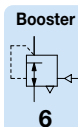
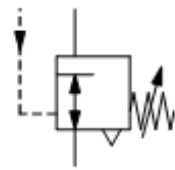


VOLUME BOOSTER

	DESCRIPTION	SUPPLY PRESSURE	PRESSURE RANGE		CONNECTION	SERIES	PAGE
		max. bar	bar		thread		
PRECISE	with external feedback	16	0.2	...	7	G $\frac{1}{4}$	R218 6.02
	differential pressure also	17	0	...	1 / 10	G $\frac{1}{4}$ u. G $\frac{3}{8}$	R650 6.03
	ratio 1:1 up to 1:6	17	0	...	10	G $\frac{1}{4}$ u. G $\frac{1}{2}$	R750 6.04
	different ratio	17	0	...	10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R208 6.05
	differential pressure also	16	0	...	10	G $\frac{1}{4}$ - G $\frac{1}{2}$	R03-J 6.06
	high exhaust capacity	17	0	...	10	$\frac{3}{4}$ "NPT u. 1"NPT	R600 6.07
	high exhaust capacity	28	0.2	...	18	G $\frac{1}{4}$ - G2	R116 6.08
	different ratio, high-precision	17	0	...	10	G $\frac{1}{2}$ u. G $\frac{3}{4}$	R450 6.09
	high volume flow	17	0	...	10	G1 u. G1 $\frac{1}{2}$	R200 6.13
	high exhaust capacity	17	0	...	10	1 $\frac{1}{2}$ "NPT	R201 6.13
	high volume flow	21	0.2	...	18	G $\frac{1}{4}$ - G3	R119-J 6.12
	high exhaust capacity	17	0	...	10	1 $\frac{1}{2}$ "NPT	R201 6.13
STANDARD	high volume flow	21	0.2	...	18	G $\frac{1}{4}$ - G3	R119-J 6.12
MIT ÜBERSETZUNG	1:1 up to 1:6	17	max.	10		G $\frac{1}{4}$ - G $\frac{1}{2}$	R750 6.04
	1:1 up to 1:6 and 2:1 up to 5:1	17	max.	10		G $\frac{1}{4}$ - G $\frac{1}{2}$	R208 6.05
	1:1 bis 1:3 u. 2:1 bis 3:1	17	max.	10		G $\frac{1}{2}$ u. G $\frac{3}{4}$	R450 6.09
NIEDERDRUCK	also for gases	20	10	...	350/1000 mbar	G1 - G2	RZ-J 6.10
	also for gases	0.4	2	...	55/ 160 mbar	G $\frac{1}{2}$ - G2	RGDJ-J 6.11
	also for gases	4	5	...	350 mbar	G $\frac{1}{2}$ - G1 $\frac{1}{2}$	RGB4-J 6.11
HOCHDRUCK	ratio 1:2 up to 1:19	260	3	...	42 / 104	$\frac{1}{2}$ "NPT u. $\frac{3}{4}$ "NPT	RH3-J 6.14
	made of brass	100	0.1	...	24 / 99	G1	RLM 6.15
	made of brass	50	1	...	15 / 50	G $\frac{1}{4}$ - G2	R120-J 6.16
EDELSTAHL	ratio 1:2 up to 1:19	310	3	...	42 / 104	$\frac{1}{2}$ "NPT u. $\frac{3}{4}$ "NPT	RH3-J 6.14
	made of stainless steel	100	0.1	...	24 / 99	G1	RLE 6.15
	made of stainless steel	50	1	...	15 / 50	G $\frac{1}{4}$ - G2	R3000-J 15.18
	high exhaust capacity	17	0	...	10	$\frac{3}{4}$ "NPT u. 1"NPT	R601 15.20
DRUCKERHÖHER	1:2 up to 1:10	12	4	...	100	G $\frac{1}{4}$ - G $\frac{3}{4}$	AM 6.18
	1:2 up to 1:5, with storage	12	4	...	40	G $\frac{3}{8}$ u. G $\frac{1}{2}$	AP 6.19
	1:2, small design	8	4	...	16	G $\frac{1}{8}$ - G $\frac{1}{2}$	AB 6.20



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



**G $\frac{1}{4}$, max. 16 bar
420 l/min**

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

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
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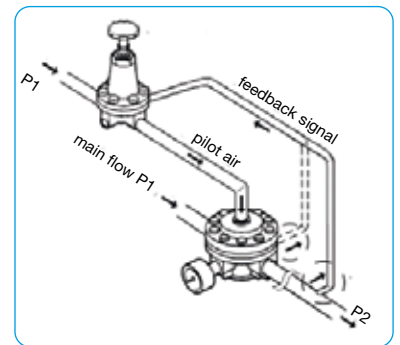


R218

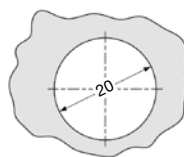
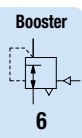
Accessories, enclosed

pressure gauge Ø 63 mm, 0 ... 10 bar, G $\frac{1}{4}$
mounting bracket made of steel
mounting nut made of brass

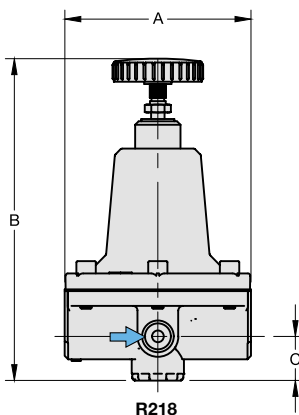
MA6302-10
BW00-36
M20x1,5M



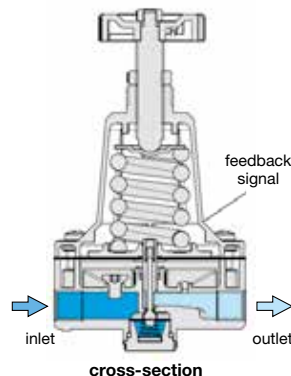
Example: combination with booster



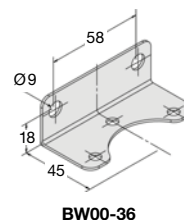
panel cut-out



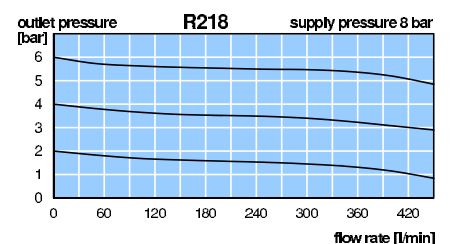
R218



cross-section



BW00-36

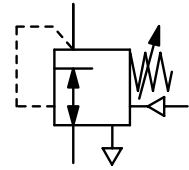


*1 at 8 bar supply pressure, 6 bar outlet pressure and 1 bar pressure drop

* 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		
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 Inner valve: brass		



G $\frac{1}{4}$ up to G $\frac{1}{2}$, 900 l/min parallel translation

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	bar	
mm	mm	mm							

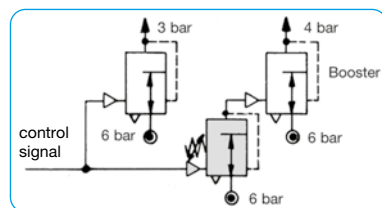
Positive bias relay						supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1			R650
68	170	16	72	900	G $\frac{1}{4}$	5	0 ... 1	0 ... 10	R650-02C
						5	0 ... 2		R650-02D
						8	0 ... 4		R650-02E
						15	0 ... 10		R650-02F
68	170	16	78	900	G $\frac{3}{8}$	5	0 ... 1	0 ... 10	R650-03C
						5	0 ... 2		R650-03D
						8	0 ... 4		R650-03E
						15	0 ... 10		R650-03F
68	170	16	78	900	G $\frac{1}{2}$	5	0 ... 1	0 ... 10	R650-04C
						5	0 ... 2		R650-04D
						8	0 ... 4		R650-04E
						15	0 ... 10		R650-04F

Special options, add the appropriate letter

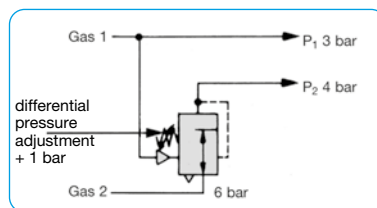
negative bias	factory-set to -0.3 bar	R650-0...Y
NPT	connection thread	R650-0...N
tamper-proof cap	above spindle, total height 174 mm	R650-0...T

