾	FD-02MH
					18	300	16	5		FD-02MG
				metal/sight glass	0.05	4	70	16		0.01
64	176	148	metal/sight glass	0.18	144	2400	16	50	G¾	FD-03MJ
					108	1800	16	5		FD-03MG
				metal/sight glass	0.18	27	450	16		0.01
64	176	148	metal/sight glass	0.18	156	2600	16	50	G½	FD-04MJ
					120	2000	16	5		FD-04MG
				metal/sight glass	0.18	30	500	16		0.01
130	206	179	metal/sight glass	0.50	420	7000	16	50	G¾	FD-06MJ
					318	5300	16	5		FD-06MG
				metal/sight glass	0.50	84	1400	16		0.01
130	206	179	metal/sight glass	0.50	510	8500	16	50	G1	FD-08MJ
					384	6400	16	5		FD-08MG
				metal/sight glass	0.50	102	1700	16		0.01



Type	D	Ø E
FD-01/02	30	4.5
FD-03/04	51	5.5



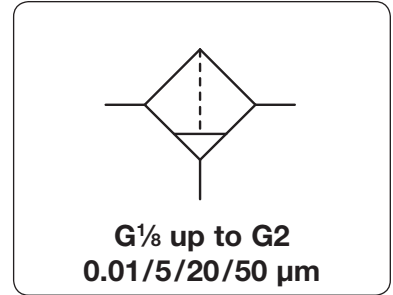
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

**Order example:**  
FD-01MH

<b>Description</b>	Good value zinc die-cast regulator of solid design.
<b>Filter element</b>	0.01 µm coalescing filter, 5 µm, 20 µm und 50 µm
<b>Filtration efficiency</b>	coalescing filter: 99.99% based on 0.01 µm particle size
<b>Bowl</b>	metal version with and without sight glass
<b>Drainage</b>	semiautomatic drain as standard, for max. 16 bar optionally manual drain, for max. 30 bar or automatic drain, for max. 16 bar
<b>Operating pressure</b>	max. 16 bar for metal bowl with sight glass max. 30 bar for metal bowl without sight glass
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass (-01 bis -04 / -12 / -16) -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass (-06 / -1A) -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
<b>Material</b>	Body: zinc die-cast at sizes G $\frac{3}{4}$ and G $\frac{1}{2}$ , aluminium at sizes G $\frac{3}{4}$ to G2 Bowl: zinc die-cast Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m <sup>3</sup> /h*1	µm	G	

Compressed air filter, series "D"											
with semiautomatic drain, 99.99 % at 0.01 µm											
									FD		
241	206	179	metal/sight glass	0.5	570	9500	16	50	G1 $\frac{1}{4}$	FD-10MJ	
					432	7200	16			5	FD-10MG
					114	1900	16			0.01	FD-10MI
241	206	179	metal/sight glass	0.5	600	10000	16	50	G1 $\frac{1}{2}$	FD-1AMJ	
					450	7500	16			5	FD-1AMG
					120	2000	16			0.01	FD-1AMI
215	273	231	metal/sight glass	1.2	1800	30000	16	50	G1 $\frac{1}{2}$	FD-12MJ	
					1380	23000	16			5	FD-12MG
215	273	231	metal/sight glass	1.2	1800	30000	16	50	G2	FD-16MJ	
					1380	23000	16			5	FD-16MG

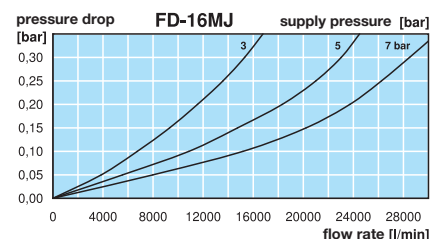
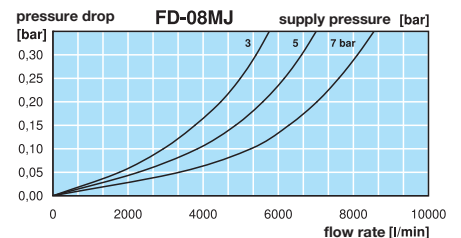
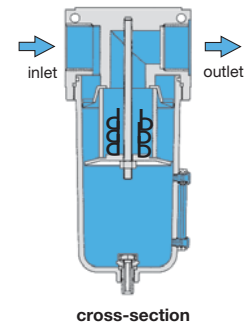
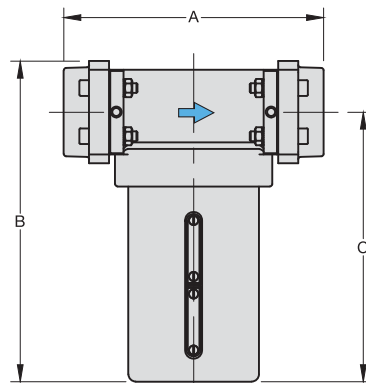
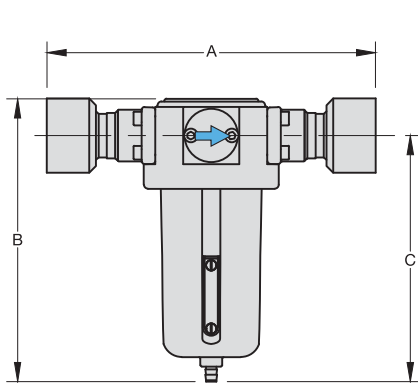


## Special options, add the appropriate letter

<b>operating pressure 30 bar</b>	metal bowl w/o sight glass, with manual drain	FD-...N.H
<b>manual drain</b>	max. 16 bar	FD-...H
<b>automatic drain</b>	draining through float valve, max. 16 bar for G $\frac{3}{8}$ to G2	FD-...R

## Accessories

<b>mounting bracket</b>	made of stainless steel	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	<b>BW00-59S</b>
	made of steel	for G1 $\frac{1}{2}$ (12) and G2	<b>BW00-61</b>



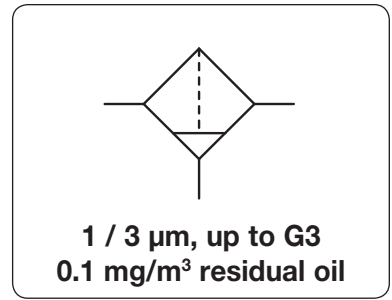
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

**Order example:**  
**FD-10MJ**

	Pre-filter V	Fine filter Z
<b>Description</b>	Coarse filter for removing water and solid impurities.	Filters out oil, water and solid impurities. Resistant to mineral and synthetic oils.
<b>Filter element</b>	3 µm incoming flow from inside to outside.	1 µm incoming flow from inside to outside.
<b>Filtration efficiency</b>	99.99% based on 3 µm particle size	99.9999% at 1 µm particle size, residual oil content ≤ 0.5 mg/m <sup>3</sup>
<b>Filter change</b>	Cleaning required as from 0.35 bar differential pressure. Solid impurities removed by blowing from	The filter must be changed as from 0.35 bar differential pressure or after one year at the latest.
<b>Drainage</b>	automatic drain as standard, optionally manual drain	
<b>Temperature range</b>	1 °C to 65 °C / 34 °F to 149 °F	
<b>Operating pressure</b>	max. 16 bar	
<b>Material</b>	Body/Bowl: chromated and powder-coated cast aluminium	



Dimensions			Bowl		Flow rate		Filter element	Connection	Order number
A	B	C	Design	Capacity	m <sup>3</sup> /h*1	l/min*1	µm	thread	
mm	mm	mm	of / with	l				G	

Micro Pre-filter 3 µm									
with automatic drain, 99,99% filtration efficiency, max. 16 bar									
FG. V									
69	194	173	aluminium /	0.2	30	500	3	G¼	FG-02V
89	293	269	automatic drain	0.8	60	1000		G¾	FG-03V
89	293	269		0.8	108	1800		G½	FG-04V
89	293	269		0.8	132	2200		G¾	FG-A6V
109	393	359		1.8	180	3000		G¾	FG-06V
109	393	359		1.8	270	4500		G1	FG-08V
109	540	506		2.7	372	6200		G1¼	FG-10V
109	540	506		2.7	432	7200		G1½	FG-1AV
150	576	535		4.9	732	12200		G1½	FG-12V
150	954	913		8.0	1050	17500		G2	FG-16V
188	759	703		10.3	1800	30000		G2½	FG-20V
188	939	903		12.7	2220	37000		G3	FG-24V



Micro Fein filter 1 µm									
with automatic drain, 99,9999% filtration efficiency residual oil ≤ 0.1 mg/m <sup>3</sup> , max. 16 bar									
FG. Z									
69	194	173	aluminium /	0.2	30	500	1	G¼	FG-02Z
89	293	269	automatic drain	0.8	60	1000		G¾	FG-03Z
89	293	269		0.8	108	1800		G½	FG-04Z
89	293	269		0.8	132	2200		G¾	FG-A6Z
109	393	359		1.8	180	3000		G¾	FG-06Z
109	393	359		1.8	270	4500		G1	FG-08Z
109	540	506		2.7	372	6200		G1¼	FG-10Z
109	540	506		2.7	432	7200		G1½	FG-1AZ
150	576	535		4.9	732	12200		G1½	FG-12Z
150	954	913		8.0	1050	17500		G2	FG-16Z
188	759	703		10.3	1800	30000		G2½	FG-20Z
188	939	903		12.7	2220	37000		G3	FG-24Z



### Special options, add the appropriate letter

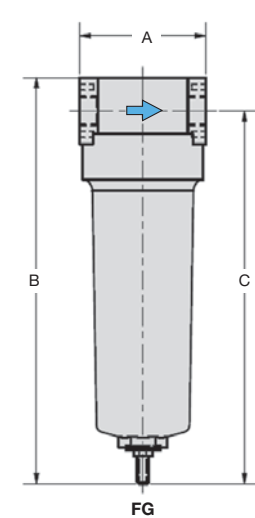
- differential pressure gauge FG-... D
- replacement indicator FG-... E
- further sizes (on request)

### Accessories

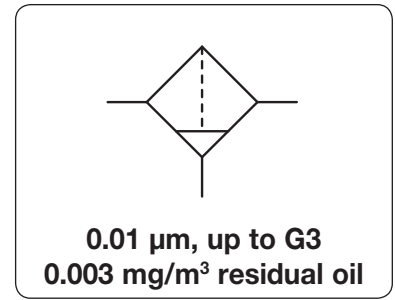
- set of mounting brackets made of steel
  - for G¼ BW00-52
  - for G¾ to G¾ (A6) BW00-53
  - for G¾ (06) to G1½ BW00-54
  - for G1½ (12) and G2 BW00-55
  - for G2½ and G3 BW00-56

Flow rate conversion factor for other operating pressures																
operating pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
factor	0.25	0.38	0.5	0.65	0.75	0.88	1	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2	2.13

\*1 at 7 bar operating pressure and open outlet. Pressure drop in new condition: **20 mbar** on pre-filter and **30 mbar** on universal filter. The maximum permissible flow rate is 10% higher than the indicated value.



	Super fine filter X	Activated Carbon Filter A
<b>Description</b>	The filter separates oil, water and solid impurities from compressed air or non-corrosive gases. It is resistant to mineral and synthetic oils.	Air filtered with this combination is virtually free from oil and odours.
<b>Filter element</b>	0.01 µm incoming flow from inside to outside	0.01 µm incoming flow from inside to outside
<b>Filtration efficiency</b>	99.99999% based on 0.01 µm particle size residual oil content ≤ 0.01 mg/m <sup>3</sup> at 7 bar and 20 °C/68 °F	residual oil content ≤ 0.03 mg/m <sup>3</sup> bei 7 bar and 20 °C/68 °F
<b>Filter change</b>	Cleaning required as from 0.35 bar differential pressure, at the latest after 3 months.	Cleaning required as from 0.35 bar differential pressure, at the latest after 3 months.
<b>Drainage</b>	automatic drain as standard, optionally manual drain	manual drain as standard
<b>Temperature range</b>	1 °C to 65 °C / 34 °F to 149 °F	1 °C to 30 °C / 34 °F to 86 °F
<b>Operating pressure</b>	max. 16 bar	
<b>Material</b>	Body/Bowl: chromated and powder-coated cast aluminium	



Dimensions			Bowl		Flow rate		Filter element	Connection	Order number
A	B	C	Design	Capacity	m <sup>3</sup> /h*1	l/min*1	µm	thread	G

Super fine filter 0.01 mg/m <sup>3</sup> residual oil							with automatic drain, max. 16 bar 99,99999%, at 0.01 µm		FG. X
69	194	173	aluminium /	0.2	30	500	0.01	G¼	<b>FG-02X</b>
89	293	269	manual drain	0.8	60	1000		G¾	<b>FG-03X</b>
89	293	269		0.8	108	1800		G½	<b>FG-04X</b>
89	293	269		0.8	132	2200		G¾	<b>FG-A6X</b>
109	393	359		1.8	180	3000		G¾	<b>FG-06X</b>
109	393	359		1.8	270	4500		G1	<b>FG-08X</b>
109	540	506		2.7	372	6200		G1¼	<b>FG-10X</b>
109	540	506		2.7	432	7200		G1½	<b>FG-1AX</b>
150	576	535		4.9	732	12200		G1½	<b>FG-12X</b>
150	954	913		8.0	1050	17500		G2	<b>FG-16X</b>
188	759	703		10.3	1800	30000		G2½	<b>FG-20X</b>
188	939	903		12.7	2220	37000		G3	<b>FG-24X</b>



Activated carbon filter 0.003 mg/m <sup>3</sup> residual oil							with manual drain, max. 16 bar		FG. A
69	185	164	aluminium /	0.2	30	500	activated carbon	G¼	<b>FG-02A</b>
89	284	260	manual drain	0.8	60	1000		G¾	<b>FG-03A</b>
89	284	260		0.8	108	1800		G½	<b>FG-04A</b>
89	284	260		0.8	132	2200		G¾	<b>FG-A6A</b>
109	384	350		1.8	180	3000		G¾	<b>FG-06A</b>
109	384	350		1.8	270	4500		G1	<b>FG-08A</b>
109	531	497		2.7	372	6200		G1¼	<b>FG-10A</b>
109	531	497		2.7	432	7200		G1½	<b>FG-1AA</b>
150	567	526		4.9	732	12200		G1½	<b>FG-12A</b>
150	945	904		8.0	1050	17500		G2	<b>FG-16A</b>
188	748	694		10.3	1800	30000		G2½	<b>FG-20A</b>
188	930	894		12.7	2220	37000		G3	<b>FG-24A</b>



### Special options, add the appropriate letter

- differential pressure gauge FG-. . . D
- replacement indicator FG-. . . E
- further sizes (on request)

### Accessories

- set of mounting brackets made of steel
  - for G¼ **BW00-52**
  - for G¾ to G¾ (A6) **BW00-53**
  - for G¾ (06) to G1½ **BW00-54**
  - for G1½ (12) and G2 **BW00-55**
  - for G2½ and G3 **BW00-56**

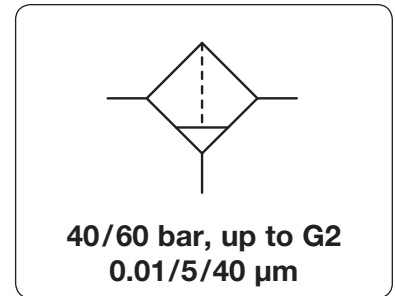
Flow rate conversion factor for other operating pressures																
operating pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
factor	0.25	0.38	0.5	0.65	0.75	0.88	1	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2	2.13

\*1 at 7 bar operating pressure and open outlet. Pressure drop in new condition: **50 mbar** on fine filter and **90 mbar** on super fine filter. The maximum permissible flow rate is 10% higher than the indicated value.

**Spare parts: see separate spare parts list** **PDF CAD**  
www.aircom.net

**Order example: FG-02X**

<b>Description</b>	Compressed air filter for up to 60 bar operating pressure with various filter elements. Mounting in horizontal position, flow direction indicated by arrow.
<b>Filter element</b>	5 µm and 40 µm made of sintered bronze, 0.01 µm coalescing filter made of borosilicate fibres with stainless steel jacket and foam protection
<b>Filtration efficiency</b>	coalescing filter: 99.999% based on 0.01 µm particle size
<b>Bowl</b>	metal version without sight glass
<b>Drainage</b>	manual drain as standard
<b>Supply pressure</b>	max. 60 bar
<b>Temperature range</b>	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: black, anodized aluminium Bowl: brass at G $\frac{3}{8}$ to G1, aluminium at G1 $\frac{1}{2}$ and G2 Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow rate	Filter element	Connection	Order number
A	B	C	Design	Capacity	rate	thread	
mm	mm	mm	made of	l	m <sup>3</sup> /h*1	G	

## High pressure filter up to 40 bar with manual drain, 99.999% at 0.01 µm **F445**

72	200	168	metal	0.08	162	2700	40	G $\frac{3}{8}$ " <sup>2</sup>	<b>F445-03EL</b>
65	200	168			168	2800		G $\frac{1}{2}$ "	<b>F445-04EL</b>
92	210	170	metal	0.10	198	3300		G $\frac{3}{4}$ " <sup>2</sup>	<b>F445-06EL</b>
80	210	170			210	3500		G1"	<b>F445-08EL</b>
150	285	243	metal	0.30	1200	20000		G1 $\frac{1}{2}$ " <sup>2</sup>	<b>F445-12EL</b>
140	285	243			1320	22000		G2"	<b>F445-16EL</b>
72	200	168	metal	0.08	126	2100	5	G $\frac{3}{8}$ " <sup>2</sup>	<b>F445-03GL</b>
65	200	168			138	2300		G $\frac{1}{2}$ "	<b>F445-04GL</b>
92	210	170	metal	0.10	156	2600		G $\frac{3}{4}$ " <sup>2</sup>	<b>F445-06GL</b>
80	210	170			168	2800		G1"	<b>F445-08GL</b>
150	285	243	metal	0.30	900	15000		G1 $\frac{1}{2}$ " <sup>2</sup>	<b>F445-12GL</b>
140	285	243			1080	18000		G2"	<b>F445-16GL</b>
72	200	168	metal	0.08	150	2500	0.01	G $\frac{3}{8}$ " <sup>2</sup>	<b>F445-03IL</b>
65	200	168			162	2700		G $\frac{1}{2}$ "	<b>F445-04IL</b>
92	210	170	metal	0.10	192	3200		G $\frac{3}{4}$ " <sup>2</sup>	<b>F445-06IL</b>
80	210	170			204	3400		G1"	<b>F445-08IL</b>
150	285	243	metal	0.30	1140	19000		G1 $\frac{1}{2}$ " <sup>2</sup>	<b>F445-12IL</b>
140	285	243			1260	21000		G2"	<b>F445-16IL</b>



## High pressure filter up to 60 bar with manual drain, 99.999% at 0.01 µm **F465**

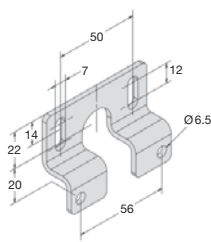
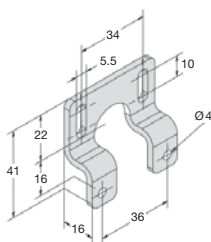
72	185	160	metal	0.08	162	2700	40	G $\frac{3}{8}$ " <sup>2</sup>	<b>F465-03EL</b>
65	185	160			168	2800		G $\frac{1}{2}$ "	<b>F465-04EL</b>
92	200	170	metal	0.10	198	3300		G $\frac{3}{4}$ " <sup>2</sup>	<b>F465-06EL</b>
80	185	160			210	3500		G1"	<b>F465-08EL</b>
72	185	160	metal	0.08	126	2100	5	G $\frac{3}{8}$ " <sup>2</sup>	<b>F465-03GL</b>
65	185	160			135	2300		G $\frac{1}{2}$ "	<b>F465-04GL</b>
92	200	170	metal	0.10	156	2600		G $\frac{3}{4}$ " <sup>2</sup>	<b>F465-06GL</b>
80	200	170			168	2800		G1"	<b>F465-08GL</b>
72	185	160	metal	0.08	150	2500	0.01	G $\frac{3}{8}$ " <sup>2</sup>	<b>F465-03IL</b>
65	185	160			162	2700		G $\frac{1}{2}$ "	<b>F465-04IL</b>
92	200	170	metal	0.10	192	3200		G $\frac{3}{4}$ " <sup>2</sup>	<b>F465-06IL</b>
80	200	170			204	3400		G1"	<b>F465-08IL</b>

## Special options, add the appropriate letter

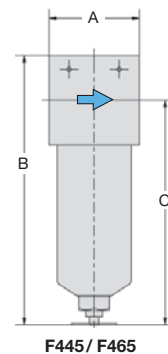
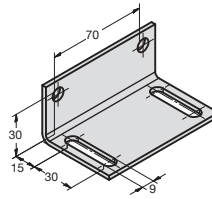
for oxygen specially cleaned **F4.5-...15**

## Zubehör, lose beigelegt

mounting bracket made of steel



for G $\frac{3}{8}$ " and G $\frac{1}{2}$ " **BW00-15**  
for G $\frac{3}{4}$ " and G1" **BW00-16**  
for G1 $\frac{1}{2}$ " and G2" **BW00-60**



\*1 at 7 bar operating pressure and 0.33 bar pressure drop

\*2 reduced from the next bigger filter

Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net



Order example:  
**F445-03EL**



**Description** The exhaust filter/sound silencer treats all exhaust air issued by pneumatic devices:  
 1) Removing environmentally harmful oil particles from oily exhaust air  
 2) Silencing exhaust air noise

**Filtration efficiency** > 99.99%, residual oil content < 0.01 mg/m<sup>3</sup>

**Noise reduction** > 40 dB (A) at 1 m

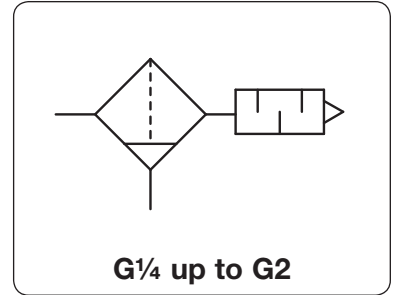
**Service life** approx. 2500 operating hours, depending on contamination

**Drainage** The bowl is emptied by means of an overflow valve or by opening the manual drain.

**Operating pressure** max. 16 bar

**Temperature range** 2 °C to 100 °C / 36 °F to 212 °F

**Material** Housing: polypropylene at G¼ and G¾, aluminium at G½ to G2  
 Filter: micro fibreglass and polyurethane



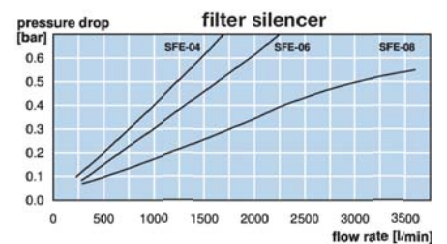
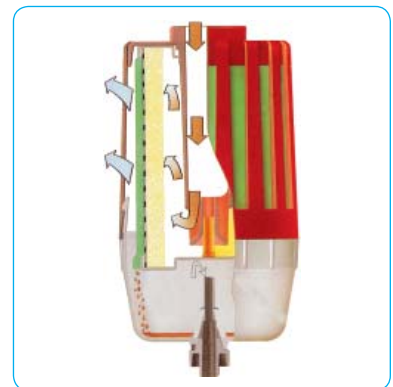
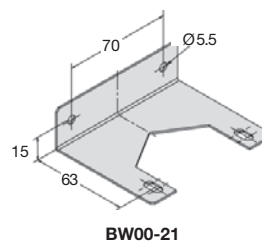
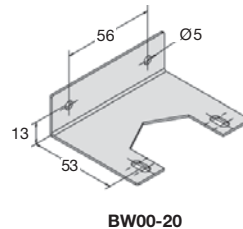
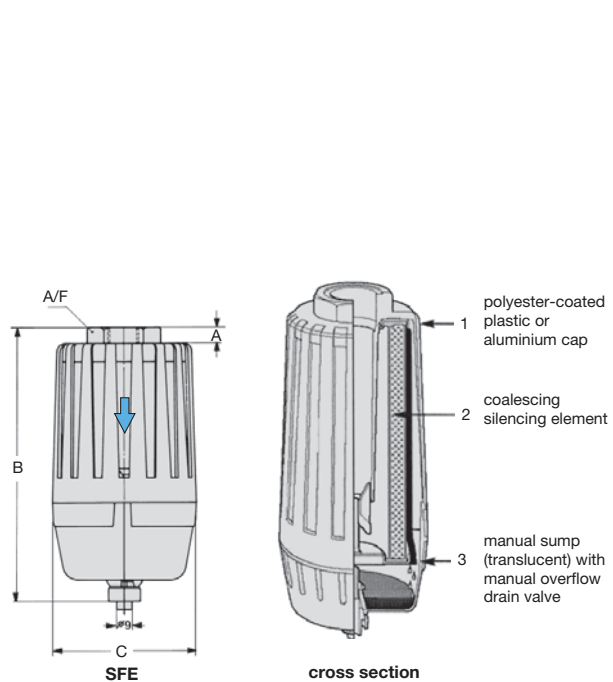
Dimensions				Flow rate	Connection thread	Order number
A	B	ØC	A/F			
mm	mm	mm	mm	m <sup>3</sup> /h*1	G	

Filter silencer				operating pressure max. 16 bar		SFE	
8	131	77	28	30	500	G¼	<b>SFE-02</b>
8	131	77	28	35	580	G¾	<b>SFE-03</b>
12	181	90	36	75	1250	G½	<b>SFE-04</b>
12	181	90	36	100	1670	G¾	<b>SFE-06</b>
15	254	110	50	175	2920	G1	<b>SFE-08</b>
70	287	110	50	200	3330	G1¼	<b>SFE-10</b>
70	312	110	50	200	3330	G1½	<b>SFE-12</b>
70	312	110	50	200	3330	G2	<b>SFE-16</b>



## Accessories

mounting bracket	made of steel	for G¼ to G¾	<b>BW00-20</b>
		for G1 to G2	<b>BW00-21</b>



\*1 at 6 bar operating pressure to atmosphere

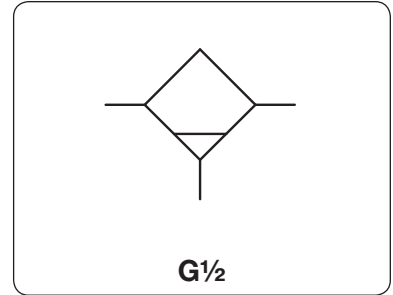
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net



Order example:  
**SFE-02**

<b>Description</b>	The condensate drain collects any liquid which has accumulated in the compressed air circuit. It is to be installed at the lowest point in the compressed air plant.
<b>Bowl</b>	plastic version with bowl guard at D608
<b>Drain</b>	metal version with or without sight glass at D11, with sight glass at D608 D11: internal automatic drain as standard for max. 12 bar, optionally manual drain D608: external automatic drain as standard for max. 18 bar, optionally internal drain for max. 16 bar without manual drain
<b>Operating pressure</b>	max. 12 bar at plastic bowl max. 12 bar or 16 bar at metal bowl with internal automatic drain max. 18 bar at metal bowl with external automatic drain
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass
<b>Material</b>	Body: zinc die-cast Sight glass: polyurethane Bowl: polyurethane or zinc die-cast



Dimensions		Bowl	Automatic	Operating	Connection	Order
A	B	design	drain	pressure	thread	number
mm	mm	of / with	capacity	max. bar	G	

Condensate / tank drain with automatic drain						D11/D608	
54	134	metal	0.12	SA605MD	12	G1/2	<b>D11-04</b>
		metal / sight glass					<b>D11-04W</b>
95	159	plastic / bowl guard	0.25	SA603D	12	G1/2	<b>D608-04D</b>
		metal / sight glass			18		<b>D608-04DW</b>



D11-04W

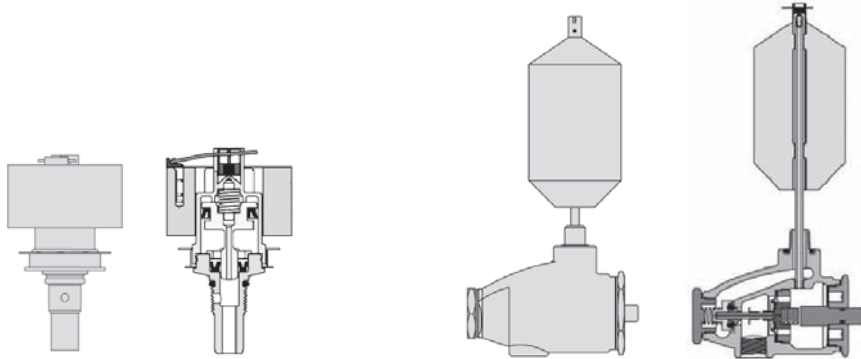
D11-04

## Wahlweise Ausführung, es ist der entsprechende Buchstabe hinzuzufügen

<b>NPT</b>	connection thread	D . . . -04 . <b>N</b>
<b>manual drain</b>	instead of automatic drain	for D11 D11 -04 . <b>H</b>
<b>manual drain</b>	instead of automatic drain	for D608 D608-04 . <b>H</b>
<b>automatic drain</b>	internal, SA702MD, max. 16 bar	for D608 D608-04 . <b>R</b>

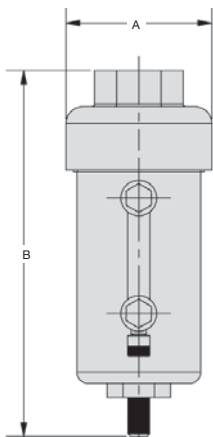


D608-04DW

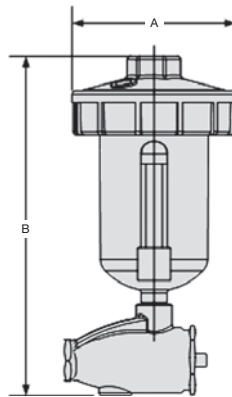


**SA605MD**  
internal drain

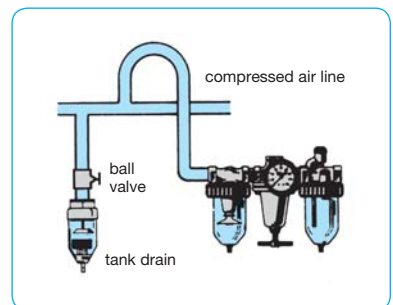
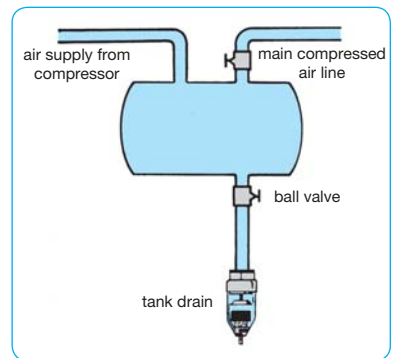
**SA603D**  
external drain



**D11-04W**



**D608**



examples of use



## Filter Pressure Regulators

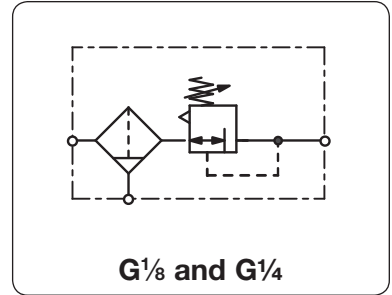
Description	Pressure range bar	Connection thread	Device	Page
„Miniature“-Series	0.2 ... 1,8 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	B548	<b>17.02</b>
„Midi“-Series made of metal	0.2 ... 1,8 / 17	G $\frac{1}{4}$ - G $\frac{1}{2}$	B11, B12	<b>17.03</b>
made of plastic	0 ... 4 / 12	G $\frac{1}{4}$ - G1	B042 ... B095	<b>17.04</b>
„Maxi“-Series, robust, modular	0.2 ... 4 / 17	G $\frac{1}{4}$ - G1	B20, B21	<b>17.05</b>
Series „D“, made of aluminium / die-cast zinc	0.3 ... 3 / 15	G $\frac{1}{8}$ - G2	BD	<b>17.06</b>
down to -40 °C / -40 °F	0 ... 0.7 / 8	$\frac{1}{4}$ " NPT	B300	<b>17.08</b>



# 17

## Filter Pressure Regulators

<b>Description</b>	Regulator of small and compact design, ideal for limited space conditions.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 11 bar for plastic bowl, max. 21 bar for metal bowl		
<b>Adjustment</b>	by plastic knob with snap-lock		
<b>Relieving function</b>	relieving		
<b>Gauge port</b>	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied		
<b>Filter element</b>	20 $\mu$ m, optionally 5 $\mu$ m, made of polypropylene		
<b>Bowl</b>	plastic or metal version		
<b>Drainage</b>	manual drain as standard, for max. 21 bar semiautomatic drain as option, for max. 12 bar		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and semiautomatic drain version 0 °C to 80 °C / 32 °F to 176 °F for metal bowl		
<b>Material</b>	Body: aluminium	Elastomer: NBR/Buna-N	Inner valve: brass
	Spring cage: glass fibre-reinforced plastic		
	Bowl: polyurethane or zinc die-cast		



Dimensions			Bowl	Flow	P <sub>1</sub>	Connection	Pressure	Order
A	B	C	design	rate	max.	thread	range	number
mm	mm	mm	made of	l m <sup>3</sup> /h*1	l/min*1	G	bar	

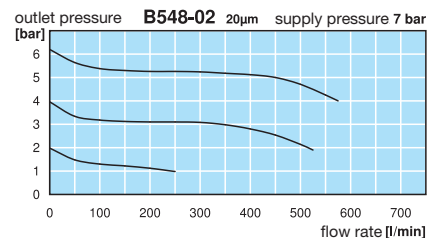
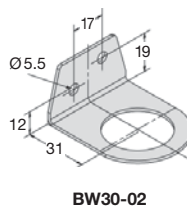
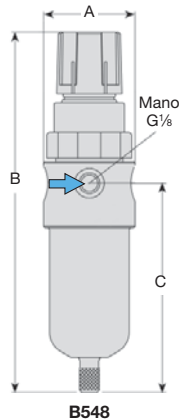
Miniature filter regulator			with manual drain, relieving, without gauge, filter element 20 $\mu$ m					B548		
40	152	86	plastic	0.04	27	450	11	G $\frac{1}{8}$	0.2...1.8	B548-01AHA
									0.2...4.0	B548-01AHB
									0.3...9.0	B548-01AHC
		metal	21	0.2...1.8	B548-01DHA					
				0.2...4.0	B548-01DHB					
				0.3...9.0	B548-01DHC					
40	152	86	plastic	0.04	27	450	11	G $\frac{1}{4}$	0.2...1.8	B548-02AHA
									0.2...4.0	B548-02AHB
									0.3...9.0	B548-02AHC
		metal	21	0.2...1.8	B548-02DHA					
				0.2...4.0	B548-02DHB					
				0.3...9.0	B548-02DHC					



Special options, add the appropriate letter		
5 $\mu$ m filter element		B548-0..G.
NPT	connection thread	B548-0...N
non-relieving	without relieving function	B548-0...K
semiautomatic drain	RK500SY, max. 12 bar	B548-0...M

## Accessories

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	MA4001-...*2
mounting bracket	made of steel	BW30-02
mounting nut	made of plastic	M30x1,5K
	made of aluminium	M30x1,5A



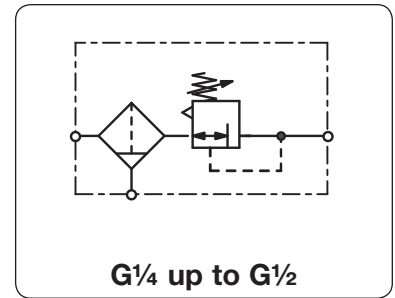
\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Extensions: see chapter for FRL service units  
Gauges: see chapter for measuring devices  
Spare parts: see separate spare parts list

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Order example:  
**B548-01AHA**

<b>Description</b>	Filter pressure regulator with high flow and of small design.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 17 bar for metal bowl with sight glass, max. 21 bar for metal bowl without sight glass		
<b>Adjustment</b>	by plastic knob with snap-lock at B11, by T-handle with locknut at B12		
<b>Relieving function</b>	relieving	<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Filter element</b>	40 $\mu$ m, optionally 5 $\mu$ m, made of polypropylene		
<b>Bowl</b>	metal version with sight glass, optionally without		
<b>Drain</b>	manual drain as standard, for max. 21 bar, semiautomatic or automatic drain as option, for max. 12 bar		
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass 0 °C to 50 °C / 32 °F to 122 °F for semiautomatic or automatic drain for appropriately conditioned compressed air down to -30 °C / -22 °F at B12		
<b>Material</b>	Body: zinc die-cast	Bowl: zinc die-cast	
	Inner valve: brass, optionally stainless steel	Elastomer: NBR/Buna-N, optionally FKM	
	Spring cage: glass fibre-reinforced plastic at B11, zinc die-cast at B12		



