

VACUUM PRESSURE REGULATOR

DESCRIPTION	PRESSURE RANGE	CONNECTION thread	SERIES	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

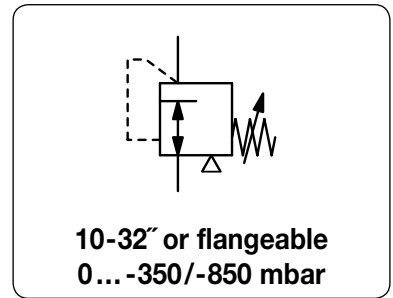


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MINIATURE VACUUM PRESSURE REGULATOR, MADE OF PLASTIC

V800 / V900

Description	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.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. -1000 mbar		
Accuracy	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	
Air consumption	0.3 l/min at -1000 mbar supply pressure		
Adjustment	by plastic knob, adjusting screw or preset		
Gauge port	not available		
Mounting position	any		
Temperature range	4 °C to 66 °C / 39 °F to 151 °F		
Material	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	V900-10WK V900-30WK
29	60	8	adjusting screw	22	V900-10WOS V900-30WOS
29	43	8	preset	22	V901-..

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

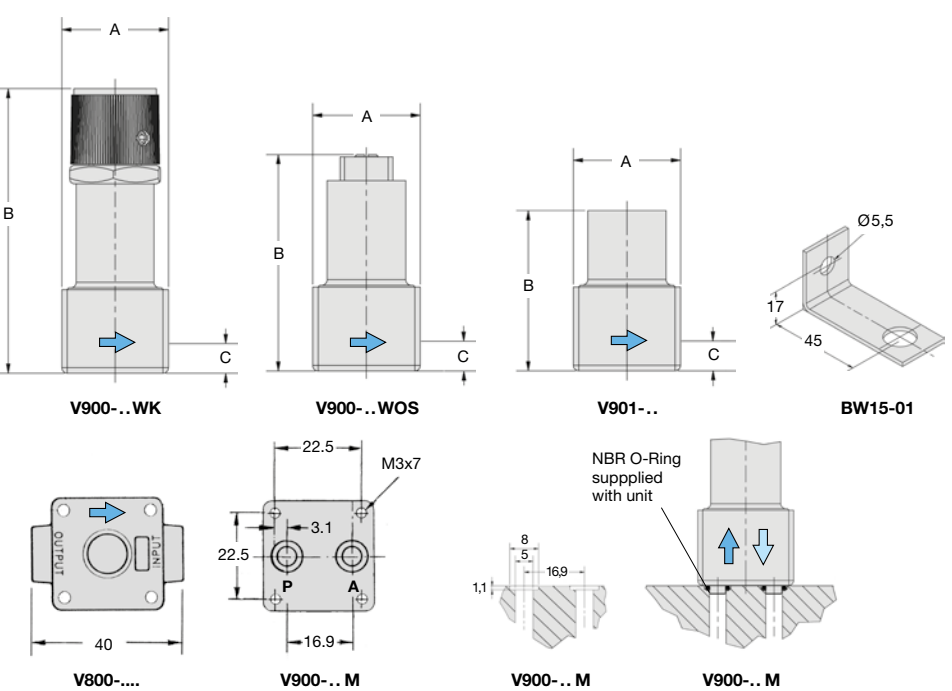
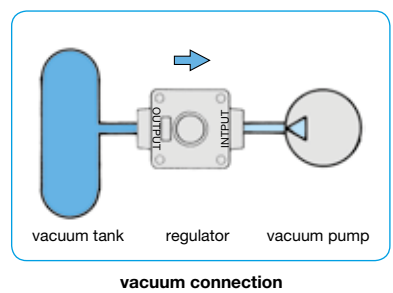


