

# VOLUME BOOSTER

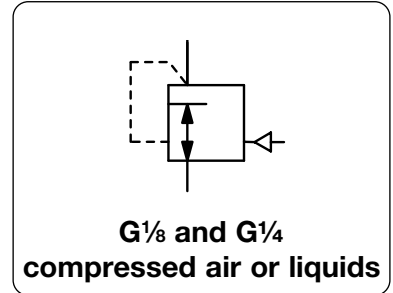
	DESCRIPTION	SUPPLY PRESSURE	PRESSURE RANGE	CONNECTION	DEVICE	PAGE
		max. bar	bar	thread		
<b>PRECISE</b>	with external feedback	16	0,2 ... 7	G $\frac{1}{4}$	R218	<b>6.03</b>
	differential pressure also	17	0 ... 1 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	<b>6.04</b>
	ratio 1:1 up to 1:6	17	0 ... 10	G $\frac{1}{4}$ and G $\frac{1}{2}$	R750	<b>6.05</b>
	different ratio	17	0 ... 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R208	<b>6.06</b>
	differential pressure also	16	0 ... 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J	<b>6.07</b>
	high exhaust capacity	17	0 ... 10	$\frac{3}{4}$ "NPT u. 1"NPT	R600	<b>6.08</b>
	different ratio, high-precision	17	0 ... 10	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450	<b>6.09</b>
	high exhaust capacity	28	0,2 ... 18	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	R116	<b>6.10</b>
	high volume flow	17	0 ... 10	G1 and G1 $\frac{1}{2}$	R200	<b>6.11</b>
high exhaust capacity	17	0 ... 10	1 $\frac{1}{2}$ "NPT	R201	<b>6.11</b>	
<b>STANDARD</b>	high volume flow	21	0.2 ... 18	G $\frac{1}{4}$ - G3	R119-J	<b>6.13</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>6.05</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>6.06</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>6.09</b>
<b>LOW PRESSURE</b>	also for gases	20	10 ... 350/1000 mbar	G1 - G2	RZ-J	<b>6.12</b>
	also for gases	0,4	2 ... 55/ 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	<b>6.15</b>
	also for gases	4	5 ... 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	<b>6.15</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>6.14</b>
	made of brass	100	0.1 ... 24 / 99	G1	RLM	<b>6.16</b>
	made of brass	50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R120-J	<b>6.17</b>
<b>MINIATURE</b>	also for liquids	10	0 ... 6	G $\frac{1}{8}$	R035-JK	<b>6.02</b>
<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>6.14</b>
	made of stainless steel	100	0.1 ... 24 / 99	G1	RLE	<b>6.16</b>
	made of stainless steel	50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R3000-J	15.18
	high exhaust capacity	17	0 ... 10	$\frac{3}{4}$ "NPT and 1"NPT	R601	15.20
<b>PRESSURE BOOSTER</b>	1:2 up to 1:10	12	4 ... 100	G $\frac{1}{4}$ - G $\frac{3}{4}$	AM	<b>6.18</b>
	1:2 up to 1:5, with storage	12	4 ... 40	G $\frac{3}{8}$ and G $\frac{1}{2}$	AP	<b>6.19</b>
	1:2, small design	10	3 ... 16	G $\frac{1}{8}$ - G $\frac{1}{2}$	AB	<b>6.20</b>



# MINIATURE VOLUME BOOSTER

R035-JK

<b>Description</b>	Pilot-operated volume booster of small and light design. Also suitable as separator for media. The booster features a sensitive rolling diaphragm permitting good pressure constancy. compressed air, non-corrosive gases or liquids		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 10 bar		
<b>Pilot pressure</b>	max. 6 bar, pilot port G $\frac{1}{8}$		
<b>Transmission ratio</b>	1:1 pilot pressure: outlet pressure		
<b>Relieving function</b>	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 50 °C / 32 °F to 122 °F		
<b>Material</b>	Body: POM	Elastomer: NBR/Buna-N	Inner valve: brass



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

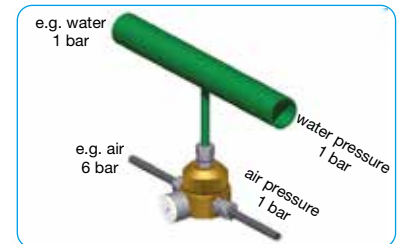
<b>Plastic booster</b>	supply pressure max. 10 bar, non-relieving, without constant bleed, transmission ratio 1:1						<b>R035-JK</b>	
36	48	12	15	250	G $\frac{1}{8}$	10	0... 6	R035-01JK



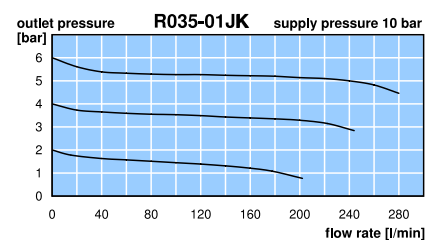
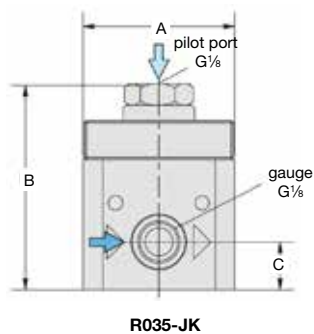
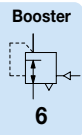
R035-01JK

## Accessories, enclosed

pressure gauge	Ø 23 mm, 0... 6 bar, G $\frac{1}{8}$	MA2301-06
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example for media separator

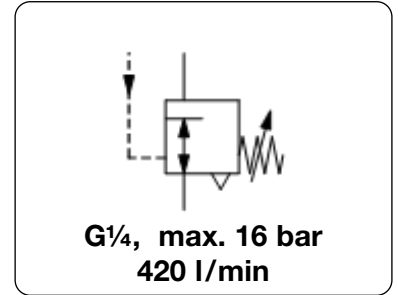


\*1 10 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\* Product group



<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 to 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	



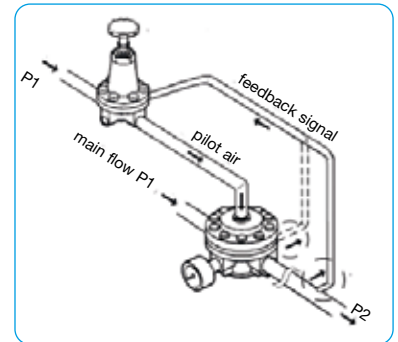
Dimensions			K <sub>v</sub> -value (m <sup>3</sup> /h)	Flow rate m <sup>3</sup> /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					
mm	mm	mm					

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

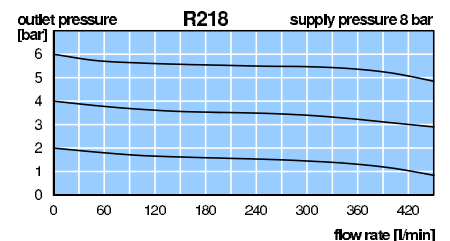
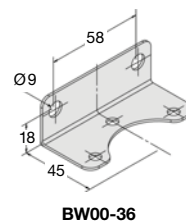
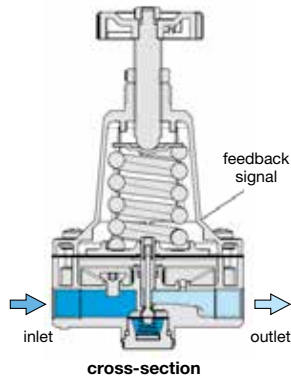
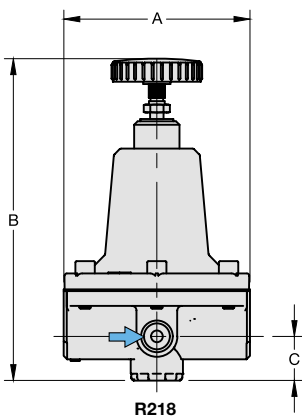
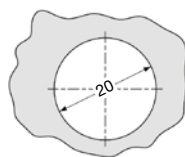


## Accessories, enclosed

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



Example: combination with booster

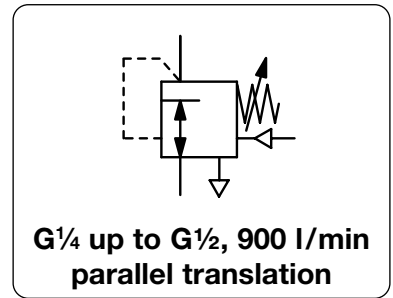


\*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

\* Product group



<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	900	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	900	G $\frac{3}{8}$	5	0 ... 1	0 ... 10	R650-03C
						5	0 ... 2		R650-03D
						8	0 ... 4		R650-03E
68	170	16	78	900	G $\frac{1}{2}$	5	0 ... 1	0 ... 10	R650-04C
						5	0 ... 2		R650-04D
						8	0 ... 4		R650-04E
						15	0 ... 10		R650-04F

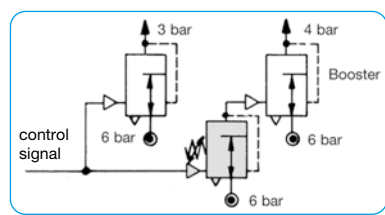
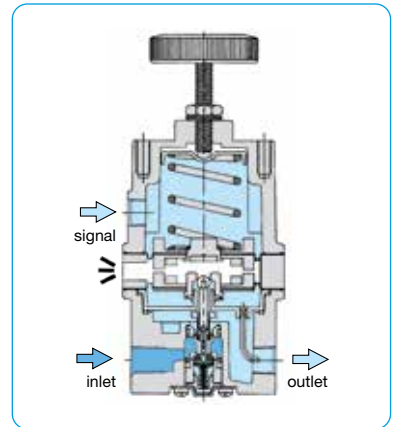