Dimensions			Bowl	Flow	Supply	Connection	Pressure	Order
A	B	C	Design	Capacity	rate	max.	range	number
mm	mm	mm	made of/with	l	m $^3$ /h*1	l/min*1	bar	

"Midi" filter regulator			manual drain, relieving, max. 17 bar without pressure gauge, 40 $\mu$ m filter element					B11		
60	210	120	metal / sight glass	0.12	120	2 000	17	G $\frac{1}{4}$	0.2 ... 1.8	<b>B11-02WJA</b>
									0.2 ... 4.0	<b>B11-02WJB</b>
									0.3 ... 9.0	<b>B11-02WJC</b>
									0.5 ... 17	<b>B11-02WJD</b>
60	210	120	metal / sight glass	0.12	132	2 200	17	G $\frac{3}{8}$	0.2 ... 1.8	<b>B11-03WJA</b>
									0.2 ... 4.0	<b>B11-03WJB</b>
									0.3 ... 9.0	<b>B11-03WJC</b>
									0.5 ... 17	<b>B11-03WJD</b>
60	210	120	metal / sight glass	0.12	138	2 300	17	G $\frac{1}{2}$	0.2 ... 1.8	<b>B11-04WJA</b>
									0.2 ... 4.0	<b>B11-04WJB</b>
									0.3 ... 9.0	<b>B11-04WJC</b>
									0.5 ... 17	<b>B11-04WJD</b>

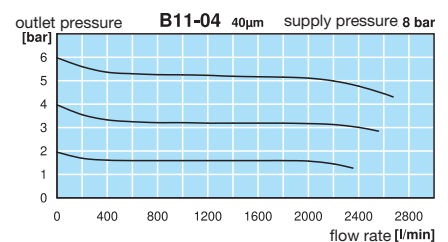
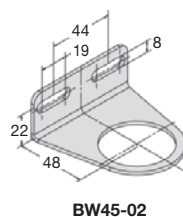
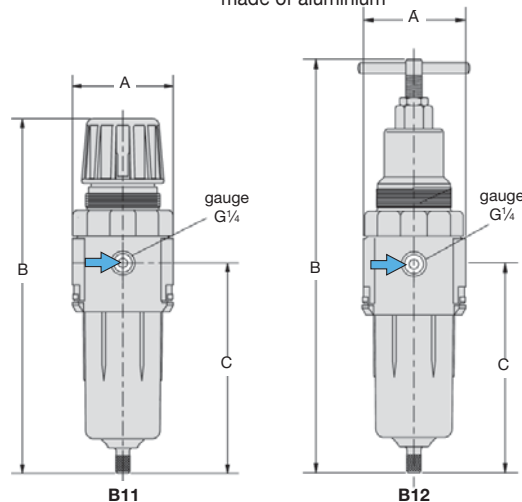


### Special options, add the appropriate letter

<b>T-handle</b>	locknut included, height = 215 mm	B12-0 . . . .
<b>5 <math>\mu</math>m filter element</b>		B11-0 . . . G.
<b>bowl w/o sight glass</b>	max. 21 bar, 0 °C to 80 °C / 32 °F to 176 °F for appropriately conditioned compressed air down to -30 °C / -22 °F	B12-0 . D . .
<b>NPT</b>	connection thread	B11-0 . . . . N
<b>non-relieving</b>	without relieving function	B11-0 . . . . K
<b>semiautomatic drain</b>	RK500SY, max. 12 bar	B11-0 . . . . M
<b>automatic drain</b>	SA605MD, max. 12 bar	B11-0 . . . . R
<b>FKM elastomer</b>	inner parts made of brass	B11-0 . . . . X64

### Accessories

<b>pressure gauge</b>	Ø 50 mm, 0 ... *2 bar, G $\frac{1}{4}$	<b>MA5002- . . *2</b>
<b>mounting bracket</b>	made of steel	<b>BW45-02</b>
<b>mounting nut</b>	made of plastic	<b>M45x1,5K</b>
	made of aluminium	<b>M45x1,5A</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar

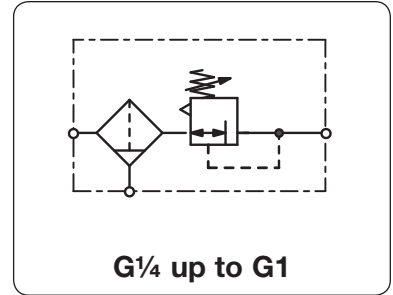
**Extensions:** see chapter for FRL service units  
**Gauges:** see chapter for measuring devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

**Order example:**  
**B11-02WJA**



<b>Description</b>	Modular pressure filter regulator which can be interlocked with all other instruments of the same series.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 12,5 bar, max. 16 bar for Series 042		
<b>Adjustment</b>	by knob with snap-lock		
<b>Relieving function</b>	relieving		
<b>Gauge port</b>	G $\frac{1}{8}$ or G $\frac{1}{4}$ at series 095, on both sides of the body, screw plugs supplied		
<b>Filter element</b>	20 $\mu$ m, optionally 5 $\mu$ m, made of sintered polyethylene		
<b>Bowl</b>	plastic version with bayonet catch, threaded connection at series 042		
<b>Drainage</b>	manual drain with semiautomatic drain, optionally automatic drain		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F		
<b>Material</b>	Body: nylon, POM at series 042	Inner valve: brass	
	Bowl: polyamide	Thread insert: brass	
	Elastomer: NBR/Buna-N		



Dimensions			Bowl		Flow rate	Supply max.	Connection thread	Order number
A	B	C	Design	Capacity				
mm	mm	mm	made of/with	l	m $^3$ /h*1	l/min*1	bar	G

Plastic filter regulator					manual drain with semiautomatic drain, relieving, max. 12,5/16 bar w/o gauge, pressure range 0...8 bar, 20 $\mu$ m filter element			B0	
42	207	126	plastic/	0.02	72	1200	16	G $\frac{1}{4}$	<b>B042-02HC</b>
52	239	148	bowl guard	0.04	120	2000	12.5	G $\frac{3}{8}$	<b>B050-03HC</b>
52	239	148		0.04	126	2100	12.5	G $\frac{1}{2}$	<b>B052-04HC</b>
63	276	173		0.10	168	2800	12.5	G $\frac{1}{2}$	<b>B075-04HC</b>
137	276	173		0.10	174	2900	12.5	G $\frac{3}{4}$	<b>B080-06HC</b>
195	411	237		0.20	828	13800	12.5	G1	<b>B095-08HC</b>



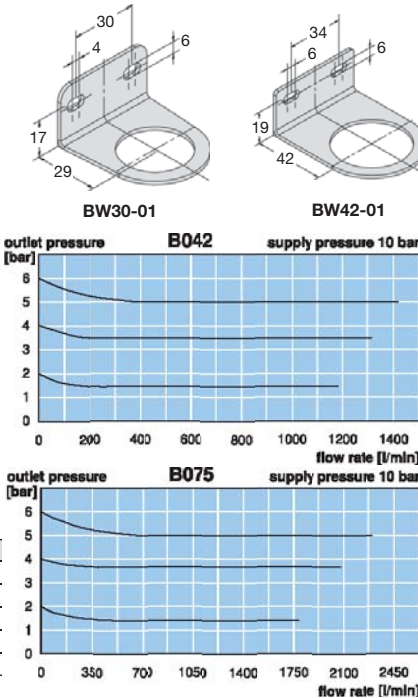
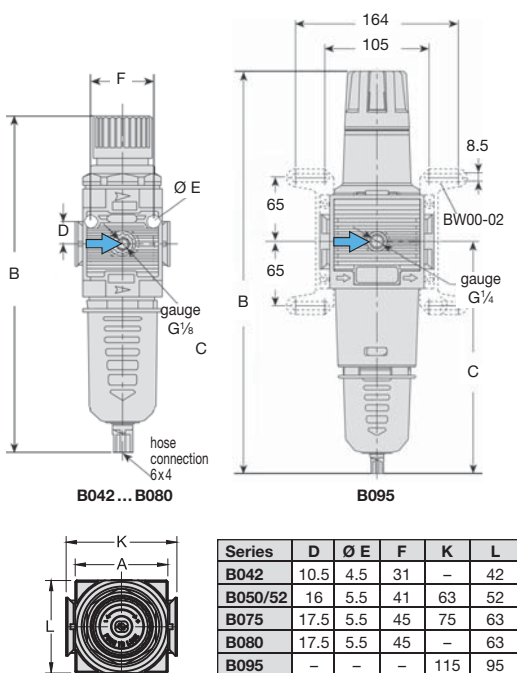
Special options, add the appropriate letter		
5 $\mu$ m filter element		for B042 to B080 B0...0.G. for B095 B095-0.G.
non-relieving	without relieving function	for all B0...0...K
0... 4 bar pressure range		for B042 to B080 B0...0...B for B095 B095-0...B
0...12 bar pressure range		for B042 to B080 B0...0...D for B095 B095-0...D
automatic drain		B0...0...R



Accessories		
pressure gauge	$\varnothing$ 40 mm, 0...*2 bar, G $\frac{1}{8}$ $\varnothing$ 50 mm, 0...*2 bar, G $\frac{1}{8}$ $\varnothing$ 63 mm, 0...*2 bar, G $\frac{1}{4}$	for B042 MA4001-...*2 for B050 to B080 MA5001-...*2 for B095 MA6302-...*2
mounting bracket	made of steel, mounting nut at the device	for B042 BW30-01 for B050 to B080 BW42-01 for B095 BW00-02



Filter regulator  
17



\*1 at 10 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop      \*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

Extensions: see chapter for FRL service units  
Gauges: see chapter for measuring devices  
Spare parts: see separate spare parts list

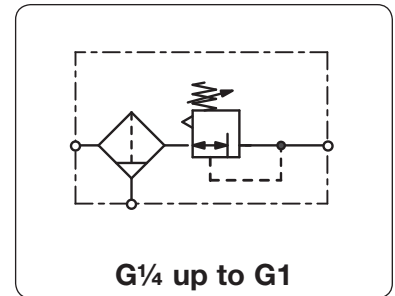
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Order example:  
**B042-02HC**

# "Maxi" Filter Pressure Regulator

B20 / B21

<b>Description</b>	High-capacity filter regulator of modular design with exchangeable inserts. Can be interlocked with lubricator without needs for double nipples. Each "maxi" device may be taken from a fixed line in seconds by simply removing the mounting bolts.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 17 bar		
<b>Adjustment</b>	by plastic knob with snap-lock at B20, by T-handle with locknut at B21		
<b>Relieving function</b>	relieving	<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
<b>Bowl</b>	metal version with sight glass	<b>Filter element</b>	40 $\mu$ m, optionally 5 $\mu$ m, made of polypropylene
<b>Drainage</b>	manual drain as standard, optionally semiautomatic or automatic drain for max. 12 bar		
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F up to 50 °C / 122 °F for semiautomatic or automatic drain version		
<b>Material</b>	Body: zinc die-cast Knob (B20): glass fibre-reinforced plastic Bowl: zinc die-cast Elastomer: NBR/Buna-N	Spring cage: zinc die-cast T-handle (B21): steel Sight glass: polyurethane Inner valve: brass and plastic	



Dimensions			Bowl		Flow rate	Connection thread	Pressure range	Order number
A	B	C	Design	Capacity				
mm	mm	mm	made of / with	l	m $^3$ /h*1	l/min*1	G	bar

"Maxi" filter regulator						with manual drain, relieving, without gauge, 40 $\mu$ m filter element, max. 17 bar		B20	
89	289	175	metal/sight glass	0.3	132	2200	G $\frac{1}{4}$	0.2... 4.0	B20-02WJB
								0.3... 9.0	B20-02WJC
								0.5... 17	B20-02WJD
					186	3100	G $\frac{3}{8}$	0.2... 4.0	B20-03WJB
								0.3... 9.0	B20-03WJC
								0.5... 17	B20-03WJD
288	4800	G $\frac{1}{2}$	0.2... 4.0	B20-04WJB					
			0.3... 9.0	B20-04WJC					
			0.5... 17	B20-04WJD					
111	289	175	metal/sight glass	0.3	408	6800	G $\frac{3}{4}$	0.2... 4.0	B20-06WJB
								0.3... 9.0	B20-06WJC
								0.5... 17	B20-06WJD
					420	7000	G1	0.2... 4.0	B20-08WJB
								0.3... 9.0	B20-08WJC
								0.5... 17	B20-08WJD

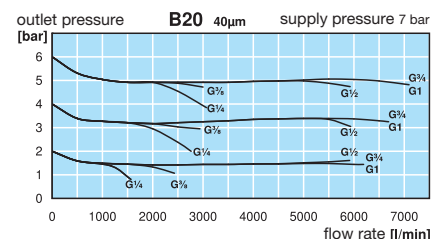
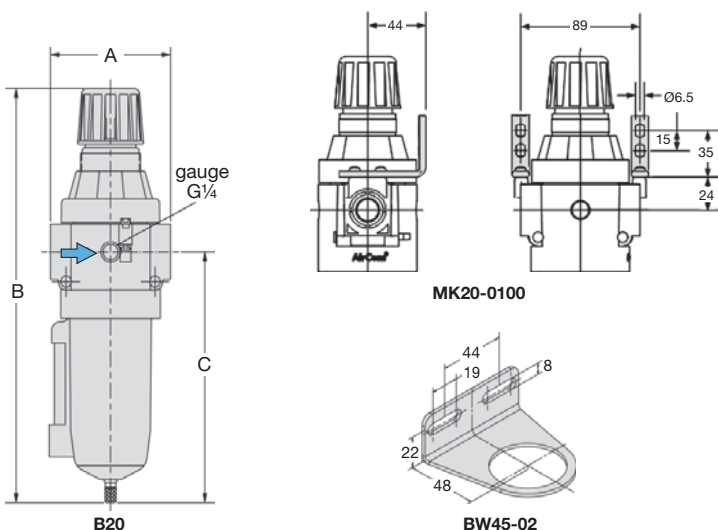


Special options, add the appropriate letter		
<b>T-handle</b>	including locknut, total height 329 mm	B21-0..W..
<b>filter element 5 <math>\mu</math>m</b>		B20-0..WG.
<b>NPT</b>	connection thread	B20-0..W..N
<b>non-relieving</b>	without relieving function	B20-0..K
<b>semiautomatic drain</b>	RK500SY, max. 12 bar	B20-0..W..M
<b>automatic drain</b>	SA605MD, max. 12 bar	B20-0..W..R



Accessories		
<b>pressure gauge</b>	$\varnothing$ 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-..*2
<b>mounting bracket</b>	mounting at the spring cage	BW45-02
<b>mounting nut</b>	made of plastic	M45x1,5K
	made of aluminium	M45x1,5A
<b>mounting bracket set</b>	made of steel	MK20-0100

Filter regulator  
17



\*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop      \*2 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar

Extensions: see chapter for FRL service units  
Gauges: see chapter for measuring devices  
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net

**Order example:**  
B20-02WJB

**Description** Low-cost zinc die-cast regulator of solid design and diaphragm operating system up to G $\frac{1}{2}$ . From G $\frac{3}{4}$  on with piston operating system. Suitable for compressed air or non-corrosive gases.

**Supply pressure** max. 16 bar for metal bowl with sight glass

**Adjustment** by knob with snap-lock up to G $\frac{1}{2}$ , by hexagon head screw from G $\frac{3}{4}$  up to G1 $\frac{1}{2}$  (BD-1A), by T-handle from G1 $\frac{1}{2}$  (BD-12.) up to G2

**Gauge port** G $\frac{1}{4}$  on both sides of the body, G $\frac{1}{8}$  on both sides of the body at BD-01/02, one screw plug supplied

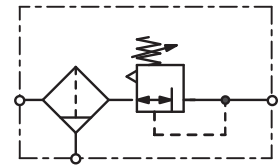
**Filter element** 50  $\mu$ m, optionally 5  $\mu$ m, made of propylene

**Bowl** plastic version, standard or short, metal version with or without sight glass

**Drainage** semiautomatic drain as standard for max. 16 bar, respectively manual drain max. 30 bar, automatic drain max. 16 bar as option

**Temperature range** -10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass, for G $\frac{1}{8}$  up to G $\frac{1}{2}$  -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass, for G $\frac{3}{4}$  up to G2 -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass, for all sizes

**Material** Body: zinc die-cast at G $\frac{1}{8}$  and G $\frac{1}{4}$ , aluminium at G $\frac{3}{8}$  to G2  
Elastomer: NBR/Buna-N  
Bowl: zinc die-cast



**G $\frac{1}{8}$  up to G2**  
**5/50  $\mu$ m, up to 30 bar**

Dimensions			Bowl	Flow	P <sub>1</sub>	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m <sup>3</sup> /h*1 l/min*1	$\mu$ m	G	

Filter pressure regulator										
with semiautomatic drain, relieving, without pressure gauge, pressure range 0.5...8 bar										
									BD	
40	201	128	metal/sight glass	0.05	27	450	16	50	G $\frac{1}{8}$	BD-01M BD-01NH
			metal	0.05			30			
40	201	128	metal/sight glass	0.05	30	500	16	50	G $\frac{1}{4}$	BD-02M BD-02NH
			metal	0.05			30			
64	248	148	metal/sight glass	0.18	108	1800	16	50	G $\frac{3}{8}$	BD-03M BD-03NH
			metal	0.18			30			
64	248	148	metal/sight glass	0.18			16		G $\frac{1}{2}$	BD-04M BD-04NH
			metal	0.18			30			
130	314	179	metal/sight glass	0.50	300	5000	16	50	G $\frac{3}{4}$	BD-06M BD-06NH
			metal	0.50			30			
130	314	179	metal/sight glass	0.50			16		G1	BD-08M BD-08NH
			metal	0.50			30			
241	314	179	metal/sight glass	0.50	390	6500	16	50	G1 $\frac{1}{4}$	BD-10M BD-10NH
			metal	0.50			30			
241	314	179	metal/sight glass	0.50			16		G1 $\frac{1}{2}$	BD-1AM BD-1ANH
			metal	0.50			30			



BD-01/-02  
Accessory: gauge



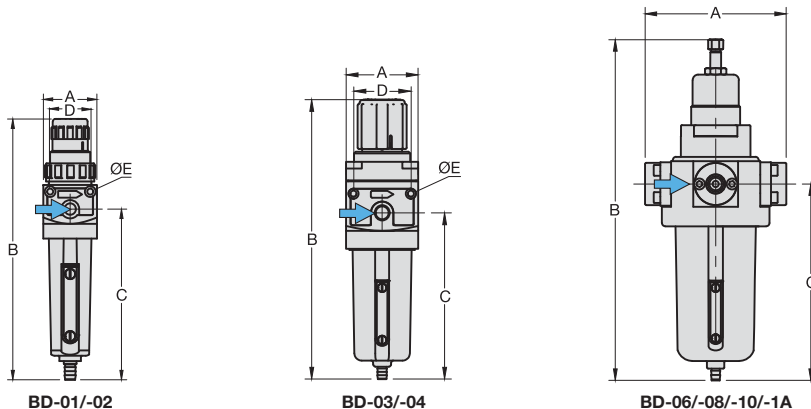
BD-03/-04  
Accessory: gauge



BD-06/-08/-10/-1A  
Accessory: gauge

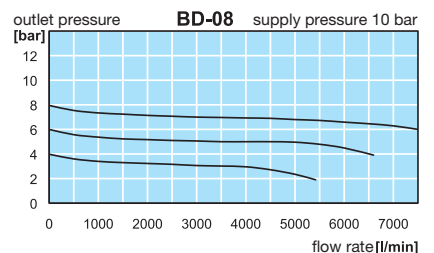
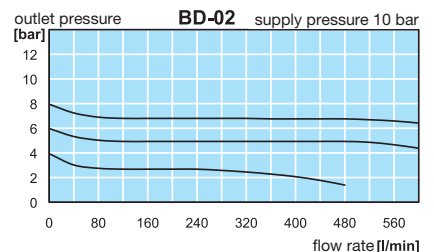
Filter regulator  
17

Type	M	D	Ø E
BD-01/02	M30x1,5	30	4.5
BD-03/04	M50x1,5	51	5.5



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

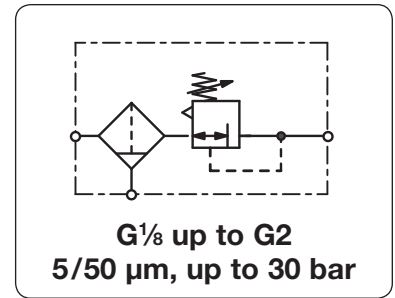


Extensions: see chapter for FRL service units  
Gauges: see chapter for measuring devices  
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net

Order example:  
BD-01M

<b>Description</b>	Low-cost zinc die-cast regulator of solid design and diaphragm operating system up to G $\frac{1}{2}$ . From G $\frac{3}{4}$ on with piston operating system. Suitable for compressed air or non-corrosive gases.
<b>Supply pressure</b>	max. 16 bar for metal bowl with sight glass
<b>Adjustment</b>	by knob with snap-lock up to G $\frac{1}{2}$ , by hexagon head screw from G $\frac{3}{4}$ up to G $1\frac{1}{2}$ (BD-1A), by T-handle from G $1\frac{1}{2}$ (BD-12.) up to G2
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ on both sides of the body at BD-01/02, one screw plug supplied
<b>Filter element</b>	50 $\mu$ m, optionally 5 $\mu$ m, made of propylene
<b>Bowl</b>	plastic version, standard or short, metal version with or without sight glass
<b>Drainage</b>	semiautomatic drain as standard for max. 16 bar, respectively manual drain max. 30 bar, automatic drain max. 16 bar as option
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass, for G $\frac{1}{8}$ up to G $\frac{1}{2}$ -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass, for G $\frac{3}{4}$ up to G2 -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass, for all sizes
<b>Material</b>	Body: zinc die-cast at G $\frac{1}{8}$ and G $\frac{1}{4}$ , aluminium at G $\frac{3}{8}$ to G2 Elastomer: NBR/Buna-N Bowl: zinc die-cast



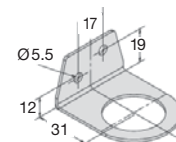
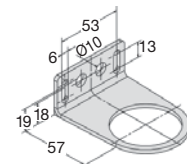
Dimensions			Bowl	Flow	P <sub>1</sub>	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/ with	l	m <sup>3</sup> /h*1 l/min*1	$\mu$ m	G	

Filter pressure regulator									with semiautomatic drain, relieving, without pressure gauge, pressure range 0.5...8 bar	BD
192	429	220	metal/sight glass	1.20	960	16000	16	50	G $1\frac{1}{2}$	BD-12M
			metal	1.20			30			BD-12NH
192	429	220	metal/sight glass	1.20	1020	17000	16		G2	BD-16M
			metal	1.20			30			BD-16NH


**BD-12/-16**

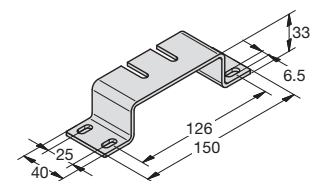
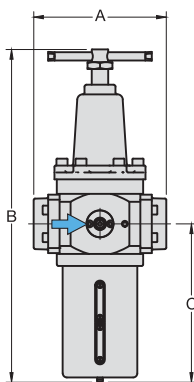
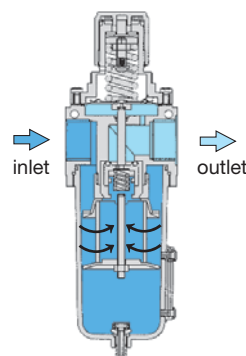
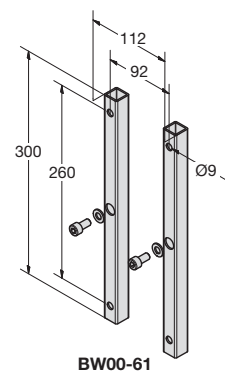
## Special options, add the appropriate letter

<b>5 <math>\mu</math>m filter element</b>		for G $\frac{1}{8}$ to G $\frac{1}{2}$	BD-...G
		for G $\frac{3}{4}$ to G1	BD-...G
		for G $1\frac{1}{4}$ to G2	BD-...G
<b>0.3 ... 3 bar regulating range</b>			BD-...B
<b>1 ... 15 bar regulating range</b>			BD-...E
<b>manual drain</b>	max. 16 bar for metal bowls with sight glass		BD-...H
<b>automatic drain</b>	max. 16 bar, drainage through float valve	for G $\frac{3}{8}$ to G2	BD-...R
<b>flange connection</b>	see chapter for stainless steel devices / flanges		BD-...F.


**BW30-02**

**BW50-03**

## Accessories

<b>pressure gauge</b>	$\varnothing$ 40 mm, 0...*2 bar, G $\frac{1}{8}$ $\varnothing$ 50 mm, 0...*2 bar, G $\frac{1}{4}$ $\varnothing$ 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>MA4001-..*2</b>
		for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>MA5002-..*2</b>
		for G $\frac{3}{4}$ up to G2	<b>MA6302-..*2</b>
<b>mounting bracket</b>	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>M30x1,5K</b>
<b>mounting bracket</b>	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>BW50-03</b>
<b>mounting nut</b>	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>M50x1,5K</b>
<b>mounting bracket</b>	made of stainless steel	for G $\frac{3}{4}$ up to G $1\frac{1}{2}$ (1A)	<b>BW00-59S</b>
<b>set of brackets</b>	made of steel	for G $1\frac{1}{2}$ (12) and G2	<b>BW00-61</b>


**BW00-59S**

**BD-12/-16**

**cross-sec-**

**BW00-61**

\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

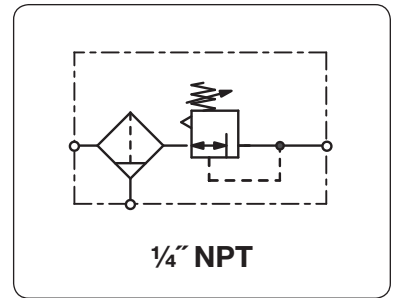
**Extensions:** see chapter for FRL service units  
**Gauges:** see chapter for measuring devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
[www.aircom.net](http://www.aircom.net)

**Order example:**  
**BD-12M**



<b>Description</b>	Filter pressure regulator especially for low temperatures as well as supply of instruments. compressed air or non-corrosive gases
<b>Media</b>	max. 17 bar
<b>Supply pressure</b>	10 mbar outlet pressure deviation at supply pressure variation of 1 bar
<b>Supply sensitivity</b>	<b>max 2 l/min subject to outlet pressure</b>
<b>Air consumption</b>	by square-headed spindle (spanner size 8 mm) with locknut
<b>Adjustment</b>	relieving, optionally non-relieving
<b>Relieving function</b>	1/4" NPT on one side of the body, one screw plug supplied
<b>Gauge port</b>	40 µm, optionally 5 µm, made of impregnated cellulose
<b>Filter element</b>	manual drain
<b>Drainage</b>	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
<b>Temperature range</b>	Body: aluminium die-cast
<b>Material</b>	Spring cage: aluminium die-cast
	Elastomer: nylon-reinforced NBR/Buna-N, optionally FKM
	Inner valve: brass, acetal, galvanised steel



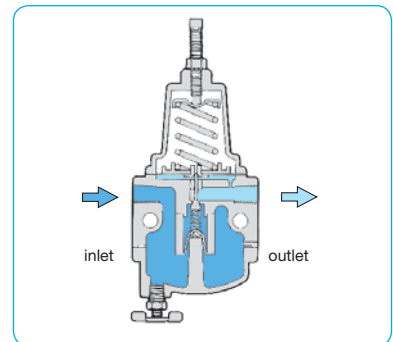
Dimensions			Bowl	Flow	P <sub>1</sub>	Connection	Pressure	Order
A	B	C	Design	Capacity	rate	max.	range	number
mm	mm	mm	made of	l	m <sup>3</sup> /h*1	l/min*1	bar	

Filter pressure regulator								with manual drain, relieving, without gauge, 40 µm filter element	B300	
197	80	83	Metall	0.1	33	550	17	1/4" NPT	0...0.7	<b>B300-020</b>
									0...2.0	<b>B300-02A</b>
									0...4.0	<b>B300-02B</b>
									0...8.0	<b>B300-02C</b>



**Special options, add the appropriate letter**

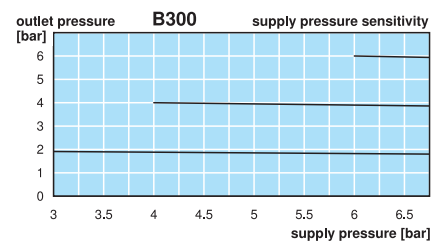
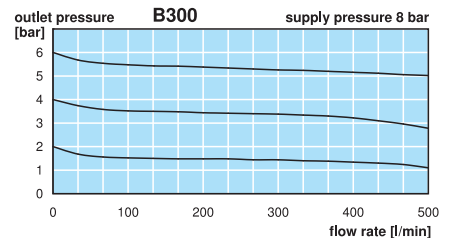
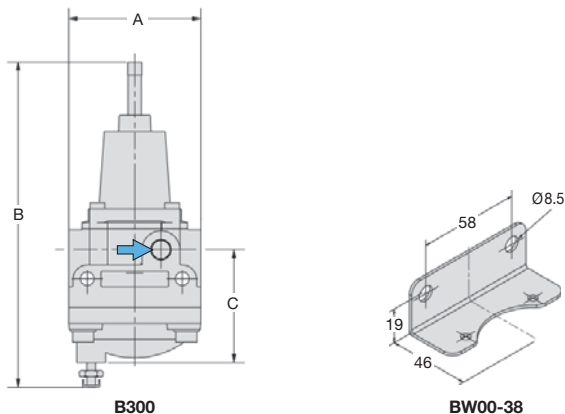
5 µm filter element		B300-02 . G
non-relieving	without relieving function	B300-02 . K
tapped exhaust	1/4" NPT	B300-02 . X12
tamper-proof cap		B300-02 . T
FKM-elastomer		B300-02 . V



**Accessories**

mounting bracket	mounting at spring cage, made of steel	<b>BW00-38</b>
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Filter regulator  
17



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

Extensions: see chapter for FRL service units  
Spare parts: see separate spare parts list

PDF CAD  
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**Order example:**  
**B300-020**



## Compressed Air Lubricators

Description	Operating pressure max. bar	Connection thread	Device	Page
made of plastic	16	G $\frac{1}{4}$ - G1	L042 ... L095	<b>18.02</b>
„Maxi“-Series, robust, block design	17	G $\frac{1}{4}$ - G1	L20	<b>18.03</b>
„Standard“-Series, robust	21	G $\frac{1}{4}$ - G2	L606	<b>18.04</b>
Series „D,, made of aluminium/zinc die-cast	30	G $\frac{1}{8}$ - G2	LD	<b>18.06</b>



# 18

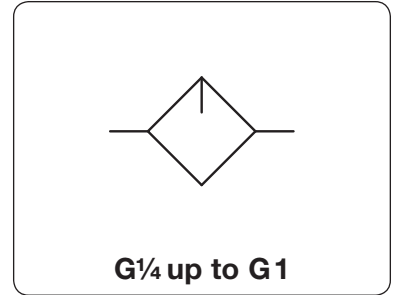
## Compressed Air Lubricators

Lubricator



18

<b>Description</b>	Standard type mist lubricator which lubricates in proportion to flow rate. The modular lubricator can be interlocked with other instruments of the same series. Wall mounting through two drilled holes in the body, except for L095.	
<b>Bowl</b>	plastic version with bowl guard	
<b>Operating pressure</b>	max. 12,5 bar,	max. 16 bar for Series 042 max. 7 bar for lubricator with oil level indicator
<b>Oil refilling</b>	with semiautomatic oil refilling the oil is drawn into the bowl by a vacuum at the push of a button without need to interrupt operation.	
<b>Oil level indicator</b>	if the oil level falls below the limit value, a float will close a signal contact. Contact: NO Voltage: max. 115 V	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	
<b>Material</b>	Body: nylon, POM at Series 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Bowl	Flow	Operating	Connection	Order
A	B	C	Design	rate	pressure	thread	number
mm	mm	mm	made of / with	m <sup>3</sup> /h*1	l/min*1	max. bar	G

Lubricator, made of plastic				operating pressure max. 12.5 / 16 bar				L0	
42	157	105	plastic	0.04	120	2000	16.0	G $\frac{1}{4}$	<b>L042-02</b>
52	185	127	bowl guard	0.07	120	2000	12.5	G $\frac{3}{8}$	<b>L050-03</b>
52	185	127		0.07	126	2100	12.5	G $\frac{1}{2}$	<b>L052-04</b>
63	227	159		0.14	210	3500	12.5	G $\frac{1}{2}$	<b>L075-04</b>
137	227	159		0.14	216	3600	12.5	G $\frac{3}{4}$	<b>L080-06</b>
95	300	220		0.44	900	15000	12.5	G1	<b>L095-08</b>



**L042**      **L050**  
semiautomatic oil refilling

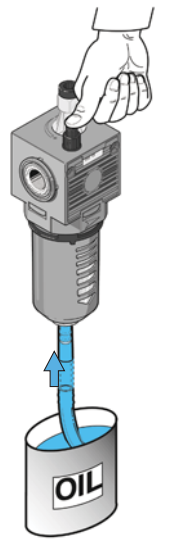
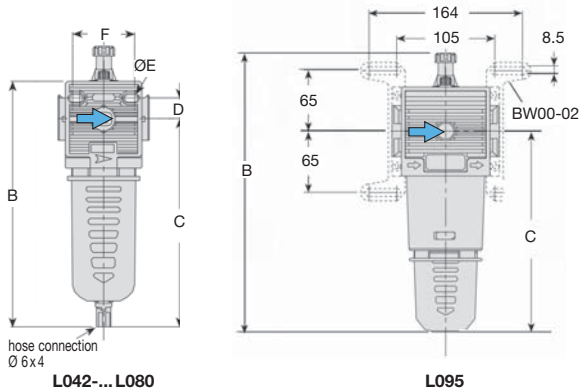
Special options, add the appropriate letter					
semiautomatic oil refilling	P <sub>min.</sub> 3 bar		for L042 to L080	L0...0.X65	
oil level indicator	P <sub>max.</sub> 7 bar	115 V/NO	for L050 to L095	L0...0.X66	



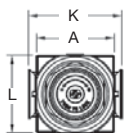
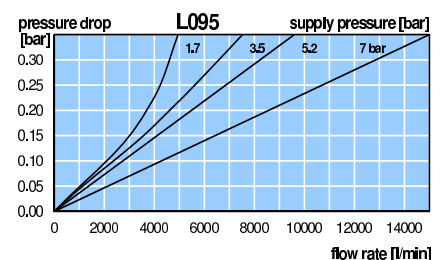
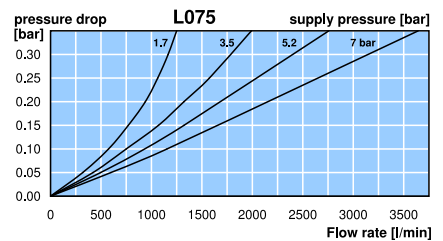
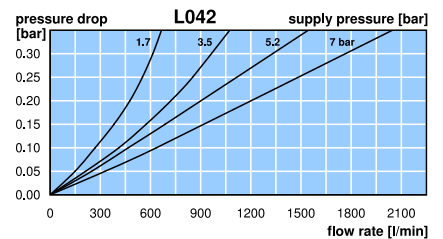
**L080**      **L095**

## Accessories

set of brackets	made of steel	for L095	<b>BW00-02</b>
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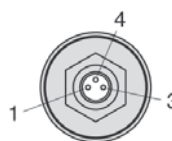
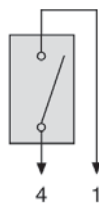
semiautomatic oil refilling



Series	D	Ø E	F	K	L
L042	10.5	4.5	31	-	42
L050/52	16	5.5	41	63	52
L075	17.5	5.5	45	75	63
L080	17.5	5.5	45	-	63
L095	-	-	-	115	95



oil level indicator



oil level indicator

\*1 at 10 bar operating pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units

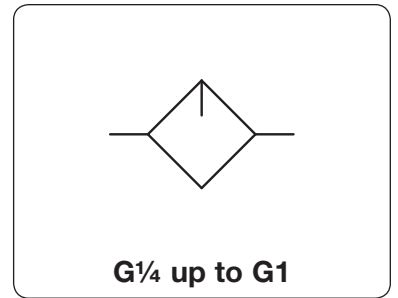
PDF CAD  
www.aircom.net

Order example:  
L042-02

# "Maxi" Compressed Air Lubricator

L20

<b>Description</b>	Standard type mist lubricator of modular design with exchangeable insert kits. Can be interlocked with a filter or regulator without need for double nipples. A bypass valve and venturi nozzle guarantee low pressure drop and uniform lubrication of the compressed air. All "maxi" instruments are easy to take out of fixed piping by simply removing the two fastening bolts on the insert kits.		
<b>Bowl</b>	metal bowl with sight glass		
<b>Operating pressure</b>	max. 17 bar		
<b>Oil refilling</b>	oil refilling under pressure possible		
<b>Oil level indicator</b>	red ball inside the sight glass indicates oil level		
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F		
<b>Material</b>	Body: Bowl:	zinc die-cast zinc die-cast	Sight glass: Elastomer: polyurethane NBR/Buna-N