Accessories, enclosed

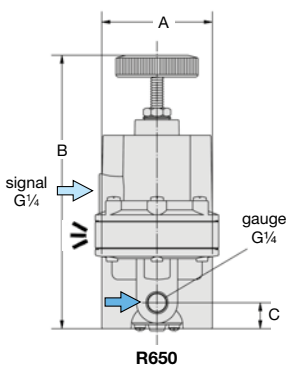
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-33



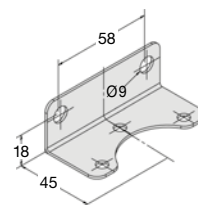
Example 1: constant differential pressure of 1 bar at high flow



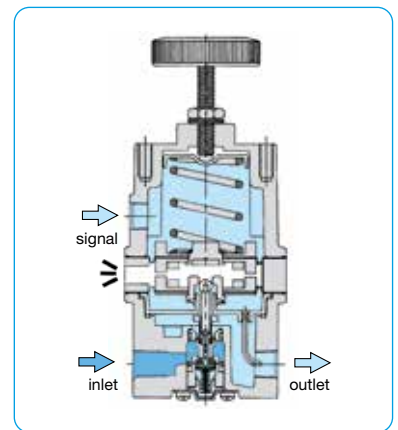
Example 2: constant differential pressure of 1 bar



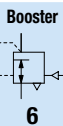
R650



BW00-33

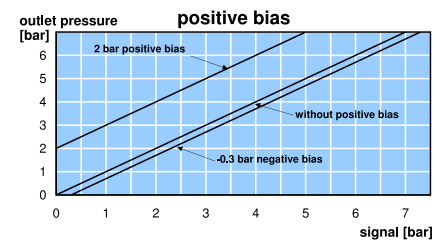
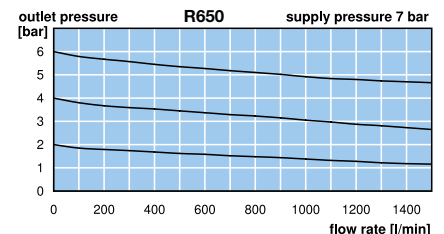


cross-section



Booster

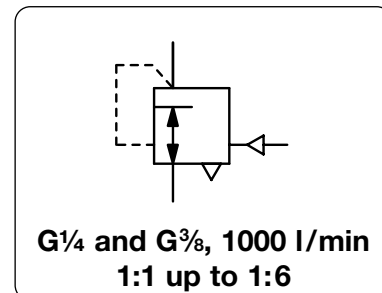
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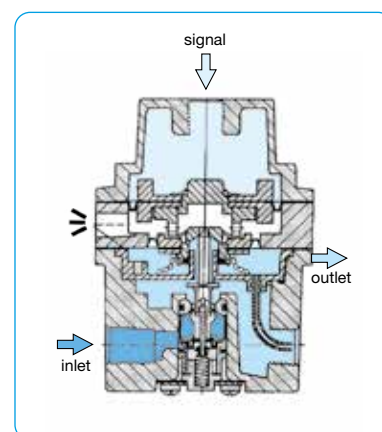
*1 at 7 bar supply pressure and 6 bar outlet pressure
*2 01 = 0...1 bar, 02 = 0...2.5 bar, 04 = 0...4 bar, 10 = 0...10 bar



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				
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				
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				



R750



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

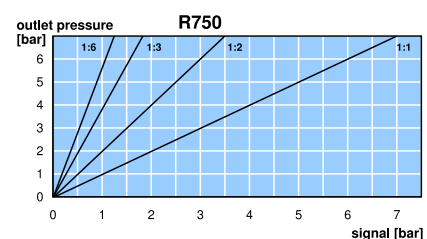
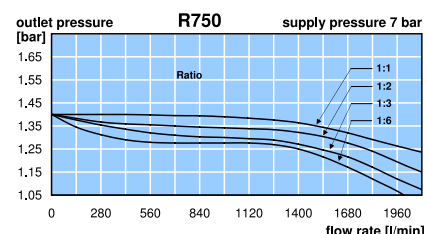
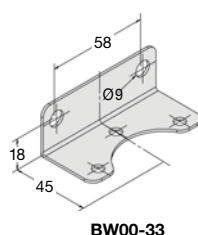
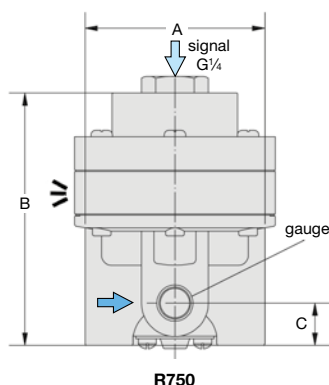
Booster					with transmission ratio, relieving, with constant bleed,		supply pressure max. 17 bar, pressure range 0...10 bar		R750
68	102	16	0.5	60	1000	G¼	10	1:1	R750-02I
							5.0	1:2	R750-02K
							3.3	1:3	R750-02C
							1.7	1:6	R750-02M
68	102	16	0.5	60	1000	G⅜	10	1:1	R750-03I
							5.0	1:2	R750-03K
							3.3	1:3	R750-03C
							1.7	1:6	R750-03M
68	102	16	0,5	60	1000	G½	10	1:1	R750-04I
							5,0	1:2	R750-04K
							3,3	1:3	R750-04C
							1.7	1:6	R750-04M

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

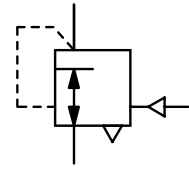
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-33



*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



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		
Accuracy	at supply pressure variation of 7 bar: < 7 mbar pressure deviation		
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		
Material	Body: aluminium die-cast Inner valve: brass and zinc-plated steel		



**G $\frac{1}{4}$ to G $\frac{1}{2}$, 1300 l/min
1:1 up to 1:6, 2:1 up to 5:1**

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	
mm	mm	mm						

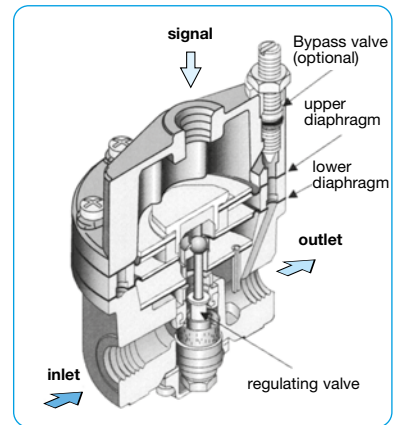
Booster			with transmission ratio, supply pressure max. 17 bar, relieving, with constant bleed, pressure range 0...10 bar				R208	
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	1 : 1
							5.0	1 : 2
							3.3	1 : 3
76	110	24	0.7	78	1300	G $\frac{1}{4}$	2.5	1 : 4
							2.0	1 : 5
							1.7	1 : 6
76	98	24	0.7	78	1300	G $\frac{1}{4}$	10	2 : 1
								3 : 1
76	110	24	0.7	78	1300	G $\frac{1}{4}$	10	4 : 1
								5 : 1



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

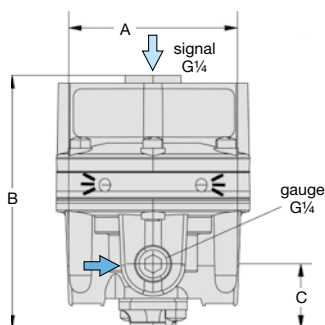


cross section

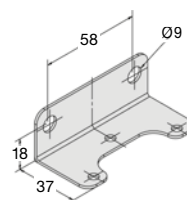
Booster

Accessories, enclosed

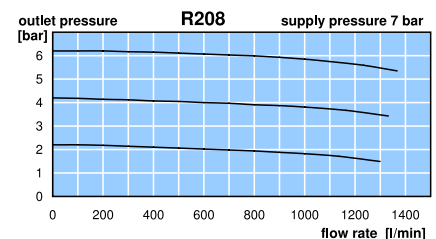
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$	MA5002-...*2
mounting bracket	made of steel	BW00-34



R208



BW00-34



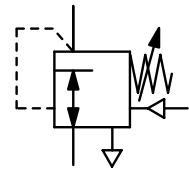
*1 at 7 bar supply pressure and 1.4 bar outlet pressure
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