**Special options, add the appropriate letter**

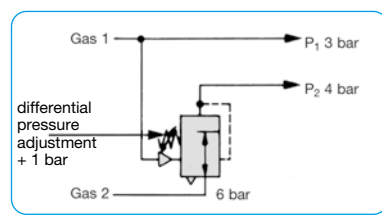
<b>negative bias</b>	factory-set to -0.3 bar	R650-0..Y
<b>NPT</b>	connection thread	R650-0..N
<b>tamper-proof cap</b>	above spindle, total height 174 mm	R650-0..T

**Accessories, enclosed**

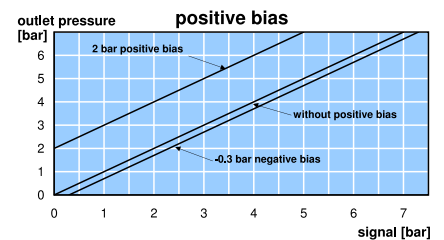
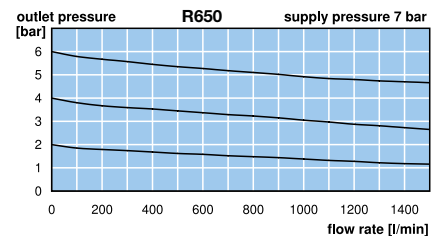
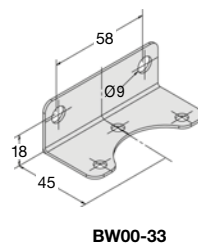
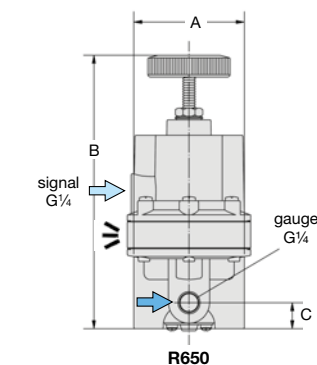
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
<b>mounting bracket</b>	made of steel	BW00-33



**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

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net

\* Product group



Order example:  
R650-02C

# 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

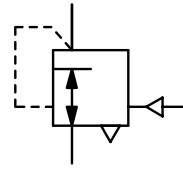
**Mounting position** any

### 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	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	G	max. bar	signal : outlet

Booster			with transmission ratio, relieving, with constant bleed,		supply pressure max. 17 bar, 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
68	102	16	0.5	60	1000	G $\frac{1}{2}$	10	1:1	R750-04I
							5.0	1:2	R750-04K
							3.3	1:3	R750-04C
							1.7	1:6	R750-04M



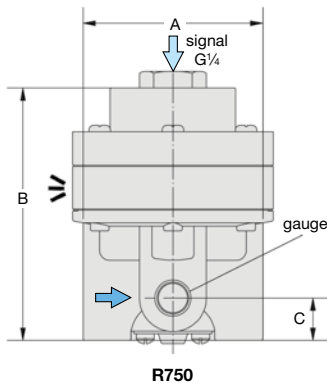
R750

### Special options, add the appropriate letter

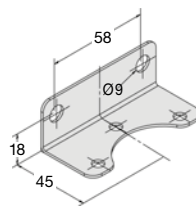
negative bias	factory-set to -0,3 bar	R750-0. .Y
NPT	connection thread	R750-0. .N
tapped exhaust	connection thread G $\frac{1}{4}$	R750-0. .X12

### Accessories, enclosed

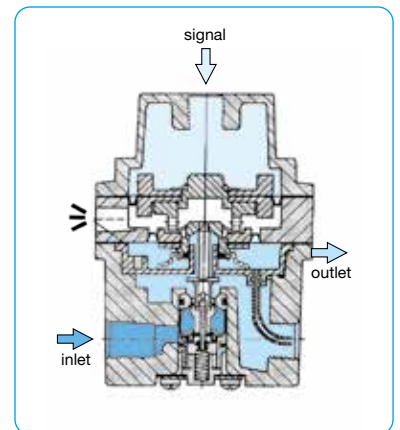
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-33



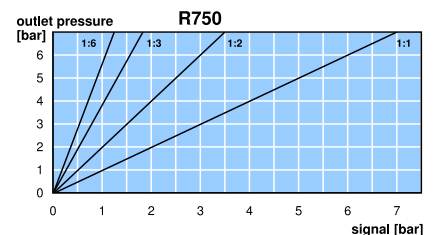
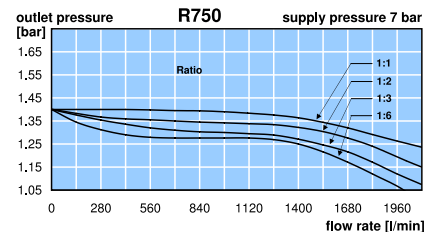
R750



BW00-33



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

\* Product group



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

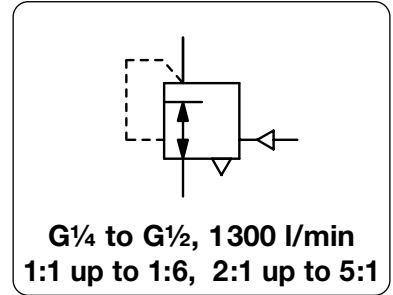
**Temperature range** 0 °C to 80 °C / 32 °F to 176 °F, NBR, for appropriately conditioned compr. air down to -40 °C / -40 °F  
 0 °C to 90 °C / 32 °F to 194 °F, FKM, for appropriately conditioned compr. air down to -40 °C / -40 °F

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

**Relieving function** relieving

**Mounting position** any

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



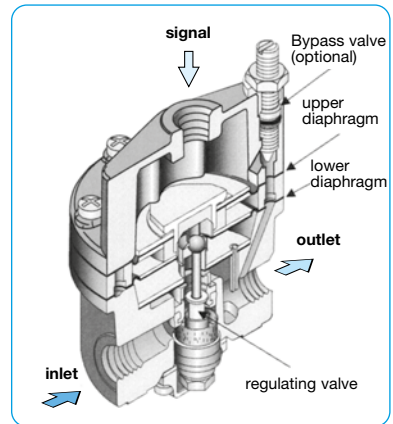
Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Pilot pressure	Transmission ratio	Order number
A	B	C	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	G	max. bar	signal : outlet	

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	<b>R208-02I</b>
							5.0	1 : 2	<b>R208-02K</b>
							3.3	1 : 3	<b>R208-02L</b>
76	110	24	0.7	78	1300	G $\frac{1}{4}$	2.5	1 : 4	<b>R208-02M</b>
							2.0	1 : 5	<b>R208-02N</b>
							1.7	1 : 6	<b>R208-02O</b>
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	2 : 1	<b>R208-02R</b>
								3 : 1	<b>R208-02S</b>
76	110	24	0.7	78	1300	G $\frac{1}{4}$	10	4 : 1	<b>R208-02T</b>
								5 : 1	<b>R208-02U</b>



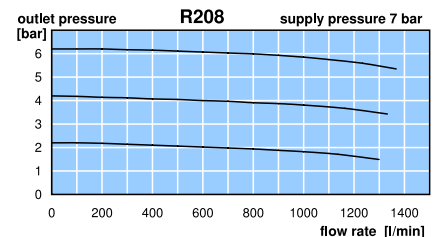
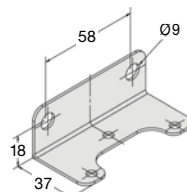
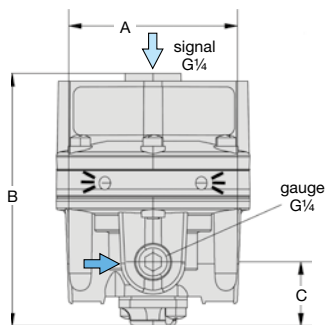
**Special options, add the appropriate letter**

G $\frac{3}{8}$	connection thread	R208-03 .
G $\frac{1}{2}$	connection thread	R208-04 .
NPT	connection thread	R208-0 .N
non-relieving*3	without relieving function	R208-0 .K
tapped exhaust*3	connection thread G $\frac{1}{4}$	R208-0 .X12
bypass with restrictor*4	between control chamber and outlet	1:1 only R208-0 .X16
negative bias*3	preset to -0,24 bar, adjustable by 30 mbar	R208-0 .Y
silicone elastomer	supply pressure max. 5 bar	1:1 only R208-0 .A
FKM elastomer		R208-0 .V



**Accessories, enclosed**

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



\*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  
 \*4 not compatible with option Y

\* Product group

Gauges: see chapter for measuring devices

PDF CAD  
 www.aircom.net



Order example:  
**R208-02I**



**Description** 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.

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

**Supply pressure** max. 16 bar

**Pilot pressure** max. 10 bar, accordingly lower in the case of manual pre-pressure setting

**Accuracy** 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

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

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

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

**Gauge port** any

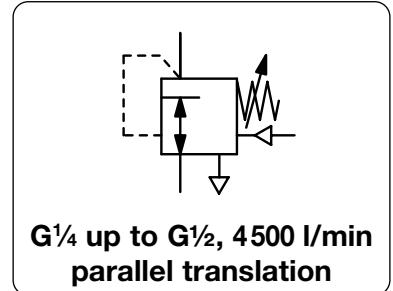
**Temperature range** 0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F

**Material** Body: zinc die-cast

**Pilot port** G<sub>1/8</sub>

**Mounting position** any

**Elastomer:** NBR/Buna-N



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Positive bias	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	bar	bar