Dimensions			Bowl	Flow	Operating	Connection	Order
A	B	C	Design	rate	pressure	thread	number
mm	mm	mm	made of/with	m <sup>3</sup> /h*1	l/min*1	max. bar	G

"Maxi" lubricator				operating pressure max. 17 bar			L20		
89	229	170	metal/sight glass	0.3	108	1800	17	G <sup>1</sup> / <sub>4</sub>	L20-02W
					186	3100		G <sup>3</sup> / <sub>8</sub>	L20-03W
					336	5600		G <sup>1</sup> / <sub>2</sub>	L20-04W
111	229	170	metal/sight glass	0.3	420	7000	17	G <sup>3</sup> / <sub>4</sub>	L20-06W
					438	7300		G1	L20-08W



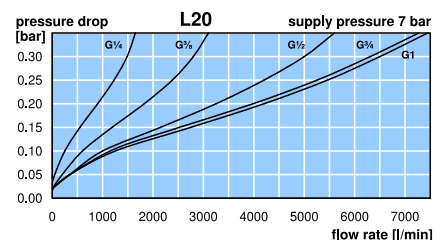
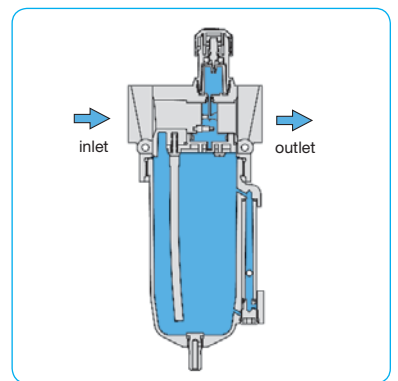
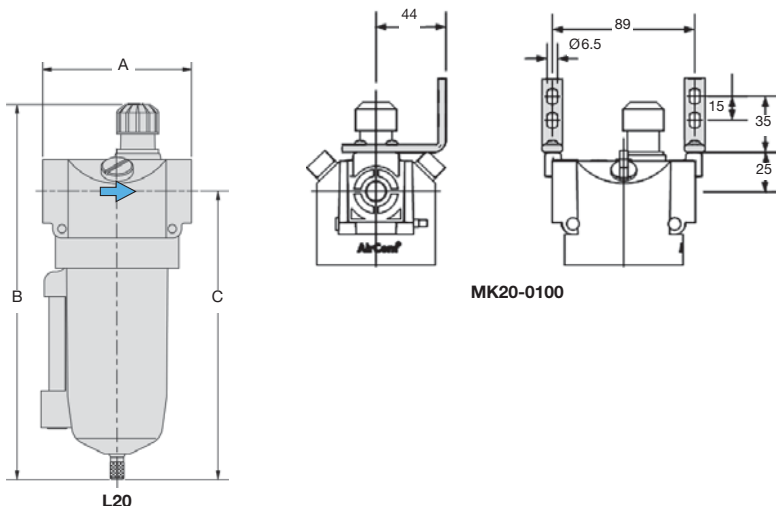
L20

## Special options, add the appropriate letter

NPT	connection thread	L20-0.WN
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## Accessories

set of brackets	made of steel	MK20-0100
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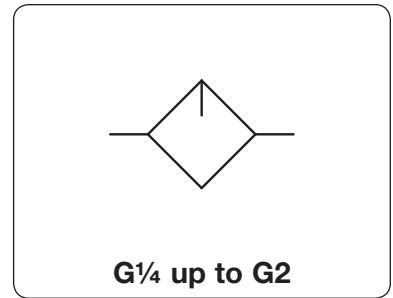
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units  
Spare parts: see separate spare parts list

PDF CAD  
www.aircom.net

Order example:  
L20-02W

<b>Description</b>	Compressed air lubricator of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.
<b>Bowl</b>	plastic version with bowl guard metal version with or without sight glass
<b>Operating pressure</b>	max. 11 bar for plastic bowl max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass, from G <sup>3</sup> / <sub>4</sub> on 0 °C to 80 °C / 32 °F to 176 °F for metal bowl with/without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: zinc die-cast Bowl: polyurethane, zinc die-cast or steel Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Operating	Connection	Order
A	B	C	design	rate	pressure	thread	number
mm	mm	mm	made of/ with	l m <sup>3</sup> /h*1	l/min*1	max. bar	G

Standard lubricator									L606
71	202	145	plastic/bowl guard	0.08	66	1100	11	G <sup>1</sup> / <sub>4</sub>	L606-02B
71	202	145	metal/sight glass	0.08			17		L606-02W
71	202	145	plastic/bowl guard	0.08	108	1800	11	G <sup>3</sup> / <sub>8</sub>	L606-03B
71	202	145	metal/sight glass	0.08			17		L606-03W
71	202	145	plastic/bowl guard	0.08	151	2500	11	G <sup>1</sup> / <sub>2</sub>	L606-04B
71	202	145	metal/sight glass	0.08			17		L606-04W
103	251	184	metal/sight glass	0.50	492	8200	17	G <sup>3</sup> / <sub>4</sub>	L606-06W
103	340	273	steel	1.00			21		L606-06E
103	340	273	steel/sight glass	1.00			17		L606-06F
103	306	239	steel/sight glass	2.00			17		L606-06G
103	251	184	metal/sight glass	0.50	540	9000	17	G1	L606-08W
103	340	273	steel	1.00			21		L606-08E
103	340	273	steel/sight glass	1.00			17		L606-08F
103	306	239	steel/sight glass	2.00			17		L606-08G



L606-02B

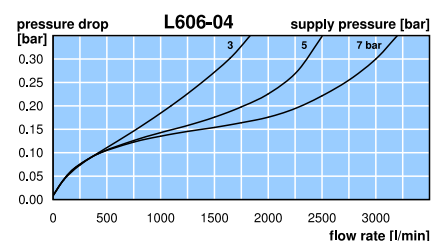
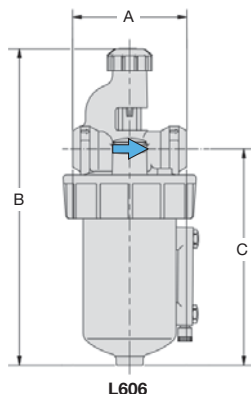


L606-08E  
1 l-bowl

L606-08G  
2 l-bowl

### Special options, add the appropriate letter

<b>NPT</b>	connection thread	L606-... N
<b>flange connection</b>	see chapter for stainless steel devices / flanges	L606-... F.



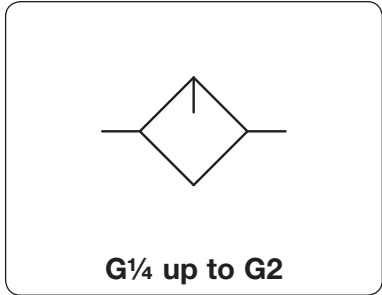
\*1 at 7 bar operating pressure and 0.33 bar pressure drop

**Extensions:** see chapter for FRL service units  
**Spare parts:** see separate spare parts list

PDF CAD  
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Order example:  
L606-02B

<b>Description</b>	Compressed air lubricator of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.
<b>Bowl</b>	plastic version with bowl guard metal version with or without sight glass
<b>Operating pressure</b>	max. 11 bar for plastic bowl max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass, from G $\frac{3}{4}$ on 0 °C to 80 °C / 32 °F to 176 °F for metal bowl with/without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F
<b>Material</b>	Body: zinc die-cast Bowl: polyurethane, zinc die-cast or steel Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Operating	Connection	Order
A	B	C	design	rate	pressure	thread	number
mm	mm	mm	made of/with	l m $^3$ /h*1	l/min*1	max. bar	G

Standard lubricator								L606	
122	266	194	metal/sight glass	0.50	1020	17000	17	G1 $\frac{1}{2}$	L606-12W
122	355	283	steel	1.00			21		L606-12E
122	355	283	steel/sight glass	1.00			17		L606-12F
122	300	228	steel/sight glass	2.00			17		L606-12G
133	385	265	steel/sight glass	1.00	1680	28000	17	G2	L606-16F
134	490	370	steel/sight glass	3.00			17		L606-16K3L



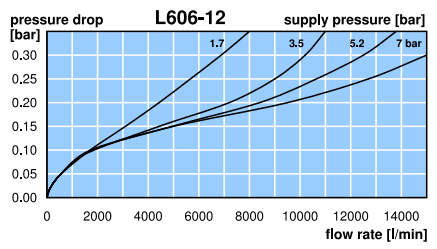
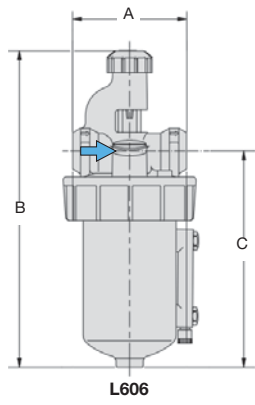
flange connection



L606-..G, 2l-bowl

### Special options, add the appropriate letter

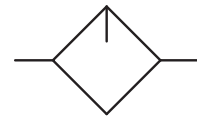
<b>NPT</b>	connection thread	L606-... N
<b>flange connection</b>	see chapter for stainless steel devices / flanges	L606-... F.



\* at 7 bar operating pressure and 0.33 bar pressure drop



<b>Description</b>	Good value zinc die-cast compressed air lubricator of solid design lubricating in proportion to flow rate. Wall mounting through two drilled holes in the body. Suitable for compressed air or non-corrosive gases.
<b>Bowl</b>	metal version with or without sight glass
<b>Operating pressure</b>	max. 16 bar for metal bowl with sight glass max. 30 bar for metal bowl without sight glass
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F for G $\frac{1}{8}$ to G $\frac{1}{2}$ -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass, for G1 to G2 -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass, for all sizes
<b>Material</b>	Body: zinc die-cast at G $\frac{1}{8}$ and G $\frac{1}{4}$ , aluminium at G $\frac{3}{8}$ to G2 Bowl: polyurethane or zinc die-cast Elastomer: NBR/Buna-N



G $\frac{1}{8}$  up to G2

Dimensions			Bowl	Flow	Operating	Connection	Order
A	B	C	Design	rate	pressure	thread	number
mm	mm	mm	made of/with	m $^3$ /h*1	l/min*1	max. bar	G

## Lubricator Series "D"

## LD

40	161	115	metal/sight glass metal	0.05 0.05	36	600	16	G $\frac{1}{8}$	LD-01M LD-01N
40	161	115	metal/sight glass metal	0.05 0.05	40	660	16	G $\frac{1}{4}$	LD-02M LD-02N
64	215	137	metal/sight glass metal	0.18	144	2400	16	G $\frac{3}{8}$	LD-03M LD-03N
64	215	137	metal/sight glass metal	0.18	156	2600	16	G $\frac{1}{2}$	LD-04M LD-04N
130	248	176	metal/sight glass metal	0.50	420	7000	16	G $\frac{3}{4}$	LD-06M LD-06N
130	248	176	metal/sight glass metal	0.50	480	8000	16	G1	LD-08M LD-08N
241	248	176	metal/sight glass metal	0.50	540	9000	16	G1 $\frac{1}{4}$	LD-10M LD-10N
241	248	176	metal/sight glass metal	0.50	600	10000	16	G1 $\frac{1}{2}$	LD-1AM LD-1AN
215	316	223	metal/sight glass metal	1.20	1620	27000	16	G1 $\frac{1}{2}$	LD-12M LD-12N
215	316	223	metal/sight glass metal	1.20	1680	28000	16	G2	LD-16M LD-16N



LD-01/-02



LD-03/-04M



LD-06/-08

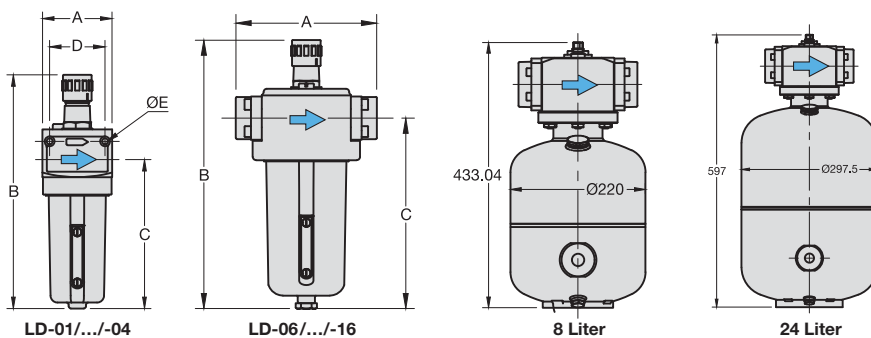


LD-12/-16

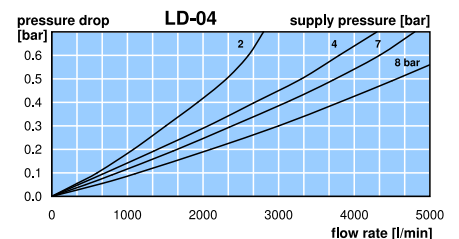
## Special options, add the appropriate letter

8	litre bowl	made of stainless steel, max. 30 bar	for G1 $\frac{1}{2}$ (12) and G2	LD- 1.M08
24	litre bowl	made of stainless steel, max. 30 bar	for G1 $\frac{1}{2}$ (12) and G2	LD- 1.M24

Type	D	Ø E
LD-01/02	30	4.5
LD-03/04	51	5.5



\*1 at 7 bar operating pressure and 0.33 bar pressure drop



Extensions: see chapter for FRL service units

PDF CAD  
www.aircom.net



Order example:  
LD-01M

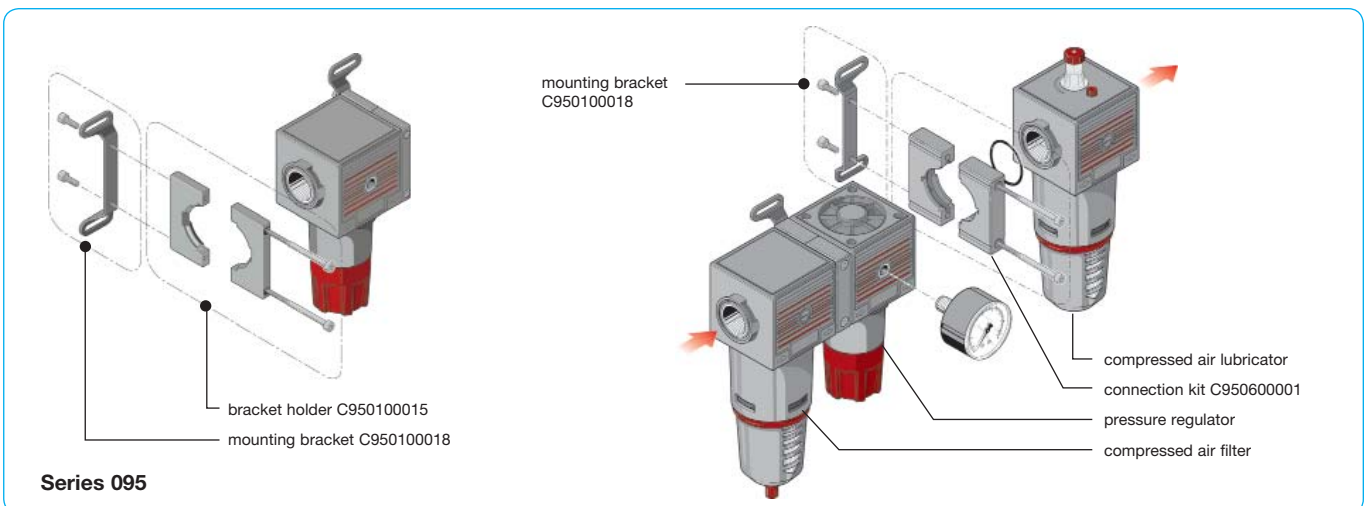
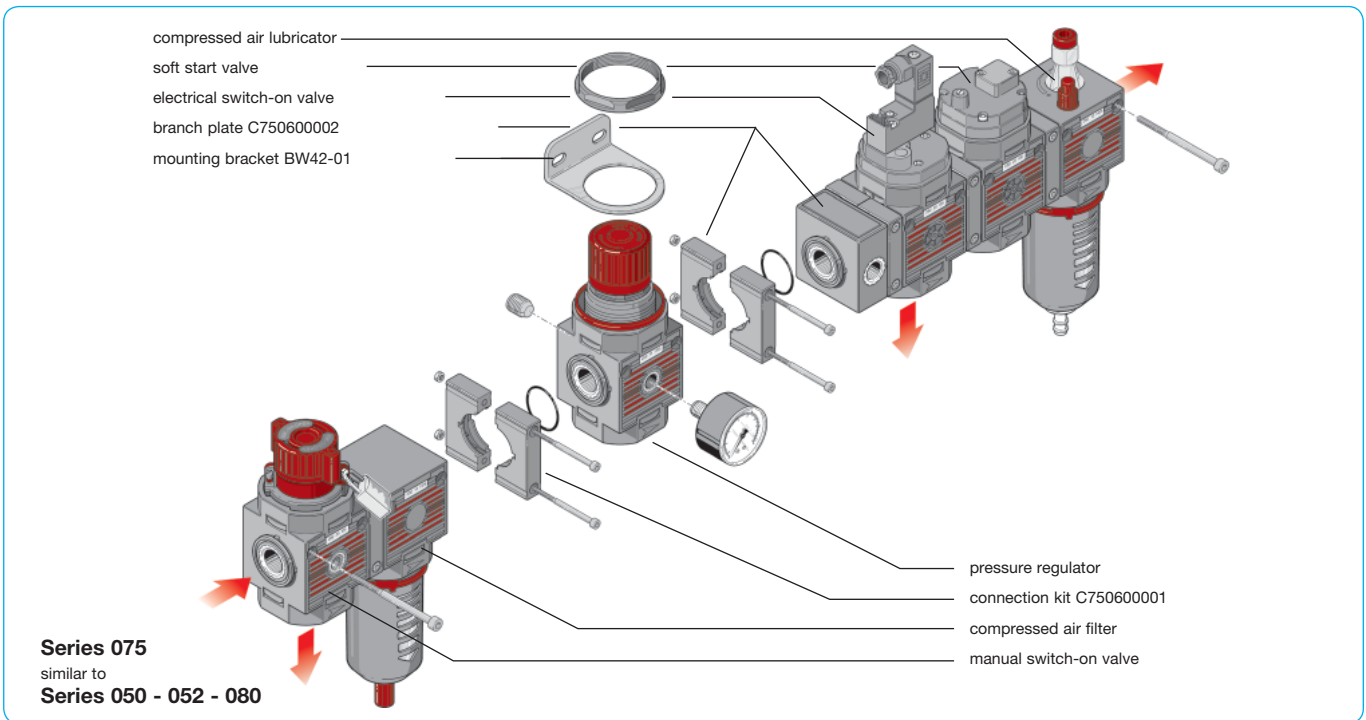
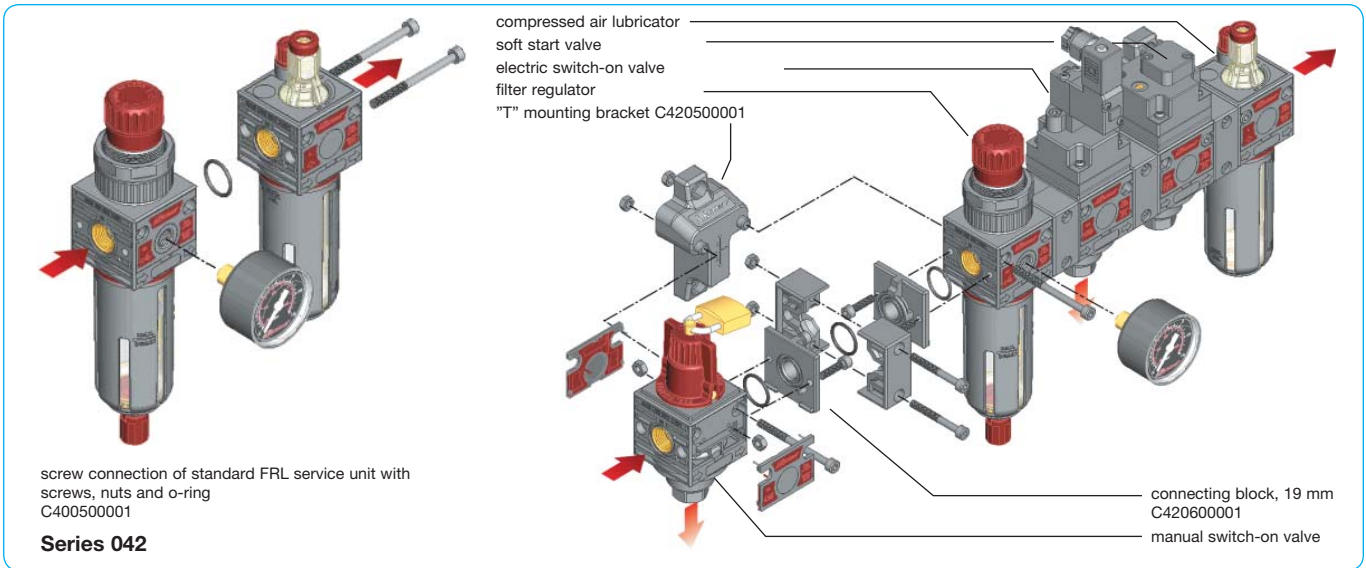


Description		Pressure range bar	Connection thread	Device	Page
made of plastic, 2- and 3-part	C2, C3	0 ... 8 / 12	G $\frac{1}{4}$ - G1	C2, C3	<b>19.03</b>
assembly diagrams	C2, C3			C2, C3	<b>19.04</b>
switch-on and soft start valve	C2, C3		G $\frac{1}{4}$ - G $\frac{3}{4}$	A0, S0, V0	<b>19.05</b>
„Midi“-Series made of metal, 2- and 3-part		0.2 ... 4 / 17	G $\frac{1}{4}$ - G $\frac{1}{2}$	C10, C11	<b>19.06</b>
„Maxi“-Series, made of metal, robust, 2- and 3-part		0.2 ... 4 / 17	G $\frac{1}{4}$ - G1	C20, C21	<b>19.07</b>
Series „D“, made auf alu/zinc die-cast, 2-part		0.3 ... 3 / 15	G $\frac{1}{8}$ - G2	CD2	<b>19.08</b>
Series „D“, made auf alu/zinc die-cast, 3-part		0.3 ... 3 / 15	G $\frac{1}{8}$ - G2	CD3	<b>19.09</b>
„Standard“-Series, robust		0.2 ... 4 / 17	G $\frac{3}{4}$ - G2	C630	<b>19.10</b>
drain valves		max. 21		SA, RK	<b>19.11</b>
hose rupture valves, aluminium/stainless steel		max. 18	G $\frac{1}{4}$ - G2	281	<b>19.12</b>

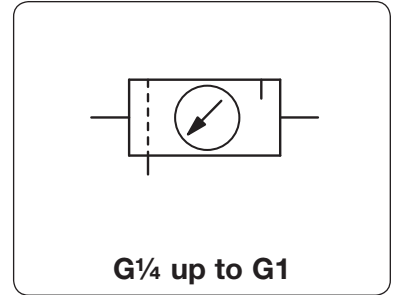


# 19

## FRL Service Units



<b>Description</b>	Made up of modular components which can be combined to form compact units. Switch-on and soft start valves available as additional modules.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 12.5 bar, max. 7 bar at lubricator with oil level indicator, max. 16 bar for Series 042		
<b>Gauge port</b>	G $\frac{1}{2}$ or G $\frac{1}{4}$ at series 095, on both sides of the body, one screw plug supplied		
<b>Filter element</b>	20 $\mu$ m, optionally 5 $\mu$ m, made of sintered polyethylene		
<b>Bowl</b>	plastic version with bayonet catch, series 042 with connection thread		
<b>Drain</b>	manual drain with semiautomatic drain, optionally automatic drain		
<b>Oil refilling</b>	optionally with semiautomatic oil refilling without need to interrupt operation		
<b>Oil level indicator</b>	If the oil level falls below the limit value, a float will close a signal contact.		
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F	Voltage:	max. 115 V
<b>Material</b>	Body: nylon, POM at series 042	Inner valve:	brass
	Bowl: polyamide	Thread insert:	brass
	Elastomer: NBR/Buna-N		



Dimensions				Combination	Bowl	Flow	Connection	Order
A	B	C	K	consist	design	rate	thread	number
mm	mm	mm	mm	of	made of / with	m <sup>3</sup> /h*1	l/min*1	G

FRL unit, 2-part				P <sub>1</sub> : max. 12.5 / 16 bar, P <sub>2</sub> : 0...8 bar, 20 $\mu$ m, semiautomatic drain, with pressure gauge				C2	
84	208	126	-	B+L042	plastic/	59	980	G $\frac{1}{4}$	<b>C242-02HC</b>
115	239	148	126	B+L050	bowl guard	84	1400	G $\frac{3}{8}$	<b>C250-03HC</b>
115	239	148	126	B+L052		90	1500	G $\frac{1}{2}$	<b>C252-04HC</b>
139	276	173	151	B+L075		132	2200	G $\frac{1}{2}$	<b>C275-04HC</b>
212	276	173	-	B+L080		138	2300	G $\frac{3}{4}$	<b>C280-06HC</b>
210	415	237	230	B+L095		480	8000	G1	<b>C295-08HC</b>

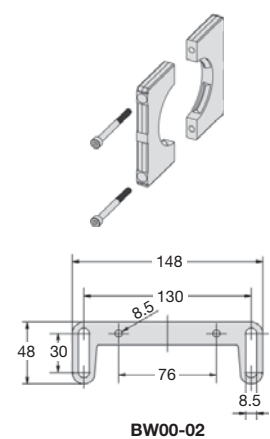
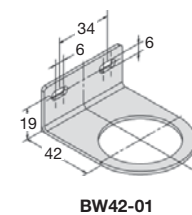
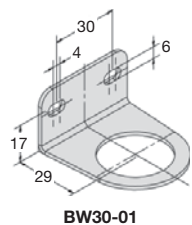
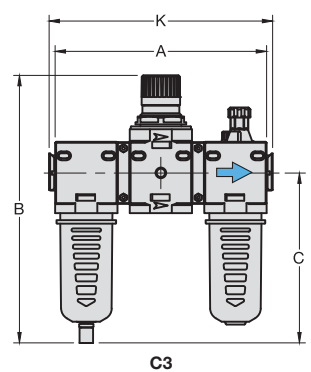
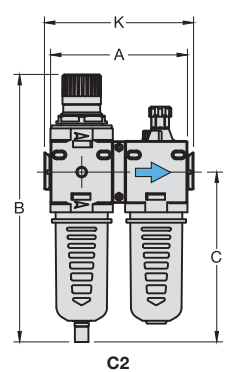


FRL unit, 3-part				P <sub>1</sub> : max. 12.5 / 16 bar, P <sub>2</sub> : 0...8 bar, 20 $\mu$ m, semiautomatic drain, with pressure gauge				C3	
126	208	126	-	F+R+L042	plastic/	59	980	G $\frac{1}{4}$	<b>C342-02HC</b>
178	239	148	189	F+R+L050	bowl guard	84	1100	G $\frac{3}{8}$	<b>C350-03HC</b>
178	239	148	189	F+R+L052		90	1500	G $\frac{1}{2}$	<b>C352-04HC</b>
215	276	173	227	F+R+L075		132	2200	G $\frac{1}{2}$	<b>C375-04HC</b>
288	276	173	-	F+R+L080		138	2300	G $\frac{3}{4}$	<b>C380-06HC</b>
325	411	237	345	F+R+L095		480	8000	G1	<b>C395-08HC</b>



Special options, add the appropriate letter			
<b>5 <math>\mu</math>m filter element</b>		for C.42 to C.80 for C.95	C...-0.G. C.95-0.G.
<b>0...12 bar regulating range</b>		for C.42 to C.80 for C.95	C...-0.D C.95-0.D
<b>automatic drain</b>	C400200130	for all devices	C...-0.R
<b>semiautomatic oil refilling</b>	P <sub>min.</sub> 3 bar	for C.42 to C.80	C...-0.X65
<b>oil level indicator</b>	P <sub>max.</sub> 7 bar max. 115 V / NO	for C.50 to C.95	C...-0.X66

Accessories			
<b>mounting bracket</b>	made of steel, mounting nut at the device	for C.42 for C.50 to C.80	<b>BW30-01</b> <b>BW42-01</b>
<b>set of brackets</b>	made of steel, mounting nut at the device	for C.95	<b>BW00-02</b>



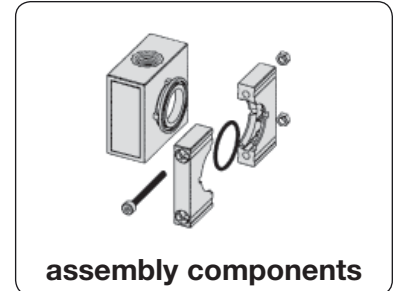
\*1 at 10 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop  
\*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

**Order example:**  
**C242-02HC**

<b>Connection kit</b>	With this interlocking kit, two compressed air instruments can be connected to one another without need for double nipples. This makes possible very compact layouts.
C35 :	<ul style="list-style-type: none"> <li>Mounting using rotary clip and two o-rings. These allow regulators to be connected to other regulators or filters.</li> </ul>
C40 :	<ul style="list-style-type: none"> <li>Instruments are connected to each other using screws, nuts and o-ring;</li> <li>alternatively, a segmented connecting block can be used for instrument connection.</li> </ul>
C50 :	<ul style="list-style-type: none"> <li>Instrument connection by means of a two-part connecting block.</li> </ul>
<b>Branch plate</b>	
C40 :	<ul style="list-style-type: none"> <li>Branch plate with compressed air connection port G<math>\frac{1}{8}</math> or G<math>\frac{1}{4}</math> or both outlet plates.</li> <li>Supply plate for two pressure regulators through port G<math>\frac{1}{4}</math>.</li> </ul>
C50 :	<ul style="list-style-type: none"> <li>Branch plate with compressed air connection G<math>\frac{1}{4}</math>.</li> </ul> Port installation of the branch plate is only possible using connecting blocks.

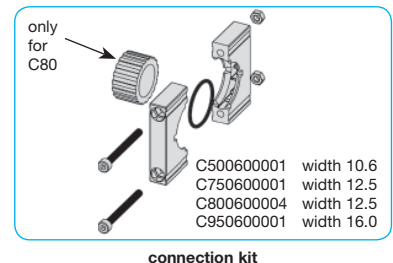
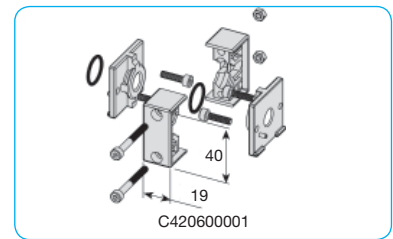


Description	Connection of instruments	for series	Order number
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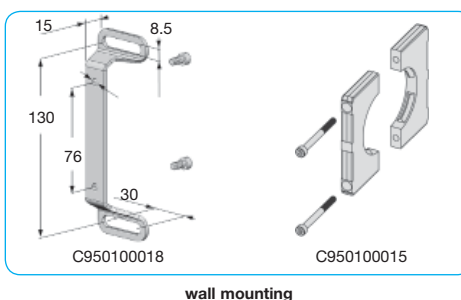
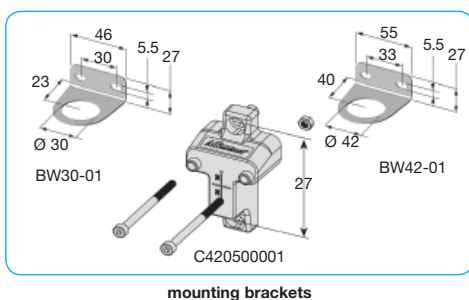
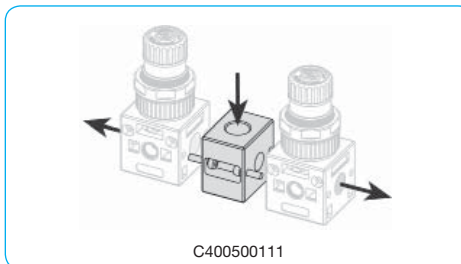
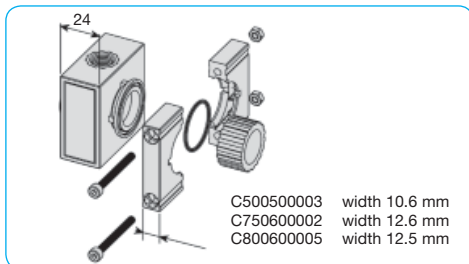
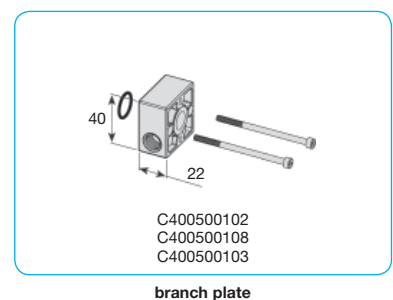
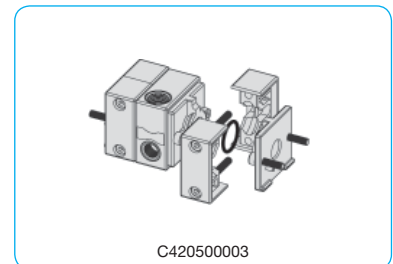
Connection kit	for connecting separate instruments	C...	
rotary clips with two o-rings screws, nuts and o-ring	R+F or R+R or F+F	35	<b>C350100018</b>
	F+R+L or P+B+L	42	<b>C400500001</b>
	B+L	42	<b>C400600001</b>
	F+L or F+F	42	<b>C400700001</b>
connection kit	for any two instruments	42	<b>C420600001</b>
		50 / 52	<b>C500600001</b>
		75	<b>C750600001</b>
		80	<b>C800600004</b>
		95	<b>C950600001</b>



Branch plate	with compressed air connection port	C...	
outlet G $\frac{1}{8}$		42	<b>C400500102</b>
outlet G $\frac{1}{4}$		42	<b>C400500108</b>
outlet G $\frac{1}{8}$ and G $\frac{1}{4}$		42	<b>C400500103</b>
outlet G $\frac{1}{8}$ and G $\frac{1}{4}$	with connection kit	42	<b>C420500003</b>
supply G $\frac{1}{4}$ for two regulators		42	<b>C400500111</b>
outlet G $\frac{1}{4}$		50 / 52	<b>C500500003</b>
outlet G $\frac{1}{4}$		75	<b>C750600002</b>
outlet G $\frac{1}{4}$		80	<b>C800600005</b>



Mounting material			C...
mounting bracket		for G $\frac{1}{4}$	<b>BW30-01</b>
mounting bracket		for G $\frac{3}{8}$ to G $\frac{1}{2}$	<b>BW42-01</b>
wall mounting		for G $\frac{1}{4}$	<b>C420500001</b>
wall mounting		for G1	<b>C950100018</b>
bracket holder	required in absence of C9506	for G1	<b>C950100015</b>





### Manual switch-on

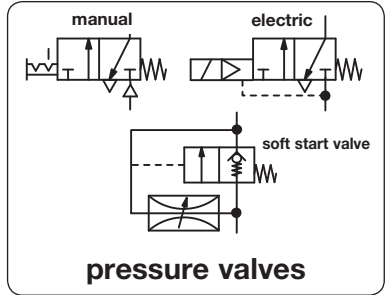
Manual switch-on/off valve which relieves at switch-off. Tapped exhaust with connection thread G $\frac{1}{8}$  or valve G $\frac{1}{4}$ . Valve can be protected from unauthorised tampering by provided padlock. Wall mounting is possible through two drilled holes in the body. Maximum supply pressure is 15 bar.

### Electric switch-on valve

The electrically-operated 3-port/2-way valve switches the air flow on or off. As standard, it is supplied with a miniature valve or alternatively with a CNOMO valve and can be operated purely in a pneumatic way as option. Wall mounting is possible through two drilled holes in the body. Tapped exhaust with connection thread G $\frac{1}{8}$  or G $\frac{1}{4}$ . Maximum supply pressure is 3 to 10 bar.

### Soft start valve

The soft start valve slowly pressurizes the system and switches over to full scale operation when 60% of the nominal pressure is reached. The pressure raising period can be set by an adjusting screw on top of the valve. Wall mounting is possible through two drilled holes in the body. Maximum supply pressure is 3 to 10 bar.



