



CATALOGUE 2021

PRESSURE & VOLUME FLOW

measuring & regulating, Air Treatment



MINIATURE PRESSURE REGULATOR

	DESCRIPTION		PRESSURE RANGE bar	CONNECTION thread	SERIES	PAGE
FACTORY-SET OUTLET PRESSURE	higher accuracy		2 / 3 / 4 / 6	G $\frac{1}{4}$ fm	233F	1.02
	without exhaust	17 x 25	2 / 3 / ... / 10	G $\frac{1}{4}$ fm	R13	1.03
	for compressed air	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	231	1.04
	for liquids	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	239A	1.05
	for drinking water	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	239K	9.03
	for oxygen	34 x 52	1 / 2 / ... / 8	G $\frac{1}{4}$	239M	1.05
	relieving		2 / 3 / ... / 8	G $\frac{1}{4}$ - G $\frac{3}{4}$	232	1.06
SLIM DESIGN	extremely small	19 x 40	0.2 ... 2 / 8	M5	RR-M5	1.07
	also with FKM and EPDM	18 x 65	0.2 ... 1.4 / 7	M5 / $\frac{1}{8}$ "NPT	MAR	www*
VERY ACCURATE	very lightweight		0.03 ... 0.24 / 6	$\frac{1}{8}$ "NPT	R800	1.08
	very lightweight		0.03 ... 0.24 / 6	10-32" and flange	R900	1.08
	modular		0.01 ... 0.7 / 7	flange	R6	1.09
	interlockable		0.01 ... 0.7 / 7	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, SS	R7	1.10
	FDA approved		0.1 ... 1 / 12	G $\frac{1}{8}$ and G $\frac{1}{4}$	R037	1.11
	plastic		0.1 ... 1 / 12	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.12
	inlet pressure compensated		0.1 ... 3 / 6	G $\frac{1}{8}$	R309	1.13
	up to 25 bar supply pressure		0.1 ... 3 / 16	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.13
	slim design		0 ... 0.35 / 7	M5 and flange	RT	www*
	inlet pressure compensated		0.2 ... 2 / 9	flange	R342	www*
	without constant bleed		0.2 ... 2 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	www*
	very accurate		0.05 ... 2 / 8	G $\frac{1}{8}$	RI	www*
	very accurate		0.05 ... 2 / 8	G $\frac{1}{8}$ and flange	R90	5.02
STANDARD	increased accuracy		0.1 ... 1 / 12	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.12
	also for water,	brass	0.1 ... 1 / 11	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364	1.14
	made of aluminium		0.1 ... 1 / 11	G $\frac{1}{8}$ and G $\frac{1}{4}$	R374	1.14
	even for oxygen		0.2 ... 2.5 / 8	G $\frac{1}{8}$	R307	1.15
	even for oxygen		0 ... 0.25 / 8	flange	R308	1.16
CARTRIDGE	up to 260 l/min		1 ... 8	G $\frac{1}{8}$ u. G $\frac{1}{4}$	RC	1.17



1

* visit our webshop: www.aircom.net

IN-LINE REGULATOR WITH FACTORY-SET OUTLET PRESSURE

R13



Description In-line pressure regulator with factory-set non-adjustable outlet pressure, reducing from e.g. 10 bar to 5 bar. The regulator R13 is suited for basic pressure control only with an outlet pressure tolerance of $\pm 30\%$. The outlet pressure stated below is valid for 15 bar inlet pressure. For other inlet pressure please refer to the according item from the diagram.

Benefits

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

Media compressed air or non-corrosive gases

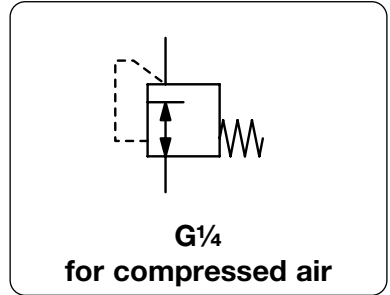
Supply pressure max. 15 bar

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

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

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

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



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

Basic accuracy regulator						P: max. 15 bar, non-relieving, outlet pressure accuracy $\pm 30\%$, made of brass	R13
17	34	17	300	15	G¼ fm	2	R13-02D
						3	R13-02E
						4	R13-02F
						5	R13-02G
						6	R13-02H
						7	R13-02I
						8	R13-02K
						10	R13-02M



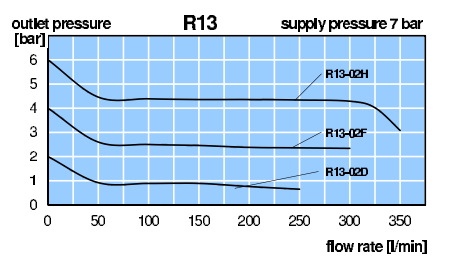
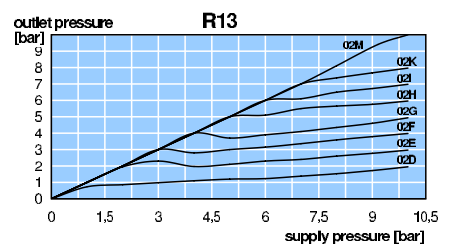
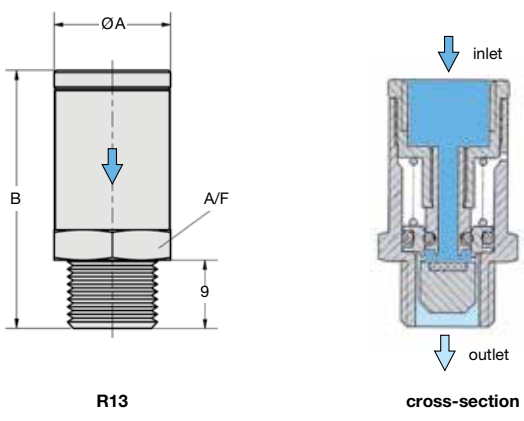
R13

Special options, add the appropriate letter

FKM elastomer R13-02 . V



R13



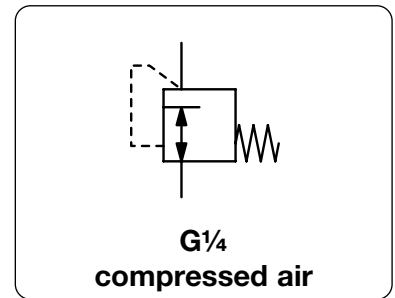
*1 at 7 bar supply pressure, 6 bar outlet pressure and 2 bar pressure drop

* Product group

PDF CAD
www.aircom.net

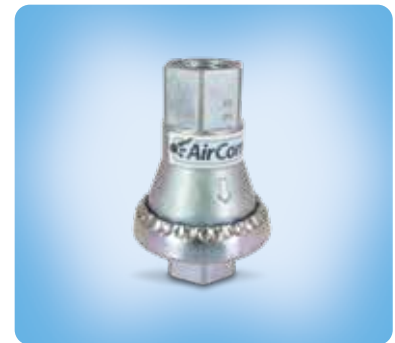
Order example:
R13-02D

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



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

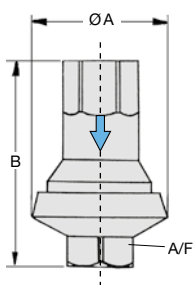
Regulator for air „SaveAir®“				P: max. 18 bar, non-relieving, accuracy *2, made of zinc	231		
34	52	17	400	18	G1/4	1	231A0210
			600			2	231A0220
			700			3	231A0230
			700			4	231A0240
			700			5	231A0250
			800			6	231A0260
			800			7	231A0270
			800			8	231A0280



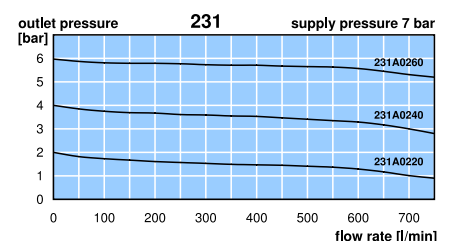
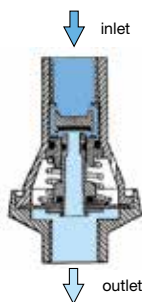
231

Special options, add the appropriate letter

NPT	connection thread	231A 1 2 . .
deviant pressure range	indicate on order	231A . 2XX



231

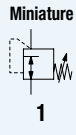


*1 $P_0 = 12 \text{ bar}$; $\Delta p = 0.5 \text{ bar}$

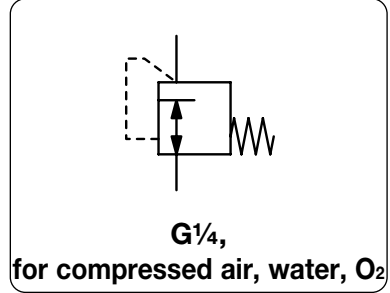
*2 Tolerance: $< 4 \text{ bar} \pm 0.3 \text{ bar}$ (air, $P_0 = 6 \text{ bar}$, 10 NI/min)
 $\geq 4 \text{ bar} \pm 10\%$ (air, $P_0 = 10 \text{ bar}$, 10 NI/min)

* Product group





General information	In-line pressure regulator with factory-set outlet pressure, reducing from e.g. 10 bar to 5 bar. The regulator is suited for basic pressure control only with an outlet pressure tolerance of approx. $\pm 10\%^{*2}$. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.
Description	239A: regulator for liquids, compressed air and non-corrosive gases 239M: medical industry and pharmaceuticals
Application	water, hydraulic and sprinkler systems, cooler, cleaning systems
Supply pressure	max. 10 bar for liquids or oxygen max. 18 bar for compressed air and non-corrosive gases
Temperature range	0 °C to 60 °C / 32 °F to 140 °F
Material	Body: nickel-plated brass Inner parts: brass Elastomer: NBR/Buna-N for 239A, FKM for 239M



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

Regulator for compr. air / water						made of brass, P _i : max. 18 bar / 10 bar, NBR/Buna-N, outlet pressure accuracy *2	239A	
34	52	17	10	400	18/10	G ¹ / ₄	1	239A0210
			10	600			2	239A0220
			10	700			3	239A0230
			10	700			4	239A0240
			10	700			5	239A0250
			10	800			6	239A0260
			10	800			7	239A0270
			10	800			8	239A0280



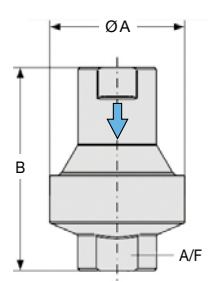
239A / 239M

Regulator for oxygen						made of brass, P _i : max. 10 bar, FKM, outlet pressure accuracy *2	239M	
34	52	17	-	400	10	G ¹ / ₄	1	239M0210
			-	600			2	239M0220
			-	700			3	239M0230
			-	700			4	239M0240
			-	700			5	239M0250
			-	800			6	239M0260
			-	800			7	239M0270
			-	800			8	239M0280

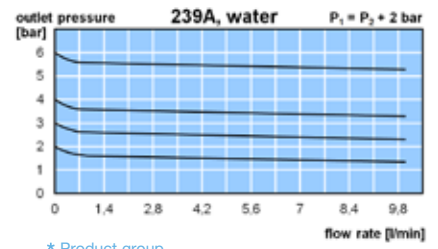
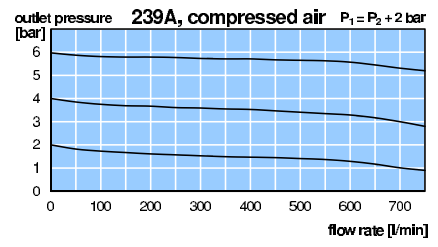
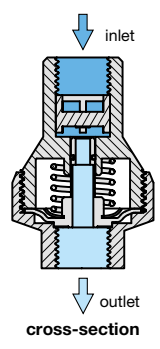
Special options, add the appropriate letter

NPT connection thread 239A1 . . .

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



239A / 239M



*1 P_i = 10 bar; Δp = 0.8 bar

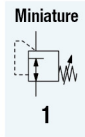
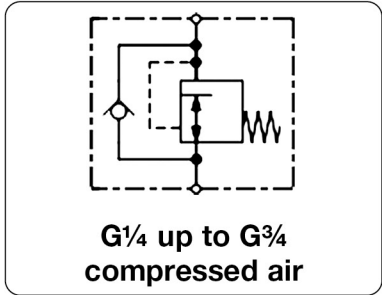
*2 Tolerance: < 4 bar ± 0.3 bar (air, P_e = 6 bar, 10 NI/min)
≥ 4 bar ± 10% (air, P_e = 10 bar, 10 NI/min)

* Product group

PDF CAD
www.aircom.net

Order example:
239A0210

Description	In-line pressure regulator with factory-set outlet pressure, reducing from e.g. 15 bar to 6 bar. With an outlet pressure tolerance of only ±10% ² it is especially suitable for nailing machines.
Benefits	<ul style="list-style-type: none"> • Higher safety through lower pressure. Tools and equipment protected against pressure damages. • Cost reduction through substantially reduced air consumption. Longer service life. • Noise reduction for tools.
Media	compressed air or non-corrosive gases
Supply pressure	max. 25 bar
Adjustment	Select the pressure regulator according to the desired outlet pressure. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.
Relieving function	relieving at removal of supply pressure
Temperature range	0 °C to 80 °C / 32 °F to 176 °F
Material	Body: aluminium Elastomer: NBR/Buna-N



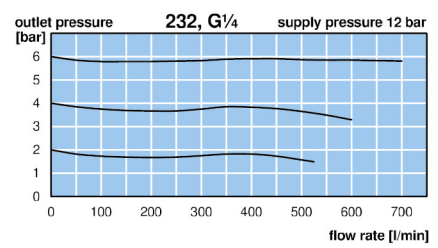
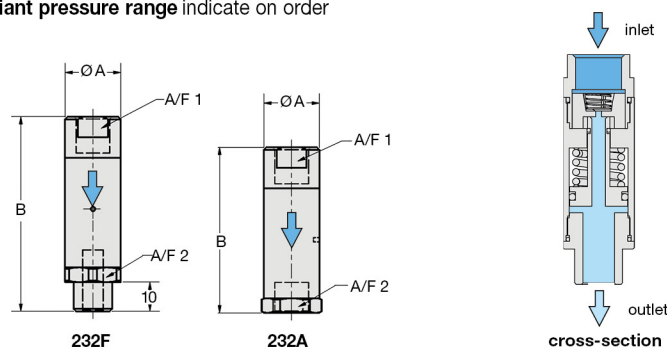
Dimensions				Flow rate	Supply pressure	Connection thread	Outlet pressure	Order number
ØA	B	A/F 1	A/F 2					
mm	mm	mm	mm	l/min*1	max. bar	G	bar*2	

Regulator with relieving function				P1: max. 25 bar, accuracy*2, aluminium		232		
19	69	16	19	500	25	G ¹ / ₄ ia	2	232F0220
							3	232F0230
							4	232F0240
							5	232F0250
							6	232F0260
							7	232F0270
							8	232F0280
							19	59
3	232A0230							
4	232A0240							
5	232A0250							
6	232A0260							
7	232A0270							
8	232A0280							
25	63	22	25	1400	25	G ³ / ₈		
							3	232A0330
							4	232A0340
							5	232A0350
							6	232A0360
							7	232A0370
							8	232A0380
							30	68
3	232A0430							
4	232A0440							
5	232A0450							
6	232A0460							
7	232A0470							
8	232A0480							
40	102	34	40	2500	25	G ³ / ₄		
							4	232A0540
							6	232A0560
							8	232A0580



Special options, add the appropriate letter

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



*1 P₀ = 12 bar; Δp = 0.5 bar
*2 Tolerance: < 4 bar ± 0.3 bar (air, P₀ = 6 bar, 10 Nl/min)
≥ 4 bar ± 10% (air, P₀ = 10 bar, 10 Nl/min)

* Product group

PDF CAD
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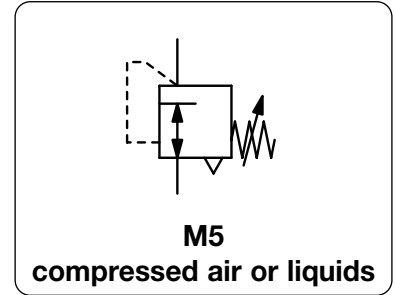
Order example:
232F0220

MICRO PRESSURE REGULATOR

RR-M5



Description	Highly compact piston-operated regulator, suitable for panel mounting and basic pressure regulation.
Media	compressed air, non-corrosive gases or liquids
Supply pressure	max. 6 bar at 0.2 ... 2 bar pressure range, max. 10 bar at 1 ... 8 bar pressure range
Adjustment	by knurled-head screw with locknut
Relieving function	relieving for air, non-relieving for water
Gauge port	not available
Mounting position	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: nickel-plated brass Elastomer: NBR/Buna-N Inner valve: stainless steel and brass



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

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



RR-M5

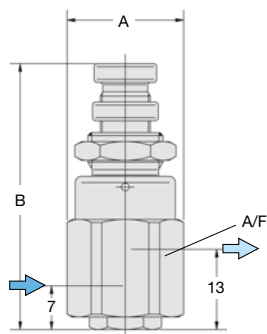
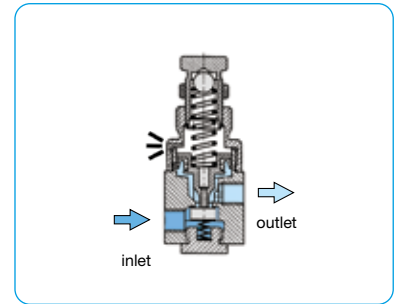
Pressure regulator for water				supply pressure max. 6 / 10 bar, non-relieving	RR-M5
19	40	17	1.2	6	RR-M5AK
17	40	17	1.2	10	RR-M5CK



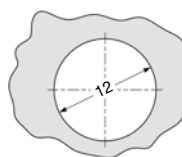
RR-M5

Special options, add the appropriate letter
for oxygen specially cleaned, with oxygen grease minimum purchase 50 pieces RR-M5 . . K15

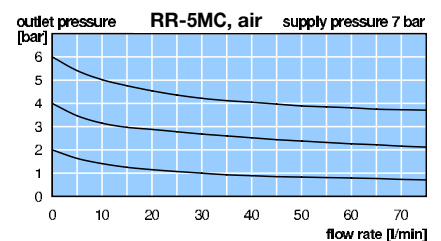
Accessories, enclosed
plastic panel nut M12x1K



RR-M5



panel cut-out



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

* Product group

PDF CAD
www.aircom.net

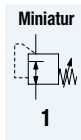
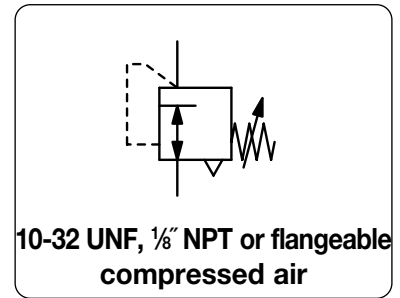


Order example:
RR-M5A

PLASTIC MINIATURE PRECISION PRESSURE REGULATOR

R800 / R900

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



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

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



R800-..WK mounting nut incl. R900-..WK mounting nut incl.

Special options, add the appropriate letter

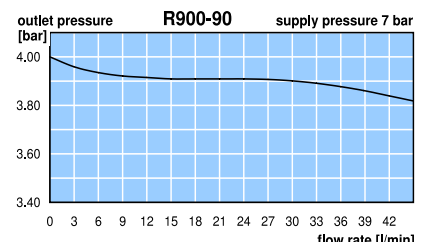
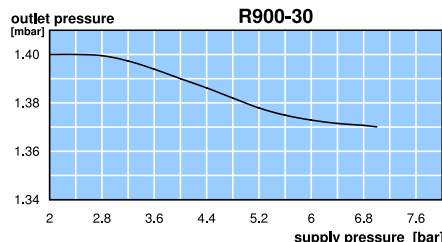
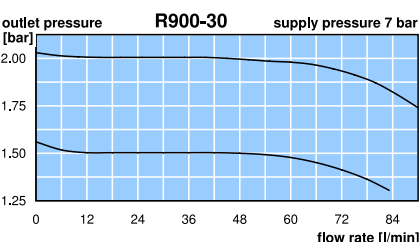
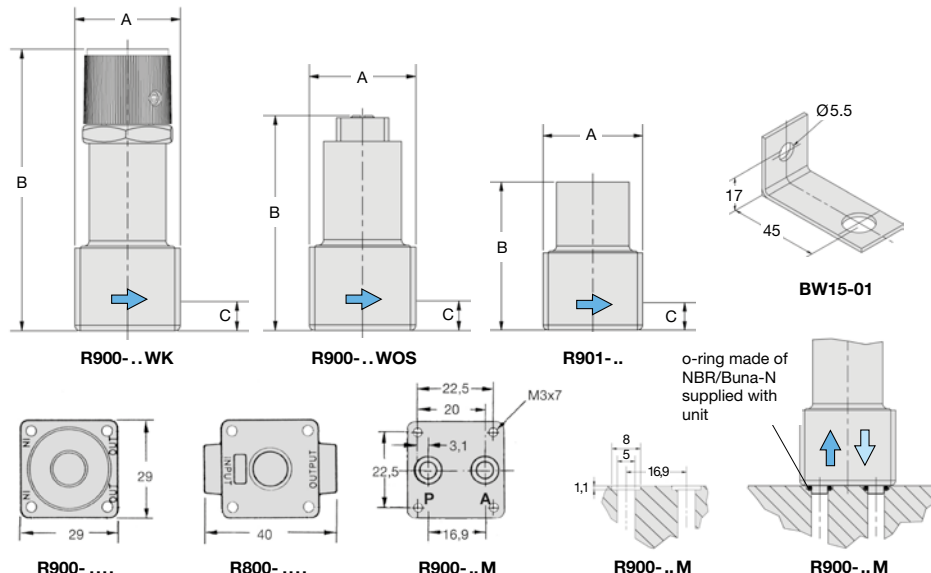
1/8" NPT	connection thread, width 40 mm	R8...W...
non-relieving	without constant bleed	R.1.....
for oxygen	specially cleaned	R.....15



R910-..WOS mounting nut incl.

Accessories, enclosed

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



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

* Product group

PDF CAD
www.aircom.net

Order example:
R900-3,5MWK

MODULAR MINIATURE PRESSURE REGULATOR „AIRLOGIC“

R6 / RP / M5000



Description

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

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

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

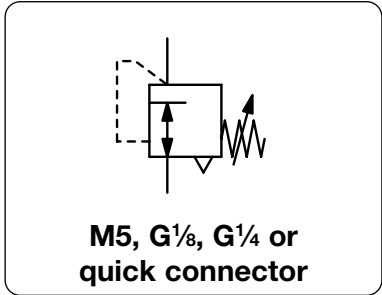
Top cover

Connector slide

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

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

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



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

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



R6

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



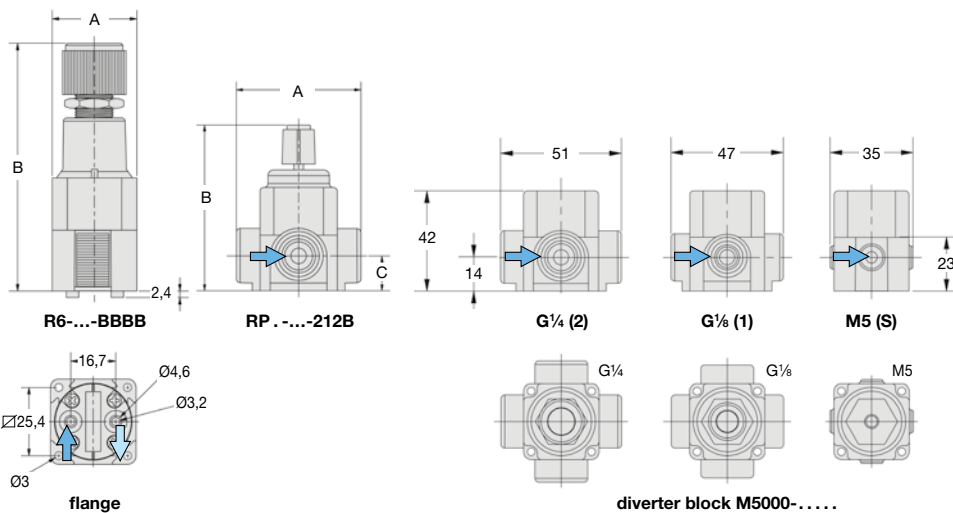
RP7 for socket wrench

RP6 with flange

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

Special options and accessories

see adjoining page



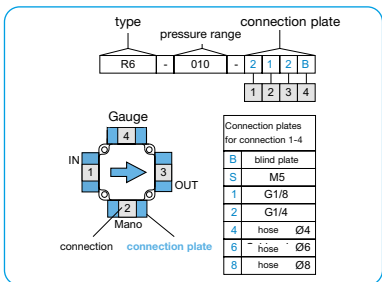
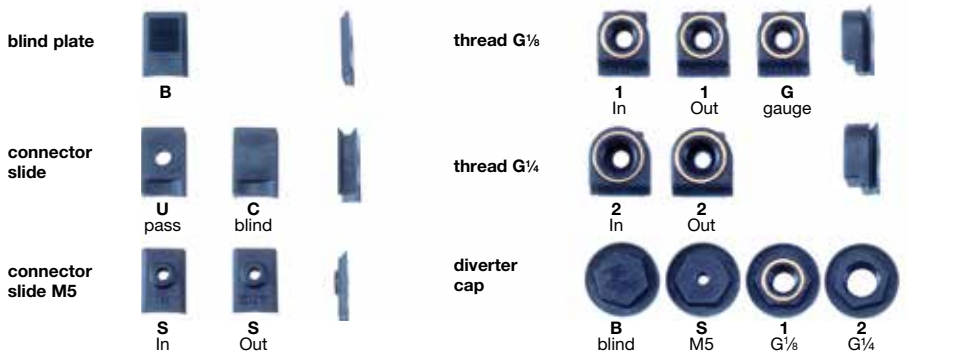
M5000-SBSBS

M5000-1S1SB



M5000-11111, G $\frac{1}{8}$

M5000-22222, G $\frac{1}{4}$

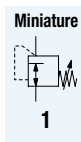
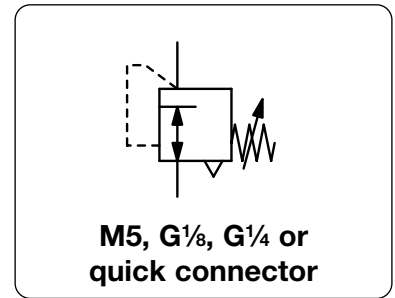


*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

*2 indicate preset pressure on order

* Product group

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



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

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



R7-...-1B1B, G $\frac{1}{8}$



R7-...-2B2BS, G $\frac{1}{4}$

Special options, add the appropriate letter or number

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



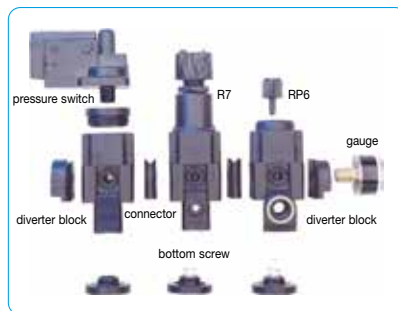
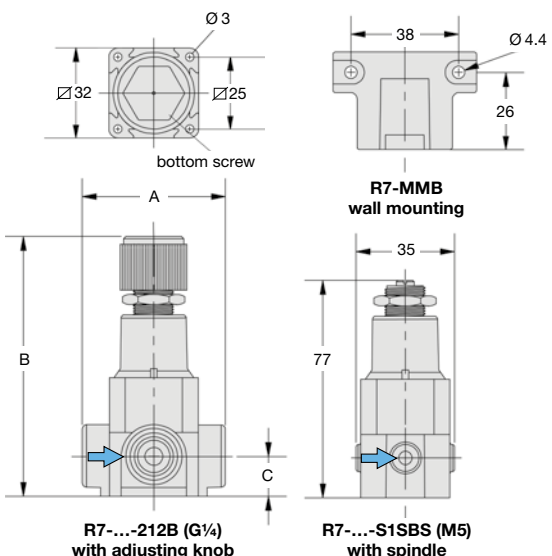
R7-...-SBSBS with spindle, M5 R7-...-4B4B w/ quick connector \varnothing 4

Accessories, enclosed

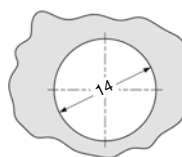
pressure gauge	\varnothing 23 mm, 0...*2 bar, G $\frac{1}{8}$	MA2301-...*2
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example for assembly



example for assembly



panel cut-out

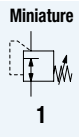
*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

* Product group

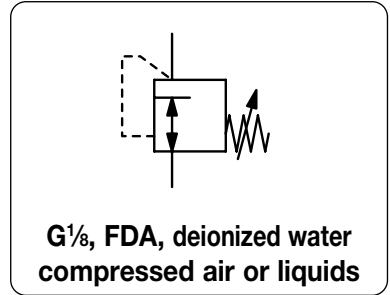


MINIATURE PRESSURE REGULATOR WITH FDA APPROVAL

R037



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



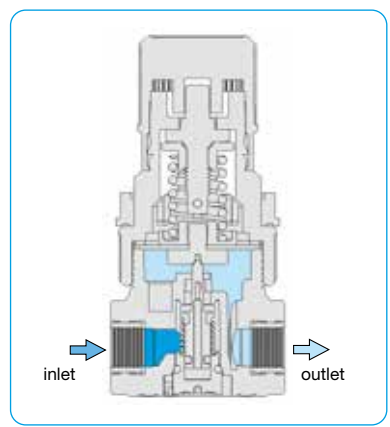
Dimensions			Flow rate		Connection	Pressure	Order
A	B	C	water	air	thread	range	number
mm	mm	mm	l/min*1	l/min	G	bar	

Pressure regulator w. FDA approval							supply pressure max. 16 bar, non-relieving EPDM, with inlet pressure compensation	R037
41	86	11	5	350	G ¹ / ₈	0,1 ... 1	R037-010K	
						0,1 ... 2	R037-01AK	
						0,2 ... 4	R037-01BK	
						0,3 ... 8	R037-01CK	
						0,4 ... 12	R037-01DK	
41	86	11	5	380	G ¹ / ₄	0,1 ... 1	R037-020K	
						0,1 ... 2	R037-02AK	
						0,2 ... 4	R037-02BK	
						0,3 ... 8	R037-02CK	
						0,4 ... 12	R037-02DK	



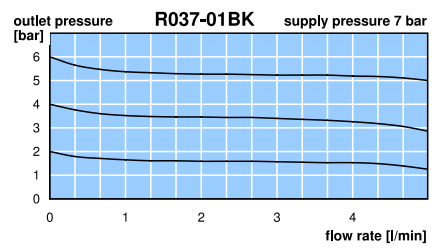
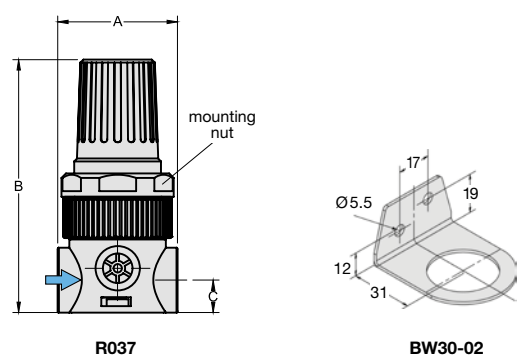
R037

Special options, add the appropriate letter or number
for oxygen specially cleaned, with oxygen grease R037-0...K15



cross-section

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



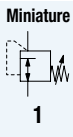
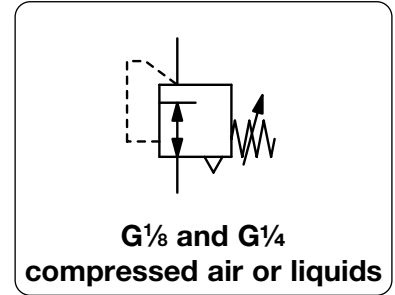
*1 supply pressure 1 bar above outlet pressure

* Product group

PRECISION PRESSURE REGULATOR MADE OF PLASTIC

R039

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



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

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



R039

Precision pressure regulator							with air consumption, P _i : max. 16 bar, w. rolling diaphragm, inlet pressure-compensated		R039-F
41	86	11	5	350	G $\frac{1}{8}$	0.1 ... 1		R039-010F	R039-010F
						0.2 ... 2		R039-01AF	R039-01AF
						0.2 ... 4		R039-01BF	R039-01BF
						0.3 ... 8		R039-01CF	R039-01CF
						0.3 ... 12		R039-01DF	R039-01DF
41	86	11	5	380	G $\frac{1}{4}$	0.1 ... 1		R039-020F	R039-020F
						0.2 ... 2		R039-02AF	R039-02AF
						0.2 ... 4		R039-02BF	R039-02BF
						0.3 ... 8		R039-02CF	R039-02CF
						0.3 ... 12		R039-02DF	R039-02DF

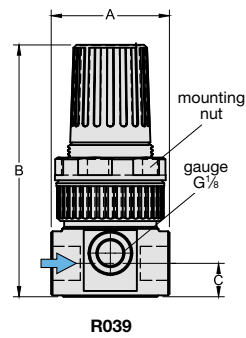


R039-K

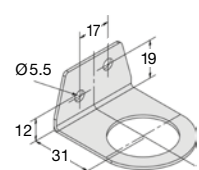
Special options, add the appropriate letter			
adjustment lock	non-adjustable knob		R039-0 . . T
without gauge port			R039-0 . . X02
for oxygen	especially cleaned, with oxygen grease	not for R039-0..F	R039-0 . . K15

Accessories, enclosed

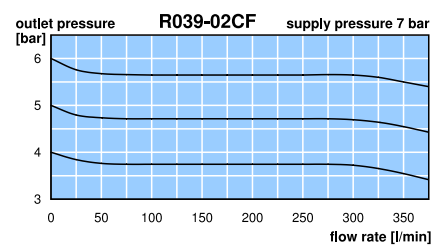
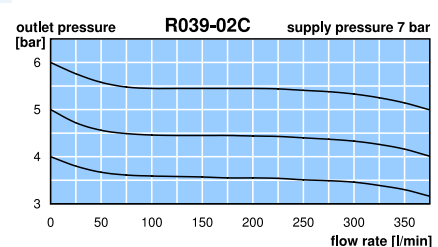
pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	MA4001- . . *2
mounting bracket	made of steel	BW30-02
mounting nut	made of plastic	M30x1,5K
	made of aluminium	M30x1,5A



R039

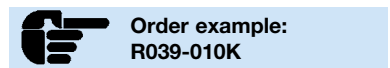


BW30-02



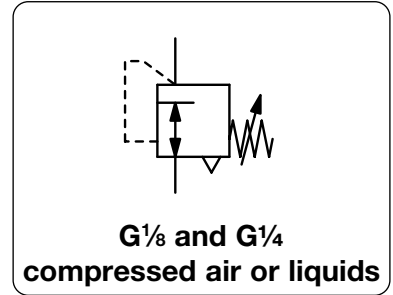
*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop, for water: supply pressure 2 bar above outlet pressure
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

* Product group





Description	Diaphragm pressure regulator made of brass without constant bleed.		
Media	compressed air, non-corrosive gases or liquids		
Supply pressure	max. 25 bar, max. 14 bar for the oxygen version		
Adjustment	by plastic knob with snap-lock		
Relieving function	relieving, optionally non-relieving		
Gauge port	G $\frac{1}{8}$ on both sides of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C to 60 °C / 32 °F to 140 °F for NBR / Buna-N 0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM for appropriately conditioned compressed air down to -30 °C / -22 °F		
Material	Body: brass	Elastomer: NBR/Buna-N, optionally FKM or EPDM, e.g. for brake fluid	Inner valve: stainless steel and brass
	Spring cage: POM		



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

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

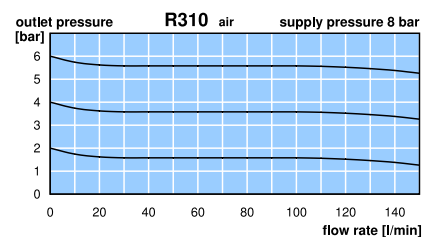
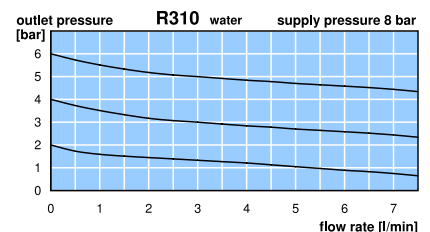
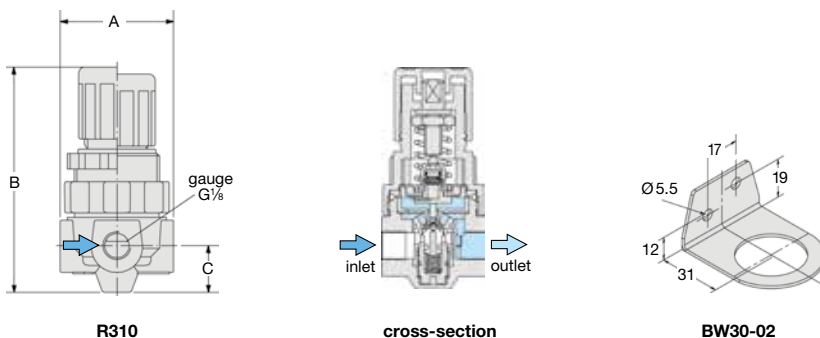


Special options, add the appropriate letter or number

non-relieving	without relieving function	R310-0. . K
for oxygen	specially cleaned, P $_1$: max. 14 bar, P $_2$: max. 10 bar	R310-0. . K15
FKM elastomer		R310-0. . V
EPDM elastomer	non-relieving, e.g. for brake fluid	R310-0. . KE

Accessories, enclosed

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



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

* Product group

Gauges: see chapter for measuring devices

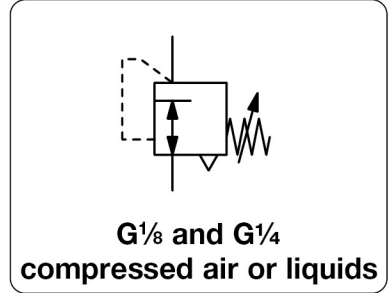
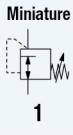
PDF CAD
www.aircom.net

Order example:
R310-01B

MINIATURE PRESSURE REGULATOR

R364 / R374

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



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

Brass pressure regulator			Flow rate		Connection	Pressure	Order
A	B	C	rate		thread	range	number
mm	mm	mm	m ³ /h*1 l/min*1		G	bar	A*
supply pressure max. 21 bar, relieving							
35	76	12	27	450	G $\frac{1}{8}$	0.1...1.0	R364-010
						0.2...1.8	R364-01A
						0.2...4.0	R364-01B
						0.3...9.0	R364-01C
						0.5... 11	R364-01D
35	76	12	27	450	G $\frac{1}{4}$	0.1...1.0	R364-020
						0.2...1.8	R364-02A
						0.2...4.0	R364-02B
						0.3...9.0	R364-02C
						0.5... 11	R364-02D



R364 made of brass

Aluminium pressure regulator			Flow rate		Connection	Pressure	Order
A	B	C	rate		thread	range	number
mm	mm	mm	m ³ /h*1 l/min*1		G	bar	A*
supply pressure max. 21 bar, relieving							
35	76	12	27	450	G $\frac{1}{8}$	0.1...1.0	R374-010
						0.2...1.8	R374-01A
						0.2...4.0	R374-01B
						0.3...9.0	R374-01C
						0.5... 11	R374-01D
35	76	12	27	450	G $\frac{1}{4}$	0.1...1.0	R374-020
						0.2...1.8	R374-02A
						0.2...4.0	R374-02B
						0.3...9.0	R374-02C
						0.5... 11	R374-02D



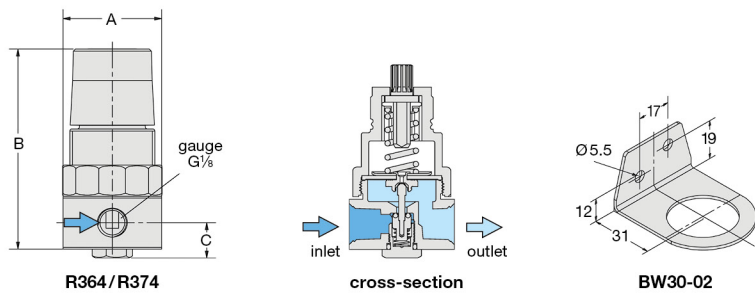
R374 made of aluminium

Special options, add the appropriate letter		
NPT	connection thread	R3.4-0...N
non-relieving	without relieving function	R3.4-0...K
adjustment lock	socket wrench adjustment, height 64 mm	R3.4-0...T
free of grease and oil	specially cleaned, suitable for oxygen	R3.4-0...L
FKM elastomer	inner parts made of brass	R3.4-0...X64
	inner parts made of stainless steel	R3.4-0...X08

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



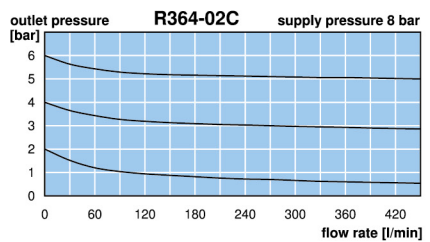
R364-02CT with adjustment lock R364-02CX82 brass throughout



R364/R374

cross-section

BW30-02



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

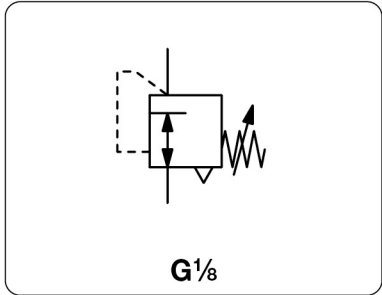
* Product group

MINIATURE PRECISION PRESSURE REGULATOR ∇ 30 MM

R307



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



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

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

Special options, add the appropriate letter

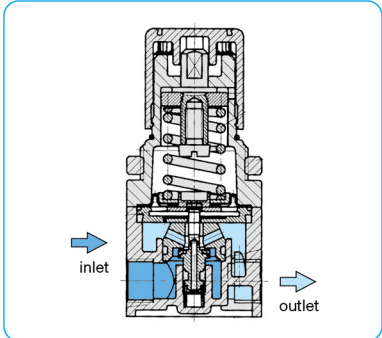
non-relieving	without relieving function	R307-01 . K
for oxygen	specially cleaned, with oxygen grease	R307-01 . K15



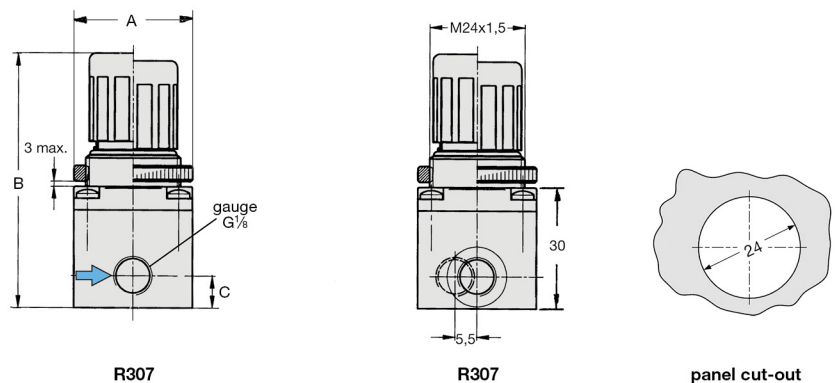
R307

Accessories, enclosed

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



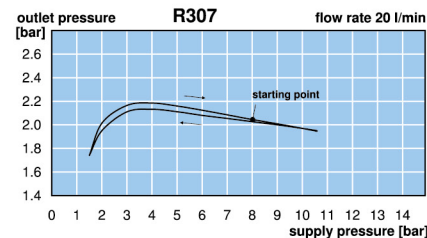
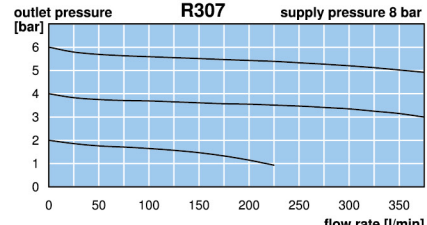
cross-section



R307

R307

panel cut-out



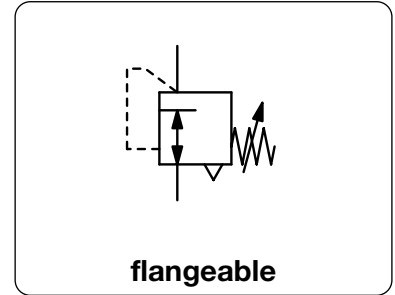
*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*2 04 = 0...4 bar, 10 = 0...10 bar

* Product group

MINIATURE PRECISION PRESSURE REGULATOR ∇ 30 MM, WITH FLANGE

R308

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



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

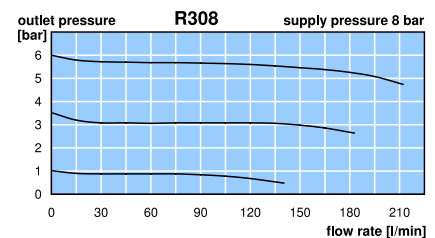
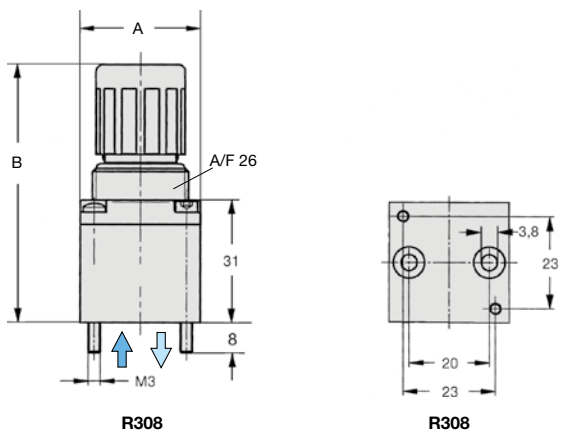
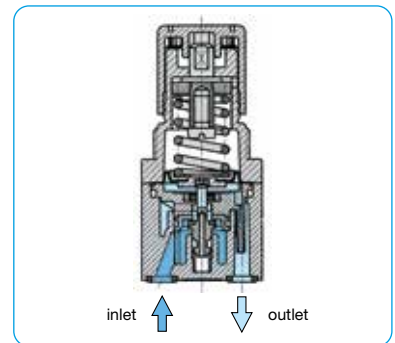
Precision regulator with flange	supply pressure max. 10 bar, relieving, without constant bleed	R308				
30	64	200	10	flange	0 ... 0.25	R308-P00
					0.2 ... 2.5	R308-P0B
					0.2 ... 3.5	R308-P0C
					0.2 ... 8.0	R308-P0D



R308 flangeable

Special options, add the appropriate letter

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



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

* Product group

PDF CAD
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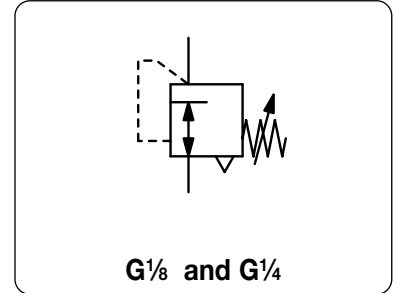
Order example
R308-P00

CARTRIDGE PRESSURE REGULATOR

RC



Description	Piston-operated cartridge pressure regulator suitable for assembly block.
Media	compressed air filtered to 50 µm, lubricated or unlubricated
Supply pressure	max. 10 bar
Adjustment	by knurled-head screw with locknut
Relieving function	relieving
Gauge port	not available
Mounting position	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: nickel-plated brass Elastomer: NBR/Buna-N

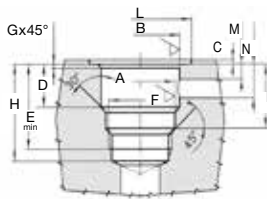


Dimensions				Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C	A/F	l/min*1	max. bar	G	bar	

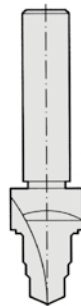
Cartridge regulator					supply pressure max. 10 bar, relieving, without constant bleed	RC
15	57	15	14	150	10	G ¹ / ₈ 1... 8 bar RC-01C
19	63	18	17	260	10	G ¹ / ₄ 1... 8 bar RC-02C



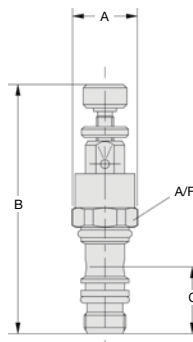
Step drill for cartridge seat				RCS
16	-	-	-	G ¹ / ₈ RCS-01
20	-	-	-	G ¹ / ₄ RCS-02



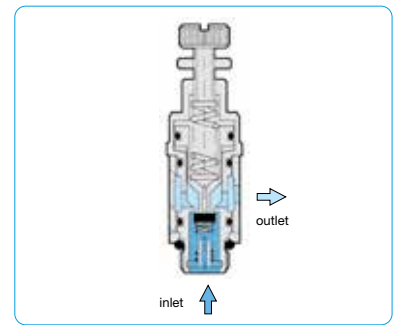
drilled hole



RCS

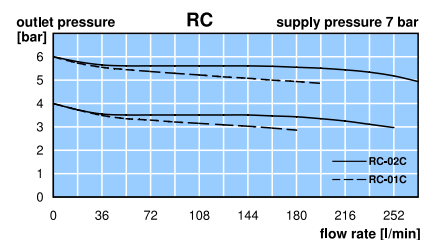


RC



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

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



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

* Product group

PDF CAD
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Order example:
RC-01C

STANDARD PRESSURE REGULATORS

DESCRIPTION	SUPPLY PRESSURE	PRESSURE RANGE	CONNECTION	SERIES	PAGE
	max. bar	bar	thread		
„Maxi“-Series, robust, interlockable	21	0.2 ... 1.8 / 17	G¼ - G1	R20, R21	2.02
made of plastic, also for liquids	12,5	0 ... 4 / 12	G½ - G1	R035 ... R095	2.03
extremely robust, high flow rate	21	0.2 ... 1.8 / 17	G¼ - G3	R119	2.04
Series „D“, made of aluminium	30	0.2 ... 1.5 / 15	G½ - G2	RD1 ... RD4	2.06
with joint supply	16	0.1 ... 3 / 16	G½ - G½	RB	2.08
lockable pressure regulator	16	0.1 ... 3 / 16	G½ and G1	RS	2.09
270° adjustment dial pressure regulator	21	0 ... 3 / 11	G¼ - G2	R11 ... R41	2.10



2

Standard

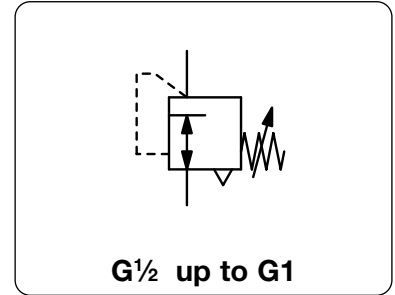


2

"MAXI" PRESSURE REGULATOR

R20/R21

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



Standard

2

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

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

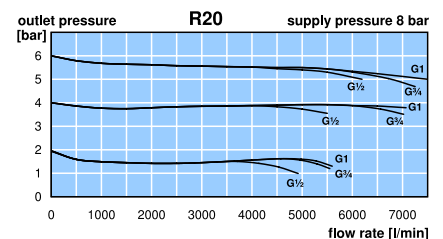
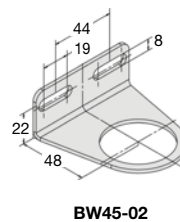
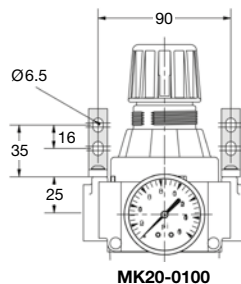
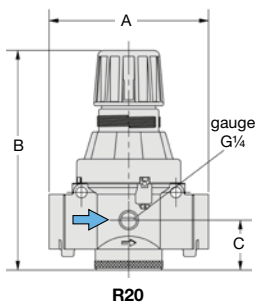


Special options, add the appropriate letter

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

Accessories, enclosed

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



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

* Product group

Gauges: see chapter for measuring devices

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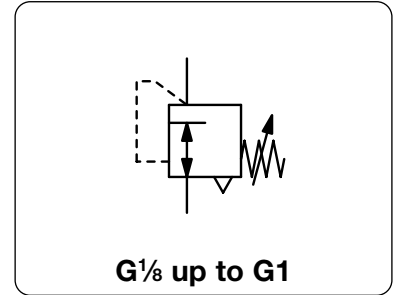


Order example:
R20-04A

PLASTIC PRESSURE REGULATOR

R035 ... R095

Description	Modular regulator, easy to interlock with other regulators, filters or filter regulators of the same series, without the need for double nipples or any other fittings. A sensitive rolling diaphragm allows good pressure regulation.	
Media	compressed air, non-corrosive gases or liquids	
Supply pressure	max. 12.5 bar, max. 10 bar for R035, max. 16 bar bei R042	
Adjustment	by plastic knob with snap-lock, R035 without snap-lock	
Relieving function	relieving, optionally non-relieving	
Gauge port	G $\frac{1}{8}$ on both sides of the body (G $\frac{1}{4}$ at R095), one screw plug supplied	
Mounting position	any	
Temperature range	0 °C to 50 °C / 32 °F to 177 °F	
Material	Body: nylon, Elastomer: NBR/Buna-N Inner valve: brass Thread insert: brass	POM at R035 and R042



Standard



2

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

Pressure regulator								
36	61	12	0.11	15	250	G $\frac{1}{8}$	0... 6	R035-01B R035-01RB
42	102	20	0.36	51	850	G $\frac{1}{4}$	0... 4 0... 8 0... 12	R042-02B R042-02C R042-02D
52	129	38	0.59	84	1400	G $\frac{3}{8}$	0... 4 0... 8 0... 12	R050-03B R050-03C R050-03D
52	129	38	0.63	90	1500	G $\frac{1}{2}$	0... 4 0... 8 0... 12	R052-04B R052-04C R052-04D
63	145	42	1.0	138	2300	G $\frac{1}{2}$	0... 4 0... 8 0... 12	R075-04B R075-04C R075-04D
137	145	42	1.0	144	2400	G $\frac{3}{4}$	0... 4 0... 8 0... 12	R080-06B R080-06C R080-06D
115	222	48	6.3	900	15000	G1	0... 4 0... 8 0... 12	R095-08B R095-08C R095-08D

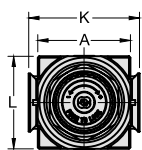
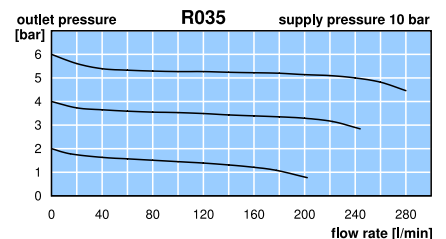
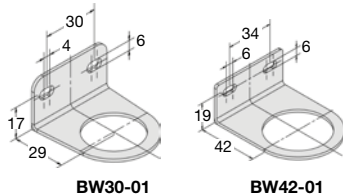
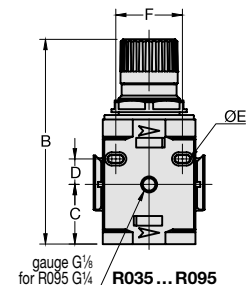


Special options, add the appropriate letter

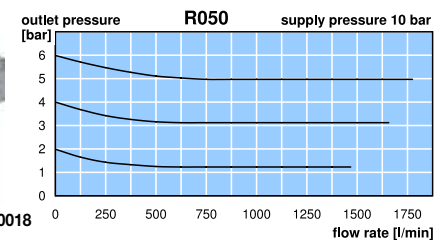
non-relieving without relieving function, also for liquids R0..-0...K

Accessories, enclosed

pressure gauge	Ø 23 mm, 0... ^{*2} bar, G $\frac{1}{8}$, max. 12 bar Ø 40 mm, 0... ^{*2} bar, G $\frac{1}{4}$ Ø 50 mm, 0... ^{*2} bar, G $\frac{1}{2}$ Ø 63 mm, 0... ^{*2} bar, G $\frac{3}{4}$	for R035 for R042 for R050 to R080 for R095	MA2301-...^{*2} MA4001-...^{*2} MA5001-...^{*2} MA6302-...^{*2}
mounting bracket	made of steel, mounting nut at the device	for R042 for R050 to R080	BW30-01 BW42-01
set of brackets	made of steel	for R095	BW00-02
connection clips		for R035	C350100018



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



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

* Product group

Accessories and mounting brackets: see chapter for FRL service units
Gauges: see chapter for measuring devices

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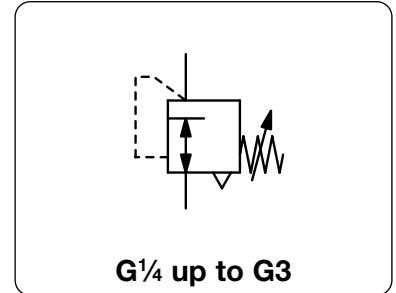


Order example:
R035-01B

„STANDARD“ PRESSURE REGULATOR

R119

Description	High-capacity diaphragm regulator of solid design suitable for many applications. Ideal for installations where constant line pressure at wide flow variations. From size G2 on it is a pilot-operated piston regulator with an excellent regulation characteristic curve.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 21 bar, max. 16 bar by R119-16B/-20B/-24B	
Air consumption	from size G2 on the regulator's air consumption is about 0.1 l/min.	
Adjustment	by T-handle with locknut from size G2 on by plastic knob with snap-lock on the pilot regulator for G½ optionally by handwheel, for control panel integration	
Relieving function	relieving, optionally non-relieving	
Gauge port	G¼ on both sides of the body, screw plugs supplied	Mounting position any
Temperature range	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
Material	Body: zinc die-cast Diaphragm: NBR/Buna-N	Inner valve: brass Bottom screw: reinforced nylon

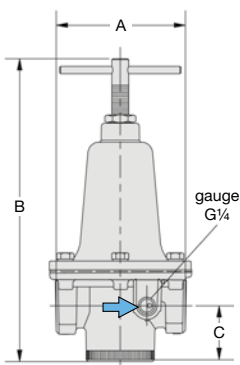


Standard

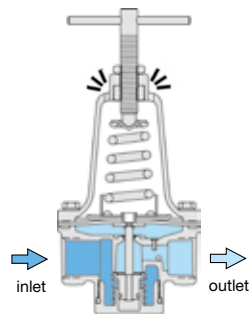
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Dimensions			K _v -value (m³/h)	Flow rate		Connection thread G	Pressure range bar	Order number
A	B	C		m³/h*1	l/min*1			

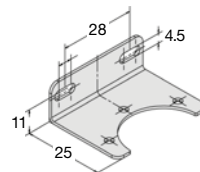
„Standard“ pressure regulator							supply pressure max. 21 bar, relieving, without pressure gauge		R119
70	157	35	1.5	150	2500	G¼	0.2 ... 1.8	0.2 ... 4.0	R119-02A R119-02B R119-02C R119-02D
83	172	38	3.6	360	6000	G¾*3	0.2 ... 1.8	0.2 ... 4.0	R119-03A R119-03B R119-03C R119-03D
83	172	38	3.6	360	6000	G½	0.2 ... 1.8	0.2 ... 4.0	R119-04A R119-04B R119-04C R119-04D
113	265	49	5.4	540	9000	G¾	0.3 ... 9.0	0.5 ... 17	R119-06C R119-06D
113	265	49	6.0	600	10000	G1	0.3 ... 9.0	0.5 ... 17	R119-08C R119-08D



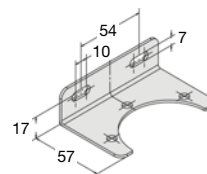
R119-02 ... -12



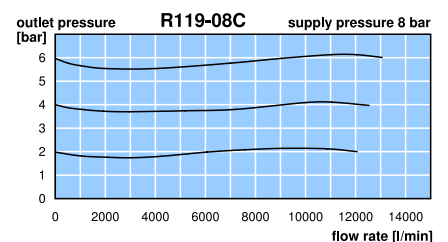
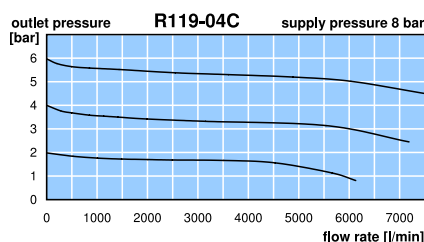
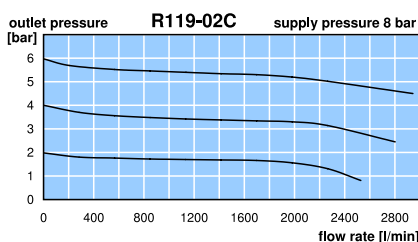
cross-section



BW00-22



BW00-23



*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*3 reduced by the next larger pressure regulator

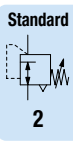
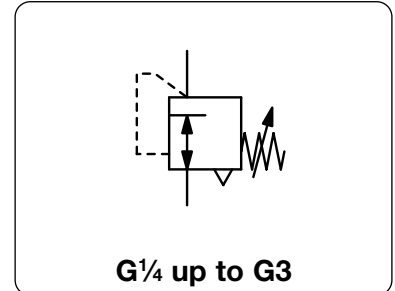
* Product group

PDF CAD
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Order example:
R119-02A

Description	High-capacity diaphragm regulator of solid design suitable for many applications. Ideal for installations where constant line pressure at wide flow variations. From size G2 on it is a pilot-operated piston regulator with an excellent regulation characteristic curve.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 21 bar, max. 16 bar by R119-16B/-20B/-24B	
Air consumption	from size G2 on the regulator's air consumption is about 0.1 l/min.	
Adjustment	by T-handle with locknut from size G2 on by plastic knob with snap-lock on the pilot regulator for G½ optionally by handwheel, for control panel integration	
Relieving function	relieving, optionally non-relieving	
Gauge port	G¼ on both sides of the body, screw plugs supplied	Mounting position any
Temperature range	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F	
Material	Body: zinc die-cast Diaphragm: NBR/Buna-N	Inner valve: brass Bottom screw: reinforced nylon



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

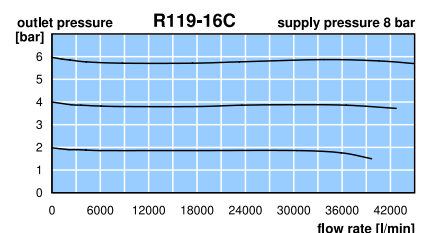
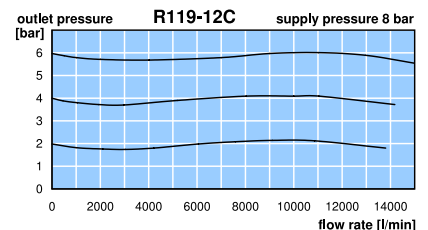
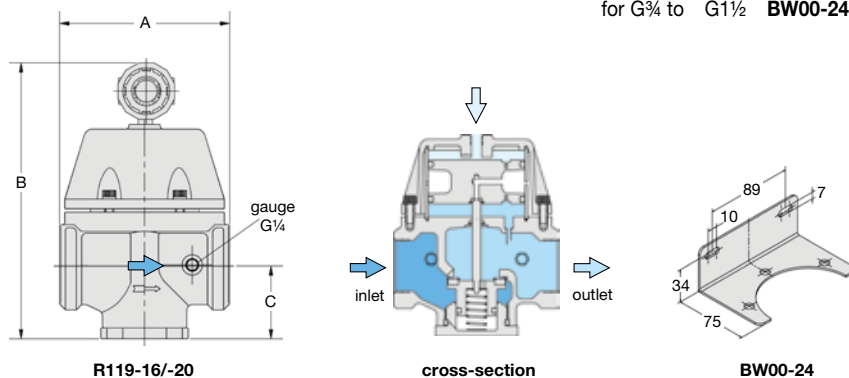
„Standard“ pressure regulator								supply pressure max. 21 bar, relieving, without pressure gauge	R119
126	275	48	6.6	660	11 000	G1¼*3	0.3... 9.0	R119-10C	
							0.5... 17	R119-10D	
126	275	48	7.2	720	12 000	G1½	0.3... 9.0	R119-12C	
							0.5... 17	R119-12D	
186	300	79	35.4	2520	42 000	G2	0.2... 7.0	R119-16B	
							0.8... 8.0	R119-16C	
							1.5... 15	R119-16D	
186	300	79	37.1	2640	44 000	G2½	0.2... 7.0	R119-20B	
							0.8... 8.0	R119-20C	
							1.5... 15	R119-20D	
214	360	95	56.0	6600	110 000	G3	0.2... 7.0	R119-24B	
							0.8... 8.0	R119-24C	
							1.5... 15	R119-24D	



Special options, add the appropriate letter			
NPT	connection thread	for G2 to G3	R119-...N
non-relieving	without relieving function		R119-...K
FKM elastomer		for G¼ to G1½ for G3	R119-...X64 R119-24.X64
panel mounting	with handwheel, hole diameter 16 mm	for G½	R119-...P
flange connection	see chapter SST devices / flanges		R119-...F.
PWIS-free	for painting plants		R119-...LA

Accessories, enclosed

pressure gauge	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
mounting bracket	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, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar
*3 reduced by the next larger pressure regulator

Gauges: see chapter for measuring devices

PDF CAD
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* Product group

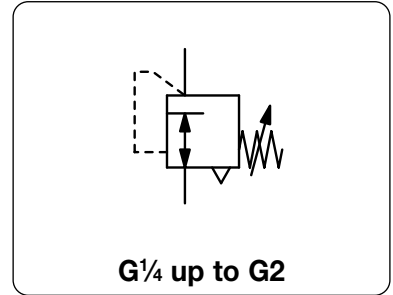


Order example:
R119-10C

PRESSURE REGULATOR SERIES „D“ UP TO 30 BAR

RD1...RD4

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



Standard

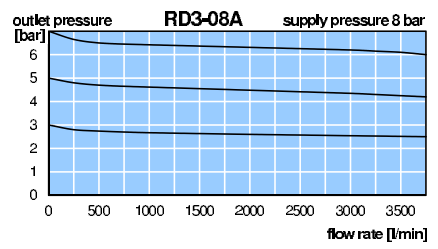
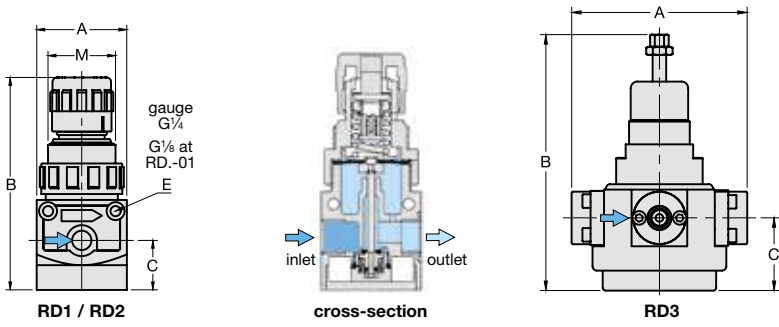
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Dimensions			Kv-value (m ³ /h)	Flow rate m ³ /h*1 l/min*1	P ₁ max. bar	Connection thread G	Pressure range bar	Order number
A	B	C						

Pressure regulator							supply pressure max. 20 / 30 bar, relieving, without pressure gauge	RD1...RD4	
40	95	22	0.6	27	450	20	G $\frac{1}{8}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD1-01A RD1-01B RD1-01D RD1-01E
40	95	22	0.6	27	450	20	G $\frac{1}{4}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD1-02A RD1-02B RD1-02D RD1-02E
64	151	48	3.0	108	1800	20	G $\frac{3}{8}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD2-03A RD2-03B RD2-03D RD2-03E
64	151	48	3.0	108	1800	20	G $\frac{1}{2}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD2-04A RD2-04B RD2-04D RD2-04E
130	190	54	8.4	195	3250	30	G $\frac{3}{4}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD3-06A RD3-06B RD3-06D RD3-06E
130	190	54	8.4	195	3250	30	G1	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD3-08A RD3-08B RD3-08D RD3-08E
241	190	54	8.4	195	3250	30	G1 $\frac{1}{4}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD3-10A RD3-10B RD3-10D RD3-10E
241	190	54	8.4	195	3250	30	G1 $\frac{1}{2}$	0.2...1.5 0.3...3.0 0.5...8.0 1.5... 15	RD3-1AA RD3-1AB RD3-1AD RD3-1AE



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



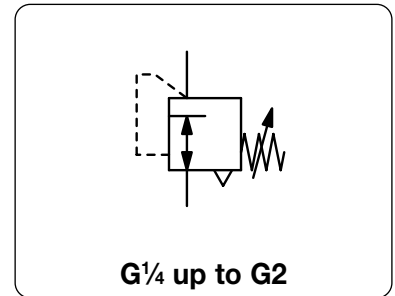
*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

* Product group

PRESSURE REGULATOR SERIES "D" UP TO 30 BAR

RD1...RD4

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



Standard



2

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

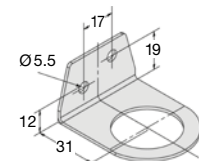
Pressure regulator								supply pressure 30 bar, relieving, without pressure gauge	RD1...RD4
192	399	128	25.0	1320	22 000	30	G $\frac{1}{2}$	0.2...1.5	RD4-12A
								0.3...3.0	RD4-12B
								0.5...8.0	RD4-12D
								1.5... 15	RD4-12E
192	399	128	25.0	1320	22 000	30	G2	0.2...1.5	RD4-16A
								0.3...3.0	RD4-16B
								0.5...8.0	RD4-16D
								1.5... 15	RD4-16E



RD4

Special options, add the appropriate letter

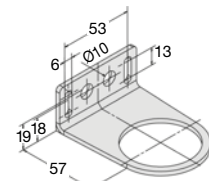
non-relieving	without relieving function	RD K
30 bar operating pressure		RD H



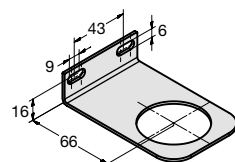
BW30-02

Accessories, enclosed

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for RD1	MA4001-..*2
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for RD2	MA5002-..*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for RD3 and RD4	MA6302-..*2
mounting bracket	made of steel	for RD1	BW30-02
mounting nut	made of plastic	for RD1	M30x1,5K
mounting bracket	made of steel	for RD2	BW50-03
mounting nut	made of plastic	for RD2	M50x1,5K
mounting bracket	made of stainless steel	for RD3	BW45-03S
mounting nut	made of stainless steel	for RD3	M45X-1,5S

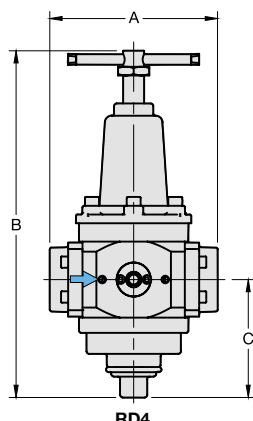


BW50-03

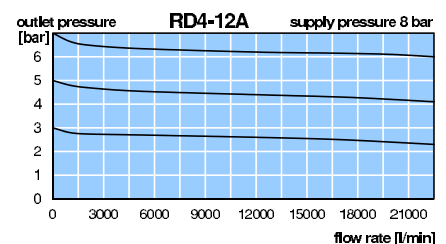


BW45-03S

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



RD4



*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

* Product group

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

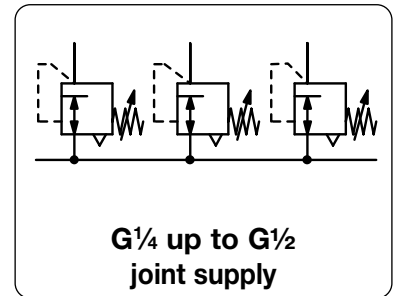


Order example:
RD4-12A

PRESSURE REGULATOR FOR BATTERY WITH JOINT SUPPLY

RB

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



Standard
2

Dimensions			K _v - splitting value	Flow rate		Connection thread	Pressure range	Order number	Price €*
A	B	C		m ³ /h	l/min*1				

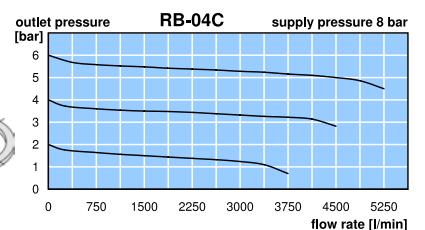
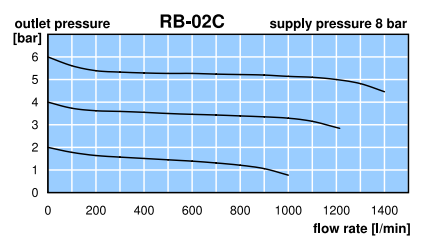
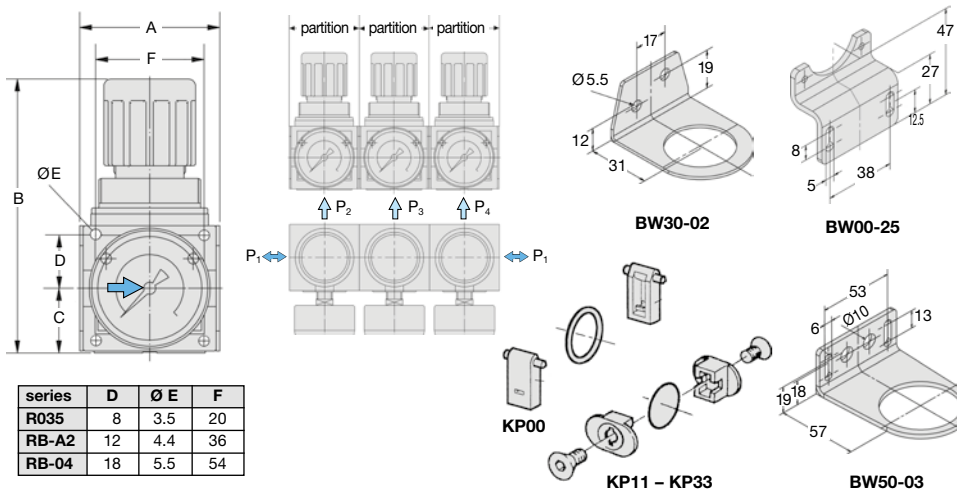
Pressure regulator						supply pressure max. 16 bar, relieving		RB	
40	84	12	40	0.60	60	1000	G $\frac{1}{4}$	0.1 ... 3	RB-02B
								0.2 ... 6	RB-02C
								0.5 ... 10	RB-02D
48	94	22	45	1.3	126	2100	G $\frac{1}{4}$	0.1 ... 3	RB-A2B
								0.2 ... 6	RB-A2C
								0.5 ... 10	RB-A2D
								0.5 ... 16	RB-A2E
70	133	36	66	2.4	240	4000	G $\frac{1}{2}$	0.1 ... 3	RB-04B
								0.2 ... 6	RB-04C
								0.5 ... 10	RB-04D
								0.5 ... 16	RB-04E



battery block RB

Accessories, enclosed

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



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

* Product group

Gauges: see chapter for measuring devices

PDF CAD
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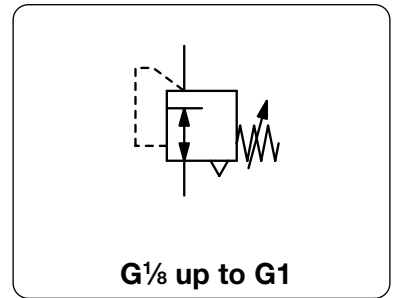


Order example:
RB-02B

LOCKABLE PRESSURE REGULATOR

RS

Description	Pressure regulator with diaphragm of solid design lockable with key		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 16 bar		
Air consumption	no air consumption		
Adjustment	by handwheel, lockable		
Relieving function	relieving		
Gauge port	G $\frac{1}{8}$ on both sides of the body		
Mounting position	any		
Temperature range	-10°C to 60°C / 14°F to 140°F		
Material	Body: zinc die-cast	Diaphragm: NBR/Buna-N and brass	
	Lock cylinder: brass	Bottom screw: POM	
	Spring cage: POM and brass	O-ring: NBR/Buna-N	
	Adjusting spring: steel zinc-plated	Return spring: stainless steel	



Standard
2

Dimension			K _v -value	Flow-rate	Connection thread	Pressure range	Order Number
A	B	C					
mm	mm	mm	m ³ /h	m ³ /h*1	l/min*1	G	bar

Lockable pressure regulator							supply pressure max. 16 bar, NBR elastomer for compressed air and neutral gases	RS
40	113	22	1,2	60	1000	G $\frac{1}{8}$	0,1 ... 3 0,2 ... 6 0,5 ... 10	RS-01A RS-01B RS-01C
48	123	27	1,4	90	1500	G $\frac{1}{4}$	0,1 ... 3 0,2 ... 6 0,5 ... 10 0,5 ... 16	RS-02A RS-02B RS-02C RS-02D
69	156	35	5,2	360	6000	G $\frac{1}{2}$	0,1 ... 3 0,2 ... 6 0,5 ... 10 0,5 ... 10	RS-04A RS-04B RS-04C RS-04D
100	209	52	6,1	600	10000	G1	0,1 ... 3 0,2 ... 6 0,5 ... 10 0,5 ... 10	RS-08A RS-08B RS-08C RS-08D

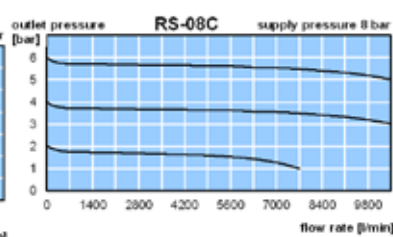
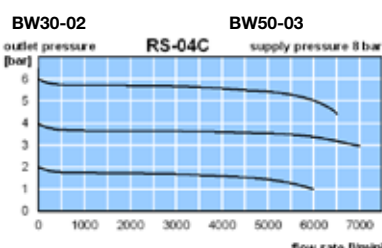
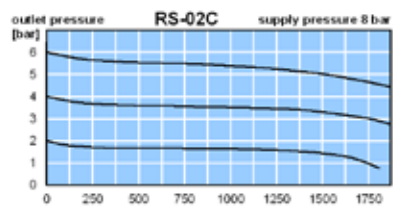
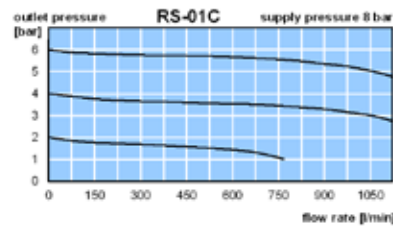
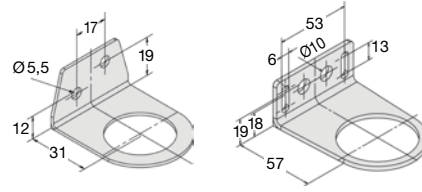
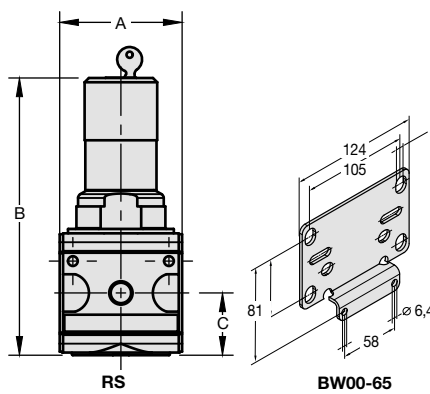


Special options, add the appropriate letter

up to -40°C low temperature version RS-0...X51

FKM elastomer RS-0...V

Accessories, enclosed							
pressure gauge	Ø 40 mm, 0... ^{*2} bar	G $\frac{1}{8}$	for G $\frac{1}{8}$	MA4001-... ^{*2}			
	Ø 50 mm, 0... ^{*2} bar	G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	MA5002-... ^{*2}			
	Ø 63 mm, 0... ^{*2} bar	G $\frac{1}{4}$	for G1	MA6302-... ^{*2}			
mounting nut	made of plastic		for G $\frac{1}{8}$ and G $\frac{1}{4}$	M30x1,5K			
	made of aluminium		for G $\frac{1}{8}$ and G $\frac{1}{4}$	M30x1,5A			
	made of plastic		G $\frac{1}{2}$	M50x1,5K			
mounting bracket	made of steel		for G $\frac{1}{8}$ and G $\frac{1}{4}$	BW30-02			
			for G $\frac{1}{2}$	BW50-03			
			for G1	BW00-65			



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

270° ADJUSTMENT DIAL PRESSURE REGULATOR, LOCKABLE

R21...R41

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

Media compressed air

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

Air consumption R21/R31/R41: max. 1.4 l/min depending on outlet pressure

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

Relieving function relieving

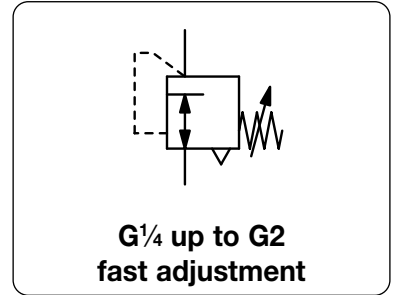
Gauge port G $\frac{1}{4}$ on both sides of the body

Mounting position any

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

Material Body: zinc die-cast
O-ring: NBR/Buna-N

Piston: acetal
Valve seat: acetal, brass and NBR/Buna-N



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

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

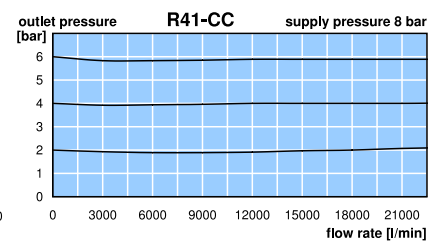
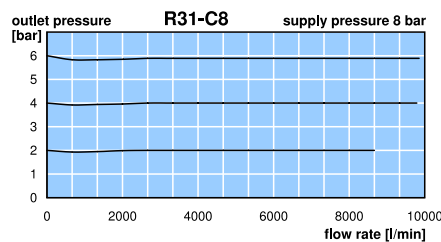
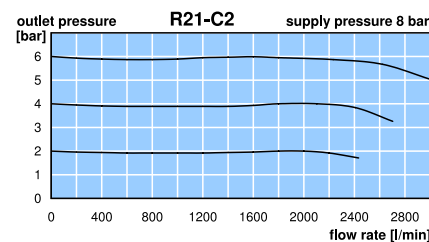
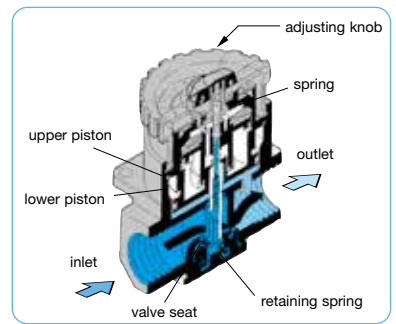
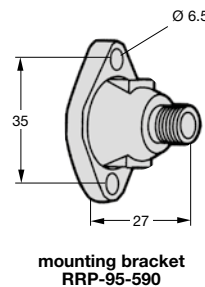
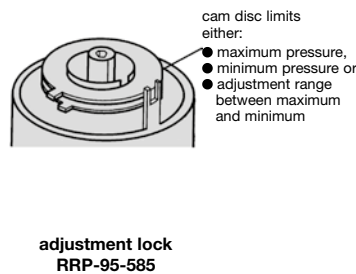
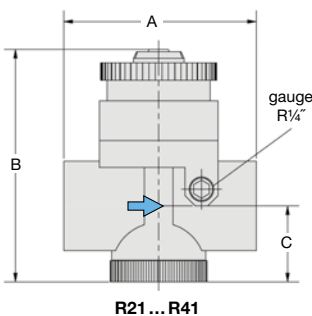


Special options, add the appropriate letter

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

Accessories, enclosed

pressure gauge Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ for R21 to R41 MA5002-..*2
mounting bracket mounting through the gauge port at the back for R21 to R41 RRP-95-590



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

* Product group

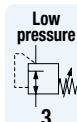
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

Order example:
R21-C2-L

LOW PRESSURE REGULATORS

	DESCRIPTION	SUPPLY PRESSURE	PRESSURE RANGE	CONNECTION	SERIES	PAGE
		max. bar	mbar	thread		
STANDARD	also for propane and other gases	16	factory-set 50	G $\frac{1}{4}$ - G $\frac{1}{2}$	R01	3.02
	miniature, manually adjustable	16	25 ... 50 / 1400	G $\frac{1}{4}$ and G $\frac{3}{8}$	R01-5/-6	3.03
	miniature	10	20 ... 150	G $\frac{1}{2}$	R01-4	3.03
	for many different gases	0.4	2 ... 16 / 160	G $\frac{1}{2}$ - G2	RGDJ	3.04
	for many different gases	4	5 ... 12 / 350	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4	3.05
	for many different gases	10	5 ... 45 / 1500	G $\frac{1}{2}$ - G2	R160/R161	3.06
	for many different gases	20	10 ... 18 / 4400	G1 - flange DN50	RZ	3.08
PRECISE	with relieving function	10	2 ... 45 / 350	G $\frac{3}{8}$ - G $\frac{3}{4}$	R4100	3.09
	for pure gases 5.0	20	5 ... 50 / 1500	G $\frac{1}{2}$	RR	3.10
	Nullmatic	35	2 ... 120 / 31000	$\frac{1}{4}$ "NPT	R40	www*
	relatively small	10	2 ... 35 / 800	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.11
MADE OF STAINLESS STEEL	for many different gases	7	5 ... 45 / 3000	G $\frac{1}{2}$ - G2	R3100	15.14
VOLUME BOOSTER	for many different gases	20	10 ... 350 / 1000	G1 - G2	RZ-J	6.12
	for many different gases	0.4	2 ... 55 / 100	G $\frac{1}{2}$ - G2	RGDJ-J	6.15
	for many different gases	4	5 ... 350	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J	6.15
BACK PRESSURE REGUL.	precise	10	2 ... 35 / 800	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB110	8.08
	precise	6	5 ... 45 / 3000	G $\frac{1}{2}$ - G2	DBC	8.11



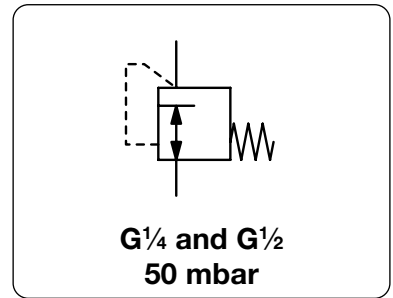
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* see in our Webshop: www.aircom.net

LOW PRESSURE REGULATOR WITH FACTORY-SET OUTLET PRESSURE OF 50 MBAR

R01

Description	Low pressure regulator with factory-set outlet pressure of 50 mbar and an integrated safety valve, (except for regulator R01-415), which opens at approx. 130-150 mbar. Therefore not for gas pressure regulation in closed rooms.	
Media	compressed air, propane, butane or other non-corrosive gases	
Supply pressure	max. 16 bar at R01-415, R01-405,	max. 2.5 bar bei R01-319/-604/-641
Accuracy	at max. supply pressure and flow:	< 15 % FS pressure deviation
	at max. supply pressure without flow:	< 25 % FS pressure deviation
	at min. supply pressure and flow:	< 5 % FS pressure deviation
Air consumption	without constant bleed	
Relieving function	non-relieving	
Gauge port	G $\frac{1}{4}$ on one side of the body, except on R01-319/-415	
Mounting position	any	
Temperature range	-20 °C to 60 °C / -4 °F to 140 °F	
Material	Body: zinc die-cast, chrome-plated	Inner valve: brass
	Elastomer: NBR/Buna-N	

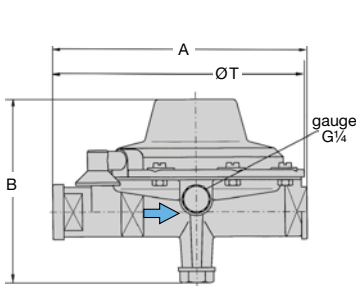


Dimensions			Flow rate		Supply pressure	Connection	Outlet pressure	Order number
A	B	ØT	m ³ /h	l/min	max. bar	G	mbar	

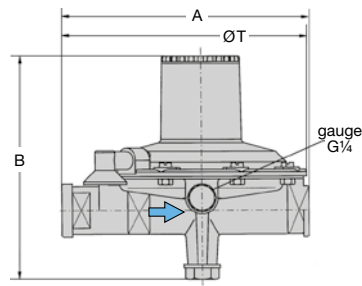
Low pressure regulator								supply pressure max. 2.5 / 16 bar, non-relieving, 50 mbar factory-set	R01
100	44	86	1.2	20	16	G $\frac{1}{4}$	50	R01-415	
138	92	118	3.0	50	2.5	G $\frac{1}{2}$	50	R01-604	
138	117	118	9.6	160	2.5	G $\frac{1}{2}$	50	R01-641	
160	133	145	19.8	330	2.5	G $\frac{1}{2}$	50	R01-319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



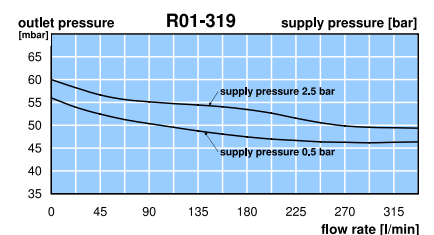
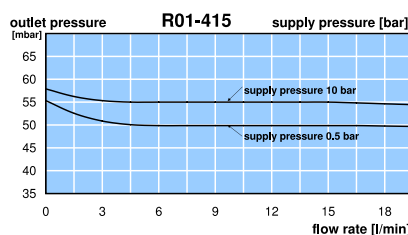
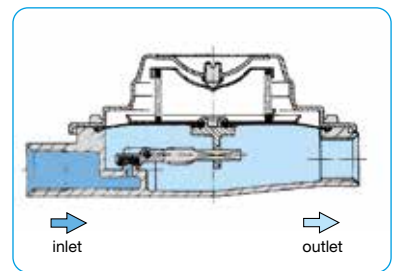
Accessories, enclosed			
pressure gauge	Ø 63 mm, 0...60 mbar, G $\frac{1}{4}$	not for R01-319/-415	MA6302-B6



R01-405 / -604



R01-641



* Product group

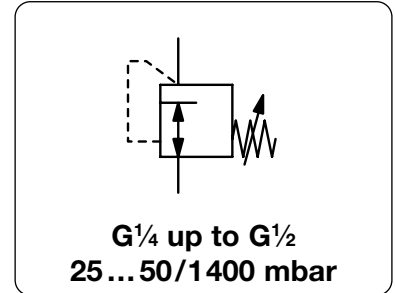
Gauges: see chapter for measuring devices

PDF CAD
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Order example:
R01-415

Description	The low pressure regulator is manually adjustable. Version R01-4 has an integrated safety valve which opens at a pressure of 1.5 times of the max. outlet pressure, thus not suitable for gas pressure regulation in closed rooms.		
Media	compressed air, propane, butane or other non-corrosive gases as well as oil		
Supply pressure	max. 16 bar at R01-5/-6, max. 10 bar at R01-4		
Accuracy	at min. supply pressure and flow: < 5% FS pressure deviation at max. supply pressure and flow: < 15% FS pressure deviation at max. supply pressure without flow: < 25% FS pressure deviation		
Air consumption	without constant bleed		
Adjustment	R01-5/-6:	by adjusting knob a. dial enabling eleven settings for different outlet pressures	
Relieving function	R01-4:	by T-handle with locknut	
Gauge port	non-relieving		
Temperature range	G $\frac{1}{4}$ on one side of the body, except on R01-5/-6 -20 °C to 60 °C / -4 °F to 140 °F		
Material	Body: zinc die-cast	Elastomer: NBR/Buna-N	Inner valve: brass



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

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

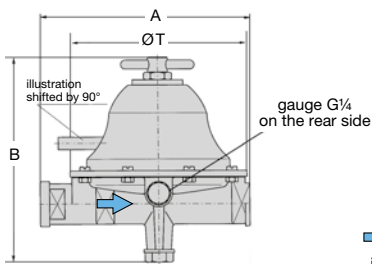


Low pressure regulator				supply pressure max. 10 bar, non-relieving	R01-4				
138	127	117	140	2.5	G $\frac{1}{2}$	20 ... 150	R01-411-01		

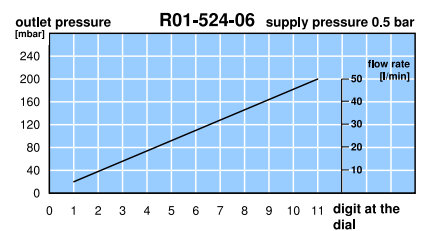
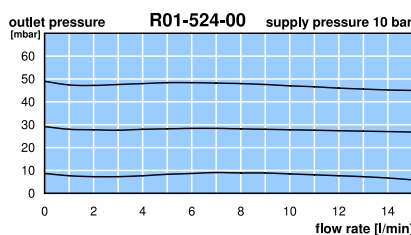
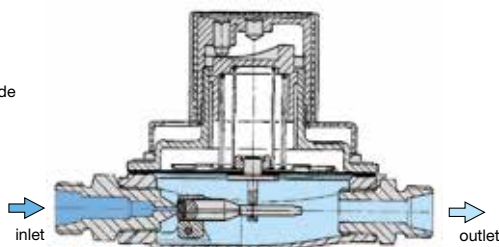


Accessories, enclosed B*

pressure gauge Ø 63 mm, 0 ... 250 mbar, G $\frac{1}{4}$, capsule type for R01-411-01 **MA6302-C3**



R01-411



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

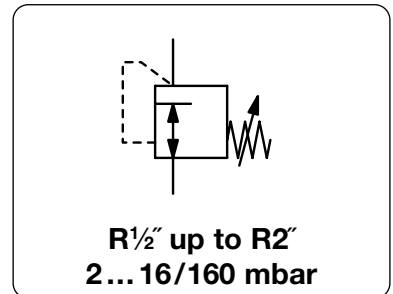
* Product group



LOW PRESSURE REGULATOR, SUPPLY PRESSURE MAX. 400 MBAR

RGDJ

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



Dimensions			Nominal size	K _v -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	

Low pressure regulator										supply pressure max. 400 mbar, non-relieving	RGDJ
100	120	30	15	0.66	12	200	1/2"	2 ... 16	RGDJ-04A		
								10 ... 20	RGDJ-04B		
								16 ... 28	RGDJ-04C		
								22 ... 40	RGDJ-04D		
								40 ... 55	RGDJ-04E		
125	166	34	20	1.49	27	450	3/4"	5 ... 15	RGDJ-06A		
								12 ... 25	RGDJ-06B		
								22 ... 35	RGDJ-06C		
								30 ... 50	RGDJ-06D		
								45 ... 65	RGDJ-06E		
								60 ... 80	RGDJ-06G		
								75 ... 100	RGDJ-06I		
								100 ... 160	RGDJ-06L		
125	166	34	25	2.6	51	850	1"	pressure range see R3/4	RGDJ-08.		
155	194	45	40	4.9	90	1500	1 1/2"	5 ... 15	RGDJ-12A		
								12 ... 25	RGDJ-12B		
								22 ... 35	RGDJ-12C		
								30 ... 50	RGDJ-12D		
								45 ... 65	RGDJ-12E		
								60 ... 80	RGDJ-12G		
								75 ... 100	RGDJ-12I		
								100 ... 160	RGDJ-12L		
200	219	52	50	6.6	120	2000	2"	5 ... 15	RGDJ-16A		
								12 ... 25	RGDJ-16B		
								22 ... 35	RGDJ-16C		
								30 ... 50	RGDJ-16D		
								45 ... 65	RGDJ-16E		
								60 ... 80	RGDJ-16G		
								75 ... 100	RGDJ-16I		

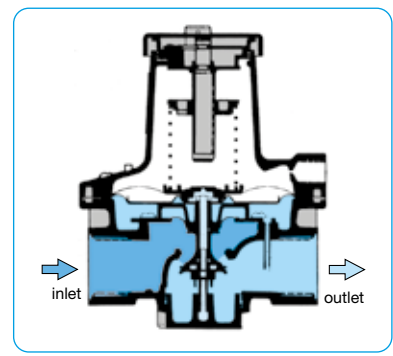
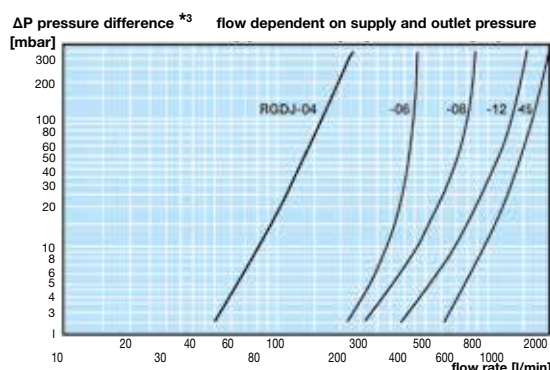
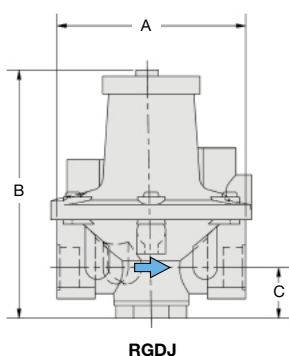


Special options, add the appropriate letter

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

Accessories, enclosed

pressure gauge Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ from R $\frac{3}{4}$ " MA6302-..*2



*1 at 350 mbar supply pressure and 100 mbar outlet pressure
*2 B6 = 0...60 mbar, C2 = 0...160 mbar

*3 Δp = P₁ - P₂, difference between supply and outlet pressure

* Product group

Gauges: see chapter for measuring devices

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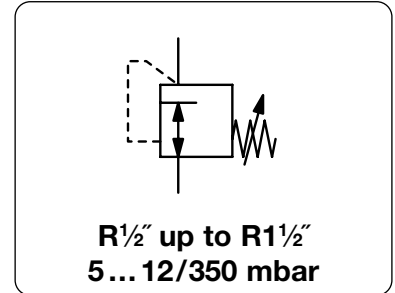


Order example:
RGDJ-04A

LOW PRESSURE REGULATOR, SUPPLY PRESSURE MAX. 4 BAR

RGB4

Description	Highly sensitive low pressure regulator with inlet pressure compensation for high precision regulation. Zero shut-off prevents outlet pressure from increasing.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 4 bar	
Air consumption	without constant bleed	
Adjustment	manual by turning the spindle under the cover of the spring cage	
Relieving function	non-relieving	
Accuracy	max. < 20% pressure drop at full flow	
Gauge port	G $\frac{1}{4}$ on one site at R1 $\frac{1}{2}$ "	optionally G $\frac{1}{4}$ at R $\frac{1}{2}$ " and R1"
Mounting position	any, preferably bonnet upwards	
Temperature range	-15 °C to 60 °C / 5 °F to 140 °F	
Material	Body: aluminium Elastomer: NBR/Buna-N	Inner valve: aluminium and plastic



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

Low pressure regulator								supply pressure max. 4 bar, non-relieving	RGB4
148	174	24	15	0.62	42	700	1/2"	5 ... 12	RGB4-04A
								10 ... 30	RGB4-04C
								25 ... 45	RGB4-04D
								40 ... 60	RGB4-04E
								55 ... 75	RGB4-04F
								70 ... 90	RGB4-04G
								85 ... 105	RGB4-04H
								100 ... 160	RGB4-04I
								150 ... 230	RGB4-04K
								220 ... 350	RGB4-04L
192	230	33	25	2.5	168	2800	1"	5 ... 12	RGB4-08A
								10 ... 30	RGB4-08C
								25 ... 45	RGB4-08D
								40 ... 60	RGB4-08E
								55 ... 75	RGB4-08F
								70 ... 90	RGB4-08G
								85 ... 105	RGB4-08H
								100 ... 160	RGB4-08I
								150 ... 230	RGB4-08K
								220 ... 350	RGB4-08L
150	265	55	40	5	336	5600	1 1/2"	5 ... 12	RGB4-12A
								10 ... 30	RGB4-12C
								25 ... 45	RGB4-12D
								40 ... 60	RGB4-12E
								55 ... 75	RGB4-12F
								70 ... 90	RGB4-12G
								85 ... 105	RGB4-12H
								100 ... 160	RGB4-12I
								150 ... 230	RGB4-12K
								220 ... 350	RGB4-12L

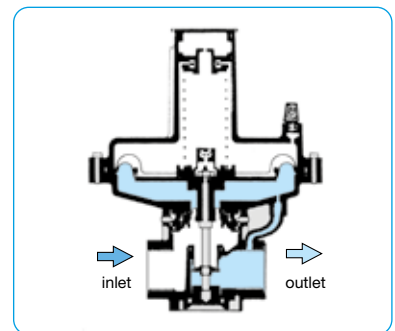
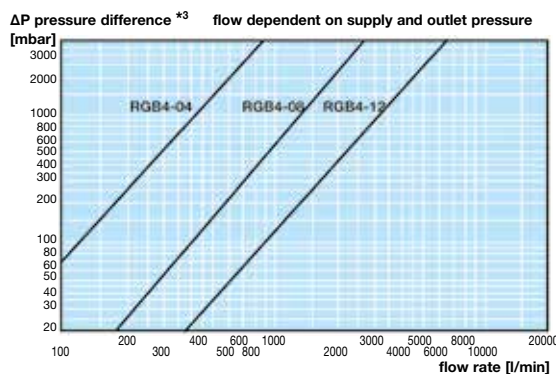
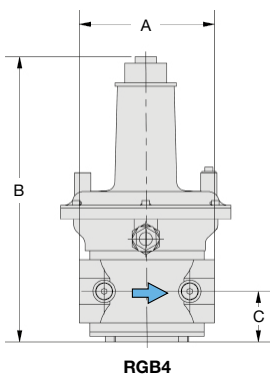


Special options, add the appropriate letter

connection thread G $\frac{1}{4}$ for pressure gauge for R $\frac{1}{2}$ " and R1" RGB4-...M

Accessories, enclosed

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



^{*1} at 4 bar supply pressure and 100 mbar outlet pressure
^{*2} B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar
^{*3} ΔP = P₁ - P₂ difference between supply and outlet pressure

Gauges: see chapter for measuring devices

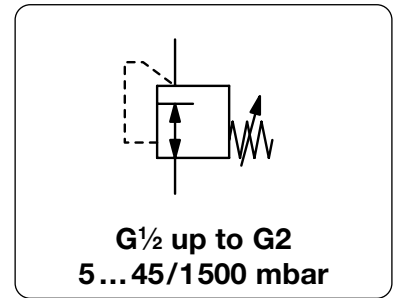
PDF CAD
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* Product group
Order example: RGB4-04A

LOW PRESSURE REGULATOR, SUPPLY PRESSURE MAX. 10 BAR

R160/R161

Description	Low pressure regulator with large diaphragm for good accuracy and high sensitivity.	
Media	compressed air or non-corrosive gases	
Supply pressure	see chapter, max. 10 bar (bei R161), min. 1 bar	
Air consumption	without constant bleed	
Adjustment	with handwheel by R161	with adjusting screw on R160-06 to -1A (A, B, C), -12 and -16
	with T-handle by R160-06 to 1A (D, E)	by hexagon head screw with locknut
Relieving function	non-relieving	
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plug supplied	Mounting position any
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F	
Material	Body: aluminium coated O-rings: FKM by G $\frac{1}{2}$, all other NBR/Buna-N, optionally FKM or EPDM Diaphragm: NBR/Buna-N with PTFE coating Inner valve: brass / aluminium Spring cage: stainless steel	



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

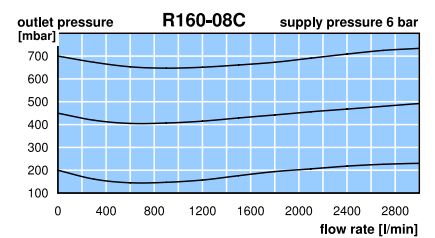
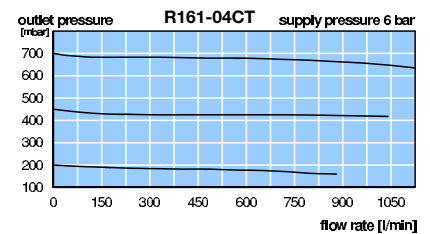
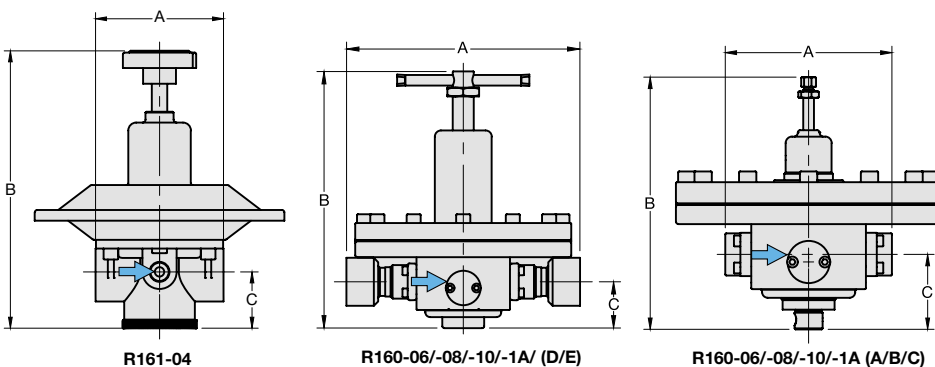
Low pressure regulator										supply pressure max. 7 / 10 bar, non-relieving, without constant bleed	R160 / R161
82	191	40	1.4	60	1000	10	G $\frac{1}{2}$	5 ... 45	R161-04AT		
								10 ... 400	R161-04BT		
								20 ... 1000	R161-04CT		
								50 ... 1500	R161-04DT		
154	233	69	1.4	84	1400	7	G $\frac{3}{4}$	5 ... 45	R160-06A		
								10 ... 120	R160-06B		
			8.4	576	9600			10 ... 400	R160-06C		
154	292	53						15 ... 700	R160-06D		
								200 ... 1200	R160-06E		
154	233	69	1.4	84	1400	7	G1	5 ... 45	R160-08A		
								10 ... 120	R160-08B		
			8.4	576	9600			10 ... 400	R160-08C		
154	292	53						15 ... 700	R160-08D		
								200 ... 1200	R160-08E		
265	233	69	1.4	84	1400	7	G1 $\frac{1}{4}$	5 ... 45	R160-10A		
								10 ... 120	R160-10B		
			8.4	576	9600			10 ... 400	R160-10C		
265	292	53						15 ... 700	R160-10D		
								200 ... 1200	R160-10E		
265	233	69	1.4	84	1400	7	G1 $\frac{1}{2}$	5 ... 45	R160-1AA		
								10 ... 120	R160-1AB		
			8.4	576	9600			10 ... 400	R160-1AC		
265	292	53						15 ... 700	R160-1AD		
								200 ... 1200	R160-1AE		



R161-04



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



*1 at 6 bar supply pressure and max. outlet pressure

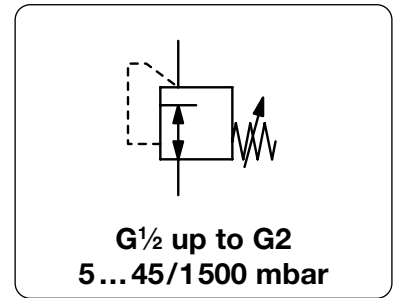
* Product group

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Order example:
R161-04AT

Description	Low pressure regulator with large diaphragm for good accuracy and high sensitivity.	
Media	compressed air or non-corrosive gases	
Supply pressure	see chapter, max. 10 bar (bei R161), min. 1 bar	
Air consumption	without constant bleed	
Adjustment	with handwheel by R161	with adjusting screw on R160-06 to -1A (A, B, C), -12 and -16
	with T-handle by R160-06 to 1A (D, E)	by hexagon head screw with locknut
Relieving function	non-relieving	
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plug supplied	Mounting position any
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F	
Material	Body: aluminium coated O-rings: FKM by G $\frac{1}{2}$, all other NBR/Buna-N, optionally FKM or EPDM Diaphragm: NBR/Buna-N with PTFE coating Inner valve: brass / aluminium Spring cage: stainless steel	



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

Low pressure regulator										supply pressure max. 7 / 10 bar, non-relieving, without constant bleed	R160
192	468	128	6.2	420	7000	6	G1½	20 ... 50	R160-12A		
								50 ... 150	R160-12B		
								150 ... 300	R160-12C		
			25	1680	28000			100 ... 1000	R160-12D		
192	468	128	6.2	420	7000	6	G2	20 ... 50	R160-16A		
								50 ... 150	R160-16B		
								150 ... 300	R160-16C		
			25	1680	28000			100 ... 1000	R160-16D		

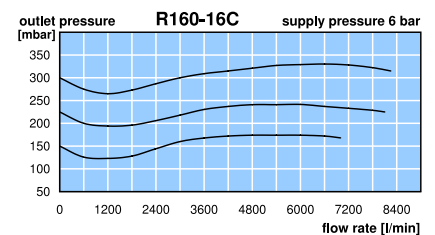
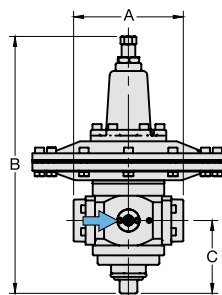
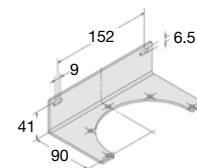


Special options, add the appropriate letter

NPT	connection thread, A=141 mm	for G $\frac{1}{2}$	R160-... N
NPT	connection thread	for G $\frac{3}{4}$ to G2	R160-... N
SST inner parts	for ammonia NH ₃		R160-... 02
FKM -O-ring	PTFE diaphragm	for G3/4 to G2	R160-... T
EPDM-O-ring			R160-... TE
EPDM-O-ring	FDA-approval		R160-... TD
carbon dioxide CO₂			R160-... 03
argon	Ar		R160-... 05
nitrogen	N ₂		R160-... 07
helium	He		R160-... 09
hydrogen	H ₂		R160-... 11
methane	CH ₄		R160-... 13
natural gas *4			R160-... 14
oxygen	O ₂	for G $\frac{1}{2}$ bis G1½ (1A)	R160-... 15
propane	C ₃ H ₈		R160-... 16
nitrous oxide	N ₂ O		R160-... 17
flange connection	see chapter for stainless steel devices		R160-... F.

Accessories, enclosed

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



*1 at 6 bar supply pressure and max. outlet pressure
 *2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, 01 = 0...1 bar, 01.6 = 0...1,6 bar
 *4 without DVGW approval

* Product group

Gauges: see chapter for measuring devices

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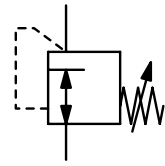


Order example:
R160-12A

LOW PRESSURE REGULATOR, SUPPLY PRESSURE MAX. 20 BAR

RZ

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



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

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

Low press. regulator w. positioning spring									
P ₁ : max. 20 bar, non-relieving									
RZ									
185	245	30	10	17	1800	10	G1	15 ... 20	RZ1-08A
			10		1800	10		20 ... 30	RZ1-08B
			10		1800	10		30 ... 40	RZ1-08C
			10		1800	10		40 ... 70	RZ1-08D
			10		1800	10		70 ... 110	RZ1-08E
			10		3300	16/20		110 ... 180	RZ2-08F
			10		3300	16/20		180 ... 300	RZ2-08G
			5		4100	16/20		300 ... 700	RZ3-08H
185	245	30	10	17	2700	10	G1½*3	15 ... 20	RZ1-12A
			10		2700	10		20 ... 30	RZ1-12B
			10		2700	10		30 ... 40	RZ1-12C
			10		2700	10		40 ... 70	RZ1-12D
			10		2700	10		70 ... 110	RZ1-12E
			10		5000	16/20		110 ... 180	RZ2-12F
			10		5000	16/20		180 ... 300	RZ2-12G
			5		5000	16/20		300 ... 700	RZ3-12H
254	460	80	5	22	15000	10	flange	10 ... 18	RZ1-16AF
			5		15000	10	DN50	15 ... 30	RZ1-16BF
			5		15000	10		25 ... 49	RZ1-16CF
			5		25000	10		40 ... 75	RZ1-16DF
			5		25000	10		62 ... 120	RZ1-16EF
			5		25000	10		100 ... 170	RZ1-16FF
			5		25000	20		145 ... 270	RZ1-16GF
			5		25000	20		230 ... 350	RZ1-16HF
			5	34	28000	20		280 ... 720	RZ2-16IF
			5		28000	20		840 ... 1250	RZ2-16KF



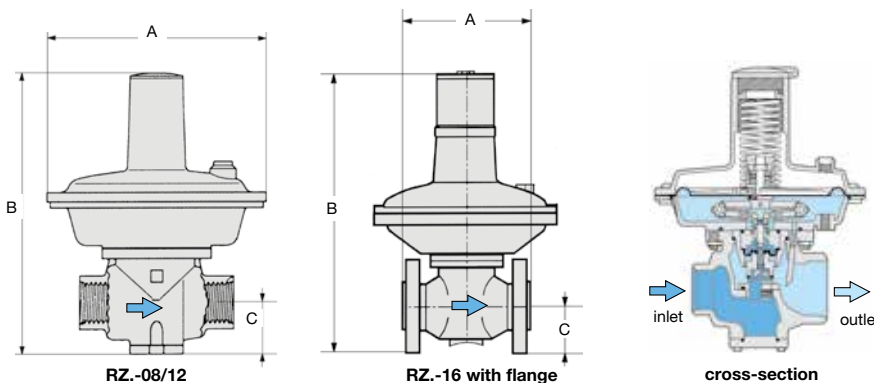
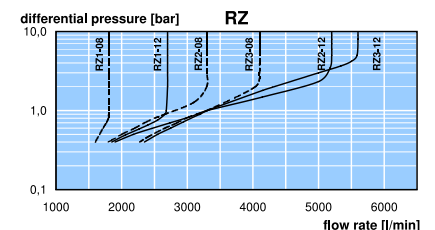
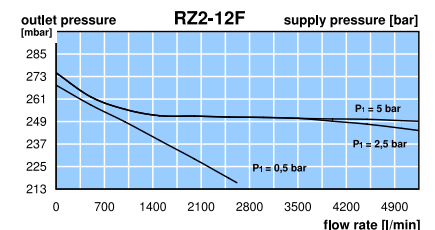
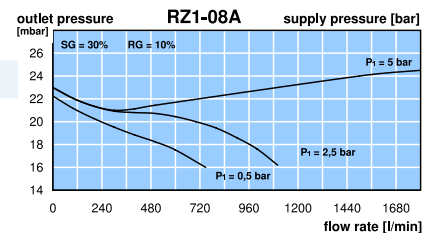
RZ2-08F



RZ1-16AF

Special options, add the appropriate letter

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



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

* Product group

PDF CAD
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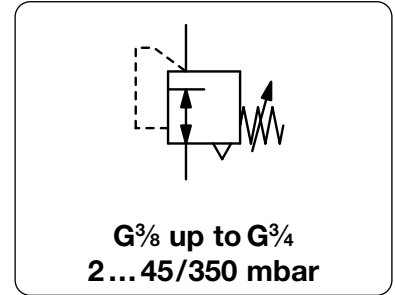


Order example:
RZ1-08A

PRECISION LOW PRESSURE REGULATOR, WITH RELIEVING FUNCTION

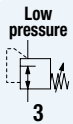
R4100

Description	High precision diaphragm pressure regulator with high flow, without zero shut-off (counterpressure is required).
Media	compressed air or non-corrosive gases
Supply pressure	max. 10 bar
Accuracy	sensitivity < 2 mbar
Air consumption	without constant bleed
Adjustment	by handwheel with locknut
Relieving function	relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plug 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 Inner valve: stainless steel, brass, aluminium and steel



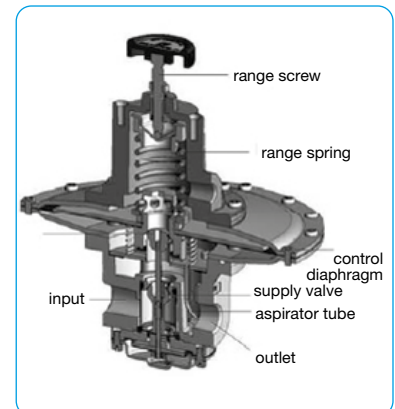
Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread G	Pressure range mbar	Order number	D*
A	B	C		m ³ /h*1	l/min*1				

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



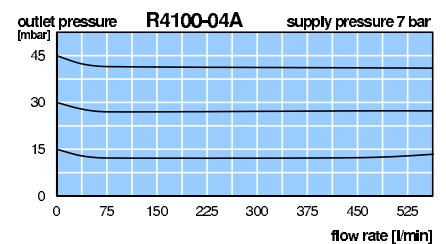
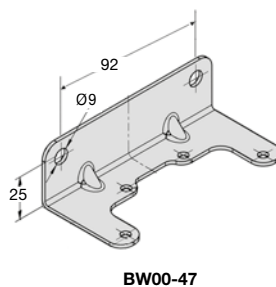
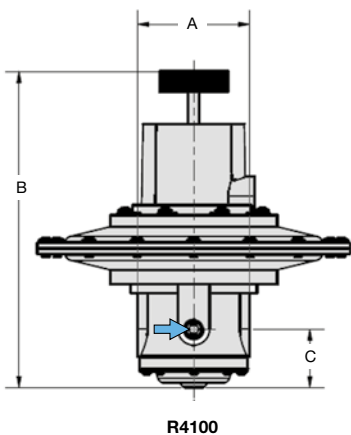
Special options, add the appropriate letter

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



Accessories, enclosed

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



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

* Product group

Gauges: see chapter for measuring devices

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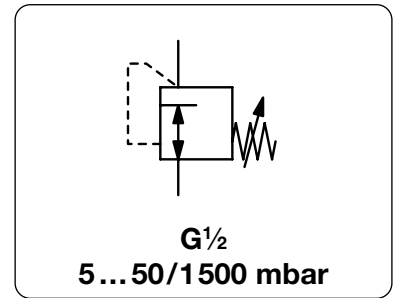


Order example:
R4100-03A

PRECISION LOW PRESSURE REGULATOR FOR PURE GASES UP TO 5.0 PURITY

RR

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



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

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



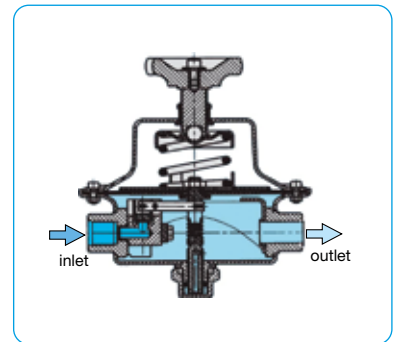
RR

Special options, add the appropriate letter

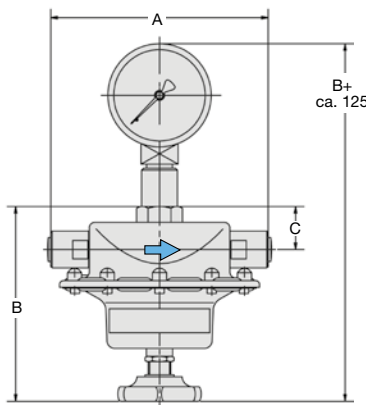
free of grease and oil	suitable for oxygen and flammable gases	RR-...L
pressure gauge	Ø 100 mm, 0... bar, handwheel at the bottom	RR-...G

Accessories, enclosed

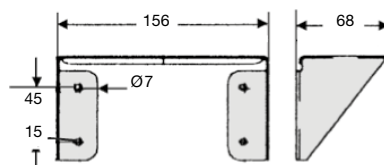
mounting bracket	made of steel	for RR-04	BW00-64
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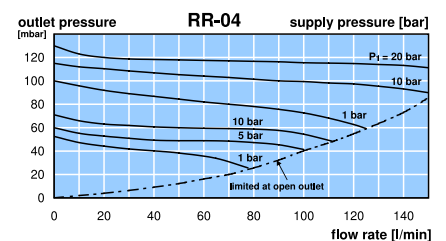
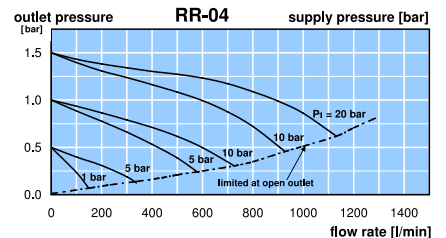
cross-section



RR-04 with gauge



BW00-64



*1 at 6 bar supply pressure and open outlet

* Product group

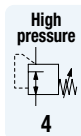
PDF CAD
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Order example:
RR-04A

HIGH PRESSURE REGULATORS

	DESCRIPTION	Kv:	SUPPLY PRESSURE	PRESSURE RANGE	CONNECTION	DEVICE	PAGE
			max. bar	bar	thread		
PRESS. REGULATOR	also for liquids and O ₂	0.3 - 25.6	40	0.2 ... 3 / 35	G $\frac{1}{4}$ - G2	R280	4.02
	for many different gases	0.2 - 70	50	0.1 ... 1.5 / 50	G $\frac{1}{8}$ - G4	R120	4.04
	also for liquids	1.3 - 3.2	60	0.5 ... 12 / 50	G $\frac{1}{4}$ - G1	R286	4.08
	low cost	0.02	207	0.1 ... 3.5 / 12	$\frac{1}{4}$ "NPT	RH83	4.09
	for many different gases	0.05 - 3.5	200	0.1 ... 1.5 / 200	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH10	4.10
	gas cylinder pressure regulator		200	0 ... 1.5 / 40	DIN 477	RH201, RH202	4.12
	gas cylinder pressure regulator		300	0 ... 1.5 / 40	DIN 477	RH300	4.13
	gas cylinder pressure regulator		100	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147	4.14
	gas cylinder pressure regulator		200	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-247	4.14
	gas cylinder pressure regulator		300	0 ... 10 / 60	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347	4.14
	miniature	0.05	241	0.2 ... 2 / 7	$\frac{1}{8}$ "NPT and $\frac{1}{4}$ "NPT	RH0	4.15
	miniature	0.05	414	0.5 ... 5 / 124	$\frac{1}{4}$ "NPT	RH1	4.15
	for pure gases 5.0	0.9	207	0.2 ... 1.7 / 14	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH2	4.16
	different pressure ranges	0.05	414	0.3 ... 35 / 414	$\frac{1}{4}$ "NPT	HP300	4.17
	made of brass	0.05	414	0.7 ... 104 / 172	$\frac{1}{4}$ "NPT	HP400	4.17
	different pressure ranges	0.05	300	0.1 ... 1.7 / 35	$\frac{1}{4}$ "NPT	HP500	4.18
	large nominal size	1.7	260	0.7 ... 21 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3	4.19
	large nominal size	1.7	345	0.7 ... 21 / 172	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-U	4.19
	made of brass	0.3	414	0 ... 14 / 28	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH4	4.20
	different pressure ranges	0.05	1 034	0.3 ... 35 / 690	$\frac{1}{4}$ "NPT	HP306	4.21
MADE OF SST	for many different gases	0.05 - 3.5	200	1 ... 8 / 200	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH3000	15.16
	large nominal size	1.7	310	0.7 ... 21 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-S1	4.19
	robust	0.13	380	0.3 ... 2 / 35	$\frac{1}{4}$ "NPT	RHB-S	www
	large nominal size	1.7	410	0.7 ... 21 / 172	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-S2	4.19
	different pressure ranges		690	0.3 ... 35 / 414	$\frac{1}{4}$ "NPT	HP300-S	4.17
	for different gases, wide variety		60	0.1 ... 1.5 / 50	G $\frac{1}{8}$ - G2	R3000	15.06
VACUUM REGULATOR	made of brass		4	0.06...1 bar _{abs}	$\frac{1}{4}$ "NPT	RDV	www
DIFFERENTIAL PRESS.	brass or stainless steel	0.7 / 2.0	414	0 ... 1 / 24	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44	4.22
VOLUME BOOSTER	ratio 1:2 to 1:19	1.7	260	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-J	6.14
	SST 1:2 to 1:19	1.7	310	3 ... 42 / 104	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH3-JS1	6.14
	SST	2.9	100	0.1 ... 24 / 99	G1	RLM, RLE	6.16
	made of brass		50	1 ... 15 / 50	G $\frac{1}{4}$ - G2	R120-J	6.17



Description Diaphragm pressure regulator for supply pressure up to 40 bar, of solid design, completely made of brass.

Media compressed air, non-corrosive gases or liquids. Regulator R280-16 is not suitable for liquids.

Supply pressure max. 40 bar, for liquids $\Delta P_{max.} = 25$ bar

Adjustment by handwheel for G $\frac{1}{4}$ and G $\frac{1}{2}$, with locknut
by T-handle for G $\frac{3}{4}$ up to G1 $\frac{1}{2}$
by knob for G2
by hexagonal spindle for range 0.5...16/25 bar, up to size G $\frac{1}{2}$ 14 mm A/F, otherwise 19 mm A/F

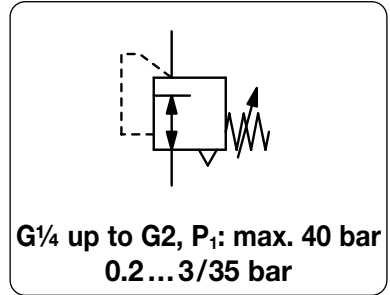
Relieving function relieving, optionally non-relieving

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

Mounting position any

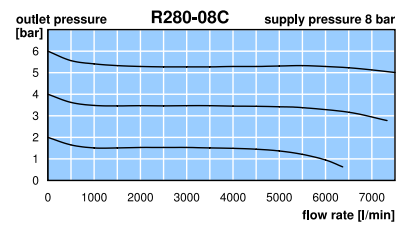
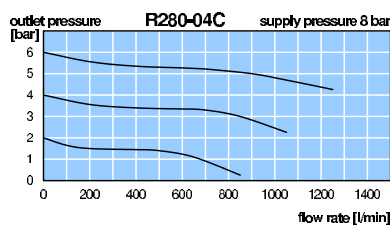
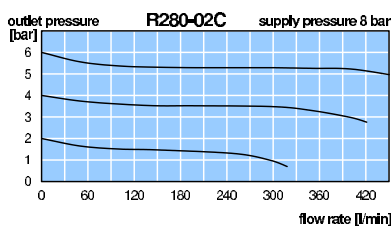
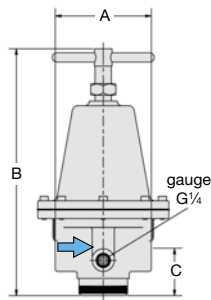
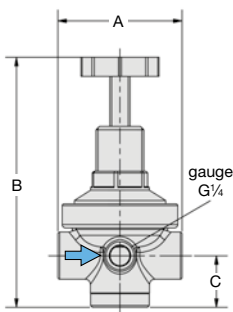
Temperature range -10 °C to 90 °C / 14 °F to 194 °F

Material Body: brass, aluminium die-cast at G2 regulator
Elastomer: NBR/Buna-N
Inner valve: brass



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

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



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

*2 reduced from next bigger thread

* Product group

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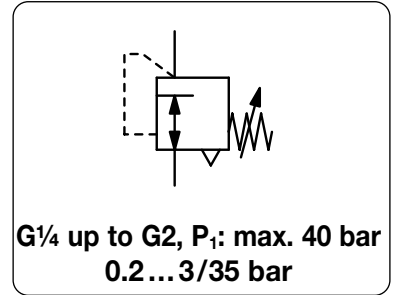


Order example:
R280-02A

BRASS PRESSURE REGULATOR UP TO 40 BAR SUPPLY PRESSURE

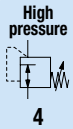
R280

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



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

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

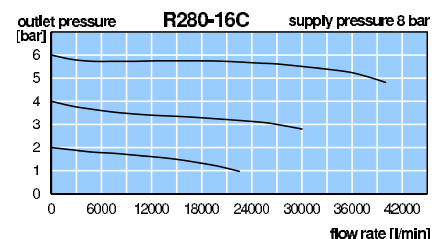
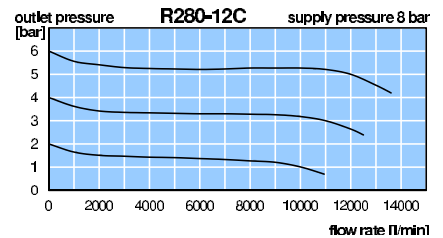
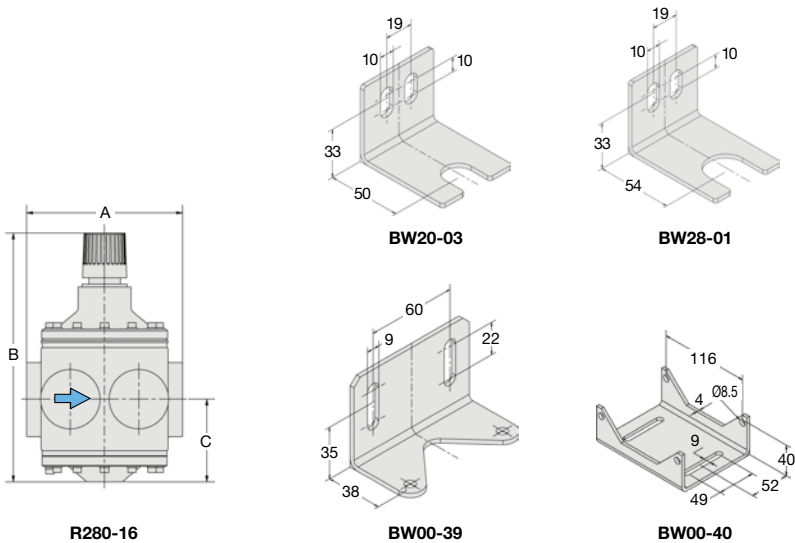


Special options, add the appropriate letter

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

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



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

Gauges: see chapter for measuring devices

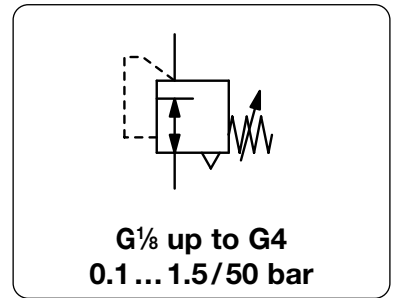
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* Product group



Order example:
R280-12A

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

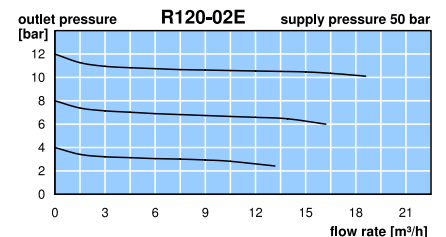
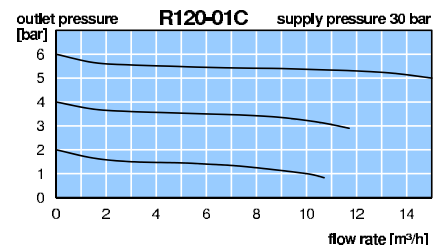
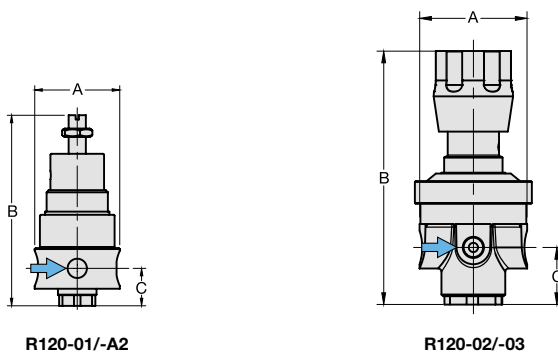


Dimensions			Regul. system	K _v -	Flow	Connection	P ₁	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m ³ /h)	m ³ /h*1	G	bar	bar	

Brass pressure regulator			for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge						R120	
40	88	18	D	0.35	8	130	G $\frac{3}{8}$	30	0.1 ... 1.5	R120-01A
			D		10	160		30	0.2 ... 3.0	R120-01B
			D		15	250		30	0.5 ... 8.0	R120-01C
			D		20	330		30	1 ... 15	R120-01E
40	88	18	D	0.35	8	130	G $\frac{1}{4}$	30	0.1 ... 1.5	R120-A2A
			D		10	160		30	0.2 ... 3.0	R120-A2B
			D		15	250		30	0.5 ... 8.0	R120-A2C
			D		20	330		30	1 ... 15	R120-A2E
69	146	35	D	1.4	16	260	G $\frac{1}{4}$	30	0.1 ... 1.5	R120-02A
			D		20	320		30	0.2 ... 3.0	R120-02B
			D		30	500		30	0.5 ... 8.0	R120-02C
			D		40	660		50	1 ... 15	R120-02E
69	161	35	P	50	840	50	2 ... 30	R120-02F		
			P	60	1000	50	3 ... 50	R120-02G		
69	146	35	D	0.35	16	260	G $\frac{3}{8}$	30	0.1 ... 1.5	R120-03A
			D		20	320		30	0.2 ... 3.0	R120-03B
			D		30	500		30	0.5 ... 8.0	R120-03C
			D		40	660		50	1 ... 15	R120-03E
69	161	35	P	50	840	50	2 ... 30	R120-03F		
			P	60	1000	50	3 ... 50	R120-03G		



Special options and Accessories, see separate page



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

* Product group

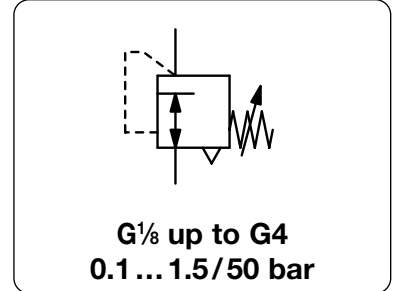
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
R120-01A

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



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

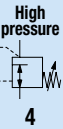
Brass pressure regulator										for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge		R120	
78	171	37	D	3.0	27	450	G $\frac{1}{2}$	30	0.1 ... 1.5	R120-04A			
			D		30	600		30	0.2 ... 3.0	R120-04B			
			D		40	830		30	0.5 ... 8.0	R120-04C			
			D		60	1250		50	1 ... 15	R120-04E			
78	171	37	P		100	2080		50	2 ... 30	R120-04F			
			P		120	2500		50	3 ... 50	R120-04G			
114	290	66	D	9.8	75	1250	G $\frac{3}{4}$	30	0.1 ... 1.5	R120-06A			
			D		98	1600		30	0.2 ... 3.0	R120-06B			
			D		170	2800		30	0.5 ... 8.0	R120-06C			
			D		280	4600		50	1 ... 15	R120-06E			
114	315	66	P		400	6600		50	2 ... 30	R120-06F			
			P		500	8300		50	3 ... 50	R120-06G			
114	290	66	D	9.8	75	1250	G1	30	0.1 ... 1.5	R120-08A			
			D		98	1600		30	0.2 ... 3.0	R120-08B			
			D		170	2800		30	0.5 ... 8.0	R120-08C			
			D		280	4600		50	1 ... 15	R120-08E			
114	315	66	P		400	6600		50	2 ... 30	R120-08F			
			P		500	8300		50	3 ... 50	R120-08G			



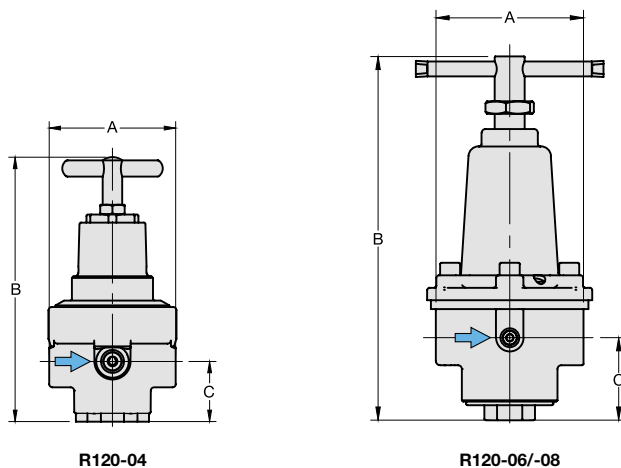
R120-04



R120-06/-08

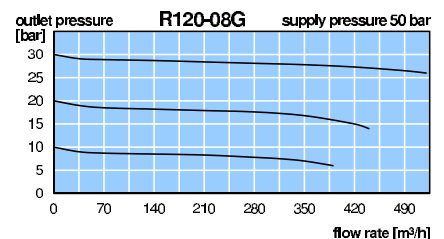
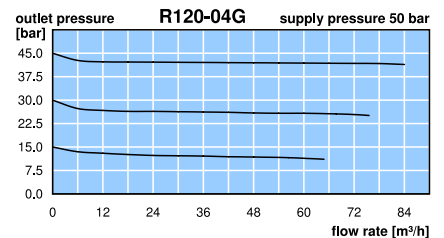


Special options and Accessories, see separate page



R120-04

R120-06/-08



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

* Product group

Gauges: see chapter for measuring devices

PDF CAD
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Order example:
R120-04A

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

Media compressed air, non-corrosive gases or liquids

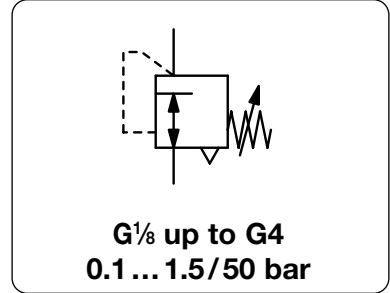
Adjustment **Supply pressure** see chart, max. 50 bar, for liquids $\Delta p_{max} = 25$ bar
 R120-01/-A2: with adjusting screw, at R120-02 with black knob
 R120-04 to -B6: with T-handle, R120-16: with hexagonal spindle (spanner size 24 mm)
 R120-16/-24/-32: by pilot pressure regulator

Relieving function R120-B6: relieving R120-16/-24/-32: non-relieving

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

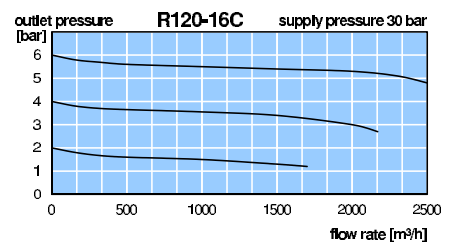
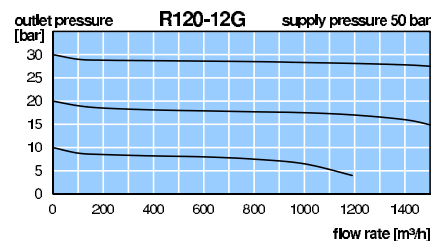
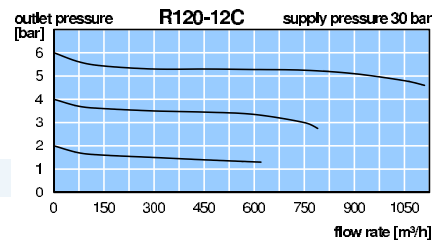
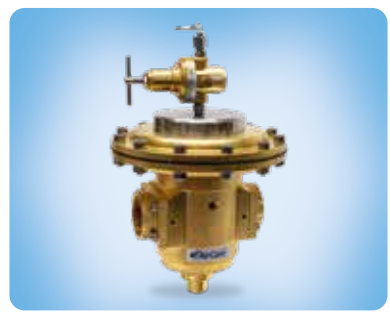
Temperature range 0 °C bis 80 °C / 32 °F to 176 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F, optionally high temperature version up to 130 °C / 266 °F

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

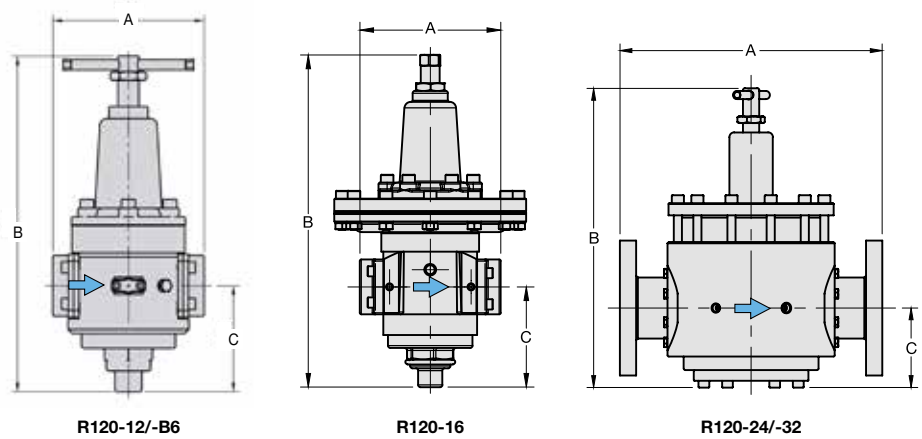


Dimensions			Regul. system	K _v -	Flow	Connection	P ₁	Pressure	Order
A	B	C	D: diaphragm	value	rate	thread	max.	range	number
mm	mm	mm	P: piston	(m ³ /h)	m ³ /h*1	G	bar	bar	

Brass pressure regulator										for compressed air, supply pressure max. 30 / 50 bar, relieving, without pressure gauge		R120
174	386	122	P	25	400	6600	G1½	30	0.1 ... 1.5	R120-12A		
				670	11000	30		0.2 ... 3.0	R120-12B			
				1000	16600	30		0.5 ... 8.0	R120-12C			
				1500	25000	50		1 ... 15	R120-12E			
				1600	27000	50		2 ... 30	R120-12F			
				2000	33000	50		3 ... 50	R120-12G			
174	386	122	P	25	400	6600	G2	30	0.1 ... 1.5	R120-B6A		
				670	11000	30		0.2 ... 3.0	R120-B6B			
				1000	16600	30		0.5 ... 8.0	R120-B6C			
				1500	25000	50		1 ... 15	R120-B6E			
				1600	27000	50		2 ... 30	R120-B6F			
				2000	33000	50		3 ... 50	R120-B6G			
180	421	128	D	25	1800	30000	G2	30	0.1 ... 1.5	R120-16AK		
				2100	35000	30		0.2 ... 3.0	R120-16BK			
				2500	40000	30		0.3 ... 6.0	R120-16CK			
180	403	128	D	3500	50000	30	1 ... 15	R120-16DK				
389	434	118	D	65	2400	40000	flange	30	0.1 ... 1.5	R120-24AKF		
				5000	83000	30		0.2 ... 3.0	R120-24BKF			
				5000	83000	DN80		30	0.3 ... 6.0	R120-24CKF		
				6000	99000	30		1 ... 15	R120-24DKF			
389	434	118	D	65	2400	40000	flange	30	0.1 ... 1.5	R120-32AKF		
				3700	61000	30		0.2 ... 3.0	R120-32BKF			
				5000	83000	DN100		30	0.3 ... 6.0	R120-32CKF		
				6000	99000	30		1 ... 15	R120-32DKF			



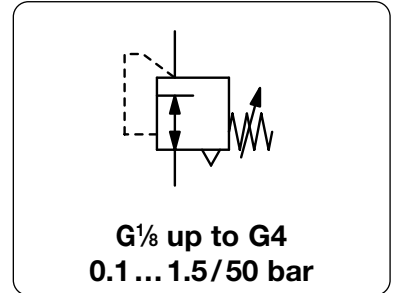
Special options and Accessories, see separate page



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

* Product group

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



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

Special options, add the appropriate letter

NPT	connection thread						R120-... N
non-relieving	without relieving function				up to R120-B6		R120-... K
down to -40 °C	low temperature version						R120-... X51
up to 130 °C	high temperature version						R120-... X54
Spring cage made of POM	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)						R120-... X57
EPDM O-ring	PTFE diaphragm						R120-... E
T-handle	instead of plastic knob				for R120-02		R120-02.. T
PWIS-free	for painting plants						R120-... LA
carbon dioxide	CO ₂						R120-... K03
argon	Ar						R120-... K05
nitrogen	N ₂						R120-... K07
helium	He						R120-... K09
hydrogen	H ₂						R120-... K11
methane	CH ₄						R120-... K13
natural gas *3							R120-... K14
oxygen	O ₂						R120-... K15
propane	C ₃ H ₈						R120-... K16
nitrous oxide	N ₂ O						R120-... K17
water	H ₂ O						R120-... KW
flange connection	standard for R120-32, otherwise see chapter SST devices /flanges						R120-... F.

Accessories, enclosed

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	MA4001-... *2
	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ (02) up to G $\frac{1}{2}$	MA5002-... *2
	Ø 50 mm, 0...60 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ up to G $\frac{1}{2}$	MA5002-60
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G4	MA6302-... *2
	Ø 63 mm, 0...60 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G4	MA6302-60
gauge up to 130 °C	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$, stainless steel		MS6302-... *2
mounting bracket	made of stainless steel	for G $\frac{1}{8}$ u. G $\frac{1}{4}$ (A2)	BW30-03S
mounting nut	made of stainless steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	M30x1,5SS
mounting bracket	made of stainless steel	for G $\frac{1}{4}$ (02) and G $\frac{3}{8}$	BW35-01S
mounting nut	made of stainless steel	for G $\frac{1}{4}$ (02) and G $\frac{3}{8}$	M35x1,5S
mounting bracket	made of stainless steel	for G $\frac{1}{2}$	BW50-01S
mounting nut	made of stainless steel	for G $\frac{1}{2}$	M50x1,5S
mounting bracket	made of steel	for G $\frac{3}{4}$ and G1	BW00-42
		for G1 $\frac{1}{2}$ and G2 (B6)	BW00-68S

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

*3 without DVGW approval

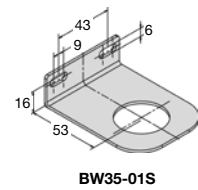
* Product group

Gauges: see chapter for measuring devices

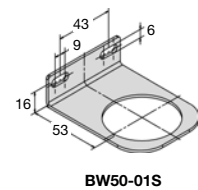
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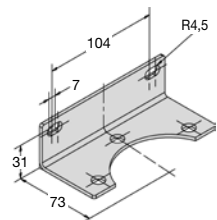
Order example:
MA4001-02



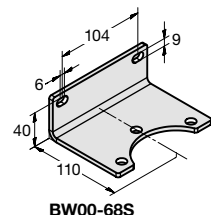
BW35-01S



BW50-01S



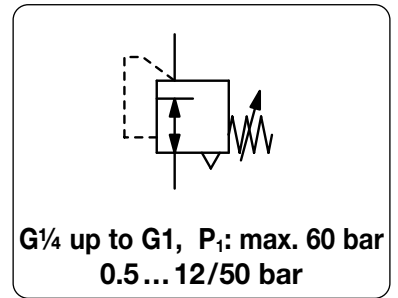
BW00-42



BW00-68S



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



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

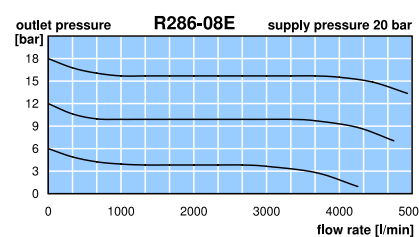
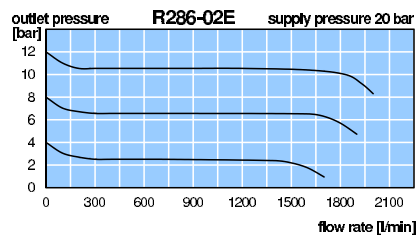
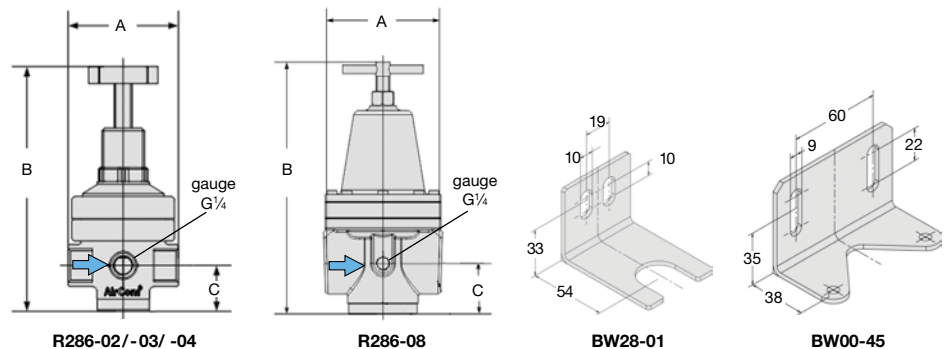
Brass pressure regulator								supply pressure max. 60 bar, for compressed air relieving, without pressure gauge	R286
72	164	31	handwheel	1.3	120	2000	G $\frac{1}{4}$	0.5 ... 12	R286-02C
			hexagonal spindle					1.0 ... 20	R286-02E
								2.0 ... 35	R286-02F
								3.0 ... 50	R286-02G
72	164	31	handwheel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



Special options, add the appropriate letter
non-relieving without relieving function, for liquids R286-0 . . K

Accessories, enclosed

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



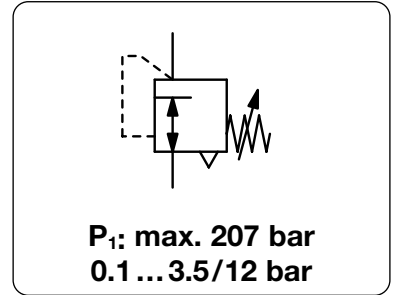
*1 at 20 bar supply pressure, 10 bar outlet pressure and 4 bar pressure drop

* Product group

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

Order example: R286-02C

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



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number	D*
A	B	C		m ³ /h*1	l/min*1				

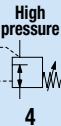
High pressure regulator 207 bar				for compressed air, relieving made of brass, NBR/Buna-N		RH83		
48	110	10	0.02	19.2	320	¼" NPT	0.1 ... 3.5	RH83-02A
							0.3 ... 8.5	RH83-02B
							0.7 ... 12	RH83-02C

Special options, add the appropriate letter

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

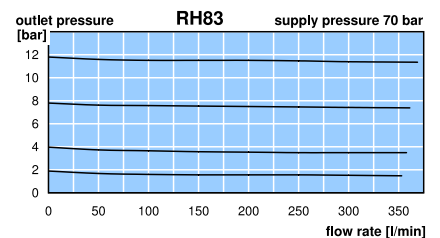
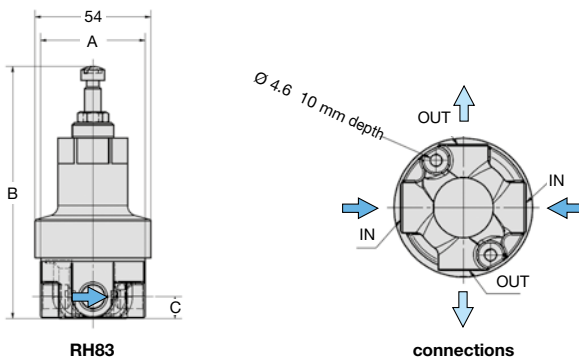


RH83



Accessories, enclosed

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



*1 bei P₁ = 70 bar, P₂ = 4 bar und Δp = 0.35 bar

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

* Product group



Description For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston.
A sintered bronze filter at the inlet port protects against contamination.

Media compressed air or non-corrosive gases

Supply pressure max. 220 bar

Adjustment RH10-02: by black plastic knob all others: by T-handle with locknut

Gauge port All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.

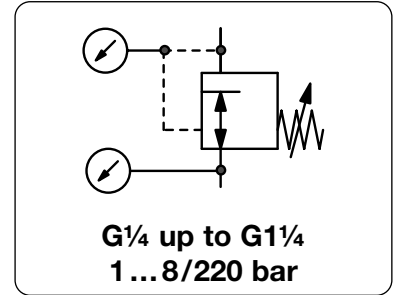
Safety relief valve prevents from overpressure, see chart

Compensation All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.