*3 only for 1:1, 1:2, 1:3, 2:1 and 3:1
*4 not compatible with option Y

* Product group



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	Pilot port G $\frac{1}{8}$
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	
Air consumption	response sensitivity: < 2 mbar	
Relieving function	1.5 l/min at P ₁ = 5 bar, 2 l/min at P ₁ = 7 bar, 4 l/min at P ₁ = 10 bar, < 1% of volume flow relieving	
Relief capacity	700 l/min at 6 bar outlet and 0.35 bar overpressure above setpoint	
Gauge port	G $\frac{1}{4}$ 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 -30 °C / -22 °F	
Material	Body: zinc die-cast	Elastomer: NBR/Buna-N



G $\frac{1}{4}$ up to G $\frac{1}{2}$, 4500 l/min parallel translation

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

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



R03-...J

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

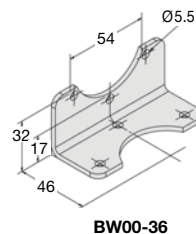
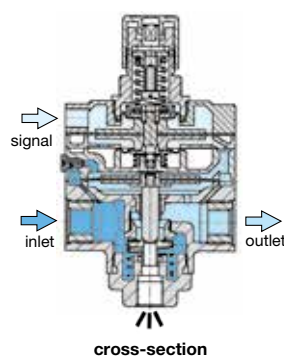
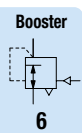


R03-...J1

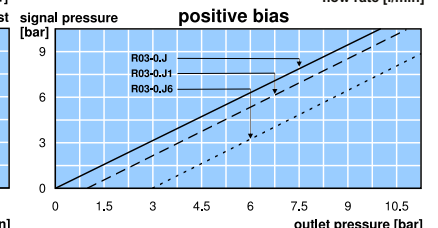
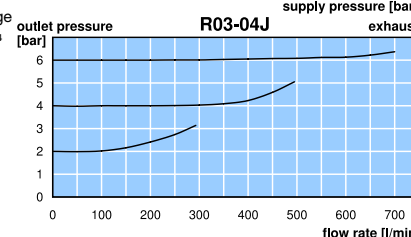
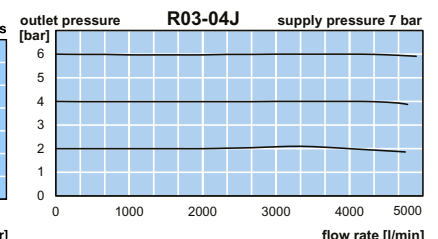
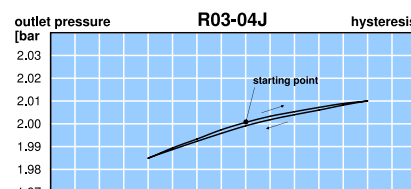
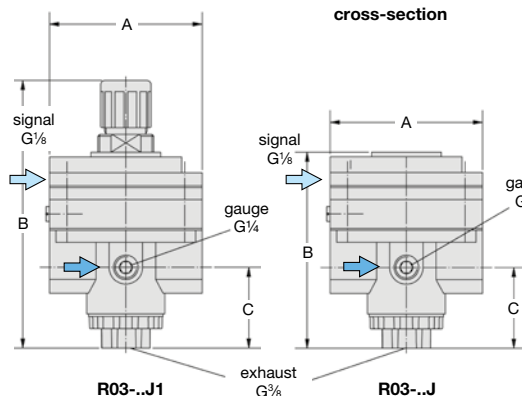
Accessories, enclosed					B*
pressure gauge	Ø 50 mm, 0...*2 bar, G $\frac{1}{4}$				MA5002-...*2
mounting nut	made of plastic		for R03-...J1		M30x1,5K
mounting bracket	made of steel				BW00-36



R03-...J6



BW00-36



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

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 ¾ NPT

Relief capacity

4245 l/min at 0.35 bar overpressure above setpoint

Gauge port

¾ NPT on both sides of the body

Mounting position any

Temperature range

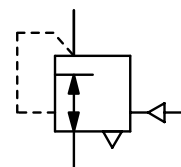
-40 - 93 °C; optional -52 °C

Material

Body: aluminium die-cast

Elastomer: NBR

Inner valve: aluminium and galvanized steel



¾ NPT and 1 NPT
13000 l/min

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

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

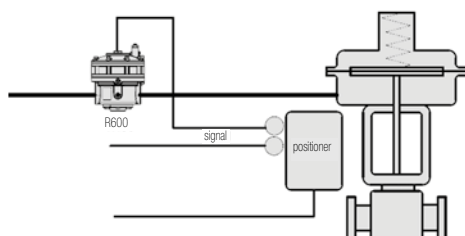
connection part pressure gauge

¼"NPTa-G¼

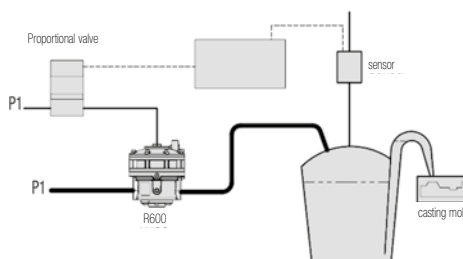
VP-0202N

mounting bracket

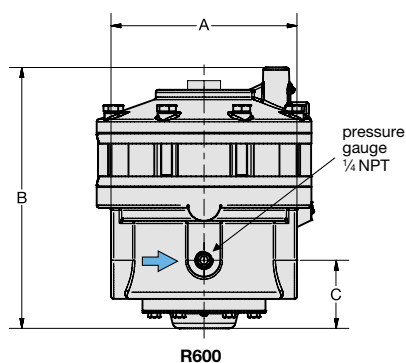
BW00-66



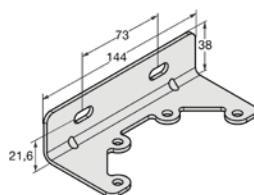
Volume flow booster with single-acting positioner and diaphragm actuator



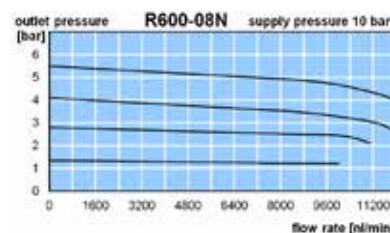
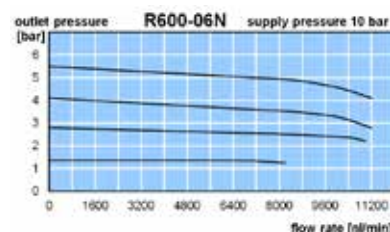
Volume flow booster in a casting plant



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

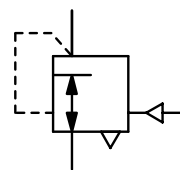
PDF CAD
www.aircom.net

* Product group



Order example:
R600-06N

Description	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		



G¼ up to G2
12500 l/min

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						

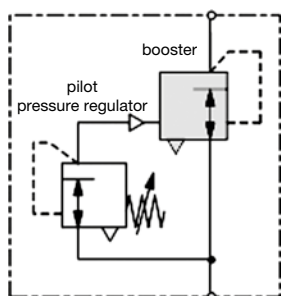
Booster with high relief capacity						P ₁ : max. 28/31 bar, P ₂ : 0.2... 18 bar,		ratio 1:1 relieving	R116
80	129	39	15	4.3	270	4 500	G¼	R116-02	
				4.4	290	4 800	G⅜	R116-03	
				4.5	300	5 000	G½	R116-04	
93	149	48	25	9.5	690	11 500	G¾	R116-06	
				10.0	720	12 000	G1	R116-08	
				10.4	750	12 500	G1¼	R116-10	
152	183	89	40	35,4	2 000	42 000	G1½	R116-10	
				35,4	2 500	42 000	G2	R116-12	

Special options, add the appropriate letter

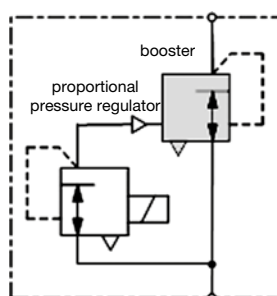
NPT	connection thread	R116-...N
flange connection	see chapter SST devices / flanges	R116-...F