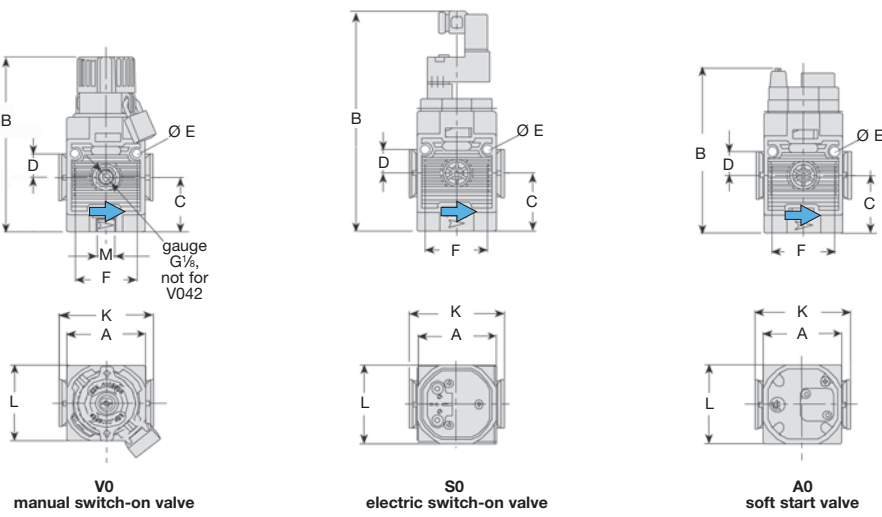
Dimensions			Description	Exhaust port	Flow rate		Connection thread	Order number
A	B	C			m <sup>3</sup> /h*1	l/min*1		

Manual 3-port/2-way valve				supply pressure max. 15 bar, including padlock			V0	
42	110	45	manual switch-on	G $\frac{1}{8}$	96	1600	G $\frac{1}{4}$	V042-02
63	121	36	and switch-off of the	G $\frac{1}{4}$	156	2600	G $\frac{3}{8}$	V050-03
63	121	36	compressed air circuit	G $\frac{1}{4}$	162	2700	G $\frac{1}{2}$	V052-04
75	138	42		G $\frac{1}{4}$	186	3100	G $\frac{1}{2}$	V075-04
137	138	42		G $\frac{1}{4}$	192	3200	G $\frac{3}{4}$	V080-06

Electric 3-port/2-way valve				24 V DC, 2 W, supply pressure 3...10 bar			S0	
42	143	42	electric switch-on	G $\frac{1}{8}$	96	1600	G $\frac{1}{4}$	S042-02
63	145	52	and switch-off of the	G $\frac{1}{4}$	156	2600	G $\frac{3}{8}$	S050-03
63	145	52	compressed air circuit	G $\frac{1}{4}$	162	2700	G $\frac{1}{2}$	S052-04
75	154	63		G $\frac{1}{4}$	186	3100	G $\frac{1}{2}$	S075-04
137	154	63		G $\frac{1}{4}$	192	3200	G $\frac{3}{4}$	S080-06

Soft start valve				supply pressure 3...10 bar			A0	
42	105	42	slow pressurizing of the		96	1600	G $\frac{1}{4}$	A042-02
63	108	52	pneumatic plant,		156	2600	G $\frac{3}{8}$	A050-03
63	108	52	delay time adjustable		162	2700	G $\frac{1}{2}$	A052-04
75	117	63			186	3100	G $\frac{1}{2}$	A075-04
137	117	63			192	3200	G $\frac{3}{4}$	A080-06

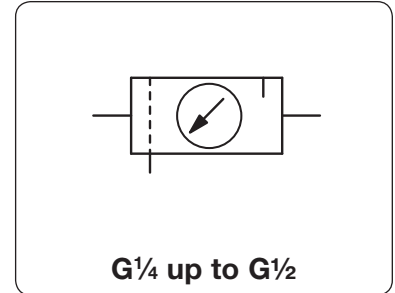
Special options, add the appropriate letter								
24 V AC, 2 W	input supply voltage			for S0	S0...-0.X			
115 V AC, 1 W	input supply voltage			for S0	S0...-0.Y			
230 V AC, 1 W	input supply voltage			for S0	S0...-0.Z			
pneumatic control	C402600014, instead of electrical operation			for S0	S0...-0.P			



\*1 at 10 bar supply pressure and 1 bar pressure drop

Series	D	Ø E	F	K	L
042	10.5	4.5	31	-	42
050/052	16	5.5	41	63	52
075	17.5	5.5	45	75	63
080	-	-	-	-	137

<b>Description</b>	FRL service unit of small design and high flow. Equipped with pressure gauge.		
<b>Media</b>	compressed air or non-corrosive gases		
<b>Supply pressure</b>	max. 11 bar for plastic bowl max. 17 bar for metal bowl with sight glass		
<b>Adjustment</b>	by plastic knob with snap-lock at C10, by T-handle with locknut at C11		
<b>Relieving function</b>	relieving, optionally non-relieving		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Filter element</b>	40 $\mu$ m, optionally 5 $\mu$ m, made of polypropylene		
<b>Bowl</b>	plastic version with or without bowl guard,	metal version with sight glass, optionally without	
<b>Drainage</b>	manual drain as standard for max. 21 bar,	automatic or semiautomatic drain as option for max. 12 bar	
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and automatic or semiautomatic drain version 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass		
<b>Material</b>	Body: zinc die-cast	Elastomer: NBR/Buna-N	
	Spring cage: glass fibre-reinforced plastic at C10, zinc die-cast at C11	Inner valve: brass	
	Bowl: zinc die-cast or plastic		



Dimensions			Combination consisting of	Bowl design made of / with	Flow rate		Connection thread G	Order number
A	B	C			m $^3$ /h*1	l/min*1		

FRL unit, 2-part				P $_1$ : max. 17 bar, P $_2$ : 0.3...9 bar, 40 $\mu$ m, manual drain, relieving, with pressure gauge			C10	
176	235	146	B11+L606	metal/sight glass	66	1100	G $\frac{1}{4}$	C10-02BL-W
					114	1900	G $\frac{3}{8}$	C10-03BL-W
					132	2200	G $\frac{1}{2}$	C10-04BL-W

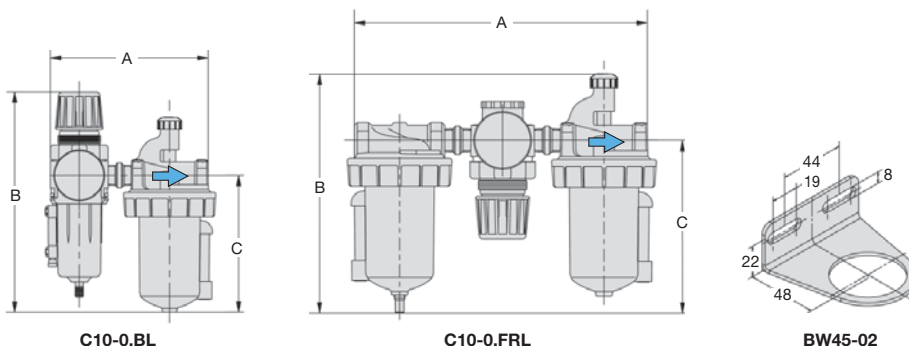


FRL unit, 3-part				P $_1$ : max. 11/17 bar, P $_2$ : 0.3...9 bar, 40 $\mu$ m, manual drain, relieving, with pressure gauge			C10	
206	185	146	F602+R10+L606	plastic	66	1100	G $\frac{1}{4}$	C10-02FRL-A
				plastic/bowl guard				C10-02FRL-B
				metal/sight glass				C10-02FRL-W
206	185	146	F602+R10+L606	plastic	102	1700	G $\frac{3}{8}$	C10-03FRL-A
				plastic/bowl guard				C10-03FRL-B
				metal/sight glass				C10-03FRL-W
206	185	146	F602+R10+L606	plastic	138	2300	G $\frac{1}{2}$	C10-04FRL-A
				plastic/bowl guard				C10-04FRL-B
				metal/sight glass				C10-04FRL-W



Special options, add the appropriate letter		
T-handle	including locknut	C11-0.....
5 $\mu$ m filter element		C10-0.....G
NPT	connection thread	C10-0.....N
0.2... 4 bar pressure range		C10-0.....B
0.5...17 bar pressure range		C10-0.....D
semiautomatic drain	RK500SY, max. 12 bar	C10-0.....M
automatic drain	SA605MD, max. 12 bar	C10-0.....R

Accessories		
mounting bracket	made of steel	BW45-02
mounting nut	made of plastic	M45x1,5K
	made of aluminium	M45x1,5A



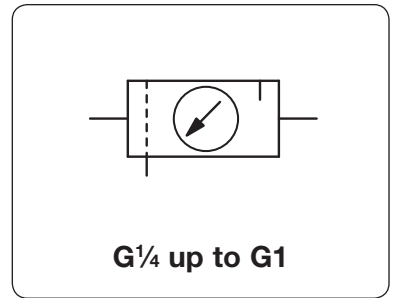
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
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**Order example:**  
**C10-02BL-W**

<b>Description</b>	"Maxi" FRL service units with pressure gauge are of modular design with exchangeable insert kits and have a high flow rate. All "maxi" instruments are easy to take out of fixed piping by simply removing the two fastening bolts on the insert kits.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Supply pressure</b>	max. 17 bar	
<b>Adjustment</b>	by plastic knob with snap-lock at C20,	by T-handle with locknut at C21
<b>Relieving function</b>	relieving, optionally non-relieving	<b>Filter element</b> 40 µm, optionally 5 µm, made of polypropylene
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body	<b>Bowl</b> metal version with sight glass
<b>Drainage</b>	manual drain as standard,	optionally automatic drain or semiautomatic drain for max. 12 bar
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F	
	0 °C to 50 °C / 32 °F to 122 °F for automatic or semiautomatic drain version	
<b>Material</b>	Body: zinc die-cast	Spring cage: zinc die-cast
	Knob (C20): glass fibre-reinforced plastic	T-handle (C21): steel
	Bowl: zinc die-cast	Sight glass: polyurethane
	Elastomer: NBR/Buna-N	Inner valve: brass and plastic



Dimensions			Combination consisting of	Bowl design made of / with	Flow rate		Connection thread G	Order number
A	B	C			m <sup>3</sup> /h*1	l/min*1		

FRL unit, 2-part				P: max. 17 bar, P <sub>2</sub> : 0.3...9 bar, 40 µm, manual drain, relieving, with pressure gauge			C20	
178	289	175	B+L20	metal / sight glass	102	1700	G $\frac{1}{4}$	C20-02BL-W
					174	2900	G $\frac{3}{8}$	C20-03BL-W
					276	4600	G $\frac{1}{2}$	C20-04BL-W
203	289	175	B+L20	metal / sight glass	390	6500	G $\frac{3}{4}$	C20-06BL-W
					402	6700	G1	C20-08BL-W

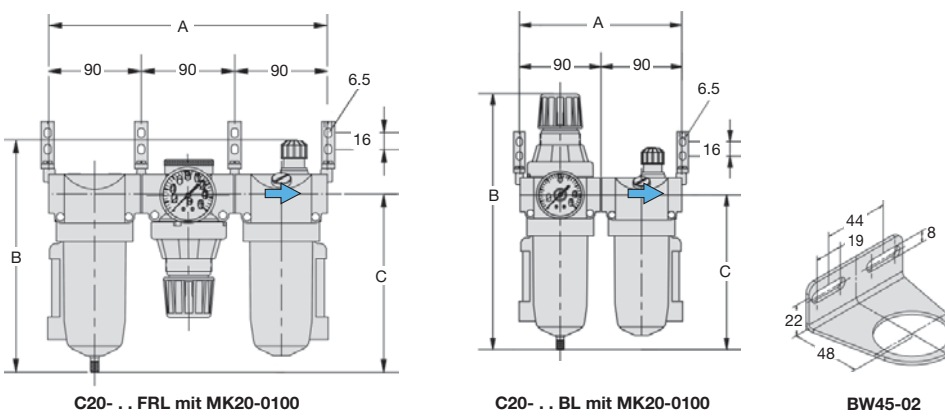


FRL unit, 3-part				P: max. 17 bar, P <sub>2</sub> : 0.3...9 bar, 40 µm, manual drain, relieving, with pressure gauge			C20	
270	226	171	F+R+L20	metal / sight glass	102	1700	G $\frac{1}{4}$	C20-02FRL-W
					174	2900	G $\frac{3}{8}$	C20-03FRL-W
					276	4600	G $\frac{1}{2}$	C20-04FRL-W
292	226	171	F+R+L20	metal / sight glass	390	6500	G $\frac{3}{4}$	C20-06FRL-W
					402	6700	G1	C20-08FRL-W



Special options, add the appropriate letter		
T-handle	including locknut	C21-0 . . . -W
5 µm filter element		C20-0 . . . -WG
NPT	connection thread	C20-0 . . . -WN
0.2... 4 bar pressure range		C20-0 . . . -WB
0.5...17 bar pressure range		C20-0 . . . -WD
semiautomatic drain	RK500SY, max. 12 bar	C20-0 . . . -WM
automatic drain	SA605MD, max. 12 bar	C20-0 . . . -WR

Accessories		
mounting bracket	mounting at the spring cage	BW45-02
mounting nut	made of aluminium	M45x1,5A
mounting bracket set	made of steel, consisting of two mounting brackets	MK20-0100
porting block	tap G $\frac{1}{4}$ , for unlubricated compressed air	IK20CP
switch-on valve	lockable 3-port/2-way valve	IK20V



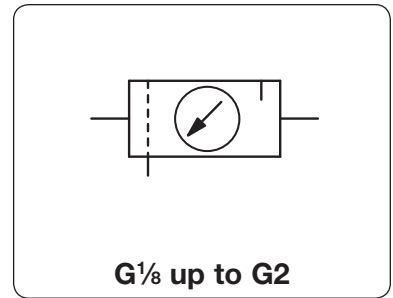
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

Further details: see chapter for single devices  
Spare parts: see separate spare parts list

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Order example:  
C20-02BL-W

<b>Description</b>	Solid, low-cost FRL service unit made of zinc die-cast equipped with pressure gauge.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
<b>Adjustment</b>	by plastic knob with snap-lock up to G $\frac{1}{2}$ by hexagon head screw from G $\frac{3}{4}$ up to G1 $\frac{1}{2}$ on (CD.-1A.) by T-handle from G1 $\frac{1}{2}$ (CD.-12.) up to G2 on
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ or G $\frac{1}{2}$ at CD.-01/-02, on both sides of the body, one screw plug supplied
<b>Filter element</b>	20 $\mu$ m or 50 $\mu$ m, optionally 5 $\mu$ m or 50 $\mu$ m, made of propylene <b>Bowl</b> metal version with or without sight glass
<b>Drainage</b>	semiautomatic drain as standard, optionally automatic (max. 16 bar) or manual drain for max. 30 bar
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F metal bowl with sight glass, for G $\frac{1}{2}$ to G $\frac{1}{2}$ -20 °C to 60 °C / -4 °F to 140 °F metal bowl with sight glass, for G $\frac{3}{4}$ to G2 -30 °C to 80 °C / -22 °F to 176 °F metal bowl without sight glass, for all sizes
<b>Material</b>	Body: zinc die-cast at G $\frac{1}{2}$ and G $\frac{3}{4}$ , aluminium at G $\frac{3}{4}$ up to G2 Elastomer: NBR/Buna-N Bowl: zinc die-cast



Dimensions			Combination	Bowl	Filter	Flow	Connection	Order
A	B	C	consisting	design	element	rate	thread	number
mm	mm	mm	of	made of / with		m <sup>3</sup> /h*1	G	

FRL unit, 2-part				P <sub>1</sub> : max. 16 bar, P <sub>2</sub> : 0.8...8 bar, 20 / 50 $\mu$ m, semiautomatic drain, relieving, with gauge				CD2	
80	201	128	BD+LD	metal/sight glass	20	27	450	G $\frac{1}{8}$	CD2-01
								G $\frac{1}{4}$	CD2-02
128	248	148		metal/sight glass	50	108	1800	G $\frac{3}{8}$	CD2-03
								G $\frac{1}{2}$	CD2-04
275	314	179		metal/sight glass	50	300	5000	G $\frac{3}{4}$	CD2-06
								G1	CD2-08
386	314	179		metal/sight glass	50	300	5000	G1 $\frac{1}{4}$	CD2-10
								G1 $\frac{1}{2}$	CD2-1A
355	483	223		metal/sight glass	50	960	16000	G1 $\frac{1}{2}$	CD2-12
								G2	CD2-16

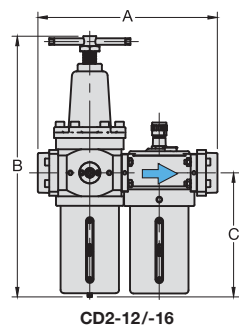
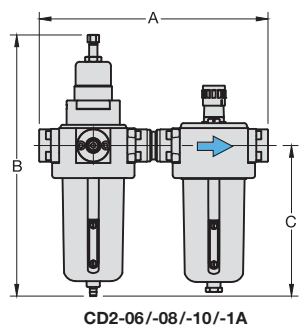
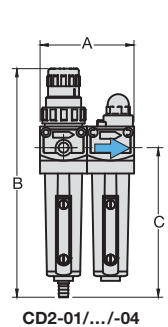


**Special options, add the appropriate letter**

<b>5 <math>\mu</math>m filter element</b>	for G $\frac{1}{8}$ to G $\frac{1}{2}$	CD2-...G
	for G $\frac{3}{4}$ to G1	CD2-...G
	for G1 $\frac{1}{4}$ to G2	CD2-...G
<b>0.3...3 bar regulation range</b>		CD2-...B
<b>1...15 bar</b>		CD2-...E
<b>operating press. 30 bar</b>	only for metal bowl (without sight glass) with manual drain	CD2-...NH
<b>manual drain</b>	max. 16 bar	CD2-...H
<b>automatic drain</b>	drainage by float valve, max. 16 bar	for G $\frac{3}{8}$ to G2
		CD2-...R

**Accessories**

<b>mounting bracket</b>	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>M30x1,5K</b>
<b>mounting bracket</b>	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>BW50-03</b>
<b>mounting nut</b>	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>M50x1,5K</b>
<b>mounting bracket</b>	made of stainless steel	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	<b>BW00-59S</b>
<b>set of brackets</b>	made of steel	for G1 $\frac{1}{2}$ (12) and G2	<b>BW00-61</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

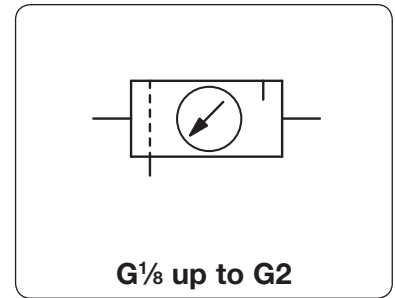
**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
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**Order example:**  
 CD2-01



<b>Description</b>	Solid, low-cost FRL service unit made of zinc die-cast equipped with pressure gauge.
<b>Media</b>	compressed air or non-corrosive gases
<b>Supply pressure</b>	max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
<b>Adjustment</b>	by plastic knob with snap-lock up to G $\frac{1}{2}$ by hexagon head screw from G $\frac{3}{4}$ up to G $1\frac{1}{2}$ on (CD.-1A.) by T-handle from G $1\frac{1}{2}$ (CD.-12.) up to G2 on
<b>Relieving function</b>	relieving, optionally non-relieving
<b>Gauge port</b>	G $\frac{1}{4}$ or G $\frac{1}{2}$ at CD.-01/-02, on both sides of the body, one screw plug supplied
<b>Filter element</b>	20 $\mu$ m or 50 $\mu$ m, optionally 5 $\mu$ m or 50 $\mu$ m, made of propylene <b>Bowl</b> metal version with or without sight glass
<b>Drainage</b>	semiautomatic drain as standard, optionally automatic (max. 16 bar) or manual drain for max. 30 bar
<b>Temperature range</b>	-10 °C to 50 °C / 14 °F to 122 °F metal bowl with sight glass, for G $\frac{1}{2}$ to G $\frac{3}{2}$ -20 °C to 60 °C / -4 °F to 140 °F metal bowl with sight glass, for G $\frac{3}{4}$ to G2 -30 °C to 80 °C / -22 °F to 176 °F metal bowl without sight glass, for all sizes
<b>Material</b>	Body: zinc die-cast at G $\frac{1}{2}$ and G $\frac{3}{4}$ , aluminium at G $\frac{1}{2}$ up to G2 Elastomer: NBR/Buna-N Bowl: zinc die-cast



Dimensions			Combination	Bowl	Filter	Flow	Connection	Order
A	B	C	consisting	design	element	rate	thread	number
mm	mm	mm	of	made of / with		m $^3$ /h*1	G	

FRL unit, 3-part									P $_1$ : max. 16 bar, P $_2$ : 0.8...8 bar, 20 / 50 $\mu$ m, semiautomatic drain, relieving, with gauge		CD3
120	201	128	FD+RD+LD	metal/sight glass	20	24	400	G $\frac{1}{8}$ G $\frac{1}{4}$		<b>CD3-01</b>	
										<b>CD3-02</b>	
192	251	148		metal/sight glass	50	108	1800	G $\frac{3}{8}$ G $\frac{1}{2}$		<b>CD3-03</b>	
										<b>CD3-04</b>	
427	312	179		metal/sight glass	50	228	3800	G $\frac{3}{4}$ G1		<b>CD3-06</b>	
										<b>CD3-08</b>	
531	312	179		metal/sight glass	50	228	3800	G $1\frac{1}{4}$ G $1\frac{1}{2}$		<b>CD3-10</b>	
										<b>CD3-1A</b>	
495	486	231		metal/sight glass	50	1320	22000	G $1\frac{1}{2}$ G2		<b>CD3-12</b>	
										<b>CD3-16</b>	

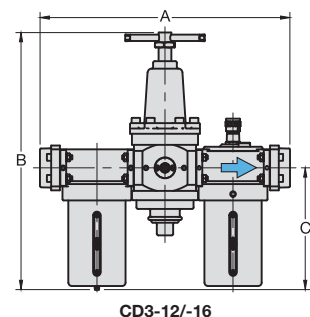
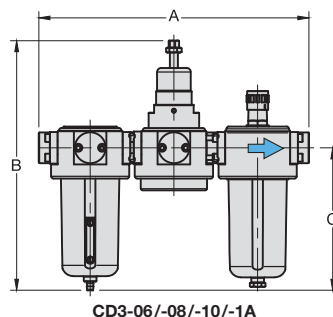
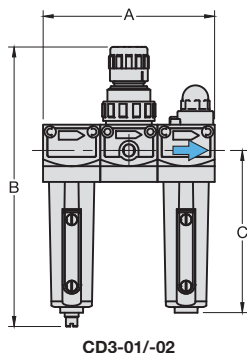


**Special options, add the appropriate letter**

<b>5 <math>\mu</math>m filter element</b>		for G $\frac{1}{8}$ to G $\frac{1}{2}$	CD3-...G
		for G $\frac{3}{4}$ to G1	CD3-...G
		for G $1\frac{1}{4}$ to G2	CD3-...G
<b>0.3...3 bar regulation range</b>			CD3-...B
<b>1 ...15 bar</b>			CD3-...E
<b>operating press. 30 bar</b>	only for metal bowl (without sight glass) with manual drain		CD3-...NH
<b>manual drain</b>	max. 16 bar		CD3-...H
<b>automatic drain</b>	drainage by float valve, max. 16 bar	for G $\frac{3}{8}$ to G2	CD3-...R

**Accessories**

<b>mounting bracket</b>	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>BW30-02</b>
<b>mounting nut</b>	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	<b>M30x1,5K</b>
<b>mounting bracket</b>	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>BW50-03</b>
<b>mounting nut</b>	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	<b>M50x1,5K</b>
<b>mounting bracket</b>	made of stainless steel	for G $\frac{3}{4}$ to G $1\frac{1}{2}$ (1A)	<b>BW00-59S</b>
<b>set of brackets</b>	made of steel	for G $1\frac{1}{2}$ (12) and G2	<b>BW00-61</b>



\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

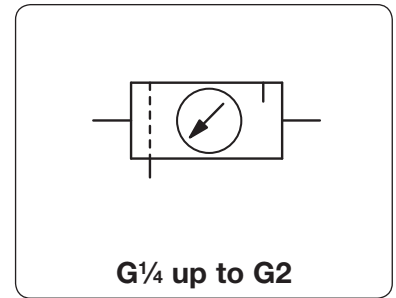
**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
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**Order example:**  
CD3-01



<b>Description</b>	FRL service unit of small size and with high flow. Solid design, proven in operation.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 17 bar for metal bowl with sight glass		
<b>Adjustment</b>	by T-handle with locknut,	by plastic knob with snap-lock on pilot regulator at size G2	
<b>Relieving function</b>	relieving, optionally non-relieving <b>Air consumption</b> only for pilot pressure at size G2		
<b>Gauge port</b>	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
<b>Filter element</b>	40 $\mu$ m, optionally 5 $\mu$ m, made of polypropylene		
<b>Bowl</b>	metal version with sight glass		
<b>Drainage</b>	manual drain as standard	for max. 21 bar	
	optionally internal automatic drain	for max. 12 / 16 bar	
	or external automatic drain	for max. 18 bar	
<b>Temperature range</b>	0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass		
<b>Material</b>	Body: zinc die-cast	Elastomer: NBR/Buna-N	
	Bowl: polyurethane, zinc die-cast or steel	Inner valve: brass	



Dimensions			Combination consisting of	Bowl design made of/with	Flow rate		Connection thread	Order number
A	B	C			m <sup>3</sup> /h*1	l/min*1		

FRL unit, 3-part				P: max. 17 bar, P <sub>2</sub> : 0.3...9 bar, 40 $\mu$ m, manual drain, relieving, with pressure gauge			C630	
400	267	197	F602 + R119, + L606	metal/sight glass	408	6 800	G $\frac{3}{4}$	C630-06FRL-W
					516	8 600	G1	C630-08FRL-W
419	286	206		metal/sight glass	600	10 000	G1 $\frac{1}{4}$	C630-10FRL-W
					630	10 500	G1 $\frac{1}{2}$	C630-12FRL-W
485	425	356		metal/sight glass	1 590	26 500	G2	C630-16FRL-W



C630



C630-03FRL-W  
with metal bowl and sight glass



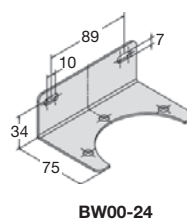
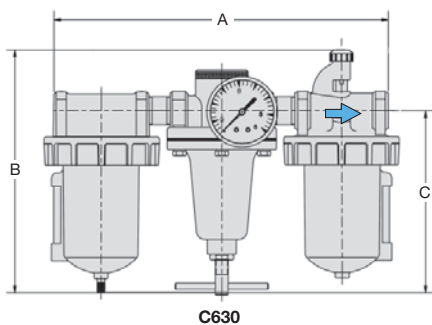
with mounting flange

## Special options, add the appropriate letter

5 $\mu$ m filter element		C630-0 . . . . . G
NPT connection thread		C630-0 . . . . . N
0.2... 4 bar pressure range		C630-0 . . . . . B
0.5...17 bar pressure range		C630-0 . . . . . D
semiautomatic drain	RK500SY, max. 12 bar	C630-0 . . . . . M
automatic drain	SA605MD, max. 12 bar	C630-0 . . . . . R
flange connection	see chapter for stainless steel devices / flanges	C630-0 . . . . . F

## Accessories

mounting bracket	made of steel	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$	<b>BW00-24</b>
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RK500SY

SA605MD

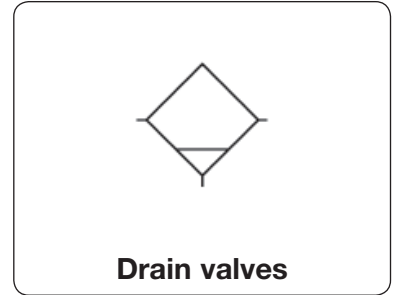
\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

**Further details:** see chapter for single devices  
**Spare parts:** see separate spare parts list

**PDF CAD**  
www.aircom.net

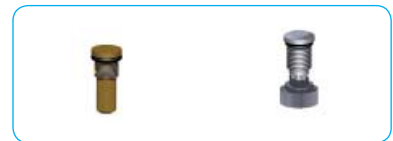
**Order example:**  
C630-06FRL-A

<b>Manual drain</b>	The manual drain can be opened by screwing it into the bowl. Once the collected condensate reaches the drain hole, it is being relieved.
<b>Semiautomatic drain</b>	The semiautomatic drain semiautomatically separates condensates from compressed air or gas systems. After operating pressure switch-off the drain valve opens and the collected condensate is being relieved.
<b>Automatic drain</b>	The automatic drain fully automatically separates condensates from compressed air or gas systems. Once the float lifts from the valve seat caused by the condensate level, the condensate is being relieved. Operating pressure must be 2 bar minimum.
<b>Temperature range</b>	0 °C to 50 °C / 32 °F to 122 °F 0 °C to 80 °C / 32 °F to 176 °F for manual drain made of brass for appropriately conditioned compressed air down to -30 °C / -22 °F



Valve type	Description	For filter/ filter regulator	For bowl type	Operating pressure max. bar	Order number
------------	-------------	---------------------------------	------------------	-----------------------------------	-----------------

Drain valves		1/8"-27 NPSM thread of internal valve			SA/RK
<b>manual drain</b>	made of brass	F20/F35...F105/ F504/F602 / B11/B12/B20/B21/ B35...B105/B548	all	21	<b>SA600Y-71</b>
	made of plastic	F20/F35...F105/ F504/F602 / B11/B12/B20/B21/ B35...B105/B548	all	21	<b>AWF-10</b>
<b>semiautomatic drain</b> drainage after pressure switch-off	piston drain	F504	all	12	<b>RK504SY</b>
		F602-02/-03	A/B/W	12	<b>RK602SY</b>
		B11/B12	all	12	<b>4210</b>
	spring-loaded	F20	all	12	<b>4212</b>
F35		all	12	<b>PKF35</b>	
<b>automatic drain</b> effective from 2 bar on	internal mounting	F20/F35...F105/ F504/F602 / B11/B12/B20/B21/ B35...B105/B548	all	12	<b>RK500SY</b>
		F20/F75/F602/B11/ B12/B20/B21/B75	all, except for W at F105	16	<b>SA605MD</b>
		F20/F105/F602/ B20/B21/B105	W	12	<b>SA702MD</b>
	external mounting	F105/B105	W	12	<b>SAF105MD</b>
		F602-04 to -20 F602-04 to -20	A/B/W E/F	18	<b>SA602D</b> <b>SA603D</b>



Drain valves made of SST		1/8"-27 NPSM valve thread			SA
<b>automatic drain</b>	internal mounting effective from 2 bar on	F10/F11/B11-S	all	12	<b>SA10MDSS</b>



**Description** Air supply is immediately shut off when volume flow exceeds a specific value. The maximum admissible flow is factory-set in such a way that a standard application of pneumatic equipment is ensured. Pressure drop amounts to 0.05 to 0.3 bar. In the case of failure, the hose rupture valve blows off through a small nozzle. After repairing the hose break, the hose rupture valve can be set to zero again.

**EN ISO 4414-11.2010** According to EN ISO 4414-11.2010 the hose rupture valve protects individuals, systems and machines from injuries or damages caused by lashing hose lines in the event of hose breaks.

**Function** The air passes the piston and continues through the seat. The air stream is slowed down by means of lengthwise grooves on the piston surface. When the volume flow is too high, the air cannot pass the piston quickly enough, thus the piston will be pressed against the spring. If the maximum admissible flow is exceeded, e.g. when the hose suddenly breaks, the air supply will automatically be shut off.

**Supply pressure** max. 18 bar  
**Temperature range** -20 °C to 80 °C / -4 °F to 176 °F at G¼ to G½, up to 120 °C / 248 °F at G¾ to G2  
**Material** Body: aluminium, optionally stainless steel Elastomer: NBR/Buna-N  
 Inner valve: aluminium and plastic



**max. 18 bar**  
**G¼ up to G2**

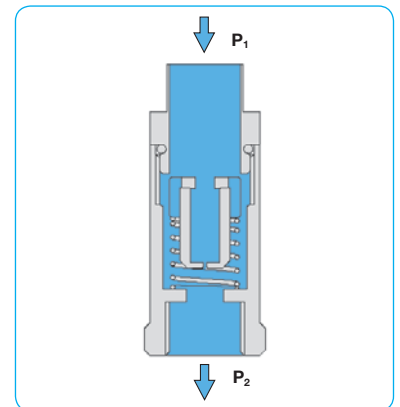
Dimensions			max. flow rate		Connection thread	Order number
B	C	A/F	at 8 bar *2			
mm	mm	mm	m³/h	l/min	G	

**Hose Rupture Valve "HoseGuard®"** operating pressure max. 18 bar **281**

49	-	22	46	760 *1	G¼	281A0211
49	10	22	46	760 *1	G¼ai	281A0221
49	-	22	3	52	G¼	281ZL0211
49	10	22	3	52	G¼ai	281ZL0221
49	-	22	60	990	G¼	281ZH0211
49	10	22	60	990	G¼ai	281ZH0221
58	-	27	65	1080 *1	G¾	281A0311
58	12	27	65	1080 *1	G¾ai	281A0321
58	-	27	87	1450	G¾	281ZH0311
58	12	27	87	1450	G¾ai	281ZH0321
65	-	30	181	3020 *1	G½	281A0411
64	15	30	181	3020 *1	G½ai	281A0421
65	-	30	206	3440	G½	281ZH0411
64	15	30	206	3440	G½ai	281ZH0421
76	-	30	244	4070 *1	G¾	281A0511
76	-	30	315	5250	G¾	281ZH0511
100	-	41	313	5220 *1	G1	281A0611
100	-	41	456	7600	G1	281ZH0611
130	-	70	775	12920 *1	G2	281A0911



281

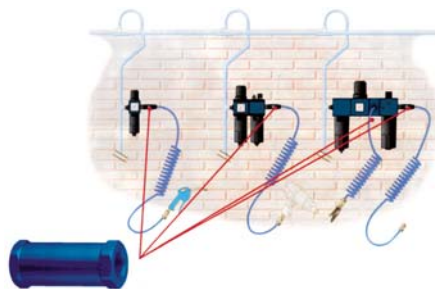
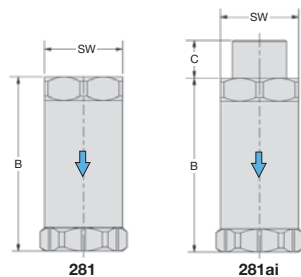


cross-section

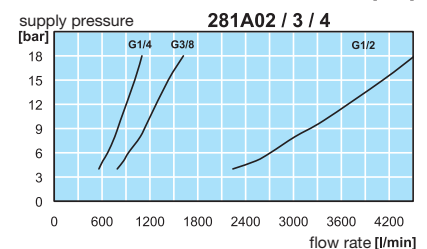
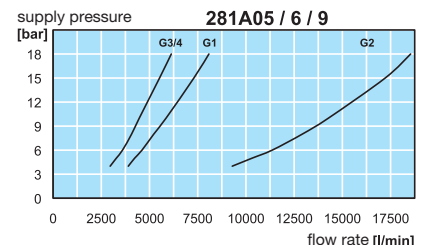
**Special options, add the appropriate letter**

- NPT** connection thread for standard version 281A1 . . .
- connection thread for Low-Flow version 281ZL1 . . .
- connection thread for High-Flow version 281ZH1 . . .
- 281R . . .

stainless steel body



application example



\*1 Standard version

\*2 volume flow measurement according to DIN EN60534 (± 10% for closing)

## Micro-/ Miniature-Devices

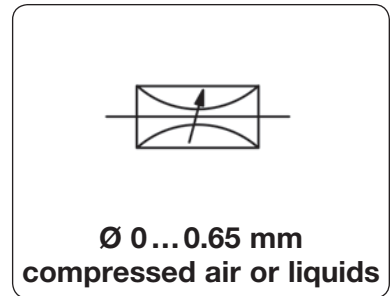
	Description	DN/Ø	Flow rate l/min	Connection thread	Device	Page
<b>needle valve</b>	miniature	Ø 3.0 - 4.5	0 ... 32	nipple	NV30	<b>20.02</b>
<b>precision restrictor</b>	made of brass, micro	Ø 0.06 - 0.64		nipple, 10-32"	RF	<b>20.03</b>
	made of plastic	Ø 0.08 - 1.02		nipple	R-0	<b>20.04</b>
	with filter	Ø 0.10 - 0.76		nipple	F950	<b>20.04</b>
<b>inline-filter</b>	micro, up to 8.6 bar		5 ... 73 µm	nipple, 10-32"	F9 . .	<b>20.05</b>
<b>check valve</b>	micro, up to 5.2 bar	1,5 / 3,8		nipple	F2804	<b>20.06</b>
	restrictor check valve	0.1/ ... / 1.02		10-32"	F2804	<b>20.06</b>