Temperature range -20 °C to 60 °C / -4 °F to 140 °F

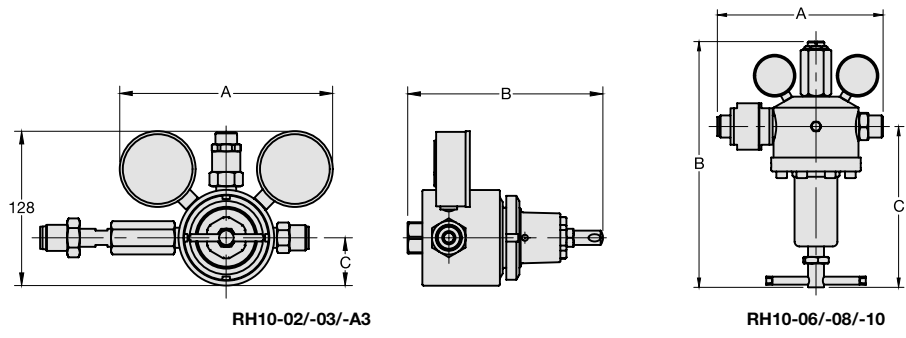
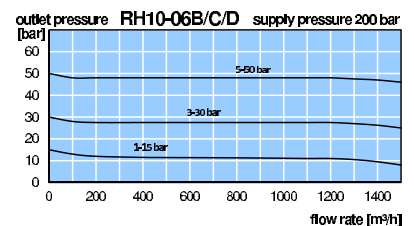
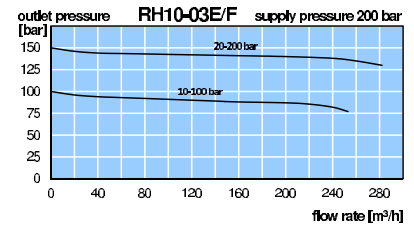
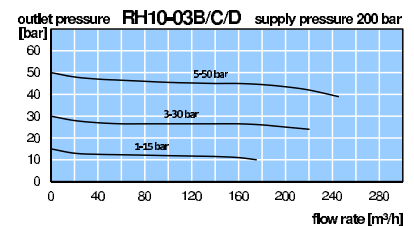
Material Body: brass, nickel-plated at RH10-02
Piston: brass at RH10-02
Valve seat: nylon
Diaphragm: stainless steel at RH10-02, NBR/Buna-N at all others

Mounting position any
Inlet filter: sintered bronze
O-rings: EPDM or FKM, dependent on media



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

High pressure regulator 220 bar							non-relieving, for compressed air, pressure gauges supplied	RH10	
176	145	35	S	0.05	80	1300	DIN 477 / G _{1/4} f	1 ... 8	RH10-02A
			S					1 ... 15	RH10-02B
176	163	35	S					3 ... 30	RH10-02C
			S					5 ... 50	RH10-02D
			S					10 ... 100	RH10-02E
			-					20 ... 200	RH10-02F
184	176	40	S	0.19	228	3800	DIN 477 / G _{3/8} f	0.1 ... 1.5	RH10-030
			S					1 ... 15	RH10-03B
			S					3 ... 30	RH10-03C
			S					5 ... 50	RH10-03D
184	186	40	-					10 ... 100	RH10-03E
			-					20 ... 200	RH10-03F
182	245	102	S	0.25	422	7000	G _{3/4} f / G _{3/4} m	0.1 ... 1.5	RH10-A30
			S					1 ... 15	RH10-A3B
182	260	102	S					3 ... 30	RH10-A3C
			S					5 ... 50	RH10-A3D
182	195	35	-					10 ... 100	RH10-A3E
			-					20 ... 200	RH10-A3F
166	345	232	S	0.6	2000	33000	G _{3/4} a / G _{3/4} m	1 ... 8	RH10-06A
			S					1 ... 15	RH10-06B
166	358	245	S					3 ... 30	RH10-06C
			S					5 ... 50	RH10-06D
			-					10 ... 100	RH10-06E
253	370	242	S	1.8	3000	48000	G ₁ m / G ₁ m	1 ... 8	RH10-08A
			S					1 ... 15	RH10-08B
253	406	278	S					3 ... 30	RH10-08C
			S					5 ... 50	RH10-08D
253	406	278	-					20 ... 200	RH10-08F



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

Stainless steel version: see chapter for stainless steel devices

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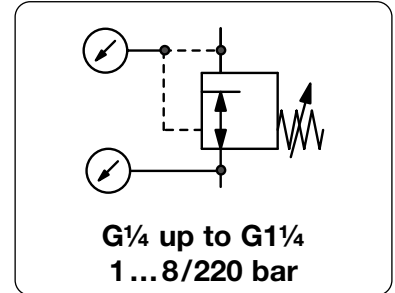
* Product group

Order example: RH10-02A

HIGH PRESSURE REGULATOR FOR OUTLET PRESSURE UP TO 200 BAR

RH10

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



Dimensions			Safety relief valve	K _v -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m³/h)	m³/h*1	inlet / outlet	bar	

High pressure regulator 220 bar								non-relieving, for compressed air, pressure gauges supplied	RH10
248	385	270	S	3.1	5000	80000	G1m / G1¼	1... 8	RH10-10A
			S					1... 15	RH10-10B
			S					3... 30	RH10-10C
248	420	305	S					5... 50	RH10-10D



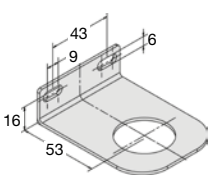
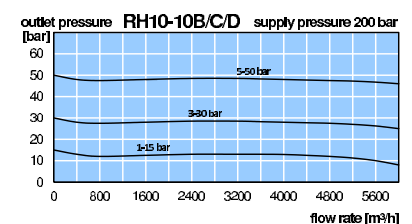
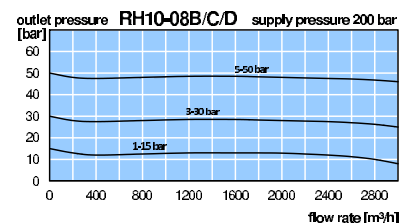
RH10-08B

Special options, add the appropriate letter

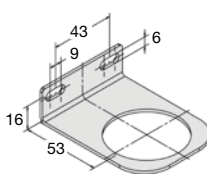
relieving	with relieving function, for compressed air	RH10-...R
FKM elastomer		RH10-...V
PTFE elastomer		RH10-...T
SST diaphragm	from RH10-03	RH10-...S
for panel mounting	for RH10-02 to -A3	RH10-...P
carbon dioxide *2	CO ₂	RH10-...03
argon	Ar	RH10-...05
nitrogen	N ₂	RH10-...07
helium	He	RH10-...09
hydrogen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

Accessories, enclosed

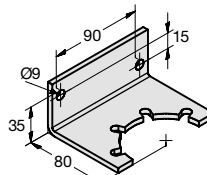
mounting bracket	made of stainless steel	for RH10-02	BW35-01S
mounting nut		for RH10-02	M35x1,5S
mounting bracket		for RH10-03 and -A3	BW50-01S
mounting nut		for RH10-03 and -A3	M50x1,5S
mounting bracket		for RH10-06	BW00-31S
		for RH10-08	BW00-35S



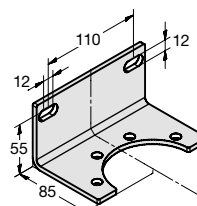
BW35-01S



BW50-01S



BW00-31S



BW00-35S

*1 at 200 bar supply pressure max. outlet pressure

*2 max. 80 bar outlet pressure

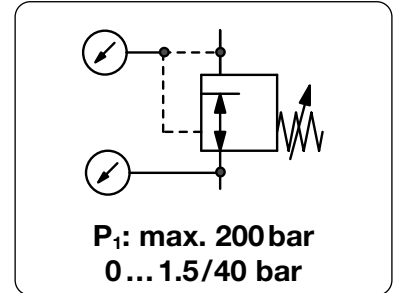
Stainless steel version: see chapter for stainless steel devices

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Order example:
RH10-10A

Description	High pressure regulator for gas cylinders for reducing pressure of compressed air or liquid gases from a high level to the required pressure.	
Supply pressure	max. 200 bar	
Media	compressed air, oxygen or different gases	
Connections	according to DIN 477 (Part 1)	
Adjustment	by T-handle	
Gauge port	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
Leakage rate	10 ⁻⁸ mbar l/s	
Compensation	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
Temperature range	-30 °C to 60 °C / -22 °F to 140 °F	
Material	Body: brass	O-rings: NBR/Buna-N and EPDM
	Diaphragm: 65NBR4550, PTFE for outlet > 10 bar, stainless steel for pure gases up to 5.0	Spring cage: brass



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

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

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



RH201, 1-step

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

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



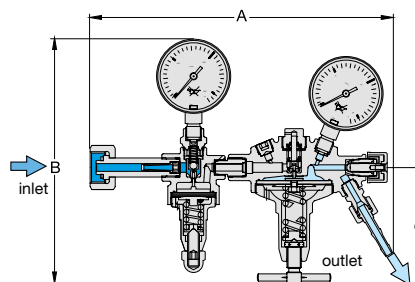
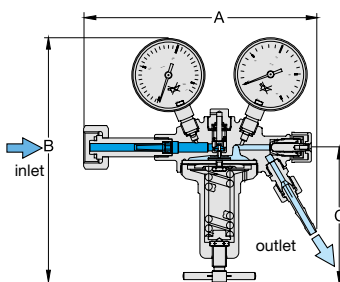
RH202, 2-step

Special options, change the appropriate letter

carbon dioxide	CO ₂	RH20 .-... 03
inert gas		RH20 .-... 04
argon	Ar	RH20 .-... 05
fuel gas		RH20 .-... 06
nitrogen	N ₂	RH20 .-... 07
forming gas		up to 40 bar RH20 .-... 08
helium	He	up to 40 bar RH20 .-... 09
hydrogen	H ₂	RH20 .-... 11
testing gas		up to 40 bar RH20 .-... 12
oxygen	O ₂	up to 40 bar RH20 .-... 15
chrome-plated body	inside and outside	1-step RH201 -C...
chrome-plated body	inside and outside	2-step RH202 -C...
metal diaphragm	5.0 purity	1-step RH201 - .M...
		2-step RH202 - .M...



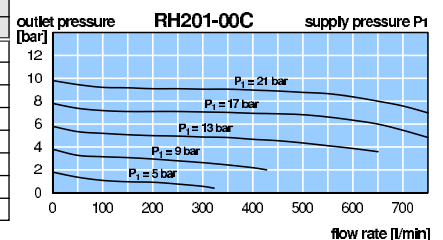
RH201-C..., chrome-plated



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

connection thread up to 200 bar		
gas type	inlet *1	outlet
nitrogen	W24,32x ¹ / ₄	G ¹ / ₄
testing gas	M19x1,5 LH	G ³ / ₈ LH
nitrous oxide	G ³ / ₈	G ¹ / ₄
azetylene	clamp (cylinder)	G ³ / ₈ a LH

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



*1 Thread according to DIN 477, Part 1

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

only left hand thread is marked LH, right hand RH is not marked.

* Product group

Description High pressure regulator for gas cylinders for reducing pressure of compressed air or liquid gases from a high level to the required pressure.

Supply pressure max. 300 bar

Media compressed air, oxygen or different gases

Connections according to DIN 477 (Part 5)

Adjustment by T-handle

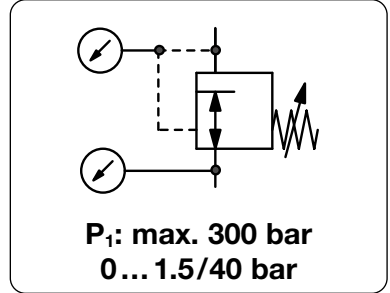
Gauge port All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.

Leakage rate 10^{-6} mbar l/s

Compensation All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.

Temperature range -30 °C to 60 °C / -22 °F to 140 °F

Material Body: brass O-rings: NBR/Buna-N and EPDM Spring cage: brass
Diaphragm: 65NBR4550, PTFE for outlet > 10 bar, stainless steel for pure gases up to 5.0



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

Cylinder pressure regulator 300 bar for compressed air, connections DIN 477, with inlet / outlet gauges, RH300								
210	190	100	1-step	48	800	300	0 ... 10	RH301-00C
210	210	120		75	1250		0 ... 20	RH301-00D
				120	2000		0 ... 40	RH301-00E
240	190	100	2-step	8	133	300	0 ... 1,5	RH302-00A
				48	800		0 ... 10	RH302-00C



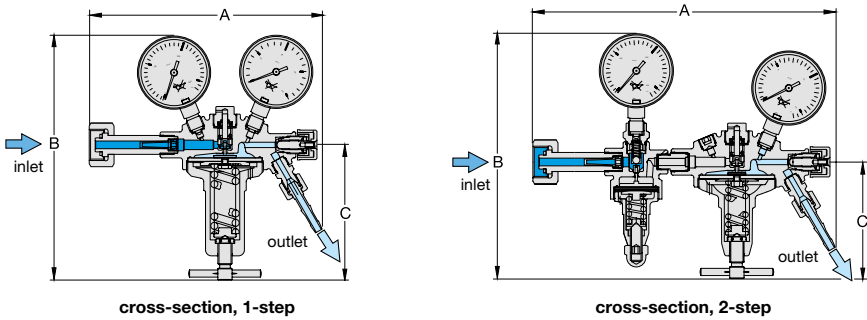
RH301, 1-step

Special options, change the appropriate letter

compressed air	connection gauge G ⁵ / ₈	RH35 -... .
carbon dioxide	CO ₂	RH30 -... .03
inert gas		RH30 -... .04
argon	Ar	RH30 -... .05
fuel gas		RH30 -... .06
nitrogen	N ₂	RH30 -... .07
forming gas		up to 40 bar RH30 -... .08
helium	He	up to 40 bar RH30 -... .09
hydrogen	H ₂	RH30 -... .11
testing gas		up to 40 bar RH30 -... .12
oxygen	O ₂	up to 20 bar RH30 -... .15
chrome-plated body	inside and outside	1-step RH301 -C....
chrome-plated body	inside and outside	2-step RH302 -C....
metal diaphragm	5.0 purity	1-step RH301 - .M...
		2-step RH302 - .M...



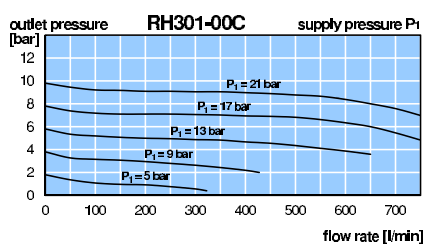
RH302, 2-step



RH301-C..., chrome-plated

connection thread up to 300 bar		
gas type	inlet *1	outlet
fuel gas	W30x2 LH	G ³ / ₄ LH
all others	W30x2	G ¹ / ₄

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



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

* Product group

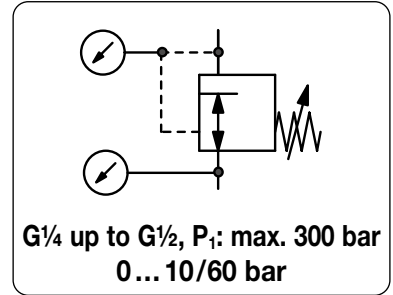
PDF CAD
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Order example:
RH301-00C

MAIN PRESSURE REGULATOR UP TO 300 BAR

RH

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



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

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



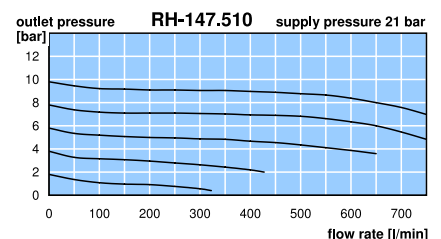
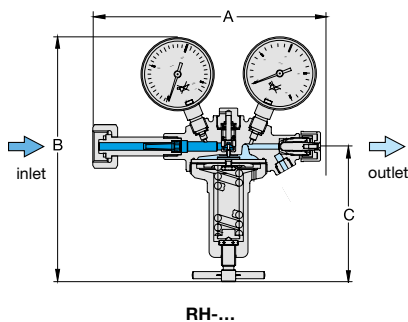
RH-47.510 / 520



RH-47.525 / 545 / 565

Special options, add the appropriate letter

G¼	connection thread, max. 100 bar	RH-. 27...
G¾	connection thread	RH-. 37...
carbon dioxide	CO ₂	RH-. 47... .03
inert gas		RH-. 47... .04
argon	Ar	RH-. 47... .05
fuel gas		up to 40 bar RH-. 47... .06
nitrogen	N ₂	RH-. 47... .07
forming gas		up to 40 bar RH-. 47... .08
helium	He	RH-. 47... .09
hydrogen	H ₂	RH-. 47... .11
testing gas		up to 40 bar RH-. 47... .12
methane	CH ₄	RH-. 47... .13M
natural gas *2		RH-. 47... .14
oxygen	O ₂	up to 20 bar RH-. 47... .15
chrome plated body	inside and outside	RH-. 47... .C
metal diaphragm	5.0 purity	RH-. 47... .M



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

*2 without DVGW-approval

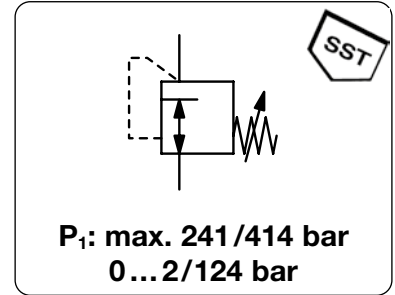
* Product group

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Order example:
RH-147.510

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



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

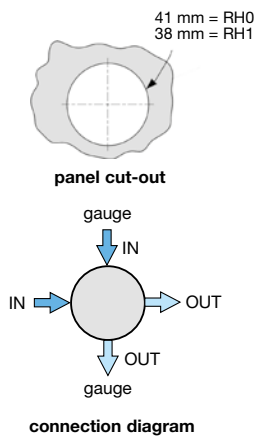
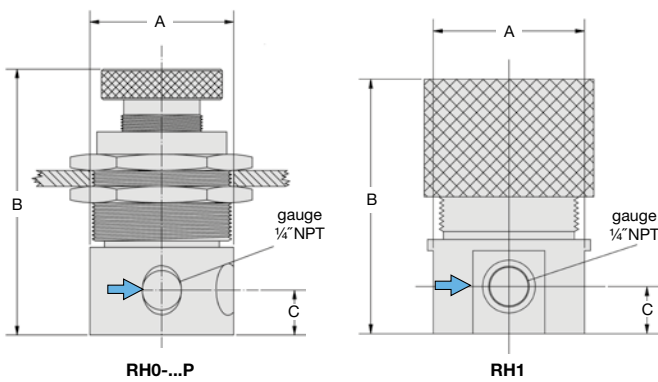
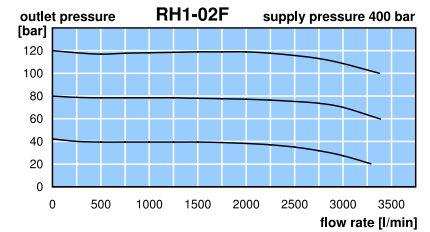
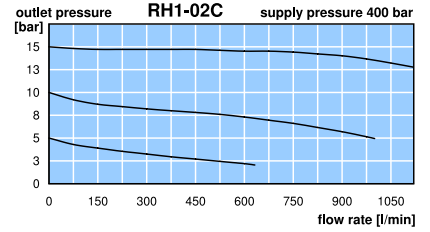
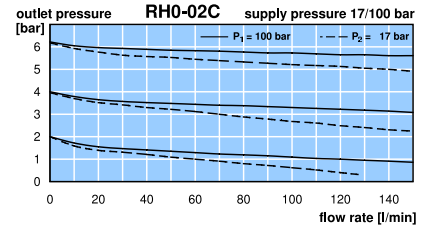
High pressure regulator 241 bar						for gases, non-relieving brass, stainless steel diaphragm	RH0	
41	82	14	0.05	9 ^{*1}	150 ^{*1}	1/4" NPT	0.2 ... 2 0.4 ... 4 0.6 ... 7	RH0-02A RH0-02B RH0-02C

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



Special options, add the appropriate letter

1/8" NPT	connection thread	für RH0	RH0-01.
aluminium body		für RH0	RH0-02. A
stainless steel body		für RH0	RH0-02. S
CTFE seat		für RH0	RH0-02. X52
CTFE seat	for stainless steel body	für RH0	RH0-02. SX52
Vespel seat		für RH1	RH1-02. X45
NBR o-ring		für RH1	RH1-02. N
FKM o-ring		für RH1	RH1-02. V
brass pressure gauge	inlet side HM	outlet side	RH.-02. GM
SST pressure gauge	inlet side H	outlet side	RH.-02. G
for panel mounting		für RH0	RH0-02. P



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

* Product group

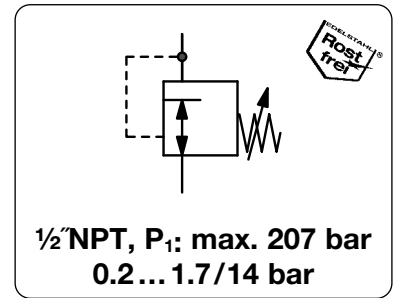
PDF CAD
www.aircom.net

Order example:
RH0-02A

HIGH PRESSURE REGULATOR FOR PURE GASES UP TO 207 BAR

RH2

Description	Diaphragm-operated high pressure regulator of small design and with high flow.		
Media	compressed air, non-corrosive gases or pure gases up to 5.0		
Supply pressure	max. 207 bar		
Test pressure	150 % of maximum supply pressure		
Leakage rate	< 2 x 10 ⁻⁸ mbar l/s He		
Adjustment	by black plastic knob		
Relieving function	non-relieving		
Gauge port	¼" NPT for inlet and outlet pressure, shifted by 60°		
Mounting position	any		
Temperature range	-40 °C to 75 °C / -40 °F to 167 °F		
Material	Body: brass or stainless steel 316	Spring cage: nickel-plated brass	
	Diaphragm: stainless steel 316	Seals: PTFE	
	Valve seat: CTFE	Inner valve: stainless steel 316	



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

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



RH2

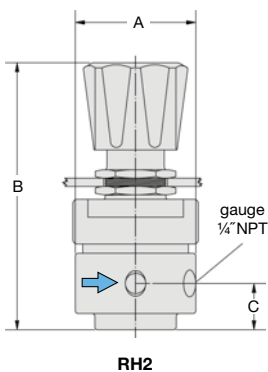
SST pressure regulator, ½" NPT							supply pressure max. 207 bar, non-relieving	RH2
66	150	26	0.9	330	5500	½" NPT	0.2... 1.7	RH2-04AS
							0.2... 3.5	RH2-04BS
							0.5... 7.0	RH2-04CS
							1.0... 10	RH2-04DS
							1.0... 14	RH2-04ES

Special options, add the appropriate letter

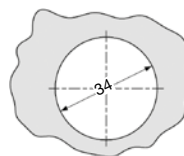
¾" NPT	connection thread		RH2-03.
brass pressure gauge	for brass body,	outlet side	RH2-0...GM
SST pressure gauge	for stainless steel body,	outlet side	RH2-0...G

Accessories, enclosed

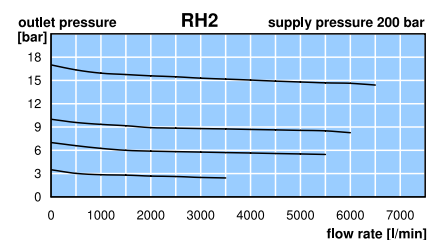
mounting nut	for panel mounting, made of stainless steel	8686-1
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RH2



panel cut-out



*1 at 200 bar supply pressure and 14 bar outlet pressure

* Product group

PDF CAD
www.aircom.net

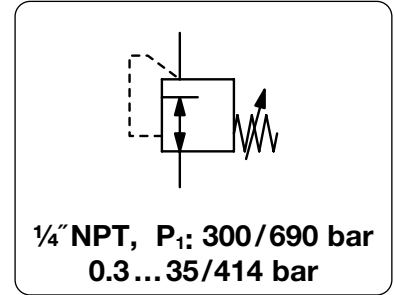


Order example:
RH2-04A

HIGH PRESSURE REGULATOR UP TO 690 BAR

HP300 / HP400

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



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

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

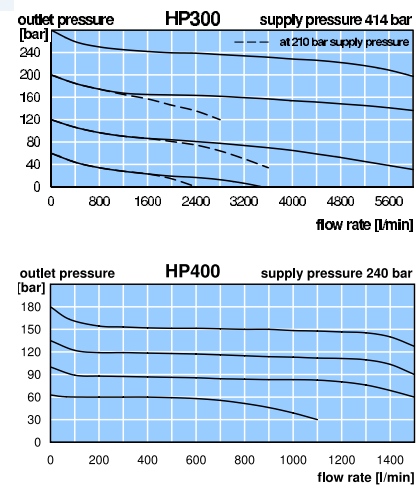
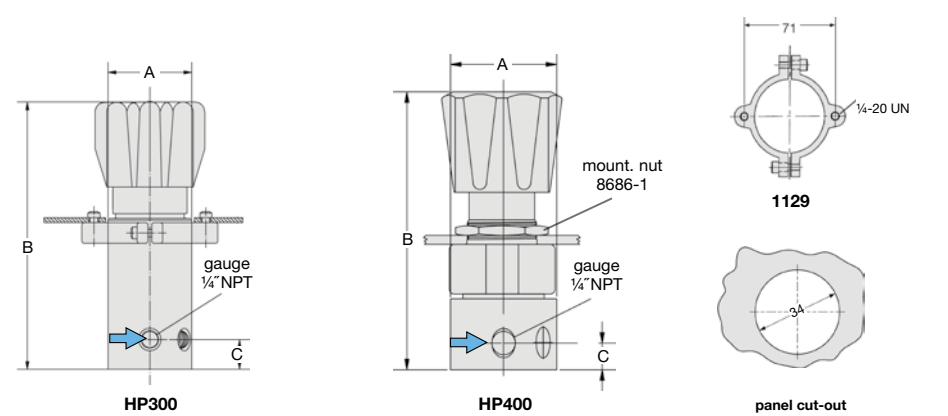


High pressure regulator 414 bar							non-relieving, brass	HP400		
50	137	13	0.05	90	1500	1/4" NPT	0.7 ... 104	HP400-104		
							1.0 ... 172	HP400-170		



Special options, add the appropriate letter			
relieving		HP300-...R	
		HP400-...R	
body made of SST		(690 bar) HP300-...S	
		(414 bar) HP400-...S	
for oxygen	specialy cleaned, P ₁ < 300 bar	for HP300/400	HP.00-...15
for liquids	w/o filter at inlet, valve seat of Nylatron	for HP300	HP300-...W
	w/o filter at inlet, valve seat of Vespel	for HP400	HP400-...W
brass pressure gauge	for brass body, inlet side		HP.00-...HM
	for brass body, outlet side		HP.00-...GM
SST pressure gauge	for stainless steel body, inlet side		HP.00-...H
	for stainless steel body, outlet side		HP.00-...G

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



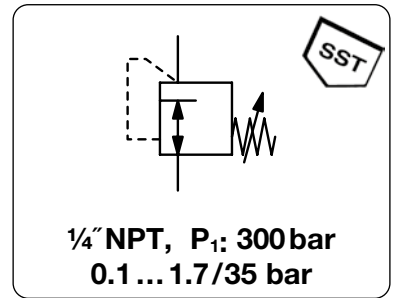
*1 at 240 bar supply pressure and 30 bar outlet pressure

* Product group

HIGH PRESSURE REGULATOR UP TO 300 BAR

HP500

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



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread NPT	Pressure range bar	Order number	D*
A	B	C		m ³ /h*1	l/min*1				

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



HP500

High pressure



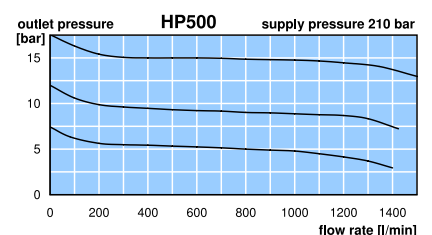
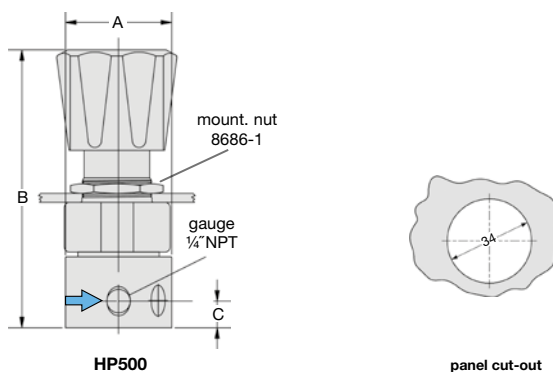
4

Special options, add the appropriate letter

relieving		HP500-...R
body made of SST		HP500-...S
free of grease and oil	suitable for oxygen, P ₁ < 200 bar	HP500-...L
for liquids	w/o filter at inlet, valve seat of Vespel	HP500-...W
brass pressure gauge	for brass body, inlet side	HP500-...HM
	for brass body, outlet side	HP500-...GM
SST pressure gauge	for stainless steel body, inlet side	HP500-...H
	for stainless steel body, outlet side	HP500-...G

Accessories, enclosed

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

* Product group

PDF CAD
www.aircom.net

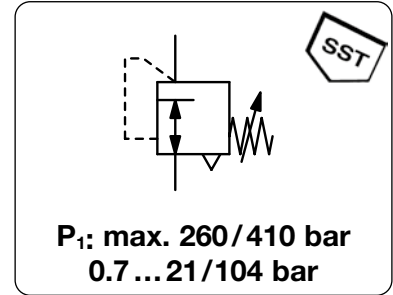


Order example:
HP500-002

HIGH FLOW / HIGH PRESSURE REGULATOR UP TO 410 BAR

RH3

Description	High pressure regulator with high flow and high reliability. Large piston sensor for high sensitivity and balanced stem design for constant downstream pressure.	
Media	compressed air, non-corrosive gases or liquids	
Supply pressure	max. 260 bar, optionally up to 310 bar or 410 bar	
Leakage rate	< 1 x 10 ⁻⁴ mbar l/s He	
Adjustment	by black plastic knob	
Relieving function	relieving, optionally non-relieving	
Gauge port	none, optionally 1/4" NPT for inlet and outlet	
Mounting position	any	
Temperature range	-25 °C to 100 °C / -13 °F to 212 °F	
Material	Body: brass, optionally stainless steel	O-rings: NBR/Buna-N and FKM
	Main valve seat: CTFE, PTFE at RH3-04B	Relieving valve: CTFE, PTFE at RH3-04B/-04C
	Inner valve: PTFE and brass, optionally stainless steel	



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

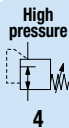
High pressure regulator 260 bar, 1/2" NPT								relieving, brass	RH3
76	203	45	1.7	420	7000	1/2" NPT	0.7 ... 21	RH3-04B	
							1.0 ... 42	RH3-04C	
							1.4 ... 70	RH3-04D	
							3.4 ... 104	RH3-04E	

Special options, add the appropriate letter

3/4" NPT	connection thread		RH3-06
non-relieving	without relieving function		RH3-0 . .K
stainless steel, 310 bar	body: stainless steel 316		RH3-0 . .S1
stainless steel, 410 bar	body: stainless steel 316, add. pre. range 3.4 ... 172 bar (F)		RH3-0 .S2
brass, 345 bar	body: brass, add. pre. range 3.4 ... 172 bar (F)		RH3-0 .U
gauge port	1/4" NPT for inlet and outlet		RH3-0 .M
brass pressure gauge	inlet side MHM	outlet side	RH3-0 . .MGM
SST pressure gauge	inlet side MH	outlet side	RH3-0 . .MG

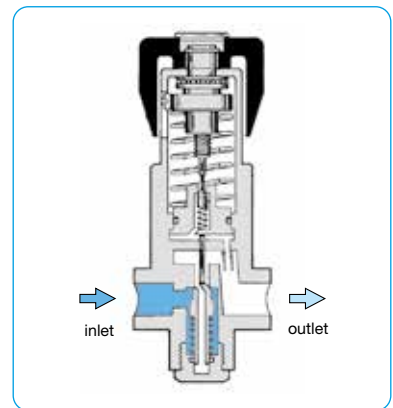


RH3

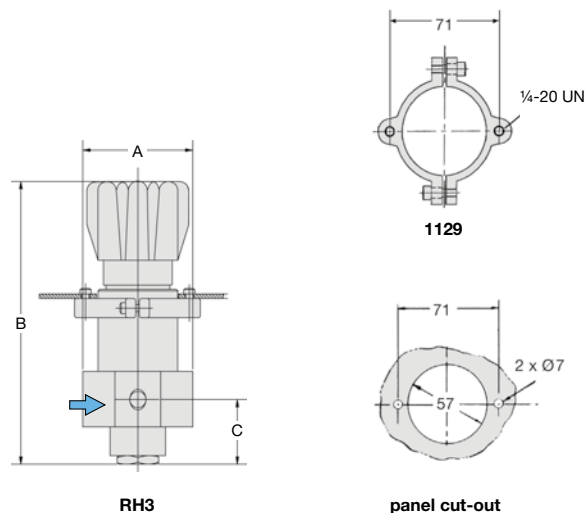


Accessories, enclosed

set of mounting brackets	for panel mounting	1129
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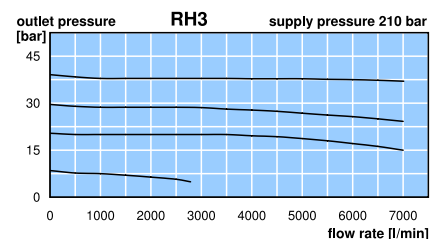
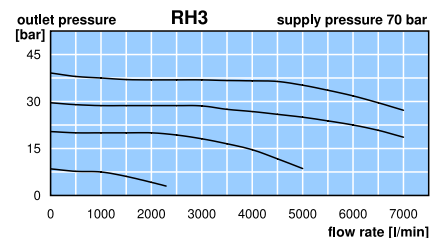
cross-section



RH3

panel cut-out

gauge port, option "M"



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

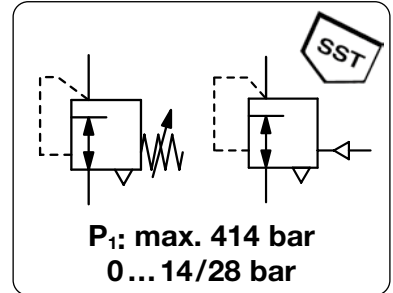
* Product group



HIGH PRESSURE REGULATOR UP TO 414 BAR

RH4

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



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

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



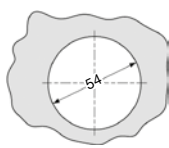
RH4-...S

Special options, add the appropriate letter

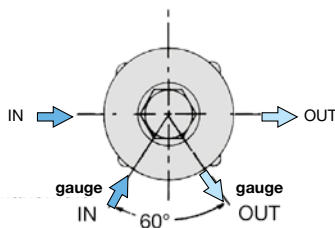
booster version	1/2" NPT, 0...41 bar, brass, diaphragm control, P _{st} = 5.8 bar	RH4-04J1
	piston control	RH4-04J2
non-relieving	without relieving function	RH4-0..K
stainless steel body		RH4-0..S
gauge port	1/4" NPT for inlet and outlet	RH4-0..M
brass pressure gauge	inlet side MHM	outlet side RH4-0..MGM
SST pressure gauge	inlet side MH	outlet side RH4-0..MG

Accessories, enclosed

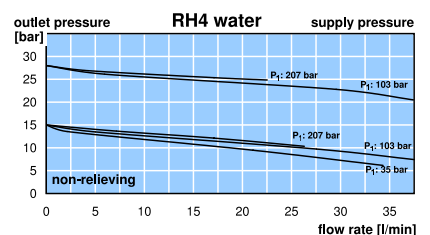
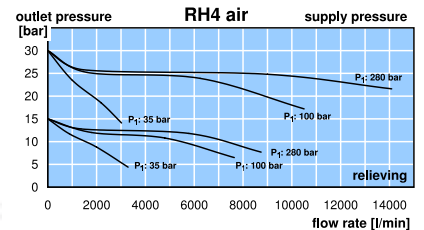
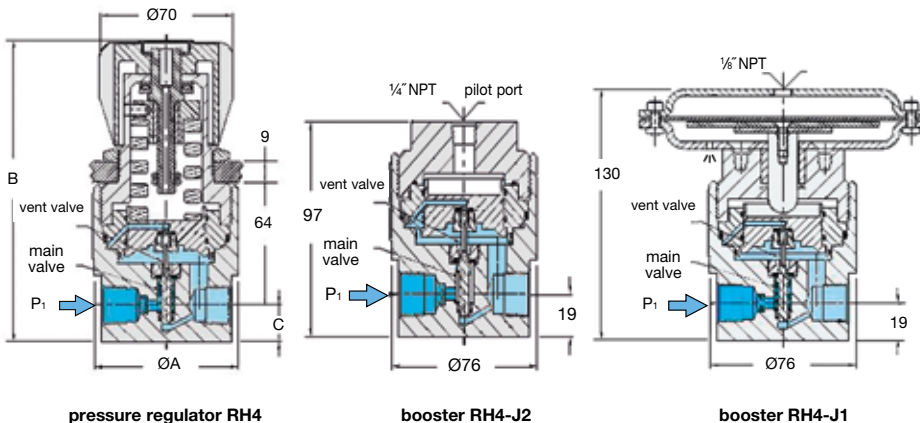
mounting nut for panel mounting 62634



panel cut-out



gauge port, option "M"



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

* Product group

PDF CAD
www.aircom.net

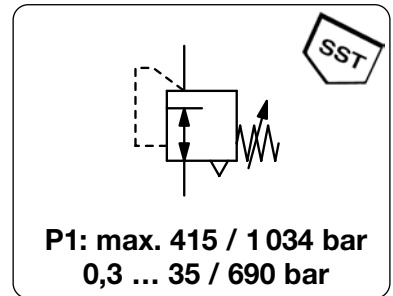


Order example:
RH4-03A

HIGH PRESSURE REGULATOR

HP306

Description	High pressure regulator, piston operated, made of stainless steel, with high sensitivity, excellent accuracy and reliability.		
Media	compressed air and non-corrosive gases or liquids (non-relieving version)		
Supply Pressure	max. 690 bar optionally 415 bar or 1034 bar		
Accuracy	at supply pressure variation of 7 bar: < 100 mbar		
Adjustment	by black plastic adjustment dial		
Relieving Function	standard relieving, optional non-relieving		
Gauge Ports	no ports, optional 1/4" NPT for inlet and outlet pressure, shifted by 60°		
Temperature Range	-40° to 75°C / -40°F to 167°F		
Material	Body: stainless steel 316	Mounting position: any	
	Seal: NBR optional FKM	Spring Cage: stainless steel 300	
	Valve Seat: Vespel	Filter: 40 µm, stainless steel 300, brass by option U	
	Inner Valve: stainless steel 300	Relieving Valve: CTFE	



Dimensions			K _v -value (m³/h)	Flow rate m³/h*1	Flow rate l/min*1	Connection thread NPT	Pressure range bar	Order Number
A	B	ØC						

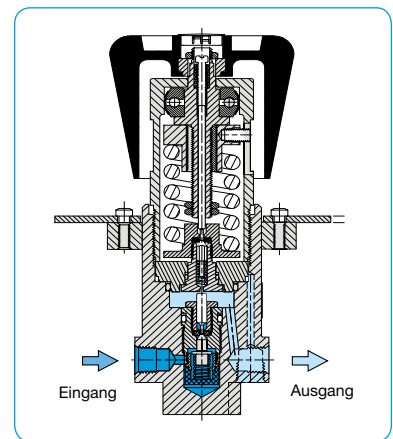
High Pressure Regulator 690 bar			relieving, compressed air, stainless steel, NBR	HP306				
55	175	19	0,05	210	3600	1/4" NPT	0.3 ... 35	HP306-035
				230	3900	1/4" NPT	0.3 ... 55	HP306-055
				280	4800	1/4" NPT	0.7 ... 105	HP306-105
				320	5400	1/4" NPT	1.0 ... 175	HP306-175
				390	6500	1/4" NPT	1.7 ... 275	HP306-280
				420	7000	1/4" NPT	3.4 ... 415	HP306-415
				450	7500	1/4" NPT	14 ... 690	HP306-690



HP306 accessory: mounting bracket

Special options, add the appropriate letter

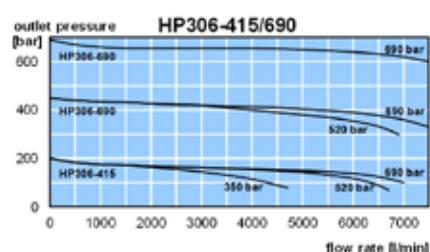
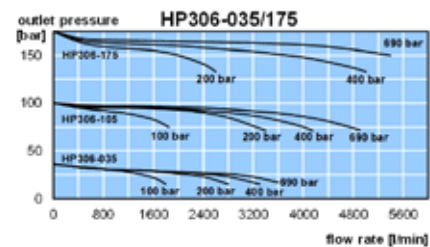
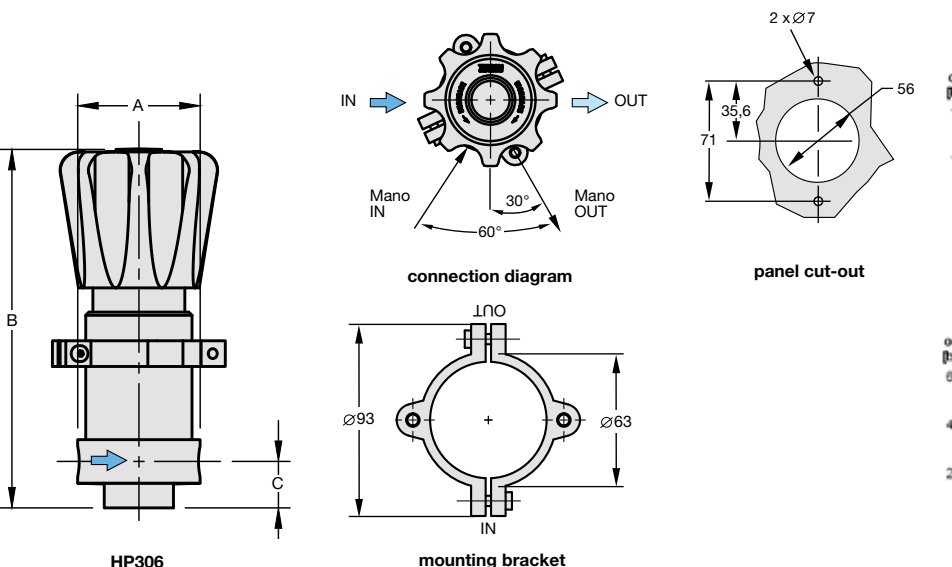
3/8" NPT	connection thread	HP306-...03
1/2" NPT	connection thread not possible by option S	HP306-...04
FKM elastomer		HP306-...V
non-relieving	with FKM elastomer	HP306-...VK
for oxygen	special cleaned, P1 < 200 bar	HP306-...15
inlet pressure 415 bar	brass up to pressure range 3.4 ... 415	HP306-...U
inlet pressure 1034 bar	stainless steel	HP306-...S
tapped exhaust	with FKM elastomer, 1/4" NPT	HP306-...VX12
gauge port	1/4" NPT for inlet and outlet	HP306-...M
gauge brass	inlet side MHM	HP306-...MGM
gauge stainless steel	inlet side MH	HP306-...MG



cross-section

Accessories, enclosed

monting bracket	made of aluminium	1129
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*1 at 690 bar inlet pressure, see diaphragm

* Product group

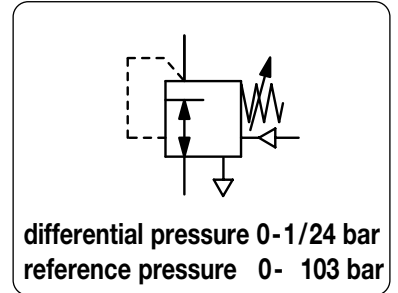
PDF CAD
www.aircom.net

Order example:
HP306-035

DIFFERENTIAL PRESSURE REGULATOR P1: MAX. 414 BAR, P2: 0-103 BAR

RH44

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

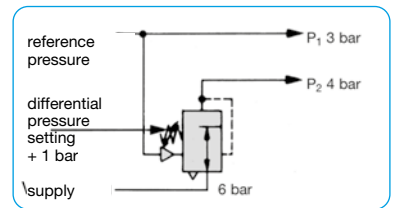


Dimensions			K _v -value (m³/h)	Flow rate l/min*1	Connection thread NPT	Differential pressure range bar	Order number
A mm	B mm	C mm					

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

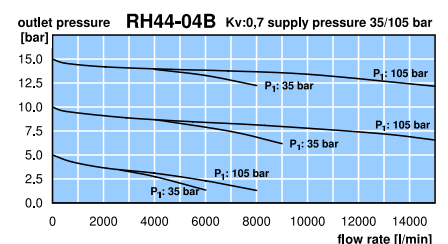
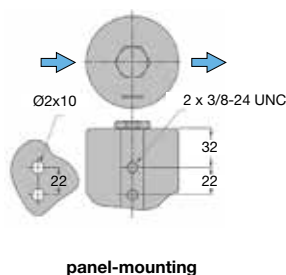
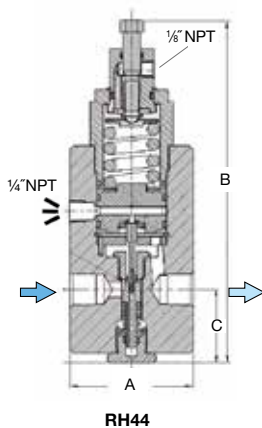
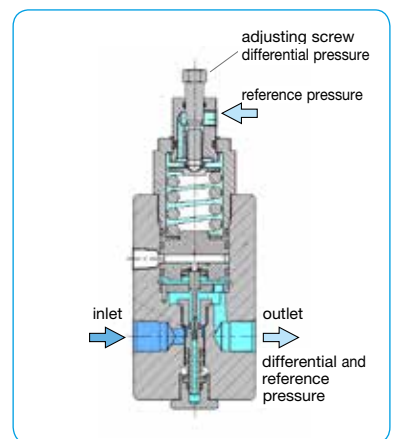


RH44



Special options, add the appropriate letter

body stainless steel RH44-0..S



*1 bei P₁ = 105 bar, P₂ = 15 bar and Δp = 1 bar

* Product group

Stainless steel version: see chapter for stainless steel devices

PDF CAD
www.aircom.net

Order example: RH44-04A

PRECISION PRESSURE REGULATOR

	DESCRIPTION	PRESSURE RANGE bar	CONNECTION thread	DEVICE	PAGE
WITH CONSTANT BLEED	miniature	0.05 ... 2 / 8	G $\frac{1}{8}$ and flange	R90	5.02
	proven	0.02 ... 0.5 / 10	G $\frac{1}{4}$	11-818	5.03
	proven	0.14 ... 1.7 / 8	G $\frac{1}{4}$ and $\frac{1}{4}$ "NPT	53.10	5.04
	many variations	0.01 ... 0.14 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230	5.06
	very precise	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10	5.07
	small design	0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	R300	5.08
	Nullmatic	0.002 ... 0.12 / 31	$\frac{1}{4}$ "NPT	R40	www*
	high exhaust	0.01 ... 3 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03	5.10
	low pressure	0.002 ... 0.35 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.11
	2-stage	0.14 ... 2.7 / 8,2	G $\frac{1}{4}$ - G $\frac{3}{4}$	R700	5.13
	many pressure areas	0.03 ... 0.15 / 14	G $\frac{1}{4}$ - G $\frac{3}{4}$	R410	5.14
	high volume flow	0.001 ... 0.7 / 10	G1 and G1 $\frac{1}{2}$	R102	5.16
	miniature	0.01 ... 0.35 / 7	M5 and flange	RT	www*
	miniature	0.005 ... 0.05 / 1.5	G $\frac{1}{2}$	RR	3.10
	clean room environment, SST	0.05 ... 2 / 4	G $\frac{1}{8}$, M5	RE1	15.04
	stainless steel	0.02 ... 1.5 / 10	G $\frac{1}{4}$ and G $\frac{1}{2}$	R3150	15.05
	WITHOUT CONSTANT BLEED	robust, low cost	0.01 ... 0.6 / 3.5	G $\frac{1}{4}$ and G $\frac{3}{8}$	R216
non-relieving		0.01 ... 0.14 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-K	5.06
non-relieving		0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10-N	5.07
small design		0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	R300-K	5.08
high volume flow		0.03 ... 0.7 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R100	5.09
non-relieving		0.002 ... 0.35 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110-K	5.11
robust		0.01 ... 0.5 / 16	G $\frac{1}{4}$	R217	5.12
high-precision		0.03 ... 0.7 / 17	G $\frac{3}{8}$ - G $\frac{3}{4}$	R400	5.15
non-relieving		0.03 ... 0.15 / 14	G $\frac{3}{8}$ - G $\frac{3}{4}$	R410-K	5.14
non-relieving		0.001 ... 0.7 / 10	G1 and G1 $\frac{1}{2}$	R102-K	5.16
differential pressure regulator		0.01 ... 1 / 10	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	6.04
miniature		0.2 ... 2 / 9	flange	R342	www*
miniature		0.2 ... 2 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	www*
miniature		0.1 ... 3 / 6	G $\frac{1}{8}$	R309	1.14
miniature		0.2 ... 2.5 / 8	G $\frac{1}{8}$	R307	1.16
miniature		0.2 ... 0.25 / 8	flange	R308	1.17



* visit our webshop: www.aircom.net

5

Precision



5

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

Media max. 10 bar

Supply pressure response sensitivity: $\pm 0.2\%$ FS

Accuracy repeatability: $\pm 0.3\%$ FS

Air consumption supply sensitivity: 35 mbar for a 7 bar supply pressure change

Adjustment max. 3 l/min at 10 bar supply pressure. Consumption depends on supply pressure.

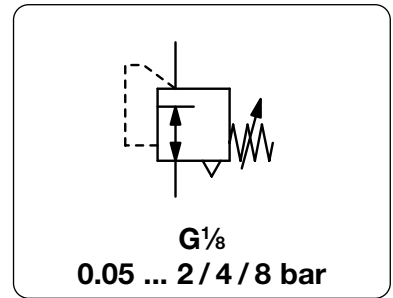
Relieving function by handwheel with locknut

Gauge port relieving

Mounting position G $\frac{1}{8}$ on both sides of the body, screw plug supplied

Temperature range any

Material 10 °C to 70 °C / 50 °F to 158 °F
 Body: zinc die-cast
 Elastomer: NBR/Buna-N
 Inner valve: stainless steel and brass



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

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



R90

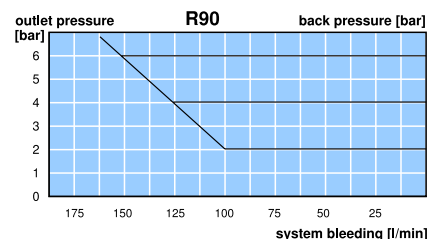
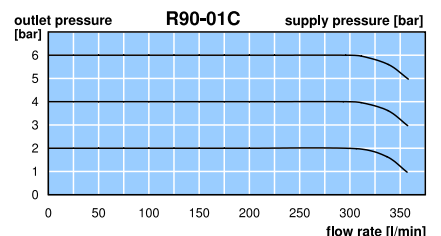
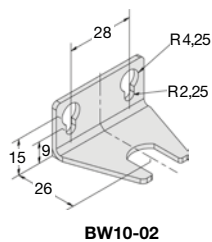
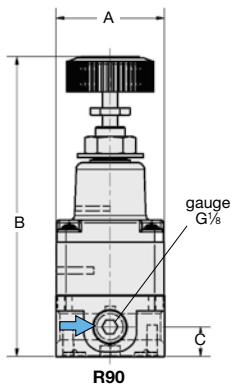
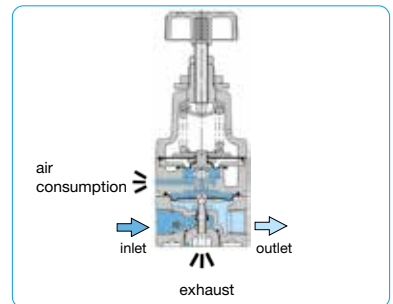
Precision



5

Accessories, enclosed

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



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

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

* Product group

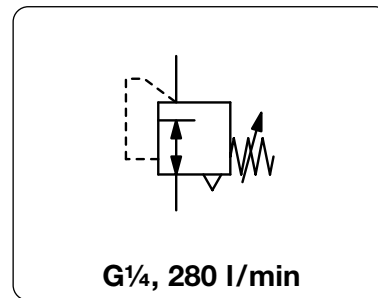


Order example:
R90-01A

PRECISION PRESSURE REGULATOR

11-818

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

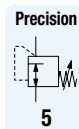


Dimensions			Description	P ₁ max.	Flow rate	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm		bar	l/min*1	G	bar	

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

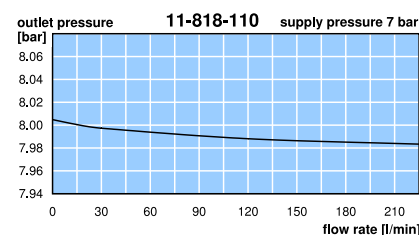
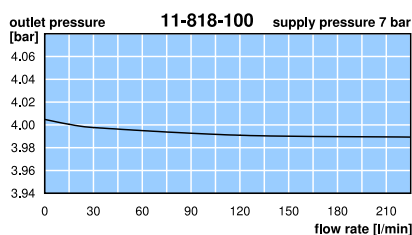
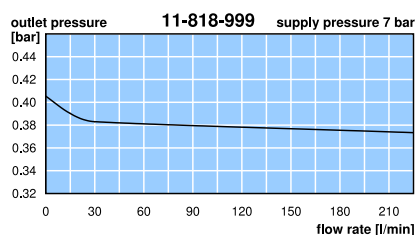
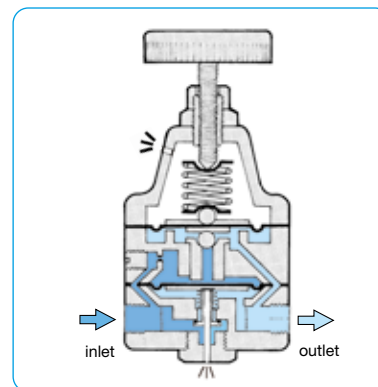
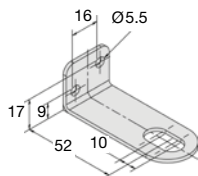
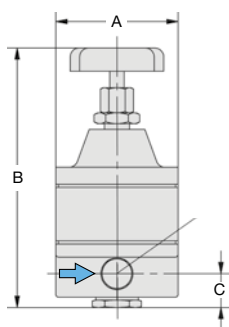
Special options, add the appropriate letter

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



Accessories, enclosed

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



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

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

* Product group

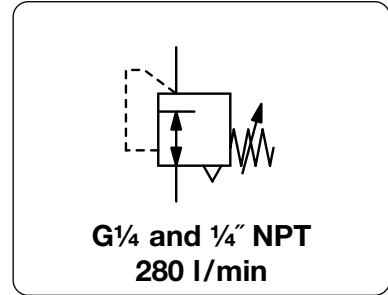
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
11-818-999

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



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

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



53.1002.6X

Precision



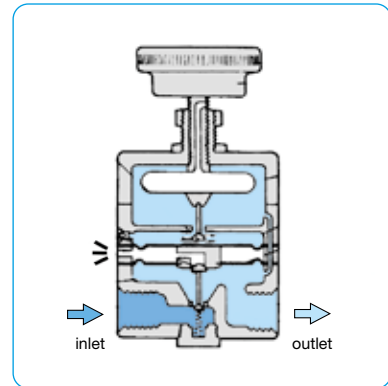
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Special options, add the appropriate letter

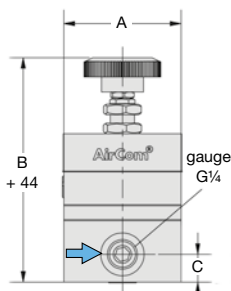
tamper-proof cap aluminium, adjustment by screwdriver, total height 109 mm 53.1. T

Accessories, enclosed

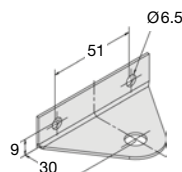
pressure gauge Ø 50 mm, 0 ... *2 bar, G¼ **MA5002-...*2**
connecting parts gauge for NPT ports, adapter ¼" NPT - G¼ female **VP-0202N**
mounting bracket made of steel, mounting nut at the device **BW11-01**



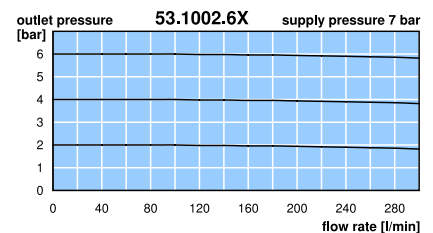
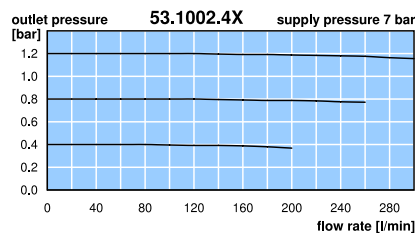
cross-section



53.10...



BW11-01



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

* Product group

Gauges: see chapter for measuring devices

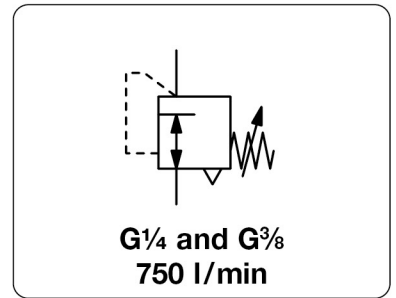
PDF CAD
www.aircom.net



Order example:
53.1002.4X

PRECISION REGULATOR WITHOUT CONSTANT BLEED, UP TO 3.5 BAR OUTLET PRESSURE R216

Description	Diaphragm pressure regulator with good regulation accuracy at varying volume flow, especially at low pressure.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 21 bar		
Accuracy	response sensitivity: < 100 mbar		
Air consumption	without constant bleed		
Adjustment	by T-handle with locknut, mounting bracket not possible by handwheel, suitable for panel mounting		
Relieving function	relieving, optionally non-relieving		
Gauge port	G $\frac{1}{8}$ on the bottom side of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for handwheel version 0 °C to 80 °C / 32 °F to 176 °F for T-handle version		
Material	Body: zinc die-cast	Elastomer: NBR/Buna-N	Bottom screw: brass



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

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



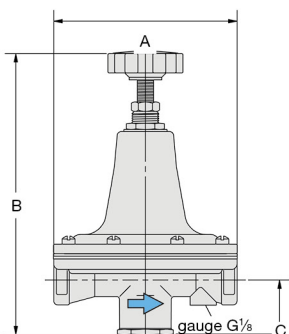
R216-02F

Special options, add the appropriate letter

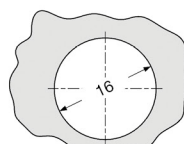
non-relieving	without relieving function	R216-0...K
NPT	connection thread	R216-0...N
free of oil and grease	specially cleaned	R216-0...L

Accessories, enclosed

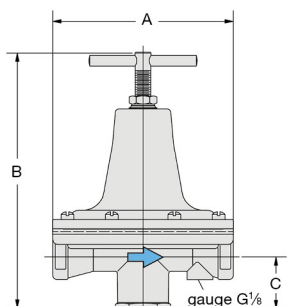
pressure gauge	Ø 63 mm, 0... ² bar, G $\frac{1}{4}$, connection parts required	MA6302-...²
connection parts	for pressure gauge	AM-02
mounting bracket	made of steel, mounting nut at the device for R216-0...P	BW20-02



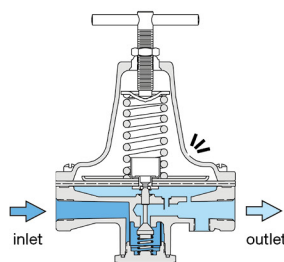
R216-...P



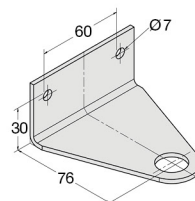
panel cut-out



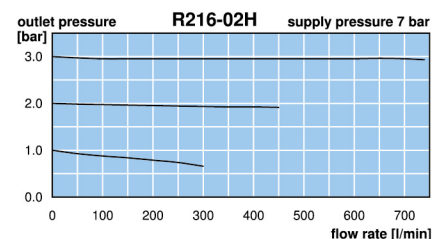
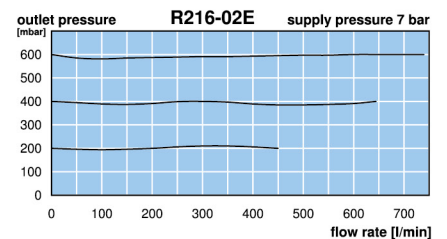
R216



cross-section



BW20-02



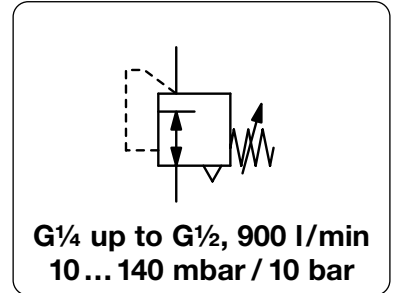
*1 at 7 bar supply pressure and 3 bar outlet pressure

*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar

* Product group



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



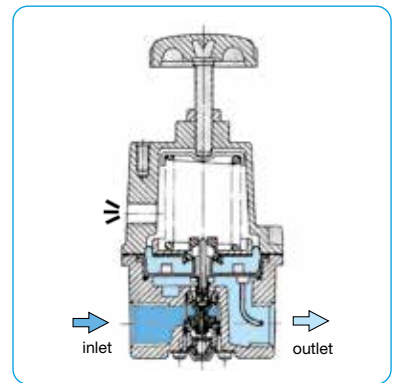
Dimensions			K _v -value (m ³ /h)	Flow rate m ³ /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					
mm	mm	mm					

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



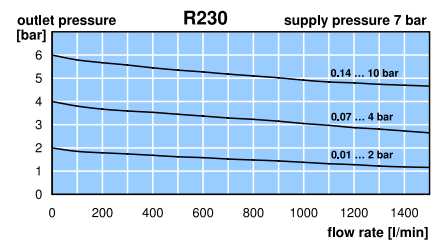
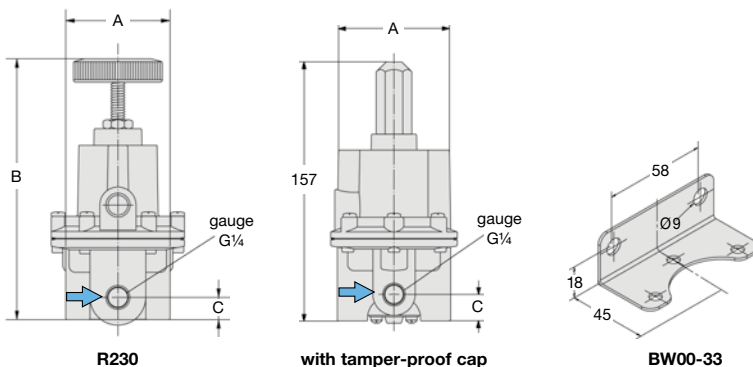
Special options, add the appropriate letter

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



Accessories, enclosed

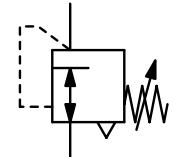
pressure gauge	Ø 63 mm, 0...160 mbar, G $\frac{1}{4}$, capsule type	MA6302-C2
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$, Bourdon tube	MA5002-...*2
gauge connectors	NPT connection thread, adapter $\frac{1}{4}$ " NPT to G $\frac{1}{4}$ female	VP-0202N
mounting bracket	made of steel	BW00-33



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

* Product group

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



**G $\frac{1}{4}$ up to G $\frac{1}{2}$, 1000 l/min
10 ... 140 mbar / 28 bar**

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

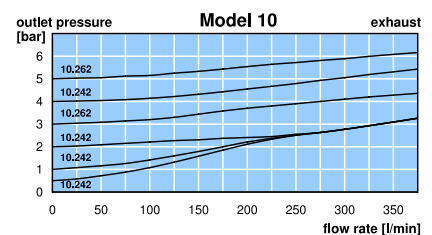
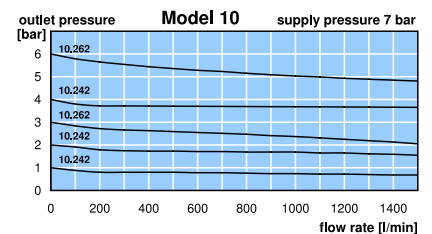
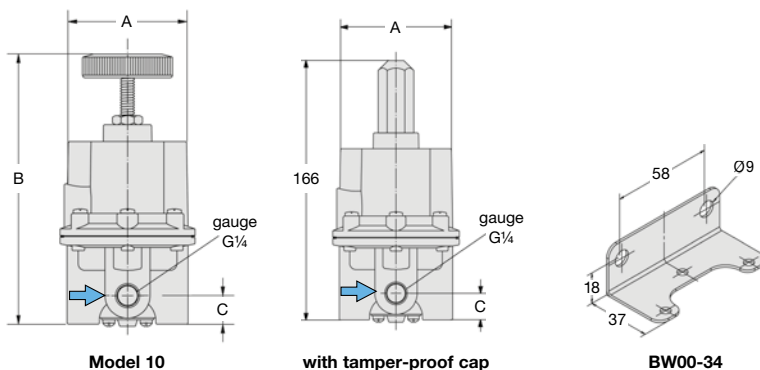
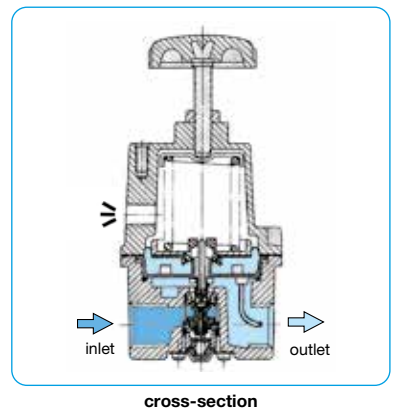
Precision pressure regulator							supply pressure max. 35 bar, relieving, with constant bleed	Model 10
67	169	26	0.64	60	1000	G $\frac{1}{4}$	0.01 ... 0.14	10212H
							0.01 ... 0.7	10222H
							0.01 ... 1.4	10202H
							0.01 ... 2.1	10232H
							0.07 ... 4.1	10242H
							0.14 ... 10	10262H
		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

Special options, add the appropriate letter

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

Accessories, enclosed

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



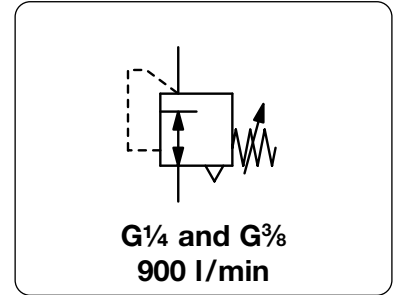
*1 at 7 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*2 01 = 0 ... 1 bar, 02 = 0 ... 2.5 bar, 06 = 0 ... 6 bar, 10 = 0 ... 10 bar, 16 = 0 ... 16 bar, 25 = 0 ... 25 bar, 60 = 0 ... 60 bar

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

Order example:
10212H

Description	Diaphragm pressure regulator of small and lightweight design with high flow capacity. It provides sensitive adjustment accurate to 2 mbar.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 18 bar	
Accuracy	setting accuracy:	< 2 mbar
	response sensitivity:	< 2 mbar
Air consumption	max. 3 l/min, subject to outlet pressure	
Adjustment	by handwheel with locknut	
Relieving function	relieving	
Relief capacity	55 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
Gauge port	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied	
Temperature range	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F	
Material	Body:	aluminium die-cast
	Inner valve:	brass, galvanized steel
	Elastomer:	NBR/Buna-N, optionally FKM



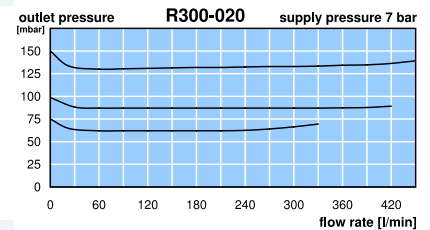
Dimensions			K _v -value (m ³ /h)	Flow rate m ³ /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					

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



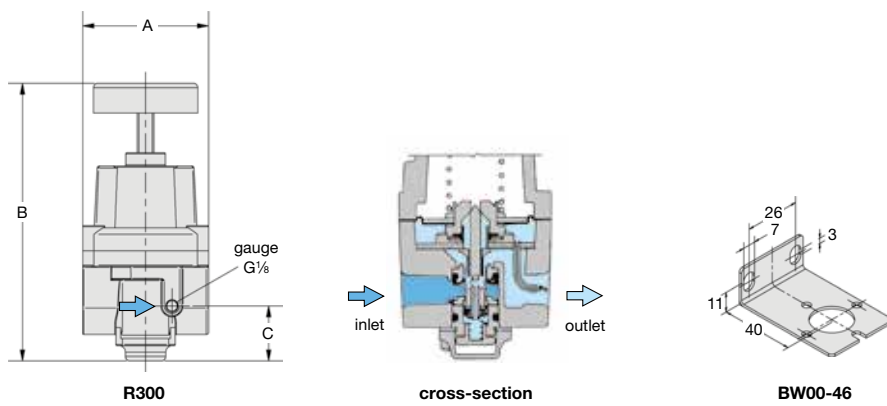
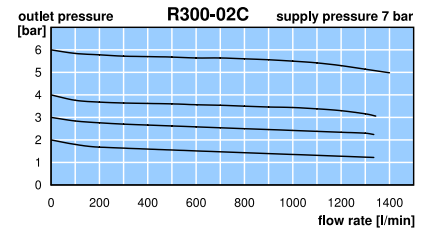
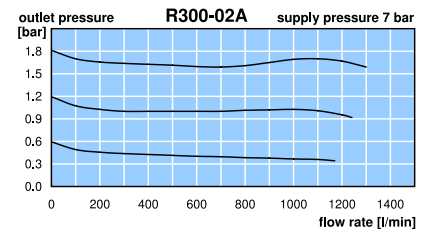
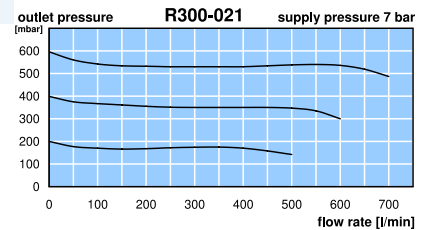
Special options, add the appropriate letter

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



Accessories, enclosed

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



*1 at 7 bar supply pressure and 1.4 bar outlet pressure
*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, C2 = 160 mbar

Gauges: see chapter for measuring devices

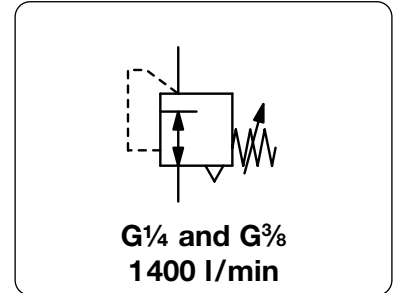
PDF CAD
www.aircom.net

* Product group
Order example:
R300-020

PRECISION PRESSURE REGULATOR WITHOUT CONSTANT BLEED

R100

Description	Regulator provides precision regulation in high flow and high relief applications.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 18 bar		
Accuracy	at supply pressure variation of 7 bar: < 7 mbar pressure deviation response sensitivity: < 2 mbar		
Air consumption	without constant bleed		
Adjustment	by handwheel with locknut		
Relieving function	relieving		
Relief capacity	200 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		Mounting position any
Temperature range	0 °C to 80 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
Material	Body: zinc die-cast	Inner valve: aluminium, brass and neoprene	Elastomer: NBR/Buna-N



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread G	Pressure range bar	Order number	D*
A	B	C		m ³ /h*1	l/min*1				

Precision pressure regulator							supply pressure max. 18 bar, relieving, without constant bleed	R100
54	129	25	0.73	78	1300	G $\frac{1}{4}$	0.03 ... 0.7	R100-021
							0.03 ... 2.0	R100-02A
							0.07 ... 4.0	R100-02B
							0.14 ... 10	R100-02C
54	129	25	0.78	84	1400	G $\frac{3}{8}$	0.03 ... 0.7	R100-031
							0.03 ... 2.0	R100-03A
							0.07 ... 4.0	R100-03B
							0.14 ... 10	R100-03C



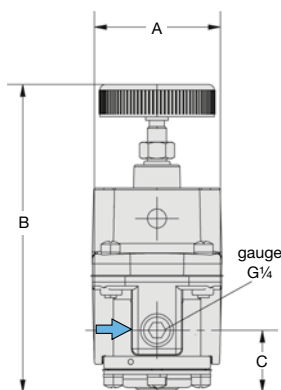
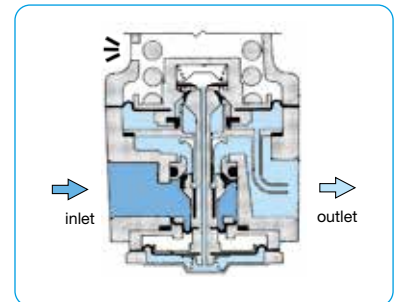
R100

Special options, add the appropriate letter

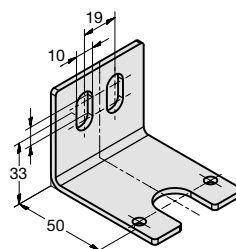
NPT	connection thread	R100-0...N
tamper-proof cap	aluminium, adjustment by screwdriver, total height 139 mm	R100-0...T

Accessories, enclosed

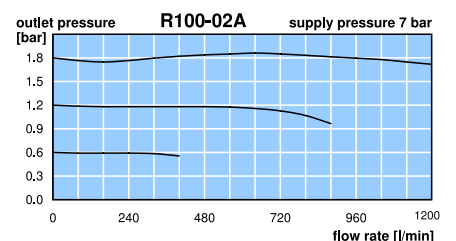
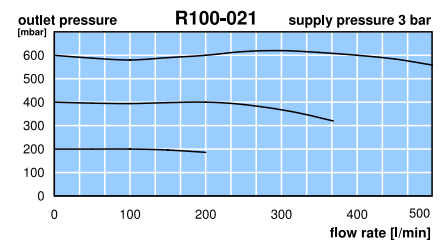
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel, including mounting screws	BW20-04



R100



BW20-04



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

Gauges: see chapter for measuring devices

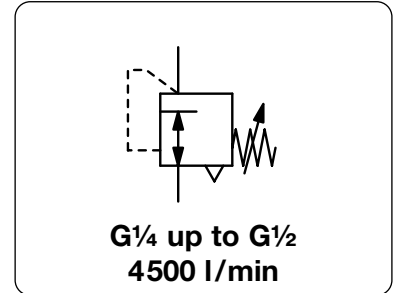
PDF CAD
www.aircom.net

* Product group



Order example:
R100-021

Description	Regulator provides precision regulation in high flow and high relief applications. The regulator is silicone-free and suitable for panel mounting.	
Media	oil-free and 5 µm filtered compressed air or non-corrosive gases	
Supply pressure	max. 16 bar	
Accuracy	at supply pressure change from 2 bar to 7 bar: < 6 mbar pressure deviation at volume flow change from 0 l/min to 20 l/min: < 20 mbar pressure deviation response sensitivity: < 4 mbar	
Air consumption	< 1.5 l/min at P ₁ = 5 bar, < 2 l/min at P ₁ = 7 bar, < 4 l/min at P ₁ = 10 bar, < 1% of volume flow	
Adjustment	by handwheel with locknut, suitable for panel mounting	
Relieving function	relieving	
Relief capacity	700 l/min at 6 bar outlet and 0.35 bar overpressure above setpoint	
Gauge port	G _{1/4} on both sides of the body, one screw plug supplied	Mounting position any
Temperature range	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -35 °C / -31 °F	
Material	Body: zinc die-cast	Elastomer: NBR/Buna-N



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

Precision pressure regulator							supply pressure max. 16 bar, relieving, with constant bleed	R03
82	200	41	2.1	198	3300	G _{1/4} *3	0.01 ... 3	R03-02A
							0.02 ... 5	R03-02B
							0.04 ... 7	R03-02C
							0.05 ... 10	R03-02D
82	200	41	2.4	228	3800	G _{3/8} *3	0.01 ... 3	R03-03A
							0.02 ... 5	R03-03B
							0.04 ... 7	R03-03C
							0.05 ... 10	R03-03D
82	200	41	2.9	270	4500	G _{1/2}	0.01 ... 3	R03-04A
							0.02 ... 5	R03-04B
							0.04 ... 7	R03-04C
							0.05 ... 10	R03-04D

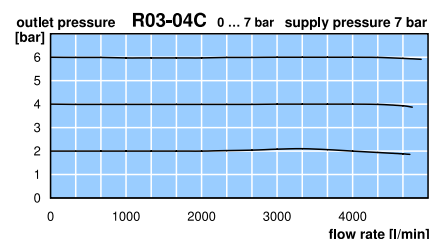
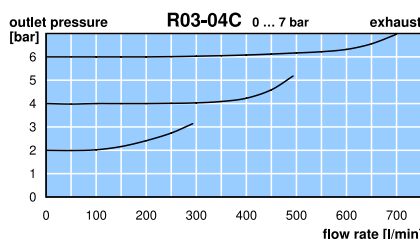
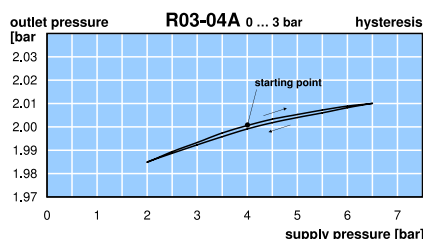
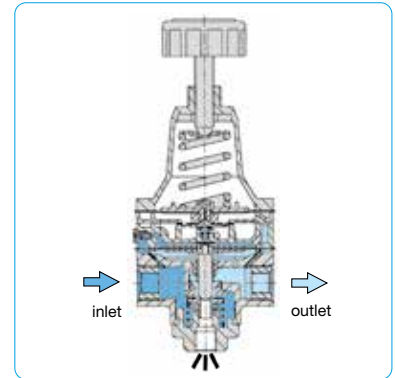
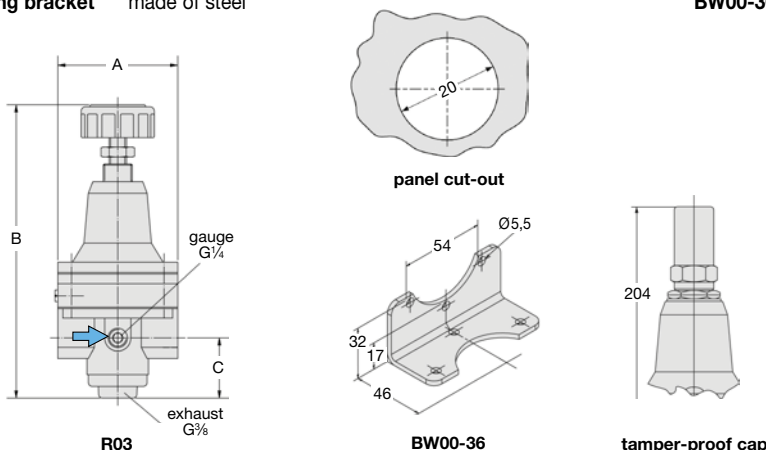


Special options, add the appropriate letter

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

Accessories, enclosed

pressure gauge Ø 50 mm, 0...*2 bar, G_{1/4} MA5002-...*2
mounting bracket made of steel BW00-36



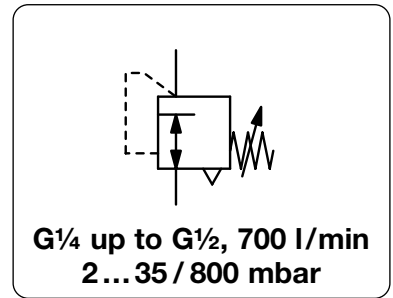
*1 at 7 bar supply pressure and 6 bar outlet pressure
 *2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar
 *3 standard unit G_{1/2} is reduced to smaller threads by fittings

* Product group

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

Order example: R03-02A

Description	Diaphragm regulator with small dimensions. Suitable for low pressure and high accuracy applications. Its special diaphragm ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
Media	compressed air or non-corrosive gases	
Recommendation	connection thread G $\frac{1}{2}$ for pressure range 0...35 / 140 / 280 mbar	
Supply pressure	max. 10 bar	
Accuracy	response sensitivity: < 0,2 mbar	Air consumption max. 2 l/min depending on outlet pressure
Adjustment	by handwheel with locknut	
Relieving function	relieving, optionally non-relieving	Relief capacity 14 l/min at 7 mbar above setpoint 70 mbar
Gauge port	G $\frac{1}{4}$ on both sides of the body, optionally $\frac{1}{4}$ NPT	
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 Inner valve: stainless steel and galvanised steel Elastomer: NBR/Buna-N, optionally FKM	



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread G	Pressure range mbar	Order number	D*
A	B	C		m ³ /h*1	l/min*1				

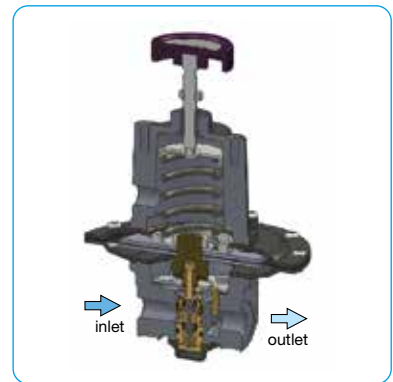
Precision regulator for low pressure								supply pressure max. 10 bar, relieving, with constant bleed	R110
67	180	25	0.4	42	700	G $\frac{1}{4}$	2... 35	R110-020	
							2... 140	R110-02A	
							2... 280	R110-02B	
							2... 400	R110-02C	
							2... 800	R110-02D	
67	180	25	0.4	42	700	G $\frac{1}{2}$	2... 35	R110-040	
							2... 140	R110-04A	
							2... 280	R110-04B	
							2... 400	R110-04C	
							2... 800	R110-04D	



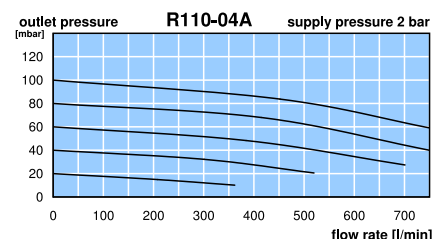
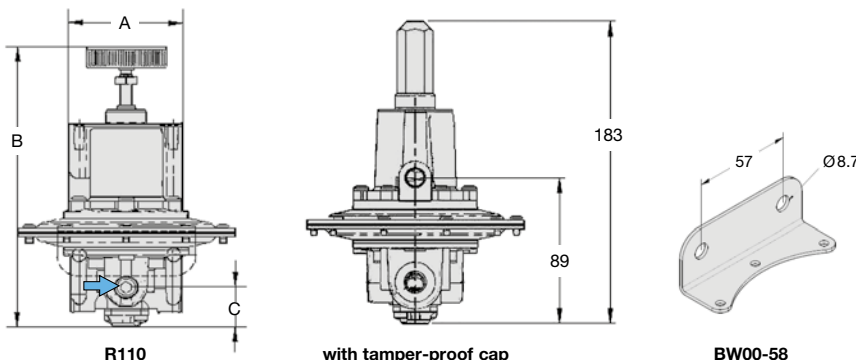
R110

Special options, add the appropriate letter		
G $\frac{3}{8}$	connection thread	R110-03 .
NPT	connection thread	R110-0 . .N
non-relieving	without constant bleed	R110-0 . .K
reduced bleeding	ca. 1 l/min	R110-0 . .X19
tapped exhaust	connection thread G $\frac{1}{4}$	R110-0 . .X12
FKM elastomer		R110-0 . .V
tamper-proof cap	aluminium, adjustment by screwdriver, total height 183 mm	R110-0 . .T

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



cross-section

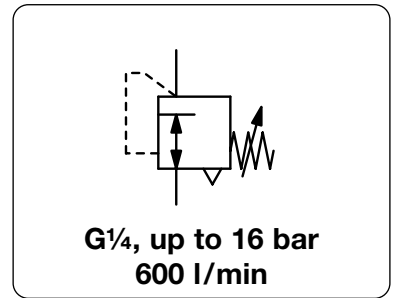


*1 at 7 bar supply pressure, 800 mbar outlet pressure and 40 mbar pressure drop
*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar

* Product group

PRECISION REGULATOR WITHOUT CONSTANT BLEED, UP TO 16 BAR OUTLET PRESSURE R217

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



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

Precision pressure regulator							supply pressure max. 16 bar, relieving, without constant bleed	R217
82	148	20	0.3	36	600	G $\frac{1}{4}$	0.01 ... 0.5	R217-020
							0.01 ... 1	R217-02A
							0.20 ... 3	R217-02B
							0.40 ... 6	R217-02C
							0.50 ... 10	R217-02D
							0.70 ... 16	R217-02E



R217

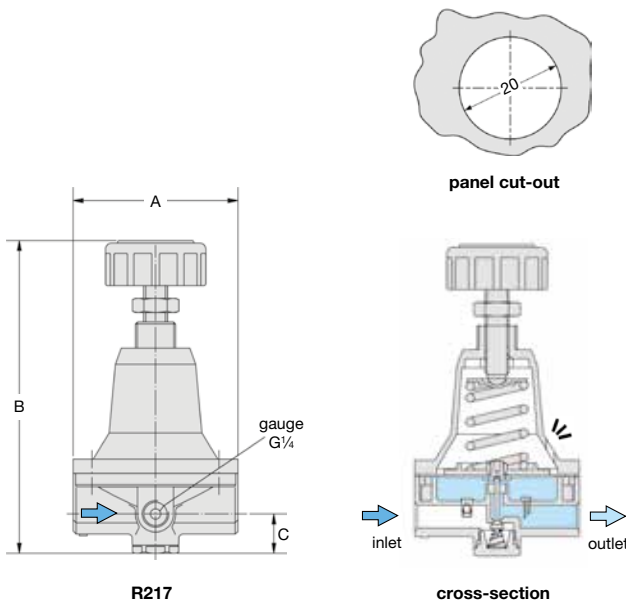
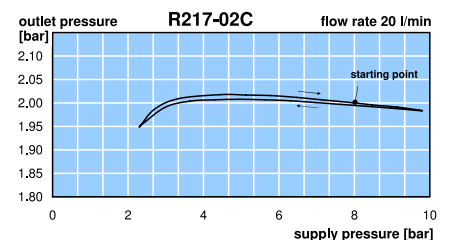
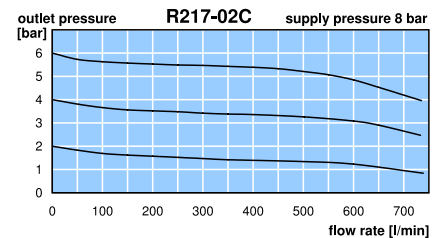
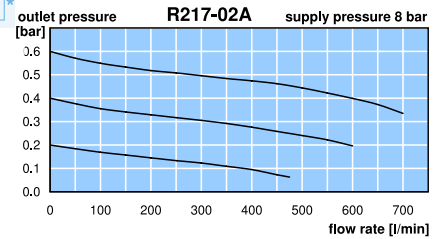
Precision



5

Special options,	add the appropriate letter	
free of grease and oil	specially cleaned	R217-0...L

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



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

* Product group

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
R217-02A

HIGH-PRECISION TWO-STAGE PRECISION REGULATOR

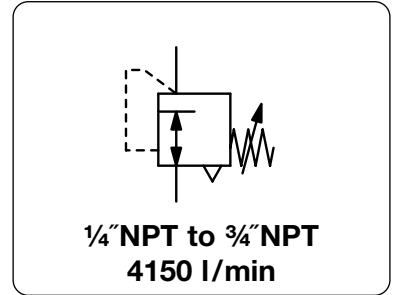
R700

Description

The diaphragm regulator provides high-precision two-stage regulation in high flow and high relief applications. A special diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations.

Media
Supply pressure
Accuracy
Air consumption
Relieving function
Relief capacity
Gauge port
Mounting position
Temperature range
Material

compressed air or non-corrosive gases
 max. 17 bar
 response sensitivity: < 2 mbar
 max. 3 l/min in depending on outlet pressure
 relieving
 1000 l/min at 5 bar outlet and 0.35 bar overpressure above setpoint
 ¼" NPT on both sides of the body
 any
 0 °C to 71 °C / 32 °F to 160 °F, for appropriately conditioned compressed air down to -29 °C / -29 °F
 Body: aluminium die-cast
 Elastomer: NBR/Buna-N
 Inner valve: stainless steel, brass and aluminium



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread NPT	Pressure range bar	Order Number
A	B	C		m ³ /h*1	l/min*1			

Precision pressure regulator							supply pressure max. 17 bar, relieving, with constant bleed	R700
92	176	25	2.0	100	1600	¼" NPT	0.14 ... 2.7 0.14 ... 4.1 0.14 ... 8.2	R700-02A R700-02B R700-02C
92	176	25	4.3	220	3600	½" NPT	0.14 ... 2.7 0.14 ... 4.1 0.14 ... 8.2	R700-04A R700-04B R700-04C
92	176	25	5.0	250	4150	¾" NPT	0.14 ... 2.7 0.14 ... 4.1 0.14 ... 8.2	R700-06A R700-06B R700-06C



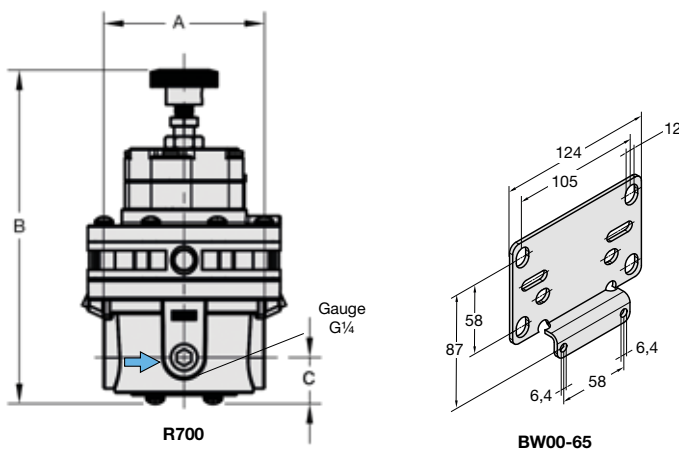
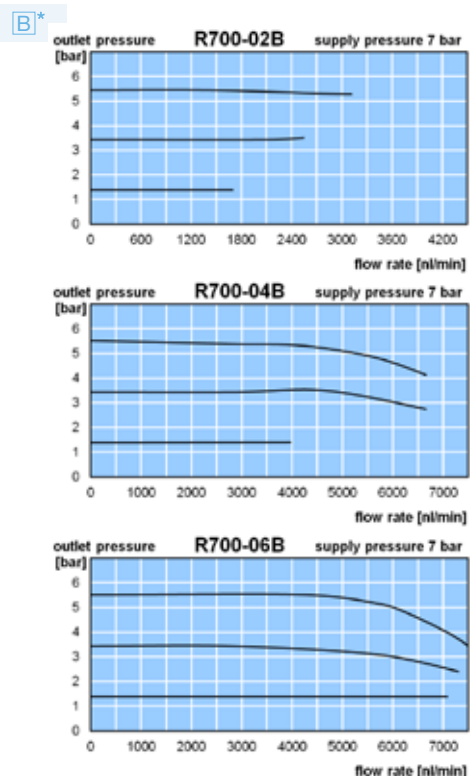
R700

Special options, add the appropriate letter

tapped exhaust	connection thread ¼" NPT	R700-0 . . X12
tamper-proof cap	aluminium, adjustment by screwdriver, total height 173 mm	R700-0 . . T

Accessories, enclosed

pressure gauge	Ø 63 mm, 0...*2 bar, G¼	MA6302-...*2
Gauge connectors	NPT connection thread, adapter ¼" NPT to G¼ female	VP-0202N
Mounting bracket	made of steel	BW00-65



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

* Product group

Gauges: see chapter for measuring devices

PDF CAD
 www.aircom.net



Order example:
 R700-02A

PRECISION PRESSURE REGULATOR WITH CONSTANT BLEED

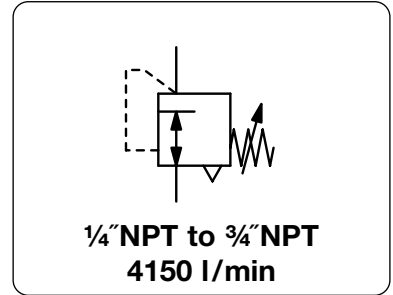
R410

Description

The diaphragm regulator provides high-precision regulation in high flow and high relief applications. A special diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations.

- Media** compressed air or non-corrosive gases
- Supply pressure** max. 17 bar
- Accuracy** response sensitivity: < 2 mbar
- Air consumption** max. 3 l/min depending on outlet pressure
- Relieving function** relieving, optionally non-relieving
- Relief capacity** 850 l/min at 5 bar outlet and 0.35 bar overpressure above setpoint
- Gauge port** 1/4" NPT on both sides of the body
- Mounting position** any
- Temperature range** 0 °C to 93 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
- Material** Body: Aluminium die-cast
Elastomer: NBR
Inner valve: stainless steel, brass and aluminium

compressed air or non-corrosive gases
max. 17 bar
response sensitivity: < 2 mbar
max. 3 l/min depending on outlet pressure
relieving, optionally non-relieving
850 l/min at 5 bar outlet and 0.35 bar overpressure above setpoint
1/4" NPT on both sides of the body
any
0 °C to 93 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
Body: Aluminium die-cast
Elastomer: NBR
Inner valve: stainless steel, brass and aluminium

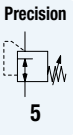


Dimensions			K _v -Value	Flow rate		Connection thread	Pressure range	Order number	D*
A	B	C		(m ³ /h)	m ³ /h*1				

Precision pressure regulator							supply pressure max. 17 bar, relieving, with constant bleed	R410		
92	194	25	1.7	100	1600	1/4" NPT	0.03 ... 0.15	R410-02A	D*	
							0.03 ... 0.7	R410-02B		
							0.03 ... 2.0	R410-02C		
							0.07 ... 4.0	R410-02D		
							0.07 ... 7.0	R410-02E		
							0.15 ... 10	R410-02F		
							0.15 ... 14	R410-02G		
92	194	25	3.7	200	3300	1/2" NPT	0.03 ... 0.15	R410-04A	D*	
							0.03 ... 0.7	R410-04B		
							0.03 ... 2.0	R410-04C		
							0.07 ... 4.0	R410-04D		
							0.07 ... 7.0	R410-04E		
							0.15 ... 10	R410-04F		
							0.15 ... 14	R410-04G		
92	194	25	4.3	250	4150	3/4" NPT	0.03 ... 0.15	R410-06A	D*	
							0.03 ... 0.7	R410-06B		
							0.03 ... 2.0	R410-06C		
							0.07 ... 4.0	R410-06D		
							0.07 ... 7.0	R410-06E		
							0.15 ... 10	R410-06F		
							0.15 ... 14	R410-06G		



R410

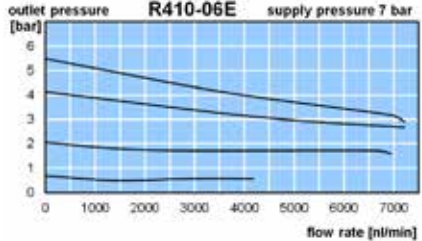
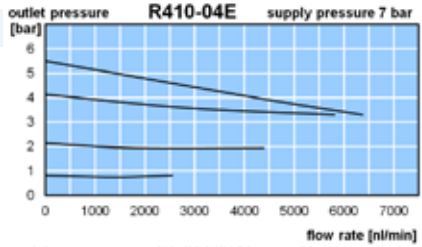
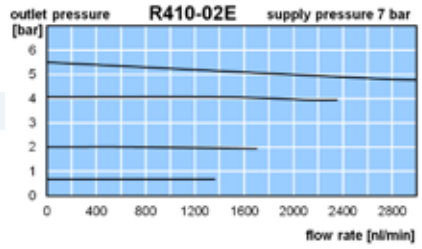
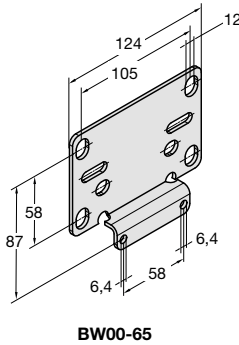
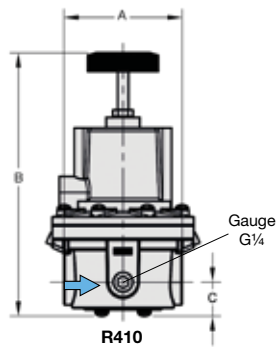


Special options, add the appropriate letter

- non-relieving** without constant bleed R410-0..K
- tapped exhaust** connection thread 1/4" NPT R410-0..X12
- tamper-proof-cap** of aluminium, adjustment by screwdriver, total height 295 mm R410-0..T

Accessories, enclosed

- pressure gauge** Ø 63 mm, 0...*1 bar, G1/4 MA6302-...*1
- gauge connectors** NPT connection thread, adapter 1/4" NPT to G1/4 female VP-0202N
- mounting bracket** made of steel BW00-65



*1 bei 01 = 0...1 bar, 02 = 0...2,5 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

PDF CAD
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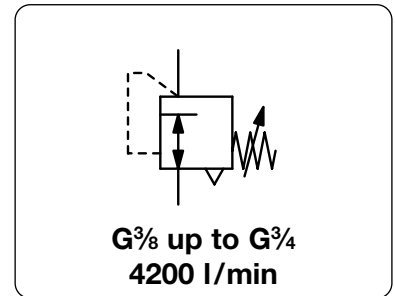
* Product group

Order example:
R410-02A

PRECISION PRESSURE REGULATOR WITHOUT CONSTANT BLEED

R400

Description	The diaphragm regulator provides high-precision regulation in high flow and high relief applications. A special diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 18 bar	
Accuracy	response sensitivity: < 2 mbar	
Air consumption	without constant bleed	
Adjustment	by handwheel with locknut	
Relieving function	relieving	
Relief capacity	1000 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 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 bar	Order number
A	B	C		m ³ /h*1	l/min*1			

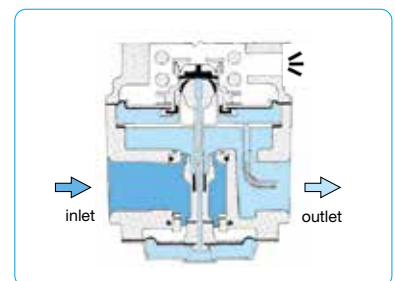
Precision pressure regulator							supply pressure max. 18 bar, relieving, without constant bleed	R400
89	206	39	2.12	228	3800	G $\frac{3}{8}$	0.03 ... 0.7	R400-031
							0.03 ... 2.0	R400-03A
							0.07 ... 4.0	R400-03B
							0.15 ... 10	R400-03C
							0.35 ... 17	R400-03D
89	206	39	2.23	240	4000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



R400

Special options, add the appropriate letter

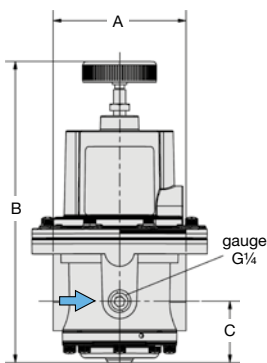
tapped exhaust	connection thread G $\frac{1}{4}$	R400-0 . . X12
NPT	connection thread	R400-0 . . N
tamper-proof cap	of aluminium, adjustment by screwdriver, total height 295 mm	R400-0 . . T
FKM elastomer	up to 10 bar	R400-0 . . V



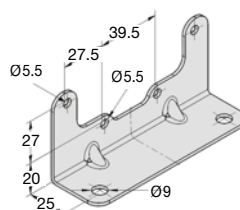
cross-section

Accessories, enclosed

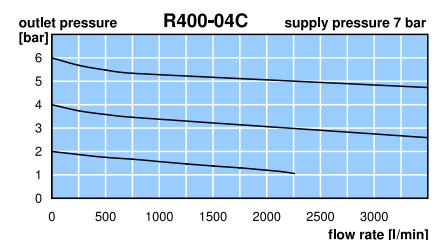
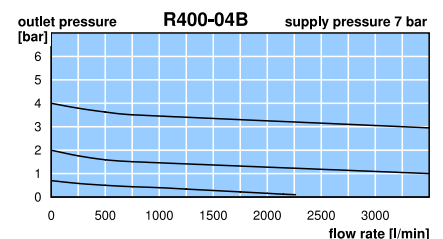
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-...*2
mounting bracket	made of steel	BW00-47



R400



BW00-47



* Product group

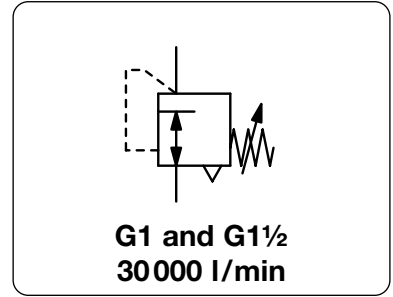
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
R400-031

Description	Provides precision regulation in high flow and high relief applications. A sensitive rolling diaphragm and balanced inner valve assure constant outlet pressure even with supply pressure and flow fluctuations.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 18 bar, optionally max. 35 bar	
Accuracy	response sensitivity: < 2 mbar	
Air consumption	0.5% of volume flow, max. 15 l/min	
Adjustment	by T-handle with locknut	
Relieving function	relieving, optionally non-relieving	
Relief capacity	1200 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	
Gauge port	G¼ for outlet pressure	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 at 35 bar version Inner valve: stainless steel, brass, aluminium and steel	



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

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

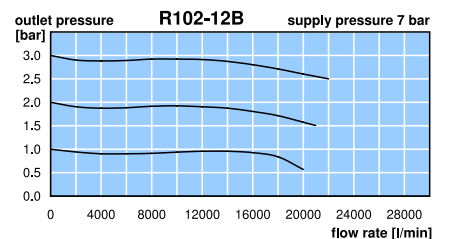
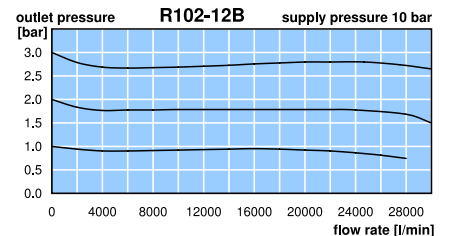
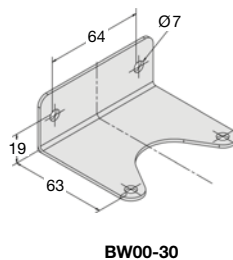
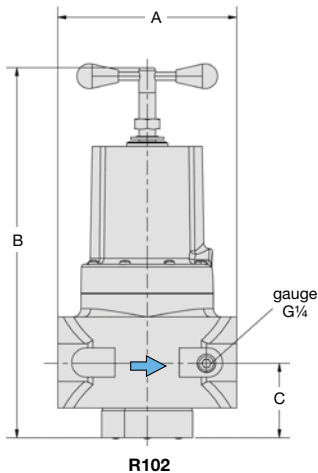
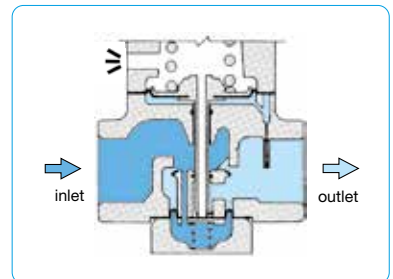


Special options, add the appropriate letter

NPT	connection thread	R102-... N
non-relieving	and without constant bleed	R102-... K
tapped exhaust	G¾ connection thread	R102-... X12
supply pressure 35 bar	free of non-ferrous metal, FKM elastomer	R102-... X62
tamper-proof cap	aluminium, adjustment by screwdriver, total height 295 mm	R102-... T

Accessories, enclosed

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



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

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

* Product group



Order example:
R102-081

VOLUME BOOSTER

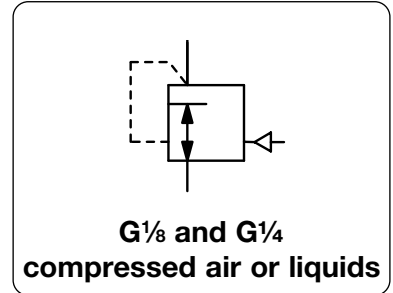
	DESCRIPTION	SUPPLY PRESSURE	PRESSURE RANGE	CONNECTION	DEVICE	PAGE
		max. bar	bar	thread		
PRECISE	with external feedback	16	0,2 ... 7	G¼	R218	6.03
	differential pressure also	17	0 ... 1 / 10	G¼ and G¾	R650	6.04
	ratio 1:1 up to 1:6	17	0 ... 10	G¼ and G½	R750	6.05
	different ratio	17	0 ... 10	G¼ - G½	R208	6.06
	differential pressure also	16	0 ... 10	G¼ - G½	R03-J	6.07
	high exhaust capacity	17	0 ... 10	¾"NPT u. 1"NPT	R600	6.08
	different ratio, high-precision	17	0 ... 10	G½ and G¾	R450	6.09
	high exhaust capacity	28	0,2 ... 18	G¼ - G1¼	R116	6.10
	high volume flow	17	0 ... 10	G1 and G1½	R200	6.11
high exhaust capacity	17	0 ... 10	1½"NPT	R201	6.11	
STANDARD	high volume flow	21	0.2 ... 18	G¼ - G3	R119-J	6.13
WITH RATIO	1:1 up to 1:6	17	max. 10	G¼ and G¾	R750	6.05
	1:1 up to 1:6 and 2:1 up to 5:1	17	max. 10	G¼ and G¾	R208	6.06
	1:1 up to 1:3 and 2:1 up to 3:1	17	max. 10	G½ and G¾	R450	6.09
LOW PRESSURE	also for gases	20	10 ... 350/1000 mbar	G1 - G2	RZ-J	6.12
	also for gases	0,4	2 ... 55/ 160 mbar	G½ - G2	RGDJ-J	6.15
	also for gases	4	5 ... 350 mbar	G½ - G1½	RGB4-J	6.15
HIGH PRESSURE	ratio 1:2 up to 1:19	260	3 ... 42 / 104	½"NPT and ¾"NPT	RH3-J	6.14
	made of brass	100	0.1 ... 24 / 99	G1	RLM	6.16
	made of brass	50	1 ... 15 / 50	G¼ - G2	R120-J	6.17
MINIATURE	also for liquids	10	0 ... 6	G½	R035-JK	6.02
STAINLESS STEEL	ratio 1:2 up to 1:19	310	3 ... 42 / 104	½"NPT and ¾"NPT	RH3-J	6.14
	made of stainless steel	100	0.1 ... 24 / 99	G1	RLE	6.16
	made of stainless steel	50	1 ... 15 / 50	G¼ - G2	R3000-J	15.18
	high exhaust capacity	17	0 ... 10	¾"NPT and 1"NPT	R601	15.20
PRESSURE BOOSTER	1:2 up to 1:10	12	4 ... 100	G¼ - G¾	AM	6.18
	1:2 up to 1:5, with storage	12	4 ... 40	G¾ and G½	AP	6.19
	1:2, small design	10	3 ... 16	G½ - G½	AB	6.20



MINIATURE VOLUME BOOSTER

R035-JK

Description	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		
Media	compressed air, non-corrosive gases or liquids		
Supply pressure	max. 10 bar		
Pilot pressure	max. 6 bar, pilot port G $\frac{1}{8}$		
Transmission ratio	1:1 pilot pressure: outlet pressure		
Relieving function	non-relieving		
Gauge port	G $\frac{1}{8}$ on both sides of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F		
Material	Body: POM	Inner valve: brass	Elastomer: NBR/Buna-N



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	

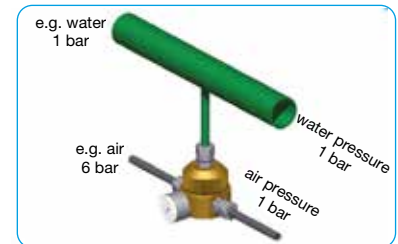
Plastic booster	supply pressure max. 10 bar, non-relieving, without constant bleed, transmission ratio 1:1						R035-JK	
36	48	12	15	250	G $\frac{1}{8}$	10	0... 6	R035-01JK



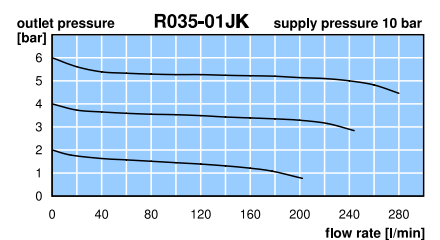
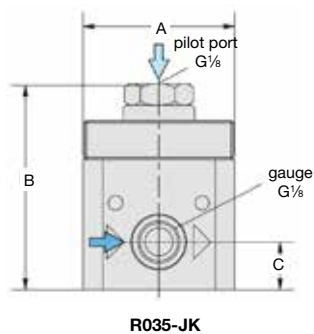
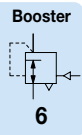
R035-01JK

Accessories, enclosed

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



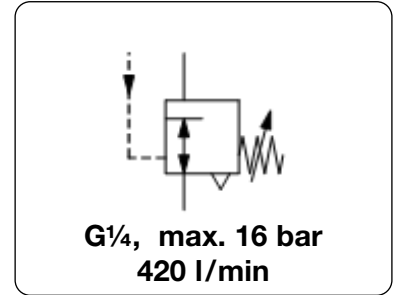
*1 10 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

* Product group

PRESSURE REGULATOR WITH EXTERNAL FEEDBACK

R218

Description	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.			
Media	compressed air and non-corrosive gases			
Supply pressure	max. 16 bar	Air consumption	approx. 3 to 6 l/min	
Adjustment	by handwheel with snap-lock, for panel mounting			
External Feedback	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.			
Relieving function	relieving			
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied	Feedback connection	G $\frac{1}{4}$	
Temperature range	0 °C to 60 °C / 32 °F to 140 °F		Mounting position	any
Material	Body: zinc die-casting	Spring cage: zinc die-casting	Elastomer: FKM	



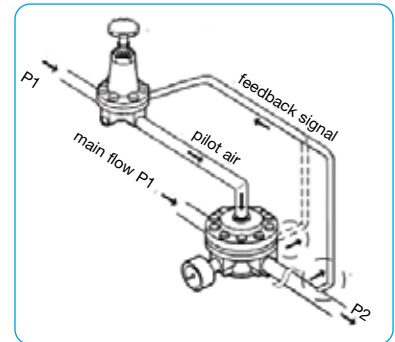
Dimensions			K _v -value (m ³ /h)	Flow rate m ³ /h*1 l/min*1	Connection thread G	Pressure range bar	Order number
A	B	C					
mm	mm	mm					D*

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

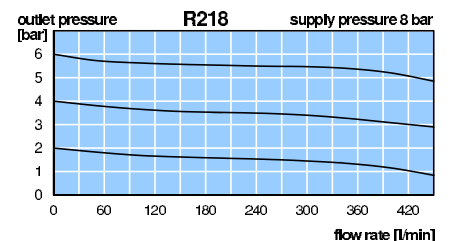
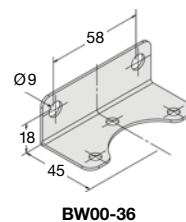
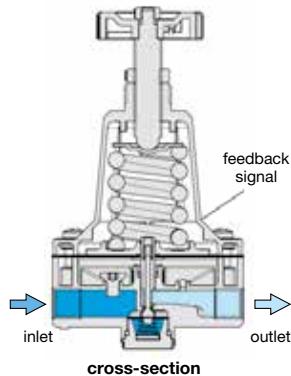
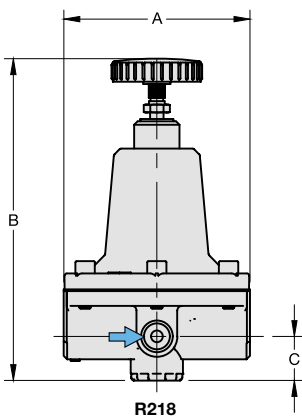
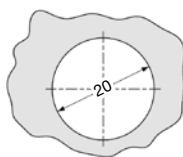


Accessories, enclosed

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



Example: combination with booster

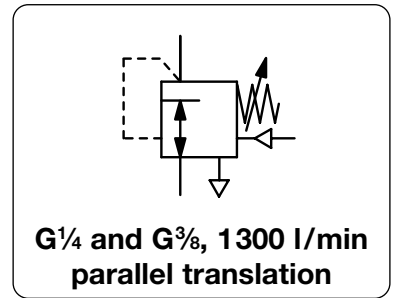


*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

* Product group



Description	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.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 17 bar	
Pilot pressure	max. 10 bar, pilot port G $\frac{1}{4}$	
Accuracy	response sensitivity: < 1 mbar	
Air consumption	without constant bleed	
Relief capacity	110 l/min at 1.5 bar outlet and 0.35 bar overpressure above setpoint	Relieving function relieving
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 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	1000	G $\frac{3}{8}$	5	0... 1	0... 10	R650-03C	
						5	0... 2		R650-03D	
						8	0... 4		R650-03E	
						15	0... 10		R650-03F	

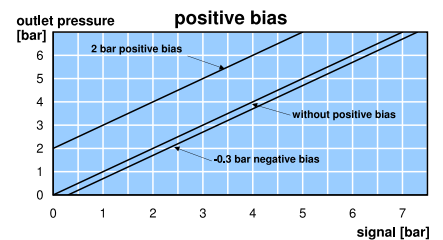
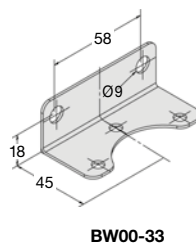
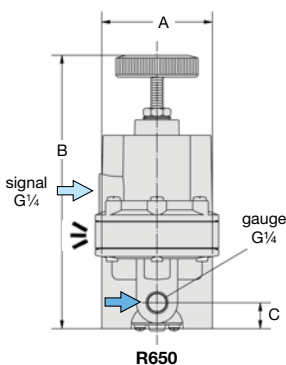
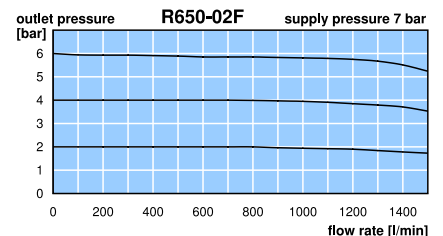
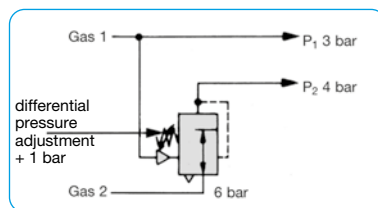
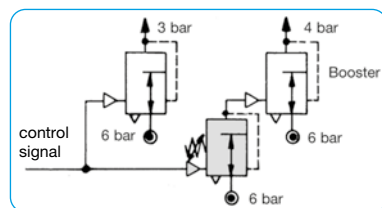
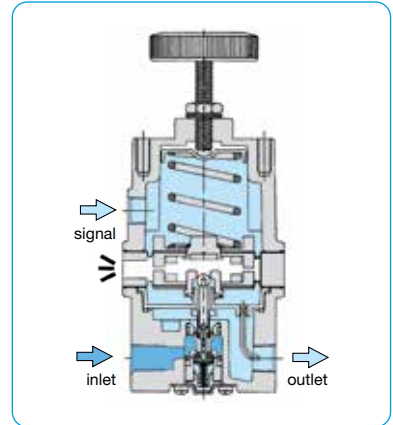


Special options, add the appropriate letter

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

Accessories, enclosed

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



*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

* Product group

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

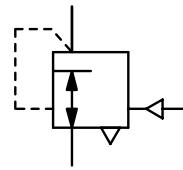
any

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 _v -value	Flow rate	Connection thread	Signal pressure	Transmission ratio	Order number
A	B	C						
mm	mm	mm	(m ³ /h)	m ³ /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



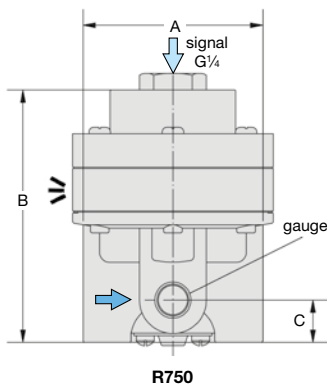
R750

Special options, add the appropriate letter

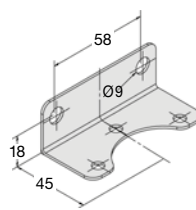
negative bias	factory-set to -0,3 bar	R750-0. .Y
NPT	connection thread	R750-0. .N
tapped exhaust	connection thread G $\frac{1}{4}$	R750-0. .X12

Accessories, enclosed

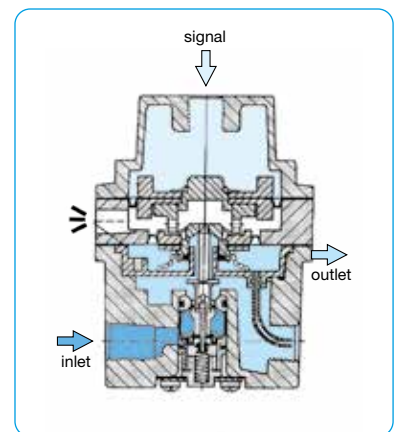
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-33



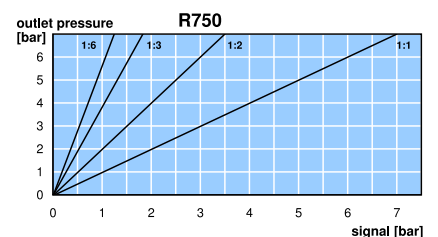
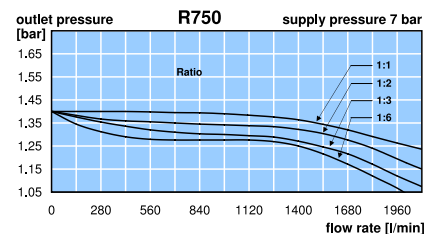
R750



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

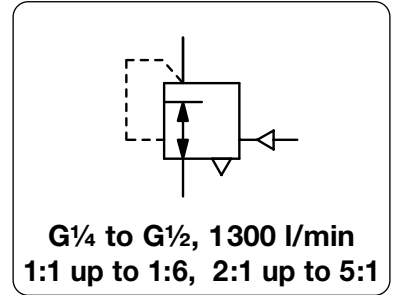
Temperature range 0 °C to 80 °C / 32 °F to 176 °F, NBR, for appropriately conditioned compr. air down to -40 °C / -40 °F
 0 °C to 90 °C / 32 °F to 194 °F, FKM, for appropriately conditioned compr. air down to -40 °C / -40 °F

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 _v -value	Flow rate	Connection thread	Pilot pressure	Transmission ratio	Order number
A	B	C	(m ³ /h)	m ³ /h*1	G	max. bar	signal : outlet	

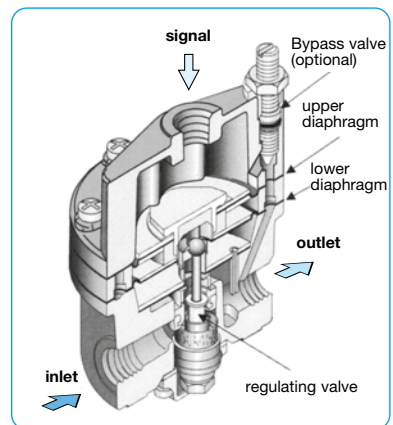
Booster			with transmission ratio, relieving, with constant bleed, pressure range 0...10 bar				R208		
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	1 : 1	R208-02I
							5.0	1 : 2	R208-02K
							3.3	1 : 3	R208-02L
76	110	24	0.7	78	1300	G $\frac{1}{4}$	2.5	1 : 4	R208-02M
							2.0	1 : 5	R208-02N
							1.7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



R208

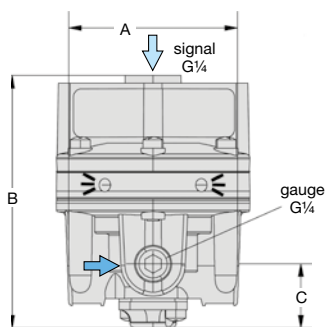
Special options, add the appropriate letter

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

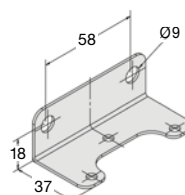


Accessories, enclosed

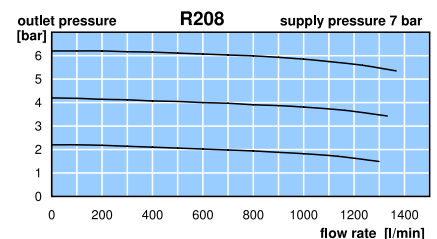
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-34



R208



BW00-34



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

*3 only for 1:1, 1:2, 1:3, 2:1 and 3:1
 *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 P₁= 5 bar, 2 l/min at P₁= 7 bar, 4 l/min at P₁= 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_{1/4} on both sides of the body, one screw plug supplied

Gauge port any

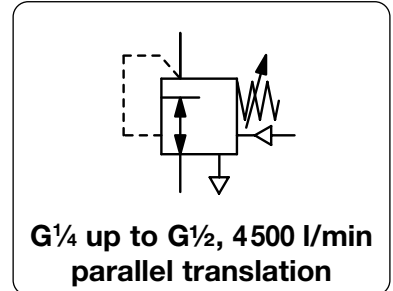
Temperature range 0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F

Material Body: zinc die-cast

Pilot port G_{1/8}

Mounting position any

Elastomer: NBR/Buna-N



Dimensions			K _v -value	Flow rate	Connection thread	Positive bias	Pressure range	Order number
A	B	C						
mm	mm	mm	(m ³ /h)	m ³ /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 _{1/4} *3	without	0.05 ... 10	R03-02J
			2.3	228	3800	G _{3/8} *3			R03-03J
			2.7	270	4500	G _{1/2}			R03-04J



R03-...J

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



R03-...J1

Accessories, enclosed

pressure gauge Ø 50 mm, 0...*2 bar, G_{1/4}

mounting nut made of plastic

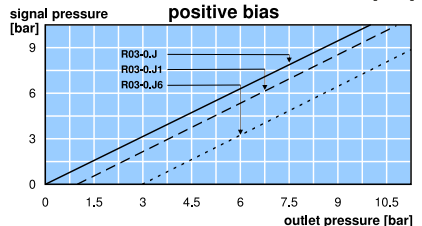
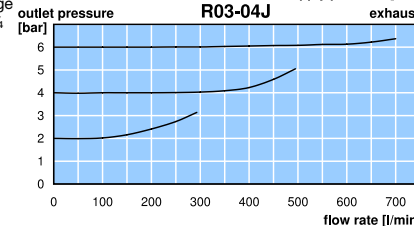
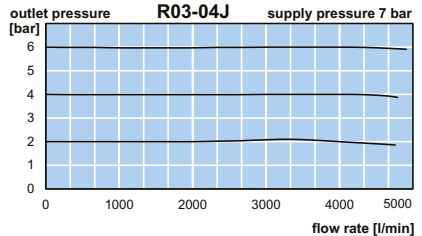
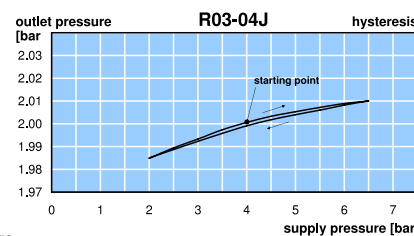
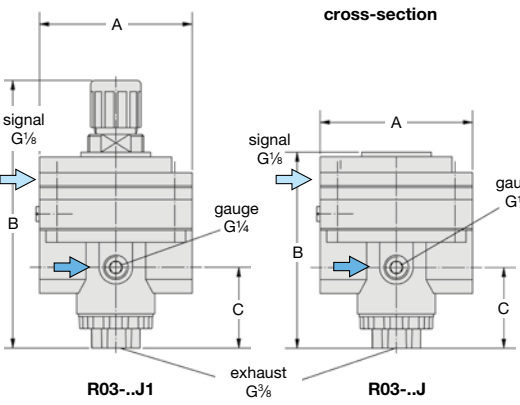
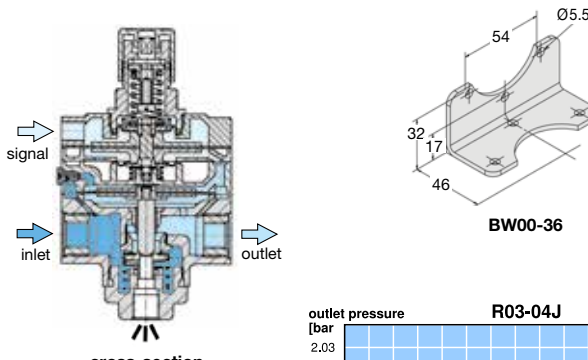
mounting bracket made of steel

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_{1/2} reduced to smaller threads by fittings

Gauges: see chapter for measuring devices

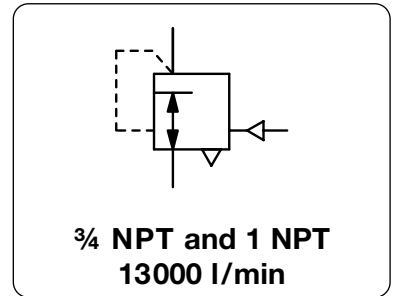
PDF CAD
www.aircom.net

* Product group



Order example:
R03-02J

Description	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.	
Media	compressed air or non-corrosive gases	Supply pressure max. 17 bar
Pilot pressure	max. 10 bar	
Accuracy	response sensitivity 15 mbar	
Internal air consumption	no internal air consumption	Relieving function relieving, tapped exhaust function ¼ NPT
Relief capacity	4245 l/min at 0.35 bar overpressure above setpoint	
Gauge port	¼ NPT on both sides of the body	Mounting position any
Temperature range	-40 - 93 °C; optional -52 °C	
Material	Body: aluminium die-cast Inner valve: aluminium and galvanized steel	Elastomer: NBR



Dimensions			K _v - 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



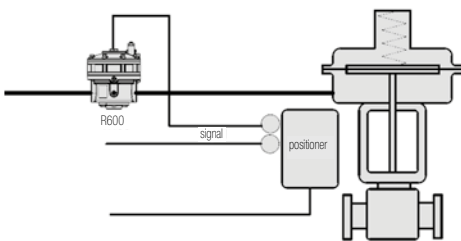
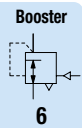
R600

Special options, add the appropriate letter

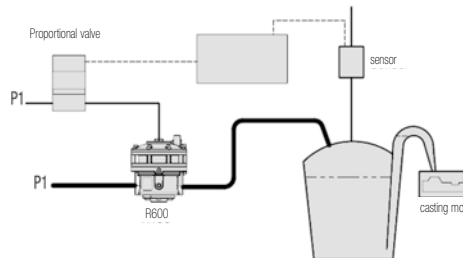
Low Temperature Option		R600-0.NX51
Body	made of stainless steel (s. page 15.20)	R601

Accessories, enclosed

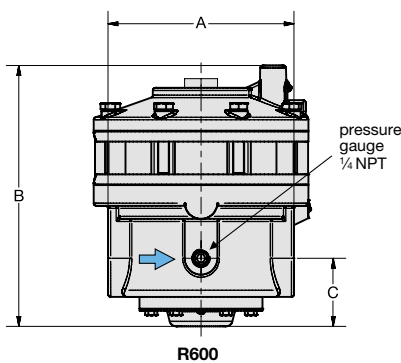
pressure gauge	Ø 63 mm, 0...*2 bar, G¼	MA6302-..*2
connection part pressure gauge	¼"NPTa-G¼	VP-0202N
mounting bracket		BW00-66



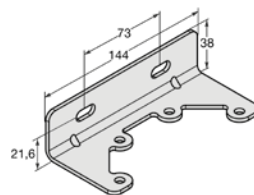
Volume flow booster with single-acting positioner and diaphragm actuator



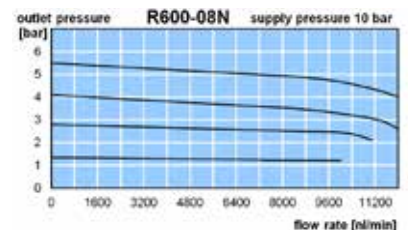
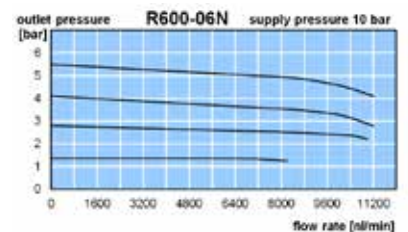
Volume flow booster in a casting plant



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

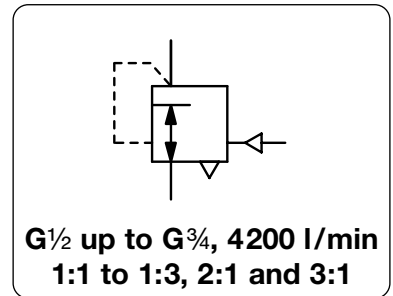
PDF CAD
www.aircom.net

* Product group



Order example:
R600-06N

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. 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, 2:1 and 3:1 ratio, 5 bar at 1:2,	3.3 bar at 1:3,	pilot port: G $\frac{1}{4}$
Accuracy	at supply pressure variation of 7 bar: < 7 mbar pressure deviation response sensitivity: 2.5 mbar		
Internal air consumption	max. 3 l/min, depending on outlet pressure		
Relief capacity	1100 l/min at 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 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	Relieving function relieving
	Inner valve: brass and aluminium		Mounting position any



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

Booster			with transmission ratio, supply pressure max. 17 bar relieving, with constant bleed, pressure range 0...10 bar				R450		
87	129	40	2.16	240	4000	G $\frac{1}{2}$	10	1 : 1	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



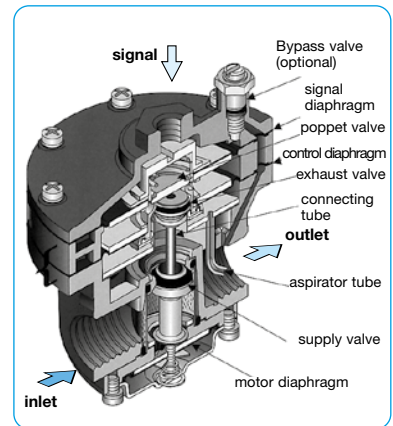
R450

Special options, add the appropriate letter

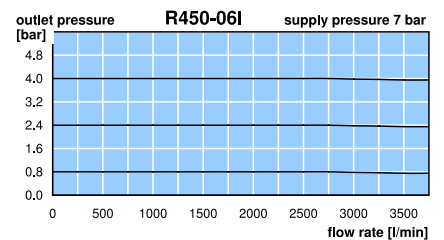
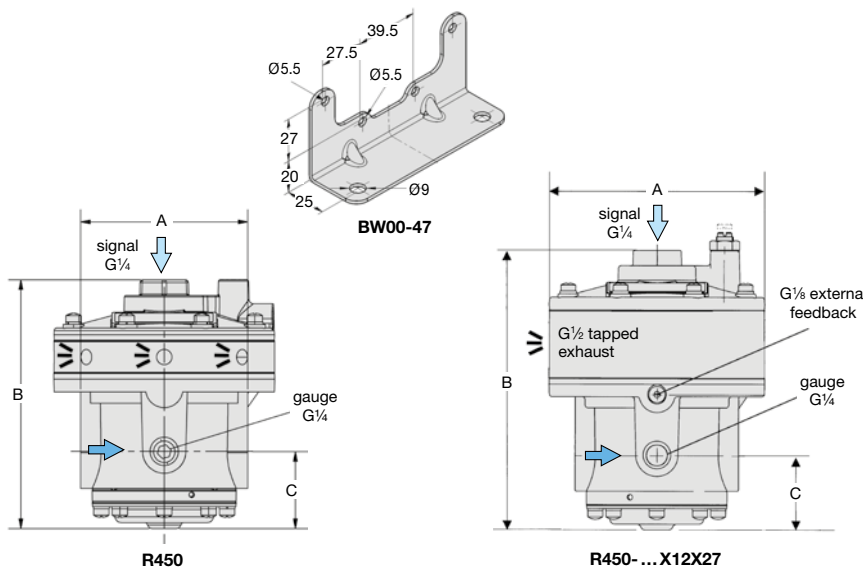
NPT	connection thread	R450-0..N
tapped exhaust	G $\frac{1}{2}$ connection thread, total height 148 mm	R450-0..X12
bypass with restrictor	from control chamber to outlet	1:1 only R450-0..X16
external feedback	with connection thread G $\frac{1}{8}$	R450-0..X27
FKM elastomer		R450-0..V

Accessories, enclosed

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



cross section



*1 at 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

* Product group

Gauges: see chapter for measuring devices

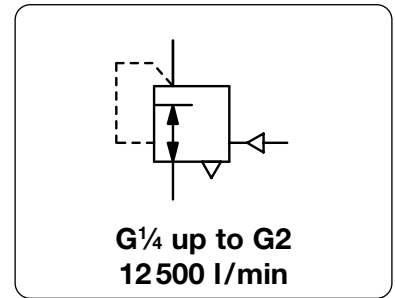
PDF CAD
www.aircom.net

Order example:
R450-04I

PRECISION VOLUME BOOSTER WITH HIGH RELIEF CAPACITY

R116

Description	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).		
Media	compressed air or non-corrosive gases	Mounting position	any
Supply pressure	max. 28 bar	Pilot pressure	max. 18 bar
Outlet pressure	0.2... 18 bar, max. 31 bar at G1½ a. G2	Air consumption	without constant bleed
Relieving function	6500 l/min at 6 bar, see diagram		
Ports	inlet / outlet: see chart gauge P ₂ : G¼	exhaust: G½ (up to overall size G½), G¾ (from size G¾ on)	gauge P ₁ : G½ (from size G¾ on)
Temperature range	-18 °C to 70 °C / 0 °F to 158 °F		
Material	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 _v -value	Flow rate	Connection thread	Order number
A	B	C	DN	(m³/h)	m³/h*1	G	
mm	mm	mm			l/min*1		

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

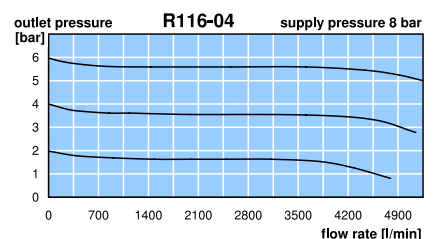
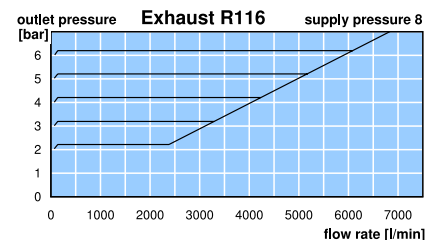
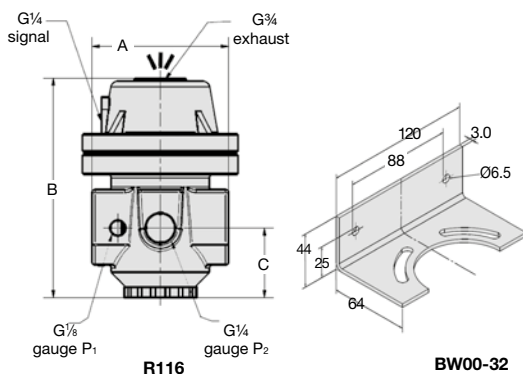
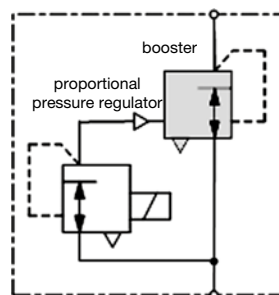
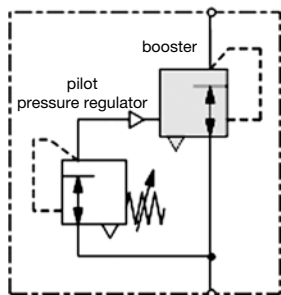


Special options, add the appropriate letter

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

Accessories, enclosed

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



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

Gauges: see chapter for measuring devices

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

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

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

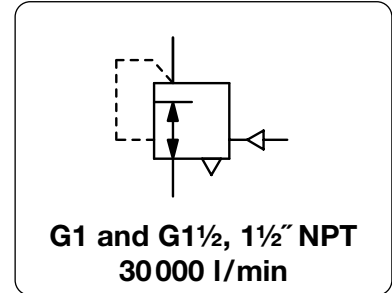
Material Body: aluminium die-cast Elastomer: NBR/Buna-N-/Dacron, optionally FKM Inner valve: stainless steel, cadmium-plated steel and brass

Supply pressure max. 17 bar

Response sensitivity 30 mbar

Relieving function relieving, optionally non-relieving

Mounting position any



Dimensions			K _v -value	Flow rate	Connection thread	Supply pressure	Pressure range	Order number
A	B	C	(m ³ /h)	m ³ /h*1	l/min*1	max. bar	bar	

Booster w. high volume flow								
supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1								
A	B	C	K _v	Flow rate	Connection	Supply pressure	Pressure range	Order number
141	198	57	11.4	1680	28000	G1	0...10	R200-08I
141	198	57	12.2	1800	30000	G1½	0...10	R200-12I

Booster w. high exhaust capacity								
supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1								
A	B	C	K _v	Flow rate	Connection	Supply pressure	Pressure range	Order number
250	240	57	12.2	1800	30000	1½" NPT	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

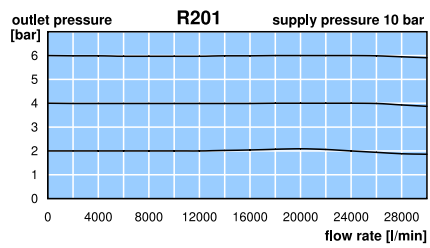
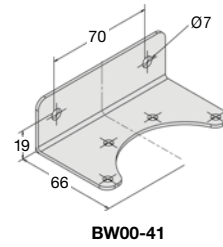
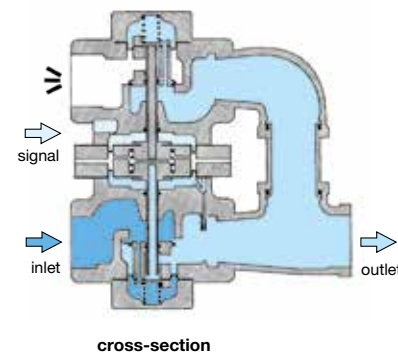
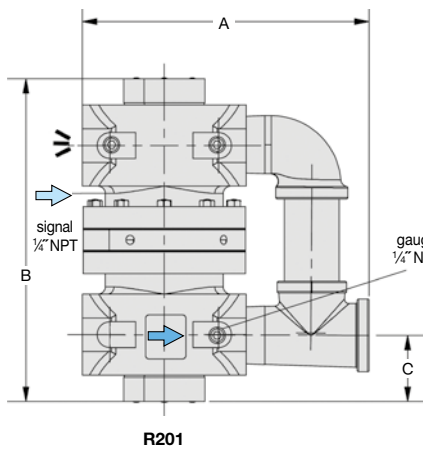
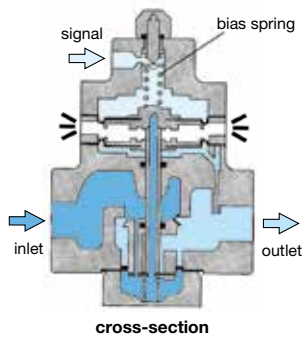
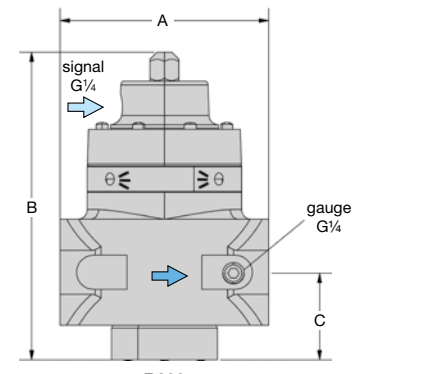
FKM elastomer R20-..IV

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

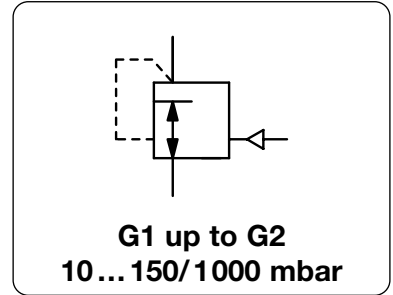
Gauges: see chapter for measuring devices

PDF CAD
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* Product group
Order example:
R200-08I

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

Description	Highly sensitive diaphragm low pressure volume booster with excellent regulating characteristics.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 20 bar depending on the accuracy: the smaller P ₁ the higher the accuracy max. 10 bar at pressure range < 150 mbar		
Pilot pressure	max. 1000 mbar		
Air consumption	without constant bleed		
Relieving function	non-relieving, optionally relieving		
Accuracy	at max. flow rate < e.g. 10% pressure deviation of full scale		
Adjustment	manual by turning the spindle under the cover of the spring cage		
Gauge port	not available		
Mounting position	any		
Temperature range	-20 °C bis 60 °C / -4 °F to 140 °F		
Material	Body: SG cast iron GGG50, GGG40 at G2	Elastomer: NBR/Buna-N, optionally FKM	Inner valve: brass and stainless steel
	Spring cage: aluminium		



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

Low pressure volume booster						supply max. 20 bar, non-relieving, 1:1 transmission ratio	RZ-J		
100	245	30	10	17	1800	10	G1	15 ... 110	RZ1-08J
			5		3300			180 ... 1000	RZ3-08J
185	245	30	10	17	2700	10	G1½*3	15 ... 110	RZ1-12J
			5		5000			180 ... 1000	RZ3-12J
254	460	80	10	34	15000	10	G2	10 ... 350	RZ1-16JF
			5		28000			350 ... 1000	RZ2-16JF



RZ1-08J

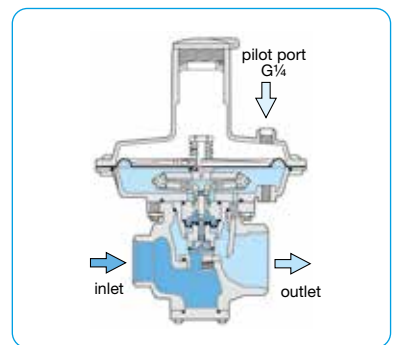
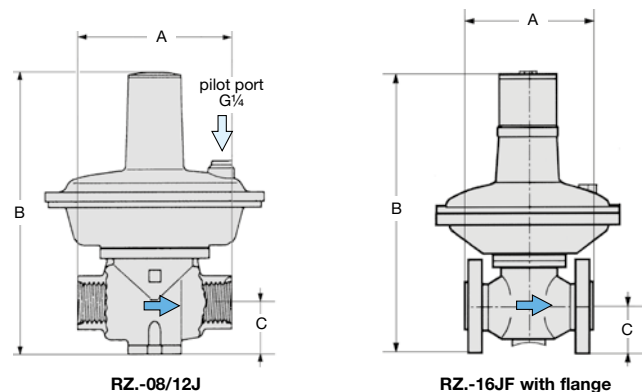
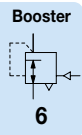
Special options, add the appropriate letter

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

up to 16 bar



RZ1-16JF

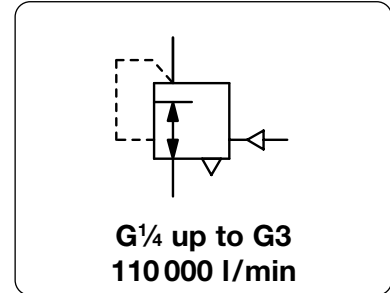


*1 at 4 bar supply pressure and max. outlet pressure *2 see description above *3 G1 thread at inlet

* Produkt group



Description	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.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 21 bar	
Pilot pressure	max. 18 bar	
Pilot port	G¼ at regulator size G¼ and G¾, pilot port G¼ from regulator size G½ on	
Air consumption	approx. 1 l/min of pilot signal	
Relieving function	relieving as standard, optionally non-relieving up to G1	
Gauge port	G¼ on both sides of the body	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	up to 80 °C / 176 °F at G3
Material	Body: zinc die-cast, aluminium at G3 Diaphragm: NBR/Buna-N, optionally FKM	Mounting position any Inner valve: brass Bottom screw: reinforced nylon



Dimensions			Nominal size	K _v -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 ³	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

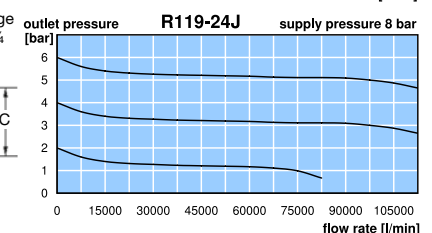
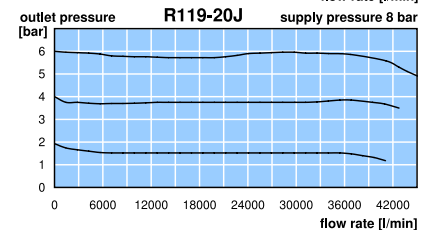
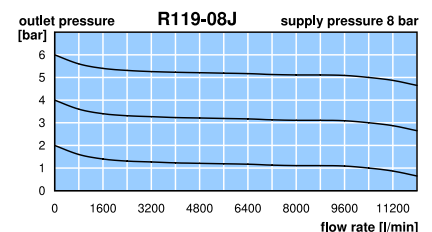
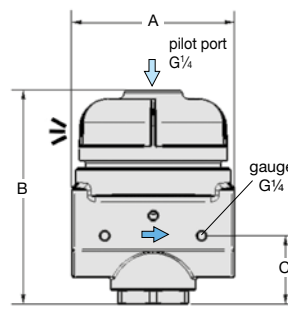
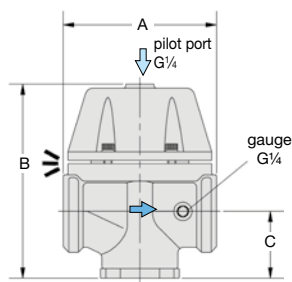
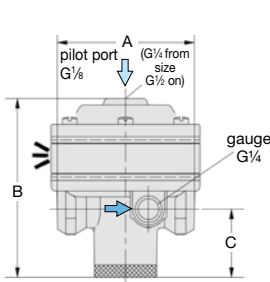
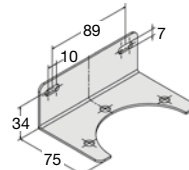
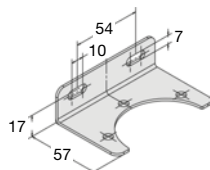
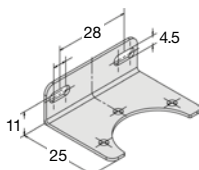
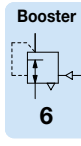


Special options, add the appropriate letter

NPT	connection thread	for G2 to G3	R119-...JN
non-relieving	without relieving function	for G¼ to G1	R119-...JK
FKM elastomer		for G¼ to G1½	R119-...JX64
		for G3	R119-24JX64
without constant bleed	insided the pilot chamber	for G¼ to G1½	R119-...JX71
flange connection	see chapter for SST devices / flanges		R119-...JF
external feedback	for faster and increased accuracy	for G3	R119-24JX27
pre-pressure regulation	340 mbar, advisable if P ₁ is close to P ₂	for G3	R119-24JX06

Accessories, enclosed

pressure gauge	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
mounting bracket	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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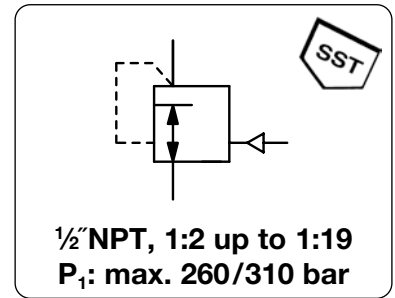


Order example:
R119-02J

HIGH PRESSURE VOLUME BOOSTER WITH TRANSMISSION RATIO, UP TO 310 BAR

RH3-J

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



Dimensions			K _v -value	Flow rate	Pilot pressure	Pressure range	Transmission ratio	Order number
A	B	C	(m ³ /h)	m ³ /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	RH3-J402
						17	5 ... 70	1 : 4	RH3-J404
						5	3 ... 42	1 : 8	RH3-J408
						5	5 ... 70	1 : 13	RH3-J413
						5	10 ... 104	1 : 19	RH3-J419



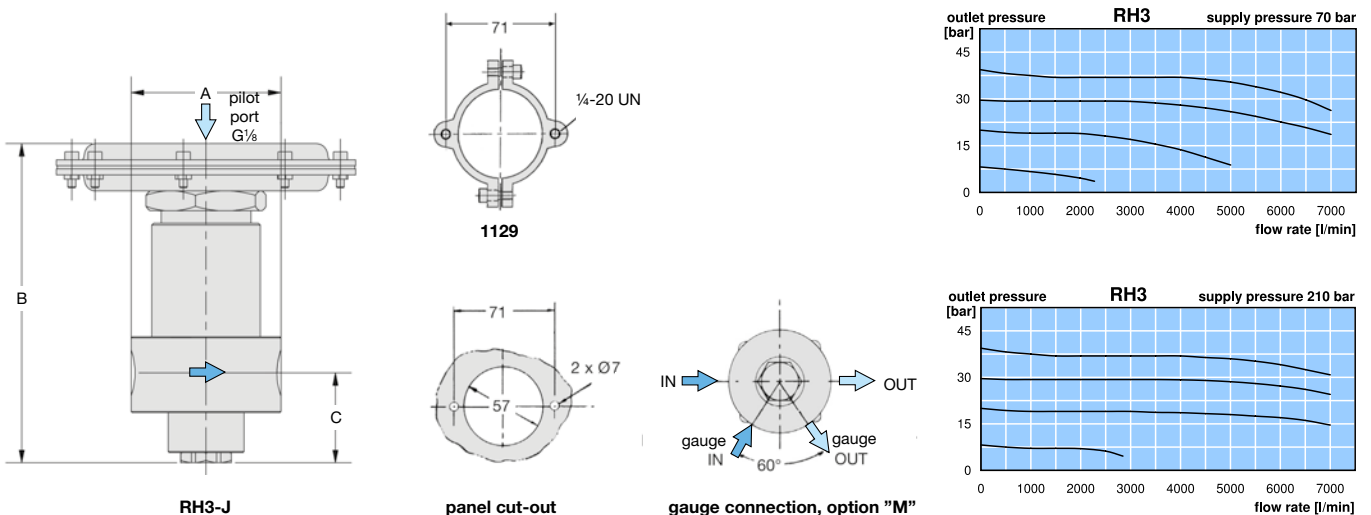
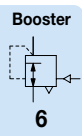
RH3-J

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
-----------------	--------------------	------



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

* Product group

Gauges: see chapter for measuring devices

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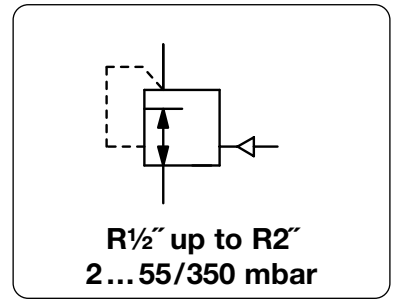


Order example:
RH3-J402

LOW PRESSURE VOLUME BOOSTER UP TO 350 MBAR

RGDJ-J/RGB4-J

Description	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.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 400 mbar at RGDJ-J,	max. 4 bar at RGB4-J	
Pilot pressure	max. 160 mbar at RGDJ-J,	max. 350 mbar at RGB4-J,	pilot port G $\frac{1}{4}$ "
Air consumption	without constant bleed		
Relieving function	non-relieving		
Accuracy	at maximum volume flow: < 20% pressure deviation of full scale		
Gauge port	G $\frac{1}{4}$ " on one side for RGB4-12J, optionally G $\frac{1}{4}$ " for all others except RGDJ-04J		
Mounting position	any		
Temperature range	RGDJ-J: -20 °C to 70 °C / -4 °F to 158 °F	RGB4J: -15 °C to 60 °C / -4 °F to 140 °F	
Material	Body: aluminium	Elastomer: NBR/Buna-N	
	Inner valve: aluminium and plastic		



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>P₁ max. 400 mbar</i>									non-relieving, without constant bleed, transmission ratio 1:1	RGDJ-J
100	120	30	15	0.66	12	200	½"	2... 55		RGDJ-04J
125	166	34	20	1.49	27	450	¾"	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	1½"	5... 160		RGDJ-12J
200	219	52	50	6.6	120	2000	2"	5... 100		RGDJ-16J



RGDJ-04J

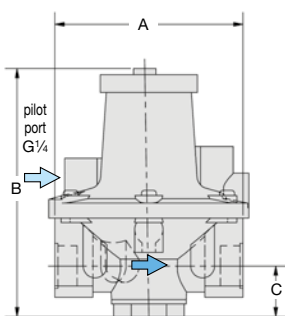
Low pressure booster <i>P₁ max. 4 bar</i>									non-relieving, without constant bleed, transmission ratio 1:1	RGB4-J
148	174	24	15	0.62	42	700	½"	5... 350		RGB4-04J
192	230	33	25	2.5	168	2800	1"	5... 350		RGB4-08J
150	265	55	40	5	336	5600	1½"	5... 350		RGB4-12J



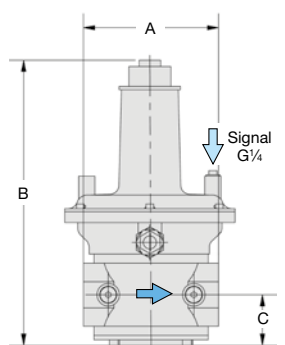
RGB4-08J

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

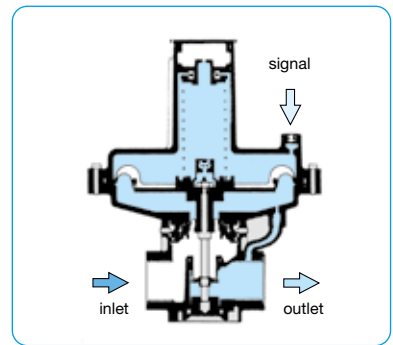
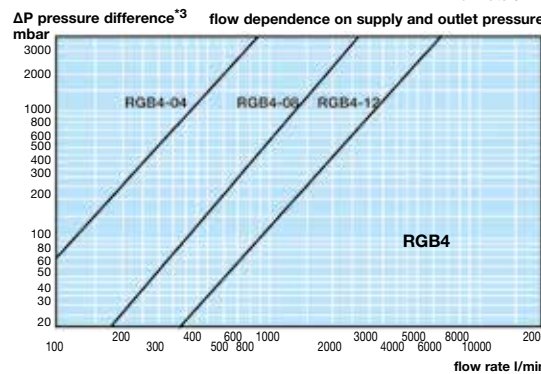
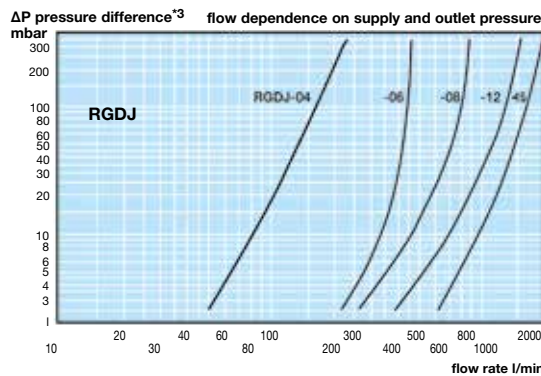
Accessories, enclosed
 pressure gauge Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ " for R¾" up to R2" MA6302-..*2



RGDJ-J



RGB4-J



cross section RGB4-J

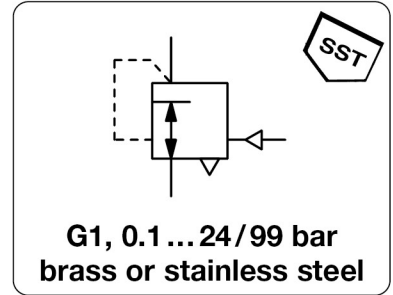
*1 bei 350 mbar Eingangsdruck und 100 mbar Ausgangsdruck
 *2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar
 *3 ΔP= P₁ - P₂ Druckdifferenz von Eingangsdruck und Ausgangsdruck

Gauges: see chapter for measuring devices

PDF CAD
 www.aircom.net

Order example:
 RGDJ-04J

Description	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.		
Media	compressed air, non-corrosive gases or liquids		
Supply pressure	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
Pilot pressure	max. 24 bar for RL-0.J1, max. 99 bar for RL-0.J2, pilot port G $\frac{1}{4}$		
Accuracy	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
Air consumption	without constant bleed		
Gauge port	not available		
Temperature range	-20 °C to 100 °C / -4 °F to 212 °F for FKM, -40 °C to 130 °C / -40 °F to 266 °F for EPDM		
Material	Body: brass or stainless steel 1.4571 Inner valve: brass or stainless steel 1.4571	Elastomer: FKM, optionally EPDM	



Dimensions			K _v -	Flow	Connection	Supply	Pressure	Order
A	B	C	value	rate	thread	pressure	range	number
mm	mm	mm	(m ³ /h)	m ³ /h*1	G	max. bar*2	bar	

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



RLM, made of brass

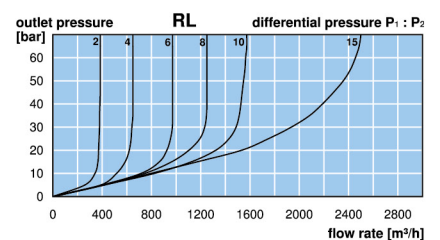
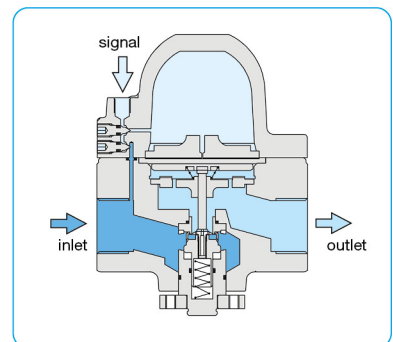
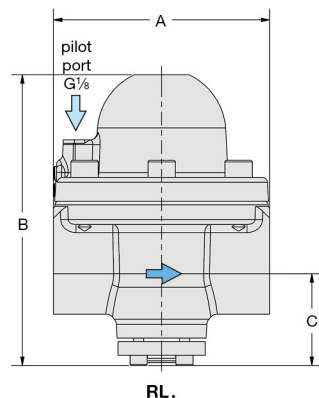
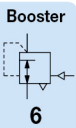
SST pressure regulator			supply pressure max. 25 / 100 bar, non-relieving, without constant bleed, transmission ratio 1:1, FKM						RLE
127	170	54	2.9	340	5600	G1	25	0.1 ... 24	RLE-08J1
				2500	60000	G1	100	0.5 ... 99	RLE-08J2