Accessories, enclosed

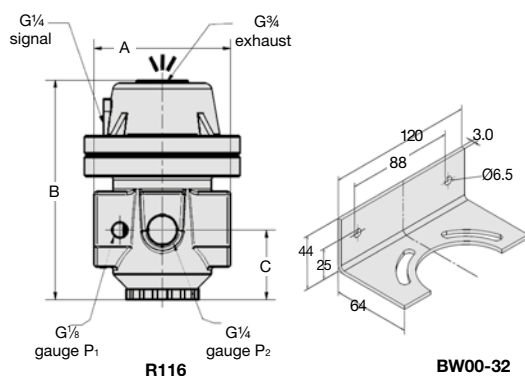
pressure gauge	Ø 50 mm, 0...*2 bar, G¼ Ø 63 mm, 0...*2 bar, G¼	for G¼ to G½ MA5002-*2 for G¾ to G1¼ MA6302-*2
mounting bracket	made of aluminium	for G¼ to G1¼ BW00-32



example: booster with pilot pressure regulator



example: booster with proportional pressure regulator



R116

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
www.aircom.net

* Product group



Order example:
R116-02



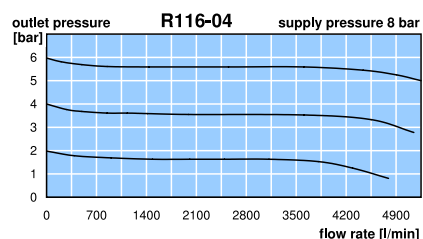
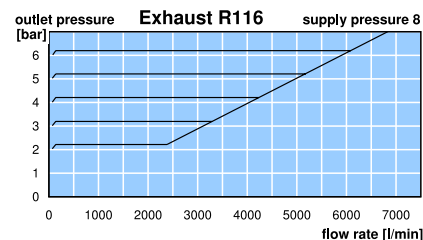
R116-04



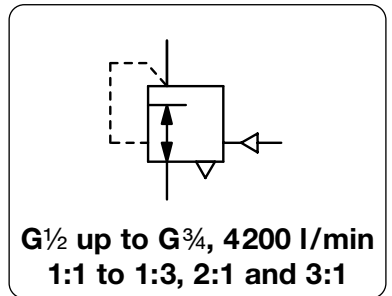
R116-08



R116-12/-16



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		
Pilot pressure	max. 10 bar at 1:1, 2:1 and 3:1 ratio,	5 bar at 1:2,	Supply pressure max. 17 bar
Accuracy	at supply pressure variation of 7 bar: < 7 mbar pressure deviation		pilot port: G $\frac{1}{4}$
Internal air consumption	max. 3 l/min, depending on outlet pressure		Relieving function relieving
Relief capacity	1100 l/min at 0.35 bar overpressure above setpoint		Mounting position any
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 Inner valve: brass and aluminium		Elastomer: NBR/Buna-N, optionally FKM



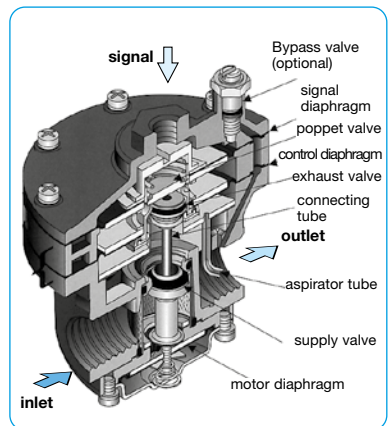
Dimensions			K _v -value	Flow rate		Connection thread	Pilot pressure	Transmission ratio	Order number
A	B	C	(m ³ /h)	m ³ /h*1	l/min*1	G	max. bar	signal : outlet	
mm	mm	mm	(m ³ /h)						

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	G½	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	G¾	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



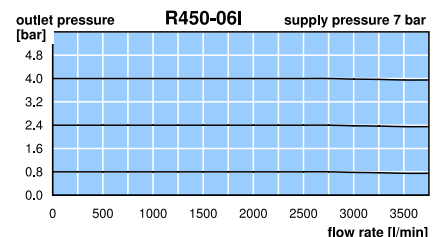
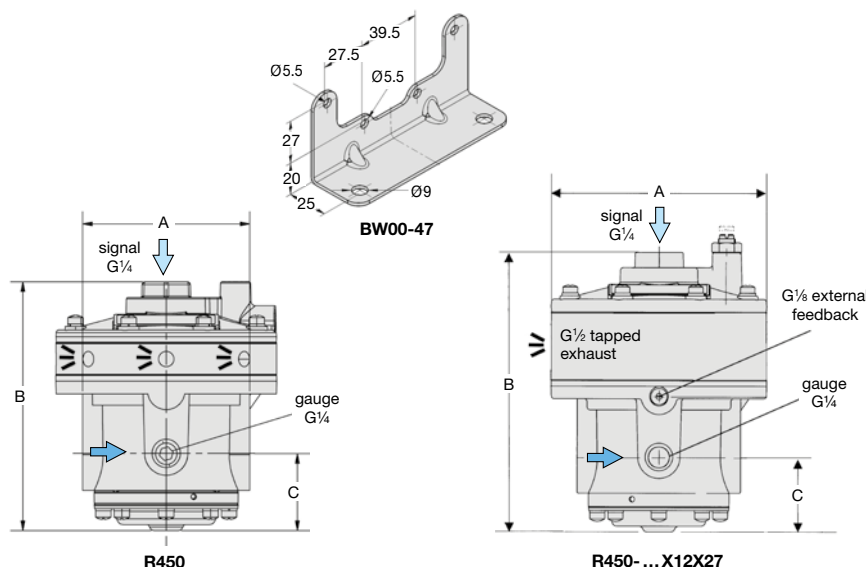
Special options, add the appropriate letter

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

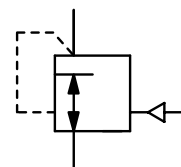
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-..*2
mounting bracket	made of steel	BW00-47



*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



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		
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	
	Spring cage: aluminium	Inner valve: brass and stainless steel	



G1 up to G2
10 ... 150/1000 mbar

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								
mm	mm	mm								

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



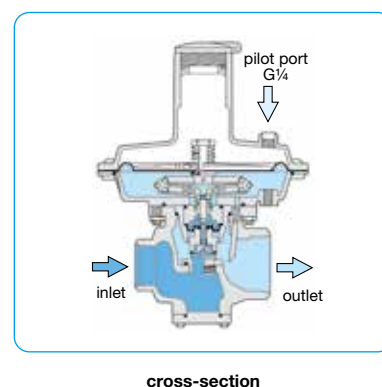
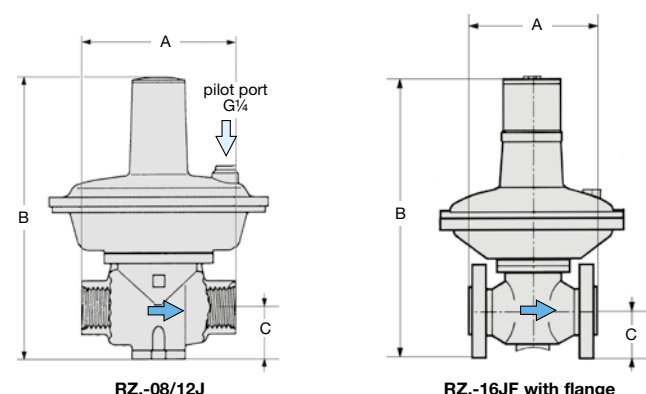
RZ1-08J

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



RZ1-16JF

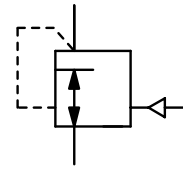


*1 at 4 bar supply pressure and max. outlet pressure *2 see description above *3 G1 thread at inlet

* Produkt group



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 Inner valve: aluminium and plastic Elastomer: NBR/Buna-N		



R $\frac{1}{2}$ " up to R2"
2...55/350 mbar

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	1/2"	2... 55	RGDJ-04J
125	166	34	20	1.49	27	450	3/4"	5... 160	RGDJ-06J
125	166	34	25	2.6	51	850	1"	5... 160	RGDJ-08J
155	194	45	40	4.9	90	1500	1 1/2"	5... 160	RGDJ-12J
200	219	52	50	6.6	120	2000	2"	5... 100	RGDJ-16J