# 20

## Micro-/Miniature-Devices

<b>Description</b>	The precision needle valve is a manually adjustable flow control valve used in pneumatic and fluid systems. Unique laminar flow design ensures sensitive reproducible control. Ideal for precision gas metering and circuit speed or sequencing control.	
<b>Media</b>	5 µm filtered compressed air, non-corrosive gases or liquids	
<b>Operating pressure</b>	vacuum up to positive pressure of max. 12 bar	
<b>Adjustment</b>	The flow control needle needs 8 screw turns for maximum flow, approximately equal to an 0.65 mm / 0.025" orifice.	
<b>Panel mounting</b>	borehole 8 mm / 0.312", max. panel thickness 3.5 mm / 0.15"	
<b>Temperature range</b>	-40 °C to 95 °C / -40 °F to 203 °F	
<b>Material</b>	Body and needle: nickel-plated brass	Elastomer: NBR/Buna-N



Flow adjustment	Operating pressure	Volume flow at 3.5 bar and 6 turns	Nipple diameter	Order number
mit	max. bar	l/min	Ø mm / inch	

Needle valve with knurled screw				operating pressure max. 12 bar, nickel-plated brass, Ø 0...0.65 mm	NV30-K
knurled-head	12	0...32	3.0 / 1/16"		NV30-2K
			4.5 / 1/8"		NV30-4K

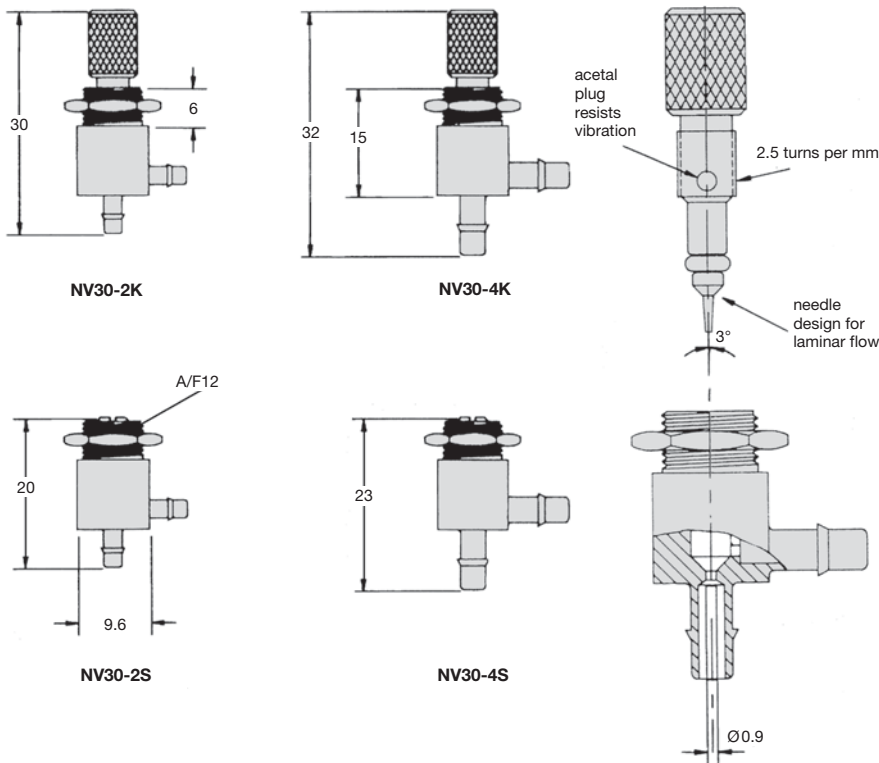


NV30-2K  
with knurled-head

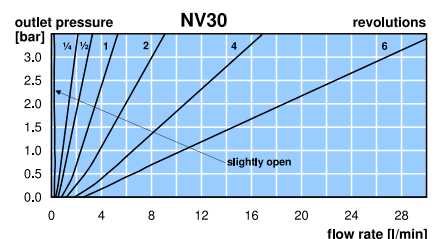
Needle valve with slotted screw				operating pressure max. 12 bar, nickel-plated brass, Ø 0...0.65 mm	NV30-S
slotted screw	12	0...32	3.0 / 1/16"		NV30-2S
			4.5 / 1/8"		NV30-4S



NV30-4S  
with slotted screw



NV30-2K

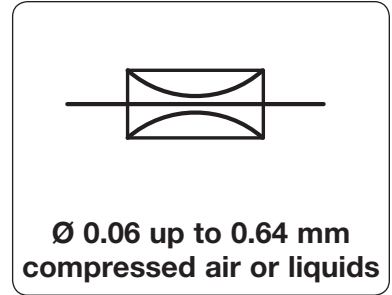




# Precision Restrictor in Brass Body

RF





<b>Description</b>	Precision sapphire restrictor for reducing the flow of air or gas. Fixed flow restrictors are used in back pressure and air jet sensing circuits.		
<b>Media</b>	5 µm filtered compressed air, non-corrosive gases or liquids		
<b>Diameter tolerances</b>	-3% to +10% of nominal diameter		
<b>Operating pressure</b>	vacuum up to positive pressure of max. 12 bar		
<b>Temperature range</b>	5 °C to 50 °C / 41 °F to 122 °F		
<b>Material</b>	Body: brass	Restrictor: sapphire	

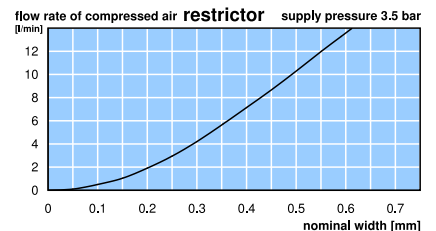
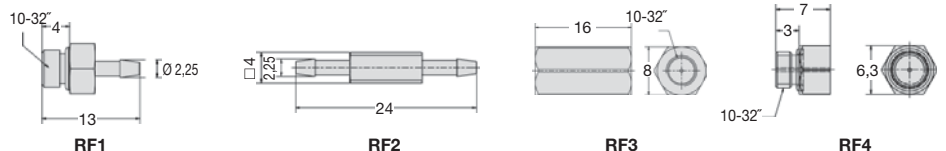


Nominal size Ø mm	Order number			
	10-32" / nipple Ø 2 RF1	nipple Ø 2.2 RF2	10-32" RF3	10-32" / open orifice RF4



## Restrictor operating pressure max. 12 bar RF

				
0.06	RF106	RF206	RF306	RF406
0.07	RF107*	RF207	RF307	RF407
0.08	RF108*	RF208*	RF308*	RF408*
0.09	RF109	RF209	RF309	RF409
0.10	RF110*	RF210*	RF310*	RF410*
0.11	RF111	RF211	RF311	RF411
0.12	RF112	RF212	RF312	RF412
0.13	RF113	RF213	RF313	RF413
0.14	RF114	RF214	RF314	RF414
0.15	RF115*	RF215*	RF315*	RF415*
0.16	RF116	RF216	RF316	RF416
0.17	RF117	RF217	RF317	RF417
0.18	RF118	RF218	RF318	RF418
0.20	RF120	RF220	RF320	RF420
0.22	RF122*	RF222*	RF322*	RF422*
0.24	RF124	RF224	RF324	RF424
0.26	RF126	RF226	RF326	RF426
0.28	RF128	RF228	RF328	RF428
0.30	RF130	RF230	RF330	RF430
0.32	RF132*	RF232*	RF332*	RF432*
0.34	RF134	RF234	RF334	RF434
0.36	RF136	RF236	RF336	RF436
0.40	RF140	RF240	RF340	RF440
0.44	RF144*	RF244*	RF344*	RF444*
0.48	RF148	RF248	RF348	RF448
0.52	RF152	RF252	RF352	RF452
0.54	RF154	RF254	RF354	RF454
0.58	RF158	RF258	RF358	RF458
0.64	RF164*	RF264*	RF364*	RF464*



\* preferred stock items

PDF CAD  
www.aircom.net

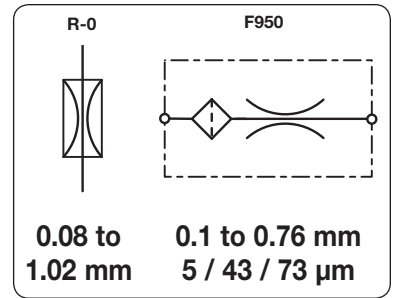


Order example:  
RF106

# Precision Restrictor in Plastic Body

R-0/F950

Precision Restrictor R-0	
<b>Description</b>	Precision sapphire restrictor for reducing the flow of compressed air or non-corrosive gases
<b>Medium</b>	compressed air or non-corrosive gases
<b>Filter element</b>	5 µm for DN0.08 up to DN0.23, from DN0.25 on 100 µm
<b>Operating pressure</b>	vacuum up to max. 7 bar
<b>Material</b>	Body: polycarbonate, FDA-approved Restrictor: sapphire Filter element: stainless steel fabric
<b>Temperature range</b>	5 °C to 50 °C / 41 °F to 122 °F
Restrictor with Filter F950	
<b>Description</b>	Disposable in-line-filter with Dutch weave screen of 304 stainless steel. Flow direction and filter size in µm are clearly marked. The colour indicates the nominal size.
<b>Diameter tolerance</b>	-3% to +10% of nominal diameter
<b>Filter element</b>	5 µm at DN 0.10 to DN 0.15, 43 µm at DN 0.18 to DN 0.41, 73 µm at DN 0.51 to DN 0.76
<b>Operating pressure</b>	max. 7 bar
<b>Material</b>	Body: polysulphone Restrictor: sapphire Filter element: stainless steel fabric
<b>Temperature range</b>	5 °C to 50 °C / 41 °F to 122 °F



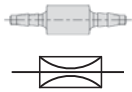
Dimensions	Connection	Nominal size	Order	Nominal size	Order
A	inlet / outlet	colour / DN	number	colour / DN	number
mm		Ø mm		Ø mm	

## Restrictor, barbed fittings Ø 2.7

operating pressure max 7 bar

R-0...-6

30 fittings Ø 2.7	gold	0.08	R-003-6	orange	0.36	R-014-6
	purple	0.10	R-004-6*	grey	0.41	R-016-6*
	white	0.13	R-005-6	brown	0.43	R-017-6
	yellow	0.18	R-007-6	red	0.48	R-019-6
	light green	0.20	R-008-6*	dark blue	0.51	R-020-6*
	lavender	0.23	R-009-6	black	0.64	R-025-6
	light blue	0.25	R-010-6	beige	0.76	R-030-6
	green	0.30	R-012-6*	dark grey	0.89	R-035-6*
				cyan	1.02	R-040-6*



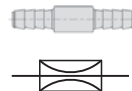
R-0...-1 R-0...-6  
with nipple

## Restrictor, barbed fittings Ø 4,7

operating pressure max 7 bar

R-0...-1

34 fittings Ø 4.7	gold	0.08	R-003-1	orange	0.36	R-014-1
	purple	0.10	R-004-1*	grey	0.41	R-016-1*
	white	0.13	R-005-1	brown	0.43	R-017-1
	yellow	0.18	R-007-1	red	0.48	R-019-1
	light green	0.20	R-008-1*	dark blue	0.51	R-020-1*
	lavender	0.23	R-009-1	black	0.64	R-025-1
	light blue	0.25	R-010-1	beige	0.76	R-030-1
	green	0.30	R-012-1*	dark grey	0.89	R-035-1*
				cyan	1.02	R-040-1*



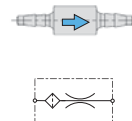
R-0...-0  
with plain fittings

## Restrictor with filter

operating pressure max. 7 bar  
nipple Ø 2.7 mm, 5/43/73 µm

F950

34 fittings Ø 2.7	purple	0.10	5 µm	F950- 5-041-B80*
	light green	0.13	5 µm	F950- 5-050-B80
	red	0.15	5 µm	F950- 5-051-B80
	cyan	0.18	43 µm	F950-43-071-B80*
	yellow	0.25	43 µm	F950-43-101-B80
	black	0.30	43 µm	F950-43-121-B80*
	grey	0.41	43 µm	F950-43-161-B80
	blue	0.51	73 µm	F950-73-201-B80*
	brown	0.64	73 µm	F950-73-251-B80
	beige	0.76	73 µm	F950-73-301-B80*



F950...B85/ ... B80  
with filter

Supply pressure

## Special options, add the appropriate letter

plain fittings Ø 2.3 A = 9,9 mm

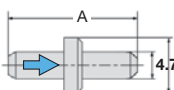


for R-0 R-0...-0

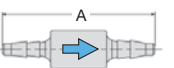
nipple Ø 4.7 A = 34 mm



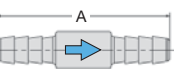
for F950 F950-...-...-B85



plain fittings  
R-0...-0



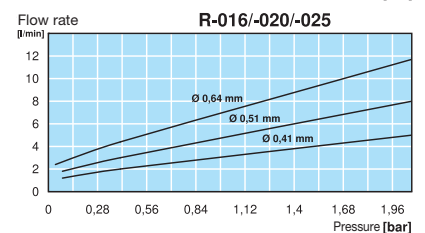
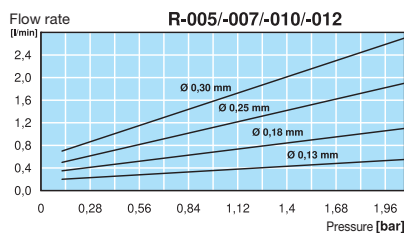
barbed fittings Ø 2.7  
R-0...-6  
F950-...-...-B80



barbed fittings Ø 4.7  
R-0...-1  
F950-...-...-B85

\* preferred stock items

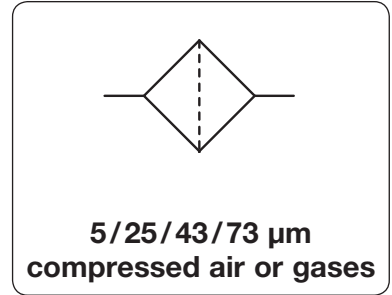
\*1 nominal size see RF2



# Micro In-Line Filter

F950/F960/F970

<b>Description</b>	Compact in-line filter with fittings or threaded connection. Flow direction and filter size in $\mu\text{m}$ are clearly marked.	
<b>Media</b>	compressed air or non-corrosive gases	
<b>Diameter tolerances</b>	-3% to +10% of nominal diameter	
<b>Filter element</b>	5 $\mu\text{m}$ , 25 $\mu\text{m}$ , 43 $\mu\text{m}$ or 73 $\mu\text{m}$	
<b>Operating pressure</b>	max. 8.6 bar	
<b>Temperature range</b>	5 °C to 50 °C / 41 °F to 122 °F	
<b>Material</b>	Body: polysulphone	Filter element: Dutch weave stainless steel



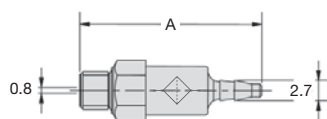
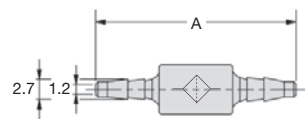
Dimensions A mm	Operating pressure max. bar	Connection inlet / outlet	Filter element $\mu\text{m}$	Order number
-----------------------	-----------------------------------	------------------------------	------------------------------------	-----------------

Micro pressure filter			operating pressure max. 8.6 bar		F900
26	8.6	fittings $\varnothing$ 2.7	5	F950-05B80	
			25	F950-25B80	
			43	F950-43B80	
			73	F950-73B80	
30	8.6	fittings $\varnothing$ 4.7	5	F950-05B85	
			25	F950-25B85	
			43	F950-43B85	
			73	F950-73B85	
24	8.6	10-32" / fittings $\varnothing$ 2.7	5	F960-05B80	
			25	F960-25B80	
			43	F960-43B80	
			73	F960-73B80	
28	8.6	10-32" / fittings $\varnothing$ 4.7	5	F960-05B85	
			25	F960-25B85	
			43	F960-43B85	
			73	F960-73B85	
15	8.6	10-32" / 10-32"	5	F970-05	
			25	F970-25	
			43	F970-43	
			73	F970-73	

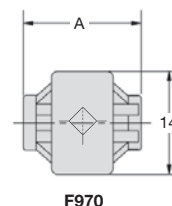
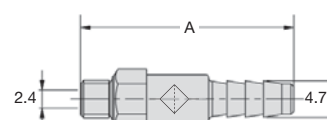
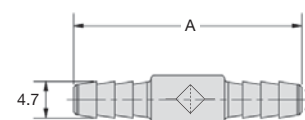


## Accessories

connecting nipple for F960 and F970	10-32" / fitting $\varnothing$ 2.7	F3120-80
	$\varnothing$ 4.7	F3120-85
	$\varnothing$ 5.6	F3120-86



fitting	for tube		
B80	$\varnothing$ 2.7	$\frac{1}{16}$ "	$\varnothing$ 1.6 mm
B85	$\varnothing$ 4.7	$\frac{1}{8}$ "	$\varnothing$ 3.2 mm
B86	$\varnothing$ 5.6	0.17"	$\varnothing$ 4.3 mm

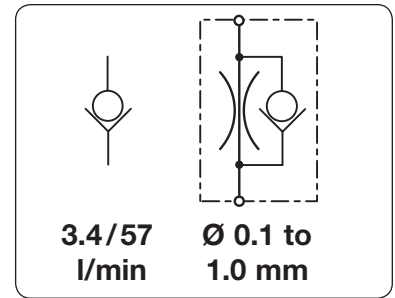


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Order example:  
F950-05B80

<b>Check valve</b>	The check valve permits flow in one direction only. A small check disc within the housing ensures free flow in one direction and at the same time seals off on the other side.	
<b>Restrictor check valve</b>	The restrictor check valve provides a constant flow in one direction, defined through the orifice size, and a flow of the full nominal size towards the other direction.	
<b>Media</b>	5 µm filtered compressed air or non-corrosive gases	
<b>Diameter tolerance</b>	-3% to +10% of nominal diameter	
<b>Operating pressure</b>	max. 0.7 bar at F2804-400/1/2/3,	max. 5.2 bar at F2804-404
<b>Cracking pressure</b>	< 20 mbar at F2804-400/1/2/3,	< 25 mbar at F2804-404
<b>Temperature range</b>	5 °C to 50 °C / 41 °F to 122 °F	
<b>Material</b>	Body: polysulphone at F2804-400/1/2/3, polypropylene at F2804-404 Check disc: Celcon at F2804-401/2, silicone at F2804-400/3/4	



Dimensions A mm	Operating pressure max. bar	Check disk made of	Connection	Leakage rate < ml/min*3	Flow rate l/min*2	Nominal size colour / DN	Order number
-----------------	-----------------------------	--------------------	------------	-------------------------	-------------------	--------------------------	--------------

Check valve		operating pressure max. 0.7 / 5.2 bar			F2804		
12	0.7	silicone	plain fittings Ø 2.4	3	3.4	red	1.5 F2804-400*1
		Celcon		51		orange	1.5 F2804-401
		Celcon		17		green	1.5 F2804-402
		silicone		3		blue	1.5 F2804-403
26	0.7	Celcon	fittings Ø 2.7	51	3.4	grey	1.5 F2804-401-B80
		Celcon		17		grey	1.5 F2804-402-B80
		silicone		3		grey	1.5 F2804-403-B80*1
30	0.7	Celcon	fittings Ø 4.7	51	3.4	grey	1.5 F2804-401-B85
		Celcon		17		grey	1.5 F2804-402-B85
		silicone		3		grey	1.5 F2804-403-B85*1
15	5.2	silicone	10-32"	1	57	grey	3.8 F2804-404*1
		silicone	fittings Ø 2.7	1		grey	3.8 F2804-404-B80
		silicone	fittings Ø 4.7	1		grey	3.8 F2804-404-B85




F2804-400 / 1 / 2 / 3 check valve



F2804-404 - B85 / ... - B80 check valve



F2804-404 - 071 / -301 restrictor check valve

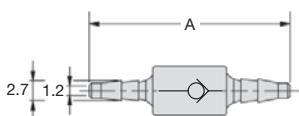
Restrictor check valve		operating pressure max. 5.2 bar			F2804		
15	5.2	silicone	10-32"				0.10 F2804-404-041*1
							0.13 F2804-404-050
							0.15 F2804-404-051
							0.18 F2804-404-071
							0.25 F2804-404-101*1
							0.30 F2804-404-121
							0.41 F2804-404-161
							0.51 F2804-404-201
							0.64 F2804-404-251*1
							0.76 F2804-404-301
							1.02 F2804-404-401*1

## Special options, add the appropriate number

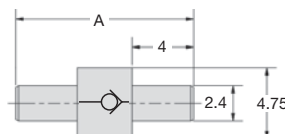
increased cracking pressure for check valve, with spring 35 mbar **F2804-404-05**

## Accessories

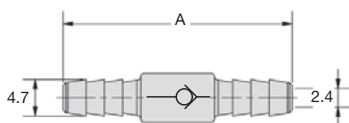
connecting nipple for F2804-404 10-32" / fitting Ø 2.7 **F3120-80**  
 Ø 4.7 **F3120-85**  
 Ø 5.6 **F3120-86**



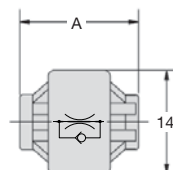
F2804-40.-B80



F2804-40.- with plain fittings



F2804-40.-B85



F2804-404

fitting	for tube	
B80	Ø 2.7	1/16" Ø 1.6 mm
B85	Ø 4.7	1/8" Ø 3.2 mm
B86	Ø 5.6	0.17" Ø 4.3 mm

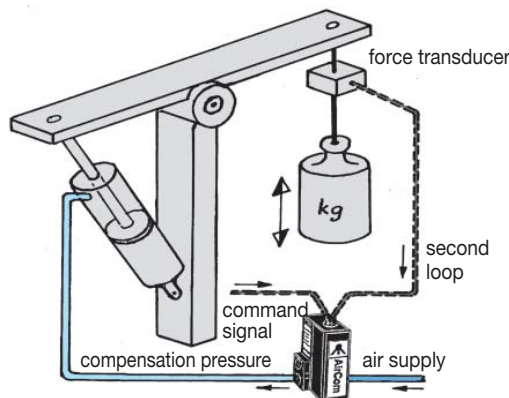
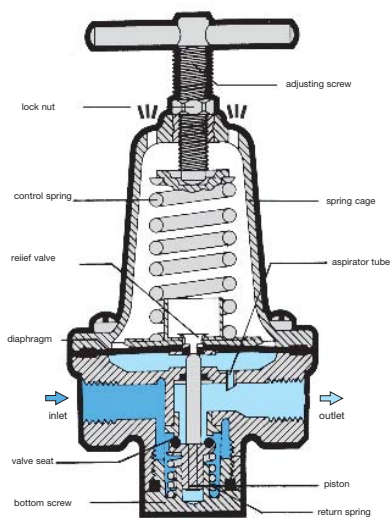
\*1 preferred stock items      \*2 at max. operating pressure      \*3 at Δp or P<sub>1</sub> = 70 mbar, at type F2804-404: P<sub>1</sub> = 5.2 bar

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Order example:  
F2804-400

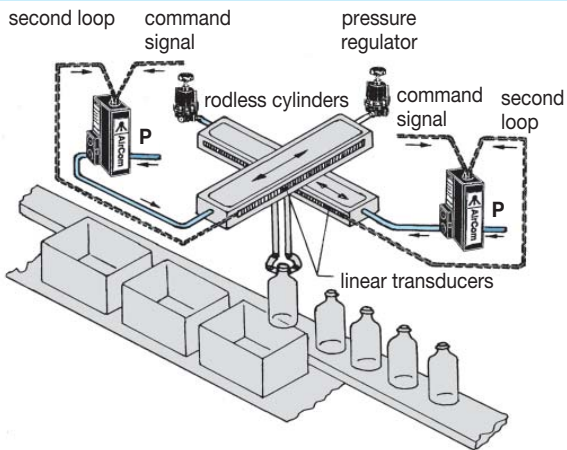
	Description	Seite
<b>Applications</b>	Proportional Pressure Regulators	21.02
<b>Functional description</b>	Compressed Air Filters	21.10
	Pressure Regulators and Volume Booster	21.11
	Filter Regulators	21.12
	Compressed Air Lubricators	21.13
<b>Calculations</b>	Volume Flow Rate	21.06
	Air Amplifier	21.07
	Conversion Tables	21.09
<b>Technical Information</b>	Connections thread for Gas Cylinder	21.08
	Temperature range of Elastomer	21.08
	Influence of filter pore size on flow rate	21.08
	Influence of supply pressure variation on flow rate	21.08
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# 21 Info

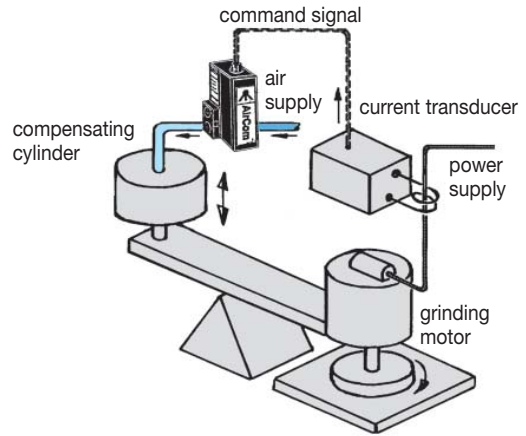


## Applications of Proportional Pressure Regulators



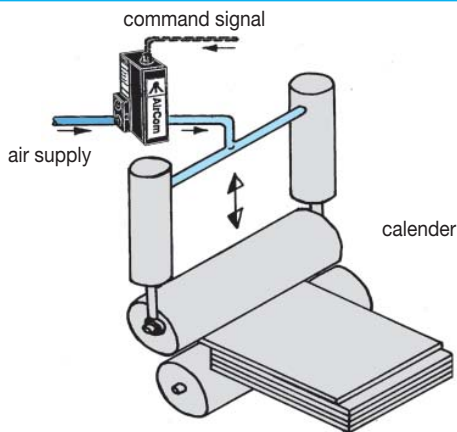
### Positioning

AirCom proportional pressure regulators control rodless cylinders for operating robotic arms which load bottles into cases.



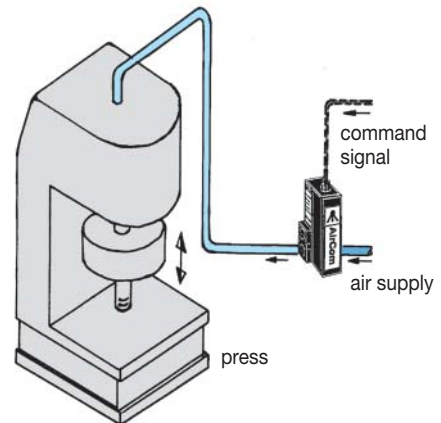
### Constant push pressure

AirCom proportional pressure regulators monitor the motor current and adjust the force applied to provide accurate control of the grinding force.



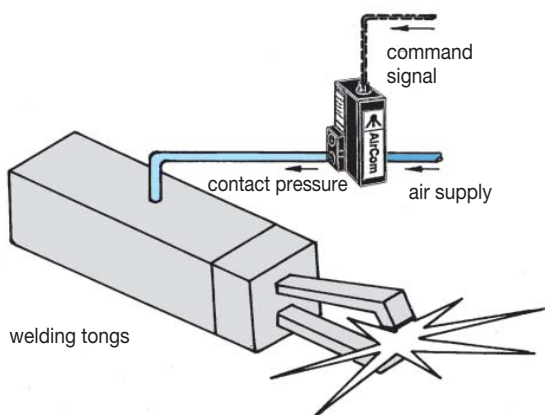
### Constant material thickness

The AirCom proportional pressure regulator controls the downward force of the calender roller in order to compensate sheet thickness variations on sheet feeding equipment.



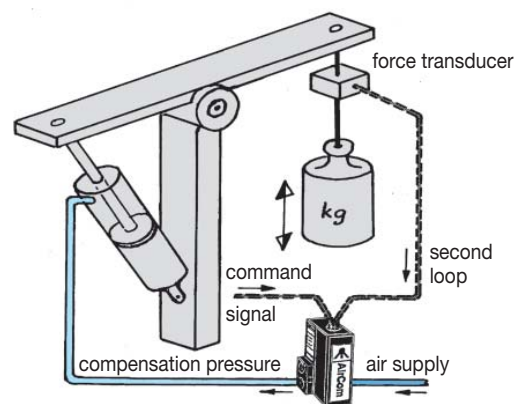
### Controlled contact pressure

The AirCom proportional pressure regulator accurately controls the force that a cylinder exerts on its load. Thus, the workpiece's quality can be significantly improved.



### Welding tongs with constant contact pressure

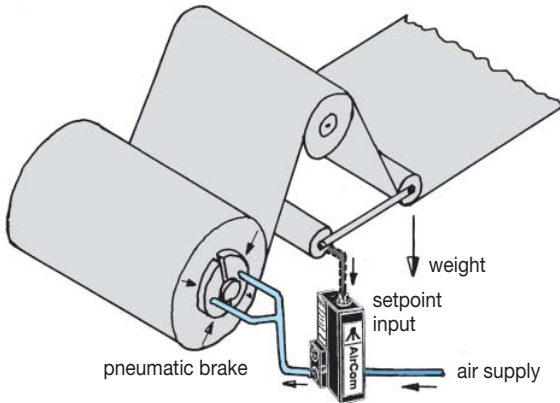
The AirCom proportional pressure regulator quickly and accurately controls the nip pressure required in resistance welding.



### Balancer for load moving by hand

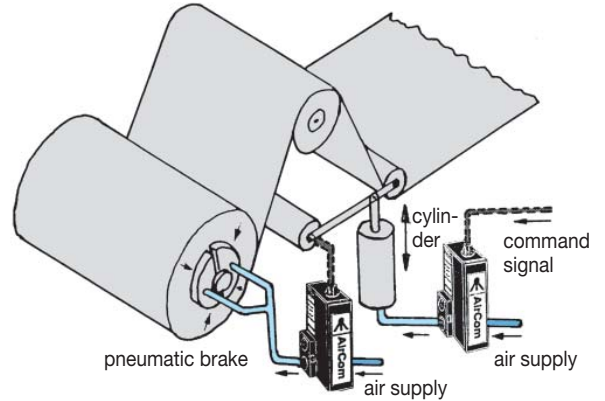
The AirCom proportional pressure regulator keeps the load in balance by cylinder force. Loads weighing tons are easy to raise and lower simply by hand.

## Applications of Proportional Pressure Regulators



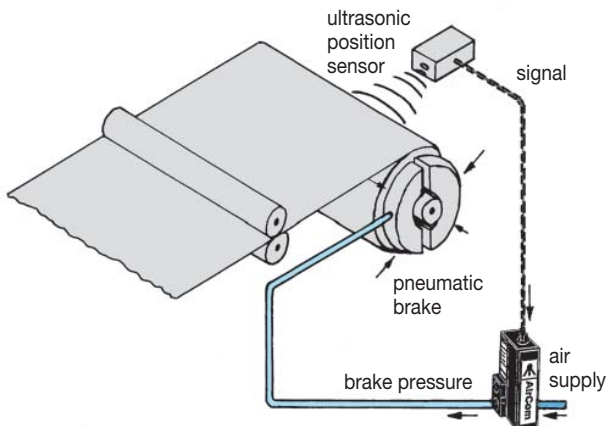
### Winder with constant web tension

The AirCom proportional pressure regulator accurately senses the position of a dancer arm of known weight and mass to ensure constant web tension by controlling a brake.



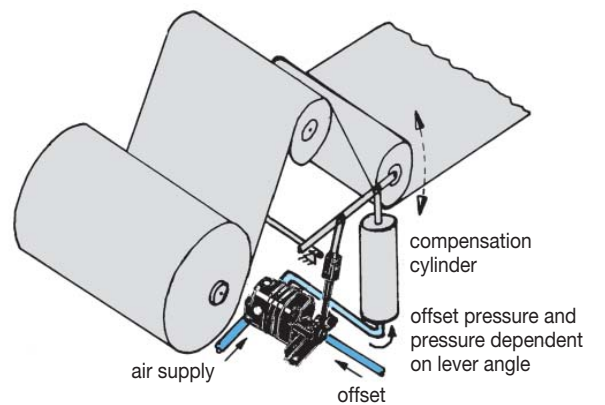
### Winder with adjustable web tension

The AirCom proportional pressure regulator adjusts web tension in web tension control systems that employ cylinders instead of deadweights achieving constant material tension.



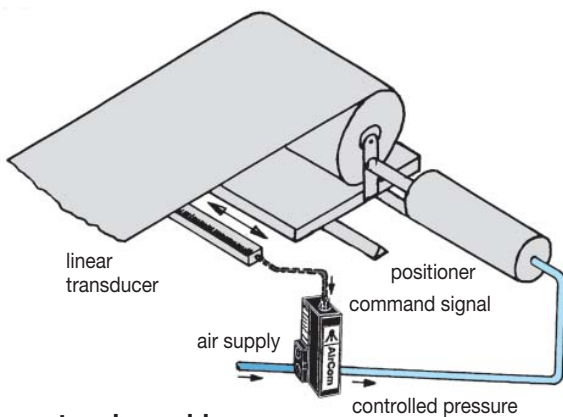
### Winder with constant web tension

A position sensor commands the AirCom proportional pressure regulator to adjust web tension as the roll size changes. The roll speed is reduced in proportion to the coil size.



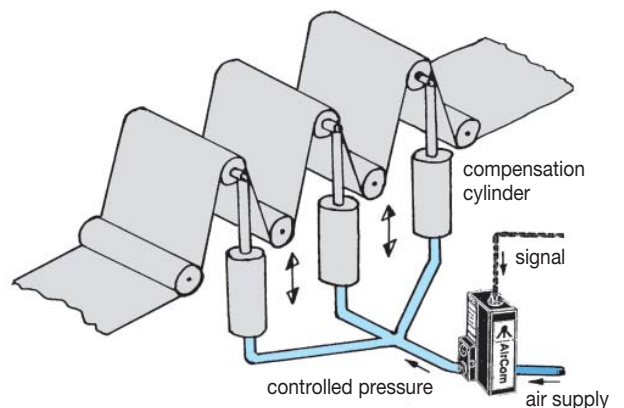
### Winder with weight-compensated dancer roller

The lever-operated proportional regulator compensates the changed weight of the winding roll and controls the web tension by cylinder force.



### Accurate edge guidance

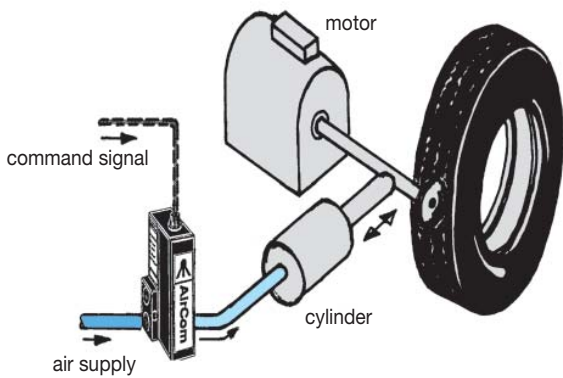
The addition of an AirCom proportional pressure regulator assures accurate edge guidance in web systems. A linear transducer checks the web position and pilots the regulator to readjust the positioner.



### Length compensation on winding systems

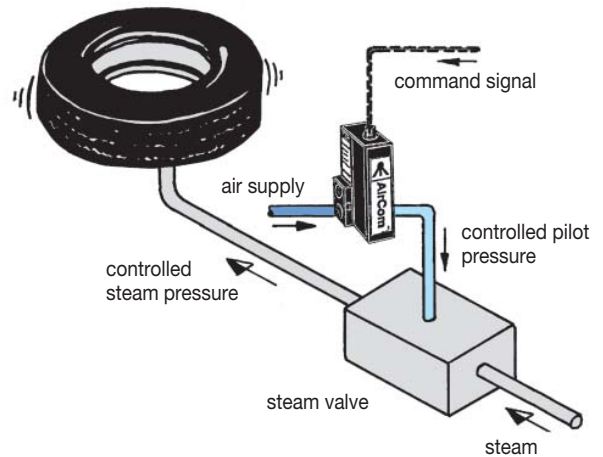
With the assistance of an AirCom proportional pressure regulator and the consequential control of compensation cylinders, webs can be easily "festooned". In addition, the cylinders provide for constant web tension.

## Applications of Proportional Pressure Regulators



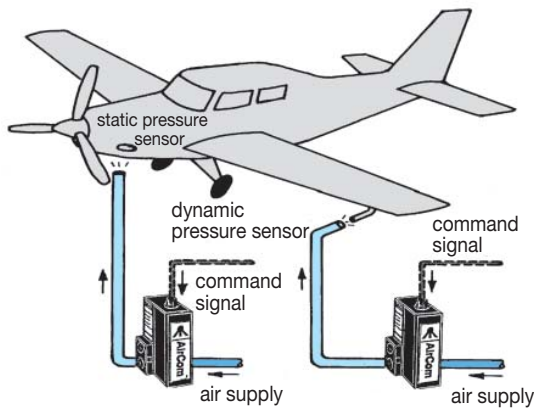
### Precision tyre treatment

AirCom proportional pressure regulators control the forces required for maintaining a constant circumference in the balancing of rubber tyres when cutting tyre treads.