RLE, made of stainless steel

Special options, add the appropriate letter

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

PDF CAD
www.aircom.net

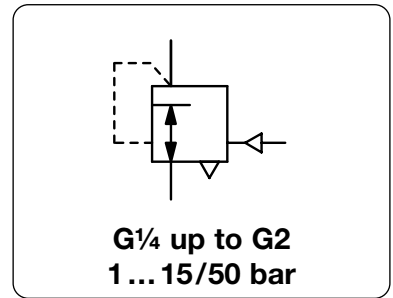


Order example:
RLM-08J1

BRASS VOLUME BOOSTER, UP TO 50 BAR

R120-J

Description	Solid volume booster made of brass or bronze throughout with a 1:1 transmission ratio. R120-02J2 to R120-08J2 are diaphragm-operated, R120-12J, R120-16J and R120-...J5 are piston-operated.		
Media	compressed air, non-corrosive gases or liquids		
Supply pressure	max. 50 bar, for liquids $\Delta p_{max} = 25$ bar		
Pilot pressure	max. 15 bar for R120-...J2, max. 50 bar for R120-...J5, pilot port G $\frac{1}{4}$		
Air consumption	without constant bleed		
Relieving function	non-relieving, optionally relieving		
Relief size	DN2		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, optionally low temperature version down to -40 °C / -40 °F		
Material	Body: brass up to G $\frac{1}{2}$, bronze from G $\frac{3}{4}$ on	O-rings: FKM, optionally EPDM	Inner valve: brass
	Diaphragm: NBR/Buna-N with PTFE coating		



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

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



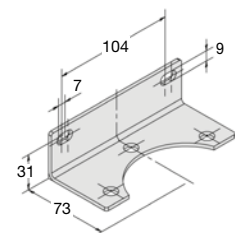
R120-06J2

Special options, add the appropriate letter

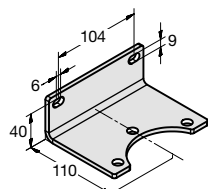
diaphragm relieving	for R120-02J2 up to R120-08J2		R120-...J.R
piston relieving	for R120-12J, R120-16J and R120-...J5		R120-...J.R
down to -40 °C	low temperature version		R120-...J.X51
up to 130 °C	high temperature version		R120-...J.X54
EPDM elastomer	not for G2		R120-...J.E
tapped exhaust			R120-...J.RX12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

Accessories, enclosed

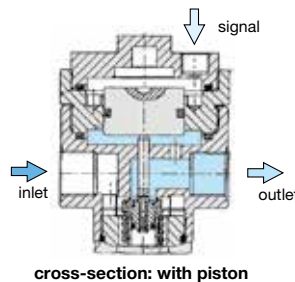
pressure gauge	Ø 50 mm, 0... ^{*2} bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	MA5002-..*2
pressure gauge	Ø 63 mm, 0... ^{*2} bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ up to G2	MA6302-..*2
mouting bracket	made of steel	for G $\frac{3}{4}$ and G1	BW00-42
		for G1 $\frac{1}{2}$ and G2	BW00-68S



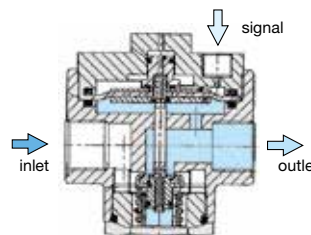
BW00-42



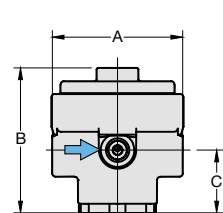
BW00-68S



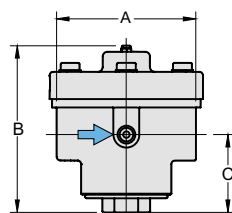
cross-section: with piston



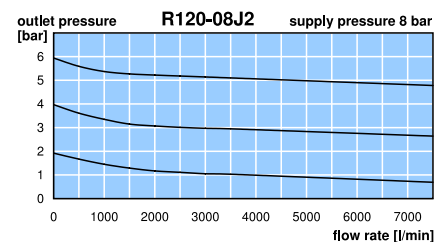
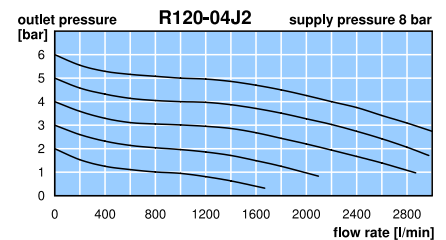
cross-section: with diaphragm



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_A system air to drive the air amplifier, 2...10 bar

Supply pressure P₁ max. 12 bar, for instance nitrogen or compressed air

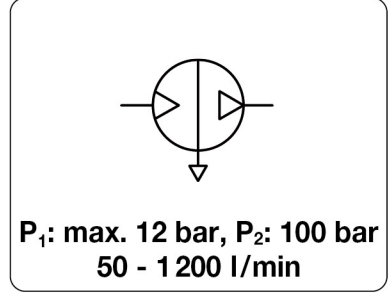
Outlet pressure P₂ amplified outlet or operating pressure of 20 bar to 100 bar maximum

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

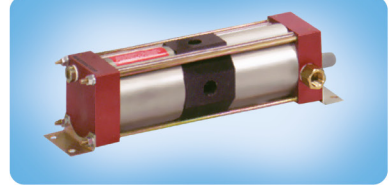
Sound level max. 79 dB (A)

Material Body: aluminium
Seals: NBR/Buna-N



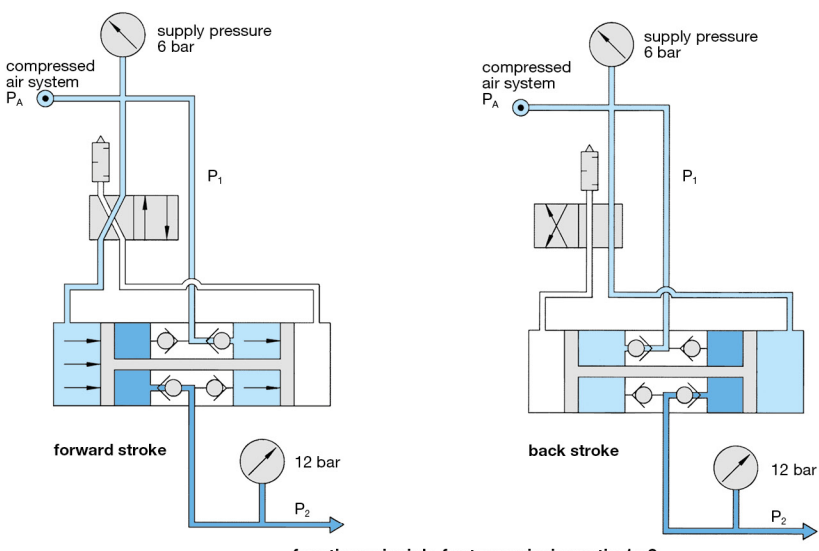
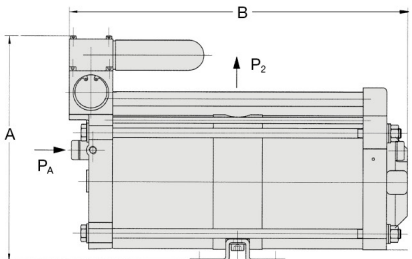
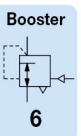
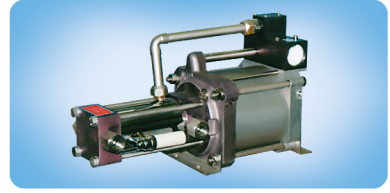
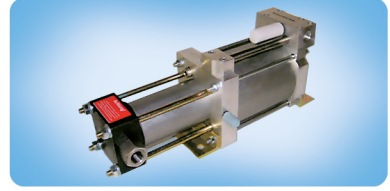
Dimensions			Weight kg	Connection thread G	Transmission ratio P _A : P ₂	Flow rate l/min	P ₂ max. bar	Order number
A	B	C						

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

Calculation examples can be found in the appendix

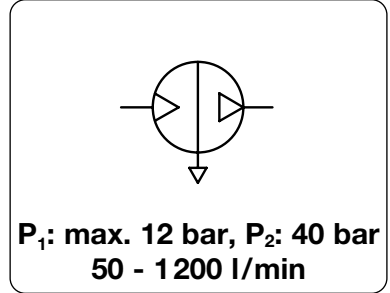
PDF CAD
www.aircom.net

* Product group
 Order example:
AM20-0580

AIR AMPLIFIER STATION WITH TANK

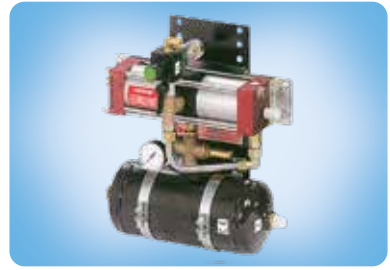
AP

Description	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.		
Media	lubricated, unlubricated and 50 µm filtered compressed air		
Amplifier station	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.		
Drive pressure P_A	system air to drive the air amplifier, 2...10 bar		
Supply pressure P₁	max. 12 bar, for instance nitrogen or the system air		
Outlet pressure P₂	amplified outlet or operating pressure of 20 bar to 40 bar maximum		
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	Tank: coated steel, SST at AP40-0050



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

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



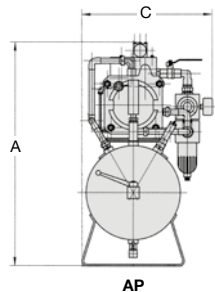
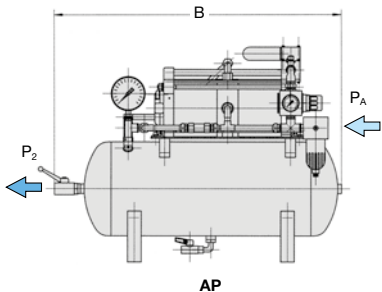
AP20-0580 similar AP20-0960



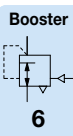
AP20-1200 similar AP40-0360 and AP20-0230

Special options, add the appropriate letter

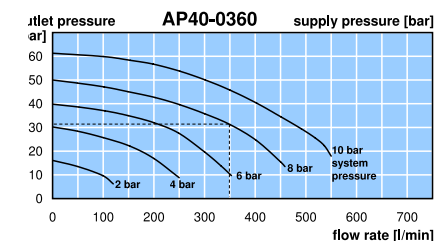
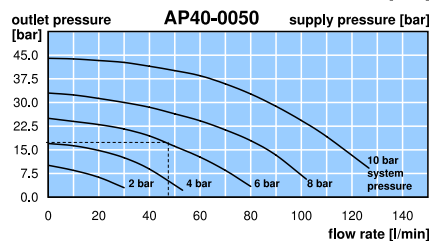
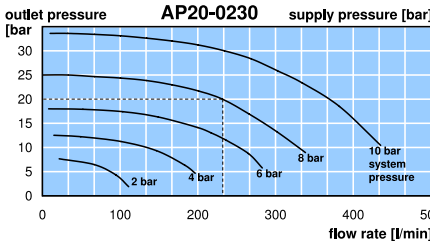
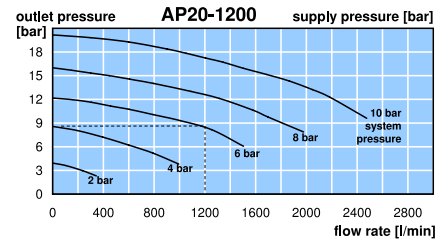
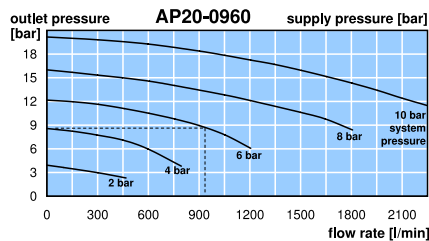
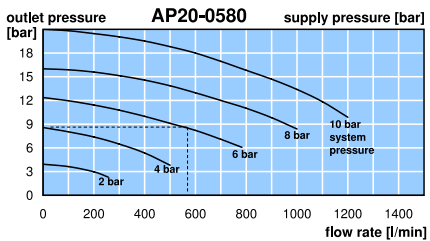
- unlubricated operation seals FEC seals for dry compressed air or nitrogen AP...T
- Atex e.g. Ex II 3G/3D IIB x, further specifications possible AP...EX
- pressure booster for gasbis P₂ max. 1500 bar AP...6



AP40-0050



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



*1 at 6 bar supply and 8 bar outlet pressure under full load
 *2 at 8 bar supply and 20 bar outlet pressure under full load
 *3 at 6 bar supply and 16 bar outlet pressure under full load
 *4 at 8 bar supply and 30 bar outlet pressure under full load
 *5 outlet pressure P₂ limited by the pressure stage of the accumulator, higher pressure ranges on request

* Product group

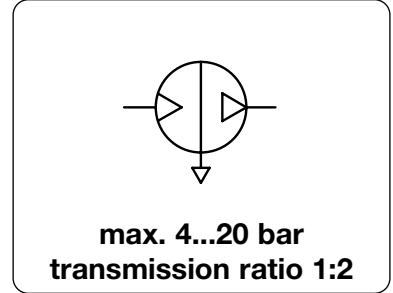
Calculation examples can be found in the appendix

PDF CAD
www.aircom.net



Order example:
AP20-0580

Description	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.	
Media	lubricated and 50 µm filtered compressed air	Mounting position any
Drive	double piston intensifier, ratio 1:2	Reversing, check and switcing valves provide for automatic control. Life time approx. 20 million switching cycles.
Inlet pressure P₁	2...8 bar	Outlet pressure P₂ 4...16 bar
Air tanks	are recommended. They compensate pressure fluctuations and allow short-term high volume flows. See circuit below.	
Tank filling time	is a measure of booster performance. To reduce the filling time of the tank, it has to be prefilled with input pressure P ₁ . See circuit below.	
Temperature range	-5 °C to 50 °C / 23 °F to 122 °F	
Material	Cylinder: anodized aluminium	seals: NBR/Buna-N



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

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



AB040

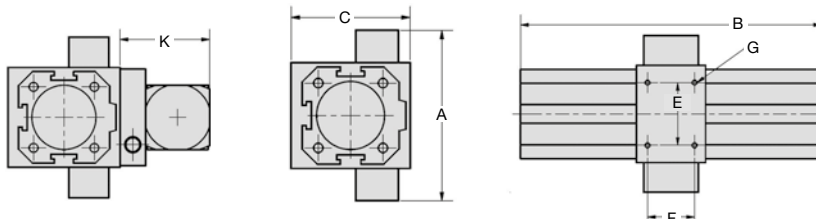
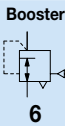
Pressure booster with regulator and gauge									
P ₁ max. 8 bar, for compressed air									
									AB-D
100	192	126	1.5	G½	1 : 2	130	30	4...16	AB040D
117	284	168	3.0	G¾	1 : 2	260	15	4...16	AB063D
176	468	218	12	G½	1 : 2	440	6	4...16	AB100D



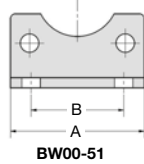
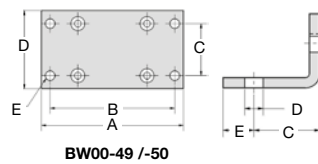
AB040D

Accessories, enclosed

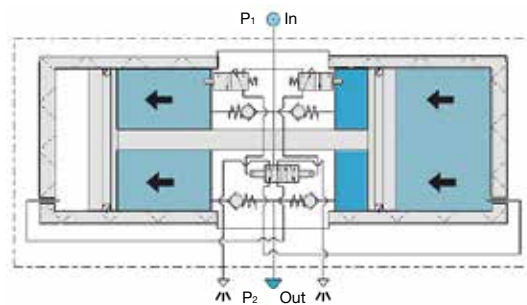
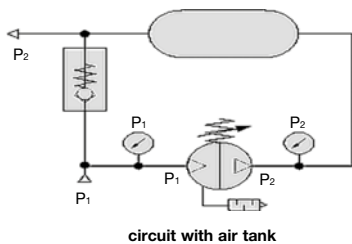
Mounting plate	made of steel, central attachment below	for AB040	BW00-49
		for AB063	BW00-50
Mounting bracket	made of steel, mounting at the side, 1 piece	for AB100	BW00-51



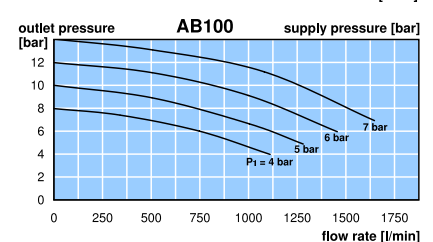
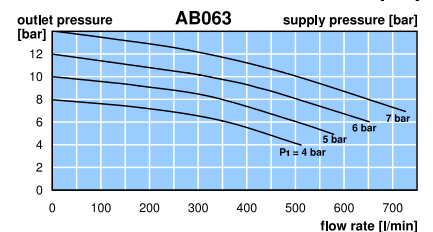
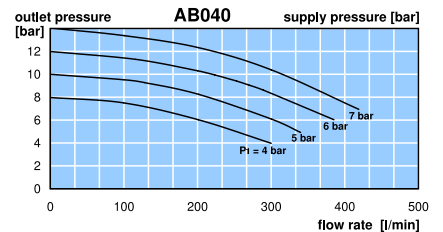
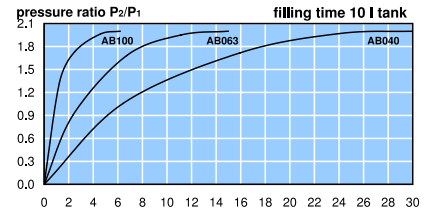
Device	A	B	C	D	E	F	G	H	K
AB040	100	192	70	57	40	30	M4	G½	56
AB063	117	284	90	75	60	40	M6	G¾	78
AB100	176	468	155	130	114	45	M8	G½	63



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



*1 at P₂ = 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

VACUUM PRESSURE REGULATOR

DESCRIPTION		PRESSURE RANGE	CONNECTION	SERIES	PAGE
			thread		
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	G1/8 - G1	V04	7.06
vacuum adjustment valve	precise	-1 ... 0 bar	G1/4 - G1	V05	7.06

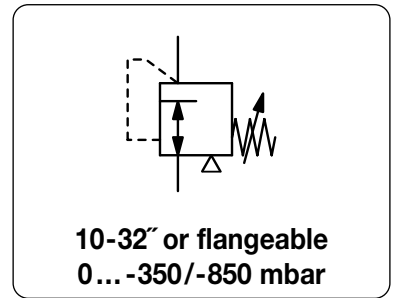


7

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				
mm	mm	mm				

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

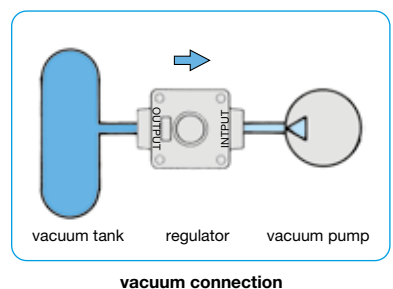


Special options, add the appropriate letter or number

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

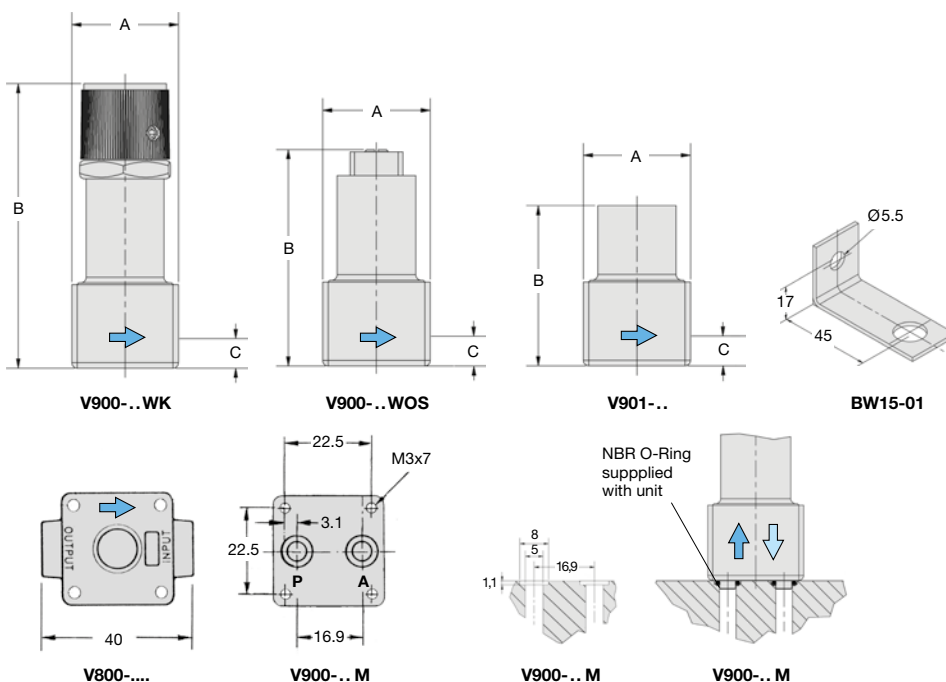
Accessories, enclosed

mounting bracket made of steel BW15-01



* Product group

Order example:
V900-10WK

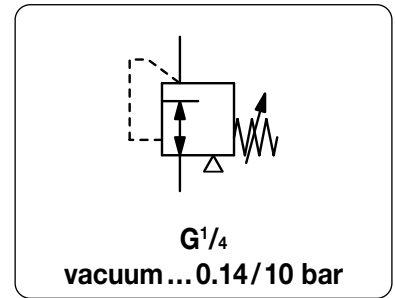


PDF CAD
www.aircom.net

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

Vacuum pressure regulator								supply pressure max. 17 bar, with constant bleed	R250
68	184	20	65	0.78	4	70	G $\frac{1}{4}$	-1 ... +0.14	R250-020
								-1 ... +0.7	R250-02A
								-1 ... +2.0	R250-02B
								-1 ... +7.0	R250-02C
								-1 ... +10	R250-02D



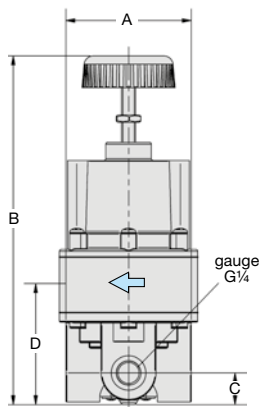
R250

Special options, add the appropriate letter

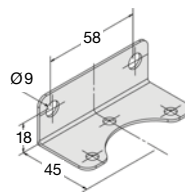
NPT	connection thread	R250-0..N
tamper-proof cap	made of aluminium, adjustment by screwdriver, total height 189 mm	R250-0..T

Accessories, enclosed

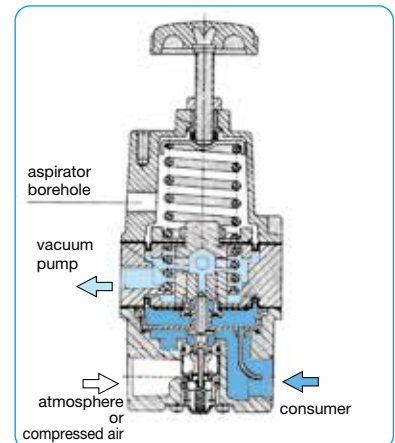
pressure gauge	Ø 63 mm, -1 ... 0 bar, G $\frac{1}{4}$	MA6302-00
mounting bracket	made of steel	BW00-33



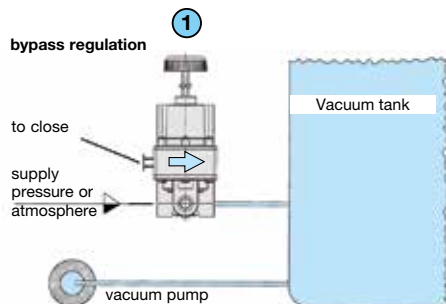
R250



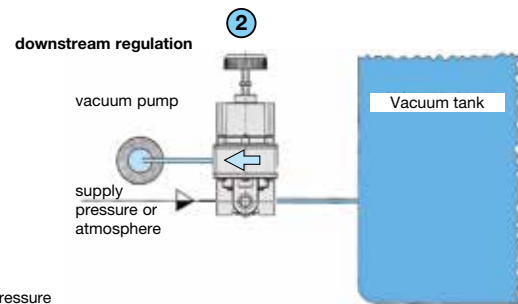
BW00-33



cross-section
connection for downstream regulation



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



2 **Downstream installation** is preferred when rapid exhaust of a tank or system or over-pressure filling is required. The inlet pressure connection can optionally be left open to atmosphere.

Note
A strainer is provided on the pressure side or atmospheric, 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

* Product group

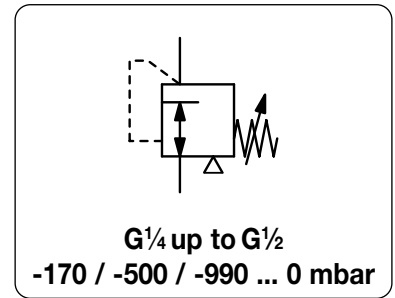
Gauges: see chapter for measuring devices

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	



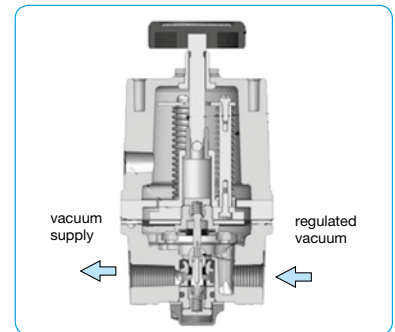
V170

Special options, add the appropriate letter

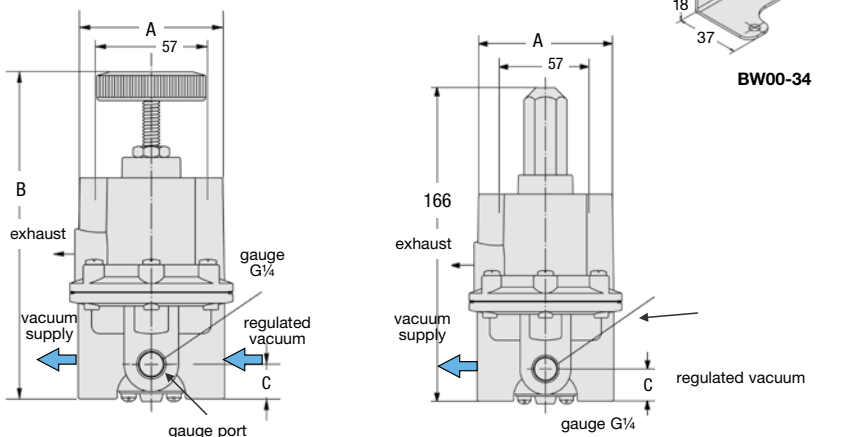
NPT	connection thread	V170-0 . . N
Verstellsicherung	made of aluminium, adjustment by screwdriver, total height 160 mm	V170-0 . . T
FKM-Elastomere		V170-0 . . V

Accessories, enclosed

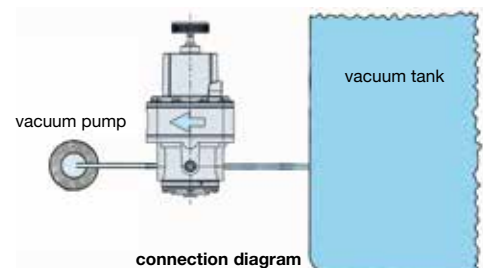
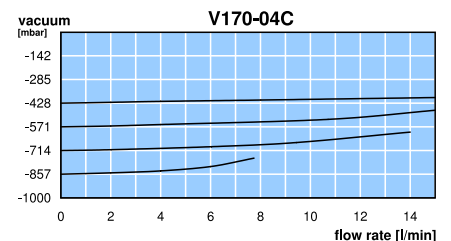
pressure gauge	Ø 63 mm, -1 bar...0 bar, G $\frac{1}{4}$	MA6302-00
mounting bracket	made of steel	BW00-34



cross-section



V170 with tamper proof cap



* Product group

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

Gauges: see chapter for measuring devices

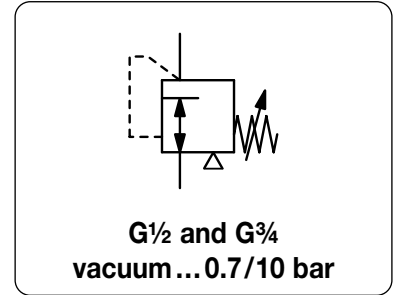
PDF CAD
www.aircom.net



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	bar
mm	mm	mm	mm	m ³ /h				

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



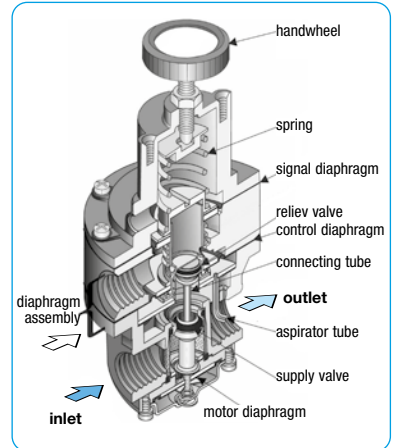
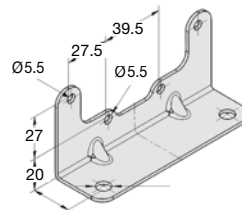
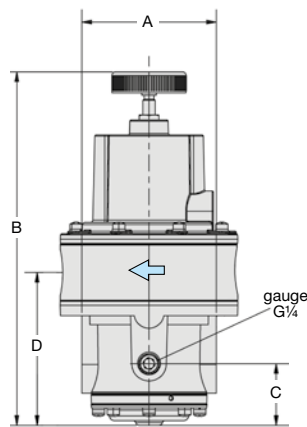
R251

Special options, add the appropriate letter

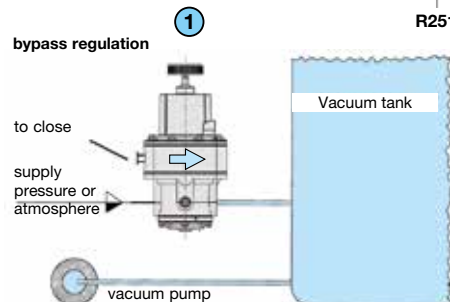
NPT	connection thread	R251-0 . . N
tamper-proof cap	made of aluminium, adjustment by screwdriver, total height 240 mm	R251-0 . . T
FKM elastomer		R251-0 . . V

Accessories, enclosed

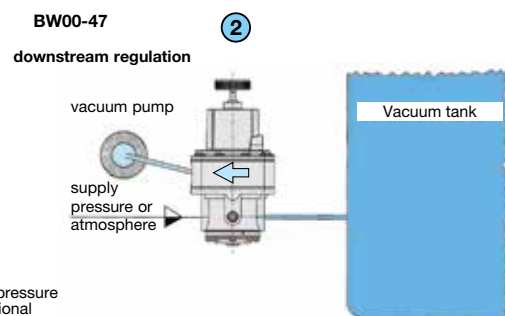
pressure gauge	Ø 63 mm, -1 ... 0 bar, G $\frac{1}{4}$	MA6302-00
mounting bracket	made of steel	BW00-47



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 installation is preferred when rapid exhaust of a tank or system or over-pressure filling is required. The inlet pressure connection can optionally be left open to atmosphere.

Note
A strainer is provided on the pressure side or atmospheric, 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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* Product group

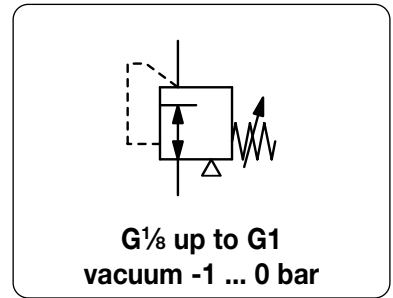


Order example:
R251-04A

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 actual 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 spindle with lock nut 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	l/min	G	bar	D*

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

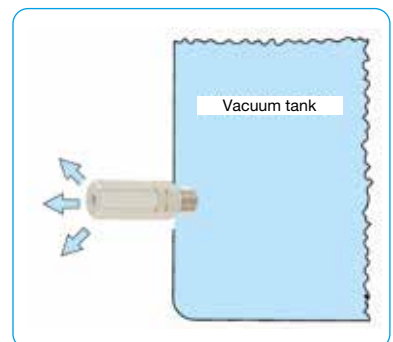
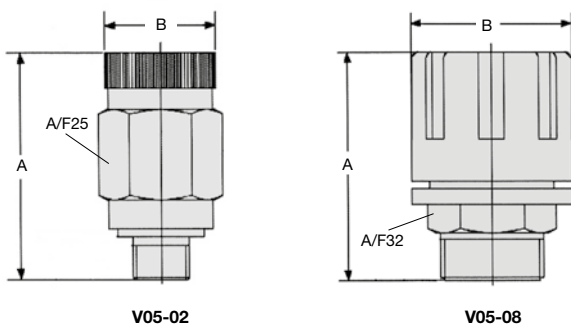
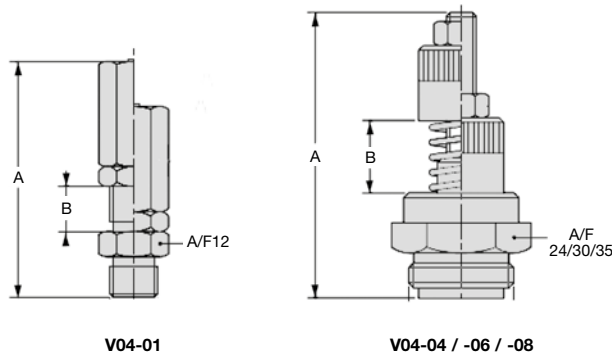
Vacuum adjustment valve, precise							Vacuum regulator with external leakage	V05
63	26	25	4	260	G ¹ / ₄	-1 ... 0		V05-02
82	52	32	20	700	G1	-1 ... 0		V05-08



V04-06 V04-08



V05-02 V05-08



* Product group

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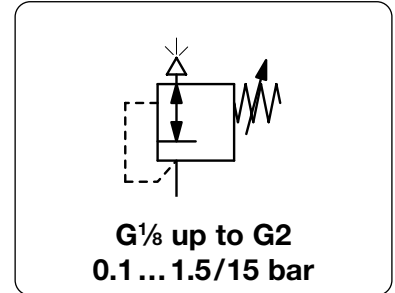
Order example:
V04-01

BACK PRESSURE REGULATOR

	DESCRIPTION	OVERPRESSURE	ADJUSTMENT RANGE	CONNECTION	DEVICE	PAGE
		max. bar	bar	thread		
STANDARD	aluminium	30	0.2 ... 1.5 / 15	G $\frac{1}{8}$ - G2	DBC	8.02
	brass	65	0.2 ... 1.5 / 50	G $\frac{1}{8}$ - G2	DBM	8.04
	- 40 °C	65	0.2 ... 1.5 / 50	G $\frac{1}{4}$ - G1	DBM-X51	8.05
	+130 °C	65	0.2 ... 1.5 / 50	G $\frac{1}{8}$ - G $\frac{1}{2}$	DBM-X54	8.05
PRECISE	high-precision	35	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10BP	8.06
	free of non-ferrous metal	35	0.01 ... 0.14 / 28	G $\frac{1}{4}$ - G $\frac{1}{2}$	10BP-X63	8.06
	aluminium	17	0.01 ... 0.14 / 10	G $\frac{1}{4}$ - $\frac{1}{2}$ "NPT	DB240	8.07
	aluminium	10	0.001 ... 0.14 / 7	G $\frac{1}{4}$ and G $\frac{3}{8}$	DB300	8.09
	aluminium	17	0.03 ... 0.7 / 10	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB400	8.10
LOW PRESSURE	precise	10	0.002... 0.035 / 0.8	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB110	8.08
	precise	6	0.005... 0.045 / 3	G $\frac{1}{2}$ - G2	DBC	8.11
PILOT-OPERATED	precise	17	0 ... 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	DB208	8.12
	precise	17	0 ... 10	G $\frac{3}{8}$ - G $\frac{3}{4}$	DB450	8.13
MINIATURE	screw-in, knurled screw	21	1.7 ... 2.4 / 14	G $\frac{1}{4}$ m	59	8.14
	screw-in, plastic knob	21	0 ... 3.5 / 7	G $\frac{1}{4}$ m	130	8.14
	tapped exhaust	21	0 ... 1.0 / 7	G $\frac{1}{4}$	134	8.14
STAINLESS STEEL	for many gases, FDA also	65	0.1 ... 1.5 / 50	G $\frac{1}{8}$ - G2	D3000	15.22
	- 40 °C	65	0.2 ... 1.5 / 50	G $\frac{1}{8}$ - G $\frac{1}{2}$	D3000-X51	15.25
	+130 °C	65	0.1 ... 1.5 / 50	G $\frac{1}{4}$ - G2	D3000-X54	15.25
	low pressure	6	0.005... 0.045 / 3	G $\frac{1}{2}$ - G2	D3100	15.26

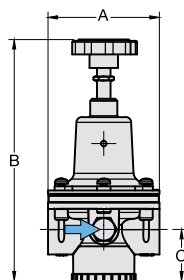
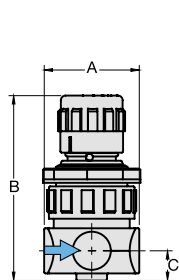
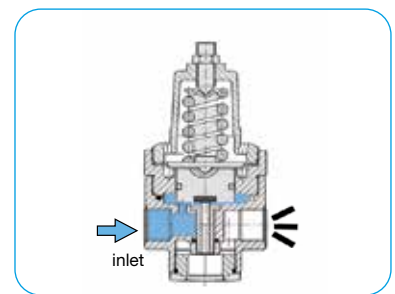
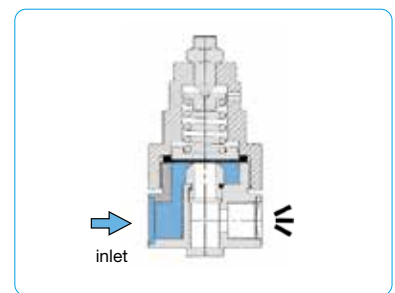


Description	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.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



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

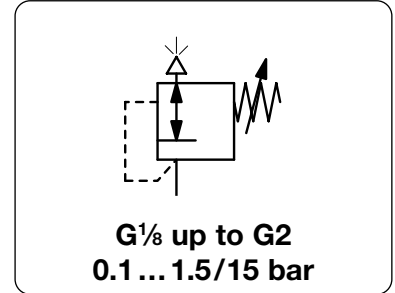
Aluminium back pressure regulator				overpressure max. 30 bar	DBC			
40	78	13	D	200	30	G $\frac{1}{8}$	0.2 ... 1.5	DBC-01A
							0.3 ... 3.0	DBC-01B
							0.8 ... 8.0	DBC-01D
							1.5 ... 15	DBC-01E
40	78	13	D	200	30	G $\frac{1}{4}$	0.2 ... 1.5	DBC-A2A
							0.3 ... 3.0	DBC-A2B
							0.8 ... 8.0	DBC-A2D
							1.5 ... 15	DBC-A2E
78	166	33	D	400	30	G $\frac{1}{4}$	0.2 ... 1.5	DBC-02A
							0.3 ... 3.0	DBC-02B
							0.8 ... 8.0	DBC-02D
							1.5 ... 15	DBC-02E
78	166	33	D	500	30	G $\frac{3}{8}$	0.2 ... 1.5	DBC-03A
							0.3 ... 3.0	DBC-03B
							0.8 ... 8.0	DBC-03D
							1.5 ... 15	DBC-03E
82	175	38	D	2200	30	G $\frac{1}{2}$	0.2 ... 1.5	DBC-04A
							0.3 ... 3.0	DBC-04B
							0.8 ... 8.0	DBC-04D
							1.5 ... 15	DBC-04E
82	175	38	D	2500	30	G $\frac{3}{4}$	0.2 ... 1.5	DBC-A6A
							0.3 ... 3.0	DBC-A6B
							0.8 ... 8.0	DBC-A6D
							1.5 ... 15	DBC-A6E



*1 at 7 bar overpressure and open outlet

* Product group

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



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

Aluminium back pressure regulator							overpressure max. 30 bar	DBC
215	393	128	P	12000	30	G1½	0.2 ... 1.5	DBC-12A
							0.3 ... 3.0	DBC-12B
							0.8 ... 8.0	DBC-12D
							1.5 ... 15	DBC-12E
215	393	128	P	12000	30	G2	0.2 ... 1.5	DBC-16A
							0.3 ... 3.0	DBC-16B
							0.8 ... 8.0	DBC-16D
							1.5 ... 15	DBC-16E



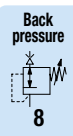
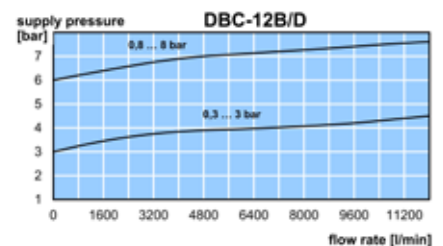
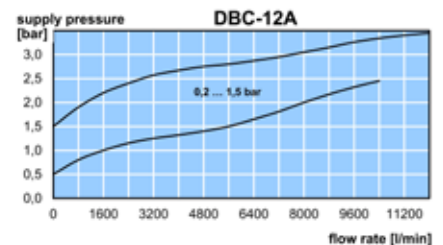
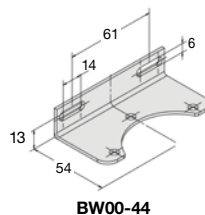
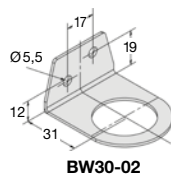
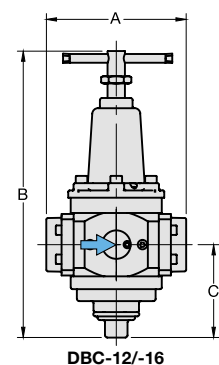
DBC-12/-16
accessory pressure gauge

Special options, add the appropriate letter

NPT	connection thread	from G $\frac{1}{4}$ (02)	DBC-... N
FKM o-ring	PTFE-diaphragm		DBC-... V
EPDM o-ring	PTFE-diaphragm		DBC-... E
flange connection	see chapter for stainless steel devices / flanges		DBC-... F.

Accessories, enclosed

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



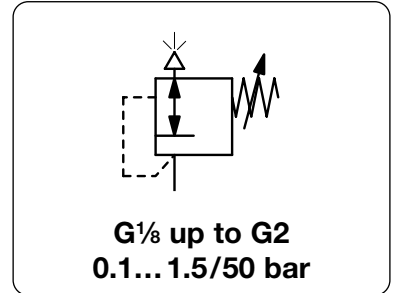
*1 at 7 bar overpressure and open outlet
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

PDF CAD
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* Product group
Order example:
DBC-06A

Description	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
Media	compressed air, non-corrosive gases or liquids	Overpressure	see chart, max. 65 bar
Adjustment	by black plastic knob with snap-lock for DBM-02/-03 by T-handle with locknut for DBM-04/-08	by hexagonal spindle (spanner size 24 mm) with locknut for DBM-12/-16	
Gauge port	G $\frac{1}{4}$ on both sides of the body, from DBC-02 on screw plugs supplied		
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F		
Mounting position	any		
Material	Body: brass Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM, optionally EPDM Inner valve: brass	



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

Brass back pressure regulator					overpressure max. 30/65 bar	DBM		
69	150	35	D	800	30	G $\frac{1}{4}$	0.2 ... 1.5	DBM-02A
							0.3 ... 3.0	DBM-02B
							0.8 ... 8.0	DBM-02D
							1.5 ... 15	DBM-02E
69	145	35	P		65		3.0 ... 30	DBM-02F
69	160	35					5.0 ... 50	DBM-02G
69	150	35	D	800	30	G $\frac{3}{8}$	0.2 ... 1.5	DBM-03A
							0.3 ... 3.0	DBM-03B
							0.8 ... 8.0	DBM-03D
							1.5 ... 15	DBM-03E
69	145	35	P		65		3.0 ... 30	DBM-03F
69	160	35					5.0 ... 50	DBM-03G
78	170	38	D	2500	30	G $\frac{1}{2}$	0.2 ... 1.5	DBM-04A
							0.3 ... 3.0	DBM-04B
							0.8 ... 8.0	DBM-04D
							1.5 ... 15	DBM-04E
78	170	38	P		65		3.0 ... 30	DBM-04F
							5.0 ... 50	DBM-04G
118	291	66	D	8000	30	G $\frac{3}{4}$	0.2 ... 1.5	DBM-06A
							0.3 ... 3.0	DBM-06B
							0.8 ... 8.0	DBM-06D
							1.5 ... 15	DBM-06E
118	313	66	P		65		3.0 ... 30	DBM-06F
							5.0 ... 50	DBM-06G
118	291	66	D	8000	30	G1	0.2 ... 1.5	DBM-08A
							0.3 ... 3.0	DBM-08B
							0.8 ... 8.0	DBM-08D
							1.5 ... 15	DBM-08E
118	313	66	P		65		3.0 ... 30	DBM-08F
							5.0 ... 50	DBM-08G



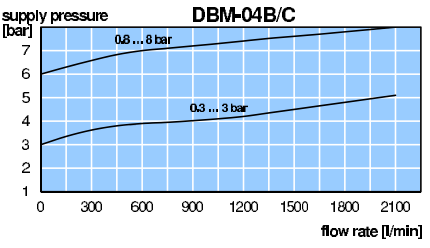
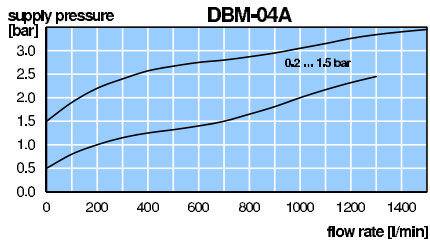
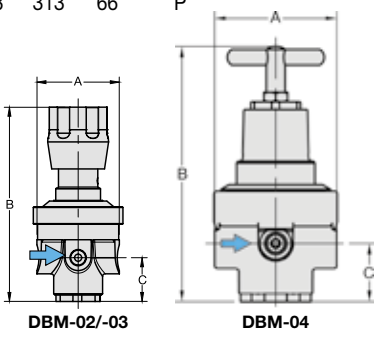
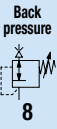
DBM-02/-03



DBM-04



DBM-06/-08



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

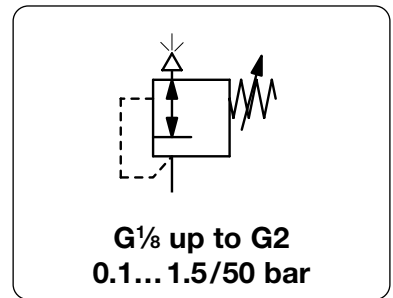
* Product group

Gauges: see chapter for measuring devices

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Order example:
DBM-02A

Description	Back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
Media	compressed air, non-corrosive gases or liquids	Overpressure	see chart, max. 65 bar
Adjustment	by spindle with locknut for DBM-01 by T-handle with locknut for DBM-04/-08	by black plastic knob with snap-lock for DBM-02/-03 by hexagonal spindle (spanner size 24 mm) with locknut for DBM-12/-16	
Gauge port	G $\frac{1}{4}$ on both sides of the body, from DBC-02 on	G $\frac{1}{2}$ at DBM-01, screw plugs supplied	
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F		
Mounting position	any		
Material	Body: brass Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM, optionally EPDM Inner valve: brass	



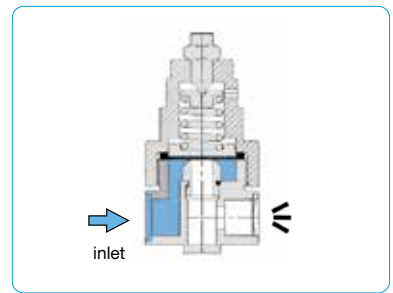
Dimensions			Regul. system	Relief	Over-	Connection	Adjustment	Order
A	B	C	D: diaphragm	capacity	pressure	thread	range	number
mm	mm	mm	P: piston	l/min*1	max. bar	G	bar	

Brass back pressure regulator						overpressure max. 30/65 bar	DBM	
180	385	129	D	25 000	30	G $\frac{1}{2}$	0.2... 1.5 0.3... 3.0 0.8... 8.0 1.5... 15	DBM-12A DBM-12B DBM-12D DBM-12E
180	400	129	P		65		3.0... 30 5.0... 50	DBM-12F DBM-12G
180	385	129	D	25 000	30	G2	0.2... 1.5 0.3... 3.0 0.8... 8.0 1.5... 15	DBM-16A DBM-16B DBM-16D DBM-16E
180	400	129	P		65		3.0... 30 5.0... 50	DBM-16F DBM-16G



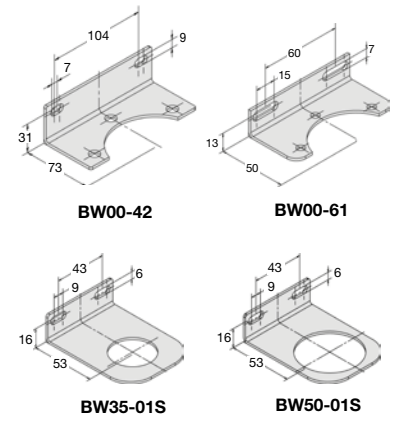
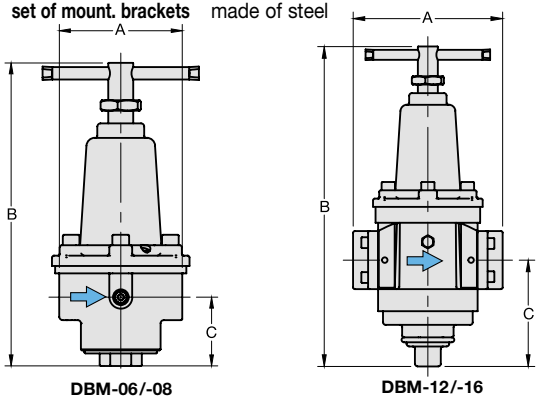
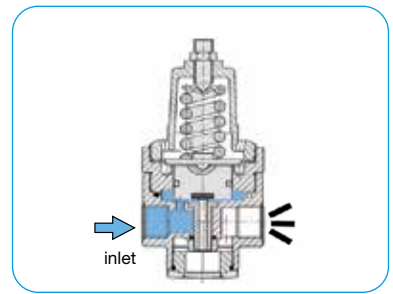
Special options, add the appropriate letter

NPT	connection thread	DBM-... N
down to -40 °C / -40 °F	low temperature version	DBM-... X51
up to 130 °C / 266 °F	high temperature version	DBM-... X54
EPDM o-ring	PTFE diaphragm	DBM-... E
T-handle	instead of knob	DBM-... T
flange connection	see chapter for stainless steel devices / flanges	DBM-... F.
nitrogen	N $_2$: 07	carbon dioxide CO $_2$: 03
helium	He: 09	hydrogen H $_2$: 11
oxygen	O $_2$: 15	propane C $_3$ H $_8$: 16
		argon Ar: DBM-... 05
		methane CH $_4$: DBM-... 13
		nitrous oxide N $_2$ O: DBM-... 17
		water H $_2$ O: DBM-... W

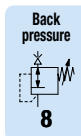


Accessories, enclosed

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$ Ø 50 / Ø 63 mm, 0...25 bar, G $\frac{1}{4}$ Ø 50 / Ø 63 mm, 0...60 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$ for G $\frac{3}{4}$ to G2 für G $\frac{1}{4}$ bis G2 für G $\frac{1}{4}$ bis G2	MA5002-...*2 MA6302-...*2 MA ..02-25 MA ..02-60
mounting bracket	made of stainless steel	for G $\frac{1}{4}$ and G $\frac{3}{8}$	BW35-01S
mounting nut	made of stainless steel	for G $\frac{1}{4}$ and G $\frac{3}{8}$	M35x1,5S
mounting bracket	made of stainless steel	for G $\frac{1}{2}$	BW50-01S
mounting nut	made of stainless steel	for G $\frac{1}{2}$	M50x1,5S
mounting bracket	made of steel	for G $\frac{3}{4}$ and G1	BW00-42
set of mount. brackets	made of steel	for G $\frac{1}{2}$ and G2	BW00-61

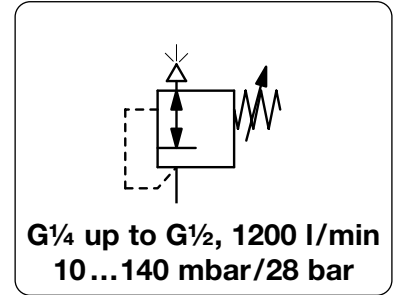


*1 at 7 bar overpressure and open outlet
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar 60 = 0...60 bar



PRECISION BACK PRESSURE REGULATOR OF ADVANCED ACCURACY, UP TO 35 BAR 10BP

Description	The back pressure regulator is a high-flow, high-precision pneumatic relief valve with adjustable setpoint. It provides protection against overpressure in the downstream section of pneumatic systems. A convoluted diaphragm provides the sensitivity for venting to the atmosphere in response to the slightest upstream change.
Media	compressed air or non-corrosive gases
Overpressure	max. 21 bar up to pressure range of 14 bar, max. 35 bar beyond
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 and brass



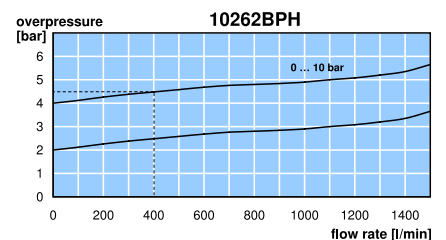
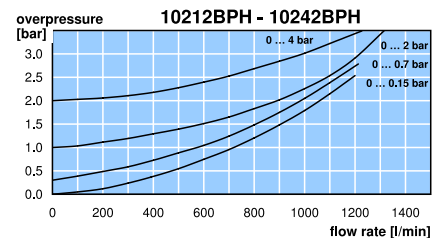
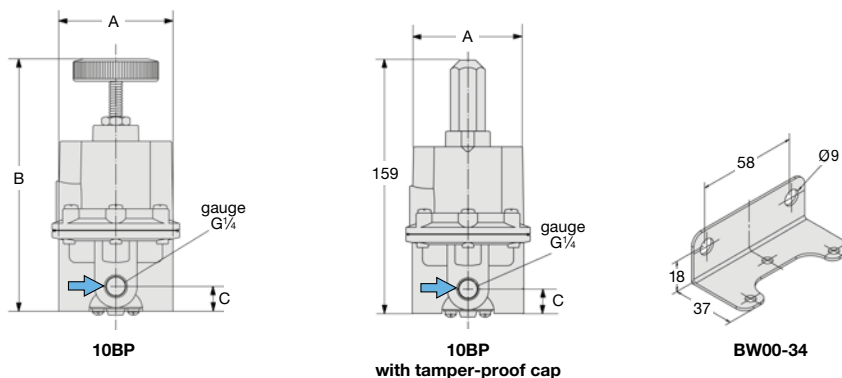
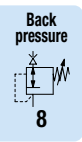
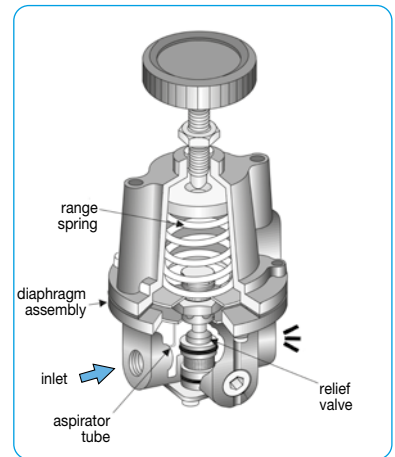
Dimensions			Relief capacity l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range bar	Order number
A	B	C					

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



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

Accessories, enclosed		
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$ Ø 50 mm, 0... 25 bar, G $\frac{1}{4}$ Ø 50 mm, 0... 60 bar, G $\frac{1}{4}$ Ø 63 mm, 0...160 mbar, G $\frac{1}{4}$	MA5002-...*2 MA5002-25 MA5002-60 MA6302-C2 BW00-34
mounting bracket	made of steel	



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

Gauges: see chapter for measuring devices

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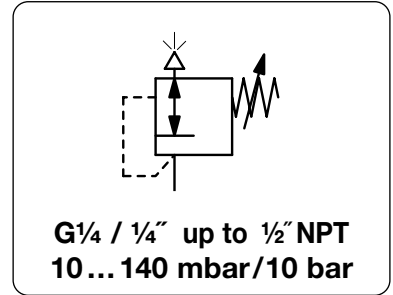
* Product group

Order example:
10212BPH

PRECISION BACK PRESSURE REGULATOR

DB240

Description	The back pressure regulator is a high-flow, high-precision pneumatic relief valve with adjustable setpoint. It provides protection against overpressure in the downstream section of pneumatic systems. A convoluted diaphragm provides the sensitivity for venting to the atmosphere in response to the slightest upstream change.
Media	compressed air or non-corrosive gases
Overpressure	max. 17 bar
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 70 °C / 32 °F to 158 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
Material	Body: aluminium die-cast Elastomer: NBR/Buna-N Inner valve: stainless steel and brass



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

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



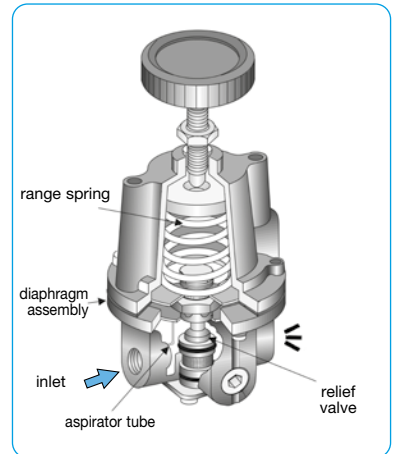
DB240

Special options, add the appropriate letter

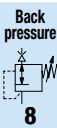
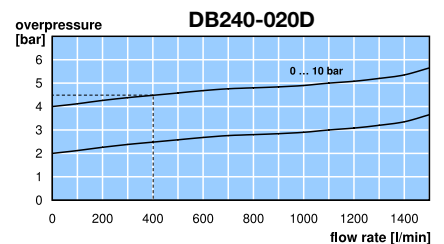
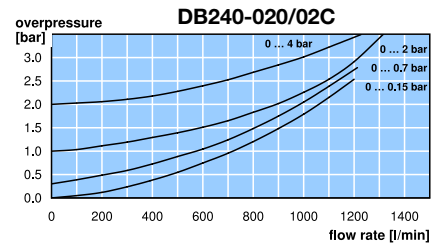
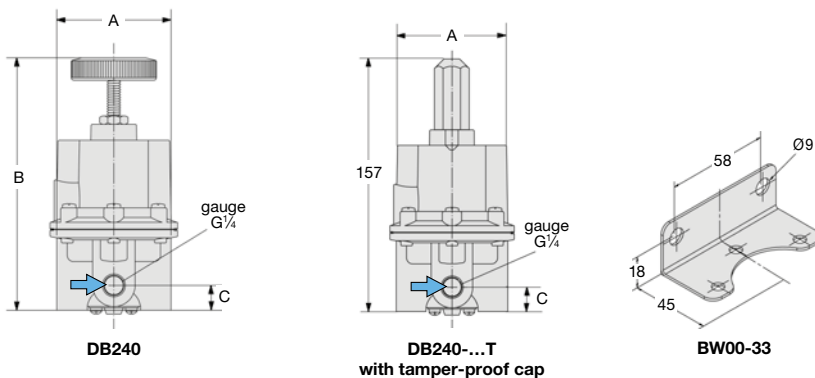
$\frac{1}{4}$" NPT	connection thread	DB240-02 . N
$\frac{3}{8}$" NPT	connection thread	DB240-03 . N
$\frac{1}{2}$" NPT	connection thread, recommended for mbar range	DB240-04 . N
tamper-proof cap	aluminium, adjustment by screwdriver, total height 157 mm	DB240-0 . . T

Accessories, enclosed

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



cross-section



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

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

* Product group



Order example:
DB240-020

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

Media compressed air or non-corrosive gases

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

Overpressure max. 10 bar

Accuracy response sensitivity <2 mbar

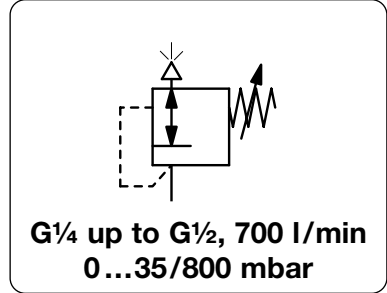
Adjustment by handwheel with locknut

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

Mounting position any

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

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



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

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



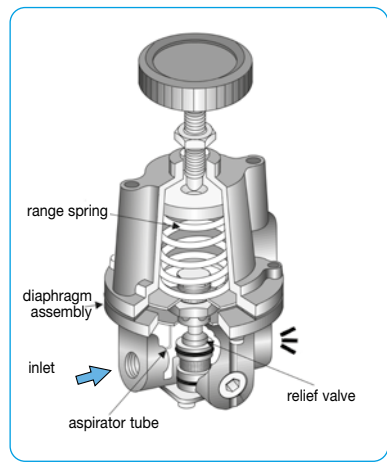
DB110

Special options, add the appropriate letter

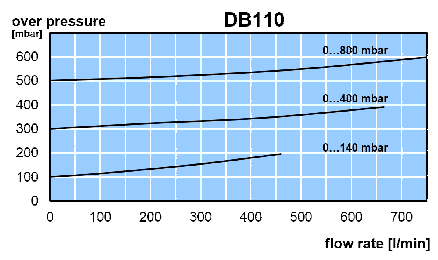
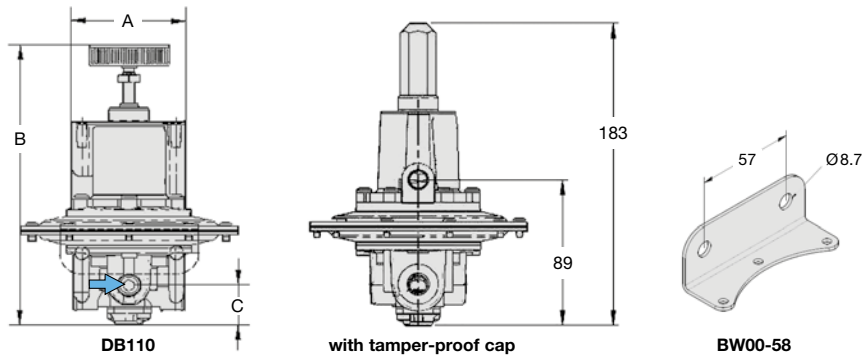
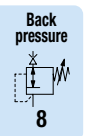
G¾	connection thread	DB110-03.
NPT	connection thread	DB110-0.. N
FKM elastomer		DB110-0.. V
tamper-proof cap	aluminium, adjustment by screwdriver, total height 183 mm	DB110-0.. T

Accessories, enclosed

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



functional principle

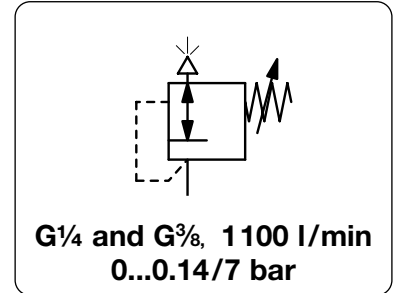


*1 at 200 mbar overpressure and open outlet
*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar

PRECISION BACK PRESSURE REGULATOR, SMALL AND LIGHTWEIGHT

DB300

Description	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.
Media	compressed air or non-corrosive gases
Overpressure	max. 10 bar
Accuracy	response sensitivity <2 mbar
Adjustment	by handwheel with locknut
Gauge port	G $\frac{1}{8}$ 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: brass



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

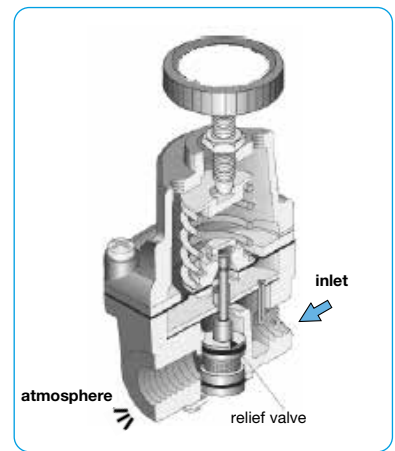
Precision back pressure regulator							overpressure max. 10 bar	DB300
57	126	19	1100	10	G $\frac{1}{4}$	0.001... 0.14	DB300-020	
						0.01 ... 0.7	DB300-021	
						0.03 ... 2.0	DB300-02A	
						0.07 ... 4.0	DB300-02B	
						0.14 ... 7.0	DB300-02C	
57	126	19	1100	10	G $\frac{3}{8}$	0.001... 0.14	DB300-030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



DB300

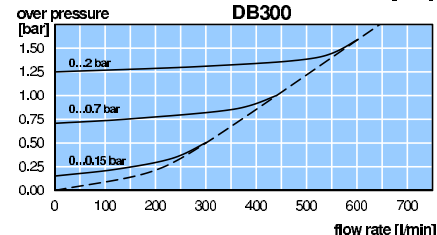
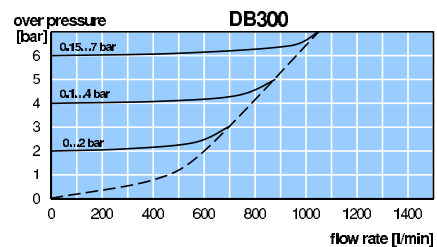
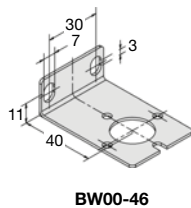
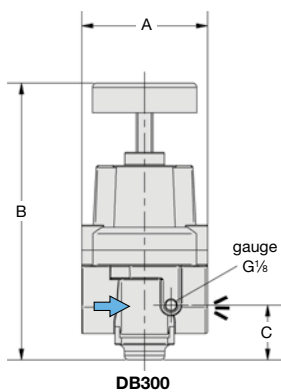
Special options, add the appropriate letter

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



Accessories, enclosed

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



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

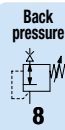
Gauges: see chapter for measuring devices

PDF CAD
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* Product group



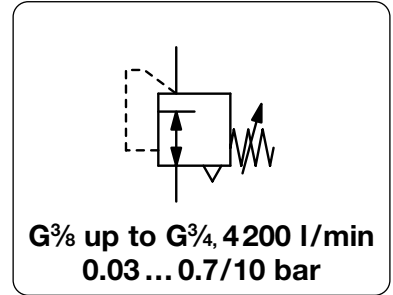
Order example:
DB300-020



PRECISION BACK PRESSURE REGULATOR

DB400

Description	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.
Media	compressed air or non-corrosive gases
Overpressure	max. 17 bar
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 cadmium-plated steel



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

Precision back pressure regulator							overpressure max. 17 bar	DB400
89	206	39	3 800	17	G $\frac{3}{8}$	0.03 ... 0.7	DB400-031	
						0.03 ... 2.0	DB400-03A	
						0.07 ... 4.0	DB400-03B	
						0.15 ... 10	DB400-03C	
89	206	39	4 000	17	G $\frac{1}{2}$	0.03 ... 0.7	DB400-041	
						0.03 ... 2.0	DB400-04A	
						0.07 ... 4.0	DB400-04B	
						0.15 ... 10	DB400-04C	
89	206	39	4 200	17	G $\frac{3}{4}$	0.03 ... 0.7	DB400-061	
						0.03 ... 2.0	DB400-06A	
						0.07 ... 4.0	DB400-06B	
						0.15 ... 10	DB400-06C	



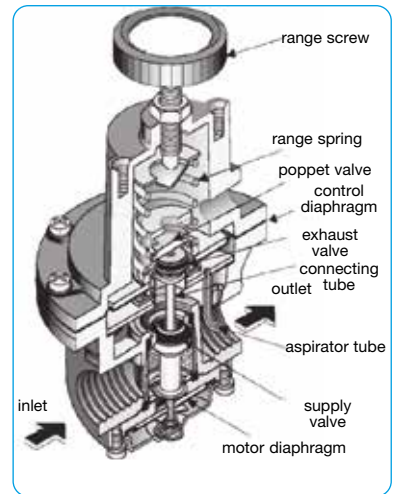
DB400

Special options, add the appropriate letter

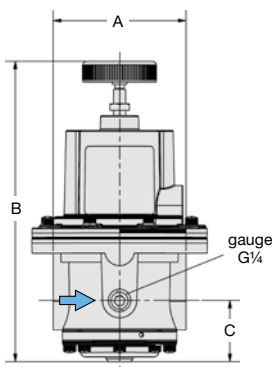
NPT	connection thread	DB400-0..N
tamper-proof cap	aluminium, adjustment by screwdriver, total height 295 mm	DB400-0..T
FKM elastomer		DB400-0..V

Accessories, enclosed

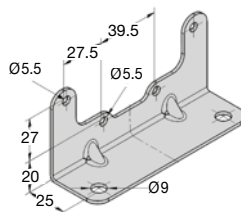
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-...*2
mounting bracket	made of steel	BW00-47



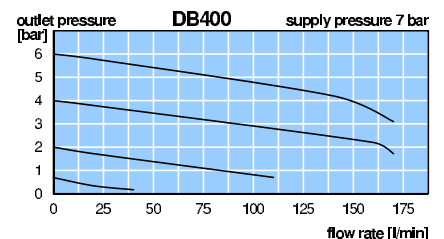
cross-section



DB400



BW00-47



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

* Product group

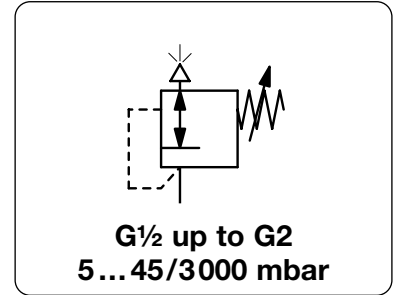
Gauges: see chapter for measuring devices

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Order example:
DB400-031

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



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

Aluminium back pressure regulator			NBR/Buna-N with PTFE coating		DBC		
82	186	38	300	1	G $\frac{1}{2}$	5... 45	DBC-04N
			500			20... 200	DBC-04P
			1000			150... 700	DBC-04Q
161	290	45	1300	6	G $\frac{3}{4}$	50... 300	DBC-06P
			2300			100... 700	DBC-06Q
			5000			200... 1200	DBC-06R
161	290	45	1300	6	G1	50... 300	DBC-08P
			2300			100... 700	DBC-08Q
			5000			200... 1200	DBC-08R
265	290	45	1300	6	G1 $\frac{1}{4}$	50... 300	DBC-10P
			2300			100... 700	DBC-10Q
			5000			200... 1200	DBC-10R
265	290	45	1300	6	G1 $\frac{1}{2}$	50... 300	DBC-1AP
			2300			100... 700	DBC-1AQ
			5000			200... 1200	DBC-1AR
192	444	128	2500	6	G1 $\frac{1}{2}$	20... 50	DBC-12N
			5000			50... 150	DBC-12P
			7500			150... 300	DBC-12Q
			10000			300... 3000	DBC-12R
192	444	128	2500	6	G2	20... 50	DBC-16N
			5000			50... 150	DBC-16P
			7500			150... 300	DBC-16Q
			10000			300... 3000	DBC-16R



DBC-04



DBC-06/-08



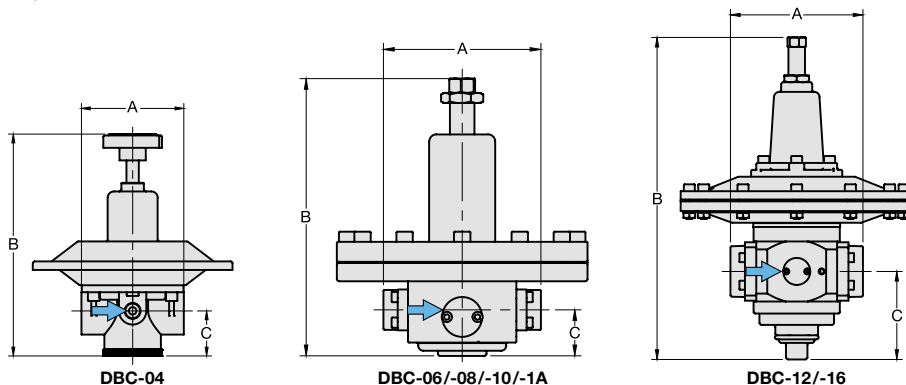
DBC-12/-16

Special options, add the appropriate letter

NPT	connection thread	DBC-... N
FKM o-ring	PTFE-diaphragm	DBC-... V
EPDM o-ring	PTFE-diaphragm	DBC-... E
flange connection	see chapter for stainless steel devices / flanges	DBC-... F.

Accessories, enclosed

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



*1 at 6 bar overpressure and open outlet
*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar, C01 = 0...1 bar, 04 = 0...4 bar, 06 = 0...6 bar

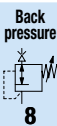
Gauges: see chapter for measuring devices

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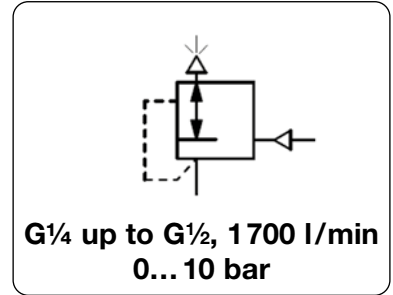
* Product group



Order example:
DBC-04N



Description	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
Media	compressed air or non-corrosive gases		
Overpressure	max. 17 bar	Pilot pressure	0 ... 10 bar
Accuracy	1% at 7 bar pilot pressure	Response sensitivity	1 mbar
Adjustment	depending on the level of signal pressure the response value will change accordingly		
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 casting O-rings: NBR/Buna-N, optionally FKM	Elastomer:	NBR/Buna-N Inner valve: brass and zinc-plated steel



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

Back pressure regulator, pilot-operated							pilot pressure overpressure	0...10 bar max. 17 bar	DB208
76	98	24	1700	17	0... 10	G $\frac{1}{4}$		DB208-02	
						G $\frac{3}{8}$		DB208-03	
						G $\frac{1}{2}$		DB208-04	



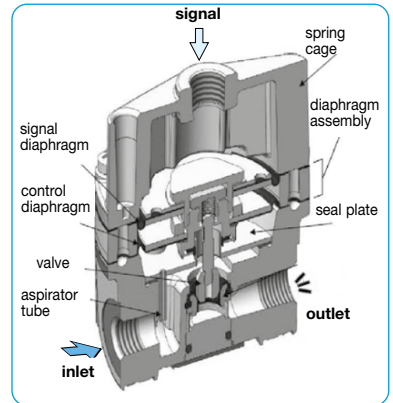
DB208

Special options, add the appropriate letter

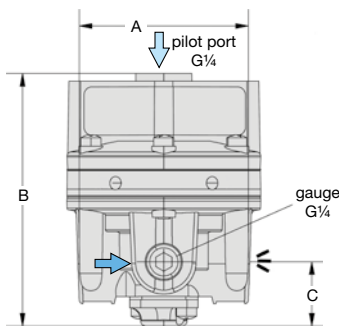
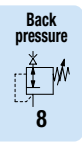
NPT	connection thread	DB208-0.N
FKM elastomer		DB208-0.V

Accessories, enclosed

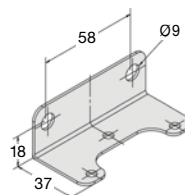
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-34



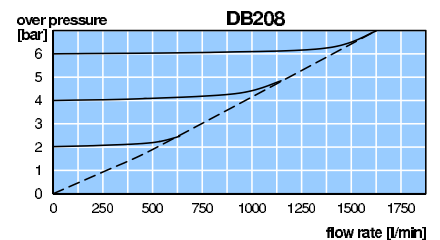
cross-section



DB208



BW00-34



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

Gauges: see chapter for measuring devices

PDF CAD
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* Product group

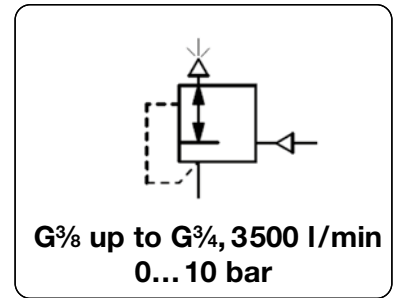


Order example:
DB208-02

PRECISION BACK PRESSURE REGULATOR, PILOT-OPERATED

DB450

Description	Diaphragm back pressure regulators protect pneumatic devices against overpressure. If the pressure exceeds the setpoint, the pressure valve exhausts to the atmosphere until the pressure level is below the setpoint. It is advisable to select the pressure range as near as possible to the maximum setpoint.		
Media	compressed air or non-corrosive gases		
Overpressure	max. 17 bar	Pilot pressure	0 ... 10 bar
Accuracy	3% at 7 bar pilot pressure	Response sensitivity	2.5 mbar
Adjustment	depending on the level of signal pressure the response value will change accordingly		
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 casting O-rings: NBR/Buna-N, optionally FKM	Elastomer:	NBR/Buna-N
		Inner valve:	brass and aluminium



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

Back pressure regulator, pilot-operated							pilot pressure overpressure	0...10 bar max. 17 bar	DB450
87	129	40	3500	17	0... 10	G $\frac{3}{8}$		DB450-03	
						G $\frac{1}{2}$		DB450-04	
						G $\frac{3}{4}$		DB450-06	



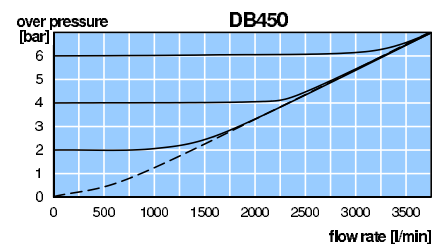
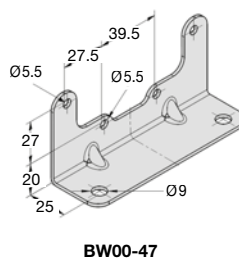
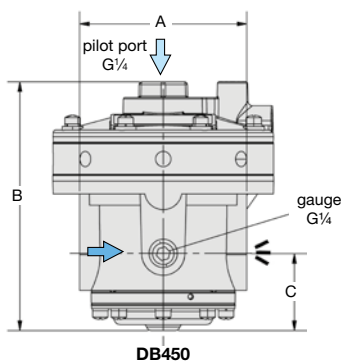
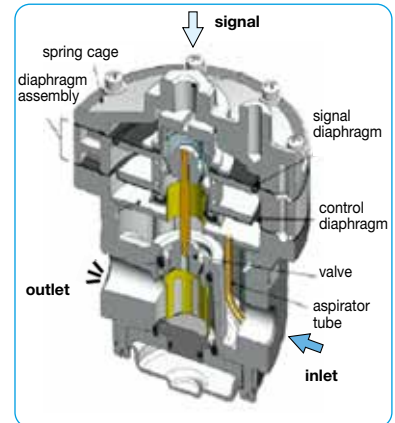
DB450

Special options, add the appropriate letter

NPT	connection thread	DB450-0. N
FKM elastomer		DB450-0. V

Accessories, enclosed

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



*1 at 6 bar inlet pressure and open outlet

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

* Product group

Gauges: see chapter for measuring devices

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Order example:
DB450-03

WATER PRESSURE REGULATORS

	DESCRIPTION	SUPPLY PRESSURE max. bar	PRESSURE RANGE bar	CONNECTION thread	SERIES	PAGE
MINIATURE	made of plastic	11	0 ... 1.0 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	R25	9.02
	made of plastic	11	0 ... 1.8 / 9	G $\frac{1}{4}$ and G $\frac{3}{8}$	R45	9.02
	preset, for drinking water	15	1 / 2 / 3... 8	G $\frac{1}{4}$	239K	9.03
STANDARD	female thread	60	0.2 ... 2 / 45	G $\frac{1}{4}$ - G2	RWI	9.04
	male thread	25	0.2 ... 2 / 20	R $\frac{1}{2}$ " - R $2\frac{1}{2}$ "	RWA	9.06
	flange	40	0.2 ... 2 / 20	DN 8-DN125	RWF	9.08
	stainless steel, flange	40	0.2 ... 2 / 20	DN15-DN50	RAF	9.10
	stainless steel, female thread	40	0.2 ... 2 / 20	G $\frac{1}{2}$ - G2	RAI	9.12
STEAM PRESSURE REGULATOR	spheroidal graphite iron	19	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU	9.14
	red brass	17	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU-R	9.14
	stainless steel	19	0.14 ... 1.7 / 9	G $\frac{1}{2}$ - G2, flange	RU-S	9.14



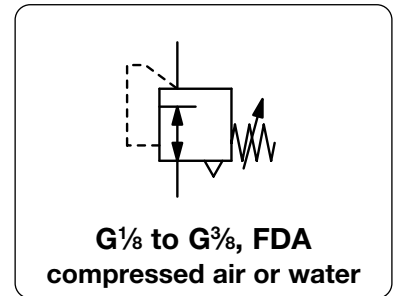
9

Special



9

Description	Miniature pressure regulator with diaphragm, designed for compressed air and water applications. All internal wetted sections are corrosion-resistant, lead free and without any brass components. Material approved by the NSF and FDA. Regulator for modular application with many integrated fixing holes.		
Media	compressed air, non-corrosive gases or water		
Supply pressure	max. 11 bar		
Adjustment	by plastic knob with snap-lock		
Relieving function	relieving for air, non-relieving for water		
Gauge port	G $\frac{1}{8}$ on both sides of R25,	G $\frac{1}{4}$ on both sides of R45, screw plugs supplied	
Mounting position	any		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F		
Material	Body: glass fibre-reinforced acetal Inner valve: glass fibre-reinforced acetal	Elastomer: NBR/Buna-N	



Dimensions			Flow rate		Connection	Pressure	Order no.	Order no. for
A	B	C	water	air	thread	range	for water	compressed air
mm	mm	mm	l/min*1	l/min*1	G	bar	non-relieving	relieving

Pressure regulator

supply pressure max. 11 bar							R25	
40	78	12	3	150	G $\frac{1}{8}$	0...1.0	R25-010K	R25-010
						0...1.8	R25-01AK	R25-01A
						0...4.0	R25-01BK	R25-01B
						0...9.0	R25-01CK	R25-01C
40	78	12	3	150	G $\frac{1}{4}$	0...1.0	R25-020K	R25-020
						0...1.8	R25-02AK	R25-02A
						0...4.0	R25-02BK	R25-02B
						0...9.0	R25-02CK	R25-02C



R25

Pressure regulator for high flow

supply pressure max. 11 bar							R45	
52	87	14	10	680	G $\frac{1}{4}$	0...1.8	R45-02AK	R45-02A
						0...4.0	R45-02BK	R45-02B
						0...9.0	R45-02CK	R45-02C
52	87	14	13	960	G $\frac{3}{8}$	0...1.8	R45-03AK	R45-03A
						0...4.0	R45-03BK	R45-03B
						0...9.0	R45-03CK	R45-03C



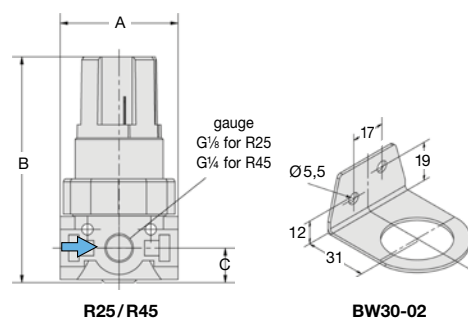
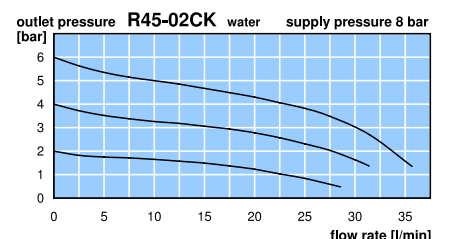
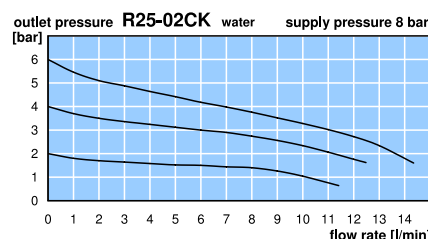
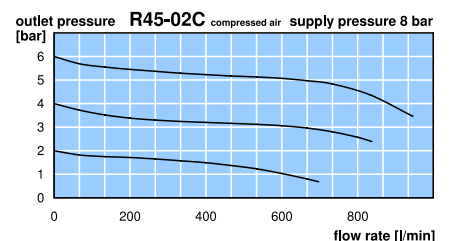
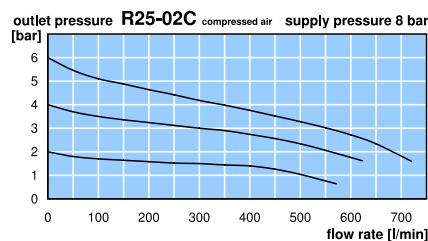
R45

Special options, add the appropriate letter

adjustment lock	socket wrench adjustment, height 64 mm	R25 only R25-0..T
EPDM-Elastomerc		R.5-0..E

Accessories, enclosed

pressure gauge	Ø 40 mm, 0...*2 bar, G $\frac{1}{8}$ Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for R25 MA4001-..*2 for R45 MA5002-..*2
mounting bracket	made of steel	BW30-02
mounting nut	made of plastic made of aluminium	R05X51 M30x1,5A



R25/R45

BW30-02

*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop, for water supply pressure 2 bar above outlet pressure
*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

* Product group

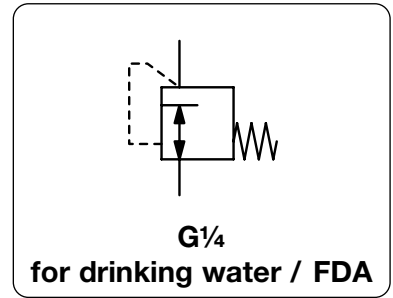
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
R25-010K

General	In-Line pressure regulator with factory-set outlet pressure, reducing from e.g. 10 bar to 5 bar. The outlet pressure cannot be subsequently adjusted. This safeguards against tampering.
Description	regulator for drinking water conforms to the FDA, EU and DIN 50930-6, TÜV drinking water directives
Application	applications areas such as drinking water, food and medical industry
Supply pressure	max. 15 bar
Accuracy	± 0.3 bar, for compressed air P ₁ : 6 bar and 10 l/min
Temperature range	4 °C to 60 °C / 39.2 °F to 140 °F
Material	Body: Grivory® GV-5 FWA Inner parts: Stainless steel DIN 1.4404 / AISI 316L Diaphragm: EPDM



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

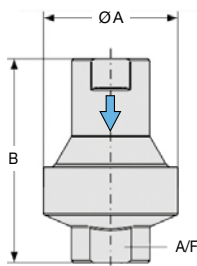
Regulator for drinking water				Grivory, accuracy *2	P ₁ : max. 15 bar,	239K
34	52	17	10	15	G1/4	1 239K0210
			10			2 239K0220
			10			3 239K0230
			10			4 239K0240
			10			5 239K0250
			10			6 239K0260
			10			7 239K0270
			10			8 239K0280



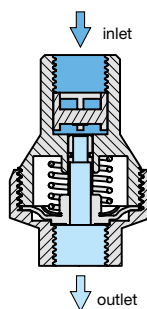
239K

Special options, add the appropriate letter

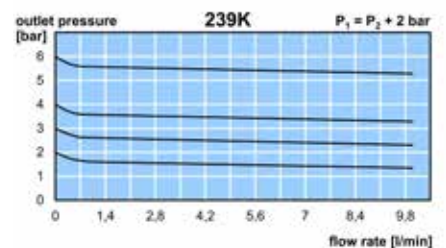
NPT	connection thread	239K1 . . .
deviant pressure range	indicate on order	239K . . XX



239K



cross-section



*1 P₁ = 10 bar; Δp = 0.8 bar

*2 Tolerance: < 4 bar ± 0.3 bar (air, P_e = 6 bar, 10 NI/min)
≥ 4 bar ± 10% (air, P_e = 10 bar, 10 NI/min)

* Product group



PRESSURE REGULATOR FOR WATER, WITH FEMALE THREAD

RWI

Description

Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated. particularly all regulators RWI...C with outlet range 1.5 ...6 bar

Drinking water

Media

preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. Especially suitable for compressed air are regulators RWI...D. It has to be considered that these regulators are non-relieving.

Pressure difference Reduction ratio

1 bar, between inlet and outlet pressure
between supply and outlet pressure should not be greater than:
20:1 for RWI...A, 10:1 for RWI...D, 6:1 for RWI...G/H, 3:1 for RWI...I

Mounting position

any, preferably vertical
G¼ on both sides of the body for outlet pressure, ports are closed with screw plugs.

Gauge port

ATEX

PED

Temperature range

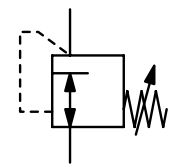
Material

according to ATEX2014/34/EU, EN1127, EN13463 for zone 1, 2, 21 and 22 according to EU directives DGRL/PED for liquids and gases of group 2
0 °C to 80 °C / 32 °F to 176 °F
see opposite page

Screw standard

according to DIN ISO 228

drinking water



G¼ up to G2
0.2... 2/45 bar

Dimensions			Flow rate	Kvs-	Nominal	Connection	Pressure		Order	B*
A	B	C	recommended	value	size	thread	inlet	outlet	number	
mm	mm	mm	(m³/h)*1	(m³/h)*2	DN	G	max. bar	bar		

Regulator with female thread

gunmetal, NBR/Buna-N
drinking water: RWI...C

RWI

70	186	46	0.2	0.5	DN8	G¼	25	0.2 ... 2	RWI-02A
	167	47					25	1.5 ... 8	RWI-02D
	188	47					40	2.0 ... 20	RWI-02H
	191	48					60	20 ... 45	RWI-02I
70	186	46	0.2	0.6	DN10	G¾	25	0.2 ... 2	RWI-03A
	167	47					25	1.5 ... 8	RWI-03D
	188	47					40	2.0 ... 20	RWI-03H
	191	48					60	20 ... 45	RWI-03I
85	154	27	1.3	2.9	DN15	G½	16	0.2 ... 2	RWI-04A
	168	27	1.3	2.9			25	0.5 ... 4	RWI-04B
	168	27	1.3	2.9			25	1.5 ... 6	RWI-04C
	189	47	0.5	1.2			25	1.5 ... 8	RWI-04D
	163	27	1.3	2.9			25	1.5 ... 10	RWI-04E
	182	27	1.3	2.9			25	1.5 ... 12	RWI-04F
	233	27	1.3	2.9			25	2.0 ... 20	RWI-04G
	229	47	0.5	1.2			40	2.0 ... 20	RWI-04H
	218	47	0.5	1.2			60	20 ... 45	RWI-04I
95	157	27	2.3	3.9	DN20	G¾	16	0.2 ... 2	RWI-06A
	169	27	2.3	3.8			25	0.5 ... 4	RWI-06B
	169	27	2.3	3.9			25	1.5 ... 6	RWI-06C
	190	47	0.6	1.3			25	1.5 ... 8	RWI-06D
	164	27	2.3	3.9			25	1.5 ... 10	RWI-06E
	182	27	2.3	3.9			25	1.5 ... 12	RWI-06F
	234	27	2.3	3.9			25	2.0 ... 20	RWI-06G
	229	47	0.6	1.3			40	2.0 ... 20	RWI-06H
	218	47	0.5	1.2			60	20 ... 45	RWI-06I
105	156	29	3.6	5.4	DN25	G1	16	0.2 ... 2	RWI-08A
	105	170	29	3.6			25	0.5 ... 4	RWI-08B
	105	170	29	3.6			25	1.5 ... 6	RWI-08C
	95	242	56	0.7			25	1.5 ... 8	RWI-08D
	105	164	29	3.6			25	1.5 ... 10	RWI-08E
	105	184	29	3.6			25	1.5 ... 12	RWI-08F
	105	235	29	3.6			25	2.0 ... 20	RWI-08G
	95	256	55	0.7			40	2.0 ... 20	RWI-08H



RWI-02...-03A

RWI-04...-10A

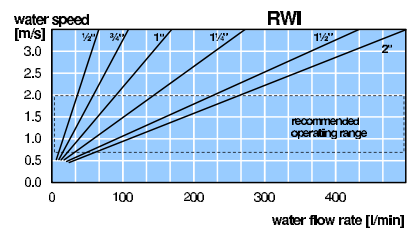
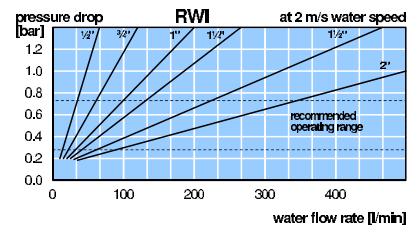


RWI-02...-08D

RWI-02...-08H/I

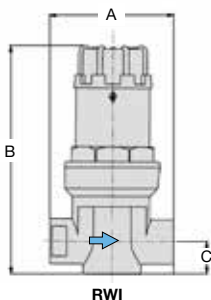


RWI-02...-10B/C/E/F/G

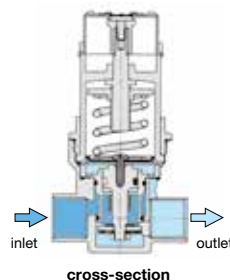


* Product group

Special



RWI



cross-section

*1 at 2 m/s water speed

*2 for compressed air the flow is 70 times greater

PDF CAD
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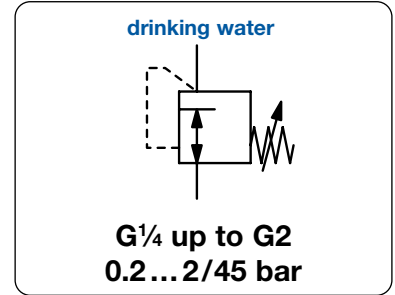


Order example:
RWI-02A

PRESSURE REGULATOR FOR WATER, WITH FEMALE THREAD

RWI

		Material										
Regulator	RW	RWI...A	RWI...B	RWI...C	RWI...D	RWI...E	RWI...F	RWI...G	RWI...H	RWI...J		
Nominal size	DN	DN8-10	DN15-80	DN15-50	DN15-50	DN8-50	DN15-50	DN15-50	DN15-50	DN8-20		
Body	all	gunmetal CnSn5Zn5Pb2-C-GS / CC499K (Rg5)										
Spring cage	< DN32	Ms (< DN25)	PA	Ms	PA	Ms (< DN25)	Ms	Ms (< DN25)	Ms (< DN25)	Ms (< DN25)		
	> DN40	-	Rg	GG	GG (> DN32)	GG	GG (> DN32)	GG (> DN32)	GG (> DN32)	GG (> DN32)		
Seals	all	NBR/Buna N										
Diaphragm	< DN25	CR	NBR/Buna N	NBR/Buna N	NBR/Buna N	NBR/Buna N	NBR/Buna N	NBR/Buna N	NBR/Buna N	NBR/Buna N		
	> DN32		NBR/Buna N	CR	NBR/Buna N	CR	NBR/Buna N	piston / NBR/Buna N	piston / NBR/Buna N	piston / NBR/Buna N		
Spring cage	< DN32	Ms	Ms, SS, Ho	Ms	Ms	Ms, SS, Ho (< DN25 Ms)	Ms	Ms	Ms	Ms		
	> DN40	-	Ms, SS	Ms, Rg, SS	Ms, Rg, SS	Ms, SS	Ms, SS	Ms, Rg, SS	Ms, Rg, SS	Ms		
Reg. assembly	< DN32	cartridge			valve seat			cartridge			valve seat	
removable	> DN40	valve seat			valve seat			valve seat			valve seat	
Legend:		Ms: brass	SS: stainless steel	Rg: gunmetal	GG: grey cast iron	Ho: Hostaform C						



Dimensions			Flow rate	Kvs-	Nominal	Connection	Pressure		Order	
A	B	C	recommended	value	size	thread	inlet	outlet	number	B*
mm	mm	mm	(m ³ /h)*1	(m ³ /h)*2	DN	G	max. bar	bar		

Regulator with female thread						gunmetal, NBR/Buna-N drinking water: RWI...C	RWI		
120	174	47	5.8	6.1	DN32	G1 $\frac{1}{4}$	16	0.2 ... 2	RWI-10A
120	187	47	5.8	6.0			25	0.5 ... 4	RWI-10B
120	186	47	5.8	6.1			25	1.5 ... 6	RWI-10C
104	323	61	3.0	4.2			25	1.5 ... 8	RWI-10D
120	182	47	5.8	6.1			25	1.5 ... 10	RWI-10E
120	200	47	5.8	6.1			25	1.5 ... 12	RWI-10F
120	252	47	5.8	6.1			25	2.0 ... 20	RWI-10G
104	385	61	3.0	4.2			40	1.5 ... 20	RWI-10H
150	371	60	9.0	9.0	DN40	G1 $\frac{1}{2}$	16	0.2 ... 2	RWI-12A
150	301	60	9.0	9.0			25	0.5 ... 4	RWI-12B
150	293	52	9.0	9.0			25	1.5 ... 6	RWI-12C
108	323	61	3.2	4.5			25	1.5 ... 8	RWI-12D
150	365	52	9.0	9.0			25	1.5 ... 10	RWI-12E
150	361	60	9.0	9.0			25	1.5 ... 12	RWI-12F
150	386	60	9.0	9.0			25	2.0 ... 20	RWI-12G
108	392	61	3.2	4.5			40	1.5 ... 20	RWI-12H
160	371	60	14	13	DN50	G2	16	0.2 ... 2	RWI-16A
160	301	60	14	13			25	0.5 ... 4	RWI-16B
160	293	52	14	13			25	1.5 ... 6	RWI-16C
147	378	72	6.9	7.2			25	1.5 ... 8	RWI-16D
160	365	52	14	13			25	1.5 ... 10	RWI-16E
160	361	60	14	13			25	1.5 ... 12	RWI-16F
160	386	60	14	13			25	2.0 ... 20	RWI-16G
147	421	72	6.9	7.2			40	1.5 ... 20	RWI-16H

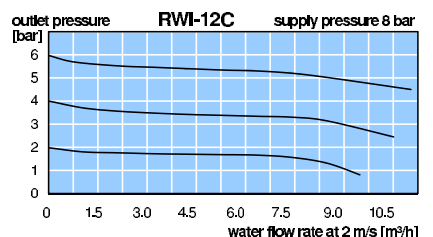
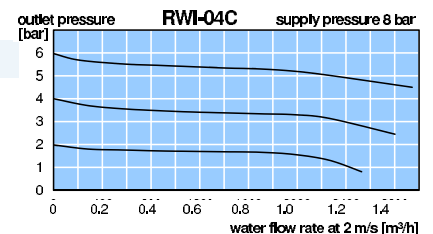
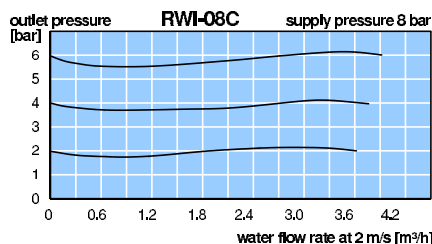
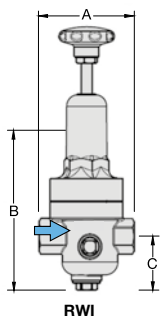


Special options, add the appropriate letter

NPT	connection thread	RWI-...N
Elastomer	CR: C	RWI-...V
for different media	warm-, hot-, and see water, acids, bases, oil, petrol glue, food, foam, gases etc.	RWI-...X
	FKM: V	

Accessories, enclosed

pressure gauge	\varnothing 50 mm, 0... ^{*3} bar, G $\frac{1}{4}$	up to G $\frac{1}{2}$ MA5002-... ^{*3}
	\varnothing 63 mm, 0... ^{*3} bar, G $\frac{1}{4}$	from G $\frac{3}{4}$ MA6302-... ^{*3}



*1 at 2 m/s water speed *2 for compressed air the flow is 70 times greater
*3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar, 60 = 0...60 bar

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

* Product group



Order example:
RWI-10A


Special



PRESSURE REGULATOR FOR WATER, WITH MALE THREAD

RWA

Description Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated. particularily all regulators RWA-...C with pressure range 1.5 ...6 bar. Regulators with DN15 up to DN25 have the same constructions dimensions as D06F from Honeywell, according to DVGW up to DN32.

Drinking water 

Media preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. It has to be considered that these regulators are non-relieving.

Pressure difference 1 bar, between inlet and outlet pressure

Gauge port G $\frac{1}{4}$ on both sides of the body for outlet pressure, ports are closed with screw plugs.

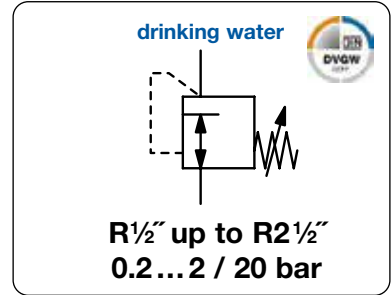
Mounting position any, preferably vertical

ATEX according to ATEX2014/34/EU, EN1127, EN13463 for zone 1, 2, 21 and 22

PED according to EU directives DGRL/PED for liquids and gases of group 2

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

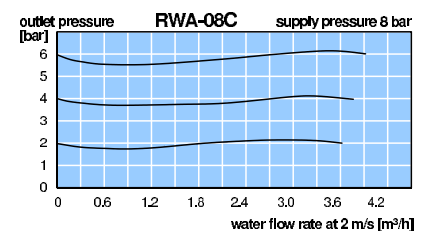
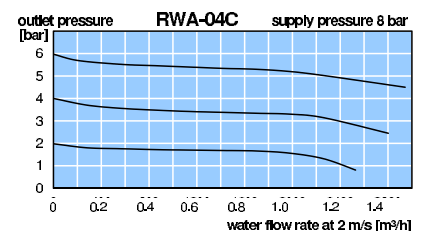
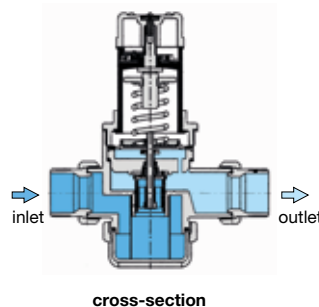
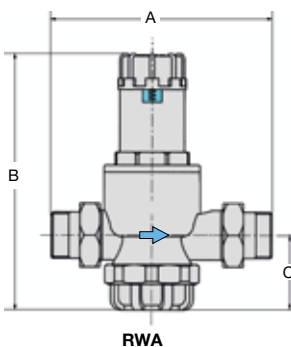
Material see opposite page



Dimensions			Flow rate	K _{vs}	Nominal Connection		Pressure		Order	B*
A	B	C	recommended	value	size	thread	inlet	outlet	number	
mm	mm	mm	(m ³ /h)*1	(m ³ /h)*2	DN	R	max. bar	bar		

Regulator with male thread

							gunmetal, NBR/Buna-N			RWA
							drinking water: RWA-...C			
137	154	27	1,3	2.9	DN15	1/2"	16	0.2 ... 2	2	RWA-04A
	163						25	0.5 ... 4	4	RWA-04B
	168						25	1.5 ... 6	6	RWA-04C
	163						25	1.5 ... 10	10	RWA-04E
	182						25	1.5 ... 12	12	RWA-04F
	233						25	2.0 ... 20	20	RWA-04G
141	156	27	2,3	3.9	DN20	3/4"	16	0.2 ... 2	2	RWA-06A
	163						25	0.5 ... 4	4	RWA-06B
	168						25	1.5 ... 6	6	RWA-06C
	163						25	1.5 ... 10	10	RWA-06E
	182						25	1.5 ... 12	12	RWA-06F
	233						25	2.0 ... 20	20	RWA-06G
161	155	29	3,6	5.4	DN25	1"	16	0.2 ... 2	2	RWA-08A
	164						25	0.5 ... 4	4	RWA-08B
	168						25	1.5 ... 6	6	RWA-08C
	164						25	1.5 ... 10	10	RWA-08E
	182						25	1.5 ... 12	12	RWA-08F
	233						25	2.0 ... 20	20	RWA-08G
177	156	47	5,8	6.1	DN32	1 1/4"	16	0.2 ... 2	2	RWA-10A
	219						25	0.5 ... 4	4	RWA-10B
	222						25	1.5 ... 6	6	RWA-10C
	219						25	1.5 ... 10	10	RWA-10E
	234						25	1.5 ... 12	12	RWA-10F
	252						25	2.0 ... 20	20	RWA-10G



*1 at 2 m/s water speed *2 for compressed air the flow is 70 times greater

* Product group

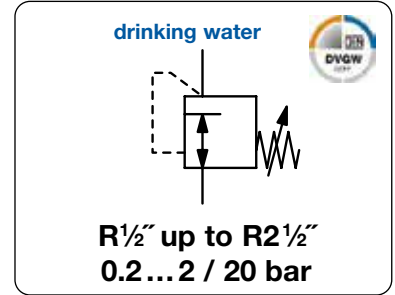
PDF CAD
www.aircom.net



Order example:
RWA-04A

		Material					
Regulator	RW	RWA-..A	RWA-..B	RWA-..C	RWA-..E	RWA-..F	RWA-..G
Nominal size	DN	DN15-65	DN15-65	DN15-65	DN15-65	DN15-100	DN15-65
Body	all	gunmetal CnSn5ZN5Pb2-C-GS / CC499K (Rg5)					
Spring cage	< DN32	PA	Ms	PA	Ms	Ms (< DN25)	Ms (< DN25)
	> DN40	Rg	GG	GG	GG	GG (> DN32)	GG (> DN32)
Seals	all	NBR/Buna N					
Diaphragm	< DN25	NBR/Buna N			NBR/Buna-N piston / NBR/Buna-N		
	> DN32	NBR/Buna N			NBR/Buna-N piston / NBR/Buna-N		
Inner valve	< DN32	Ms, SS, Ho			Ms, SS, Ho (< DN25 Ms)		
	> DN40	Ms, SS			Ms, SS		
Reg. assembly removable	< DN32	cartridge				valve seat	
	> DN40	valve seat				valve seat	

Legend: **Ms**: brass **SS**: stainless steel **Rg**: gunmetal **GG**: grey cast iron **Ho**: Hostaform C **NBR/Buna-N**: nitrile rubber



Dimensions			Flow rate	Kvs	Nominal Connection		Pressure		Order number
A	B	C	recommended	value	size	thread	inlet	outlet	
mm	mm	mm	(m³/h)*1	(m³/h)*2	DN	R	max. bar	bar	B*

Regulator with male thread							gunmetal, NBR/Buna-N drinking water: RWA-..C	RWA		
210	370	59	9,0	9,0	DN40	1½"	16	0.2 ... 2	2	RWA-12A
	301	51					25	0.5 ... 4	4	RWA-12B
	293	51					25	1.5 ... 6	6	RWA-12C
	361	51					25	1.5 ... 10	10	RWA-12E
	361	51					25	1.5 ... 12	12	RWA-12F
	386	51					25	2.0 ... 20	20	RWA-12G
210	372	61	14	13	DN50	2"	16	0.2 ... 2	2	RWA-16A
	372	61					25	0.5 ... 4	4	RWA-16B
	294	53					25	1.5 ... 6	6	RWA-16C
	363	53					25	1.5 ... 10	10	RWA-16E
	364	53					25	1.5 ... 12	12	RWA-16F
	388	53					25	2.0 ... 20	20	RWA-16G
273	394	68	24	20	DN65	2½"	16	0.2 ... 2	2	RWA-20A
	324						25	0.5 ... 4	4	RWA-20B
	324						25	1.5 ... 6	6	RWA-20C
	392						25	1.5 ... 10	10	RWA-20E
	384						25	1.5 ... 12	12	RWA-20F
	408						25	2.0 ... 20	20	RWA-20G

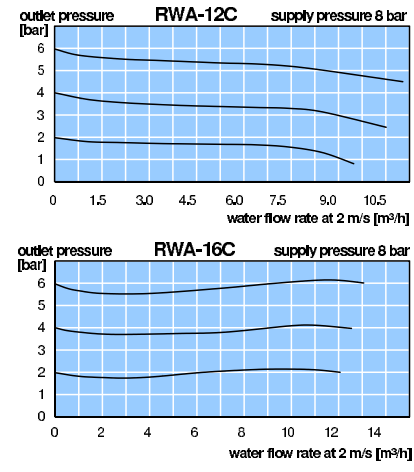
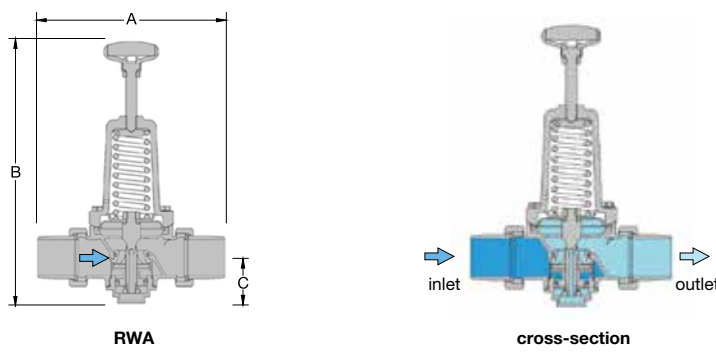


Special options, add the appropriate letter

NPT connection thread RWA-.. .N
Elastomer CR: C FKM: V RWA-.. .V
for different media warm-, hot-, and see water, acids, bases, oil, petrol glue, food, foam, gases etc. RWA-.. .X

Accessories, enclosed

pressure gauge Ø 50 mm, 0...^{*3} bar, G¼ G½ MA5002-..^{*3}
 Ø 63 mm, 0...^{*3} bar, G¼ up to G¾ MA6302-..^{*3}



*1 at 2 m/s water speed *2 for compressed air the flow is 70 times greater
 *3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

PRESSURE REGULATOR FOR WATER, WITH FLANGE

RWF

Description Regulator independent of inlet pressure, made of gunmetal, with strainer of stainless steel. Regulators up to 10 bar outlet pressure equipped with diaphragm, all others are piston-operated.

Drinking water particularly all regulators RWF-..C with pressure range 1.5 ...6 bar.

Media preferably water or drinking water, but also compressed air, neutral liquids and non-corrosive gases. It has to be considered that these regulators are non-relieving.

Pressure difference 1 bar, between inlet and outlet pressure

Gauge port G $\frac{1}{4}$ on both sides of the body for outlet pressure, ports are closed with screw plugs.

Mounting position any, preferably vertical

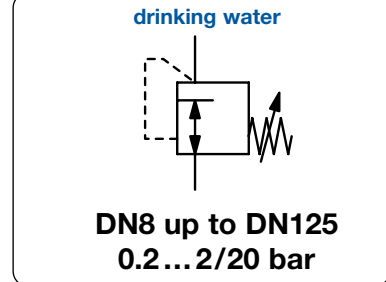
ATEX according to ATEX2014/34/EU, EN1127, EN13463 for zone 1, 2, 21 and 22

PED according to EU directives DGRL/PED for liquids and gases of group 2

Flanges according to DIN 1092. length according to DIN558-1

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

Material see opposite page



Dimensions				Flow rate	K _{vs}	Nominal	Pressure		Order
A	B	C	D	recommended	value	size	inlet	outlet	number
mm	mm	mm	mm	(m ³ /h)*1	(m ³ /h)	DN	max. bar	bar	

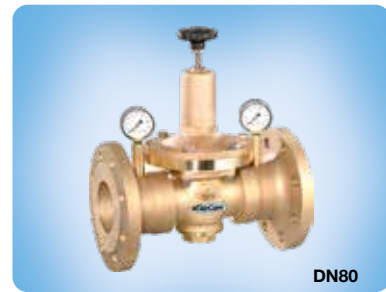
Pressure regulator with flange							gunmetal, NBR/Buna N, w/o gauge drinking water: RWF-..C	RWF		
130	178	48	80	0.2	0.5	DN8	25	0.8 ... 8	8	RWF-02D
							40	1.5 ... 20	20	RWF-02G
				0.2	0.5	DN10	25	0.8 ... 8	8	RWF-03D
							40	1.5 ... 20	20	RWF-03G
130	175	48	95	1.3	2.9	DN15	16	0.2 ... 2	2	RWF-04A
							25	0.5 ... 4	4	RWF-04B
								1.5 ... 6	6	RWF-04C
								1.5 ... 10	10	RWF-04E
								1.5 ... 12	12	RWF-04F
								2.0 ... 20	20	RWF-04G
150	183	53	105	2.3	3.9	DN20	16	0.2 ... 2	2	RWF-06A
							25	0.5 ... 4	4	RWF-06B
								1.5 ... 6	6	RWF-06C
								1.5 ... 10	10	RWF-06E
								1.5 ... 12	12	RWF-06F
								2.0 ... 20	20	RWF-06G
160	185	58	115	3.6	5.4	DN25	16	0.2 ... 2	2	RWF-08A
							25	0.5 ... 4	4	RWF-08B
								1.5 ... 6	6	RWF-08C
								1.5 ... 10	10	RWF-08E
								1.5 ... 12	12	RWF-08F
								2.0 ... 20	20	RWF-08G
180	197	70	140	5.8	6.1	DN32	16	0.2 ... 2	2	RWF-10A
							25	0.5 ... 4	4	RWF-10B
								1.5 ... 6	6	RWF-10C
								1.5 ... 10	10	RWF-10E
								1.5 ... 12	12	RWF-10F
								2.0 ... 20	20	RWF-10G
200	386	75	150	9.0	9.0	DN40	16	0.2 ... 2	2	RWF-12A
							25	0.5 ... 4	4	RWF-12B
								1.5 ... 6	6	RWF-12C
								1.5 ... 10	10	RWF-12E
								1.5 ... 12	12	RWF-12F
								2.0 ... 20	20	RWF-12G



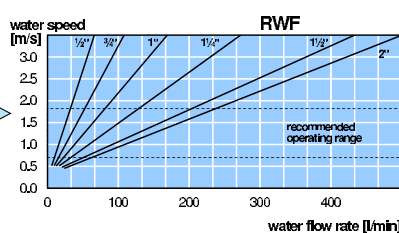
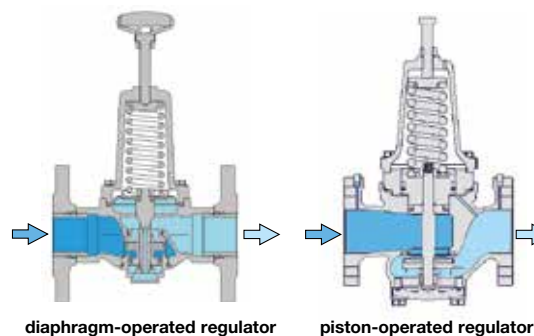
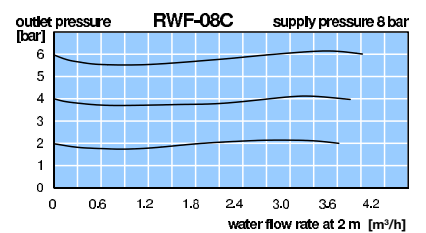
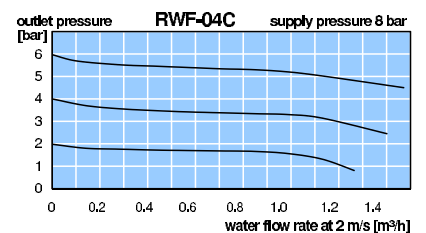
RWF-02...-08D/G



RWF-10...-16G



RWF-24A
accessories: pressure gauge



*1 at 2 m/s water speed * for compressed air the flow is 70 times greater

* Product group

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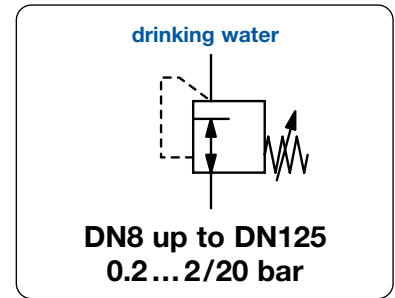
Order example:
RWF-02D

PRESSURE REGULATOR FOR WATER, WITH FLANGE

RWF

Regulator Nominal size	RW DN	Material						
		RWF-..A		RWF-..B	RWF-..C	RWF-..E	RWF-..F	RWF-..G
		DN8-10	DN15-80	DN15-125	DN15-125	DN15-125	DN15-100	DN8-80
Body	all	gunmetal CnSn5Zn5Pb2-C-GS / CC499K (Rg5)						
Spring cage	< DN32 > DN40	Ms (< DN25) -	PA Rg	Ms	PA	Ms	Ms	Ms (< DN25) GG (> DN32)
Seals	all	NBR/Buna-N						
Diaphragm	< DN25 > DN32	CR	NBR/Buna-N				piston / NBR/Buna-N piston / NBR/Buna-N	
Inner valve	< DN32 > DN40	Ms	Ms, SS, Ho			Ms, SS, Ho (< DN25 Ms) Ms, SS		
Reg. assembly removable	< DN32 > DN40	cartridge				valve seat		

Legend: Ms: brass SS: stainless steel Rg: gunmetal GG: grey cast iron Ho: Hostaform C CR: chloroprene rubber, NBR/Buna-N: nitrile rubber



Dimensions			Flow rate	Kvs-	Nominal	Pressure		Order	
A	B	C	D	recommended	value	size	inlet	outlet	number
mm	mm	mm	mm	(m³/h)*1	(m³/h)	DN	max. bar	bar	

Pressure regulator with flange							gunmetal, NBR/Buna N, w/o gauge drinking water: RWF-..C	RWF		
230	394	83	165	14	13	DN50	16	0.2 ... 2	2	RWF-16A
324							25	0.5 ... 4	4	RWF-16B
324								1.5 ... 6	6	RWF-16C
396								1.5 ... 10	10	RWF-16E
384								1.5 ... 12	12	RWF-16F
411								2.0 ... 20	20	RWF-16G
290	420	93	185	24	20	DN65	16	0.2 ... 2	2	RWF-20A
349							25	0.5 ... 4	4	RWF-20B
349								1.5 ... 6	6	RWF-20C
418								1.5 ... 10	10	RWF-20E
411								1.5 ... 12	12	RWF-20F
429								2.0 ... 20	20	RWF-20G
310	427	100	200	26	24	DN80	16	0.2 ... 2	2	RWF-24A
	518	136		60	60			0.5 ... 4	4	RWF-24B
	356	100		26	24			1.5 ... 6	6	RWF-24C
	518	136		60	60			1.5 ... 6	6	RWF-25C
	521			60	60			3.0 ... 10	10	RWF-24E
	545			60	60		25	4.0 ... 12	12	RWF-24F
	436			24	24		25	2.0 ... 20	20	RWF-24G
350	540	140	200	80	80	DN100	16	0.5 ... 4	4	RWF-32B
	540							1.5 ... 6	6	RWF-32C
	542							3.0 ... 10	10	RWF-32E
	600	135						4.0 ... 12	12	RWF-32F
400	730	165	270	130	130	DN125	16	0.5 ... 4	4	RWF-40B
	540							1.5 ... 6	6	RWF-40C
	542							3.0 ... 10	10	RWF-40E



RWF-24B/C/E
accessories: pressure gauge



RWF-12...-16F/G
accessories: pressure gauge



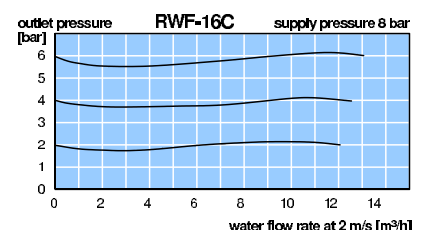
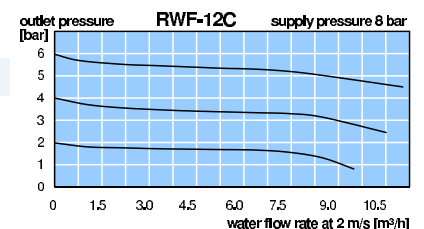
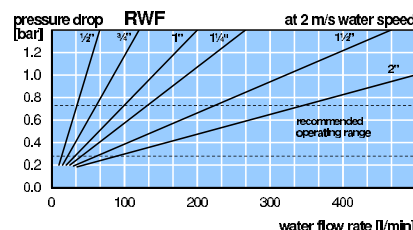
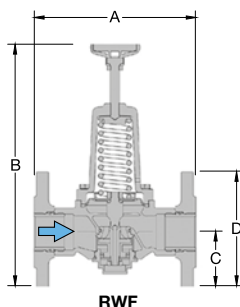
RWF-24F
accessories: pressure gauge

Special options, add the appropriate letter

Elastomer	EPDM: E	CR: C	FKM: V	RWF-.. .V
flange connection	ANSI			RWF-.. .F2
for different media	warm-, hot-, and see water, acids, bases, oil, petrol glue, food, foam, gases etc.			RWF-.. .X

Accessories, enclosed

pressure gauge Ø 63 mm, vertical 0...*2 bar, G1/4 MT6302-..*2



*1 at 2 m/s water speed * for compressed air the flow is 70 times greater
*2 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD
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Order example:
RWF-16A

Description Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable.
 With stainless-steel dirt-trap / strainer

Medium aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!

Supply pressure see chart, max. 40 bar

Minimum press. difference $P_1 : P_2 = 1$ bar

Adjustment with hexagon socket, with locknut

Relieving function non-relieving

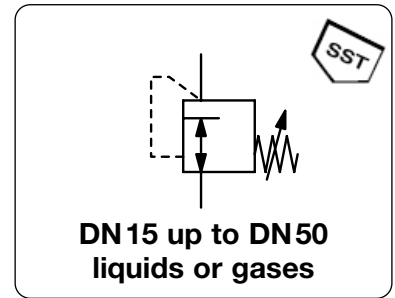
Gauge port G $\frac{1}{4}$ on both sides of the body, one screw plug supplied

Mounting position any, preferably vertical

Flange according DIN 1092, overall length according DIN 558-1

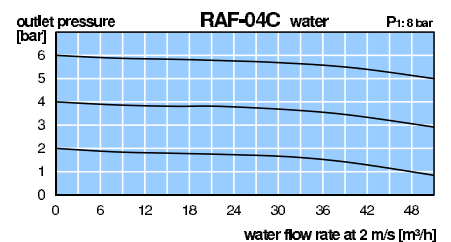
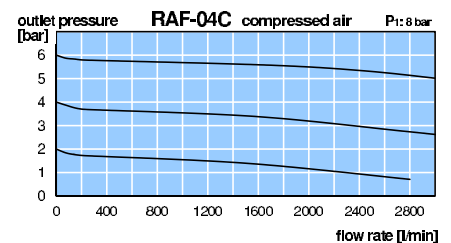
Temperature range 0 °C to 190 °C / 32 °F to 374 °F for FKM for media and ambient temperature
 0 °C to 130 °C / 32 °F to 266 °F for EPDM for media and ambient temperature

Material Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L
 Elastomer and seals: FKM / FPM, optionally EPDM

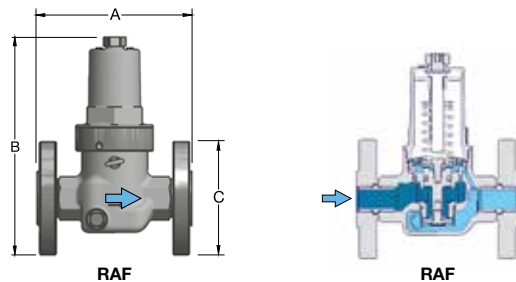


Dimensions			K _v -value	Flow rate water	Supply pressure max. bar	Mounting flange DN	Pressure range bar	Order number
A	B	C						
mm	mm	mm	(m ³ /h)*1	l/min*2				

Regulator with flange					for liquids, supply pressure max. 25/40 bar non-relieving, 1.4408 / V4A / 316L, FKM		RAF	
130	137	95	2.9	50	25	DN15	0.2 ... 2	RAF-04A
	118				25		0.5 ... 4	RAF-04B
	118				25		1.5 ... 6	RAF-04C
	118				25		1.5 ... 10	RAF-04D
	136				40		2.0 ... 20	RAF-04F
150	137	105	3.9	65	25	DN20	0.2 ... 2	RAF-06A
	118				25		0.5 ... 4	RAF-06B
	118				25		1.5 ... 6	RAF-06C
	118				25		1.5 ... 10	RAF-06D
	137				40		2.0 ... 20	RAF-06F
160	150	115	5.4	90	25	DN25	0.2 ... 2	RAF-08A
	118				25		0.5 ... 4	RAF-08B
	118				25		1.5 ... 6	RAF-08C
	118				25		1.5 ... 10	RAF-08D
	137				40		2.0 ... 20	RAF-08F
180	150	140	6.1	102	25	DN32	0.2 ... 2	RAF-10A
	118				25		0.5 ... 4	RAF-10B
	118				25		1.5 ... 6	RAF-10C
	118				25		1.5 ... 10	RAF-10D
	137				40		2.0 ... 20	RAF-10F



Spezial
 9



*1 at 2 m/s water speed *2 for compressed air the flow is 70 times greater
 *3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

Gauges: see chapter for measuring devices

PDF CAD
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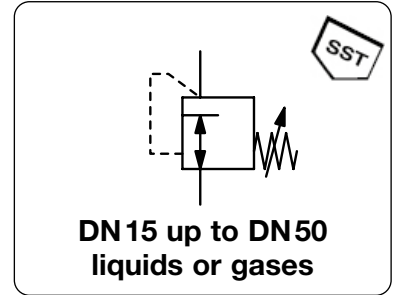


Order example:
 RAF-04A

FLANGE PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

RAF

Description Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable.
 With stainless-steel dirt-trap / strainer
Medium aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!
Supply pressure see chart, max. 40 bar
Minimum press. difference P₁ : P₂ = 1 bar
Adjustment with hexagon socket, with locknut
Relieving function non-relieving
Gauge port G_{1/4} on both sides of the body, one screw plug supplied
Mounting position any, preferably vertical
Flange according DIN 1092, overall length according DIN 558-1
Temperature range 0 °C to 190 °C / 32 °F to 374 °F for FKM for media and ambient temperature
 0 °C to 130 °C / 32 °F to 266 °F for EPDM for media and ambient temperature
Material Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L
 Elastomer and seals: FKM / FPM, optionally EPDM



Dimensions			K _v -value (m ³ /h)*1	Flow rate water l/min*2	Supply pressure max. bar	Mounting flange DN	Pressure range bar	Order number
A	B	C						

Regulator with flange			for liquids, supply pressure max. 25/40 bar non-relieving, 1.4408 / V4A / 316L, FKM				RAF		
200	269	150	9.0	150	25	DN40	0.2 ... 2	RAF-12A	
	219							0.5 ... 4	RAF-12B
	219							1.5 ... 6	RAF-12C
	219							1.5 ... 10	RAF-12D
	247							2.0 ... 20	RAF-12F
230	269	165	13	216	25	DN50	0.2 ... 2	RAF-16A	
	219							0.5 ... 4	RAF-16B
	219							1.5 ... 6	RAF-16C
	219							1.5 ... 10	RAF-16D
	247							2.0 ... 20	RAF-16F



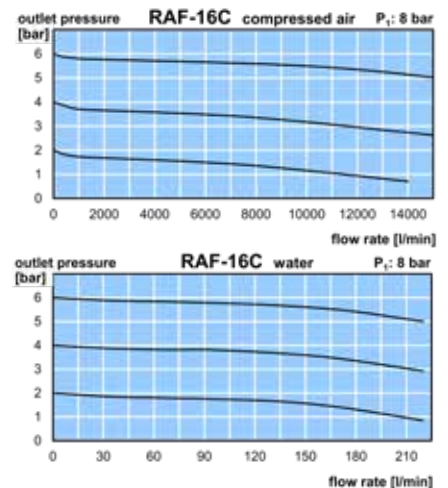
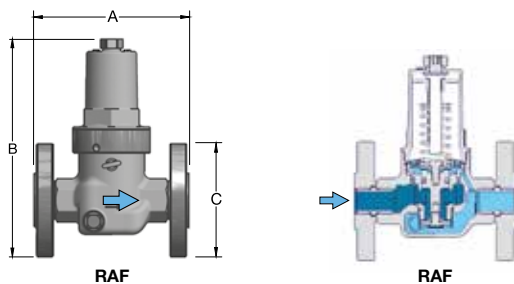
Special options, add the appropriate letter

EPDM Elastomer membrane and seals, FDA approval RAF-. . .TD



Accessories, enclosed

SST pressure gauge Ø 50 mm, 0...*3 bar, G_{1/4}, for DN 15 **MS5002-..*3**
 Ø 63 mm, 0...*3 bar, G_{1/4}, and all the rest of them **MS6302-..*3**



*1 at 2 m/s water speed *2 for compressed air the flow is 70 times greater
 *3 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 25 = 0...25 bar

* Product group

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Order example:
RAF-12A

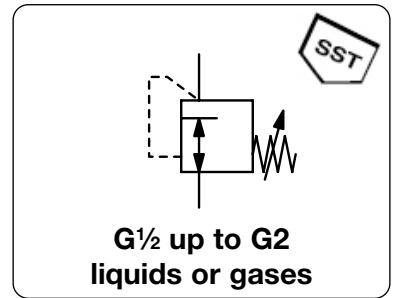
Special



PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

RAI

Description	Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable. With stainless-steel dirt-trap / strainer
Medium	aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!
Supply pressure	see chart, max. 40 bar
Minimum press. difference	$P_1 : P_2 = 1$ bar
Adjustment	with hexagon socket, with locknut
Relieving function	non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Mounting position	any, preferably vertical
Temperature range	0 °C to 190 °C / 32 °F to 374 °F medium and ambient temperature
Material	Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L Elastomer and seals: FKM/FPM



Dimensions			Kv-	Flow rate	Supply	Nominal	Connection	Pressure-	Order	
A	B	C	value	water	pressure	size	thread	range	number	
mm	mm	mm	(m ³ /h)*1	l/min	max. bar	DN	G	bar		

Regulator with female thread										for liquids, supply pressure max. 25/40 bar non-relieving, 1.4408 / V4A / 316L, FKM	RAI
95	166	29	2,9	50	25	DN15	G $\frac{1}{2}$	0.2 ... 2	RAI-04A		
95	147	29			25			0.5 ... 4	RAI-04B		
95	147	29			25			1.5 ... 6	RAI-04C		
95	147	29			25			1.5 ... 10	RAI-04D		
95	165	29			40			2.0 ... 20	RAI-04F		
95	166	29	3,9	65	25	DN20	G $\frac{3}{4}$	0.2 ... 2	RAI-06A		
95	147	29			25			0.5 ... 4	RAI-06B		
95	147	29			25			1.5 ... 6	RAI-06C		
95	147	29			25			1.5 ... 10	RAI-06D		
95	165	29			40			2.0 ... 20	RAI-06F		
110	189	39	5,4	90	25	DN25	G1	0.2 ... 2	RAI-08A		
110	157	39			25			0.5 ... 4	RAI-08B		
110	157	39			25			1.5 ... 6	RAI-08C		
110	157	39			25			1.5 ... 10	RAI-08D		
110	176	39			40			2.0 ... 20	RAI-08F		
120	189	39	6,1	102	25	DN32	G1 $\frac{1}{4}$	0.2 ... 2	RAI-10A		
120	157	39			25			0.5 ... 4	RAI-10B		
120	157	39			25			1.5 ... 6	RAI-10C		
120	157	39			25			1.5 ... 10	RAI-10D		
120	176	39			40			2.0 ... 20	RAI-10F		



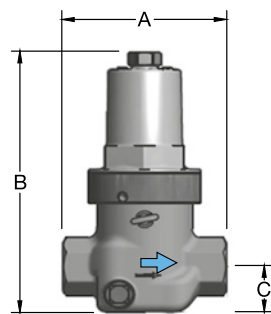
RAI-04...-10A



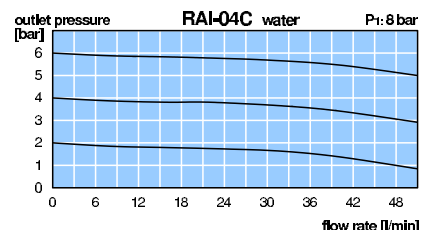
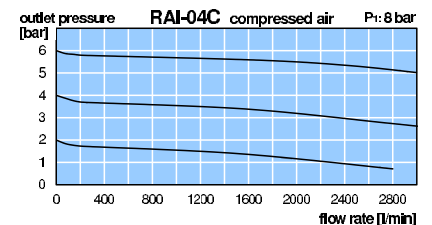
RAI-04...10B/C/D



RAI-04...-10D



RAI



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

*2 for compressed air the flow is 65 times greater

* Product group

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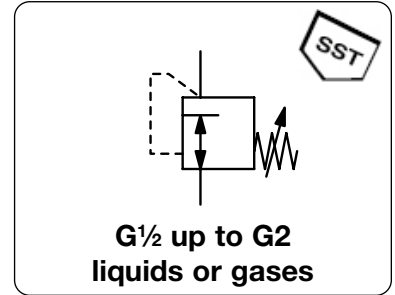


Order example:
RAI-04A

PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

RAI

Description	Pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent. Inner parts are replaceable. With stainless-steel dirt-trap / strainer
Medium	aggressive liquids, compressed air or non-corrosive gases. Not suitable for steam!
Supply pressure	see chart, max. 40 bar
Minimum press. difference	$P_1 : P_2 = 1$ bar
Adjustment	with hexagon socket, with locknut
Relieving function	non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Mounting position	any, preferably vertical
Temperature range	0 °C to 190 °C / 32 °F to 374 °F medium and ambient temperature
Material	Body, spring cage, inner valve: stainless steel 1.4408 / V4A / 316 L Elastomer and seals: FKM/FPM



Dimensions			K _v -value	Flow rate	Supply pressure	Nominal size	Connection thread	Pressure-range	Order number	
A	B	C	(m ³ /h)*1	l/min	max. bar	DN	G	bar		
mm	mm	mm								

Regulator with female thread										for liquids, supply pressure max. 25/40 bar non-relieving, 1.4408 / V4A / 316L, FKM	RAI
150	306	37	9,0	150	25	DN40	G1 $\frac{1}{2}$	0.2 ... 2	RAI-12A		
150	256	37			25			0.5 ... 4	RAI-12B		
150	256	37			25			1.5 ... 6	RAI-12C		
150	256	37			25			1.5 ... 10	RAI-12D		
150	284	37			40			2.0 ... 20	RAI-12F		
160	306	37	13	216	25	DN50	G2	0.2 ... 2	RAI-16A		
160	256	37			25			0.5 ... 4	RAI-16B		
160	256	37			25			1.5 ... 6	RAI-16C		
160	256	37			25			1.5 ... 10	RAI-16D		
160	284	37			40			2.0 ... 20	RAI-16F		

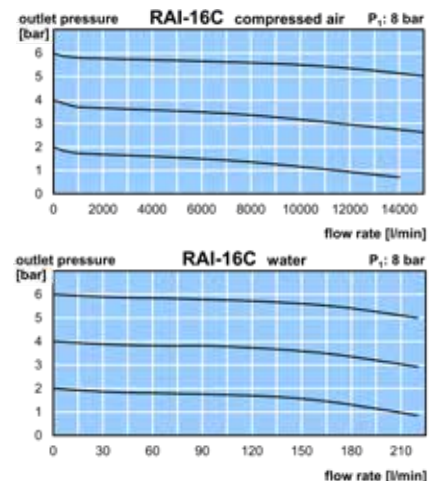


Special options, add the appropriate letter

EPDM Elastomer membrane and seals, FDA approval RAF-. . .TD

Accessories, enclosed

SST pressure gauge \varnothing 50 mm, 0...^{*3} bar, G $\frac{1}{4}$, for DN 15 **MS5002-...^{*3}**
 \varnothing 63 mm, 0...^{*3} bar, G $\frac{1}{4}$, and all the rest of them **MS6302-...^{*3}**



*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop *2 for compressed air the flow is 65 times greater

* Product group **Order example: RAI-12A**

PDF CAD
www.aircom.net

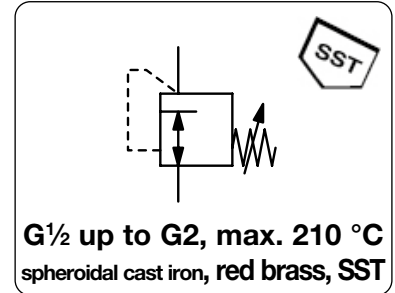
Special

9

PRESSURE REGULATOR FOR STEAM UP TO 210 °C / 410 °F

RU

Description	Directly acting pressure regulator with stainless steel inner parts suitable for steam and compressed air.		
Media	compressed air, non-corrosive gases or steam with dryness of at least 98%		
Supply pressure	RUG: max. 19 bar at 210 °C / 410 °F, max. 17 bar for red brass version RUH: max. 10 bar at 184 °C / 363 °F		
Air consumption	without constant bleed		
Adjustment	by plastic knob	Relieving function	non-relieving
Gauge port	not available	Mounting position	any
Temperature range	RUG: max. 210 °C / 410 °F,		RUH: max. 184 °C / 363 °F
Material	Body: spheroidal cast iron EN-GJS-400-18-LT (GGG40.3), optionally red brass Rg5 or stainless steel 1.4404 at RUG Spring cage: epoxy-coated aluminium, nickel-plated aluminium at RUG Inner valve / bellows: stainless steel 1.4404 and 1.4571 O-ring / seal: EPDM and PTFE		



Dimensions			Nominal size	K _v -value	P ₁ max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m ³ /h)	bar	G	bar	
mm	mm	mm						

Pressure regulator for steam								RU
								supply pressure max. 10 / 19 bar, non-relieving, spheroidal cast iron
83	190	60	15	1.5	19	G ^{1/2}	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-04A RUG-04B RUG-04C
96	190	60	20	2.5	19	G ^{3/4}	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-06A RUG-06B RUG-06C
108	190	60	25	3.0	19	G ¹	0.14...1.7 1.4 ...4.0 3.5 ...8.6	RUG-08A RUG-08B RUG-08C
134	220	67	25	6.8	10	G ¹	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-08A RUH-08B RUH-08C
134	220	67	40	11.5	10	G ^{1 1/2}	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-12A RUH-12B RUH-12C
134	220	67	50	15.0	10	G ²	0.14...1.7 1.4 ...4.0 3.5 ...9.0	RUH-16A RUH-16B RUH-16C



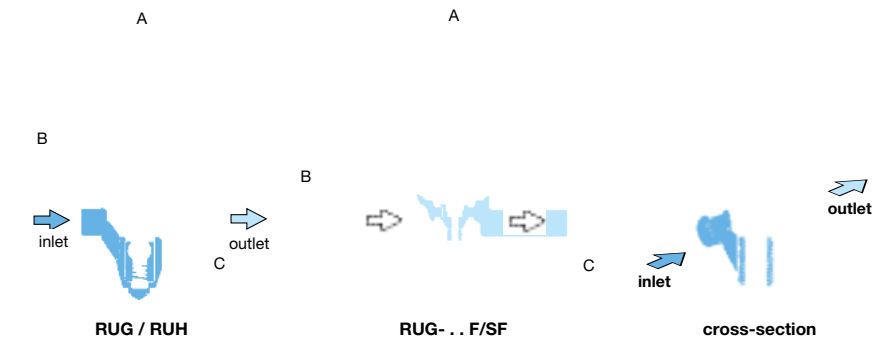
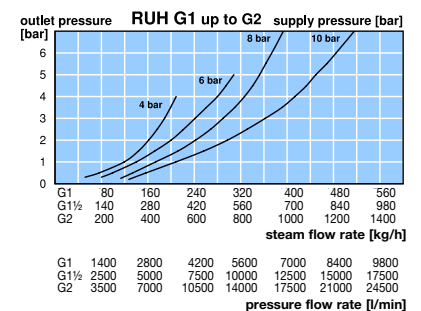
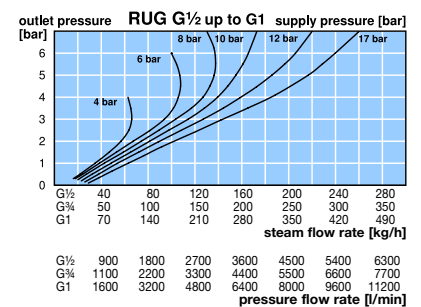
RUG-04A



RUG-04BSF
made of stainless steel, with flange

Special options, add the appropriate letter

stainless steel 1.4404	body with connection thread	for RUG	RUG-0...S
	body with flange	for RUG	RUG-0...SF
red brass Rg5	body of red brass Rg5, P ₁ max. 17 bar	for RUG	RUG-0...R
flange of spheroidal cast iron	GGG40.3	for RUG	RUG-0...F



Model	A	B	C
RUG-04R/S	83	192	62
RUG-06R/S	96	192	62
RUG-08R/S	108	192	62

Model	A	B	C
RUG-04F/SF	150	182/192	55/62
RUG-06F/SF	150	192/192	55/62
RUG-08F/SF	160	192/192	55/62

* Product group

PDF CAD
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Order example:
RUG-04A

PROPORTIONAL PRESSURE REGULATORS

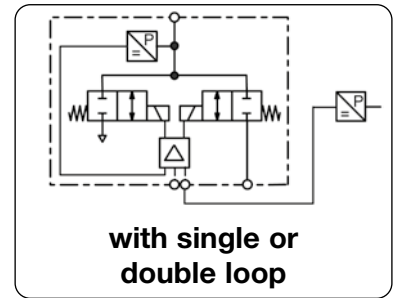
PRINCIPLE	DESCRIPTION	ACCURACY max.	PRESSURE RANGE bar	CONNECTION thread	DEVICE	PAGE
CONTROL VALVE high accuracy	on PCB	± 0.2 %	0 ... 0.005/ 10	G $\frac{1}{8}$	PM	10.02
	falling characteristic	± 0.2 %	0 ... 0.005/ 35	G $\frac{1}{8}$	PQ1	10.04
	with double loop	± 0.2 %	0 ... 0.005/ 35	G $\frac{1}{8}$	PQ2	10.05
	up to 2000 l/min	± 0.25 %	0 ... 0.1 / 35	¼"NPT - ¾"NPT	PQ3...PQ6	10.06
PROPORT. MAGNET very robust	proven, many options	± 0.5 %	0 ... 0.5 / 1	G $\frac{1}{8}$ - G1	PR	10.09
	for flow applications	± 0.5 %	0 ... 6 / 50	G $\frac{3}{8}$	PF	10.12
	digital control, also SST	± 0.5 %	0 ... 0.1 / 50	G $\frac{1}{8}$ - G1	PP	10.13
	programmable	± 0.5 %	0 ... 1 / 12	G $\frac{1}{8}$ - G $\frac{3}{8}$	PD	10.15
FLAPPER/NOZZLE highly sensitive	integrated booster, Atex	± 0.5 %	0,2... 1 / 8	¼"NPT	PT6	10.19
PIEZO-OPERATED very fast	high accurate, Atex	± 0.25 %	0,2... 1 / 8	¼"NPT	PT7	10.20
	minimal power consumption	± 0.2 %	0 ... 0.1 / 16	G $\frac{1}{8}$ and G $\frac{1}{4}$	PRE	10.21
MOTORISED REGUL.	failfreeze	± 1 %	0,14... 1.8 / 8	¼"NPT	P180	www*
HIGH PRESSURE	proportional magnet	± 0.5 %	0 ... 30 / 50	G $\frac{1}{4}$	PP0	10.13
	control valves	± 0.5 %	0 ... 40 / 70	G $\frac{1}{8}$	PQH	10.18
ATEX	control valves	± 1 %	0 ... 2 / 6	G $\frac{1}{8}$	PCEX	10.17
	flapper nozzle	± 0.5 %	0,2... 1 / 8	¼"NPT	PT6	10.19
	piezo-operated	± 0.25 %	0,2... 1 / 8	¼"NPT	PT7	10.20
VACUUM	on PCB	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PM	10.02
	control valves	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PQ1	10.04
	with double loop	± 0.2 %	-1 ... 0 / + 1	G $\frac{1}{8}$	PQ2	10.05
	proportional magnet	± 0.5 %	-1 ... 0 / + 1	G $\frac{1}{8}$ - G1	PR	10.09
	digital control	± 0.5 %	-1 ... 0	G $\frac{1}{8}$ - G1	PP	10.13
	piezo-operated	± 0.2 %	-1 ... 1 / +10	G $\frac{1}{8}$ and G $\frac{1}{4}$	PRE	10.21
IO-LINK SETPOINT	digital control	± 1,5 %	0 ... 3 / 10	G $\frac{1}{4}$ - G $\frac{1}{2}$	PIO	10.23
	with 10-speed-potentiometer				PPB	10.24



* visit our webshop: www.aircom.net

10

Description	Proportional pressure regulator with closed loop control technology for better control of pressurised gases. The instrument can be built as single closed loop or dual closed loop control valve. dry, lubricated or unlubricated and 5 µm filtered compressed air or non-corrosive gases	
Media	constant outlet pressure at voltage drop	
Fail freeze	0 ... 10 V, impedance 4.7 kΩ,	ratio of internal to external relationship is 10% to 90%
Second loop	15 ... 24 V DC, residual ripple < 10%, with reverse voltage protection	jumper selectable command
Supply voltage	0 ... 10 V / 4.7 kΩ, 4 ... 20 mA / 100 Ω,	
Impedance	0 ... 10 V at max. 10 mA	
Monitor signal	terminal strip for 2.5 mm ²	
Electrical connection	3.6 W regulating, 0.5 W non-regulating	Air consumption without constant bleed
Power consumption	< 0.15% FS	Repeatability < 0.02 FS
Linearity / Hysteresis	< 1% FS at 0 °C to 50 °C / 32 °F to 122 °F	Adjustment zero point and span
Temperature influence	0 °C to 70 °C / 32 °F to 158 °F	Mounting position any, vibration-resistant
Temperature range	Ports: brass	Elastomer: FKM
Material	Transducer: aluminium and silicon	Valves: nickel-plated brass



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

Proportional press. regulator								0-10 V input and monitor signal, supply voltage 24 V DC, fail freeze, single loop for DIN rail	PM
56	78	54	35	10 mbar	0.2	G1/8	0 ... 5 mbar	PM1DE-A5	
				20 mbar			0 ... 10 mbar	PM1DE-B1	
				200 mbar			0 ... 100 mbar	PM1DE-C1	
				1 000 mbar			0 ... 600 mbar	PM1DE-C6	
56	78	54	35	2 bar	0.2	G1/8	0 ... 1 bar	PM1DE-01	
				3 bar			0 ... 2 bar	PM1DE-02	
				9 bar			0 ... 4 bar	PM1DE-04	
				9 bar			0 ... 6 bar	PM1DE-06	
				15 bar			0 ... 10 bar	PM1DE-10	
56	78	54	35	2 bar	0.2	G1/8	0 ... -1 bar	PM1DE-V0	
				2 bar			-1 ... +1 bar	PM1DE-V1	

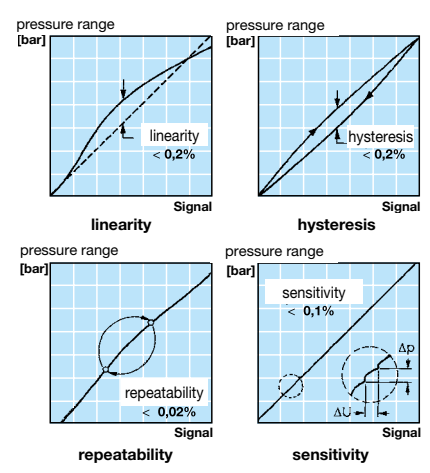
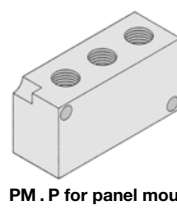
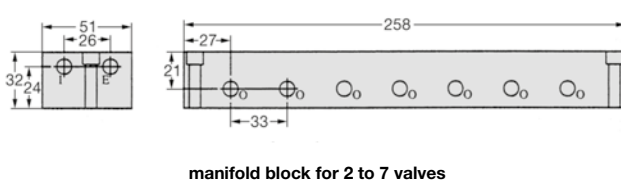
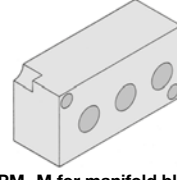
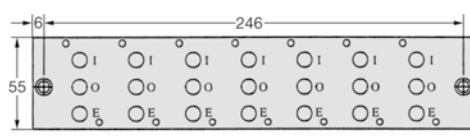
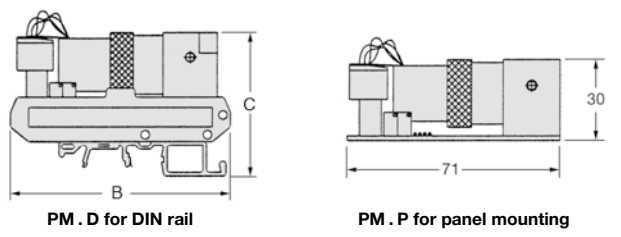


Special options, add the appropriate letter

double loop	second loop feedback 0 ...10 V	PM2
4-20 mA	supply signal, jumper selectable command	PM I . . .
flow 100 l/min	increased flow rate	PM HF
panel mounting	on plane level	PM . P . . .
mounting for manifolds	connections downwards	PM . M . . .

Accessories, enclosed

manifold block for 2 to 7 valves number of valves added to order number **SBM-**



*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min
*2 higher supply pressures on request

* Product group

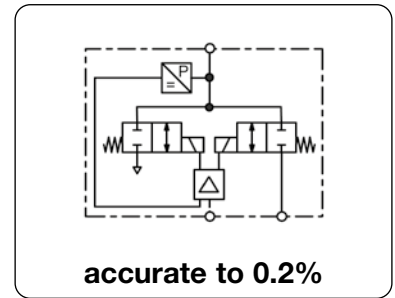
For further details about double loop see PQ2

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Order example:
PM1DE-A5

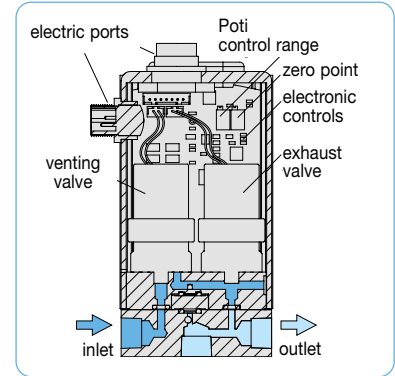
Technical features

• Pressure range	0...10 mbar up to 0...35 bar	• Linearity	± 0.15% FS
• Input signal	0...10 V and 4...20 mA	• Hysteresis	± 0.15% FS
• Security	constant outlet pressure at voltage drop	• Response sensitivity	< 0.1% FS
• Response time	10 to 15 ms	• Repeatability	± 0.02% FS
• Adjustment	zero point and span	• Protection class	IP 65
• Sensitivity	immune to shock and vibration up to 25 g	• Air consumption	without constant bleed



General technical features

Description	Two solenoid valves control the system pressure. One valve is for inlet control, the other for outlet control. A strain gauge pressure transducer measures system pressure and provides a feedback signal to the electronic controls. Any difference between command and feedback signals causes one of the solenoid valves to open, causing system pressure to increase or decrease.		
Mounting position	any, immune to shock and vibration up to 25 g		
Protection class	IP 65 housing		
Temperature range	-5 °C to 70 °C / 23 °F to 158 °F		
Material	Body: aluminium	Elastomer: FKM	
	Transducer: aluminium and silicon	Valves: nickel-plated brass	



Pneumatic features

Media	dry, unlubricated and 5 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart, minimum 10% above outlet pressure
Flow rate	35 l/min at 7 bar supply pressure and open outlet, optionally 100 l/min 3 l/min at controlled outlet pressure
Exhaust	same nominal size as on inlet valve, thus same relief capacity
Air consumption	without constant bleed, Option X58: < 2 l/min

Electrical features

Supply voltage	15...24 V DC, reverse voltage protection existing
Power consumption	3.6 W for regulation, 0.5 W non-regulating
Signal range	0...10 V, optionally 4...20 mA
Impedance	4.7 kΩ at voltage signal, 100 Ω at current signal 10 kΩ at voltage signal, 100 Ω at current signal, for external feedback
Monitor signal impedance	> 4.7 kΩ at voltage signal, < 100 Ω at current signal
Electrical connector	plug M16x0.75, 7-pin, with coupling socket
Monitor signal	0...10 V, optionally 4...20 mA
Security	constant outlet pressure at voltage drop

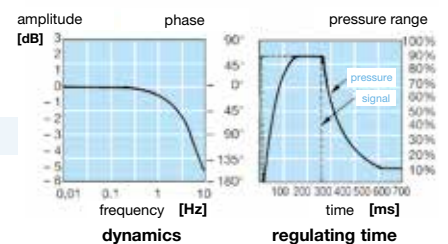
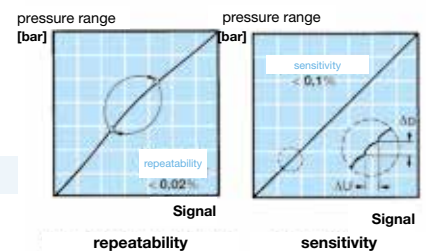
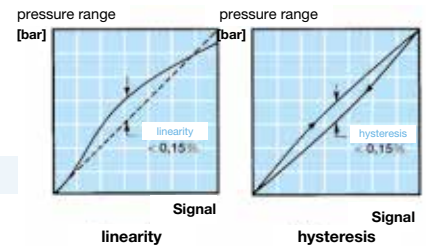
Accuracy

Linearity/Hysteresis	± 0.15% FS
Response sensitivity	< 0.1% FS
Response time	10 to 15 ms
Repeatability	± 0.02% FS
Temperature influence	< 0.01% FS per °C/K at 0 °C to 50 °C / 32 °F to 122 °F < 1.00% FS per °C/K at 50 °C to 70 °C / 122 °F to 158 °F
Accuracy over all	± 0.2 % FS
Regulating time	< 2 s to fill 0.1 l volume to 90% of the initial pressure (or to exhaust) < 40 s to fill 2 l volume to 90% of the initial pressure (< 80 s to exhaust)

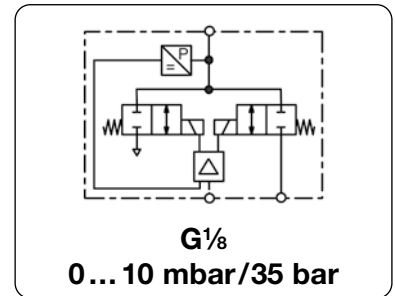
Adjustment

Zero point	The zero point can be increased by up to 20% of full scale, e.g. from 0 bar to 1.2 bar at a 6 bar regulator. External adjustment via potentiometer Z "zero".
Span	The maximum pressure value of the control range can be reduced by up to 20% depending on the selected pressure range, e.g. from 6 to 4.8 bar. External adjustment via potentiometer S "span".