Special options, add the appropriate letter or number

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

Accessories, enclosed

mounting bracket made of steel BW15-01



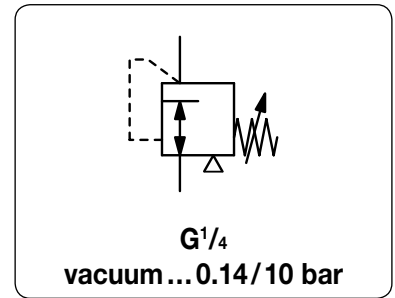
PDF CAD
www.aircom.net

Order example:
V900-10WK

PRECISION VACUUM PRESSURE REGULATOR 70 L/MIN

R250

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



Dimensions			K _v	Flow	Connection	Vacuum	Order
A	B	C	D	value	rate	range	number
mm	mm	mm	mm	m ³ /h	m ³ /h*1 l/min*1	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

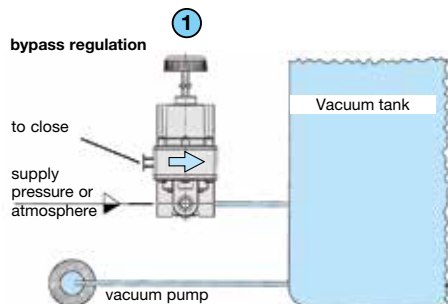
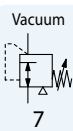
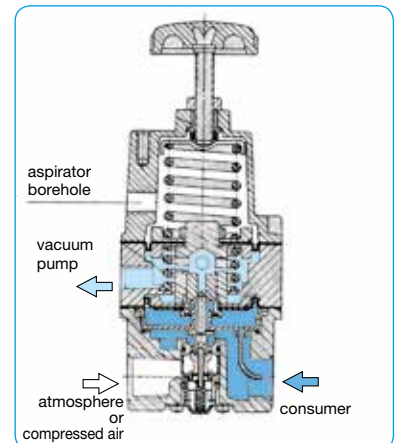
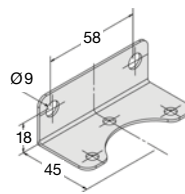
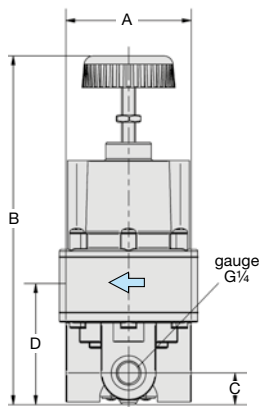
Special options, add the appropriate letter

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

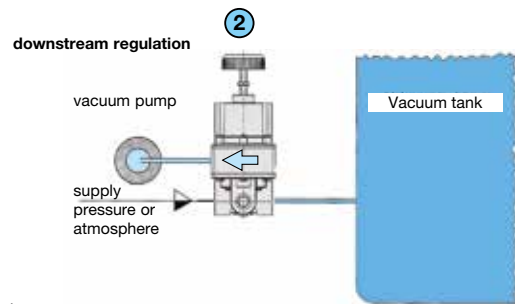


Accessories, enclosed

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



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.

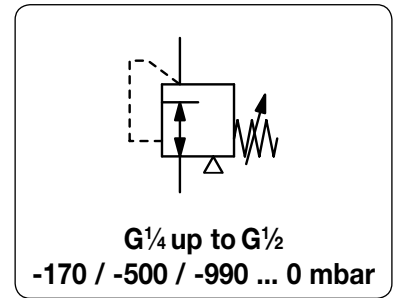
*1 for compressed air at -0.98 bar supply pressure and 0 bar outlet pressure
*2 for compressed air at 7 bar supply pressure and 1.4 bar outlet pressure

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

Order example:
R250-020

Description	High precision diaphragm vacuum regulator with high flow capacity. A balanced vacuum valve minimizes the effects of variation.
Media	compressed air or non-corrosive gases
Accuracy	response sensitivity: < 2 mbar
Adjustment	by handwheel with locknut
Gauge port	G $\frac{1}{4}$ 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, brass, aluminium and steel



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread G	Pressure range mbar	Order number
A	B	C		m ³ /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	