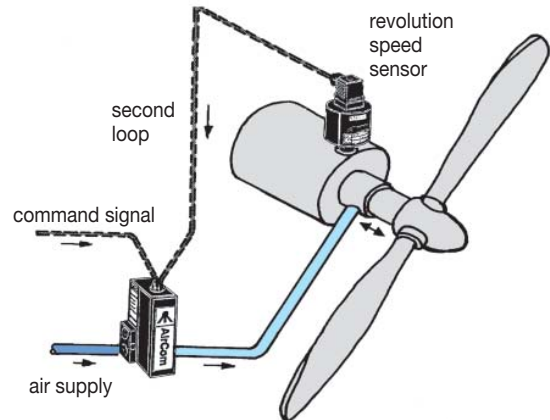
### Controlling tyre elasticity

Incorporated into the steam valve system, AirCom proportional pressure regulators control the elasticity of rubber tyres.



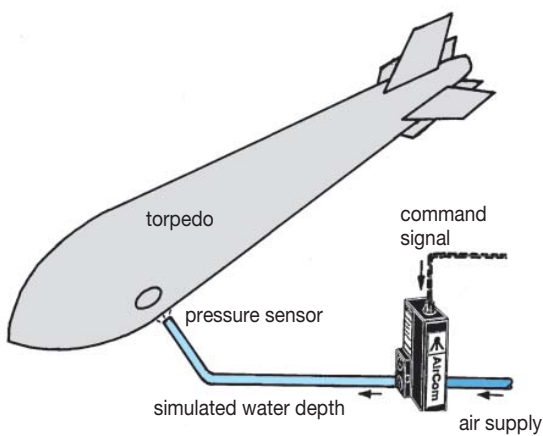
### Simulation of water depths

AirCom proportional pressure regulators accurately monitor static and dynamic pressure sensors in aircraft.



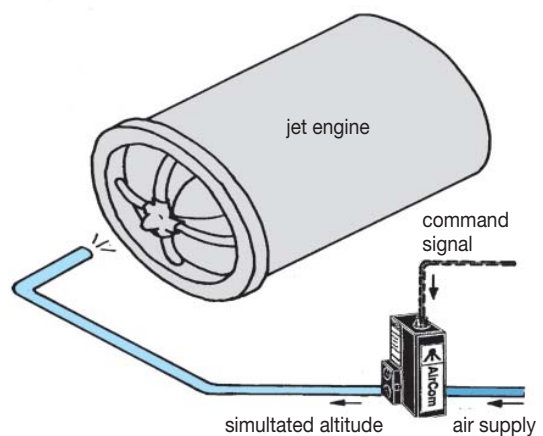
### Turbine pressure regulation

AirCom proportional pressure regulators control and adjust the propeller blade angle to regulate the turning of wind turbine generators.



### Simulation of water depths

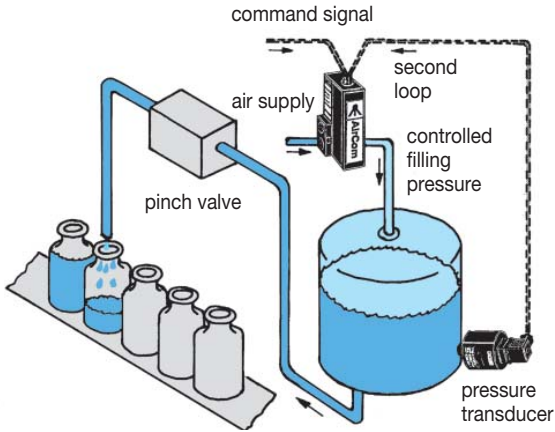
AirCom proportional pressure regulators simulate different water depths for torpedo sensor testing.



### Simulation of flight altitudes

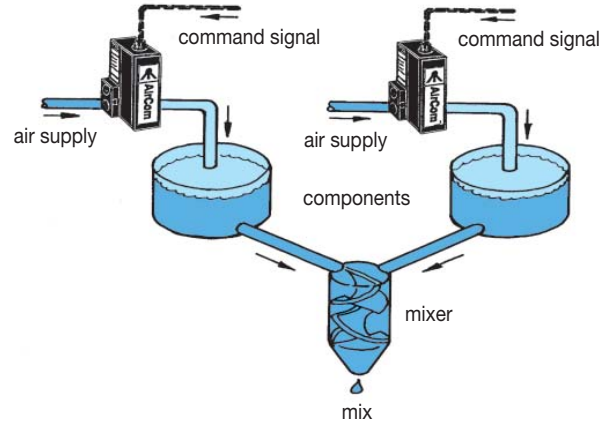
In jet engine testing, AirCom proportional pressure regulators accurately control the air pressure required for simulating various altitudes.

## Applications of Proportional Pressure Regulators



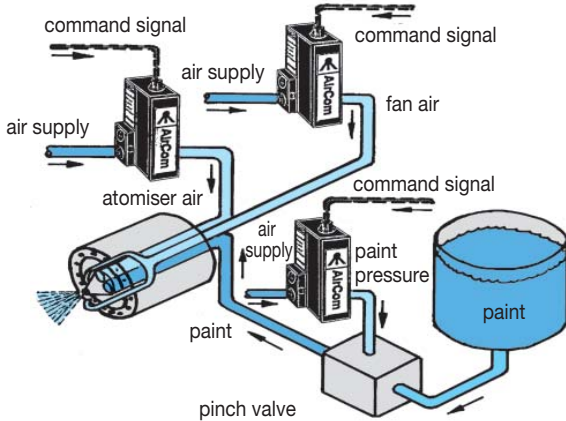
### Constant filling pressure

AirCom proportional pressure regulators accurately control the liquid flow regardless of tank level for dispensing pharmaceuticals and food products.



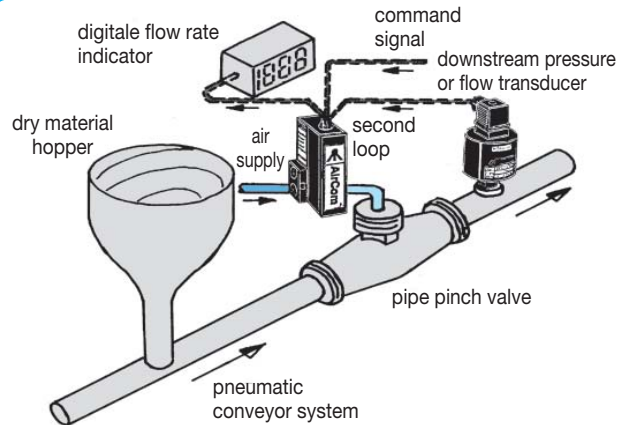
### Exact mix

AirCom proportional pressure regulators accurately control the flow of ingredients for mixing for, e.g. the precise formulation of resin.



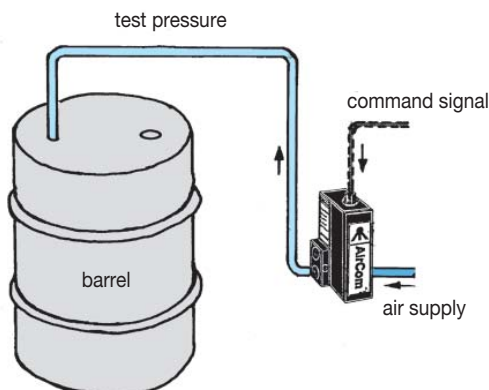
### Economic spray painting

AirCom proportional pressure regulators economically control turbine speed, atomise and shape air and deliver the fluid for spray painting.



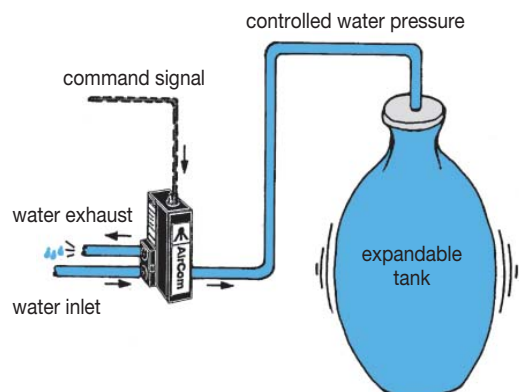
### Flow regulation

AirCom proportional pressure regulators regulate and monitor the flow of dry material in pneumatic conveying systems.



### Leak testing

AirCom proportional pressure regulators control the pressure required to test for leaks of containers of any size



### Regulation of constant water pressure

AirCom proportional pressure regulators control and maintain the pressure of water flowing into expanding tanks, even during receding expansion.



# Volume Flow Rate Calculation

## Physical parameters

	Short symbol	Description	Remarks	Unit
<b>A</b>	Q	Flow rate		l/min
	$K_v$	Flow factor	at $\Delta P = 1$ bar and $\gamma = 1$ or 1.25	m <sup>3</sup> /h
	P	Relative pressure		bar
	$P_{abs}$	Absolute pressure	1 + P	bar <sub>abs</sub>
	$P_1$	Supply pressure		bar
	$P_2$	Outlet pressure		bar
	$\Delta P$	Differential pressure	$P_1 - P_2$	bar
	T	Absolute Temperature	$\geq 273 + ^\circ\text{C}$ , at 20 °C / 68 °F: 293	K
	$\gamma_L$	Specific weight of air	air: 1.25 at 20 °C / 68 °F and 760 mm Hg	N/m <sup>3</sup>
	$\gamma_A$	Specific weight of water	water: 1.0	N/dm <sup>3</sup>
	$u_L$	Flow velocity of air	for air max. 100 m/s, recommended 50 m/s (50%)	m/s
	$u_A$	Flow velocity of water	for water max. 4.5 m/s, recommended 3 m/s (60%)	m/s
	F	Cross-sectional area	area of the open tube	cm <sup>2</sup>

	Medium/General formula	Simplified formula *														recommend.	Dimension
<b>B</b>	<b>Subcritical <math>\Delta P &lt; 0.5 \cdot (1 + P_1)</math></b>	$P_1$ bar	2	3	4	5	6	7	8	9	10	11	12	13	14	<b>Q · 0.6</b>	<b>(l/min)</b>
		$P_2 >$ bar	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5		
	<b>Supercritical <math>\Delta P &gt; 0.5 \cdot (1 + P_1)</math></b>	$P_1$ bar	2	3	4	5	6	7	8	9	10	11	12	13	14		
		$P_2 <$ bar	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5		

<b>C</b>	<b>Compressed air, supercritical:</b> $\Delta P < 0.5 \cdot (1 + P_1)$ $Q = K_v \cdot 514 \cdot 16.67 \cdot \sqrt{\frac{\Delta P \cdot P_2 \text{ abs}}{\gamma_L \cdot T}}$	<b><math>Q = 448 \cdot K_v \cdot \sqrt{\Delta P \cdot (1 + P_2)}</math></b>	<b>Q · 0.6</b>	<b>(l/min)</b>
	<b>Compressed air, supercritical:</b> $\Delta P > 0.5 \cdot (1 + P_1)$ $Q = K_v \cdot 257 \cdot 16.67 \cdot \frac{P_1 \text{ abs}}{\sqrt{\gamma_L \cdot T}}$	<b><math>Q = 224 \cdot K_v \cdot (1 + P_1)</math></b>	<b>Q · 0.6</b>	<b>(l/min)</b>
	<b>Water:</b> $Q = K_v \cdot 16.67 \cdot \sqrt{\frac{\Delta P}{\gamma_A}}$	<b><math>Q = 16.67 \cdot K_v \cdot \sqrt{\Delta P}</math></b>	<b>Q · 0.6</b>	<b>(l/min)</b>

<b>D</b>	<b>Outlet tube for compressed air:</b> check of flow rate with respect to noise $Q = u_L \cdot F \cdot P_2 \text{ abs} \cdot 16.67 \cdot \frac{98.28}{T}$	<b><math>Q = 560 \cdot F \cdot (1 + P_2)</math></b>	<b>Q · 0.5</b>	<b>(l/min)</b>
	<b>Outlet tube for water:</b> check of flow rate with respect to noise $Q = u_A \cdot F \cdot 0.36 \cdot 16.67$	<b><math>Q = 27 \cdot F</math></b>	<b>Q · 0.6</b>	<b>(l/min)</b>

<b>E</b>	Cross section of orifices	G	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2	2 1/2
		F (cm <sup>2</sup> )	0.08	0.31	0.71	1.27	2.85	5.06	11.4	20.2	31.5

### Example

- Example ①** Determine the **compressed air flow** of regulator R230-02B ( $K_v = 0.7$  m<sup>3</sup>/h)  
supply pressure  $P_1 = 3$  bar, outlet pressure  $P_2 = 2.5$  bar  
a) at  $P_1 = 3$  bar and  $P_2 = 2.5$  bar  $\longrightarrow$  subcritical pressure ratio  
b)  $Q = 448 \cdot K_v \cdot \sqrt{\Delta P (1 + P_2)}$  =  $448 \cdot 0.7 \cdot \sqrt{0.5 \cdot (1 + 2.5)}$  = 415 l/min
- Example ②** As example ①, but supply pressure  $P_1 = 7$  bar  
a) at  $P_1 = 7$  bar and  $P_2 = 2.5$  bar  $\longrightarrow$  supercritical pressure ratio  
b)  $Q = 224 \cdot K_v \cdot (1 + P_1)$  =  $224 \cdot 0.7 \cdot (1 + 7)$  = 1254 l/min
- Example ③** Determine the **water flow** of regulator R25-02BK ( $K_v = 0.38$  m<sup>3</sup>/h)  
supply pressure  $P_1 = 4$  bar, outlet pressure  $P_2 = 2$  bar, orifice G1/4 (0.31 cm<sup>2</sup>)  
a)  $Q = 16.67 \cdot K_v \cdot \sqrt{\Delta P}$  =  $16.67 \cdot 0.38 \cdot \sqrt{4 - 2}$  = 8.9 l/min  
b)  $Q = 27 \cdot F$  =  $27 \cdot 0.31$  = 8.4 l/min  
Calculation b) only for check. Recommended flow: 8.9 l/min · 0.6 = 5.3 l/min

\* simplified formula at 20 °C / 68 °F, specific weight of water  $\gamma = 1$  and compressed air = 1.25, at flow velocity of air of 100 m/s and of water 4.5 m/s



# Booster / Air Amplifier Calculation

## Physical parameters

Short symbol	Description	Remarks	Dimension
$P_1$	Existing system pressure	minimum pressure	bar
$P_2$	required proof pressure	maximum pressure	bar
$V_F$	Volume of the device under test	including hose volume	l
$t_z$	Cycle time	period from one test to the next	s
$t_F$	Inflation time	period until required proof pressure is reached	s
$i$	Pressure transmission ratio, e.g. 1:4	system pressure: proof pressure	
$Q_N$	Required flow rate	for expanded compressed air (0 bar)	NI/min
	Operation medium	e.g. compressed air or nitrogen	

## Calculation formulas

**Flow rate of expanded compressed air:**  $Q_N = \frac{P_2 \cdot V_F}{t_F} \cdot 60$  (NI/min)

**Pressure transmission ratio:**  $i = \frac{P_2}{P_1}$

## Calculation example

11 bar pressure is to be set up in a device under test of 0.2 l volume within 5 seconds. This procedure is repeated every 30 seconds. System pressure is 6 bar.

Specifications:  $P_1 = 6 \text{ bar}$                        $t_z = 20 \text{ s}$                        $V_F = 0.2 \text{ l}$   
 $P_2 = 11 \text{ bar}$                                        $t_F = 5 \text{ s}$

**1) Calculation of the required flow rate in NI/min**

$Q_N = \frac{P_2 \cdot V_F}{t_F} \cdot 60$                        $Q_N = \frac{11 \cdot 0.2}{5} \cdot 60 = 26.4 \text{ NI/min}$

**2) Calculation of the required pressure transmission ratio**

$i = \frac{P_2}{P_1}$                                        $i = \frac{11 \text{ bar}}{6 \text{ bar}} = 1.8$                        $\Rightarrow 1:2$  chosen from catalogue

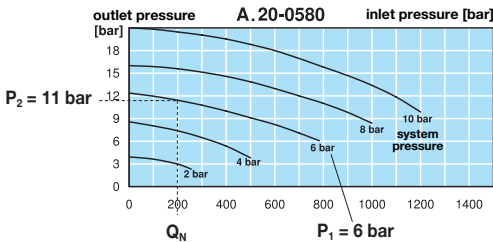
**3) Examination of existing operation mode**

Full load in continuous operation: max. 12 min/h  $\Rightarrow$  ratio 1:5

$\frac{t_F}{t_z} = \frac{5 \text{ s}}{20 \text{ s}} = \frac{1}{4} \Rightarrow$  Full load in continuous operation, i.e. maximum 20% of the performance charts values may be realised.

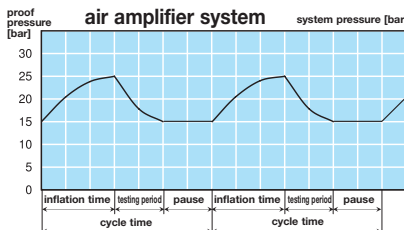
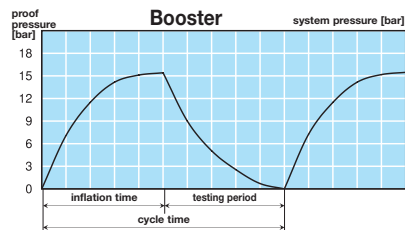
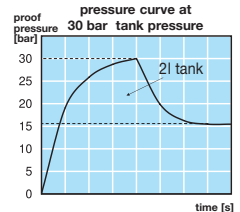
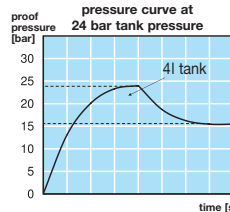
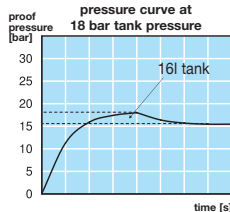
$Q_N \cdot 5 \Rightarrow$  100% of indications of performance diagrams,                       $26.4 \text{ NI/min} \cdot 5 = 132 \text{ NI/min}$

**4) Booster selection on the basis of performance diagrams**



max. performance > required performance  
 200 NI/min > 132 NI/min  
 $\Rightarrow$  AM20-0580

## Pressure curves of boosters / air amplifier systems



**Result:**

The higher the tank pressure, the smaller the pressure tank may be and vice versa.

The air amplifier systems are individually adapted to your demands by AirCom.

## Connection Threads, Temperature Ranges, Elastomers

Info

21

### Flange connection according to DIN 477

Gas type	Inlet port	Gas type	Inlet port
flammable gases	W21.8x1/14 LH union nut	ammonia	W21.8x1/14 union nut
carbon dioxide	1" LH union nut	testing gas with NH <sub>3</sub>	M19x1.5 LH union nut
nitrous oxide	G $\frac{3}{8}$ union nut	hydrogen sulphide	1" LH union nut
non-flammable gases	W21.8x1/14 union nut	hydrogen chloride	1" LH union nut
testing gas	M19x1.5 LH union nut	sulphur dioxide	G $\frac{5}{8}$ union nut
testing gas with CO	M19x1.5 LH union nut	nitrogen	W24.32x1/14 union nut
synthetic air	G $\frac{3}{4}$ union nut		
oxygen	G $\frac{3}{4}$ union nut	compressed air	G $\frac{5}{8}$ male

### Temperature ranges of elastomers

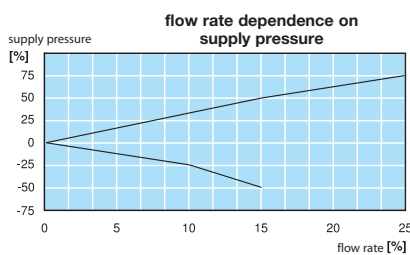
NBR/Buna N	Perbunan <sup>®</sup> , nitrile,	-30 °C to 90 °C / - 22 °F to 194 °F	for air, water, hydraulic-machine-fuel oil, turpentine
FPM	FKM, Viton <sup>®</sup>	-20 °C to 130 °C / - 4 °F to 266 °F	for gasoline, hydraulic fluids, HFA, HFB, HFD
EPDM		-40 °C to 120 °C / - 40 °F to 248 °F	for brake fluids, azetylene, ozone, hydrogen
PTFE	Teflon <sup>®</sup>	-200 °C to 200 °C / - 328 °F to 392 °F	
Silicone		-40 °C to 120 °C / - 40 °F to 248 °F	

### Influence of filter pore size on flow rate

Filter element	Flow rate
70 µm	110%
40 µm	100%
20 µm	90%

Filter element	Flow rate
5.0 µm	75%
0.3 µm	60%
0.01 µm	35%

### Influence of supply pressure variation on flow rate



### Threads / Nominal size

Connection thread	Nominal size
G $\frac{1}{4}$	DN10
G $\frac{1}{2}$	DN15
G $\frac{3}{4}$	DN20
G1	DN25
G1 $\frac{1}{4}$	DN32
G1 $\frac{1}{2}$	DN40
G2	DN50
G3	DN100

## Conversion Tables

Pa	bar	mbar	mWS	mmWS	torr mmHg	at kp / cm <sup>2</sup>	atm	inAg (inH <sub>2</sub> O)	inHg	psi lpf / in <sup>2</sup>
<b>1</b>	10 <sup>-5</sup>	10 <sup>-2</sup>	0.1020 · 10 <sup>-3</sup>	0.1020	7.501 · 10 <sup>-3</sup>	10.20 · 10 <sup>-6</sup>	9.869 · 10 <sup>-6</sup>	4.016 · 10 <sup>-3</sup>	2.953 · 10 <sup>-4</sup>	145.05 · 10 <sup>-6</sup>
10 <sup>5</sup>	<b>1</b>	10 <sup>3</sup>	10.20	10.20 · 10 <sup>3</sup>	750.1	1.020	0.9869	401.6	29.53	14.505
100	10 <sup>-3</sup>	<b>1</b>	10.20 · 10 <sup>-3</sup>	10.20	0.7501	1.020 · 10 <sup>-3</sup>	0.9869 · 10 <sup>-3</sup>	0.4016	29.53 · 10 <sup>-3</sup>	14.505 · 10 <sup>-3</sup>
9807	98.07 · 10 <sup>-3</sup>	98.07	<b>1</b>	10 <sup>3</sup>	73.56	0.1	96.78 · 10 <sup>-3</sup>	39.37	2.896	1.4224
9.807	98.07 · 10 <sup>-6</sup>	98.08 · 10 <sup>-3</sup>	10 <sup>-3</sup>	<b>1</b>	73.56 · 10 <sup>-3</sup>	10 <sup>-4</sup>	96.78 · 10 <sup>-6</sup>	0.03937	2.896 · 10 <sup>-3</sup>	1.4224 · 10 <sup>-3</sup>
133.32	1.333 · 10 <sup>-3</sup>	1.333	13.59 · 10 <sup>-3</sup>	13.59	<b>1</b>	1.359 · 10 <sup>-3</sup>	1.316 · 10 <sup>-3</sup>	0.5351	3.937 · 10 <sup>-2</sup>	0.01934
98.07 · 10 <sup>3</sup>	0.9807	980.7	10	10 <sup>4</sup>	735.6	<b>1</b>	0.9678	393.7	28.96	14.224
1.013 · 10 <sup>5</sup>	1.013	1013	10.33	10.33 · 10 <sup>3</sup>	760	1.033	<b>1</b>	406.7	29.92	14.68
249.1	2.491 · 10 <sup>-3</sup>	2.491	25.4 · 10 <sup>-3</sup>	25.4	1.8684	2.54 · 10 <sup>-3</sup>	2.458 · 10 <sup>-3</sup>	<b>1</b>	7.355 · 10 <sup>-2</sup>	36.126 · 10 <sup>-3</sup>
3386	3.386 · 10 <sup>-2</sup>	33.86	0.3453	345.3	25.4	3.453 · 10 <sup>-2</sup>	3.342 · 10 <sup>-2</sup>	13.60	<b>1</b>	0.4912
6894.8	6.8948 · 10 <sup>-2</sup>	68.948	0.7031	703.1	51.715	70.31 · 10 <sup>-3</sup>	68.04 · 10 <sup>-3</sup>	27.68	2.036	<b>1</b>

## Conversion of US and UK Units of Measurement into SI Units

Unit of measurement	US / UK Unit	SI Unit	Conversion factor	Unit of measurement	US / UK Unit	SI Unit	Conversion factor
---------------------	--------------	---------	-------------------	---------------------	--------------	---------	-------------------

### Length

1 inch = 40 lines	in	2.54 cm	0.393701
1 mil / thou	mil	25.4 μm	0.03937
1 line		0.635 mm	1.57480
1 foot = 12 in = 3 hands	ft	30.48 cm	0.0328084
1 yard = 3 feet = 4 spans	yd	0.9144 m	1.09361
1 furlong = 220 yd	fur	0.201168 km	4.97097
1 mile	mi	1.60934 km	0.62137
1 nautical mile (internat.)	nmi, NM	1.852 km	0.539957
1 knot	kn	1.852 km / h	0.539957

### Area

1 square inch	sq in	6.4516 cm <sup>2</sup>	0.155000
1 circular inch	circ in	5.0671 cm <sup>2</sup>	0.197352
1 square foot = 144 sq in	sq ft	929.03 cm <sup>2</sup>	1.0764 · 10 <sup>-3</sup>
1 square yard = 9 sq ft	sq yd	0.83613 m <sup>2</sup>	1.19599
1 square mile = 640 acres	sq mi	2.5900 km <sup>2</sup>	0.38610

### Volume

1 cubic inch	cu in	16.387 cm <sup>3</sup>	0.061024
1 cubic foot = 1728 cu in	cu ft	28.317 dm <sup>3</sup>	0.035315
1 cubic yard = 27 cu ft	cu yd	0.76455 m <sup>3</sup>	1.30795
1 fluid ounce (UK)	fl oz	0.028413 dm <sup>3</sup>	35.1950
1 fluid ounce (US)	fl oz	0.029574 dm <sup>3</sup>	33.8138
1 pint = 4 gills (UK)	(liq) pt	0.56826 dm <sup>3</sup>	1.75975
1 pint = 4 gills (US)	liq pt	0.47318 dm <sup>3</sup>	2.11336
1 quart = 2 pints (UK)	(liq) qt	0.13652 dm <sup>3</sup>	0.87988
1 quart = 2 pints (US)	liq qt	0.94636 dm <sup>3</sup>	1.05668
1 quarter = 64 gal		290.950 dm <sup>3</sup>	0.0034370
1 gallon = 2 pottles (UK)	gal	4.54609 dm <sup>3</sup>	0.219969
1 gallon (US)	gal	3.78543 dm <sup>3</sup>	0.264170
1 dry barrel (US)	bl	115.628 dm <sup>3</sup>	0.0086484

### Force

1 pound-weight	lb wt	4.448221 N	0.2248089
1 pound-force	LB lbf	4.448221 N	0.2248089
1 poundal	pdl	0.138255 N	7.23301
1 kilogramme-force	kgf, kgp	9.80665	0.1019716

### Pressure (force / area)

1 pound-weight	lb wt / sq in	6.8948 kN / m <sup>2</sup>	0.145038
1 pound-weight	lb wt / sq ft	47.880 N / m <sup>2</sup>	0.0208854
1 kilogramme-force / sq in	kgf / sq in	1.52003 N / m <sup>2</sup>	0.657880
1 foot of water	ft H <sub>2</sub> O	0.029891 bar	33.455
1 inch of mercury	in Hg	0.033864 bar	29.530

### Energy and power

1 foot pound-weight	ft lb wt	1.355821 J	0.737561
1 foot pound-force	ft Lb, ft lbf	1.355817 J	0.737563
1 foot-poundal	ft pdl	0.0421401 J	23.7304
1 horsepower hour	hph, H Phr	2.6845 MJ	0.37251
	h. p. hr.	0.74570 kWh	1.34102

### Weight

1 grain	gr	64.7989 mg	0.0154324
1 dram	dr	1.77185 g	0.564383
1 ounce = 16 drams	oz	28.3495 g	0.0352739
1 pound = 16 oz	lb	0.453592 kg	2.204622
1 quarter = 28 lb (lbs)		12.7006 kg	0.078737
1 hundredweight = 112 lb	cwt	50.8024 kg	0.0196841

# Function of Compressed Air Filters

## Filtration

The average 10 HP compressor handles four million cubic inches of air per hour. This air can contain billions of contaminating particles.

At high concentration and high speed, these particles can be extremely harmful. They block orifices, erode components, and clog clearances between moving parts. In addition, when ambient air is drawn into a compressor, it can, depending on weather conditions, have relative humidity of 100 percent. As air is compressed and cooled, some water vapour condenses out as free water, but even with a compressor aftercooler, some moisture is swept downstream into the air system. This may result in rusted pneumatic tools and components, contaminated lubricants and frozen air lines during low temperature periods.

Other types of foreign matter in air lines include: impurities generated within the air line, such as wear particles, pipe scale and rust; construction and assembly debris; and contaminants introduced into the air system during maintenance or through leakage passages.

All these contaminants, which are of a size to cause air system problems, should be removed by a filter.

## Filter Construction

Most pneumatic filters consist of two basic elements: a die-cast body, into which the inlet and outlet piping is connected, and a sealed removable bowl which contains collected contaminants.

The bowl is fitted with a drain mechanism to remove liquids before they rise to the baffle level. The drain system usually operates while the filter is under pressure, but the unit must be exhausted to remove the bowl for cleaning and element service. The piping need not be disturbed.

Generally a transparent bowl is the most convenient because it provides easy visual inspection of the sump level. However, hostile environment, higher pressure, or higher temperature may require a metal bowl for safety.

The most common plastic used for bowls is polycarbonate. This material performs satisfactorily for air pressures below 10 bar / 150 psig and temperatures between 4 °C / 40 °F and 50 °C / 120 °F, but polycarbonate can be attacked by several chemicals. AirCom offers both polyethylene and metal bowl guards for added safety.

As the pressure or temperature requirement increases, you may have to specify a metal bowl with sight glass. For extreme conditions, it is recommended that the sight glass be eliminated. (Please refer to the individual model descriptions for specifications on bowls.)

Thus, the environment determines the choice of bowl. Polycarbonates offer great strength and visibility, but can be attacked by certain chemicals. Metal bowls offer the highest pressure and temperature rating, and provide superior protection when installed in an environment containing chemicals that are incompatible with polycarbonate.

## Filter Operation

### Air filters:

When pressurized air enters a typical body, the curved inlet and deflector direct the incoming air in a downward whirling pattern. Centrifugal force hurls the larger solid and liquid water particles outward where they collect on the inner surface of the filter bowl. The particles spiral down past a baffle into a quiet chamber. The baffle prevents turbulent air in the upper bowl from re-entraining liquid contaminants and carrying them downstream.

Then the dry, cleaner air follows a convoluted path through the filter element, where finer solid particles are filtered out. Finally, filtered air passes up the centre of the element and out the discharge port.

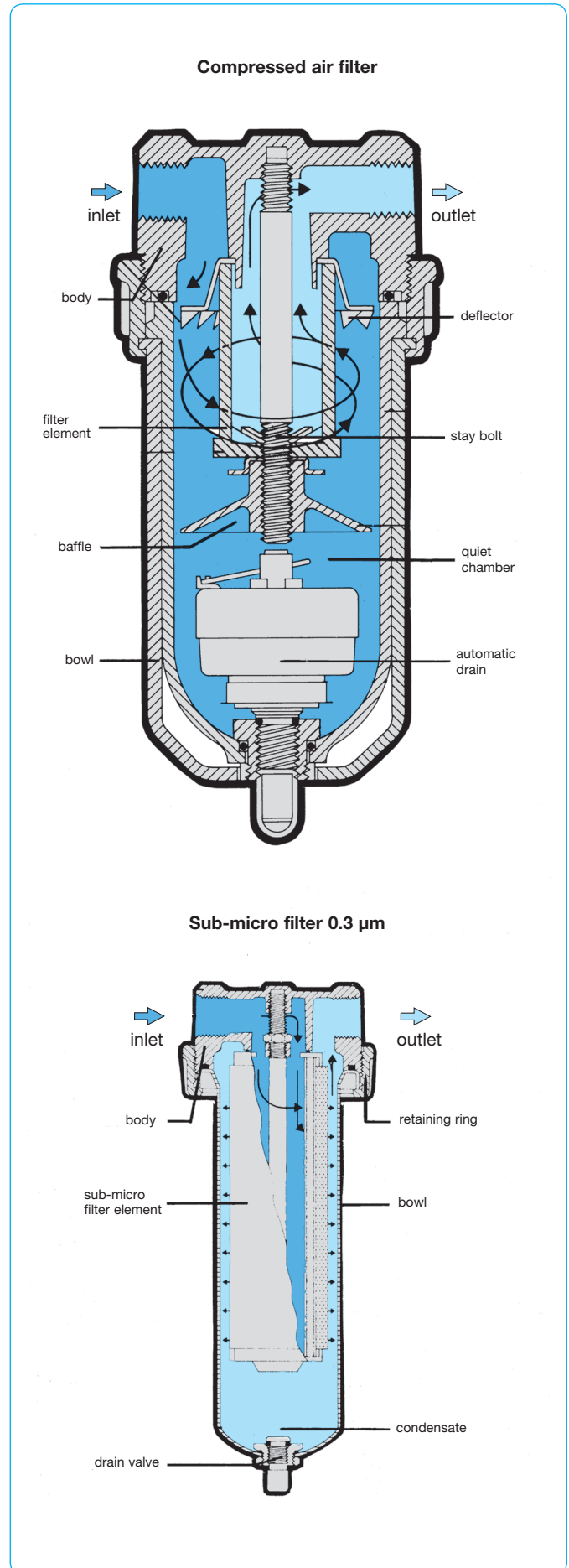
### Coalescing filters:

These high-efficiency filters operate on a somewhat different principle than air filters. The key difference is in the element, where a fibre network is narrowly spaced to trap smaller contaminants. The special fibres hold any liquid particle which contacts them.

Pre-filtered air enters the cylindrical element at the centre. As it flows through the element, particles are captured by three different mechanisms: direct interception as particles impinge on the fibres; inertial impactions as particles are thrown against fibres by the turbulent air stream; and diffusion as smaller particles vibrate with Brownian motion to collide with fibres and other particles. As a result, coalescing elements can capture particles smaller than the nominal size of the flow passages through the element.

Collected liquid migrates to the crossing points of the fibres, where larger drops form or coalesce. Pressure differential through the element then forces these drops to the downstream surface of the element where they gravitate downward to the sump.

The filtered air then exits through the outlet port.



# Function of Pressure Regulators and Volume Boosters

## Regulator Operation

In a typical regulator, a poppet sets the size of an orifice which connects the inlet port to the outlet port. The sensing element, often a diaphragm or piston mechanically linked to the poppet, reacts to downstream pressure and a reference force to position the poppet. The reference can be a spring or an air pilot chamber.

The valve is normally open. High pressure air enters and flows through the orifice towards the outlet. Downstream pressure is connected through an aspirator tube to the bottom of the diaphragm. As downstream pressure increases, the diaphragm is forced upwards, compressing the adjustment spring. When the diaphragm moves, the poppet spring pushes the poppet disc upwards to throttle the orifice. If downstream pressure exhausts, the mechanical sequence reverses and the poppet disc opens the orifice until the set pressure is reached again.

Downstream-generated high pressure, for example, from high temperatures or heavy vertical loads on cylinders, is reduced by a self-relieving feature built into the regulator. The poppet stem normally blocks a relieving orifice in the centre of the diaphragm: if excessive pressure lifts the diaphragm off the stem, air bleeds through the orifice and out of the bonnet vent until the system returns to the set pressure.

## Regulation

An air regulator is a specialised control valve. It reduces the upstream supply pressure level to a specified constant downstream pressure, regardless of variations in the upstream pressure or changes in flow through the regulator.

Pneumatic equipment that is operated at higher-than-recommended pressure wastes the energy for generating that pressure. This creates a potential safety hazard and probably causes premature wear. Operating below specified pressure can cause the machine to fail to meet design performance specifications. Therefore, precise air pressure control is essential for efficient operation or air-powered equipment.

## Regulator Construction

Regulators are generally constructed using a die-cast metal body. Other external parts, such as the spring cage and bottom plug, may be either metal or plastic. All-metal construction offers more durability in tough applications where abuse is likely to occur, while plastic constructions are lower in cost. For normal industrial applications, temperature ranges of 4 °C/40 °F to 50 °F/120 °F and supply pressure to 20 bar/300 psi, either construction will serve well.

Lightweight diaphragm sensors offer quick response and high sensitivity to air pressure changes. Piston sensors are somewhat slower but may be more durable. Where downstream pressure requirements change rapidly enough to cause regulator chatter, slower response may be an advantage. If the self-relieving feature is not needed for an application, simpler non-relieving regulators are available.