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



Description	The pneumatic proportional pressure regulator produces outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system consisting of valves, manifold, housing and electronic controls.
Single loop	Pressure is controlled by two solenoid valves. One valve functions as inlet control, the other as exhaust. The pressure outlet is measured by an internal pressure transducer which provides a feedback signal to the electronic controls. This feedback signal is compared with the command input signal. Any difference between the two signals causes one of the two solenoid valves to open, allowing flow into or out of the system. Accurate pressure is maintained by these two valves.
Accuracy	Linearity / Hysteresis: ± 0.15% FS Response sensitivity: < 0.1% FS Repeatability: ± 0.02% FS Accuracy over all: ± 0.2% FS



Dimensions			Flow rate	Supply pressure	Accuracy	Connection thread	Pressure range	Order number
A	B	C	l/min*1	max. mbar/bar*2	%	G	mbar/bar	E*

Single loop regulator			0 ... 10 V input and feedback signal, supply voltage 24 V DC, 35 l/min*1, with coupling socket		PQ1			
51	106	8	on request	10 mbar	0.2	G ¹ / ₈	0 ... 5 mbar	PQ1EE-A5
				20 mbar			0 ... 10 mbar	PQ1EE-B1
				40 mbar			0 ... 20 mbar	PQ1EE-B2
				100 mbar			0 ... 50 mbar	PQ1EE-B5
				200 mbar			0 ... 100 mbar	PQ1EE-C1
				400 mbar			0 ... 200 mbar	PQ1EE-C2
				800 mbar			0 ... 400 mbar	PQ1EE-C4
				1 000 mbar			0 ... 600 mbar	PQ1EE-C6
51	106	8	35	2 bar	0.2	G ¹ / ₈	0 ... 1 bar	PQ1EE-01
				3 bar			0 ... 2 bar	PQ1EE-02
				7 bar			0 ... 4 bar	PQ1EE-04
				7 bar			0 ... 6 bar	PQ1EE-06
				9 bar			0 ... 8 bar	PQ1EE-08
				15 bar			0 ... 10 bar	PQ1EE-10
				15 bar			0 ... 12 bar	PQ1EE-12
				24 bar			0 ... 16 bar	PQ1EE-16
				24 bar			0 ... 20 bar	PQ1EE-20
				38 bar			0 ... 25 bar	PQ1EE-25
				38 bar			0 ... 30 bar	PQ1EE-30
				38 bar			0 ... 35 bar	PQ1EE-35
51	106	8	35	0 bar	0.2	G ¹ / ₈	0 ... -1 bar	PQ1EE-V0
				2 bar			-1 ... +1 bar	PQ1EE-V1



PQ1

Special options, add the appropriate letter or number

4-20 mA input and monitor signal	PQ1 IC- . . .
flow 100 l/min increased flow rate, max. 10 bar, not combinable with Opt. . .X58	PQ1HF
continuous regulation*3 improved characteristic curve through proportional inlet valve, max. 10 bar	PQ1X58
declining curve inverted outlet	PQ1X59

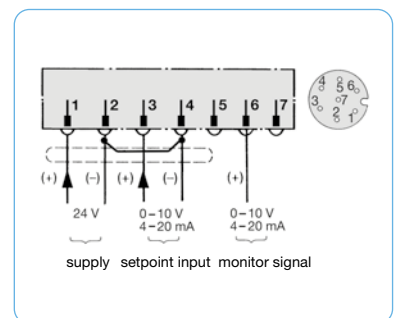
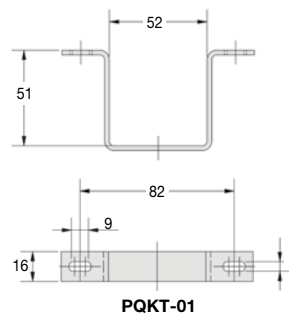
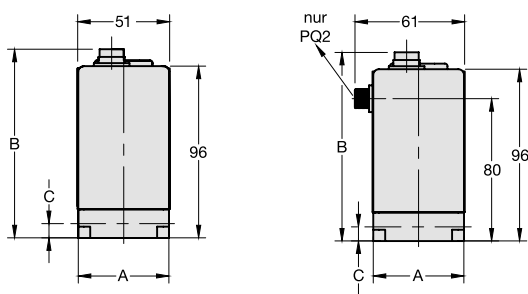
Accessories, enclosed

coupling socket	M16x0,75, 7-pin with 2 m cable	straight	PRK-A2L
		angular	PRK-C2L
mounting bracket	made of steel		PQKT-01



PRK-A

PRK-C



*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min
*2 higher supply pressure on request
*3 air consumption

* Product group

Technical details: see previous page

PDF CAD
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Order example:
PQ1EE-A5

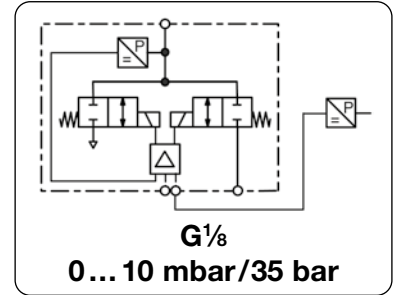
PROPORTIONAL PRESSURE REGULATOR WITH DOUBLE LOOP, ACCURATE TO 0.2%

PQ2

Description The pneumatic proportional pressure regulator produces outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system consisting of valves, manifold, housing and electronic controls.

Double loop The servo valve expands in single loop operation by combining an additional feedback from an external sensing device with the internal transducer. The external sensor provides information on the control status. The PQ2 then compares the command signal with the second loop feedback signal. Should there be a difference in the signal comparisons, the servo valve will make adjustments to the internal loop to bring the system into balance. This provides accurate final outlet. The acceptance of electrical feedback from an external sensor enables precise control of conditions such as pressure, force, torque, position or flow.

External pressure transducer Any pressure transducer for 0-10 V and 4-20 mA output signal and suitable for 15-24V DC supply voltage can be applied. An appropriate coupling socket plus cable is required.



Dimensions			Flow rate	Supply pressure	Accuracy	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm	l/min*1	max. mbar/bar*2	%	G	mbar/bar	E*

Double loop regulator				0 ... 10 V input / feedback / second loop signal, supply voltage 24 V DC, 35 l/min*1, with both coupling sockets		PQ2		
51	106	8	on request	10 mbar	0.2	G ^{1/8}	0 ... 5 mbar	PQ2EE-A5
				20 mbar			0 ... 10 mbar	PQ2EE-B1
				40 mbar			0 ... 20 mbar	PQ2EE-B2
				100 mbar			0 ... 50 mbar	PQ2EE-B5
				200 mbar			0 ... 100 mbar	PQ2EE-C1
				400 mbar			0 ... 200 mbar	PQ2EE-C2
				800 mbar			0 ... 400 mbar	PQ2EE-C4
				1000 mbar			0 ... 600 mbar	PQ2EE-C6
51	106	8	35	2 bar	0.2	G ^{1/8}	0 ... 1 bar	PQ2EE-01
				3 bar			0 ... 2 bar	PQ2EE-02
				7 bar			0 ... 4 bar	PQ2EE-04
				7 bar			0 ... 6 bar	PQ2EE-06
				9 bar			0 ... 8 bar	PQ2EE-08
				15 bar			0 ... 10 bar	PQ2EE-10
				15 bar			0 ... 12 bar	PQ2EE-12
				24 bar			0 ... 16 bar	PQ2EE-16
				24 bar			0 ... 20 bar	PQ2EE-20
				38 bar			0 ... 25 bar	PQ2EE-25
				38 bar			0 ... 30 bar	PQ2EE-30
				38 bar			0 ... 35 bar	PQ2EE-35
51	106	8	35	0 bar	0.2	G ^{1/8}	0 ... -1 bar	PQ2EE-V0
				2 bar			-1 ... +1 bar	PQ2EE-V1



Special options, add the appropriate letter or number

4-20 mA input / feedback / second loop signal PQ2 IC- . . .

flow 100 l/min increased flow rate, max. 10 bar PQ2 HF

continuous regulation*3 improved characteristic curve through proportional inlet valve, max. 10 bar PQ2 X58

declining curve inverted outlet PQ2 X59

Accessories, enclosed

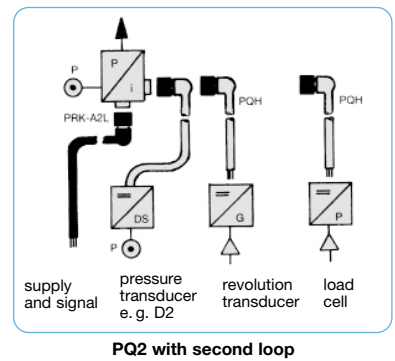
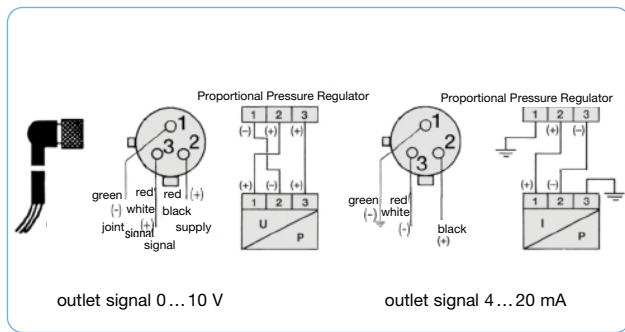
coupling socket M16x0.75, 7-pin with 2.0 m cable, supply and signal, straight PRK-A2L

coupling socket 1/2" UNF, 3-pin with 0.9 m cable, for second loop, angular PRK-C2L

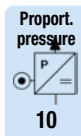
mounting bracket made of steel straight angular PQH-L1

angular PQH-L2

PQKT-01



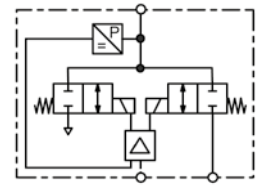
*1 at 7 bar supply pressure and open outlet, at regulated flow rate of 3 l/min
*2 higher supply pressures on request *3 air consumption



PROPORTIONAL PRESSURE REGULATOR WITH HIGH ACCURACY AND HIGH FLOW PQ3...PQ6

Technical features

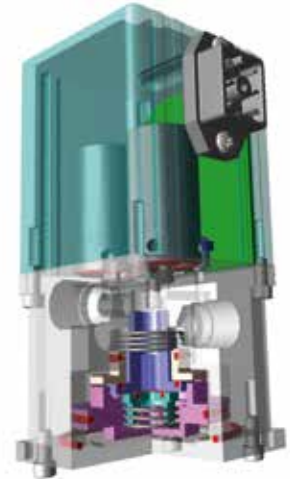
• Pressure range	-1... 35 bar	• Accuracy	± 0.4%
• Input signal	0-10 V; 4-20 mA	• Mounting position	any
• Protection class	IP65	• Adjustment	zero point, span, hysteresis
• Response time	15 ... 20 ms	• Air consumption	without air consumption
• Power consumption	6 W		



accurate 0.4%

General technical features

Description	Two solenoid valves control the system pressure. One valve is for inlet control, the other for outlet control. In order to achieve high volume flow the regulator is pilot-controlled, i.e. the valves control an integral volume booster. Extraordinary accuracy is reached by measuring the outlet pressure of the booster and feeding back the according signal.		
Mounting position	any, preferably upright		
Protection class	IP65		
Temperature range	0 °C to 70 °C / 32 °F to 158 °F		
Material	Booster body: nickel-plated aluminium	Elastomer: FKM, NBR/Buna-N	
	Transducer: aluminium and silicon	Valves: nickel-plated brass	

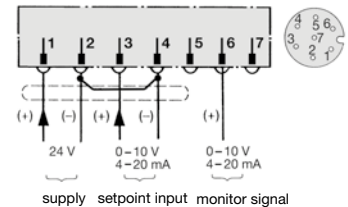


Pneumatic features

Media	dry, unlubricated and 40 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart, minimum 10% above outlet pressure
Flow rate	PQ3: 700 l/min at 8 bar supply pressure and 6 bar outlet pressure PQ4 / PQ6: 2000 l/min at 8 bar supply pressure and 6 bar outlet pressure
Exhaust	nearly same relief capacity as ventilation capacity
Air consumption	without constant bleed

Electrical features

Supply voltage	15-24 V DC
Power consumption	max. 6 W
Command signal	0-10 V, optionally 4-20 mA
Command signal impedance	10 kΩ at voltage signal, 100 Ω at current signal
Electrical connector	plug M16x0.75, 7-pin, with coupling socket, optionally plug M12
Monitor signal	0-10 V, optionally 4-20 mA
Security	constant outlet pressure at voltage drop



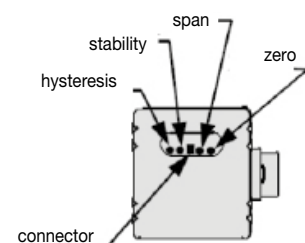
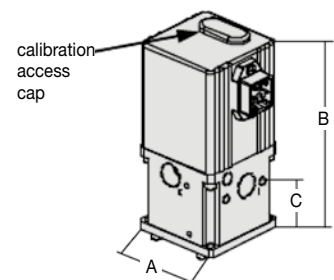
connection diagram for supply and signal

Accuracy

Linearity / Hysteresis	± 0.3% FS > 7 bar outlet pressure ± 0,5% FS
Response sensitivity	< 0.1% FS
Response time	10 ... 15 ms
Repeatability	± 0.2% FS
Accuracy	± 0.4% FS

Adjustment

Adjustment	Adjustment by calibration access cap on the top of the valve.
Zero point	The zero point can be changed by up to 10% of full scale, e.g. from 0 bar to 0.6 bar at a 6 bar regulator. External adjustment via potentiometer Z "zero".
Span	The maximum pressure value of the control range can be reduced by up to 10%, e.g. from 6 bar to 5.4 bar. External adjustment via potentiometer S "span".
Hysteresis	Response sensitivity can be adjusted via potentiometer H "hysteresis".



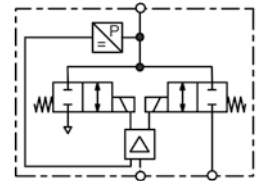
PROPORTIONAL PRESSURE REGULATOR WITH HIGH ACCURACY AND HIGH FLOW PQ3...PQ6

Description

Closed loop electronic pressure regulator consisting of two solenoid valves, an internal pressure transducer, and an electronic control circuit mounted to an integral volume booster. The pressure is controlled by activating the solenoid valves, which apply pressure to the pilot side of the volume booster.

Single loop

Pressure is controlled by two solenoid valves. One valve functions as inlet control, the other as exhaust. The pressure outlet is measured by an internal pressure transducer which provides a feedback signal to the electronic controls. This feedback signal is compared with the command input signal. Any difference between the two signals causes one of the two solenoid valves to open, allowing flow into or out of the system. Accurate pressure is maintained by these two valves.



0...0.1 bar/35 bar

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

Single loop regulator

0 ... 10 V input and feedback signal
supply voltage 24 V DC, with coupling socket

PQ3/PQ4/PQ6

51	123	34	700	1	0,25	1/4" NPT	0...0,1	PQ3EE-C1	
				1			0...0,5	PQ3EE-C5	
				2			0...1,0	PQ3EE-01	
				3			0...2,0	PQ3EE-02	
				7			0...4,0	PQ3EE-04	
				7			0...6,0	PQ3EE-06	
				9			0...8,0	PQ3EE-08	
				15			0...10	PQ3EE-10	
				15			3/8" NPT	0...12	PQ3EE-12
				24				0...16	PQ3EE-16
				24				0...20	PQ3EE-20
				38				0...25	PQ3EE-25
				38				0...30	PQ3EE-30
				38				0...35	PQ3EE-35
				77			175	65	2000
1	0...0,5	PQ4EE-C5							
2	0...1,0	PQ4EE-01							
3	0...2,0	PQ4EE-02							
7	0...4,0	PQ4EE-04							
7	0...6,0	PQ4EE-06							
9	0...8,0	PQ4EE-08							
15	0...10	PQ4EE-10							
77	175	65	2000		1	0,4			
				1	0...0,5		PQ6EE-C5		
				2	0...1,0		PQ6EE-01		
				3	0...2,0		PQ6EE-02		
				7	0...4,0		PQ6EE-04		
				7	0...6,0		PQ6EE-06		
				9	0...8,0		PQ6EE-08		
				15	0...10		PQ6EE-10		



PQ3EE-10



PQ4EE-10

Special options, add the appropriate letter

4-20 mA input and monitor signal PQ . IC . . .

Accessories, enclosed

coupling socket	M16x0.75, 7-pin with 2 m cable	straight	PRK-A2L
mounting bracket	made of steel	angular	PRK-C2L
mounting bracket	made of steel	for PQ3	PQKT-01
		for PQ4/PQ6	PQKT-02



PRK-A

PRK-C

*1 at 8 bar inlet pressure and 6 bar outlet pressure

Technical details: see previous page

PDF CAD
www.aircom.net

* Product group



Order example:
PQ3EE-C1

Description

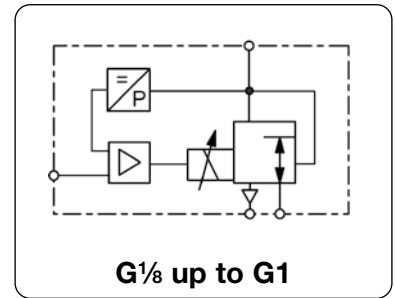
The pneumatic proportional pressure regulator controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact monoblock assembly with proportional solenoid valve, electronic regulator and internal pressure transducer.

In the process, the outlet pressure is transformed into a proportional electrical signal and compared with the input signal. If the outlet pressure exceeds the preset setpoint, the valve exhausts down to the pressure desired.

The valve has no constant bleed. At absence of input signal or supply voltage the valve exhausts. The power supply of the setpoint potentiometer is provided by the proportional regulator via connector pin number 5.

Pressure transducer Open transducers: 100 mbar, 500 mbar, 1/5/10/16/20/30/50 bar and vacuum

Application examples Proportional pressure regulators are being used for blowing machines, ultrasonic equipments, testing machines, painting systems, contouring systems, laser welding machines, textile machines, cheese presses, pneumatic brakes, clamping devices and medical engineering.



General technical features

Description	3-port/2-way pressure regulator with proportional magnet, integrated hybrid PCB and closed loop with pressure transducer in compact monoblock assembly.	
Mounting position	any, preferably upright	
Protection class	IP 54 with standard connector, IP 65 with special connector	
Shock resistance	3G	
Temperature range	0 °C up to 50 °C / 32 °F to 122 °F, high temperature version on request	
Material	Body: brass (G ¹ / ₈) and aluminium (G ¹ / ₄ , G ¹ / ₂ u. G1)	Inner valve: brass and SST
	Seals: NBR/Buna-N, on request EPDM or FKM	FKM for 50 bar version

Pneumatic features

Media	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart, min. 10% above outlet pressure
Flow rate	see chart, at 6 bar inlet pressure and 5 bar outlet pressure
Exhaust	same nominal size as on inlet valve, thus same relief capacity
Air consumption	without air consumption

Electrical features

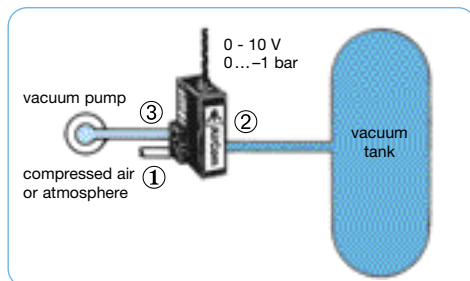
Supply voltage	24 V DC + 15% - 10%, residual ripple max. 10%
Power consumption	12 W at G ¹ / ₈ , 22 W at G ¹ / ₄ , 30 W at G ¹ / ₂ , 44 W at G1
Current consumption	0.5A at G ¹ / ₈ , 1.0A at G ¹ / ₄ , 1.25A at G ¹ / ₂ , 1.7A at G1
Command signal	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA, digital or Profibus DB rising curve as standard, optionally declining curve
Impedance	100 kΩ at voltage signal (0.1 mA current consumption) 500 Ω at current signal
Electrical connector	circular plug according to DIN 43651, 7-pin plug for analogue signal 16-pin plug for digital signal

Accuracy

Linearity/Hysteresis	< 1% FS
Response sensitivity	< 0.1% FS
Repeatability	< 0.1% FS
Over all accuracy	± 0.5%
Regulating time	< 1 s over the range, 70 ms at 10 to 90% or 90 to 10% of the range

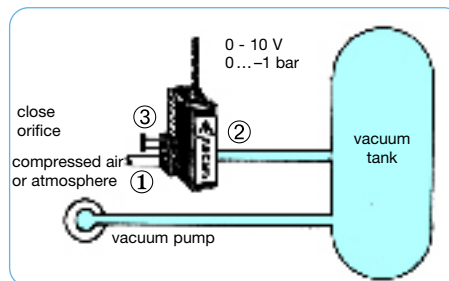
Adjustment

Zero point	calibration ± 10% FS via potentiometer P2
Range	calibration + 5% FS or -10% FS via potentiometer P1
Amplification	calibration 1:1 up to 1:10 via potentiometer P7



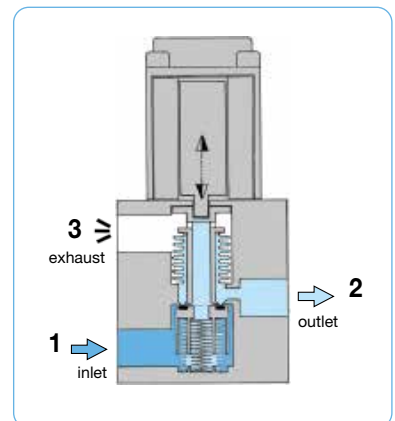
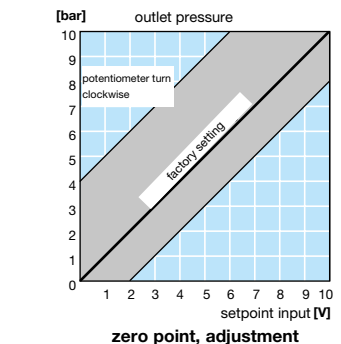
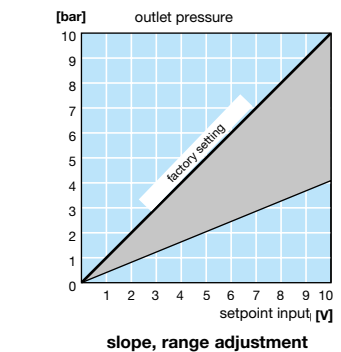
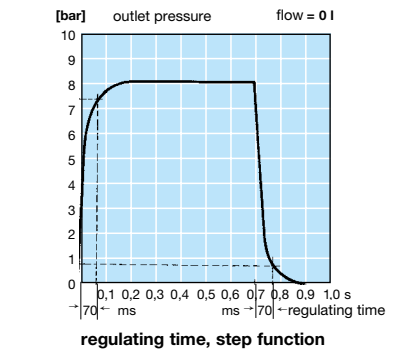
Downstream regulation (V1)

The vacuum pump saves energy and it is easy to fill the tank either with vacuum or pressure. A filter is recommended at orifice ①.



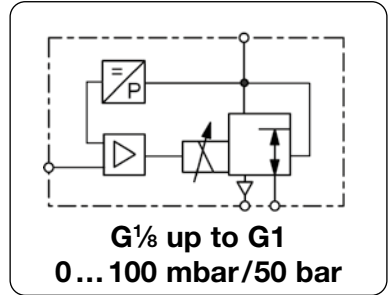
Upstream regulation (V2)

Upstream installation is preferred if rapid evacuation of a tank or system is required. A filter is recommended at orifice ①.



Technical features

- **Pressure range** 0...-1.0 bar to 0...50 bar
- **Command signal** 0...10 V, 0...20 mA, 4...20 mA, digital
- **Feedback signal** 0...10 V, 0...20 mA, 4...20 mA
- **Adjustment** zero point, range and amplification
- **Pressure sensors** 100 / 500 mbar, 1/5/10/16/20/30/50 bar
- **Flow rate** 250 / 820 / 1700 / 6500 l/min
- **Linearity / Hysteresis** < 1% FS
- **Response sensitivity** ± 0,5% FS
- **Repeatability** ± 0,5% FS
- **Regulating time** < 1 s
- **Power consumption** 12 / 22 / 30 / 44 W
- **Exhaust** full nominal size



Dimensions			Nominal size	K _v -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m³/h)	l/min*1	bar	G	bar	

Proportional pressure regulator									
0-10 V input signal, supply voltage 24 V DC, with coupling socket									
PR									
35	80	63	3	0.18	210	-1	G1/8	0...-1.0	PRA00-00V1
						-1		0...-0.5	PRA00-00V1A5
						-1		0...-0.1	PRA00-00V1A1
						3		-1,0... 1.0	PRA00-01V1
						1		0... 0.1	PRA00-A100
						2		0... 0.5	PRA00-A500
						2		0... 1.0	PRA00-0100
						12		0... 6.0	PRA00-0600
						12		0... 10	PRA00-1000
						22		0... 20	PRA00-2000
52	105	74	6	0.6	700	-1	G1/4	0...-1.0	PR000-00V1
						-1		0...-0.5	PR000-00V1A5
						-1		0...-0.1	PR000-00V1A1
						3		-1,0... 1.0	PR000-01V1
						1		0... 0.1	PR000-A100
						2		0... 0.5	PR000-A500
						2		0... 1.0	PR000-0100
						12		0... 6.0	PR000-0600
						12		0... 10	PR000-1000
						18		0... 16	PR000-1600
						22		0... 20	PR000-2000
						40		0... 30	PR000-3000
						60		0... 50	PR000-5000
70	150	101	12	1.2	1400	-1	G1/2	0...-1.0	PR100-00V1
						2		0... 1.0	PR100-0100
						12		0... 6.0	PR100-0600
						12		0... 10	PR100-1000
						14		0... 12	PR100-1200
96	190	115	20	4.8	5600	-1	G1	0...-1.0	PR200-00V1
						2		0... 1.0	PR200-0100
						12		0... 6.0	PR200-0600
						12		0... 10	PR200-1000
						14		0... 12	PR200-1200



PRA



PR0



PR1



PR2

*1 at 6 bar supply pressure and 5 bar outlet pressure

Technical details: see previous page

PDF CAD
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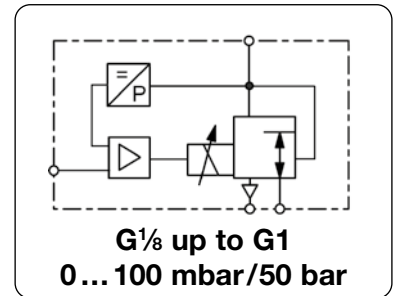
* Product group



Order example:
PRA00-00V1

Technical features

• Pressure range	0...-1.0 bar to 0...50 bar	• Linearity / Hysteresis	< 1% FS
• Command signal	0...10 V, 0...20 mA, 4...20 mA, digital	• Response sensitivity	± 0,5% FS
• Feedback signal	0...10 V, 0...20 mA, 4...20 mA	• Repeatability	± 0,5% FS
• Adjustment	zero point, range and amplification	• Regulating time	< 1 s
• Pressure sensors	100 / 500 mbar, 1/5/10/16/20/30/50 bar	• Power consumption	12 / 22 / 30 / 44 W
• Flow rate	250 / 820 / 1700 / 6500 l/min	• Exhaust	full nominal size



Special options, add the appropriate letter or number

input signal	0-20 mA		PR .. 1-....
	4-20 mA		PR .. 2-....
	8 bit digital with hold function		PR .. 3-....
	Profibus DP	from G ¹ / ₄ on	PR .. 8-....
feedback signal	0-10 V		PR . 1 .-....
	0-20 mA		PR . 2 .-....
	4-20 mA		PR . 3 .-....
external feedback signal	0-10 V		PR . 4 .-....
	0-20 mA		PR . 5 .-....
	4-20 mA		PR . 6 .-....
deviant pressure range	indicate on order		PR ... -XX. .
for vacuum	Bypass version	G ¹ / ₈ and G ¹ / ₄	PR ... - .V2
		G ¹ / ₂	PR1. . . .V2
		G1	PR2. . . .V2
for absolute pressure			PR ... - .0A
protection class IP65	special cable box, PRK-IP65		PR ... - .06
body made of stainless steel	valve body and inner parts , 1.4304, EPDM seals, G ¹ / ₄ and G ¹ / ₂		PR ... - .SS
body made of aluminium	nly valve body, max. 20 bar	G ¹ / ₄ only	PR ... - .19
for oxygen	specially cleaned, FKM elastomer		PR ... - .15



example: combination PR with booster

Accessories, enclosed

coupling socket	7-pin with 2 m cable	straight	PRK-A2L
	7-pin with 5 m cable	straight	PRK-A5L
	7-pin with 2 m cable, IP65	straight	PRK-I 2L
	7-pin with 2 m cable	angular	PRK-C2L
other cable length	7-pin with 5 m cable	angular	PRK-C5L
	e.g. 10 m available		

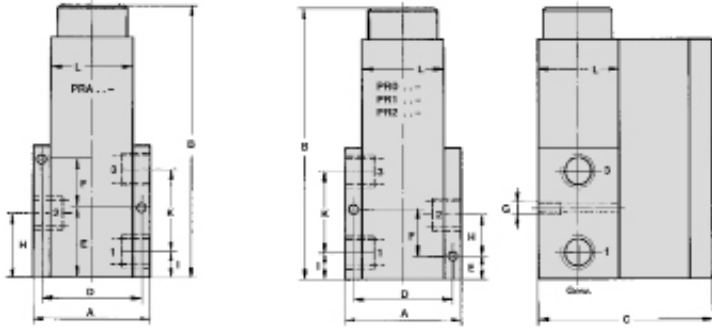


PRK-A

PRK-C



DIMENSIONS AND CONNECTION DIAGRAM "AIRTRONIC"®



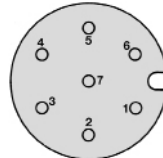
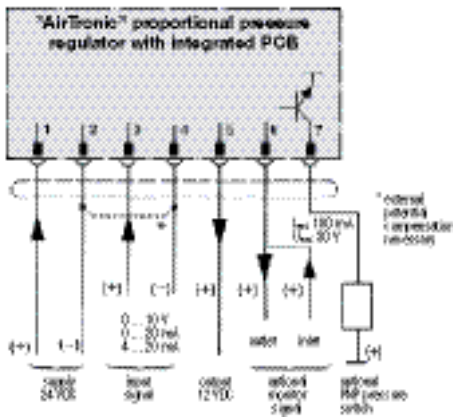
1: inlet
2: outlet
3: exhaust

Proport. regulator	thread	A	B	C	D	E
PRA . . .	G ½	35	80	63	29	18
PR0 . . .	G ¼	52	105	74	43	10
PR1 . . .	G ½	70	150	101	57.5	12
PR2 . . .	G 1	96	190	115	79	15

Proport. regulator	F	G	H	I	K	L
PRA . . .	7	M 4	15	10	16.6	25
PR0 . . .	20	M 4	16	11*	34	36
PR1 . . .	28	M 6	23	15	48.5	45
PR2 . . .	33	M 8	30	20	60	60

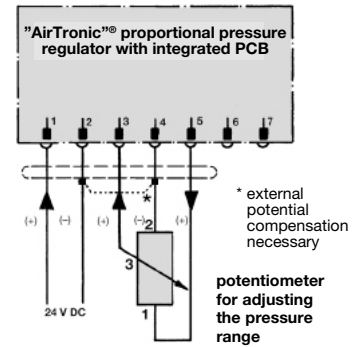
* 14 mm from 30 bar pressure range on

"AIRTRONIC"® PROPORTIONAL PRESSURE REGULATOR WITH INTEGRATED PCB



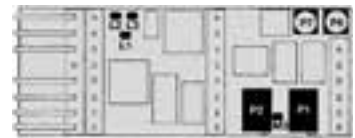
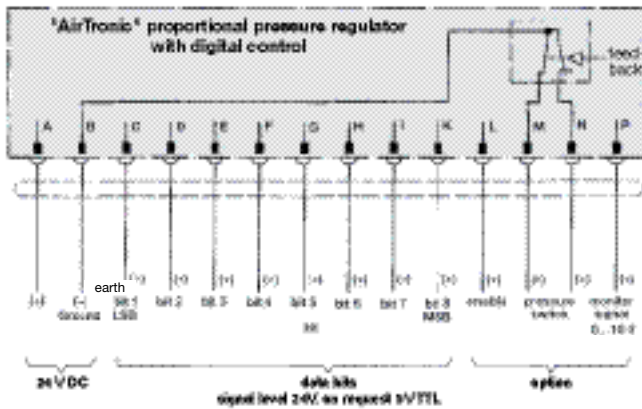
colour of wire		
pin	4-wire	7-wire
1	white	grey
2	brown	blue
3	yellow	yellow
4	green	green
5	-	brown
6	-	white
7	-	pink

pin numbers seen from solder pin side



"AIRTRONIC"® CONNECTION DIAGRAM

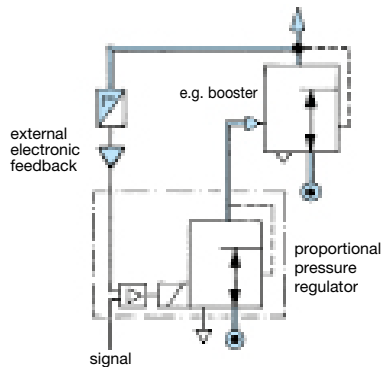
CONNECTION DIAGRAM WITH POTENTIOMETER



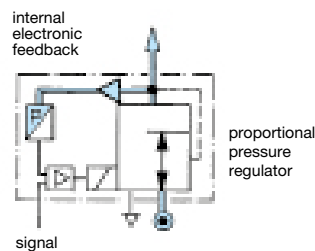
- P1 range: -10%...+5%
- P2 zero point: ± 10%
- P6 option pressure switch: 5...15%
- P7 proportional amplification: 1...11
- M3 measuring point offset zero
- L1 earth (GND)
- L2 solenoid +24 V
- L3 solenoid (pulse width modulation) PWM

CONNECTION DIAGRAM FOR DIGITALLY CONTROLLED PROPORTIONAL PRESSURE REGULATOR

ADJUSTMENT OF THE PROPORTIONAL REGULATOR

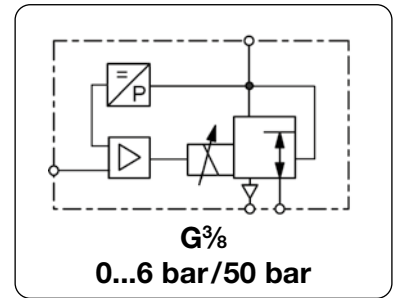


EXTERNAL ELECTRONIC FEEDBACK
0 ... 10 V or 0/4 ... 20 mA



INTERNAL ELECTRONIC FEEDBACK
as standard

Description	The pneumatic proportional regulator controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact mono block assembly with proportional solenoid valve, electronic regulator and internal pressure transducer. The valve works as a slide valve and is designed for flow applications such as thermal cutting. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, PR adapter and software. Data record can be saved and used for further valves. The valve has a constant bleed. At absence of input signal or supply voltage the valve exhausts.		
Software	Display: signal, outlet pressure, PID parameters, pressure switch signal etc.		
Scope function	view setpoint, outlet pressure, internal signals from PID control		
Media	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases		
Supply voltage	24 V DC ± 10 V, residual ripple < 10%	Power consumption	14 W (810mA current consumption)
Signal range	0-10 V, 100 kΩ impedance	0/4-20 mA, 250 Ω impedance	
Electr. connection	plug M12x1, 5-pin (protection class IP65)	Mounting position	any, preferably solenoid on top
Accuracy	hysteresis: 0.5% FS	Linearity/repeatability	< ± 0.5% FS
Temp. range	fluid / ambient: 0 °C to 60 °C / 32 °F to 140 °F	Material	Body: aluminium Elastomer: NBR/Buna-N



Dimensions			Nominal size	K _v -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number	E*
A	B	C	DN	(m ³ /h)	l/min*1	bar	G	bar		

Proportional pressure regulator										0-10 V command signal, supply voltage 24 V DC, without M12 coupling socket	PF
60	160	78	8	1,45	1700	12	G ³ / ₈	0 ... 6	PF000-0600		
						18		0 ... 10	PF000-1000		
						18		0 ... 16	PF000-1600		
						22		0 ... 20	PF000-2000		
						40		0 ... 30	PF000-3000		
						50		0 ... 40	PF000-4000		
						60		0 ... 50	PF000-5000		

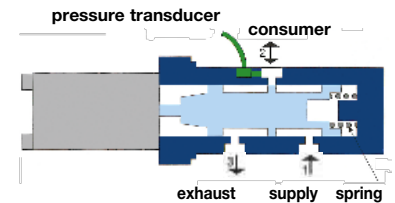


Special options, add the appropriate letter or number

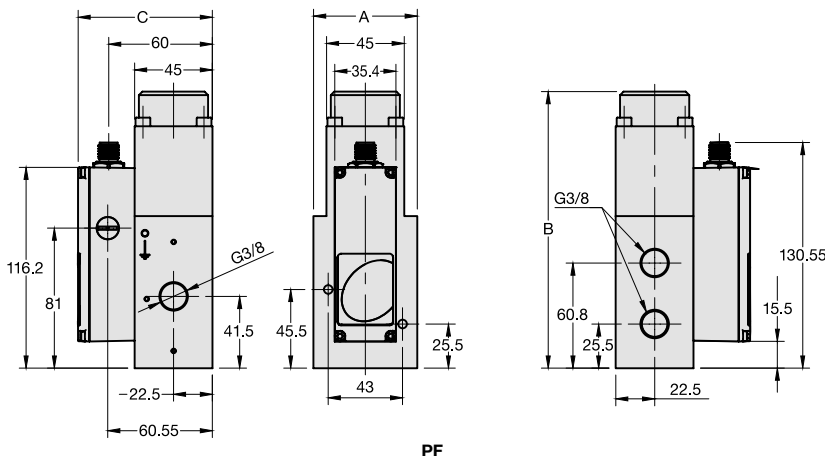
command signal	0-20 mA	PF..1-....
	4-20 mA	PF..2-....
monitor signal	0-10 V	PF.1.-....
	4-20 mA	PF.3.-....
deviant pressure range	indicate on order	PF...-XX..
for oxygen	specialy cleaned, FKM elastomers	PF...-..15

Accessories, enclosed

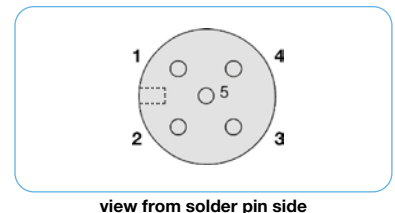
PR adapter	with USB plug and 1 m cable	PDUSB
software	basic version "light"	PDSOFT1²
coupling socket	M12x1, 5-pin, with 2 m cable, 5 x 0.25	angular KM12-C5-2
	M12x1, 5-pin, with 5 m cable, 6 x 0.25	angular KM12-C5-5



The position of the slide is continuously shifting according to command signal and pressure change at the outlet. Thereby a constant outlet pressure is achieved.



*1 at 6 bar supply pressure and 5 bar outlet pressure
*2 You do not need any software to use the valve!



pin	description	5-wire cable (2m)
1	24 V supply voltage	brown
2	analog input signal	white
3	supply ground	blue
4	analog ground	black
5	digital pressure switch signal	grey
housing	EMC shield	shield

connection diagram

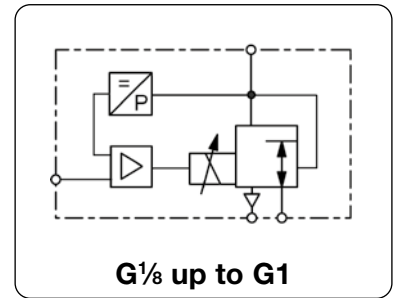
* Product group



Order example:
PF000-0600

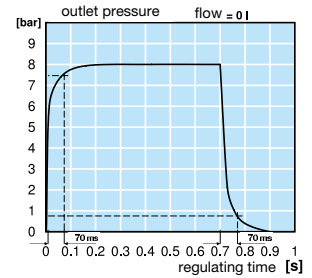
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Description	The pneumatic proportional regulator controls the outlet pressure in proportion to an electrical command input signal. It comprises a complete closed loop servo system in a compact mono block assembly with proportional solenoid valve, electronic regulator and internal pressure transducer. The valve works as a 3-port/2-way valve with proportional magnet. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, PR adapter and software. Data record can be saved and used for further valves. The valve has no constant bleed. At absence of input signal or supply voltage the valve exhausts.
Software	Display: signal, outlet pressure, parameter, pressure switch signal etc. Scope function: view setpoint, outlet pressure, internal signals from PID control Parameters: command signal, zero point, overload threshold, ramp Valve diagnosis: parameters factory set or customised, optimization of the valve



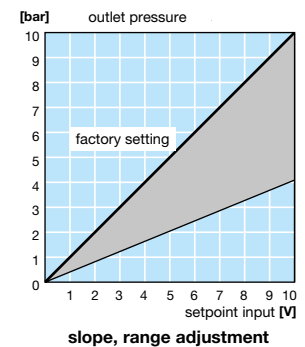
General technical features

Description	3-port/2-way valve with proportional magnet and digital control
Mounting position	any, preferably vertical
Protection class	IP65 with mounted coupling socket
Shock resistance	3G
Temperature range	0 °C to 60 °C / 32 °F to 140 °F, fluid / ambient temperature
Material	Body: brass (for G ¹ / ₈ and G ¹ / ₄) or aluminium (for G ¹ / ₂ and G1) Inner valve: brass and stainless steel Seals: NBR/Buna-N, EPDM or FKM on request, FKM for 50 bar version



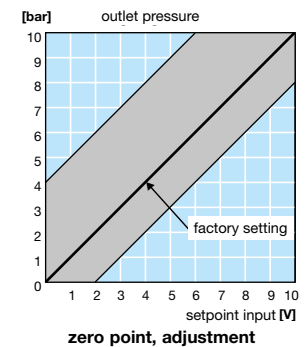
Pneumatic features

Media	dry, lubricated, unlubricated and 5 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart
Flow rate	see chart, at 6 bar supply pressure and 5 bar outlet pressure
Exhaust	same nominal size as on inlet valve, thus same relief capacity
Air consumption	without air consumption



Electrical features

Supply voltage	24 V DC ±10%
Electrical connection	M12, 5-pin coupling socket
Power consumption	12 W at G ¹ / ₈ , 24 W at G ¹ / ₄ , 34 W at G ¹ / ₂ , 44 W at G1
Current consumption	500 mA at G ¹ / ₈ , 1000 mA at G ¹ / ₄ , 1400 mA at G ¹ / ₂ , 1800 mA at G1
Command signal	0-10 V, 0-20 mA, 4-20 mA
Impedance	100 kΩ at voltage signal (0.1 mA current consumption) 250 Ω at current signal
Setpoint input	0-10 V, 0-20 mA, 4-20 mA



Accuracy

Linearity/Hysteresis	< ± 0.5% FS
Repeatability	± 0.5% FS
Response sensitivity	± 0.5% FS
Over all accuracy	± 0.5% FS

Adjustment and parameter settings

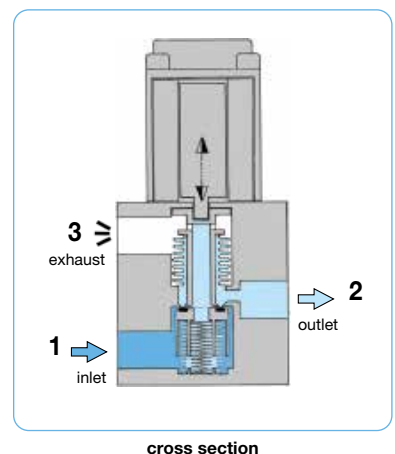
Zero point / range	Zero point and range can be calibrated percentagewise.
Control mode / Amplification	Through the software different control modes may be chosen. All parameters of P/PI/PID controllers can be tuned.
Diagnosis	A diagnostic tool including data recording is available within the software.
Characteristic curve	Increasing or decreasing curve can be set (increasing by standard).

Downstream regulation for vacuum/positive pressure regulators (V1)

Recommended when tank shall be evacuated or filled with positive pressure. At inlet port (1) either compressed air or atmosphere has to be applied. The use of a filter is advisable.

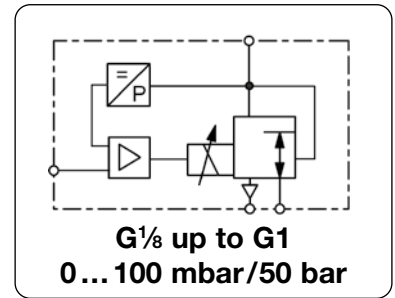
Downstream regulation for vacuum regulators (V3)

Recommended when tank shall be evacuated. Exhaust port (3) will be closed. Inlet port (1) must be connected with vacuum pump. Outlet port (2) has to be connected with consumer or tank.



Technical features

• Pressure range	0...0.1 bar bis 0...50 bar	• Linearity / Hysteresis	± 0.5% FS
• Command signal	0-10 V, 0-20 mA, 4-20 mA	• Response sensitivity	± 0.5% FS
• Output signal	0-10 V, 0-20 mA, 4-20 mA	• Repeatability	± 0.5% FS
• Regulating time	< 1 s	• Rated input	12 / 22 / 30 / 44 W
• Pressure sensor	100 / 500 mbar, 1 / 5 / 10 / 16 / 20 / 30 / 50 bar	• Relief capacity	full nominal size
• Flow rate	250 / 820 / 1700 / 6500 l/min		



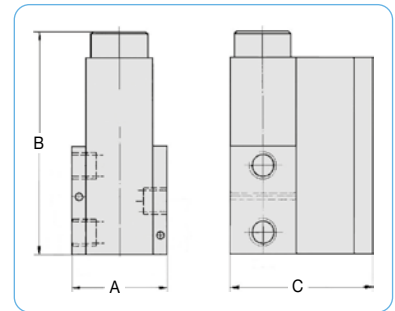
Dimensions			Nominal size	K _v -value	Flow rate	Supply max.	Connection thread	Pressure range	Order number
A	B	C	DN	(m ³ /h)	l/min*1	bar	G	bar	
mm	mm	mm							E*

Proportional pressure regulator

0-10 V command signal, supply voltage 24 V DC, with coupling socket

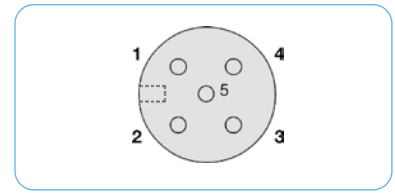
PP

35	83	57	3	0.18	210	-1	G ¹ / ₈	0...-1.0	PPA00-00V3								
								0... 0.1	PPA00-A100								
								0... 0.5	PPA00-A500								
								0... 1.0	PPA00-0100								
								0... 3.0	PPA00-0300								
								0... 6.0	PPA00-0600								
								0... 10	PPA00-1000								
								0... 16	PPA00-1600								
								0... 20	PPA00-2000								
								0... 25	PPA00-2500								
52	105	68	6	0.6	700	-1	G ¹ / ₄	0...-1.0	PP000-00V3								
								0... 0.1	PP000-A100								
								0... 0.5	PP000-A500								
								0... 1.0	PP000-0100								
								0... 3.0	PP000-0300								
								0... 6.0	PP000-0600								
								0... 10	PP000-1000								
								0... 16	PP000-1600								
								0... 20	PP000-2000								
								0... 30	PP000-3000								
70	136	85	12	1.2	1400	-1	G ¹ / ₂	0...-1.0	PP100-00V3								
								0... 1.0	PP100-0100								
								0... 3.0	PP100-0300								
								0... 6.0	PP100-0600								
								0... 10	PP100-1000								
								0... 12	PP100-1200								
								96	190	101	20	4.8	5600	-1	G1	0...-1.0	PP200-00V3
																0... 1.0	PP200-0100
																0... 3.0	PP200-0300
																0... 6.0	PP200-0600
0... 10	PP200-1000																
0... 12	PP200-1200																



Special options, add the appropriate letter or number

setpoint input	0-20 mA	1		4-20 mA	PP..2-....	
feedback output	0-10 V	1	0-20 mA	2	4-20 mA	PP..3-....
deviant pressure range for absolute pressure	indicate on order				PP...-XX..	
body made of stainless steel	P ₂ = max. 20 bar, body / inner parts, 1.4304, EPDM, G ¹ / ₄ and G ¹ / ₂				PP...-..0A	
body made of aluminium	valve body only, max. 20 bar G ¹ / ₄ only				PP0...-..19	
for oxygen	specially cleaned, FKM elastomer				PP...-..15	
cascade regulation	w/o monitor signal 2. sensor, electr. feedback 0-10 V				PP...-..KU	
	w/o monitor signal 2. sensor, electr. feedback 4-20 mA				PP...-..KI	



Accessories, enclosed

PR adapter software	with USB plug and 1 m cable	PDUSB
coupling socket	basic version "light"	PDSOFT1²
adapter cable	M12x1, 5-pin with 2 m cable, 5 x 0.25 angular	KM12-C5-2
	5 m cable, 5 x 0.25 angular	KM12-C5-5
	M12x1, 5-pin with 0.2 m cable	PRK-PR-PP

*1 at 6 bar supply pressure and 5 bar outlet pressure
*2 You do not need any software to use the valve!

Technical details: see previous page

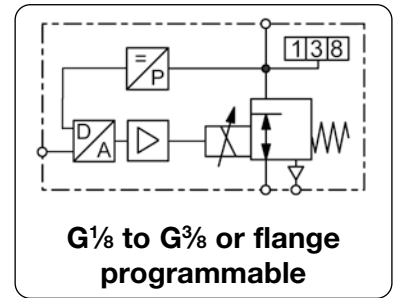
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* Product group



Order example:
PPA00-00V3

Description	The proportional pressure regulator is digitally controlled and works as a 3/2 valve with proportional magnet and closed loop. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, PR adapter and software.
Software	Display: signal, outlet pressure, PID parameters, pressure switch signal etc. Scope function: view setpoint, outlet pressure, internal signals from PID control
Parameters	command signal, zero point, overload threshold, ramp Valve diagnosis: parameters factory-set or customised, optimization of the valve.

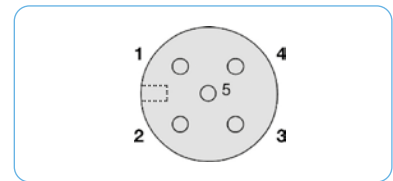


General technical features

Description	3-port/2-way valve with proportional magnet and digital control
Mounting position	any, preferably upright
Protection class	IP65 with mounted coupling socket
Temperature range	0 °C to 50 °C / 32 °F to 122 °F ambient
Material	Body: aluminium Inner valve: POM (Polyacetal) Elastomer: NBR/Buna N and FPM

Pneumatic features

Media	dry, lubricated or unlubricated and 50 µm filtered compressed air or non-corrosive gases
Supply pressure	see chart
Flow rate	see chart, at 7 bar supply pressure and open outlet
Exhaust	same nominal size as on inlet valve, thus same relief capacity
Air consumption	without air consumption



Electrical features

Supply voltage	24 V DC ± 10%
Electrical connection	M12x1, 5-pin plug, with coupling socket
Power consumption	12 W at nominal size 4, 40 W at nominal size 8
Current consumption	850 mA at nominal size 4, 1640 mA at nominal size 8
Command signal	0-10 V, 0-20 mA, 4-20 mA
Impedance	100 kΩ at voltage signal (0.1 mA current consumption) 500 Ω at current signal
Feedback output	0-10 V = 3 bar only, 6 bar and 10 bar pressure range possible

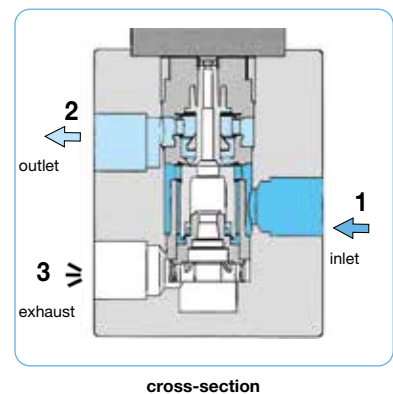
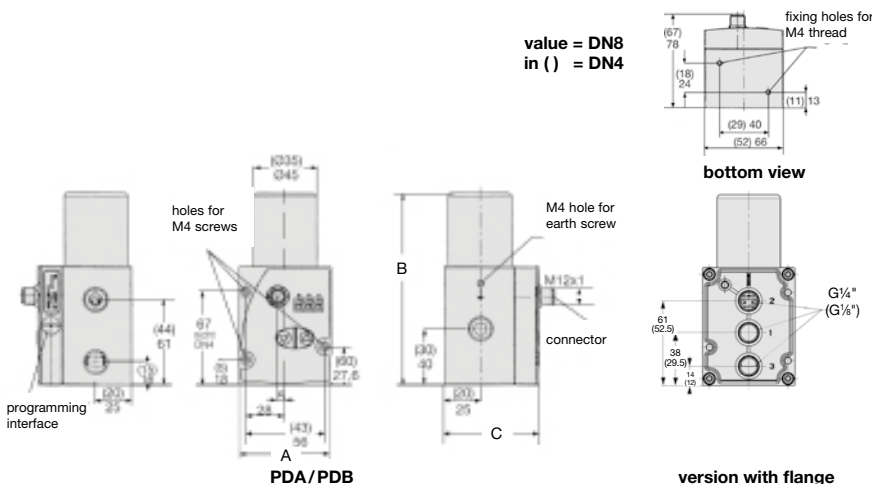
pin	description	5-wire cable (2m)
1	24 V supply voltage	brown
2	analog input signal	white
3	supply ground	blue
	analog ground	
4	analog outlet signal	black
5	digital pressure switch signal	grey
housing	EMC shield	shield

Accuracy

Linearity/Hysteresis	< 1,0% FS	Response sensitivity	< 0,5% FS
Repeatability	< 0,5% FS	Minimum setpoint	100 mV (0.2 mA / 4.2 mA)
Minimum outlet pressure	1% FS	Over all accuracy	± 0,5% FS

Adjustment and parameter settings

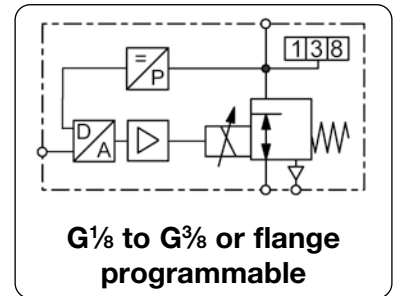
Zero point / range	Zero point and range can be calibrated percentagewise.
Control mode / Amplification	Through the software different control modes may be chosen. All parameters of P/PI/PID controllers can be tuned.
Diagnosis	A diagnostic tool including data recording is available within the software.
Characteristic curve	Increasing or decreasing curve can be set (increasing by standard).



PROPORTIONAL PRESSURE REGULATOR, PROGRAMMABLE

PD

Description	The proportional pressure regulator is digitally controlled and works as a 3/2 valve with proportional magnet and closed loop. The digital control system offers advantages at installation and commissioning for adapting the valve to special applications. The regulator can be set and optimised using a PC, PR adapter and software.		
Media	dry, lubricated, unlubricated and 50 µm filtered compressed air or non-corrosive gases		
Supply voltage	24 V DC ± 10 V, residual ripple < 10%		
Signal range	0-10 V, 100 kΩ impedance, 0/4-20 mA, 250 Ω impedance		
Electrical connection	plug M12x1, 5-pin, with coupling socket	Pressure switch	PNP, adjustable ± 5% from setpoint
Power consumption	21 W at DN4, 40 W at DN8		
Linearity/Hysteresis	< 0.5% FS / < 1% FS		
Mounting position	any		
Temperature range	fluid: 0 °C to 60 °C / 32 °F to 140 °F ambient: 0 °C to 50 °C / 32 °F to 122 °F		
Material	Body: aluminium	Elastomer: NBR/Buna-N	Inner valve: POM



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

Proportional pressure regulator						0-10 V input and outlet signal, supply 24 V DC, without display, with coupling socket		PD
52	112	67	4	0.43	470	6	G $\frac{1}{8}$	0 ... 1 PDA41-010
						6		0 ... 3 PDA41-030
						9		0 ... 5 PDA41-050
						9		0 ... 6 PDA41-060
						13		0 ... 8 PDA41-080
						13		0 ... 10 PDA41-100
						13		0 ... 12 PDA41-120
						6	G $\frac{1}{4}$	0 ... 1 PDA42-010
						6		0 ... 3 PDA42-030
						9		0 ... 5 PDA42-050
						9		0 ... 6 PDA42-060
						13		0 ... 8 PDA42-080
						13		0 ... 10 PDA42-100
						13		0 ... 12 PDA42-120
66	138	78	8	1.2	1300	6	G $\frac{1}{4}$	0 ... 1 PDA82-010
						6		0 ... 3 PDA82-030
						9		0 ... 5 PDA82-050
						9		0 ... 6 PDA82-060
						13		0 ... 8 PDA82-080
						13		0 ... 10 PDA82-100
						13		0 ... 12 PDA82-120
						6	G $\frac{3}{8}$	0 ... 1 PDA83-010
						6		0 ... 3 PDA83-030
						9		0 ... 5 PDA83-050
						9		0 ... 6 PDA83-060
						13		0 ... 8 PDA83-080
						13		0 ... 10 PDA83-100
						13		0 ... 12 PDA83-120



PDA without display



PDB with display



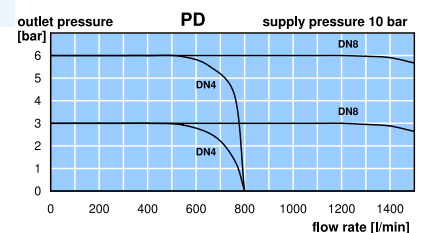
programming via PC

Special options, add the appropriate letter or number

display	3-digit, red	PDB
NPT	connection thread	PD N
0-20 mA	setpoint input and monitor signal	PD 1
4-20 mA	setpoint input and monitor signal	PD 2
flange version		PD . . F
	for PDA41/82	PD KU
cascade regulation	w/o monitor signal 2. sensor, electr. feedback 0-10 V	PD KI
	w/o monitor signal 2. sensor, electr. feedback 4-20 mA	

Accessories, enclosed

PR adapter	with USB plug and 1 m cable	PDUSB
software	basic version "light"	PDSOFT1*2
coupling socket	M12x1, 5-pin, with 2 m cable, 5 x 0.25 angular 5 m cable, 5 x 0.25 angular	KM12-C5-2 KM12-C5-5



*1 at 6 bar supply pressure and 5 bar outlet pressure
*2 You do not need any software to use the valve!

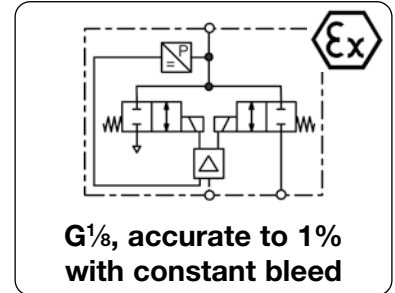
Technical details: see previous page

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Order example:
PDA41-010

Description	Piezo-operated proportional pressure regulator with closed loop in a two-wire system. Outlet pressure is proportional to an electrical input signal. The valve can be mounted in any position and is immune to shock or vibration. It is pilot-controlled to reach a higher flow rate.	
Media	lubricated or unlubricated and 50 µm filtered compressed air or non-corrosive gases	
Supply voltage	not necessary due to two-wire system (supply through 4...20 mA command signal)	
Electrical connector	coupling socket, 4-pin according to DIN 43651, size 15 x 15 mm	connector turnable in 90° steps
ATEX classification	Compliance with directive 2014/34/EU for use in potentially explosive atmosphere of group IIC, temperature classification T4.	
Power consumption	< 200 mW	Ignition protection type: II1G Ex ia IIC T4; II1D Ex D20 T135°C
Linearity/Hysteresis	< 1% FS	Failsafe feature exhaust at power breakdown
Mounting position	any	Repeatability < 0.5% FS
Air consumption	The pilot valve has an air consumption of 1.6 l/min	Protection class IP 65
Temperature range	Media: 0 °C to 60 °C / 32 °F to 140 °F	Ambient: 0 °C to 60 °C / 32 °F to 140 °F
Material	Body: aluminium and plastic	Elastomer: NBR/Buna-N and FKM
	Inner valve: stainless steel and plastic	

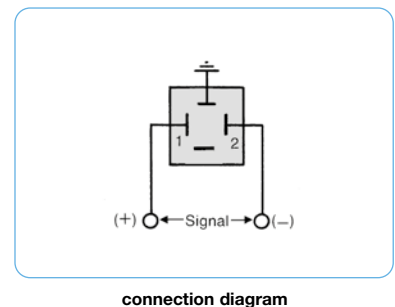
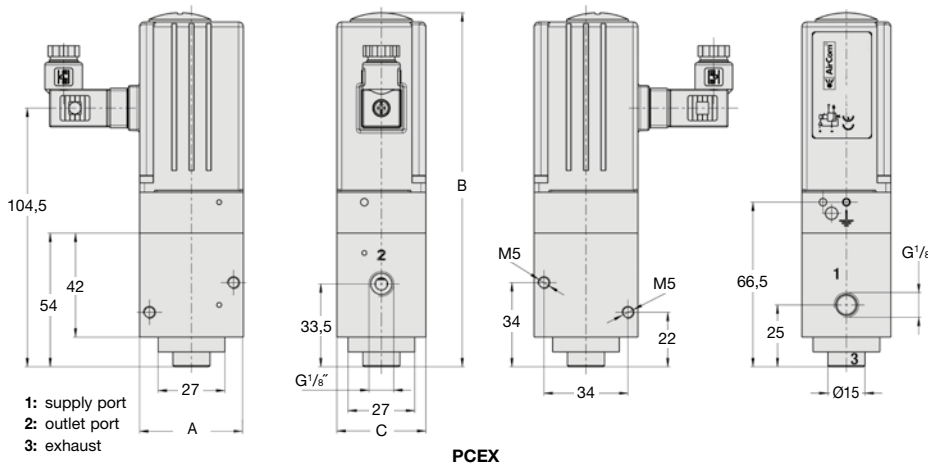
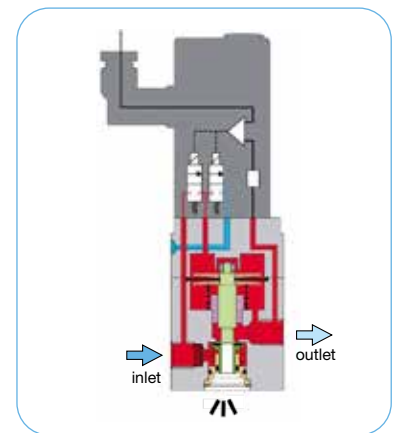


Dimensions			Nominal size	K _v -value	Flow rate	Supply min./max.	Connection thread	Pressure range	Order number	E*
A	B	C	DN	(m ³ /h)	l/min*1	bar	G	bar		

Proportional pressure regulator						4-20 mA input signal, ATEX with coupling socket, with constant bleed		PCEX	
42	143	36	4	0.5	550	2.5/3.0	G ¹ / ₈	0...2	PCEX-02
						3.5/5.0		0...3	PCEX-03
						4.5/6.0		0...4	PCEX-04
						5.5/8.0		0...5	PCEX-05
						6.5/8.0		0...6	PCEX-06



PCEX

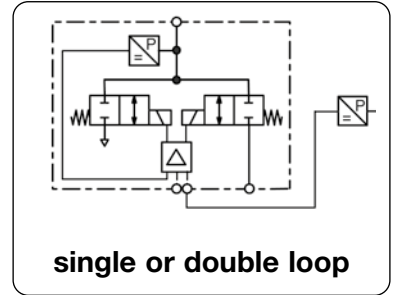


*1 at 6 bar supply pressure, 5 bar outlet pressure, equal exhaust forward flow

* Product group



Description	Proportional pressure regulator with closed loop control technology for better control of pressurised gases. The instrument can be built as single closed loop or dual closed loop control valve. dry, lubricated or unlubricated and 20 µm filtered compressed air or non-corrosive gases constant outlet pressure at voltage drop	
Media	dry, lubricated or unlubricated and 20 µm filtered compressed air or non-corrosive gases	
Fail freeze	constant outlet pressure at voltage drop	
Second loop	0-10 V, impedance 4.7 kΩ,	ratio of internal to external relationship is 10% to 90%
Supply voltage	15-24 V DC, residual ripple < 10%,	with reverse voltage protection
Impedance	0-10 V / 10 kΩ, 4-20 mA / 100 Ω	
Protection class	IP65	
Electrical connector	M12, 6-pin	
Power consumption	24 W (985 mA) regulating, 2.4 W (100 mA) non-regulating	
Linearity/Hysteresis	< 0.5% FS	Repeatability < 0.5% FS
Adjustment	zero, span, hysteresis	
Temperature range	0 °C to 70 °C / 32 °F to 158 °F	
Material	Ports: brass Transducer: silicon	Mounting position any, vibration-resistant Elastomer: FKM Valves: stainless steel



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

Proportional pressure regulator									
0-10 V input and monitor signal, w. coupling socket supply voltage 24 V DC, single loop									PQH1
76	122	15	0.016	280	75	0.5	G $\frac{1}{8}$	0 ... 40	PQH1EE-40
								0 ... 50	PQH1EE-50
								0 ... 60	PQH1EE-60
								0 ... 70	PQH1EE-70

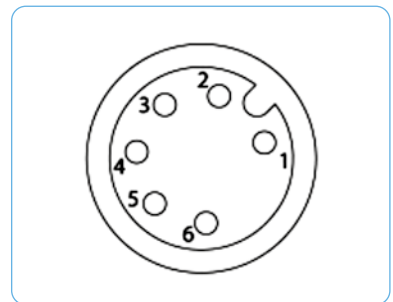
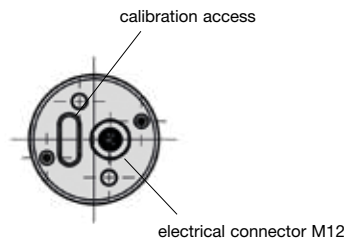
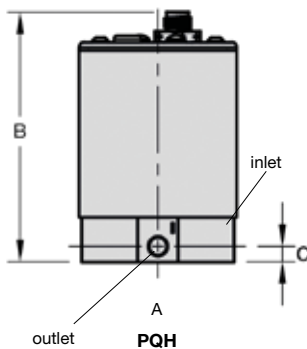


PQH1

Proportional pressure regulator									
0-10 V input, monitor- and feedback signal, with coupling socket, supply volt. 24 V DC, double loop									PQH2
76	122	15	0.016	280	75	0.5	G $\frac{1}{8}$	0 ... 40	PQH2EE-40
								0 ... 50	PQH2EE-50
								0 ... 60	PQH2EE-60
								0 ... 70	PQH2EE-70

Special options, add the appropriate letter or number

4-20 mA	input and feedback signal	PQH . IC- ..
for oxygen		PQH15
stainless steel manifold		PQHSS



view from solder pin side

Pin	Description
1	TTL output
2	set point +
3	set point ground
4	supply 24V DC
5	supply earth
6	analogue output signal

connection plan

*1 at 70 bar supply pressure and open outlet

For further details about double loop see end of the chapter

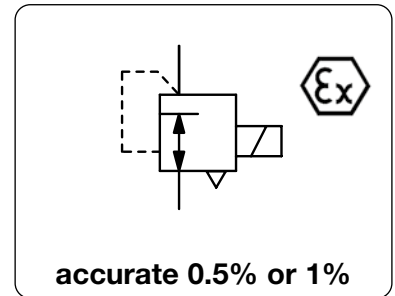
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www.aircom.net

* Product group



Order example:
PQH1EE-40

Description	The proportional pressure regulator translates a direct current or voltage input signal into a proportional pneumatic outlet signal. The valve uses proven moving coil and flapper nozzle technology with a built-in pneumatic relay with slight amplification and positive bias. Additional supply voltage is not necessary. The device has to be protected against vibration.
Media	5 µm filtered compressed air or non-corrosive gases
Supply voltage	not required
Electrical connector	plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket 30 x 30 mm
Command signal	0...10 V / 1.1 kΩ at PT6...-B, otherwise 900 Ω 4...20 mA / 200 Ω at PT6...-0, otherwise 260 Ω
Failsafe	exhaust at power breakdown
Linearity	< 0.5 % FS at 0.2...2 bar, otherwise < 1% FS
Hysteresis	< 0.25% FS at 0.2...2 bar, otherwise < 1% FS
Adjustment	Zero point: by 0.3 bar Range: 40% FS
Temperature range	-30 °C to 65 °C / -22 °F to 149 °F
Material	Body: chromated aluminium Nozzle: sapphire in nickel-plated brass plate
	Response sensitivity < 0.2% FS Repeatability < 0.1% FS Vibration sensitivity < 2% FS, for 10 g and 15...500 Hz Mounting position upright ± 15° Protection class IP 65 Elastomer: NBR/Buna-N Inner valve: stainless steel, brass, zinc-plated steel



Dimensions			Flow rate	Supply pressure	Command signal	Pressure range	Order number
A	B	C	l/min*1	max. bar	V/mA	bar	
mm	mm	mm					

Proportional pressure regulator 0-10 V							¼ NPT, depending on pressure range	PT600
							air consumption 2...8 l/min	
57	93	13	250	8	0-10 V	0.2...1		PT600-B100
						0.2...2		PT600-B200
57	132	13	300	10	0-10 V	0...2		PT600-0200
						0...4		PT600-0400
						0...8		PT600-0800



PT60.-0.

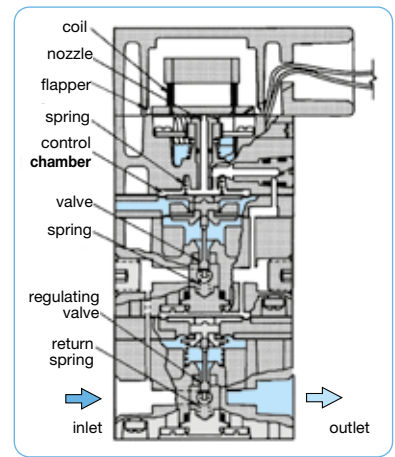
Proportional pressure regulator 4-20 mA							¼ NPT, depending on pressure range	PT602
							air consumption 2...8 l/min	
57	93	13	250	8	4-20 mA	0.2...1		PT602-B100
						0.2...2		PT602-B200
57	132	13	300	10	4-20 mA	0...2		PT602-0200
						0...4		PT602-0400
						0...8		PT602-0800

Special options, change the appropriate number

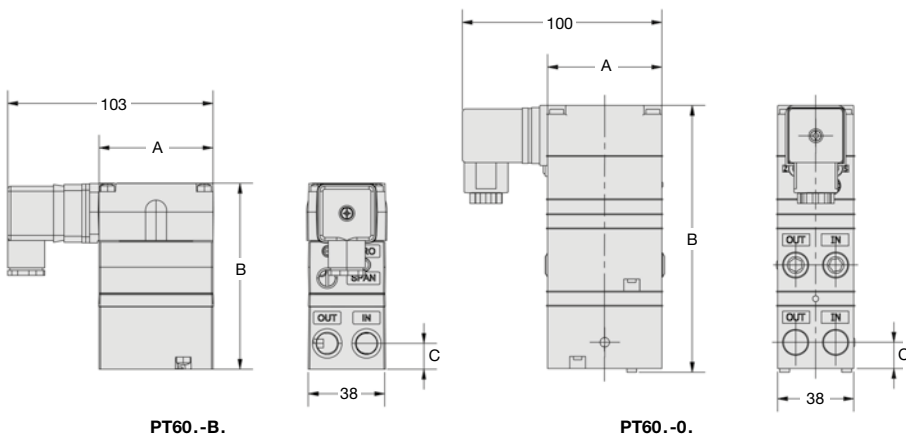
Ex-i-Atex	Atex II 1G Ex ia IIC T4	4-20 mA only	PT602-..01
-----------	-------------------------	--------------	------------

Accessories, enclosed

mounting bracket	made of steel, for standard version	SA-PT1
	made of steel, for Din rail	SA-PT2
isolate transmitter	Ex ia II C, E/A: 0-20 mA, 24 V DC, EX 1-32	KFD2-CD

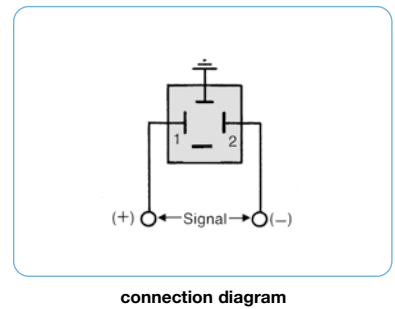


cross-section



PT60.-B.

PT60.-0.



connection diagram

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

* Product group

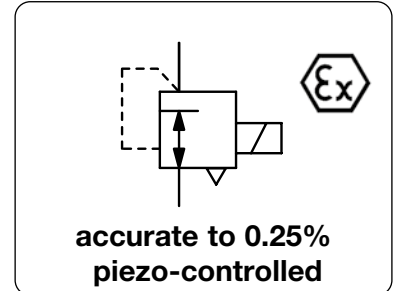
Order example:
PT600-B100

PDF CAD
www.aircom.net



PROPORTIONAL PRESSURE REGULATOR WITH PIEZO ELEMENT AND ELECTRICAL FEEDBACK PT7

Description	The proportional pressure regulator translates a direct current or voltage signal into a linear proportional pneumatic outlet signal. With rapid response controls using low-powered piezo microelectronics, flapper nozzle and solid state control circuit. The proportional pressure regulator has internal electronic with an electrical feedback sensor and is housed in NEMA4X (IP65) enclosure with six outlet ranges, jumper selectable. Input and outlet ports on both ends of the body simplify pneumatic piping.	
Media	5 µm filtered compressed air or non-corrosive gases	
Supply voltage	7...30 V DC, 90 mW, required for 0...10 V setpoint input only, with reverse voltage protection	
Electrical connector	plug according to DIN 43650A, contact gap 18 mm, 3-pin, with coupling socket 30 x 30 mm	
Command signal	0...10 V / 10 kΩ, 3-pin, 24 V DC supply voltage, 4...20 mA / 330 Ω, two-wire, min. 7 V DC on input	
Failsafe	exhaust at power breakdown	
Linearity	< 0.25% FS	
Hysteresis	< 0.1% FS at 0.2...0.5 bar, otherwise < 0.25% FS	
Adjustment	Zero point: by 0.3 bar Range: 40% FS	
Temperature range	-40 °C to 70 °C / -40 °F to 158 °F	
Material	Body: chromated aluminium Nozzle: sapphire in nickel-plated brass plate Response sensitivity < 0.2% FS Repeatability < 0.1% FS Vibration sensitivity < 1% FS, for 10 g and 15...500 Hz Mounting position any Protection class IP 65 Elastomer: NBR/Buna-N Inner valve: stainless steel, brass, zinc-plated steel	

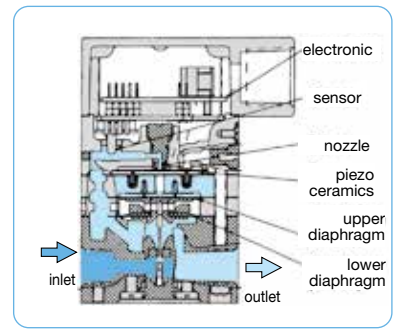


Dimensions			Flow rate	Supply pressure	Command signal	Pressure range	Order number
A	B	C	l/min*1	max. bar	V/mA	bar	
mm	mm	mm					E*

Proportional pressure regulator 0-10 V			¼" NPT, air consumption 2...8 l/min subject to pressure range		PT780		
57	95	13	250	8	0-10 V	0.2...1 0.2...2	PT780-B100 PT780-B200
57	133	13	300	10	0-10 V	0...2 0...4 0...8	PT780-0200 PT780-0400 PT780-0800



Proportional pressure regulator 4-20 mA			¼" NPT, air consumption 2...8 l/min subject to pressure range		PT782		
57	95	13	250	8	4-20 mA	0.2...1 0.2...2	PT782-B100 PT782-B200
57	133	13	300	10	4-20 mA	0...2 0...4 0...8	PT782-0200 PT782-0400 PT782-0800

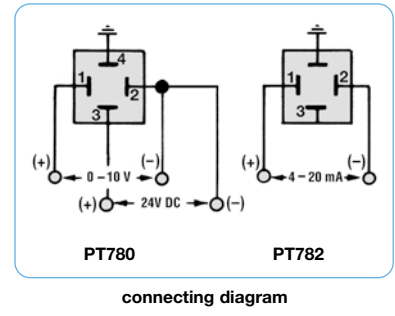
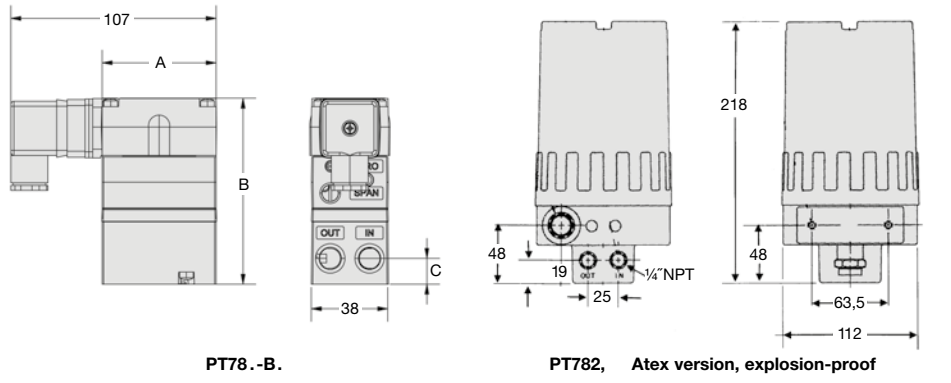
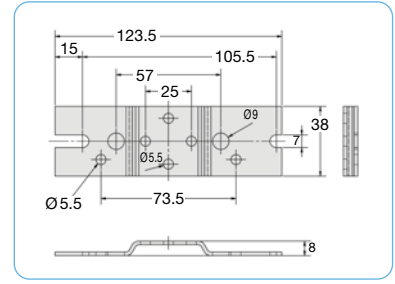


Special options, change the appropriate number

-i-Atex	Atex II 1G Ex ia IIB T4	4-20 mA only	PT782-...01
-d-Atex	Atex ds IIC T6	max. 2 bar	4-20 mA only PT782-...0E

Accessories, enclosed

mounting bracket	made of steel, for standard version	SA-PT1
	made of steel, for DIN rail	SA-PT2
mounting clip	made of steel, Atex version, explosion-proof	SA-PT3
isolate transmitter	Ex ia II C E/A: 0...20 mA, 24 V DC, EX 1-32	KFD2-CD



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

* Product group

Description

Piezo-operated proportional pressure regulator based on the principle of a piezo element which bends when voltage is applied. At the end of the piezo element is a flapper valve, which operates against a precision nozzle to create back pressure on the control diaphragm of a booster relay. A pressure transducer provides feedback of the outlet pressure compared with the setpoint value with correction by the electronic control system if necessary.

Minimal power consumption

- no self-heating, even none at pressure absence
- safe battery operation over a long period

Piezo element

- almost no power consumption necessary for regulation
- extremely quick regulating operations
- low-noise regulation especially for medical and laboratory technology

Small and light design

- particularly suitable for portable devices in conjunction with battery operation
- ideal for limited space conditions

PRE1

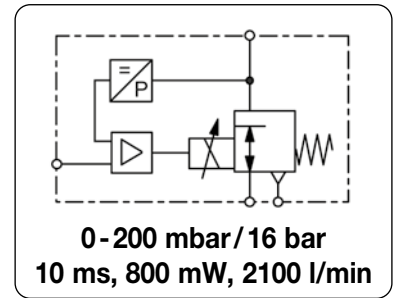
DN 2.5, 350 l/min, coupling socket M8x1, 3-pin,
monitor signal optionally 0... P_{2max} \triangleq 0...10 V,

monitor signal, 4-pin
max. 1 mA, $R_a > 1k\Omega$

PRE2

DN 6, 1600 l/min, coupling socket M12x1.5, 5-pin
monitor signal standard 0... P_{2max} \triangleq 0...10 V,

max. 1 mA, $R_a > 1k\Omega$



General features

Description	Piezo-operated 3-port/2-way proportional pressure regulator with internal pressure sensor and closed loop.		
Protection class	IP 30 for PRE1 according to DIN EN 60529	IP 65 for PRE2 according to DIN EN 60529 with coupling socket and tapped exhaust	
Mounting position	any		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F		
Material	Body: plastic, PRE1 IXEF1022	PRE2 Grivity GVX-65H	Elastomer: NBR/Buna-N Inner valve: brass and spring steel

Pneumatic features

Media	dry, unlubricated and 5 μ m filtered compressed air or non-corrosive gases		
Supply pressure	min. 1.5 bar (at $P_2 \leq 8$ bar) or 2 bar (at $P_2 \geq 8$ bar) and additional P_1 : min. 1 bar greater than P_2 max. 2.5 bar up to 17 bar, depending on pressure range according to chart		
Flow rate	PRE1: max. 350 l/min at $P_1 = 10$ bar, $P_2 = 6$ bar and open outlet	DN 2.5	
	PRE2: max. 1600 l/min at $P_1 = 10$ bar, $P_2 = 6$ bar and open outlet	DN 6	
Exhaust	PRE1: 180 l/min at $P_2 = 6$ bar, 20 l/min at $P_2 = 200$ mbar		
	PRE2: 1000 l/min at $P_2 = 6$ bar, 400 l/min at $P_2 = 2$ bar		
Air consumption	PRE1: < 1.0 l/min independent of pressure range PRE2: < 1.0 l/min independent of pressure range		

Electrical features

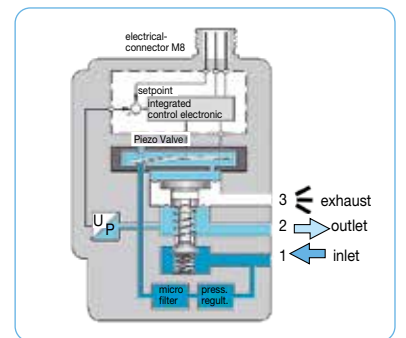
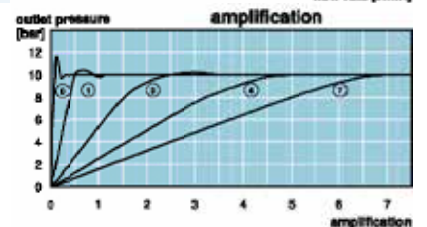
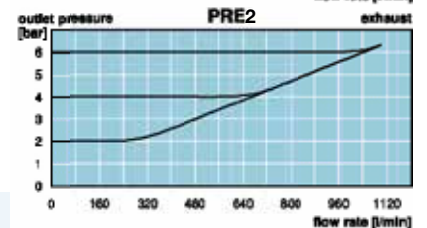
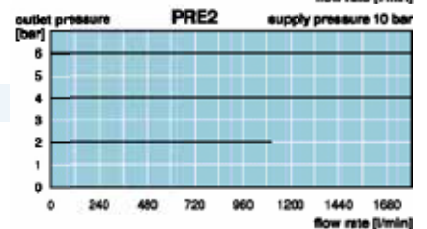
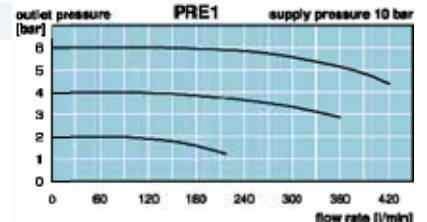
Supply voltage	PRE1: 24 V DC \pm 10%, 0.4 W, current consumption max. 15 mA	PRE2: 24 V DC \pm 10%, 0.8 W, current consumption max. 30 mA
Command signal	4...20 mA or 0...10 V	
Impedance	PRE1: $\geq 66 k\Omega$ at voltage signal, $\leq 500 \Omega$ at current signal	PRE2: $\geq 55 k\Omega$ at voltage signal, $\leq 500 \Omega$ at current signal
Electrical connector	PRE1: coupling socket M8x1, 3-pin	PRE1-R: coupling socket M8x1, 4-pin
	PRE2: coupling socket M12x1.5, 5-pin	
Monitor signal	PRE1-U.R: as option 0... P_{2max} / 0...10 V, max. 1 mA, $R_a > 1k\Omega$	PRE2: standard 0... P_{2max} / 0...10 V, max. 1 mA
Electronic switch	PRE2 only, PNP, "on" when setpoint and actual value match in the tolerance range 0 V DC = off, U_N -0,7 V DC = on, output current < 200 mA, tolerance P_2 : \pm 2%	
Failsafe	If signal or electrical supply fails, outlet pressure falls to zero and the regulator exhausts.	
Note	For long connection lines shielding is to be used. Pay attention to voltage drops. As the case may be, current signal is preferable.	

Accuracy

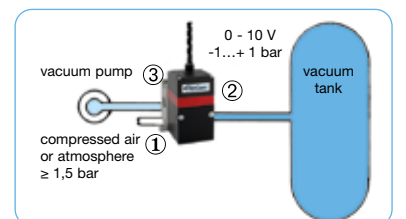
Linearity	< 0.5% FS, at 0.2 bar range	< 1 % FS
Hysteresis	< 0.2% FS, at 0.2 bar range	< 0.5% FS
Response sensitivity	< 0.1% FS, at 0.2 bar range	< 0.5% FS at PRE1 < 0.2% FS at PRE2
Repeatability	< 0.2% FS, at 0.2 bar range	< 0.5% FS
Response time	10 ms	
Over all accuracy	\pm 0.2% FS (Monitor signal \pm 1,5 % FS)	

Adjustment

Zero point	calibration only by factory
Range	calibration only by factory



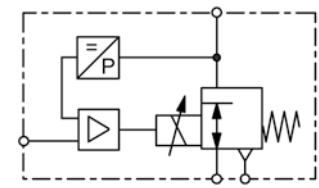
cross-section PRE1



PRE2-V1 for vacuum

Technical features

- Highly dynamic** 10 ms, critical frequency 43 Hz
- Low power consumption** 400 mW / 800 mW nominal power
- No self-heating** due to low power consumption
- Battery operation** due to low power consumption
- For portable devices** up to 3 bar pressure range
- No over-oscillation** adjustable closed loop amplification
- No resonance oscillation** adjustable closed loop amplification
- Linearity** < 0.5% or 1% FS
- Hysteresis** < 0.2% or 0.5% FS
- Response sensitivity** < 0.1% or 0.5% FS
- Repeatability** < 0.2% or 0.5% FS
- Failsafe** exhaust at power breakdown
- Protection class** IP 30 or IP 65
- Two-wire system** for signal 4...20 mA



0 ... 200 mbar / 16 bar
10 ms, 800 mW, 2400 l/min

Dimensions			Supply pressure	Flow rate	Connection thread	Pressure range	Order number for inlet signal	
A	B	C	max. bar	l/min*1	G	bar	4-20 mA	0-10 V
mm	mm	mm						

Proportional press. regl.							supply voltage 24 V DC, constant bleed, with straight coupling socket and 5 m cable		PRE	PRE
36	61	53	2.5	100	G ¹ / ₈	0...0.2	PRE1-IA2	PRE1-UA2		
			6.0	200		0... 2	PRE1-I02	PRE1-U02		
			10	250		0... 5	PRE1-I05	PRE1-U05		
			280	0... 6		PRE1-I06	PRE1-U06			
			350	0... 8		PRE1-I08	PRE1-U08			
46	84	68	2.5	800	G ¹ / ₄	-1... 1	PRE2-IV1	PRE2-UV1		
			10	1500		-1... 4	PRE2-I04V1	PRE2-U04V1		
			1500	-1... 6		PRE2-I06V1	PRE2-U06V1			
			1700	-1... 10		PRE2-I10V1	PRE2-U10V1			
			2.5	500		0... 0.5	PRE2-IA5	PRE2-UA5		
			900	0... 1		PRE2-I01	PRE2-U01			
			1100	0... 2		PRE2-I02	PRE2-U02			
			1100	0... 3		PRE2-I03	PRE2-U03			
			10	1500		0... 4	PRE2-I04	PRE2-U04		
			1500	0... 5		PRE2-I05	PRE2-U05			
			1500	0... 6		PRE2-I06	PRE2-U06			
			12	1700		0... 10	PRE2-I10	PRE2-U10		
			17	2400		0... 16	PRE2-I16	PRE2-U16		



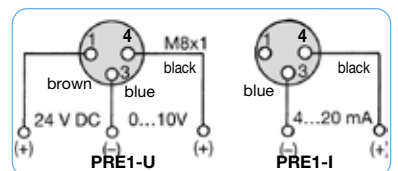
PRE1



PRE2

Special options, add the appropriate letter

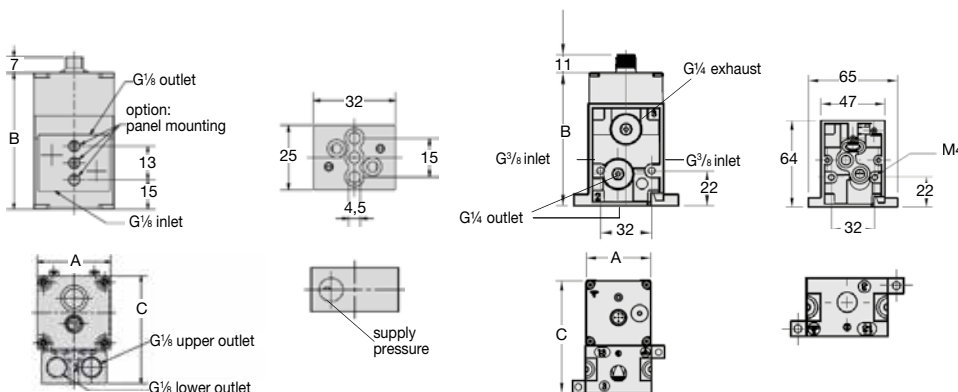
- monitor signal** 0-10 V, standard at PRE2 for PRE1-U PRE1-...R
- flange connection** without manifold PRE-...F
- w/o coupling socket** and without cable PRE-...H
- mounting clips** for DIN rail PRE-...C
- deviant pressure ranges** PRE-...XX
- for oxygen*2** specially cleaned PRE-...15



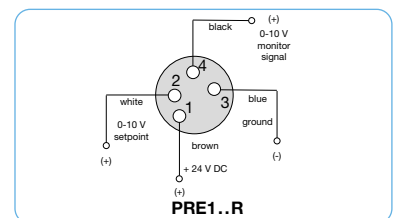
connection diagram

Accessories, enclosed

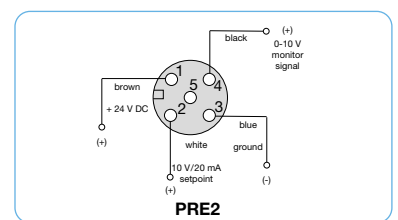
- coupling socket** with 5 m cable, angular
 - M8x1, 3-pin for PRE1 **KM08-C3-5**
 - M8x1, 4-pin for PRE1-R **KM08-C4-5**
 - M12x1.5, 5-pin for PRE2 **KM12-C5-5**



*1 at open outlet
 *2 by PRE1 no tapped exhaust on the manifold



connection diagram



connection diagram

* Product group

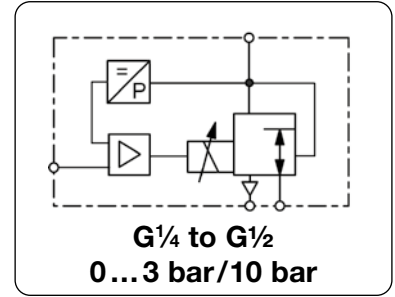
Technical details: see previous page

PDF CAD
 www.aircom.net



Order example:
PRE1-IA1

Description	The pneumatic proportional pressure regulator controls the outlet pressure in a complete closed loop servo system in proportion to an digital IO-Link command signal. By using the IO-Link Master the valve can be adapted to special applications and optimize the the response time, the overshoot and the precision of the valve. The valve has no constant bleed. At absence of input signal or supply voltage the pressure of the valve stands.		
Media	dry, lubricated, unlubricated and 50 µm filtered compr. air or non-corrosive gases		
Command signal	Digital command signal in 1mbar steps (0-10000 = 0-10 bar)	Control	IO-Link (Class A)
Hysteresis	1,5% FS	Supply voltage	24 VDC
Linearity	1,5% FS	Electrical connector	M12, 5-pin
Repeatability	1,5% FS	Protection class	IP65
Minimum Command signal	0,5% FS	Current consumption	180 mA
Minimum Outlet Pressure	1,0% FS	Power consumption	3,8 W (< 1W if regulated)
Temperature range	0-60 °C Media and Ambient		
Material	Body: aluminium	Inner valve: POM (Polyacetal)	Elastomer: NBR
Mounting position	any, preferably perpendicular		



Dimensions			K _v - value	Flow rate	Supply pressure	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm	(m ³ /h)	(m ³ /h)	l/min	bar ⁻¹	G	bar

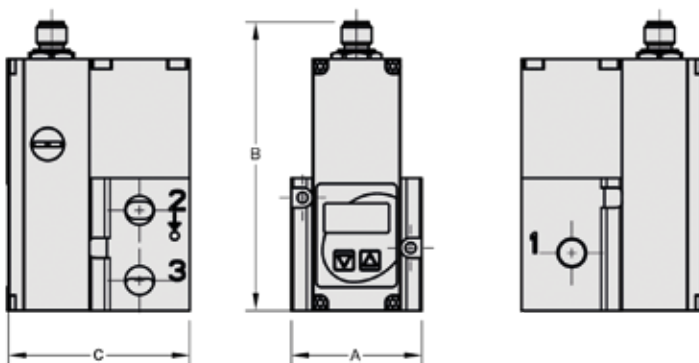
Proportional pressure regulator						Supply 24 V DC via IO-Link master without coupling socket		PIO	
52	115	73	0.43	28,2	470	4	G ¹ / ₄	0 ... 3	PIO2-03
						7	G ¹ / ₄	0 ... 6	PIO2-06
						11	G ¹ / ₄	0 ... 10	PIO2-10
66	129	89	1.2	78	1300	4	G ³ / ₈	0 ... 3	PIO3-03
						7	G ³ / ₈	0 ... 6	PIO3-06
						11	G ³ / ₈	0 ... 10	PIO3-10
66	144	102	4.8	312	5200	4	G ¹ / ₂	0 ... 3	PIO4-03
						7	G ¹ / ₂	0 ... 6	PIO4-06
						11	G ¹ / ₂	0 ... 10	PIO4-10



PIO

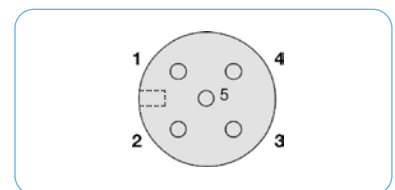
Special options, add the appropriate letter or number

Display	PIO-... B
for oxygen	PIO-... 15



- 1: inlet
- 2: outlet
- 3: exhaust

PIO



view from solder pin side

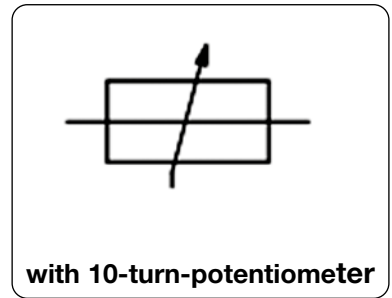
Pin	Description
1	24V supply voltage
2	not occupied
3	supply ground
4	C/Q
5	not occupied
Housing	EMC shield

connection plan

*1 To use the valve, you need the IODD
P1 = at least 1 bar higher than the maximum outlet pressure

* Product group

Description	The series line of potentiometers are designed for use as a command signal for control pressure regulators.		
	A 10 volt reference is used to provide excitation to the potentiometer. An op-amp measures the output on the wiper of the potentiometer and provides buffering to eliminate external components from affecting the linearity of the potentiometer.		
	A three wire cord is provided and is attached to the pc board to make necessary power signal and common connections		
Field of application	0-10 V version PPB-U is compatible with all proportional pressure regulators. 4-20 mA version PPB-I is compatible with all pressure regulators of Series PQ and PM. For all other pressure regulators, e.g Series PP, PR, PRE, a setpoint of 4.1 ... 18.5 mA is generated.		
Measuring range	0 ... 999	Supply voltage	15 - 24 V DC
Current consumption	max. 30 mA	Linearity/Hysteresis	± 0.25% FS
Mounting position	any	Temperature range	0 °C to 70 °C / 32 °F to 158 °F



Dimensions			Output signal V / mA	Order number
F	H	G		
mm	mm	mm		

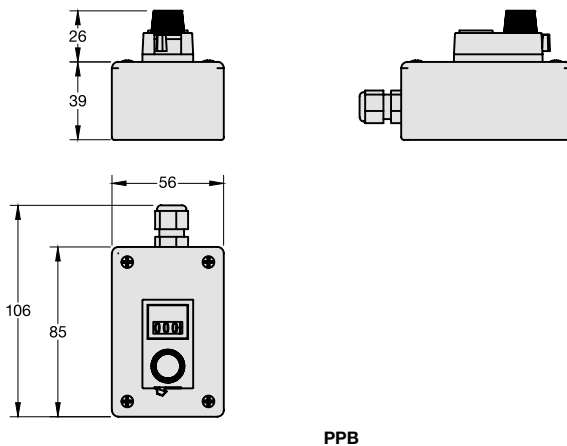
Setpoint Potentiometer			supply voltage 15 - 24 V DC	PPB
85	55	40	0-10 V	PPB-U
85	55	40	4-20 mA	PPB-I



PPB-U



PPB-I



Pin	Description	3-pin cable
1	voltage supply 24V DC	black
2	analogue setpoint	white
3	supply earth	green

connecting plan

* Product group



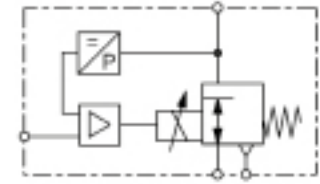
VOLUME BOOSTER-PROPORTIONAL PRESS. REGL.-COMBINATIONS

What are volume booster / proportional pressure regulator combinations used for?

Combinations of volume boosters and proportional pressure regulator lend themselves for electronically regulating high volume flows. On the one hand common proportional pressure regulator are not available with connection sizes big enough, on the other hand combinations are in most cases more economic. There are two ways of regulating: Single loop systems are suitable for standard applications without high requirements for accuracy and without consideration of pressure drop at high flow. Double loop regulations on the contrary are much more accurate and also qualified for dynamic processes.

General operational description:

The volume booster and proportional pressure regulator are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional pressure regulator and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.



**G $\frac{1}{4}$ up to G3
compressed air or liquids**

Single loop

At single loop combinations the pressure difference between command signal and outlet pressure is being ignored because the proportional pressure regulator only refers to its own outlet pressure within the pilot chamber. The outlet pressure performance is dependent of the volume booster's accuracy.

Double loop

Combinations with a second feedback have the possibility to balance pressure differences. For this a pressure transducer is installed in the outlet line of the booster. The electrical signal of the transducer is applied as a feedback signal onto the proportional pressure regulator. The proportional pressure regulator detects any pressure differences and compensates them automatically. In high flow applications a pressure drop at the outlet of the pilot regulator is thus minimised.

General features

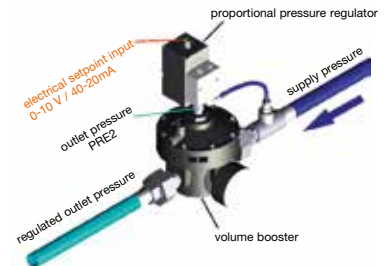
Construction type	The volume booster / proportional pressure regulator combinations are delivered completely assembled and calibrated.
Mounting position	preferred horizontal (see figure)
Protection class	IP 54 with ordinary coupling socket as standard, optionally IP 65 for some devices (see according product information sheets)
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for all proportional pressure regulator, for booster ranges refer to according product sheets

Pneumatic features

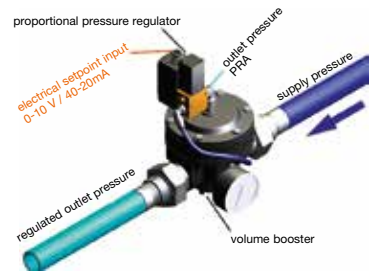
Command signal	The proportional pressure regulator may only be fed with dry and 5 µm filtered compressed air. The pneumatic command signal must always be air!
Media	Preferred dry, 5 µm filtered compressed air for supply of the proportional pressure regulator. The volume boosters can operate with air or non-corrosive gases, model R120 even with liquids. The respective air consumption and the relieving function strongly have to be regarded.
Inlet pressure	dependent of the according combination (see according product information sheets)
Pressure supply	The proportional pressure regulator has to be separately supplied with compressed air with regard to the valve's maximum inlet pressure.
Exhaust	The proportional pressure regulator exhausts only the booster's pilot chamber. The booster, if in relieving version, exhausts the volume of the supply pressure line. The relief capacity is subject to the differential pressure.
Volume flow	see specifications of the according volume booster

Electrical features

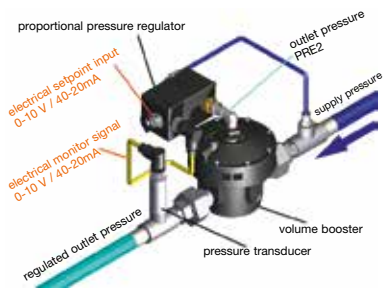
Supply voltage	All valves have to be supplied with 24 V DC.
Power consumption	see according product information sheets
Setpoint input	0-10 V as standard, optionally 4-20 mA for all valves
Monitor signal	A feedback signal is not reasonable for the single loop version because here only the pressure of the booster's pilot chamber is monitored. That value does not give any information about the outlet pressure behind the booster.



PRE2, R450 with single loop



PRA, R119 with single loop

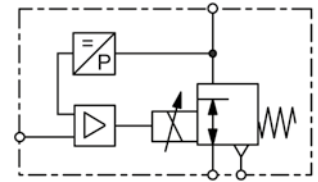


PQ2, R450 with double loop

General operational description:

The volume booster and proportional pressure regulator are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional pressure regulator and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.

At single loop combinations the pressure difference between command signal and outlet pressure is being ignored because the proportional pressure regulator only refers to its own outlet pressure within the pilot chamber. The outlet pressure performance is dependent of the volume booster's accuracy.



**G¹/₄ up to G3
compressed air or liquids**

Single loop combination examples

Flow rate l/min	Connection thread G	Outlet pressure bar	Part number Booster	Part number Prop.press.reg.	Order number of combination	E*
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R750 with PRE1, for compressed air or non-corrosive gases setpoint 0-10 V, P₁ max. 17 bar

1000	G ¹ / ₄	0... 8	R750-02I	PRE1-U08	BP1U750-02	
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R450 with PRE1, for compressed air or non-corrosive gases setpoint 0-10 V, P₁ max. 17 bar

4000	G ¹ / ₂	0... 8	R450-04I	PRE1-U08	BP1U450-04	
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R119 with PPA, for compressed air or non-corrosive gases setpoint 0-10 V, P₁ max. 21 bar

5600	G ¹ / ₂	0... 10	R119-04J	PPA00-1000	BP1U119-04	
9000	G ³ / ₄	0... 10	R119-06J	PPA00-1000	BP1U119-06	
10000	G1	0... 10	R119-08J	PPA00-1000	BP1U119-08	
12000	G1 ¹ / ₂	0... 10	R119-12J	PPA00-1000	BP1U119-12	
42000	G2	0... 10	R119-16J	PPA00-1000	BP1U119-16	
44000	G2 ¹ / ₂	0... 10	R119-20J	PPA00-1000	BP1U119-20	
110000	G3	0... 10	R119-24J	PPA00-1000	BP1U119-24	

RGB4 with PRE1-A2, for compressed air or gases setpoint 0-10 V, P₁ max. 4 bar

700	G ¹ / ₂	0...0,2	RGB4-04J	PRE1-UA2	BP1UGB4-04	
2800	G1	0...0,2	RGB4-08J	PRE1-UA2	BP1UGB4-08	
5600	G1 ¹ / ₂	0...0,2	RGB4-12J	PRE1-UA2	BP1UGB4-12	

RZ1 with PRE1-.01/02, for compressed air or gases setpoint 0-10 V, P₁ max. 16 bar

2900	G1	0... 1	RZ3-08J	PRE1-U02	BP1UZ-08	
5700	G1 ¹ / ₂	0... 1	RZ3-12J	PRE1-U02	BP1UZ-12	
21000	G2	0... 1	RZ2-16J	PRE1-U02	BP1UZ-16	

R120 with PPA, for compressed air, gases or liquids setpoint 0-10 V, P₁ max. 50 bar

1200	G ¹ / ₂	0... 15	R120-04J2	PPA00-1600	BP1U120-04	
4200	G ³ / ₄	0... 15	R120-06J2	PPA00-1600	BP1U120-06	
5000	G1	0... 15	R120-08J2	PPA00-1600	BP1U120-08	
1200	G ¹ / ₂	0... 50	R120-04J5	PP000-5000	BP1U120-04J5	
4200	G ³ / ₄	0... 50	R120-06J5	PP000-5000	BP1U120-06J5	
5000	G1	0... 50	R120-08J5	PP000-5000	BP1U120-08J5	
14000	G1 ¹ / ₂	0... 50	R120-12J5	PP000-5000	BP1U120-12J5	
15000	G2	0... 50	R120-16J5	PP000-5000	BP1U120-16J5	

Special options, add the appropriate letter

4-20 mA	input signal	BP1I...-....
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BP1U750-02



BP1U119-16



BP1UZ-08



BP1U120-08J5

* Product group

Gauges: see chapter for measuring devices
Further details: see chapter for single devices

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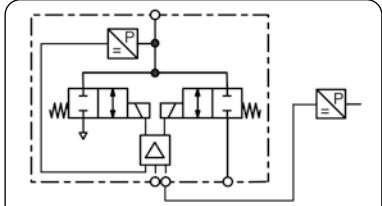


Order example:
BP1U750-02

General operational description:

The volume booster and proportional pressure regulator are fed by the supply pressure. When no command signal is applied the outlet pressure behind the booster is zero. When the command signal is increased the outlet pressure rises in proportion to it. Since the transmission ratio is not exactly 1:1, a slight pressure difference occurs between the outlet pressure of the proportional pressure regulator and the booster's outlet on single loop systems. This can be balanced by a feedback signal (double loop), though.

Combinations with a second feedback have the possibility to balance pressure differences. For this a pressure transducer is installed in the outlet line of the booster. The electrical signal of the transducer is applied as a feedback signal onto the proportional pressure regulator. The pressure regulator detects any pressure differences and compensates them automatically. In high flow applications a pressure drop at the outlet of the pilot regulator is thus minimised.



G $\frac{1}{2}$ up to G2
compressed air or non-corrosive gases

Double loop combination example

Flow rate l/min	Connection thread G	Outlet pressure bar	Sensor	Part number		Order number of combination	E*
				Booster	Prop.press.reg.		

R450 with PQ2, for compressed air or non-corrosive gases							setpoint 0-10 V, P ₁ max. 17 bar
4 000	G $\frac{1}{2}$	0... 1	DAV-01H	R450-04I	PQ2EE-01	BP2U450-0401	
		0... 6	DAV-06H	R450-04I	PQ2EE-06	BP2U450-0406	
		0...10	DAV-10H	R450-04I	PQ2EE-10	BP2U450-0410	



BP2U450-0406

R200 with PQ2, for compressed air or non-corrosive gases							setpoint 0-10 V, P ₁ max. 17 bar
28 000	G1	0... 1	DAV-01H	R200-08I	PQ2EE-01	BP2U200-0801	
		0... 6	DAV-06H	R200-08I	PQ2EE-06	BP2U200-0806	
		0...10	DAV-10H	R200-08I	PQ2EE-10	BP2U200-0810	



BP2U200-0806

RGB4 with PQ2, for compressed air or gases							setpoint 0-10 V, P ₁ max. 4 bar
700	G $\frac{1}{2}$	0...0.35	DAV-C4H	RGB4-04J	PQ2EE-C4	BP2UGB4-04	
2 800	G1	0...0.35	DAV-C4H	RGB4-08J	PQ2EE-C4	BP2UGB4-08	
5 600	G $\frac{1}{2}$	0...0.35	DAV-C4H	RGB4-12J	PQ2EE-C4	BP2UGB4-12	



BP2UGB4-12

RZ1 with PQ2, for compressed air or gases							setpoint 0-10 V, P ₁ max. 16 bar
2 900	G1	0...1	DAV-01H	RZ3-08J	PQ2EE-01	BP2UZ-08	
5 700	G $\frac{1}{2}$	0...1	DAV-01H	RZ3-12J	PQ2EE-01	BP2UZ-12	
21 000	G2	0...1	DAV-01H	RZ2-16J	PQ2EE-01	BP2UZ-16	



BP2UZ-08

Special options, add the appropriate letter

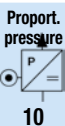
4-20 mA input signal BP2I ...-....

* Product group

Gauges: see chapter for measuring devices
Further details: see chapter for single devices

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Order example:
BP2U450-0401



PROPORTIONAL FLOW VALVES AND MEASUREMENT DEVICE



DESCRIPTION	DN / Ø	FLOW RATE		CONNECTION thread	DEVICE	PAGE
			l/min			
MEASURING DEVICE portable		0.02 ... 0.1/	450	G¼ and G½	VGM	11.02
portable, hand-operated		0.02 ... 0.1/	450	G¼ and G½	VGR	11.03
for many gases		0.05 ... 0.1/	6000	G¼ - G1	PVM	11.06
with proportional regulator		0.05 ... 0.1/	2000	G¼ - G½	PVR	11.07
differential pressure principle		0.03 ... 0.3/	7000	G¼ - G¾	VPF	www*
PROP. FLOW VALVES w/o power consumption	0.2 /.../ 1.5	0 ...	3 / 24	M5	PVK	11.08
for air and water	0.1 /.../ 20	0	0.3 / 1185	G½ - G1	PV21...PV40	11.10
extremely small, 7 mW	0.3 / 0.4	0 ...	6 / 7	flange	PV630, PV631	www*
pulse-width-modulated, mini	0.2 /.../ 0.8	0 ...	1 / 20	flange	PV202	11.12
pulse-width-modulated	1.2 /.../ 7.1	0 ...	70 / 420	G½ - G¾	PV202	11.13
stainless steel	1.2 / 7.1	0 ...	70 / 420	G½ - G¾	PV202-S	11.13
for water	12.5	0 ...	35 / 37	G¾ u. G½	PV203	11.13
motorised, for liquids	15 / 20	0 ...	1000 / 3500	G½ - G1	P8	11.14
flow valve, Y-type	15 /.../ 65	0 ...	14 / 1233	G½ - G2½	PVE	11.15
NEEDLE VALVES compact	Ø 1.0 - 6.5	0	0.3 / 425	G¼ and G½	VR6	11.04
PINCH VALVES POM or Aluminium				G¾ - G3, DN150 Q		11.16



11

* visit our webshop: www.aircom.net

PORTABLE MASS FLOW METER, W/O MANUAL CONTROL VALVE

VGM

Prop.-V.



11

Description	Thermal mass flow meter based on high precision MEMS technology (CMOS sensor). Pressure and temperature-insensitive according to the CTA constant temperature principle. Also insensitive to pressure surges.		
Media	compressed air or non-corrosive gases	Operating pressure	max. 10 bar
Supply voltage	Standard AA battery or Micro-USB power supply (DIN62684), optionally external power +12 ...+30 V DC (max. 200 mA)		
Display	Touch-display 128 x 64 px, backlighted only with external power supply (Micro-USB or 24 V DC)		
Electrical connector	optionally length 2.0 m, with free ends at 24 V DC	Function	totalisator included, physical units can be changed
Alarm functions	3 configurable alarms, programmable as : low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: delay and alarm duration. Relais: switching current up to 1A, switching voltage 30 V DC		
Accuracy	± 2% FS, from 200 l/min ± 3% FS	Response time	500 ms at 99% accuracy
Turndown ratio	1:50 (Eco) or 1:1000 (Special)	Protection class	IP 50
Flow regulation	manual fine adjustment by 15 turns	Mounting position	any, horizontal from 5 bar on
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	Warm-up time	< 1 sec. for full accuracy
Material	Body: aluminium, optionally electropolished stainless steel 316 Elastomer: FKM, optionally EPDM		

**2... 100 ml/min/450 l/min
compressed air or gases
accurate to 2%**

Dimensions			Operating pressure	Accuracy	Connection thread	Flow rate	Order number
A	B	C					
mm	mm	mm	max. bar	%	G	ml/min / l/min	

Mass flow meter							w/o manual control valve, LCD-Display, battery mode, portable, aluminium, FKM	VGM*1
114	44	12.5	10	2	G¼	2 ... 100 ml/min	VGM-A1	
						4 ... 200 ml/min	VGM-A2	
						10 ... 500 ml/min	VGM-A5	
						0.02 ... 1 l/min	VGM-B1	
						0.04 ... 2 l/min	VGM-B2	
						0.1 ... 5 l/min	VGM-B5	
160	54	17.5	10	2	G½	2 ... 100 l/min	VGM-C1	
						4 ... 200 l/min	VGM-C2	
						4 ... 300 l/min	VGM-D1	
						9 ... 450 l/min	VGM-D2	
							VGM-D3	
							VGM-D4	



VGM-G¼ mass flow meter

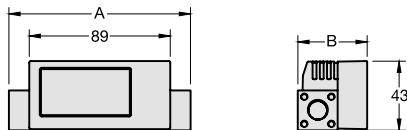


VGM-G½ mass flow meter

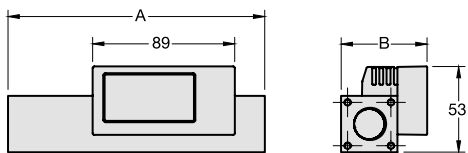
Special options, add the appropriate letter oder number

deviant volume flow	indicate on order	VGM-XX
limit switch	min. / max.-alarm, 1 A SPDT switch, incl. 24 V DC supply	VGM- . . G2
stainless steel body	electropolished throughout	VGM- . . S
EPDM elastomer	for VGM-A1 to -C5	VGM- . . E
24 V DC supply	cable attached on the device, length 2 m, with free ends	VGM- . . 2
panel mounting	cut-out 48 x 96 mm, protection class IP50 in the front	VGM- . . T
1% accuracy	for G¼	VGM- . . H
carbon dioxide	CO ₂	VGM- . . 03
argon	Ar	VGM- . . 05
nitrogen	N ₂	VGM- . . 07
helium	He	VGM- . . 09
hydrogen	H ₂	VGM- . . 11
methane	CH ₄	VGM- . . 13
oxygen	O ₂	VGM- . . 15
propane	C ₃ H ₈	VGM- . . 16
nitrous oxide	N ₂ O	VGM- . . 17
gases	see above for G½	VGM- D . . .

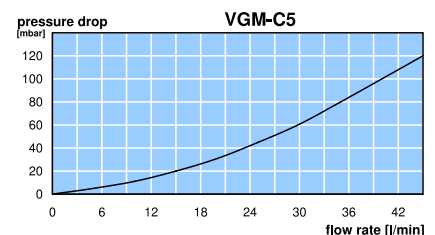
Specific gas calibration			
gas species			max. l/min
nitrogen	07	N ₂	450
oxygen	15	O ₂	450
argon	05	Ar	300
helium	09	He	450
hydrogen	11	H ₂	300
carbon dioxide	03	CO ₂	150
propane	16	C ₃ H ₈	80
methane	13	CH ₄	100



VGM-A/-B/-C



VGM-D



* Product group

Calibration or test chart: see chapter for technical informations
*1 Note: indicate media, supply and outlet pressure on order

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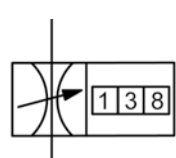


Order example:
VGM-A1

PORTABLE MASS FLOW METER, WITH AND WITHOUT MANUAL CONTROL VALVE

VGR

Description	Thermal mass flow meter based on high precision MEMS technology (CMOS sensor). Pressure and temperature-insensitive according to the CTA constant temperature principle. Also insensitive to pressure surges.		
Media	compressed air or non-corrosive gases	Operating pressure	max. 10 bar
Supply voltage	Standard AA battery or Micro-USB power supply (DIN62684), optionally external power +12 ...+30 V DC (max. 200 mA)		
Display	Touch-display 128 x 64 px, backlit only with external power supply (Micro-USB or 24 V DC)		
Electrical connector	optionally length 2.0 m, with free ends at 24 V DC	Function	totalisator included, physical units can be changed
Alarm functions	3 configurable alarms, programmable as : low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: delay and alarm duration. Relais: switching current up to 1A, switching voltage 30 V DC		
Accuracy	± 2% FS, from 200 l/min ± 3% FS	Response time	500 ms at 99% accuracy
Turndown ratio	1:50 (Eco) or 1:1000 (Special)	Protection class	IP 50
Flow regulation	manual fine adjustment by 15 turns	Mounting position	any, horizontal from 5 bar on
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	Warm-up time	< 1 sec. for full accuracy
Material	Body: aluminium, optionally electropolished stainless steel 316 Elastomer: FKM, optionally EPDM		



**2 ... 100 ml/min/450 l/min
compressed air or gases
accurate to 2%**

Prop.-V.
11

Dimensions			Operating pressure	Accuracy	Connection thread	Flow rate	Order number
A	B	C					
mm	mm	mm	max. bar	%	G	ml/min / l/min	

Mass flow meter			with manual control valve, LCD-Display, needle valve battery mode, portable, aluminium, FKM			VGR*1	
114	44	12.5	10	2	G $\frac{1}{4}$	2 ... 100 ml/min	VGR-A1
				2		4 ... 200 ml/min	VGR-A2
				2		10 ... 500 ml/min	VGR-A5
				2		0.02 ... 1 l/min	VGR-B1
				2		0.04 ... 2 l/min	VGR-B2
				2		0.1 ... 5 l/min	VGR-B5
160	54	17.5	10	2	G $\frac{1}{2}$	2 ... 100 l/min	VGR-C1
				2		4 ... 200 l/min	VGR-C2
				2		0.4 ... 20 l/min	VGR-C5
				3		1 ... 50 l/min	VGR-D1
				3		2 ... 100 l/min	VGR-D2
				3		4 ... 300 l/min	VGR-D3
			3		9 ... 450 l/min	VGR-D4	



VGR-G $\frac{1}{4}$
mass flow meter
with manual control valve

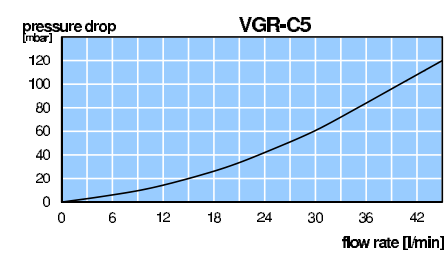
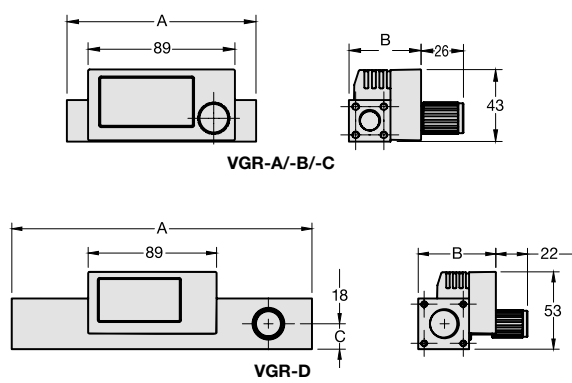


VGR-G $\frac{1}{2}$
mass flow meter

Special options, add the appropriate letter oder number

deviant volume flow	indicate on order	VGR-XX
limit switch	min. / max.-alarm, 1 A SPDT switch, incl. 24 V DC supply	VGR-..G2
stainless steel body	electropolished throughout	VGR-..S
EPDM elastomer	for VGR-A1 to -C5	VGR-..E
24 V DC supply	cable attached on the device, length 2 m, with free ends	VGR-..2
panel mounting	cut-out 48 x 96 mm, protection class IP50 in the front	VGR-..T
1% accuracy	for G $\frac{1}{4}$	VGR-..H
carbon dioxide	CO ₂	VGR-..03
argon	Ar	VGR-..05
nitrogen	N ₂	VGR-..07
helium	He	VGR-..09
hydrogen	H ₂	VGR-..11
methane	CH ₄	VGR-..13
oxygen	O ₂	VGR-..15
propane	C ₃ H ₈	VGR-..16
nitrous oxide	N ₂ O	VGR-..17
gases	see above	VGR- D ...

Specific gas calibration			
gas species			max. l/min
nitrogen	07	N ₂	450
oxygen	15	O ₂	450
argon	05	Ar	300
helium	09	He	450
hydrogen	11	H ₂	300
carbon dioxide	03	CO ₂	150
propane	16	C ₃ H ₈	80
methane	13	CH ₄	100

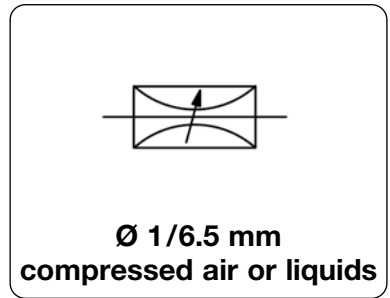


Calibration or test chart: see chapter for technical informations
*1 Note: indicate media, supply and outlet pressure on order

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* Product group
Order example:
VGR-A1

Description	The modular, compact micro needle valve is for fine-flow adjustment of gases and liquids. It consists of an inner valve and body with straight or angle connector. The valve is free from oil and grease.	
Media	5 µm filtered compressed air, non-corrosive gases or liquids	
Operating pressure	vacuum up to positive pressure of max. 40 bar	
Adjustment	The micro valve has a 15-turn spindle to fully open from a closed condition. It operates with virtually no hysteresis and closes clockwise or optionally counterclockwise. The valve needle is non-rotating and thus provides a stable adjustment.	
Panel mounting	borehole 15 mm,	mounting through two screws M4x10
Temperature range	-40 °C to 100 °C / -40 °F to 212 °F	
Material	Body: anodized aluminium, optionally stainless steel Inner valve: nickel-plated brass, optionally stainless steel	Elastomer: FKM, optionally EPDM Knob: plastic



Dimensions			Needle size mm	K _v -value (m ³ /h)	Flow rate		Connection thread G	Order number
A	B	C			water l/min*2	air l/min*1		

Precision needle valve									with straight pass, right-hand closing, with knob, aluminium/brass/FKM, supply: max. 40 bar	VR
54	64	10	1.0	0.0007	0 ... 0.01	0 ... 0.3	G¼		VR6-02A	
			1.5	0.005	0 ... 0.10	0 ... 2.5			VR6-02B	
			2.0	0.01	0 ... 0.15	0 ... 7.0			VR6-02C	
			2.5	0.04	0 ... 0.60	0 ... 17			VR6-02D	
			3.0	0.10	0 ... 2.30	0 ... 60			VR6-02E	
62	80	17.5	4.0	0.58	0 ... 8.00	0 ... 250	G½		VR6-04A	
			6.5	1.00	0 ... 16	0 ... 425			VR6-04B	



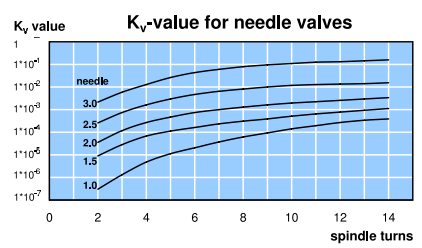
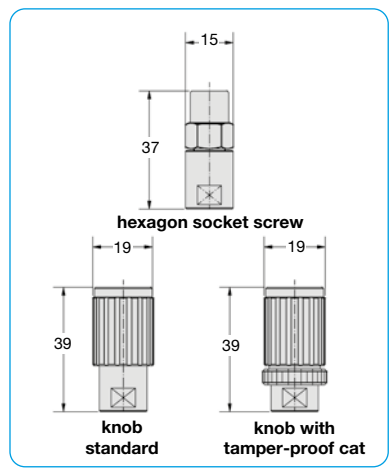
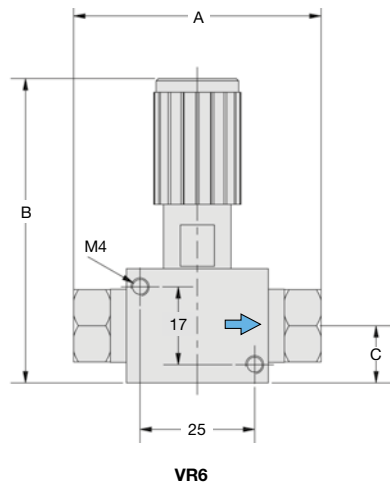
VR6-02



VR6-04

Special options, add the appropriate letter

stainless steel body	body and valve made of stainless steel 316	for G¼	VR6-02.S
EPDM elastomer	-40 °C to 90 °C / -40 °F to 194 °F, SST body only	for G¼	VR6-02.SE
FFKM elastomer	SST body only	for G¼	VR6-02.SX29
amper-proof cap	on valve with knob, standard		VR6-02.T
hexagon socket screw	and locknut		VR6-02.I



*1 at 1 bar operating pressure and open outlet
*2 at 1 bar pressure difference

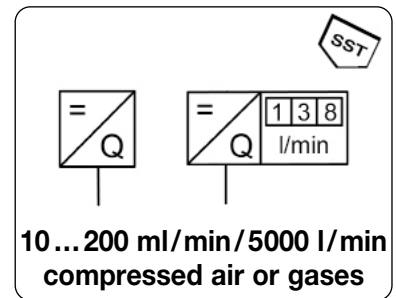
* Product group

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**Order example:
VR6-02A**

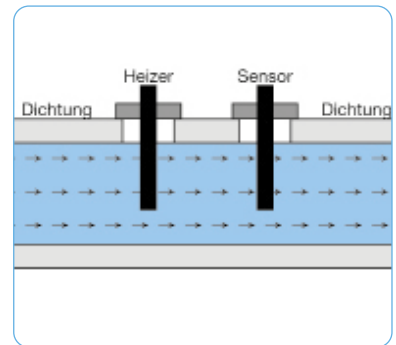
Technical features

- Benefits:**
- suitable for nearly all gases and gas mixtures
 - compact robust design with protection class IP65
 - no moving parts
 - short response time
 - low sensitivity to dirt and humidity
 - optionally available with multifunctional TFT display



General technical features

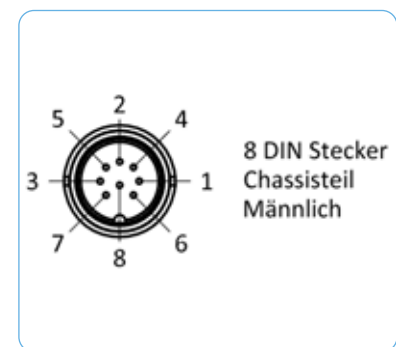
Mounting position	horizontal
Protection class	IP65 (with and without display)
Temperature range	0 °C to 50 °C / 32 °F to 122 °F
Material	Body: aluminium, optionally stainless steel 316L Elastomer: Viton®, optionally EPDM or Kalrez® Sensor: stainless steel 316L strainer: stainless steel Flow straightener: stainless steel



functional principle

Pneumatic features

Media	compressed air as well as virtually all gases and mixtures of gases*1
Operating pressure	max. 10 bar device body made of aluminium max. 20 bar device body made of stainless steel
Differential pressure	device-dependent
Mass flow rate	up to 10.000 l/min on request



PVM and PVR connection plan

Electrical features

Supply voltage	+15 ... 24 vDC ±10%
Current consumption	PVM: approx. 75 mA at 0 % flow, approx. 125 mA at 100 % flow PVR: approx. 325 mA at 0 % flow, approx. 375 mA at 100 % flow add 30 mA for display, if applicable
Signal ranges	0...10 V DC / 0...5 V DC, wahlweise 0...20 mA / 4...20 mA
Impedance	> 10 kΩ at voltage signal, < 375 Ω at current signal
Connection	round connector 8-pin DIN (male)- and RS232 output
EMC	according to CE

model gas	PVM/PVR34 - PVM/ PVR38	PVM/PVR 31 & PVM/ PVR32
air/nitrogen	1.00	1.00
argon	2.02	1.50
CO ₂	1.13	0.86
helium	on request	on request
hydrogen	on request	on request
NH ₃	0.74	0.82
N ₂ O	1.08	0.83
C ₂ H ₂	0.68	0.66
C ₃ H ₆	0.62	0.58
C ₃ H ₈	0.51	0.43
CH ₄	0.61	0.77
CO	1.04	1.01
C ₂ H ₄	0.75	0.7
NO	1.01	1.00
HCL	1.53	1.12

conversion factors for max. flow rate for other gases

Accuracy

Linearity / Hysteresis	1% v.M. zzgl 0,5% v.E.
Repeatability	< ± 0.2 % v.E.
Pressure sensitivity	> ± 0.3% FS/bar typ. (air)
Temperature sensitivity	± 0.2 % / °C v.l. (air)
Mounting sensitivity	< 0.2 % at 90° deviation from horizontal at 1 bar typical (air)
Operating time	0.9 s bei 63% of the range
Tightness	< 2 x 10 ⁻⁸ mbar l/s He

Description	Mass flow meter directly measuring flow according to constant temperature anemometer principle.						
Features	Low pressure drop and immunity against dirt and humidity. Measurement unaffected by pressure and temperature changes. No moving parts, installation in virtually any position.						
Principle	Two stainless steel probes - a heater and temperature probe - protrude inside the bore. A constant difference in temperature is created. The energy required is proportional to flow.						
Media	compressed air, air as well as virtually all gases and gas mixtures						
Compensation	Neither temperature nor pressure have to be compensated. There are no moving parts within the flow meter, therefore it is virtually wear-free.						
Pressure drop	Low pressure drop because solely two stainless steel probes protrude inside the smooth, round measurement cell. The use of screw connections with a nominal size as big as possible is suggested.						
Temperature range	0 °C to 50 °C / 32 °F to 122 °F						
Material	<table border="0"> <tr> <td>Operating press. max. 10 bar</td> <td>Differential press. device dependent</td> </tr> <tr> <td>Body: aluminium, optionally SST 316L</td> <td>Elastomer: Viton®, optionally EPDM or Kalrez®</td> </tr> <tr> <td>Sensor: stainless steel 316L</td> <td>strainer: stainless steel</td> </tr> </table>	Operating press. max. 10 bar	Differential press. device dependent	Body: aluminium, optionally SST 316L	Elastomer: Viton®, optionally EPDM or Kalrez®	Sensor: stainless steel 316L	strainer: stainless steel
Operating press. max. 10 bar	Differential press. device dependent						
Body: aluminium, optionally SST 316L	Elastomer: Viton®, optionally EPDM or Kalrez®						
Sensor: stainless steel 316L	strainer: stainless steel						

10 ... 200 ml/min / 5000 l/min
compressed air or gases

Dimensions			Operating pressure max. bar	Connection thread G	Flow rate ml/min*1 / l/min*1	Order number
A	B	C				

Mass flow meter				4-20 mA output signal, supply voltage 24 V DC, w/o display, with coupling socket, for compressed air			PVM*2	
95	117	15	10	G1/4	10 ... 200 ml/min 25 ... 500 ml/min 50 ... 1000 ml/min			PVM31-22 PVM31-52 PVM31-13
95	117	15	10	G1/4	0.10 ... 2 l/min 0.35 ... 5 l/min			PVM31-23 PVM32-53
95	114	15	10	G1/4	1 ... 10 l/min 1 ... 20 l/min 1 ... 50 l/min			PVM34-14 PVM34-24 PVM34-54
95	122	16	10	G1/2	0.4 ... 20 l/min 4 ... 200 l/min			PVM36-24 PVM36-25
117	136	25	10	G1/2	2 ... 100 l/min 20 ... 400 l/min 20 ... 1000 l/min			PVM37-15 PVM37-45 PVM37-16
143	164	37,5	10	G1	10 ... 500 l/min 100 ... 2000 l/min 100 ... 4000 l/min 150 ... 5000 l/min			PVM38-55 PVM38-26 PVM38-46 PVM38-56



PVM31



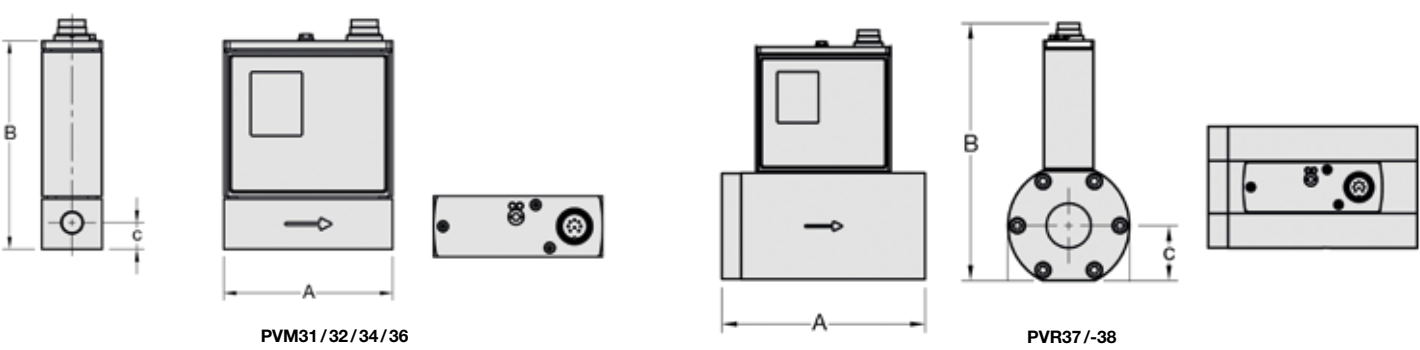
PVM37/38

Special options, add the appropriate letter or number

deviating volume flow rate						PVM ... XX
special calibration	range or gas to be indicated on order					PVMY
monitor signal	0-10 V					PVMU
stainless steel body	316L, P ₁ max. 20 bar					PVMS
EPDM elastomer						PVME
Kalrez elastomer						PVMK
free of oil and grease	for oxygen and different gases					PVML
carbon dioxide CO₂ : 03	argon Ar: 05	nitrogen N ₂ :				PVM07
helium He: 09	hydrogen H ₂ : 11	methane CH ₄ :				PVM13
oxygen O ₂ : 15	propane C ₃ H ₈ : 16	nitrous oxide N ₂ O:				PVM17

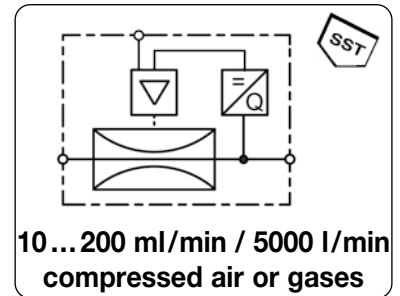
Accessories, enclosed

coupling socket	M16x1, 6-pin with 3 m Kabel	straight
other cable length	5 m or 10 m available	



*1 valid for compressed air at Δp= 5 bar and open outlet. For other gases please apply conversion factor
*2 only possible with PVM 31 (max. 1 l/min) and PVM 32 (max. 5 l/min).

Description	Mass flow meter directly measuring flow according to constant temperature anemometer principle. The measured setpoint is compared with the nominal value. The valve will be readjusted accordingly.		
Mechanical Construction	PVR31/32/34/36: mass flow meter and meter in the same housing PVR 37: mass flow meter and meter together at the measuring bob PVR38: mass flow meter and meter as single components are bolted together		
Media	compressed air, air as well as virtually all gases and gas mixtures		
Compensation	Neither temperature nor pressure have to be compensated. There are no moving parts within the flow meter, therefore it is virtually wear-free.		
Pressure drop	Low pressure drop because solely two stainless steel probes protrude inside the smooth, round measurement cell. The use of screw connections with a nominal size as big as possible is suggested.		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F Operating press. max. 10 bar Differential press. device dependent		
Material	Body: aluminium, optionally SST 316L Sensor: stainless steel 316L	Elastomer: Viton®, optionally EPDM or Kalrez® strainer: stainless steel	



Prop.-V.
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Dimensions			K _v -value (m³/h)	Operating pressure max. bar	Connection thread G	Mass flow ml/min*1 / l/min*1	Order number
A mm	B mm	C mm					

Mass flow regulator				4-20 mA input and output signal, supply voltage 24 V DC, w/o display, with coupling socket, for compressed air			PVR*3	
95	117	15	0.066	10	G¼	10 ... 200 ml/min 100 ... 500 ml/min 100 ... 1000 ml/min 100 ... 2000 ml/min	PVR31-22 PVR31-52 PVR31-13 PVR31-23	
95	117	15	0.066	10	G¼	0.05 ... 1 l/min 0.35 ... 5 l/min 0.50 ... 7 l/min	PVR32-13 PVR32-53 PVR32-14	
95	114	15	0.066	10	G¼	0.50 ... 10 l/min 1.00 ... 20 l/min 2.50 ... 50 l/min	PVR34-14 PVR34-24 PVR34-54	
95	122	16	0.17	10	G½	1 ... 20 l/min 4 ... 50 l/min 5 ... 200 l/min	PVR36-24 PVR36-54 PVR36-25	
145	136	25	0.35	10	G½	5 ... 100 l/min 10 ... 200 l/min 20 ... 400 l/min	PVR37-15 PVR37-25 PVR37-45	
on request			1.5	10	G1	10 ... 500 l/min 100 ... 1000 l/min 100 ... 2000 l/min 100 ... 5000 l/min	PVR38-55 PVR38-16 PVR38-26 PVR38-56	



PVR31



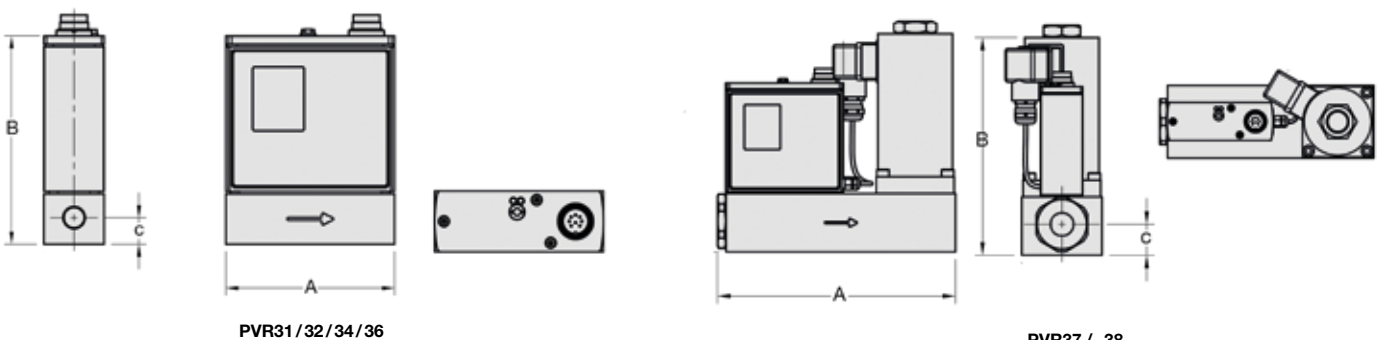
PVR37

Special options, add the appropriate letter oder number

deviating volume flow rate						PVM ... XX
special calibration	range or gas to be indicated on order					PVR Y
setpoint /monitor signal	0-10 V					PVR U
stainless steel body	316L, P ₁ max. 20 bar					PVR S
EPDM elastomer						PVR E
Kalrez® elastomer						PVR K
free of oil and grease	for oxygen and different gases					PVR L
carbon dioxide CO ₂ :	03	argon Ar:	05	nitrogen N ₂ :		PVR 07
helium*2 He:	09	hydrogen*2 H ₂ :	11	methane CH ₄ :		PVR 13
oxygen O ₂ :	15	propane C ₃ H ₈ :	16	nitrous oxide N ₂ O:		PVR 17

Accessories, enclosed

coupling socket	M16x1, 6-pin with 3 m Kabel	straight
other cable length	5 m or 10 m available	



*1 valid for compressed air at Δp= 5 bar and open outlet. For other gases please apply conversion factor.
*2 only possible with PVR 31 (max. 1 l/min) and PVR 32 (max. 5 l/min).

*3 Note: indicate media, supply and outlet pressure, temperature on order

PDF CAD
www.aircom.net

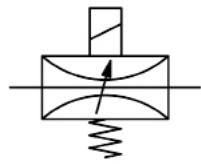
* Product group



Order example:
PVR31-22



Description	Small proportional flow valve for regulating both air and non-corrosive gases. Voltage signal 10 V as standard or optionally 5 V or 20 V DC.				
Media	50 µm filtered compressed air or non-corrosive gases				
Operating pressure	see chart, max. 7 bar				
Electrical specification	command signal	max. voltage	resistance	current consumption	power consumption
	0 - 5 V DC	0 - 6.2 V DC	13 Ω	0 - 370 mA	1.9 W
	0 - 10 V DC	0 - 12.4 V DC	54 Ω	0 - 185 mA	1.9 W
	0 - 20 V DC	0 - 24.8 V DC	218 Ω	0 - 92 mA	1.9 W
Electrical connection	solder lug or terminal lug, 2.5 x 0.5 mm				
Mounting position	any				
Hysteresis	± 10% FS		Repeatability ± 3% FS		
Temperature range	0 °C to 60 °C / 32 °F to 140 °F				
Material	Body: nickel-plated brass Inner valve: stainless steel and brass		Elastomer: NBR/Buna-N, optionally FKM or EPDM		



DN 0.2 up to DN 1.5
0 - 5 / 10 / 20 V DC

Dimensions			Nominal size	K _v -value	Flow rate	Operating pressure	Connection thread	Order number
A	B	C	DN	(m ³ /h)	l/min*1	max. bar	M5	
mm	mm	mm						

Volume flow regulator M5								0-10 V DC, 2-port/2-way valve for compressed air or non corrosive gases, with terminal lug, brass, NBR/Buna-N	PVK
20	40	5	0.2	0.03	0...3	1.7	M5	PVK-092	
						3.5		PVK-093	
						7.0		PVK-097	
20	40	5	0.3	0.07	0...7	1.7	M5	PVK-132	
						3.5		PVK-133	
						7.0		PVK-137	
20	40	5	0.6	0.24	0...24	1.7	M5	PVK-252	
						3.5		PVK-253	
						7.0		PVK-257	
20	40	5	1.0	0.18	0...19	1.7	M5	PVK-402	
						3.5		PVK-403	
20	40	5	1.5	0.14	0...14	1.7	M5	PVK-602	



PVK-257
with M5 connection



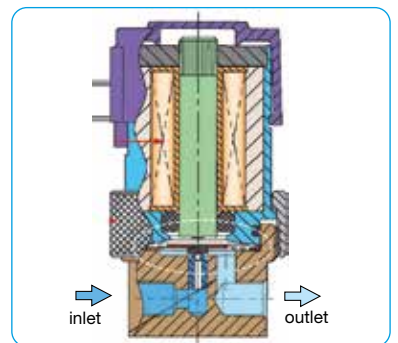
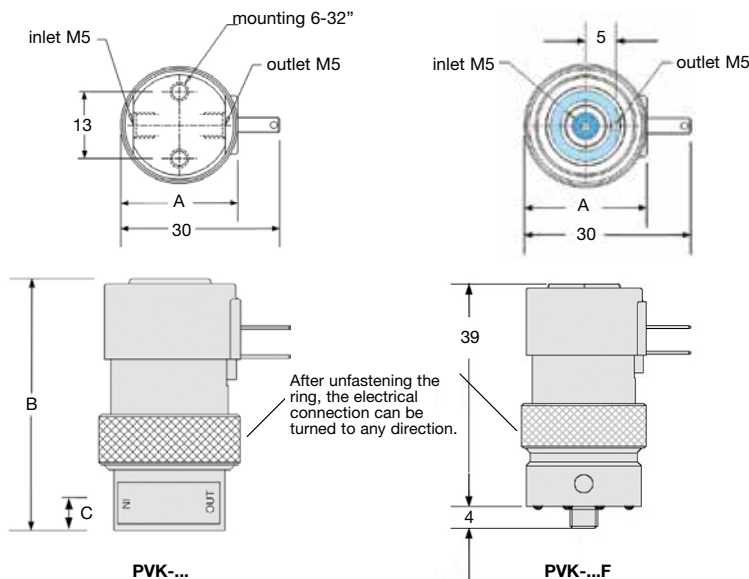
PVK-092AF
with flange connection

Special options, add the appropriate letter

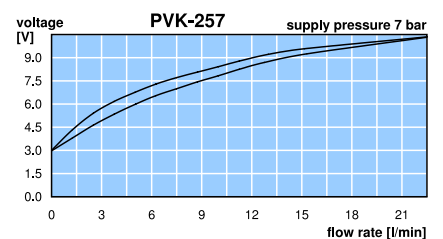
0 - 5 V	input signal max. 6,2 V,	0 - 370 mA,	13 Ω	PVK-. . . A
0 - 20 V	input signal max. 25 V,	0 - 92 mA,	218 Ω	PVK-. . . C
flange connection	for panel mounting			PVK-. . . F
FKM elastomer				PVK-. . . V
EPDM elastomer				PVK-. . . E

Accessories, enclosed

manifold block for valve with flange connection, for 2, 4 ... 12 valves



cross section

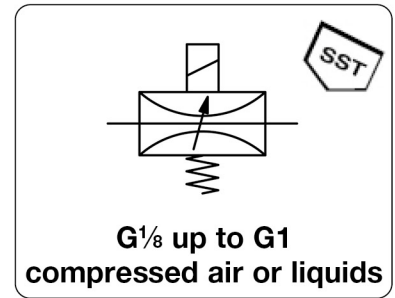


*1 at max. current consumption and max. operating pressure

* Product group



Description	2-way proportional flow valve controls the volume flow of maximum 1185 l/min for air in proportion to the input signal of 0 to 10 V or 0/4 to 20 mA. The proportional valve and the electronic control unit are ordered separately.
Product selection	To achieve the best linear flow characteristics, it is advisable not to reduce the flow too much and to have enough pressure drop at the valve for good control. Reference value: at the valve > 30% of the total pressure drop.
Installation hint	The nominal width of the orifice following the proportional valve should not be smaller than the nominal width of the valve. A constriction of the cross-section after the valve should be categorically avoided!

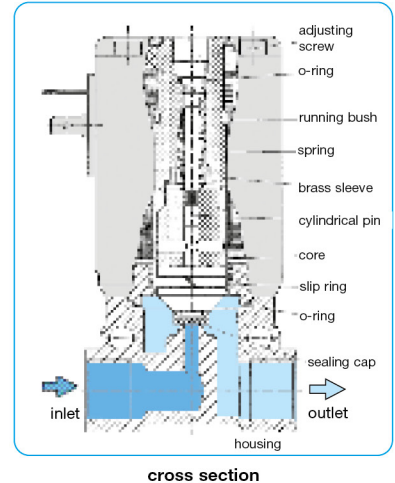


General technical features

Design	2-way proportional flow valve, normally closed during absence of current, with additional control module in cable plug or in housing for DIN rail mounting.		
Mounting position	any, preferably upright		
Protection class	IP 65 with coupling socket, IP 40 for DIN rail version		
Temperature range	-10 °C to 90 °C / 14 °F to 194 °F for media -10 °C to 55 °C / 14 °F to 131 °F for electronics		
Material	Body: brass Elastomer:	Inner valve: FKM	brass and stainless steel Control housing: plastic

Pneumatic features

Media	compressed air, non-corrosive gases or liquids, max. viscosity 21 mm ² /s, PV40 for liquids only
Operating pressure	see chart, max. 16 bar
Flow rate	0...2 / 1185 l/min for air, 0...0.03 / 83 l/min for liquids in detail see chart, at max. supply pressure and Δp = 1 bar



Electrical features

Supply voltage 24 V DC ± 10%, residual ripple max. 5%, with reverse voltage protection

Power consumption	electronic	PV21	PV21	PV22	PV34	PV40-04	PV40-06	PV40-08
	1 W	2 W to DN 0.6	5 W from DN 0.8 on	9 W	16 W	8 W	10 W	15 W

Command signal 0-5 V, 0-10 V, 0-20 mA or 4-20 mA selectable

Impedance > 20 kΩ at voltage signal
< 200 Ω at current signal

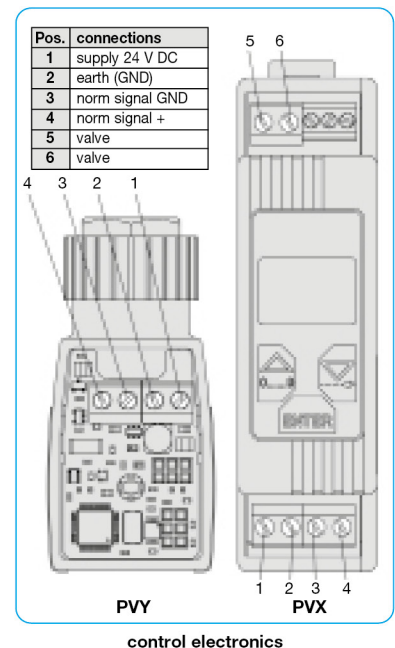
Electrical connector PV21: square connector according to DIN 43650 form B
PV22...PV40: square connector according to DIN 43650 form A

Accuracy

Linearity	< 10 % FS		
Hysteresis	< 5 % FS		
Response sensitivity	< 0.1% FS at DN < 0,8 mm,	< 0.25% FS at DN ≥ 0,8 mm,	< 1% FS at PV40
Repeatability	< 0.25% FS at PV22 < 0.5% FS		
Regulating time	PV21: < 15 ms,	PV22: < 20 ms,	PV34: < 50 ms, PV40: < 200 ms each for 90% of the range

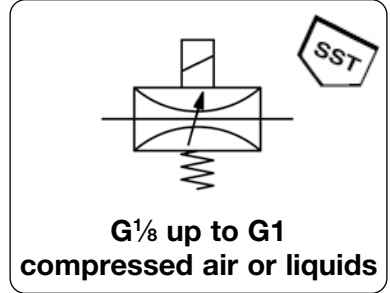
Adjustment

Zero point	The zero point can be decreased or increased.
Range	The range can be decreased or increased.
Ramp	The ramping potentiometer adjusts the time delay with a range of 0 to 10 s in order to dampen sudden changes of the setpoint. Increasing and decreasing ramps have the same delay.
Zero point switch	Using a DIP switch, the zero point switch can be activated or deactivated. It is not necessary to have another switch-off valve.