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 <sub>1/4</sub> *3	without	0.05 ... 10	R03-02J	
			2.3	228	3800	G <sub>3/8</sub> *3			R03-03J	
			2.7	270	4500	G <sub>1/2</sub>			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 <sub>1/4</sub> *3	0 ... 1 bar	0.05 ... 10	R03-02J1	
			2.3	228	3800	G <sub>3/8</sub> *3			R03-03J1	
			2.7	270	4500	G <sub>1/2</sub>			R03-04J1	
82	180	41	2.0	198	3300	G <sub>1/4</sub> *3	0 ... 6 bar	0.05 ... 10	R03-02J6	
			2.3	228	3800	G <sub>3/8</sub> *3			R03-03J6	
			2.7	270	4500	G <sub>1/2</sub>			R03-04J6	



R03-...J1

**Accessories**, enclosed

**pressure gauge** Ø 50 mm, 0...\*2 bar, G<sub>1/4</sub>

**mounting nut** made of plastic

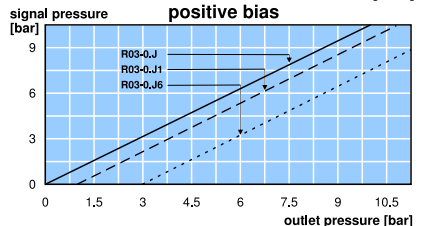
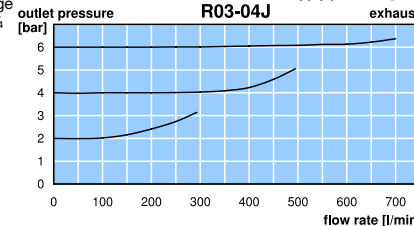
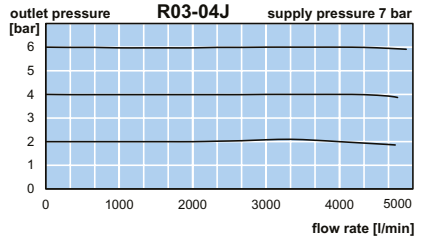
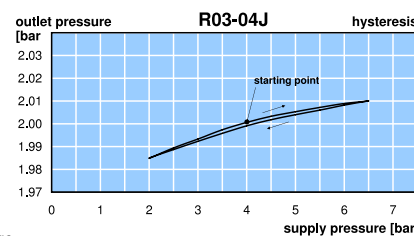
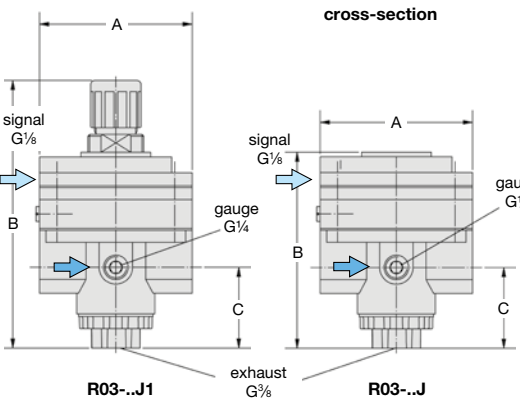
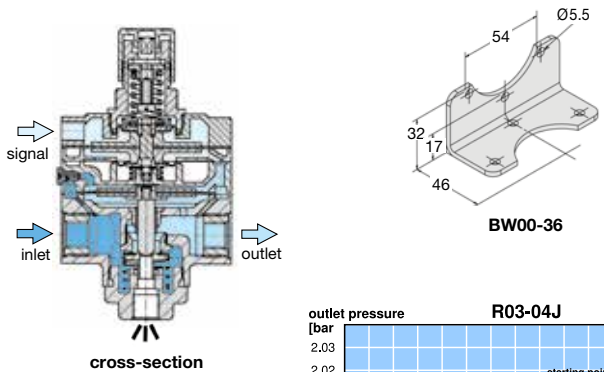
**mounting bracket** made of steel

for R03-...J1

MA5002-...\*2  
M30x1,5K  
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<sub>1/2</sub> reduced to smaller threads by fittings

Gauges: see chapter for measuring devices

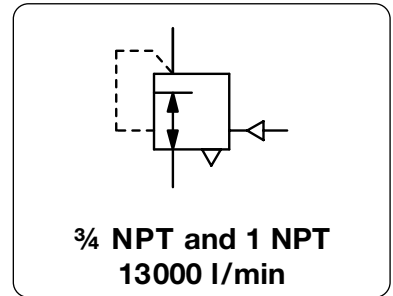
PDF CAD  
www.aircom.net

\* Product group



Order example:  
R03-02J

<b>Description</b>	The volume booster amplifies the volume at a 1:1 ratio of pilot pressure to outlet pressure. The booster is robust, highly accurate and sensitive. The hysteresis between the outlet pressure and the relieving pressure is very small and constant. Caused by the inlet pressure compensation of the control valve the regulator is stable against fluctuations in inlet pressure vibrations due to sudden changes of the volume flow are prevented by damping in the diaphragm chamber.	
<b>Media</b>	compressed air or non-corrosive gases	<b>Supply pressure</b> max. 17 bar
<b>Pilot pressure</b>	max. 10 bar	
<b>Accuracy</b>	response sensitivity 15 mbar	
<b>Internal air consumption</b>	no internal air consumption	<b>Relieving function</b> relieving, tapped exhaust function ¼ NPT
<b>Relief capacity</b>	4245 l/min at 0.35 bar overpressure above setpoint	
<b>Gauge port</b>	¼ NPT on both sides of the body	<b>Mounting position</b> any
<b>Temperature range</b>	-40 - 93 °C; optional -52 °C	
<b>Material</b>	Body: aluminium die-cast Inner valve: aluminium and galvanized steel	Elastomer: NBR



Dimensions			K <sub>v</sub> - Value	Flow rate	Connection thread	Pilot pressure max. bar	Transmission ratio signal : outlet	Order number
A	B	C						
mm	mm	mm	(m³/h)	m³/h*1	l/min*1	G		

Booster			Transmission ratio 1:1, inlet pressure max. 17 bar reversible, without internal air consumption				R600		
117	177	45	8	690	11500	¾"NPT	17	0...10	R600-06N
			9	780	13000	1"NPT	17	0...10	R600-08N



R600

## Special options, add the appropriate letter

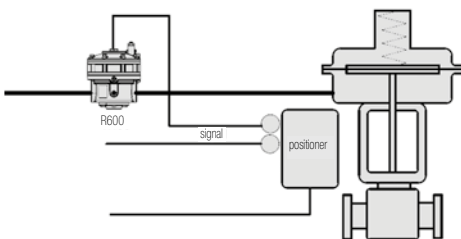
<b>Low Temperature Option</b>		R600-0.NX51
<b>Body</b>	made of stainless steel (s. page 15.20)	R601

## Accessories, enclosed

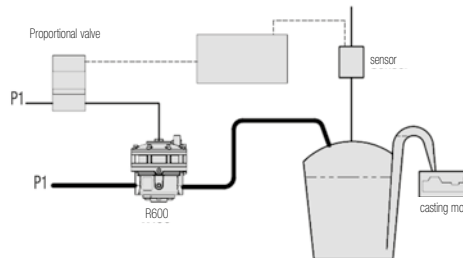
pressure gauge	Ø 63 mm, 0...*2 bar, G¼	MA6302-..*2
connection part pressure gauge	¼"NPTa-G¼	VP-0202N
mounting bracket		BW00-66

Booster

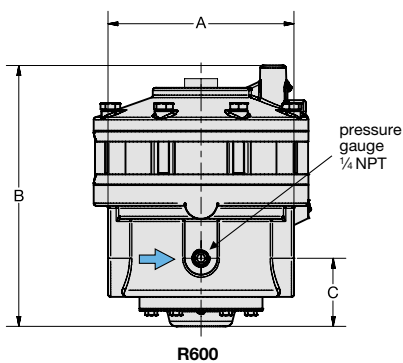
6



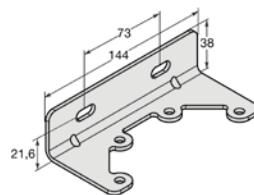
Volume flow booster with single-acting positioner and diaphragm actuator



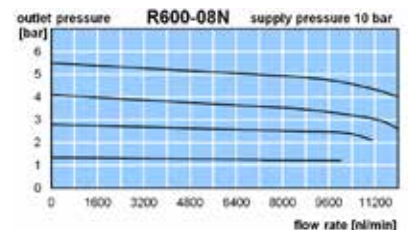
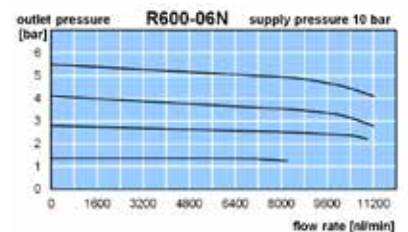
Volume flow booster in a casting plant



R600



BW00-66



\*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

Gauges: see chapter for measuring devices  
Stainless steel version in chapter 15

PDF CAD  
www.aircom.net

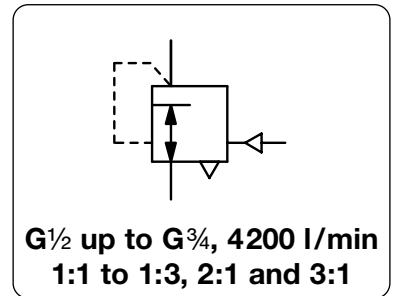
\* Product group



Order example:  
R600-06N



<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,	<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>Relieving function</b>	relieving
<b>Relief capacity</b>	1100 l/min at 0.35 bar overpressure above setpoint	<b>Mounting position</b>	any
<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 Inner valve: brass and aluminium	<b>Elastomer:</b>	NBR/Buna-N, optionally FKM



Dimensions			K <sub>v</sub> -value	Flow rate	Connection thread	Pilot pressure max. bar	Transmission ratio signal : outlet	Order number
A	B	C						