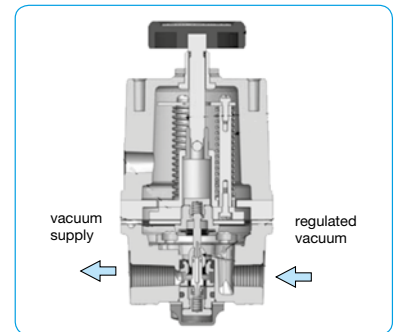
V170

Special options, add the appropriate letter

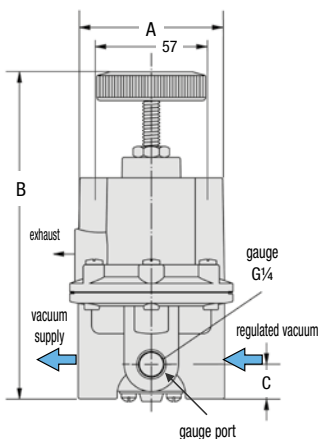
NPT	connection thread	V170-0 . . N
Verstellsicherung	made of aluminium, adjustment by screwdriver, total height 160 mm	V170-0 . . T
FKM-Elastomere		V170-0 . . V

Accessories, enclosed

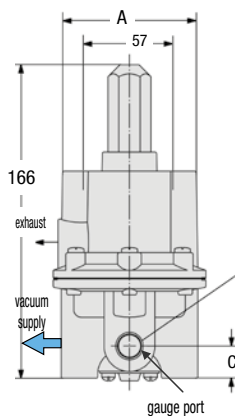
pressure gauge	Ø 63 mm, 0 bar down to -1bar, G $\frac{1}{4}$	MA6302-00
mounting bracket	made of steel	BW00-34



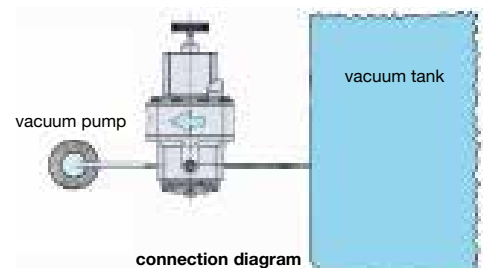
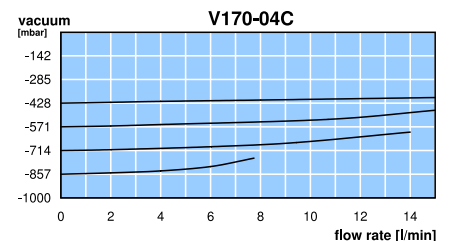
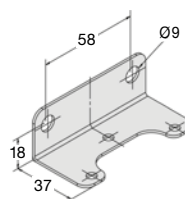
cross-section



V170



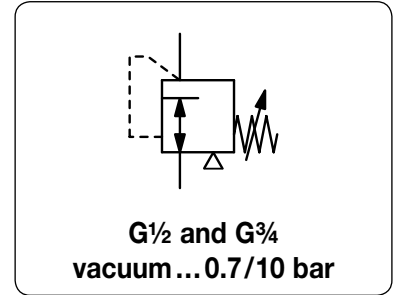
with tamper proof cap



PRECISION VACUUM PRESSURE REGULATOR 800 L/MIN

R251

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



Dimensions				K _v	Flow rate	Connection thread	Vacuum range	Order number
A	B	C	D	value	m ³ /h*1	l/min*1	G	
mm	mm	mm	mm	m ³ /h			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	