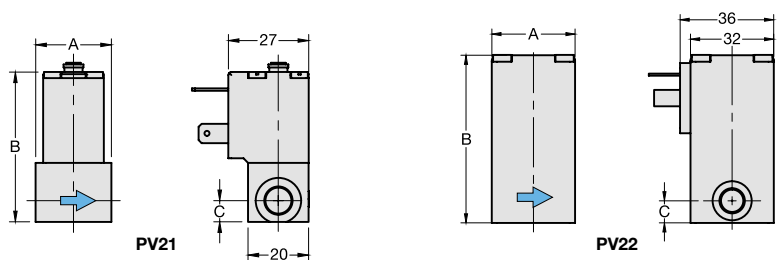
* Product group

Technical features	
• Media	compressed air, non-corrosive gases or liquids, except for PV40*3
• Signal range	0-5 V, 0-10 V, 0-20 mA, 4-20 mA
• Pressure range	vacuum ... 2 / 16 bar
• Orifice	DN 0.1 ... DN 20
• Flow rate	max. 1185 l/min for air, max. 90 l/min for water
• Adjustment	zero point, range and ramp
• Zero switch-off	ensures reliable closure of the valve
• Linearity	< 10% FS
• Hysteresis	< 5% FS
• Response sensitivity	< 0.1% FS at DN < 0.8 mm < 0.25% FS at DN ≥ 0.8 mm < 1% FS at PV40 < 0.25% FS, < 0.5% FS at PV22
• Repeatability	< 0.25% FS, < 0.5% FS at PV22
• Regulating time	depending on type: < 15 ms, < 20 ms, < 50 ms or < 200 ms
• Protection class	IP65 with plug
• Impedance	> 20 kΩ at V, < 200 Ω at mA



Dimensions			Nominal K _v -	Flow rate		Operating	Differ.-	Connection	Order	
A	B	C	size	value	water	air	pressure	press.	thread	number
mm	mm	mm	DN	(m ³ /h)	l/min*1	l/min*2	max. bar	max. bar	G	

Proportional flow valve											without electronics, brass, FKM, for compressed air, vacuum or liquids	PV
25	50	7	0.1	0.0025	0...	0.004	0...	0.27	10	10	G ¹ / ₈	PV21-01
25	50	7	0.2	0.001	0...	0.017	0...	1.0	10	10	G ¹ / ₈	PV21-02
25	50	7	0.3	0.002	0...	0.033	0...	2.2	10	10	G ¹ / ₈	PV21-03
25	50	7	0.4	0.004	0...	0.067	0...	4.0	8	8	G ¹ / ₈	PV21-04
25	50	7	0.6	0.010	0...	0.167	0...	11	6	6	G ¹ / ₈	PV21-06
25	50	7	0.8	0.018	0...	0.3	0...	19	12	6	G ¹ / ₈	PV21-08
25	50	7	0.8	0.018	0...	0.3	0...	19	12	12	G ¹ / ₈	PV21-08B
25	50	7	1.0	0.027	0...	0.3	0...	19	10	5	G ¹ / ₈	PV21-10
25	50	7	1.0	0.027	0...	0.3	0...	19	10	10	G ¹ / ₈	PV21-10B
25	50	7	1.2	0.038	0...	0.633	0...	41	8	4	G ¹ / ₈	PV21-12
25	50	7	1.2	0.038	0...	0.633	0...	41	8	8	G ¹ / ₈	PV21-12B
25	50	7	1.6	0.055	0...	0.917	0...	59	6	3	G ¹ / ₈	PV21-16
25	50	7	1.6	0.055	0...	0.917	0...	59	6	6	G ¹ / ₈	PV21-16B
25	50	7	2.0	0.090	0...	1.5	0...	97	3	1.5	G ¹ / ₈	PV21-20
25	50	7	2.0	0.090	0...	1.5	0...	97	3	3	G ¹ / ₈	PV21-20B
32	66	8.5	0.8	0.018	0...	0.3	0...	19	16	8	G ¹ / ₈	PV22-08
32	66	8.5	0.8	0.018	0...	0.3	0...	19	16	16	G ¹ / ₈	PV22-08B
32	66	8.5	1.0	0.027	0...	1.0	0...	65	14	7	G ¹ / ₈	PV22-10
32	66	8.5	1.0	0.027	0...	1.0	0...	65	14	14	G ¹ / ₈	PV22-10B
32	66	8.5	1.2	0.040	0...	0.67	0...	43	12	6	G ¹ / ₈	PV22-12
32	66	8.5	1.2	0.040	0...	0.67	0...	43	12	12	G ¹ / ₈	PV22-12B
32	66	8.5	1.5	0.060	0...	1.0	0...	65	10	5	G ¹ / ₈	PV22-15
32	66	8.5	1.5	0.060	0...	1.0	0...	65	10	10	G ¹ / ₈	PV22-15B
46	72	8.5	2.0	0.10	0...	1.66	0...	108	8	4	G ¹ / ₄	PV22-20
46	72	8.5	2.0	0.10	0...	1.66	0...	108	8	8	G ¹ / ₄	PV22-20B
46	72	8.5	2.5	0.15	0...	2.5	0...	162	5	2.5	G ¹ / ₄	PV22-25
46	72	8.5	2.5	0.15	0...	2.5	0...	162	5	5	G ¹ / ₄	PV22-25B
46	72	8.5	3.0	0.22	0...	3.67	0...	237	3.5	1.8	G ¹ / ₄	PV22-30
46	72	8.5	3.0	0.22	0...	3.67	0...	237	3.5	3.5	G ¹ / ₄	PV22-30B
46	72	8.5	4.0	0.32	0...	5.33	0...	345	2	1	G ¹ / ₄	PV22-40
46	72	8.5	4.0	0.32	0...	5.33	0...	345	2	2	G ¹ / ₄	PV22-40B



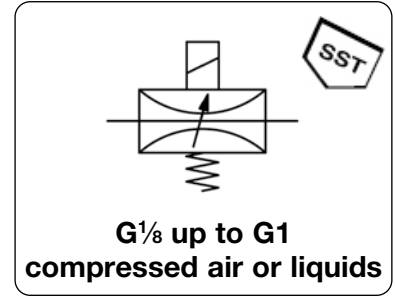
*1 at max. operating pressure and Δp = 1 bar *2 at pressure drop from 6 bar down to 5 bar
*3 PV40 is not suitable for compressed air and vacuum as it is pilot operated

* Product group

PROPORTIONAL FLOW VALVE "AIRPROP"[®]

PV21 ... PV40

Media		Technical features	
• Media	compressed air, non-corrosive gases or liquids, except for PV40*3	• Linearity	< 10% FS
• Signal range	0-5 V, 0-10 V, 0-20 mA, 4-20 mA	• Hysteresis	< 5% FS
• Pressure range	vacuum...2 / 16 bar	• Response sensitivity	< 0.1% FS at DN < 0.8 mm < 0.25% FS at DN ≥ 0.8 mm < 1% FS at PV40 < 0.25% FS, < 0.5% FS at PV22
• Orifice	DN 0.1 ... DN 20	• Repeatability	< 0.25% FS, < 0.5% FS at PV22
• Flow rate	max. 1185 l/min for air, max. 90 l/min for water	• Regulating time	depending on type: < 15 ms, < 20 ms, < 50 ms or < 200 ms
• Adjustment	zero point, range and ramp	• Protection class	IP65 with plug
• Zero switch-off	ensures reliable closure of the valve	• Impedance	> 20 kΩ at V, < 200 Ω at mA



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Dimensions			Nominal K _v -	Flow rate		Operating	Differ.-	Connection	Order	
A	B	C	size	value	water	pressure	press.	thread	number	E*
mm	mm	mm	DN	(m ³ /h)	l/min*1	max. bar	max. bar	G		

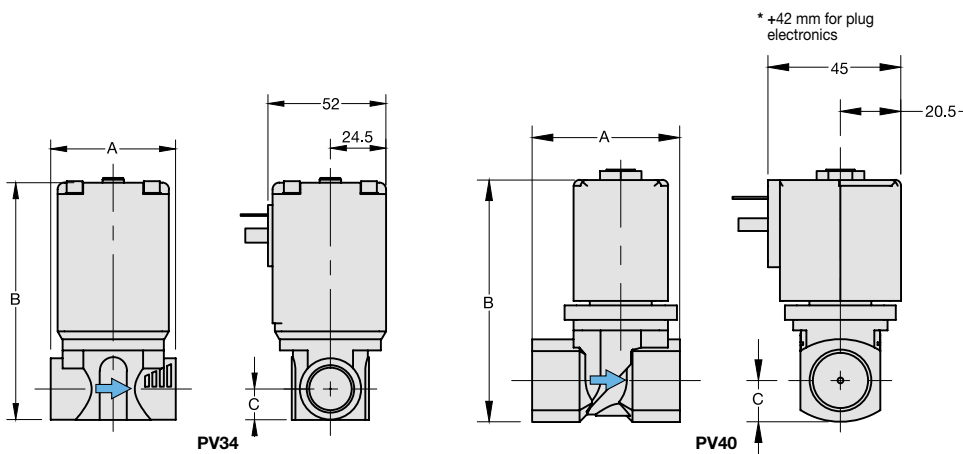
Proportional flow valve										without electronics, brass, FKM, for compressed air, vacuum or liquids	PV
55	105	11	4.0	0.45	0... 7.5	0... 485	8	4	G ³ / ₈		PV34-40
55	105	11	4.0	0.45	0... 7.5	0... 485	8	8	G ³ / ₈		PV34-40B
55	105	11	6.0	0.80	0... 13.3	0... 860	4	2	G ¹ / ₂		PV34-60
55	105	11	6.0	0.80	0... 13.3	0... 860	4	4	G ¹ / ₂		PV34-60B
55	105	11	8.0	1.10	0... 18.3	0... 1185	2	1	G ¹ / ₂		PV34-80
55	105	11	8.0	1.10	0... 18.3	0... 1185	2	2	G ¹ / ₂		PV34-80B
50	89	12	10	1.4	0... 25.0*3	-	10		G ¹ / ₂		PV40-04
58	110	14	13	2.5	0... 45.0*3	-	10		G ³ / ₄		PV40-06
80	155	16	20	5.0	0... 90.0*3	-	10		G1		PV40-08



Special options, add the appropriate letter
stainless steel body SST 316, W.-No. 1.4401 for PV21 to PV34 PV...S

Accessories, enclosed

plug electronics	24 V DC, 0-5 V, 0-10 V, 0/4 mA-20 mA	for PV22 to PV40	PVY-06
clip-on electronics	24 V DC, 0-5 V, 0-10 V, 0/4 mA-20 mA	for PV21	PVX-01
		for PV22 to PV40	PVX-02
coupling socket	according to DIN 43650 form B	for PV21	2285-0
	according to DIN 43650 form A	for PV22 to PV40	2286-0



*1 at max. operating pressure and Δp = 1 bar *2 at pressure drop from 6 bar down to 5 bar
 *3 PV40 is not suitable for compressed air and vacuum as it is pilot operated

Technical informations: see previous page

PDF CAD
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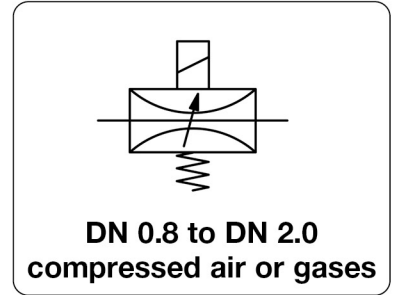
* Product group



Order example:
PV34-40



Description	The miniature flow valve is highly reliable and combines precise control of flow rate with compact design and only 80 g weight. It can be used for vacuum or pressure up to 12 bar. Plug amplifier required.		
Media	50 µm filtered compressed air, vacuum or non-corrosive gases		
Plug amplifier	Conversion of the analogue signal into a pulse-wide modulated current.		
Electrical connector	Supply voltage: 24 V DC, max. 1.1 A	Adjustment:	zero point and range
Operating pressure	Switchable signal: 0...10 V, 0...20 mA, 4...20 mA	Time ramp:	0.1 to 3 s selectable
Repeatability	Close function: < 2% of max. signal	Frequency:	1000 Hz
Response sensitivity	plug, contact gap 9.4 mm, 3-pin, with coupling socket (Pg 7P)	Life cycle	> 100 million cycles
Polarity	see chart, max. 10 bar	Linearity	< 8% FS
Mounting position	any for valve	Hysteresis	< 5% FS
Material	any	Protection class	IP 65 with coupling socket
	Body: brass	Temperature range	0 °C to 50 °C / 32 °F to 122 °F
	Inner valve: stainless steel and brass	Elastomer: FPM	
		Manifold: brass (M5), zinc die-cast (G½), polyamide (Ø4)	



Description	Dimensions			K _v -value (m³/h)	Flow rate l/min*1	Operating pressure max. bar	Nominal size DN	Order number	E*
	A	B	C						

Proportional flow valve	flangeable, for compressed air, 24 V DC,	w/o manifold block, direct control, w/o amplifier	with coupling socket, direct control, w/o amplifier	PV202				
				NC	Order number			
	15	48	53	0.0012	0... 1	10	0.2	PV202-002
				0.0048	0... 5	10	0.4	PV202-004
				0.0096	0... 11	10	0.6	PV202-006
				0.0180	0... 20	10	0.8	PV202-008



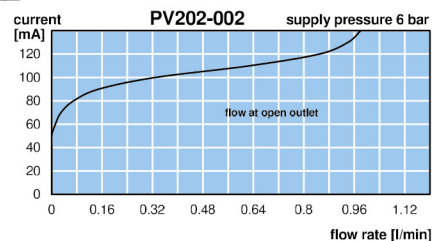
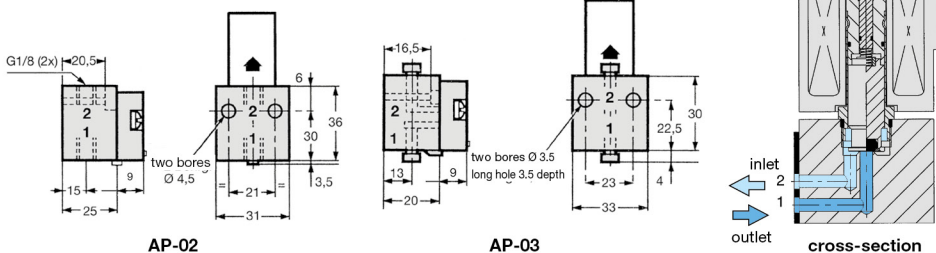
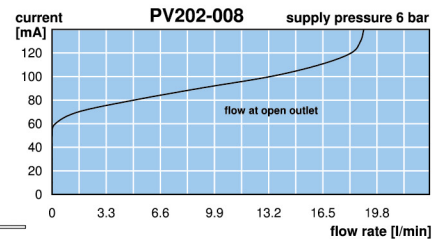
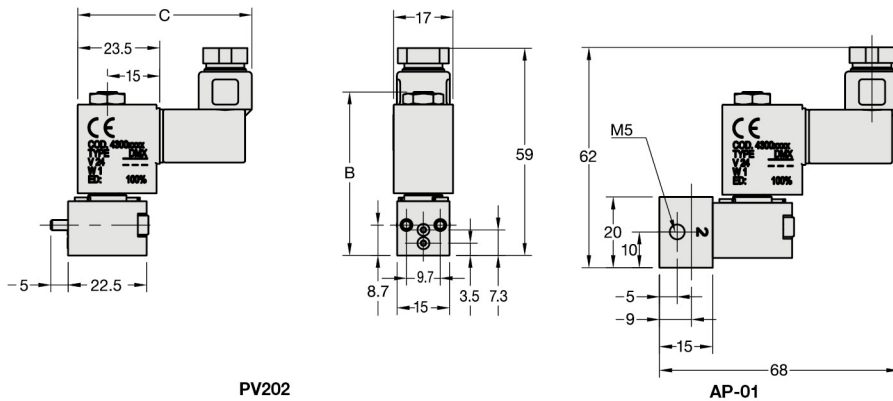
Special options, add the appropriate letter

12 V DC voltage signal PV202-0..V



Accessories, enclosed

plug amplifier	24 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA	PVY-05
manifold block	M5	AP-01
	G½	AP-02
	Ø4	AP-03
in-line manifold	Ø4	AP-04
	G½	AP-05



*1 operating pressure 6 bar and Δp = 1 bar

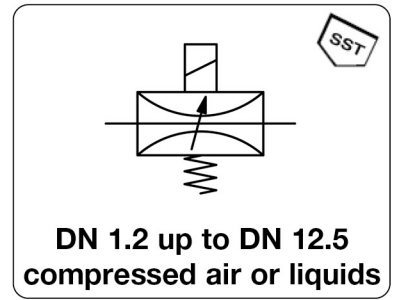
* Product group



PROPORTIONAL FLOW VALVE

PV202 / PV203

Description	The proportional flow valve can be controlled either by 24 V DC or optionally by a plug amplifier with switchable signals.		
Media	50 µm filtered compressed air, vacuum, non-corrosive gases or liquids		
Plug amplifier	Conversion of the analogue signal into a pulse-wide modulated current.		
Electrical connector	Supply voltage: 24 V DC, max. 1.1 A	Adjustment:	zero point and range
Protection class	Switchable signal: 0...10 V, 0...20 mA, 4...20 mA	Time ramp:	0.1 to 3 s selectable
Temperature range	Close function: < 2% of max. signal	Hum frequency:	40 to 700 Hz selectable
	plug, 3-pin, with coupling socket (Pg 9P or Pg 11P)	Operating pressure	see chart, max. 12 bar
	IP 65 with coupling socket	Mounting position	any
	-10 °C to 90 °C / 14 °F to 194 °F	at G $\frac{1}{8}$: 0 °C to 50 °C / 32 °F to 122 °F	
Viscosity max.	PV202, G $\frac{1}{8}$	PV202, G $\frac{1}{4}$ / G $\frac{3}{8}$	PV203, G $\frac{3}{8}$ / G $\frac{1}{2}$
Power consumption	-	21 mm ² /s	40 mm ² /s
Hysteresis / Sensitivity	100...450 mA, 8.6 W	100...500 mA, 11 W	100...500 mA, 11 W
Repeatability	< 5% FS / < 1% FS	< 5% FS / < 2% FS	< 7.5% FS / < 2% FS
Body / Inner valve	< 1% FS	< 3% FS	< 3% FS
	brass/SST, PTFE, FKM	brass/SST, PTFE, FKM	brass/SST, PTFE, NBR/Buna-N



Prop.-V.
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Dimensions			Media	Nominal size	K _v -value	Flow rate	Supply max.	Connection thread	Order number
A	B	C	A: air W: water	DN	(m ³ /h)	l/min*1	bar	G	

Proportional flow valve									
24 V DC, direct control, without amplifier, with coupling socket, made of brass									
PV202 / PV203									
25	78	8	A	1.2	0.05	0...70	8.0	G $\frac{1}{8}$	PV202-1-12
				1.6	0.07	0...110	6.0		PV202-1-16
				2.4	0.13	0...70	4.0		PV202-1-24
				3.2	0.18	0...105	2.5		PV202-1-32
40	95	20	A/W*3	1.2	0.05	0...60	16	G $\frac{1}{4}$	PV202-2-12
				2.4	0.12	0...110	8.0		PV202-2-24
				3.2	0.24	0...170	4.0		PV202-2-32
				4.0	0.42	0...280	2.5		PV202-2-40
				5.6	0.72	0...310	1.4		PV202-2-56
				7.1	0.90	0...390	1.0		PV202-2-71
48	97	14	A/W*3	3.2	0.24	0...190	4.0	G $\frac{3}{8}$	PV202-3-32
				4.0	0.42	0...300	2.5		PV202-3-40
				5.6	0.72	0...330	1.4		PV202-3-56
				7.1	0.90	0...420	1.0		PV202-3-71
52	105	14	W	12.5	2.10	0...35*2	10	G $\frac{3}{8}$	PV203-3-125W
				12.5	2.10	0...37*2	10	G $\frac{1}{2}$	PV203-4-125W

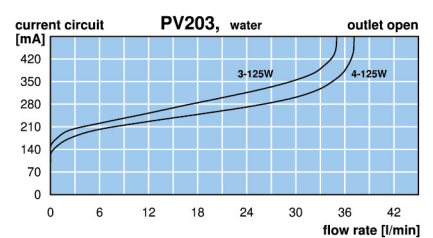
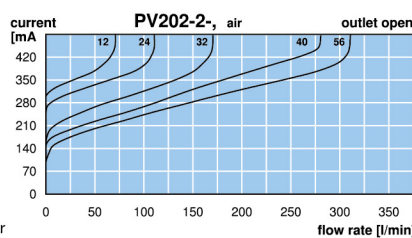
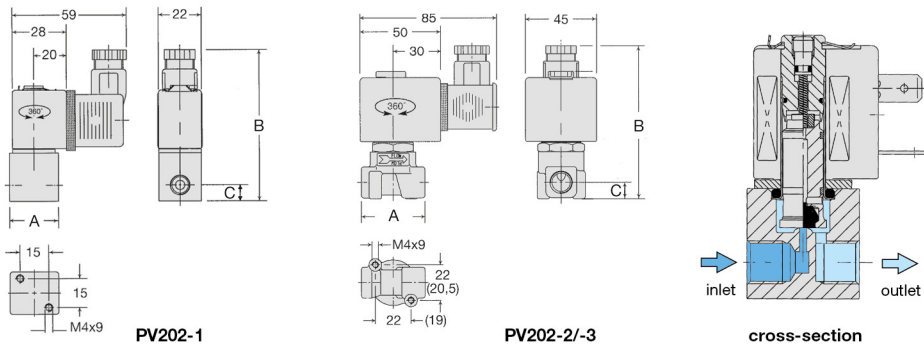


Special options, add the appropriate letter

for water or oil		for PV202, G $\frac{1}{4}$ and G $\frac{3}{8}$	PV202-...W
stainless steel body	NPT connection thread, FKM elastomere	for PV202	PV202-...S
12 V DC	voltage signal		PV0-...12V

Accessories, enclosed

plug amplifier	24 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA	for PV202, G $\frac{1}{8}$	PVY-03
		for all others	PVY-04
plug amplifier	12 V DC, switchable 0-10 V, 0-20 mA, 4-20 mA	für PV202, G $\frac{3}{8}$	PVY-08
		for all others	PVY-09



*1 for compressed air at operating pressure 6 bar and $\Delta p = 1$ bar
*2 flow rate for water since valve is pilot-controlled
*3 for liquids add **W** to order number of type PV202-2/-3

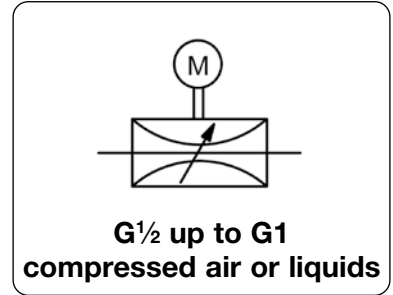
* Product group

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Order example:
PV202-1-12

Description	Motorised proportional flow valve with low power consumption and resistance to contamination. Throttle setting by wear-resistant control drives made of oxide ceramic. Throttling occurs with drip-tight zero shut-off but no gas tightness.	
Media	compressed air, vacuum or liquids up to viscosity of 40 mm ² /s	Hysteresis ± 4%
Operation	DC, synchronous or stepping motor with standard voltage of 24 V DC or AC 10% residual ripple. All motors fulfil standards EN 61000-6-3, EN 61000-6 and 2014/30/EU.	
DC motor (15 / 24)	Motor with feedback potentiometer for servo-amplifier. Resistor 1kΩ ± 20 %, control e.g. by servo-amplifier. Only part of potentiometer range is used. Voltage for potentiometer: 12 V, max. 10 mA.	
DC motor (50 / 51)	With integrated position controller. Setpoint input using jumpers: 0...10 V, 0/4...20 mA. Input resistance: 200 kΩ at voltage signal, 500 Ω at current signal.	
Stepper motor (38)	Bipolar, by means of SAA1042A (Motorola) with drop resistance of 44 Ω per phase at a driver (full-step) operating voltage of 24 V ± 5%. 2028 steps for 90° control disc turn, 200 Hz nominal step frequency.	
Temperature range	-10 °C to 90 °C / 14 °F to 194 °F	
Material	Body: brass Elastomer: NBR/Buna-N, optionally FKM or EPDM	Protection class IP 54 Control discs: oxide ceramic Mounting position: vertical upwards ± 60 °C



Dimensions			Nominal size	K _v -value	Flow rate		Supply max.	Connection thread	Order number	E*
A	B	C	DN	(m ³ /h)	water	air	bar	G		
mm	mm	mm			l/min*1	l/min*1				

Proportional flow valve					DC motor type 50, with potentiometer, 120 Ncm, 24 V DC, switching time 5 s*2			Order number	
65	147	13	15	1.1	0...20	0...1000	16	G ^{1/2}	P822-50
65	147	13	20	3.4	0...60	0...3000	6	G ^{1/2}	P82A-50
95	164	24	20	4.4	0...70	0...3500	6	G ^{3/4}	P823-50
95	164	24	20	4.4	0...70	0...3500	6	G1	P824-50

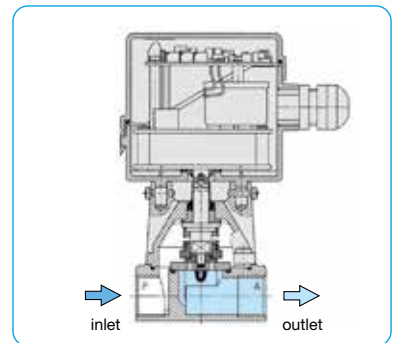


P8

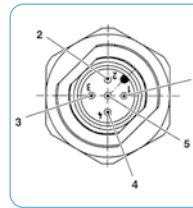
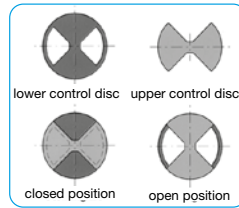
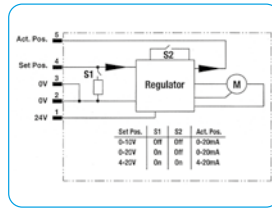
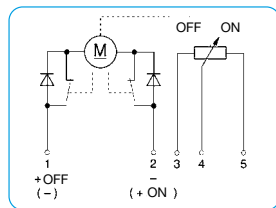
Special options, add the appropriate letter

cartridge installation instead of thread for DN 15 P825-..

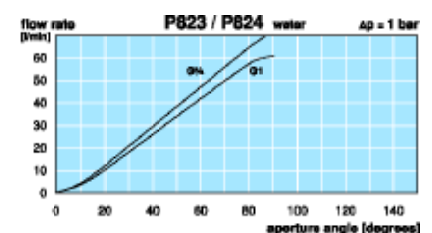
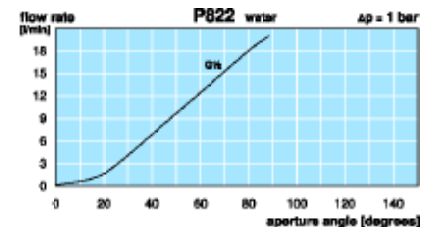
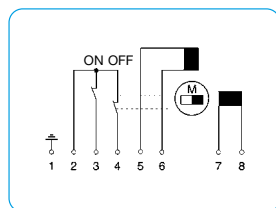
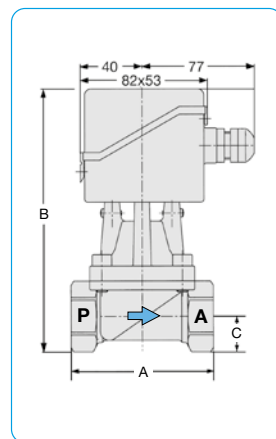
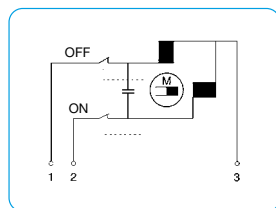
Description	Figure-No.	Watt	Δp max./Torque	Switching time*2	
DC motor w/ potentiometer, 120 Ncm	①	1,5 W	10 bar/120 Ncm f. G ^{1/2}	10-14 s	P82.-15
DC motor w/ potentiometer, 120 Ncm	①	1,5 W	6 bar/120 Ncm f. G ^{3/4} , G1	10-14 s	P82.-15
DC motor w/ controllerr	②	3,8 W	16 bar/220 Ncm f. G ^{1/2}	10-11 s	P82.-51
AC motor 50 Hz	③	3,0 W	6 bar/120 Ncm f. G ^{3/4} , G1	10 s	P82.-36
stepper motor	④	5,0 W	6 bar/120 Ncm f. G ^{3/4} , G1	10 s	P82.-38
FKM elastomer					P82.-..E
EPDM elastomer					P82.-..L
free of grease and oil			especially cleaned, suitable for oxygen		P82.-..L



cross-section



PIN	Description
Pin 1	supply voltage 24 Volt
Pin 2	supply voltage 0 Volt
Pin 3	ground potential for set value input and feedback outlet
Pin 4	set value input 0 - 10 V / 0 (4) - 20 mA
Pin 5	feedback outlet 0 (4) - 20 mA



*1 at 6 bar supply pressure and Δp = 1 bar

*2 subject to supply pressure

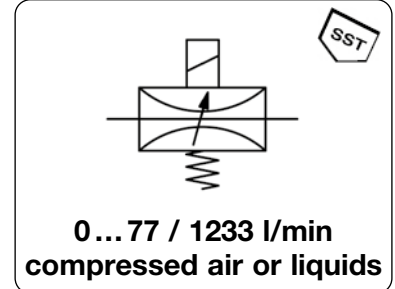
* Product group



PROPORTIONAL FLOW VALVE WITH Y-TYPE VALVE

PVE

Description	Compact positioner with analogue control. Compressed air for remote control necessary. The stroke is made proportional to the flow through the parabolic contour of the piston. The valve shuts tight and is of anti-water hammer design.	
Media	compressed air, vacuum up to 10 ⁻² mbar or liquids up to viscosity of max. 600 cST (mm ² /s)	
Control	pneumatic:	lubricated, unlubricated and 50 µm filtered compressed air, 4...8 bar, port G ³ / ₈
	electrical:	0-10 V, optionally 4-20 mA, supply 24 V DC ± 10%, power consumption 150 mA/3.6 W
Control element	2-port/2-way valve, NC (normally closed) as standard, as option 3-port/2-way valve for mixing different media, with standard piston cable gland, optionally M12	
Electrical connection	any	Protection Class IP 66
Mounting position		Repeatability < 1.0% FS
Linearity / Hysteresis	< 2% FS	valve closes (NC) in the event of voltage failure, optionally outlet fail freeze feature
Failsafe		Ambient: 0 °C to 50 °C / 32 °F to 122 °F Medium: -10 °C to 180 °C / 14 °F to 356 °F
Temperature range		Control valve body: bronze, optionally SST 316L Cone seal: PTFE
Material	Proportional valve body: aluminium, PA and FV	



Prop.-V.
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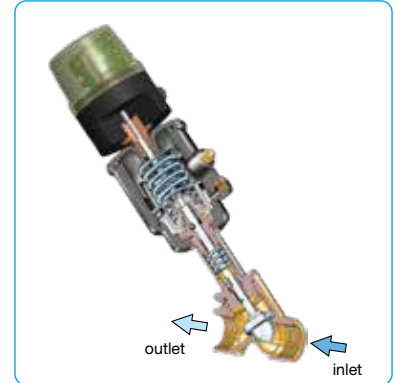
Dimensions			Nominal	K _v -	Supply	Flow rate		Connection	Order
A	B	Ø*1	size	value	max.	water	air	thread	number
mm	mm	mm	DN	(m ³ /h)	bar	l/min	l/min	G	

Volumenstromregler										PVE
2/2-Wege, NC, Bronze, Steuerdruck 4...8 bar, für Luft oder Wasser, 0-10 V, 24 V DC, failsafe										
65	155	63	15	4.6	10	0...	14	5 000	G1/2	PVE1-04B
75	185	63	20	7.1	16	0...	118	7 700	G3/4	PVE1-06C
90	209	90	25	15	16	0...	250	16 250	G1	PVE1-08D
110	246	90	32	21	12	0...	350	22 750	G1 1/4	PVE1-10D
110	298	125	32	22	16	0...	367	23 800	G1 1/4	PVE1-10E
120	245	63	40	29	4	0...	483	31 400	G1 1/2	PVE1-12C
120	262	90	40	29	8	0...	483	31 400	G1 1/2	PVE1-12D
120	314	125	40	44	16	0...	733	47 600	G1 1/2	PVE1-12E
150	259	63	50	40	2	0...	667	43 300	G2	PVE1-16C
150	276	90	50	40	6	0...	667	43 300	G2	PVE1-16D
150	328	125	50	66	10	0...	1 100	71 500	G2	PVE1-16E
190	300	90	65	68	2	0...	1 133	73 600	G2 1/2	PVE1-20D
190	352	125	65	74	6	0...	1 233	80 000	G2 1/2	PVE1-20E



Special options, add the appropriate letter

- fail freeze** if supply voltage fails, outlet pressure will be frozen
 - SST body** stainless steel 316L, material no. 1.4401
 - 4-20 mA** input signal
 - for oxygen *2** specially cleaned, with oxygen grease, for G¹/₂ to G²
 - cascade control** double loop, 0-10 V
double loop, 4-20 mA
double loop, frequency input
 - electr. connection M12** with coupling socket
- PVE... .3
 - PVE... .S
 - PVE... .I
 - PVE... .15
 - PVE... .KU
 - PVE... .KI
 - PVE... .KF
 - PVE... .M12

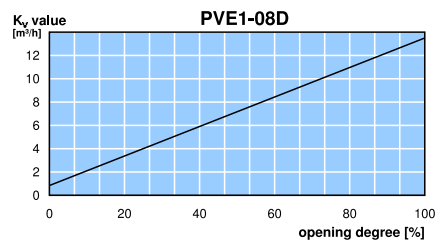
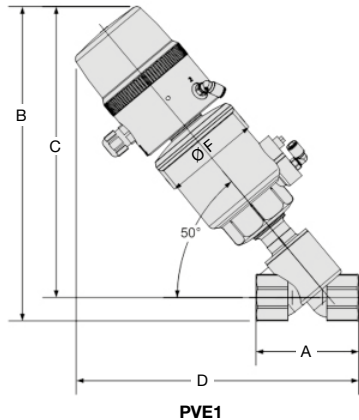


PVE with regulator control	
1	24 V DC supply voltage
2	GND (earth) supply
3	+ setpoint (0-10 V / 4-20 mA)
4	GND (earth) setpoint
5	
6	position feedback
7	+24 V DC ON/OFF output signal

PVE with cascade control	
1	24 V DC supply voltage
2	GND (earth) supply
3	+ setpoint (0-10 V / 4-20 mA)
4	GND (earth) setpoint
5	external signal input
6	
7	+24 V DC ON/OFF output signal

connecting plan

Øhead*1	thread.	C	D	ØF
63 mm	1/2	169	170	85
	3/4	170	175	85
	1	172	179	85
	1 1/4	204	217	85
	1 1/2	215	224	85
2	224	249	85	
90 mm	1	189	197	118
	1 1/4	221	236	118
	1 1/2	232	243	118
	2	241	267	118
	2 1/2	257	299	118
125 mm	1 1/4	273	284	156
	1 1/2	283,5	291	156
	2	293	315	156
	2 1/2	308	347	156



*1 Ø of pilot head
*2 max. 15 bar operating pressure and 60 °C / 140 °F media temperature

* Product group

PDF CAD
www.aircom.net

Order example:
PVE1-04B



Description The flow control valve functions as a pinch valve in a new design of housing with full flow cross-section. Since the straight valve passage has neither constrictions nor back-points, there is no danger of clogging or blockage. Frictional loss is at a minimum.

Media Compressed air, non-corrosive gases, liquids or other paste-like or powdery media. Solids are enclosed by the flexible sleeve at shut-off.

Sleeve Highly flexible with double-woven reinforcement in eight different grades. Sleeve simple to change.

Pressures Operating pressure: max. 4.0 bar Pilot pressure: max. 6.5
Differential pressure: max. 2.5 bar Closing pressure: $P_1 + 2.5$ bar from DN32, $P_1 + 2$ bar from DN40 on

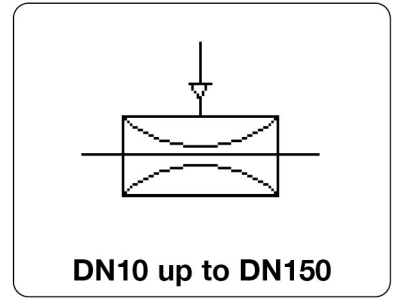
Vacuum If vacuum is greater than -100 mbar, vacuum compensation should be provided on the control side.

Accuracy In the flow range of 0 to 70% the accuracy of the linearity of pilot pressure to flow is approx. 10%.

Mounting position any

Temperature range 0 °C to max. 100 °C / 32 °F to max. 212 °F, subject to sleeve material

Material Body: POM at model QP or aluminium die-cast at model QS Sleeve: depending on selected version



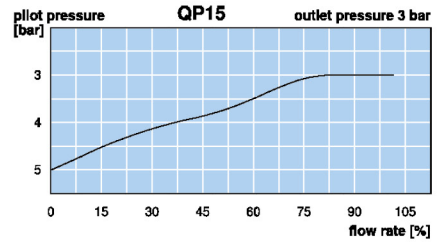
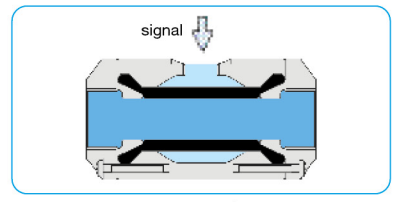
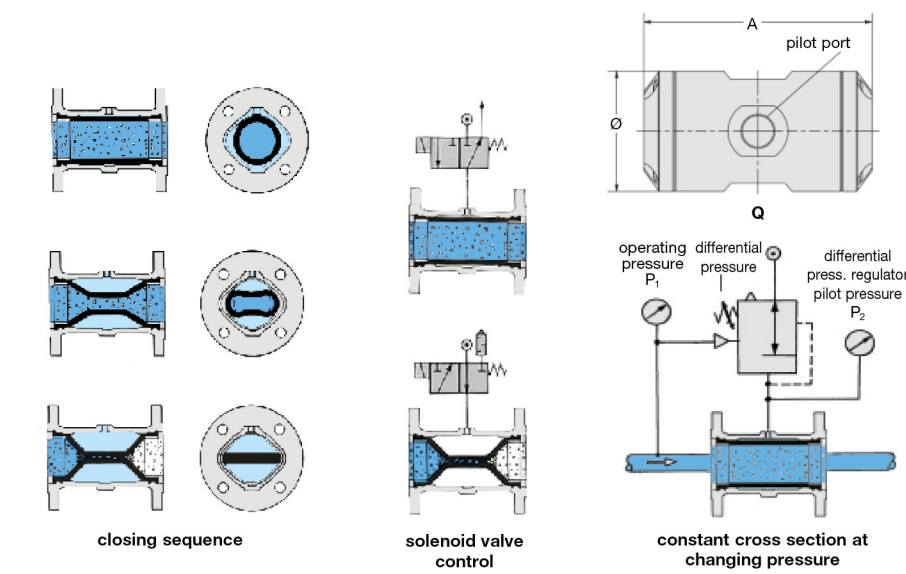
Dimensions		Nominal size	Volume of control chamber	Pilot port	Operating pressure	Connection thread	Order number
A	Ø						
mm	mm	DN	l	G	max. bar	G / flange	

Flow control valve							Q
operating pressure max. 4 bar, pilot pressure max. 2.5 bar above operating pressure							
80	44	10	0.03	G $\frac{1}{4}$	4	G $\frac{3}{8}$	QP10 -03NR
95	50	15	0.04	G $\frac{1}{4}$	4	G $\frac{1}{2}$	QP15 -04NR
110	58	20	0.05	G $\frac{1}{4}$	4	G $\frac{3}{4}$	QP20 -06NR
125	65	25	0.07	G $\frac{1}{4}$	4	G1	QP25 -08NR
140	83	32	0.10	G $\frac{1}{4}$	4	G1 $\frac{1}{4}$	QP32 -10NR
150	95	40	0.13	G $\frac{1}{4}$	4	G1 $\frac{1}{2}$	QP40 -12NR
200	100	50	0.23	G $\frac{1}{4}$	4	G2	QS50 -16NR
240	134	65	0.49	G $\frac{1}{4}$	4	G2 $\frac{1}{2}$	QS65 -20NR
290	154	80	0.95	G $\frac{1}{4}$	4	G3	QS80 -24NR
280	220	100	1.80	G $\frac{3}{8}$	4	flange	QS100-FLNR
350	250	125	3.30	G $\frac{3}{8}$	4	flange	QS125-FLNR
420	285	150	6.40	G $\frac{3}{8}$	4	flange	QS150-FLNR



Special options, add the appropriate letter

- flange connection** according to DIN 2532, PN10 from G1 $\frac{1}{4}$ on Q... -FL...
- sleeve NR** natural rubber, black 80 °C / 176 °F Q... -... NR
- sleeve NRL** rubber, suitable for food, black 70 °C / 158 °F Q... -... NL
- sleeve NRLH** rubber, suitable for food, light 70 °C / 158 °F Q... -... NH
- sleeve NBR** nitrile rubber / Buna-N, suitable for food 80 °C / 176 °F Q... -... NB
- sleeve EPDM** ethylene-propylene rubber, suitable for food, black 100 °C / 212 °F Q... -... EP
- sleeve FKM** fluorine rubber, black 100 °C / 212 °F Q... -... FK
- sleeve CR** chloroprene rubber / neoprene, black 80 °C / 176 °F Q... -... CR
- sleeve CSM** natural rubber, chlorosulphonyl polyethylene 80 °C / 176 °F Q... -... CS



* Product group

Stainless steel pinch valves: see chapter for stainless steel devices

PDF CAD
www.aircom.net



Order example:
QP10-03NR

PRESSURE SWITCHES

	DESCRIPTION	PRESSURE RANGE bar	CONNECTION thread	DEVICE	PAGE
PRESSURE	miniature, low cost	0.2 ... 2 / 200	G $\frac{1}{8}$ and G $\frac{1}{4}$	DS08 ... DS46	12.02
	many variations	0.1 ... 1 / 200	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DS16 ... DS18	12.03
	low pressure, handwheel	0.005 ... 0.02 / 12	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP	12.05
	low pressure, plastic	0.003 ... 0.03 / 7	$\frac{1}{8}$ "NPT m	F4200	12.06
	small hysteresis	0.014 ... 0.14 / 7	$\frac{1}{8}$ "NPT m	F4300	12.07
	high accuracy	0.004 ... 0.012 / 0.15	nipple	F4000	www*
	for PCB	0.014 ... 0.14 / 7	nipple	F4400	www*
VACUUM	many options	-0.2 ... -1	G $\frac{1}{8}$	DS15	12.03
	with handwheel	-0.005... -0.02 / -0.7	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP-V	12.05
	plastic	-0.001... -0.01 / -1	$\frac{1}{8}$ "NPTm	F4200-X	12.06
	also flangable	-0.007... -0.17 / -1	$\frac{1}{8}$ "NPTm	F4300-X	12.07
	with adjustable hysteresis	-0.007... -0.38 / -0.5	nipple	F4000-X	www*
	with small hysteresis	-0.007... -0.17 / -1	nipple	F4400-X	www*
DIFFERENTIAL PRESS.	with handwheel	5 ... 20 / 50 mbar	nipple	DSP-W	12.05
ATEX	dust, EXII 3D IP65 T90	0.3 ... 1.5 / 150	G $\frac{1}{4}$ male	DS34	12.04
	gas, EXII 2G ExdII C T6	1 ... 6 / 400	G $\frac{1}{4}$ female	DS35	12.04
	gas, EXII 2G Ex ia T4	0.005 ... 0.02 / 12	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP	12.05
PNEUMAT. SIGNAL	pressure	0.07 ... 0.35 / 7	$\frac{1}{8}$ "NPTm	PP700/PP701	12.08
	vacuum	-0.03 ... 0.17 / -0.85	$\frac{1}{8}$ "NPTm	VP700/VP701	12.08
ELECTRICAL SIGNAL	with pressure indicator	-1 ... 1 / 10	G $\frac{1}{8}$ m	DSB/DSC	12.10
STAINLESS STEEL	many options	0.3 ... 1.5 / 200	G $\frac{1}{4}$ m	DS18	12.03
	low pressure, handwheel	0.005 ... 0.02 / 12	G $\frac{1}{8}$ m and G $\frac{1}{4}$ m	DSP	12.05



12

Description The small-sized pressure switch closes or opens an electrical contact when the desired pressure is reached. If it falls below, the contact will be reset.

Media DS10: compressed air DS13: compressed air and water All others: compressed air, water hydraulic oil

Burst pressure min. 20 bar, DS13: max. 15 bar, DS40C/D: max. 250 bar

Contact silver-coated, max. 2A Ohm resistive load, max. 100 VA

Hysteresis < 10% FS, DS10 and D40: 10 ... 15% FS

Mounting position any

Life span 10⁶ operating cycle for max. 200 switches / min

Protection class IP 00, with protective cap IP 65

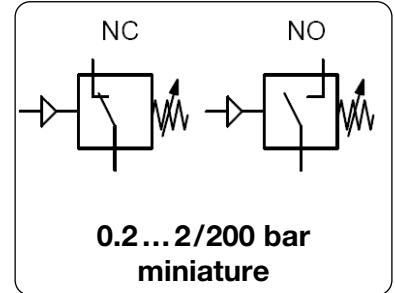
Tolerance ± 0.2 bar at 0.2 ... 2 bar, ± 0.5 bar at 1 ... 10 bar
± 3 bar at 10 ... 70 bar, ± 5 bar at 50 ... 200 bar

Electrical connection contact pin 2 x 6.3 x 0.8 except for DS10 and DS40: screwed connection M2

Temperature range -25 °C to 85 °C / -13 °F to 185 °F DS13: -20 °C bis 75 °C / -4 °F to 167 °F

Material Body: brass for DS08, DS14, DS46
steel for DS25, DS40
plastic for DS13
Elastomer: NBR/Buna-N, optionally EPDM, FKM and Kalrez

Voltage 42 V



Switches



Dimensions			Body	Electr.	Connection	Pressure	Measurement	Order number	
A/F	B	C	made of	connection	thread	transmission	range	contact	contact
mm	mm	mm			G	by	bar	NO	NC

Mini-Pressure switch, 42 V								NBR/Buna-N	DS	
17	13	22	brass	flat plug	G¼	diaphragm	0.3 ... 1.0	2	DS08-21A	DS08-20A
								10	DS08-21B	DS08-20B
19	16	25	brass	screw connection	G½	diaphragm	1.0 ... 10		DS10-11B	
14	23	37	plastic	flat plug	G½	diaphragm	0.2 ... 1.0	2	DS13-11A	DS13-10A
								8	DS13-11B	DS13-10B
19	21	34	brass	flat plug	G½	diaphragm	0.3 ... 1.0	2	DS14-11A	DS14-10A
								10	DS14-11B	DS14-10B
24	20	34	steel	flat plug	G½	diaphragm	0.2 ... 1.0	2	DS25-11A	DS25-10A
								10	DS25-11B	DS25-10B
24	22	31	steel	screw connection	G½	diaphragm	0.3 ... 1.0	2	DS40-11A	DS40-10A
		37				diaphragm		10	DS40-11B	DS40-10B
						piston	10 ... 50	70	DS40-11C	DS40-10C
						piston	50 ... 200		DS40-11D	DS40-10D
27	29	35	brass	flat plug	G¼	diaphragm	0.2 ... 0.5	2	DS46-21A	DS46-20A
								10	DS46-21B	DS46-20B



Special options, add the appropriate letter

G¼ male connection thread only for DS10 to DS40 DS...-2..

FKM elastomer for diaphragm not for DS13 DS...-...V

for piston only for DS40 (C/D) DS...-...V

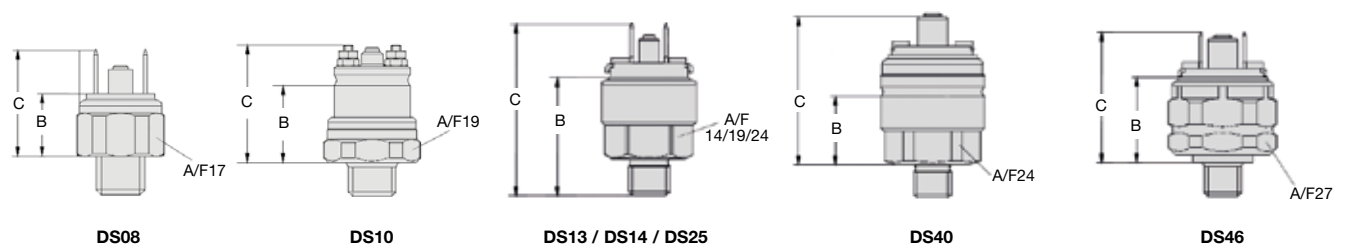
EPDM elastomer only for DS10 and DS40 DS...-...E

Kalrez elastomer only for DS10 and DS40 DS...-...K

gold contact not for DS08 DS...-...G

Accessories, enclosed

protection cap for DS10 **K210** for DS08, DS13 and DS14 **K214**
for DS25 **K250** for DS40 and DS46 **K400**

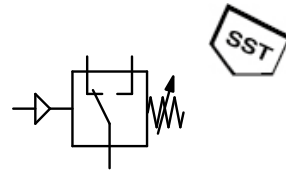


* Product group

PRESSURE SWITCH, UP TO 600 MBAR

DS15 ... DS18

Description	The pressure switch closes or opens an electrical contact when the desired pressure is reached. If it falls below, the contact will be reset.	
Media	compressed air, non-corrosive gases or liquids	
Overpressure	see chart for max. static pressure, dynamic pressures are 50% lower	
Switch contact	DS15/16: NO contact, optionally NC contact	DS17/18: SPDT switch
Contact load	DS15/16: 2 A at 42 V DC, DS17: 4 A at 42 V DC, DS18: 4 A at 250 V AC	
Electrical connector	DS15/16: screw terminal, DS17/18: spade terminal 6.3 x 0.8 mm, optionally also for DS15/16	
Hysteresis	DS15/16: 5...20%, DS17/18: adjustable to 10...30% by factory	
Life cycle	10 ⁶ switching cycles at < 50 bar	Switching frequency max. 200 cycles/min
Vibration resistance	10 g at 5...200 Hz	
Certifications	CSA-certified and UL-listed	
Protection class	IP 00, with coupling socket IP 65	
Temperature range	-30 °C to 100 °C / -22 °F to 212 °F for NBR/Buna-N, -30 °C to 120 °C / -22 °F to 248 °F for EPDM, -5 °C to 120 °C / 23 °F to 248 °F for FKM	
Material	Body: steel, brass at DS15, optionally stainless steel at DS18 Elastomer: NBR/Buna-N, optionally EPDM or FKM	



0,1 ... 1/200 bar
-0.2 ... -1 bar

Switches
12

Pressure transmission by	Overpressure protection < bar	Measuring tolerance ± bar	Measurement range bar	Order number
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Pressure switch G ¹ / ₄ m, NO 42V	steel, NBR/Buna-N, without protective cap	DS16
diaphragm	300	0.2
		0.5
		1.0
		2.0
piston	600	5.0



DS16

Pressure switch G ¹ / ₄ m, SPDT 42V	steel, NBR/Buna-N, with coupling socket	DS17
diaphragm	100	0.2
	100	0.5
	300	1.0
	300	3.0
	300	5.0
piston	600	5.0



DS17

Pressure switch G ¹ / ₄ m, SPDT 250V	steel, NBR/Buna-N, with coupling socket	DS18
diaphragm	100	0.2
	300	1.0
	300	3.0
	300	5.0
piston	600	5.0



DS18

DS15

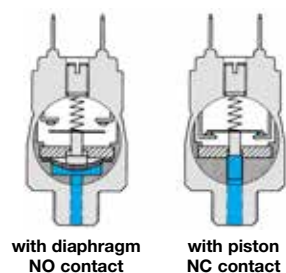
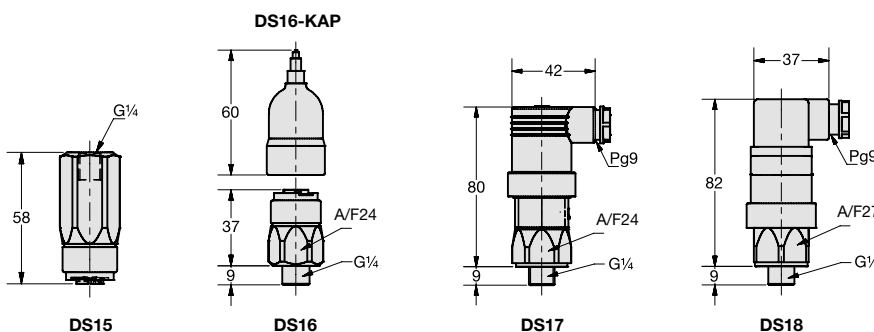
Vacuum switch G ¹ / ₈ f, NO 42V	brass, FKM, without protective cap	DS15
diaphragm	20	0.1

Special options, add the appropriate letter

EPDM elastomer	not for DS15	DS1.-.E
FKM elastomer	not for DS15	DS1.-.V
free of oil and grease	suitable for oxygen, max. 10 bar	DS1.-.L
NC contact	instead of normally open contact	DS1.-.1
spade terminal	6.3 x 0.8 mm, galvanised	DS1.-.T
600 bar overpressure	maximum	DS16-.U
gold contact	max. 24 V AC/DC, 50 mA	DS17-.G
250 V	max. voltage	DS17-.W
stainless steel body	0.5...5/200 bar	DS18-.S
factory-set pressure	pressure indication falling pressure VF . . rising pressure	DS1.-.VS . .

Accessories, enclosed

protection cap	straight, IP65	for DS15 and DS16	DS16-KAP
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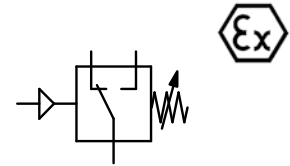


* Product group

PDF CAD
www.aircom.net

Order example:
DS16-A

Description	The pressure switch closes or opens an electrical contact when the desired pressure is reached. When the pressure falls below the adjusted setpoint, the contact will be reset.	
Media	compressed air or non-corrosive gases	
Overpressure	see chart for max. static pressure,	
Contact load	DS34: 1 A at 230 V AC,	Switch contact SPDT switch
ATEX version	DS34: II 3D IP 65 T90°C	dynamic pressures are 50% lower
Electrical connector	3-wire connection cable, length 2 m, cross-sectional area 0.75 mm ² at DS34 or 0.5 mm ² at DS35	DS35: 2 A at 230 V AC
Hysteresis	< 25% FS, ca. 10% FS in the lower range	DS35: II 2G Ex d II C T6/T5
Life cycle	10 ⁸ switching cycles at < 50 bar	Switching frequency 200 cycles/min
Vibration resistance	10 g at 5...200 Hz	Shock resistance 30 g
Mounting position	any	Protection class IP 65
Temperature range	-20 °C to 80 °C / 23 °F to 176 °F for NBR/Buna-N and EPDM	
	-5 °C to 80 °C / 23 °F to 176 °F for FKM	
Material	Body: zinc-plated steel at DS34, aluminium at DS35	optionally EPDM or FKM
	Elastomer: NBR/Buna-N,	



**0.3... 1.5/400 bar
dust- and gas-proof**

Pressure transmission by	Overpressure protection < bar	Measurement tolerance ± bar	Measurement range bar	Order number
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Pressure switch G ¹ / ₄ male	SPDT switch 230 V AC, 1A	dust-proof	II 3D IP 65 T90°C	DS34
diaphragm	300	0.2	0.3 ... 1.5	DS34-A
		0.5 - 1.0	1.0 ... 10	DS34-B
		1.0	10 ... 20	DS34-C
		2.0	20 ... 50	DS34-D
piston	600	5.0	50 ... 150	DS34-E



**DS34
dust protection**

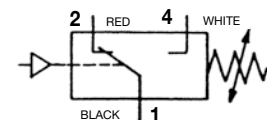
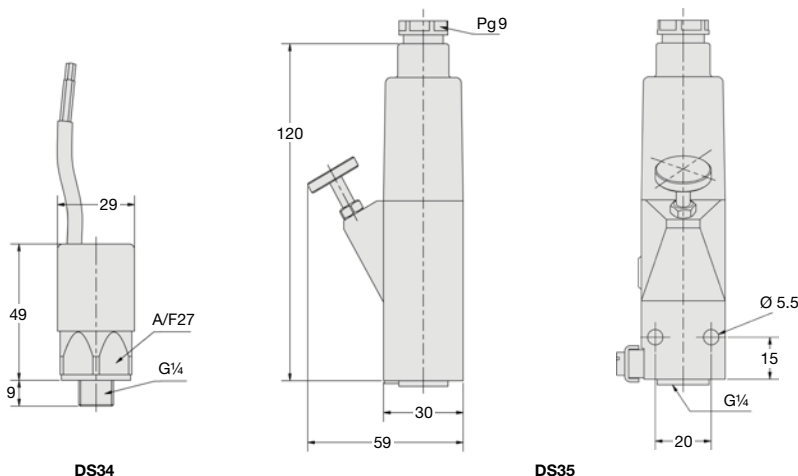
Pressure switch G ¹ / ₄ female	SPDT switch 230 V AC, 1A	gas-proof	II 2G Ex d II C T6/T5	DS35
diaphragm	200	0.5	1 ... 6	DS35-B
		3.0	5 ... 50	DS35-D
piston	600	3 - 5	20 ... 100	DS35-E
		5 - 7	25 ... 250	DS35-H
		5 - 9	100 ... 400	DS35-K



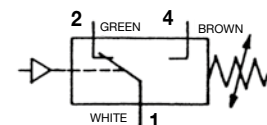
**DS35
gas protection**

Special options, add the appropriate letter

EPDM elastomer	-20 °C to 80 °C / -4 °F to 176 °F	DS3. - . E
FKM elastomer	- 5 °C to 80 °C / 23 °F to 176 °F	DS3. - . V
free of oil and grease	suitable for oxygen, max. 10 bar, diaphragm version only	DS3. - . L
adjusted switchpoint	± 5%, indicate on order	DS3. - . X



pin configuration DS34



pin configuration DS35

* Product group

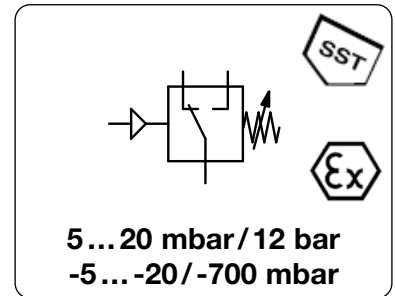
PDF CAD
www.aircom.net



Order example:
DS34-A



Description	Adjustable pressure switch for monitoring pressure, vacuum and differential pressure. From the 6 bar device on two turns of the adjusting knob are necessary for the whole adjustment range, so the scale on the knob is inappropriate.		
Media	compressed air, non-corrosive gases or liquids	Overpressure	see chart
Switch contact	SPDT switch with silver contact, optionally gold contact	Vibration resistance	20 g
Contact load	2 A at 24 V DC, 6 A at 250 V AC	Switching time	30 ms
Electrical connector	AMP spade terminal, 6.3 x 8 mm, according to DIN 46244	Hysteresis	see chart
Life cycle	10 ⁶ switching cycles	Protection class	IP 65 w/ coupling socket
Certifications	VDE, TÜV design test, optionally Atex		
Mounting position	any, but indication needed for switch point < 100 mbar		
Temperature range	-20 °C to 85 °C / -4 °F to 185 °F for NBR/Buna-N, EPDM and polyamide, up to 130 °C / 266 °F for FKM		
Material	Body: Zytel, a high-quality polyamide Elastomer: NBR/Buna-N, optionally EPDM, FKM or special FKM (saturated steam-resistant) Pressure connection: brass, at DSP-W polyamide, optionally stainless steel or PVDF		



Switches



12

Dimensions		Overpressure protection	hysteresis max.	Measurement range	Order number
B	Ø	< bar	mbar / bar	mbar / bar	
mm	mm				D*

Pressure switch G ¹ / ₄ male, for low pressure			wetted sections: brass and NBR/Buna-N, scale toleranz 10%		DSP-D
68	45	0.5	3 mbar	5 ... 20 mbar	DSP-DB2
		0.5	5 mbar	10 ... 50 mbar	DSP-DB5
		0.5	10 mbar	25 ... 100 mbar	DSP-DC1
		1.0	20 mbar	50 ... 250 mbar	DSP-DC2
		1.0	50 mbar	100 ... 500 mbar	DSP-DC5
		10	150 mbar	0.25 ... 1.0 bar	DSP-D01
		10	250 mbar	0.5 ... 1.5 bar	DSP-D02
		10	500 mbar	1 ... 3.0 bar	DSP-D03
		25	0.5 / 2 bar*	1 ... 6.0 bar	DSP-D06
		25	0.5 / 2 bar*	4 ... 9.0 bar	DSP-D09
		25	0.5 / 2 bar*	7 ... 12 bar	DSP-D12



Pressure switch G ¹ / ₄ male			wetted sections: brass and NBR/Buna-N, scale toleranz 10%		DSP-V
68	45	0.5	3 mbar	-5 ... - 20 mbar	DSP-V02
		0.5	5 mbar	-10 ... - 50 mbar	DSP-V05
		0.5	10 mbar	-25 ... -100 mbar	DSP-V10
		0.5	20 mbar	-50 ... -125 mbar	DSP-V12
		1.0	25 mbar	-75 ... -200 mbar	DSP-V20
		1.0	30 mbar	-100 ... -300 mbar	DSP-V30
		1.0	75 mbar	-200 ... -500 mbar	DSP-V50
		1.0	75 mbar	-300 ... -700 mbar	DSP-V70

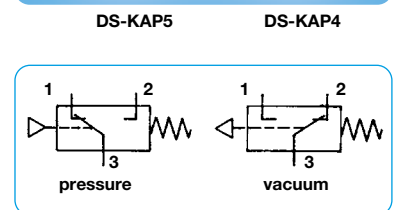


Differential press. switch, nipple Ø 6.5			wetted sections: polyamide and NBR/Buna-N, scale toleranz 10%		DSP-W
77	45	0.1	3 mbar	5 ... 20 mbar	DSP-W20
		0.1	5 mbar	10 ... 50 mbar	DSP-W50



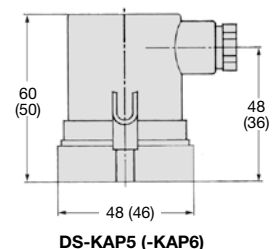
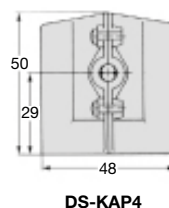
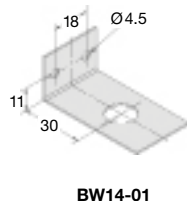
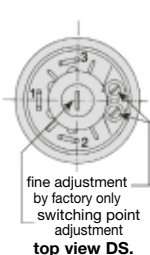
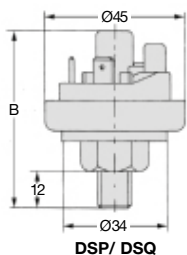
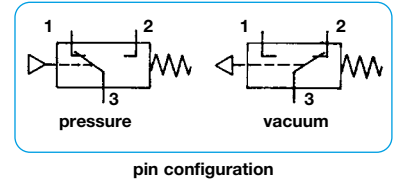
Special options, add the appropriate letter

factory-set pressure		DSQ- . . .
G¹/₈ male	pressure port thread, (not for DSP-W)	DSP- . . . 1
stainless steel port	pressure port thread, 1.4401, (not for DSP-W)	DSP- . . . S
FKM elastomer	max. 130 °C / 266 °F	DSP- . . . V
EPDM elastomer		DSP- . . . E
increased overpressure	max. 4 bar for pressure measurement range < 1 bar	DSP- . . . U
gold contact	max. 24 V AC, 100 mA	DSP- . . . G
Ex-i-Atex	II 1/2G Ex ia IIB T4 and II 1/2G Ex ia IIC T4	DSP- . . . EX
Ex-ii-Atex	II 1/2G Ex ia IIB T4 and II 1/2G Ex ia IIC T4	DSP- . . . SEX



Accessories, enclosed

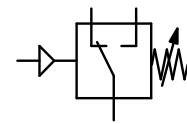
mounting bracket	made of steel, including nut	for G ¹ / ₄	BW14-01
protection cap	angular, cable feedthrough Ø 5 mm	IP44	DS-KAP4
	angular, high-strength cable gland Pg 9	IP54	DS-KAP5
		IP65	DS-KAP6



* 0.5 bar at the beginning, 2 bar at the end of the pressure range

* Product group

Description	High-precision pressure and vacuum switch with electrical outlet signal. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products.		
Media	compressed air, non-corrosive gases or liquids		
Switch contact	micro SPDT switch, covered by plastic cap		
Contact load	3 A at 230 V AC or 1.2 A at 125 V DC 10 A at 230 V AC or 0.5 A at 125 V DC		
Electrical connector	0.187" (4.75 mm) quick connector for Molex connector		
Repeatability	± 2% FS		
Certifications	CSA-certified and UL-listed		
Switching time	25 ms		
Mounting position	any		
Temperature range	4 °C to 66 °C / 40 °F to 150 °F		
Material	Body: polysulphone	Spring: stainless steel	Media non-contact parts: nylon, carbon fibre nylon, acetal
	Diaphragm: polyurethane		



3 ... 30 mbar / 7 bar
-1 ... -10 mbar / -1 bar

Description	Contact load	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
	max. A	mbar	mbar			

Pressure and Vacuum Switch	pressure port 1/8" NPT male with nylon nipple Ø 1/16", and covering cap, SPDT switch	F4200				
pressure switch	3	3	10	1	0.003 ... 0.03	F4200- 0,5PT
	10	7	20	2	0.014 ... 0.14	F4200- 2PT
	10	30	50	2	0.035 ... 0.35	F4200- 5PT
	10	70	110	3	0.035 ... 1.0	F4200- 15PT
	10	120	160	4	0.035 ... 2.1	F4200- 30PT
	10	240	350	8	0.035 ... 4.2	F4200- 60PT
	10	400	500	8	0.070 ... 7.0	F4200-100PT
vacuum switch	3	1	3	-0.3	-0.001 ... -0.01	F4200-X 4PT
	10	17	27	-1	-0.007 ... -0.17	F4200-X 5PT
	10	34	50	-1	-0.015 ... -0.34	F4200-X10PT
	10	68	100	-1	-0.050 ... -1.00	F4200-X30PT



F4200-...PT



F4200-...FM



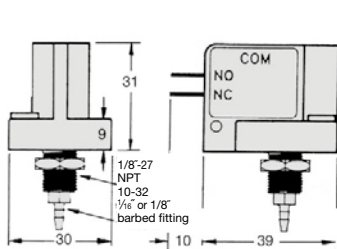
F4200-...PM



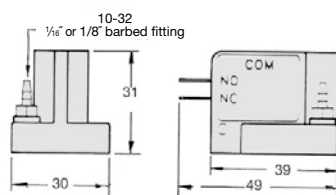
F4200-...MM

Special options, add or change the appropriate letter

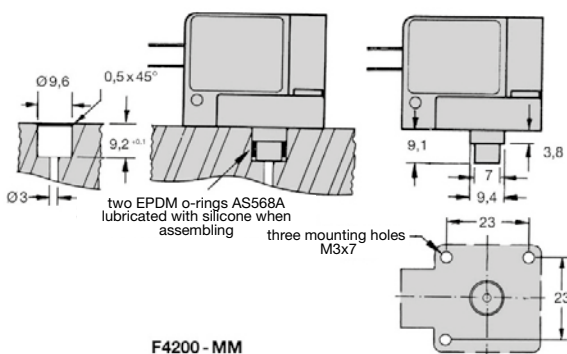
flush mounting	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4200- ... FM
panel mounting	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4200- ... PM
manifold mounting		F4200- ... MM
barbed fittings	for FM and PM, made of nylon, Ø 1/16", Ø 2 mm nylon, Ø 1/8", Ø 4 mm polysulphone, Ø 1/16", Ø 2 mm polysulphone, Ø 1/8", Ø 4 mm	F4200- ... B80 Stand. F4200- ... B85 F4200- ... P80 F4200- ... P85
gold contact		F4200- ... 1B
factory-set switchpoint	± 5%, indicate on order	F4200- ... X
free of oil and grease	specially cleaned, suitable for oxygen	F4200- ... L



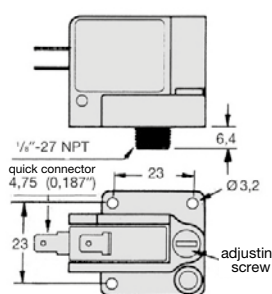
F4200 - PM



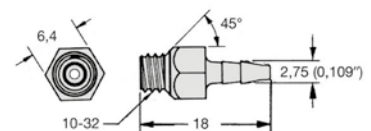
F4200 - FM



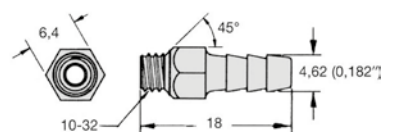
F4200 - MM



F4200 - PT



B80 / P80



B85 / P85

* Product group

PDF CAD
www.aircom.net

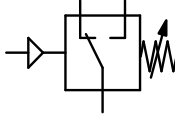


Order example:
F4200-0,5PT

PRESSURE AND VACUUM SWITCH WITH LOW HYSTERESIS, TYPE "AIRROL®"

F4300

Description	Pressure and vacuum switch with electrical outlet signal and low hysteresis. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products.		
Media	compressed air, non-corrosive gases or liquids		
Switch contact	micro SPDT switch, covered by plastic cap		
Contact load	3 A or 4 A at 230 V AC, see chart		
Electrical connector	0.110" (2.8 mm) quick connector for Molex/ETC connector		
Repeatability	± 2% FS		
Certifications	CSA-certified and UL-listed		
Switching time	25 ms		
Mounting position	any		
Temperature range	4 °C to 66 °C / 40 °F to 150 °F		
Material	Body: polysulphone	Spring: stainless steel	
	Diaphragm: polyurethane	Media non-contact parts: nylon, carbon fibre nylon, acetal	



14 ... 140 mbar / 7 bar
-7 ... -170 mbar / -1 bar

Switches
12

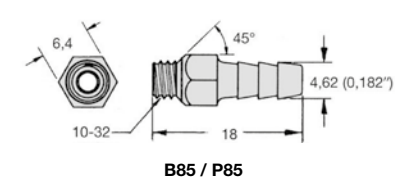
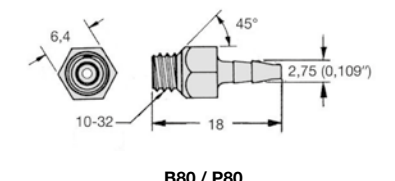
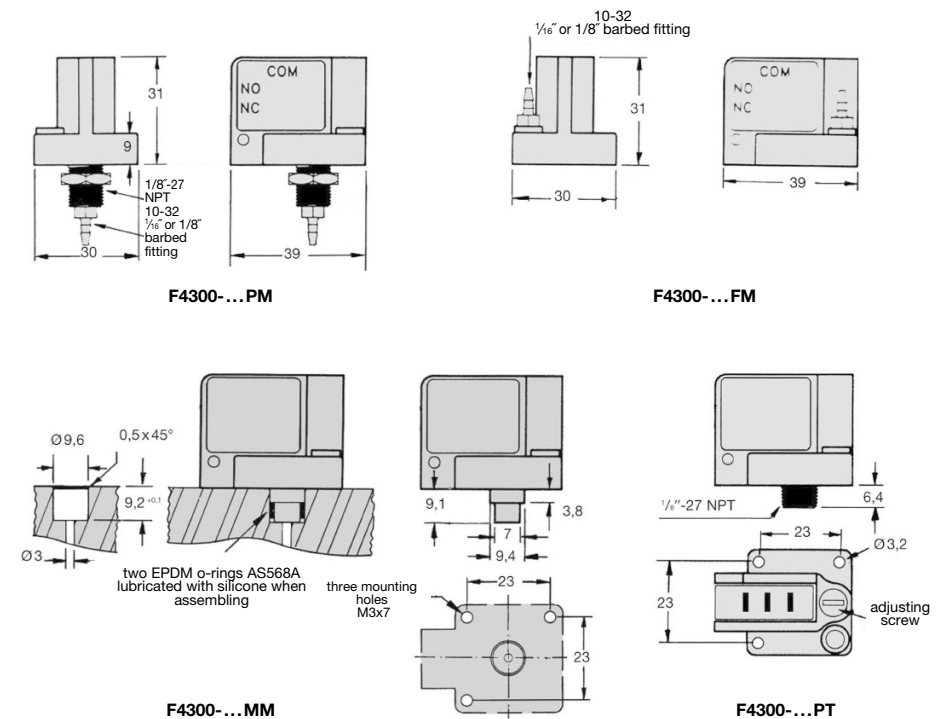
Description	Contact load	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
	max. A	mbar	mbar	max. bar	bar	

Pressure / vacuum switch, low hysteresis	Contact load	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
pressure switch	3	7	14	2	0.014 ... 0.14	F4300- 2PT
	4	14	24	2	0.035 ... 0.35	F4300- 5PT
	4	30	41	3	0.035 ... 1.0	F4300- 15PT
	4	40	70	4	0.035 ... 2.1	F4300- 30PT
	4	100	170	8	0.035 ... 4.2	F4300- 60PT
	4	140	240	8	0.070 ... 7.0	F4300-100PT
vacuum switch	4	10	20	-1	-0.007 ... -0.17	F4300-X 5PT
	4	20	34	-1	-0.015 ... -0.34	F4300-X10PT
	4	34	50	-1	-0.050 ... -1.00	F4300-X30PT



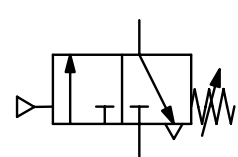
Special options, add or change the appropriate letter

flush mounting	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4300-...FM
panel mounting	barbed fitting made of nylon, Ø 1/16", Ø 2 mm	F4300-...PM
manifold mounting		F4300-...MM
barbed fittings	for FM and PM, made of nylon, Ø 1/16", Ø 2 mm	F4300-...B80 Stand.
	nylon, Ø 1/8", Ø 4 mm	F4300-...B85
	polysulphone, Ø 1/16", Ø 2 mm	F4300-...P80
	polysulphone, Ø 1/8", Ø 4 mm	F4300-...P85
gold contact		F4300-...1B
factory-set switchpoint	± 5%, indicate on order	F4300-...X
free of oil and grease	specially cleaned, suitable for oxygen	F4300-...L



* Product group

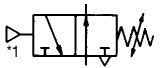
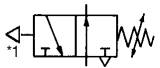
Description	Pilot-actuated pressure valve with precisely adjustable pilot setpoint. Perfect for applications which require intrinsic safety, pneumatic sequencing or pressure relief. Valves are normally opened or closed. The switch complies with FDA regulations and is suitable for water and food products.		
Media	5 µm filtered compressed air		
Pressure valve	3-port/2-way air-assisted servo valve with exhaust to atmosphere, NO or NC, made of nylon		
	Supply pressure:	1.4...8 bar, untapped exhaust	
	Air consumption:	max. 0.3 l/min at 2 bar supply pressure or max. 0.7 l/min at 7 bar	
	Pneumatic connection:	quick connector for hose external diameter of 4 mm (5/32")	
	Flow rate:	70 l/min at 7 bar, nominal size DN 0.2, K _v = 0.05	
	Switching time:	64 ms at 6 bar supply pressure	
Accuracy	Pressure switch:	at supply pressure variation of 0.7 bar: < 7 mbar pressure deviation	
	Vacuum switch:	at supply pressure variation of 0.3 bar: < 3 mbar pressure deviation	
	Repeatability:	± 2% FS	
Temperature range	4 °C to 60 °C / 40 °F to 140 °F		
Material	Body:	polysulphone	
	Diaphragm:	polyurethane	
	Mounting position	any	
	Spring:	stainless steel	
	Media non-contact parts:	nylon, carbon fibre nylon, acetal	



70 ... 350 mbar / 7 bar
-30 ... -170 / -850 mbar

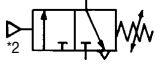
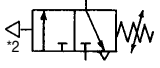
Switches
12

Description	Supply pressure of switching valve	Hysteresis typical	Hysteresis max.	Over-pressure max. bar	Measurement range bar	Order number
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Switch with pneumatic output, NO	1/8" NPT male, supply pressure 1.4...8 bar		PP / VP700			
 pressure switch	1.4 ... 8 bar	15	30	2	0.07 ... 0.35	PP700- 5PT
			20	4	0.07 ... 1.0	PP700- 15PT
	NO	20	70	4	0.07 ... 2.1	PP700- 30PT
		35	140	8	0.20 ... 4.2	PP700- 60PT
		50	240	8	0.35 ... 7.0	PP700-100PT
 vacuum switch	1.4 ... 8 bar	15	35	-1	-0.03 ... -0.17	VP700- 5PT
			20	-1	-0.03 ... -0.34	VP700- 10PT
	NO	20	70	-1	-0.07 ... -0.85	VP700- 30PT
		35				



PP/VP700-...PT

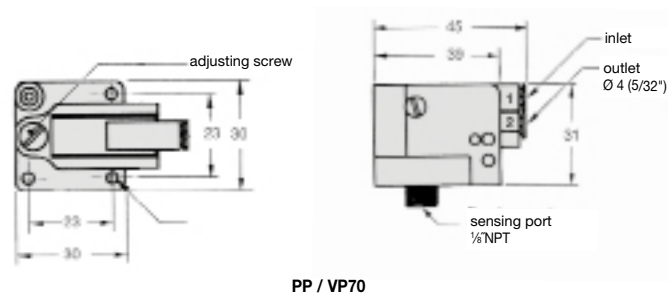
Switch with pneumatic output, NC	1/8" NPT male, supply pressure 1.4...8 bar		PP / VP701			
 pressure switch	1.4 ... 8 bar	15	30	2	0.07 ... 0.35	PP701- 5PT
			20	4	0.07 ... 1.0	PP701- 15PT
	NC	20	70	4	0.07 ... 2.1	PP701- 30PT
		35	140	8	0.20 ... 4.2	PP701- 60PT
		50	240	8	0.35 ... 7.0	PP701-100PT
 vacuum switch	1.4 ... 8 bar	15	35	-1	-0.03 ... -0.17	VP701- 5PT
			20	-1	-0.03 ... -0.34	VP701- 10PT
	NC	20	70	-1	-0.07 ... -0.85	VP701- 30PT
		35				



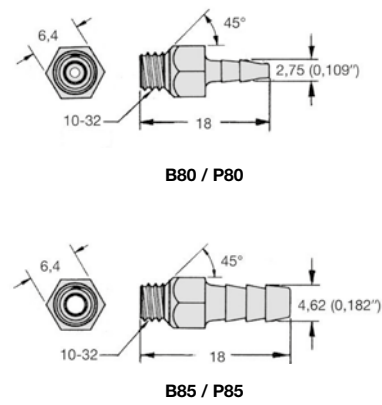
PP/VP701-...FM

Special options, add or change the appropriate letter

flush mounting	barbed fitting made of nylon,	Ø 1/16", Ø 2 mm	.P70-... FM
panel mounting	barbed fitting made of nylon,	Ø 1/16", Ø 2 mm	.P70-... PM
manifold mounting			.P70-... MM
barbed fitting	for FM and PM,	nylon, Ø 1/16", Ø 2 mm	.P70-... B80 Stand.
		nylon, Ø 1/8", Ø 4 mm	.P70-... B85
		polysulphone, Ø 1/16", Ø 2 mm	.P70-... P80
		polysulphone, Ø 1/8", Ø 4 mm	.P70-... P85
free of grease and oil	specially cleaned, suitable for oxygen		.P70-... L



PP / VP70




B80 / P80

B85 / P85

*1 only output signal in the absence of input signal (positive pressure, vacuum)
*2 no output signal in the absence of input signal (positive pressure, vacuum)

* Product group

PDF CAD
www.aircom.net

 **Order example:**
PP700-5PT

PRESSURE TRANSDUCER

DESCRIPTION	PRESSURE RANGE bar	CONNECTION thread	DEVICE	PAGE
for gases and liquids, also vacuum	0 ... 50 mbar / 1000 bar	G $\frac{1}{8}$ a - G $\frac{1}{2}$ a	D2	13.02
for high temperature, accurate to 0.1%	0 ... 50 mbar / 1000 bar	G $\frac{1}{4}$ m and G $\frac{1}{2}$ m	DA	13.04
for differential pressure, also vacuum	0 ... 1 mbar / 10 bar	G $\frac{1}{8}$	D5	13.05
elekt. signal with pressure indicator	-1 ... 1 mbar / 10 bar	G $\frac{1}{8}$ a	DSB/DSC	13.06



13

Transducer



13

Description

Media

Supply voltage

Electrical connector

Output signal

Repeatability

Temperature sensitivity

Ambient temperature

Media temperature

Shock resistance

Material

The operating pressure is converted into a proportional, electrical signal by a ceramics stainless steel pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal. compressed air, natural gases or liquids

12-33 V DC residual ripple 5%, with reverse voltage protection, max. current consumption 4 mA

plug M12x1, 4-pin, with coupling socket **Protection class** IP67 according to DIN EN60529

4-20 mA: max. power consumption 260 mW 0-10 V: max. power consumption 50 mW

< 0,3% v.E **Long-term stability** < 0,3% v.E

< 0,2% v.E **Vibration resistance** 20 g at 15-2000 Hz

from -30 °C to 85 °C

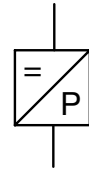
from -40 °C to 125 °C

100 g (11 ms)

Body: Stainless steel 316L, mat. no. 1.4404 O-Ring: FKM, optionally EPDM

Coupling socket: polyacrylamide 50% GF UL 94 V-0 Measuring cell: Stainless steel (bar areas)

ceramics AL₂O₃ (mbar/absolute pressure areas)



**accurate to 0.3%
compressed air or liquids**

Dimensions			Over-pressure	Under-pressure	Measurement range	Oder number
B	Ø	SW	max. bar	max. bar	bar	(4-20 mA)
mm	mm	mm				

Miniature

G $\frac{1}{4}$ male stainless steel, for compressed air, natural gases or liquids, with angular coupling socket

D2

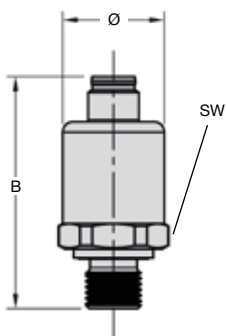
55	24	24	-1	3,0	-1 ... 0 bar	D2A-V00
				3,0	-1 ... 1 bar	D2A-V01
				4,8	-1 ... 1,5 bar	D2A-V02
				7,5	-1 ... 2,5 bar	D2A-V03
				18	-1 ... 5 bar	D2A-V05
				30	-1 ... 9 bar	D2A-V09
				48	-1 ... 15 bar	D2A-V15
				75	-1 ... 24 bar	D2A-V24
				3,0	0 ... 1 bar	D2A-01
				4,8	0 ... 1,6 bar	D2A-02
				7,5	0 ... 2,5 bar	D2A-03
				12	0 ... 4 bar	D2A-04
				18	0 ... 6 bar	D2A-06
				30	0 ... 10 bar	D2A-10
				48	0 ... 16 bar	D2A-16
				75	0 ... 25 bar	D2A-25
				120	0 ... 40 bar	D2A-40
				180	0 ... 60 bar	D2A-60
				300	0 ... 100 bar	D2A-D1
				480	0 ... 160 bar	D2A-D2
				750	0 ... 250 bar	D2A-D3
				1200	0 ... 400 bar	D2A-D4
				1500	0 ... 600 bar	D2A-D6
				1500	0 ... 1000 bar	D2A-E1



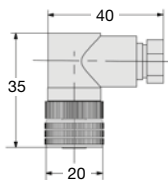
D2



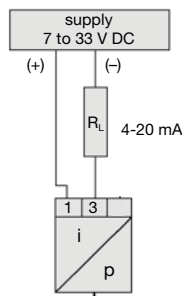
KM-A4-0



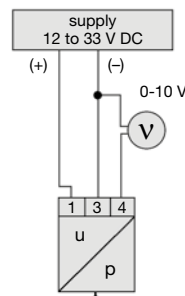
D2V-03



KM12-C4-0



D2A



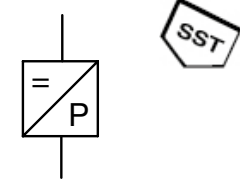
D2V

* Product group

PDF CAD
www.aircom.net



Description	The operating pressure is converted into a proportional, electrical signal by a ceramics stainless steel pressure transducer. After amplification the signal is monitored as an analogue voltage or current signal.		
Media	compressed air, natural gases or liquids		
Supply voltage	12-33 V DC	residual ripple 5%, with reverse voltage protection, max. current consumption 4 mA	
Electrical connector	plug M12x1, 4-pin, with coupling socket	Protection class IP67 according to DIN EN60529	
Output signal	4-20 mA: max. power consumption 260 mW	0-10 V: max. power consumption 50 mW	
Repeatability	< 0,3% v.E	Long-term stability < 0,3% v.E	
Temperature sensitivity	< 0,2% v.E	Vibration resistance 20 g at 15-2000 Hz	
Ambient temperature	from -30 °C to 85 °C		
Media temperature	from -40 °C to 125 °C		
Shock resistance	100 g (11 ms)		
Material	Body: Stainless steel 316L, mat. no. 1.4404	O-Ring: FKM, optionally EPDM	
	Coupling socket: polyacrylamide 50% GF UL 94 V-0	Measuring cell: Stainless steel (bar areas) ceramics AL ₂ O ₃ (mbar/absolute pressure areas)	



**accurate to 0.3%
compressed air or liquids**

Dimensions			Over-pressure	Under-pressure	Measurement range	Oder number
B	Ø	SW	max. bar	max. bar	bar	(4-20 mA)
mm	mm	mm				

Miniature	G $\frac{1}{4}$ male stainless steel, for compressed air, natural gases or liquids, with angular coupling socket					D2
55	24	24	-0,3	2,0	-50 ... 50 mbar	D2A-B5V
					-100 ... 100 mbar	D2A-C1V
					-200 ... 200 mbar	D2A-C2V
					-300 ... 300 mbar	D2A-C3V
					-100 ... 0 mbar	D2A-VC1
					0 ... 50 mbar	D2A-B5
					0 ... 100 mbar	D2A-C1
					0 ... 200 mbar	D2A-C2
					0 ... 300 mbar	D2A-C3
					0 ... 400 mbar	D2A-C4
					0 ... 600 mbar	D2A-C6



D2



KM-A4-0

Special options, add the appropriate letter or number

0-10 V output signal		D2V - . .
deviant measurement range to be indicated on order		D2 . - . XX
absolute pressure range measurement range from 0 ... 16 bar (Ceramic measuring cell)		D2 . - . . A
flush-mounted diaphragm fully welded		D2 . - . . F
G$\frac{1}{4}$ male connection thread		D2 . - . . 01
G$\frac{1}{2}$ male connection thread		D2 . - . . 04
NPT connection thread		D2 . - . . N
EPDM elastomers		D2 . - . . E
for oxygen specially cleaned from measurement range 1 bar		D2 . - . . 15

Accessories, enclosed

coupling socket 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5

* Product group



PRESSURE TRANSDUCER, 0.1% ACCURATE, FOR HIGH TEMPERATURES, ATEX

DA

Description	Pressure transducer in compact and robust stainless steel housing with piezo-resistive measuring element. Factory-made calibration of zero point and range is possible.
Media	compressed air, non-corrosive gases or liquids
Overpressure	max. 3x full scale, min. 3 bar, for DAA-D4/D6 max. 850 bar and DAA-E1 max. 1500 bar
Supply voltage	9...33 V DC at current signal, 15...30 V DC at voltage signal, reverse voltage protection, short-circuit-proof
ATEX version	only current signal 10...30 V DC, max. 1 W, as per EN 50.014 / EN 50.020: 1974 A1...A5, ATEX 2640-1
Electrical connector	plug according to DIN 43650, with coupling socket
Output signal	4...20 mA: max. power consumption 260 mW, 0...10 V: max. power consumption 50 mW
Linearity/Hysteresis	< 0.1% FS
Temperature sensitivity	Repeatability < 0.1% FS Long-term stability < 0.1% FS, < 0.5% FS at version up to 500 mbar
Response time	< 0.02% FS per °C / K, < 0.06% FS at version up to 2 bar per °C / K, at range of 0 °C to 70 °C / 32 °F to 158 °F
Vibration resistance	1 ms for 10...90% of pressure range
Mounting position	any
Material	Body/Diaphragm: stainless steel 316L, material no. 1.4435 O-rings: FKM, optionally EPDM

-1...1000 bar, accurate to 0.1 %
compressed air or gases

Dimensions			Accuracy	Measurement range	Order number	Measurement range	Order number
B	Ø	A/F	%	mbar/bar	4-20 mA	mbar/bar	4-20 mA

Pressure transducer				G½ male, SST, overpressure with angular coupling socket, 4-20 mA	DA
73	24	27	0.1	0... 50 mbar	DAA-B5H
				0... 100 mbar	DAA-C1H
				0... 160 mbar	DAA-C2H 0... 10 bar
				0... 250 mbar	DAA-C3H 0... 16 bar
				0... 400 mbar	DAA-C4H 0... 25 bar
				0... 600 mbar	DAA-C6H 0... 40 bar
				0... 1.0 bar	DAA-01H 0... 60 bar
				0... 1.6 bar	DAA-02H 0... 100 bar
				0... 2.5 bar	DAA-03H 0... 160 bar
				0... 4.0 bar	DAA-04H 0... 250 bar
				0... 6.0 bar	DAA-06H 0... 400 bar
					0... 600 bar
					DAA-D6H
					DAA-E1



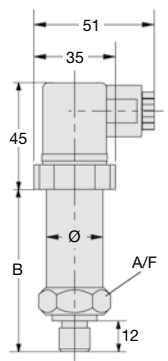
DAA-C1H



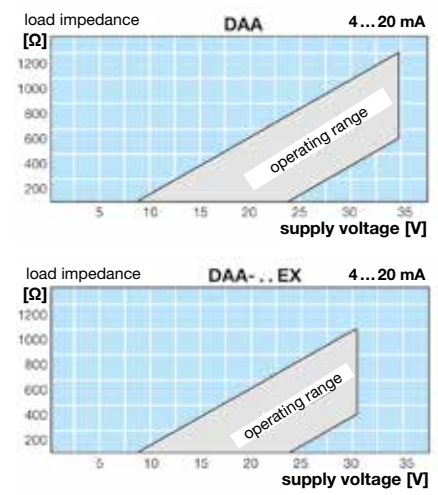
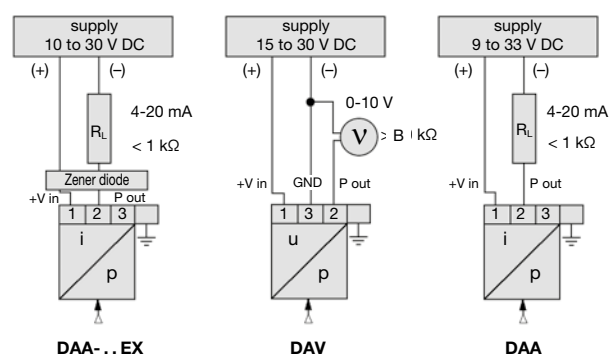
DA-..T

Special options, add the appropriate letter or number

0-10 V output signal	not for Ex ATEX version	DAV-..
deviant measurement range	to be indicated on order	DA-..XX
absolute pressure range	from 50 mbar on	DA-..A
vacuum	0...-1 bar	DA-..V
Ex-Atex version	Ex II 1G Ex ia IIC T6	4...20 mA only
0.25 % linearity	for 100 mbar up to 600 bar	DAA-..EX
	for 1000 bar	DA-..G
		DA-..E1G
-25 to +100 °C/-13 to 212 °F	media temperature compensated up to 85 °C / 185 °F / T4	DA-..S
-25 to +150 °C/-13 to 302 °F	media temperature compensated up to 85 °C / 185 °F / T3	DA-..T
flush-mounted diaphragm	connection thread G½, also for vacuum, up to 600 bar	DA-..F
G½ male	connection thread	DA-..04
EPDM elastomer		DA-..E
silicone-free oil-refill		DA-..X32

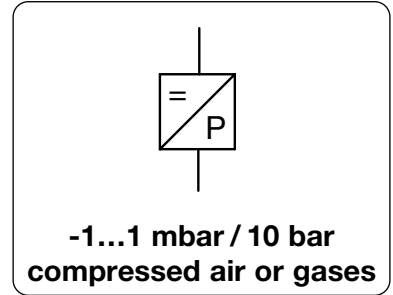


version	B (mm)
standard	73
standard 150 °C	100
Ex	122
Ex, T3	149



* Product group Order example: **DAA-B5H**

Description	The differential pressure between port H and L is converted into a proportional, electrical signal by a silicon pressure transducer, amplified and then monitored as an analogue voltage or current signal.		
Media	compressed air or non-corrosive gases		
Supply voltage	12...32 V DC, residual ripple 5%	with voltage protection	
Electrical connector	plug M12x1, 4-pin, optionally 4-wire connection cable		
Output signal	4...20 mA: max. power consumption 260 mW	1...6 V: max. power consumption 60 mW	
Linearity/Hysteresis	< 0.1 % FS typ.	< 0.25% FS	
Repeatability	< 0.1 % FS typ.	< 0.5 % FS	
Long-term stability	< 0.2 % FS typ.	< 0.5 % FS	
Temperature sensitivity	< 0.02% FS typ. per °C at 0 to 50 °C / 32 to 122 °F	< 0.16% FS typ. per °C at 0 to 50 °C	
Response time	1 ms for 10...90% of pressure range	Shock resistance 50 g	
Vibration resistance	10 g at 5...500 Hz	Protection class IP 67 with plug mounted	
Mounting position	upright	Temperature range -25 °C to 85 °C / -13 °F to 185 °F	
Material	Body: aluminium		



Dimensions		Differential pressure	Overpressure	Measurement range	Order number
B	Ø	max. bar	both ports max. bar	mbar/bar	
mm	mm				E*

Differential pressure transducer 4-20 mA				G½, 2-wire, with angular coupling socket	D5
86	40	0.25	0.5	0 ... 1 mbar -1 ... 1 mbar 0 ... 2 mbar -2 ... 2 mbar	D5A-A1*1 D5A-A1V D5A-A2*1 D5A-A2V
86	40	0.35	0.75	0 ... 5 mbar -5 ... 5 mbar 0 ... 10 mbar -10 ... 10 mbar	D5A-A5*1 D5A-A5V D5A-B1*1 D5A-B1V
86	40	0.35	3.5	0 ... 25 mbar -25 ... 25 mbar	D5A-B2 D5A-B2V*1
86	40	1.4	12	0 ... 70 mbar -70 ... 70 mbar 0 ... 350 mbar -350 ... 350 mbar	D5A-B7 D5A-B7V D5A-C3 D5A-C3V*1
86	40	2	12	0 ... 1 bar -1 ... 1 bar	D5A-O1 D5A-V1
86	40	4	12	0 ... 2 bar	D5A-O2*1
		10	12	0 ... 5 bar	D5A-O5*1
		12	20	0 ... 10 bar	D5A-10*1

Special options, add the appropriate letter or number

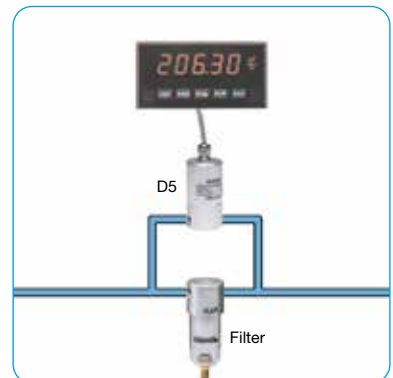
1-6 V	output signal, from measurement range 2 mbar > 10 mbar*1	D5V-...
1 m connection cable	fixed at the device	D5...L*1

Accessories, enclosed

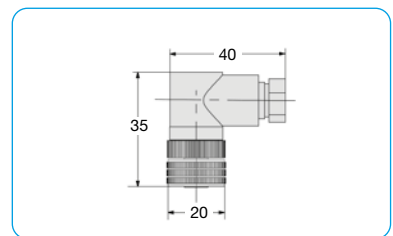
coupling socket 4-pin	M12x1, straight	KM12-A4-0	angular	KM12-C4-0
socket with cable	2 m, straight	KM12-A4-2	angular	KM12-C4-2
	5 m, straight	KM12-A4-5	angular	KM12-C4-5



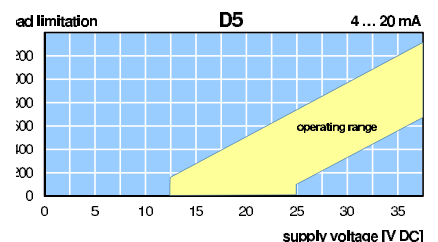
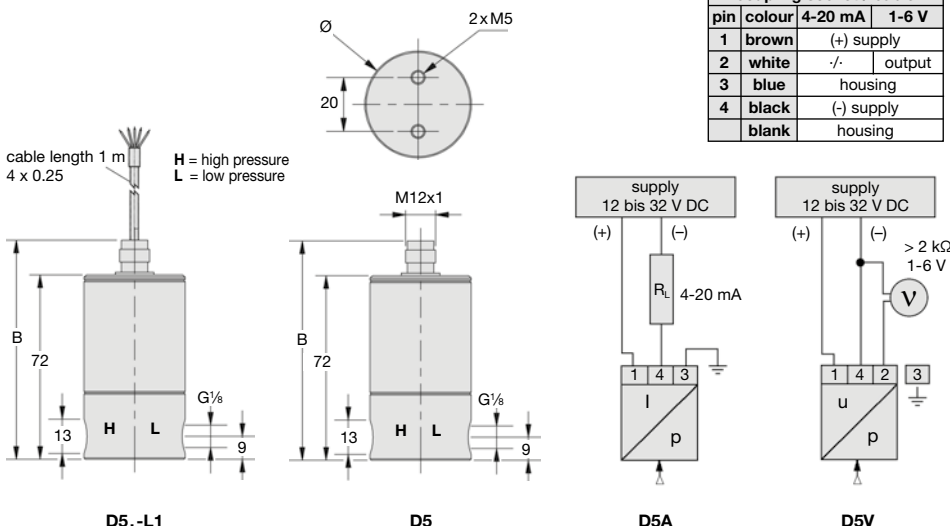
D5 D5-L1



example: filter control



KM12-C4-0



*1 Minimum order quantity 5 pieces

* Product group

Test chart: see chapter "Technical information"

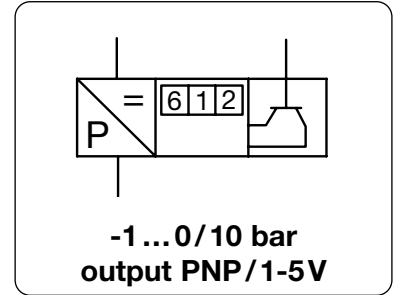
PDF CAD
www.aircom.net



Order example:
D5A-A1

PROGRAMMABLE VACUUM AND PRESSURE SWITCH TRANSDUCER WITH DISPLAY DSB / DSC

Description	Pressure to the unit is continuously monitored by a piezo-resistive sensor and converted into a proportional voltage signal. The signal is then amplified and delivered as a PNP signal. dry, lubricated or unlubricated compressed air or non-corrosive gases	
Media	12 ... 30 V DC, reverse voltage protection, current consumption max. 30 mA, output current max. 250 mA	
Supply voltage	Mode: hysteresis or window, switching point and hysteresis, NO or NC, closing or opening time, bar, psi, MPa, kg/cm ² etc. Display: current pressure, highest pressure, measurement errors	
Adjustment	DSB	2x PNP freely programmable as NO or NC, max. contact load 250 mA, short-circuit-proof
Switching output	DSB	1x PNP as at DSB and 1x analogue output signal 1...5 V, output impedance < 500 Ω
Switching output	DSC	adjustable from 0% to 100% of set switching point
Hysteresis		Linearity < 1% FS
Repeatability		Switching frequency 200 Hz
LED display		Mounting position any
Error display		Shock resistance 10 g
Certifications		Protection class IP 65
Temperature range		Connection thread: nickel-plated brass
Material	Body: ABS-PC plastic, shockproof	



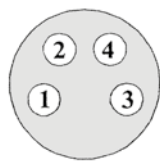
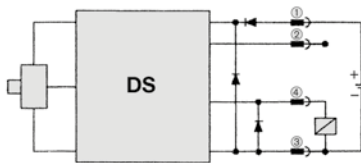
Dimensions	Digital display	Over-pressure	Output signal type	Measurement range	Order number
B	Ø	max. bar	PNP/analogue	max. mA	
mm	mm			bar	

Sensor pressure switch					connection thread G½ male, without coupling socket, M8x1, 4-pin	DS	
57	16	with	2	2x PNP	250	0 ... -1 -1 ... +1 0 ... 10 -1 ... 10 0 ... 12	DSB-V1 DSB-V2 DSB-10 DSB-V10 DSB-12
44	16	without	2	1x PNP/1x analog	250	0 ... -1 -1 ... +1 -1 ... 10	DSC-V1 DSC-V2 DSC-V10



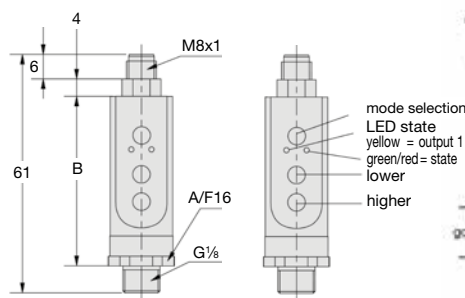
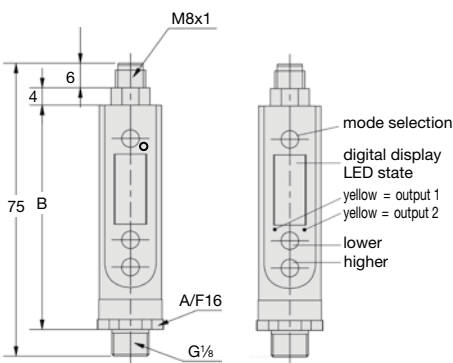
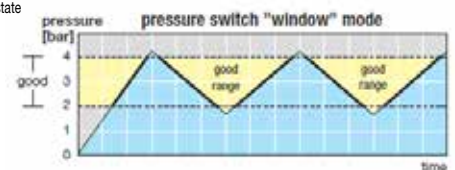
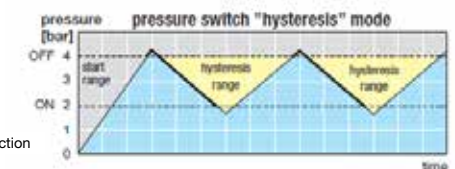
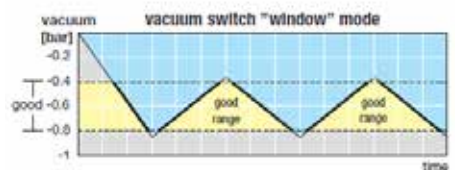
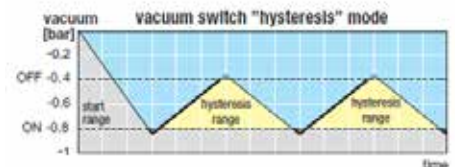
Accessories, enclosed

coupling socket	M8x1, 4-pin with 5 m cable	straight	KM8-A4-5
		angular	KM8-C4-5



PIN configuration DIN EN 50044		
pin	colour	configuration
1	brown	24 V DC (+)
2	white	outlet 2 / analog
3	blue	24 V DC (-)
4	black	outlet 1 / digital

PIN configuration according to DIN EN 50044



* Product group

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Order example:
DSB-V1

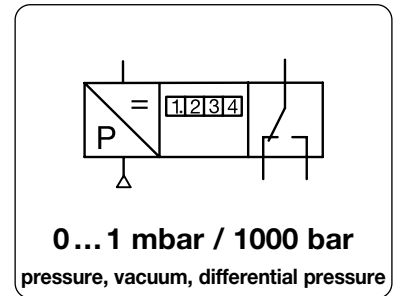
MEASURING DEVICES

	DESCRIPTION	PRESSURE RANGE	CONNECTION	DEVICE	PAGE
		bar	thread		
DIGITAL DISPLAY	mounting, auch ext. Sensor	0 ... 1 mbar / 10 bar	4 mm tube	MKA	14.02
	portable, hand-operated press. gauge	0 ... 1 mbar / 10 bar	4 mm tube	MHA	14.03
ANALOGUE DISPLAY	mounting, front ring	-1... 0 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	ME	14.04
	mounting, triangular bezel	-1... 0 / 25 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MF	14.04
	male thread, Ø 23 mm	0 ... 4 / 16 bar	M5 and G $\frac{1}{8}$	MA	14.05
	male thread, Ø 40 mm	0 ... 1 / 16 bar	G $\frac{1}{8}$	MA	14.05
	male thread Ø 50 mm	0 ... 1 / 60 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MA	14.05
	male thread, Ø 63 mm	0 ... 60 mbar / 100 bar	G $\frac{1}{4}$	MA	14.05
STAINLESS STEEL	male thread, Ø 40 mm	0 ... 2.5 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	MS	14.06
	male thread, Ø 50 mm	0 ... 2.5 / 60 bar	G $\frac{1}{4}$	MS	14.06
	male thread, Ø 63 mm	0 ... 25 mbar / 60 bar	G $\frac{1}{4}$	MS	14.06



14

Description	Suitable for measurement of positive pressure, vacuum or differential pressure.
Media	compressed air or non-corrosive gases
Supply voltage	15...30 V DC standard, optionally 230 V AC \pm 10%
Electrical connector	plug with 7-pin screw terminal for cable cross-sectional area 0.14...1.5 mm ²
Pneumatic connection	P+ : pos. pressure P- : vacuum P+/P- : differential pressure, the higher pressure is to be connected at P+ plug nipple up to 1 bar, sleeve with union nut from 2 bar on, each for hose internal diameter of \varnothing 4 mm
Display	3½-digit LCD display, max. \pm 1999, 14 mm tall, black numbers
Output signal	0...10 V, impedance > 10 k Ω , optionally 4...20 mA, impedance < 500 Ω
Linearity	see chart, optionally 0.2% FS
Long-term stability	< 0.1% FS per year at > 25 mbar, < 1% FS per year at > 5 mbar, < 2% FS per year at < 5 mbar range
Temperature sensitivity	see chart, at 0 °C to 50 °C / 32 °F to 122 °F
Response time	100 ms
Temperature range	-20 °C to 50 °C / -4 °F to 122 °F
Material	Housing: aluminium
	Overpressure see chart
	Hysteresis < 0.1% FS
	Repeatability see chart
	Resolution 1 digit
	Protection class IP 54

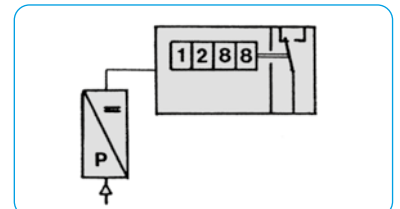


Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
% FS	% FS	% FS	max. bar	mbar/bar	

Digital gauge	for compressed air, measurement of positive pressure, vacuum and differential pressure, 24 V DC, outlet signal 0...10 V, 3½-digit display				MKA
1.0	4.0	1.0	0.25	0... 1 mbar	MKA-A1
0.3	2.5	0.8	0.25	0... 2.5 mbar	MKA-A2
0.3	1.2	0.8	0.25	0... 5 mbar	MKA-A5
0.2	1.0	0.8	0.25	0... 10 mbar	MKA-B1
0.1	1.0	0.7	0.35	0... 20 mbar	MKA-B2
0.1	1.0	0.7	0.35	0... 50 mbar	MKA-B5
0.1	1.0	0.5	0.35	0... 100 mbar	MKA-C1
0.1	1.0	0.5	0.75	0... 200 mbar	MKA-C2
0.1	1.0	0.5	1.5	0... 500 mbar	MKA-C5
0.1	1.0	0.5	3.0	-1... 1 bar	MKA-V1
0.1	1.0	0.5	3.0	0... 1 bar	MKA-01
0.1	1.0	0.5	4.0	0... 2 bar	MKA-02
0.1	2.0	0.5	10	0... 8 bar	MKA-08
0.1	2.0	0.5	12	0... 10 bar	MKA-10
0.1	2.3 mbar	1 mbar	3.3	0.7... 1.1 bar _{abs}	MKA-S1

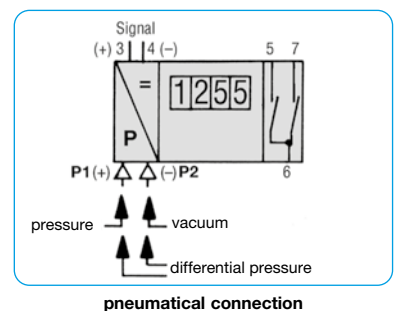
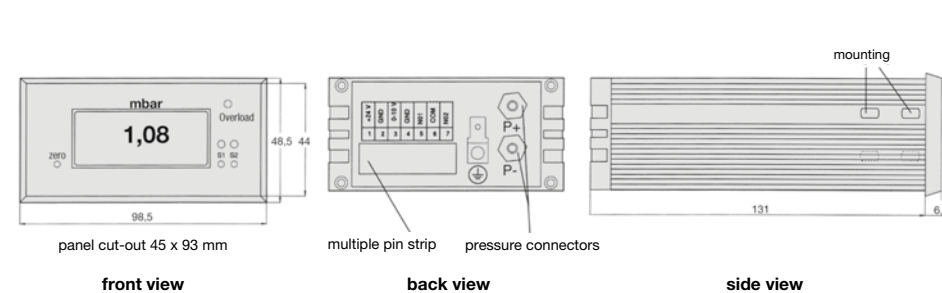
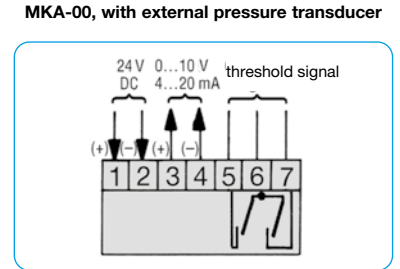


Digital gauge for external sensor	0...10 V input signal, supply voltage 24 V DC, 3½-digit display			MKA*2
96	48	137	e.g. for pressure transducer	MKA-00



Special options, add the appropriate letter

two limit switches	with LED display, 230 V AC, 1 A, hysteresis 2% FS	MKA-...S
linearity < 0.2% FS	from 100 mbar	MKA-...B
4...20 mA output signal	impedance < 500 Ω	MKA-...A
4...20 mA input signal	internal resistance 100 Ω	MKA-00A
P _a indication	< 20 mbar: indication P _a > 20 mbar: indication kP _a	MKA-...P
230 V AC	supply voltage	MKA-...V
RS232*1	interface, 8 bit without parity	MKA-...R
deviant measurement range	to be indicated on order	MKA-XX



*1 Handshake on/off, Baudrate 9600

*2 indicate pressure range by order

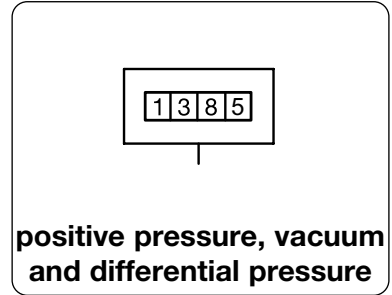
* Product group

Calibration or test chart: see chapter "Technical Information"
Pressure transducers: see chapter "Pressure Transducers"

PDF CAD
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Order example:
MKA-A1

Description	A piezo-resistive pressure sensor converts the input pressure into a digital electrical signal, which is displayed on the LCD. On-off switch is located at the side of the plastic housing.	
Media	compressed air or non-corrosive gases	Overpressure see chart
Pneumatic connection	P+ : pos. pressure P- : vacuum P+/P- : differential pressure, the higher pressure to be connected at P+ plug nipple up to 1 bar, sleeve with union nut from 2 bar on, each for hose internal diameter of Ø 4 mm	
Voltage supply	9 V battery, 2.5 mA, type 6F22, PP3 or similar	
Display	3½-digit LCD display, optionally 0...1 V	max. ± 1999, 12 mm tall, black numbers, red LED lights up at overpressure, then measurement is faulty
Output signal	low battery display at low voltage,	Impedance: > 2 kΩ terminal for 2.5 mm 2-pin jack plug
Zero point	All devices have a potentiometer for rough adjustment of zero point at the side of the housing.	
Linearity	see chart, optionally 0.2% FS	Hysteresis < 0.1% FS
Long-term stability	< 0.1% FS per year at > 20 mbar,	< 2% FS per year at < 20 mbar
Temperature sensitivity	see chart, at 0 to 50 °C / 32 to 122 °F	Repeatability see chart
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	Resolution 0,05% FS
Material	Housing: plastic	Protection class IP 54



Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
% FS	% FS	% FS	max. bar	mbar/bar	E*

Hand-operated gauge for compressed air, measurement of positive pressure, vacuum and differential pressure, with battery, 3½-digit display

Repeatability	Temperature error	Linearity error	Over-pressure	Measurement range	Order number
1.0	4.0	1.0	0.25	0... 1 mbar	MHA-A1
0.3	2.5	0.8	0.25	0... 2 mbar	MHA-A2
0.3	1.2	0.8	0.25	0... 5 mbar	MHA-A5
0.2	1.0	0.8	0.25	0... 10 mbar	MHA-B1
0.1	1.0	0.7	0.35	0... 20 mbar	MHA-B2
0.1	1.0	0.7	0.35	0... 50 mbar	MHA-B5
0.1	1.0	0.5	0.35	0... 100 mbar	MHA-C1
0.1	1.0	0.5	0.75	0... 200 mbar	MHA-C2
0.1	1.0	0.5	1.5	0... 500 mbar	MHA-C5
0.1	1.0	0.5	3.0	-1... 1 bar	MHA-V1
0.1	1.0	0.5	3.0	0... 1 bar	MHA-01
0.1	1.0	0.5	4.0	0... 2 bar	MHA-02
0.1	2.0	0.5	10	0... 8 bar	MHA-08
0.1	2.0	0.5	12	0... 10 bar	MHA-10
0.1	2.3 mbar	1 mbar	3.3	0.7... 1.1 bar _{abs}	MHA-S1



MHA

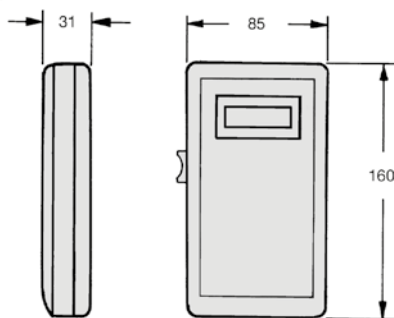
Gauges
14

Special options, add the appropriate letter

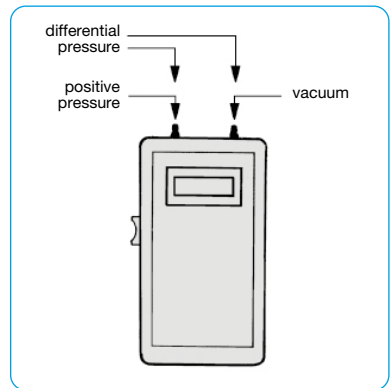
linearity < 0.2% FS	from 100 mbar on	MHA- . .B
0-1 V output signal	at electrical connector	MHA- . .N
P _a indication	< 20 mbar: indication P _a > 20 mbar: indication kP _a	MHA- . .P
zero point fine adjustment	in the front	MHA- . .E
deviant measurement range	to be indicated on order	MHA-XX

Accessories, enclosed

protective bag	for belt attachment	MHT
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MHA

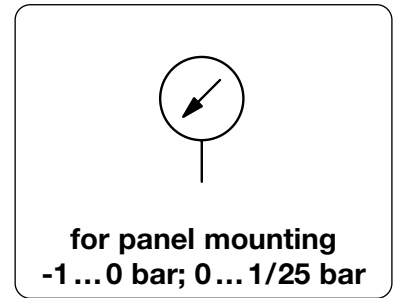


connection diagram

* Product group



Description	Bourdon tube gauge, dust-protected, splash-proof, antirust, oil-resistant and silicone-free.	
Media	all media compliant with brass, e.g. compressed air, non-corrosive gases or fluids	
Scale	white background with black bar scale and red psi scale	
Indicator accuracy	1.6% FS on gauge Ø 63 mm 2.5% FS on gauge Ø 40 mm and Ø 50 mm	
Threaded connection	G $\frac{1}{8}$ or G $\frac{1}{4}$, on central back	
Temperature range	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F	
Material	Housing: ABS plastic Lens: acrylic glass	Connection/Inner parts: brass



Dimensions				Principle	Indicator accuracy	Display range	Order number	Order number	B*
A	B	C	D	R: Bourdon tube K: capsule tube	% FS	bar	G $\frac{1}{8}$	G $\frac{1}{4}$	

Gauge with mounting flange							chrome-plated	ME40	ME50/63
40	61	51	46	R	2.5	0 ... 2.5 0 ... 4 0 ... 6 0 ... 10		ME4001-02 ME4001-04 ME4001-06 ME4001-10	
50	71	61	52	R	2.5	0 ... 6 0 ... 10 0 ... 16			ME5002-06 ME5002-10 ME5002-16
63	85	75	53	R	1.6	-1 ... 0 vac. 0 ... 4 0 ... 6 0 ... 10 0 ... 16			ME6302-00 ME6302-04 ME6302-06 ME6302-10 ME6302-16

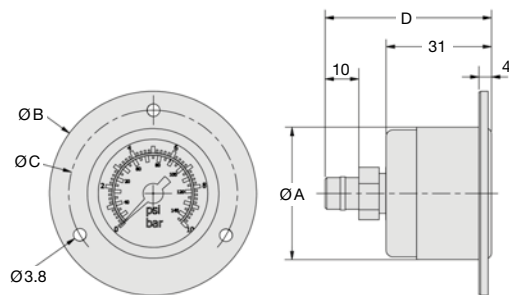


ME5002-10

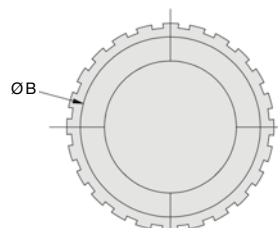
Gauge with triangular bezel							chrome-plated with nut	MF40	MF50/63
40	43	-	-	R	2.5	0 ... 2.5 0 ... 4 0 ... 6 0 ... 10		MF4001-02 MF4001-04 MF4001-06 MF4001-10	
50	55	-	-	R	2.5	-1 ... 0 vac. 0 ... 6 0 ... 10 0 ... 16			MF5002-00 MF5002-06 MF5002-10 MF5002-16
63	68	-	-	R K R	1.6	-1 ... 0 vac. 0 ... 0.25 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25			MF6302-00 MF6302-C2 MF6302-04 MF6302-06 MF6302-10 MF6302-16 MF6302-25



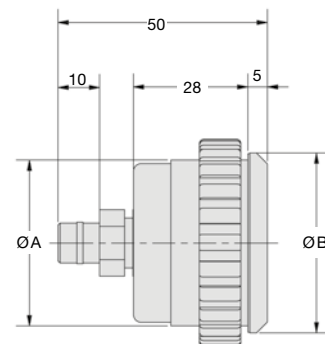
MF6302-10



ME
gauge with mounting flange



MF
gauge with triangular bezel



* Product group

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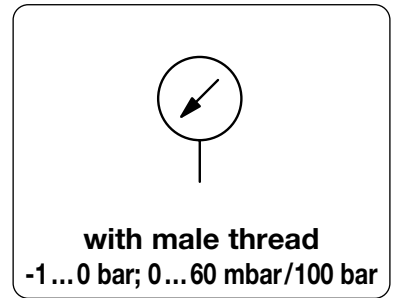


Order example:
ME4001-02

PRESSURE GAUGE WITH MALE THREAD

MA

Description	Pressure gauge with Bourdon tube or capsule, dust-protected, splash-proof, antirust, oil-resistant and silicone-free. The capsule type gauge features an integrated restrictor against pressure peaks.		
Media	all media compliant with brass, e.g. compressed air, non-corrosive gases or fluids		
Scale	Bourdon tube gauge: white background with black bar scale and red psi scale capsule type gauge: white background with black mbar scale		
Indicator accuracy	1.6% FS on gauge Ø 63 mm 2.5% FS on gauge Ø 40 mm and Ø 50 mm, 4% FS on gauge Ø 23 mm		
Connection thread	G½ or G¼, on central back, M5 at gauge Ø 23 mm		
Temperature range	0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -20 °C / -4 °F		
Material	Housing: ABS plastic at Ø 40, Ø 50, Ø 63 mm nickel-plated brass at Ø 23 mm stainless steel 1.4301 at capsule gauge	Lens: acrylic glass Connection/Inner parts: brass Seal: NBR/Buna-N at capsule gauge	



Dimensions	Principle	Indicator accuracy	Display range	Order number	Order number
Ø A	R: Bourdon tube K: capsule tube	% FS	bar / mbar	G½	M5 / G¼
mm					

Pressure gauge, round		male thread on central back		MA23/40/50	MA23/50/63
23	R	4	0 ... 4 0 ... 6 0 ... 10 0 ... 12 0 ... 16	MA2301-04 MA2301-06 MA2301-10 MA2301-12 MA2301-16	MA23M5-04 MA23M5-06 MA23M5-10 MA23M5-12 MA23M5-16
40	R	2.5	0 ... 1 0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16	MA4001-01 MA4001-02 MA4001-04 MA4001-06 MA4001-10 MA4001-16	
50	R	2.5	0 ... 1 0 ... 2.5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60	MA5001-01 MA5001-02 MA5001-04 MA5001-06 MA5001-10 MA5001-16	MA5002- 01 MA5002- 02 MA5002- 04 MA5002- 06 MA5002- 10 MA5002- 16 MA5002- 25 MA5002- 60
63	K	1.6	0 ... 60 mbar 0 ... 160 mbar 0 ... 250 mbar 0 ... 400 mbar		MA6302- B6 MA6302- C2 MA6302- C3 MA6302- C4 MA6302- C6
63	R	2.5	0 ... 0,6 bar		
63	R	1.6	-1 ... 0 vac. 0 ... 1 0 ... 2,5 0 ... 4 0 ... 6 0 ... 10 0 ... 16 0 ... 25 0 ... 60 0 ... 100		MA6302- 00 MA6302- 01 MA6302- 02 MA6302- 04 MA6302- 06 MA6302- 10 MA6302- 16 MA6302- 25 MA6302- 60 MA6302-100



MA23M5-10



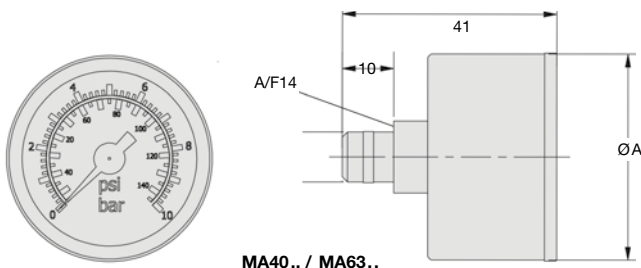
MA5001-16



MA6302-10

Special options, add the appropriate number

for oxygen specially cleaned MA15



* Product group

PDF CAD
www.aircom.net

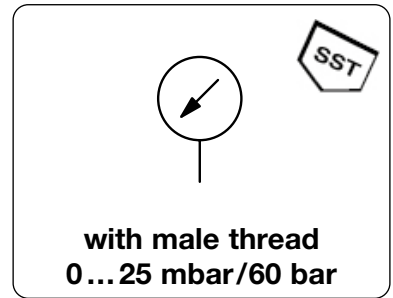


Order example:
MA2301-04

STAINLESS STEEL PRESSURE GAUGE WITH MALE THREAD

MS

Description	Pressure gauge with Bourdon tube or capsule, dust-protected and splash-proof. The capsule type gauge features an integrated restrictor against pressure peaks.	
Media	all media compliant with stainless steel, e.g. compressed air, gases or fluids	
Scale	Bourdon tube gauge: white background with black bar scale and red psi scale capsule type gauge: white background with black mbar scale	
Indicator accuracy	1.6% FS	Connection thread G $\frac{1}{8}$ or G $\frac{1}{4}$, on central back
Temperature range	medium	0 °C to 100 °C / 32 °F to 212 °F for capsule type gauge 0 °C to 200 °C / 32 °F to 392 °F for Bourdon tube gauge for appropriately conditioned compressed air down to -40 °C / -40 °F
	ambient	max. 60 °C / 140 °F
Material	Housing:	stainless steel 1.4301
	Inspection glass:	laminated safety glass at MS63, single strength glass at MS40 and MS50
	Connection:	stainless steel 1.4571 Seal: FKM at capsule gauge

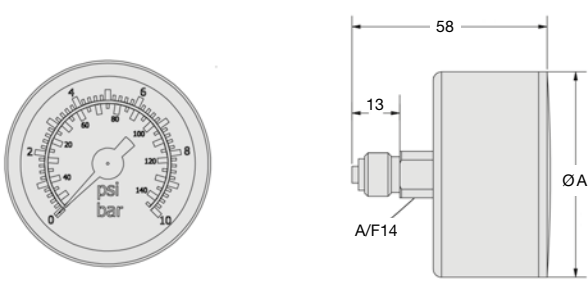


Dimensions	Principle	Indicator accuracy	Display range	Order number	Order number
\varnothing A	R: Bourdon tube	% FS	bar/mbar	G $\frac{1}{8}$	G $\frac{1}{4}$
mm	K: capsule tube				

Pressure gauge		male thread on central back	MS40	MS40/50/63
40	R	1.6	0 ... 2.5	MS4001-02
			0 ... 4	MS4001-04
			0 ... 6	MS4001-06
			0 ... 10	MS4001-10
			0 ... 16	MS4001-16
50	R	1.6	0 ... 2.5	MS5002-02
			0 ... 4	MS5002-04
			0 ... 6	MS5002-06
			0 ... 10	MS5002-10
			0 ... 16	MS5002-16
			0 ... 25	MS5002-25
63	K	1.6	0 ... 25 mbar	MS6302-B2
			0 ... 60 mbar	MS6302-B6
			0 ... 100 mbar	MS6302-C1
			0 ... 160 mbar	MS6302-C2
			0 ... 250 mbar	MS6302-C3
			0 ... 400 mbar	MS6302-C4
			0 ... 600 mbar	MS6302-C6
63	R	1.6	0 ... 1	MS6302-01
			0 ... 2.5	MS6302-02
			0 ... 4	MS6302-04
			0 ... 6	MS6302-06
			0 ... 10	MS6302-10
			0 ... 16	MS6302-16
			0 ... 25	MS6302-25
0 ... 60	MS6302-60			



Special options, add the appropriate number
for oxygen specially cleaned MS15



MS

* Product group

Gauges
14

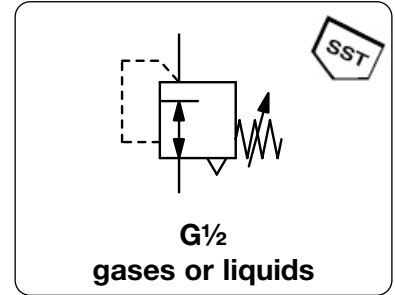
STAINLESS STEEL DEVICES

	DESCRIPTION	PRESSURE RANGE bar	CONNECTION thread	DEVICE	PAGE
PRESSURE REGULATOR	Midi-Series	0.2 ... 4.0 / 17	G½	R10-S	15.02
	Mini-Series	0.2 ... 1.8 / 9	G¼	R364-S	15.03
	for clean room enviroment, precise	0.05 ... 2 / 4	M5 and G½	RE1	15.04
	precise, also FDA	0.02 ... 1.5 / 10	G¼ and G½	R3150	15.05
	many variations, also FDA	0.1 ... 1.5 / 50	G½ - DN100	R3000	15.06
	with flange	0.2 ... 3 / 16	DN15 - DN50	REF	15.10
	also FDA	0.2 ... 3 / 16	G¼ - G2	REA	15.11
	Tri-Clamp	0.2 ... 1,5 / 8	ASME-BPE ½" - 1½"	RTC	15.12
	Tri-Clamp, low pressure	0.2 ... 1,5 / 8	ASME-BPE ½" - 1½"	RTCN	15.13
low pressure	0.005 ... 0.045 / 1.5	G¼ - G2	R3100	15.14	
VOLUME BOOSTER	for many gases	1 ... 15 / 60	G¼ - G2	R3000-J	15.19
	precise	0 ... 10	¾"NPT u. 1"NPT	R601	15.21
	with ratio	3 ... 42 / 104	½"NPT and ¾"NPT	RH3-JS1	6.14
	pressure reducer	0.1 ... 24 / 99	G1	RLE	6.16
BACK PRESSURE REG.	for many gases	0.1 ... 1.5 / 50	G½ - G2	D3000	15.23
	low pressure	0.005 ... 0.045 / 1.5	G¼ - G2	D3100	15.26
HIGH PRESSURE REG.	for many gases	1 ... 8 / 200	G¼ - G1¼	RH3000	15.17
	regulator P1: 241 bar	0 ... 2 / 7	⅛"NPT and ¼"NPT	RHO-S	4.15
	regulator P1: 690 bar	0.3 ... 35 / 414	¼"NPT	HP300-S	4.17
	regulator P1: 414 bar	0.7 ... 104 / 172	¼"NPT	HP400-S	4.17
	regulator P1: 300 bar	0.1 ... 1.7 / 35	¼"NPT	HP500-S	4.18
	regulator P1: 260 bar	0.7 ... 21 / 104	½"NPT and ¾"NPT	RH3-S	4.19
differential pressure regulator	0 ... 1 / 24	½"NPT and ¾"NPT	RH44-S	15.22	
FOR PHARMACY	and food	0.25 ... 0.46 / 53	G¼ - G2½	R70	www
	low pressure	0.005 ... 0.007 / 0.45	G¼ - G2½	R74	www
FRL SERVICE UNITS	FR, for many gases, also FDA	0.8 ... 1.5 / 50	G½ - G2	B3000	15.30
	filter, also FDA	max. 50	G½ - G2	F3000	15.34
	filter	max. 220	G¼ - G1	FH3	15.36
	lubricator	max. 50	G½ - G2	L3000	15.37
	FRL	0.5 ... 8 / 15	G½ - G2	C3002, C3003	15.38
	FR, Mini- and Midi-Series	0.2 ... 1.8 / 17	G¼ and G½	B548-S, B11-S	www
FRL, Mini- and Midi-Series	max. 21	G¼ and G½	C/F/L10-S	www	
PINCH VALVES	2/2-solenoid valve	max. 4	G¼ - G2	QE	15.40
MOUNTING FLANGES	single or mounted	up to PN100 / ANSI	G½ - G3	F / VS	15.41



15

Description	diaphragm-operated pressure regulator in small design
Media	compressed air, gases or liquids
Supply pressure	max. 21 bar
Adjustment	by plastic knob with snap-lock
Relieving function	relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 65 °C / 32 °F to 149 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F 0 °C to 80 °C / 32 °F to 176 °F for spring cage made of fiberglass or stainless steel
Material	Body: stainless steel 316 Spring cage: glass fibre-reinforced plastic Elastomer: FKM Inner valve: stainless steel 316



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

Stainless steel pressure regulator								supply pressure max. 21 bar	R10-S
60	124	35	relieving for compressed air	2.6	144	2400	G $\frac{1}{2}$	0.2 ... 4.0	R10-04BS
								0.3 ... 9.0	R10-04CS
								0.5 ... 17	R10-04DS
60	124	35	non-relieving for liquids	2.6	2.6	43	G $\frac{1}{2}$	0.2 ... 4.0	R10-04BSK
								0.3 ... 9.0	R10-04CSK
								0.5 ... 17	R10-04DSK



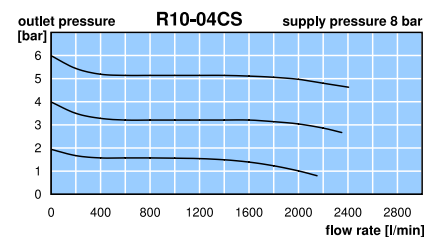
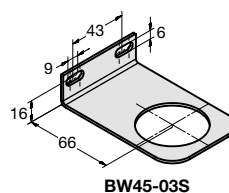
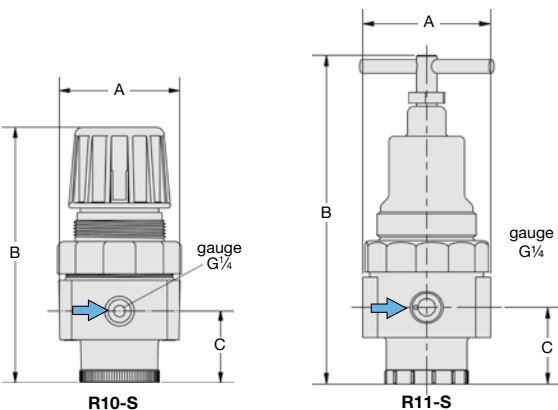
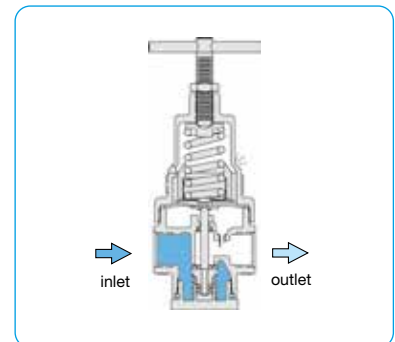
R10-S

Special options, add the appropriate letter

NPT	connection thread	R1. -0. . . N
spring cage made of SST	incl. SST-adjusting screw, total height= 154 mm	R11-04 . .

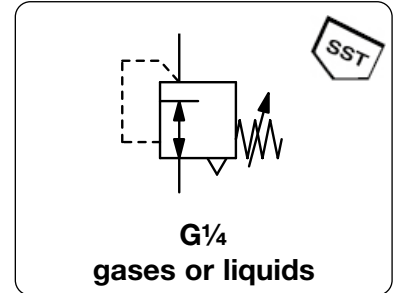
Accessories, enclosed

pressure gauge	Ø 50 mm, 0 ... *2 bar, G $\frac{1}{4}$	MS5002-..*2
mounting bracket		BW45-03S
mounting nut		M45X1,5S



*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

Description	diaphragm-operated pressure regulator in small design
Media	compressed air, gases or liquids
Supply pressure	max. 21 bar
Adjustment	by plastic knob with snap-lock, by hexagonal spindle at R354
Relieving function	relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 65 °C / 32 °F to 149 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
Material	Body: stainless steel 316 Spring cage: glass fibre-reinforced plastic at R364, stainless steel 316 at R354, optionally fibreglass at R364 Elastomer: FKM Inner valve: stainless steel 316



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

Stainless steel pressure regulator									supply pressure max. 21 bar	R364-S
35	75	13	relieving for compressed air	0.4	27	450	G $\frac{1}{4}$	0.2 ... 1.8	R364-02AS	
								0.2 ... 4.0	R364-02BS	
								0.3 ... 9.0	R364-02CS	
35	75	13	non-relieving for liquids	0.4	0,4	6	G $\frac{1}{4}$	0.2 ... 1.8	R364-02ASK	
								0.2 ... 4.0	R364-02BSK	
								0.3 ... 9.0	R364-02CSK	



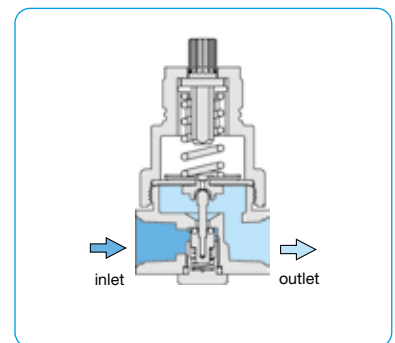
R364-S

Special options, add the appropriate letter

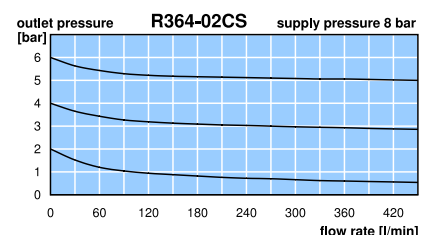
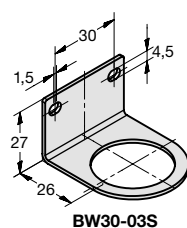
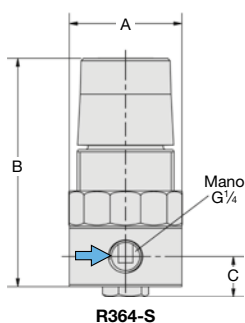
NPT	connection thread	R... -0... N
free of oil and grease	specially cleaned	R3.4-0... L
spring cage made of SST	incl. SST-adjusting screw, total height = 60 mm	R354-02...

Accessories, enclosed

pressure gauge	Ø 40 mm, 0... *2 bar, G $\frac{1}{4}$	MS4002-... *2
mounting bracket		BW30-03S
mounting nut	made of stainless steel	M30x1,5S
	made of plastic	M30x1,5K

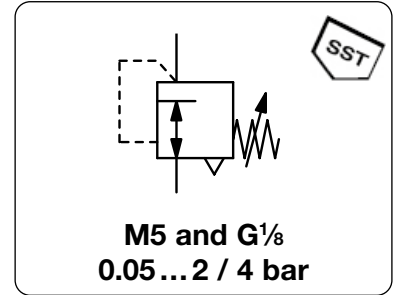


cross-section



*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

Description	Diaphragm pressure regulator made of stainless steel suitable for cleanroom environment and panel mounting.		
Media	compressed air or gases	Supply pressure	max. 10 bar
Accuracy	setting accuracy: < 0.3% FS	Repeatability:	< 1% FS
Air consumption	max. 0.5 l/min, subject to outlet pressure	The compressed air can be directly transmitted into the cleanroom without any piping.	
Adjustment	by plastic knob with snap-lock		
Relieving function	relieving		
Gauge port	M5 or G $\frac{1}{8}$ on both sides of the body, depending on connection thread, screw plugs supplied		
Clean room condition	Cleaned, assembled, inspected and sealed in a class 10,000 environment. All parts without oil use. HFC1416 ultrasonic cleaning of all fluid-contact parts.		
Temperature range	0 °C to 60 °C / 32 °F to 140 °F		
Material	Body: stainless steel 316, material no. 1.4436	Elastomer:	FKM
	Spring cage: PPS plastic	Valve seat:	PTFE



Dimensions			K _v -value (m ³ /h)	Flow rate		Connection thread M5/G	Pressure range bar	Order number
A	B	C		m ³ /h*1	l/min*1			

Precision pressure regulator							supply max. 10 bar, relieving, with internal air consumption	RE1
30	75	14	0,20	3.6	60	M5	0.05 ... 2	RE1-M5B
							0.10 ... 4	RE1-M5C
40	75	15	0,25	6	100	G $\frac{1}{8}$	0.05 ... 2	RE1-01B
							0.10 ... 4	RE1-01C



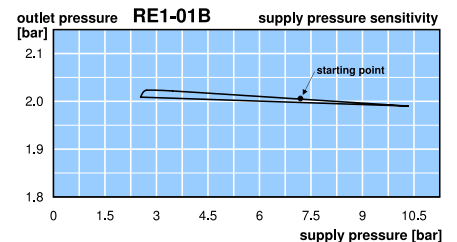
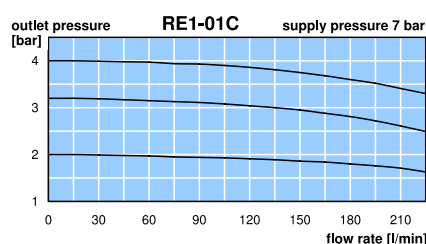
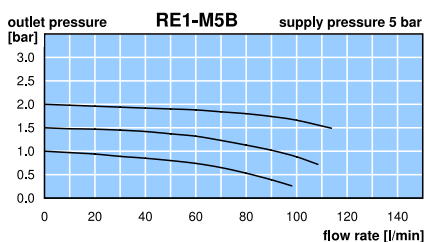
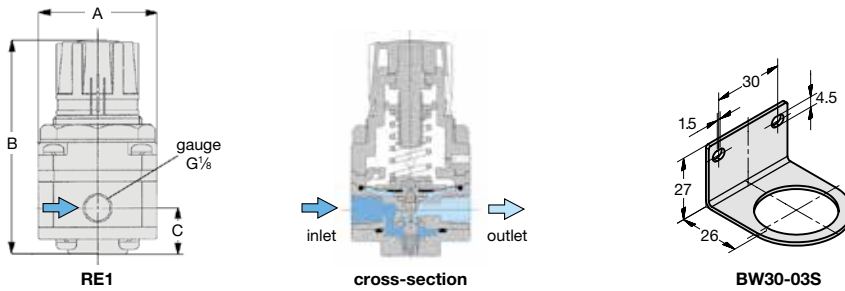
RE1-M5,
incl. mounting nut

Accessories, enclosed

mounting bracket mounting nut at the device **BW30-03S**



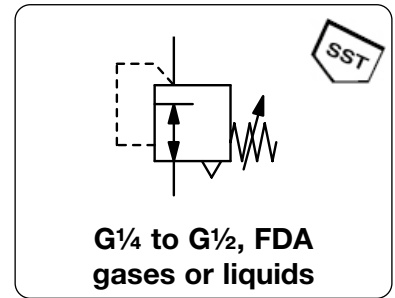
RE1-01,
incl. mounting nut



*1 at 7 bar supply pressure and 4 bar outlet pressure



Description	Diaphragm pressure regulator made of stainless steel in robust design. Pre-pressure compensated and independent of supply pressure fluctuation.		
Media	compressed air, gases or liquids		
Supply pressure	max. 20 bar		
Accuracy	setting accuracy: < 0.5% FS;	Repeatability:	< 1.5% FS
Air Consumption	without air consumption		
Adjustment	by adjusting screw, with lock nut		
Relieving function	relieving, optionally non-relieving		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C to 80 °C / 32 °F to 176 °F ,for appropriately conditioned compressed air down to -20 °C / -4 °F		
Material	Body: stainless steel 316L, W.-Nr. 1.4436	O-ring: FKM	Internal parts: stainless steel 302
	Diaphragm: NBR/Buna-N with PTFE coating		



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

Precision pressure regulator							supply pressure max. 20 bar, relieving	R3150
109	160	39	1.4	78	1300	G $\frac{1}{4}$	0.02 ... 1.5	R3150-02A
							0.10 ... 3.0	R3150-02B
							0.10 ... 8.0	R3150-02C
109	160	39	1.4	78	1300	G $\frac{3}{8}$	0.02 ... 1.5	R3150-03A
							0.10 ... 3.0	R3150-03B
							0.10 ... 8.0	R3150-03C
109	160	39	1.4	78	1300	G $\frac{1}{2}$	0.02 ... 1.5	R3150-04A
							0.03 ... 3.0	R3150-04B
							0.05 ... 10	R3150-04C



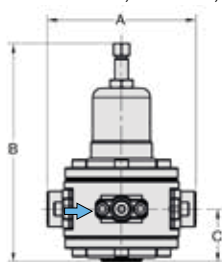
R3150

Special options, add the appropriate letter or number

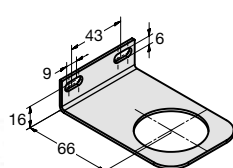
pilot operated	G $\frac{1}{8}$, max. 30 bar, 0...8 bar	R3150-0. J
NPT	connection thread	R3150-0. .N
non-relieving	for liquids	R3150-0. .K
EPDM o-ring		R3150-0. .E
EPDM o-ring	FDA approval	R3150-0. .TD
SST diaphragm	FKM o-ring	R3150-0. .S
	EPDM o-ring	R3150-0. .SE
ammonia	NH $_3$	R3150-0. .K 02
carbon dioxide	CO $_2$	R3150-0. .K 03
argon	Ar	R3150-0. .K 05
nitrogen	N $_2$	R3150-0. .K 07
helium	He	R3150-0. .K 09
hydrogen	H $_2$	R3150-0. .K 11
methane	CH $_4$	R3150-0. .K 13
natural gas *3		R3150-0. .K 14
oxygen	O $_2$	R3150-0. .K 15
propane	C $_3$ H $_8$	R3150-0. .K 16
nitrous oxide	N $_2$ O	R3150-0. .K 17
water	H $_2$ O	R3150-0. .K W

Accessories, enclosed

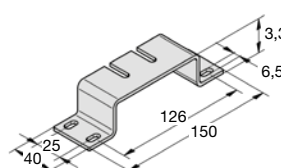
pressure gauge \varnothing 50 mm, 0...*2 bar, G $\frac{1}{4}$
 mounting bracket
 mounting nut
 mounting bracket



R3150

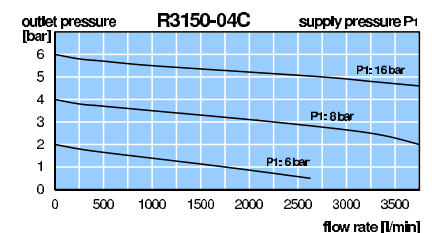
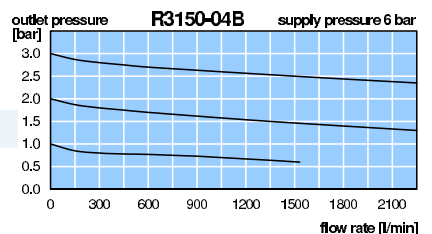
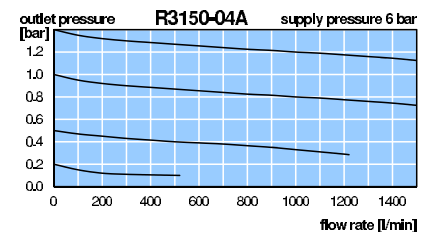


BW45-03S



BW00-59S

MS5002-...*2
 BW45-03S
 M45x1,5S
 BW00-59S



*1 see diagramm

*2 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar

*3 without DVGW-approval

Gauges: see chapter for measuring devices

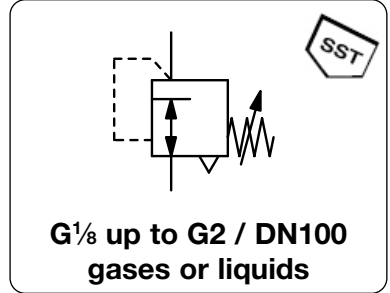
PDF CAD
www.aircom.net



Order example:
 R3150-02A

PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, UP TO 60 BAR R3000

Description	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to P ₁ = 60 bar.
Media	compressed air, gases or liquids
Supply pressure	see chart, max. 60 bar, for liquids Δp _{max.} = 25 bar
Adjustment	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
Relieving function	non-relieving, optionally relieving
Gauge port	G _{1/8} at R3000-01 and -A2, all others G _{1/4} on both sides of the body, one screw plug supplied
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404

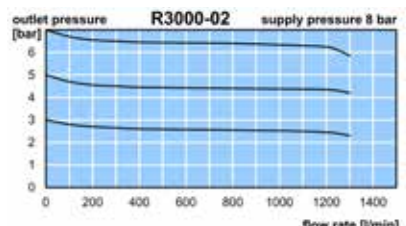
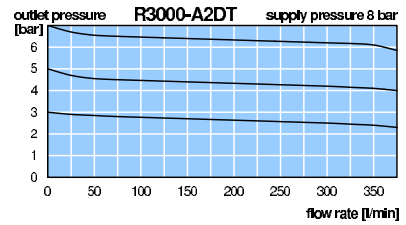
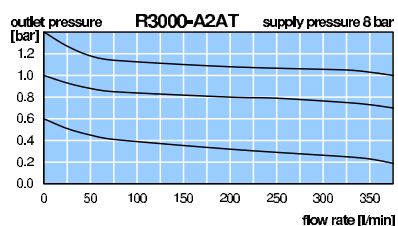
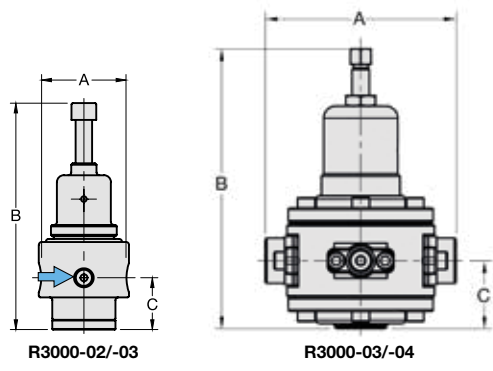


Dimensions			Regul. system	K _v	Flow rate	P ₁ max.	Connection thread	Pressure range	Order number
A	B	C	D: Diaphragm P: Piston	value (m ³ /h)	m ³ /h*1 l/min*1	bar	G	bar	

SST Pressure regulator										supply pressure max. 30/50 bar, non-relieving, PTFE diaphragm and FKM o-ring	R3000
40	88	18	M	0,35	20	330	30	G _{1/8}	0,1...1,5	R3000-01AT	
									0,2...3,0	R3000-01BT	
									0,5...8,0	R3000-01DT	
									1,0...15	R3000-01ET	
40	88	18	M	0,35	20	330	30	G _{1/4}	0,1...1,5	R3000-A2AT	
									0,2...3,0	R3000-A2BT	
									0,5...8,0	R3000-A2DT	
									1,0...15	R3000-A2ET	
64	160	38	M	1,4	78	1300	30	G _{1/4}	0,1...1,5	R3000-02AT	
									0,2...3,0	R3000-02BT	
									0,5...8,0	R3000-02CT	
									1,0...15	R3000-02DT	
							50		2,0...30	R3000-02ET	
									3,0...50	R3000-02FT	
64	175	38	K	1,4	78	1300	50	G _{3/8}	0,1...1,5	R3000-03AT	
									0,2...3,0	R3000-03BT	
									0,5...8,0	R3000-03CT	
									1,0...15	R3000-03FT	
109	160	39	M	3,0	168	2800	50	G _{3/8}	0,1...1,5	R3000-03AT	
									0,2...3,0	R3000-03BT	
									0,5...8,0	R3000-03CT	
									1,0...15	R3000-03FT	
109	178	39	K	3,0	168	2800	50	G _{3/8}	0,1...1,5	R3000-03AT	
									0,2...3,0	R3000-03BT	
									0,5...8,0	R3000-03CT	
									1,0...15	R3000-03FT	
109	160	39	M	3,0	168	2800	50	G _{1/2}	0,1...1,5	R3000-04AT	
									0,2...3,0	R3000-04BT	
									0,5...8,0	R3000-04CT	
									1,0...15	R3000-04FT	
109	178	39	K	3,0	168	2800	50	G _{1/2}	0,1...1,5	R3000-04AT	
									0,2...3,0	R3000-04BT	
									0,5...8,0	R3000-04CT	
									1,0...15	R3000-04FT	
									2,0...30	R3000-04GT	
									3,0...50	R3000-04LT	



Accessories, see following pages



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

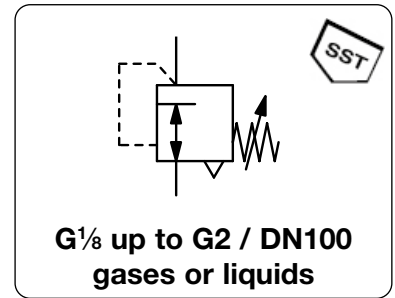
* Product group

PDF CAD
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Order example:
R3000-01AT

PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, UP TO 60 BAR R3000

Description	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
Media	compressed air, gases or liquids
Supply pressure	see chart, max. 60 bar, for liquids $\Delta p_{max.} = 25$ bar
Adjustment	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
Relieving function	non-relieving, optionally relieving
Gauge port	Mounting position any
Temperature range	$G\frac{3}{4}$ at R3000-01 and -A2, all others $G\frac{1}{2}$ on both sides of the body, one screw plug supplied 0°C to 80°C / 32°C to 176°F for FKM or EPDM 0°C to 130°C / 32°C to 266°F for high temperature version for appropriately conditioned compressed air down to -20°C / -4°F or low temperature version down to -40°C / -40°F
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



Dimensions			Regul. system	K_v	Flow	P_1	Connection	Pressure	Order
A	B	C	D: diaphragm	value	rate	max.	thread	range	number
mm	mm	mm	P: piston	(m^3/h)	m^3/h^*1	l/min^*1	G	bar	

SST Pressure regulator										supply pressure max. 30/50/60 bar, non-relieving, PTFE diaphragm and FKM o-ring	R3000
137	187	51	P	8.4	228	3800	50	$G\frac{3}{4}$	0.1...1.5	R3000-06AT	
									0.2...3.0	R3000-06BT	
									0.5...8.0	R3000-06CT	
									1.0...15	R3000-06FT	
									2.0...30	R3000-06GT	
									3.0...50	R3000-06LT	
137	187	51	P	8.4	228	3800	50	$G1$	0.1...1.5	R3000-A8AT	
									0.2...3.0	R3000-A8BT	
									0.5...8.0	R3000-A8CT	
									1.0...15	R3000-A8FT	
									2.0...30	R3000-A8GT	
									3.0...50	R3000-A8LT	
165	287	60	D	9.7	480	8000	60	$G1$	0.1...1.5	R3000-08AT	
									0.2...3.0	R3000-08BT	
									0.5...8.0	R3000-08CT	
									1.0...15	R3000-08FT	
165	302	60	P	9.7	480	8000	60		2.0...30	R3000-08GT	
165	311	60							3.0...50	R3000-08LT	
269	287	60	D	6.0	480	8000	60	$G1\frac{1}{4}$	0.1...1.5	R3000-10AT	
									0.2...3.0	R3000-10BT	
									0.5...8.0	R3000-10CT	
									1.0...15	R3000-10FT	
269	302	60	P	9.7	480	8000	60		2.0...30	R3000-10GT	
269	311	60							3.0...50	R3000-10LT	
269	287	60	D	9.7	480	8000	60	$G1\frac{1}{2}$	0.1...1.5	R3000-1AAT	
									0.2...3.0	R3000-1ABT	
									0.5...8.0	R3000-1ACT	
									1.0...15	R3000-1AFT	
269	302	60	P	9.7	480	8000	60		2.0...30	R3000-1AGT	
269	311	60							3.0...50	R3000-1ALT	



R3000-06/-A8

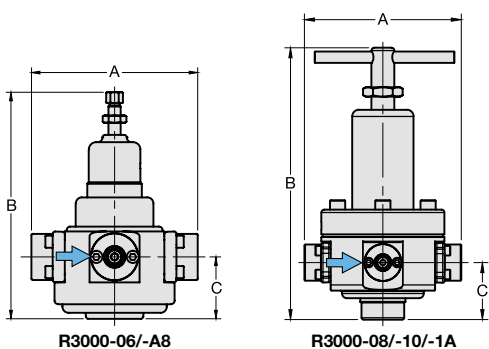


R3000-08/-10/-1A



R3000-06/A8.TF.

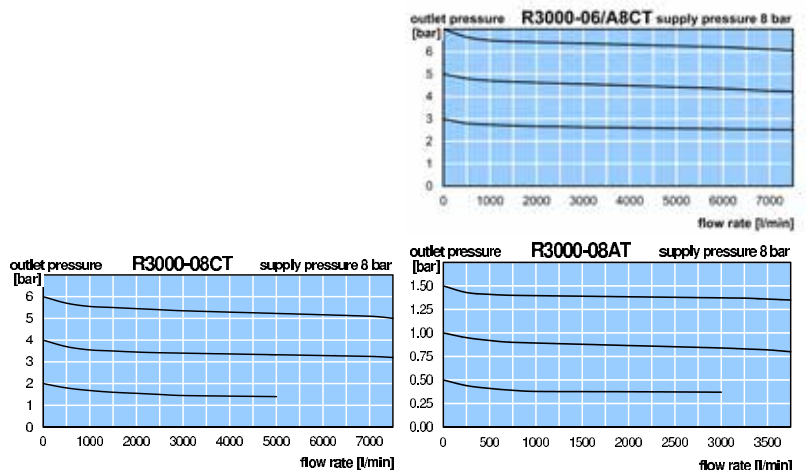
Accessories, see following pages



R3000-06/-A8

R3000-08/-10/-1A

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



* Product group

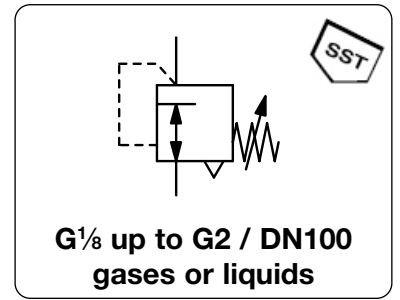
PDF CAD
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Order example:
R3000-06AT

PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, UP TO 60 BAR R3000

Description	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to P ₁ = 60 bar.
Media	compressed air, gases or liquids
Supply pressure	see chart, max. 60 bar, for liquids Δp _{max.} = 25 bar
Adjustment	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
Relieving function	non-relieving, optionally relieving
Gauge port	G _{1/8} at R3000-01 and -A2, all others G _{1/4} on both sides of the body, one screw plug supplied
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



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

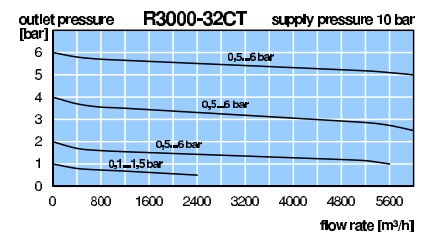
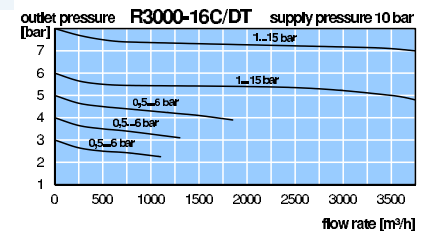
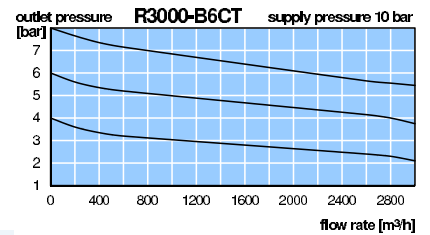
SST Pressure regulator										supply pressure max. 30/50 bar, non-relieving, PTFE diaphragm and FKM o-ring	R3000
174	393	126	P	25	900	15000	30	G1½	0.1 ... 1.5	R3000-12AT	
									0.2 ... 3.0	R3000-12BT	
									0.5 ... 8.0	R3000-12CT	
							50		1.0 ... 15	R3000-12ET	
									2.0 ... 30	R3000-12GT	
									3.0 ... 50	R3000-12LT	
174	393	126	P	25	900	15000	30	G2	0.1 ... 1.5	R3000-B6AT	
									0.2 ... 3.0	R3000-B6BT	
									0.5 ... 8.0	R3000-B6CT	
							50		1.0 ... 15	R3000-B6ET	
									2.0 ... 30	R3000-B6GT	
									3.0 ... 50	R3000-B6LT	
171	421	128	D	25	1800	30000	30	G2	0.1 ... 1.5	R3000-16AT	
									0.2 ... 3.0	R3000-16BT	
									0.5 ... 6.0	R3000-16CT	
									1.0 ... 15	R3000-16DT	
171	417	128	D	25	1800	30000	30		0.1 ... 1.5	R3000-24AT	
									0.2 ... 3.0	R3000-24BT	
									0.5 ... 6.0	R3000-24CT	
									1.0 ... 15	R3000-24DT	
405	446	118	D	65	4500	75000	30	DN80	0.1 ... 1.5	R3000-32AT	
									0.2 ... 3.0	R3000-32BT	
									0.5 ... 6.0	R3000-32CT	
									1.0 ... 15	R3000-32DT	
405	427	118							0.1 ... 1.5	R3000-16AT	
405	446	118	D	65	5500	90000	30	DN100	0.1 ... 1.5	R3000-32AT	
									0.2 ... 3.0	R3000-32BT	
									0.5 ... 6.0	R3000-32CT	
									1.0 ... 15	R3000-32DT	



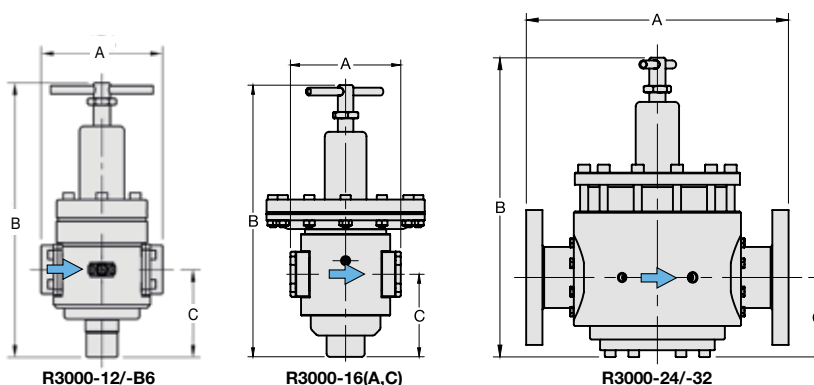
R3000-12/-B6



R3000-16
accessory: gauge



Accessories, see following pages

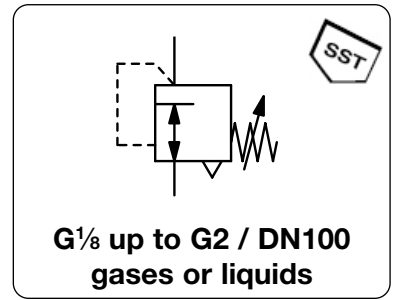


*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

* Product group

PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, UP TO 60 BAR R3000

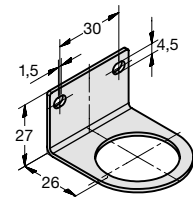
Description	Pressure regulator made of stainless steel, diaphragm- or piston-operated, up to $P_1 = 60$ bar.
Media	compressed air, gases or liquids
Supply pressure	see chart, max. 60 bar, for liquids $\Delta p_{max} = 25$ bar
Adjustment	by adjusting screw at R3000-01 to -A8, and -24 to -32 by T-handle at R3000-08 to -16C, with pilot-regulator by adjusting screw at -16D
Relieving function	non-relieving, optionally relieving
Gauge port	$G\frac{1}{8}$ at R3000-01 and -A2, all others $G\frac{1}{4}$ on both sides of the body, one screw plug supplied
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel O-rings: FKM, optionally EPDM Internal parts: stainless steel 316L, material no. 1.4404



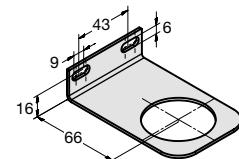
Dimensions	Regul. system	K_v	Flow	P_1	Connection	Pressure	Order
A B C	D: diaphragm	value	rate	max.	thread	range	number
mm mm mm	P: piston	(m^3/h)	m^3/h^*1 l/min*1	bar	G	bar	

Special options, add the appropriate letter or number

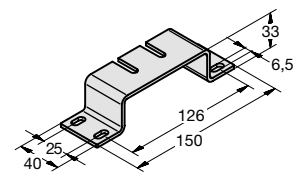
NPT	connection thread		R3000-N
with T-handle	instead of hexagonal screw	for $G\frac{1}{4}$ (02) to $G1$ (A8)	R3000-P
relieving			R3000-R
tapped exhaust		for R3000-01/A2	R3000-X12
down to -40 °C	low temperature version	from $G\frac{1}{4}$ (02) on	R3000-X51
up to 130 °C	high temperature version	from $G\frac{1}{4}$ (02) on	R3000-X54
spring cowling m. of POM	for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)		R3000-X57
FKM o-ring	for piston or PTFE diaphragm		R3000-T
EPDM o-ring			R3000-TE
EPDM o-ring	FDA-approval		R3000-TD
SST diaphragm	FKM o-ring	for $G\frac{1}{4}$ (02) to $G1$ (A8)	R3000-S
	EPDM o-ring	for $G\frac{1}{4}$ (02) to $G1$ (A8)	R3000-SE
ammonia	NH ₃		R3000-02
carbon dioxide	CO ₂		R3000-03
argon	Ar	P_1 max. 15 bar	R3000-05
nitrogen	N ₂		R3000-07
helium	He		R3000-09
hydrogen	H ₂		R3000-11
methane	CH ₄		R3000-13
natural gas *3			R3000-14
oxygen	O ₂		R3000-15
propane	C ₃ H ₈		R3000-16
nitrous oxide	N ₂ O		R3000-17
water	H ₂ O		R3000-W
flange connection	see end of the chapter / flanges		R3000-F.