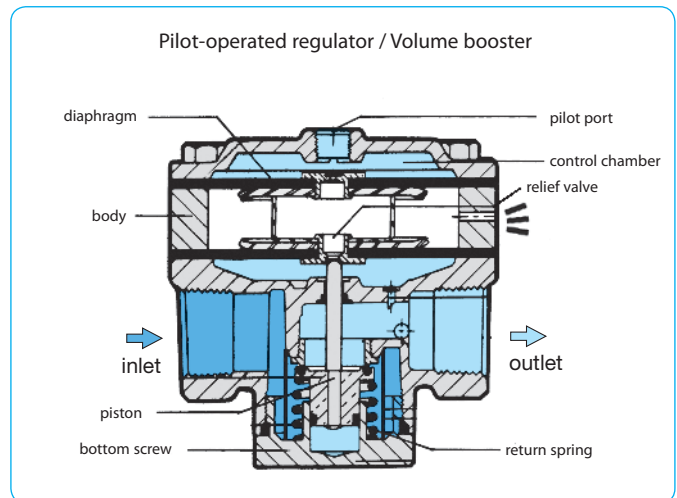
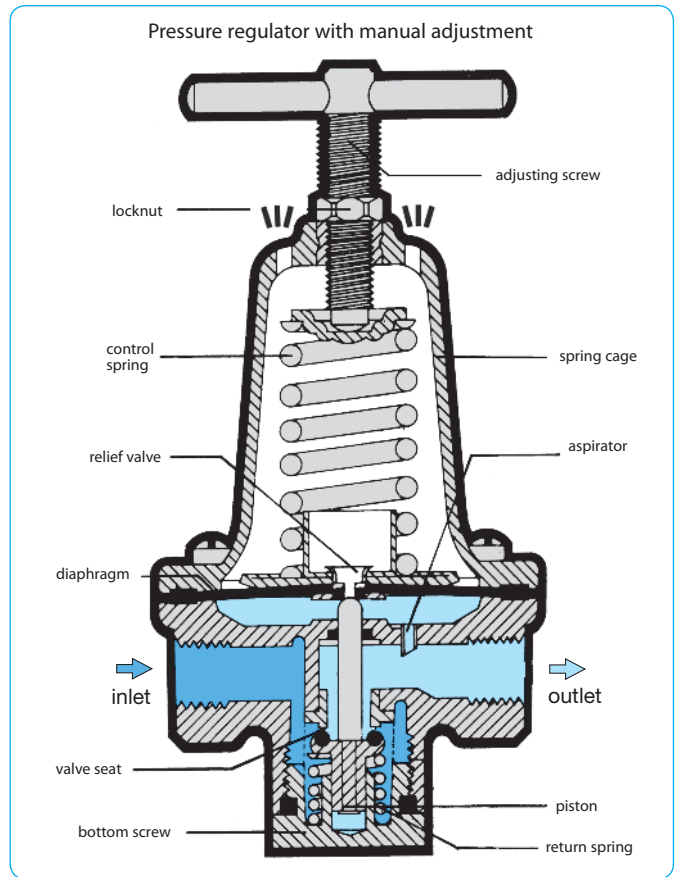
For regulators with an adjustment spring, a T-handle, knob or plunger provides the external link to the spring on various models. Locking and tamper-proof arrangements are offered, as well as factory-set regulators with no external adjustment.

## Volume Booster

Pilot-operated regulators substitute air pressure in the chamber above the sensor to provide the reference force. Remote adjustment through a separate pilot regulator is thus possible or the pilot signal can be fed back from a downstream location for precise control.

The balanced poppet design exposes both sides of the poppet to essentially the same pressure. This eliminates much of the effect that changes in inlet pressure might have on poppet position and orifice opening.

A small constant bleed passage through the diaphragm or piston prevents the poppet from sitting tightly and improves response.



**Pressure regulators:** see chapters 1 to 5  
**Volume boosters:** see chapter 6



## Function of Filter Regulators

### What is a Filter Regulator?

Filter regulators offer economy of space, performance and price. These space-saving designs give you the same basic features as the individual filter and regulator models.

### Regulator Operation

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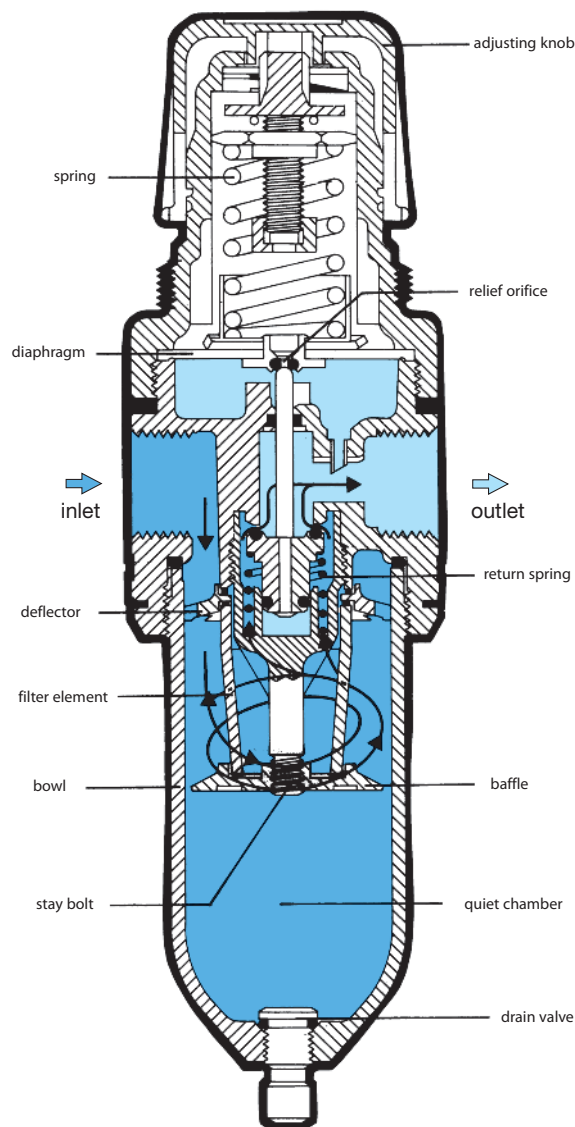
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## Function of Compressed Air Lubricators

### Lubrication

Many pneumatic system components and most pneumatic tools require oil lubrication for proper operation and long service life. This lubricant is typically carried by air stream. Too little oil can cause excessive wear and premature failure. Too much oil is wasteful and can become a contaminant, particularly when carried over with the air exhaust. Intermittent lubrication may be the worst situation because the oil film can dry out to form sludges and varnishes on internal surfaces.

Air line lubricators meter oil from a reservoir into the moving air stream. In general terminology, the oil droplets are usually termed a fog. For best results, the lubricator should be located as close as possible to the point where lubrication is required.

### Lubricator Construction

Bowls are available in polycarbonate and metal, subject to the same constraints discussed in the filter section. Transparent polycarbonate simplifies inspection of the oil level and checking for dirt and liquid condensate in the oil. Note that the system must be exhausted before removing the bowl.

In some models, the system must also be exhausted before opening the fill plug to recharge the lubricator. Other designs automatically bypass the air during refilling.

### Lubricator Operation

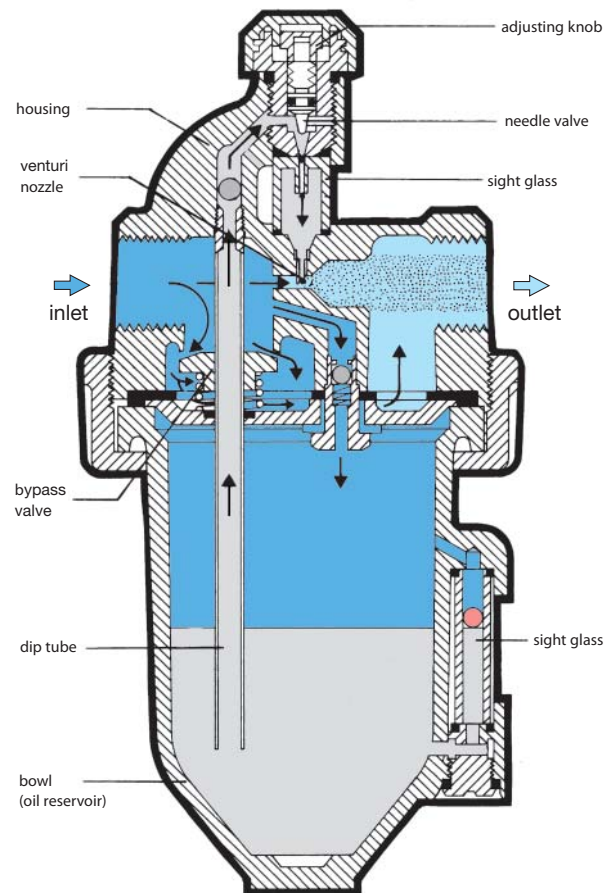
Most lubricator designs include a high-velocity venturi section in the air flow path which creates a low-pressure area to draw oil from the reservoir through the capillary tube to the point of injection. There, the air stream breaks up the oil into droplets.

In a typical lubricator (see figure), filtered and regulated air enters the lubricator housing and is channelled in either of two directions depending on the flow rate. At low flow rates, all the air passes through the venturi where it mixes with metered oil droplets. Under higher flow conditions, the spring-loaded bypass valve opens and the excess flow bypasses the venturi, then blends with the lubricated air at a downstream point. A manual adjustment of the needle valve in the housing sets the oil drip-rate into the air stream; a sight glass allows that rate to be monitored. Fill plugs at the lubricator top provide access to refill the reservoir with oil. The bowl is removable for cleaning.

### How to Select the Proper Lubricator

Use of the proper lubricator can greatly extend the life of expensive downstream pneumatic equipment. Lubricators often are selected according to pipe size. Other selection factors are type of bowl material, bowl size and refilling system capability. Bowls are available in both polycarbonate and metal. Polycarbonate offers the advantage of transparency, for simplified inspection of oil level and condition. However, caution must be exercised when using polycarbonate bowls in any area where certain chemicals are used.

In addition to choice of bowls, minimum and maximum flow rates and pressure requirements should also be considered. Be sure to check the pressure drop curves, to make certain the selected model will not create a higher pressure drop than the system design can tolerate.



## Certifications, Documentation, Service Features

Info

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### Certificate according to EN10204

Certificate	2.1
Certificate	2.2
Certificate for Material	3.1
Certificate for Material	for RUG

Prices on request

### Single device test certificate

Single device test certificate with document [on request](#)

### Test chart, calibration

Test chart	charged per measuring point	<a href="#">on request</a>
Calibration chart	charged per measuring point	<a href="#">on request</a>

### Documentation

Extra copy	<a href="#">on request</a>
Translation	<a href="#">on request</a>

### Service including hour of travel and waiting

Man hour	service technician	<a href="#">on request</a>
	engineer	<a href="#">on request</a>

# Pressure Regulator - Quick Finder

Info

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1 Miniature Pressure Regulators

5 Differential Pressure Regulators

9 Back Pressure Regulators

13 with special materials

2 Standard Pressure Regulators

6 Vacuum Pressure Regulators

10 Volume Booster

14 for extremely temperatures

3 Low Pressure Regulators

7 Precision Pressure Regulators

11 with mechanically features




15 for special media

4 High Pressure Regulators

8 Pressure Regulators for Water

12 with pneumatically features

16 for special branches

Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page	
<b>1 Miniature Pressure Regulator</b> 	24 x 14, factory-set, Cartridge	2 to 6 bar	G $\frac{1}{4}$	233	1.02	
	17 x 25, factory-set, extremely small	2 to 10 bar	G $\frac{1}{4}$	R13	1.03	
	34 x 52, factory-set, extremely small	1 to 8 bar	G $\frac{1}{4}$	231	1.05	
	34 x 52, factory-set, extremely small	1 to 8 bar	G $\frac{1}{4}$	239	1.04	
	19 x 54, factory-set, extremely small, with exhaust	2 to 8 bar	G $\frac{1}{4}$ - G $\frac{3}{4}$	232	1.06	
	22 x 77, adjustable, extremely small	1 to 3 bar	G $\frac{1}{4}$	R33	www*	
	12 x 36, very slim	1 to 8 bar	SS 4 - 8 mm	RV	www*	
	12 x 36, very slim	2 to 6 bar	SS 4 - 12 mm	JP	www*	
	18 x 61, FKM, EPDM	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ "NPT	MAR	1.08	
	19 x 40, adjustable, extremely small	0.2 - 2.0 / 8 bar	M5	RR-M5	1.07	
	29 x 29, precision regulator, light-weight	0.03 - 0.2 / 6 bar	10-32", flange	R900	1.09	
	29 x 40, precision regulator, light-weight	0.03 - 0.2 / 6 bar	$\frac{1}{8}$ "NPT	R800	1.09	
	32 x 35, precision regulator, light-weight	0.01 - 0.7 / 7 bar	flange R6	1.12		
	32 x 35, interlocking	0.01 - 0.7 / 7 bar	M5, G $\frac{1}{8}$ , G $\frac{1}{4}$ , SS	R7	1.13	
	40 x 40, made of plastic, also for water	0 - 1.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R25	9.04	
	52 x 52, made of plastic, also for water	0 - 1.8 / 9 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R45	9.04	
	40 x 42, acetal, also for drinking water	0.1 - 3.5 / 8.5 bar	G $\frac{1}{4}$ , $\frac{1}{4}$ "NPT	R91	9.02	
	40 x 40, precision regulator, pressure compensated	0.2 - 2.0 / 9 bar	flange	R342	1.14	
	40 x 40, precision regulator, without constant bleed	0.2 - 2.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	1.14	
	35 x 76, made of brass, also for water	0.1 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364	1.15	
	35 x 76, made of aluminium	0.1 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R374	1.15	
	precision regulator, pressure compensated	0.1 - 3.0 / 6 bar	G $\frac{1}{8}$	R309	1.16	
	P1:25 bar, pressure compensated	0.1 - 3.0 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.16	
	FDA, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$	R037	1.17	
	with increased accuracy, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.11	
	precision regulator, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.11	
	precision regulator, also for O $_2$	0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307	1.18	
	precision regulator, also for O $_2$	0 - 0.25 / 8 bar	flange	R308	1.19	
	precision regulator, very accurate	0.05 - 2.0 / 8 bar	G $\frac{1}{8}$	RI	5.02	
	precision regulator, very accurate	0 - 0.35 / 7 bar	M5, flange	RT	1.10	
	Cartridge, 260 l/min	1 - 8 bar	Cartridge	RC	1.20	
	<b>2 Standard Pressure Regulator</b>  up to 30 bar	for air or water	0 - 4.0 / 12 bar	G $\frac{1}{8}$ - G1	R035 ... R095	2.03
		with FKM also	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R10 / R11	2.05
with external feedback		0.2 - 7 bar	G $\frac{1}{4}$	R218	2.04	
interlocking		0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G1	R20 / R21	2.02	
very robust		0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119	2.06	
zinc diecasting		0.2 - 1.5 / 15 bar	G $\frac{1}{8}$ - G2	RD1 ... RD4	2.08	
adjustment dial pressure regulator, pre-controlled		0 - 3.0 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.12	
with joint supply		0.1 - 3.0 / 16 bar	G $\frac{1}{8}$ - G $\frac{1}{2}$	RB / R035	2.10	
<b>3 Low Pressure Regulator</b>  from 2 mbar on		factory-set	50 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R01	3.02
	miniature	25 - 50 / 1400 mbar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R01-5/-6	3.03	
	miniature	20 - 150 / 500 mbar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R01-2/-4	3.03	
	P1: 0.4 bar	2 - 16 / 100 mbar	G $\frac{1}{2}$ - G2	RGDJ	3.04	
	P1: 4 bar	5 - 12 / 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4	3.05	
	P1: 6 bar, for many gases	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160	3.06	
	P1: 20 bar	10 - 18 / 4400 mbar	G1 - G1 $\frac{1}{2}$ , DN50	RZ	3.08	
	precision pressure regulator, relieving	2 - 45 / 350 mbar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R4100	3.09	
	precision pressure regulator, relieving	2 - 35 / 800 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.15	
	precision pressure regulator, for pure gases 5.0	5 - 50 / 1500 mbar	G $\frac{1}{2}$	RR	3.10	
	stainless steel	5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100	15.12	
	booster P1: max. 0,4 bar	2 - 55 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	6.13	
	booster P1: max. 4 bar	5 - 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	6.13	
	booster P1: max. 20 bar	10 - 350 / 1000 mbar	G1 - G2	RZ-J	6.10	

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# Pressure Regulator - Quick Finder

Info

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Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page
<b>4 High Pressure Regulators</b>					
	for water and oxygen also	Kv: 0.3 - 25.6	40 / 0.2 - 3.0 / 35 bar	G $\frac{1}{4}$ - G2	R280 4.02
	for many gases	Kv: 0.2 - 70	50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2, DN100	R120 4.04
	for water and oxygen also	Kv: 1.3 - 3.2	60 / 0.5 - 12 / 50 bar	G $\frac{1}{4}$ - G1	R286 4.08
	cylinder pressure regulator		100 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147 4.14
	cylinder pressure regulator		200 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-247 4.14
	cylinder pressure regulator		200 / 0 - 1.5 / 40 bar	different	RH200 4.12
	great nominal size	Kv: 0.9	207 / 0.2 - 1.7 / 14 bar	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH2 4.16
	for many gases	Kv: 0.05 - 3.5	200 / 0.1 - 1.5 / 200 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH10 4.10
	made of stainless steel	Kv: 0.05 - 3.5	200 / 1 - 8.0 / 200 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH3000 15.18
	for many gases	Kv: 0.02	207 / 0.1 - 3.5 / 12 bar	$\frac{1}{4}$ "NPT	RH83 4.09
	miniature	Kv: 0.05	241 / 0.2 - 2.0 / 7 bar	$\frac{1}{4}$ "NPT	RH0 4.15
	great nominal size	Kv: 1.7	260 / 0.7 - 21 / 104 bar	$\frac{1}{2}$ "NPT u. $\frac{3}{4}$ "NPT	RH3 4.19
	many pressure ranges	Kv: 0.05	300 / 0.1 - 1.7 / 35 bar	$\frac{1}{4}$ "NPT	HP500 4.18
	cylinder pressure regulator		300 / 0 - 1.5 / 40 bar	different	RH300 4.13
	cylinder pressure regulator		300 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347 4.14
	absolute pressure regulator		310 / 0.067 - 1 bar <sub>abs</sub>	$\frac{1}{4}$ "NPT	RDA www*
	very robust	Kv: 0.13	380 / 0.3 - 2.0 / 35 bar	$\frac{1}{4}$ "NPT	RHB 4.21
	made of stainless steel		380 / 0.3 - 2.0 / 15 bar	$\frac{1}{4}$ "NPT	RHB-S 15.20
	miniature	Kv: 0.05	414 / 0.5 - 5 / 124 bar	$\frac{1}{4}$ "NPT	RH1 4.15
	many pressure ranges	Kv: 0.05	414 / 0.3 - 35 / 414 bar	$\frac{1}{4}$ "NPT	HP300 4.17
	stainless steel also	Kv: 0.05	414 / 0.7 - 104 / 172 bar	$\frac{1}{4}$ "NPT	HP400 4.17
	made of brass	Kv: 0.03	414 / 0 - 14 / 28 bar	$\frac{3}{8}$ "NPT - $\frac{1}{2}$ "NPT	RH4 4.20
	stainless steel	Kv: 0.05	690 / 0.3 - 35 / 414 bar	$\frac{1}{4}$ "NPT	HP300-S 4.17
	booster		50 / 1 - 15 bar	G $\frac{1}{4}$ - G1	R120-J2 6.15
	booster		50 / 1 - 50 bar	G $\frac{1}{4}$ - G2	R120-J5 6.15
	booster, stainless steel,	Kv: 2.9	100 / 0.1 - 24 / 99 bar	G1	RL 6.14
	booster, brass	Kv: 2.9	100 / 0.1 - 24 / 99 bar	G1	RLM 6.14
	booster, 1:2 - 1:19,	Kv: 1.7	260 / 3 - 42 / 104 bar	$\frac{1}{2}$ "NPT	RH3-J 6.12
	booster	Kv: 0.3	414 / 0 - 41 bar	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH4-J 4.20
	differential pressure regulator		414 / 0 - 1 / 24 bar	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44 4.22
	precision regulator, without constant bleed		0 - 1 / 10 bar	G $\frac{1}{4}$ u. G $\frac{3}{8}$	R650 6.02
	with inlet pressure 0 - 1 bar		0.05 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J1 6.05
	with inlet pressure 0 - 6 bar		0.05 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J6 6.05
	high-, differential pressure regulator 0 - 1/24 bar		414/0 - 1/24 bar	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44 4.22
	22 l/min		0.15 - 1 bar <sub>abs</sub>	$\frac{1}{8}$ "NPT	V800 7.02
	22 l/min		0.15 - 1 bar <sub>abs</sub>	10-32", flange	V900 7.02
	70 l/min		0 - 1.14 / 11 bar <sub>abs</sub>	G $\frac{1}{4}$	R250 7.03
	330 l/min		0.01 - 1 bar <sub>abs</sub>	G $\frac{1}{4}$ - G $\frac{1}{2}$	V170 7.04
	800 l/min		0 - 1.07 / 11 bar <sub>abs</sub>	G $\frac{1}{2}$ and G $\frac{3}{4}$	R251 7.05
	60 - 1100 l/min, vacuum adjustment valve		0.01 - 0.7 bar <sub>abs</sub>	G $\frac{1}{8}$ - G1	V04 7.06
	260 - 700 l/min, vacuum adjustment valve		0.01 - 1 bar <sub>abs</sub>	G $\frac{1}{4}$ - G1	V05 7.06
	60 - 150 l/min		0 -0.99 bar <sub>abs</sub>	SS4 - 12 mm	RV www*
	P1: max. 28 bar,	Kv: 0.21	0.067 - 2 bar <sub>abs</sub>	$\frac{1}{4}$ "NPT	RD4 www*
	P1: max. 4 bar,	Kv: 0.21	0.067 - 1 bar <sub>abs</sub>	$\frac{1}{4}$ "NPT	RDV www*
	P1: max. 310 bar,	Kv: 0.05	0.067 - 1 bar <sub>abs</sub>	$\frac{1}{4}$ "NPT	RDA www*
	pressure compensated, miniature		0.2 - 2.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344 1.14
	pressure compensated, miniature		0.2 - 2 / 9 bar	flange	R342 1.14
	pressure compensated, miniature		0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307 1.18
	pressure compensated, miniature		0.1 - 3 / 6 bar	G $\frac{1}{8}$	R309 1.16
	pressure compensated, miniature		0.2 - 2.5 / 8 bar	flange	R308 1.19
	pressure compensated, miniature		0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-FK 1.11
	robust		0.01 - 0.6 / 3.5 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R216 5.05
	robust		0.01 - 1 / 16 bar	G $\frac{1}{4}$	R217 5.04
	non-relieving		0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102...-N 5.08
	non-relieving		0.01 - 0.14 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-K 5.09
	recommended for mbar-range		0.001- 0.14 / 14 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R300-K 5.10
	also differential pressure regulator		0 - 1 / 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650 6.02
	good flow		0.03 - 0.7 / 10 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R100 5.11
	good flow, high-precision		0.03 - 0.7 / 17 bar	G $\frac{1}{8}$ - G $\frac{3}{4}$	R400 5.13
	low pressure regulator, very precise		0.005- 0.05 / 1.5 bar	G $\frac{1}{2}$	RR 3.10
	low pressure regulator, high-precision		0.002- 0.045 / 0.35 bar	G $\frac{1}{8}$ - G $\frac{3}{4}$	R4100 3.09
	miniature, interlocking		0.01 - 0.7 / 7 bar	flange	R6 1.12
	many variations mini		0.01 - 0.7 / 7 bar	M5, G $\frac{1}{8}$ , G $\frac{1}{4}$ , SS	R7 1.13
	small and light-weight mini		0.03 - 0.2 / 7 bar	10-32", flange	R900 1.09
	small and light-weight mini		0.01 - 0.2 / 7 bar	$\frac{1}{8}$ "NPT	R800 1.09
	high accuracy, mini		0 - 0.35 / 7 bar	M5, flange	RT 1.10
	high accuracy, mini		0.05 - 2 / 8 bar	G $\frac{1}{8}$ , flange	R90 5.03
	high accuracy, mini		0.05 - 2 / 8 bar	G $\frac{1}{8}$	R1 5.02



up to 690 bar



with constant bleed

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# Pressure Regulator - Quick Finder

Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page	
Precision Pressure Regulator (continuation) with constant bleed	pressure compensated, mini	0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.11	
	pressure compensated, mini	0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.11	
	proven	0.020- 0.5 / 10 bar	G $\frac{1}{4}$	11-818	5.06	
	many material variations	0.010- 0.2 / 9 bar	1/4"NPT	GH10	www*	
	high accuracy, wide control range	0.002- 0.12/ 31 bar	1/4"NPT	R40	5.12	
	high accuracy, proven	0.140- 1.7 / 8 bar	G $\frac{1}{4}$ , 1/4"NPT	53.10	5.07	
	good exhaust	0.010- 0.14/ 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102..	5.08	
	low-cost	0.010- 0.14/ 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230	5.09	
	recommended for mbar-range	0.001- 0.14/ 7 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R300	5.10	
	low pressure	0.35 /800 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.15	
	robust	0.010- 3 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03	5.14	
	high volume flow rate	0.001- 0.7 / 10 bar	G1 - G1 $\frac{1}{2}$	R102	5.16	
						
	<b>8 Pressure Regulators for Water</b>					
miniature	factory-set, also for water	1 / 2 / 3 / ... 8 bar	G $\frac{1}{4}$	239A	1.03	
	factory-set, also for drinking water	1 / 2 / 3 / ... 8 bar	G $\frac{1}{4}$	239K	9.03	
	extremely small	0 - 2 / 8 bar	M5	RR-K	1.08	
	diameter 18 mm	0 - 1 / 7 bar	M5 / 1/8"NPT	MAR	1.08	
	azetal, 40 x 40	0 - 1 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R25	9.04	
	brass, 35 x 35	0 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364	1.15	
	POM, 40 x 40, also deionized water	0 - 1 / 12 bar	G $\frac{1}{8}$	R037	1.17	
	brass, 40 x 40, also for brake fluids	0 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.16	
	plastic, 40 x 40, with increased accuracy	0 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.11	
	plastic, 40 x 40, with high precision	0 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.11	
	azetal, 40 x 42, for drinking/deionized water	0 - 3 / 8 bar	G $\frac{1}{4}$	R91-K	9.02	
	plastic, block design	0 - 4 / 12 bar	G $\frac{1}{8}$ - G1	R035...R095	2.03	
	brass P1 max. 40 bar	0 - 3 / 35 bar	G $\frac{1}{4}$ - G2	R280	4.02	
	brass P1 max. 60 bar	0 - 12 / 50 bar	G $\frac{1}{4}$ - G1	R286	4.08	
brass P1 max. 50 bar, up to DN100	0 - 1 / 50 bar	G $\frac{1}{4}$ - G2	R120	4.04		
brass P1 max. 40 bar	0 - 6 bar	G $\frac{1}{2}$ - G1	RW1	9.05		
brass P1 max. 25 bar	0 - 6 bar	G $\frac{1}{2}$ - G1 $\frac{1}{4}$	RW2	9.05		
brass P1 max. 60 bar	0 - 2 / 45 bar	G $\frac{1}{4}$ - G2	RW1	9.06		
brass P1 max. 25 bar, with male thread	0 - 2 / 20 bar	R $\frac{3}{8}$ " - R2 $\frac{1}{2}$ "	RWA	9.08		
brass P1 max. 40 bar, with flange	0 - 2 / 20 bar	DN8 - DN125	RWF	9.10		
brass P1 max. 21 bar, miniature	0 - 1 / 11 bar	G $\frac{1}{8}$ - G $\frac{1}{4}$	R364-J	www*		
brass P1 max. 50 bar, diaphragm/piston	0 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J	6.15		
brass P1 max. 140 bar, piston	0 - 24 / 99 bar	G1	RLM	6.14		
						
standard	with male thread, very small	1 - 2 / 14 bar	G $\frac{1}{8}$	59	8.14	
	with male thread, tapped exhaust	0 - 3 / 7 bar	G $\frac{1}{4}$	130	8.14	
	brass, tapped exhaust	0 - 1 / 7 bar	G $\frac{1}{4}$	134	8.14	
	aluminium P1 max. 30 bar	0 - 1 / 15 bar	G $\frac{1}{8}$ - G2	DBC	8.02	
	brass P1 max. 35 bar	0 - 0.1 / 50 bar	G $\frac{1}{8}$ " - G2	DBM	8.04	
	aluminium P1 max. 17 bar	0 - 0.1 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	10BP	8.06	
	aluminium P1 max. 17 bar	0 - 0.1 / 10 bar	G $\frac{1}{4}$ - 1/2"NPT	DB240	8.07	
	aluminium P1 max. 17 bar	0 - 0.1 / 10 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB400	8.10	
	aluminium P1 max. 10 bar	0 - 0.1 / 7 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	DB300	8.09	
	aluminium P1 max. 10 bar	0 - 35 / 800 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB110	8.08	
	aluminium P1 max. 6 bar	0 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	DBC	8.11	
	aluminium P1 max. 17 bar, precise	0 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB208	8.12	
	aluminium P1 max. 17 bar, precise	0 - 10 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB450	8.13	
						
<b>9 Back Pressure Regulators</b>						
miniature standard precise low pressure pilot-operated	miniature, also for water	0 - 6 bar	G $\frac{1}{8}$ - G $\frac{1}{4}$	R035-J	www*	
	miniature, also for water	0 - 11 bar	G $\frac{1}{8}$	R364-J	www*	
	also for differential pressure	0 - 1 / 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	6.02	
	also for differential pressure	0 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J	6.05	
	precise, with ratio 1:2 to 1:6	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R750	6.03	
	precise, with ratio 1:2 to 1:6 / 2:1 to 5:1	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208	6.04	
	with ratio also 1:2 / 1:3 / 2:1 / 3:1	0 - 10 bar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450	6.07	
	precise	0 - 16 bar	G $\frac{3}{4}$ - G1 $\frac{1}{2}$	R500	www*	
	precise	0 - 10 bar	G1 and G1 $\frac{1}{2}$	R200	6.09	
	precise, high exhaust	0.2 - 18 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	R116	6.08	
	precise, high exhaust	0 - 10 bar	G $\frac{3}{4}$ and G1	R490	6.06	
	precise, very high exhaust	0 - 10 bar	1 $\frac{1}{2}$ " NPT	R201	6.09	
	sehr robust	0.2 - 18 bar	G $\frac{1}{4}$ - G3	R119-J	6.11	
	low pressure	2 - 55 / 100 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	6.13	
low pressure	5 - 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	6.13		
low pressure	10 - 350/1000 mbar	G1 - G2	RZ-J	6.10		
very precise, wide pressure ranges	0.002 - 0.12/ 31 bar	1/4"NPT	R40A	5.12		
high pressure, brass	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J	6.15		
high pressure, stainless steel	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J	15.22		
high pressure, stainless steel	100 / 0.1 - 24 / 99 bar	G1	RLE	6.14		
high pressure, brass	100 / 0.1 - 24 / 99 bar	G1	RLM	6.14		
high pressure, 1:2 to 1:19	260 / 3 - 42 / 104 bar	1/2"NPT and 3/4"NPT	RH3-J	6.12		
						
<b>10 Volume Booster</b>						

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# Pressure Regulator - Quick Finder

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Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page
<b>11 with mechanically features</b>					
flange bottom side	mini	0.01 - 0.7 / 7 bar	flange	R6	1.12
	mini	0 - 0.25 / 8 bar	flange	R308	1.19
	mini, precision pressure regulator	0.03 - 0.2 / 6 bar	flange	R900-M	1.09
	mini, precision pressure regulator	0 - 0.35 / 7 bar	flange	RT-F	1.10
	mini, precision pressure regulator	0.05 - 2 / 8 bar	G $\frac{1}{8}$ , flange	R90	5.03
	mini, precision pressure regulator	0.2 - 2 / 9 bar	flange	R342	1.14
flange at the side	lockable	0.2 - 1.8 / 17 bar	DN15 - DN25	R20 - F	2.02
	P1: 40 bar	0.2 - 3 / 35 bar	DN15 - DN50	R280 - F	4.02
	very robust	0.2 - 1.8 / 17 bar	DN15 - DN80	R119 - F	2.06
	booster	0.2 - 1.8 / 17 bar	DN15 - DN80	R119 - JF	6.13
	P1: 50 bar	0.1 - 1.5 / 50 bar	DN15 - DN100	R120 - F	4.04
	low pressure regulator	2 - 16 / 100 mbar	DN15 - DN50	RGDJ - F	3.04
	low pressure regulator	5 - 12 / 350 mbar	DN15 - DN40	RGB4 - F	3.05
	low pressure regulator	10 - 18 / 4400 mbar	DN25 - DN50	RZ - F	3.08
	low pressure regulator	5 - 45 / 6000 mbar	DN25 - DN50	R160 - F	3.06
	stainless steel low pressure regulator	5 - 45 / 7000 mbar	DN15 - DN50	R3100- F	15.12
	stainless steel	0.1 - 1.5 / 50 bar	DN15 - DN50	R3000- F	15.06
	stainless steel variations	0.2 - 3 / 16 bar	DN15 - DN25	REA - F	15.11
	booster	1 - 15 / 50 bar	DN15 - DN50	R3000- JF	15.22
	special flanges	stainless steel, milk pipe, many variations	0.2 - 3 / 16 bar	milk pipe	REA - M
stainless steel, welding ends		0.2 - 3 / 16 bar	welding ends	REA - A	15.11
lever / plunger	plunger, miniature	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ "NPT	MAR-1C	www*
adjustment dial press. regulator	pilot-operated	0 - 3 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.12
Cartridge	150 / 260 l/min	1 - 8 bar	Cartridge	RC	1.20
lockable	precision pressure regulator	0.02 - 0.5 / 10 bar	G $\frac{1}{4}$	11-818-A	5.06
<b>12 with pneumatically features</b>					
tapped exhaust	precise	0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102.-E	5.08
	precise	0.01 - 0.14 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-X12	5.09
	precise	0.03 - 0.7 / 17 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R400-X12	5.13
	precise	0.001 - 0.7 / 10 bar	G1 - G1 $\frac{1}{2}$	R102	5.16
	precise	0 - 1 / 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650-X12	6.02
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R750-X12	6.03
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208-X12	6.04
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450-X12	6.07
	low pressure	0 - 35/800 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.15
	high exhaust	0 - 10 bar	G1 and G1 $\frac{1}{2}$	R200-X12	6.09
	booster	1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-JX12	6.15
	joint supply	miniature	0 - 6 bar	G $\frac{1}{8}$	R035
standard		0.1 - 3 / 16 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RB	2.10
quick exhaust	precision pressure regulator	0.01 - 0.14 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-X80	5.09
pressure compensated	precision pressure regulator, mini	0.1 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.16
	precision pressure regulator, mini	0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.11
	precision pressure regulator, mini	0.2 - 2 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	1.14
	precision pressure regulator, mini	0.2 - 2 / 9 bar	flange	R342	1.14
	precision pressure regulator, mini	0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307	1.18
external feedback	pre-pressure regulator for booster	0.2 - 7 bar	G $\frac{1}{4}$	R216	2.04
	booster	0 - 10 bar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450-X27	6.07
high flow rate	standard 110.000 l/min	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119	2.06
	booster 110.000 l/min	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119-J	6.13
	high pressure regulator 76.000 l/min	50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2, DN100	R120	4.04
	booster 76.000 l/min	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J	6.15
	made of zinc	30 / 0.2 - 1.5 / 15 bar	G $\frac{1}{8}$ - G2	RD	2.08
	made of brass	40 / 0.2 - 3 / 35 bar	G $\frac{1}{4}$ - G2	R280	4.02
	adjustment dial pressure regulator	0 - 3 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.12
	low pressure regulator	2 - 16 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ	3.04
	booster	2 - 55 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	6.13
	low pressure regulator	10 - 18 / 4400 mbar	G1 and G1 $\frac{1}{2}$ , DN50	RZ	3.08
	low pressure regulator	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160	3.06
	spheroidal cast iron, red brass, stainless steel	0.14 - 1.7 / 9 bar	G $\frac{1}{2}$ - G2, flange	RU	9.14
	for water	0.5 - 6 bar	G $\frac{1}{2}$ - G1 $\frac{1}{4}$	RW	9.05
	stainless steel	50 / 0.1 - 1.5 / 50 bar	up to G2	R3000	15.06
	stainless steel booster	50 / 1 - 15 / 50 bar	up to G2	R3000-J	15.22
	stainless steel	5 - 45 / 7000 mbar	up to G2	R3100	15.12
	pharmacy	5 - 7 / 450 mbar	up to G2 $\frac{1}{2}$	R74	15.16
	pharmacy	0.25 - 0.4 / 53 bar	up to G2 $\frac{1}{2}$	R70	15.14