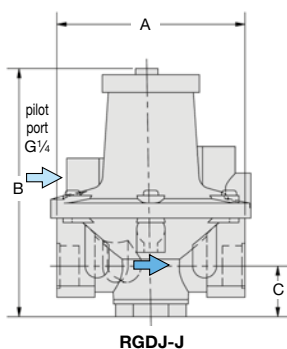
Low pressure booster <i>P₁ max. 4 bar</i> non-relieving, without constant bleed, transmission ratio 1:1									RGB4-J
148	174	24	15	0.62	42	700	1/2"	5... 350	RGB4-04J
192	230	33	25	2.5	168	2800	1"	5... 350	RGB4-08J
150	265	55	40	5	336	5600	1 1/2"	5... 350	RGB4-12J

Special options, add the appropriate letter

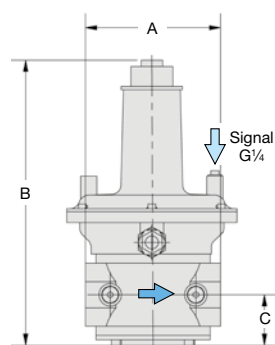
connection thread G $\frac{1}{4}$ for pressure gauge not for RGDJ-04J RG...M

Accessories, enclosed

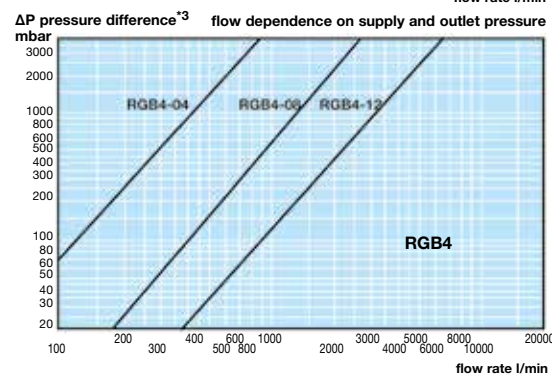
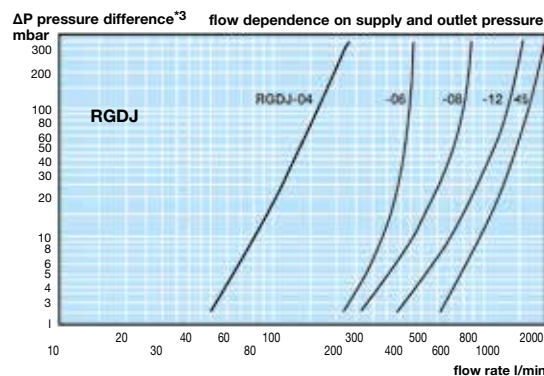
pressure gauge Ø 63 mm, 0...*2 mbar, G $\frac{1}{4}$ for R $\frac{3}{4}$ " up to R2" MA6302-...*2



RGDJ-J



RGB4-J



*1 bei 350 mbar Eingangsdruck und 100 mbar Ausgangsdruck
*2 B6 = 0...60 mbar, C2 = 0...160 mbar, C4 = 0...400 mbar

*3 $\Delta P = P_1 - P_2$ Druckdifferenz von Eingangsdruck und Ausgangsdruck

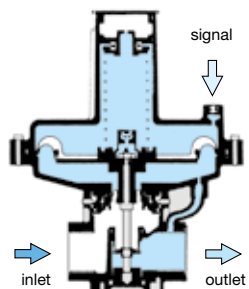
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net

* Product group

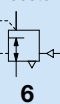


Order example:
RGDJ-04J



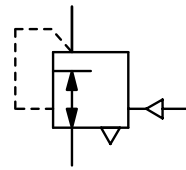
cross section RGB4-J

Booster



6

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



G¼ up to G3
110 000 l/min

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						

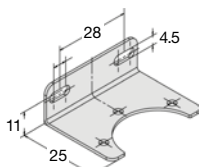
Booster			supply pressure max. 21 bar, outlet pressure 0.2 ... 18 bar with constant bleed, transmission ratio 1:1, relieving					R119-J
70	86	35	5	2.1	102	1700	G¼	R119-02J
70	86	35	10	2.8	150	2500	G¾	R119-03J
83	98	37	15	5.0	340	5600	G½	R119-04J
113	123	49	20	7.6	540	9000	G¾	R119-06J
113	123	49	25	8.4	600	10000	G1	R119-08J
125	132	48	32	9.2	660	11000	G1¼³	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

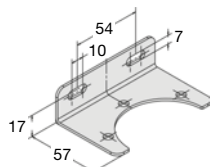
NPT	connection thread	for G2 to G3	R119-...JN
non-relieving	without relieving function	for G¼ to G1	R119-...JK
FKM elastomer		for G¼ to G1½	R119-...JX64
		for G3	R119-24JX64
		for G¼ to G1½	R119-...JX71
without constant bleed	insided the pilot chamber		R119-...JF
flange connection	see chapter for SST devices / flanges		
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

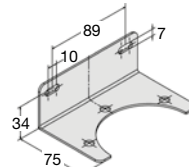
pressure gauge	Ø 50 mm, 0...² bar, G¼	for G¼ to G½	MA5002-²
	Ø 63 mm, 0...² bar, G¼	for G¾ to G3	MA6302-²
mounting bracket	made of steel	for G¼ and G¾	BW00-22
		for G½	BW00-23
		for G¾ to G1½	BW00-24



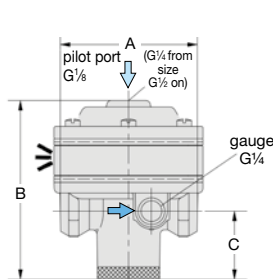
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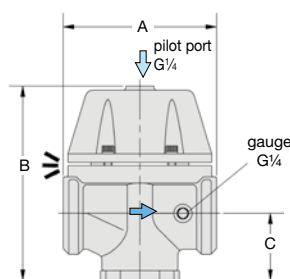
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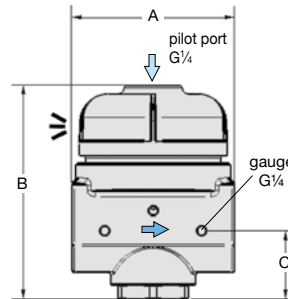
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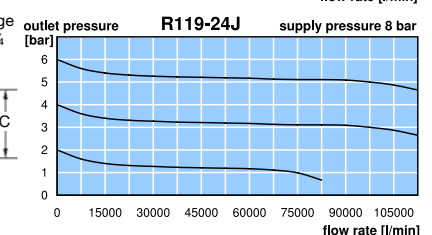
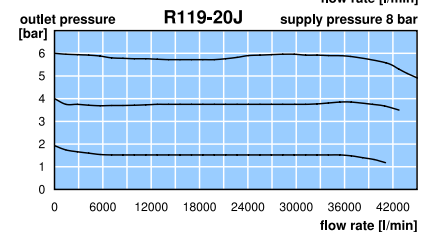
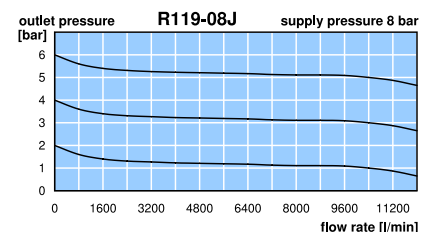
R119-02J...-12J



R119-16J/-20J



R119-24J



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

Gauges: see chapter for measuring devices

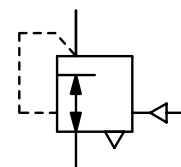
PDF CAD
www.aircom.net

* Product group



Order example:
R119-02J

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	1 800 l/min at 0.3 bar overpressure above setpoint at R200, 9 000 l/min at R201		
Gauge port	G $\frac{1}{4}$ on both sides of the body at R200; $\frac{1}{4}$ " NPT at R201		
Temperature range	0 °C to 90 °C / 32 °F to 194 °F, for appropriately conditioned compressed air down to -40 °C / -40 °F		
Material	Body: aluminium die-cast Elastomer: NBR/Buna-N-/Dacron, optionally FKM Inner valve: stainless steel, cadmium-plated steel and brass		



**G1 and G1½, 1½" NPT
30 000 l/min**

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

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

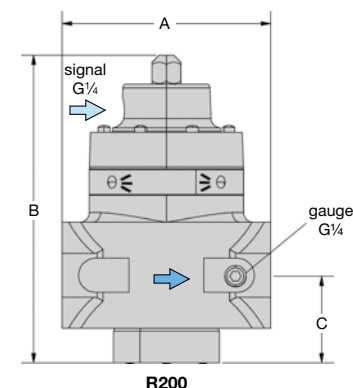
Booster w. high exhaust capacity							supply pressure max. 17 bar, relieving, without constant bleed, transmission ratio 1:1		R201
250	240	57	12.2	1800	30000	1½" NPT	17	0...10	R201-12I