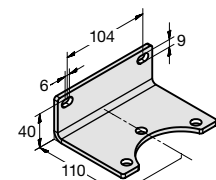
BW30-03S



BW45-03S



BW00-59S



BW00-68S

Accessories, enclosed

pressure gauge	Ø 40 mm, 0...*2 bar, $G\frac{1}{8}$	for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	MS4001-..*2
	Ø 50 mm, 0...*2 bar, $G\frac{1}{4}$	for $G\frac{1}{4}$ (02) to $G\frac{1}{2}$	MS5002-..*2
	Ø 63 mm, 0...*2 bar, $G\frac{1}{4}$	for $G\frac{3}{4}$ (06) to $G2$	MS6302-..*2
mounting bracket		for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	BW30-03S
mounting nut		for $G\frac{1}{8}$ and $G\frac{1}{4}$ (A2)	M30x1,5SS
mounting bracket		for $G\frac{1}{4}$ (02) to $G1$ (A8)	BW45-03S
mounting nut		for $G\frac{1}{4}$ (02) to $G1$ (A8)	M45x1,5S
mounting bracket		for $G1$ (08) + $G1\frac{1}{2}$ (1A)	BW00-59S
		for $G1\frac{1}{2}$ (12) + $G2$ (B6)	BW00-68S

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

*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

*3 without DVGW-approval

* Product group

Gauges: see chapter for measuring devices

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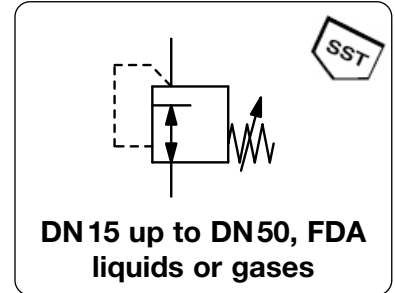


Order example:
MS4001-02

PRESSURE REGULATOR WITH FLANGE, MADE OF SPECIAL STEEL CASTING

REF

Description	Diaphragm-operated pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent.
Media	compressed air, neutral gases or liquids
Supply pressure	see chart, max. 25 bar
Adjustment	by T-handle, with locknut
Relieving function	non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Mounting position	any
Temperature range	0 °C to 120 °C / 32 °F to 248 °F for FKM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 130 °C / 32 °F to 266 °F for EPDM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 150 °C / 32 °F to 302 °F for PTFE, for appropriately conditioned compr. air down to -30 °C / -22 °F
Material	Body: stainless steel 316L, mat. no. 1.4408 Diaphragm: FKM, optionally EPDM or PTFE



Dimensions			K _v -value	Flow rate		Supply pressure	Connection flange	Pressure range	Order number
A	B	C	(m ³ /h)	air	water	max. bar	DN	bar	

Pressure regulator with flange										for liquids, P: max. 8/25 bar, non-relieving, FKM, PN40	REF
210	255	95	4.0	4200	66	8	DN 15	0.2...3.0		REF-04B	
						25		2.0... 10		REF-04D	
						25		6.0... 16		REF-04E	
220	260	105	4.0	4200	66	8	DN 20	0.2...3.0		REF-06B	
						25		2.0... 10		REF-06D	
						25		6.0... 16		REF-06E	
220	265	115	4.0	4200	66	8	DN 25	0.2...3.0		REF-08B	
						25		2.0... 10		REF-08D	
						25		6.0... 16		REF-08E	
220	273	115	7.5	8000	125	8	DN 25	0.2...3.0		REF-A8B	
						25		2.0... 10		REF-A8D	
						25		6.0... 16		REF-A8E	
280	290	150	7.5	8000	125	8	DN 40	0.2...3.0		REF-12B	
						25		2.0... 10		REF-12D	
						25		6.0... 16		REF-12E	
320	298	165	7.5	8000	125	8	DN 50	0.2...3.0		REF-16B	
						25		2.0... 10		REF-16D	
						25		6.0... 16		REF-16E	

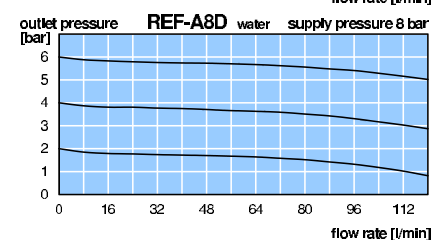
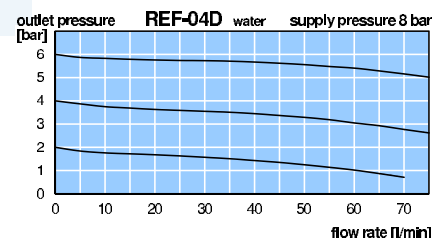
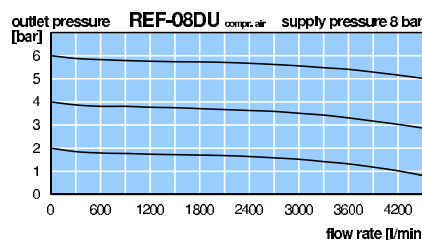
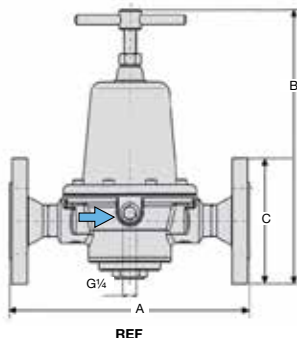


Special Options, add the appropriate letter

gaseous media	non-relieving, height +43 mm	RE U
EPDM diaphragm	FDA approved	RE E
PTFE diaphragm	FKM with PTFE coating and FKM o-ring	RE I
free of oil and grease	suitable for oxygen	RE L
flange connection*3	DIN 3239 / DIN 11850-2 / ISO 4200, DN8 to DN25, instead of connection thread	RE A
milk pipe connection		RE M

Accessories, enclosed

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for DN 8 to DN 15 (04)	MS5002-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for DN 15 (A4) to DN 50	MS6302-...*2



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

*3 version has to be indicate in clear words

Gauges: see chapter for measuring devices

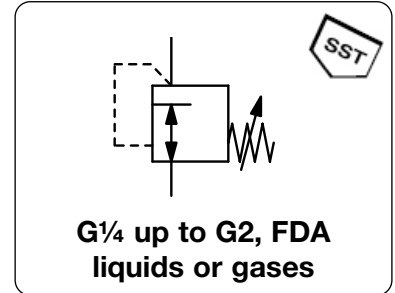
PDF CAD
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Order example:
REF-04B

PRESSURE REGULATOR MADE OF SPECIAL STEEL CASTING

REA

Description	Diaphragm-operated pressure regulator made of stainless steel throughout. Even when spindle is unscrewed the indicated minimum outlet pressure is existent.
Media	compressed air, gases or liquids
Supply pressure	see chart, max. 25 bar
Adjustment	by T-handle, with locknut
Relieving function	non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Mounting position	any
Temperature range	0 °C to 120 °C / 32 °F to 248 °F for FKM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 130 °C / 32 °F to 302 °F for EPDM, for appropriately conditioned compr. air down to -30 °C / -22 °F 0 °C to 150 °C / 32 °F to 302 °F for PTFE, for appropriately conditioned compr. air down to -30 °C / -22 °F
Material	Body: stainless steel 316L, mat. no. 1.4408 Diaphragm: FKM, optionally EPDM or PTFE



Dimensions			K _v -value	Flow rate		Supply pressure max. bar	Nom. size DN	Connection thread G	Pressure range bar	Order number
A	B	C		air	water					

Regulator made of Special Steel Casting										for liquids, P ₁ : max. 8/25 bar, non-relieving, FKM	REA											
92	190	42	1.0	1100	17	8	DN 8	G $\frac{1}{4}$	0.2...3.0	REA-02B												
						25			2.0... 10	REA-02D												
						25			6.0... 16	REA-02E												
						122	240	49	4.0	4200	66	8	DN 10	G $\frac{3}{8}$	0.2...3.0	REA-03B						
												25			2.0... 10	REA-03D						
												25			6.0... 16	REA-03E						
												150	250	53	7.5	8000	125	8	DN 15	G $\frac{1}{2}$	0.2...3.0	REA-04B
																		25			2.0... 10	REA-04D
																		25			6.0... 16	REA-04E
222	250	53	7.5	8000	125													8	DN 20	G $\frac{3}{4}$	0.2...3.0	REA-06B
																		25			2.0... 10	REA-06D
																		25			6.0... 16	REA-06E
						222	250	53	7.5	8000	125							8	DN 25	G1	0.2...3.0	REA-08B
																		25			2.0... 10	REA-08D
																		25			6.0... 16	REA-08E
												222	250	53	7.5	8000	125	8	DN 32	G1 $\frac{1}{4}$	0.2...3.0	REA-10B
																		25			2.0... 10	REA-10D
																		25			6.0... 16	REA-10E
235	250	53	7.5	8000	125													8	DN 40	G1 $\frac{1}{2}$	0.2...3.0	REA-12B
																		25			2.0... 10	REA-12D
																		25			6.0... 16	REA-12E
						235	250	53	7.5	8000	125							8	DN 50	G2	0.2...3.0	REA-16B
																		25			2.0... 10	REA-16D
																		25			6.0... 16	REA-16E



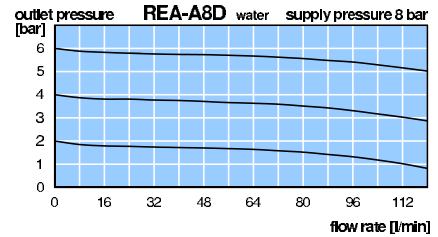
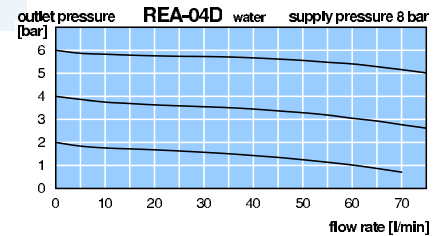
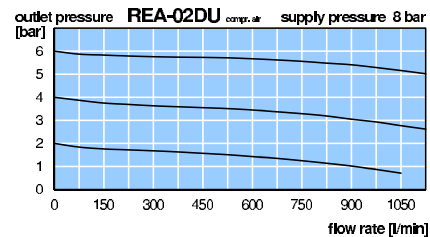
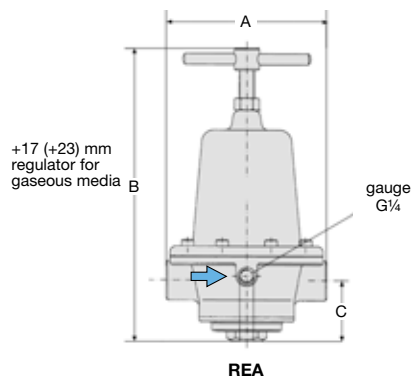
REA-04



REA-A4, accessory: gauge



Special options and Accessories, see page 15.10. REF



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

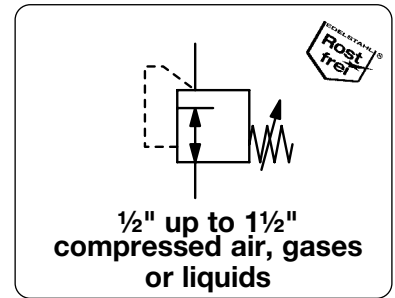
PDF CAD
www.aircom.net

Order example:
REA-02B

STAINLESS STEEL TRI CLAMP PRESSURE REGULATOR

RTC

Description Pressure regulator with flange, piston operated, made of stainless steel
Media compressed air, gases or liquids
Supply pressure max. 25 bar
Surface Electropolished body with roughness Ra <4 µm on inside wetted surfaces. All metallic parts are machined from the solid bar. No threaded connections exposed to the fluid. The regulator is virtually pocket and sterilizable with steam.
Adjustment by adjusting screw RTC-04 and -06, by T-handle RTC-08 and -12
Relieving function non-relieving
Gauge port no pressure gauge connection, optionally G¼
Temperature range -40°C to 175°C / -40°F to 347°F
Material Body, bonnet, piston and inner parts: AISI 316L, gasket: EPDM or FKM corresponding to FDA
 Main valve spring: AISI 302, Adjusting spring: C85, nickel plated NiP/Fe 15 µm
 All springs are not in contact with fluid.



Dimensions				K _v - value	Flow rate	Connection ASME- BPE	Pressure range bar	Order number
A	B	C	ØD					
mm	mm	mm	mm	m³/h ¹	l/min ¹			

Tri Clamp Pressure Regulator						supply pressure max. 25 bar, EPDM for compressed air, gases, liquids and steam		RTC
140	183	57	25	1,4	2200	1/2"	0,2 ... 1,5 0,3 ... 3,0 0,8 ... 8,0	RTC-04A RTC-04B RTC-04D
140	183	57	25	1,4	2200	3/4"	0,2 ... 1,5 0,3 ... 3,0 0,8 ... 8,0	RTC-06A RTC-06B RTC-06D
180	327	77	50,5	8,4	22000	1"	0,2 ... 1,5 0,3 ... 3,0 0,8 ... 8,0	RTC-08A RTC-08B RTC-08D
180	327	75	50,5	8,4	22000	1 1/2"	0,2 ... 1,5 0,3 ... 3,0 0,8 ... 8,0	RTC-12A RTC-12B RTC-12D



RTC-04.M/-06.M



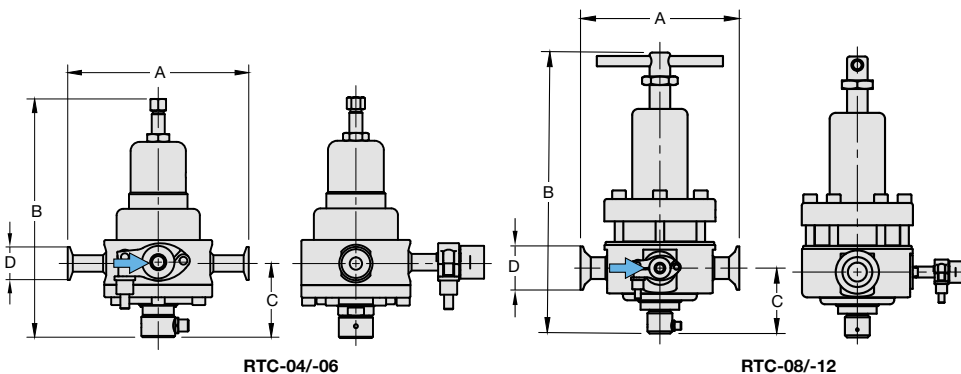
RTC-08/-12

Special Options, add the appropriate letter

FKM o-ring		RTC... T
EPDM o-ring	FDA approval	RTC... TD
to 200 °C	high temperature version	RTC... X68
ammonia	NH ₃	RTC... 02
nitrogen	N ₂	RTC... 07
oxygen	O ₂	RTC... 15
water	H ₂ O	RTC... W
neutral gas	CO ₂ , Ar, He, H ₂ , CH ₄ , C ₃ H ₈ , N ₂ O	RTC... XX
pressure gauge	G¼	RTC... M

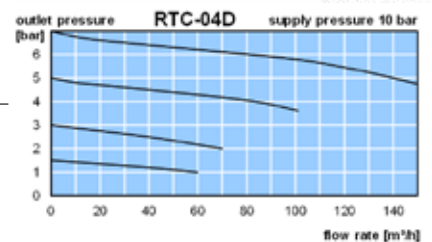
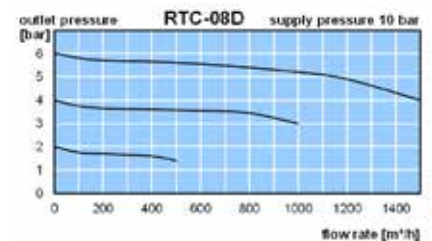
Accessories, enclosed

pressure gauge	Ø 50 mm,	0...*2 bar	G¼	for 1/2" a. 3/4"	MS5002-...*2
	Ø 63 mm,	0...*2 bar	G¼	for 1" a. 1 1/2"	MS6302-...*2
mounting bracket				for 1/2" a. 3/4"	BW45-03S
mounting nut				for 1" a. 3/4"	M45x1,5S
mounting bracket				for 1" a. 1 1/2"	BW00-27S



RTC-04/-06

RTC-08/-12



*1 at 10 bar supply pressure, 7 bar outlet pressure and 2 bar pressure drop
 *2 02 = 0...2,5 bar, 04 = 0...4 bar, 10 = 0...10 bar

Gauges: see chapter for measuring devices

PDF CAD
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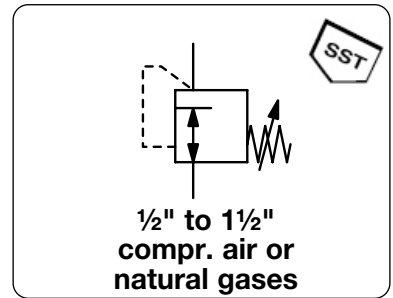


Order example:
RTC-04A

TRI CLAMP LOW PRESSURE REGULATOR

RTCN

Description	Precision low pressure regulator with flange and big spring cage, made of stainless steel. Preferably in pharmaceutical, bio, solar, brewery and food industry, if highest purity, maximum of hygiene and optimal protection against pollution and crosswise contamination is important	
Media	Compressed air or natural gases.	Supply pressure: max. 7 bar, min. 1 bar
Surface inside	Electropolished body with roughness Ra <4 µm on inside wetted surfaces.	
Adjustment	by adjusting screw	
Relieving function	non-relieving	Mounting position: any
Tightness	Class VI; (IEC 60534-4)	Gauge port: no pressure gauge connection, optionally G1/4
Temperature Range	-20°C to 80°C	
Material	Body, spring cage and internal parts: SST 316L Main valve spring: SST 302 Diaphragm: NBR/Buna-N with PTFE coating	Gasket: EPDM, FKM Adjusting spring: C85, nickel plated NIP, not in contact with fluid.



Dimensions			K _v - Value	Supply pressure max. bar	Flow rate m³/h¹	Flow rate l/min¹	Connection ASME- BPE	Pressure Range mbar	Order Number
A	B	C							

Tri Clamp low pressure regulator									Supply pressure max. 7 bar, SST, EPDM for compr. air, natural gases, not relieving	RTCN
140	179	42	0,75	7	60	1000	1/2"	5 ... 45	RTCN-04A	
								20 ... 200	RTCN-04C	
								150 ... 700	RTCN-04D	
140	179	42	0,75	7	60	1000	3/4"	5 ... 45	RTCN-06A	
								20 ... 200	RTCN-06C	
								150 ... 700	RTCN-06D	
170	237	66	1,4	7	84	1400	1"	5 ... 45	RTCN-08A	
								10 ... 120	RTCN-08B	
								10 ... 400	RTCN-08C	
								15 ... 700	RTCN-08D	
								200 ... 1200	RTCN-08E	
170	237	66	1,4	7	84	1400	1 1/2"	5 ... 45	RTCN-12A	
								10 ... 120	RTCN-12B	
								10 ... 400	RTCN-12C	
								15 ... 700	RTCN-12D	
								200 ... 1200	RTCN-12E	



RTCN-04-06

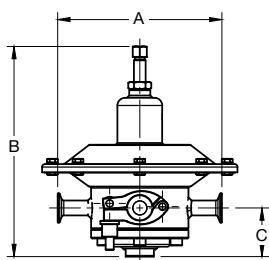


Special options, add the appropriate letter

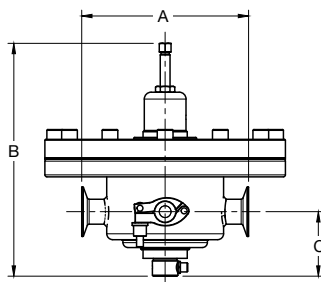
FKM o-ring		RTCN-... T
EPDM o-ring	FDA-approval	RTCN-... TD
up to 200 °C	high temperature version	RTCN-... X68
ammonia	NH ₃	RTCN-... 02
carbon dioxide	CO ₂	RTCN-... 03
nitrogen	N ₂	RTCN-... 07
oxygen	O ₂	RTCN-... 15
nitrous oxide	N ₂ O	RTCN-... 17
natural gas	Ar, He, Hz, CH ₄ , C ₃ H ₆	RTCN-... XX
pressure gauge connection		RTCN-... M

Accessories, enclosed

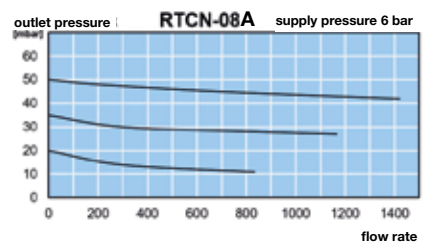
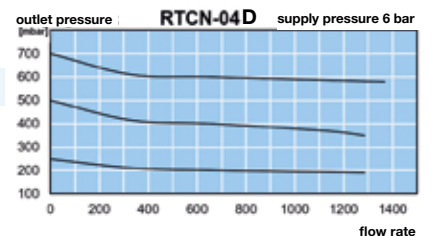
Pressure gauge	Ø 63 mm, 0...*2 mbar capsule spring, 1/4" bis 600 mbar	MS6302-..*2
	Ø 63 mm, 0...*2 bar bourdon tube, 1/4" ab 1 bar	MS6302-..*2



RTCN-04/06



RTCN-08/12



*1 at 7 bar supply pressure and max. outlet pressure
*2 B6 = 0...60 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar, O1 = 0 ... 1 bar, O2 = 0 ... 2,5 bar

Gauges: see chapter for measuring devices

PDF CAD
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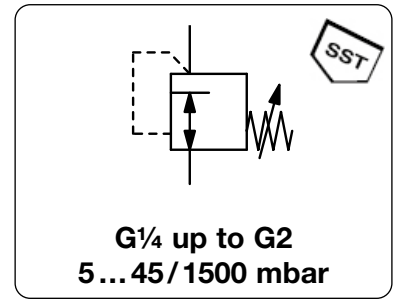


Order example:
RTCN-04A

LOW PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

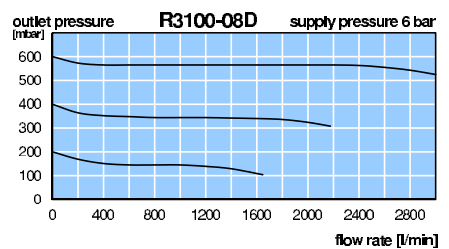
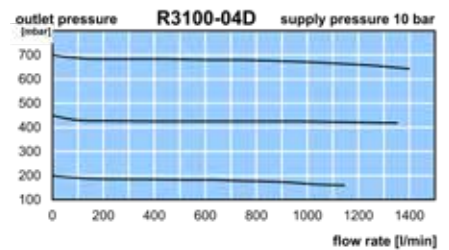
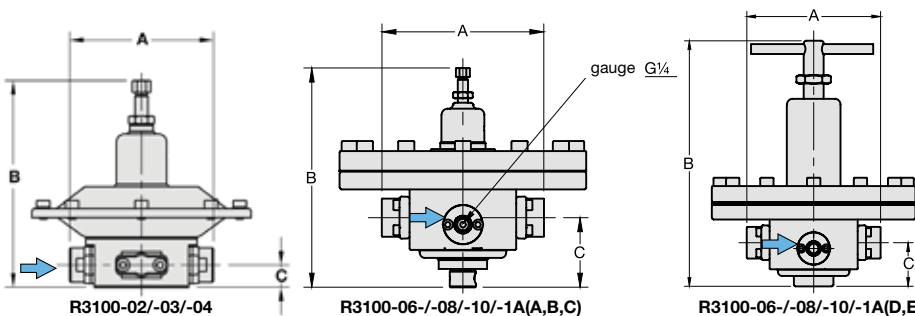
R3100

Description	Precision low pressure regulator with large diaphragm, completely made of stainless steel.	
Media	compressed air or gases	
Supply pressure	see table, max. 10 bar, min. 1 bar	
Air consumption	without constant bleed	
Adjustment	by adjusting screw	
Relieving function	non-relieving	
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied	
Mounting position	any	
Temperature range	0 °C bis 80 °C / 32 °C to 176 °F, FKM or EPDM 0 °C bis 130 °C / 32 °C to 266 °F, high temperature version, for appropriately conditioned compr. air down to -20 °C / - 4 °F, or low temperature down to -40 °C/-40°F	
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM Inner valve: stainless steel 316L / 1.4404



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

Low pressure regulator			made of SST, supply pressure max. 6/7 bar, non-relieving diaphragm NBR/Buna-N with PTFE coating, FKM o-ring					R3100		
109	181	39	1.4	84	1400	10	G $\frac{1}{4}$	5 ... 45	R3100-02A	
								10 ... 100	R3100-02C	
								20 ... 1000	R3100-02D	
								50 ... 1500	R3100-02D	
109	181	39	1.4	84	1400	10	G $\frac{3}{8}$	5 ... 45	R3100-03A	
								10 ... 100	R3100-03C	
								20 ... 1000	R3100-03D	
								50 ... 1500	R3100-03D	
109	181	39	1.4	84	1400	10	G $\frac{1}{2}$	5 ... 45	R3100-04A	
								10 ... 100	R3100-04C	
								20 ... 1000	R3100-04D	
								50 ... 1500	R3100-04E	
161	234	69	1.4	84	1400	7	G $\frac{3}{4}$	5 ... 45	R3100-06A	
								10 ... 120	R3100-06B	
								10 ... 400	R3100-06C	
161	296	53	8.4	576	9600			15 ... 700	R3100-06D	
								200 ... 1200	R3100-06E	
161	234	69	1.4	84	1400	7	G1	5 ... 45	R3100-08A	
								10 ... 120	R3100-08B	
								10 ... 400	R3100-08C	
161	296	53	8.4	576	9600			15 ... 700	R3100-08D	
								200 ... 1200	R3100-08E	



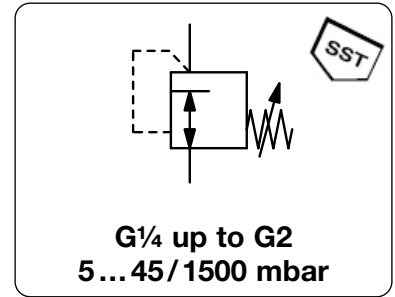
*1 at 6 bar supply pressure and 1 bar / 0.7 bar (-04) outlet pressure

Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

Order example:
R3100-02A

Description	Precision low pressure regulator with large diaphragm, completely made of stainless steel.
Media	compressed air or gases
Supply pressure	see table, max. 10 bar, min. 1 bar
Air consumption	without constant bleed
Adjustment	by adjusting screw
Relieving function	non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Mounting position	any
Temperature range	0 °C bis 80 °C / 32 °C to 176 °F, FKM or EPDM 0 °C bis 130 °C / 32 °C to 266 °F, high temperature version, for appropriately conditioned compr. air down to -20 °C / - 4 °F, or low temperature down to -40 °C/-40°F
Material	Body: stainless steel 316L, material no. 1.4404 O-rings: FKM Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L / 1.4404

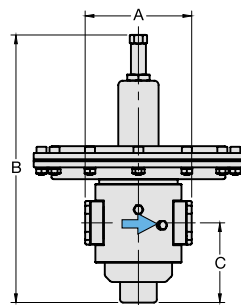


Dimensions			K _v -value	Flow rate		Supply pressure max. bar	Connection- thread G	Pressure range mbar		Order number
A	B	C		m ³ /h*	l/min*1					

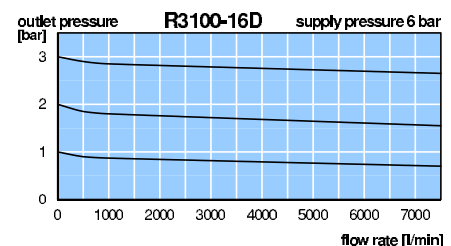
Low pressure regulator										made of SST, supply pressure max. 6/7 bar, non-relieving diaphragm NBR/Buna-N with PTFE coating, FKM o-ring	R3100
265	234	69	1.4	84	1400	7	G1 $\frac{1}{4}$	5 ... 45	R3100-10A		
								10 ... 120	R3100-10B		
								10 ... 400	R3100-10C		
265	296	53	8.4	576	9600			15 ... 700	R3100-10D		
								200 ... 1200	R3100-10E		
265	234	69	1.4	84	1400	7	G1 $\frac{1}{2}$	5 ... 45	R3100-1AA		
								10 ... 120	R3100-1AB		
								10 ... 400	R3100-1AC		
265	296	53	8.4	576	9600			15 ... 700	R3100-1AD		
								200 ... 1200	R3100-1AE		
171	431	97	6.2	420	7000	6	G1 $\frac{1}{2}$	20 ... 50	R3100-12A		
								50 ... 150	R3100-12B		
171	467	97						150 ... 300	R3100-12D		
171	430		25	1680	28000			100 ... 1000	R3100-12E		
171	431	97	6.2	420	7000	6	G2	20 ... 50	R3100-16A		
								50 ... 150	R3100-16B		
								150 ... 300	R3100-16D		
171	430	97	25	1680	28000			100 ... 1000	R3100-16E		



R3100-12/-16



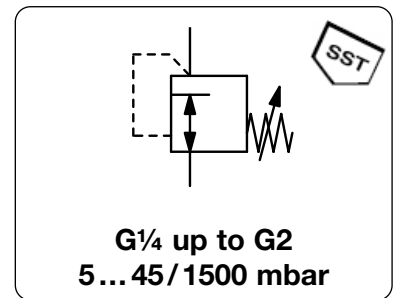
R3100-12/-16



*1 at 6 bar supply pressure and 1 bar / 0.7 bar (-04) outlet pressure



Description	Precision low pressure regulator with large diaphragm, completely made of stainless steel.		
Media	compressed air or gases		
Supply pressure	max. 7 bar, min. 1 bar		
Air consumption	without constant bleed		
Adjustment	by adjusting screw		
Relieving function	non-relieving		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Mounting position	any		
Temperature range	0 °C bis 80 °C / 32 °C to 176 °F, FKM or EPDM 0 °C bis 130 °C / 32 °C to 266 °F, high temperature version, for appropriately conditioned compr. air down to -20 °C / - 4 °F, or low temperature down to -40 °C/-40°F		
Material	Body: stainless steel 316L, material no. 1.4404	O-rings: FKM	Inner valve: stainless steel 316L / 1.4404
	Diaphragm: NBR/Buna-N with PTFE coating		



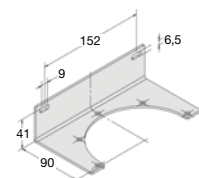
Dimensions			K _v -value	Flow rate	Supply pressure	Connection-thread	Pressure range	Order number
A	B	C	(m ³ /h)	m ³ /h*1	l/min*1	max. bar	G	mbar
mm	mm	mm	(m ³ /h)	m ³ /h*1	l/min*1	max. bar	G	mbar

Special options, add the appropriate letter

NPT	connection thread	R3100- ... N
EPDM o-ring		R3100- ... E
EPDM o-ring	FDA-approval	R3100- ... TD
down to -40 °C/-40 °F	low temperature version	R3100- ... X51
up to 130 °C/266 °F	high temperature version	R3100- ... X54
ammonia	NH ₃	R3100- ... 02
carbon dioxide	CO ₂	R3100- ... 03
argon	Ar	R3100- ... 05
nitrogen	N ₂	R3100- ... 07
helium	He	R3100- ... 09
hydrogen	H ₂	R3100- ... 11
methane	CH ₄	R3100- ... 13
natural gas *2		R3100- ... 14
oxygen	O ₂	R3100- ... 15
propane	C ₃ H ₈	R3100- ... 16
nitrous oxide	N ₂ O	R3100- ... 17
flange connection	see end of the chapter / flanges	R3100- ... F .

Accessories, enclosed

pressure gauge	Ø 63 mm, 0... ^{*3} mbar, G $\frac{1}{4}$, capsule type	up to 600 mbar	MS6302- ..^{*3}
	Ø 63 mm, 0... ^{*4} bar, G $\frac{1}{4}$, Bourdon tube	from 1 bar on	MS6302- ..^{*4}
mounting bracket		for G $\frac{1}{2}$	BW00-26S



BW00-26S

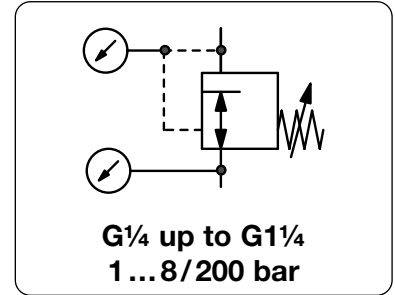


*1 at 6 bar supply pressure and 1 bar / 0.7 bar (-04) outlet pressure
*3 B6 = 0...60 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar

*2 without DVGW-approval
*4 02 = 0...2 bar, 04 = 0...4 bar, 06 = 0...6 bar



Description	Hand-operated, spring-loaded high pressure regulator for maximum supply pressure of 220 bar and maximum outlet pressure of 200 bar. For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 220 bar	
Adjustment	by hexagon head screw at RH3000-02 to -A3; T-handle at RH3000-06 to -10, with locknut	
Gauge port	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
Relief valve	prevents from overpressure, see chart	
Compensation	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
Temperature range	-20 °C to 60 °C / -4 °F to 140 °F	
Material	Body: stainless steel 316 Diaphragm: stainless steel 316 O-ring: FKM / PTFE	Mounting position any Filter: stainless steel 316 Valve seat: FKM Piston: stainless steel 316



Dimensions			Relief valve	K _v -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m³/h)	m³/h*1	inlet/outlet	bar	

High pressure regulator 220 bar RH3000

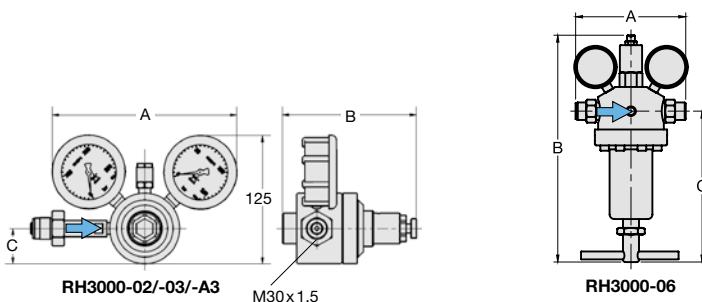
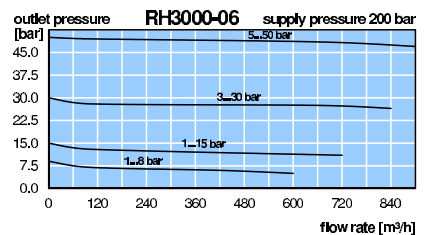
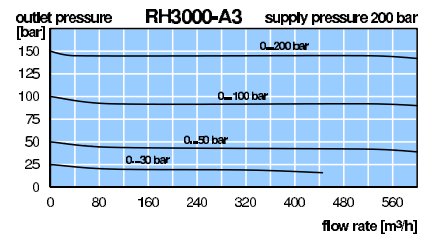
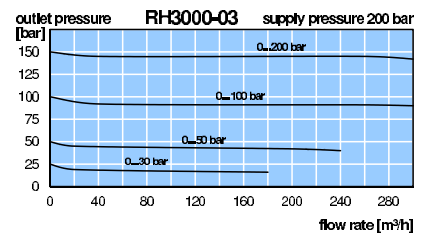
						non-relieving, for compressed air with supply and outlet pressure gauges			
170	159	32	S	0.05	30	500	DIN 477 / G 1/4 f	1 ... 8	RH3000-02A
			S		45	750		1 ... 15	RH3000-02B
170	172	32	S	60	1000			3 ... 30	RH3000-02C
			S	60	1000			5 ... 50	RH3000-02D
			S	60	1000			10 ... 100	RH3000-02E
			-		60	1000		20 ... 200	RH3000-02F
186	172	40	S	0.15	70	1150	DIN 477 / G 3/8 f	1 ... 8	RH3000-03A
			S		155	2580		1,5 ... 15	RH3000-03B
			S	210	3500			3 ... 30	RH3000-03C
186	175	46	S	250	4100			5 ... 50	RH3000-03D
				350	5800			10 ... 100	RH3000-03E
			-		390	6500		20 ... 200	RH3000-03F
186	196	40	-						
178	241	40	S	0.25	370	6170	G 3/4 f / G 3/8 f	1 ... 15	RH3000-A3B
178	244	40	S		460	7700		3 ... 30	RH3000-A3C
			S		650	10830		5 ... 50	RH3000-A3D
					680	11300		10 ... 100	RH3000-A3E
			-		700	11670		20 ... 200	RH3000-A3F
178	196	40	-						
178	241	40	S	0,25	370	6170	G 3/4 i / G 1/2 i	1 ... 15	RH3000-04B
178	244	40	S		460	7700		3 ... 30	RH3000-04C
			S		650	10830		5 ... 50	RH3000-04D
			-		680	11300		10 ... 100	RH3000-04E
			-		700	11670		20 ... 200	RH3000-04F
178	196	40	-						
166	345	232	S	1.5	600	10000	G 3/4 m / G 3/4 m	1 ... 8	RH3000-06A
			S		720	12000		1 ... 15	RH3000-06B
166	358	245	S		850	14170		3 ... 30	RH3000-06C
			S		1000	16670		5 ... 50	RH3000-06D
			-		1050	17500		10 ... 100	RH3000-06E



RH3000-02



RH3000-03

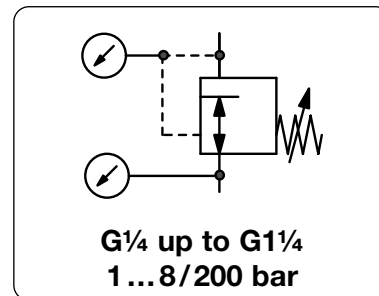


*1 at 200 bar supply pressure and max. outlet pressure

STAINLESS STEEL HIGH PRESSURE REGULATOR, P1: UP TO 200 BAR

RH3000

Description	Hand-operated, spring-loaded high pressure regulator for maximum supply pressure of 220 bar and maximum outlet pressure of 200 bar. For outlet pressures up to 15 bar the regulator has a diaphragm, for higher outlets a piston. A sintered bronze filter at the inlet port protects against contamination.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 220 bar	
Adjustment	by hexagon head screw at RH3000-02 to -A3; T-handle at RH3000-06 to -10, with locknut	
Gauge port	All regulators are equipped with both one supply pressure gauge and one outlet pressure gauge.	
Relief valve	prevents from overpressure, see chart	
Compensation	All regulators are equipped with supply pressure variation compensation, so that a change in supply pressure has no effect on the outlet pressure's stability.	
Temperature range	-20 °C to 60 °C / -4 °F to 140 °F	
Material	Body: stainless steel 316 Diaphragm: stainless steel 316 O-ring: FKM / PTFE	Mounting position any Filter: stainless steel 316 Valve seat: FKM Piston: stainless steel 316



Dimensions			Relief valve	K _v -value	Flow rate	Connection thread	Pressure range	Order number
A	B	C	S: with valve	(m ³ /h)	m ³ /h*1	inlet/outlet	bar	

High pressure regulator 220 bar						non-relieving, for compressed air with supply and outlet pressure gauges	RH3000		
253	365	242	S	1,8	1100	18330	G1a / G1 a	1 ... 8	RH3000-08A
			S		1300	21670		1 ... 15	RH3000-08B
253	406	278	S	1500	25000			3 ... 30	RH3000-08C
			S	1650	27500			5 ... 50	RH3000-08D
			-	1850	30830			20 ... 200	RH3000-08F
248	370	270	S	3,1	3850	65830	G1a / G1 1/4 i	1 ... 8	RH3000-10A
								1 ... 15	RH3000-10B
								3 ... 30	RH3000-10C
								5 ... 50	RH3000-10D



RH3000-08



RH3000-10

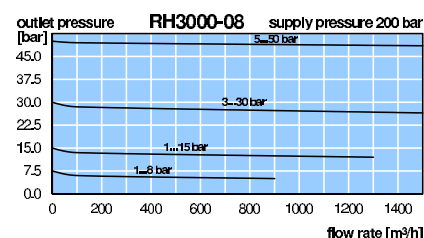
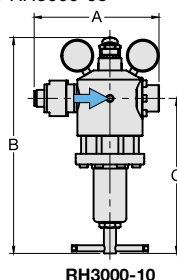
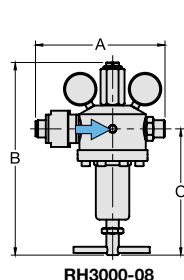
Special options, add the appropriate letter

diaphragm relieving		RH3000-... R
piston relieving		RH3000-... R
EPDM elastomer		RH3000-... E
for panel mounting	for RH3000-02 to -A3	RH3000-... P
carbon dioxide*2	CO ₂	RH3000-... 03
argon	Ar	RH3000-... 05
nitrogen	N ₂	RH3000-... 07
helium	He	RH3000-... 09
hydrogen	H ₂	RH3000-... 11
methane	CH ₄	RH3000-... 13
natural gas *3		RH3000-... 14
propane	C ₃ H ₈	RH3000-... 16
nitrous oxide	N ₂ O	RH3000-... 17
without cylinder connection		RH3000-... X40



Accessories, enclosed

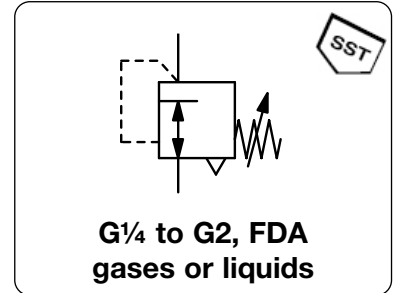
mounting bracket	for RH3000-02	BW45-03S
mounting nut	for RH3000-02	M45x1,5S
mounting bracket	for RH3000-03 and -A3	BW50-01S
mounting nut	for RH3000-03 and -A3	M50x1,5S
mounting bracket	for RH3000-06	BW00-31S
	for RH3000-08	BW00-35S



*1 at 200 bar supply pressure and max. outlet pressure *2 max. 80 bar *3 without DVGW-approval

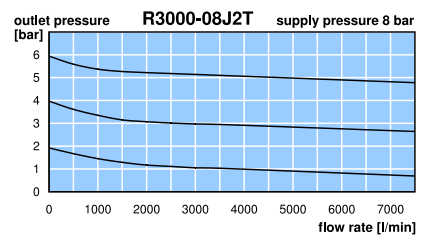
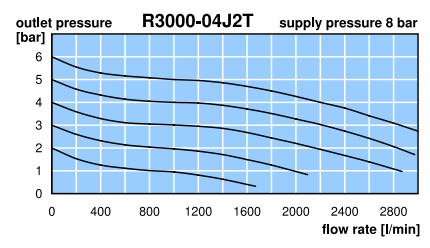
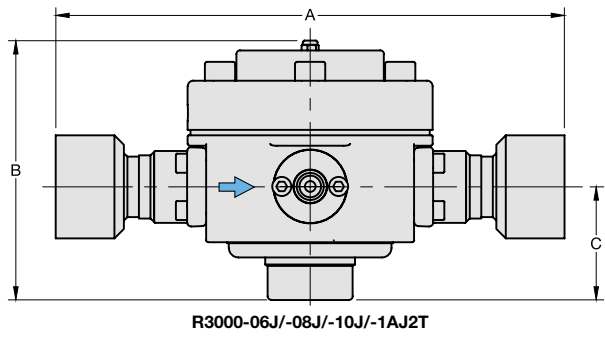
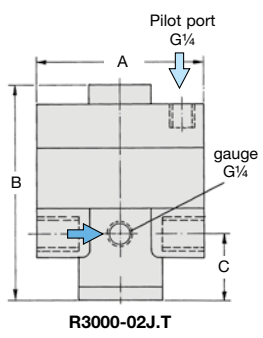
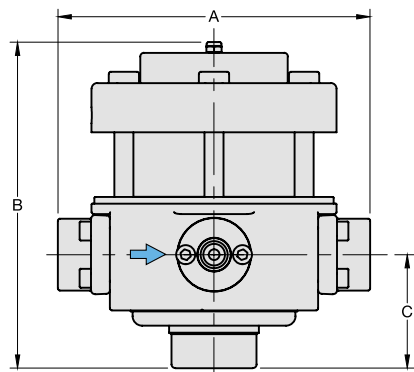
VOLUME BOOSTER MADE OF STAINLESS STEEL THROUGHOUT, UP TO 50 BAR R3000-J

Description	Volume booster made of stainless steel throughout, without constant bleed, transmission ratio 1:1.		
Media	compressed air, gases or liquids		
Supply pressure	max. 60 bar for R3000-06J/-1A, max. 30 bar for -16J, all others 50 bar, for liquids $\Delta p_{max} = 25$ bar		
Pilot pressure	max. 15 bar for R3000-...J2, max. 50 bar for R3000-...J5, pilot port G $\frac{1}{4}$		
Relieving function	non-relieving, optionally relieving		
Exhaust	DN 2, optionally DN 4		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F		
Material	Body: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM	Inner valve: SST 316L, W.-Nr. 1.4404
	Diaphragm: NBR/Buna-N with PTFE coating, optionally SST		



Dimensions			Regulating System	K _v -value	Flow rate	Connection thread	Pilot pressure	Pressure range	Order number
A	B	C	D: Diaphragm P: Piston	(m ³ /h)	m ³ /h*1 l/min*1	G	max. bar	bar	

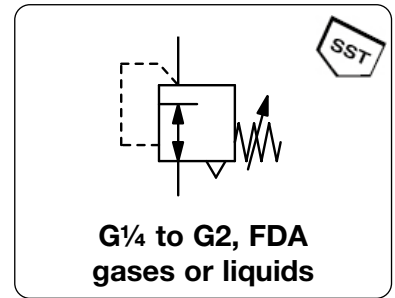
Stainless steel booster										supply pressure max. 60 bar, non-relieving, ratio 1:1, PTFE-diaphragm and FKM-o-ring	R3000-J
64	79	38	M	1.4	78	1300	G $\frac{1}{4}$	15	1...15	R3000-02J2T	
64	92	38	K					50	1...50	R3000-02J5T	
109	90	39	M	3.0	168	2800	G $\frac{1}{2}$	15	1...15	R3000-04J2T	
109	108	39	K					50	1...50	R3000-04J5T	
165	137	60	M	9.7	540	9000	G $\frac{3}{4}$	15	1...15	R3000-06J2T	
165	172	60	K					50	1...50	R3000-06J5T	
165	137	60	M	9.7	540	9000	G1	15	1...15	R3000-08J2T	
165	172	60	K					50	1...50	R3000-08J5T	
269	137	60	M	9.7	540	9000	G1 $\frac{1}{4}$	15	1...15	R3000-10J2T	
269	172	60	K					50	1...50	R3000-10J5T	
269	137	60	M	9.7	540	9000	G1 $\frac{1}{2}$	15	1...15	R3000-1AJ2T	
269	172	60	K					50	1...50	R3000-1AJ5T	
171	237	128	K	25.0	1440	24000	G1 $\frac{1}{2}$	50	1...50	R3000-12J5T	
171	237	128	K	25.0	1440	24000	G2	50	1...15	R3000-B6J2T	
171	237	128	K					50	1...50	R3000-B6J5T	
171	268	128	K	25.0	1440	24000	G2	15	1...15	R3000-16J2T	



*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

VOLUME BOOSTER MADE OF STAINLESS STEEL THROUGHOUT, UP TO 50 BAR R3000-J

Description	Volume booster made of stainless steel throughout, without constant bleed, transmission ratio 1:1.		
Media	compressed air, gases or liquids		
Supply pressure	max. 60 bar for R3000-06J/-1A, max. 30 bar for -16J, all others 50 bar, for liquids $\Delta p_{max} = 25$ bar		
Pilot pressure	max. 15 bar for R3000-...J2, max. 50 bar for R3000-...J5, pilot port G $\frac{1}{4}$		
Relieving function	non-relieving, optionally relieving		
Exhaust	DN 2, optionally DN 4		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied	Mounting position	any
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F		
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally SST	O-rings: FKM, optionally EPDM Inner valve: SST 316L, W.-Nr. 1.4404	



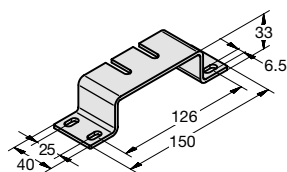
Dimensions	Regulating System	K _v -value	Flow rate	Connection thread	Pilot pressure	Pressure range	Order number
A B C	D: Diaphragm	P: Piston	(m ³ /h) m ³ /h*1 l/min*1	G	max. bar	bar	
mm mm mm							

Special options, add the appropriate letter

diaphragm relieving		for R3000-02J2 to 1A8J2	R3000-...J2.R
piston relieving		for R3000-...J5	R3000-...J...R
down to -40 °C/ -40°F	low temperature version		R3000-...J...X51
up to 130 °C/266 °F	high temperature version		R3000-...J...X54
FKM -o-ring	for piston regulator or PTFE diaphragm		R3000-...J...T
EPDM-o-ring			R3000-...J...TE
EPDM-o-ring	FDA-approval		R3000-...J...TD
SST diaphragm	FKM -o-ring		R3000-...J...S
	EPDM-o-ring		R3000-...J...SE
tapped exhaust			R3000-...J...X12
ammonia	NH ₃		R3000-...J...02
carobon dioxide	CO ₂		R3000-...J...03
argon	Ar		R3000-...J...05
nitrogen	N ₂		R3000-...J...07
helium	He		R3000-...J...09
hydrogen	H ₂		R3000-...J...11
methane	CH ₄		R3000-...J...13
natural gas *3			R3000-...J...14
oxygen	O ₂		R3000-...J...15
propane	C ₃ H ₈		R3000-...J...16
nitrous oxide	N ₂ O		R3000-...J...17
water	H ₂ O		R3000-...J...W
flange connection	see end of the chapter / flanges		R3000-...J...F.

Accessories, enclosed

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ and G $\frac{1}{2}$	MS5002-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ to G2	MS6302-...*2
mounting bracket		for G $\frac{3}{4}$ and G1	BW00-59S



*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop *3 without DVGW-approval
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

Gauges: see chapter for measuring devices

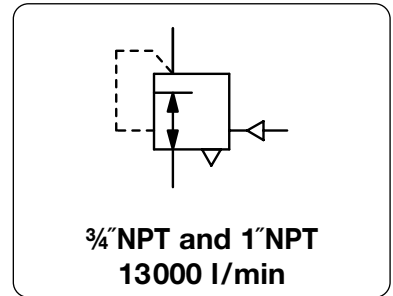
PDF CAD
www.aircom.net



Order example:
MS5002-02



Description	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 of 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.	
Media	compressed air or non-corrosive gases	Supply pressure max. 17 bar
Pilot pressure	max. 10 bar	
Accuracy	response sensitivity 15 mbar	
Air consumption	no air consumption	Relieving function relieving, tapped exhaust function ¼ NPT
Relief capacity	4245 l/min at 5 bar outlet pressure and 0.35 bar over pressure	
Gauge port	¼" NPT on both sides of the body	Mounting position: any
Temperature range	-40 to 93 °C / -72 to 167.4 °F; optionally to -52 °C / -93.6 °F	
Material	Body and inner valve stainless steel 316L	Elastomer: NBR



Dimensions			K _v -value	Flow rate	Connection thread	Supply pressure	Pilot pressure	Order number
A	B	C						
mm	mm	mm	(m ³ /h)	m ³ /h*1	l/min*1	NPT	max. bar	signal : outlet

Booster			Transmission ratio 1:1, inlet pressure max. 17 bar, reversible, without internal air consumption					R601	
117	177	45	8	690	11500	¾" NPT	17	0 ... 10	R601-06N
			9	780	13000	1" NPT	17	0 ... 10	R601-08N



R601

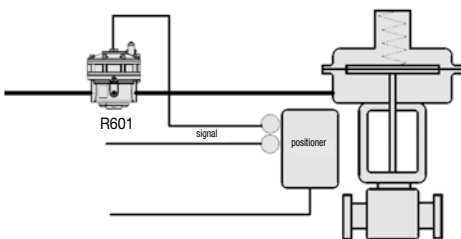
Special options, add the appropriate letter

Low temperature option to -52 °C / -93 °F R600-0.NX51

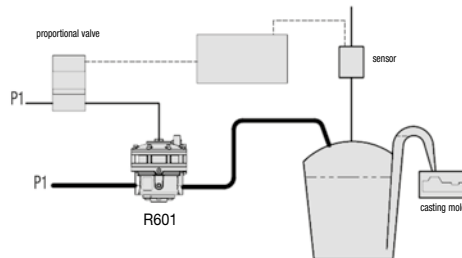
Accessories, enclosed

Pressure gauge Ø 63 mm, 0...*2 bar, G¼
Connection part pressure gauge 1/4" NPTa-G1/4
Mounting bracket

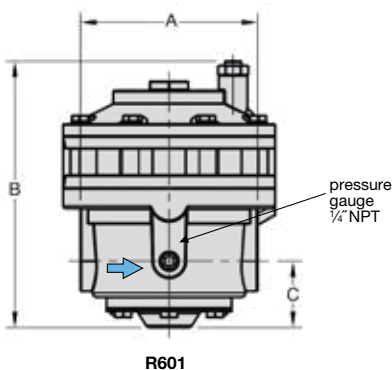
MA6302-..*2
VP-0202N
BW00-66S



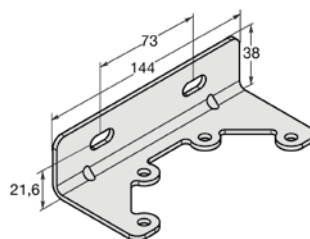
Volume flow booster with single-acting positioner and diaphragm actuator



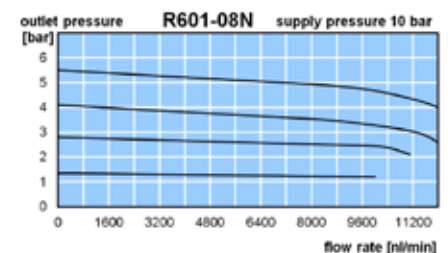
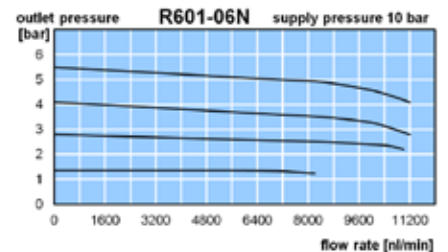
Volume flow booster in a casting plant



R601



BW00-66S



*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

Gauge: see chapter for measuring devices

PDF CAD
www.aircom.net

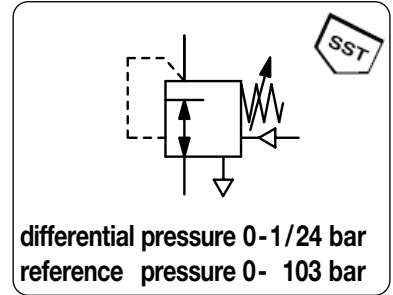
* Product group



Order example:
R601-06N

DIFFERENTIAL PRESSURE REGULATOR P1: MAX. 414 BAR, P2: 0-103 BAR RH44-S

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

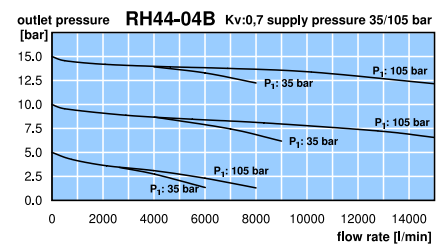
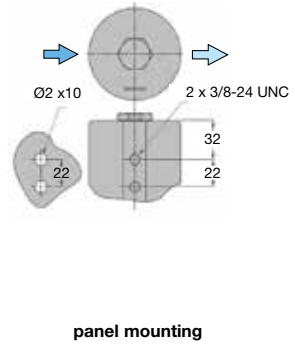
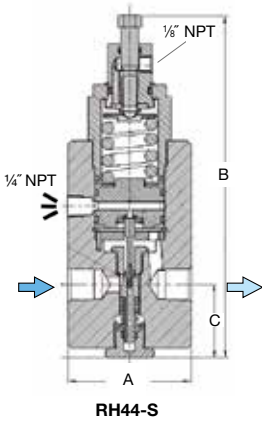
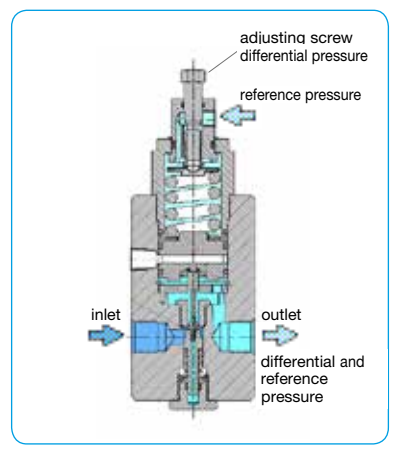
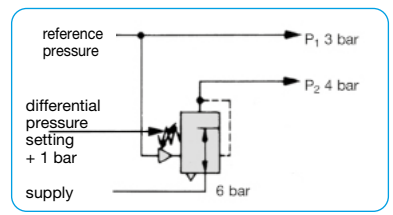


Dimensions			K _v -value (m³/h)	Flow rate (l/min)*1	Connection thread NPT	Differential pressure range bar	Order number
A mm	B mm	C mm					

Differential pressure regulator						P ₁ max: 414 bar, P ₁ max: 103 bar, SST 302 relieving, P ₂ : 0 ... 103 bar, Viton / CTFE	RH44
76	212	46	0.7	10000	1/2" NPT	0... 1 0... 7 0... 14 0... 24	RH44-04AS RH44-04BS RH44-04CS RH44-04DS
76	212	46	2.0	21000	3/4" NPT	0... 1 0... 7 0... 14 0... 24	RH44-06AS RH44-06BS RH44-06CS RH44-06DS



Special options, add the appropriate letter
brass body (s. page 4.22) RH44-0.

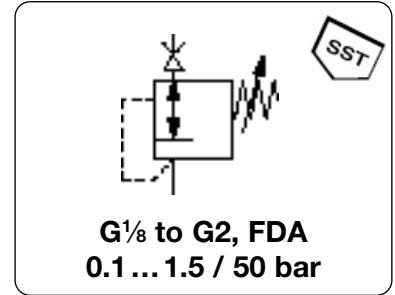


*1 at P₁ = 105 bar, P₂ = 15 bar and Δp = 1 bar

BACK PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

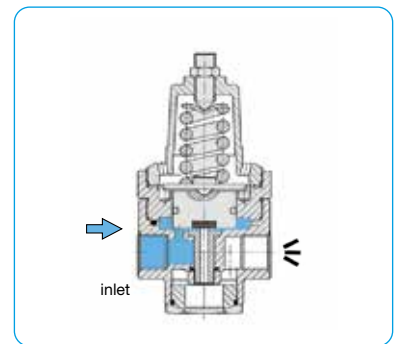
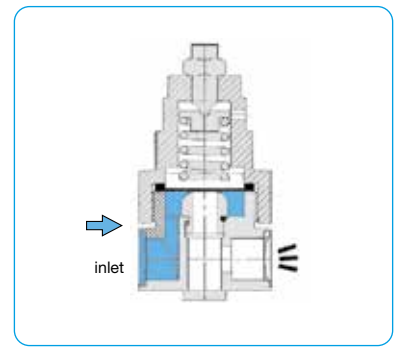
D3000

Description	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible. compressed air, gases or liquids
Media	compressed air, gases or liquids
System pressure	see chart, max. 70 bar
Adjustment	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
Gauge port	for inlet pressure, G $\frac{1}{8}$ on both sides, all others G $\frac{1}{4}$, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally NBR/Buna-N or EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

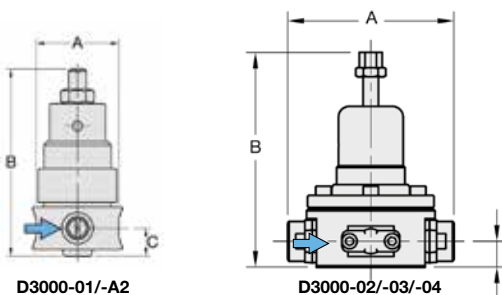


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

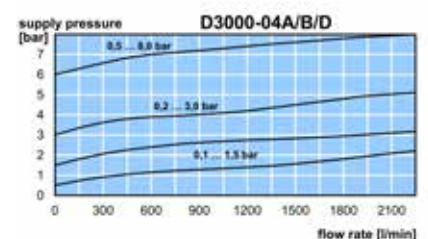
Back pressure regulator			overpressure max. 22.5 / 30 / 70 bar, PTFE diaphragm and FKM o-ring				D3000	
40	83	13	M	400	30	G $\frac{1}{8}$	0,1 ... 1,5 0,2 ... 3,0 0,5 ... 8,0 1,0 ... 15	D3000-01AT D3000-01BT D3000-01DT D3000-01ET
40	83	13	M	400	30	G $\frac{1}{4}$	0,1 ... 1,5 0,2 ... 3,0 0,5 ... 8,0 1,0 ... 15	D3000-A2AT D3000-A2BT D3000-A2DT D3000-A2ET
109	140	17	M	2300	22,5	G $\frac{1}{4}$	0,1 ... 1,5 0,2 ... 3,0 0,5 ... 8,0 1,0 ... 15	D3000-02AT D3000-02BT D3000-02DT D3000-02ET
109	153	17	K	2300	70		2,0 ... 30 3,0 ... 50	D3000-02FT D3000-02GT
109	140	17	M	2300	22,5	G $\frac{3}{8}$	0,1 ... 1,5 0,2 ... 3,0 0,5 ... 8,0 1,0 ... 15	D3000-03AT D3000-03BT D3000-03DT D3000-03ET
109	153	17	K	2300	70		2,0 ... 30 3,0 ... 50	D3000-03FT D3000-03GT
109	140	17	M	2300	22,5	G $\frac{1}{2}$	0,1 ... 1,5 0,2 ... 3,0 0,5 ... 8,0 1,0 ... 15	D3000-04AT D3000-04BT D3000-04DT D3000-04ET
109	153	17	K	2300	70		2,0 ... 30 3,0 ... 50	D3000-04FT D3000-04GT



Accessories, see next pages



*1 at 7 bar overpressure and open outlet



Gauges: see chapter for measuring devices

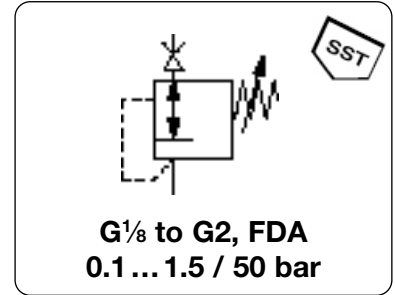
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Order example:
D3000-02AT

BACK PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

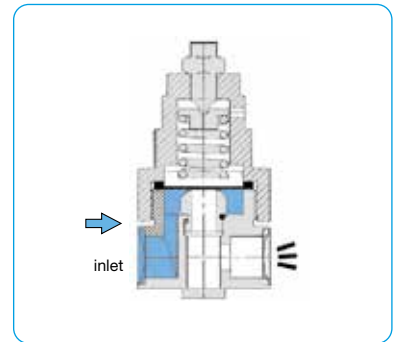
D3000

Description	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible. compressed air, gases or liquids
Media	compressed air, gases or liquids
System pressure	see chart, max. 70 bar
Adjustment	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
Gauge port	for inlet pressure, G $\frac{1}{4}$ on both sides, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

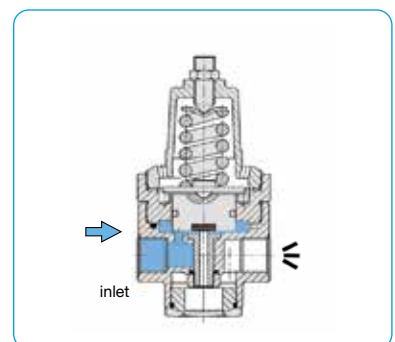


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

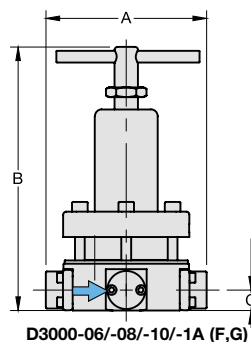
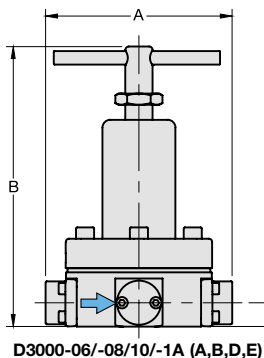
Back pressure regulator				overpressure max. 30 / 65 bar, PTFE diaphragm and FKM o-ring	D3000			
165	246	21	M	8000	30	G $\frac{3}{4}$	0,1 ... 1,5	D3000-06AT
							0,2 ... 3,0	D3000-06BT
							0,5 ... 8,0	D3000-06DT
							1,0 ... 15	D3000-06ET
165	270	21	K	8000	65		2,0 ... 30	D3000-06FT
							3,0 ... 50	D3000-06GT
165	246	21	M	8000	30	G1	0,1 ... 1,5	D3000-08AT
							0,2 ... 3,0	D3000-08BT
							0,5 ... 8,0	D3000-08DT
							1,0 ... 15	D3000-08ET
165	270	21	K	8000	65		2,0 ... 30	D3000-08FT
							3,0 ... 50	D3000-08GT
269	246	21	M	8000	30	G1 $\frac{1}{4}$	0,1 ... 1,5	D3000-10AT
							0,2 ... 3,0	D3000-10BT
							0,5 ... 8,0	D3000-10DT
							1,0 ... 15	D3000-10ET
269	270	21	K	8000	65		2,0 ... 30	D3000-10FT
							3,0 ... 50	D3000-10GT
269	246	21	M	8000	30	G1 $\frac{1}{2}$	0,1 ... 1,5	D3000-1AAT
							0,2 ... 3,0	D3000-1ABT
							0,5 ... 8,0	D3000-1ADT
							1,0 ... 15	D3000-1AET
269	270	21	K	8000	65		2,0 ... 30	D3000-1AFT
							3,0 ... 50	D3000-1AGT



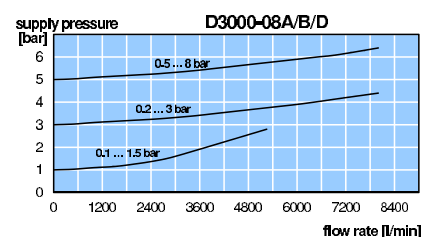
SST
SST
15



Accessories, see next pages



*1 at 7 bar overpressure and open outlet



Gauges: see chapter for measuring devices

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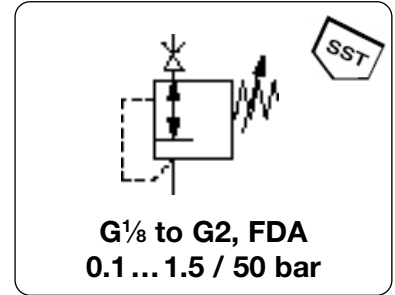


Order example:
D3000-06AT

BACK PRESSURE REGULATOR MADE OF STAINLESS STEEL THROUGHOUT

D3000

Description	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible. compressed air, gases or liquids
Media	compressed air, gases or liquids
System pressure	see chart, max. 70 bar
Adjustment	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
Gauge port	for inlet pressure, G $\frac{1}{4}$ on both sides, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40°C / -40 °F
Material	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404

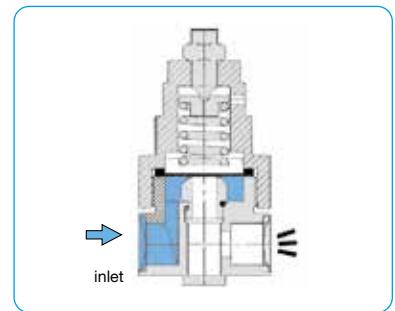


Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

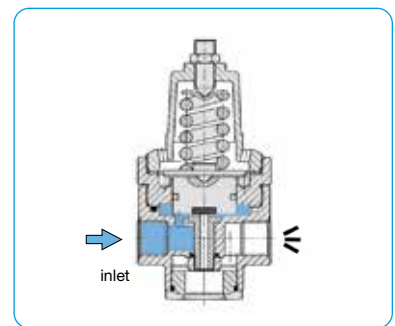
Back pressure regulator								overpressure max. 30 / 65 bar, PTFE diaphragm and FKM o-ring	D3000
171	376	128	M	25 000	30	G $\frac{1}{2}$	0.1 ... 1.5	D3000-12AT	
							0.2 ... 3.0	D3000-12BT	
							0.5 ... 8.0	D3000-12DT	
							1.0 ... 15	D3000-12ET	
171	387	128	P	25 000	65		2.0 ... 30	D3000-12FT	
							3.0 ... 50	D3000-12GT	
171	376	128	M	25 000	30	G2	0.1 ... 1.5	D3000-16AT	
							0.2 ... 3.0	D3000-16BT	
							0.5 ... 8.0	D3000-16DT	
							1.0 ... 15	D3000-16ET	
171	387	128	P	25 000	65		2.0 ... 30	D3000-16FT	
							3.0 ... 50	D3000-16GT	



D3000-12/-16

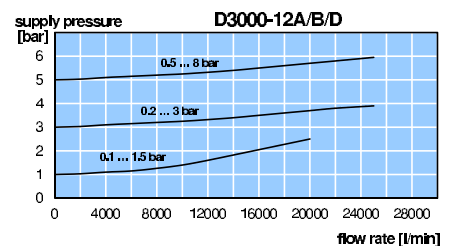
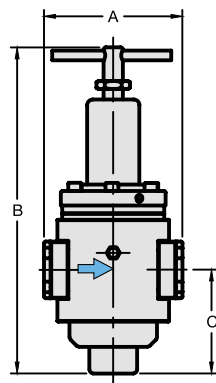


with diaphragm



with piston

Accessories, see next page

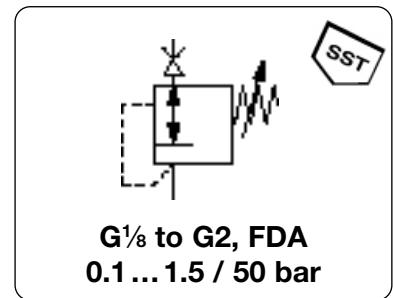


*1 at 7 bar overpressure and open outlet

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Order example:
D3000-12AT

Description	The back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.
Media	compressed air, gases or liquids
System pressure	see chart, max. 70 bar
Adjustment	by adjusting screw at D3000-01 to -A6, with locknut by T-handle at D3000-06 to -16, with locknut
Gauge port	for inlet pressure, G $\frac{1}{4}$ on both sides, screw plugs supplied
Mounting position	any
Temperature range	0 °C to 80 °C / 32 °C to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °C to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40°C / -40 °F
Material	Body: stainless steel 316L, material no 1.4404 O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE coating, optionally stainless steel Inner valve: stainless steel 316L, material no 1.4404



Dimensions			Regul. system	Exhaust	Over-	Connection	Adjustment	Order
A	B	C	D: Diaphragm	rate	pressure	thread	range	number
mm	mm	mm	P: Piston	l/min*1	max. bar	G	bar	

Special options, add the appropriate letter

pilot operated	Diaphragm version, control press. max. 15 bar, 1 ... 15 bar	D3000-... J2
pilot operated	Piston version, control press. max. 50 bar, 1 ... 50 bar	D3000-... J5
NPT	connection thread	D3000-... N
down to -40 °C/ -40°F	low temperature version	from G $\frac{1}{4}$ on D3000-... X51
up to 130 °C/266 °F	high temperature version	from G $\frac{1}{4}$ on D3000-... X54
FKM -o-ring	for piston regulator or PTFE diaphragm	D3000-... T
EPDM-o-ring		D3000-... TE
EPDM-o-ring	FDA-approval	D3000-... TD
SST diaphragm	FKM -o-ring	D3000-... S
	NBR -o-ring	D3000-... SB
	EPDM-o-ring	D3000-... SE
	EPDM-o-ring, FDA-approval	D3000-... SD
ammonia	NH ₃	P ₁ max. 15 bar D3000-... 02
carbon dioxide	CO ₂	D3000-... 03
argon	Ar	D3000-... 05
nitrogen	N ₂	D3000-... 07
helium	He	D3000-... 09
hydrogen	H ₂	D3000-... 11
methane	CH ₄	D3000-... 13
natural gas *3		D3000-... 14
oxygen	O ₂	D3000-... 15
propane	C ₃ H ₈	D3000-... 16
nitrous oxide	N ₂ O	D3000-... 17
water	H ₂ O	D3000-... W
flange connection	see end of the chapter / flanges	D3000-... F.

Accessories, enclosed

pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	MS5002-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ to G2	MS6302-...*2
mounting bracket		for G $\frac{1}{4}$ and G $\frac{1}{2}$	BW45-03S
mounting nut			M45x1,5S
mounting bracket		for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	BW00-59S
		for G1 $\frac{1}{2}$ (12) and G2	BW00-62S

*1 at 7 bar overpressure and open outlet

*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

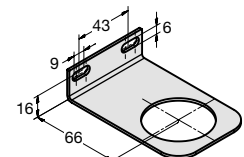
*3 without DVGW-approval

Gauges: see chapter for measuring devices

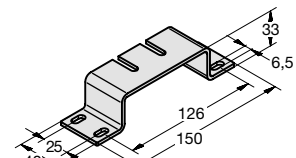
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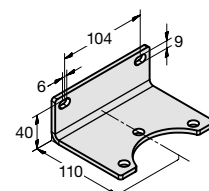
Order example:
MS5002-02



BW45-03S



BW00-59S



BW00-62S

SST

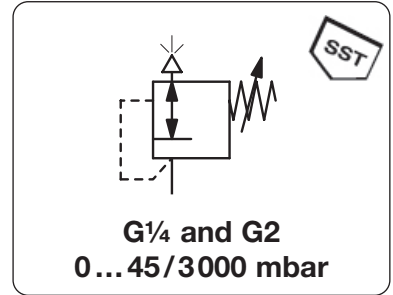


15

STAINLESS STEEL LOW BACK PRESSURE REGULATOR

D3100

Description	The diaphragm back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.	
Media	compressed air, gases	System pressure max. 10 bar
Adjustment	by adjusting screw for D3100-02 to -1A, with locknut by T-handle for D3100-12 and -16, 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 80 °C / 32 °F to 176 °F, FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F, high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM

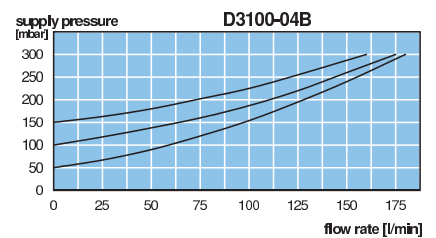
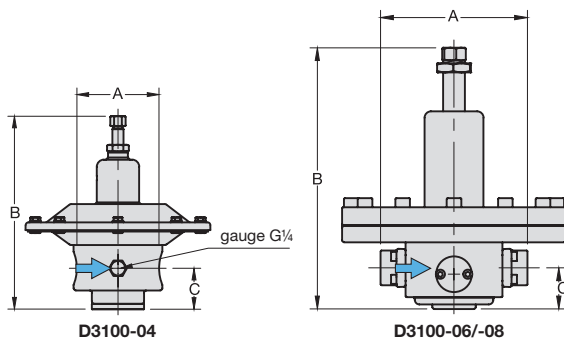


Dimensions			Exhaust rate l/min*1	Over-pressure max. bar	Connection thread G	Adjustment range mbar	Order number
A	B	C					

Back pressure regulator				overpressure max. 6/10 bar, PTFE-diaphragm and FKM-o-ring		D3100	
109	181	39	450	10	G $\frac{1}{4}$	0 ... 45	D3100-02AT
			750				D3100-02BT
			1000				D3100-02CT
			1400				D3100-02DT
109	181	39	450	10	G $\frac{3}{8}$	0 ... 45	D3100-03AT
			750				D3100-03BT
			1000				D3100-03CT
			1400				D3100-03DT
109	181	39	450	10	G $\frac{1}{2}$	0 ... 45	D3100-04AT
			750				D3100-04BT
			1000				D3100-04CT
			1400				D3100-04DT
161	290	45	1500	6	G $\frac{3}{4}$	0 ... 300	D3100-06BT
			2300				D3100-06CT
			3000				D3100-06DT
161	290	45	1500	6	G1	0 ... 300	D3100-08BT
			2300				D3100-08CT
			3000				D3100-08DT



SST
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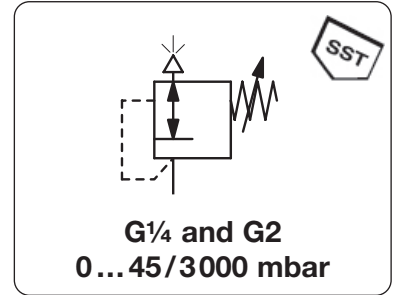
*1 at 6 bar overpressure and open outlet
*2 B6 = 0...60 mbar, C3 = 0...250 mbar

Gauges: see chapter for measuring devices

PDF CAD
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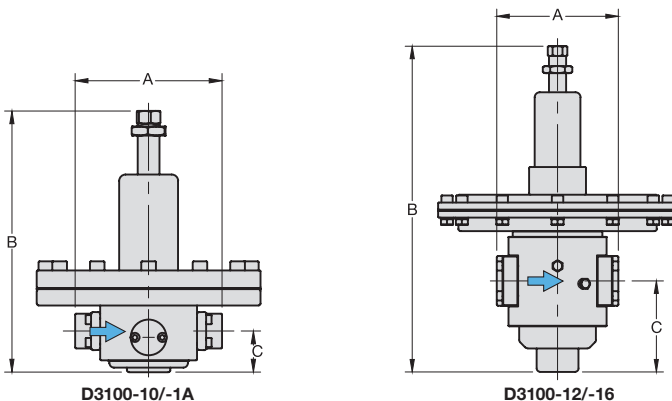
Order example:
D3100-02AT

Description	The diaphragm back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.	
Media	compressed air, gases	System pressure max. 10 bar
Adjustment	by adjusting screw for D3100-02 to -1A, with locknut by T-handle for D3100-12 and -16, 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 80 °C / 32 °F to 176 °F, FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F, high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM



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

Back pressure regulator				overpressure max. 6 / 10 bar, PTFE-diaphragm and FKM-o-ring		D3100	
265	290	45	2000	6	G $\frac{1}{4}$	0 ... 300	D3100-10BT
			4100			0 ... 700	D3100-10CT
			5000			0 ... 1200	D3100-10DT
265	290	45	2000	6	G $\frac{1}{2}$	0 ... 300	D3100-1ABT
			4100			0 ... 700	D3100-1ACT
			5000			0 ... 1200	D3100-1ADT
171	460	128	2500	6	G $\frac{1}{2}$	20 ... 50	D3100-12AT
			5000			50 ... 150	D3100-12BT
			7500			150 ... 300	D3100-12CT
171	420	128	10000	6	G2	300 ... 3000	D3100-12DT
			2500			20 ... 50	D3100-16AT
			5000			50 ... 150	D3100-16BT
171	460	128	7500	6	G2	150 ... 300	D3100-16CT
			10000			300 ... 3000	D3100-16DT



*1 at 6 bar overpressure and open outlet
*2 B6 = 0...60 mbar, C3 = 0...250 mbar

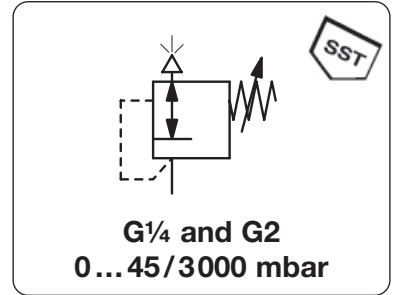
Gauges: see chapter for measuring devices

PDF CAD
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Order example:
D3100-10BT

Description	The diaphragm back pressure regulator protects compressed air devices from excessive pressure. If the pressure setpoint is exceeded, overpressure is vented into the atmosphere until the setpoint is reached again. It is recommended to choose a pressure range as low as possible.	
Media	compressed air, gases	System pressure max. 6 bar
Adjustment	by adjusting screw for D3100-02 to -1A, with locknut by T-handle for D3100-12 and -16, 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 80 °C / 32 °F to 176 °F, FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F, high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
Material	Body: stainless steel 316L, material no. 1.4404 Diaphragm: NBR/Buna-N with PTFE coating Inner valve: stainless steel 316L, material no. 1.4404	O-rings: FKM, optionally EPDM



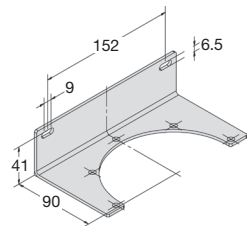
Dimensions			Exhaust rate	Over-pressure	Connection thread	Adjustment range	Order number
A	B	C	l/min*1	max. bar	G	mbar	
mm	mm	mm					

Special options, add the appropriate letter

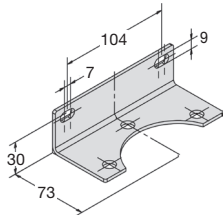
NPT	connection thread	D3100-...N
FKM -o-ring		D3100-...T
EPDM-o-ring		D3100-...TE
EPDM-o-ring	FDA-approval	D3100-...TD
down to -40 °C/ -40°F	low temperature version	D3100-...X51
up to 130 °C/266 °F	high temperature version	D3100-...X54
ammonia	NH ₃	D3100-...02
carbon dioxide	CO ₂	D3100-...03
argon	Ar	D3100-...05
nitrogen	N ₂	D3100-...07
helium	He	D3100-...09
hydrogen	H ₂	D3100-...11
methane	CH ₄	D3100-...13
natural gas *3		D3100-...14
Sauerstoff	O ₂	D3100-...15
propane	C ₃ H ₈	D3100-...16
nitrous oxide	N ₂ O	D3100-...17
flange connection	see end of the chapter / flanges	D3100-...F.

Accessories, enclosed

pressure gauge	Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$, capsule type	up to 600 mbar	MS6302-...*2
	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$, Bourdon tube	from 1 bar on	MS6302-01
gauge connection parts		for G $\frac{1}{2}$	AM-03S
mounting bracket		for G $\frac{1}{2}$	BW00-26S
		for G1	BW00-27S



BW00-26S



BW00-27S

*1 at 6 bar overpressure and open outlet
*2 B6 = 0...60 mbar, C3 = 0...250 mbar, C4 = 0...400 mbar, C6 = 0...600 mbar, 01 = 0...1 bar, 02 = 0...2 bar, 04 = 0...4 bar
*3 without DVGW-approval

FILTER REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, P1: MAX. 80 BAR B3000

Description Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{3}{8}$ on piston-operated.

Media compressed air, gases or liquids

Supply pressure max. 16 bar, 50 bar or 80 bar (only with locking screw)

Adjustment by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar

Relieving function relieving, optionally non-relieving

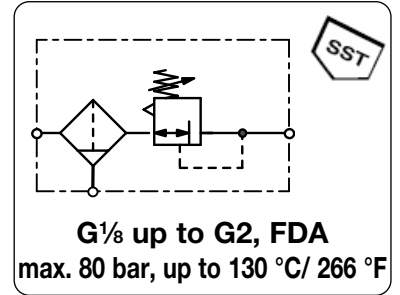
Gauge port G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ for B3000-01/-A2, one screw plug supplied

Filter element 50 μ m and 5 μ m, made of stainless steel **Bowl** stainless steel version without sight glass

Drain manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$ (02) up to G1

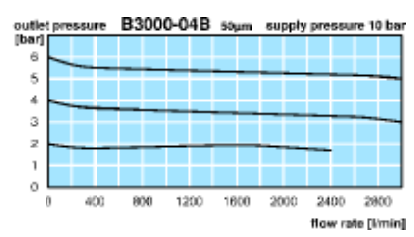
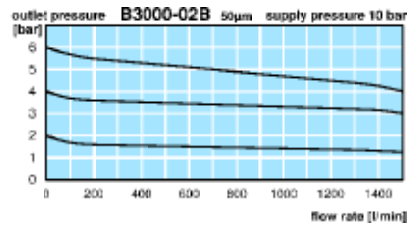
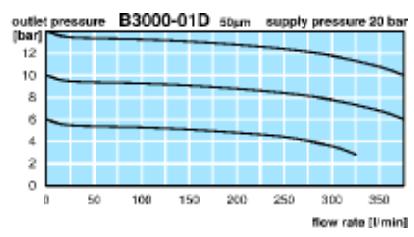
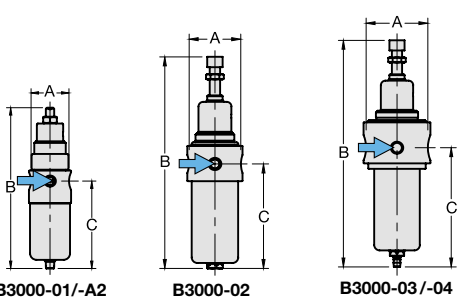
Temperature range -20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM
-20 °C to 130 °C / -4 °F to 266 °F for high temperature version or low temperature version down to -40 °C / -40 °F

Werkstoffe Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404
O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



Dimensions			Bowl capacity l	Flow rate l/min*1	Filter element μ m	Connection thread G	Pressure range bar	Order number
A	B	C						

Filter pressure regulator								with screw plug, relieving, w/o gauge, supply pressure max. 30 / 50 bar	B3000
40	147	83	0,03	200	5	G $\frac{1}{8}$	0.8 ... 8	B3000-01GH	
							1.5 ... 15	B3000-01GDH	
40	147	83	0,03	200	50	G $\frac{1}{4}$	0.8 ... 8	B3000-01H	
							1.5 ... 15	B3000-01DH	
40	147	83	0,03	200	5	G $\frac{1}{4}$	0.8 ... 8	B3000-A2GH	
							1.5 ... 15	B3000-A2GDH	
40	147	83	0,03	280	50	G $\frac{1}{4}$	0.8 ... 8	B3000-A2H	
							1.5 ... 15	B3000-A2DH	
64	249	128	0,14	600	5	G $\frac{1}{4}$	0.8 ... 8	B3000-02G	
							1.5 ... 15	B3000-02GD	
64	249	128	0,14	800	50	G $\frac{1}{4}$	0.8 ... 8	B3000-02	
							1.5 ... 15	B3000-02D	
109	246	125	0,2	2200	5	G $\frac{3}{8}$	0.8 ... 8	B3000-03G	
							1.5 ... 15	B3000-03GD	
109	246	125	0,2	2200	50	G $\frac{3}{8}$	3.0 ... 30	B3000-03GE	
							5.0 ... 50	B3000-03GF	
109	246	125	0,2	2200	5	G $\frac{1}{2}$	0.8 ... 8	B3000-03	
							1.5 ... 15	B3000-03D	
109	246	125	0,2	2200	50	G $\frac{1}{2}$	3.0 ... 30	B3000-03E	
							5.0 ... 50	B3000-03F	
109	246	125	0,2	2200	5	G $\frac{1}{2}$	0.8 ... 8	B3000-04G	
							1.5 ... 15	B3000-04GD	
109	246	125	0,2	2200	50	G $\frac{1}{2}$	3.0 ... 30	B3000-04GE	
							5.0 ... 50	B3000-04GF	
109	246	125	0,2	3000	50	G $\frac{1}{2}$	0.8 ... 8	B3000-04	
							1.5 ... 15	B3000-04D	
109	246	125	0,2	3000	50	G $\frac{1}{2}$	3.0 ... 30	B3000-04E	
							5.0 ... 50	B3000-04F	



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

PDF CAD
www.aircom.net

Order example:
B3000-01GH

FILTER REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, P1: MAX. 80 BAR B3000

Description Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{3}{4}$ on piston-operated.

Media compressed air, gases or liquids

Supply pressure max. 16 bar, 50 bar or 80 bar (only with locking screw)

Adjustment by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar

Relieving function relieving, optionally non-relieving

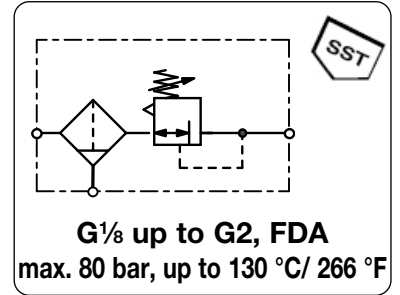
Gauge port G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ for B3000-01/-A2, one screw plug supplied

Filter element 50 μ m and 5 μ m, made of stainless steel **Bowl** stainless steel version without sight glass

Drain manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$ (02) up to G1

Temperature range -20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM
-20 °C to 130 °C / -4 °F to 266 °F for high temperature version or low temperature version down to -40 °C / -40 °F

Werkstoffe Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404
O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



Dimensions			Bowl capacity	Flow rate	Filter element	Connection thread	Pressure range	Order number
A	B	C						
mm	mm	mm	l	l/min*1	μ m	G	bar	

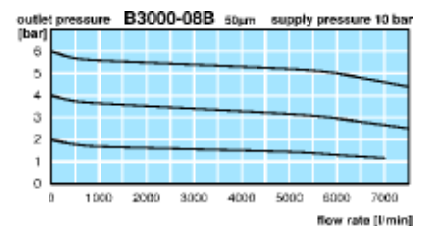
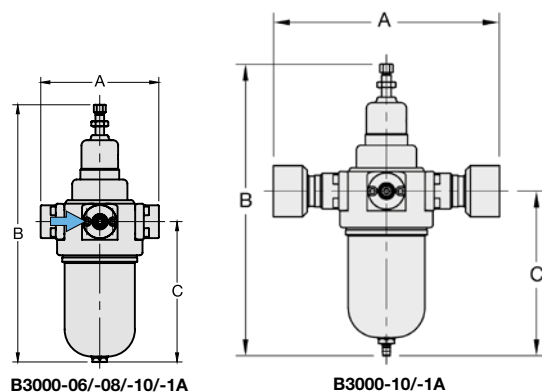
Filter pressure regulator				with screw plug, relieving, w/o gauge, supply pressure max. 30 / 50 bar			B3000			
137	304	168	0,5	4500	5	G $\frac{3}{4}$	0.8... 8	B3000-06G		
							1.5... 15	B3000-06GD		
							3.0... 30	B3000-06GE		
							5.0... 50	B3000-06GF		
							6000	50	0.8... 8	B3000-06
							1.5... 15	B3000-06D		
137	304	168	0,5	4500	5	G1	0.8... 8	B3000-08G		
							1.5... 15	B3000-08GD		
							3.0... 30	B3000-08GE		
							5.0... 50	B3000-08GF		
							6000	50	0.8... 8	B3000-08
							1.5... 15	B3000-08D		
137	304	168	0,5	4500	5	G1 $\frac{1}{4}$	0.8... 8	B3000-10G		
							1.5... 15	B3000-10GD		
							3.0... 30	B3000-10GE		
							5.0... 50	B3000-10GF		
							6000	50	0.8... 8	B3000-10
							1.5... 15	B3000-10D		
248	304	168	0,5	4500	5	G1 $\frac{1}{2}$	0.8... 8	B3000-1AG		
							1.5... 15	B3000-1AGD		
							3.0... 30	B3000-1AGE		
							5.0... 50	B3000-1AGF		
							6000	50	0.8... 8	B3000-1A
							1.5... 15	B3000-1AD		
							3.0... 30	B3000-1AE		
							5.0... 50	B3000-1AF		



B3000-06/-08



B3000-10/-1A



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

PDF CAD
www.aircom.net



Order example:
B3000-01GH

FILTER REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, P1: MAX. 80 BAR B3000

Description Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{1}{4}$ on piston-operated.

Media compressed air, gases or liquids

Supply pressure max. 16 bar, 50 bar or 80 bar (only with locking screw)

Adjustment by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar

Relieving function relieving, optionally non-relieving

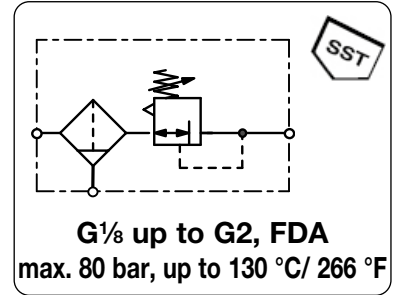
Gauge port G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ for B3000-01/-A2, one screw plug supplied

Filter element 50 μ m and 5 μ m, made of stainless steel **Bowl** stainless steel version without sight glass

Drain manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$ (02) up to G1

Temperature range -20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM
-20 °C to 130 °C / -4 °F to 266 °F for high temperature version or low temperature version down to -40 °C / -40 °F

Werkstoffe Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404
O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



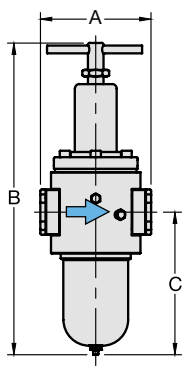
Dimensions			Bowl capacity	Flow rate	Filter element	Connection thread	Pressure range	Order number
A	B	C	l	l/min*1	μ m	G	bar	

Filter pressure regulator				with screw plug, relieving, w/o gauge, supply pressure max. 30 / 50 bar			B3000					
171	476	219	1,0	15500	5	G1 $\frac{1}{2}$	0.8 ... 8	B3000-12G				
							1.5 ... 15	B3000-12GD				
							3.0 ... 30	B3000-12GE				
							5.0 ... 50	B3000-12GF				
							0.8 ... 8	B3000-12				
			20000	1.5 ... 15	B3000-12D							
				3.0 ... 30	B3000-12E							
				5.0 ... 50	B3000-12F							
				171	476	219	1,0	15500	5	G2	0.8 ... 8	B3000-16G
											1.5 ... 15	B3000-16GD
3.0 ... 30	B3000-16GE											
5.0 ... 50	B3000-16GF											
0.8 ... 8	B3000-16											
1.5 ... 15	B3000-16D											
3.0 ... 30	B3000-16E											
5.0 ... 50	B3000-16F											

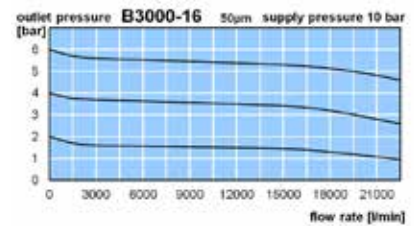


B3000-12/-16

Accessories, see next page



B3000-12/-16

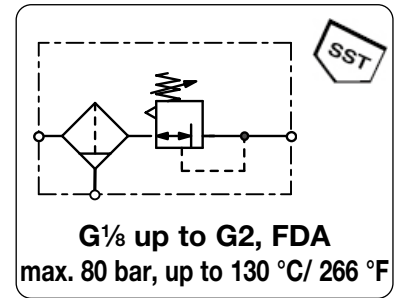


*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure



FILTER REGULATOR MADE OF STAINLESS STEEL THROUGHOUT, P1: MAX. 80 BAR B3000

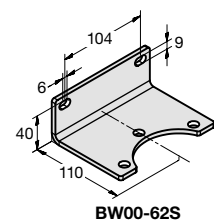
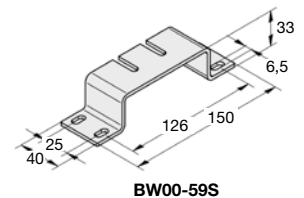
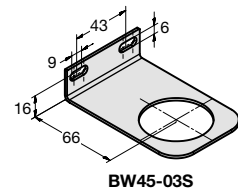
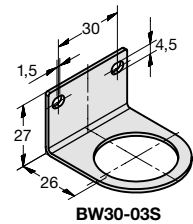
Description	Filter pressure regulator with bowl without sight glass, completely made of stainless steel. Diaphragm-operated, from size G $\frac{3}{8}$ on piston-operated.
Media	compressed air, gases or liquids
Supply pressure	max. 30 bar, 50 bar or 80 bar (only with locking screw)
Adjustment	by adjusting screw, from B3000-12 on with T-handle, max. 50 bar for B3000-02 to -16, optionally 80 bar relieving, optionally non-relieving
Relieving function	relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, G $\frac{3}{8}$ for B3000-01/-A2, one screw plug supplied
Filter element	50 μ m and 5 μ m, made of stainless steel Bowl stainless steel version without sight glass
Drain	manual drain (max. 30 bar), screw plug for 50 bar and 80 bar version automatic drain (max. 16 bar) for G $\frac{1}{4}$ (02) up to G1
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F for NBR/Buna-N, EPDM or FKM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version or low temperature version down to -40 °C / -40 °F
Werkstoffe	Body / Bowl / Inner valve : stainless steel 316L, material-no. 1.4404 O-rings: FKM, optionally EPDM Diaphragm: NBR/Buna-N with PTFE-coating



Dimensions			Bowl	Flow	Filter	Connection	Pressure	Order
A	B	C	capacity	rate	element	thread	range	number
mm	mm	mm	l	l/min*1	μ m	G	bar	

Special options, add the appropriate letter

NPT	connection thread	for G $\frac{1}{4}$ (02) to G2	B3000-... N
0,1 ... 1,5 bar regulating range			B3000-... A
0,2 ... 3 bar regulating range			B3000-... B
manual drain	max. 30 bar	for G $\frac{1}{4}$ (02) to G2	B3000-... H
automatic drain	max. 16 bar	for G $\frac{1}{4}$ (02) to G2	B3000-... R
non-relieving	without relieving function		B3000-... K
P1: max. 80 bar		for G $\frac{1}{4}$ (02) to G1 $\frac{1}{2}$ (1A)	B3000-... X48
down to -40 °C/ -40 °F	low temperature version		B3000-... X51
up to 130 °C/ 266 °F	high temperature version		B3000-... X54
spring cage made of POM		for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	R3000-... X57
EPDM-o-ring			B3000-... E
EPDM-o-ring	FDA approval		B3000-... TD
SST diaphragm	not suitable for water	for G $\frac{1}{4}$ (02) to G $\frac{1}{2}$	B3000-... S
ammonia ^{*3} NH ₃			B3000-... 02
carbon dioxide CO ₂			B3000-... 03
argon Ar			B3000-... 05
nitrogen N ₂			B3000-... 07
helium He			B3000-... 09
hydrogen H ₂			B3000-... 11
Methan CH ₄			B3000-... 13
natural gas ^{*3}			B3000-... 14
oxygen O ₂			B3000-... 15
propane C ₃ H ₈			B3000-... 16
nitrous oxide N ₂ O			B3000-... 17
flange connection	see end of the chapter / flanges		B3000-... F



Accessories, enclosed

pressure gauge	\varnothing 40 mm, 0... ^{*2} bar, G $\frac{1}{8}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	MS4001-..*2
	\varnothing 50 mm, 0... ^{*2} bar, G $\frac{1}{4}$	for G $\frac{1}{4}$ to G $\frac{1}{2}$	MS5002-..*2
	\varnothing 63 mm, 0... ^{*2} bar, G $\frac{1}{4}$	for G $\frac{3}{4}$ to G2	MS6302-..*2
mounting bracket		for G $\frac{1}{8}$ and G $\frac{1}{4}$ (A2)	BW30-03S
mounting nut			M30x1,5SS
mounting bracket		for G $\frac{1}{4}$ (02) to G1 $\frac{1}{2}$ (1A)	BW45-03S
mounting nut			M45x1,5S
mounting bracket		for G $\frac{3}{8}$ to G1 $\frac{1}{2}$ (1A)	BW00-59S
mounting bracket		for G1 $\frac{1}{2}$ (12) and G2	BW00-62S

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

*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar, 60 = 0...60 bar

*3 without DVGW-approval



STAINLESS STEEL COMPRESSED AIR FILTER, UP TO 80 BAR

F3000

Description Filter with bowl without sight glass completely made of stainless steel, extremely robust, suitable for compressed air, gases or liquids. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.

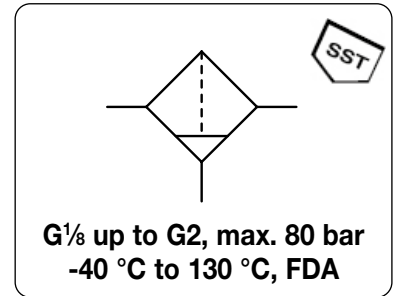
Filter element 50 µm, optionally 5 µm, made of stainless steel, coalescing filter 0.1 µm at 99,99% stainless steel version without sight glass

Bowl screw plug as standard, optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)

Operating pressure max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)

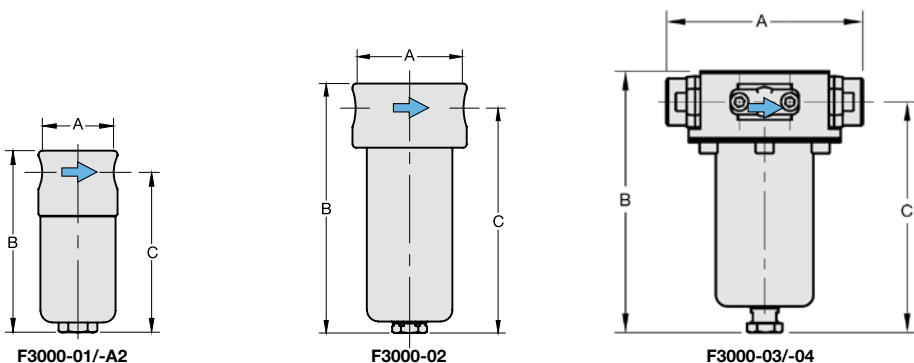
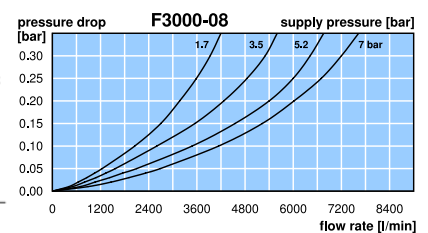
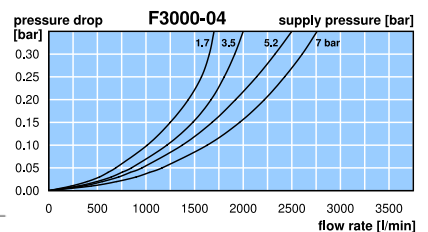
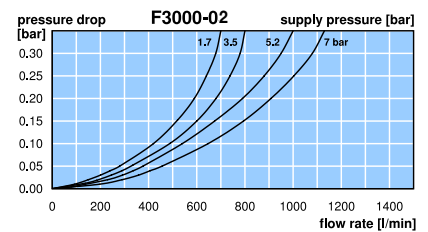
Temperature range 0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM
0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F

Material
Body: stainless steel 316L, material no. 1.4404
Bowl: stainless steel 316L, material no. 1.4404
Elastomer: FKM, optionally EPDM
Inner valve: stainless steel 316L, material no. 1.4404



Dimensions			Bowl capacity l	Flow rate m ³ /h*1	P ₁ max. bar	Filter element µm	Connection thread G	Order number
A	B	C						

Stainless steel filter, up to 50 bar with screw plug								F3000	
40	92	81	0,03	45	750	50	50	G ^{1/8}	F3000-01 F3000-01G
40	92	81	0,03	45	750	50	50	G ^{1/4}	F3000-A2 F3000-A2G
64	140	125	0,14	54	900	50	50	G ^{1/4}	F3000-02 F3000-02G F3000-02I
109	140	123	0,2	150	2500	50	50	G ^{3/8}	F3000-03 F3000-03G F3000-03I
109	140	123	0,2	150	2500	50	50	G ^{1/2}	F3000-04 F3000-04G F3000-04I
79	150	130	0,2	150	2500	50	0,01	G ^{3/4}	F3000-06 F3000-06G F3000-06I
137	194	167	0,50	432	7200	50	50	G ¹	F3000-08 F3000-08G F3000-08I
241	194	167	0,50	432	7200	50	50	G ^{1 1/4}	F3000-10 F3000-10G F3000-10I
241	194	167	0,50	432	7200	50	50	G ^{1 1/2}	F3000-1A F3000-1AG F3000-1AI
171	254	218	1,00	900	15000	50	50	G ^{1 1/2}	F3000-12 F3000-12G
171	254	218	1,00	960	16000	50	50	G ²	F3000-16 F3000-16G



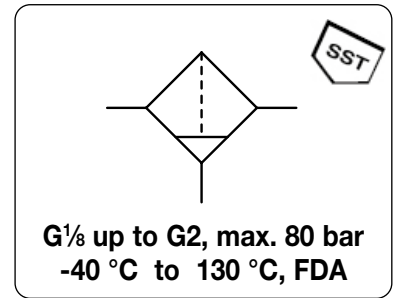
*1 at 7 bar operating pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units
Spare parts: see separate spare parts list

PDF CAD
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Order example:
F3000-01

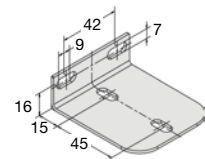
Description	Filter with bowl without sight glass completely made of stainless steel, extremely robust, suitable for compressed air, gases or liquids. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
Filter element	50 µm, optionally 5 µm, made of stainless steel, coalescing filter 0.1 µm at 99,99%
Bowl	stainless steel version without sight glass
Drainage	screw plug as standard, optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)
Operating pressure	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for FKM or EPDM 0 °C to 130 °C / 32 °F to 266 °F for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no. 1.4404 Bowl: stainless steel 316L, material no. 1.4404 Elastomer: FKM, optionally EPDM Inner valve: stainless steel 316L, material no. 1.4404



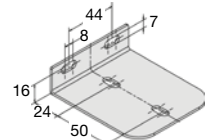
Dimensions			Bowl capacity l	Flow rate m ³ /h*1 l/min*1	P ₁ max. bar	Filter element µm	Connection thread G	Order number
A	B	C						
mm	mm	mm						

Special options, add the appropriate letter

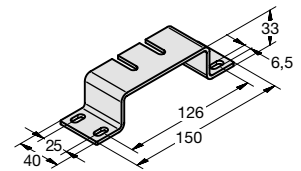
NPT	connection thread	F3000-...N
P₁: max. 80 bar		F3000-...X48
down to -40 °C / -40 °F	low temperature version	F3000-...X51
up to 130 °C / 266 °F	high temperature version	F3000-...X54
manual drain	max. 30 bar	F3000-...H
automatic drain	max. 16 bar	F3000-...R
EPDM-elastomer		F3000-...E
EPDM-elastomer	FDA-approval	F3000-...TD
ammonia	NH ₃	F3000-...02
carbon dioxide	CO ₂	F3000-...03
argon	Ar	F3000-...05
nitrogen	N ₂	F3000-...07
helium	He	F3000-...09
hydrogen	H ₂	F3000-...11
methane	CH ₄	F3000-...13
natural gas *2		F3000-...14
oxygen	O ₂	F3000-...15
propane	C ₃ H ₈	F3000-...16
nitrous oxide	N ₂ O	F3000-...17
flange connection	see end of the chapter / flanges	F3000-...F.



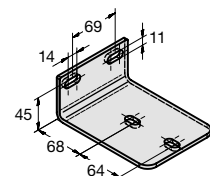
BW00-17S



BW00-18S



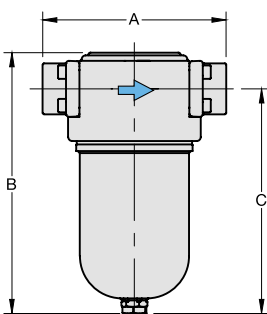
BW00-59S



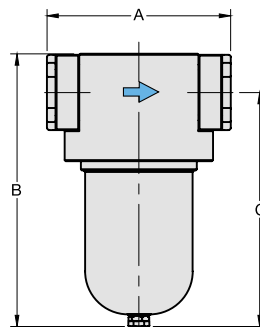
BW00-63S

Accessories, enclosed

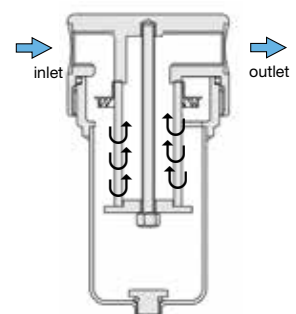
mounting bracket	for G ¹ / ₄ (02)	BW00-17S
	for G ¹ / ₂ (only 04I)	BW00-18S
	for G ³ / ₈ to G ¹ / ₂ (1A)	BW00-59S
	for G ¹ / ₂ (12) and G ₂	BW00-63S



F3000-06/-08/-10/1A



F3000-12/-16



cross-section

*1 at 7 bar operating pressure and 0.33 bar pressure drop

*2 without DVWG-approval

Extensions: see chapter for FRL service units
Spare parts: see separate spare parts list

PDF CAD
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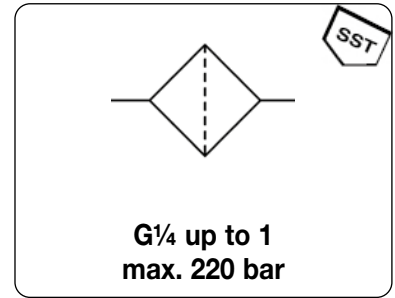


Order example:
BW00-17S

STAINLESS STEEL COMPRESSED AIR FILTER, UP TO 220 BAR

FH3

Description	Stainless steel filter, without sight glass, very robust design, for compressed air, gases or liquids. Application areas: Chemical industry, petroleum processing, food industry and medical technology.		
Filter element	50 µm, optionally 5 µm, made of SST or Coalescing 0.01 µm / 99,99 %		
Bowl	made of stainless steel, without sight glass		
Operating pressure	max. 220 bar		
Temperature range	-20 °C to 60 °C / -4 °F to 140 °F		
Material	Body: SST 316L, material-no. 1.4404, Bowl: SST 316L, material-no. 1.4404 Inner valve: SST 316L, material-no. 1.4404	optionally brass Filter elements 5/50 µm: SST 316L Elastomer: FKM, optionally EPDM	



Dimensions			Bowl capacity l	Flow rate		Filter element µm	Connection thread G	Order number
A	B	C		m³/h*1	l/min*1			

SST Filter, up to 220 bar				50 µm / 5 µm		FH3		
70	123	99	0.04	120	2000	5	G1/4	FH3-02G
				160	2670	50	G1/4	FH3-02
				120	2000	5	G3/8	FH3-03G
				160	2670	50	G3/8	FH3-03
170	123	99	0.04	120	2000	5	G1/2	FH3-04G
				160	2670	50	G1/2	FH3-04
204	145	125	0.08	240	4000	5	G3/4	FH3-06G
				320	5530	50	G3/4	FH3-06
204	145	125	0.08	240	4000	5	G1	FH3-08G
				320	5530	50	G1	FH3-08



FH3-02/-03/-04



FH3-06/-08

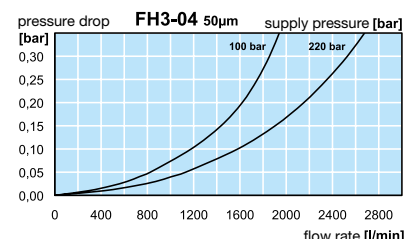
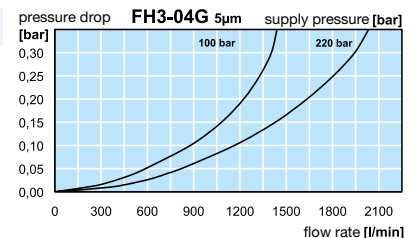
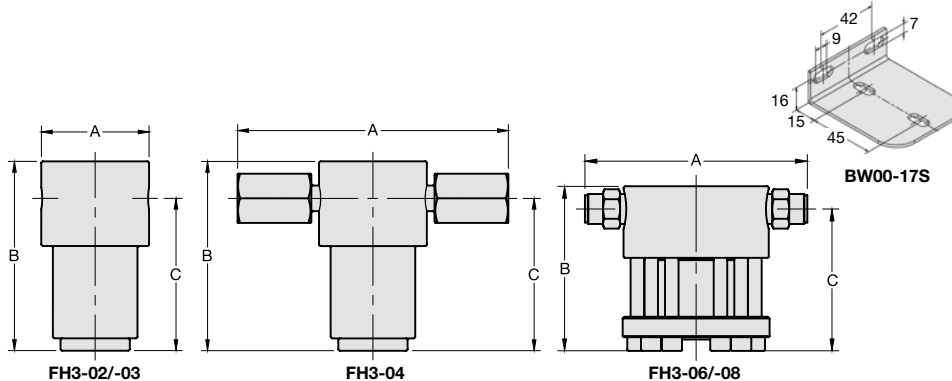
Special options, add the appropriate letter

Coalescing filter	0.01 µm / 99.99 %, brass version	for G1/4 to G1/2	FH3- .. IMS
	0.01 µm / 99.99 %, SST version	for G1/4 to G1/2	FH3- .. I
	0.01 µm / 99.99 %, SST and brass version	for G3/4 to G1	FH3- .. I
NPT	connection thread		FH3- .. N
EPDM-elastomer			FH3- .. E
brass body			FH3- .. MS
ammonia	NH ₃		FH3- ... 02
carbon dioxide	CO ₂		FH3- ... 03
argon	Ar		FH3- ... 05
nitrogen	N ₂		FH3- ... 07
helium	He		FH3- ... 09
hydrogen	H ₂		FH3- ... 11
methane	CH ₄		FH3- ... 13
oxygen	O ₂		FH3- ... 15
propane	C ₃ H ₈		FH3- ... 16
nitrous oxide	N ₂ O		FH3- ... 17
water	H ₂ O		FH3- ... W

Accessories, enclosed

mouting bracket with screws

BW00-17S



*1 at max. operating pressure

Extensions: see chapter for FRL service units
Spare parts: see separate spare parts list

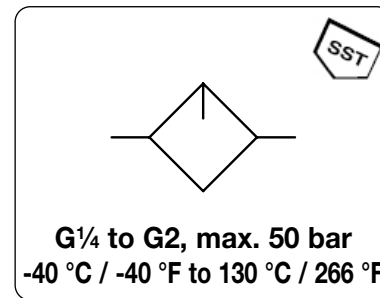
PDF CAD
www.aircom.net

Order example:
FH3-02G

LUBRICATOR MADE OF STAINLESS STEEL THROUGHOUT, UP TO 50 BAR

L3000

Description	Lubricator for compressed air with bowl without sight glass, extremely robust, with manual adjustment of oil drip rate.
Bowl	stainless steel version without sight glass
Operating pressure	max. 50 bar
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for NBR/Buna-N, 0 °C to 130 °C / 32 °F to 266 °F for high temperature version for appropriately conditioned air down to -20 °C / -4 °F, or low temperature version down to -40 °C / -40 °F
Material	Body: stainless steel 316L, material no. 1.4404 Bowl: stainless steel 316L, material no. 1.4404 Elastomer: FKM Inner valve: stainless steel 316L, material no. 1.4404



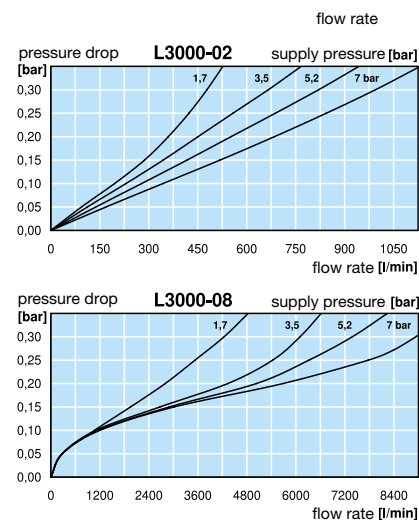
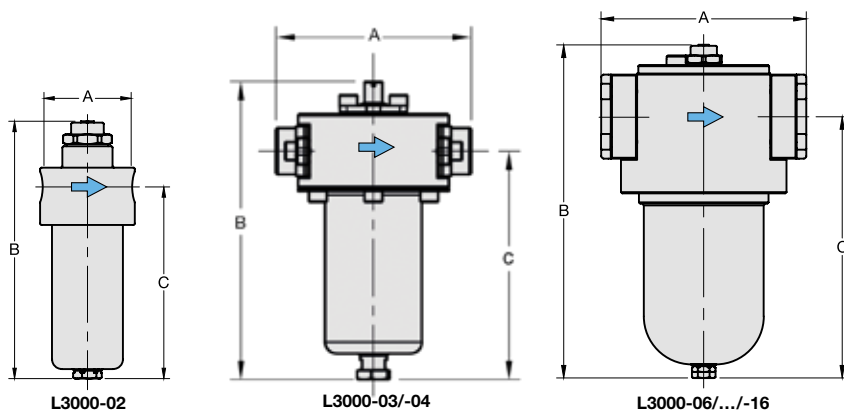
Dimensions			Bowl capacity l	Flow rate		Operating pressure max. bar	Connection thread G	Order number
A	B	C		m ³ /h*1	l/min*1			

Lubricator			operating pressure max. 50 bar					L3000
64	174	130	0.14	54	900	50	G ¹ / ₄	L3000-02
109	161	121	0,20	144	2400	50	G ³ / ₈	L3000-03
				144	2400		G ¹ / ₂	L3000-04
137	201	168	0.50	480	8000	50	G ³ / ₄	L3000-06
				480	8000		G1	L3000-08
241	201	168	0.50	480	8000	50	G ¹ / ₄	L3000-10
				480	8000		G ¹ / ₂	L3000-1A
171	278	218	1.00	720	12000	50	G ¹ / ₂	L3000-12
				720	12000		G2	L3000-16



Special options, add the appropriate letter

NPT	connection thread		L3000-.. N
down to -40 °C / -40 °F	low temperature version	from G ¹ / ₄ on	L3000-.. X51
up to 130 °C / 266 °F	high temperature version	from G ¹ / ₄ on	L3000-.. X54
flange connection	see end of the chapter / flanges		L3000-.. F.



*1 at 7 bar operating pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units

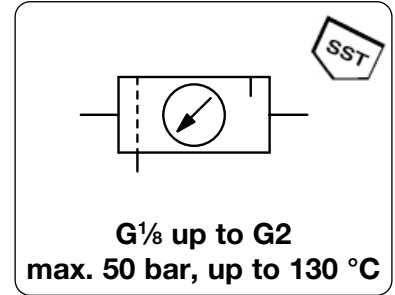
PDF CAD
www.aircom.net



Order example:
L3000-02

FRL SERVICE UNITS, 2-PART, COMPLETELY MADE OF STAINLESS STEEL, UP TO 50 BAR C3002

Description	FRL service unit completely made of stainless steel, very robust. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
Media	compressed air, gases or liquids
Supply pressure	max. 50 bar (without drain), optionally max. 30 bar (manual drain), max. 30 bar for C3002-01H
Adjustment	by hexagon socket screw Relieving function relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ at C3002-01, one screw plug supplied
Filter element	50 μ m, optionally 5 μ m, made of stainless steel Bowl stainless steel version without sight glass
Drainage	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F for FKM or EPDM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version, or low temperature version down to -40 °C / -40 °F
Material	Body / Bowl: stainless steel 316L, material no. 1.4404 Inner valve: stainless steel 316L / 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally EPDM or FKM O-rings: FKM, optionally EPDM



Dimensions			Combination existing of	Flow rate m ³ /h*1 l/min*1	Connection thread G	Order number
A mm	B mm	C mm				

FRL unit, 2-part			P ₁ : max. 50 bar, screw plug,	P ₂ : 0.5...8 bar, relieving,	50 μ m, with gauge	C3002
90	155	85	B+L3000	17	280	G $\frac{1}{8}$ C3002-01H
138	246	124		48	800	G $\frac{1}{4}$ C3002-02
138	246	124		48	800	G $\frac{3}{8}$ C3002-03
168	255	128		180	3000	G $\frac{1}{2}$ C3002-04
289	304	168		360	6000	G $\frac{3}{4}$ C3002-06
289	304	168		360	6000	G1 C3002-08
393	304	168		360	6000	G1 $\frac{1}{4}$ C3002-10
393	304	168		360	6000	G1 $\frac{1}{2}$ C3002-1A
362	482	213		1200	20000	G1 $\frac{1}{2}$ C3002-12
362	482	213		1200	20000	G2 C3002-16



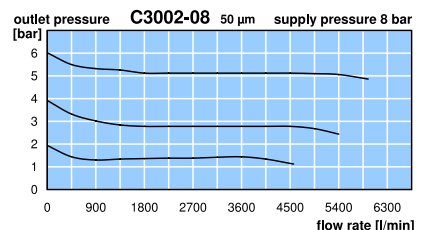
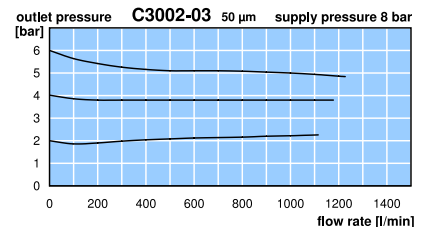
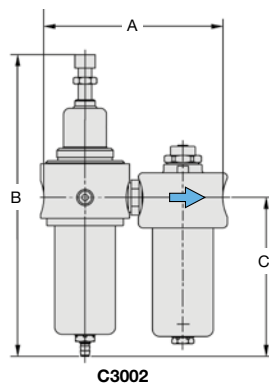
Special options, add the appropriate letter

5 μ m filter element		C3002-..G
NPT connection thread	for G $\frac{1}{4}$ to G2	C3002-..N
pressure range 0.2... 3 bar		C3002-..B
pressure range 1 ...15 bar P ₁ max. 50 bar		C3002-..D
manual drain max. 30 bar		C3002-..H
automatic drain max. 16 bar	for G $\frac{1}{4}$ to G1	C3002-..R
down to -40 °C / -40 °F	low temperature version	C3002-..X51
up to 130 °C / 266 °F	high temperature version	C3002-..X54
EPDM-elastomer		C3002-..E
flange connection	see end of the chapter / flanges	C3002-..F.



Accessories, enclosed

mounting bracket	for G $\frac{1}{8}$	BW30-03S
mounting nut		M30x1,5S
mounting bracket	for G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	BW45-03S
mounting nut		M45x1,5S
mounting bracket	for G $\frac{1}{2}$	BW50-01S
mounting nut		M50x1,5S
mounting bracket	for G1 $\frac{1}{2}$ (12) and G2	BW00-62S



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

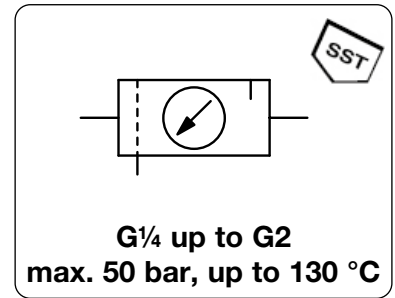
Further details: see chapter for single devices
Spare parts: see separate spare parts list

PDF CAD
www.aircom.net

Order example:
C3002-01H

FRL SERVICE UNITS, 3-PART, COMPLETELY MADE OF STAINLESS STEEL, UP TO 50 BAR C3003

Description	FRL service unit completely made of stainless steel, very robust. Application examples are the chemistry, petroleum processing as well as food industry and medical technology.
Media	compressed air, gases or liquids
Supply pressure	max. 30 bar, optionally max. 50 bar (for pressure range up to 15 bar)
Adjustment	by hexagon socket screw Relieving function relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Filter element	50 μ m, optionally 5 μ m, made of stainless steel Bowl stainless steel version without sight glass
Drainage	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
Temperature range	-20 °C to 80 °C / -4 °F to 176 °F for FKM or EPDM -20 °C to 130 °C / -4 °F to 266 °F for high temperature version, or low temperature version down to -40°C / -40 °F
Material	Body / Bowl: stainless steel 316L, material no. 1.4404 Inner valve: stainless steel 316L / 1.4404 Diaphragm: NBR/Buna-N with PTFE coating, optionally EPDM or FKM O-rings: FKM, optionally EPDM



Dimensions			Combination existing of	Flow rate m ³ /h*1	l/min*1	Connection thread G	Order number
A	B	C					

FRL unit, 3-part				P ₁ : max. 50 bar, screw plug,	P ₂ : 0.5...8 bar, relieving,	50 μ m, with gauge	C3003
212	168	130	F+R+L3000	42	700	G $\frac{1}{4}$	C3003-02
257	167	130		132	2200	G $\frac{1}{2}$	C3003-04
427	219	168		231	3850	G $\frac{3}{4}$	C3003-06
455	286	226		432	7200	G1	C3003-08
531	286	226		432	7200	G1 $\frac{1}{4}$	C3003-10
531	286	226		432	7200	G1 $\frac{1}{2}$	C3003-1A
553	390	262		720	12000	G1 $\frac{1}{2}$	C3003-12
553	390	262		780	13000	G2	C3003-16



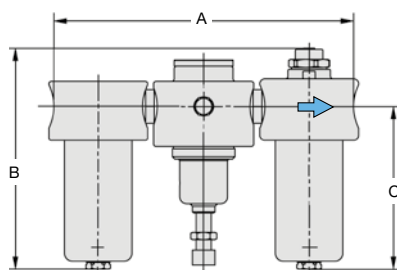
C3003-04

Special options, add the appropriate letter

5 μm filter element		C3003- . . G
NPT	connection thread	for G $\frac{1}{4}$ to G2 C3003- . . N
pressure range 0.2... 3 bar		C3003- . . B
pressure range 1 ...15 bar	P ₁ max. 50 bar	C3003- . . D
manual drain	max. 30 bar	C3003- . . H
automatic drain	max. 16 bar	for G $\frac{1}{4}$ to G1 C3003- . . R
down to -40 °C / -40 °F	low temperature version	C3003- . . X51
up to 130 °C / 266 °F	high temperature version	C3003- . . X54
EPDM-elastomer		C3003- . . E
flange connection	see end of the chapter / flanges	C3003- . . F.

Accessories, enclosed

mounting bracket	for G $\frac{1}{4}$	BW45-03S
mounting nut		M45x1,5S
mounting bracket	for G $\frac{1}{2}$	BW50-01S
mounting nut		M50x1,5S
mounting bracket	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$ (1A)	BW00-59S
mounting bracket	for G1 $\frac{1}{2}$ (12) and G2	BW00-62S



C3003

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

Further details: see chapter for single devices
Spare parts: see separate spare parts list

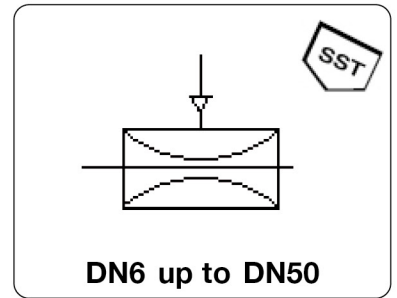
PDF CAD
www.aircom.net



Order example:
C3003-02



Description	The flow control valve functions as a pinch valve in a new design of housing with full flow cross-section. Since the straight valve passage has neither constrictions nor back-points, there is no danger of clogging or blockage. Frictional loss is at a minimum.
Media	compressed air, gases, liquids or other paste-like or powdery media Solids are enclosed by the flexible sleeve at shut-off.
Sleeve	Highly flexible with double woven reinforcement in eight different grades. Sleeve simple to change.
Pressures	Operating pressure: max. 4.0 bar Pilot pressure: max. 6.5 Differential pressure: max. 2.5 bar Closing pressure: $P_1 + 2.5$ bar to DN32, $P_1 + 2$ bar from DN40 on
Vacuum	If vacuum is greater than -100 mbar, vacuum compensation should be provided on the control side.
Accuracy	In the flow range of 0 to 70% the linearity of pilot pressure to flow is about 10% accurate.
Mounting position	any, at horizontal mounting pilot port preferably at the top
Temperature range	0 °C to max. 100 °C / 32 °F to max. 212 °F, subject to sleeve material
Material	Body: stainless steel 316L, material no. 1.4435 Sleeve: depending on selected version



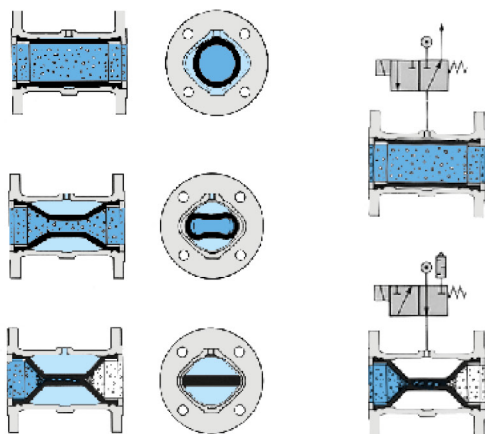
Dimensions	Nominal	Chamber	Control	Operating	Connection	Order
A	Ø	size	port	pressure	thread	number
mm	mm	DN	l	max. bar	G	

Flow control valve							operating pressure max. 4 bar, pilot pressure max. 2.5 bar above operating pressure	QE
70	26	6	0.01	M5	4	G¼		QE06-02NR
80	38	10	0.03	M5	4	G¾		QE10-03NR
95	44	15	0.04	G½	4	G½		QE15-04NR
110	55	20	0.05	G½	4	G¾		QE20-06NR
125	60	25	0.07	G½	4	G1		QE25-08NR
140	73	32	0.10	G½	4	G1¼		QE32-10NR
150	83	40	0.13	G½	4	G1½		QE40-12NR
185	99	50	0.28	G¼	4	G2		QE50-16NR



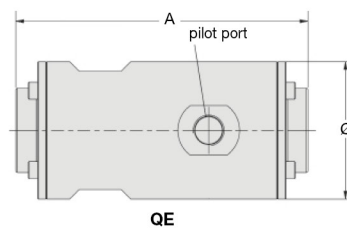
Special options, add the appropriate letter

sleeve NR	natural rubber, black	80°C/176 °F	QE...NR
sleeve NRL	rubber, suitable for food, black	70°C/158 °F	QE...NL
sleeve NRLH	rubber, suitable for food, light	70°C/158 °F	QE...NH
sleeve NBR	nitrile rubber/Buna-N, suitable for food	80°C/176 °F	QE...NB
sleeve EPDM	ethylene-propylene rubber, suitable for food, black	100°C/212 °F	QE...EP
sleeve FKM	fluorine rubber, black	not QE06 100°C/212 °F	QE...FK
sleeve CR	chloroprene rubber/neoprene, black	not QE06 80°C/176 °F	QE...CR
sleeve CSM	natural rubber, chlorosulphonyl polyethylene	not QE06 80°C/176 °F	QE...CS

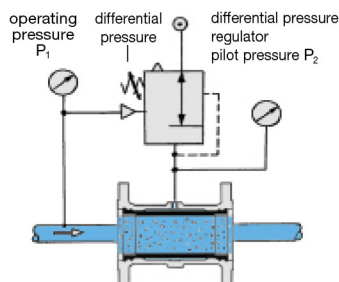


closing process

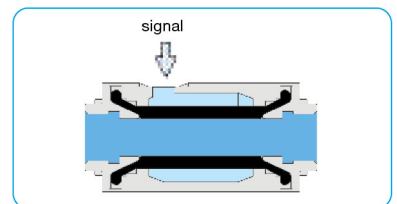
solenoid valve control



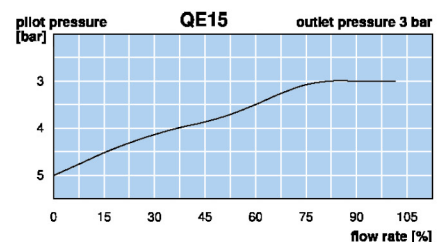
QE



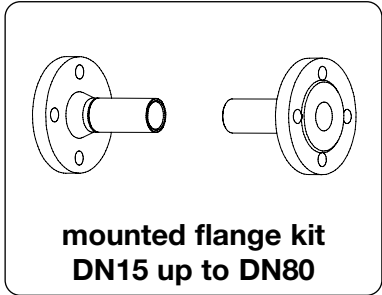
constant cross section at changing operating pressure



cross section



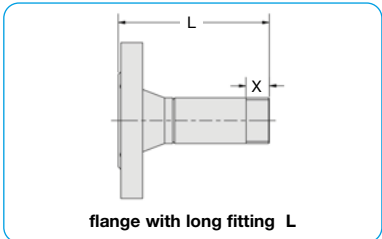
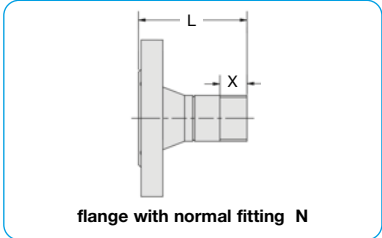
Total device width	device width between inlet and outlet, see catalogue page, dimension A	
	+ 2x total length of flange fitting, dimension L	
	- 2x screw-in depth of the device (on request)	
	= total device width including flange	
DIN-flange	according to DIN EN 1092-1	according to DIN 2637 at PN100
ANSI flange	optionally according to ASME B16.5 (150 lbs),	according to ASME B16.5 (300 lbs) on request
Material	stainless steel, material-no. 1.4571	



Nominal pressure max.	for Devices	Nominal size DN	Screw-In thread G	Order number affic
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Flange kit, DIN, completely assembled **F**

PN40	BD + BM/40	F602	R119	15	G½	F1
	CM/40	F3000/40	R3000	20	G¾	F1
	C3000/40	L606	R3100/L	25	G1	F1
	D3100/L	LM/40	RZ/L	32	G1¼	F1
	DBC/L	L3000/40	R160/L	40	G1½	F1
	R120/40	FM/40		50	G2	F1
				65	G2½	F1
			80	G3	F1	
PN100	BM/100	FM	LM/100	15	G½	F6
	CM/100	F3000/100	L3000/100	20	G¾	F6
	C3000/100	R120/100	R3000/100	25	G1	F6
				32	G1¼	F6
				40	G1½	F6
				50	G2	F6
				65	G2½	F6



thread	fitting N		fitting L		thread
	PN40	PN100	PN40	PN100	
	L mm		L mm		X mm
G½	75	82	90	97	15
G¾	82	94	112	124	17
G1	82	100	112	130	20
G1¼	94	112	114	132	22
G1½	97	114	117	134	22
G2	100	120	120	140	26
G2½	114	138	124	148	32

Special options

ANSI-flange	150 lbs	F2
	300 lbs	F3
	600 lbs	F4

Filter regulator	PN	fitting*
BD	40	N
BM	40/100	N

Lubricator	PN	fitting*
L606	40	N
LM	40/100	N
L3000	40/100	N

Regulator	PN	fitting*
R119	40	N
R120	40/100	N
R3000	40/100	N

Filter	PN	fitting*
F602	40	N
FM	40/100	N
F3000	40/100	N

Booster	PN	fitting*
R119-J	40	N
R120-J	40/100	N
R3000-J	40/100	N

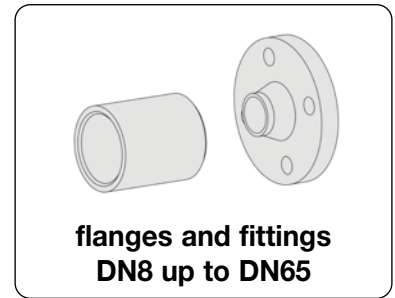
low pressure regulator	PN	fitting*
R3100	40	L
D3100	40	L
RZ	40	L
R160	40	L
DBC	40	L

FRL service unit	PN	fitting*
CM2	40/100	N
C3002	40/100	N

FRL service unit	PN	fitting*
C630	40	N
CM3	40/100	N
C3003	40/100	N

* N = normal fitting L = long fitting

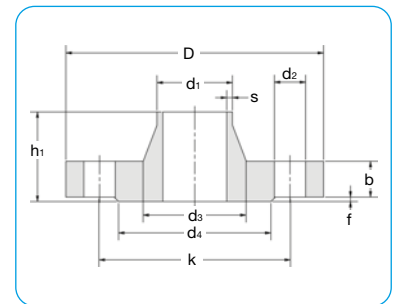
Threaded flange	according to DIN EN 1092-1 ANSI / ASME B16.5 (150 lbs), ASME B16.5 (300 lbs), ASME B16.5 (600 lbs)
Material	1.4571 (316Ti)
Weld-on fitting	with conical Whitworth-thread, according to DIN EN 10241
Material	1.4571



d1/s	Dimensions								Screws	Connection thread Rp	Nominal size DN	Order number
	D	h ₁	b	d ₄	f	k	d ₂	d ₃				

Welding neck flange, as per DIN EN 1092-1 Form B (PN40) VSV

21.3 x 2.0	95	36	16	45	2	65	14	32	4 x M12	-	15	VSV-1540
26.9 x 2.3	105	40	18	58	2	75	14	40	4 x M12	-	20	VSV-2040
33.7 x 2.6	115	40	18	68	2	85	14	46	4 x M12	-	25	VSV-2540
42.4 x 2.6	140	42	18	78	2	100	18	56	4 x M16	-	32	VSV-3240
48.3 x 2.6	150	45	18	88	3	110	18	64	4 x M16	-	40	VSV-4040
60.3 x 2.9	165	48	20	102	3	125	18	75	4 x M16	-	50	VSV-5040
76.1 x 2.9	185	52	22	122	3	145	18	90	4 x M16	-	65	VSV-6540
88.9 x 3.2	200	58	24	138	3	160	18	105	8 x M16	-	80	VSV-8040



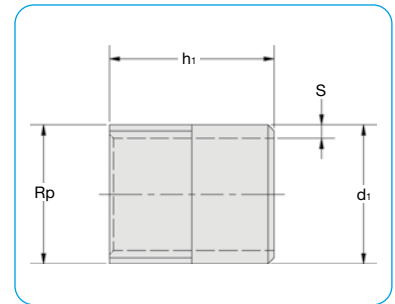
VSV welding neck flange

Special options, add the appropriate letter or number

PN100	according to DIN 2637	100	VSV-...100
ANSI/ASME-flange	B16.5 150 lbs	150 lbs	VSV-...150 lbs
ANSI/ASME-flange	B16.5 300 lbs	300 lbs	VSV-...300 lbs
ANSI/ASME-flange	B16.5 600 lbs up to DN25	600 lbs	VSV-...600 lbs

Weld-on fitting as per DIN 2999 with conical Whitworth thread (BSPT) VSA

13.5 x 2.35	30	PN50	1/4"	8	VSA-02
21.3 x 2.65	35	PN50	1/2"	15	VSA-04
26.9 x 2.65	40	PN50	3/4"	20	VSA-06
33.7 x 3.25	40	PN50	1"	25	VSA-08
42.4 x 3.25	50	PN40	1 1/4"	32	VSA-10
48.3 x 3.25	50	PN40	1 1/2"	40	VSA-12
60.3 x 3.65	50	PN40	2"	50	VSA-16
76.1 x 3.65	60	PN25	2 1/2"	65	VSA-20



VSA weld-on fitting

SST



15



COMPRESSED AIR FILTERS

DESCRIPTION	PRESSURE RANGE	CONNECTION	SERIES	PAGE
	bar	thread		
bronze In-Line-Filter	21	G $\frac{1}{4}$ - G $\frac{1}{2}$	137	16.02
In-Line-Filter 0,3 μ m	9	nipple \varnothing 4. 6 mm	F400	16.02
„Miniature“-Series	21	G $\frac{1}{8}$ and G $\frac{1}{4}$	F504	16.03
made of plastic	16	G $\frac{1}{8}$ - G1	F035 ... F095	16.04
made of plastic, with FDA-approval	10	G $\frac{1}{8}$ - G $\frac{3}{4}$	FH	16.06
„Maxi“-Series, robust, block design	17	G $\frac{1}{2}$ - G1	F20	16.07
made of brass, many variations	50	G $\frac{1}{8}$ - G2	FM	16.08
„Standard“-Series, robust	21	G $\frac{3}{4}$ - G2	F602	16.10
Series „D“, made of aluminium	30	G $\frac{1}{8}$ - G2	FD	16.12
3 μ m pre-filter	16	G $\frac{1}{4}$ - G3	FG.V	16.14
1 μ m fine filter	16	G $\frac{1}{4}$ - G3	FG.Z	16.14
0.01 μ m fine filter	16	G $\frac{1}{4}$ - G3	FG.X	16.15
activated carbon filter	16	G $\frac{1}{4}$ - G3	FG.A	16.15
high pressure filter, also for oxygen	60	G $\frac{3}{8}$ - G2	F445, F465	16.16
filter silencer	16	G $\frac{1}{4}$ - G2	SFE	16.17



16

Description Micro in-line filters are widely used in medical and process technology for cleaning compressed air for use in instruments and pneumatic logic systems. The micro in-line filter removes particles, oil and mist from compressed air. Also suitable for vacuum.

Filter element The borosilicate micro-filter is manufactured in a special vacuum process which reduces the adhesive properties of the borosilicate fibres down to a minimum in order to achieve outstanding filtering capability. When saturated with oil, the filter turns red to indicate that replacement is required.

Filtration efficiency 99.999% based on 0.03 µm particle size

Connection Fitted with nipples able to take up hoses of 4.3 mm (11/16") or 6.3 mm (¼") internal diameter. Flow direction from INside to OUTside to be noted.

Operating pressure max. 9 bar

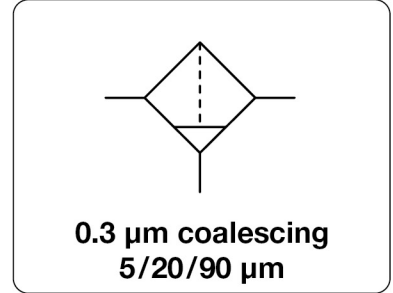
Micro in-line filter F400

Description Bronze in-line filter for compressed air with coarse impurities.