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	R450-04I
							5.0	1 : 2	R450-04K
							3.3	1 : 3	R450-04L
							10	2 : 1	R450-04M
							10	3 : 1	R450-04N
87	129	40	2.16	252	4200	G $\frac{3}{4}$	10	1 : 1	R450-06I
							5.0	1 : 2	R450-06K
							3.3	1 : 3	R450-06L
							10	2 : 1	R450-06M
							10	3 : 1	R450-06N



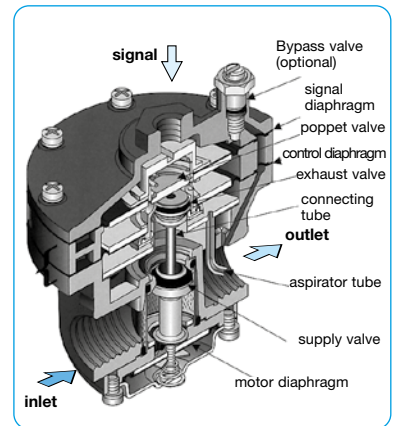
R450

## Special options, add the appropriate letter

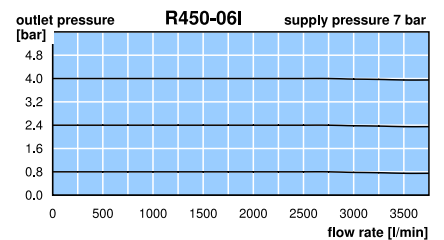
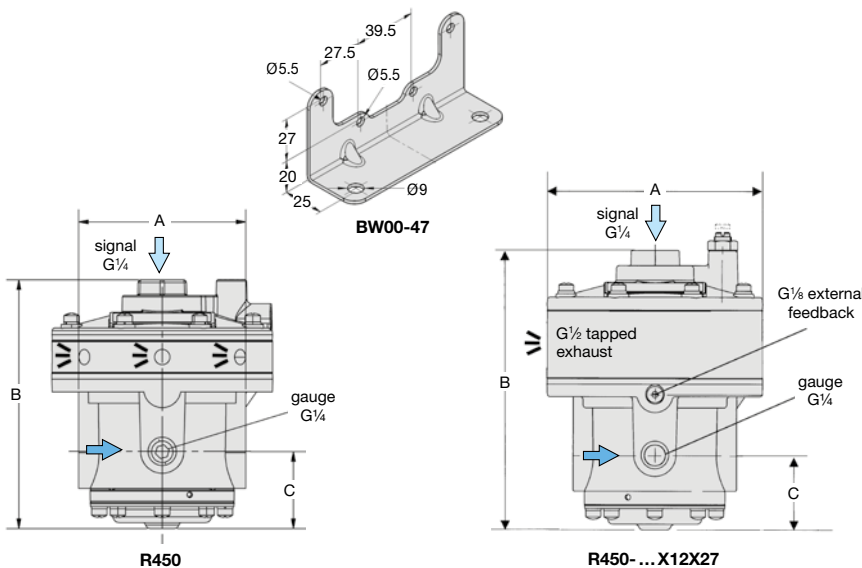
<b>NPT</b>	connection thread	R450-0..N
<b>tapped exhaust</b>	G $\frac{1}{2}$ connection thread, total height 148 mm	R450-0..X12
<b>bypass with restrictor</b>	from control chamber to outlet	1:1 only R450-0..X16
<b>external feedback</b>	with connection thread G $\frac{1}{8}$	R450-0..X27
<b>FKM elastomer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

## Accessories, enclosed

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



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

\* Product group

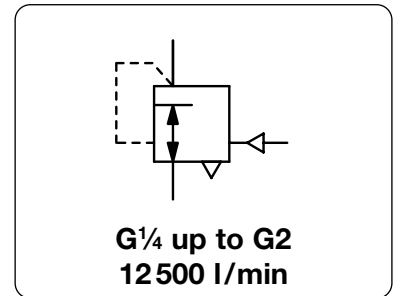


Order example:  
R450-04I

# PRECISION VOLUME BOOSTER WITH HIGH RELIEF CAPACITY

R116

<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, max. 31 bar at G1½ a. G2	<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> : G¼	exhaust: G½ (up to overall size G½), G¾ (from size G¾ on)	gauge P <sub>1</sub> : G½ (from size G¾ on)
<b>Temperature range</b>	-18 °C to 70 °C / 0 °F to 158 °F		
<b>Material</b>	Body: zinc die-cast, die-cast aluminum at G1½ a. G2 Elastomer: NBR/Buna-N	Inner valve: brass Bottom screw: reinforced nylon, glass fiber reinforced, ... G1½ u. G2	



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 with high relief capacity								P <sub>1</sub> : max. 28/31 bar, ratio 1:1 relieving	P <sub>2</sub> : 0.2... 18 bar,	R116
80	129	39	15	4.3	270	4500	G¼		<b>R116-02</b>	
				4.4	290	4800	G¾		<b>R116-03</b>	
				4.5	300	5000	G½		<b>R116-04</b>	
93	149	48	25	9.5	690	11500	G¾		<b>R116-06</b>	
				10.0	720	12000	G1		<b>R116-08</b>	
				10.4	750	12500	G1½		<b>R116-10</b>	
152	183	89	40	35.4	2000	42000	G1½		<b>R116-10</b>	
				35.4	2500	42000	G2		<b>R116-12</b>	

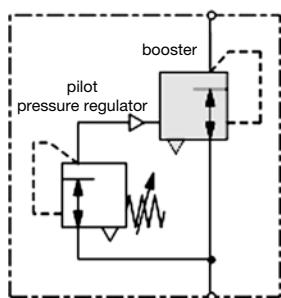


## Special options, add the appropriate letter

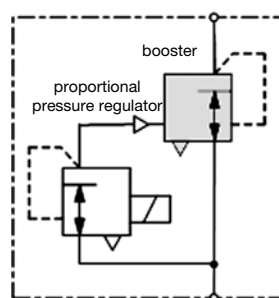
<b>NPT</b>	connection thread	R116-...N
<b>flange connection</b>	see chapter SST devices / flanges	R116-...F

## Accessories, enclosed

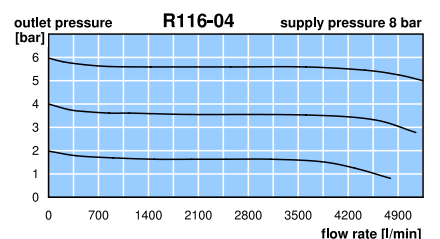
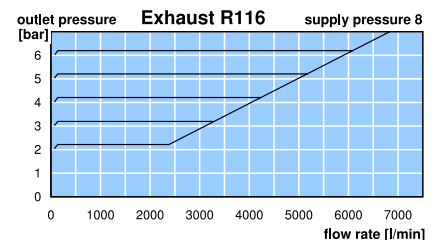
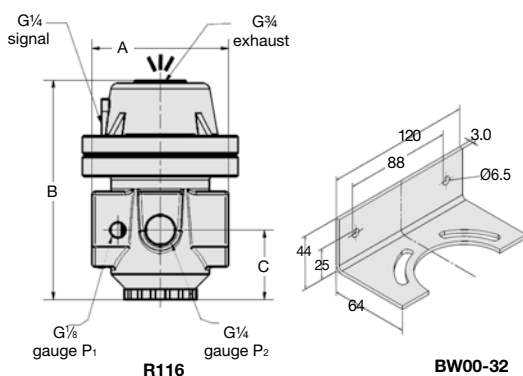
<b>pressure gauge</b>	Ø 50 mm, 0...*2 bar, G¼	for G¼ to G½	<b>MA5002-*2</b>
	Ø 63 mm, 0...*2 bar, G¼	for G¾ to G1½	<b>MA6302-*2</b>
<b>mounting bracket</b>	made of aluminium	for G¼ to G1½	<b>BW00-32</b>



example: booster with pilot pressure regulator



example: booster with proportional pressure regulator



\*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

\* Product group



Order example:  
**R116-02**

**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

**Pilot pressure** max. 17 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

**Air consumption** without constant bleed

**Relief capacity** 1800 l/min at 0.3 bar overpressure above setpoint at R200, 9000 l/min at R201

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

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

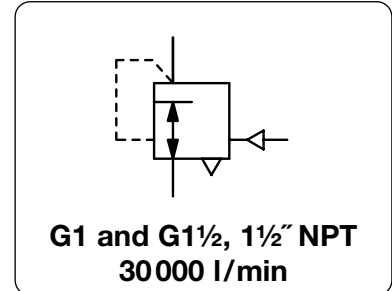
**Material** Body: aluminium die-cast Elastomer: NBR/Buna-N-/Dacron, optionally FKM Inner valve: stainless steel, cadmium-plated steel and brass

**Supply pressure** max. 17 bar

**Response sensitivity** 30 mbar

**Relieving function** relieving, optionally non-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	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