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Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page	
13 with special materials made of stainless steel	mini	0.2 - 1.8 / 9 bar	G $\frac{1}{4}$	R364-S	15.03	
	standard	0.2 - 4 / 17 bar	G $\frac{1}{2}$	R10-S	15.02	
	standard	0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2	R3000	15.06	
	many variations	0.2 - 3 / 16 bar	G $\frac{1}{4}$ - G2	REA	15.11	
	for pure gases	0.05 - 2 / 4 bar	M5 - G $\frac{1}{8}$	RE1	15.04	
	precision pressure regulator	0 - 0.2 / 9 bar	$\frac{1}{4}$ " NPT	RP1	www*	
	low pressure regulator	5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100	15.12	
	pharmacy	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R74	15.16	
	pharmacy	0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R70	15.14	
	high pressure regulator	200/1 - 8 / 200 bar	G $\frac{1}{4}$ - G $\frac{1}{4}$	RH3000	15.18	
	high pressure regulator	241/0.2 - 2 / 7 bar	$\frac{1}{4}$ " NPT	RH0-S	4.15	
	high pressure regulator	380/0.3 - 2 / 15 bar	$\frac{1}{4}$ " NPT	RHB-S	15.20	
	high pressure regulator	410/0.7 - 21 / 104 bar	$\frac{1}{2}$ " NPT	RH3 -S	4.19	
	high pressure regulator	300/0.1 - 1.7/ 35 bar	$\frac{1}{4}$ " NPT	HP500-S	4.18	
	high pressure regulator	690/0.3 - 35/ 414 bar	$\frac{1}{4}$ " NPT	HP300-S	4.17	
	high pressure regulator	414/0.7 - 104/ 172 bar	$\frac{1}{4}$ " NPT	HP400-S	4.17	
	high pressure regulator, differential pressure: 0 - 1 / 24 bar	414/0 - 1 / 24 bar	$\frac{1}{2}$ " NPT and $\frac{3}{4}$ " NPT	RH44	4.22	
	water, male thread, DN 8 - DN50	0.2 - 3 / 16 bar	G $\frac{1}{2}$ - G2	REA	15.11	
	water, male thread, DN15 - DN50	0.2 - 2 / 20 bar	G $\frac{1}{2}$ - G2	RAI	9.13	
	water, flange, DN15 - DN50	0.2 - 3 / 16 bar	flange	REF	15.10	
	water, flange, DN15 - DN50	0.2 - 2 / 20 bar	flange	RAF	9.12	
	vacuum pressure regulator	0.067 - 2 bar <sub>abs</sub>	$\frac{1}{4}$ " NPT	RD4	www*	
	booster, for many gases	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J	15.22	
	booster, dome press. regulator	100/0.1 - 24 / 99 bar	G1	RLE	6.14	
	booster, also with transmission ratio	310 / - 42 / 104 bar	$\frac{1}{2}$ " NPT and $\frac{3}{4}$ " NPT	RH3-JS1	6.12	
	made of plastic	precision pressure regulator, mini	0.03 - 0.2 / 6 bar	10-32", flange	R900	1.09
		precision pressure regulator, mini	0.03 - 0.2 / 6 bar	$\frac{1}{8}$ " NPT	R800	1.09
interlockable, mini		0.01 - 0.7 / 7 bar	G $\frac{1}{8}$ , flange	R6 / R7	1.12	
made of spheroidal cast iron, red brass	for steam	0.14 - 1.7 / 9 bar	G $\frac{1}{2}$ - G2	RU	9.14	
non-ferrous metal	precision pressure regulator	0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102..-X63	5.08	
	precision pressure regulator	0.001 - 0.7 / 10 bar	G1 - G $\frac{1}{2}$	R102-X62	5.16	
nickel-plated	onyl surface nickel-plated	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-X25	1.08	
	completely chemical nickel-plated	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-X13	1.08	
	high pressure regulator, nickel-plated surface	380/0.3 - 2 / 35 bar	$\frac{1}{4}$ " NPT	RHB-X25	4.21	
chrome-plated	cylinder pressure regulator	100/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147C	4.14	
	cylinder pressure regulator	200/0 - 1.5 / 40 bar	diverse	RH200-C	4.12	
	cylinder pressure regulator	300/0 - 1.5 / 40 bar	diverse	RH300-C	4.12	
	cylinder pressure regulator	300/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH347-C	4.14	
with EPDM	miniature	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-E	1.08	
	precision pressure regulator, mini	0.1 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310-E	1.16	
	precision pressure regulator	0 - 0.2 / 8,6 bar	$\frac{1}{4}$ " NPT	GH10-N/L	www*	
	low pressure regulator	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160-E	3.06	
	high pressure regulator	200/0.1 - 1.5/ 200 bar	G $\frac{1}{4}$ - G $\frac{1}{4}$	RH10-E	4.10	
	high pressure regulator	50/0.1 - 1.5/ 50 bar	G $\frac{1}{4}$ - G2, DN100	R120-E	4.04	
	booster	50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-JE	6.15	
	booster	100/0.1 - 24 / 99 bar	G1	RL-E	6.14	
	stainless steel, many variations	0.2 - 3 / 16 bar	G $\frac{1}{4}$ - G1	REA-E	15.11	
	stainless steel, precision pressure regulator	0 - 0.2/ 9 bar	$\frac{1}{4}$ " NPT	RP1-E	www*	
	with PTFE	precision pressure regulator	0 - 0.2/ 8,6 bar	$\frac{1}{4}$ " NPT	GH10-H	www*
high pressure regulator		200/0.1 - 1.5/ 200 bar	G $\frac{1}{4}$ - G $\frac{1}{4}$	RH10-T	4.10	
with silicone	booster	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208 -A	6.04	
with stainless steel diaphragm	cylinder pressure regulator	100/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH147-M	4.14	
	cylinder pressure regulator	200/0 - 1.5/ 40 bar	diverse	RH200-M	4.12	
	cylinder pressure regulator	300/0 - 1.5/ 40 bar	diverse	RH300-M	4.12	
	cylinder pressure regulator	300/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH347-M	4.14	
	stainless steel pressure regulator	50/0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2	R3000-TE	15.06	
	stainless steel volume booster	50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-JE	15.22	
	14 for extremely temperatures	high pressure regulator up to 106°C	380/0.3 - 2 / 35 bar	$\frac{1}{4}$ " NPT	RHB	4.21
high pressure regulator up to 130°C		50/0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G $\frac{1}{2}$	R120 - X54	4.04	
stainless steel press. regulator up to 130°C		50/0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2	R3000- X54	15.06	
low pressure regulator up to 130°C		5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100- X54	15.12	
high volume booster up to 130°C		50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-04JX54	6.15	
high volume booster up to 130°C		50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J-X54	15.22	
pharmacy up to 150°C		0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R70 - X55	15.14	
pharmacy up to 140°C		5 - 7 / 450 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R74 - X55	15.16	
pharmacy up to 180°C		0 - 0.2 / 9 bar	$\frac{1}{4}$ " NPT	RP1 - X53	www*	
pharmacy up to 200°C		0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R70 - X56	15.14	
pharmacy up to 200°C		5 - 7 / 450 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R74 - X56	15.16	
filter pressure regulator up to - 40°C		0 - 0.7 / 8 bar	$\frac{1}{4}$ " NPT	B300	www*	

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Pressure Regulators	Special Features	Pressure Range	Connection thread	Device	Page	
<b>15 for special media</b>						
nitrogen, oxygen, helium, carbon dioxide, hydrogen, nitrous oxide, argon, methane, propane	low pressure regulator	5 - 45 / 3000 mbar	G½ - G2	R160	3.06	
	high pressure regulator	50 / 0.1 - 1.5 / 50 bar	G¼ - G2, DN100	R120	4.04	
	volume booster	50 / 1 - 15 / 50 bar	G¼ - G2	R120-J	6.15	
	volume booster	100 / 0.1 - 24 / 99 bar	G1	RLM / RLE	6.14	
	cylinder pressure regulator	100 / 0 - 10 / 60 bar	G¼ - G½	RH-147	4.14	
	cylinder pressure regulator	200 / 0 - 1.5 / 40 bar	diverse	RH200	4.12	
	cylinder pressure regulator	300 / 0 - 1.5 / 40 bar	diverse	RH300	4.12	
	cylinder pressure regulator	300 / 0 - 10 / 60 bar	G¼ - G½	RH-347	4.14	
	stainless steel pressure regulator	50 / 0.1 - 1.5 / 50 bar	G½ - G2	R3000	15.06	
	stainless steel volume booster	50 / 1 - 15 / 50 bar	G¼ - G2	R3000-J	15.22	
	stainless steel pressure regulator	5 - 45 / 7000 mbar	G½ - G2	R3100	15.12	
	for oxygen	factory-set, mini	2 up to 10 bar	G¼	R13	1.03
		factory-set, mini	1 up to 8 bar	G¼	239M	1.04
		made of brass, mini	0.2 - 1.4 / 7 bar	10-32", M5, ¼"NPT	MAR - 15	1.08
		precision press. regul., mini	0.2 - 2 / 9 bar	G½ and G¼	R344	1.14
precision press. regul., mini		0.2 - 2 / 9 bar	flange	R342	1.14	
precision press. regul., mini		0.1 - 3 / 6 bar	G½	R309 - 15	1.16	
brass pressure regul., mini		0.1 - 3 / 16 bar	G½ and G¼	R310 - 15	1.16	
precision press. regul., mini		0.1 - 1 / 12 bar	G½ - G¼	R039 - 15	1.11	
precision press. regul., mini		0.2 - 2.5 / 8 bar	G½	R307 - 15	1.18	
precision press. regul., mini		0 - 0.25 / 8 bar	flange	R308 - 15	1.19	
precision press. regul.		0 - 0.2 / 9 bar	¼"NPT	GH10 - X	www*	
precision press. regul.		0.01 - 0.6 / 3.5 bar	G¼ - G¾	R216 - L	5.05	
precision press. regul.		0.01 - 1 / 16 bar	G¼	R217 - 15	5.04	
precision press. regul.		0.001 - 0.14 / 7 bar	G¼ - G¾	R300 - 15	5.10	
precision press. regul.		0.01 - 0.14 / 28 bar	G¼ - G½	102.. - SC	5.08	
free of oil and grease	low pressure regulator	5 - 45 / 3000 mbar	G½ - G2	R160 - 15	3.06	
	high pressure regulator	40 / 0.2 - 3 / 35 bar	G¼ - G2	R280 - 15	4.02	
	high pressure regulator	50 / 0.1 - 1.5 / 50 bar	G¼ - G2, DN100	R120 - 15	4.04	
	high pressure regulator	60 / 0.5 - 12 / 50 bar	G¼ - G1	R286 - 15	4.08	
	cylinder pressure regulator	100 / 0 - 10 / 60 bar	G¼ - G½	RH-147-15	4.14	
	cylinder pressure regulator	200 / 0 - 1.5 / 40 bar	diverse	RH200- 15	4.12	
	cylinder pressure regulator	300 / 0 - 1.5 / 40 bar	diverse	RH300- 15	4.12	
	cylinder pressure regulator	300 / 0 - 10 / 60 bar	G¼ - G½	RH-347-15	4.14	
	high pressure regulator	414 / 0.3 - 35 / 414 bar	¼"NPT	HP300- 15	4.17	
	high pressure regulator	414 / 0.7 - 104 / 175 bar	¼"NPT	HP400- 15	4.17	
	volume booster	50 / 1 - 15 / 50 bar	G¼ - G2	R120-J- 15	6.15	
	volume booster	100 / 0.1 - 24 / 99 bar	G1	RL - 15	6.14	
	stainless steel precision press. regulator	0 - 0.2 / 9 bar	¼"NPT	RP1 - 15	www*	
	for ammonia	mini	0.2 - 2 / 8 bar	M5	RR - L	1.07
		mini	0.1 - 1 / 11 bar	G½ and G¼	R364 - L	1.15
precision pressure regulator		0.01 - 0.6 / 3.5 bar	G¼ - G¾	R216 - L	5.05	
high pressure regulator		241 / 0.2 - 2 / 7 bar	¼"NPT	RH0 - L	4.15	
high pressure regulator		300 / 0.1 - 1.7 / 35 bar	¼"NPT	HP500 - L	4.17	
stainless steel, mini		0.2 - 1.8 / 9 bar	G¼	R364S - L	15.02	
stainless steel		0.2 - 4 / 17 bar	G½	R10S - L	15.03	
stainless steel, many variations		0.2 - 3 / 16 bar	G¼ - G1	REA - M	15.11	
for natural gasoline, w/o certificate	P1: 6 bar	5 - 45 / 3000 mbar	G½ - G2	R160-02	3.06	
for pure gases	P1: max. 0.4 bar	2 - 15 / 160 mbar	G½ - G2	RGDJ	3.04	
	P1: max. 4 bar	5 - 12 / 350 mbar	G½ - G1½	RGB4	3.05	
	P1: max. 20 bar	10 - 18 / 4400 mbar	G1 - G1½, DN50	RZ	3.08	
for pure gases	Kl.10.000	0.05 - 2 / 4 bar	M5, G½	RE1	15.04	
purity grade 5.0	cylinder pressure regulator	100 / 0 - 10 / 60 bar	G¼ - G½	RH-147- M	4.14	
	cylinder pressure regulator	200 / 0 - 1.5 / 40 bar	diverse	RH200- M	4.12	
	cylinder pressure regulator	300 / 0 - 1.5 / 40 bar	diverse	RH300- M	4.12	
	cylinder pressure regulator	300 / 0 - 10 / 60 bar	G¼ - G½	RH-347- M	4.14	
for steam	made of spheroidal cast iron, red brass	0.14 - 1.7 / 9 bar	G½ - G2	RU	9.14	
<b>16 for special branches</b>						
FDA approved	mini	0,2 - 2,5 / 8 bar	G½	R307	1.18	
	mini	0 - 1 / 9 bar	G½ u. G¼	R25	9.04	
	mini	0 - 1,8 / 9 bar	G¼ u. G¾	R45	9.04	
	mini	0,1 - 3 / 8 bar	G¼	R91	9.02	
for pharmacy and food	made of stainless steel, many variations	0,25 - 0,4 / 53 bar	G¼ - G2½	R70	15.14	
	made of stainless steel, low pressure regulator	5 - 7 / 450 mbar	G¼ - G2½	R74	15.16	
CIP-capable	stainless steel, pharmacy	0,25 - 0,4 / 53 bar	G¼ - G2½	R70	15.14	
	stainless steel, pharmacy	5 - 7 / 450 mbar	G¼ - G2½	R74	15.16	
PWIS-free	very robust	0,2 - 1,8 / 17 bar	G¼ - G3	R119-LA	2.06	
	high pressure regulator	50/0,1 - 1,5 / 50 bar	G¼ - G2, DN100	R120-LA	4.04	



for oxygen

free of oil and grease

for ammonia

for natural gasoline, w/o certificate

for pure gases

purity grade 5.0

for steam

## 16 for special branches

FDA approved

for pharmacy and food

CIP-capable

PWIS-free









## Order Number Index

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<b>AB</b>	6.18	Pressure booster
AM, AP	6.16	Press. booster, Air amplifier station
AT1004	12.08	Pressure switch
A042...A080	19.05	Soft start valve
<b>BD</b>	17.06	Filter pressure regulator
BP1 / BP2	10.25	Prop. pressure regulator-combi
B042...B095	17.04	Filter pressure regulator
B11 / B12	17.03	Filter pressure regulator
B11-S	15.32	Filter pressure regulator
B20 / B21	17.05	Filter pressure regulator
B300	17.08	Filter pressure regulator
B548	17.02	Filter pressure regulator
B548-S / B558-S	15.32	Filter pressure regulator
B3000	15.30	Filter pressure regulator
<b>CD2 / CD3</b>	19.08	FRL service unit
C2 / C3	19.03	FRL service unit
C10 / C11	19.06	FRL service unit
C10-S / C11-S	15.38	FRL service unit
C20 / C21	19.07	FRL service unit
C35...C95	19.04	Assembly parts
C630	19.10	FRL service unit
C3002 / C3003	15.36	FRL service unit
<b>DA</b>	13.08	Pressure transducer
DBC	8.02	Back pressure regulator
DBC	8.11	Back press. regul., low pressure
DBM	8.04	Back pressure regulator
DB110	8.08	Back press. regul., precision
DB208	8.12	Back press. regul., pilot-operated
DB240	8.07	Back press. regul., precision
DB300	8.09	Back press. regul., precision
DB450	8.13	Back press. regul., pilot-operated
DSB / DSC	12.10	Pressure transducer
DSP / DSQ	12.05	Pressure switch
DS08...DS46	12.02	Pressure switch
DS15...DS18	12.03	Pressure switch
DS34 / DS35	12.04	Pressure switch
D0	13.02	Pressure transducer
D5, D6, D7, D8, D9	13.03	Pressure transducer
D11	16.18	Codensate drain
D608	16.18	Codensate drain
D3000, D3100	15.24	Back pressure regulator
<b>FD</b>	16.12	Compressed air filter
FG	16.14	Compressed air filter
FH	16.06	Compressed air filter
FH3	15.40	Compressed air filter
FM	16.08	Compressed air filter
F1...F4	15.41	Mounting flange
F035...F095	16.04	Compressed air filter
F10-S / F11-S	15.38	Compressed air filter
F20	16.07	Compressed air filter
F400	16.02	In-Line filter
F445 / F465	16.16	Compressed air filter
F504	16.03	Compressed air filter
F504-S	15.38	Compressed air filter
F602	16.10	Compressed air filter
F950/F960 / F970	20.04	Compressed air filter
F2804	20.06	Check valve
F3000	15.34	Compressed air filter
F4000 / F4400	12.08	Pressure switch
F4200, F4300	12.06	Pressure switch

Order number	Catalogue page	Description
<b>HP300</b>	4.17	High pressure regulator
HP400	4.17	High pressure regulator
HP500	4.18	High pressure regulator
<b>LD</b>	18.06	Lubricator
L042...L095	18.02	Lubricator
L10-S	15.38	Lubricator
L20	18.03	Lubricator
L606	18.04	Lubricator
L3000	15.33	Lubricator
<b>MA</b>	14.07	Pressure gauge
MAR	1.08	Miniature pressure regulator
ME / MF	14.06	Pressure gauge
MHA	14.03	Hand-operated gauge
MKA	14.05	Digital pressure gauge
MPAX	14.04	Industrial process gauge
MPV / MPA	14.02	Digital pressure gauge
MS	14.08	Pressure gauge
M5000	1.12	Accessories f. press. regulators
<b>NV30</b>	20.02	Needle valve
<b>PCEX</b>	10.16	Proportional pressure regulator
PD	10.15	Proportional pressure regulator
PF	10.11	Proportional pressure regulator
PM	10.02	Proportional pressure regulator
PPB	10.23	Setpoint potentiometer
PP700	12.09	Pressure switch
PP, „AirTronic“®D	10.09	Proportional pressure regulator
PQ1, PQ2, PQ3...PQ6	10.04	Proportional pressure regulator
PQH	10.17	Proportional pressure regulator
PR „AirTronic“®	10.08	Proportional pressure regulator
PRE	10.21	Proportional pressure regulator
PT6, PT7	10.18	Proportional pressure regulator
PVE, PVK	11.16	Flow control valve
PVM	11.06	Mass flow meter
PVR	11.07	Mass flow meter
PV21...PV40 „AirProp“	11.10	Flow control valve
PV202, PV202 / PV203	11.13	Flow control valve
PV630 / PV631	11.12	Flow control valve
P180	10.22	Proportional pressure regulator
P8	11.15	Flow control valve
<b>Q</b>	11.18	Pinch valve
QE	15.39	Pinch valve
<b>RAF</b>	9.12	Pressure regulator
RAI	9.13	Pressure regulator
RB	2.10	Standard pressure regulator
RC	1.20	Cartridge pressure regulator
RD1...RD4	2.08	Standard pressure regulator
RE1	15.04	Precision pressure regulator
REF	15.10	Pressure regulator, w. flange
REA	15.11	Standard pressure regulator
RF	20.03	Restrictor
RGB4	3.05	Low pressure regulator
RGBJ-J	6.13	Volume booster
RGDJ	3.04	Low pressure regulator
RGD4-J	6.13	Volume booster
RH-147 / RH-247 / RH-347	4.14	High pressure regulator
RH0 / RH1	4.15	High pressure regulator
RH2	4.16	High pressure regulator
RH3	4.19	High pressure regulator

## Order Number Index

Order number	Catalogue page	Description
RH3-J	6.12	Volume booster
RH4	4.20	High pressure regulator
RH10	4.10	High pressure regulator
RH44	4.22	Differential pressure regulator
RH44-S	15.21	Differential pressure regulator
RH83	4.09	High pressure regulator
RH201 / RH202	4.12	Cylinder pressure regulator
RH300	4.13	Cylinder pressure regulator
RH3000	15.18	High pressure regulator
RHB	4.21	High pressure regulator
RHB-S	15.20	High pressure regulator
RI	5.02	Precision pressure regulator
RK	19.11	Drain valve
RL13	3.03	Low pressure regulator
RLE	6.15	Dome pressure regulator
RLM	6.14	Dome pressure regulator
RM	2.11	Adjustment dial press. regul.
RR-M5	1.07	Miniature pressure regulator
RR	3.10	Low pressure regulator
RT	1.10	Miniature pressure regulator
RU	9.14	Steam pressure regulator
RW	9.05	Water pressure regulator
RWA	9.08	Water pressure regulator
RWF	9.10	Water pressure regulator
RWI	9.06	Water pressure regulator
RZ	3.08	Low pressure regulator
RZ-J	6.10	Volume booster
R-0	20.04	Restrictor
R01	3.02	Low pressure regulator
R03	5.14	Precision pressure regulator
R035...R095	2.03	Standard pressure regulator
R037	1.17	Miniature pressure regulator
R039 / R039-F	1.11	Miniature pressure regulator
R03-J	6.05	Volume booster
R6	1.12	Miniature pressure regulator
R7	1.13	Miniature pressure regulator
R10 / R11	2.05	Standard pressure regulator
R10-S	15.02	Standard pressure regulator
R11...R41	2.12	Adjustment dial press. regul.
R13	1.03	In-Line pressure regulator
R20 / R21	2.02	Standard pressure regulator
R25	9.04	Miniature pressure regulator
R40	5.12	Precision pressure regulator
R45	9.04	Miniature pressure regulator
R70	15.14	Standard pressure regulator
R74	15.16	Low pressure regulator
R90	5.03	Precision pressure regulator
R91	9.02	Miniature pressure regulator
R100	5.11	Precision pressure regulator
R102	5.16	Precision pressure regulator
R110	5.15	Precision pressure regulator
R116	6.08	Volume booster
R119	2.06	Standard pressure regulator
R119-J	6.11	Volume booster
R120	4.04	High pressure regulator
R120-J	6.15	Volume booster
R160	3.06	Low pressure regulator
R200 / R201	6.09	Volume booster
R208	6.04	Volume booster
R216	5.05	Precision pressure regulator
R217	5.04	Precision pressure regulator
R218	2.04	Standard pressure regulator
R230	5.09	Precision pressure regulator
R250	7.03	Vacuum pressure regulator

Order number	Catalogue page	Description
R251	7.05	Vacuum pressure regulator
R280	4.02	High pressure regulator
R286	4.08	High pressure regulator
R300	5.10	Precision pressure regulator
R307	1.18	Miniature pressure regulator
R308	1.19	Miniature pressure regulator
R309 / R310	1.16	Miniature pressure regulator
R342 / R344	1.14	Miniature pressure regulator
R354-S / R364-S	15.03	Miniature pressure regulator
R364 / R374	1.15	Miniature pressure regulator
R400	5.13	Precision pressure regulator
R450	6.07	Volume booster
R490	6.06	Volume booster
R650	6.02	Volume booster
R750	6.03	Volume booster
R800 / R900	1.09	Miniature pressure regulator
R3000	15.06	Standard pressure regulator
R3000-J	15.22	Volume booster
R3100	15.12	Low pressure regulator
R3150	15.05	Precision pressure regulator
R4100	3.09	Low pressure regulator
<b>SA</b>	19.11	Drain valve
SFE	16.17	Filter silencer
S042...S080	19.05	Switch-on valve
<b>VG</b>	11.02	Mass flow meter
VPF	11.08	Flow monitor
VP700	12.09	Vacuum switch
VR6	11.04	Needle valve
VS	15.42	Flange and nipples
V04	7.06	Vacuum pressure regulator
V05	7.06	Vacuum pressure regulator
V042...V080	19.05	Switch-on valve
V170	7.04	Vacuum pressure regulator
V800	7.02	Vacuum pressure regulator
V900	7.02	Vacuum pressure regulator
<b>10</b>	5.08	Precision pressure regulator
10BP	8.06	Back pressure valve
11-818	5.06	Precision pressure regulator
53.10	5.07	Precision pressure regulator
59 / 130 / 134	8.14	Back pressure valve
137	16.02	In-line filter
<b>231</b>	1.05	In-Line pressure regulator
232	1.06	In-Line pressure regulator
233	1.02	Cartridge pressure regulator
239A / 239M	1.04	In-Line pressure regulator
239K	9.03	In-Line pressure regulator, drinking water
281	19.12	Hose rupture valve



## **General terms and conditions**

AirCom Pneumatic GmbH  
Siemensstraße 18, 40885 Ratingen

(Status: 16.03.2018)

### **§ 1 General information / Scope**

1. The following General terms and conditions are valid for all contracts between the company AirCom Pneumatic GmbH, Siemensstraße 18, 40885 Ratingen ("Seller") and companies (§ 14 BGB), body corporate organised under public law and special assets under public law ("Purchaser").
2. The acceptance of the order confirmation as well as the receipt of deliveries of the Seller is valid as recognising these general terms and conditions even in cases where the Purchaser has submitted an offer based on own general terms and conditions.
3. Contrary or deviating conditions of the Purchaser are not recognised unless the validity of contrary or deviating conditions is explicitly accepted in writing.
4. An explicit rejection of deviating conditions of the Purchaser is not necessary.

### **§ 2 Contract conclusion**

1. The offers are non-binding and without obligation. The contract is not concluded until the order confirmation of the Seller is signed.
2. Deviations, supplements and verbal agreements as well as agreements with travelling salesmen, representatives and agents require the written confirmation by the Seller to be valid when the contract is closed.
3. Minimal deviations by the delivered objects from the description of the offer or the order confirmation are considered as authorised and do not affect the fulfilment of the contract insofar as they concern conventional quantity and quality tolerances; in particular in cases of modifications and improvements that are based on technical development.
4. Quotations, drawings, graphics and other documentations of the offer and order confirmation are meant only for the Purchaser and must not be made available to third parties. They remain property of the Seller and are protected by copyright. They must be returned upon request or if the order was not placed.

### **§ 3 Prices and payment**

1. The price lists, price quotations and cost estimates are without obligation.



2. The specified prices are valid only for the concrete order determined by amount and delivery time. If our general delivery prices increase or drop before the delivery, the price for the individual order increases or diminishes accordingly. Price increases are limited by the price prevailing on the market. If a basic agreement has been signed by the parties, then the prices specified in it are valid for its validity period, deviating from sentence 1 and 2 of this number.
3. All prices are net prices and are understood as ex-works or warehouse, plus freight and the respectively valid value added tax.
4. Payment is due within 30 days upon invoice date without deductions and only to the Seller. Further price reductions, rebates or deductions are not granted. A cash discount deduction of new invoices is not permitted as long as older due invoices are still unpaid.

In the absence of other agreements, payment to the Seller can be made only according to the specifications of the issued invoice. The employees of the Seller, representatives and travelling salesmen are only permitted to collect payment if a special written authority to collect is submitted. Bills of exchange can be accepted for payment only upon prior agreement. The acceptance of cheques and bills of exchange is done only as payment. Discount charges and collection expenses are at the expense of the Purchaser.

5. If the contracted payment terms are exceeded, default interest is charged to the amount of 9 percentage points above the respective base interest rate, at least 7 % though.
6. The Seller is not obligated to fulfilling the contract as long as the Purchaser does not meet his obligations as contracted, in particular when due invoices are not paid. Compensation or assertion of the right of retention based on claims from the Purchaser that are not explicitly recognised in writing by the Seller is excluded insofar as it does not concern undisputed, legally effective, time-barred claims.
7. In case the Purchaser is in default for two subsequent instalments, the entire remaining purchase price becomes due for payment.
8. If the Purchaser owes compensation for damages because of non-performance according to the general legal provisions, then the Purchaser is obligated to pay the Seller an amount of 15 % of the order amount including VAT as compensation for damages, subject to the assertion of further damages, unless the Purchaser can prove that there was no damage or loss of value or significantly less than the aforementioned flat rate.

#### **§ 4 Delivery and shipment / Transfer of risk**

1. The written order confirmation of the Seller is solely applicable for the scope of the delivery.
2. Delivery is as quick as possible, the latest though within about eight weeks after the start of the delivery time. The delivery time begins with the sending of the order confirmation, however, not before receiving the documentation, authorisations or releases to be provided by the Purchaser or before an agreed down payment has been received. The delivery time is maintained if the delivery item has left the factory or the readiness for dispatch has been informed before the delivery time's expiration. Maintaining of the delivery time requires that all contractual obligations are met by the Purchaser.

3. All cases of force majeure release the Seller from the obligation for fulfilling the contract for the duration and the scope of the occasion. Force majeure are considered in particular to be natural disasters, war or the risk of war, reactor accidents, labour strife, strikes, lock-outs, unforeseeable disruption of operations or shortage of raw materials, limitation of energy supply by third parties or other events that are not the responsibility of the Seller. Claim for damages by the Purchaser are ruled out. In case of permanent impossibility of performance, the parties retain the right of immediate withdrawal; any advance performances shall be returned. This is also valid if such situations occur after the delivery date has been exceeded.
4. If the delivery item is shipped to the Purchaser upon his request, then the risk of the accidental loss or accidental degradation of the delivery item is transferred to the Purchaser with the dispatch to the Purchaser or at the latest when the delivery item has left the factory or the warehouse of the Seller, unless something else was agreed upon. This is valid regardless of who pays the shipping costs. If the shipment is delayed upon request by the Purchaser, the risk is transferred when the readiness for delivery has been reported. Insurance will be arranged only upon expressive request of the Purchaser and at his expense.
5. Claims for wrong or incomplete delivery due to obvious defects are ruled out if they are not reported in writing within a week upon arrival of the delivery item at its destination.

#### **§ 5 Acceptance and assembly**

1. Merchandise that is reported as ready for shipment has to be fetched promptly by the Purchaser. If the Purchaser falls into arrears with the fetching, the acceptance or the picking up of the merchandise, then the Seller has the right to demand compensation of the occurred damage. With the start of the acceptance delay, the risk of accidental degradation or accidental loss is transferred to the Purchaser.
2. The offer of the Seller excludes the assembly.

#### **§ 6 Retention of title**

1. The delivered merchandise remains the property of the Seller (reserved goods) until final payment of all claims made or being made based on the business relationship. If there are multiple claims or open invoices, the retention of title is valid as a collateral for the outstanding balance, even if individual merchandise shipments have already been paid.
2. In case the Purchaser acts contrary to the stipulations of the contract, for example delayed payment, the Seller has the right, upon preliminary setting of a reasonable deadline, to take back the reserved goods. If the reserved goods are taken back, this represents a withdrawal from the contract. The Seller has the right to dispose of the reserved goods after the retraction. After subtracting a reasonable amount for the disposal costs, the disposal proceeds are to be settled with the amounts owed by the Purchaser. The Purchaser is liable for the claim for the deficiency.
3. In case of third parties claiming the reserved goods, in particular distraints, the Purchaser will inform about the ownership of the Seller and will promptly notify the Seller so that owner rights can be asserted. Costs incurred thereby are borne by the Purchaser.
4. The Purchaser has the right to process and sell the reserved goods in normal course of business as long as he does not fall into arrears. Pledges as collateral or transfers by way of security are not permitted. Claims ensuing from the resale or other legal basis (insurance, unlawful act) regarding the reserved goods, are fully

transferred already now by the Purchaser to the Seller as a collateral. Upon request of the Seller, the Purchaser has to notify debtors of the assignment. The Purchaser is obligated to also reserve ownership of the reserved goods towards his Purchaser until it is paid in full. The Seller gives the revocable right to the Purchaser to collect the claims ceded to the Seller for his invoice in his own name. The direct debit authorisation becomes void if the Purchaser does not fulfil his payment obligations properly, has difficulty in meeting payments, judicial execution proceedings are taken against him or insolvency proceeding are filed against him or the filing of such insolvency proceedings are refused due to lack of assets.

5. Processing or transformation of the goods is always done for the Seller as manufacturer, but without obligation for him. If the delivery items are processed with other items not belonging to the Seller, then he acquires joint ownership of the new item in the ratio of the value of the delivery items to the other processed items at the time of the processing. If the delivery items are combined or inseparately mixed with other items not belonging to the Seller, then the Seller acquires joint ownership of the new item in the ratio of the value of the delivery items to the other combined or mixed items. If the combination or mixture of the item of the Purchaser is to be regarded as main item, then it is agreed upon that the Purchaser transfers the proportion of the joint ownership of the new item to the Seller. The Purchaser stores the thus created joint ownership for the Seller.
6. The Seller is obligated to release the collaterals to which he is entitled insofar as the realisable value of the collaterals exceeds the claims by more than 10 %; the Seller has the choice thereby of the collaterals to be released.

## **§ 7 Guarantee / Liability**

1. If contractual obligations are infringed, the Purchaser has the legal rights in compliance with the following regulations.
2. The Purchaser can only file guarantee claims if he has performed his inspection and complaint obligations according to § 377 HGB (German Commercial Code) within a week of receiving the service. Contract, type and scope of the defect must be specified during the notification.
3. The warranty is also under the condition that the Seller has the choice to view and check the faulty item at the Purchaser or having it sent back to the Seller.
4. The statutory limitation period for defects claims is one year after the transfer of risk. This is not valid unless the law requires longer periods in accordance with §§ 438 Section 1 no. 2 (Construction Work and Objects for Construction Work), 478, 479 (Supplier Regress) and 634a Section 1 no. 2 (building defects) of the BGB (Civil Code) as well as in cases of injury to life, physical injury or damage to health due to intentional or negligent dereliction of duty on the part of the Seller and if a defect was fraudulently concealed.
3. In case of an entitled and timely notification of defects, the Purchaser has the right to supplementary performance during the warranty period. The Seller has the right of choice for the type of supplementary performance – repairing the defect or delivery of a fault-free item. If the supplementary performance fails or if further supplementary performances are unacceptable for the Purchaser, then the Purchaser has the right to reduction or the withdrawal from the contract. Replaced parts become the property of the Seller.
4. If claims are made towards the Purchaser by his customer or a consumer due to a defect of the delivered merchandise that was already present during the transfer of risk or that was complained about by a consumer

as end user, the legal claims to recourse of the Purchaser towards the Seller remain untouched in accordance with §§ 478, 479 BGB.

5. Claim for damages to the conditions regulated in Number 7 due to a defect can be asserted by the Purchaser only if the supplementary performance has failed or if we deny the supplementary performance. The right of the Purchaser to assertion of the right of further claim for damages to the conditions regulated in Number 7 remains untouched by that.
6. Claims against the Seller due to defects may only be made by the Purchaser and are not assignable.
7. The Seller is liable for occurring damages only insofar as they stem from a breach of an essential contractual duty or intentional or grossly negligent behavior on the part of its legal representatives or vicarious agents. If an essential contractual duty is only slightly negligently breached, then the liability is limited to the foreseeable damages typical for the contract. An essential contractual duty prevails for obligations whose fulfilment makes the proper execution of the contract even possible and which the Purchaser has expected to be complied with or was allowed to expect to be complied with. Any further liability for compensation is ruled out. The liability for culpable injury to life, body and health in accordance with legal regulations remains untouched. This is also valid for mandatory liability in accordance with the product liability law.

#### **§ 8 Final provisions**

1. Place of performance for all delivery obligations of the Seller and for other contractual obligation of both parties is the registered office of the Seller AirCom Pneumatic GmbH, Siemensstraße 18, 40885 Ratingen.
2. The contract concluded between the parties, the terms and conditions of the Seller as well as all the legal relations between the Purchaser and the Seller are subject to the laws of the Federal Republic of Germany with the exclusion of all references to other legal orders and international contracts. The United Nations Convention on Contracts is excluded.
3. The place of jurisdiction for all disputes arising from this contractual relationship is Düsseldorf, insofar as Seller and Purchaser do not constitute a different common place of jurisdiction. The Seller has the right, however, to file suit against the Purchaser also at his registered office.
4. Should a provision of these terms and conditions be ineffective or contain an omission, then the effectiveness of the remaining provisions remain unaffected.

## References

- Full or partial reprint, reproduction or translation subject to prior written approval.
- The characteristic values given in the catalogue are average values of series production instruments. Individual divergences are possible.
- Technical modifications reserved.
- Printing errors and general errors reserved.



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