Special options, add the appropriate letter

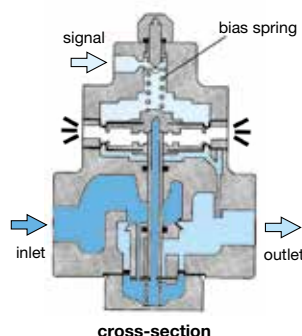
NPT	connection thread	for R200	R200-...IN
non-relieving	without relieving function	for R200	R200-...IK
tapped exhaust	connection thread G $\frac{3}{8}$	for R200	R200-...IX12
FKM elastomer			R20-...IV

Accessories, enclosed

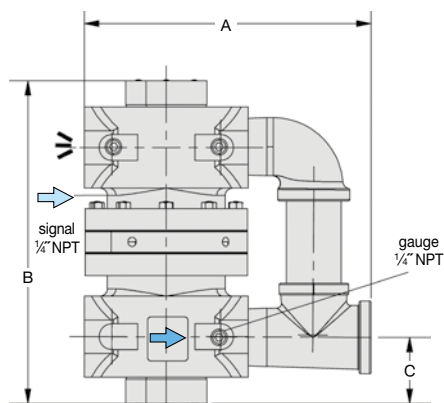
pressure gauge	Ø 63 mm, 0...*2 bar, G $\frac{1}{4}$	MA6302-...*2
adaptor	¼" NPT male / G $\frac{1}{4}$ female	VP-0202N
mounting bracket	made of steel	BW00-41



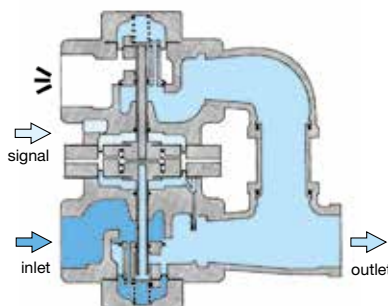
R200



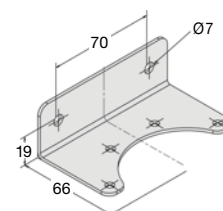
cross-section



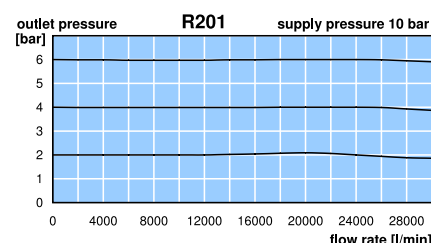
R201



cross-section



BW00-41



*1 at 10 bar supply pressure and 2.8 bar outlet pressure
*2 02 = 0...2.5 bar, 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar, 16 = 0...16 bar

Gauges: see chapter for measuring devices

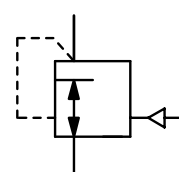
PDF CAD
www.aircom.net

* Product group



Order example:
R200-08I

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		



1/2" NPT, 1:2 up to 1:19
P₁: max. 260/310 bar

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



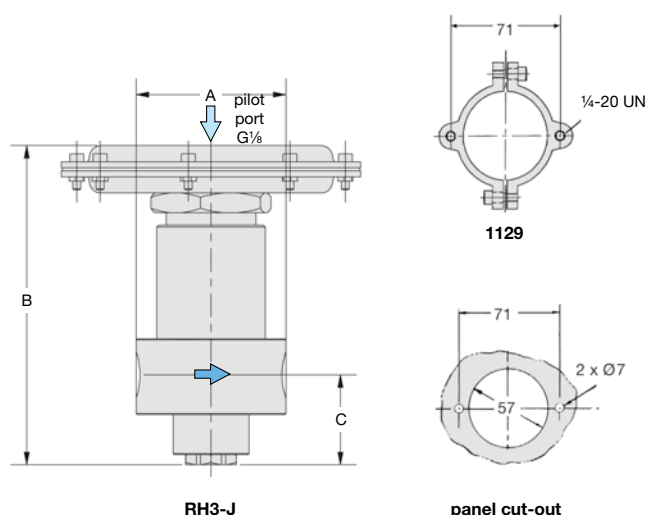
RH3-J

Special options, add the appropriate letter

3/4" 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	MMH	output side RH3-J...MGM
SST gauge	for SST body, on the input side	MH	output side RH3-J...MG

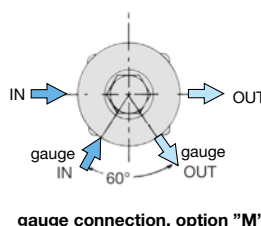
Accessories, enclosed

set of brackets	for panel mounting	1129
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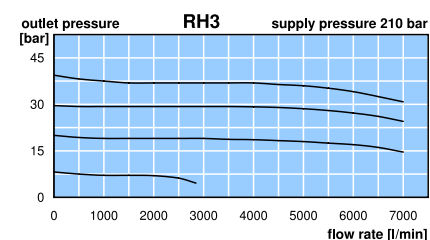
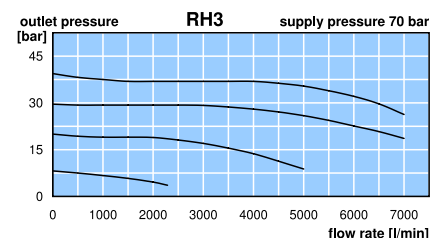


RH3-J

panel cut-out



gauge connection, option "M"



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

* Product group

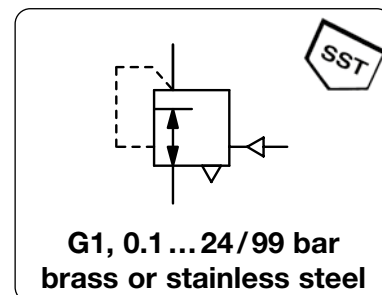
Gauges: see chapter for measuring devices

PDF CAD
www.aircom.net



Order example:
RH3-J402

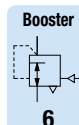
Description	The pilot pressure regulator / booster regulates the outlet pressure through a signal pressure at ratio of 1:1. Functioning as a pressure regulator the pilot pressure may either be internally inducted from the inlet pressure or externally. The dome chamber is closed by a needle valve. Functioning 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 G¼				
Accuracy	at supply pressure variation of 10 bar: 0.1 bar pressure deviation at temperature variation of 3 °C / K: 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				



RLM, made of brass



RLE, made of stainless steel



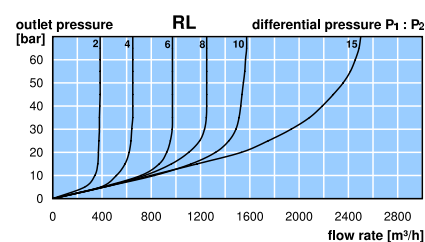
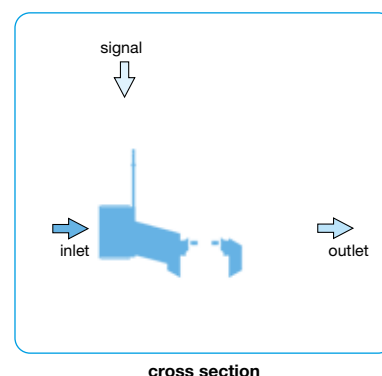
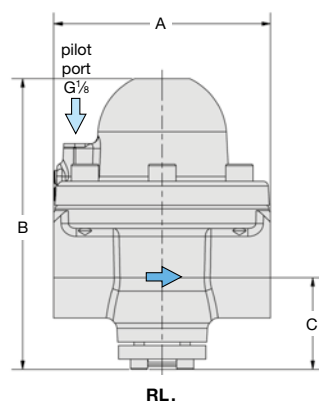
Dimensions			K _v -value	Flow rate	Connection thread	Supply pressure	Pressure range	Order number
A	B	C	(m³/h)	m³/h*1	l/min*1	G	max. bar*2	
mm	mm	mm					bar	

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

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

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-0.J1: at 25 bar supply pressure and 5 bar outlet pressure
RL-0.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