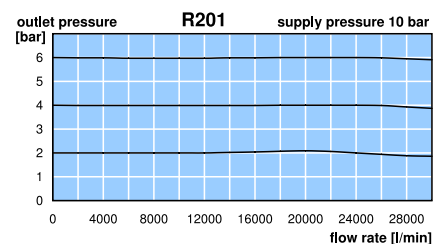
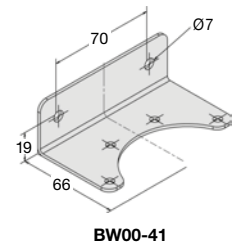
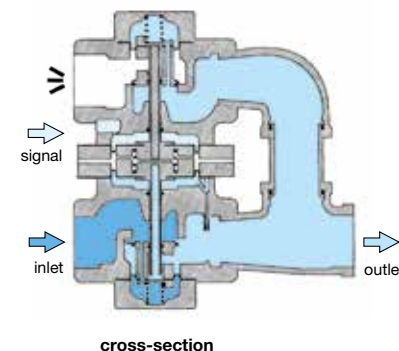
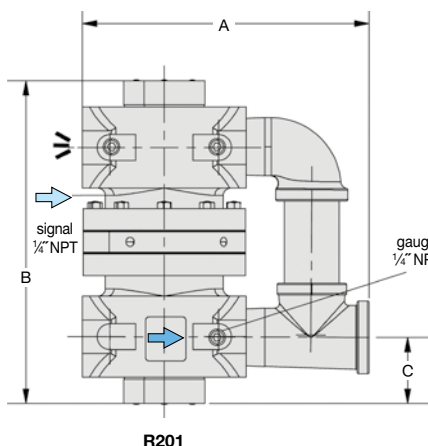
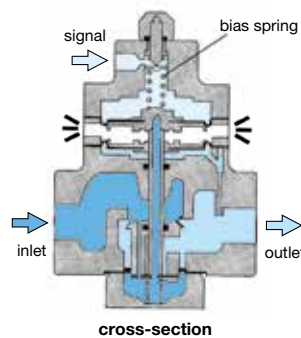
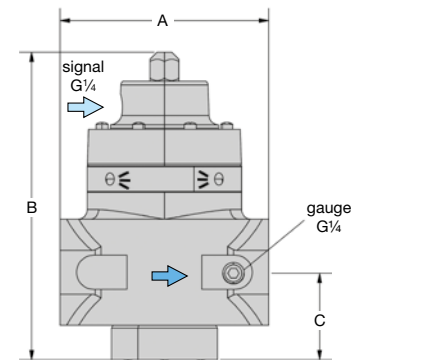
**FKM elastomer** R20-..IV

**Accessories, enclosed**

**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



\*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  
www.aircom.net

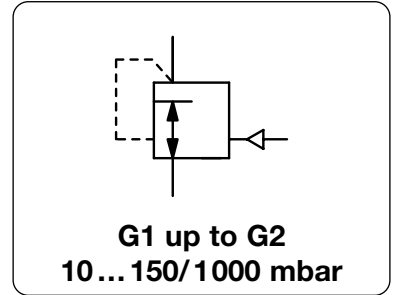
\* Product group



**Order example:  
R200-08I**

# LOW PRESSURE VOLUME BOOSTER UP TO 1 BAR, SUPPLY PRESSURE MAX. 20 BAR RZ-J

<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>Pilot pressure</b>	max. 1000 mbar		
<b>Air consumption</b>	without constant bleed		
<b>Relieving function</b>	non-relieving, optionally relieving		
<b>Accuracy</b>	at max. flow rate < e.g. 10% pressure deviation of full scale		
<b>Adjustment</b>	manual by turning the spindle under the cover of the spring cage		
<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	Flow rate	P <sub>1</sub> max.	Connection thread	Pressure range	Order number	
A	B	C	%	DN	l/min*1	bar*2	G	mbar		D*

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	<b>RZ1-08J</b>
			5		3300	20		180 ... 1000	<b>RZ3-08J</b>
100	245	30	10	17	2700	10	G1½*3	15 ... 110	<b>RZ1-12J</b>
			5		5000	20		180 ... 1000	<b>RZ3-12J</b>
254	460	80	10	34	15000	10	G2	10 ... 350	<b>RZ1-16JF</b>
			5		28000	20		350 ... 1000	<b>RZ2-16JF</b>



RZ1-08J

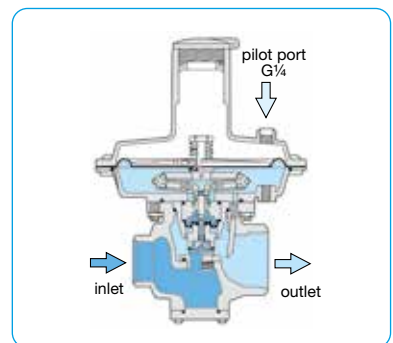
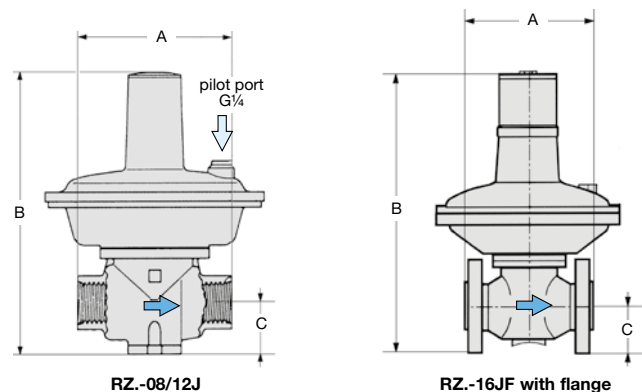
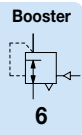
## Special options, add the appropriate letter

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

up to 16 bar



RZ1-16JF



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

\* Produkt group

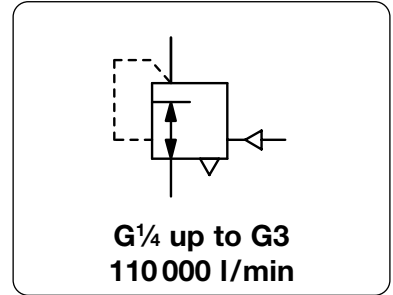
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Order example:  
**RZ1-08J**



<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 up to G1	
<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 by G2 to G3 Diaphragm: NBR/Buna-N, optionally FKM	<b>Mounting position</b> any Inner valve: brass Bottom screw: reinforced nylon



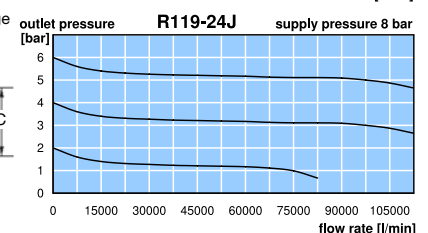
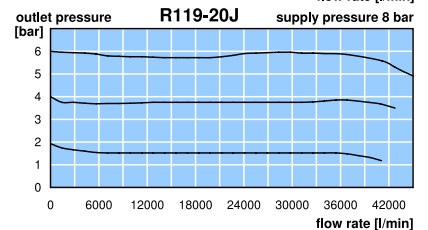
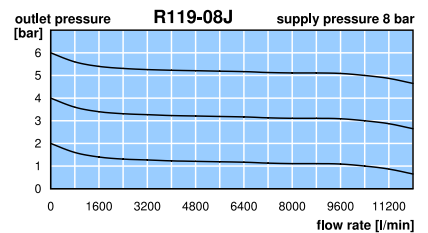
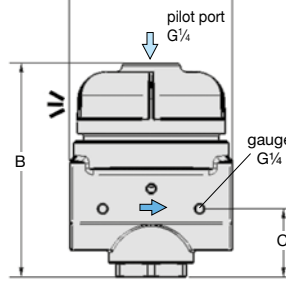
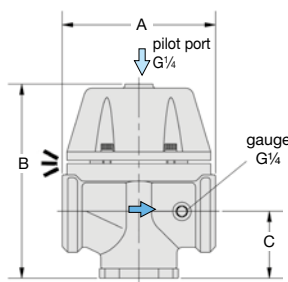
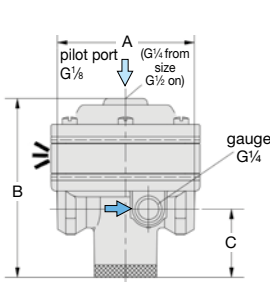
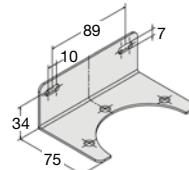
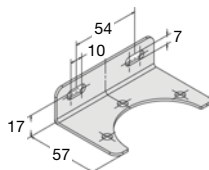
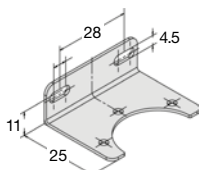
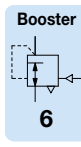
Dimensions			Nominal size	K <sub>v</sub> -value	Flow rate		Connection thread	Order number
A	B	C	DN	(m³/h)	m³/h*1	l/min*1	G	
mm	mm	mm						

Booster			supply pressure max. 21 bar, outlet pressure 0.2 ... 18 bar with constant bleed,	transmission ratio 1:1,	18 bar 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
125	132	48	32	9.2	660	11000	G1¼ <sup>3</sup>	R119-10J
125	132	48	40	10.0	720	12000	G1½	R119-12J
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	for G2 to G3	R119-...JN
<b>non-relieving</b>	without relieving function	for G¼ to G1	R119-...JK
<b>FKM elastomer</b>		for G¼ to G1½	R119-...JX64
		for G3	R119-24JX64
		for G¼ to G1½	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	for G3	R119-24JX27
<b>pre-pressure regulation</b>	340 mbar, advisable if P <sub>1</sub> is close to P <sub>2</sub>	for G3	R119-24JX06

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



\*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

\* Product group

Gauges: see chapter for measuring devices

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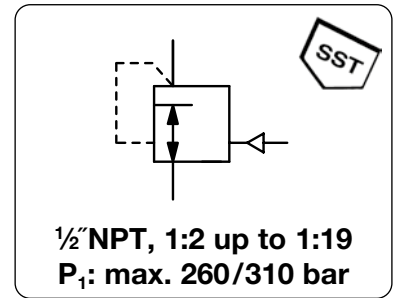
Order example:  
R119-02J