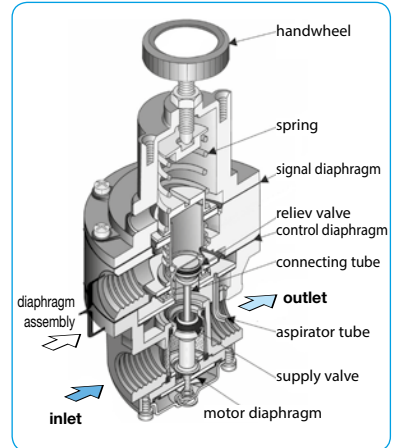
R251

Special options, add the appropriate letter

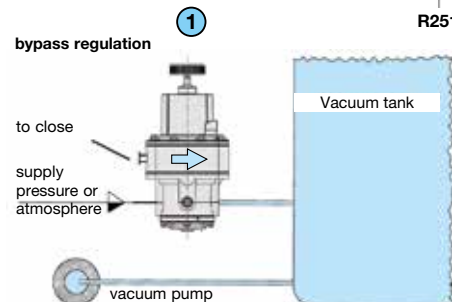
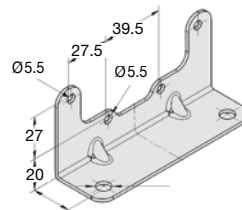
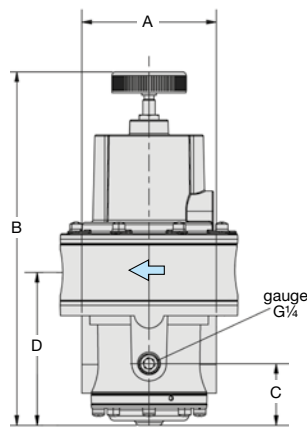
NPT	connection thread	R251-0 . . N
tamper-proof cap	made of aluminium, adjustment by screwdriver, total height 240 mm	R251-0 . . T
FKM elastomer		R251-0 . . V

Accessories, enclosed

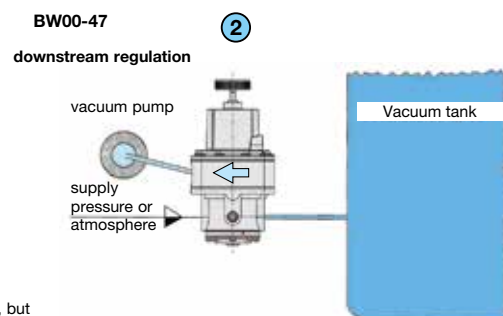
pressure gauge	Ø 63 mm, -1 ... 0 bar, G $\frac{1}{4}$	MA6302-00
mounting bracket	made of steel	BW00-47



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

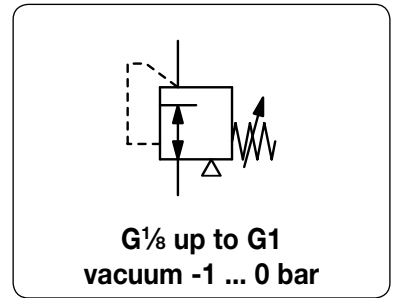
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Order example:
R251-04A

VACUUM ADJUSTMENT VALVES

V04 / V05

Description	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.	
Application	They are used as safety valves on non-commissioned tanks or containers at high vacuum level and on vacuum cup lifting systems.	
Media	compressed air or non-corrosive gases	
Adjustment	V04: by rotating the knurled bush in both directions V05: by knurled head screw or adjusting knob on spindle with fine thread	
Mounting position	any	
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F	
Material	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 ³ /h*1	l/min*1	G	bar	

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



V04-01 V04-04

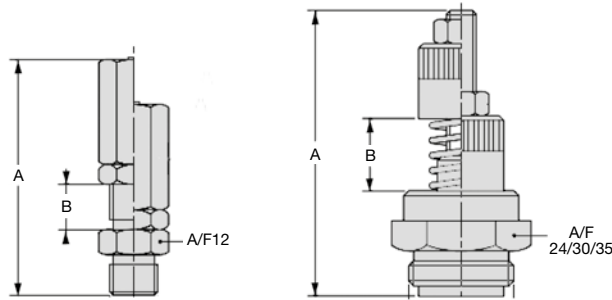
Vacuum adjustment valve, precise						Vacuum regulator with external leakage	V05
63	26	25	4	260	G ¹ / ₄	-1 ... 0	V05-02
82	52	32	20	700	G1	-1 ... 0	V05-08



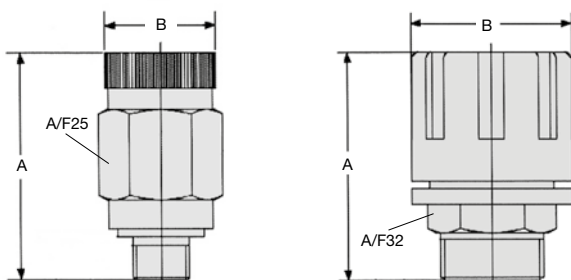
V04-06 V04-08



V05-02 V05-08



V04-01 V04-04 / -06 / -08



V05-02 V05-08