Filter element 90 µm, 20 µm or optionally 5 µm, made of sintered bronze

Operating pressure max. 21 bar

Drainage with or without manual drain

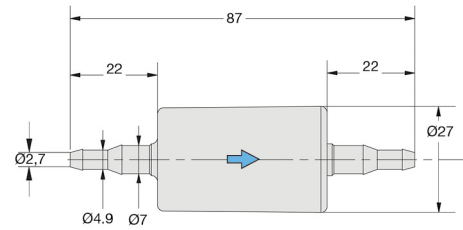


Dimensions			Description	Flow rate		P ₁ max. bar	Filter element µm	Connection thread nipple/G	Order number
A	B	C		m ³ /h*1	l/min*1				

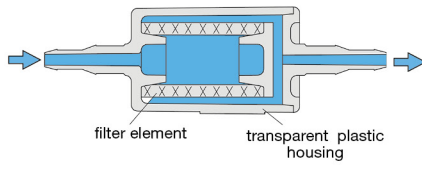
Micro in-line filter				99.999% at 0.3 µm, discolouration at saturation, max. 9 bar		F400			
87	43	Ø 27	borosilicate-micro filter	4.2	70	9	0.3	Ø 4 and Ø 6	F400



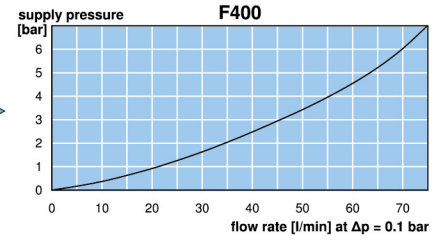
F400



F400



cross section



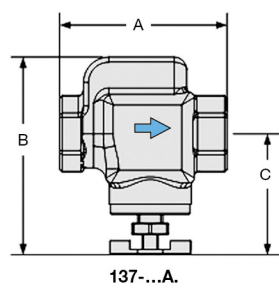
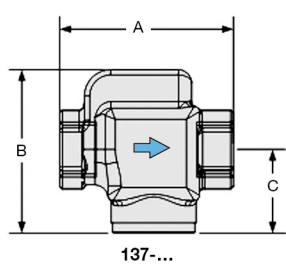
Bronze in-line filter			operating pressure max. 21 bar				137		
67	63	32	without manual drain	39	650	21	90	G¼	137-02
				42	700			G¾	137-03
				44	740			G½	137-04
				39	650	21	20	G¼	137-02H
				42	700			G¾	137-03H
				44	740			G½	137-04H
67	79	48	with manual drain	19	320	21	5	G¼	137-02V
				21	350			G¾	137-03V
				22	370			G½	137-04V
				39	650	21	20	G¼	137-02AH
				42	700			G¾	137-03AH
				44	740			G½	137-04AH
67	79	48	with manual drain	19	320	21	5	G¼	137-02AV
				21	350			G¾	137-03AV
				22	370			G½	137-04AV
				39	650	21	20	G¼	137-02AH
				42	700			G¾	137-03AH
				44	740			G½	137-04AH



137-04

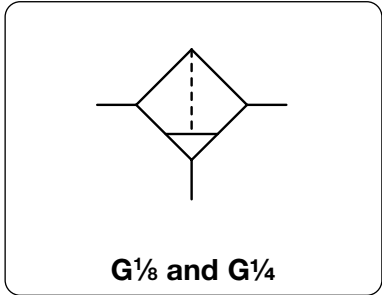


137-04A



*1 at 7 bar operating pressure and 0.1 bar pressure drop

Description	Miniature compressed air filter of small, compact design. Ideal for limited space conditions.
Filter element	20 µm, optionally 5 µm, made of propylene
Bowl	plastic or metal version
Drainage	manual drain as standard, for max. 21 bar optionally semiautomatic drain, for max. 12 bar
Operating pressure	max. 11 bar for plastic bowl max. 21 bar for metal bowl
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and semiautomatic drain version 0 °C to 80 °C / 32 °F to 176 °F for metal bowl for appropriately conditioned compressed air down to -30 °C / -22 °F
Material	Body: aluminium Bowl: polyurethane or zinc die-cast Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of	l	m ³ /h*1	l/min*1	bar	µm

Miniature compressed air filter										with manual drain	F504
40	106	96	plastic	0.04	36	600	11	20	G ¹ / ₈	F504-01AH	
			metal				21			F504-01DH	
			plastic		29	480	11	5		F504-01AG	
			metal				21			F504-01DG	
40	106	96	plastic	0.04	38	640	11	20	G ¹ / ₄	F504-02AH	
			metal				21			F504-02DH	
			plastic		31	510	11	5		F504-02AG	
			metal				21			F504-02DG	

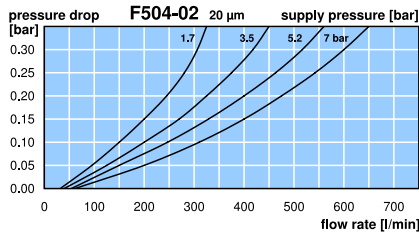
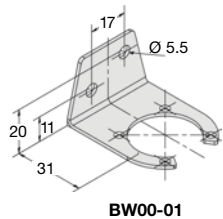
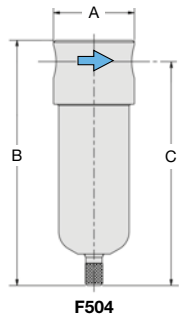


Special options, add the appropriate letter

NPT	connection thread	F504-... N
semiautomatic drain	RK500SY, max. 12 bar	F504-... M
automatic drain	RK504SY, max. 12 bar	F504-... R

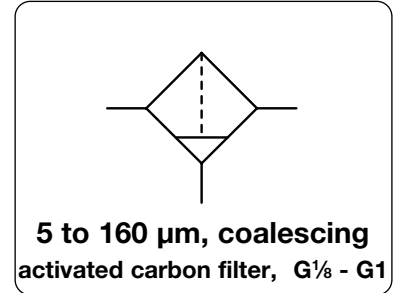
Accessories, enclosed

mounting bracket	made of steel	BW00-01
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*1 at 7 bar operating pressure and 0.33 bar pressure drop

Description	Filter of modular design which can be interlocked with all other instruments of the same series without need for double nipples. The flow on standard filters is from outside to inside; on coalescing filters 0.1 µm from inside to outside.	
Filter element	5 µm, 20 µm, 80 µm made of sintered polyethylene, 160 µm made of stainless steel, 0.01 µm coalescing filter made of borosilicate and activated carbon filter	
Filtration efficiency	coalescing filter: 99.99% at 0.01 µm particle size,	residual oil content < 5 mg/m ³
Bowl	plastic version with bayonet catch,	type 042 with connection thread
Drainage	manual drain in conjunction with semiautomatic drain,	optionally automatic drain, no drain for water
Operating pressure	max. 7 bar at series 035, max. 16 bar at series 042, max. 12.5 bar at series 050 to 095	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	
Material	Body: nylon, POM at types 035 and 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass

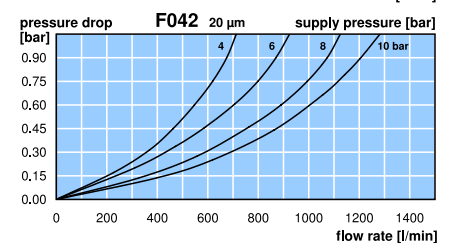
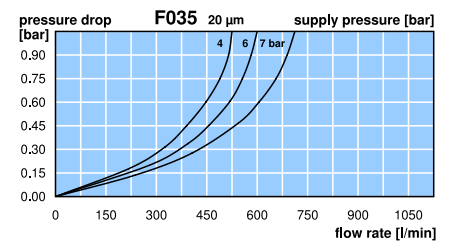
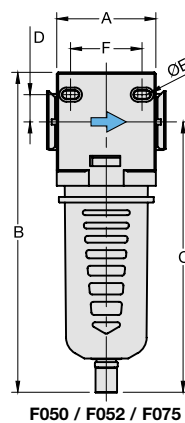
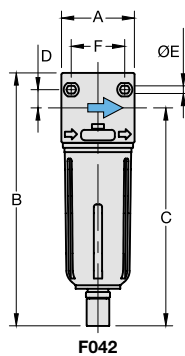
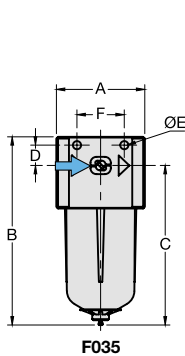
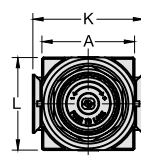


Dimensions			Bowl	Flow	P ₁	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max.	element	thread
mm	mm	mm		l	m ³ /h*1	l/min*1	µm	G

Compressed air filter			manual drain with semiautomatic drain, 99.99% at 0.01 µm				F0			
38	79	67	plastic	0.008	45	750	7	20	G ¹ / ₈	F035-01H
			plastic		40	670		5		F035-01G
			for water w/o drain		50	830		80		F035-01J
			coalescing		7	115		0.01		F035-01C
42	146	126	plastic	0.02	75	1250	16	20	G ¹ / ₄	F042-02H
			plastic		63	1050		5		F042-02G
			for water w/o drain		79	1320		80		F042-02J
			for water w/o drain		87	1450		160		F042-02K
			coalescing		11	180		0.01		F042-02C
			plastic		87	1450		activated carbon		F042-02A
52	174	148	bowl guard	0.04	150	2500	12.5	20	G ³ / ₈	F050-03H
					126	2100		5		F050-03G
					16	500		0.01		F050-03C
					150	2500		activated carbon		F050-03A



Series	D	ØE	F	K	L
F035	8.5	3.5	20	-	36
F042	10.5	4.5	31	-	42
F050	16.0	5.5	41	63	52



*1 at 10 bar operating pressure and 1 bar pressure drop, for F035 and filter element 0.01 µm only 7 bar operating pressure

Extensions: see chapter for FRL service units

PDF CAD
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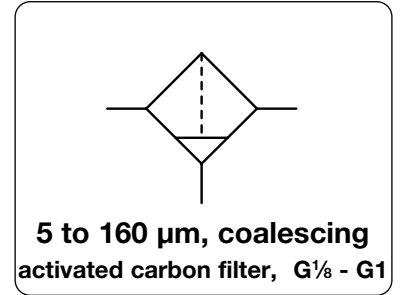


Order example:
F035-01H

COMPRESSED AIR FILTER MADE OF PLASTIC

F035 ... F095

Description	Filter of modular design which can be interlocked with all other instruments of the same series without need for double nipples. The flow on standard filters is from outside to inside; on coalescing filters 0.1 µm from inside to outside.	
Filter element	5 µm, 20 µm, 80 µm made of sintered polyethylene, 160 µm made of stainless steel, 0.01 µm coalescing filter made of borosilicate and activated carbon filter	
Filtration efficiency	coalescing filter: 99.99% at 0.01 µm particle size,	residual oil content < 5 mg/m³
Bowl	plastic version with bayonet catch,	type 042 with connection thread
Drainage	manual drain in conjunction with semiautomatic drain,	optionally automatic drain, no drain for water
Operating pressure	max. 7 bar at series 035, max. 16 bar at series 042, max. 12.5 bar at series 050 to 095	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	
Material	Body: nylon, POM at types 035 and 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Bowl	Flow	P ₁	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max.	element	thread
mm	mm	mm		l	m³/h*1	l/min*1	µm	G

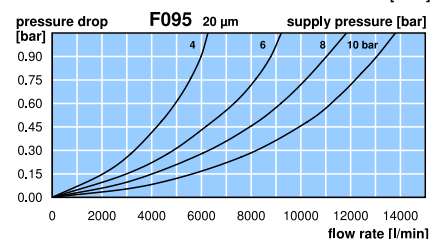
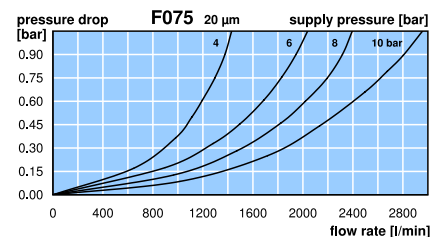
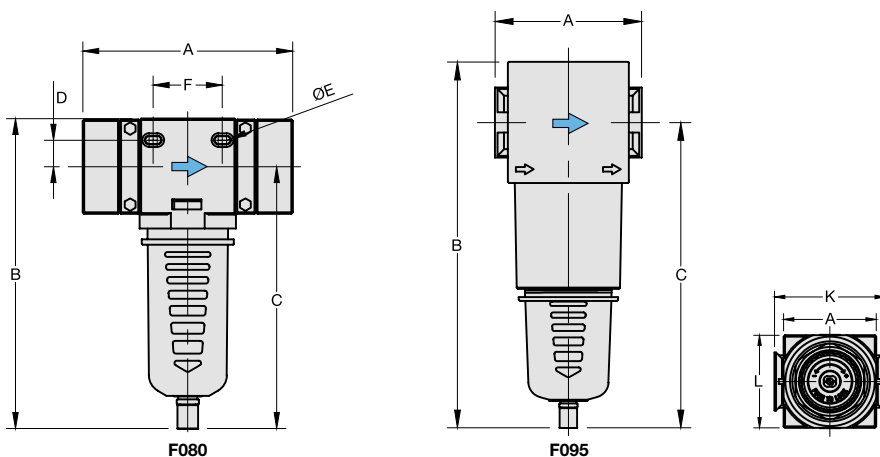
Compressed air filter			manual drain with semiautomatic drain, 99.99% at 0.01 µm				F0			
52	174	148	bowl guard	0.04	156	2600	12.5	20	G ¹ / ₂	F052-04H
					132	2200		5		F052-04G
					17	500		0.01		F052-04C
					156	2600		activated carbon		F052-04A
63	204	173	bowl guard	0.10	186	3100	12.5	20	G ¹ / ₂	F075-04H
					165	2750		5		F075-04G
					18	800		0.01		F075-04C
					186	3100		activated carbon		F075-04A
137	204	173	bowl guard	0.10	192	3200	12.5	20	G ³ / ₄	F080-06H
					168	2800		5		F080-06G
					18	800		0.01		F080-06C
95	284	237	bowl guard	0.20	828	13800	12.5	20	G ¹	F095-08H
					750	12500		5		F095-08G



Special options, add the appropriate letter
 automatic drain C400200130 for F042 to F095 F0 . . 0 . . R

Accessories, enclosed
 mounting bracket set made of steel for F095 **BW00-02**

Series	D	Ø E	F	K	L
F052	16.0	5.5	41	63	52
F075	17.5	5.5	45	75	63
F080	17.5	5.5	45	-	63
F095	-	-	-	115	95



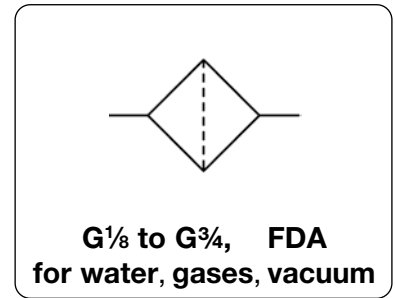
*1 at 10 bar operating pressure and 1 bar pressure drop, for F035 and filter element 00.1 µm only 7 bar operating pressure

Extensions: see chapter for FRL service units

PDF CAD
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Order example:
F052-04H

Description	Filter made of plastic for compressed air, vacuum, non-corrosive gases or liquids. The flow on the filter elements passes from outside to inside. They are largely corrosion-resistant and feature excellent chemical stability. Exposure of the filters to direct sunlight must be avoided. Optionally available with EPDM elastomers approved by the FDA.		
Filter element	5 µm, 35 µm and 80 µm made of PE, 50 µm, 100 µm and 300 µm made of stainless steel		
Bowl	made of transparent Grilamid TR55, three different sizes, screwable, without drain		
Drainage	without drain, as no water separation occurs with compressed air		
Operating pressure	max. 10 bar at 24 °C / 75 °F	Differential pressure	max. 0.7 bar
Temperature range	5 °C to 52 °C / 41 °F to 125 °F		
Cleaning	with lukewarm water and standard rinsing agent		
Material	Body: polypropylene GFV 20% Bowl: Grilamid TR55, transparent	Filter element: polyethylene, optionally stainless steel Elastomer: NBR/Buna-N, optionally FKM or EPDM (FDA)	



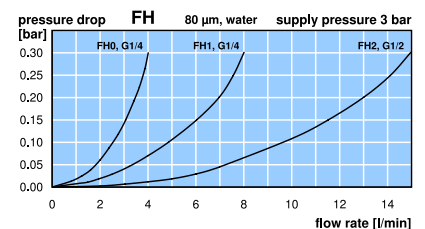
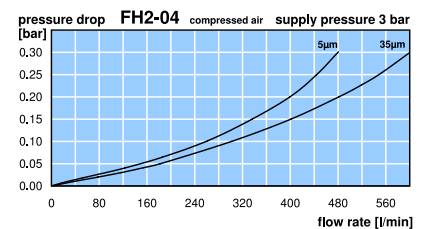
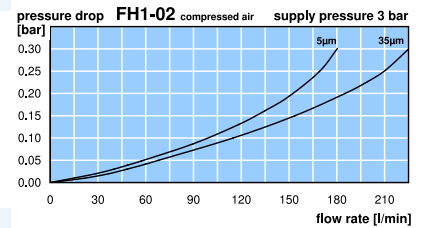
Dimensions			Bowl Capacity	Flow rate		Filter element	Connection thread	Order number
A	B	C	l	Water l/min*1	Air l/min*1	µm	G	

Plastic filter			operating pressure differential pressure max. 10 bar	max. 0.7 bar	NBR/Buna-N o-ring polyamide, polypropylene	FH		
58	93	83	0.06	6	140	5	G ¹ / ₈	FH1-01G FH1-01J FH1-01L
74	95	85	0.06	8	180	5	G ¹ / ₄	FH1-02G FH1-02J FH1-02L
74	99	87	0.06	10	220	5	G ³ / ₈	FH1-03G FH1-03J FH1-03L
75	103	89	0.06	12	260	5	G ¹ / ₂	FH1-04G FH1-04J FH1-04L
90	124	112	0.17	14	400	5	G ³ / ₈	FH2-03G FH2-03J FH2-03L
90	128	113	0.17	16	480	5	G ¹ / ₂	FH2-04G FH2-04J FH2-04L
90	133	116	0.17	18	560	5	G ³ / ₄	FH2-06G FH2-06J FH2-06L



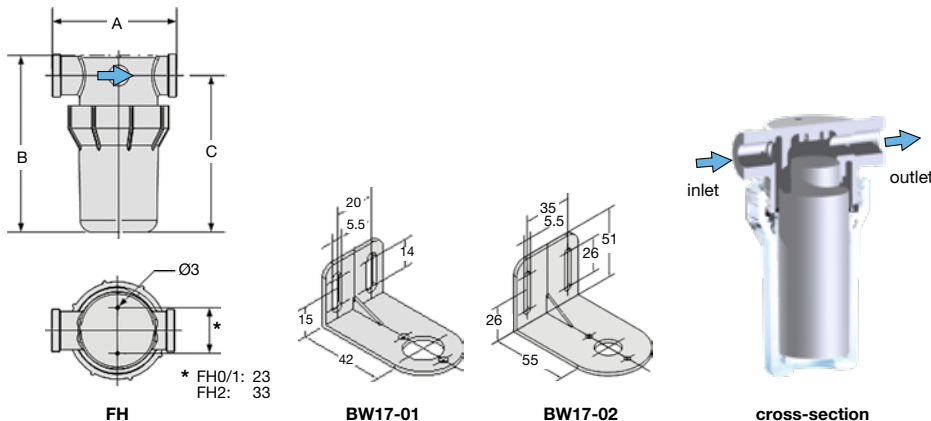
Special options, add the appropriate letter

with short bowl *2	shorter filter element,	4 l/min water	FH1 only	FH0- . . .
SST filter element	metallic tissue 50 µm S;	100 µm T;	300 µm	FH0- . . .U FH1- . . .U FH2- . . .U FHE FHV
EPDM elastomer	FDA approved			
FKM elastomer				



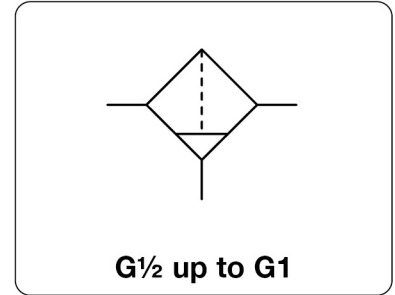
Accessories, enclosed

mounting bracket	made of plastic	for FH0 and FH1 for FH2	BW17-01 BW17-02
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*1 at 3 bar operating pressure and 0.3 bar pressure drop
*2 flow reduced by 35%, height shortened by 35 mm, bowl capacity 0.014 l

Description	Compressed air filter of modular design with exchangeable inserts. Can be interlocked with regulator or lubricator without need for double nipples. Each "maxi" device may be taken from a fixed line in seconds by simply removing the mounting bolts.
Filter element	40 µm, optionally 5 µm, made of polypropylene
Bowl	metal version with sight glass
Drainage	manual drain as standard, optionally automatic or semiautomatic drain, for max. 12 bar
Operating pressure	max. 17 bar
Temperature range	0 °C to 70 °C / 32 °F to 158 °F 0 °C to 50 °C / 32 °F to 122 °F for automatic or semiautomatic drain version
Material	Body: zinc die-cast Sight glass: polyurethane Bowl: zinc die-cast Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max. element	thread	number
mm	mm	mm	made of / with	l	m³/h*1	l/min*1	bar	µm

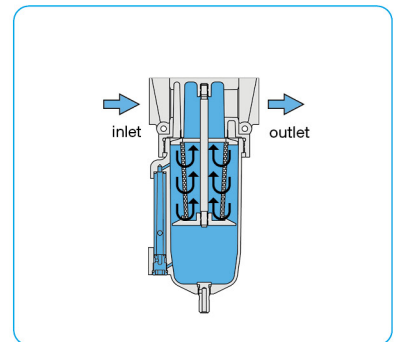
"Maxi" compressed air filter

				with manual drain		supply pressure max. 17 bar		F20	
89	191	171	metal/sight glass	0.3	288	4800	40	G½	F20-04WJ
				216	3600		5		F20-04WG
111	191	171	metal/sight glass	0.3	408	6800	40	G¾	F20-06WJ
				294	4900		5		F20-06WG
				420	7000		40	G1	F20-08WJ
				300	5000		5		F20-08WG



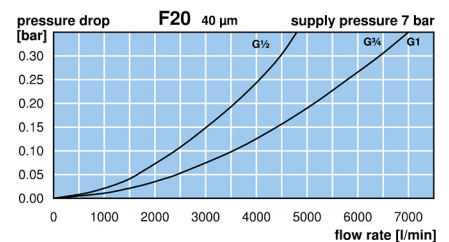
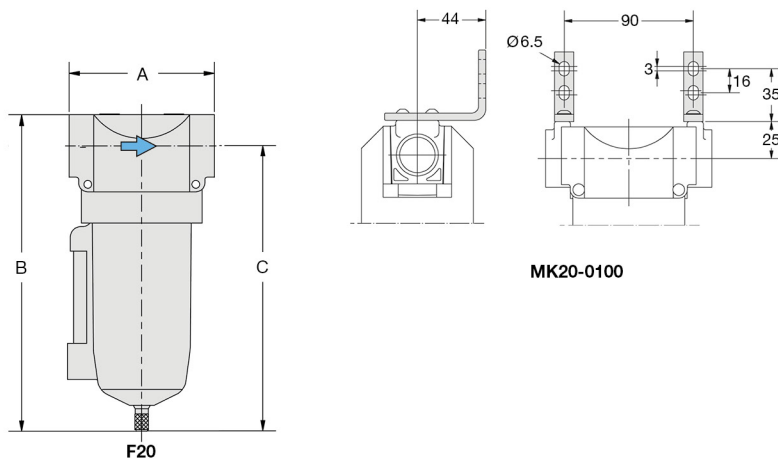
Special options, add the appropriate letter

NPT	connection thread	F20-0 .W .N
semiautomatic drain	RK500SY, max. 12 bar	F20-0 .W .M
automatic drain	SA605MD, max. 12 bar	F20-0 .W .R



Accessories, enclosed

mounting bracket set	made of steel	MK20-0100
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*1 at 7 bar supply pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units

PDF CAD
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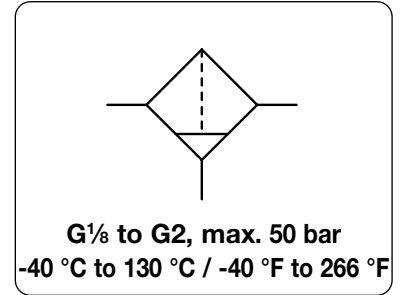


Order example:
F20-04WJ

COMPRESSED AIR FILTER MADE OF BRASS, UP TO 50 BAR

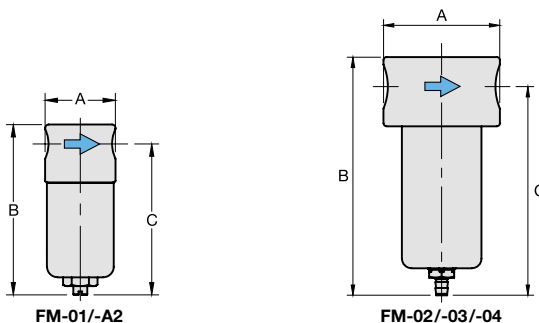
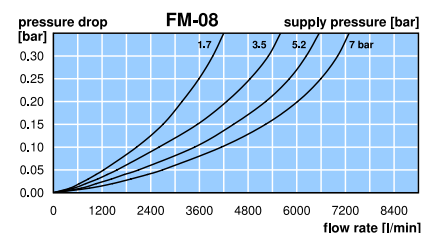
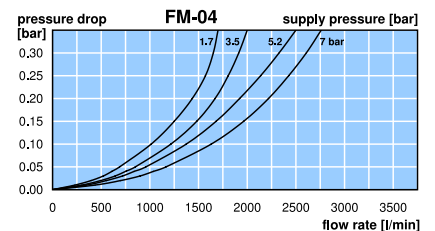
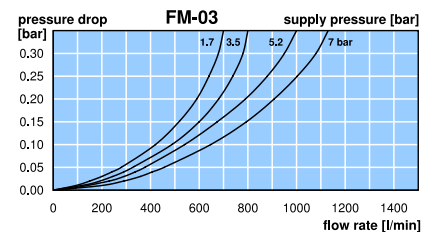
FM

Description	Filter with bowl without sight glass, extremely robust, for compressed air, non-corrosive gases or liquids.
Filter element	50 µm, optionally 5 µm, made of stainless steel Bowl stainless steel version without sight glass
Drainage	screw plug as standard optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)
Operating pressure	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
Temperature range	0 °C to 80 °C / 32 °F to 140 °F, for FKM or EPDM, 0 °C to 130 °C / 32 °F to 266 °F, for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F
Material	Body: brass Bowl: stainless steel 316L, material no 1.4404, brass at FM-01/-A2 Elastomer: FKM, optionally EPDM Inner valve: brass and plastic (not at high temperature version)



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of	l	m ³ /h*1	l/min*1	µm	G

Brass filter			with screw plug, operating pressure max. 50 bar, 50 µm				FM		
40	92	81	brass	0.03	45	750	50	G ¹ / ₈	FM-01 FM-01G
40	92	81	brass	0.03	45	750	50	G ¹ / ₄	FM-A2 FM-A2G
64	140	125	stainless steel	0.14	54	900	50	G ¹ / ₄	FM-02 FM-02G FM-02I
64	140	125	stainless steel	0.14	60	1000	50	G ³ / ₈	FM-03 FM-03G FM-03I
79	150	130	stainless steel	0.20	150	2500	50	G ¹ / ₂	FM-04 FM-04G FM-04I
136	194	167	stainless steel	0.50	432	7200	50	G ³ / ₄	FM-06 FM-06G FM-06I
136	194	167	stainless steel	0.50	432	7200	50	G1	FM-08 FM-08G FM-08I
247	194	167	stainless steel	0.50	432	7200	50	G ¹ / ₄	FM-10 FM-10G FM-10I
247	194	167	stainless steel	0.50	432	7200	50	G ¹ / ₂	FM-1A FM-1AG FM-1AI
180	297	215	stainless steel	1.00	900	15000	50	G ¹ / ₂	FM-12 FM-12G
180	297	215	stainless steel	1.00	960	16000	50	G2	FM-16 FM-16G



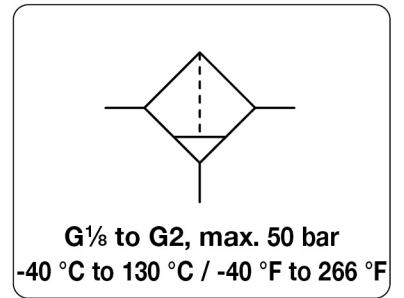
*1 at 7 bar operating pressure and 0.33 bar pressure drop

Extensions: see chapter for FRL service units

PDF CAD
www.aircom.net

Order example:
FM-01

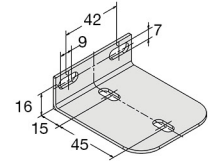
Description	Filter with bowl without sight glass, extremely robust, for compressed air, non-corrosive gases or liquids.	
Filter element	50 µm, optionally 5 µm, made of stainless steel	Bowl stainless steel version without sight glass
Drainage	screw plug as standard optionally for compressed air only: manual drain (max. 30 bar), automatic drain (max. 16 bar)	
Operating pressure	max. 50 bar (without drain), optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)	
Temperature range	0 °C to 80 °C / 32 °F to 140 °F, for FKM or EPDM, 0 °C to 130 °C / 32 °F to 266 °F, for high temperature version, for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F	
Material	Body: brass Bowl: stainless steel 316L, material no 1.4404, brass at FM-01/-A2 Elastomer: FKM, optionally EPDM Inner valve: brass and plastic (not at high temperature version)	



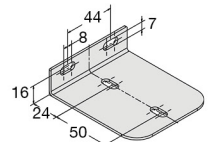
Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	max. element	thread	number
mm	mm	mm	made of	l	m ³ /h*1 l/min*1	µm	G	

Special options, add the appropriate letter

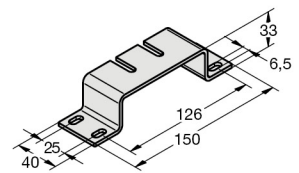
NPT	connection thread		FM- .. N
P1: max. 80 bar down to -40 °C	low temperature version	for G 1/4 (02)	FM- .. X48
u p to 130 °C	high temperature version		FM- .. X51
manual drain	max. 30 bar		FM- .. X54
automatic drain	made of SST, max. 16 bar	for G 1/4 (02)	FM- .. H
EPDM-elastomer			FM- .. R
carbon dioxide	CO ₂		FM- .. E
argon	Ar		FM- .. 03
nitrogen	N ₂		FM- .. 05
helium	He		FM- .. 07
hydrogen	H ₂		FM- .. 09
methane	CH ₄		FM- .. 11
oxygen	O ₂		FM- .. 13
propane	C ₃ H ₈		FM- .. 15
nitrous oxide	N ₂ O		FM- .. 16
for water	50 µm only	for G 1/4 (02) to G2	FM- .. 17
flange connection	see chapter for stainless steel devices / flanges		FM- .. W
			FM- .. F.



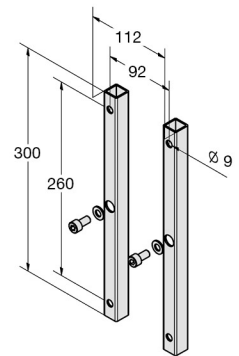
BW00-17S



BW00-18S



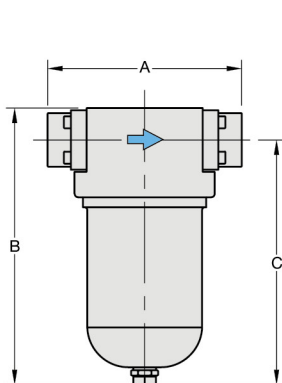
BW00-59S



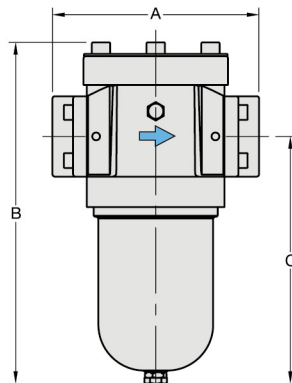
BW00-61

Accessories, enclosed

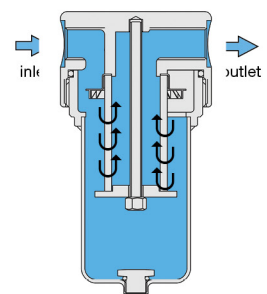
mounting bracket	made of stainless steel	for G 1/4 (02) and G 3/8 for G 1/2 for G 3/4 to G 1 1/2 (1A)	BW00-17S BW00-18S BW00-19S BW00-61
set of brackets	made of steel	for G 1 1/2 (12) and G2	



FM-06/-08/-10/-1A



FM-12/-16



cross-section

*1 at 7 bar operating pressure and 0.33 bar pressure drop

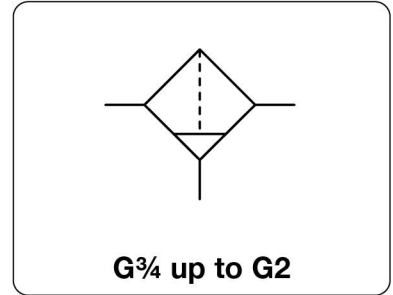
Extensions: see chapter for FRL service units

PDF CAD
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Order example:
BW00-17S

Description	Compressed air filter with high flow. Made of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.		
Filter element	40 µm, optionally 5 µm, made of polypropylene		
Bowl	metal version with or without bowl guard		
Drainage	manual drain as standard, for max. 21 bar optionally internal automatic drain, for max. 12 / 16 bar or external automatic drain, for max. 18 bar		
Operating pressure	max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for automatic drain version 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F		
Material	Body: zinc die-cast	Bowl: zinc die-cast or steel	Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	rate	max.	element	thread	number
mm	mm	mm	made of / with	m ³ /h*1	l/min*1	µm	G	

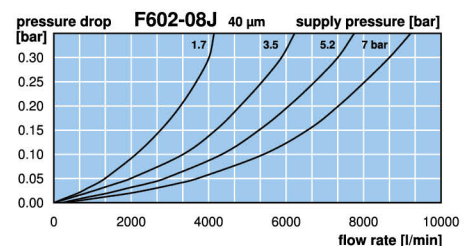
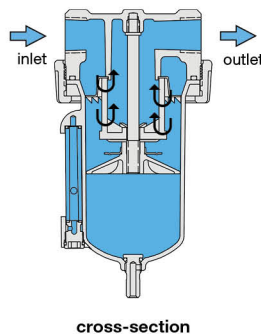
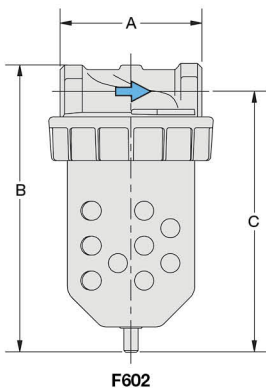
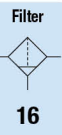
Standard compressed air filter			with manual drain			F602				
116	223	200	metal / sight glass	0.50	426	7100	17	40	G $\frac{3}{4}$	F602-06WJ
116	295	272	steel	1.00			21			F602-06EJ
116	223	200	metal / sight glass	0.50	318	5300	17	5	G $\frac{3}{4}$	F602-06WG
116	295	272	steel	1.00			21			F602-06EG
116	223	200	metal / sight glass	0.50	588	9800	17	40	G1	F602-08WJ
116	295	272	steel	1.00			21			F602-08EJ
116	223	200	metal / sight glass	0.50	438	7300	17	5	G1	F602-08WG
116	295	272	steel	1.00			21			F602-08EG
132	242	210	metal / sight glass	0.5	660	11000	17	40	G1 $\frac{1}{4}$ *2	F602-10WJ
132	315	283	steel	1.0			21			F602-10EJ
132	242	210	metal / sight glass	0.5	492	8200	17	5	G1 $\frac{1}{4}$ *2	F602-10WG
132	315	283	steel	1.0			21			F602-10EG



F602-06WJ/-08WJ
metal bowl with sight glass



F602-10WJ/-12WJ
metal bowl with sight glass



*1 at 7 bar operating pressure and 0.33 bar pressure drop

*2 reduced by the next larger filter

Extensions: see chapter for FRL service units

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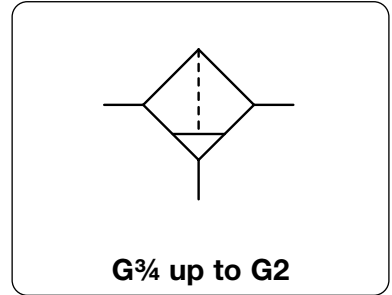


Order example:
F602-06WJ

STANDARD COMPRESSED AIR FILTER

F602

Description	Compressed air filter with high flow. Made of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.		
Filter element	40 µm, optionally 5 µm, made of polypropylene		
Bowl	metal version with or without bowl guard		
Drainage	manual drain as standard, for max. 21 bar optionally internal automatic drain, for max. 12 / 16 bar or external automatic drain, for max. 18 bar		
Operating pressure	max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for automatic drain version 0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass 0 °C to 80 °C / 32 °F to 176 °F for metal bowl without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F		
Material	Body: zinc die-cast	Bowl: zinc die-cast or steel	Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of / with	l	m ³ /h*1	µm	G	

Standard compressed air filter				with manual drain				F602			
132	242	210	metal / sight glass	0.5	660	11 000	17	40	G1½	F602-12WJ	
132	315	283	steel	1.0			21			F602-12EJ	
132	242	210	metal / sight glass	0.5	492	8 200	17	5	G1½	F602-12WG	
132	315	283	steel	1.0			21			F602-12EG	
160	330	281	metal / sight glass	0.5	1 740	29 000	17	40	G2	F602-16WJ	
160	407	358	steel	1.0			21			F602-16EJ	
160	330	281	metal / sight glass	0,5	1 800	30 000	17	40	G2½	F602-20WJ	
160	407	358	steel	1,0			21			F602-20EJ	



F602-10EJ/-12EJ
with steel container

Special options, add the appropriate letter

automatic drain	SA605MD, max. 12 bar for G ³ / ₄ to G2½	F602-.... R
	SA602D, SA603D for steel bowl, max. 18 bar for G ³ / ₄ to G2½	F602-.... Q
	SA702MD, max. 16 bar for G ³ / ₄ to G2½	F602-.... W
flange connection	see chapter for stainless steel devices / flanges	F602-.... F

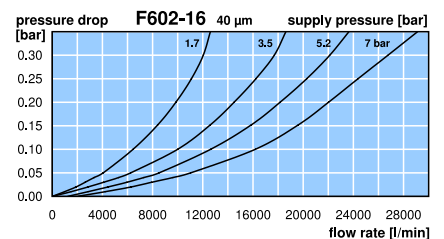
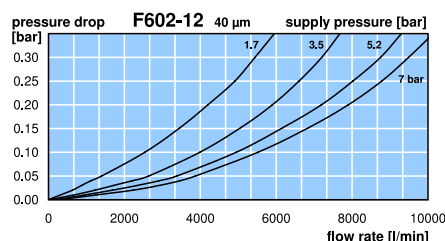


F602-16WJF
with connecting flange



RK602SY

SA605MD



*1 at 7 bar operating pressure and 0.33 bar pressure drop

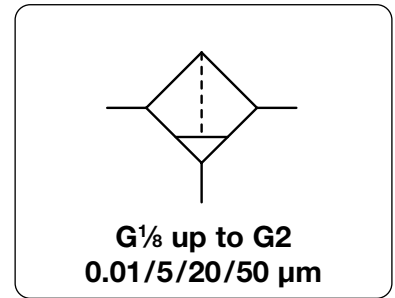
Extensions: see chapter for FRL service units

PDF CAD
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Order example:
F602-12WJ

Description	Good value aluminium regulator of solid design.
Filter element	0.01 µm coalescing filter (to -04), 5 µm and 50 µm
Filtration efficiency	coalescing filter: 99.99% based on 0.01 µm particle size
Bowl	metal version with and without sight glass
Drainage	semiautomatic drain as standard, for max. 16 bar optionally manual drain, for max. 30 bar or automatic drain, for max. 16 bar
Operating pressure	max. 16 bar for metal bowl with sight glass max. 30 bar for metal bowl without sight glass
Temperature range	-10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass (-01 to -04 / -12 / -16) -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass (-06 to -1A) -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
Material	Body: aluminium Bowl: aluminium Elastomer: NBR/Buna-N

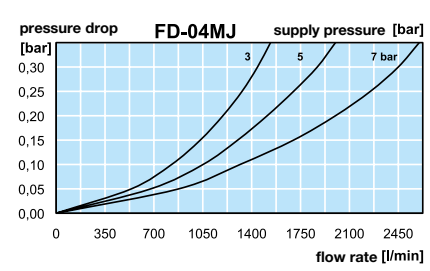
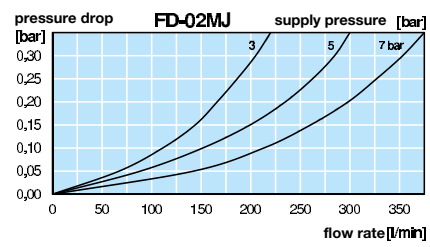
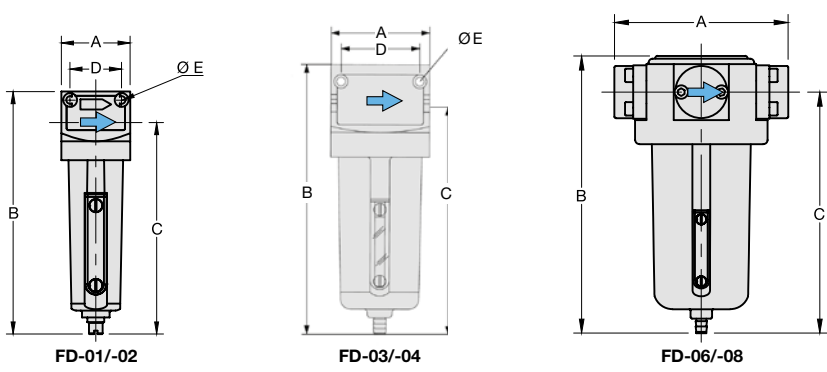


Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m ³ /h*1	µm	G	

Compressed air filter series "D"							with semiautomatic drain, 99.99 % at 0.01 µm	FD		
40	145	127	metal/sight glass	0.05	21	350	16	50	G ¹ / ₈	FD-01MJ
					16	270	16	5		FD-01MG
				metal/sight glass	0.05	4	70	16		0.01
40	145	127	metal/sight glass	0.05	24	400	16	50	G ¹ / ₄	FD-02MJ
					18	300	16	5		FD-02MG
				metal/sight glass	0.05	4	70	16		0.01
64	176	148	metal/sight glass	0.18	144	2400	16	50	G ³ / ₈	FD-03MJ
					108	1800	16	5		FD-03MG
				metal/sight glass	0.18	27	450	16		0.01
64	176	148	metal/sight glass	0.18	156	2600	16	50	G ¹ / ₂	FD-04MJ
					120	2000	16	5		FD-04MG
				metal/sight glass	0.18	30	500	16		0.01
130	205	177	metal/sight glass	0.50	420	7000	16	50	G ³ / ₄	FD-06MJ
					318	5300	16	5		FD-06MG
130	205	177	metal/sight glass	0.50	510	8500	16	50	G1	FD-08MJ
					384	6400	16	5		FD-08MG



Type	D	Ø E
FD-01/02	30	4.5
FD-03/04	51	5.5

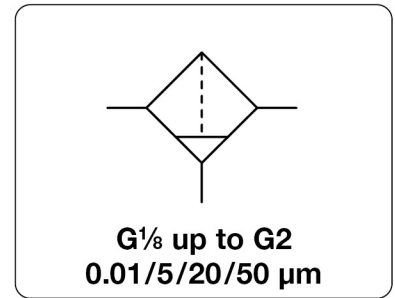


*1 at 7 bar operating pressure and 0.33 bar pressure drop

COMPRESSED AIR FILTER SERIES "D", UP TO 30 BAR

FD

Description	Good value aluminium regulator of solid design.
Filter element	0.01 µm coalescing filter (to -04), 5 µm and 50 µm
Filtration efficiency	coalescing filter: 99.99% based on 0.01 µm particle size
Bowl	metal version with and without sight glass
Drainage	semiautomatic drain as standard, for max. 16 bar optionally manual drain, for max. 30 bar or automatic drain, for max. 16 bar
Operating pressure	max. 16 bar for metal bowl with sight glass max. 30 bar for metal bowl without sight glass
Temperature range	-10 °C to 50 °C / 14 °F to 122 °F for metal bowl with sight glass (-01 to -04 / -12 / -16) -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass (-06 to -1A) -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
Material	Body: aluminium Bowl: aluminium Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Supply	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m ³ /h*1	µm	G	

Compressed air filter series "D"									with semiautomatic drain, 99.99% at 0.01 µm	FD
241	205	177	metal/sight glass	0.5	570	9500	16	50	G1¼	FD-10MJ
					432	7200	16	5		FD-10MG
241	205	177	metal/sight glass	0.5	600	10000	16	50	G1½	FD-1AMJ
					450	7500	16	5		FD-1AMG
215	265	223	metal/sight glass	1.2	1800	30000	16	50	G1½	FD-12MJ
				1.2	1380	23000	16	5		FD-12MG
215	265	223	metal/sight glass	1.2	1800	30000	16	50	G2	FD-16MJ
				1.2	1380	23000	16	5		FD-16MG

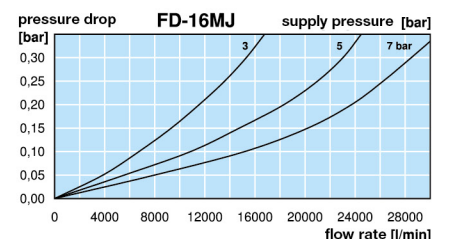
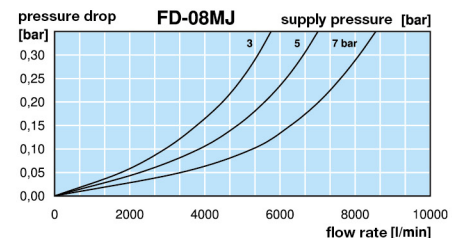
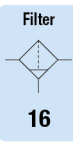
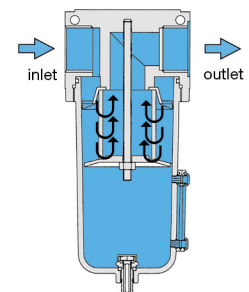
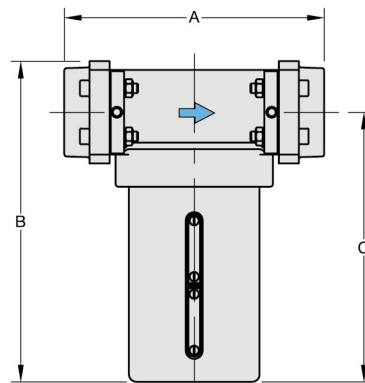
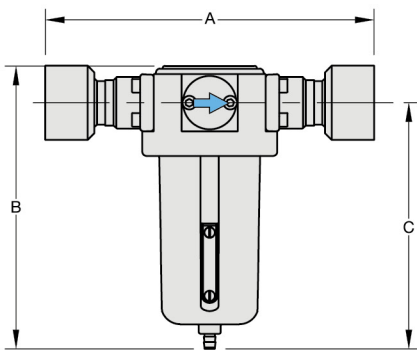


Special options, add the appropriate letter

operating pressure 30 bar	metal bowl w/o sight glass, with manual drain	FD-... N. H
manual drain	max. 16 bar	FD-... H
automatic drain	draining through float valve, max. 16 bar for G ³ / ₈ to G2	FD-... R

Accessories, enclosed

mounting bracket	made of stainless steel	for G ³ / ₈ to G1½ (1A)	BW00-59S
	made of steel	for G1½ (12) and G2	BW00-61



*1 at 7 bar operating pressure and 0.33 bar pressure drop

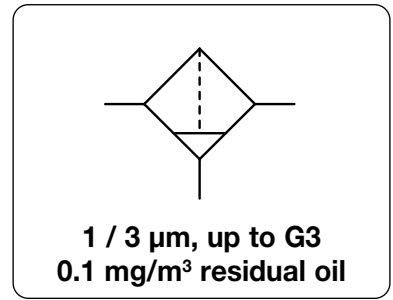
Extensions: see chapter for FRL service units

PDF CAD
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Order example:
FD-10MJ

	pre-filter V	Fine filter Z
Description	Coarse filter for removing water and solid impurities.	Filters out oil, water and solid impurities. Resistant to mineral and synthetic oils.
Filter element	3 µm incoming flow from inside to outside.	1 µm incoming flow from inside to outside.
Filtration efficiency	99.99% based on 3 µm particle size	99.9999% at 1 µm particle size, residual oil content ≤ 0.5 mg/m ³
Filter change	Cleaning required as from 0.35 bar differential pressure. Solid impurities removed by blowing from inside to outside. Oil to be cleaned in soap suds.	The filter must be changed as from 0.35 bar differential pressure or after one year at the latest.
Drainage	automatic drain as standard, optionally manual drain	
Temperature range	1 °C to 65 °C / 34 °F to 149 °F	
Operating pressure	max. 16 bar	
Material	Body/Bowl: chromated and powder-coated cast aluminium	

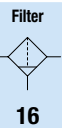


Dimensions			Bowl		Flow rate		Filter element	Connection	Order number
A	B	C	Design	Capacity	m ³ /h*1	l/min*1	µm	thread	G

Micro pre-filter 3 µm			with automatic drain, 99,99% filtration efficiency, max. 16 bar					FG. V	
69	194	173	aluminium /	0.2	30	500	3	G¼	FG-02V
89	293	269	automatic drain	0.8	60	1000		G¾	FG-03V
89	293	269		0.8	108	1800		G½	FG-04V
89	293	269		0.8	132	2200		G¾	FG-A6V
109	393	359		1.8	180	3000		G¾	FG-06V
109	393	359		1.8	270	4500		G1	FG-08V
109	540	506		2.7	372	6200		G1¼	FG-10V
109	540	506		2.7	432	7200		G1½	FG-1AV
150	576	535		4.9	732	12200		G1½	FG-12V
150	954	913		8.0	1050	17500		G2	FG-16V
188	759	703		10.3	1800	30000		G2½	FG-20V
188	939	903		12.7	2220	37000		G3	FG-24V



Micro fine filter 1 µm			with automatic drain, 99,9999% filtration efficiency residual oil ≤ 0.1 mg/m ³ , max. 16 bar					FG. Z	
69	194	173	aluminium /	0.2	30	500	1	G¼	FG-02Z
89	293	269	automatic drain	0.8	60	1000		G¾	FG-03Z
89	293	269		0.8	108	1800		G½	FG-04Z
89	293	269		0.8	132	2200		G¾	FG-A6Z
109	393	359		1.8	180	3000		G¾	FG-06Z
109	393	359		1.8	270	4500		G1	FG-08Z
109	540	506		2.7	372	6200		G1¼	FG-10Z
109	540	506		2.7	432	7200		G1½	FG-1AZ
150	576	535		4.9	732	12200		G1½	FG-12Z
150	954	913		8.0	1050	17500		G2	FG-16Z
188	759	703		10.3	1800	30000		G2½	FG-20Z
188	939	903		12.7	2220	37000		G3	FG-24Z



Special options, add the appropriate letter

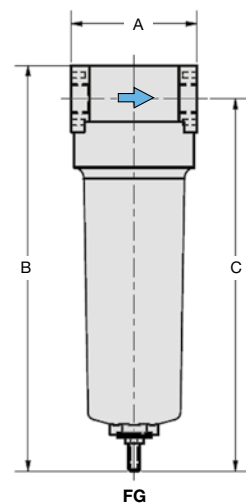
differential pressure gauge	FG-... D
replacement indicator	FG-... E
further sizes	

Accessories, enclosed

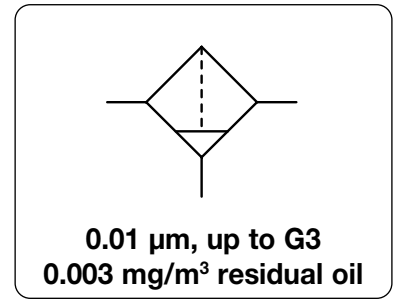
set of mounting brackets	made of steel	for G¼	BW00-52
		for G¾ to G¾ (A6)	BW00-53
		for G¾ (06) to G1½	BW00-54
		for G1½ (12) and G2	BW00-55
		for G2½ and G3	BW00-56

Flow rate conversion factor for other operating pressures																
operating pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
factor	0.25	0.38	0.5	0.65	0.75	0.88	1	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2	2.13

*1 at 7 bar operating pressure and open outlet. Pressure drop in new condition: **20 mbar** on pre-filter and **30 mbar** on universal filter. The maximum permissible flow rate is 10% higher than the indicated value.



	Super fine filter X	Activated Carbon Filter A
Description	The filter separates oil, water and solid impurities from compressed air or non-corrosive gases. It is resistant to mineral and synthetic oils.	Air filtered with this combination is virtually free from oil and odours.
Filter element	0.01 µm incoming flow from inside to outside	0.01 µm incoming flow from inside to outside
Filtration efficiency	99.99999% based on 0.01 µm particle size residual oil content ≤ 0.01 mg/m ³ at 7 bar and 20 °C/68 °F	residual oil content ≤ 0.03 mg/m ³ bei 7 bar and 20 °C/68 °F
Filter change	Cleaning required as from 0.35 bar differential pressure, at the latest after 3 months.	Cleaning required as from 0.35 bar differential pressure, at the latest after 3 months.
Drainage	automatic drain as standard, optionally manual drain	manual drain as standard
Temperature range	1 °C to 65 °C / 34 °F to 149 °F	1 °C to 30 °C / 34 °F to 86 °F
Operating pressure	max. 16 bar	
Material	Body/Bowl: chromated and powder-coated cast aluminium	



Dimensions			Bowl		Flow rate		Filter element	Connection	Order number
A	B	C	Design	Capacity	m ³ /h*1	l/min*1	µm	thread	G
mm	mm	mm	of / with	l					

Super fine filter 0.01 mg/m ³ residual oil							with automatic drain, max. 16 bar 99,99999%, at 0.01 µm	FG. X	
69	194	173	aluminium /	0.2	30	500	0.01	G¼	FG-02X
89	293	269	manual drain	0.8	60	1000		G¾	FG-03X
89	293	269		0.8	108	1800		G½	FG-04X
89	293	269		0.8	132	2200		G¾	FG-A6X
109	393	359		1.8	180	3000		G¾	FG-06X
109	393	359		1.8	270	4500		G1	FG-08X
109	540	506		2.7	372	6200		G1¼	FG-10X
109	540	506		2.7	432	7200		G1½	FG-1AX
150	576	535		4.9	732	12200		G1½	FG-12X
150	954	913		8.0	1050	17500		G2	FG-16X
188	759	703		10.3	1800	30000		G2½	FG-20X
188	939	903		12.7	2220	37000		G3	FG-24X



Activated carbon filter 0.003 mg/m ³ residual oil							with manual drain, max. 16 bar	FG. A	
69	185	164	aluminium /	0.2	30	500	activated carbon	G¼	FG-02A
89	284	260	manual drain	0.8	60	1000		G¾	FG-03A
89	284	260		0.8	108	1800		G½	FG-04A
89	284	260		0.8	132	2200		G¾	FG-A6A
109	384	350		1.8	180	3000		G¾	FG-06A
109	384	350		1.8	270	4500		G1	FG-08A
109	531	497		2.7	372	6200		G1¼	FG-10A
109	531	497		2.7	432	7200		G1½	FG-1AA
150	567	526		4.9	732	12200		G1½	FG-12A
150	945	904		8.0	1050	17500		G2	FG-16A
188	748	694		10.3	1800	30000		G2½	FG-20A
188	930	894		12.7	2220	37000		G3	FG-24A



Special options, add the appropriate letter

differential pressure gauge **FG-. . . D**

replacement indicator **FG-. . . E**

further sizes

Accessories, enclosed

set of mounting brackets made of steel

for G¼	BW00-52
for G¾ to G¾ (A6)	BW00-53
for G¾ (06) to G1½	BW00-54
for G1½ (12) and G2	BW00-55
for G2½ and G3	BW00-56

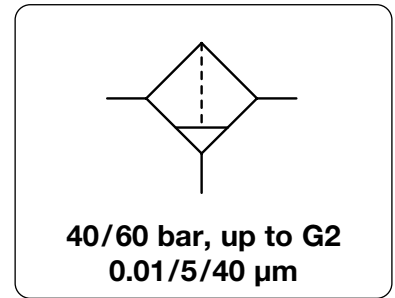
Flow rate conversion factor for other operating pressures																
operating pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
factor	0.25	0.38	0.5	0.65	0.75	0.88	1	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2	2.13

*1 at 7 bar operating pressure and open outlet. Pressure drop in new condition: **50 mbar** on fine filter and **90 mbar** on super fine filter. The maximum permissible flow rate is 10% higher than the indicated value.

HIGH PRESSURE FILTER UP TO 60 BAR

F445 / F465

Description	Compressed air filter for up to 60 bar operating pressure with various filter elements. Mounting in horizontal position, flow direction indicated by arrow.
Filter element	5 µm and 40 µm made of sintered bronze, 0.01 µm coalescing filter made of borosilicate fibres with stainless steel jacket and foam protection
Filtration efficiency	coalescing filter: 99.999% based on 0.01 µm particle size
Bowl	metal version without sight glass
Drainage	manual drain as standard
Supply pressure	max. 60 bar
Temperature range	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -30 °C / -22 °F
Material	Body: black, anodized aluminium Bowl: brass at G $\frac{3}{8}$ to G1, aluminium at G1 $\frac{1}{2}$ and G2 Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow rate	Filter element	Connection	Order number
A	B	C	Design	Capacity	rate	thread	
mm	mm	mm	made of	l	m ³ /h*1	G	

High pressure filter up to 40 bar								with manual drain, 99.999% at 0.01 µm	F445
72	200	168	metal	0.08	162	2700	40	G $\frac{3}{8}$ " ²	F445-03EL
65	200	168			168	2800		G $\frac{1}{2}$ "	F445-04EL
92	210	170	metal	0.10	198	3300		G $\frac{3}{4}$ " ²	F445-06EL
80	210	170			210	3500		G1"	F445-08EL
150	285	243	metal	0.30	1200	20000		G1 $\frac{1}{2}$ " ²	F445-12EL
140	285	243			1320	22000		G2"	F445-16EL
72	200	168	metal	0.08	126	2100	5	G $\frac{3}{8}$ " ²	F445-03GL
65	200	168			138	2300		G $\frac{1}{2}$ "	F445-04GL
92	210	170	metal	0.10	156	2600		G $\frac{3}{4}$ " ²	F445-06GL
80	210	170			168	2800		G1"	F445-08GL
150	285	243	metal	0.30	900	15000		G1 $\frac{1}{2}$ " ²	F445-12GL
140	285	243			1080	18000		G2"	F445-16GL
72	200	168	metal	0.08	150	2500	0.01	G $\frac{3}{8}$ " ²	F445-03IL
65	200	168			162	2700		G $\frac{1}{2}$ "	F445-04IL
92	210	170	metal	0.10	192	3200		G $\frac{3}{4}$ " ²	F445-06IL
80	210	170			204	3400		G1"	F445-08IL
150	285	243	metal	0.30	1140	19000		G1 $\frac{1}{2}$ " ²	F445-12IL
140	285	243			1260	21000		G2"	F445-16IL



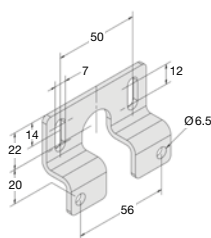
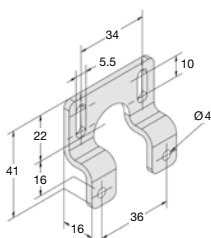
High pressure filter up to 60 bar								with manual drain, 99.999% at 0.01 µm	F465
72	185	160	metal	0.08	162	2700	40	G $\frac{3}{8}$ " ²	F465-03EL
65	185	160			168	2800		G $\frac{1}{2}$ "	F465-04EL
92	200	170	metal	0.10	198	3300		G $\frac{3}{4}$ " ²	F465-06EL
80	185	160			210	3500		G1"	F465-08EL
72	185	160	metal	0.08	126	2100	5	G $\frac{3}{8}$ " ²	F465-03GL
65	185	160			135	2300		G $\frac{1}{2}$ "	F465-04GL
92	200	170	metal	0.10	156	2600		G $\frac{3}{4}$ " ²	F465-06GL
80	200	170			168	2800		G1"	F465-08GL
72	185	160	metal	0.08	150	2500	0.01	G $\frac{3}{8}$ " ²	F465-03IL
65	185	160			162	2700		G $\frac{1}{2}$ "	F465-04IL
92	200	170	metal	0.10	192	3200		G $\frac{3}{4}$ " ²	F465-06IL
80	200	170			204	3400		G1"	F465-08IL

Special options, add the appropriate letter

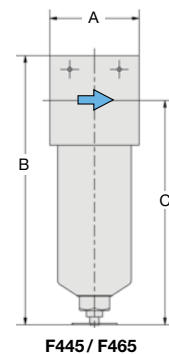
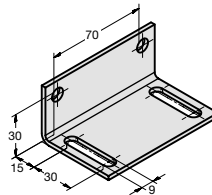
for oxygen specially cleaned F4.5-...15

Accessories, enclosed

mounting bracket made of steel



for G $\frac{3}{8}$ " and G $\frac{1}{2}$ " **BW00-15**
for G $\frac{3}{4}$ " and G1" **BW00-16**
for G1 $\frac{1}{2}$ " and G2" **BW00-60**



*1 at 7 bar operating pressure and 0.33 bar pressure drop

*2 reduced from the next bigger filter size

PDF CAD
www.aircom.net



Order example:
F445-03EL

Description The exhaust filter/sound silencer treats all exhaust air issued by pneumatic devices:
 1) Removing environmentally harmful oil particles from oily exhaust air
 2) Silencing exhaust air noise

Filtration efficiency > 99.99%, residual oil content < 0.01 mg/m³

Noise reduction > 40 dB (A) at 1 m

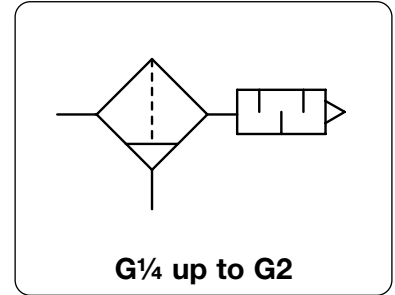
Service life approx. 2500 operating hours, depending on contamination

Drainage The bowl is emptied by means of an overflow valve or by opening the manual drain.

Operating pressure max. 16 bar

Temperature range 2 °C to 100 °C / 36 °F to 212 °F

Material Housing: polypropylene at G¼ and G¾, aluminium at G½ to G2
 Filter: micro fibreglass and polyurethane



Dimensions				Flow rate	Connection thread	Order number
A	B	ØC	A/F			
mm	mm	mm	mm	m ³ /h*1	G	

Filter silencer				operating pressure max. 16 bar		SFE	
8	131	77	28	30	500	G¼	SFE-02
8	131	77	28	35	580	G¾	SFE-03
12	181	90	36	75	1250	G½	SFE-04
12	181	90	36	100	1670	G¾	SFE-06
15	254	110	50	175	2920	G1	SFE-08
70	287	110	50	200	3330	G1¼	SFE-10
70	312	110	50	200	3330	G1½	SFE-12
70	312	110	50	200	3330	G2	SFE-16

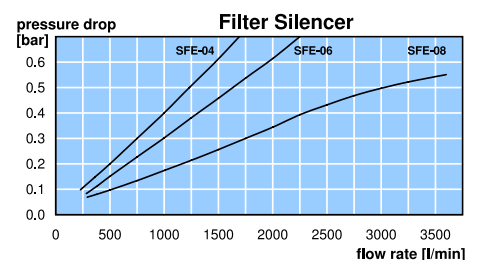
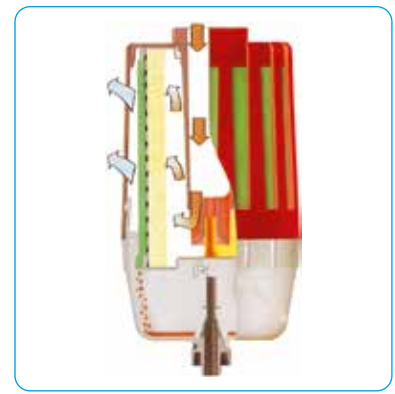
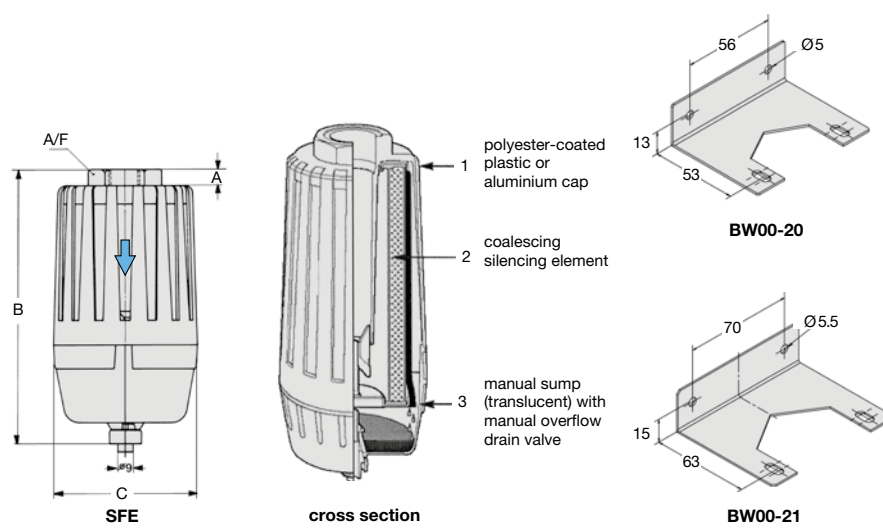


Accessories, enclosed

mounting bracket made of steel

for G¼ to G¾ **BW00-20**

for G1 to G2 **BW00-21**



*1 at 6 bar operating pressure to atmosphere

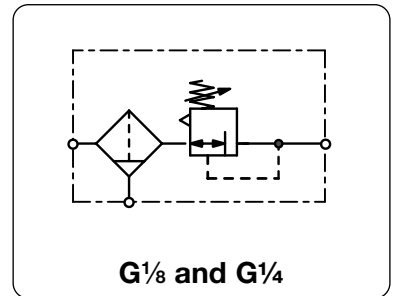
FILTER PRESSURE REGULATORS

DESCRIPTION	PRESSURE RANGE bar	CONNECTION thread	SERIES	PAGE
„Miniature“-Series	0.2 ... 1,8 / 9	G $\frac{1}{8}$ and G $\frac{1}{4}$	B548	17.02
brass	0.2 ... 3 / 15	G $\frac{1}{4}$ and G $\frac{1}{2}$	BM	17.03
made of plastic	0 ... 4 / 12	G $\frac{1}{4}$ - G1	B042 ... B095	17.04
„Maxi“-Series, robust, modular	0.2 ... 4 / 17	G $\frac{1}{2}$ - G1	B20, B21	17.05
Series „D“, made of aluminium	0.3 ... 3 / 15	G $\frac{1}{8}$ - G2	BD	17.06
down to -40 °C / -40 °F	0 ... 0.7 / 8	$\frac{1}{4}$ " NPT	B300	17.08



17

Description	Regulator of small and compact design, ideal for limited space conditions.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 11 bar for plastic bowl, max. 21 bar for metal bowl	
Adjustment	by plastic knob with snap-lock	
Relieving function	relieving	
Gauge port	G $\frac{1}{8}$ on both sides of the body, screw plugs supplied	
Filter element	20 μ m, optionally 5 μ m, made of polypropylene	
Bowl	plastic or metal version	
Drainage	manual drain as standard, for max. 21 bar semiautomatic drain as option, for max. 12 bar	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F for plastic bowl and semiautomatic drain version 0 °C to 80 °C / 32 °F to 176 °F for metal bowl	
Material	Body: aluminium Spring cage: glass fibre-reinforced plastic Bowl: polyurethane or zinc die-cast	Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Bowl	Flow	P ₁	Connection	Pressure	Order	
A	B	C	design	rate	max.	thread	range	number	B*
mm	mm	mm	made of	m ³ /h*1	bar	G	bar		

Miniature filter regulator			with manual drain, relieving, without gauge, filter element 20 μ m				B548			
40	152	86	plastic	0.04	27	450	11	G $\frac{1}{8}$	0.2...1.8	B548-01AHA
									0.2...4.0	B548-01AHB
									0.3...9.0	B548-01AHC
			metal	21	0.2...1.8	B548-01DHA				
					0.2...4.0	B548-01DHB				
					0.3...9.0	B548-01DHC				
40	152	86	plastic	0.04	27	450	11	G $\frac{1}{4}$	0.2...1.8	B548-02AHA
									0.2...4.0	B548-02AHB
									0.3...9.0	B548-02AHC
			metal	21	0.2...1.8	B548-02DHA				
					0.2...4.0	B548-02DHB				
					0.3...9.0	B548-02DHC				

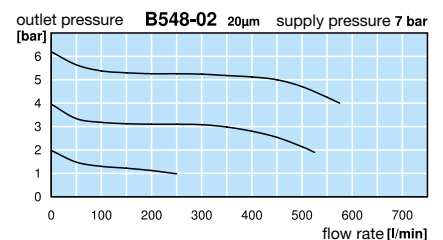
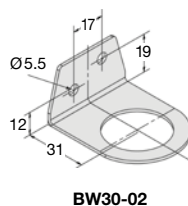
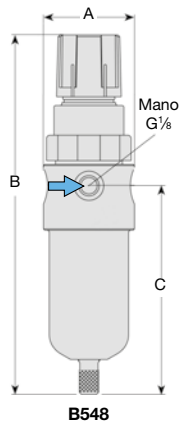


Special options, add the appropriate letter

5 μm filter element		B548-0..G.
non-relieving	without relieving function	B548-0.... K
semiautomatic drain	RK500SY, max. 12 bar	B548-0....M

Accessories, enclosed

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



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

* Product group

Extensions: see chapter for FRL service units
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

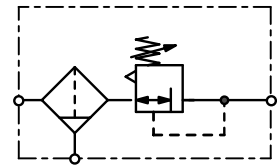


Order example:
B548-01AHA

FILTER REGULATOR MADE OF BRASS UP TO 50 BAR

BM

Description	Filter pressure regulator made of solid brass, with bowl without sight glass. The control system is a membrane.		
Media	compressed air, non-corrosive gases or liquids		
Supply pressure	max. 50 bar (without drain)		
Adjustment	by black plastic knob at size G $\frac{1}{4}$		
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Filter element	50 μ m, optionally 5 μ m, made of stainless steel		
Bowl	stainless steel version without sight glass		
Drainage	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)		
Temperature range	0 °C to 80 °C / 32 °F to 176 °F for FKM 0 °C to 130 °C / 32 °F to 266 °F for high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F or low temperature version down to -40 °C / -40 °F		
Material	Body: brass	Bowl: stainless steel 316L / material no. 1.4404	
	Diaphragm: NBR/Buna-N with PTFE coating	O-rings: FKM	
	Knob: plastic at sizes G $\frac{1}{4}$, brass at G $\frac{1}{2}$	Inner valve: brass and plastic (not at option X54)	



**G $\frac{1}{4}$ up to G $\frac{1}{2}$, max. 50 bar
-40 to 130 °C / -40 to 266 °F**

Dimensions			Bowl-	Flow	Connection	Order
A	B	C	Design	rate	thread	number
mm	mm	mm	made of	m 3 /h*1	G	

Brass filter regulator							with screw plug, relieving, without gauge, 50 μ m filter element supply pressure max. 50 bar, pressure range 0.5...8 bar	BM
64	220	123	stainless steel	0,17	84	1400	G $\frac{1}{4}$	BM-02
79	247	127	stainless steel	0,28	228	3800	G $\frac{1}{2}$	BM-04



BM-02



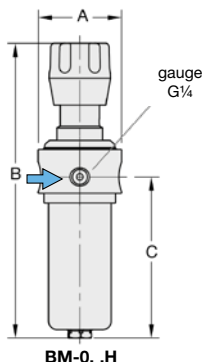
BM-04

Special options, add the appropriate letter

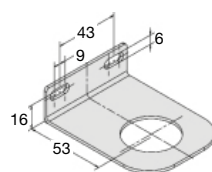
5 μ m filter element							BM- . . G
0.2... 3 bar range							BM- . . B
1 ...15 bar range							BM- . . D
manual drain			max. 30 bar				BM- . . H
automatic drain			made of stainless steel, max. 16 bar			for G $\frac{1}{4}$ (02) to G $\frac{1}{2}$	BM- . . R
non-relieving			without relieving function				BM- . . K
down to -40 °C / -40 °F			low temperature version				BM- . . X51
up to 130 °C / 266 °F			high temperature version				BM- . . X54
T-handle			instead of adjusting knob			for G $\frac{1}{4}$	BM- . . T
nitrogen N $_2$: 07			carbon dioxide CO $_2$: 03			argon Ar:	BM- . . 05
helium He: 09			hydrogen H $_2$: 11			methane CH $_4$:	BM- . . 13
oxygen O $_2$: 15			propane C $_3$ H $_8$: 16			nitrous oxide N $_2$ O:	BM- . . 17
flange connection			see chapter for stainless steel devices / flanges				BM- . . F.

Accessories, enclosed

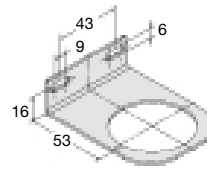
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
gauge -40 °C/-40°F to 130 °C/266 °F	Ø . . mm, 0...*2 bar, G $\frac{1}{4}$	MS6302-...*2
mounting bracket	made of stainless steel for G $\frac{1}{4}$	BW35-01S
mounting nut		M35x1,5S
mounting bracket	made of stainless steel for G $\frac{1}{2}$	BW50-01S
mounting nut		M50x1,5S



BM-0. .H



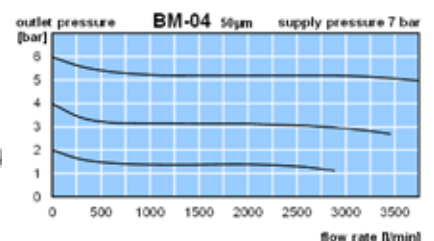
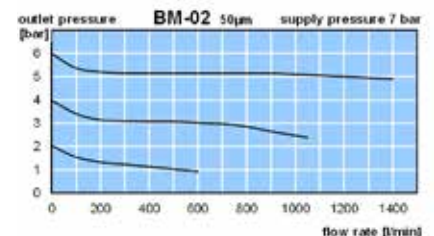
BW35-01S



BW50-01S

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

*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar



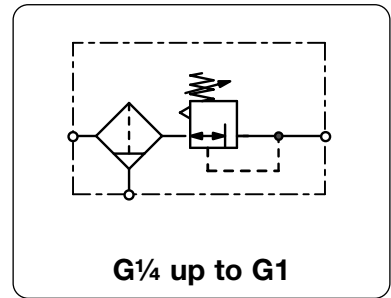
Extensions: see chapter for FRL service units
Gauges: see chapter for measuring devices
Spare parts: see separate spare parts list

PDF CAD
www.aircom.net



Order example:
BM-02

Description	Modular pressure filter regulator which can be interlocked with all other instruments of the same series.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 12,5 bar, max. 16 bar for Series 042		
Adjustment	by knob with snap-lock		
Relieving function	relieving		
Gauge port	G $\frac{1}{8}$ or G $\frac{1}{4}$ at series 095, on both sides of the body, screw plugs supplied		
Filter element	20 μ m, optionally 5 μ m, made of sintered polyethylene		
Bowl	plastic version with bayonet catch, threaded connection at series 042		
Drainage	manual drain with semiautomatic drain, optionally automatic drain		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F		
Material	Body: nylon, POM at series 042	Inner valve: brass	
	Bowl: polyamide	Thread insert: brass	
	Elastomer: NBR/Buna-N		



Dimensions			Bowl		Flow rate		Supply max.	Connection thread	Order number
A	B	C	Design	Capacity	m 3 /h*1	l/min*1	bar	G	B*

Plastic filter regulator									
manual drain with semiautomatic drain, relieving, max. 12,5/16 bar w/o gauge, pressure range 0...8 bar, 20 μ m filter element									
42	207	126	plastic/	0.02	72	1200	16	G $\frac{1}{4}$	B042-02HC
52	239	148	bowl guard	0.04	120	2000	12.5	G $\frac{3}{8}$	B050-03HC
52	239	148		0.04	126	2100	12.5	G $\frac{1}{2}$	B052-04HC
63	276	173		0.10	168	2800	12.5	G $\frac{1}{2}$	B075-04HC
137	276	173		0.10	174	2900	12.5	G $\frac{3}{4}$	B080-06HC
195	411	237		0.20	828	13800	12.5	G1	B095-08HC

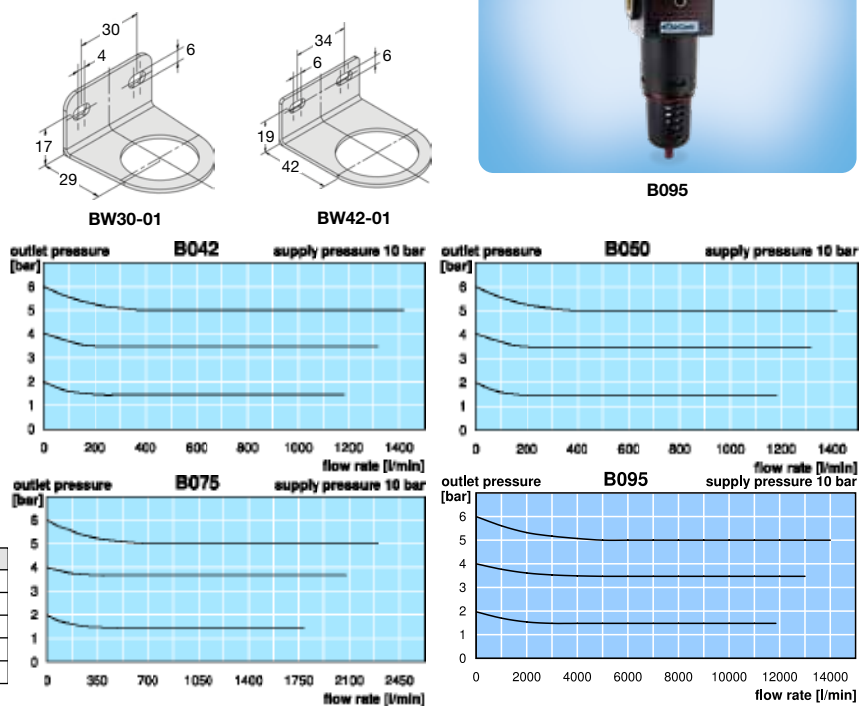
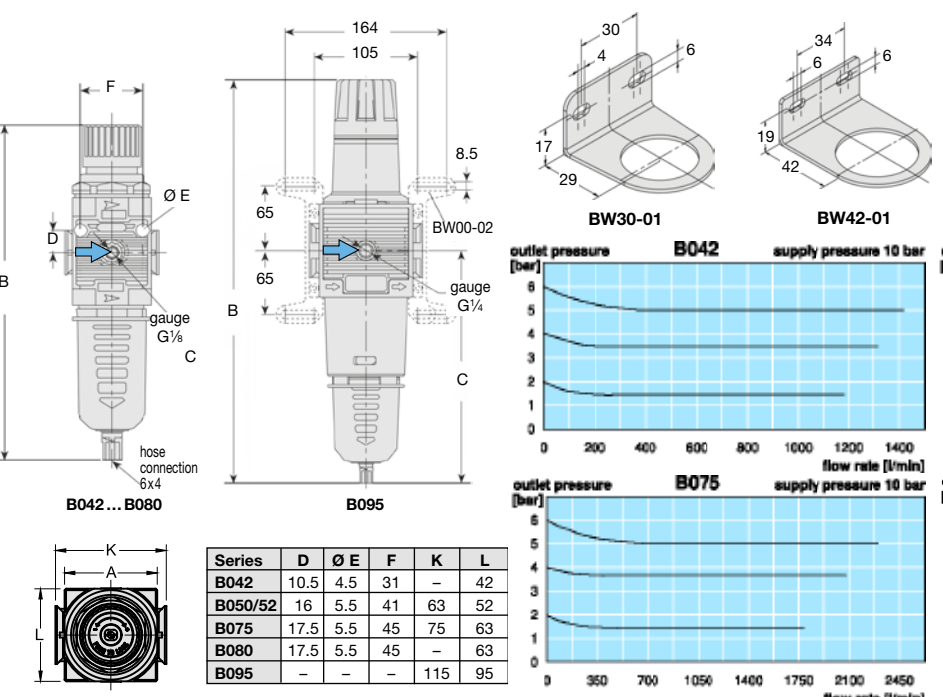


Special options, add the appropriate letter

5 μ m filter element		B0...0.G.
non-relieving	without relieving function	B0...0...K
0... 4 bar regulating range		B095-0...B
0...12 bar regulating range		B095-0...D
automatic drain		B0...0...R

Accessories, enclosed

pressure gauge	\varnothing 40 mm, 0...*2 bar, G $\frac{1}{8}$	for B042	MA4001-...*
	\varnothing 50 mm, 0...*2 bar, G $\frac{1}{8}$	for B050 to B080	MA5001-...*
	\varnothing 63 mm, 0...*2 bar, G $\frac{1}{4}$	for B095	MA6302-...*
mounting bracket	made of steel, mounting nut at the device	for B042	BW30-01
		for B050 to B080	BW42-01
		for B095	BW00-02



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

"MAXI" FILTER PRESSURE REGULATOR

B20 / B21

Description

High-capacity filter regulator of modular design with exchangeable inserts. Can be interlocked with lubricator without needs for double nipples. Each "maxi" device may be taken from a fixed line in seconds by simply removing the mounting bolts.

Media

Supply pressure

Adjustment

Relieving function

Bowl

Drainage

Temperature range

compressed air or non-corrosive gases

max. 17 bar

relieving

metal version with sight glass

manual drain as standard, optionally semiautomatic or automatic drain version

0 °C to 70 °C / 32 °F to 158 °F

up to 50 °C / 122 °F for semiautomatic or automatic drain version

Material

Body: zinc die-cast
Knob (B20): glass fibre-reinforced plastic
Bowl: zinc die-cast
Elastomer: NBR/Buna-N

by T-handle with locknut at B21

Gauge port

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

Filter element

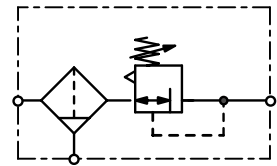
40 μ m, optionally 5 μ m, made of polypropylene

Spring cage: zinc die-cast

T-handle (B21): steel

Sight glass: polyurethane

Inner valve: brass and plastic



G $\frac{1}{2}$ up to G1

Dimensions			Bowl		Flow	Connection	Pressure	Order
A	B	C	Design	Capacity	rate	thread	range	number
mm	mm	mm	made of / with	l	m ³ /h*1	l/min*1	bar	

"Maxi" filter regulator					with manual drain, relieving, without gauge, 40 μ m filter element,			without gauge, max. 17 bar		B20
89	289	175	metal/sight glass	0.3	288	4800	G $\frac{1}{2}$	0.2... 4.0	0.3... 9.0	B20-04WJB
								0.5... 17		B20-04WJC
										B20-04WJD
111	289	175	metal/sight glass	0.3	408	6800	G $\frac{3}{4}$	0.2... 4.0	0.3... 9.0	B20-06WJB
								0.5... 17		B20-06WJC
										B20-06WJD
					420	7000	G1	0.2... 4.0	0.3... 9.0	B20-08WJB
								0.5... 17		B20-08WJC
										B20-08WJD



B20 with adjusting knob

Special options, add the appropriate letter

T-handle

including locknut, total height 329 mm

B21-0..W..

filter element 5 μ m

B20-0..WG.

NPT

connection thread

B20-0..W..N

non-relieving

without relieving function

B20-0..K

semiautomatic drain

RK500SY, max. 12 bar

B20-0..W..M

automatic drain

SA605MD, max. 12 bar

B20-0..W..R

Accessories, enclosed

pressure gauge

\varnothing 63 mm, 0...*2 bar, G $\frac{1}{4}$

MA6302-..*2 B

mounting bracket

mounting at the spring cage

BW45-02 B

mounting nut

made of plastic

M45x1,5K B

made of aluminium

M45x1,5A B

mounting bracket set

made of steel

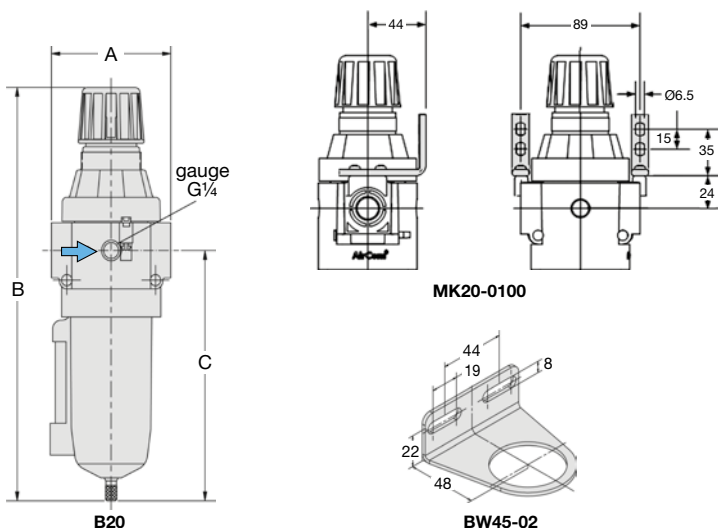
MK20-0100 B



B21 with T-handle

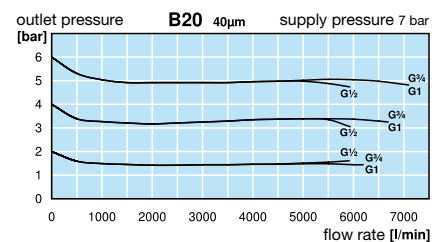
Filter regulator

17



RK500SY

SA605MD



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

*2 04 = 0...4 bar, 10 = 0...10 bar, 25 = 0...25 bar

* Product group

Extensions: see chapter for FRL service units
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

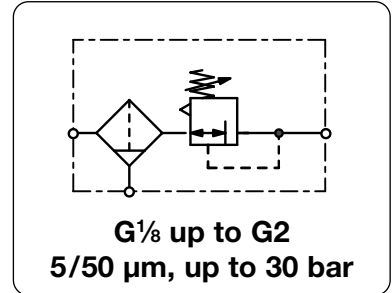


Order example:
B20-04WJB

FILTER PRESSURE REGULATOR SERIES "D", UP TO 30 BAR

BD

Description Low-cost aluminium regulator of solid design and diaphragm operating system up to G $\frac{1}{2}$. From G $\frac{3}{4}$ up with piston operating system. Suitable for compressed air or non-corrosive gases.
Supply pressure max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
Adjustment by knob with snap-lock up to G $\frac{1}{2}$, by hexagon head screw from G $\frac{3}{4}$ up to G1 $\frac{1}{2}$ (BD-1A.) by T-handle from G1 $\frac{1}{2}$ (BD-12.) up to G2
Gauge port G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{8}$ on both sides of the body at BD-01/02, one screw plug supplied
Filter element 50 μ m, optionally 5 μ m, made of propylene
Bowl plastic version, standard or short, metal version with or without sight glass
Drainage semiautomatic drain as standard for max. 16 bar, respectively manual drain max. 30 bar automatic drain max. 16 bar as option
Temperature range -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass
 -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
Material Bowl: aluminium
 Elastomer: NBR/Buna-N
 Bowl: zinc die-cast



Dimensions			Bowl	Flow	P ₁	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/with	l	m ³ /h*1	µm	G	

Filter pressure regulator										BD
										with semiautomatic drain, relieving, without pressure gauge, pressure range 0.5...8 bar
40	201	128	metal/sight glass	0.05	27	450	16	50	G $\frac{1}{8}$	BD-01M
			metal	0.05			30			BD-01NH
40	201	128	metal/sight glass	0.05	30	500	16	50	G $\frac{1}{4}$	BD-02M
			metal	0.05			30			BD-02NH
64	251	149	metal/sight glass	0.18	108	1800	16	50	G $\frac{3}{8}$	BD-03M
			metal	0.18			30			BD-03NH
64	251	149	metal/sight glass	0.18			16		G $\frac{1}{2}$	BD-04M
			metal	0.18			30			BD-04NH
129	310	174	metal/sight glass	0.50	300	5000	16	50	G $\frac{3}{4}$	BD-06M
			metal	0.50			30			BD-06NH
129	310	174	metal/sight glass	0.50			16		G1	BD-08M
			metal	0.50			30			BD-08NH
240	310	174	metal/sight glass	0.50	390	6500	16	50	G1 $\frac{1}{4}$	BD-10M
			metal	0.50			30			BD-10NH
240	310	174	metal/sight glass	0.50			16		G1 $\frac{1}{2}$	BD-1AM
			metal	0.50			30			BD-1ANH



BD-01/-02M



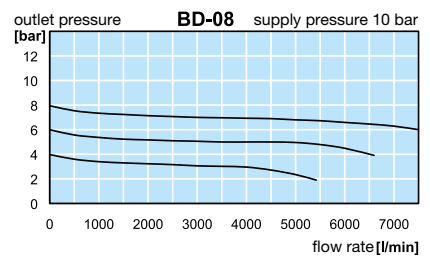
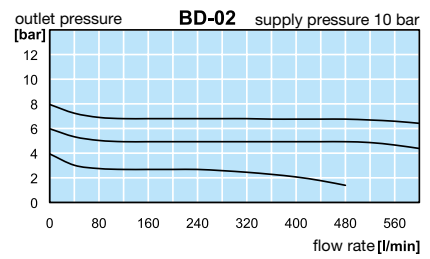
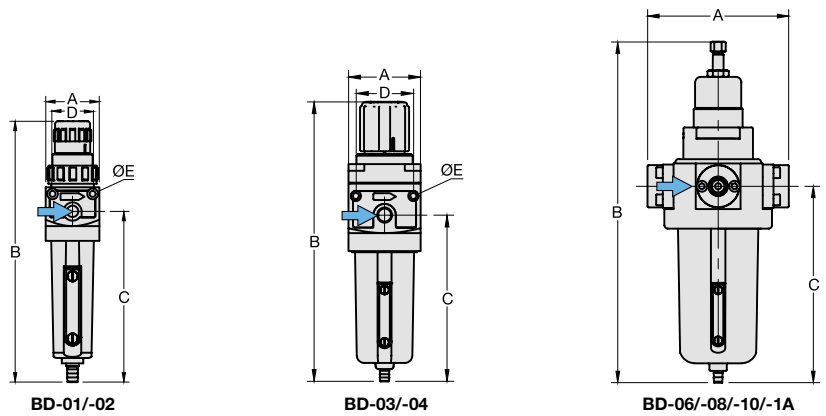
BD-03/-04M



BD-10/-1ANH

Filter regulator
17

Type	M	D	Ø E
BD-01/02	M30x1,5	30	4.5
BD-03/04	M50x1,5	51	5.5



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

*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

* Product group

Extensions: see chapter for FRL service units
 Gauges: see chapter for measuring devices

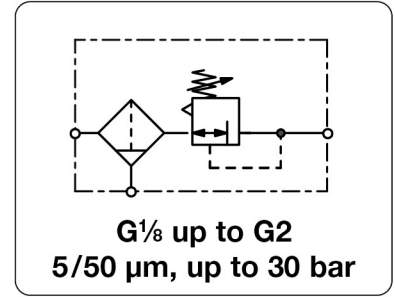
PDF CAD
www.aircom.net

Order example: BD-01M

FILTER PRESSURE REGULATOR SERIES "D", UP TO 30 BAR

BD

Description	Low-cost aluminium regulator of solid design and diaphragm operating system up to G $\frac{1}{2}$. From G $\frac{3}{4}$ on with piston operating system. Suitable for compressed air or non-corrosive gases.
Supply pressure	max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
Adjustment	by knob with snap-lock up to G $\frac{1}{2}$, by hexagon head screw from G $\frac{3}{4}$ up to G $1\frac{1}{2}$ (BD-1A.) by T-handle from G $1\frac{1}{2}$ (BD-12.) up to G2
Gauge port	G $\frac{1}{4}$ on both sides of the body, G $\frac{1}{2}$ on both sides of the body at BD-01/02, one screw plug supplied
Filter element	50 μ m, optionally 5 μ m, made of propylene
Bowl	plastic version, standard or short, metal version with or without sight glass
Drainage	semiautomatic drain as standard for max. 16 bar, respectively manual drain max. 30 bar automatic drain max. 16 bar as option
Temperature range	-20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass -30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass
Material	Body: aluminium Elastomer: NBR/Buna-N Bowl: aluminium



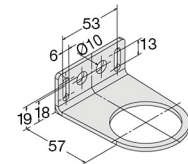
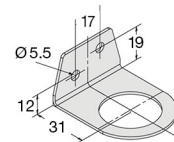
Dimensions			Bowl	Flow	P ₁	Filter	Connection	Order
A	B	C	Design	Capacity	rate	element	thread	number
mm	mm	mm	made of/ with	l	m ³ /h*1 l/min*1	μ m	G	

Filter pressure regulator									with semiautomatic drain, relieving, without pressure gauge, pressure range 0.5...8 bar	BD
192	481	220	metal/sight glass	1.20	960	16 000	16	G $1\frac{1}{2}$		BD-12M
			metal	1.20			30			BD-12NH
192	481	220	metal/sight glass	1.20	1020	17 000	16	G2		BD-16M
			metal	1.20			30			BD-16NH



Special options, add the appropriate letter

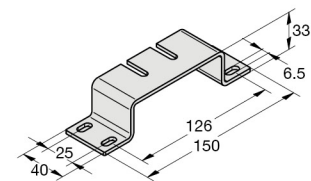
5 μm filter element		BD-... G
0.3 ... 3 bar regulating range		BD-... B
1 ... 15 bar regulating range		BD-... E
manual drain	max. 16 bar for metal bowls with sight glass	BD-... H
automatic drain	max. 16 bar, drainage through float valve for G $\frac{3}{8}$ to G2	BD-... R
flange connection	see chapter for stainless steel devices / flanges	BD-... F



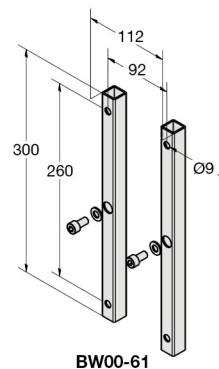
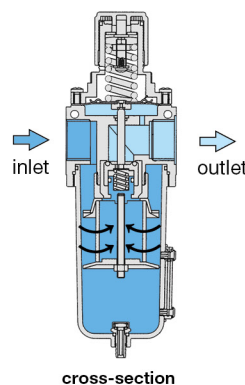
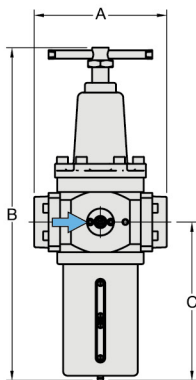
Accessories, enclosed

B*

pressure gauge	\varnothing 40 mm, 0... ^{*2} bar, G $\frac{1}{8}$ \varnothing 50 mm, 0... ^{*2} bar, G $\frac{1}{4}$ \varnothing 63 mm, 0... ^{*2} bar, G $\frac{1}{4}$	for G $\frac{1}{8}$ and G $\frac{1}{4}$ for G $\frac{3}{8}$ and G $\frac{1}{2}$ for G $\frac{3}{4}$ up to G2	MA4001-...^{*2} MA5002-...^{*2} MA6302-...^{*2}
mounting bracket	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	BW30-02
mounting nut	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	M30x1,5K
mounting bracket	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	BW50-03
mounting nut	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	M50x1,5K
mounting bracket	made of stainless steel	for G $\frac{3}{8}$ up to G $1\frac{1}{2}$ (1A)	BW00-59S
set of brackets	made of steel	for G $1\frac{1}{2}$ (12) and G2	BW00-61



BW00-59S



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

*2 04 = 0...4 bar, 10 = 0...10 bar, 16 = 0...16 bar

* Product group

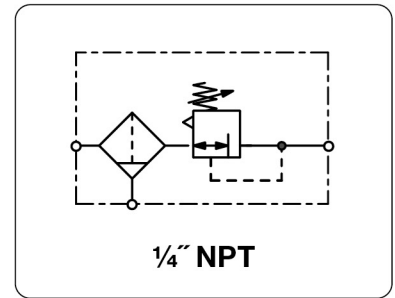
Extensions: see chapter for FRL service units
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
BD-12M

Description	Filter pressure regulator especially for low temperatures as well as supply of instruments.
Media	compressed air or non-corrosive gases
Supply pressure	max. 17 bar
Supply sensitivity	10 mbar outlet pressure deviation at supply pressure variation of 1 bar
Air consumption	max 2 l/min subject to outlet pressure
Adjustment	by square-headed spindle (spanner size 8 mm) with locknut
Relieving function	relieving, optionally non-relieving
Gauge port	1/4" NPT on one side of the body, one screw plug supplied
Filter element	40 µm, optionally 5 µm, made of impregnated cellulose
Drainage	manual drain
Temperature range	0 °C to 50 °C / 32 °F to 122 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F
Material	Body: aluminium die-cast Spring cage: aluminium die-cast Elastomer: nylon-reinforced NBR/Buna-N, optionally FKM Inner valve: brass, acetal, galvanised steel



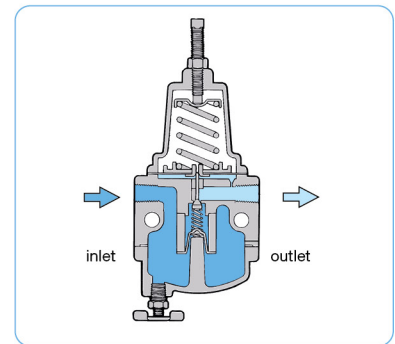
Dimensions			Bowl	Flow	P ₁	Connection	Pressure	Order
A	B	C	Design	Capacity	rate	max. thread	range	number
mm	mm	mm	made of	l	m ³ /h*1	l/min*1	bar	NPT

Filter pressure regulator								with manual drain, relieving, with air consumption without gauge, 40 µm filter element	B300	
197	80	83	metal	0.1	33	550	17	1/4" NPT	0...0.7	B300-020
									0...2.0	B300-02A
									0...4.0	B300-02B
									0...8.0	B300-02C



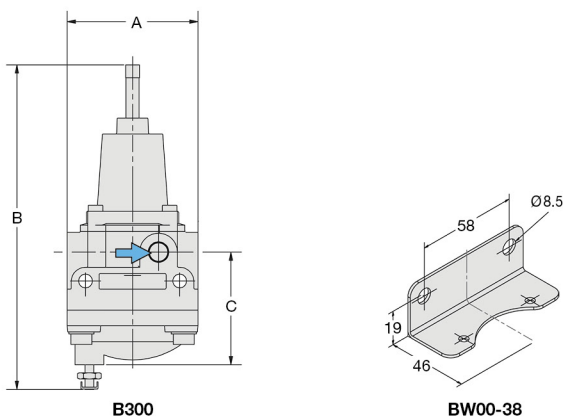
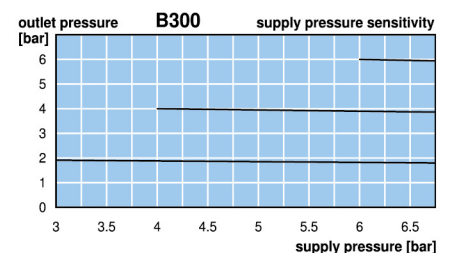
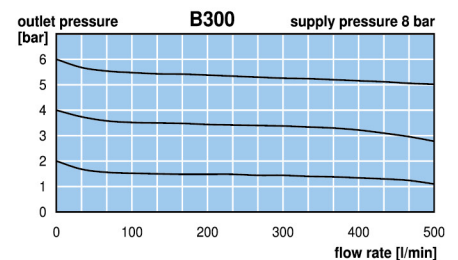
Special options, add the appropriate letter

5 µm filter element		B300-02 . G
non-relieving	without relieving function and without air consumption	B300-02 . K
tapped exhaust	1/4" NPT	B300-02 . X12
tamper-proof cap		B300-02 . T
FKM-elastomer		B300-02 . V



Accessories, enclosed

mounting bracket	mounting at spring cage, made of steel	BW00-38
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*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

* Product group



COMPRESSED AIR LUBRICATORS

DESCRIPTION	PRESSURE RANGE max. bar	CONNECTION thread	DEVICE	PAGE
made of plastic	16	G $\frac{1}{4}$ - G1	L042 ... L095	18.02
„Maxi“-Series, robust, block design	17	G $\frac{1}{2}$ - G1	L20	18.03
„Standard“-Series, robust	21	G $\frac{3}{4}$ - G2	L606	18.04
Series „D“, made of aluminium	30	G $\frac{1}{8}$ - G2	LD	18.06



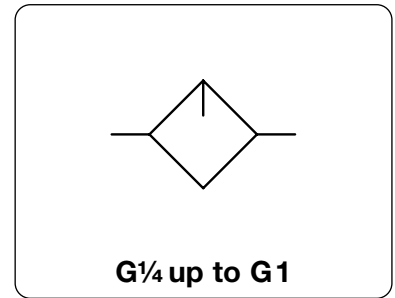
18

Lubricator



18

Description	Standard type mist lubricator which lubricates in proportion to flow rate. The modular lubricator can be interlocked with other instruments of the same series. Wall mounting through two drilled holes in the body, except for L095.	
Bowl	plastic version with bowl guard	
Operating pressure	max. 12,5 bar,	max. 16 bar for Series 042 max. 7 bar for lubricator with oil level indicator
Oil refilling	with semiautomatic oil refilling the oil is drawn into the bowl by a vacuum at the push of a button without need to interrupt operation.	
Oil level indicator	if the oil level falls below the limit value, a float will close a signal contact. Contact: NO Voltage: max. 115 V	
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	
Material	Body: nylon, POM at Series 042 Bowl: polyamide	Elastomer: NBR/Buna-N Inner valve: brass



Dimensions			Bowl	Flow	Operating	Connection	Order	
A	B	C	Design	Capacity	rate	pressure	thread	number
mm	mm	mm	made of / with	l	m ³ /h*1	l/min*1	max. bar	G

Lubricator, made of plastic				operating pressure max. 12.5 / 16 bar				L0	
42	157	105	plastic	0.04	120	2 000	16.0	G $\frac{1}{4}$	L042-02
52	185	127	bowl guard	0.07	120	2 000	12.5	G $\frac{3}{8}$	L050-03
52	185	127		0.07	126	2 100	12.5	G $\frac{1}{2}$	L052-04
63	227	159		0.14	210	3 500	12.5	G $\frac{1}{2}$	L075-04
137	227	159		0.14	216	3 600	12.5	G $\frac{3}{4}$	L080-06
95	300	220		0.44	900	15 000	12.5	G1	L095-08



L042 L052
semiautomatic oil refilling

Special options, add the appropriate letter

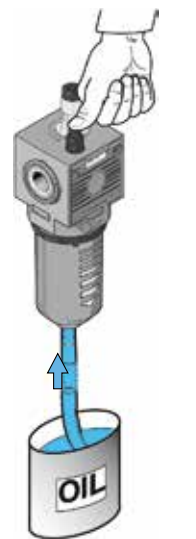
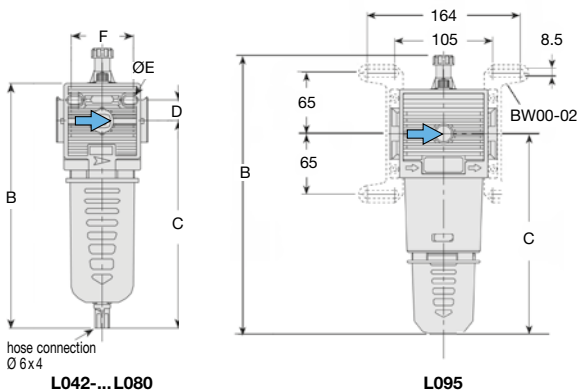
semiautomatic oil refilling	P _{min.} 3 bar		for L042 to L080	L0...0.X65
oil level indicator	P _{max.} 7 bar	115 V/NO	for L050 to L095	L0...0.X66



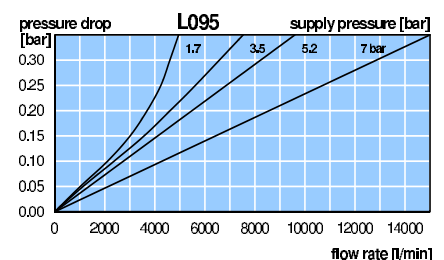
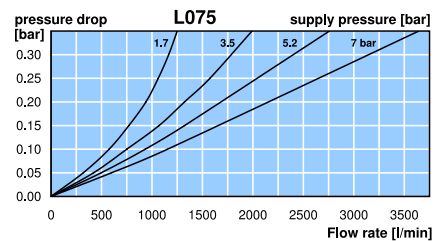
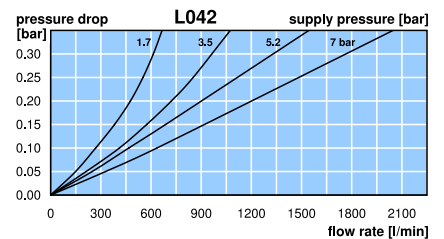
L075 L080

Accessories, enclosed

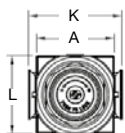
set of brackets	made of steel	for L095	BW00-02
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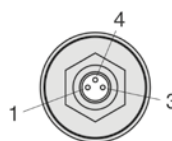
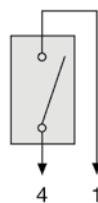
semiautomatic oil refilling



Series	D	Ø E	F	K	L
L042	10.5	4.5	31	-	42
L050/52	16	5.5	41	63	52
L075	17.5	5.5	45	75	63
L080	17.5	5.5	45	-	63
L095	-	-	-	115	95



oil level indicator



oil level indicator

*1 at 10 bar operating pressure and 0.33 bar pressure drop

* Product group

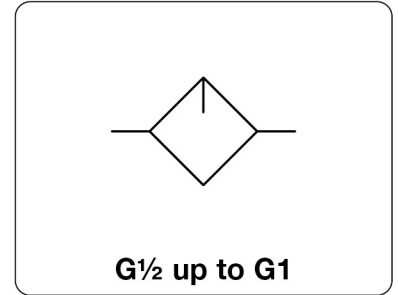
Extensions: see chapter for FRL service units

PDF CAD
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Order example:
L042-02

Description	Standard type mist lubricator of modular design with exchangeable insert kits. Can be interlocked with a filter or regulator without need for double nipples. A bypass valve and venturi nozzle guarantee low pressure drop and uniform lubrication of the compressed air. All "maxi" instruments are easy to take out of fixed piping by simply removing the two fastening bolts on the insert kits.		
Bowl	metal bowl with sight glass		
Operating pressure	max. 17 bar		
Oil refilling	oil refilling under pressure possible		
Oil level indicator	red ball inside the sight glass indicates oil level		
Temperature range	0 °C to 70 °C / 32 °F to 158 °F		
Material	Body: Bowl:	zinc die-cast zinc die-cast	Sight glass: Elastomer: polyurethane NBR/Buna-N



Dimensions			Bowl	Flow	Operating	Connection	Order	A*
A	B	C	Design	rate	pressure	thread	number	
mm	mm	mm	made of/with	m³/h*1	l/min*1	max. bar	G	

"Maxi" lubricator				operating pressure max. 17 bar				L20	
89	229	170	metal/sight glass	0.3	336	5600	17	G½	L20-04W
111	229	170	metal/sight glass	0.3	420	7000		G¾	L20-06W
					438	7300		G1	L20-08W



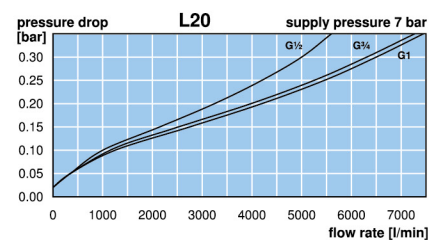
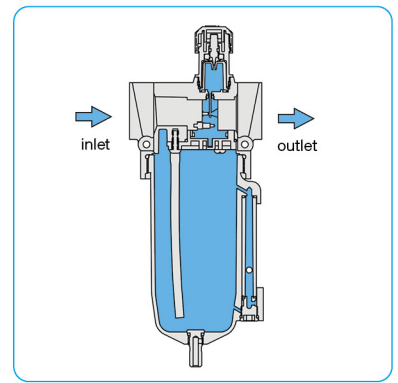
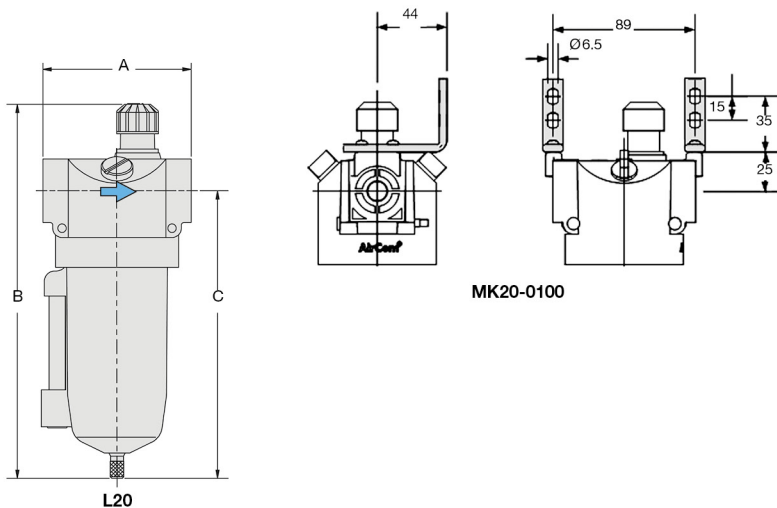
L20

Special options, add the appropriate letter

NPT	connection thread	L20-0.WN
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Accessories, enclosed

set of brackets	made of steel	MK20-0100
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*1 at 7 bar operating pressure and 0.33 bar pressure drop

* Product group

Extensions: see chapter for FRL service units

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Order example:
L20-04W



Description	Compressed air lubricator of solid design and small size. Proven in operation and suitable for many applications. Available in all standard sizes and in many versions.
Bowl	metal version with or without sight glass
Operating pressure	max. 17 bar for metal bowl with sight glass max. 21 bar for metal bowl without sight glass
Temperature range	0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass, from G $\frac{3}{4}$ on 0 °C to 80 °C / 32 °F to 176 °F for metal bowl with/without sight glass for appropriately conditioned compressed air down to -30 °C / -22 °F
Material	Body: zinc die-cast Bowl: zinc die-cast or steel Elastomer: NBR/Buna-N



Dimensions			Bowl	Flow	Operating	Connection	Order	A*
A	B	C	design	rate	pressure	thread	number	
mm	mm	mm	made of/ with	l m ³ /h*1	l/min*1	max. bar	G	

„Standard“ lubricator								L606	
103	251	184	metal/sight glass	0.50	492	8200	17	G $\frac{3}{4}$	L606-06W
103	340	273	steel	1.00			21		L606-06E
103	306	239	steel/sight glass	2.00			17		L606-06G
103	251	184	metal/sight glass	0.50	540	9000	17	G1	L606-08W
103	340	273	steel	1.00			21		L606-08E
103	306	239	steel/sight glass	2.00			17		L606-08G
122	266	194	metal/sight glass	0.50	1020	17000	17	G1 $\frac{1}{4}$ *2	L606-10W
122	355	283	steel	1.00			21		L606-10E
122	300	228	steel/sight glass	2.00			17		L606-10G
122	266	194	metal/sight glass	0.50	1020	17000	17	G1 $\frac{1}{2}$	L606-12W
122	355	283	steel	1.00			21		L606-12E
122	300	228	steel/sight glass	2.00			17		L606-12G

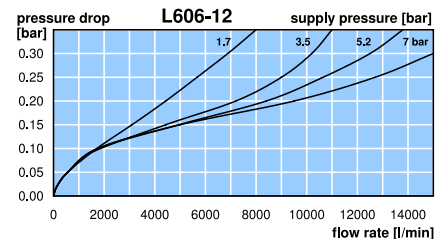
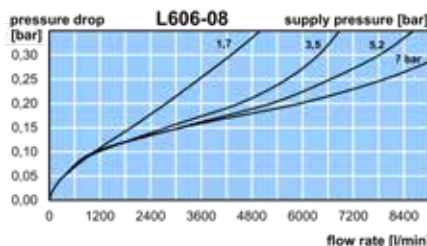
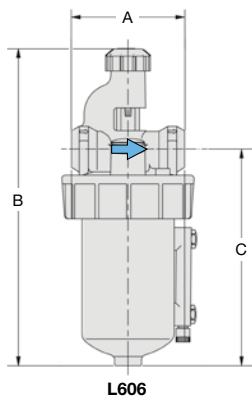


Special options, add the appropriate letter

flange connection see chapter for stainless steel devices / flanges L606-...F.



Lubricator
18



*1 at 7 bar operating pressure and 0.33 bar pressure drop

* Product group

Extensions: see chapter for FRL service units

PDF CAD
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Order example:
L606-06W

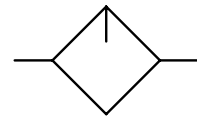
Description Good value aluminium compressed air lubricator of solid design lubricating in proportion to flow rate. Wall mounting through two drilled holes in the body. Suitable for compressed air or non-corrosive gases.

Bowl metal version with or without sight glass

Operating pressure max. 16 bar for metal bowl with sight glass
max. 30 bar for metal bowl without sight glass

Temperature range -20 °C to 60 °C / -4 °F to 140 °F for metal bowl with sight glass
-30 °C to 80 °C / -22 °F to 176 °F for metal bowl without sight glass

Material Body: aluminium
Bowl: aluminium or zinc die-cast
Elastomer: NBR/Buna-N



G¹/₈ up to G2

Dimensions			Bowl	Flow	Operating	Connection	Order	A*
A	B	C	Design	rate	pressure	thread	number	
mm	mm	mm	made of/with	m ³ /h*1	l/min*1	max. bar	G	

Lubricator series "D"

								LD	
40	161	115	metal/sight glass	0.05	36	600	16	G ¹ / ₈	LD-01M
			metal	0.05			30		LD-01N
40	161	115	metal/sight glass	0.05	40	660	16	G ¹ / ₄	LD-02M
			metal	0.05			30		LD-02N
64	215	137	metal/sight glass	0.18	144	2400	16	G ³ / ₈	LD-03M
			metal				30		LD-03N
64	215	137	metal/sight glass	0.18	156	2600	16	G ¹ / ₂	LD-04M
			metal				30		LD-04N
130	248	176	metal/sight glass	0.50	420	7000	16	G ³ / ₄	LD-06M
			metal				30		LD-06N
130	248	176	metal/sight glass	0.50	480	8000	16	G1	LD-08M
			metal				30		LD-08N
241	248	176	metal/sight glass	0.50	540	9000	16	G1 ¹ / ₄	LD-10M
			metal				30		LD-10N
241	248	176	metal/sight glass	0.50	600	10000	16	G1 ¹ / ₂	LD-1AM
			metal				30		LD-1AN
215	316	223	metal/sight glass	1.20	1620	27000	16	G1 ¹ / ₂	LD-12M
			metal				30		LD-12N
215	316	223	metal/sight glass	1.20	1680	28000	16	G2	LD-16M
			metal				30		LD-16N



LD-01M/-02M



LD-03M/-04M



LD-06M/-08M

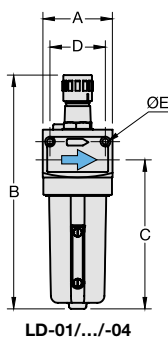


LD-12M/-16M

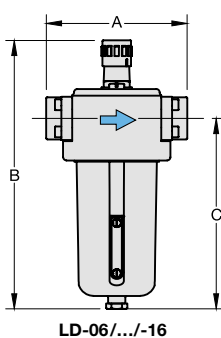
Special options, add the appropriate letter

8 liter bowl	made of stainless steel, max. 30 bar	for G1 ¹ / ₂ (12) and G2	LD- 1.M08
24 liter bowl	made of stainless steel, max. 30 bar	for G1 ¹ / ₂ (12) and G2	LD- 1.M24

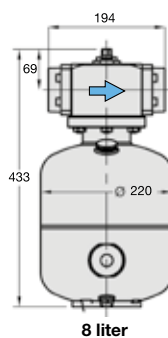
Type	D	Ø E
LD-01/02	30	4.5
LD-03/04	51	5.5



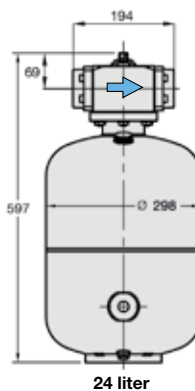
LD-01/.../-04



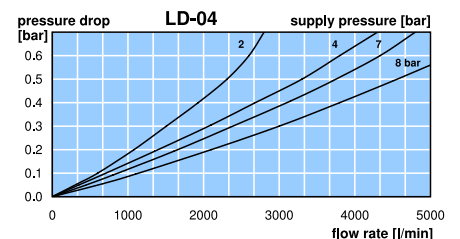
LD-06/.../-16



8 liter



24 liter



*1 at 7 bar operating pressure and 0.33 bar pressure drop

* Product group

Extensions: see chapter for FRL service units

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Order example:
LD-01M

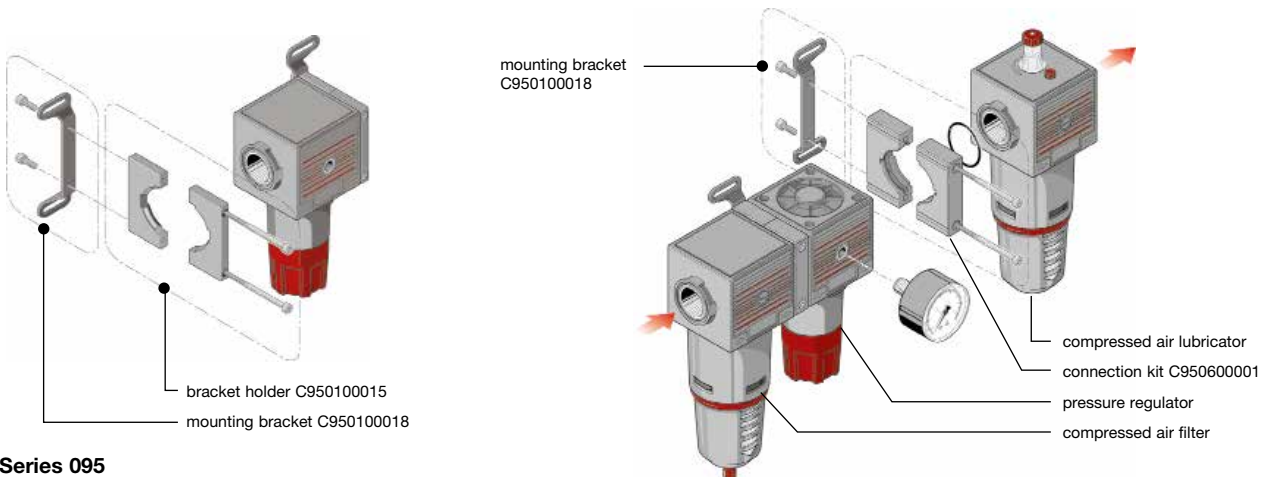
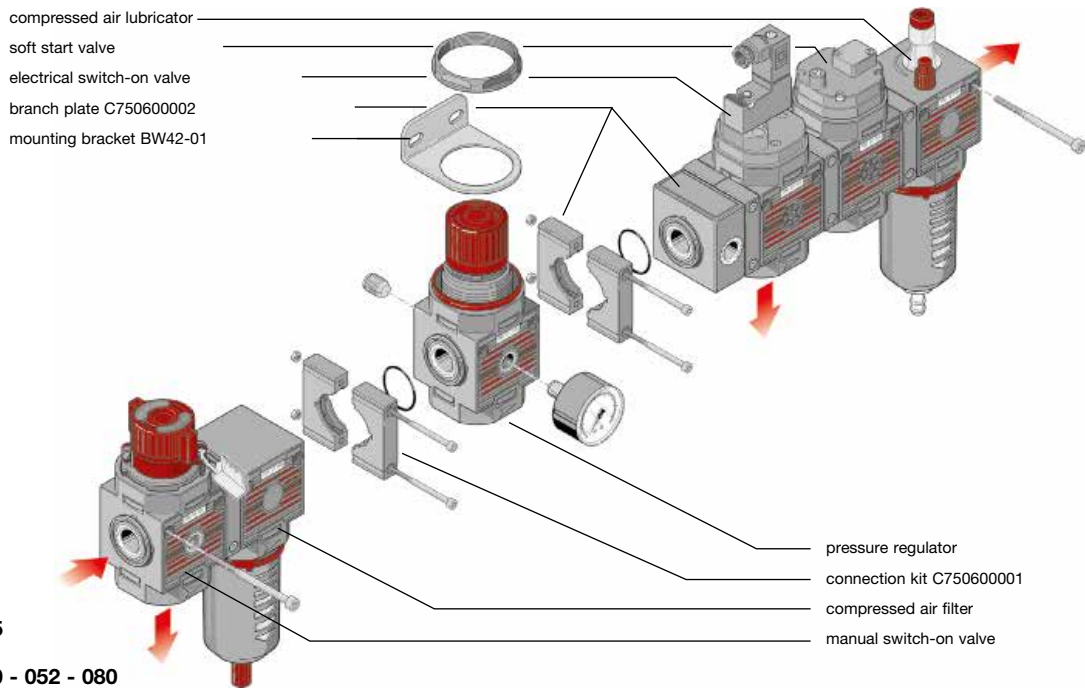
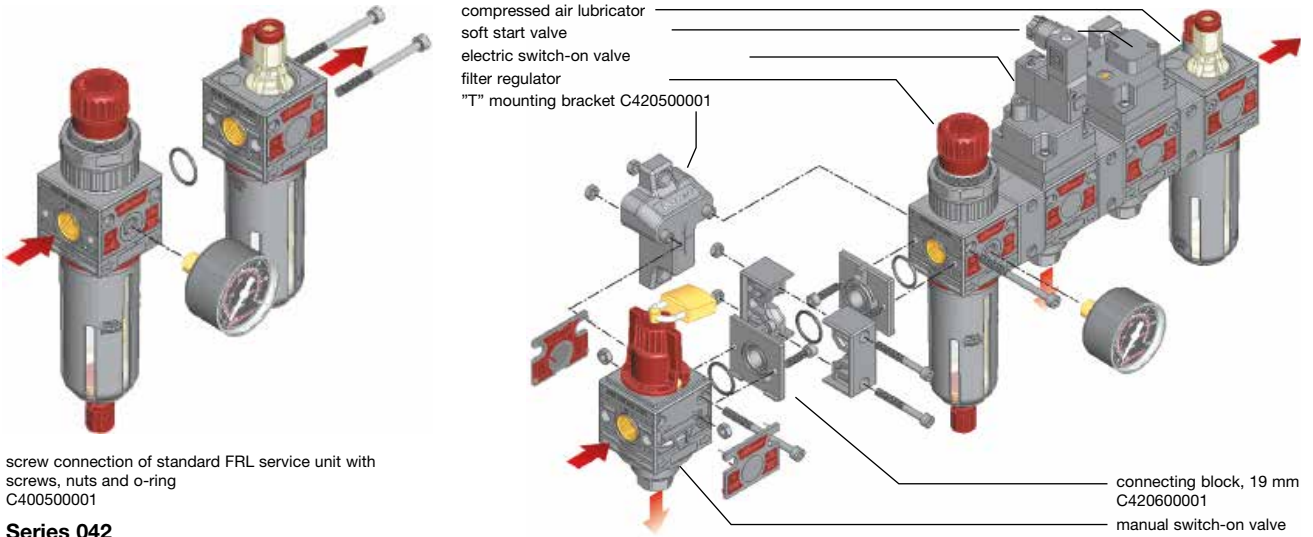
FRL SERVICE UNITS

DESCRIPTION		PRESSURE RANGE max. bar	CONNECTION thread	DEVICE	PAGE
made of plastic, 2- and 3-part	C2, C3	0 ... 8 / 12	G¼ - G1	C2, C3	19.03
assembly diagrams	C2, C3			C35 ... C95	19.04
switch-on and soft start valve	C2, C3		G¼ - G¾	A0, S0, V0	19.05
made of brass, 2- and 3-part		0.3 ... 3 / 15	G¼ and G½	CM	19.06
„Maxi“-Series, made of metal, robust, 2- and 3-part		0.2 ... 4 / 17	G½ - G1	C20, C21	19.07
Series „D“, made of alu, 2-part		0.3 ... 3 / 15	G⅛ - G2	CD2	19.08
Series „D“, made of alu, 3-part		0.3 ... 3 / 15	G⅛ - G2	CD3	19.09
„Standard“-Series, robust		0.2 ... 4 / 17	G¾ - G2	C630	19.10
drain valves		max. 21		SA, RK	19.11
hose rupture valves, aluminium/stainless steel		max. 18	G¼ - G2	281	19.12

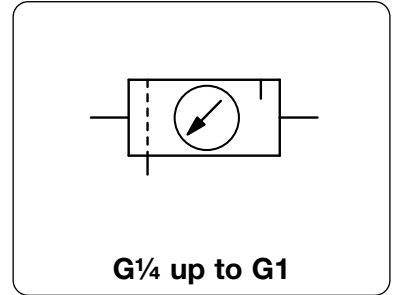


19

ASSEMBLY DIAGRAMS FOR PLASTIC FRL SERVICE UNITS C2/C3



Description	Made up of modular components which can be combined to form compact units. Switch-on and soft start valves available as additional modules.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 12.5 bar, max. 7 bar at lubricator with oil level indicator, max. 16 bar for Series 042		
Gauge port	G $\frac{1}{8}$ or G $\frac{1}{4}$ at series 095, on both sides of the body, one screw plug supplied		
Filter element	20 μ m, optionally 5 μ m, made of sintered polyethylene		
Bowl	plastic version with bayonet catch, series 042 with connection thread		
Drain	manual drain with semiautomatic drain, optionally automatic drain		
Oil refilling	optionally with semiautomatic oil refilling without need to interrupt operation		
Oil level indicator	If the oil level falls below the limit value, a float will close a signal contact.		
Temperature range	0 °C to 50 °C / 32 °F to 122 °F	Voltage:	max. 115 V
Material	Body: nylon, POM at series 042	Inner valve:	brass
	Bowl: polyamide	Thread insert:	brass
	Elastomer: NBR/Buna-N		



Dimensions				Combination	Bowl	Flow	Connection	Order	
A	B	C	K	consist	design	rate	thread	number	B*
mm	mm	mm	mm	of	made of / with	m 3 /h*1	l/min*1	G	

FRL unit, 2-part					P $_1$: max. 12.5 / 16 bar, P $_2$: 0...8 bar, 20 μ m, semiautomatic drain, with pressure gauge			C2	
84	208	126	-	B+L042	plastic/	59	980	G $\frac{1}{4}$	C242-02HC
115	239	148	126	B+L050	bowl guard	84	1400	G $\frac{3}{8}$	C250-03HC
115	239	148	126	B+L052		90	1500	G $\frac{1}{2}$	C252-04HC
139	276	173	151	B+L075		132	2200	G $\frac{1}{2}$	C275-04HC
212	276	173	-	B+L080		138	2300	G $\frac{3}{4}$	C280-06HC
210	415	237	230	B+L095		480	8000	G1	C295-08HC



FRL unit, 3-part					P $_1$: max. 12.5 / 16 bar, P $_2$: 0...8 bar, 20 μ m, semiautomatic drain, with pressure gauge			C3	
126	208	126	-	F+R+L042	plastic/	59	980	G $\frac{1}{4}$	C342-02HC
178	239	148	189	F+R+L050	bowl guard	84	1100	G $\frac{3}{8}$	C350-03HC
178	239	148	189	F+R+L052		90	1500	G $\frac{1}{2}$	C352-04HC
215	276	173	227	F+R+L075		132	2200	G $\frac{1}{2}$	C375-04HC
288	276	173	-	F+R+L080		138	2300	G $\frac{3}{4}$	C380-06HC
325	411	237	345	F+R+L095		480	8000	G1	C395-08HC

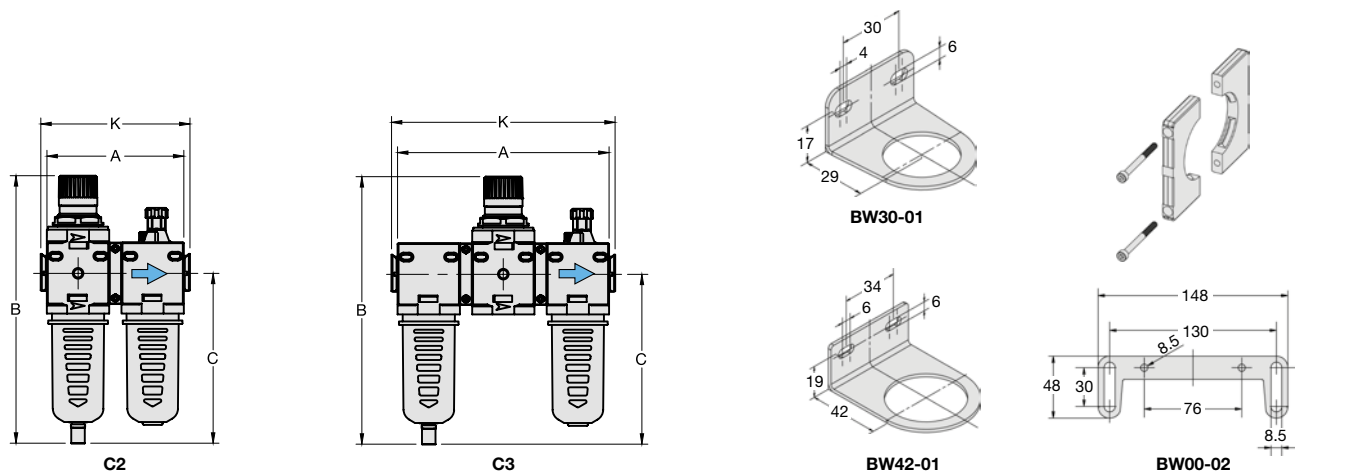


Special options, add the appropriate letter

5 μ m filter element	C...-0.G.
0...12 bar regulating range	C...-0...D
automatic drain	C...-0...R
semiautomatic oil refilling	C...-0...X65
oil level indicator	C...-0...X66

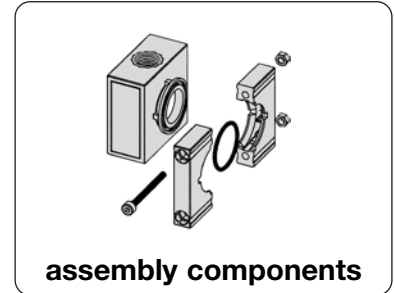
Accessories, enclosed

mounting bracket	made of steel, mounting nut at the device	for C.42	BW30-01
		for C.50 to C.80	BW42-01
set of brackets	made of steel, mounting nut at the device	for C.95	BW00-02



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

Connection kit	With this interlocking kit, two compressed air instruments can be connected to one another without need for double nipples. This makes possible very compact layouts.
C35 :	<ul style="list-style-type: none"> Mounting using rotary clip and two o-rings. These allow regulators to be connected to other regulators or filters.
C40 :	<ul style="list-style-type: none"> Instruments are connected to each other using screws, nuts and o-ring; alternatively, a segmented connecting block can be used for instrument connection.
C50 :	<ul style="list-style-type: none"> Instrument connection by means of a two-part connecting block.
Branch plate	
C40 :	<ul style="list-style-type: none"> Branch plate with compressed air connection port G$\frac{1}{8}$ or G$\frac{1}{4}$ or both outlet plates. Supply plate for two pressure regulators through port G$\frac{1}{4}$.
C50 :	<ul style="list-style-type: none"> Branch plate with compressed air connection G$\frac{1}{4}$. Port installation of the branch plate is only possible using connecting blocks.

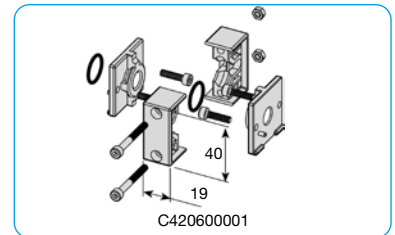


Description	Connection of instruments	for series	Order number
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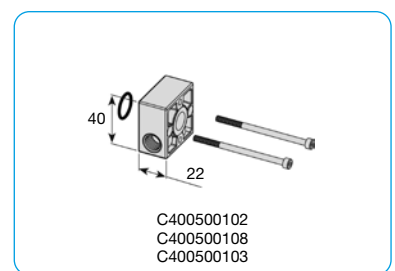
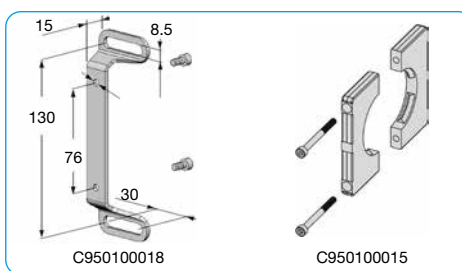
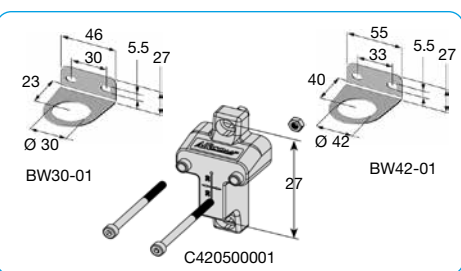
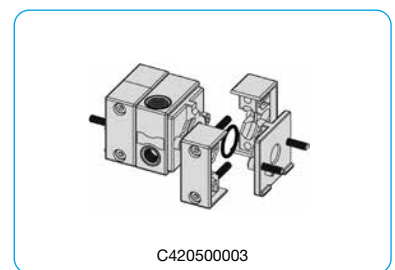
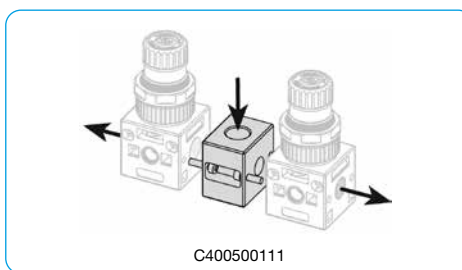
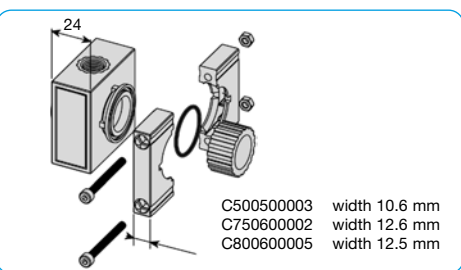
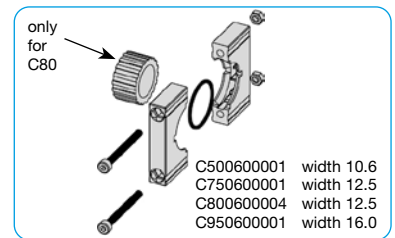
Connection kit	for connecting separate instruments	C...	
rotary clips with two o-rings screws, nuts and o-ring	R+F or R+R or F+F	35	C350100018
	F+R+L or P+B+L	42	C400500001
	B+L	42	C400600001
	F+L or F+F	42	C400700001
connection kit	for any two instruments	42	C420600001
		50 / 52	C500600001
		75	C750600001
		80	C800600004
		95	C950600001



Branch plate	with compressed air connection port	C...	
outlet G $\frac{1}{8}$		42	C400500102
outlet G $\frac{1}{4}$		42	C400500108
outlet G $\frac{1}{8}$ and G $\frac{1}{4}$		42	C400500103
outlet G $\frac{1}{8}$ and G $\frac{1}{4}$	with connection kit	42	C420500003
supply G $\frac{1}{4}$ for two regulators		42	C400500111
outlet G $\frac{1}{4}$		50 / 52	C500500003
outlet G $\frac{1}{4}$		75	C750600002
outlet G $\frac{1}{4}$		80	C800600005



Mounting material			C...
mounting bracket		for G $\frac{1}{4}$	BW30-01
mounting bracket		for G $\frac{3}{8}$ to G $\frac{1}{2}$	BW42-01
wall mounting		for G $\frac{1}{4}$	C420500001
wall mounting		for G1	C950100018
bracket holder	required in absence of C9506	for G1	C950100015



FRL units
19

Manual switch-on

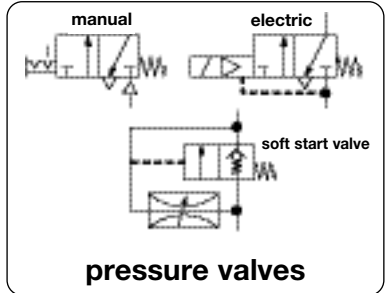
Manual switch-on/off valve which relieves at switch-off. Tapped exhaust with connection thread G $\frac{1}{8}$ or valve G $\frac{1}{4}$. Valve can be protected from unauthorised tampering by provided padlock. Wall mounting is possible through two drilled holes in the body. Maximum supply pressure is 15 bar.

Electric switch-on valve

The electrically-operated 3-port/2-way valve switches the air flow on or off. As standard, it is supplied with a miniature valve or alternatively with a CNOMO valve and can be operated purely in a pneumatic way as option. Wall mounting is possible through two drilled holes in the body. Tapped exhaust with connection thread G $\frac{1}{8}$ or G $\frac{1}{4}$. Maximum supply pressure is 3 to 10 bar.

Soft start valve

The soft start valve slowly pressurizes the system and switches over to full scale operation when 60% of the nominal pressure is reached. The pressure raising period can be set by an adjusting screw on top of the valve. Wall mounting is possible through two drilled holes in the body. Maximum supply pressure is 3 to 10 bar.



pressure valves

Dimensions			Description	Exhaust port	Flow rate		Connection thread	Order number
A	B	C			m ³ /h*1	l/min*1		
mm	mm	mm		G			G	

Manual 3-port/2-way valve				supply pressure max. 15 bar, including padlock			V0	
42	110	45	manual switch-on	G $\frac{1}{8}$	96	1600	G $\frac{1}{4}$	V042-02
63	121	36	and switch-off of the	G $\frac{1}{4}$	156	2600	G $\frac{3}{8}$	V050-03
63	121	36	compressed air circuit	G $\frac{1}{4}$	162	2700	G $\frac{1}{2}$	V052-04
75	138	42		G $\frac{1}{4}$	186	3100	G $\frac{1}{2}$	V075-04
137	138	42		G $\frac{1}{4}$	192	3200	G $\frac{3}{4}$	V080-06



V052 manual switch-on valve

Electric 3-port/2-way valve				24 V DC, 2 W, supply pressure 3...10 bar			S0	
42	143	42	electric switch-on	G $\frac{1}{8}$	96	1600	G $\frac{1}{4}$	S042-02
63	145	52	and switch-off of the	G $\frac{1}{4}$	156	2600	G $\frac{3}{8}$	S050-03
63	145	52	compressed air circuit	G $\frac{1}{4}$	162	2700	G $\frac{1}{2}$	S052-04
75	154	63		G $\frac{1}{4}$	186	3100	G $\frac{1}{2}$	S075-04
137	154	63		G $\frac{1}{4}$	192	3200	G $\frac{3}{4}$	S080-06



S052 electric switch-on valve

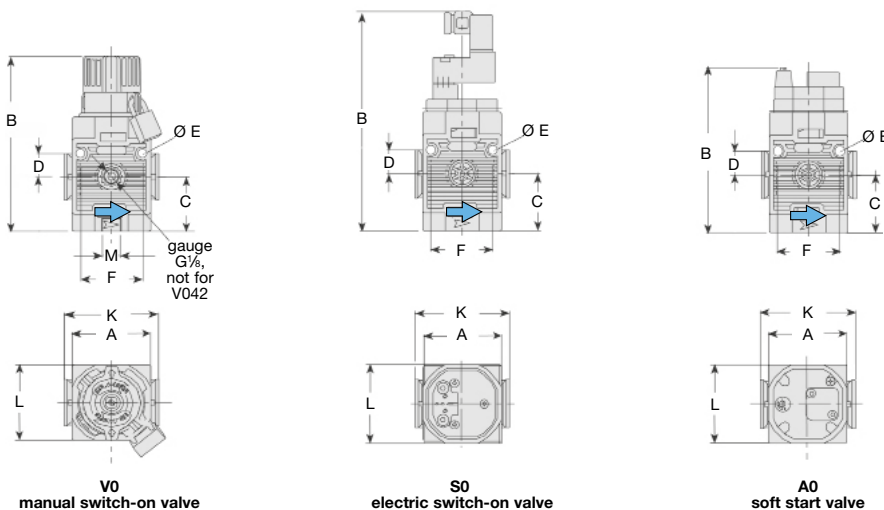
Soft start valve				supply pressure 3...10 bar			A0	
42	105	42	slow pressurizing of the		96	1600	G $\frac{1}{4}$	A042-02
63	108	52	pneumatic plant,		156	2600	G $\frac{3}{8}$	A050-03
63	108	52	delay time adjustable		162	2700	G $\frac{1}{2}$	A052-04
75	117	63			186	3100	G $\frac{1}{2}$	A075-04
137	117	63			192	3200	G $\frac{3}{4}$	A080-06



A052 soft start valve

Special options, add the appropriate letter

24 V AC, 2 W	input supply voltage	for S0	S0...0.X
115 V AC, 1 W	input supply voltage	for S0	S0...0.Y
230 V AC, 1 W	input supply voltage	for S0	S0...0.Z
pneumatic control	C402600014, instead of electrical operation	for S0	S0...0.P



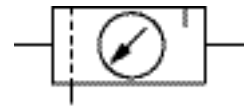
*1 at 10 bar supply pressure and 1 bar pressure drop

* Product group

Series	D	Ø E	F	K	L
042	10.5	4.5	31	-	42
050/052	16	5.5	41	63	52
075	17.5	5.5	45	75	63
080	-	-	-	-	137



Description	Extremely robust FRL service unit made of brass.
Media	compressed air, non-corrosive gases or liquids
Supply pressure	max. 50 bar at CM2, max. 30 bar at CM3, optionally max. 50 bar (all without drain)
Adjustment	by black plastic knob at CM.-02, by T-handle with locknut at CM.-04
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied
Filter element	50 μ m, optionally 5 μ m, made of stainless steel
Bowl	stainless steel version without sight glass
Drainage	screw plug as standard, optionally manual drain (max. 30 bar) or automatic drain (max. 16 bar)
Temperature range	0 °C to 80 °C / 32 °F to 176 °F FKM 0 °C to 130 °C / 32 °F to 212 °F high temperature version for appropriately conditioned compressed air down to -20 °C / -4 °F
Material	Body: brass Bowl: stainless steel 316L / 1.4404 at G $\frac{1}{8}$ to G1, brass at G $\frac{1}{2}$ and G2 Elastomer: FKM optionally EPDM Knob: plastic at sizes G $\frac{1}{4}$, brass at G $\frac{1}{2}$ Inner valve: brass and plastic (not at option X54)



**G $\frac{1}{8}$ and G $\frac{1}{2}$, max. 50 bar
-20 to 130 °C / -40 to 266 °F**

Dimensions			Combination consisting of	Bowl design made of	Flow rate		Connection thread G	Order number
A	B	C			m 3 /h*1	l/min*1		

FRL unit, 2-part				P $_1$: max. 50 bar, screw plug,	P $_2$: 0.5...8 bar, relieving,	50 μ m, with pressure gauge	CM2	
138	220	123	BM+LM	stainless steel	51	850	G $\frac{1}{4}$	CM2-02
168	247	127			138	2 300	G $\frac{1}{2}$	CM2-04



CM2-04

FRL unit, 3-part				P $_1$: max. 30 bar, screw plug,	P $_2$: 0.5...8 bar, relieving,	50 μ m, with pressure gauge	CM3	
212	173	129	FM+R120+LM	stainless steel	51	850	G $\frac{1}{4}$	CM3-02
256	175	130			138	2300	G $\frac{1}{2}$	CM3-04



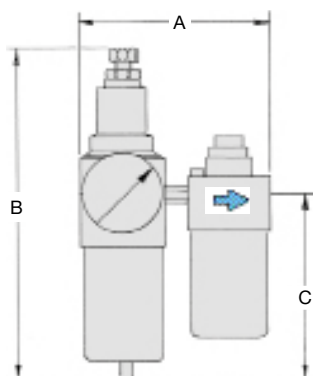
CM3-02

Special options, add the appropriate letter

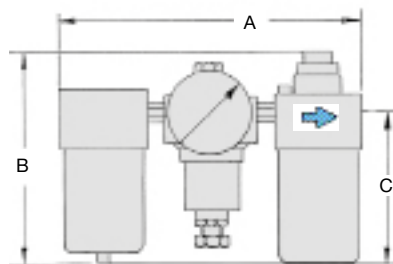
5 μ m filter element		CM . . . G
0.2... 3 bar pressure range		CM . . . B
1 ...15 bar pressure range	P $_1$ max. 50 bar	CM . . . D
manual drain	max. 30 bar	CM . . . H
automatic drain	made of stainless steel, max. 16 bar	CM . . . R
up to 130 °C / 266 °F	high temperature version	CM . . . X54
flange connection	see chapter for stainless steel devices / flanges	CM . . . F.

Accessories, enclosed

mounting bracket	made of stainless steel	for G $\frac{1}{4}$	BW35-01S
mounting nut			M35x1,5S
mounting bracket	made of stainless steel	for G $\frac{1}{2}$	BW50-01S
mounting nut			M50x1,5S

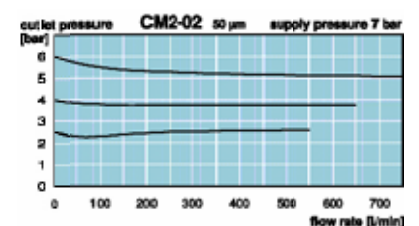
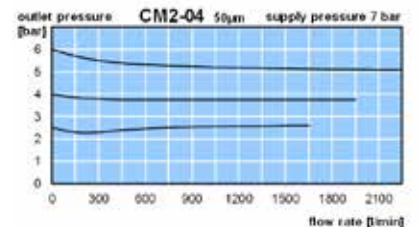


CM2-0. .H



CM3-0. .H

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



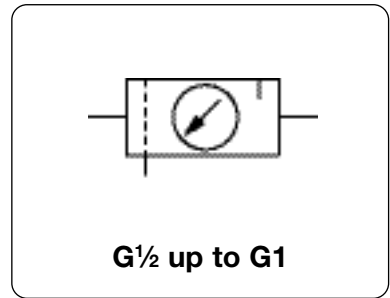
Further details: see chapter for single devices
Spare parts: see separate spare parts list

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Order example:
CM2-02

Description	"Maxi" FRL service units with pressure gauge are of modular design with exchangeable insert kits and have a high flow rate. All "maxi" instruments are easy to take out of fixed piping by simply removing the two fastening bolts on the insert kits.	
Media	compressed air or non-corrosive gases	
Supply pressure	max. 17 bar	
Adjustment	by plastic knob with snap-lock at C20,	by T-handle with locknut at C21
Relieving function	relieving, optionally non-relieving	Filter element 40 µm, optionally 5 µm, made of polypropylene
Gauge port	G¼ on both sides of the body	Bowl metal version with sight glass
Drainage	manual drain as standard,	optionally automatic drain or semiautomatic drain for max. 12 bar
Temperature range	0 °C to 70 °C / 32 °F to 158 °F	
	0 °C to 50 °C / 32 °F to 122 °F for automatic	or semiautomatic drain version
Material	Body: zinc die-cast	Spring cage: zinc die-cast
	Knob (C20): glass fibre-reinforced plastic	T-handle (C21): steel
	Bowl: zinc die-cast	Sight glass: polyurethane
	Elastomer: NBR/Buna-N	Inner valve: brass and plastic



Dimensions			Combination consisting of	Bowl design made of / with	Flow rate		Connection thread G	Order number
A	B	C			m³/h*1	l/min*1		

FRL unit, 2-part				P1: max. 17 bar, P2: 0.3...9 bar, 40 µm, manual drain, relieving, with pressure gauge			C20	
178	289	175	B+L20	metal / sight glass	276	4600	G½	C20-04BL-W
203	289	175	B+L20	metal / sight glass	276	4600	G½	C20-04BL-W
					390	6500	G¾	C20-06BL-W
					402	6700	G1	C20-08BL-W



FRL unit, 3-part				P1: max. 17 bar, P2: 0.3...9 bar, 40 µm, manual drain, relieving, with pressure gauge			C20	
270	226	171	F+R+L20	metal / sight glass	102	1700	G¼	C20-02FRL-W
					174	2900	G¾	C20-03FRL-W
					276	4600	G½	C20-04FRL-W
292	226	171	F+R+L20	metal / sight glass	390	6500	G¾	C20-06FRL-W
					402	6700	G1	C20-08FRL-W

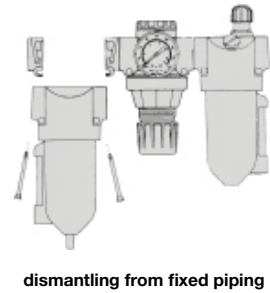
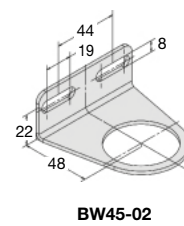
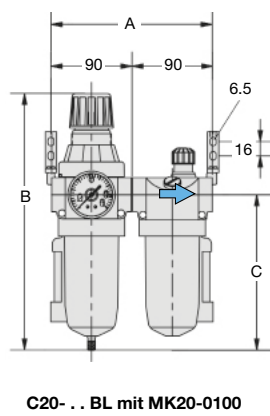
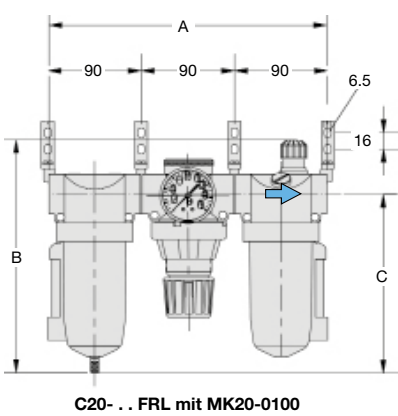


Special options, add the appropriate letter

T-handle	including locknut	C21-0 . . . -W
5 µm filter element		C20-0 . . . -WG
NPT	connection thread	C20-0 . . . -WN
0.2... 4 bar pressure range		C20-0 . . . -WB
0.5...17 bar pressure range		C20-0 . . . -WD
semiautomatic drain	RK500SY, max. 12 bar	C20-0 . . . -WM
automatic drain	SA605MD, max. 12 bar	C20-0 . . . -WR

Accessories, enclosed

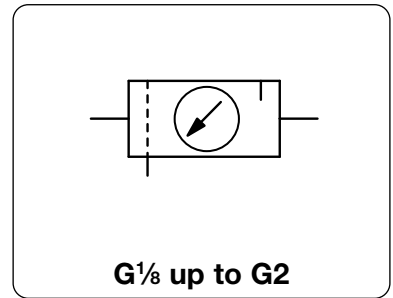
mounting bracket	mounting at the spring cage	BW45-02	
mounting nut	made of aluminium	M45x1,5A	
mounting bracket set	made of steel, consisting of two mounting brackets	MK20-0100	
porting block	tap G¼, for unlubricated compressed air	IK20CP	



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

* Product group

Description	Solid, low-cost FRL service unit made of aluminium equipped with pressure gauge.
Media	compressed air or non-corrosive gases
Supply pressure	max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
Adjustment	by plastic knob with snap-lock up to G $\frac{1}{2}$ by hexagon head screw from G $\frac{3}{8}$ up to G1 $\frac{1}{2}$ on (CD.-1A.) by T-handle from G1 $\frac{1}{2}$ (CD.-12.) up to G2 on
Relieving function	relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ or G $\frac{1}{2}$ at CD.-01/-02, on both sides of the body, one screw plug supplied
Filter element	semiautomatic drain as standard, optionally automatic (max. 16 bar) or manual drain for max. 30 bar
Drainage	20 μ m or 50 μ m, optionally 5 μ m or 50 μ m, made of propylene Bowl metal version with or without sight glass
Temperature range	-10 °C to 50 °C / 14 °F to 122 °F metal bowl with sight glass, for G $\frac{1}{2}$ to G $\frac{1}{2}$ -20 °C to 60 °C / -4 °F to 140 °F metal bowl with sight glass, for G $\frac{3}{8}$ to G2 -30 °C to 80 °C / -22 °F to 176 °F metal bowl without sight glass, for all sizes
Material	Body: aluminium Elastomer: NBR/Buna-N Bowl: aluminium



Dimensions			Combination	Bowl	Filter	Flow	Connection	Order
A	B	C	consisting	design	element	rate	thread	number
mm	mm	mm	of	made of / with		m ³ /h*1	G	

FRL unit, 2-part				P ₁ : max. 16 bar, P ₂ : 0.8...8 bar, 20 / 50 μ m, semiautomatic drain, relieving, with gauge				CD2	
80	201	128	BD+LD	metal/sight glass	50	27	450	G $\frac{1}{8}$ G $\frac{1}{4}$	CD2-01 CD2-02
128	248	148		metal/sight glass	50	108	1800	G $\frac{3}{8}$ G $\frac{1}{2}$	CD2-03 CD2-04
275	314	179		metal/sight glass	50	300	5000	G $\frac{3}{4}$ G1	CD2-06 CD2-08
386	314	179		metal/sight glass	50	300	5000	G1 $\frac{1}{4}$ G1 $\frac{1}{2}$	CD2-10 CD2-1A
355	483	223		metal/sight glass	50	960	16000	G1 $\frac{1}{2}$ G2	CD2-12 CD2-16

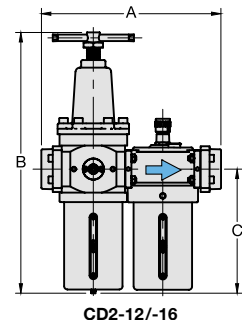
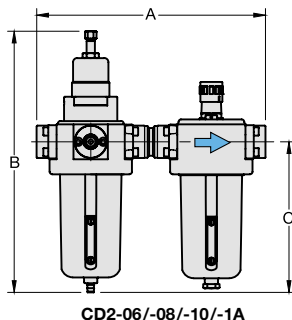
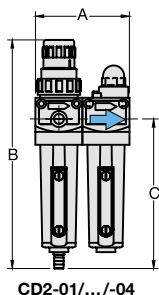


Special options, add the appropriate letter

5 μm filter element		CD2-...G
0.3...3 bar regulation range		CD2-...B
1 ...15 bar operating press. 30 bar manual drain	only for metal bowl (without sight glass) with manual drain max. 16 bar	CD2-...E CD2-...NH
automatic drain	drainage by float valve, max. 16 bar for G $\frac{3}{8}$ up to G2	CD2-...H CD2-...R

Accessories, enclosed

mounting bracket	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	BW30-02
mounting nut	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	M30x1,5K
mounting bracket	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	BW50-03
mounting nut	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	M50x1,5K
mounting bracket	made of stainless steel	for G $\frac{3}{4}$ up to G1 $\frac{1}{2}$ (1A)	BW00-59S
set of brackets	made of steel	for G1 $\frac{1}{2}$ (12) and G2	BW00-61



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

Further details: see chapter for single devices

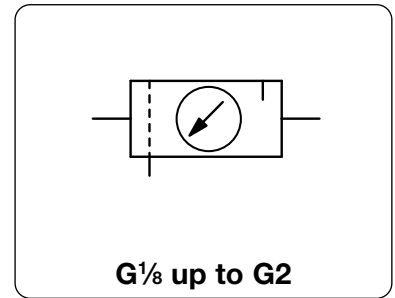
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* Product group



Order example:
CD2-01

Description	Solid, low-cost FRL service unit made of aluminium equipped with pressure gauge.
Media	compressed air or non-corrosive gases
Supply pressure	max. 16 bar for metal bowl with sight glass, max. 30 bar for metal bowl without sight glass
Adjustment	by plastic knob with snap-lock up to G $\frac{1}{2}$ by hexagon head screw from G $\frac{3}{8}$ up to G $\frac{1}{2}$ on (CD.-1A.) by T-handle from G $\frac{1}{2}$ (CD.-12.) up to G2 on
Relieving function	relieving, optionally non-relieving
Gauge port	G $\frac{1}{4}$ or G $\frac{1}{2}$ at CD.-01/-02, on both sides of the body, one screw plug supplied
Filter element	20 μ m or 50 μ m, optionally 5 μ m or 50 μ m, made of propylene Bowl metal version with or without sight glass
Drainage	semiautomatic drain as standard, optionally automatic (max. 16 bar) or manual drain for max. 30 bar
Temperature range	-10 °C to 50 °C / 14 °F to 122 °F metal bowl with sight glass, for G $\frac{3}{8}$ to G $\frac{1}{2}$ -20 °C to 60 °C / -4 °F to 140 °F metal bowl with sight glass, for G $\frac{3}{8}$ to G2 -30 °C to 80 °C / -22 °F to 176 °F metal bowl without sight glass, for all sizes
Material	Body: aluminium Elastomer: NBR/Buna-N Bowl: aluminium



Dimensions			Combination	Bowl	Filter	Flow	Connection	Order	
A	B	C	consisting	design	element	rate	thread	number	A*
mm	mm	mm	of	made of / with		m ³ /h*1	l/min*1	G	

FRL unit, 3-part				P ₁ : max. 16 bar, P ₂ : 0.8...8 bar, 20 / 50 μ m, semiautomatic drain, relieving, with gauge				CD3	
120	201	128	FD+RD+LD	metal/sight glass	50	24	400	G $\frac{1}{8}$ G $\frac{1}{4}$	CD3-01 CD3-02
192	251	148		metal/sight glass	50	108	1800	G $\frac{3}{8}$ G $\frac{1}{2}$	CD3-03 CD3-04
427	312	179		metal/sight glass	50	228	3800	G $\frac{3}{4}$ G1	CD3-06 CD3-08
531	312	179		metal/sight glass	50	228	3800	G $\frac{1}{2}$ G $\frac{1}{2}$	CD3-10 CD3-1A
472	399	231		metal/sight glass	50	1320	22000	G $\frac{1}{2}$ G2	CD3-12 CD3-16

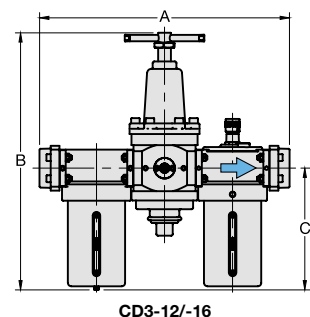
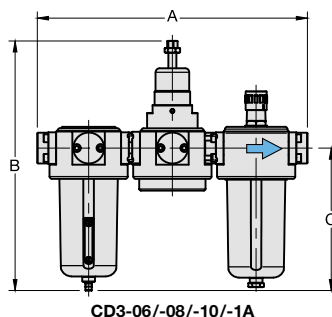
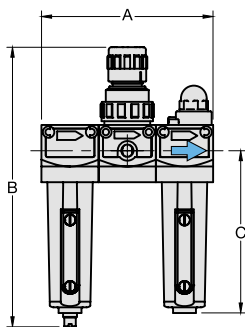


Special options, add the appropriate letter

5 μ m filter element		CD3-...G
0.3...3 bar regulation range		CD3-...B
1...15 bar		CD3-...E
operating press. 30 bar	only for metal bowl (without sight glass) with manual drain	CD3-...NH
manual drain	max. 16 bar	CD3-...H
automatic drain	drainage by float valve, max. 16 bar for G $\frac{3}{8}$ up to G2	CD3-...R

Accessories, enclosed

mounting bracket	made of steel	for G $\frac{1}{8}$ and G $\frac{1}{4}$	BW30-02
mounting nut	made of plastic	for G $\frac{1}{8}$ and G $\frac{1}{4}$	M30x1,5K
mounting bracket	made of steel	for G $\frac{3}{8}$ and G $\frac{1}{2}$	BW50-03
mounting nut	made of plastic	for G $\frac{3}{8}$ and G $\frac{1}{2}$	M50x1,5K
mounting bracket	made of stainless steel	for G $\frac{3}{4}$ up to G $\frac{1}{2}$ (1A)	BW00-59S
set of brackets	made of steel	for G $\frac{1}{2}$ (12) and G2	BW00-61



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

* Product group

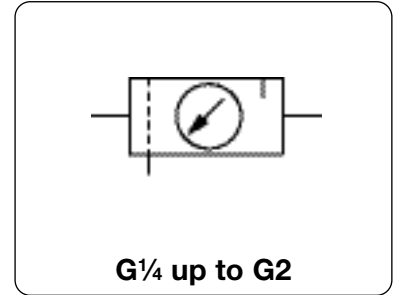
Further details: see chapter for single devices

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Order example:
CD3-01

Description	FRL service unit of small size and with high flow. Compact design, proven in operation.		
Media	compressed air or non-corrosive gases		
Supply pressure	max. 17 bar for metal bowl with sight glass		
Adjustment	by T-handle with locknut,	by plastic knob with snap-lock on pilot regulator at size G2	
Relieving function	relieving, optionally non-relieving	Air consumption only for pilot pressure at size G2	
Gauge port	G $\frac{1}{4}$ on both sides of the body, one screw plug supplied		
Filter element	40 μ m, optionally 5 μ m, made of polypropylene		
Bowl	metal version with sight glass		
Drainage	manual drain as standard	for max. 21 bar	
	optionally internal automatic drain	for max. 12 / 16 bar	
	or external automatic drain	for max. 18 bar	
Temperature range	0 °C to 70 °C / 32 °F to 158 °F for metal bowl with sight glass		
Material	Body: zinc die-cast	Elastomer: NBR/Buna-N	
	Bowl: polyurethane, zinc die-cast or steel	Inner valve: brass	



Dimensions			Combination consisting of	Bowl design made of/with	Flow rate		Connection thread G	Order number
A	B	C			m ³ /h*1	l/min*1		

FRL unit, 3-part				P: max. 17 bar, P ₂ : 0.3...9 bar, 40 μ m, manual drain, relieving, with pressure gauge		C630		
400	267	197	F602 + R119, + L606	metal/sight glass	408	6 800	G $\frac{3}{4}$	C630-06FRL-W
					516	8 600	G1	C630-08FRL-W
419	286	206		metal/sight glass	600	10 000	G1 $\frac{1}{4}$	C630-10FRL-W
					630	10 500	G1 $\frac{1}{2}$	C630-12FRL-W
485	425	356		metal/sight glass	1 590	26 500	G2	C630-16FRL-W



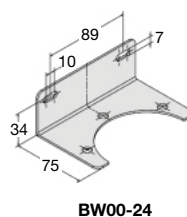
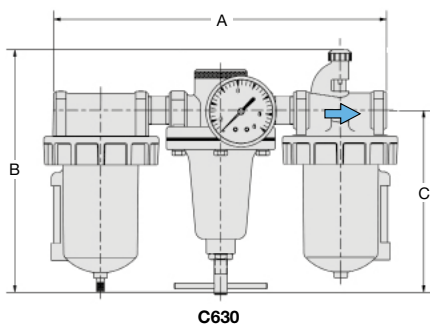
Special options, add the appropriate letter

5 μm filter element		C630-0 G
NPT connection thread		C630-0 N
0.2... 4 bar pressure range		C630-0 B
0.5...17 bar pressure range		C630-0 D
semiautomatic drain	RK500SY, max. 12 bar	C630-0 M
automatic drain	SA605MD, max. 12 bar	C630-0 R
flange connection	see chapter for stainless steel devices / flanges	C630-0 F



Accessories, enclosed

mounting bracket	made of steel	for G $\frac{3}{4}$ to G1 $\frac{1}{2}$	BW00-24
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*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

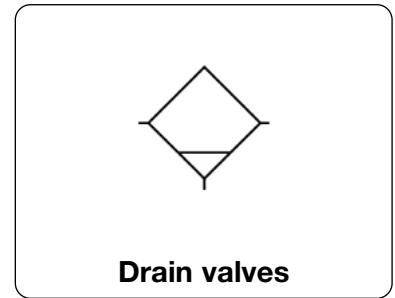
* Product group

Further details: see chapter for single devices

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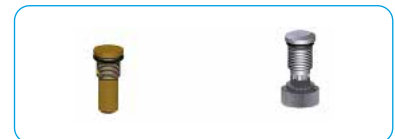
Order example:
C630-06FRL-A

Manual drain	The manual drain can be opened by screwing it into the bowl. Once the collected condensate reaches the drain hole, it is being relieved.
Semiautomatic drain	The semiautomatic drain semiautomatically separates condensates from compressed air or gas systems. After operating pressure switch-off the drain valve opens and the collected condensate is being relieved.
Automatic drain	The automatic drain fully automatically separates condensates from compressed air or gas systems. Once the float lifts from the valve seat caused by the condensate level, the condensate is being relieved. Operating pressure must be 2 bar minimum.
Temperature range	0 °C to 50 °C / 32 °F to 122 °F 0 °C to 80 °C / 32 °F to 176 °F for manual drain made of brass for appropriately conditioned compressed air down to -30 °C / -22 °F



Valve type	Description	For filter/ filter regulator	For bowl type	Operating pressure max. bar	Order number	B*
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Drain valves		1/8"-27 NPSM thread of internal valve			SA/RK
manual drain	made of brass	F20/ F504/F602 / B11/B12/B20/B21/ B548	all	21	SA600Y-71
	made of plastic	F20/ F504/F602/ B11/B12/B20/B21/ B548	all	21	AWF-10
semiautomatic drain	piston drain	F504	all	12	RK504SY
	drainage after pressure switch-off	F602-02/-03	A/B/W	12	RK602SY
		B11/B12	all	12	4210
	spring-loaded	F20/ F20/ F504/F602/ B11/B12/B20/B21/ B548	all	12	4212 RK504SY RK500SY
automatic drain	internal mounting effective from 2 bar on	F20/F602/B11/ B12/B20/B21/ F20/F602/ B20/B21	all	12	SA605MD
		F20/F602/ B20/B21	all	16	SA702MD
	external mounting	F602-04 to -20 F602-04 to -20	A/B/W E/F	18 18	SA602D SA603D



Drain valves made of SST		1/8"-27 NPSM valve thread			SA
automatic drain	internal mounting effective from 2 bar on	F10/F11/B11-S	all	12	SA10MDSS



* Product group

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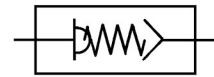
Order example:
SA600Y-71

Description Air supply is immediately shut off when volume flow exceeds a specific value. The maximum admissible flow is factory-set in such a way that a standard application of pneumatic equipment is ensured. Pressure drop amounts to 0.05 to 0.3 bar. In the case of failure, the hose rupture valve blows off through a small nozzle. After repairing the hose break, the hose rupture valve can be set to zero again.

EN ISO 4414-11.2010 According to EN ISO 4414-11.2010 the hose rupture valve protects individuals, systems and machines from injuries or damages caused by lashing hose lines in the event of hose breaks.

Function The air passes the piston and continues through the seat. The air stream is slowed down by means of lengthwise grooves on the piston surface. When the volume flow is too high, the air cannot pass the piston quickly enough, thus the piston will be pressed against the spring. If the maximum admissible flow is exceeded, e.g. when the hose suddenly breaks, the air supply will automatically be shut off.