# 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>



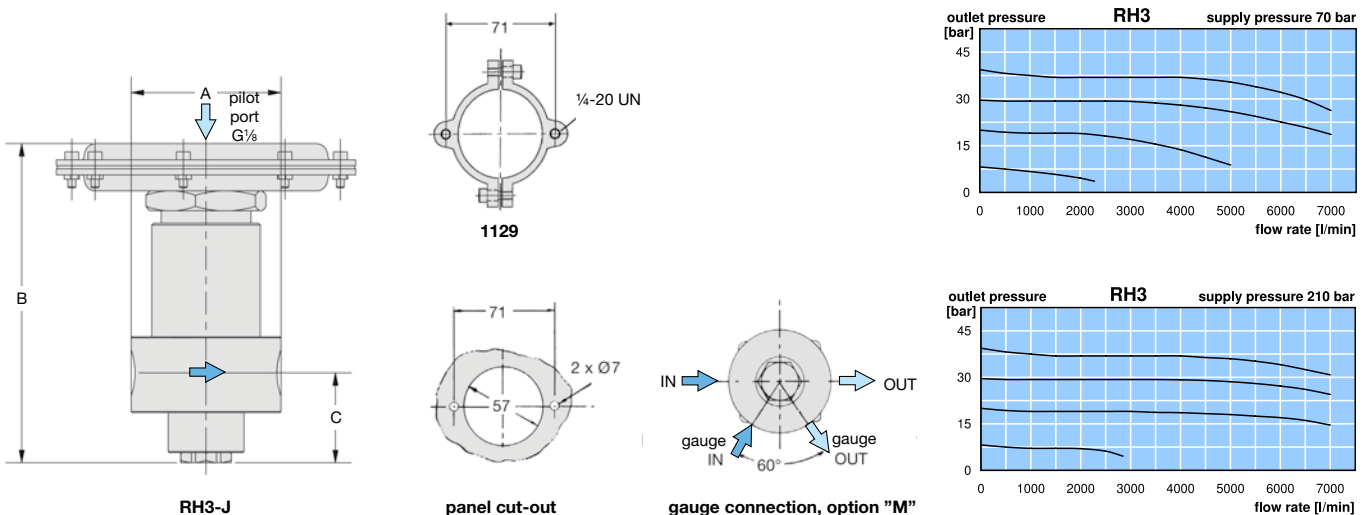
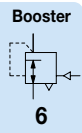
RH3-J

## 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, enclosed

set of brackets	for panel mounting	1129
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\*1 at 210 bar supply pressure and 40 bar outlet pressure

\* Product group

Gauges: see chapter for measuring devices

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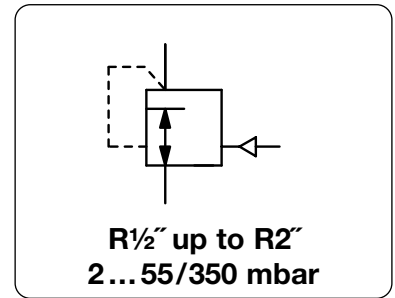


Order example:  
**RH3-J402**

# 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. 160 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>	G $\frac{1}{4}$ " on one side for RGB4-12J, optionally G $\frac{1}{4}$ " for all others except RGDJ-04J		
<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 $^3$ /h)	m $^3$ /h*1	l/min*1	R	mbar
mm	mm	mm						

Low pressure booster <i>P<math>_1</math> max. 400 mbar</i>								non-relieving, without constant bleed, transmission ratio 1:1	RGDJ-J
100	120	30	15	0.66	12	200	1/2"	2... 55	RGDJ-04J
125	166	34	20	1.49	27	450	3/4"	5... 160	RGDJ-06J
125	166	34	25	2.6	51	850	1"	5... 160	RGDJ-08J
155	194	45	40	4.9	90	1500	1 1/2"	5... 160	RGDJ-12J
200	219	52	50	6.6	120	2000	2"	5... 100	RGDJ-16J

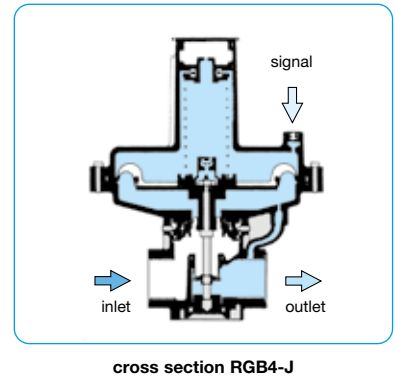
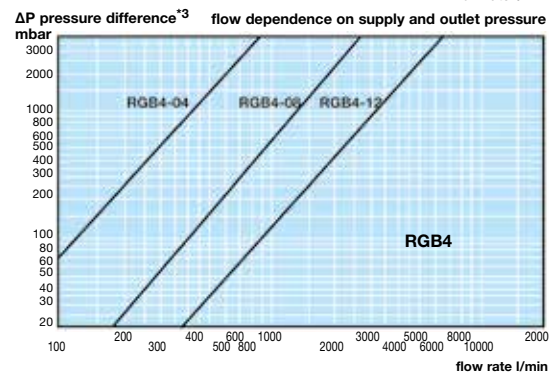
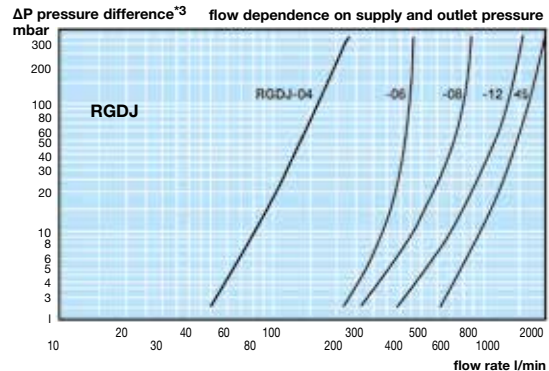
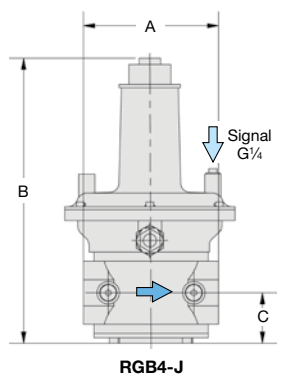
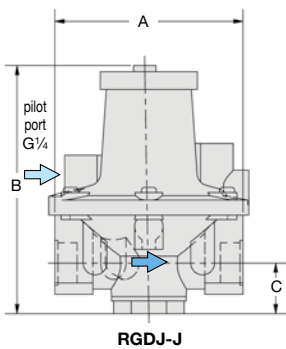


Low pressure booster <i>P<math>_1</math> max. 4 bar</i>								non-relieving, without constant bleed, transmission ratio 1:1	RGB4-J
148	174	24	15	0.62	42	700	1/2"	5... 350	RGB4-04J
192	230	33	25	2.5	168	2800	1"	5... 350	RGB4-08J
150	265	55	40	5	336	5600	1 1/2"	5... 350	RGB4-12J



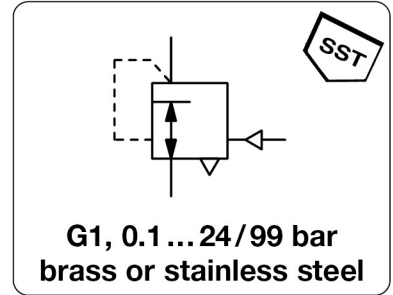
**Special options,** add the appropriate letter  
 connection thread G $\frac{1}{4}$ " for pressure gauge not for RGDJ-04J RG. . . . .M

**Accessories,** enclosed  
 pressure gauge  $\varnothing$  63 mm, 0...\*2 mbar, G $\frac{1}{4}$ " for R $\frac{3}{4}$ " up to R2" MA6302-..\*2



\*1 bei 350 mbar Eingangsdruck und 100 mbar Ausgangsdruck  
 \*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar  
 \*3  $\Delta P = P_1 - P_2$  Druckdifferenz von Eingangsdruck und Ausgangsdruck

<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 G $\frac{1}{4}$		
<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>Gauge port</b>	not available		
<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> -	Flow	Connection	Supply	Pressure	Order
A	B	C	value	rate	thread	pressure	range	number
mm	mm	mm	(m <sup>3</sup> /h)	m <sup>3</sup> /h*1	l/min*1	max. bar*2	bar	

<b>Brass pressure regulator</b>			supply pressure max. 25 / 100 bar, non-relieving, without constant bleed, transmission ratio 1:1, FKM						<b>RLM</b>
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

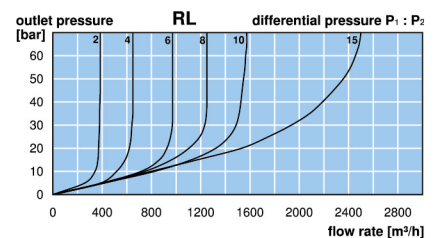
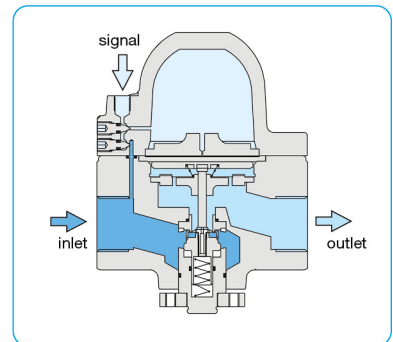
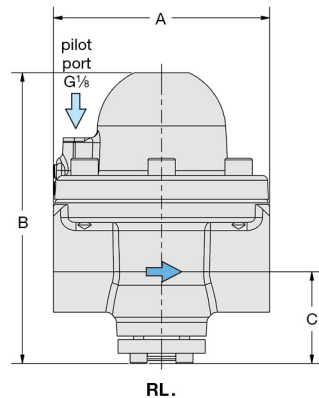
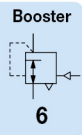
<b>SST pressure regulator</b>			supply pressure max. 25 / 100 bar, non-relieving, without constant bleed, transmission ratio 1:1, FKM						<b>RLE</b>
127	170	54	2.9	340	5600	G1	25	0.1 ... 24	<b>RLE-08J1</b>
				2500	60000	G1	100	0.5 ... 99	<b>RLE-08J2</b>