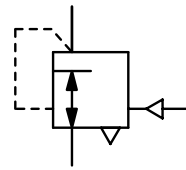
* Product group

PDF CAD
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Order example:
RLM-08J1

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



G $\frac{1}{4}$ up to G2
1 ... 15/50 bar

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



Booster made of brass R120-J

supply pressure max. 50 bar, non-relieving, without constant bleed, transmission ratio 1:1

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	R120-04J2
80	107	38	P				50	1 ... 50	R120-04J5
114	147	66	D	9.8	500	8300	G $\frac{3}{4}$	15	R120-06J2
114	176	66	P				50	1 ... 50	R120-06J5
114	147	66	D	9.8	500	8300	G1	15	R120-08J2
114	176	66	P				50	1 ... 50	R120-08J5
174	223	122	P	25.0	1380	23000	G1 $\frac{1}{2}$	15	R120-12J2
174	223	122	P				50	1 ... 50	R120-12J5
174	223	122	P	25.0	1380	23000	G2	15	R120-16J2
174	223	122	P				50	1 ... 50	R120-16J5



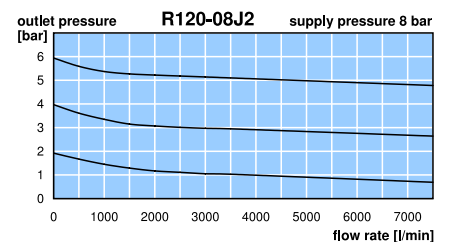
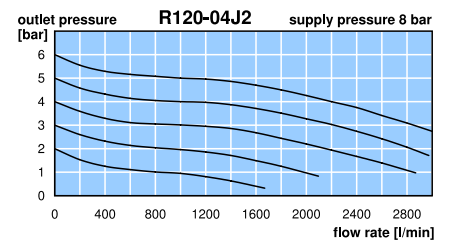
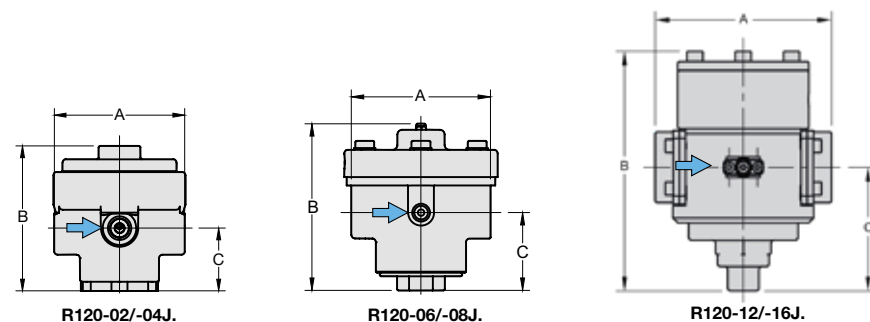
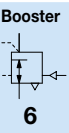
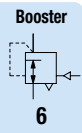
R120-02J2



R120-04J5



R120-06J2



*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

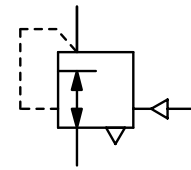
PDF CAD
www.aircom.net

* Product group



Order example:
R120-02J2

Description	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		



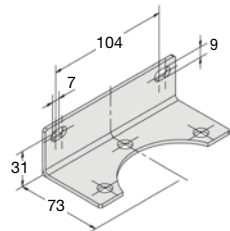
G $\frac{1}{4}$ up to G2
1 ... 15/50 bar

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

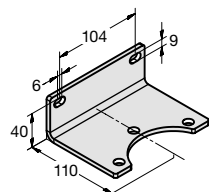


Special options, add the appropriate letter

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: R120-...J.05
helium He: 09	hydrogen H ₂ : 11	methane CH ₄ : R120-...J.13
natural gas 14	oxygen O ₂ : 15	propane C ₃ H ₈ : R120-...J.16
	nitrous oxide N ₂ O: 17	water H ₂ O: R120-...J.W



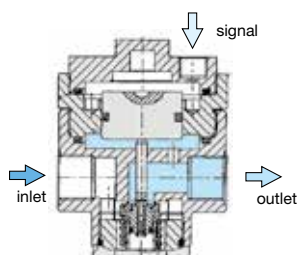
BW00-42



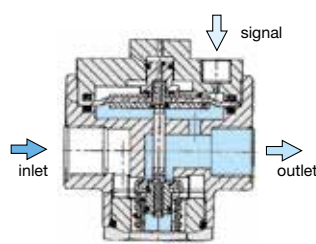
BW00-68S

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}
mounting bracket	made of steel	for G $\frac{3}{4}$ and G1	BW00-42
	made of stainless steel	for G1 $\frac{1}{2}$ and G2	BW00-68S



cross-section: with piston



cross-section: with diaphragm

^{*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

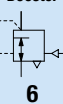
PDF CAD
www.aircom.net

* Product group

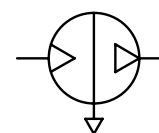


Order example:
MA5002-02

Booster



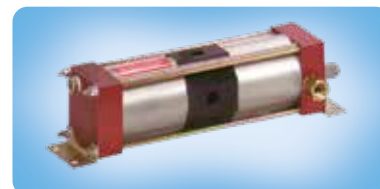
Description	The air amplifier compresses air or nitrogen from a standard pressure of 10 bar max. to the desired outlet pressure of 60 bar max. This is realised by cylinders with different ratios - simple, safe and economical. No electrical installation is required and there is no energy consumption once 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		
Material	Body: aluminium	Sound level	max. 79 dB (A)
		Seals:	NBR/Buna-N



P₁: max. 12 bar, P₂: 100 bar
50 - 1200 l/min

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

Pressure booster / Air amplifier							supply pressure P ₁ max. 12 bar, for compressed air	drive pressure P _A 2...10 bar	AM
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



AM20-0580



AM20-0960

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...-...G
pressure booster for liquids		AM...-...L



AM20-1200



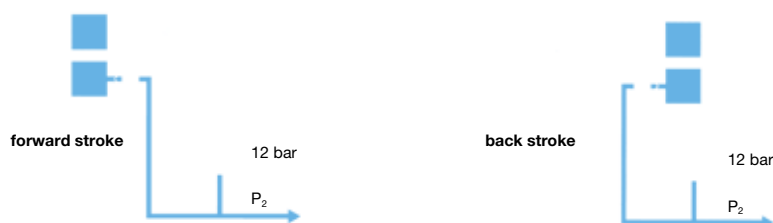
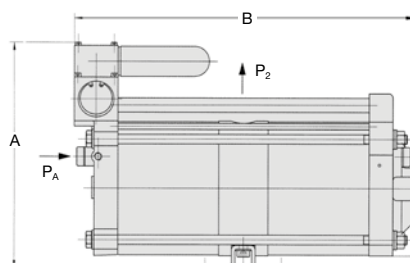
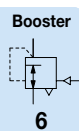
AM32-0230



AM40-0050



AM60-0360



function principle for transmission ratio 1 : 2

*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

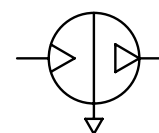
PDF CAD
 www.aircom.net

* Product group



Order example:
 AM20-0580

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 P_1	max. 12 bar, for instance nitrogen or the system air		
Outlet pressure P_2	amplified outlet or operating pressure of 20 bar to 40 bar maximum		
Temperature range	0 °C to 60 °C / 32 °F to 140 °F		
Material	Body: aluminium	Seals: NBR/Buna-N	Tank: coated steel, SST at AP40-0050
		Sound level max. 79 dB (A)	



P_1 : max. 12 bar, P_2 : 40 bar
50 - 1200 l/min

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 $\frac{3}{8}$	G $\frac{3}{8}$	1 : 2	580 ^{*1}	20	AP20-0580
235	400	360	16	3	G $\frac{1}{2}$	G $\frac{1}{2}$	1 : 2	960 ^{*1}	20	AP20-0960
656	844	381	49	40	G $\frac{3}{4}$	G $\frac{1}{2}$	1 : 2	1200 ^{*1}	20	AP20-1200
655	844	381	58	40	G $\frac{1}{2}$	G $\frac{1}{2}$	1 : 3	230 ^{*2}	20	AP20-0230
365	400	133	5.3	0.8	G $\frac{3}{8}$	G $\frac{3}{8}$	1 : 4	50 ^{*3}	40	AP40-0050
655	844	381	45	40	G $\frac{1}{2}$	G $\frac{3}{8}$	1 : 5	360 ^{*4}	40	AP40-0360



AP20-0580 similar AP20-0960

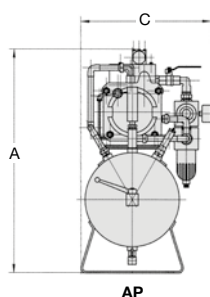
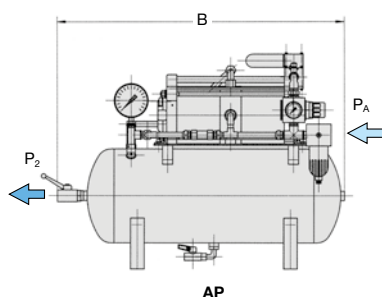


AP20-1200 similar AP40-0360 and AP20-0230

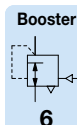
Special options, add the appropriate letter

unlubricated operation seals FEC seals for dry compressed air or nitrogen
Atex e.g. Ex II 3G/3D IIB x, further specifications possible
pressure booster for gasbis P_2 max. 1500 bar

AP...T
 AP...EX
 AP...