Supply pressure max. 18 bar
Temperature range -20 °C to 80 °C / -4 °F to 176 °F at G¼ to G½, up to 120 °C / 248 °F at G¾ to G2
Material Body: aluminium, optionally stainless steel Elastomer: NBR/Buna-N
 Inner valve: aluminium and plastic



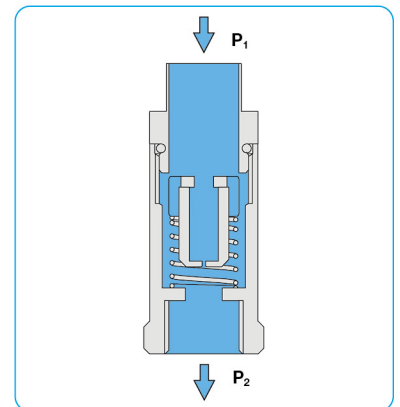
max. 18 bar
G¼ up to G2

Dimensions			max. flow rate		Connection thread	Order number
B	C	A/F	at 8 bar *2			
mm	mm	mm	m³/h	l/min	G	

Hose Rupture Valve "HoseGuard®"						operating pressure max. 18 bar	281
49	-	22	46	760 *1	G¼	281A0211	
49	10	22	46	760 *1	G¼mf	281A0221	
49	-	22	3	52	G¼	281ZL0211	
49	10	22	3	52	G¼mf	281ZL0221	
49	-	22	60	990	G¼	281ZH0211	
49	10	22	60	990	G¼mf	281ZH0221	
58	-	27	65	1080 *1	G¾	281A0311	
58	12	27	65	1080 *1	G¾mf	281A0321	
58	-	27	87	1450	G¾	281ZH0311	
58	12	27	87	1450	G¾mf	281ZH0321	
65	-	30	181	3020 *1	G½	281A0411	
64	15	30	181	3020 *1	G½mf	281A0421	
65	-	30	206	3440	G½	281ZH0411	
64	15	30	206	3440	G½mf	281ZH0421	
76	-	30	244	4070 *1	G¾	281A0511	
76	-	30	315	5250	G¾	281ZH0511	
100	-	41	313	5220 *1	G1	281A0611	
100	-	41	456	7600	G1	281ZH0611	
130	-	70	775	12920 *1	G2	281A0911	



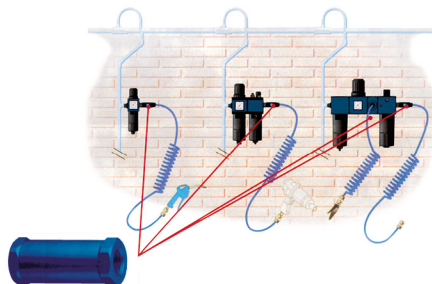
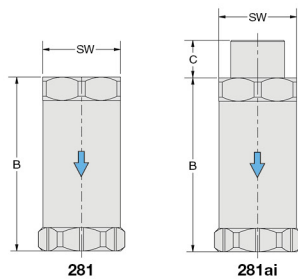
281



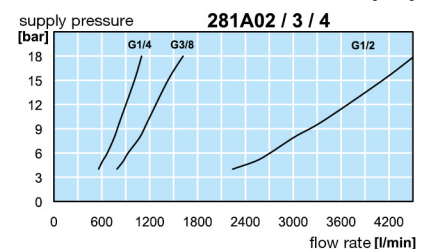
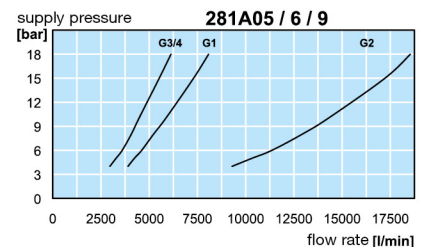
cross-section

Special options, add the appropriate letter

- NPT** connection thread for standard version 281A1 . . .
- connection thread for Low-Flow version 281ZL1 . . .
- connection thread for High-Flow version 281ZH1 . . .
- stainless steel body** 281R . . .



application example



*1 Standard version

*2 volume flow measurement according to DIN EN60534 (± 10% for closing)

* Product group



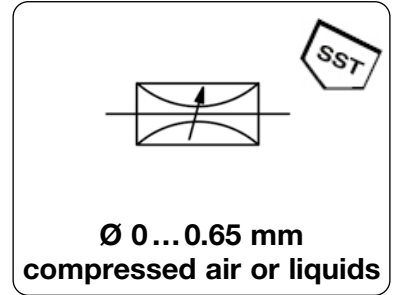
MICRO-/ MINIATURE-DEVICES

	DESCRIPTION	DN/Ø	FLOW RATE l/min	CONNECTION thread	SERIES	PAGE
NEEDLE VALVE	made of stainless steel, miniature	Ø 3.0 - 4.5	0 ... 32	nipple	NV30	20.02
PRECISION RESTRICTOR	made of brass, micro	Ø 0.06 - 0.64		nipple, 10-32"	RF	20.03
	made of plastic	Ø 0.08 - 1.02		nipple	R-0	20.04
	with filter	Ø 0.10 - 0.76		nipple	F950	20.04
INLINE-FILTER	micro, up to 8.6 bar	5 ... 73 µm		nipple, 10-32"	F9 . .	20.05
CHECK VALVE	micro, up to 5.2 bar	1,5 / 3,8		nipple	F2804	20.06
	restrictor check valve	0.1/ ... / 1.02		10-32"	F2804	20.06



20

Description	The precision needle valve is a manually adjustable flow control valve used in pneumatic and fluid systems. Unique laminar flow design ensures sensitive reproducible control. Ideal for precision gas metering and circuit speed or sequencing control.	
Media	5 µm filtered compressed air, non-corrosive gases or liquids	
Operating pressure	vacuum up to positive pressure of max. 12 bar	
Adjustment	The flow control needle needs 8 screw turns for maximum flow, approximately equal to an 0.65 mm / 0.025" orifice.	
Panel mounting	borehole 8 mm / 0.312", max. panel thickness 3.5 mm / 0.15"	
Temperature range	-40 °C to 95 °C / -40 °F to 203 °F	
Material	Body and needle: stainless steel 303	Elastomer: NBR/Buna-N



Flow adjustment	Operating pressure	Volume flow at 3.5 bar and 6 turns	Nipple diameter	Order number	
mit	max. bar	l/min	Ø mm	inch	

Needle valve with knurled screw			operating pressure max. 12 bar, stainless steel, Ø 0...0.65 mm		NV30-K
knurled-head	12	0...32	3.0	1/16"	NV30-2K
			4.5	1/8"	NV30-4K

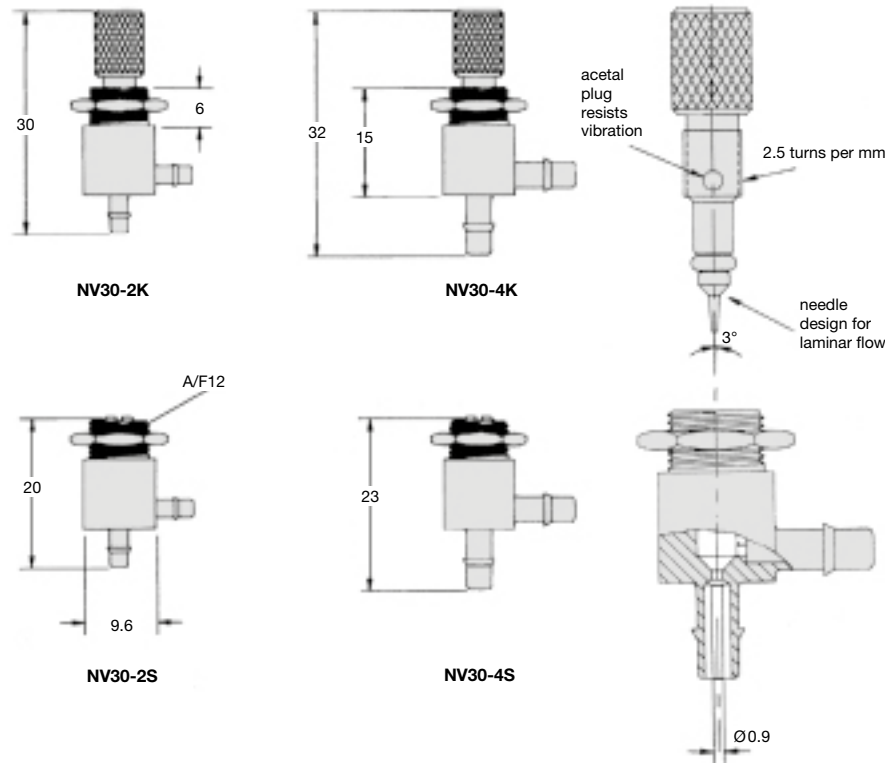


NV30-2K
with knurled-head

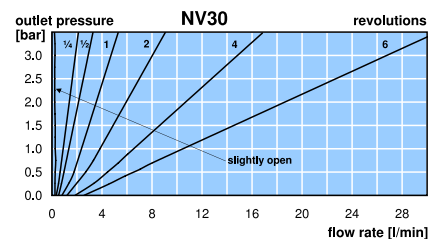
Needle valve with slotted screw			operating pressure max. 12 bar, stainless steel, Ø 0...0.65 mm		NV30-S
slotted screw	12	0...32	3.0	1/16"	NV30-2S
			4.5	1/8"	NV30-4S



NV30-4S
with slotted screw



NV30-2K



* Product group

PDF CAD
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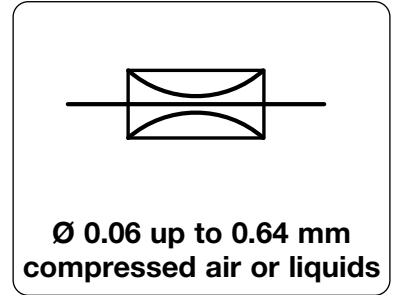


Order example:
NV30-2K

PRECISION RESTRICTOR IN BRASS BODY

RF

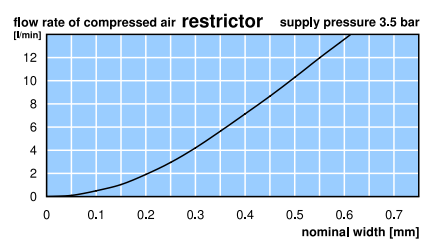
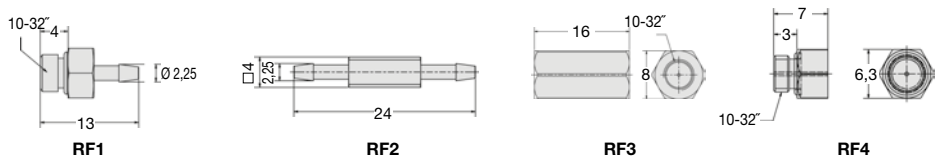
Description	Precision sapphire restrictor for reducing the flow of air or gas. Fixed flow restrictors are used in back pressure and air jet sensing circuits.		
Media	5 µm filtered compressed air, non-corrosive gases or liquids		
Diameter tolerances	-3% to +10% of nominal diameter		
Operating pressure	vacuum up to positive pressure of max. 12 bar		
Temperature range	5 °C to 50 °C / 41 °F to 122 °F		
Material	Body: brass	Restrictor: sapphire	



Nominal size Ø mm	Order number			
	10-32" / nipple Ø 2 RF1	nipple Ø 2.2 RF2	10-32" RF3	10-32" / open orifice RF4



Restrictor	operating pressure max. 12 bar				RF
0.06	RF106	RF206	RF306	RF406	
0.07	RF107	RF207	RF307	RF407	
0.08	RF108	RF208	RF308	RF408	
0.09	RF109	RF209	RF309	RF409	
0.10	RF110	RF210	RF310	RF410	
0.11	RF111	RF211	RF311	RF411	
0.12	RF112	RF212	RF312	RF412	
0.13	RF113	RF213	RF313	RF413	
0.14	RF114	RF214	RF314	RF414	
0.15	RF115	RF215	RF315	RF415	
0.16	RF116	RF216	RF316	RF416	
0.17	RF117	RF217	RF317	RF417	
0.18	RF118	RF218	RF318	RF418	
0.20	RF120	RF220	RF320	RF420	
0.22	RF122	RF222	RF322	RF422	
0.24	RF124	RF224	RF324	RF424	
0.26	RF126	RF226	RF326	RF426	
0.28	RF128	RF228	RF328	RF428	
0.30	RF130	RF230	RF330	RF430	
0.32	RF132	RF232	RF332	RF432	
0.34	RF134	RF234	RF334	RF434	
0.36	RF136	RF236	RF336	RF436	
0.40	RF140	RF240	RF340	RF440	
0.44	RF144	RF244	RF344	RF444	
0.48	RF148	RF248	RF348	RF448	
0.52	RF152	RF252	RF352	RF452	
0.54	RF154	RF254	RF354	RF454	
0.58	RF158	RF258	RF358	RF458	
0.64	RF164	RF264	RF364	RF464	



* Product group

Order example: RF106

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PRECISION RESTRICTOR IN PLASTIC BODY

R-0 / F950

Precision Restrictor R-0

Description Precision sapphire restrictor for reducing the flow of compressed air or non-corrosive gases
Medium compressed air or non-corrosive gases
Filter element 5 µm for DN0.08 up to DN0.23, from DN0.25 on 100 µm
Operating pressure vacuum up to max. 7 bar
Material Body: polycarbonate, FDA-approved Restrictor: sapphire Filter element: stainless steel fabric

Restrictor with Filter F950

Description Disposable in-line-filter with Dutch weave screen of 304 stainless steel. Flow direction and filter size in µm are clearly marked. The colour indicates the nominal size.
Diameter tolerance -3% to +10% of nominal diameter
Filter element 5 µm at DN 0.10 to DN 0.15, 43 µm at DN 0.18 to DN 0.41, 73 µm at DN 0.51 to DN 0.76
Operating pressure max. 7 bar
Material Body: polysulphone Restrictor: sapphire Filter element: stainless steel fabric

R-0 **F950**

0.08 up to 1.02 mm **0.1 up to 0.76 mm**
5 / 43 / 73 µm

Dimensions	Connection	Nominal size	Order	Nominal size	Order
A	inlet / outlet	colour / DN	number	colour / DN	number
mm		Ø mm		Ø mm	

Restrictor, barbed fittings Ø 2.7 operating pressure max 7 bar **R-0...-6**

30 fittings Ø 2.7	gold	0.08	R-003-6	orange	0.36	R-014-6
	purple	0.10	R-004-6	grey	0.41	R-016-6
	white	0.13	R-005-6	brown	0.43	R-017-6
	yellow	0.18	R-007-6	red	0.48	R-019-6
	light green	0.20	R-008-6	dark blue	0.51	R-020-6
	lavender	0.23	R-009-6	black	0.64	R-025-6
	light blue	0.25	R-010-6	beige	0.76	R-030-6
	green	0.30	R-012-6	dark grey	0.89	R-035-6
				cyan	1.02	R-040-6

R-0...-1 with nipple R-0...-6 with nipple

Restrictor, barbed fittings Ø 4,7 operating pressure max 7 bar **R-0...-1**

34 fittings Ø 4.7	gold	0.08	R-003-1	orange	0.36	R-014-1
	purple	0.10	R-004-1	grey	0.41	R-016-1
	white	0.13	R-005-1	brown	0.43	R-017-1
	yellow	0.18	R-007-1	red	0.48	R-019-1
	light green	0.20	R-008-1	dark blue	0.51	R-020-1
	lavender	0.23	R-009-1	black	0.64	R-025-1
	light blue	0.25	R-010-1	beige	0.76	R-030-1
	green	0.30	R-012-1	dark grey	0.89	R-035-1
				cyan	1.02	R-040-1

R-0...-0 with plain fittings

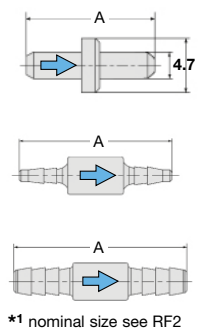
Restrictor with filter operating pressure max. 7 bar nipple Ø 2.7 mm, 5/43/73 µm **F950**

34 fittings Ø 2.7	purple	0.10	5 µm	F950- 5-041-B80
	light green	0.13	5 µm	F950- 5-050-B80
	red	0.15	5 µm	F950- 5-051-B80
	cyan	0.18	43 µm	F950-43-071-B80
	yellow	0.25	43 µm	F950-43-101-B80
	black	0.30	43 µm	F950-43-121-B80
	grey	0.41	43 µm	F950-43-161-B80
	blue	0.51	73 µm	F950-73-201-B80
	brown	0.64	73 µm	F950-73-251-B80
	beige	0.76	73 µm	F950-73-301-B80

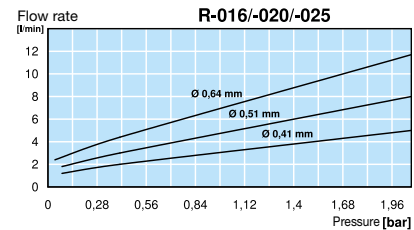
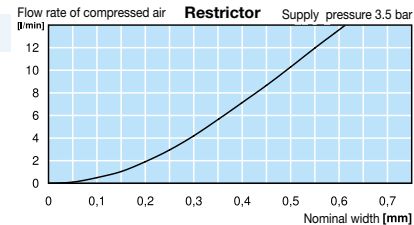
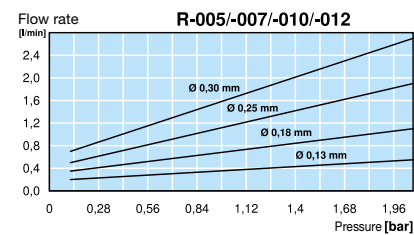
F950...B85/ ...B80 with filter

Special options, add the appropriate letter

plain fittings Ø 2.3 A = 9,9 mm for R-0 R-0...-0
 nipple Ø 4.7 A = 34 mm for F950 F950...-...-B85



plain fittings R-0...-0
 barbed fittings Ø 2.7 R-0...-6 F950...-...-B80
 barbed fittings Ø 4.7 R-0...-1 F950...-...-B85



* Product group

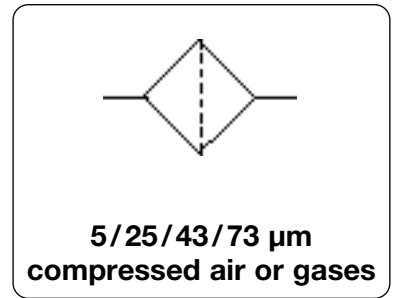
PDF CAD
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Order example:
R-003-6

MICRO IN-LINE FILTER

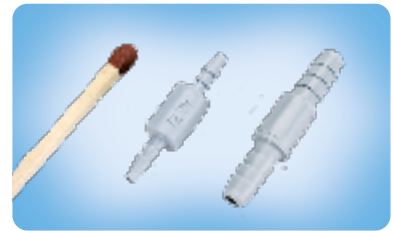
F950 / F960 / F970

Description	Compact in-line filter with fittings or threaded connection. Flow direction and filter size in μm are clearly marked.	
Media	compressed air or non-corrosive gases	
Diameter tolerances	-3% to +10% of nominal diameter	
Filter element	5 μm , 25 μm , 43 μm or 73 μm	
Operating pressure	max. 8.6 bar	
Temperature range	5 °C to 50 °C / 41 °F to 122 °F	
Material	Body: polysulphone	Filter element: Dutch weave stainless steel



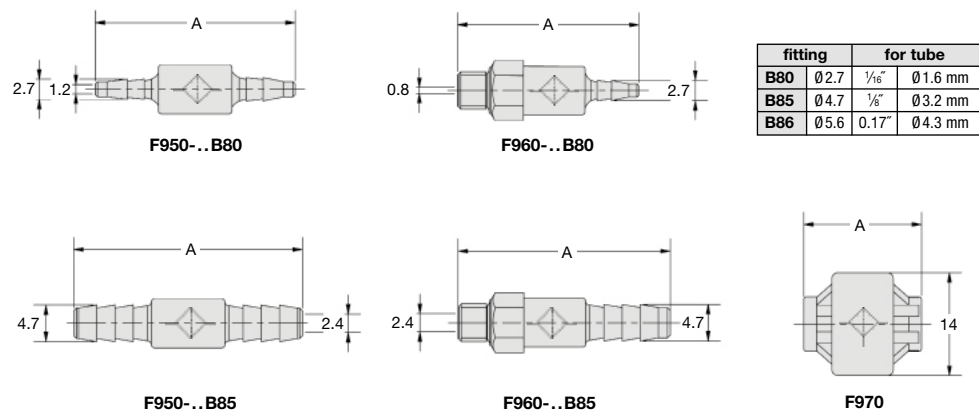
Dimensions A mm	Operating pressure max. bar	Connection inlet / outlet	Filter element μm	Order number	
-----------------------	-----------------------------------	------------------------------	------------------------------------	-----------------	--

Micro pressure filter			operating pressure max. 8.6 bar		F900
26	8.6	fittings $\text{\O} 2.7$	5	F950-05B80	
			25	F950-25B80	
			43	F950-43B80	
			73	F950-73B80	
30	8.6	fittings $\text{\O} 4.7$	5	F950-05B85	
			25	F950-25B85	
			43	F950-43B85	
			73	F950-73B85	
24	8.6	10-32" / fittings $\text{\O} 2.7$	5	F960-05B80	
			25	F960-25B80	
			43	F960-43B80	
			73	F960-73B80	
28	8.6	10-32" / fittings $\text{\O} 4.7$	5	F960-05B85	
			25	F960-25B85	
			43	F960-43B85	
			73	F960-73B85	
15	8.6	10-32" / 10-32"	5	F970-05	
			25	F970-25	
			43	F970-43	
			73	F970-73	



Accessories, enclosed

connecting nipple for F960 and F970	10-32" / fitting $\text{\O} 2.7$	F3120-80
	$\text{\O} 4.7$	F3120-85
	$\text{\O} 5.6$	F3120-86



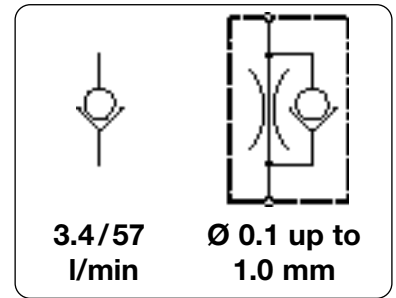
* Product group

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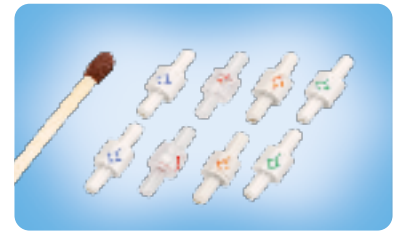
Order example:
F950-05B80

Check valve	The check valve permits flow in one direction only. A small check disc within the housing ensures free flow in one direction and at the same time seals off on the other side.	
Restrictor check valve	The restrictor check valve provides a constant flow in one direction, defined through the orifice size, and a flow of the full nominal size towards the other direction.	
Media	5 µm filtered compressed air or non-corrosive gases	
Diameter tolerance	-3% to +10% of nominal diameter	
Operating pressure	max. 0.7 bar at F2804-400/1/2/3,	max. 5.2 bar at F2804-404
Cracking pressure	< 20 mbar at F2804-400/1/2/3,	< 25 mbar at F2804-404
Temperature range	5 °C to 50 °C / 41 °F to 122 °F	
Material	Body: polysulphone at F2804-400/1/2/3, polypropylene at F2804-404 Check disc: Celcon® at F2804-401/2, silicone at F2804-400/3/4	



Dimensions	Operating pressure	Check disk	Connection	Leakage rate	Flow rate	Nominal size	Order number	
A	max. bar	made of		< ml/min*2	l/min*1	colour / DN		D*
mm								

Check valve		operating pressure max. 0.7 / 5.2 bar			F2804		
12	0.7	silicone plain fittings Ø 2.4	3	3.4	red	1.5	F2804-400
		Celcon®	51		orange	1.5	F2804-401
		Celcon®	17		green	1.5	F2804-402
		silicone	3		blue	1.5	F2804-403
26	0.7	Celcon® fittings Ø 2.7	51	3.4	grey	1.5	F2804-401-B80
		Celcon®	17		grey	1.5	F2804-402-B80
		silicone	3		grey	1.5	F2804-403-B80
30	0.7	Celcon® fittings Ø 4.7	51	3.4	grey	1.5	F2804-401-B85
		Celcon®	17		grey	1.5	F2804-402-B85
		silicone	3		grey	1.5	F2804-403-B85
15	5.2	silicone 10-32"	1	57	grey	3.8	F2804-404
		silicone fittings Ø 2.7	1		grey	3.8	F2804-404-B80
		silicone fittings Ø 4.7	1		grey	3.8	F2804-404-B85



F2804-400/1/2/3 check valve



F2804-404-B85/...-B80 check valve

Restrictor check valve		operating pressure max. 5.2 bar			F2804	
15	5.2	silicone 10-32"		0.10		F2804-404-041
				0.13		F2804-404-050
				0.15		F2804-404-051
				0.18		F2804-404-071
				0.25		F2804-404-101
				0.30		F2804-404-121
				0.41		F2804-404-161
				0.51		F2804-404-201
				0.64		F2804-404-251
				0.76		F2804-404-301
				1.02		F2804-404-401



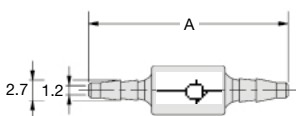
F2804-404-071/-301 restrictor check valve

Special options, add the appropriate number

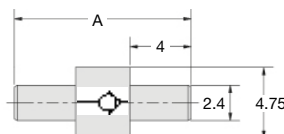
increased cracking pressure for check valve, with spring 35 mbar F2804-404-05

Accessories, enclosed

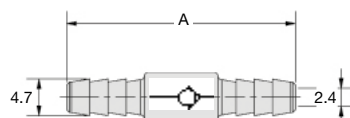
connecting nipple for F2804-404 10-32" / fitting Ø 2.7 F3120-80
Ø 4.7 F3120-85
Ø 5.6 F3120-86



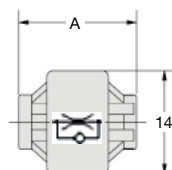
F2804-40.-B80



F2804-40.- with plain fittings



F2804-40.-B85



F2804-404

fitting	for tube	
B80	Ø 2.7	1/16" Ø 1.6 mm
B85	Ø 4.7	1/8" Ø 3.2 mm
B86	Ø 5.6	0.17" Ø 4.3 mm

*1 at max. operating pressure *2 at Δp or P₁ = 70 mbar, at type F2804-404: P₁ = 5.2 bar

* Product group

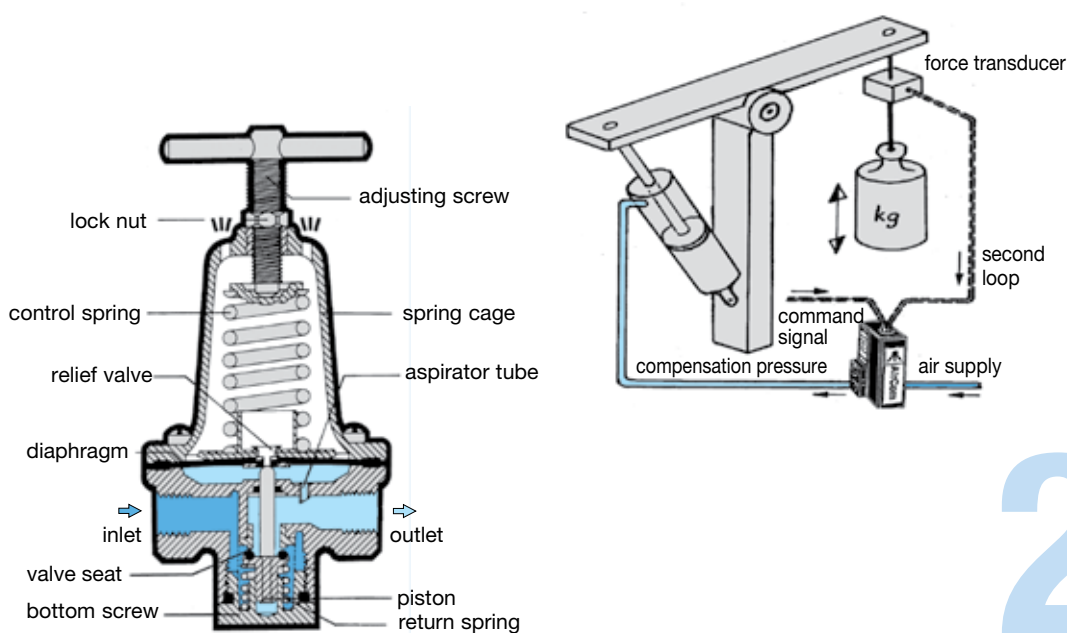
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www.aircom.net



Order example:
F2804-400

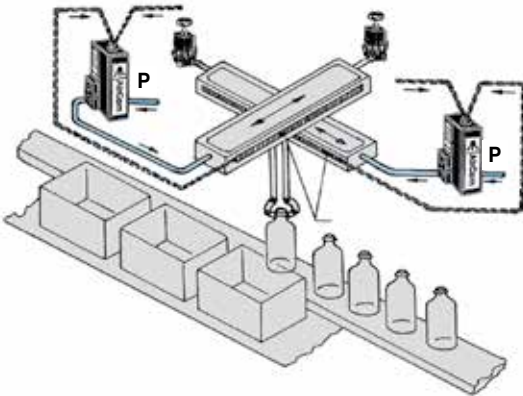
TECHNICAL INFORMATION

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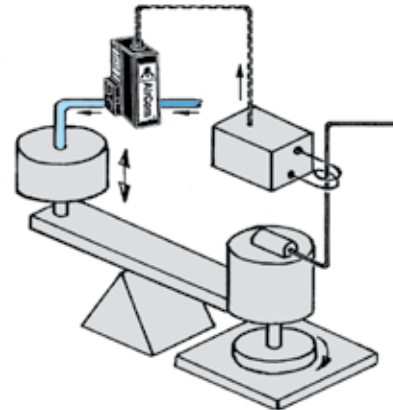
21

APPLICATIONS OF PROPORTIONAL PRESSURE REGULATORS



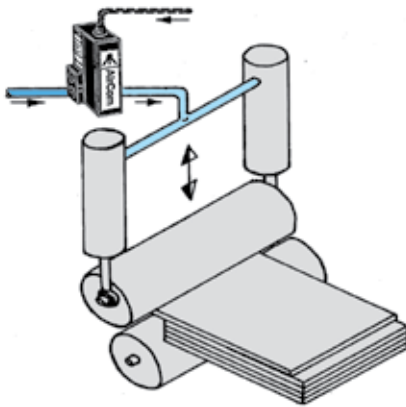
POSITIONING

AirCom proportional pressure regulators control rodless cylinders for operating robotic arms which load bottles into cases.



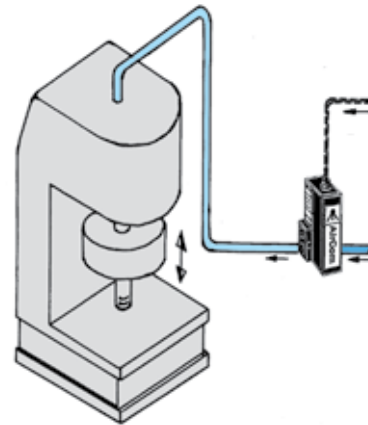
CONSTANT PUSH PRESSURE

AirCom proportional pressure regulators monitor the motor current and adjust the force applied to provide accurate control of the grinding force.



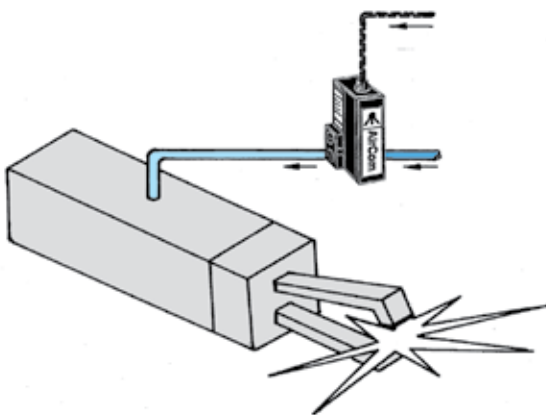
CONSTANT MATERIAL THICKNESS

The AirCom proportional pressure regulator controls the downward force of the calender roller in order to compensate sheet thickness variations on sheet feeding equipment.



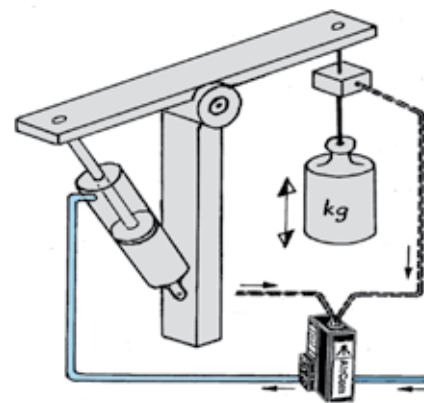
CONTROLLED CONTACT PRESSURE

The AirCom proportional pressure regulator accurately controls the force that a cylinder exerts on its load. Thus, the workpiece's quality can be significantly improved.



WELDING TONGS WITH CONSTANT CONTACT PRESSURE

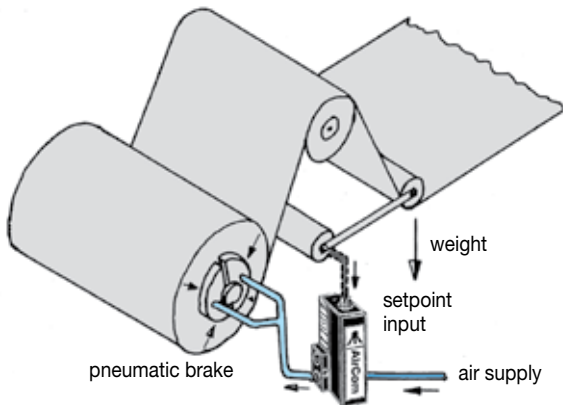
The AirCom proportional pressure regulator quickly and accurately controls the nip pressure required in resistance welding.



BALANCER FOR LOAD MOVING BY HAND

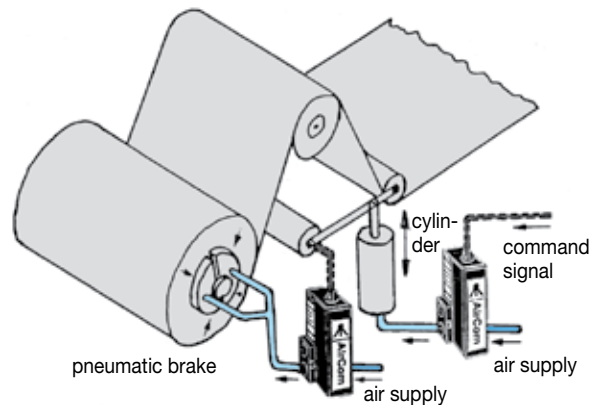
The AirCom proportional pressure regulator keeps the load in balance by cylinder force. Loads weighing tons are easy to raise and lower simply by hand.

APPLICATIONS OF PROPORTIONAL PRESSURE REGULATORS



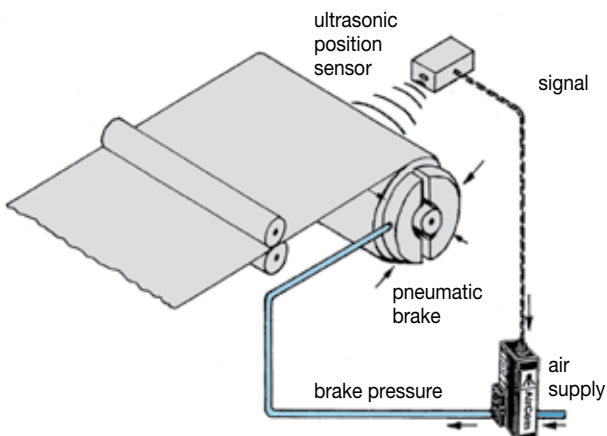
WINDER WITH CONSTANT WEB TENSION

The AirCom proportional pressure regulator accurately senses the position of a dancer arm of known weight and mass to ensure constant web tension by controlling a brake.



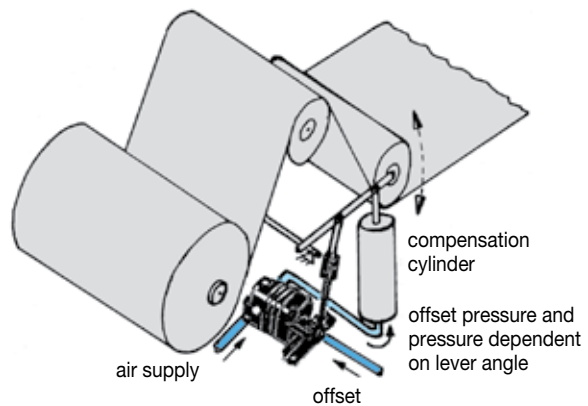
WINDER WITH ADJUSTABLE WEB TENSION

The AirCom proportional pressure regulator adjusts web tension in web tension control systems that employ cylinders instead of deadweights achieving constant material tension.



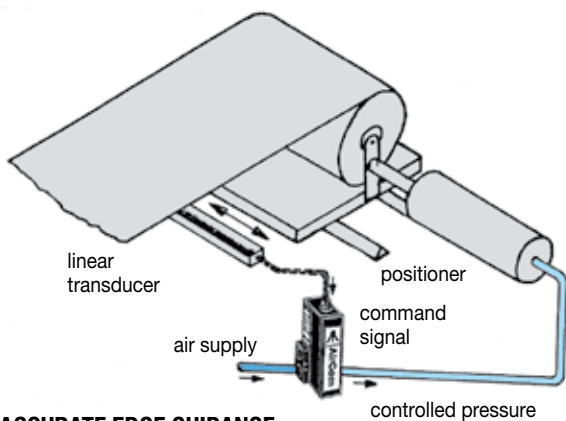
WINDER WITH CONSTANT WEB TENSION

A position sensor commands the AirCom proportional pressure regulator to adjust web tension as the roll size changes. The roll speed is reduced in proportion to the coil size.



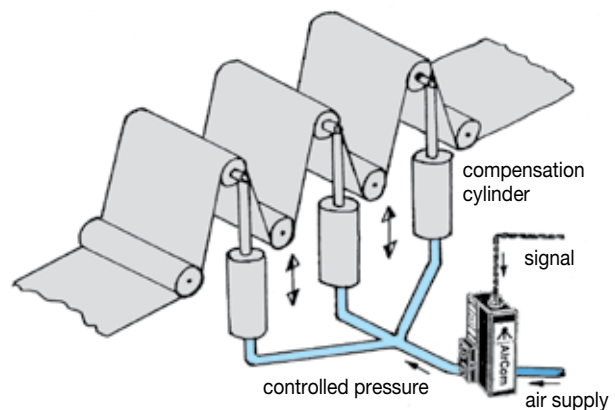
WINDER WITH WEIGHT-COMPENSATED DANCER ROLLER

The lever-operated proportional regulator compensates the changed weight of the winding roll and controls the web tension by cylinder force.



ACCURATE EDGE GUIDANCE

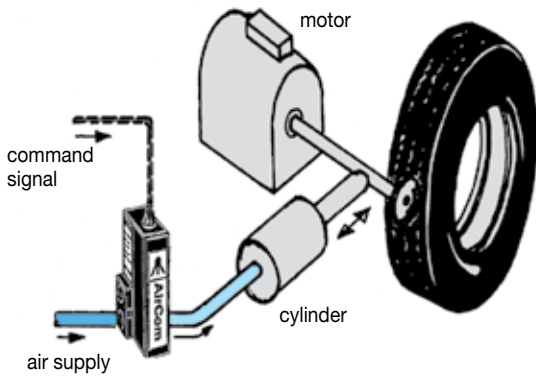
The addition of an AirCom proportional pressure regulator assures accurate edge guidance in web systems. A linear transducer checks the web position and pilots the regulator to readjust the positioner.



LENGTH COMPENSATION ON WINDING SYSTEMS

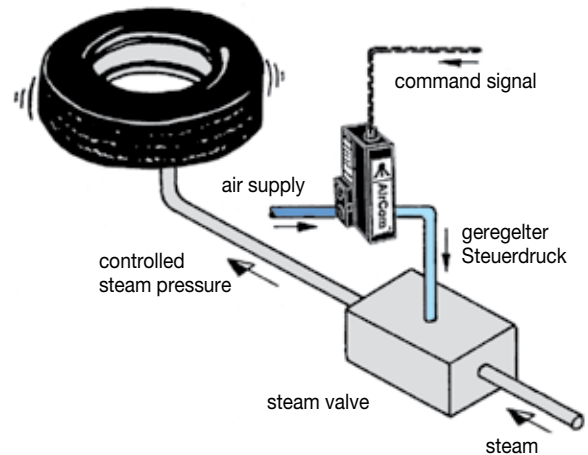
With the assistance of an AirCom proportional pressure regulator and the consequential control of compensation cylinders, webs can be easily "festooned". In addition, the cylinders provide for constant web tension.

APPLICATIONS OF PROPORTIONAL PRESSURE REGULATORS



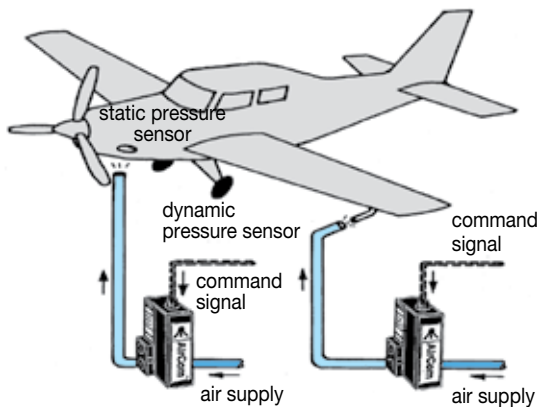
PRECISION TYRE TREATMENT

AirCom proportional pressure regulators control the forces required for maintaining a constant circumference in the balancing of rubber tyres when cutting tyre treads.



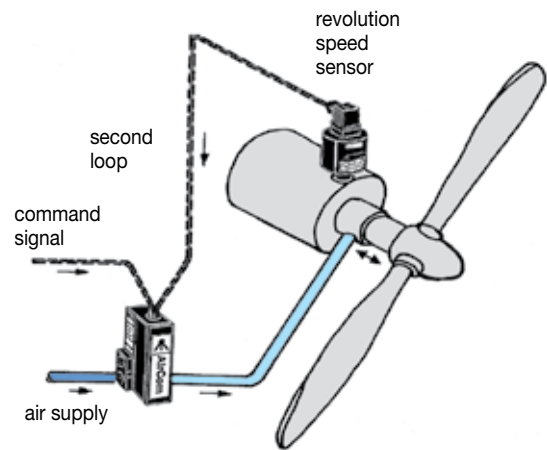
CONTROLLING TYRE ELASTICITY

Incorporated into the steam valve system, AirCom proportional pressure regulators control the elasticity of rubber tyres.



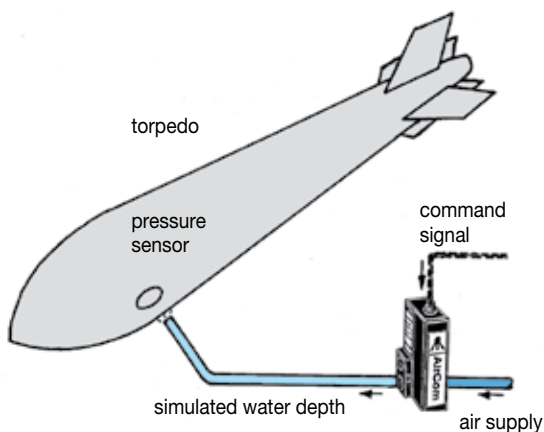
SIMULATION OF WATER DEPTHS

AirCom proportional pressure regulators accurately monitor static and dynamic pressure sensors in aircraft.



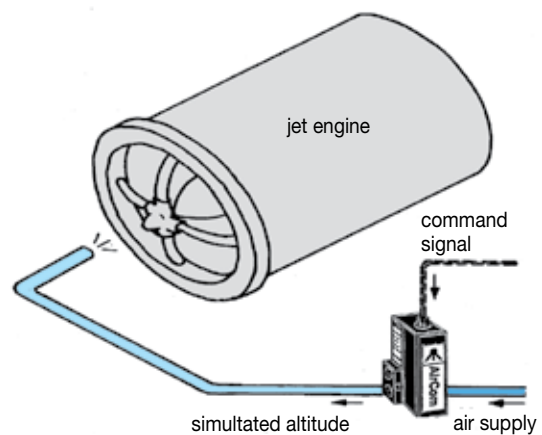
TURBINE PRESSURE REGULATION

AirCom proportional pressure regulators control and adjust the propeller blade angle to regulate the turning of wind turbine generators.



SIMULATION OF WATER DEPTHS

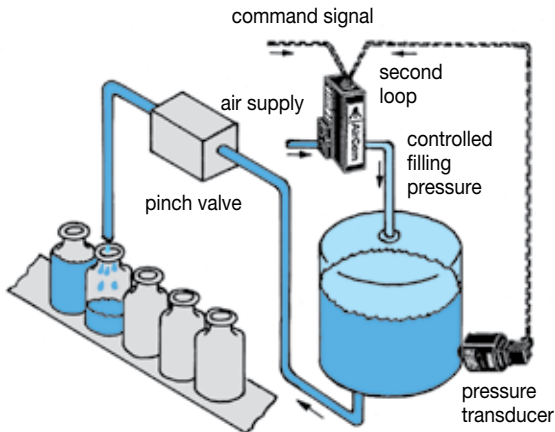
AirCom proportional pressure regulators simulate different water depths for torpedo sensor testing.



SIMULATION OF FLIGHT ALTITUDES

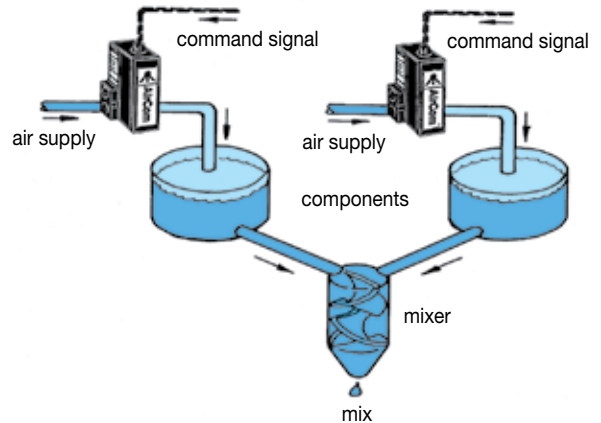
In jet engine testing, AirCom proportional pressure regulators accurately control the air pressure required for simulating various altitudes.

APPLICATIONS OF PROPORTIONAL PRESSURE REGULATORS



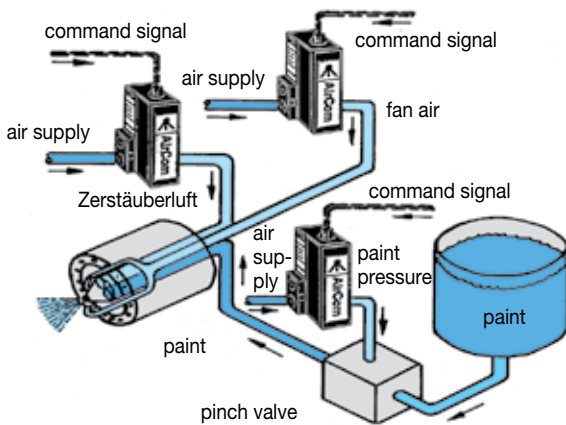
CONSTANT FILLING PRESSURE

AirCom proportional pressure regulators accurately control the liquid flow regardless of tank level for dispensing pharmaceuticals and food products.



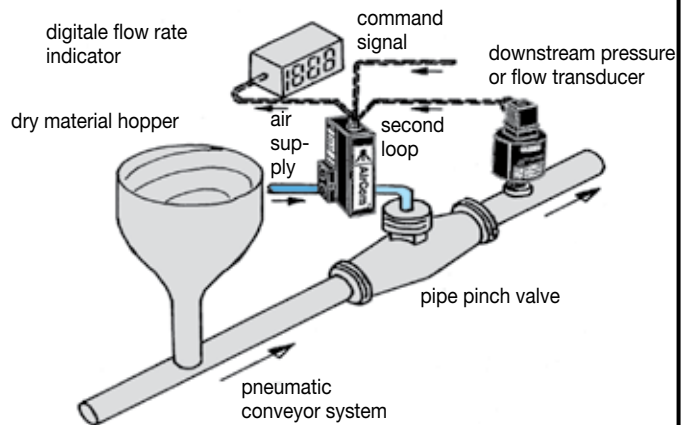
EXACT MIX

AirCom proportional pressure regulators accurately control the flow of ingredients for mixing for, e.g. the precise formulation of resin.



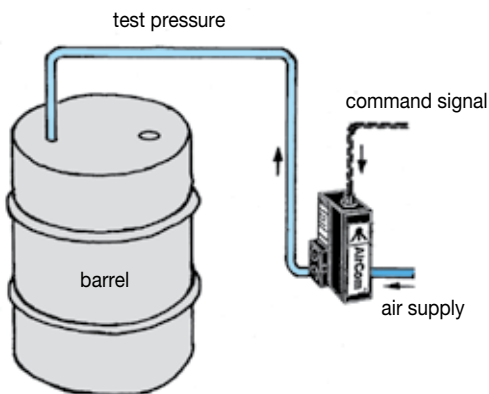
ECONOMIC SPRAY PAINTING

AirCom proportional pressure regulators economically control turbine speed, atomise and shape air and deliver the fluid for spray painting.



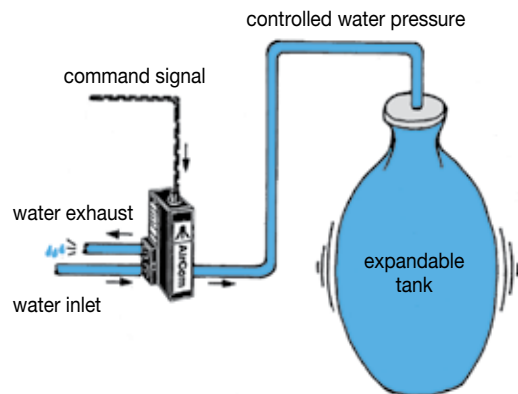
FLOW REGULATION

AirCom proportional pressure regulators regulate and monitor the flow of dry material in pneumatic conveying systems.



LEAK TESTING

AirCom proportional pressure regulators control the pressure required to test for leaks of containers of any size.



REGULATION OF CONSTANT WATER PRESSURE

AirCom proportional pressure regulators control and maintain the pressure of water flowing into expanding tanks, even during receding expansion.

VOLUME FLOW RATE CALCULATION

PHYSICAL PARAMETERS

SHORT SYMBOL	DESCRIPTION	REMARKS	UNIT
Q	Flow rate		l/min
K _v	Flow factor	at Δ P = 1 bar and γ = 1 or 1,25	m ³ /h
P	Relative pressure		bar
P _{abs}	Absolute pressure	1 + P	bar _{abs}
P ₁	Supply pressure		bar
P ₂	Outlet pressure		bar
Δ P	Differential pressure	P ₁ - P ₂	bar
T	Absolute Temperature	≙ 273 + °C, at 20 °C: 293	°K
γ _L	Specific weight of air	air: 1,25 at 20 °C and 760 mm Hg	N/m ³
γ _A	Specific weight of water	water: 1,0	N/dm ³
υ _L	Flow velocity of air	for air max. 100 m / s, recommended 50 m / s (50%)	m/s
υ _A	Flow velocity of water	for water max. 4.5 m / s, recommended 3 m / s (60%)	m/s
F	Cross-sectional area	area of the open tube	cm ²

MEDIUM / GENERAL FORMULA

SIMPLIFIED FORMULA *

RECOMMEND.

DIMENSION

Subcritical Δ P < 0,5 · (1 + P₁)

P ₁ bar	2	3	4	5	6	7	8	9	10	11	12	13	14
P ₂ > bar	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5

Supercritical Δ P > 0,5 · (1 + P₁)

P ₁ bar	2	3	4	5	6	7	8	9	10	11	12	13	14
P ₂ < bar	0,5	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5

Compressed air, supercritical:

$$\Delta P < 0,5 \cdot (1 + P_1)$$

$$Q = K_v \cdot 514 \cdot 16,67 \cdot \sqrt{\frac{\Delta P \cdot P_{2\text{abs}}}{\gamma_L \cdot T}}$$

$$Q = 448 \cdot K_v \cdot \sqrt{\Delta P \cdot (1 + P_2)}$$

Q · 0,6

(l/min)

Compressed air, supercritical:

$$\Delta P > 0,5 \cdot (1 + P_1)$$

$$Q = K_v \cdot 257 \cdot 16,67 \cdot \frac{P_{1\text{abs}}}{\sqrt{\gamma_L \cdot T}}$$

$$Q = 224 \cdot K_v \cdot (1 + P_1)$$

Q · 0,6

(l/min)

Water:

$$Q = K_v \cdot 16,67 \cdot \sqrt{\frac{\Delta P}{\gamma_A}}$$

$$Q = 16,67 \cdot K_v \cdot \sqrt{\Delta P}$$

Q · 0,6

(l/min)

Outlet tube for compressed air:

check of flow rate with respect to noise

$$Q = \nu_L \cdot F \cdot P_{2\text{abs}} \cdot 16,67 \cdot \frac{98,28}{T}$$

$$Q = 560 \cdot F \cdot (1 + P_2)$$

Q · 0,5

(l/min)

Outlet tube for water:

check of flow rate with respect to noise

$$Q = \nu_A \cdot F \cdot 0,36 \cdot 16,67$$

$$Q = 27 \cdot F$$

Q · 0,6

(l/min)

Cross section of orifices

G	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2	2 1/2
F (cm ²)	0,08	0,31	0,71	1,27	2,85	5,06	11,4	20,2	31,5

EXAMPLE

Example ① Determine the compressed air flow of regulator R230-02B (K_v = 0,7 m³/h) supply pressure P₁ = 3 bar, outlet pressure P₂ = 2,5 bar

a) at P₁ = 3 bar and P₂ = 2,5 bar → subcritical pressure ratio
 b) Q = 448 · K_v · √(Δ P (1 + P₂)) = 448 · 0,7 · √(0,5 · (1 + 2,5)) = 415 l/min

Example ② As example ①, but supply pressure P₁ = 7 bar

a) at P₁ = 7 bar and P₂ = 2,5 bar → supercritical pressure ratio
 b) Q = 224 · K_v · (1 + P₁) = 224 · 0,7 · (1 + 7) = 1254 l/min

Example ③ Determine the water flow of regulator R25-02BK (K_v = 0,38 m³/h) supply pressure P₁ = 4 bar, outlet pressure P₂ = 2 bar, orifice G1/4 (0,31 cm²)

a) Q = 16,67 · K_v · √(Δ P) = 16,67 · 0,38 · √(4 - 2) = 8,9 l/min
 b) Q = 27 · F = 27 · 0,31 = 8,4 l/min
 Calculation b) only for check. Recommended flow: 8.9 l / min · 0.6 = 5,3 l/min

* simplified formula at 20 °C / 68 °F, specific weight of water γ = 1 and compressed air = 1.25, at flow velocity of air of 100 m / s and of water 4.5 m / s

BOOSTER / AIR AMPLIFIER CALCULATION

PHYSICAL PARAMETERS

SHORT SYMBOL	DESCRIPTION	REMARKS	DIMENSION
P_1	Existing system pressure	minimum pressure	bar
P_2	required proof pressure	minimum pressure	bar
V_F	Volume of the device under test	including hose volume	l
t_z	Cycle time	period from one test to the next	s
t_F	Inflation time	period until required proof pressure is reached	s
i	Pressure transmission ratio, e.g. 1 : 4	system pressure: proof pressure	
Q_N	Required flow rate	for expanded compressed air (0 bar)	NI/min
	Operation medium	e.g. compressed air or nitrogen	

CALCULATION FORMULAS

Flow rate of expanded compressed air: $Q_N = \frac{P_2 \cdot V_F}{t_F} \cdot 60$ (NI/min)

Pressure transmission ratio: $i = \frac{P_2}{P_1}$

CALCULATION EXAMPLE

11 bar pressure is to be set up in a device under test of 0.2 l volume within 5 seconds. This procedure is repeated every 30 seconds. System pressure is 6 bar.

Specifications: $P_1 = 6 \text{ bar}$ $t_z = 20 \text{ s}$ $V_F = 0,2 \text{ l}$
 $P_2 = 11 \text{ bar}$ $t_F = 5 \text{ s}$

1. Calculation of the required flow rate in NI/min

$$Q_N = \frac{P_2 \cdot V_F}{t_F} \cdot 60 \qquad Q_N = \frac{11 \cdot 0,2}{5} \cdot 60 = 26,4 \text{ NI/min}$$

2. Calculation of the required pressure transmission ratio

$$i = \frac{P_2}{P_1} \qquad i = \frac{11 \text{ bar}}{6 \text{ bar}} = 1,8 \qquad \Rightarrow 1 : 2 \text{ chosen from catalogue}$$

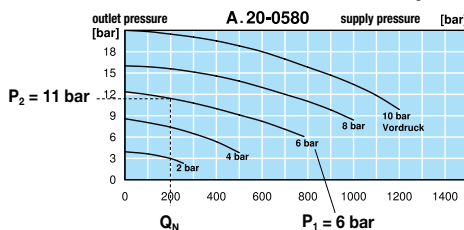
3. Examination of existing operation mode

Full load in continuous operation: max. 12 min/h \Rightarrow ratio 1 : 5

$$\frac{t_F}{t_z} = \frac{5 \text{ s}}{20 \text{ s}} = \frac{1}{4} \Rightarrow \text{Full load in continuous operation, i.e. maximum 20\% of the performance charts values may be realised.}$$

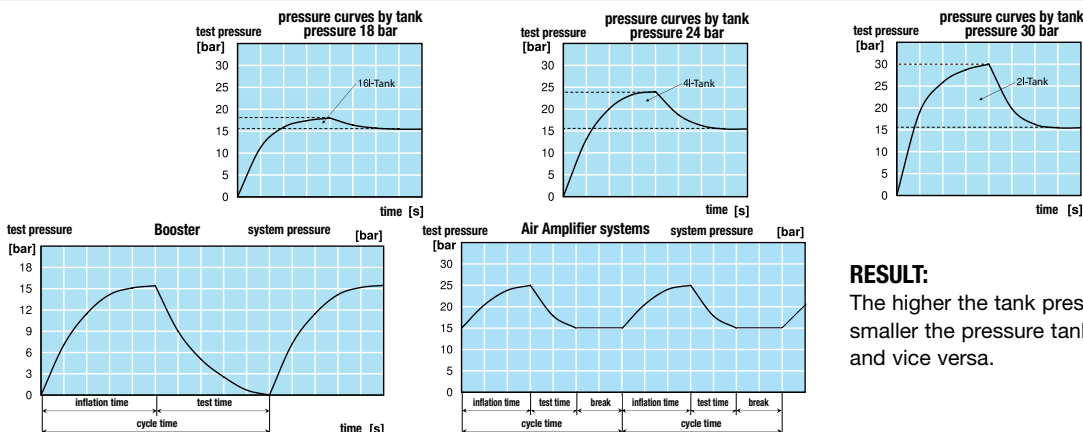
$$Q_N \cdot 5 \qquad \Rightarrow 100\% \text{ of indications of performance diagrams,} \qquad 26,4 \text{ NI/min} \cdot 5 = 132 \text{ NI/min}$$

4. Booster selection on the basis of performance diagrams



max. performance > required performance
 200 NI/min > 132 NI/min
 \Rightarrow AM20 - 0580

PRESSURE CURVES OF BOOSTERS / AIR AMPLIFIER SYSTEMS



RESULT:
 The higher the tank pressure, the smaller the pressure tank may be and vice versa.

THE AIR AMPLIFIER SYSTEMS ARE INDIVIDUALLY ADAPTED TO YOUR DEMANDS BY AIRCOM.

VOLUME FLOW RATE CALCULATION

FLANGE CONNECTION ACCORDING TO DIN 477

Gas type	Inlet port	Gas type	Inlet port
flammable gases	W21.8x1/14 LH union nut	ammonia	W21.8x1/14 union nut
carbon dioxide	1" LH union nut	testing gas with NH ₃	M19x1.5 LH union nut
nitrous oxide	G $\frac{3}{4}$ union nut	hydrogen sulphide	1" LH union nut
non-flammable gases	W21.8x1/14 union nut	hydrogen chloride	1" LH union nut
testing gas	M19x1.5 LH union nut	sulphur dioxide	G $\frac{3}{4}$ union nut
testing gas with CO	M19x1.5 LH union nut	nitrogen	W24.32x1/14 union nut
synthetic air	G $\frac{3}{4}$ union nut	compressed air	G $\frac{5}{8}$ male
oxygen	G $\frac{3}{4}$ union nut		

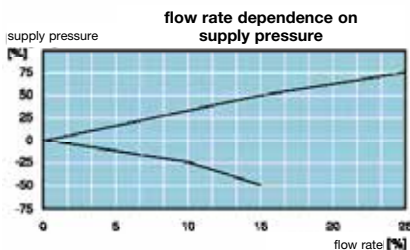
TEMPERATURE RANGES OF ELASTOMERS

NBR/Buna N	Perbunan [®] , nitrile,	-30 °C to 90 °C / - 22 °F to 194 °F	for air, water, hydraulic-machine-fuel oil, turpentine
FPM	FKM, Viton [®]	-20 °C to 130 °C / - 4 °F to 266 °F	for gasoline, hydraulic fluids, HFA, HFB, HFD
EPDM		-40 °C to 120 °C / - 40 °F to 248 °F	for brake fluids, azetylene, ozone, hydrogen
PTFE	Teflon [®]	-200 °C to 200 °C / - 328 °F to 392 °F	
Silicone		-40 °C to 120 °C / - 40 °F to 248 °F	

INFLUENCE OF FILTER PORE SIZE ON FLOW RATE

Filter element	Flow rate	Filter element	Flow rate
70 µm	110%	5.0 µm	75%
40 µm	100%	0.3 µm	60%
20 µm	90%	0.01 µm	35%

INFLUENCE OF SUPPLY PRESSURE VARIATION ON FLOW RATE



THREADS / NOMINAL SIZE

Connection thread	Nominal size
G $\frac{1}{4}$	DN10
G $\frac{1}{2}$	DN15
G $\frac{3}{4}$	DN20
G1	DN25
G1 $\frac{1}{4}$	DN32
G1 $\frac{1}{2}$	DN40
G2	DN50
G3	DN100

CONVERSION TABLES

Pa	bar	mbar	mWS	mmWS	Torr mmHg	at kp / cm ²	atm	Inch H ₂ O	Inch Hg	PSI lbf / in ²
1	10 ⁻⁵	10 ⁻²	0,1020 · 10 ⁻³	0,1020	7,501 · 10 ⁻³	10,20 · 10 ⁻⁶	9,869 · 10 ⁻⁶	4,016 · 10 ⁻³	2,953 · 10 ⁻⁴	145,05 · 10 ⁻⁶
10 ⁵	1	10 ³	10,20	10,20 · 10 ³	750,1	1,020	0,9869	401,6	29,53	14,505
100	10 ⁻³	1	10,20 · 10 ⁻³	10,20	0,7501	1,020 · 10 ⁻³	0,9869 · 10 ⁻³	0,4016	29,53 · 10 ⁻³	14,505 · 10 ⁻³
9807	98,07 · 10 ⁻³	98,07	1	10 ³	73,56	0,1	96,78 · 10 ⁻³	39,37	2,896	1,4224
9,807	98,07 · 10 ⁻⁶	98,08 · 10 ⁻³	10 ⁻³	1	73,56 · 10 ⁻³	10 ⁻⁴	96,78 · 10 ⁻⁶	0,03937	2,896 · 10 ⁻³	1,4224 · 10 ⁻³
133,32	1,333 · 10 ⁻³	1,333	13,59 · 10 ⁻³	13,59	1	1,359 · 10 ⁻³	1,316 · 10 ⁻³	0,5351	3,937 · 10 ⁻²	0,01934
98,07 · 10 ³	0,9807	980,7	10	10 ⁴	735,6	1	0,9678	393,7	28,96	14,224
1,013 · 10 ⁵	1,013	1013	10,33	10,33 · 10 ³	760	1,033	1	406,7	29,92	14,68
249,1	2,491 · 10 ⁻³	2,491	25,4 · 10 ⁻³	25,4	1,8684	2,54 · 10 ⁻³	2,458 · 10 ⁻³	1	7,355 · 10 ⁻²	36,126 · 10 ⁻³
3386	3,386 · 10 ⁻²	33,86	0,3453	345,3	25,4	3,453 · 10 ⁻²	3,342 · 10 ⁻²	13,60	1	0,4912
6894,8	6,8948 · 10 ⁻²	68,948	0,7031	703,1	51,715	70,31 · 10 ⁻³	68,04 · 10 ⁻³	27,68	2,036	1

UMRECHNUNG AMERIKANISCHER UND ENGLISCHER MASSEINHEITEN IN SI-EINHEITEN

LENIGHT

UNIT OF MEASUREMENT	US / UK-UNIT	SI-UNIT	CONVERSION FACTOR
1 inch = 40 lines	in	2,54 cm	0,393701
1 mil / thou	mil	25,4 µm	0,03937
1 line		0,635 mm	1,57480
1 foot = 12 in = 3 hands	ft	30,48 cm	0,0328084
1 yard = 3 feet = 4 spans	yd	0,9144 m	1,09361
1 furlong = 220 yd	fur	0,201168 km	4,97097
1 mile (Landmeile)	mi	1,60934 km	0,62137
1 nautical mile (internat.)	n mi, NM	1,852 km	0,539957
1 knot (Knoten)	kn	1,852 km / h	0,539957

AREA

1 square inch	sq in	6,4516 cm ²	0,155000
1 circular inch		5,0671 cm ²	0,197352
1 square foot = 144 sq in	sq ft	929,03 cm ²	1,0764 · 10 ⁻³
1 square yard = 9 sq ft	sq yd	0,83613 m ²	1,19599
1 square mile = 640 acres	sq mi	2,5900 km ²	0,38610

VOLUME

1 cubic inch	cu in	16,387 cm ³	0,061024
1 cubic foot = 1728 cu in	cu ft	28,317 dm ³	0,035315
1 cubic yard = 27 cu ft	cu yd	0,76455 m ³	1,30795
1 fluid ounce (GBr)	fl oz	0,028413 dm ³	35,1950
1 fluid ounce (USA)	fl oz	0,029574 dm ³	33,8138
1 pint = 4 gills (GBr)	(liq) pt	0,56826 dm ³	1,75975
1 pint = 4 gills (USA)	liq pt	0,47318 dm ³	2,11336
1 quart = 2 pints (GBr)	(liq) qt	0,13652 dm ³	0,87988
1 quart = 2 pints (USA)	liq qt	0,94636 dm ³	1,05668
1 quarter = 64 gal		290,950 dm ³	0,0034370
1 gallon = 2 pottles (GBr)	gal	4,54609 dm ³	0,219969
1 gallon (USA)	gal	3,78543 dm ³	0,264170
1 dry barrel		115,628 dm ³	0,0086484

FORCE

EINHEIT	EINHEITEN-ZEICHEN	SI-EINHEITEN	UMRECHNUNGS-FAKTOR
1 pound-weight	lb wt	4,448221 N	0,2248089
1 pound-force	LB lbf	4,448221 N	0,2248089
1 poundal	pdl	0,138255 N	7,23301
1 kilogramme-force	kgf, kgp	9,80665	0,1019716

PRESSURE (FORCE / AREA)

1 pound-weight	lb wt / sq in	6,8948 kN / m ²	0,145038
1 pound-weight	lb wt / sq ft	47,880 N / m ²	0,0208854
1 kilogramme-force / sq in	kgf / sq in	1,52003 N / m ²	0,657880
1 foot of water	ft H ₂ O	0,029891 bar	33,455
1 inch of Hg	in Hg	0,033864 bar	29,530

ENERGY AND POWER

1 foot pound-weight	ft lb wt	1,355821 J	0,737561
1 foot pound-force	ft Lb, ft lbf	1,355817 J	0,737563
1 foot-poundal	ft pdl	0,0421401 J	23,7304
1 horse-power hour	hph, H Phr	2,6845 MJ	0,37251
	h. p. hr.	0,74570 kWh	1,34102

WEIGHT

1 grain	gr	64,7989 mg	0,0154324
1 dram	dr	1,77185 g	0,564383
1 ounce = 16 drams	oz	28,3495 g	0,0352739
1 pound = 16 oz	lb	0,453592 kg	2,204622
1 quarter = 28 lb (lbs)		12,7006 kg	0,078737
1 hundredweight = 112 lb	cwt	50,8024 kg	0,0196841

FUNCTION OF COMPRESSED AIR FILTERS

Filtration

The average 10 HP compressor handles four million cubic inches of air per hour. This air can contain billions of contaminating particles. At high concentration and high speed, these particles can be extremely harmful. They block orifices, erode components, and clog clearances between moving parts. In addition, when ambient air is drawn into a compressor, it can, depending on weather conditions, have relative humidity of 100 percent. As air is compressed and cooled, some water vapour condenses out as free water, but even with a compressor aftercooler, some moisture is swept downstream into the air system. This may result in rusted pneumatic tools and components, contaminated lubricants and frozen air lines during low temperature periods. Other types of foreign matter in air lines include: impurities generated within the air line, such as wear particles, pipe scale and rust; construction and assembly debris; and contaminants introduced into the air system during maintenance or through leakage passages. All these contaminants, which are of a size to cause air system problems, should be removed by a filter.

Filter Construction

Most pneumatic filters consist of two basic elements: a die-cast body, into which the inlet and outlet piping is connected, and a sealed removable bowl which contains collected contaminants. The bowl is fitted with a drain mechanism to remove liquids before they rise to the baffle level. The drain system usually operates while the filter is under pressure, but the unit must be exhausted to remove the bowl for cleaning and element service. The piping need not be disturbed. Generally a transparent bowl is the most convenient because it provides easy visual inspection of the sump level. However, hostile environment, higher pressure, or higher temperature may require a metal bowl for safety. The most common plastic used for bowls is polycarbonate. This material performs satisfactorily for air pressures below 10 bar / 150 psig and temperatures between 4 °C / 40 °F and 50 °C / 120 °F, but polycarbonate can be attacked by several chemicals. AirCom offers both polyethylene and metal bowl guards for added safety. As the pressure or temperature requirement increases, you may have to specify a metal bowl with sight glass. For extreme conditions, it is recommended that the sight glass be eliminated. (Please refer to the individual model descriptions for specifications on bowls.) Thus, the environment determines the choice of bowl. Polycarbonates offer great strength and visibility, but can be attacked by certain chemicals. Metal bowls offer the highest pressure and temperature rating, and provide superior protection when installed in an environment containing chemicals that are incompatible with polycarbonate.

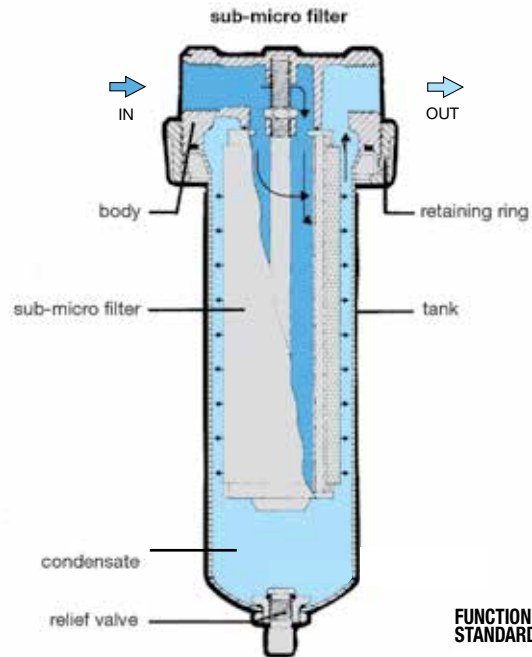
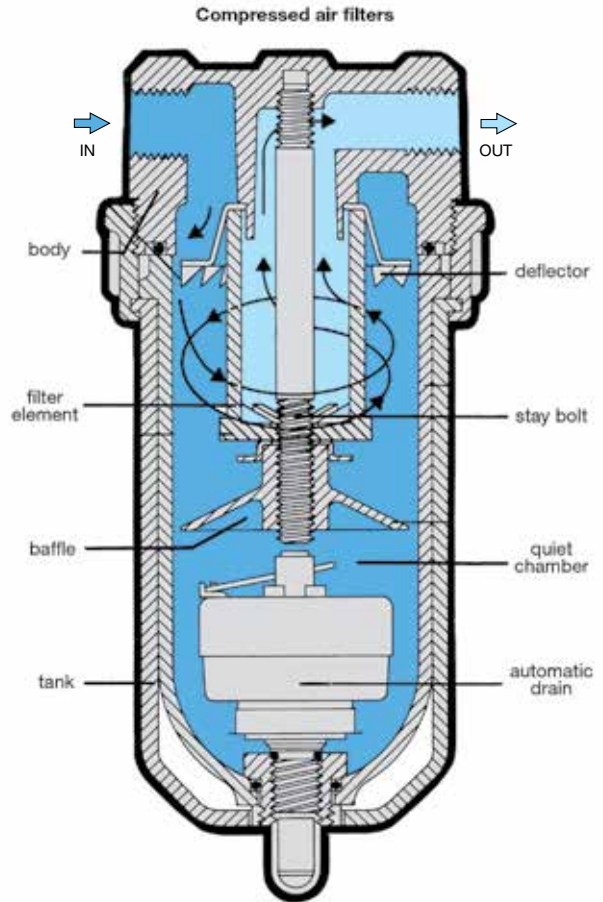
Filter Operation

Air filters:

When pressurized air enters a typical body, the curved inlet and deflector direct the incoming air in a downward whirling pattern. Centrifugal force hurls the larger solid and liquid water particles outward where they collect on the inner surface of the filter bowl. The particles spiral down past a baffle into a quiet chamber. The baffle prevents turbulent air in the upper bowl from reentraining liquid contaminants and carrying them downstream. Then the dry, cleaner air follows a convoluted path through the filter element, where finer solid particles are filtered out. Finally, filtered air passes up the centre of the element and out the discharge port.

Coalescing filters:

These high-efficiency filters operate on a somewhat different principle than air filters. The key difference is in the element, where a fibre network is narrowly spaced to trap smaller contaminants. The special fibres hold any liquid particle which contacts them. Prefiltered air enters the cylindrical element at the centre. As it flows through the element, particles are captured by three different mechanisms: direct interception as particles impinge on the fibres; inertial impactions as particles are thrown against fibres by the turbulent air stream; and diffusion as smaller particles vibrate with Brownian motion to collide with fibres and other particles. As a result, coalescing elements can capture particles smaller than the nominal size of the flow passages through the element. Collected liquid migrates to the crossing points of the fibres, where larger drops form or coalesce. Pressure differential through the element then forces these drops to the downstream surface of the element where they gravitate downward to the sump. The filtered air then exits through the outlet port.



FUNCTION STANDARD FILTER



Compressed air filters: see Chapter 16

FUNCTION OF PRESSURE REGULATORS AND VOLUME BOOSTERS

Regulator Operation

In a typical regulator, a poppet sets the size of an orifice which connects the inlet port to the outlet port. The sensing element, often a diaphragm or piston mechanically linked to the poppet, reacts to downstream pressure and a reference force to position the poppet. The reference can be a spring or an air pilot chamber. The valve is normally open. High pressure air enters and flows through the orifice towards the outlet. Downstream pressure is connected through an aspirator tube to the bottom of the diaphragm. As downstream pressure increases, the diaphragm is forced upwards, compressing the adjustment spring. When the diaphragm moves, the poppet spring pushes the poppet disc upwards to throttle the orifice. If downstream pressure exhausts, the mechanical sequence reverses and the poppet disc opens the orifice until the set pressure is reached again. Downstream-generated high pressure, for example, from high temperatures or heavy vertical loads on cylinders, is reduced by a self-relieving feature built into the regulator. The poppet stem normally blocks a relieving orifice in the centre of the diaphragm: If excessive pressure lifts the diaphragm off the stem, air bleeds through the orifice and out of the bonnet vent until the system returns to the set pressure.

Regulation

An air regulator is a specialised control valve. It reduces the upstream supply pressure level to a specified constant downstream pressure, regardless of variations in the upstream pressure or changes in flow through the regulator.

Pneumatic equipment that is operated at higher-than-recommended pressure wastes the energy for generating that pressure. This creates a potential safety hazard and probably causes premature wear. Operating below specified pressure can cause the machine to fail to meet design performance specifications. Therefore, precise air pressure control is essential for efficient operation or air-powered equipment.

Regulator Construction

Regulators are generally constructed using a die-cast metal body. Other external parts, such as the spring cage and bottom plug, may be either metal or plastic. All-metal construction offers more durability in tough applications where abuse is likely to occur, while plastic constructions are lower in cost. For normal industrial applications, temperature ranges of 4 °C / 40 °F to 50 °F / 120 °F and supply pressure to 20 bar / 300 psi, either construction will serve well. Lightweight diaphragm sensors offer quick response and high sensitivity to air pressure changes. Piston sensors are somewhat slower but may be more durable. Where downstream pressure requirements change rapidly enough to cause regulator chatter, slower response may be an advantage. If the self-relieving feature is not needed for an application, simpler non-relieving regulators are available. For regulators with an adjustment spring, a T-handle, knob or plunger provides the external link to the spring on various models. Locking and tamper-proof arrangements are offered, as well as factory-set regulators with no external adjustment.

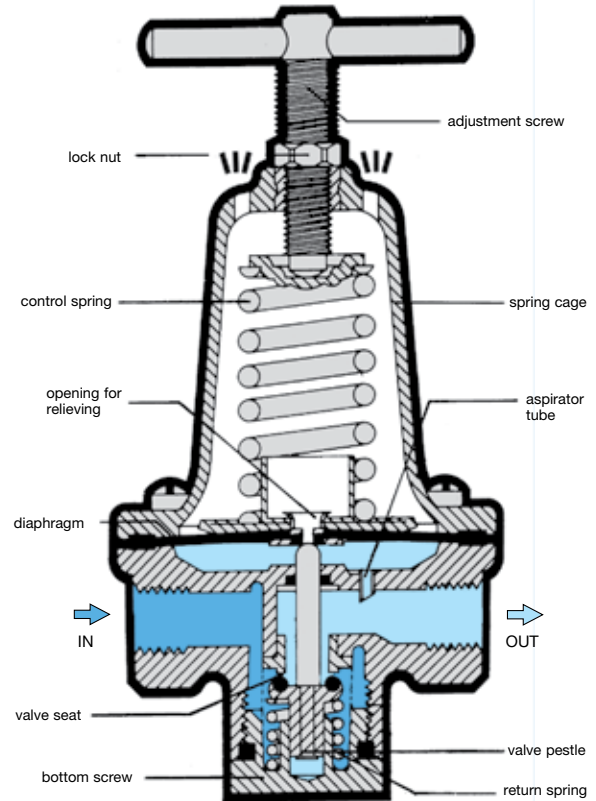
Volume Booster

Pilot-operated regulators substitute air pressure in the chamber above the sensor to provide the reference force. Remote adjustment through a separate pilot regulator is thus possible or the pilot signal can be fed back from a downstream location for precise control.

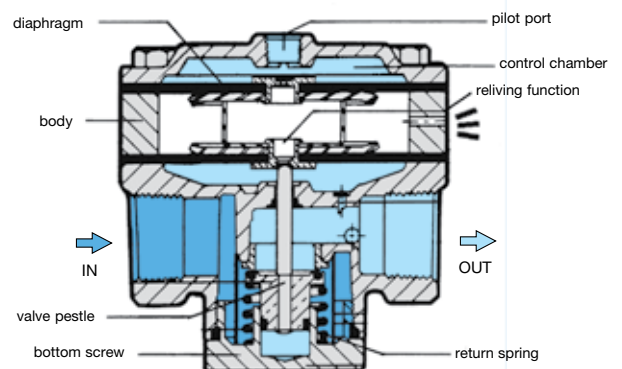
The balanced poppet design exposes both sides of the poppet to essentially the same pressure. This eliminates much of the effect that changes in inlet pressure might have on poppet position and orifice opening.

A small constant bleed passage through the diaphragm or piston prevents the poppet from sitting tightly and improves response.

Pressure regulator with manual adjustment



Remote-controlled pressure regulator, volume booster, pilot pressure minder



Control of a remote-controlled controller with external feedback



FUNCTION VOLUME BOOSTER



pressure regulator: see Chapter 1 to 5
Volume booster: see Chapter 6

FUNCTION OF FILTER REGULATORS

What is a Filter Regulator?

Filter regulators offer economy of space, performance and price. These space-saving designs give you the same basic features as the individual filter and regulator models.

Regulator Operation

In a typical regulator, a poppet sets the size of an orifice which connects the inlet port to the outlet port. The sensing element, often a diaphragm or piston mechanically linked to the poppet, reacts to downstream pressure and a reference force to position the poppet. The reference can be a spring or an air pilot chamber. The valve is normally open. High pressure air enters and flows through the orifice towards the outlet. Downstream pressure is connected through an aspirator tube to the bottom of the diaphragm. As downstream pressure increases, the diaphragm is forced upwards, compressing the adjustment spring. When the diaphragm moves, the poppet spring pushes the poppet disc upwards to throttle the orifice. If downstream pressure exhausts, the mechanical sequence reverses and the poppet disc opens the orifice until the set pressure is reached again. Downstream-generated high pressure, for example, from high temperatures or heavy vertical loads on cylinders, is reduced by a self-relieving feature built into the regulator. The poppet stem normally blocks a relieving orifice in the centre of the diaphragm: If excessive pressure lifts the diaphragm off the stem, air bleeds through the orifice and out of the bonnet vent until the system returns to the set pressure.

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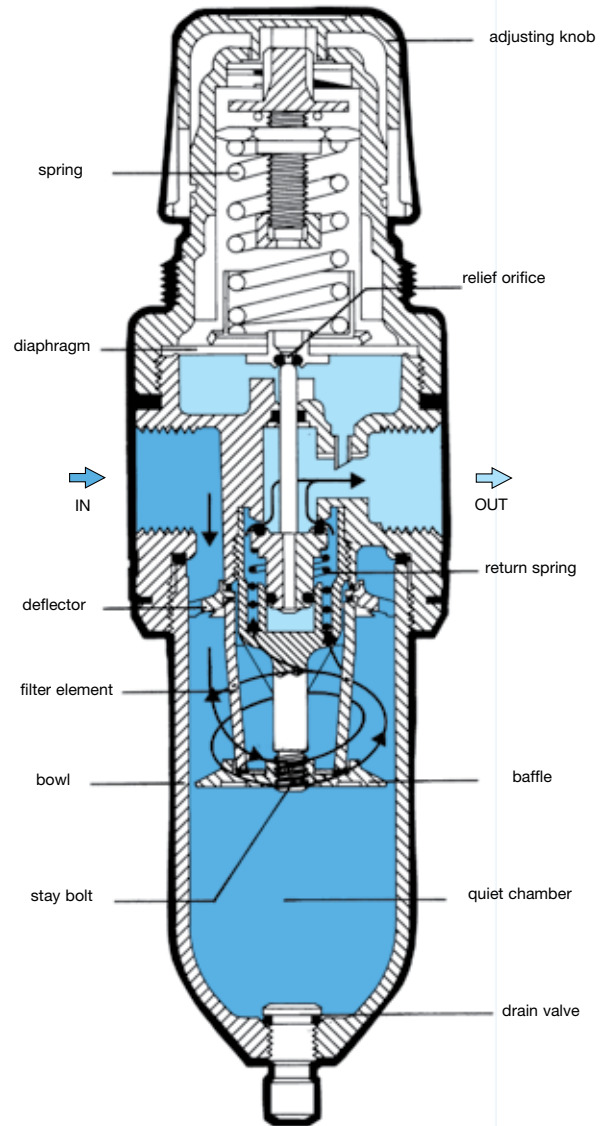
Filtration

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Most pneumatic filters consist of two basic elements: a die-cast body, into which the inlet and outlet piping is connected, and a sealed removable bowl which contains collected contaminants. The bowl is fitted with a drain mechanism to remove liquids before they rise to the baffle level. The drain system usually operates while the filter is under pressure, but the unit must be exhausted to remove the bowl for cleaning and element service. The piping need not be disturbed. Generally a transparent bowl is the most convenient because it provides easy visual inspection of the sump level. However, hostile environment, higher pressure, or higher temperature may require a metal bowl for safety. The most common plastic used for bowls is polycarbonate. This material performs satisfactorily for air pressures below 10 bar / 150 psig and temperatures between 4 °C / 40 °F and 50 °C / 120 °F, but polycarbonate can be attacked by several chemicals. AirCom offers both polyethylene and metal bowl guards for added safety. As the pressure or temperature requirement increases, you may have to specify a metal bowl with

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FUNCTION FILTER PRESSURE REGULATOR



Filter regulators: see chapter 17

FUNCTION OF COMPRESSED AIR LUBRICATORS

Lubrication

Many pneumatic system components and most pneumatic tools require oil lubrication for proper operation and long service life. This lubricant is typically carried by air stream. Too little oil can cause excessive wear and premature failure. Too much oil is wasteful and can become a contaminant, particularly when carried over with the air exhaust. Intermittent lubrication may be the worst situation because the oil film can dry out to form sludges and varnishes on internal surfaces.

Air line lubricators meter oil from a reservoir into the moving air stream. In general terminology, the oil droplets are usually termed a fog. For best results, the lubricator should be located as close as possible to the point where lubrication is required.

Lubricator Construction

Bowls are available in polycarbonate and metal, subject to the same constraints discussed in the filter section. Transparent polycarbonate simplifies inspection of the oil level and checking for dirt and liquid condensate in the oil. Note that the system must be exhausted before removing the bowl. In some models, the system must also be exhausted before opening the fill plug to recharge the lubricator. Other designs automatically bypass the air during refilling.

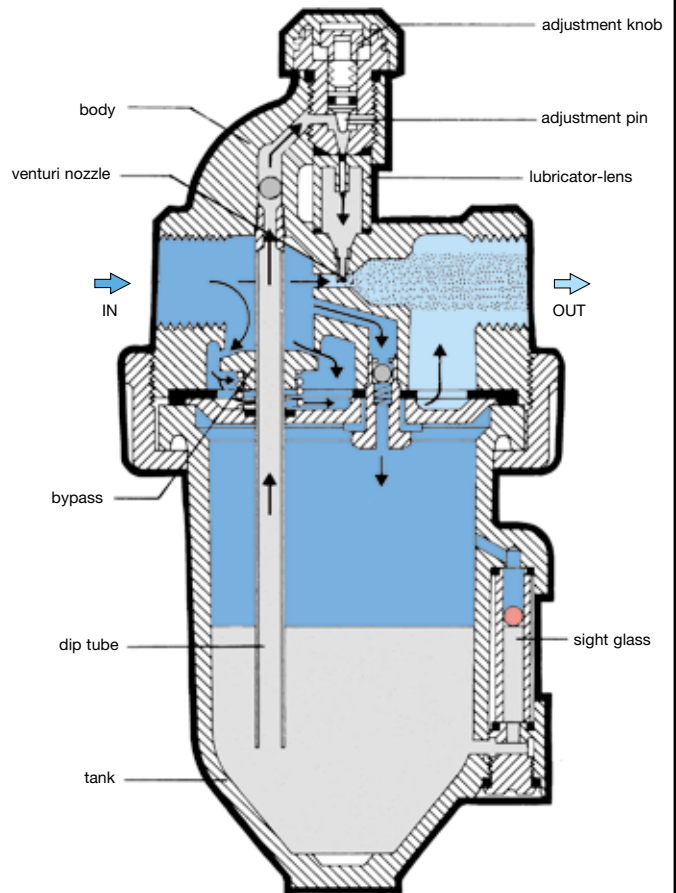
Lubricator Operation

Most lubricator designs include a high-velocity venture section in the air flow path which creates a low-pressure area to draw oil from the reservoir through the capillary tube to the point of injection. There, the air stream breaks up the oil into droplets. In a typical lubricator (see figure), filtered and regulated air enters the lubricator housing and is channelled in either of two directions depending on the flow rate. At low flow rates, all the air passes through the venture where it mixes with metered oil droplets. Under higher flow conditions, the spring-loaded bypass valve opens and the excess flow bypasses the venture, then blends with the lubricated air at a downstream point. A manual adjustment of the needle valve in the housing sets the oil drip-rate into the air stream; a sight glass allows that rate to be monitored. Fill plugs at the lubricator top provide access to refill the reservoir with oil. The bowl is removable for cleaning.

How to Select the Proper Lubricator

Use of the proper lubricator can greatly extend the life of expensive downstream pneumatic equipment. Lubricators often are selected according to pipe size. Other selection factors are type of bowl material, bowl size and refilling system capability. Bowls are available in both polycarbonate and metal. Polycarbonate offers the advantage of transparency, for simplified inspection of oil level and condition. However, caution must be exercised when using polycarbonate bowls in any area where certain chemicals are used.

In addition to choice of bowls, minimum and maximum flow rates and pressure requirements should also be considered. Be sure to check the pressure drop curves, to make certain the selected model will not create a higher pressure drop than the system design can tolerate.



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CERTIFICATIONS | DOCUMENTATION | SERVICE FEATURES

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CERTIFICATE ACCORDING TO EN10204

Certificate	2.1	25,00 €
Certificate	2.2	25,00 €
Certificate for Material	3.1	50,00 €
Certificate for Material	for RUG	130,00 €

SINGLE DEVICE TEST CERTIFICATE

Single device test certificate with document	on request
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TEST CHART, CALIBRATION

Test chart	charged per measuring point	25,00 €
Calibration chart	charged per measuring point	30,00 €

DOCUMENTATION

Extra copy	10,00 €
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SERVICE INCLUDING HOUR OF TRAVEL AND WAITING

Man hour	service technician	55,00 €
	engineer	90,00 €

PRESSURE REGULATOR – QUICK FINDER

1 MINIATURE PRESSURE REGULATORS

2 STANDARD PRESSURE REGULATORS

3 LOW PRESSURE REGULATORS

4 HIGH PRESSURE REGULATORS

5 DIFFERENTIAL PRESSURE REGULATORS

6 VACUUM PRESSURE REGULATORS

7 PRECISION PRESSURE REGULATORS

8 PRESSURE REGULATORS FOR WATER

9 BACK PRESSURE REGULATORS

10 VOLUME BOOSTER

11 WITH MECHANICALLY FEATURES

12 WITH PNEUMATICALLY FEATURES

13 WITH SPECIAL MATERIALS

14 FOR EXTREMELY TEMPERATURES

15 FOR SPECIAL MEDIA

16 FOR SPECIAL BRANCHES


PRESSURE REGULATORS	SPECIAL FEATURES	PRESSURE RANGE	CONNECTION THREAD	DEVICE	PAGE	
1	24 x 14, factory-set, Cartridge	2 to 6 bar	G $\frac{1}{4}$	233	1.02	
	17 x 25, factory-set, extremely small	2 to 10 bar	G $\frac{1}{4}$	R13	1.03	
	34 x 52, factory-set, extremely small	1 to 8 bar	G $\frac{1}{4}$	231	1.05	
	34 x 52, factory-set, extremely small	1 to 8 bar	G $\frac{1}{4}$	239	1.04	
	19 x 54, factory-set, extremely small, with exhaust	2 to 8 bar	G $\frac{1}{4}$ - G $\frac{3}{4}$	232	1.06	
	22 x 77, adjustable, extremely small	1 to 3 bar	G $\frac{1}{4}$	R33	www*	
	18 x 61, FKM, EPDM	0.2 - 1.4 / 7 bar	10-32", M5, ½"NPT	MAR	1.08	
	19 x 40, adjustable, extremely small	0.2 - 2.0 / 8 bar	M5	RR-M5	1.07	
	29 x 29, precision regulator, light-weight	0.03 - 0.2 / 6 bar	10-32", flange	R900	1.09	
	29 x 40, precision regulator, light-weight	0.03 - 0.2 / 6 bar	½"NPT	R800	1.09	
	32 x 35, precision regulator, light-weight	0.01 - 0.7 / 7 bar	flange R6	R6	1.12	
	32 x 35, interlocking	0.01 - 0.7 / 7 bar	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, SS	R7	1.13	
	40 x 40, made of plastic, also for water	0 - 1.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R25	9.02	
	52 x 52, made of plastic, also for water	0 - 1.8 / 9 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R45	9.02	
	40 x 42, acetal, also for drinking water	0.1 - 3.5 / 8.5 bar	G $\frac{1}{4}$, ¼"NPT	R91	www*	
	40 x 40, precision regulator, pressure compensated	0.2 - 2.0 / 9 bar	flange	R342	1.14	
	40 x 40, precision regulator, without constant bleed	0.2 - 2.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	1.14	
	35 x 76, made of brass, also for water	0.1 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364	1.15	
	35 x 76, made of aluminium	0.1 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R374	1.15	
	precision regulator, pressure compensated	0.1 - 3.0 / 6 bar	G $\frac{1}{8}$	R309	1.16	
	P1:25 bar, pressure compensated	0.1 - 3.0 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.16	
	FDA, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R037	1.17	
	with increased accuracy, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.11	
	precision regulator, pressure compensated	0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.11	
	precision regulator, also for O $_2$	0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307	1.18	
	precision regulator, also for O $_2$	0 - 0.25 / 8 bar	flange	R308	1.19	
precision regulator, very accurate	0.05 - 2.0 / 8 bar	G $\frac{1}{8}$	RI	5.02		
precision regulator, very accurate	0 - 0.35 / 7 bar	M5, flange	RT	1.10		
Cartridge, 260 l/min	1 - 8 bar	Cartridge	RC	1.20		
2	for air or water	0 - 4.0 / 12 bar	G $\frac{1}{8}$ - G1	R035 ... R095	2.03	
	with FKM also	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R10 / R11	2.05	
	with external feedback	0.2 - 7 bar	G $\frac{1}{4}$	R218	2.04	
	interlocking	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G1	R20 / R21	2.02	
	very robust	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119	2.06	
	zinc diecasting	0.2 - 1.5 / 15 bar	G $\frac{1}{8}$ - G2	RD1 ... RD4	2.08	
	adjustment dial pressure regulator, pre-controlled	0 - 3.0 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.12	
	with joint supply	0.1 - 3.0 / 16 bar	G $\frac{1}{8}$ - G $\frac{1}{2}$	RB / R035	2.10	
	lockable	0,1 - 3,0 / 16 bar	G $\frac{1}{8}$ - G1	RS	2.11	
	3	factory-set	50 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R01	3.02
		miniature	25 - 50 / 1400 mbar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R01-5/-6	3.03
miniature		20 - 150 / 500 mbar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R01-2/-4	3.03	
P1: 0.4 bar		2 - 16 / 100 mbar	G $\frac{1}{2}$ - G2	RGDJ	3.04	
P1: 4 bar		5 - 12 / 350 mbar	G $\frac{1}{2}$ - G1½	RGB4	3.05	
P1: 6 bar, for many gases		5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160	3.06	
P1: 20 bar		10 - 18 / 4400 mbar	G1 - G1½, DN50	RZ	3.08	
precision pressure regulator, relieving		2 - 45 / 350 mbar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R4100	3.09	
precision pressure regulator, relieving		2 - 35 / 800 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.15	
precision pressure regulator, for pure gases 5.0		5 - 50 / 1500 mbar	G $\frac{1}{2}$	RR	3.10	
stainless steel		5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100	15.12	
booster P1: max. 0,4 bar		2 - 55 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	6.13	
booster P1: max. 4 bar		5 - 350 mbar	G $\frac{1}{2}$ - G1½	RGB4-J	6.13	
booster P1: max. 20 bar	10 - 350/1000 mbar	G1 - G2	RZ-J	6.10		

* visit our webshop: www.aircom.net

PRESSURE REGULATOR – QUICK FINDER

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	PRESSURE REGULATORS	SPECIAL FEATURES	PRESSURE RANGE	CONNECTION THREAD	DEVICE	PAGE	
	4	for water and oxygen also for many gases	Kv: 0.3 - 25.6 Kv: 0.2 - 70	40 / 0.2 - 3.0 / 35 bar 50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2 G $\frac{1}{4}$ - G2, DN100	R280 R120	4.02 4.04
		for water and oxygen also	Kv: 1.3 - 3.2	60 / 0.5 - 12 / 50 bar	G $\frac{1}{4}$ - G1	R286	4.08
		cylinder pressure regulator		100 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147	4.14
		cylinder pressure regulator		200 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-247	4.14
		cylinder pressure regulator		200 / 0 - 1.5 / 40 bar	different	RH201/RH202	4.12
		great nominal size	Kv: 0.9	207 / 0.2 - 1.7 / 14 bar	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH2	4.16
		for many gases	Kv: 0.05 - 3.5	200 / 0.1 - 1.5 / 200 bar	G $\frac{1}{4}$ - G $\frac{1}{4}$	RH10	4.10
		made of stainless steel	Kv: 0.05 - 3.5	200 / 1 - 8.0 / 200 bar	G $\frac{1}{4}$ - G $\frac{1}{4}$	RH3000	15.16
		for many gases	Kv: 0.02	207 / 0.1 - 3.5 / 12 bar	$\frac{1}{4}$ "NPT	RH83	4.09
		miniature	Kv: 0.05	241 / 0.2 - 2.0 / 7 bar	$\frac{1}{4}$ "NPT	RH0	4.15
	up to 690 bar	great nominal size	Kv: 1.7	260 / 0.7 - 2.1 / 104 bar	$\frac{1}{2}$ "NPT u. $\frac{3}{4}$ "NPT	RH3	4.19
		many pressure ranges	Kv: 0.05	300 / 0.1 - 1.7 / 35 bar	$\frac{1}{4}$ "NPT	HP500	4.18
		cylinder pressure regulator		300 / 0 - 1.5 / 40 bar	different	RH300	4.13
		cylinder pressure regulator		300 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347	4.14
		very robust	Kv: 0.13	380 / 0.3 - 2.0 / 35 bar	$\frac{1}{4}$ "NPT	RHB	www*
		made of stainless steel		380 / 0.3 - 2.0 / 15 bar	$\frac{1}{4}$ "NPT	RHB-S	www*
		miniature	Kv: 0.05	414 / 0.5 - 5 / 124 bar	$\frac{1}{4}$ "NPT	RH1	4.15
		many pressure ranges	Kv: 0.05	414 / 0.3 - 35 / 414 bar	$\frac{1}{4}$ "NPT	HP300	4.17
		Messing	Kv: 0.05	0,7 ... 104 / 172 bar	$\frac{1}{4}$ "NPT	HP306	4.21
		stainless steel also	Kv: 0.05	414 / 0.7 - 104 / 172 bar	$\frac{1}{4}$ "NPT	HP400	4.17
		made of brass	Kv: 0.03	414 / 0 - 14 / 28 bar	$\frac{3}{8}$ "NPT - $\frac{1}{2}$ "NPT	RH4	4.20
		stainless steel	Kv: 0.05	690 / 0.3 - 35 / 414 bar	$\frac{1}{4}$ "NPT	HP300-S	4.17
		booster		50 / 1 - 15 bar	G $\frac{1}{4}$ - G1	R120-J2	6.17
		booster		50 / 1 - 50 bar	G $\frac{1}{4}$ - G2	R120-J5	6.17
		booster, stainless steel,	Kv: 2.9	100 / 0.1 - 24 / 99 bar	G1	RLE	6.16
booster, brass	Kv: 2.9	100 / 0.1 - 24 / 99 bar	G1	RLM	6.16		
booster, 1:2 - 1:19,	Kv: 1.7	260 / 3 - 42 / 104 bar	$\frac{1}{2}$ "NPT	RH3-J	6.14		
booster	Kv: 0.3	414 / 0 - 41 bar	$\frac{3}{8}$ "NPT and $\frac{1}{2}$ "NPT	RH4-J	4.20		
differential pressure regulator		414 / 0 - 1 / 24 bar	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44	4.22		
5	precision regulator, without constant bleed		0 - 1 / 10 bar	G $\frac{1}{4}$ u. G $\frac{3}{8}$	R650	6.04	
	with inlet pressure 0 - 1 bar		0.05 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J1	6.07	
	with inlet pressure 0 - 6 bar		0.05 - 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J6	6.07	
	high-, differential pressure regulator 0 - 1/24 bar		414/0 - 1/24 bar	$\frac{1}{2}$ "NPT and $\frac{3}{4}$ "NPT	RH44	4.22	
6	22 l/min		0.15 - 1 bar _{abs}	$\frac{1}{8}$ "NPT	V800	7.02	
	22 l/min		0.15 - 1 bar _{abs}	10-32", flange	V900	7.02	
	70 l/min		0 - 1.14 / 11 bar _{abs}	G $\frac{1}{4}$	R250	7.03	
	330 l/min		0.01 - 1 bar _{abs}	G $\frac{1}{4}$ - G $\frac{1}{2}$	V170	7.04	
	800 l/min		0 - 1.07 / 11 bar _{abs}	G $\frac{1}{2}$ and G $\frac{3}{4}$	R251	7.05	
	60 - 1100 l/min, vacuum adjustment valve		0.01 - 0,7 bar _{abs}	G $\frac{1}{8}$ - G1	V04	7.06	
	260 - 700 l/min, vacuum adjustment valve		0.01 - 1 bar _{abs}	G $\frac{1}{4}$ - G1	V05	7.06	
7	without constant bleed	pressure compensated, miniature		0.2 - 2.0 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	www*
		pressure compensated, miniature		0.2 - 2 / 9 bar	flange	R342	www*
		pressure compensated, miniature		0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307	1.16
		pressure compensated, miniature		0.1 - 3 / 6 bar	G $\frac{1}{8}$	R309	1.14
		pressure compensated, miniature		0.2 - 2.5 / 8 bar	flange	R308	1.17
		pressure compensated, miniature		0.1 - 1.0 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-FK	1.13
		robust		0.01 - 0.6 / 3.5 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R216	5.05
		robust		0.01 - 1 / 16 bar	G $\frac{1}{4}$	R217	5.12
		non-relieving		0.01 - 0.14/ 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102...-N	5.07
		non-relieving		0.01 - 0.14/ 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-K	5.06
		recommended for mbar-range		0.001 - 0.14/ 14 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R300-K	5.08
		also differential pressure regulator		0 - 1 / 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650	6.04
	good flow		0.03 - 0.7 / 10 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R100	5.09	
	good flow, high-precision		0.03 - 0.7 / 17 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R400	5.15	
	low pressure regulator, very precise		0.005 - 0.05/ 1.5 bar	G $\frac{1}{2}$	RR	3.10	
	low pressure regulator, high-precision		0.002 - 0.045/0.35 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R4100	3.09	
	with constant bleed	miniature, interlocking		0.01 - 0.7 / 7 bar	flange	R6	1.10
		many variations	mini	0.01 - 0.7 / 7 bar	M5, G $\frac{1}{8}$, G $\frac{1}{4}$, SS	R7	1.11
		small and light-weight	mini	0.03 - 0.2 / 7 bar	10-32", flange	R900	1.09
		small and light-weight	mini	0.01 - 0.2 / 7 bar	$\frac{1}{8}$ "NPT	R800	1.09
		high accuracy,	mini	0 - 0.35/ 7 bar	M5, flange	RT	www*
		high accuracy,	mini	0.05 - 2 / 8 bar	G $\frac{1}{8}$, flange	R90	5.03
		high accuracy,	mini	0.05 - 2 / 8 bar	G $\frac{1}{8}$	RI	www*
Precision Pressure		pressure compensated, mini		0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.13
	pressure compensated, mini		0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039-F	1.13	
with constant bleed	proven		0.020 - 0.5 / 10 bar	G $\frac{1}{4}$	11-818	5.06	
	high accuracy, wide control range		0.002 - 0.12/ 31 bar	$\frac{1}{4}$ "NPT	R40	www*	
	high accuracy,	proven	0.140 - 1.7 / 8 bar	G $\frac{1}{4}$, $\frac{1}{4}$ "NPT	53.10	5.04	
	low-cost		0.010 - 0.14/ 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230	5.09	





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PRESSURE REGULATORS	SPECIAL FEATURES	PRESSURE RANGE	CONNECTION THREAD	DEVICE	PAGE	
Regulator (continuation)	2-stage	0,14 ... 2,7 / 8,2 bar	¼"NPT - ¾"NPT	R700	5.13	
	guter Flow, hochgenau	0,03 - 1,15/ 14 bar	¼"NPT - ¾"NPT	R410	5.14	
	good exhaust	0.010- 0.14/ 28 bar	G¼ - G½	102..	5.07	
	preiswert	0,010- 0,14/ 10 bar	G¼ - G½	R230	5.06	
	recommended for mbar-range	0.001- 0.14/ 7 bar	G¼ - G¾	R300	5.08	
	low pressure	0.35 /800 bar	G¼ - G½	R110	5.11	
	robust	0.010- 3 / 10 bar	G¼ - G½	R03	5.10	
	high volume flow rate	0.001- 0.7 / 10 bar	G1 - G1½	R102	5.16	
		factory-set, also for water	1 / 2 / 3 /... 8 bar	G¼	239A	1.06
		factory-set, also for drinking water	1 / 2 / 3 /... 8 bar	G¼	239K	9.03
	miniature	extremely small	0 - 2 / 8 bar	M5	RR-K	1.08
	Regulator (continuation)	diameter 18 mm	0 - 1 / 7 bar	M5 / ¼"NPT	MAR	www*
azetal, 40 x 40		0 - 1 / 9 bar	G¾ and G¼	R25	9.02	
brass, 35 x 35		0 - 1 / 11 bar	G¾ and G¼	R364	1.15	
POM, 40 x 40, also deionized water		0 - 1 / 12 bar	G¾ and G¼	R037	1.12	
brass, 40 x 40, also for brake fluids		0 - 3 / 16 bar	G¾ and G¼	R310	1.14	
plastic, 40 x 40, with increased accuracy		0 - 1 / 12 bar	G¾ and G¼	R039	1.13	
plastic, 40 x 40, with high precision		0 - 1 / 12 bar	G¾ and G¼	R039-F	1.13	
azetal, 40 x 42, for drinking/deionized water		0 - 3 / 8 bar	G¼	R91-K	www*	
standard		plastic, block design	0 - 4 / 12 bar	G¾ - G1	R035...R095	2.03
		brass P1 max. 40 bar	0 - 3 / 35 bar	G¼ - G2	R280	4.02
		brass P1 max. 60 bar	0 - 12 / 50 bar	G¼ - G1	R286	4.08
		brass P1 max. 50 bar, up to DN100	0 - 1 / 50 bar	G¼ - G2	R120	4.04
	brass P1 max. 60 bar	0 - 2 / 45 bar	G¼ - G2	RWI	9.04	
	brass P1 max. 25 bar, with male thread	0 - 2 / 20 bar	R¾" - R2½"	RWA	9.06	
	brass P1 max. 40 bar, with flange	0 - 2 / 20 bar	DN8 - DN125	RWF	9.08	
pilot-operated	brass P1 max. 21 bar, miniature	0 - 1 / 11 bar	G¾ - G¼	R364-J	www*	
	brass P1 max. 50 bar, diaphragm/piston	0 - 15 / 50 bar	G¼ - G2	R120-J	6.17	
	brass P1 max. 140 bar, piston	0 - 24 / 99 bar	G1	RLM	6.16	
Regulator (continuation)	with male thread, very small	1 - 2 / 14 bar	G¾	59	8.14	
	with male thread, tapped exhaust	0 - 3 / 7 bar	G¼	130	8.14	
	brass, tapped exhaust	0 - 1 / 7 bar	G¼	134	8.14	
	standard	aluminium P1 max. 30 bar	0 - 1 /15 bar	G¾ - G2	DBC	8.02
		brass	0 - 0.1 /50 bar	G¾" - G2	DBM	8.04
	precise	aluminium P1 max. 35 bar	0 - 0.1 /28 bar	G¼ - G½	10BP	8.06
		aluminium P1 max. 17 bar	0 - 0.1 /10 bar	G¼ - ½"NPT	DB240	8.07
		aluminium P1 max. 17 bar	0 - 0.1 /10 bar	G¾ - G¾	DB400	8.09
		aluminium P1 max. 10 bar	0 - 0.1 / 7 bar	G¼ and G¾	DB300	8.10
	low pressure	aluminium P1 max. 10 bar	0 - 35 / 800 mbar	G¼ - G½	DB110	8.08
		aluminium P1 max. 6 bar	0 - 45 / 3000 mbar	G½ - G2	DBC	8.11
	pilot-operated	aluminium P1 max. 17 bar, precise	0 - 10 bar	G¼ - G½	DB208	8.12
	aluminium P1 max. 17 bar, precise	0 - 10 bar	G¾ - G¾	DB450	8.13	
Regulator (continuation)	miniature, also for water	0 - 6 bar	G¾ - G¼	R035-J	6.02	
	miniature, also for water	0 - 11 bar	G¾	R364-J	6.02	
	also for differential pressure	0 - 1 / 10 bar	G¼ and G¾	R650	6.04	
	also for differential pressure	0 - 10 bar	G¼ - G½	R03-J	6.07	
	precise, with ratio 1:2 to 1:6	0 - 10 bar	G¼ and G¾	R750	6.05	
	precise, with ratio 1:2 to 1:6 / 2:1 to 5:1	0 - 10 bar	G¼ and G¾	R208	6.06	
	precise high exhaust	0 - 10 bar	¾"NPT u. 1"NPT	R600	6.08	
	precise stainless steel	0 - 10 bar	¾"NPT u. 1"NPT	R601	15.20	
	with ratio also 1:2 / 1:3 / 2:1 / 3:1	0 - 10 bar	G½ and G¾	R450	6.09	
	precise	0 - 10 bar	G1 and G1½	R200	6.11	
	precise, high exhaust	0.2 - 18 bar	G¼ - G1¼	R116	6.10	
	precise, high exhaust	0 - 10 bar	G¾ and G1	R490	www*	
precise, very high exhaust	0 - 10 bar	1½"NPT	R201	6.11		
sehr robust	0.2 - 18 bar	G¼ - G3	R119-J	6.13		
low pressure	2 - 55 / 100 mbar	G½ - G2	RGDJ-J	6.15		
low pressure	5 - 350 mbar	G½ - G1½	RGB4-J	6.15		
low pressure	10 - 350/1000 mbar	G1 - G2	RZ-J	6.02		
very precise, wide pressure ranges	0.002 - 0.12/ 31 bar	¼"NPT	R40A	www*		
high pressure, brass	50 / 1 - 15 / 50 bar	G¼ - G2	R120-J	6.17		
high pressure, stainless steel	50 / 1 - 15 / 50 bar	G¼ - G2	R3000-J	15.18		
high pressure, stainless steel	100 / 0.1 - 24 / 99 bar	G1	RLE	6.16		
high pressure, brass	100 / 0.1 - 24 / 99 bar	G1	RLM	6.16		
high pressure, 1:2 up to 1:19	260 / 3 - 42 / 104 bar	½"NPT and ¾"NPT	RH3-J	6.14		




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11 flange bottom side 	mini	0.01 - 0.7 / 7 bar	flange	R6	1.10	
	mini	0 - 0.25 / 8 bar	flange	R308	1.17	
	mini, precision pressure regulator	0.03 - 0.2 / 6 bar	flange	R900-M	1.09	
	mini, precision pressure regulator	0 - 0.35 / 7 bar	flange	RT-F	www*	
	mini, precision pressure regulator	0.05 - 2 / 8 bar	G $\frac{1}{8}$, flange	R90	5.02	
	mini, precision pressure regulator	0.2 - 2 / 9 bar	flange	R342	www*	
	flange at the side 	lockable	0.2 - 1.8 / 17 bar	DN15 - DN25	R20 - F	2.02
		P1: 40 bar	0.2 - 3 / 35 bar	DN15 - DN50	R280 - F	4.02
		very robust	0.2 - 1.8 / 17 bar	DN15 - DN80	R119 - F	2.04
		booster	0.2 - 1.8 / 17 bar	DN15 - DN80	R119 - JF	6.13
P1: 50 bar		0.1 - 1.5 / 50 bar	DN15 - DN100	R120 - F	4.04	
low pressure regulator		2 - 16 / 100 mbar	DN15 - DN50	RGDJ - F	3.04	
low pressure regulator		5 - 12 / 350 mbar	DN15 - DN40	RGB4 - F	3.05	
low pressure regulator		10 - 18 / 4400 mbar	DN25 - DN50	RZ - F	3.08	
low pressure regulator		5 - 45 / 6000 mbar	DN25 - DN50	R160 - F	3.06	
stainless steel low pressure regulator		5 - 45 / 7000 mbar	DN15 - DN50	R3100- F	15.14	
stainless steel		0.1 - 1.5 / 50 bar	DN15 - DN50	R3000- F	15.06	
stainless steel variations		0.2 - 3 / 16 bar	DN15 - DN25	REA - F	15.11	
booster		1 - 15 / 50 bar	DN15 - DN50	R3000- JF	15.18	
special flanges	stainless steel, milk pipe, many variations	0.2 - 3 / 16 bar	milk pipe	REA - M	15.11	
	stainless steel, welding ends	0.2 - 3 / 16 bar	welding ends	REA - A	15.11	
	stainless steel, Tri-Clamp	0.2 - 1.5 / 8 bar	ASME BPE $\frac{1}{4}$ " - $\frac{1}{2}$ "	RTC	15.12	
	stainless steel, Tri-Clamp	5 - 45 / 1200 mbar	ASME BPE $\frac{1}{2}$ " - $\frac{1}{2}$ "	RTCN	15.13	
adjustment dial	pilot-operated	0 - 3 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.10	
press. regulator Cartridge	150 / 260 l/min	1 - 8 bar	Cartridge	RC	1.18	
lockable	precision pressure regulator	0.02 - 0.5 / 10 bar	G $\frac{1}{8}$	11-818-A	5.03	
12 tapped exhaust 	precise	0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102..-E	5.07	
	precise	0.01 - 0.14 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-X12	5.06	
	precise	0.03 - 0.7 / 17 bar	G $\frac{3}{8}$ - G $\frac{3}{4}$	R400-X12	5.15	
	precise	0.001 - 0.7 / 10 bar	G1 - G1 $\frac{1}{2}$	R102	5.16	
	precise	0 - 1 / 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R650-X12	6.04	
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R750-X12	6.05	
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208-X12	6.06	
	precise, with transmission ratio	0 - 10 bar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450-X12	6.09	
	low pressure	0 - 35/800 mbar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R110	5.11	
	high exhaust	0 - 10 bar	G1 and G1 $\frac{1}{2}$	R200-X12	6.11	
	booster	1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-JX12	6.17	
joint supply	miniature	0 - 6 bar	G $\frac{1}{8}$	R035	2.08	
	standard	0.1 - 3 / 16 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RB	2.08	
quick exhaust	precision pressure regulator	0.01 - 0.14 / 10 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	R230-X80	5.06	
pressure compensated	precision pressure regulator, mini	0.1 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310	1.14	
	precision pressure regulator, mini	0.1 - 1 / 12 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R039	1.13	
	precision pressure regulator, mini	0.2 - 2 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	www*	
	precision pressure regulator, mini	0.2 - 2 / 9 bar	flange	R342	www*	
	precision pressure regulator, mini	0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307	1.16	
external feedback	pre-pressure regulator for booster	0.2 - 7 bar	G $\frac{1}{4}$	R218	6.03	
	booster	0 - 10 bar	G $\frac{1}{2}$ and G $\frac{3}{4}$	R450-X27	6.09	
high flow rate 	standard 110.000 l/min	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119	2.06	
	booster 110.000 l/min	0.2 - 1.8 / 17 bar	G $\frac{1}{4}$ - G3	R119-J	6.15	
	high pressure regulator 76.000 l/min	50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2, DN100	R120	4.04	
	booster 76.000 l/min	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J	6.17	
	made of zinc	30 / 0.2 - 1.5 / 15 bar	G $\frac{1}{8}$ - G2	RD	2.06	
	made of brass	40 / 0.2 - 3 / 35 bar	G $\frac{1}{4}$ - G2	R280	4.02	
	adjustment dial pressure regulator	0 - 3 / 11 bar	G $\frac{1}{4}$ - G2	R11 ... R41	2.10	
	low pressure regulator	2 - 16 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ	3.04	
	booster	2 - 55 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J	6.15	
	low pressure regulator	10 - 18 / 4400 mbar	G1 and G1 $\frac{1}{2}$, DN50	RZ	3.08	
	low pressure regulator	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160	3.06	
	spheroidal cast iron, red brass, stainless steel	0.14 - 1.7 / 9 bar	G $\frac{1}{2}$ - G2, flange	RU	9.12	
	stainless steel	50 / 0.1 - 1.5 / 50 bar	up to G2	R3000	15.06	
	stainless steel booster	50 / 1 - 15 / 50 bar	up to G2	R3000-J	15.18	
	stainless steel	5 - 45 / 7000 mbar	up to G2	R3100	15.14	
	pharmacy	5 - 7 / 450 mbar	up to G2 $\frac{1}{2}$	R74	www*	
	pharmacy	0.25 - 0.4 / 53 bar	up to G2 $\frac{1}{2}$	R70	www*	

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13 made of stainless steel 	mini	0.2 - 1.8 / 9 bar	G $\frac{1}{4}$	R364-S	15.03	
	standard	0.2 - 4 / 17 bar	G $\frac{1}{2}$	R10-S	15.02	
	standard	0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2	R3000	15.06	
	many variations	0.2 - 3 / 16 bar	G $\frac{1}{4}$ - G2	REA	15.11	
	for pure gases	0.05 - 2 / 4 bar	M5 - G $\frac{1}{8}$	RE1	15.04	
	low pressure regulator	5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100	15.14	
	pharmacy	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R74	www*	
	pharmacy	0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R70	www*	
	high pressure regulator	200/1 - 8 / 200 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH3000	15.16	
	high pressure regulator	241/0.2 - 2 / 7 bar	$\frac{1}{4}$ " NPT	RH0-S	4.15	
	high pressure regulator	380/0.3 - 2 / 15 bar	$\frac{1}{4}$ " NPT	RHB-S	www*	
	high pressure regulator	410/0.7 - 21 / 104 bar	$\frac{1}{2}$ " NPT	RH3 -S	4.19	
	high pressure regulator	300/0.1 - 1.7/ 35 bar	$\frac{1}{4}$ " NPT	HP500-S	4.18	
	high pressure regulator	690/0.3 - 35/ 414 bar	$\frac{1}{4}$ " NPT	HP300-S	4.17	
	high pressure regulator	414/0.7 - 104/ 172 bar	$\frac{1}{4}$ " NPT	HP400-S	4.17	
	high pressure regulator, differential pressure: 0 - 1 / 24 bar	414/0 - 1 / 24 bar	$\frac{1}{2}$ " NPT and $\frac{3}{4}$ " NPT	RH44	4.22	
	water, male thread, DN 8 - DN50	0.2 - 3 / 16 bar	G $\frac{1}{2}$ - G2	REA	15.11	
	water, male thread, DN15 - DN50	0.2 - 2 / 20 bar	G $\frac{1}{2}$ - G2	RAI	9.11	
	water, flange, DN15 - DN50	0.2 - 3 / 16 bar	flange	REF	15.10	
	water, flange, DN15 - DN50	0.2 - 2 / 20 bar	flange	RAF	9.10	
	booster, for many gases	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J	15.18	
	booster, dome press. regulator	100/0.1 - 24 / 99 bar	G1	RLE	6.16	
	booster, also with transmission ratio	310 / - 42 / 104 bar	$\frac{1}{2}$ " NPT and $\frac{3}{4}$ " NPT	RH3-JS1	6.14	
	stainless steel, Tri-Clamp	0.2 - 1.5 / 8 bar	ASME BPE $\frac{1}{4}$ " - $1\frac{1}{2}$ "	RTC	15.12	
	stainless steel, Tri-Clamp	5 - 45 / 1200 mbar	ASME BPE $\frac{1}{2}$ " - $1\frac{1}{2}$ "	RTCN	15.13	
	made of plastic 	precision pressure regulator, mini	0.03 - 0.2 / 6 bar	10-32", flange	R900	1.09
		precision pressure regulator, mini	0.03 - 0.2 / 6 bar	$\frac{1}{8}$ " NPT	R800	1.09
		interlockable, mini	0.01 - 0.7 / 7 bar	G $\frac{1}{8}$, flange	R6 / R7	1.10
	made of spheroidal cast iron, red brass non-ferrous metal	for steam	0.14 - 1.7 / 9 bar	G $\frac{1}{2}$ - G2	RU	9.12
		precision pressure regulator	0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102...-X63	5.07
		precision pressure regulator	0.001 - 0.7 / 10 bar	G1 - G1 $\frac{1}{2}$	R102-X62	5.16
	nickel-plated	onyl surface nickel-plated	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-X25	www*
		completely chemical nickel-plated	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-X13	www*
		high pressure regulator, nickel-plated surface	380/0.3 - 2 / 35 bar	$\frac{1}{4}$ " NPT	RHB-X25	www*
	chrome-plated	cylinder pressure regulator	100/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147C	4.14
		cylinder pressure regulator	200/0 - 1.5 / 40 bar	diverse	RH200-C	4.12
		cylinder pressure regulator	300/0 - 1.5 / 40 bar	diverse	RH300-C	4.12
		cylinder pressure regulator	300/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH347-C	4.14
	with EPDM	miniature	0.2 - 1.4 / 7 bar	10-32", M5, $\frac{1}{8}$ " NPT	MAR-E	www*
precision pressure regulator, mini		0.1 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310-E	1.14	
low pressure regulator		5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160-E	3.06	
high pressure regulator		200/0.1 - 1.5/ 200 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH10-E	4.10	
high pressure regulator		50/0.1 - 1.5/ 50 bar	G $\frac{1}{4}$ - G2, DN100	R120-E	4.04	
booster		50/1 - 15/ 50 bar	G $\frac{1}{4}$ - G2	R120-JE	6.17	
booster		100/0.1 - 24 / 99 bar	G1	RL-E	6.16	
stainless steel, many variations		0.2 - 3 / 16 bar	G $\frac{1}{4}$ - G1	REA-E	15.11	
with PTFE	high pressure regulator	200/0.1 - 1.5/ 200 bar	G $\frac{1}{4}$ - G1 $\frac{1}{4}$	RH10-T	4.10	
with silicone	booster	0 - 10 bar	G $\frac{1}{4}$ and G $\frac{3}{8}$	R208 -A	6.06	
with stainless steel diaphragm	cylinder pressure regulator	100/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH147-M	4.14	
	cylinder pressure regulator	200/0 - 1.5/ 40 bar	diverse	RH200-M	4.12	
	cylinder pressure regulator	300/0 - 1.5/ 40 bar	diverse	RH300-M	4.12	
	cylinder pressure regulator	300/0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH347-M	4.14	
	stainless steel pressure regulator	50/0.1-1.5 / 50 bar	G $\frac{1}{8}$ - G2	R3000-TE	15.06	
	stainless steel volume booster	50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-JE	15.18	
14 	high pressure regulator	up to 106°C	380/0.3 - 2 / 35 bar	$\frac{1}{4}$ " NPT	RHB	www*
	high pressure regulator	up to 130°C	50/0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G $\frac{1}{2}$	R120 - X54	4.04
	stainless steel press. regulator	up to 130°C	50/0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2	R3000- X54	15.06
	low pressure regulator	up to 130°C	5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100- X54	15.14
	high volume booster	up to 130°C	50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-04JX54	6.17
	high volume booster	up to 130°C	50/1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J-X54	15.18
	pharmacy	up to 150°C	0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R70 - X55	www*
	pharmacy	up to 140°C	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R74 - X55	www*
	pharmacy	up to 200°C	0.25 - 0.4 / 53 bar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R70 - X56	www*
	pharmacy	up to 200°C	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R74 - X56	www*
	filter pressure regulator	up to - 40°C	0 - 0.7 / 8 bar	$\frac{1}{4}$ " NPT	B300	17.08

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PRESSURE REGULATOR – QUICK FINDER

PRESSURE REGULATORS	SPECIAL FEATURES	PRESSURE RANGE	CONNECTION THREAD	DEVICE	PAGE	
15 nitrogen, oxygen, helium, carbon dioxide, hydrogen, nitrous oxide, argon, methane, propane	low pressure regulator	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160	3.06	
	high pressure regulator	50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2, DN100	R120	4.04	
	volume booster	50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J	6.17	
	volume booster	100 / 0.1 - 24 / 99 bar	G1	RLM / RLE	6.16	
	cylinder pressure regulator	100 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147	4.14	
	cylinder pressure regulator	200 / 0 - 1.5 / 40 bar	diverse	RH200	4.12	
	cylinder pressure regulator	300 / 0 - 1.5 / 40 bar	diverse	RH300	4.12	
	cylinder pressure regulator	300 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347	4.14	
	stainless steel pressure regulator	50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{8}$ - G2	R3000	15.06	
	stainless steel volume booster	50 / 1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2	R3000-J	15.18	
	stainless steel pressure regulator	5 - 45 / 7000 mbar	G $\frac{1}{2}$ - G2	R3100	15.14	
	factory-set,	mini	2 up to 10 bar	G $\frac{1}{4}$	R13	1.04
	factory-set,	mini	1 up to 8 bar	G $\frac{1}{4}$	239M	1.06
	made of brass,	mini	0.2 - 1.4 / 7 bar	10-32", M5, 1/8" NPT	MAR - 15	www*
	precision press. regul.,	mini	0.2 - 2 / 9 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R344	www*
precision press. regul.,	mini	0.2 - 2 / 9 bar	flange	R342	www*	
precision press. regul.,	mini	0.1 - 3 / 6 bar	G $\frac{1}{8}$	R309 - 15	1.14	
brass pressure regul.,	mini	0.1 - 3 / 16 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R310 - 15	1.14	
precision press. regul.,	mini	0.1 - 1 / 12 bar	G $\frac{1}{8}$ - G $\frac{1}{4}$	R039 - 15	1.13	
precision press. regul.,	mini	0.2 - 2.5 / 8 bar	G $\frac{1}{8}$	R307 - 15	1.16	
precision press. regul.,	mini	0 - 0.25 / 8 bar	flange	R308 - 15	1.17	
precision press. regul.		0.01 - 0.6 / 3.5 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R216 - L	5.05	
precision press. regul.		0.01 - 1 / 16 bar	G $\frac{1}{4}$	R217 - 15	5.12	
precision press. regul.		0.001 - 0.14 / 7 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R300 - 15	5.08	
precision press. regul.		0.01 - 0.14 / 28 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	102.. - SC	5.07	
low pressure regulator		5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160 - 15	3.06	
high pressure regulator		40 / 0.2 - 3 / 35 bar	G $\frac{1}{4}$ - G2	R280 - 15	4.02	
high pressure regulator		50 / 0.1 - 1.5 / 50 bar	G $\frac{1}{4}$ - G2, DN100	R120 - 15	4.04	
high pressure regulator		60 / 0.5 - 12 / 50 bar	G $\frac{1}{4}$ - G1	R286 - 15	4.08	
cylinder pressure regulator		100 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147-15	4.14	
cylinder pressure regulator		200 / 0 - 1.5 / 40 bar	diverse	RH200- 15	4.12	
cylinder pressure regulator		300 / 0 - 1.5 / 40 bar	diverse	RH300- 15	4.12	
cylinder pressure regulator		300 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347-15	4.14	
high pressure regulator		414 / 0.3 - 35 / 414 bar	1/4" NPT	HP300- 15	4.17	
high pressure regulator		414 / 0.7 - 104 / 175 bar	1/4" NPT	HP400- 15	4.17	
volume booster		50 / 1 - 15 / 50 bar	G $\frac{1}{4}$ - G2	R120-J- 15	6.15	
volume booster		100 / 0.1 - 24 / 99 bar	G1	RL - 15	6.16	
free of oil and grease	mini	0.2 - 2 / 8 bar	M5	RR - L	1.08	
	mini	0.1 - 1 / 11 bar	G $\frac{1}{8}$ and G $\frac{1}{4}$	R364 - L	1.15	
	precision pressure regulator	0.01 - 0.6 / 3.5 bar	G $\frac{1}{4}$ - G $\frac{3}{8}$	R216 - L	5.05	
	high pressure regulator	241 / 0.2 - 2 / 7 bar	1/4" NPT	RH0 - L	4.15	
	high pressure regulator	300 / 0.1 - 1.7 / 35 bar	1/4" NPT	HP500 - L	4.17	
	stainless steel, mini	0.2 - 1.8 / 9 bar	G $\frac{1}{4}$	R364S - L	15.02	
	stainless steel	0.2 - 4 / 17 bar	G $\frac{1}{2}$	R10S - L	15.03	
	stainless steel, many variations	0.2 - 3 / 16 bar	G $\frac{1}{4}$ - G1	REA - M	15.11	
for ammonia	P1: 6 bar	5 - 45 / 3000 mbar	G $\frac{1}{2}$ - G2	R160-02	3.06	
for natural gasoline, w/o certificate	P1: max. 0.4 bar	2 - 15 / 160 mbar	G $\frac{1}{2}$ - G2	RGDJ	3.04	
	P1: max. 4 bar	5 - 12 / 350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4	3.05	
	P1: max. 20 bar	10 - 18 / 4400 mbar	G1 - G1 $\frac{1}{2}$, DN50	RZ	3.08	
for pure gases	KI.10.000	0.05 - 2 / 4 bar	M5, G $\frac{1}{8}$	RE1	15.04	
purity grade 5.0	cylinder pressure regulator	100 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-147- M	4.14	
	cylinder pressure regulator	200 / 0 - 1.5 / 40 bar	diverse	RH200- M	4.12	
	cylinder pressure regulator	300 / 0 - 1.5 / 40 bar	diverse	RH300- M	4.12	
	cylinder pressure regulator	300 / 0 - 10 / 60 bar	G $\frac{1}{4}$ - G $\frac{1}{2}$	RH-347- M	4.14	
for steam	made of spheroidal cast iron, red brass	0.14 - 1.7 / 9 bar	G $\frac{1}{2}$ - G2	RU	9.12	
FDA approved	stainless steel, Tri-Clamp	0,2 - 1,5 / 8 bar	ASME BPE 1/4" - 1 1/2"	RTC	15.12	
	stainless steel, Tri-Clamp	5 - 45 / 1200 mbar	ASME BPE 1/2" - 1 1/2"	RTCN	15.13	
	mini	0 - 1 / 9 bar	G $\frac{1}{8}$ u. G $\frac{1}{4}$	R037	1.12	
	mini	0 - 1,8 / 9 bar	G $\frac{1}{4}$ u. G $\frac{3}{8}$	R25	9.02	
	mini	0,1 - 3 / 8 bar	G $\frac{1}{4}$	R45	9.02	
				R91	www*	
for pharmacy and food	made of stainless steel, many variations	0,25 - 0,4 / 53 bar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R70	www*	
	made of stainless steel, low pressure regulator	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R74	www*	
CIP-capable	stainless steel, pharmacy	0,25 - 0,4 / 53 bar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R70	www*	
	stainless steel, pharmacy	5 - 7 / 450 mbar	G $\frac{1}{4}$ - G2 $\frac{1}{2}$	R74	www*	
PWIS-free	very robust	0,2 - 1,8 / 17 bar	G $\frac{1}{4}$ - G3	R119-LA	2.04	
	high pressure regulator	50/0,1 - 1,5 / 50 bar	G $\frac{1}{4}$ - G2, DN100	R120-LA	4.04	

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PERSONAL NOTES

PERSONAL NOTES

ORDER NUMBER INDEX

ORDER NUMBER	CATALOGUE PAGE	DESCRIPTION	ORDER NUMBER	CATALOGUE PAGE	DESCRIPTION
AB	6.18	Pressure booster	HP500	4.18	High pressure regulator
AM/AP	6.16	Press. booster, Air amplifier station			
AT1004	12.08	Pressure switch	LD	18.06	Lubricator
A042...A080	19.05	Soft start valve	L042...L095	18.02	Lubricator
			L10-S	15.40	Lubricator
BD	17.06	Filter pressure regulator	L20	18.03	Lubricator
BP1/BP2	10.25	Prop. pressure regulator-combi	L606	18.04	Lubricator
B042...B095	17.04	Filter pressure regulator	L3000	15.33	Lubricator
B11/B12	17.03	Filter pressure regulator	MA	14.07	Pressure gauge
B11-S	15.32	Filter pressure regulator	MAR	1.08	Miniature pressure regulator
B20/B21	17.05	Filter pressure regulator	ME/MF	14.06	Pressure gauge
B300	17.08	Filter pressure regulator	MHA	14.03	Hand-operated gauge
B548	17.02	Filter pressure regulator	MKA	14.05	Digital pressure gauge
B548-S/B558-S	15.32	Filter pressure regulator	MPAX	14.04	Industrial process gauge
B3000	15.30	Filter pressure regulator	MPV/MPA	14.02	Digital pressure gauge
			MS	14.08	Pressure gauge
CD2/CD3	19.08	FRL service unit	M5000	1.12	Accessories f. press. regulators
C2/C3	19.03	FRL service unit			
C10/C11	19.06	FRL service unit	NV30	20.02	Needle valve
C10-S/C11-S	15.40	FRL service unit			
C20/C21	19.07	FRL service unit	PCEX	10.16	Proportional pressure regulator
C35...C95	19.04	Assembly parts	PD	10.15	Proportional pressure regulator
C630	19.10	FRL service unit	PF	10.11	Proportional pressure regulator
C3002/C3003	15.38	FRL service unit	PM	10.02	Proportional pressure regulator
			PPB	10.23	Setpoint potentiometer
DA	13.06	Pressure transducer	PP700	12.09	Pressure switch
DBC	8.02	Back pressure regulator	PP, „AirTronic“®D	10.13	Proportional pressure regulator
DBC	8.11	Back press. regul., low pressure	PQ1/PQ2/PQ3...PQ6	10.04	Proportional pressure regulator
DBM	8.04	Back pressure regulator	PQH	10.17	Proportional pressure regulator
DB110	8.08	Back press. regul., precision	PR „AirTronic“®	10.08	Proportional pressure regulator
DB208	8.12	Back press. regul., pilot-operated	PRE	10.21	Proportional pressure regulator
DB240	8.07	Back press. regul., precision	PT6/PT7	10.18	Proportional pressure regulator
DB300	8.09	Back press. regul., precision	PVE/PVK	11.16	Flow control valve
DB450	8.13	Back press. regul., pilot-operated	PVM	11.06	Mass flow meter
DSB/DSC	12.10	Pressure transducer	PVR	11.07	Mass flow meter
DSP/DSQ	12.05	Pressure switch	PV21...PV40 „AirProp“	11.10	Flow control valve
DS08...DS46	12.02	Pressure switch	PV202/PV202/PV203	11.13	Flow control valve
DS15...DS18	12.03	Pressure switch	PV630/PV631	11.12	Flow control valve
DS34/DS35	12.04	Pressure switch	P180	10.22	Proportional pressure regulator
D5, D7, D8, D9	13.02	Pressure transducer	P8	11.15	Flow control valve
D11	16.18	Codensate drain			
D608	16.18	Codensate drain	Q	11.18	Pinch valve
D3000/D3100	15.24	Back pressure regulator	QE	15.37	Pinch valve
FD	16.12	Compressed air filter	RAF	9.10	Pressure regulator
FG	16.14	Compressed air filter	RAI	9.11	Pressure regulator
FH	16.06	Compressed air filter	RB	2.10	Standard pressure regulator
FH3	15.36	Compressed air filter	RC	1.20	Cartridge pressure regulator
FM	16.08	Compressed air filter	RD1...RD4	2.08	Standard pressure regulator
F1...F4	15.41	Mounting flange	RE1	15.04	Precision pressure regulator
F035...F095	16.04	Compressed air filter	REF	15.10	Pressure regulator, w. flange
F10-S/F11-S	15.40	Compressed air filter	REA	15.11	Standard pressure regulator
F20	16.07	Compressed air filter	RF	20.03	Restrictor
F400	16.02	In-Line filter	RGB4	3.05	Low pressure regulator
F445/F465	16.16	Compressed air filter	RGBJ-J	6.13	Volume booster
F504	16.03	Compressed air filter	RGDJ	3.04	Low pressure regulator
F504-S	15.38	Compressed air filter	RGD4-J	6.13	Volume booster
F602	16.10	Compressed air filter	RH-147/RH-247/RH-347	4.14	High pressure regulator
F950/F960/F970	20.04	Compressed air filter	RH0/RH1	4.15	High pressure regulator
F2804	20.06	Check valve	RH2	4.16	High pressure regulator
F3000	15.34	Compressed air filter	RH3	4.19	High pressure regulator
F4000/F4400	12.08	Pressure switch	RH3-J	6.12	Volume booster
F4200/F4300	12.06	Pressure switch	RH4	4.20	High pressure regulator
			RH10	4.10	High pressure regulator
HP300	4.17	High pressure regulator	RH44	4.22	Differential pressure regulator
HP306	4.21	High pressure regulator	RH44-S	15.21	Differential pressure regulator
HP400	4.17	High pressure regulator			

ORDER NUMBER INDEX

ORDER NUMBER	CATALOGUE PAGE	DESCRIPTION	ORDER NUMBER	CATALOGUE PAGE	DESCRIPTION
RH83	4.09	High pressure regulator	R400	5.13	Precision pressure regulator
RH200	4.12	Cylinder pressure regulator	R450	6.07	Volume booster
RH300	4.13	Cylinder pressure regulator	R490	6.06	Volume booster
RH3000	15.18	High pressure regulator	R650	6.02	Volume booster
RI	5.02	Precision pressure regulator	R750	6.03	Volume booster
RK	19.11	Drain valve	R800/R900	1.09	Miniature pressure regulator
RL13	3.03	Low pressure regulator	R3000	15.06	Standard pressure regulator
RLE	6.15	Dome pressure regulator	R3000-J	15.22	Volume booster
RLM	6.14	Dome pressure regulator	R3100	15.12	Low pressure regulator
RM	2.11	Adjustment dial press. regul.	R3150	15.05	Precision pressure regulator
RR-M5	1.07	Miniature pressure regulator	R4100	3.09	Low pressure regulator
RR	3.10	Low pressure regulator	SA	19.11	Drain valve
RS	2.11	abschließbarer Druckregler	SFE	16.17	Filter silencer
RT	1.10	Miniature pressure regulator	S042...S080	19.05	Switch-on valve
RTC	15.20	Tri-Clamp Druckregler	VG	11.02	Mass flow meter
RU	9.12	Steam pressure regulator	VPF	11.08	Flow monitor
RWA	9.06	Water pressure regulator	VP700	12.09	Vacuum switch
RWF	9.08	Water pressure regulator	VR6	11.04	Needle valve
RWI	9.04	Water pressure regulator	VS	15.42	Flange and nipples
RZ	3.08	Low pressure regulator	V04	7.06	Vacuum pressure regulator
RZ-J	6.10	Volume booster	V05	7.06	Vacuum pressure regulator
R-0	20.04	Restrictor	V042...V080	19.05	Switch-on valve
R01	3.02	Low pressure regulator	V170	7.04	Vacuum pressure regulator
R03	5.14	Precision pressure regulator	V800	7.02	Vacuum pressure regulator
R035...R095	2.03	Standard pressure regulator	V900	7.02	Vacuum pressure regulator
R037	1.17	Miniature pressure regulator	10	5.08	Precision pressure regulator
R039/R039-F	1.11	Miniature pressure regulator	10BP	8.06	Back pressure valve
R03-J	6.05	Volume booster	11-818	5.06	Precision pressure regulator
R6	1.12	Miniature pressure regulator	53.10	5.07	Precision pressure regulator
R7	1.13	Miniature pressure regulator	59/130/134	8.14	Back pressure valve
R10/R11	2.05	Standard pressure regulator	137	16.02	In-line filter
R10-S	15.02	Standard pressure regulator	231	1.05	In-Line pressure regulator
R11...R41	2.12	Adjustment dial press. regul.	232	1.06	In-Line pressure regulator
R13	1.03	In-Line pressure regulator	233	1.02	Cartridge pressure regulator
R20/R21	2.02	Standard pressure regulator	239A/239M	1.04	In-Line pressure regulator
R25	9.04	Miniature pressure regulator	239K	9.03	In-Line pressure regulator, drinking water
R40	5.12	Precision pressure regulator	281	19.12	Hose rupture valve
R45	9.02	Miniature pressure regulator			
R70	15.14	Standard pressure regulator			
R74	15.16	Low pressure regulator			
R90	5.03	Precision pressure regulator			
R100	5.11	Precision pressure regulator			
R102	5.16	Precision pressure regulator			
R110	5.15	Precision pressure regulator			
R116	6.08	Volume booster			
R119	2.06	Standard pressure regulator			
R119-J	6.11	Volume booster			
R120	4.04	High pressure regulator			
R120-J	6.15	Volume booster			
R160	3.06	Low pressure regulator			
R200/R201	6.09	Volume booster			
R208	6.04	Volume booster			
R216	5.05	Precision pressure regulator			
R217	5.04	Precision pressure regulator			
R218	2.04	Standard pressure regulator			
R230	5.09	Precision pressure regulator			
R250	7.03	Vacuum pressure regulator			
R251	7.05	Vacuum pressure regulator			
R280	4.02	High pressure regulator			
R286	4.08	High pressure regulator			
R300	5.10	Precision pressure regulator			
R307	1.18	Miniature pressure regulator			
R308	1.19	Miniature pressure regulator			
R309/R310	1.16	Miniature pressure regulator			
R342/R344	1.14	Miniature pressure regulator			
R354-S/R364-S	15.03	Miniature pressure regulator			
R364/R374	1.15	Miniature pressure regulator			

GENERAL TERMS AND CONDITIONS

§ 1 GENERAL INFORMATION / SCOPE

1. The following General Terms and Conditions are valid for all contracts between the company AirCom Pneumatic GmbH, Siemensstraße 18, 40885 Ratingen ("Seller") and companies (§ 14 BGB), body corporate organised under public law and special assets under public law ("Purchaser").
2. The acceptance of the order confirmation as well as the receipt of deliveries of the Seller is valid as recognising these general terms and conditions even in cases where the Purchaser has submitted an offer based on own general terms and conditions.
3. Contrary or deviating conditions of the Purchaser are not recognised unless the validity of contrary or deviating conditions is explicitly accepted in writing.
4. An explicit rejection of deviating conditions of the Purchaser is not necessary.
5. Any individual agreement concluded between the parties shall take precedence over the General Terms and Conditions.

§ 2 CONTRACT CONCLUSION

1. The offers are non-binding and without obligation. The contract is not concluded until the order confirmation of the Seller is signed.
2. Deviations, supplements, and verbal agreements as well as agreements with travelling salesmen, representatives and agents require the written confirmation by the Seller to be valid when the contract is closed.
3. Minimal deviations by the delivered objects from the description of the offer or the order confirmation are considered as authorised and do not affect the fulfilment of the contract insofar as they concern conventional quantity and quality tolerances; in particular in cases of modifications and improvements that are based on technical development.
4. Quotations, drawings, graphics and other documentations of the offer and order confirmation are meant only for the Purchaser and must not be made available to third parties. They remain property of the Seller and are protected by copyright. They must be returned upon request or if the order was not placed.

§ 3 PRICES AND PAYMENT

1. The price lists, price quotations and cost estimates are without obligation.
2. The specified prices are valid only for the concrete order determined by amount and delivery time. If our general delivery prices increase or drop before the delivery, the price for the individual order increases or diminishes accordingly. Price increases are limited by the price prevailing on the market. If a basic agreement has been signed by the parties, then the prices specified in it are valid for its validity period, deviating from sentence 1 and 2 of this number.
3. All prices are net prices and are understood as ex works or warehouse plus freight, transport insurance (see below § 4 (5)), brokerage fees, bank charges and the respective statutory value added tax as well as any possible handling costs if the latter are agreed upon between the two parties.
4. Payment is due within 30 days upon invoice date without deductions and only to the Seller. Further price reductions, rebates or deductions are not granted. A cash discount deduction of new invoices is not permitted if older due invoices are still unpaid.
In the absence of other agreements, a payment to the Seller can be made only according to the specifications of the issued invoice. The employees of the Seller, representatives and travelling salesmen are only permitted to collect payment if a special written authority to collect is submitted. Bills of exchange can be accepted for payment only upon prior agreement. The acceptance of cheques and bills of exchange is done only as payment. Discount charges and collection expenses are at the expense of the Purchaser.
5. If the contracted payment terms are exceeded, default interest is charged to the amount of 9 percentage points above the respective base interest rate.
6. The Seller is not obligated to fulfilling the contract if the Purchaser does not meet his obligations as contracted, in particular when due invoices are not paid. Compensation or assertion of the right of retention based on claims from the Purchaser that are not explicitly recognised in writing by the Seller is excluded insofar as it does not concern undisputed, legally effective, time-barred claims.
7. If the Purchaser owes compensation for damages because of non-performance according to the general legal provisions, then the Purchaser is obligated to pay the Seller an amount of 15 % of the order amount including VAT as compensation for damages, subject to the assertion of further damages, unless the Purchaser can prove that there was no damage or loss of value or significantly less than the aforementioned flat rate.

§ 4 DELIVERY AND SHIPMENT / TRANSFER OF RISK

1. The written order confirmation of the Seller is solely applicable for the scope of the delivery.
2. Delivery is as quick as possible, the latest though within about eight weeks after the start of the delivery time. The delivery to the Purchaser is always subject to punctual and correct supply to the Seller. The delivery time begins with the sending of the order confirmation, however, not before receiving the documentation, authorisations, or releases to be provided by the Purchaser or before an agreed down payment has been received. The delivery time is maintained if the delivery item has left the factory or the readiness for dispatch has been informed before the delivery time's expiration. Maintaining of the delivery time requires that all contractual obligations be met by the Purchaser.
3. All cases of force majeure release the Seller from the obligation for fulfilling the contract for the duration and the scope of the occasion. Force majeure are considered in particular to be natural disasters, war or the risk of war, reactor accidents, epidemics and pandemics, labour strife, strikes, lockouts, unforeseeable disruption of operations or shortage of raw materials, limitation of energy supply by third parties or other events that are not the responsibility of the Seller. Claim for damages by the Purchaser are

ruled out. In case of permanent impossibility of performance, the parties retain the right of immediate withdrawal; any advance performances shall be re-turned. This is also valid if such situations occur after the delivery date has been exceeded.

4. If the delivery item is shipped to the Purchaser upon his request, then the risk of the accidental loss or accidental degradation of the delivery item is transferred to the Purchaser with the dispatch to the Purchaser or at the latest when the delivery item has left the factory or the warehouse of the Seller, unless something else was agreed upon. This is valid regardless of who pays the shipping costs. If the shipment is delayed upon request by the Purchaser, the risk is transferred when the readiness for delivery has been reported.
5. For total net order values equal to or greater than EUR 1,000.00 the Seller shall take out a transport insurance of 0.5% of the order value for the shipment at the expense of the Purchaser. This provision shall not apply for customers exempted from forwarding, logistics and warehousing insurance (SLVS waiver customers).
6. Claims for wrong or incomplete delivery due to obvious defects are ruled out if they are not reported in writing within a week upon arrival of the delivery item at its destination.

§ 5 ACCEPTANCE AND ASSEMBLY

1. Merchandise that is reported as ready for shipment must be fetched promptly by the Purchaser. If the Purchaser falls into arrears with the fetching, the acceptance or the picking up of the merchandise, then the Seller has the right to demand compensation of the occurred damage. With the start of the acceptance delay, the risk of accidental degradation or accidental loss is transferred to the Purchaser.
2. The offer of the Seller excludes the assembly.

§ 6 RETENTION OF TITLE

1. The delivered merchandise remains the property of the Seller (reserved goods) until final payment of all claims made or being made based on the business relationship. If there are multiple claims or open invoices, the retention of title is valid as a collateral for the outstanding balance, even if individual merchandise shipments have already been paid.
2. In case the Purchaser acts contrary to the stipulations of the contract, for example delayed payment, the Seller has the right, upon preliminary setting of a reasonable deadline, to take back the reserved goods. If the reserved goods are taken back, this represents a withdrawal from the contract. The Seller has the right to dispose of the reserved goods after the retraction. After subtracting a reasonable amount for the disposal costs, the disposal proceeds are to be settled with the amounts owed by the Purchaser. The Purchaser is liable for the claim for the deficiency.
3. In case of third parties claiming the reserved goods, in particular distrains, the Purchaser will inform about the ownership of the Seller and will promptly notify the Seller so that owner rights can be asserted. Costs incurred thereby are borne by the Purchaser.
4. The Purchaser has the right to process and sell the reserved goods in normal course of business as long as he does not fall into arrears. Pledges as collateral or transfers by way of security are not permitted. Claims ensuing from the resale or other legal basis (insurance, unlawful act) regarding the reserved goods, are fully transferred already now by the Purchaser to the Seller as a collateral. Upon request of the Seller, the Purchaser must notify debtors of the assignment. The Purchaser is obligated to also reserve ownership of the reserved goods towards his Purchaser until it is paid in full. The Seller gives the revocable right to the Purchaser to collect the claims ceded to the Seller for his invoice in his own name. The direct debit authorisation becomes void if the Purchaser does not fulfil his payment obligations properly, has difficulty in meeting payments, judicial execution proceedings are taken against him or insolvency proceedings are filed against him or the filing of such insolvency proceedings are refused due to lack of assets.
5. Processing or transformation of the goods is always done for the Seller as manufacturer, but without obligation for him. If the delivery items are processed with other items not belonging to the Seller, then he acquires joint ownership of the new item in the ratio of the value of the delivery items to the other processed items at the time of the processing. If the delivery items are combined or inseparably mixed with other items not belonging to the Seller, then the Seller acquires joint ownership of the new item in the ratio of the value of the delivery items to the other combined or mixed items. If the combination or mixture of the item of the Purchaser is to be regarded as main item, then it is agreed upon that the Purchaser transfers the proportion of the joint ownership of the new item to the Seller. The Purchaser stores the thus created joint ownership for the Seller.
6. The Seller is obligated to release the collaterals to which he is entitled insofar as the realisable value of the collaterals exceeds the claims by more than 10 %; the Seller has the choice thereby of the collaterals to be released.

§ 7 GUARANTEE / LIABILITY

1. If contractual obligations are infringed, the Purchaser has the legal rights in compliance with the following regulations.
2. The Purchaser can only file guarantee claims if he has performed his inspection and complaint obligations according to § 377 HGB (German Commercial Code) within a week of receiving the service. Contract, type, and scope of the defect must be specified during the notification.
3. The warranty is also under the condition that the Seller has the choice to view and check the faulty item at the Purchaser or having it sent back to the Seller.
4. The statutory limitation period for defects claims is one year after the transfer of risk. This is not valid unless the law requires longer periods in accordance with §§ 438 Section 1 no. 2 (Construction Work and Objects for Construction Work), 478, 479 (Supplier Regress) and 634 a Section 1 no. 2 (building defects) of the BGB (Civil Code) as well as in cases of injury to life, physical injury, or damage to health due to intentional or negligent dereliction of duty on the part of the Seller and if a defect was fraudulently concealed.

5. In case of an entitled and timely notification of defects, the Purchaser has the right to supplementary performance during the warranty period. The Seller has the right of choice for the type of supplementary performance – repairing the defect or delivery of a fault-free item. If the supplementary performance fails or if further supplementary performances are unacceptable for the Purchaser, then the Purchaser has the right to reduction or the withdrawal from the contract. Replaced parts become the property of the Seller.

6. If claims are made towards the Purchaser by his customer or a consumer due to a defect of the delivered merchandise that was already present during the transfer of risk or that was complained about by a consumer as end user, the legal claims to recourse of the Purchaser towards the Seller remain untouched in accordance with §§478, 479 BGB.

7. Claim for damages due to a defect can be asserted by the Purchaser only if the supplementary performance has failed or if we deny the supplementary performance. The right of the Purchaser to assertion of the right of further claim for damages remains untouched by that.

8. Claims against the Seller due to defects may only be made by the Purchaser and are not assignable.

9. The Seller is liable for occurring damages only insofar as they stem from a breach of an essential contractual duty or intentional or grossly negligent behaviour on the part of its legal representatives or vicarious agents. If an essential contractual duty is only slightly negligently breached, then the liability is limited to the foreseeable damages typical for the contract. An essential contractual duty prevails for obligations whose fulfilment makes the proper execution of the contract even possible and which the Purchaser has expected to be complied with or could expect to be complied with. Any further liability for compensation is ruled out. The liability for culpable injury to life, body, and health in accordance with legal regulations remains untouched. This is also valid for mandatory liability in accordance with the product liability law.

§ 8 DISCLOSURE OF PERSONAL DATA FOR THE PURPOSE OF LAW ENFORCEMENT AND DEBT COLLECTION

1. In the event of a legitimate interest according to Art. 6 para. 1 lit. f GDPR, particularly in case of payment default, the Seller reserves the right to disclose the data provided when placing the order for law enforcement and debt collection purposes to a lawyer and/or external companies (e. g. AKZEPTA GmbH, Krausenstraße 8, D-10117 Berlin).

2. Furthermore the Seller collects address information, information on the Purchaser's payment behaviour and credit worthiness based on mathematical and statistical methods applying address data information from external companies such as CRIF Bürgel GmbH, Radlkofersstraße 2, D-81373 Munich, to fulfil the contract. The processing of this data is necessary to fulfil contractual purposes or implement pre-contractual measures (Art. 6(1)(b)) and to protect the legitimate interests of the Seller (Art. 6 (1)(f)).

3. Declaration of consent, Art. 6 (1)(a) GDPR

The Purchaser declares as follows: „I hereby agree that AirCom Pneumatic GmbH collects and processes address information, information on my payment behaviour and credit worthiness based on mathematical and statistical methods from external companies such as CRIF Bürgel GmbH, Radlkofersstraße 2, D-81373 Munich, applying address data information for the purpose of the conclusion of contract.”

The Purchaser declares furthermore as follows:

„I hereby agree that AirCom Pneumatic GmbH discloses data provided when placing an order to lawyers or external companies such as AKZEPTA GmbH, Krausenstraße 8, D-10117 Berlin, for the purpose of law enforcement and debt collection.”

4. Possibility of revocation / Possibility of opposition

The consent given to the Seller can be revoked by the Purchaser at any time. This does not affect the legality of the collection and use of the data based on this consent until the consent is withdrawn. The Purchaser is entitled to object at any time to the processing of its data. This applies if the processing is not required to fulfil a contract with the Purchaser or precontractual measures or does not preclude legitimate interests of the Seller in particular.

§ 9 FINAL PROVISIONS

1. Place of performance for all delivery obligations of the Seller and for other contractual obligation of both parties is the registered office of the Seller AirCom Pneumatic GmbH, Siemensstraße 18, 40885 Ratingen.

2. The contract concluded between the parties, the terms, and conditions of the Seller as well as all the legal relations between the Purchaser and the Seller are subject to the laws of the Federal Republic of Germany with the exclusion of all references to other legal orders and international contracts. The United Nations Convention on Contracts is excluded.

3. The place of jurisdiction for all disputes arising from this contractual relationship is Düsseldorf, insofar as Seller and Purchaser do not constitute a different common place of jurisdiction. The Seller has the right, however, to file suit against the Purchaser also at his registered office.

4. Should a provision of these terms and conditions be ineffective or contain an omission, then the effectiveness of the remaining provisions remain unaffected.

REFERENCES

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