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

\* Product group

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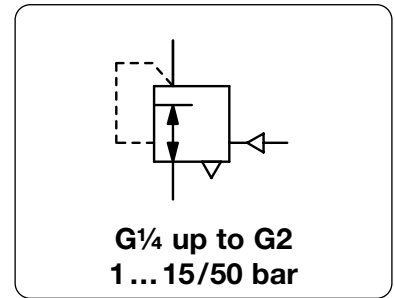


Order example:  
RLM-08J1

# BRASS VOLUME BOOSTER, UP TO 50 BAR

R120-J

<b>Description</b>	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.		
<b>Media</b>	compressed air, non-corrosive gases or liquids		
<b>Supply pressure</b>	max. 50 bar, for liquids $\Delta p_{max} = 25$ bar		
<b>Pilot pressure</b>	max. 15 bar for R120-...J2, max. 50 bar for R120-...J5, pilot port G $\frac{1}{4}$		
<b>Air consumption</b>	without constant bleed		
<b>Relieving function</b>	non-relieving, optionally relieving		
<b>Relief size</b>	DN2		
<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 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		
<b>Material</b>	Body: brass up to G $\frac{1}{2}$ , bronze from G $\frac{3}{4}$ on	O-rings: FKM, optionally EPDM	Inner valve: brass
	Diaphragm: NBR/Buna-N with PTFE coating		



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

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			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
114	147	66	D	9.8	500	8300	G $\frac{3}{4}$	15	1...15	R120-06J2
114	176	66	P					50	1...50	R120-06J5
114	147	66	D	9.8	500	8300	G1	15	1...15	R120-08J2
114	176	66	P					50	1...50	R120-08J5
180	242	109	P	11.8	840	14000	G1 $\frac{1}{2}$	50	1...50	R120-12J5
180	242	109	P	12.6	900	15000	G2	50	1...50	R120-16J5



R120-02J2



R120-04J5



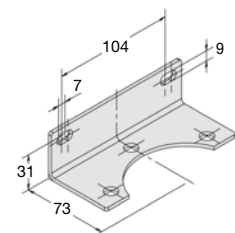
R120-06J2

## Special options, add the appropriate letter

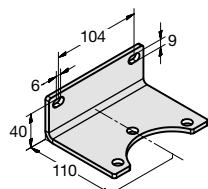
<b>diaphragm relieving</b>	for R120-02J2 up to R120-08J2		R120-...J.R
<b>piston relieving</b>	for R120-12J, R120-16J and R120-...J5		R120-...J.R
<b>down to -40 °C</b>	low temperature version		R120-...J.X51
<b>up to 130 °C</b>	high temperature version		R120-...J.X54
<b>EPDM elastomer</b>	not for G2		R120-...J.E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

## Accessories, enclosed

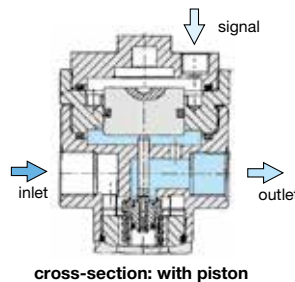
<b>pressure gauge</b>	Ø 50 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	<b>MA5002-..*2</b>
<b>pressure gauge</b>	Ø 63 mm, 0... <sup>*2</sup> bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G2	<b>MA6302-..*2</b>
<b>mouting bracket</b>	made of steel	for G $\frac{3}{4}$ and G1	<b>BW00-42</b>
		for G1 $\frac{1}{2}$ and G2	<b>BW00-68S</b>



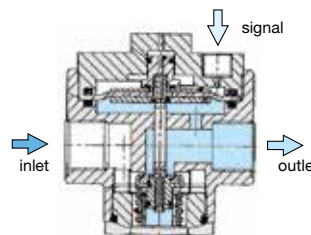
BW00-42



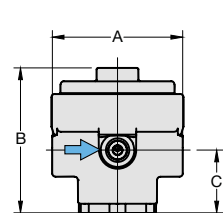
BW00-68S



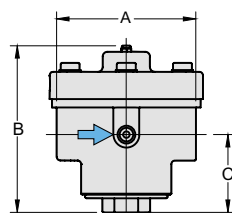
cross-section: with piston



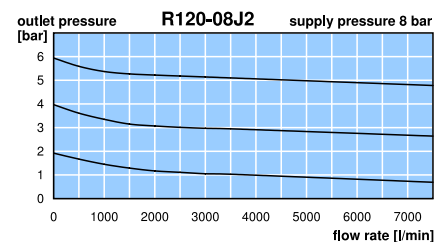
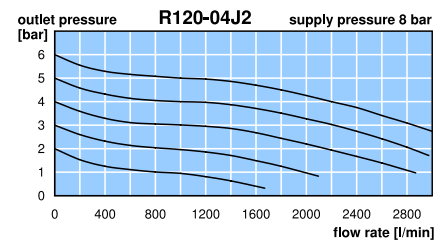
cross-section: with diaphragm



R120-02/-04J.



R120-06/-08/-12/-16J.



\*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

\* Product group



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

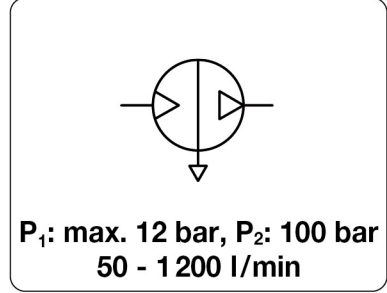
**Outlet pressure P<sub>2</sub>** amplified outlet or operating pressure of 20 bar to 100 bar maximum

**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

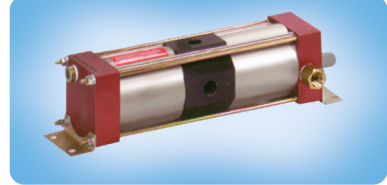
**Sound level** max. 79 dB (A)

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



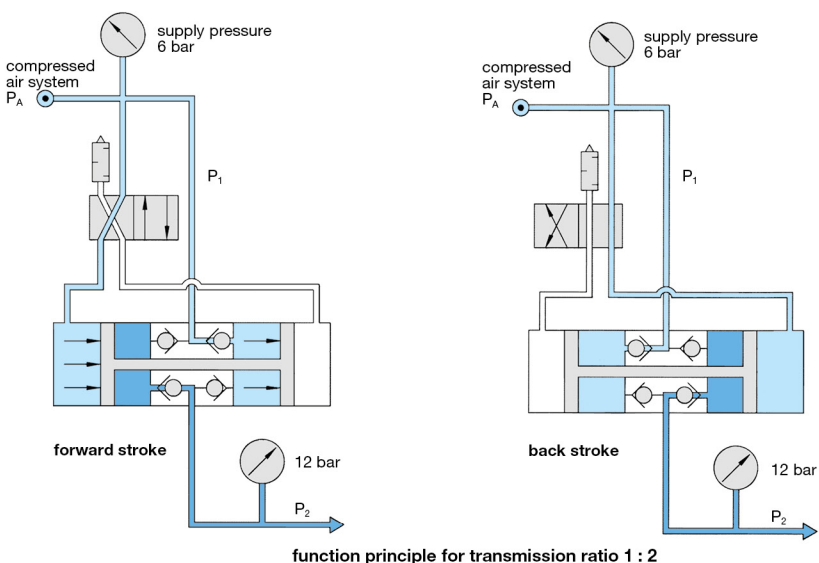
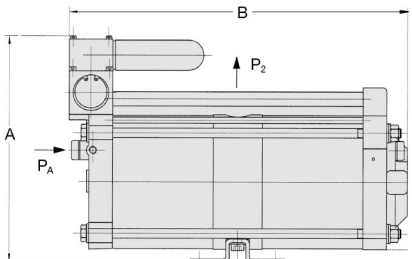
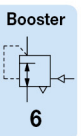
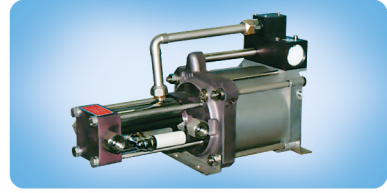
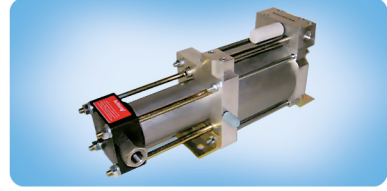
Dimensions			Weight kg	Connection thread G	Transmission ratio P <sub>A</sub> : P <sub>2</sub>	Flow rate l/min	P <sub>2</sub> max. bar	Order number
A	B	C						

Pressure booster / Air amplifier								supply pressure P <sub>1</sub> max. 12 bar, for compressed air	AM
								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 . . . . .



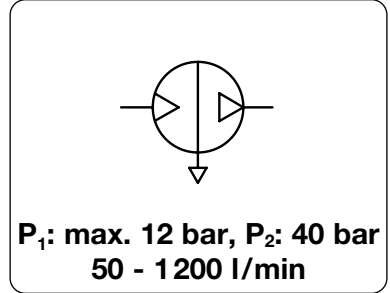
\*1 at 6 bar supply and 8 bar outlet pressure under full load  
\*2 at 8 bar supply and 20 bar outlet pressure under full load  
\*3 at 6 bar supply and 16 bar outlet pressure under full load  
\*4 at 8 bar supply and 30 bar outlet pressure under full load  
\*5 at 8 bar supply and 40 bar outlet pressure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



# AIR AMPLIFIER STATION WITH TANK

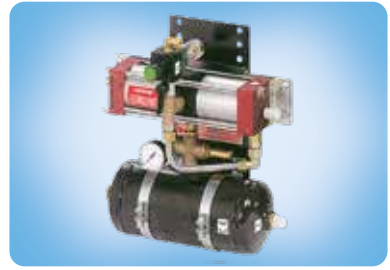
AP

<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



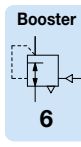
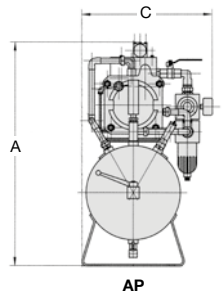
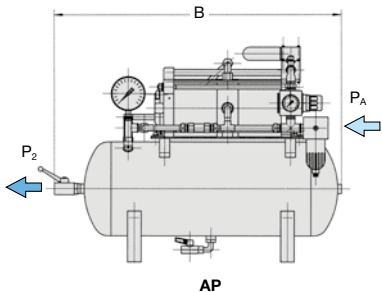
Dimensions			Weight	Tank	Connection	Transmission	Flow	P <sub>2</sub>	Order
A	B	C	kg	volume	thread	ratio	rate	max.	number
mm	mm	mm		l	drive	P <sub>1</sub> / P <sub>2</sub>	P <sub>A</sub> : P <sub>2</sub>	bar <sup>*5</sup>	

Air amplifier station				supply pressure P <sub>1</sub> max. 12 bar, for compressed air drive pressure P <sub>A</sub> 2...10 bar			AP			
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

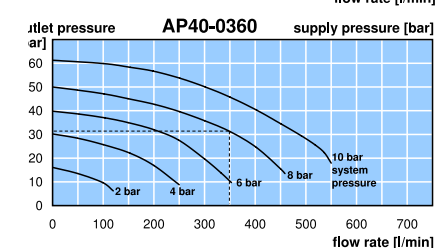
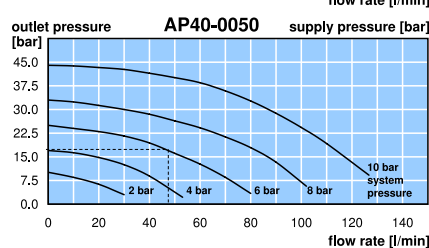
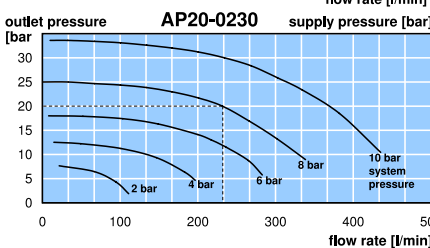
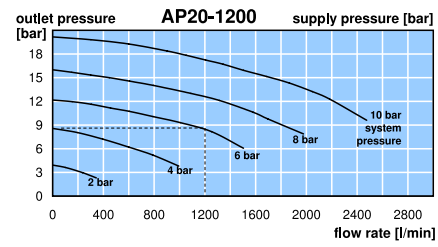
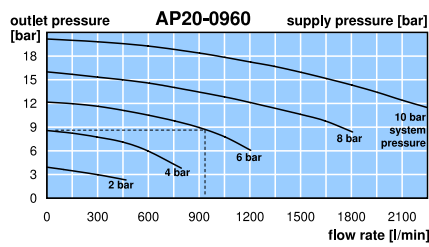
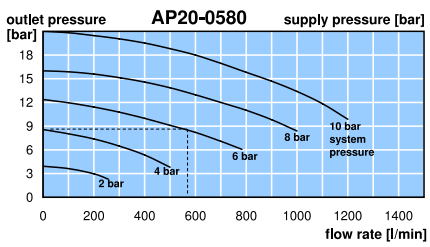


## Special options, add the appropriate letter

- 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 gasbis P<sub>2</sub> max. 1500 bar AP...6



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



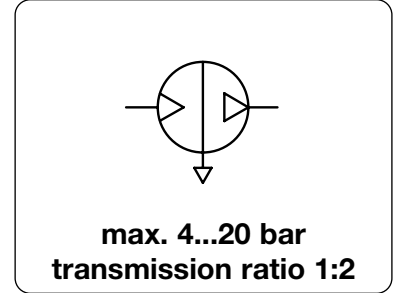
\*1 at 6 bar supply and 8 bar outlet pressure under full load  
 \*2 at 8 bar supply and 20 bar outlet pressure under full load  
 \*3 at 6 bar supply and 16 bar outlet pressure under full load  
 \*4 at 8 bar supply and 30 bar outlet pressure under full load  
 \*5 outlet pressure P<sub>2</sub> limited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

Calculation examples can be found in the appendix

PDF CAD  
www.aircom.net

\* Product group  
 Order example:  
 AP20-0580

<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 kg	Connection thread G	Transmission ratio P <sub>A</sub> : P <sub>2</sub>	Flow rate l/min*1	Fill time 10l-tank s	Pressure range bar	Order number
A mm	B mm	C mm							

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

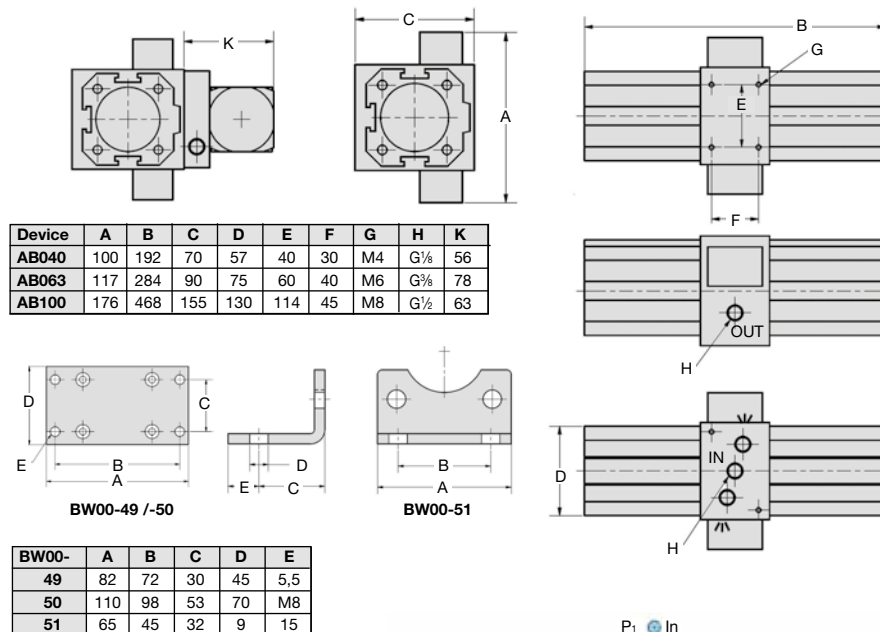
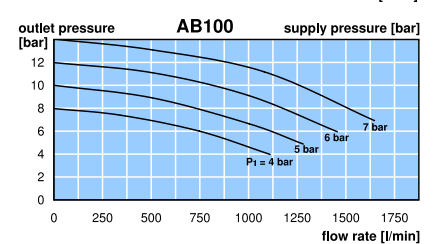
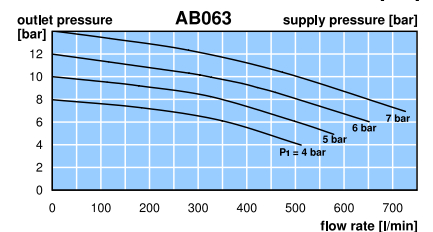
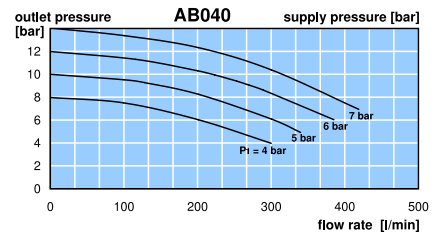
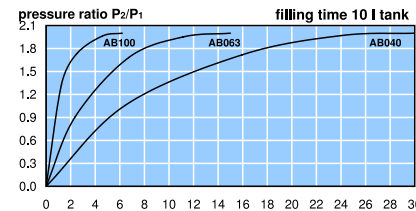
Pressure booster with regulator and gauge									
P <sub>1</sub> max. 8 bar, for compressed air									
<b>AB-D</b>									
100	192	126	1.5	G½	1 : 2	130	30	4...16	<b>AB040D</b>
117	284	168	3.0	G¾	1 : 2	260	15	4...16	<b>AB063D</b>
176	468	218	12	G½	1 : 2	440	6	4...16	<b>AB100D</b>



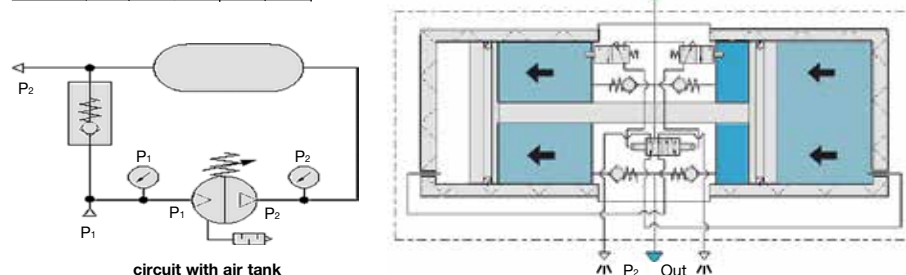
AB040D

## Accessories, enclosed

<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>



BW00-	A	B	C	D	E
<b>49</b>	82	72	30	45	5,5
<b>50</b>	110	98	53	70	M8
<b>51</b>	65	45	32	9	15



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

\* Product group

Pressure booster with 2 l to 20 l tank on request

PDF CAD  
www.aircom.net



Order example:  
AB040