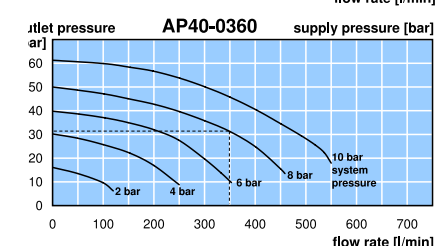
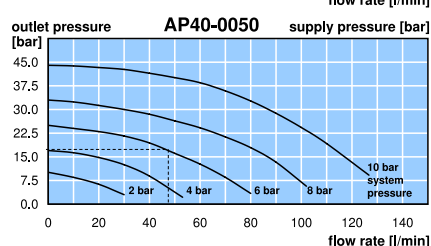
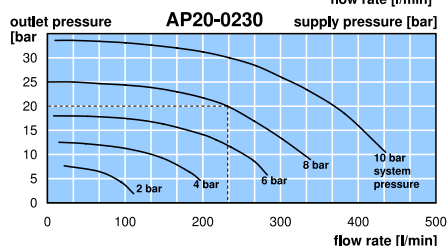
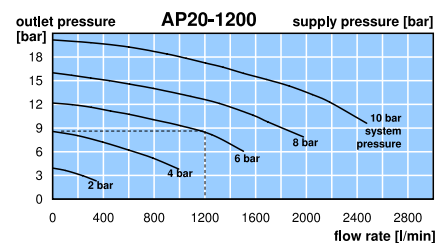
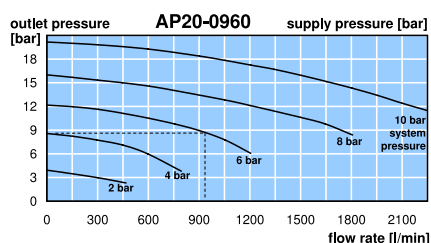
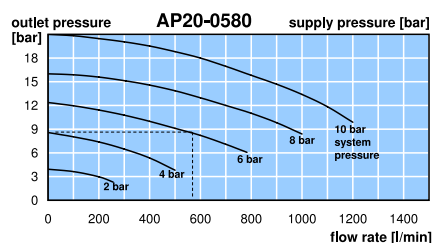


AP40-0050



Booster
6

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



*1 at 6 bar supply and 8 bar outlet pressure under full load

*2 at 8 bar supply and 20 bar outlet pressure under full load

*5 outlet pressure P_2 limited by the pressure stage of the accumulator, higher pressure ranges on request

*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

* Product group

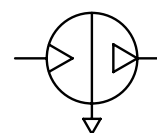
Calculation examples can be found in the appendix

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		
Drive	double piston intensifier, ratio 1:2 Reversing, check and switching valves provide for automatic control. Life time approx. 20 million switching cycles.		
Inlet pressure P_1	2...8 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		



**max. 4...20 bar
transmission ratio 1:2**

Dimensions	Weight	Connection	Transmission	Flow	Fill time	Pressure	Order
A B C	kg	thread	ratio	rate	10l-tank	range	number
mm mm mm		G	$P_A : P_2$	l/min*	s	bar	

Pressure booster							P_1 max. 8 bar, for compressed air	AB
100	192	70	1.5	G $\frac{1}{8}$	1 : 2	130	30	4...16 AB040
117	284	90	3.0	G $\frac{3}{8}$	1 : 2	260	15	4...16 AB063
176	468	155	12	G $\frac{1}{2}$	1 : 2	440	6	4...16 AB100



AB040

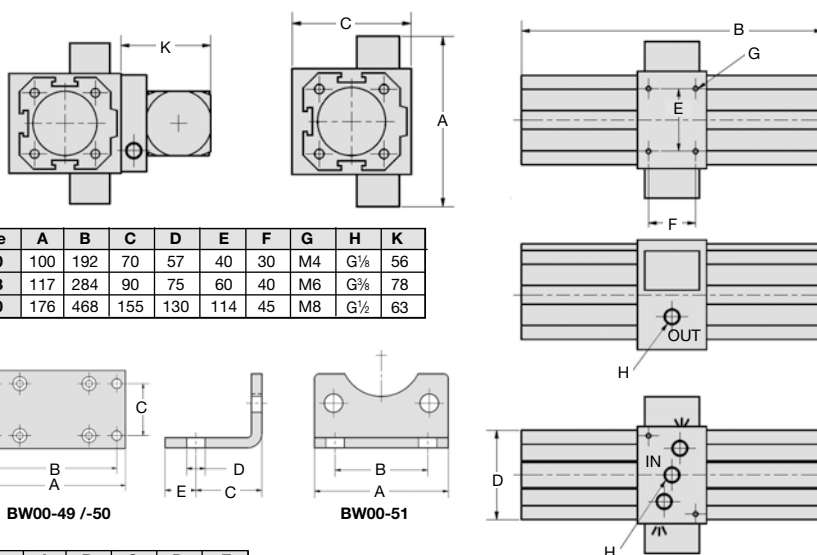
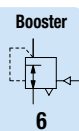
Pressure booster with regulator and gauge							P_1 max. 8 bar, for compressed air	AB-D
100	192	126	1.5	G $\frac{1}{8}$	1 : 2	130	30	4...16 AB040D
117	284	168	3.0	G $\frac{3}{8}$	1 : 2	260	15	4...16 AB063D
176	468	218	12	G $\frac{1}{2}$	1 : 2	440	6	4...16 AB100D



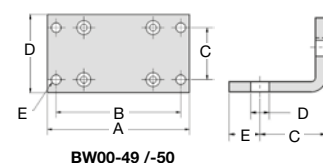
AB040D

Accessories, enclosed

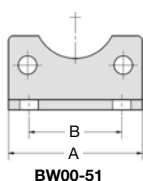
Mounting plate	made of steel, central attachment below	for AB040	BW00-49
		for AB063	BW00-50
Mounting bracket	made of steel, mounting at the side, 1 piece	for AB100	BW00-51



Device	A	B	C	D	E	F	G	H	K
AB040	100	192	70	57	40	30	M4	G $\frac{1}{8}$	56
AB063	117	284	90	75	60	40	M6	G $\frac{3}{8}$	78
AB100	176	468	155	130	114	45	M8	G $\frac{1}{2}$	63

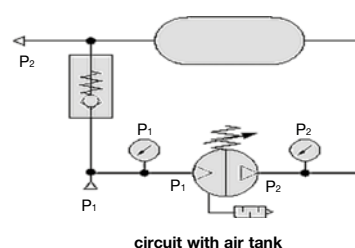


BW00-49 /-50

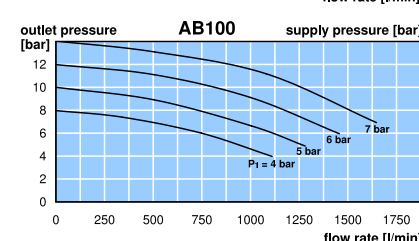
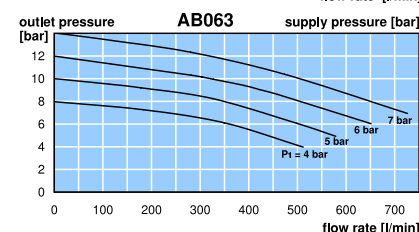
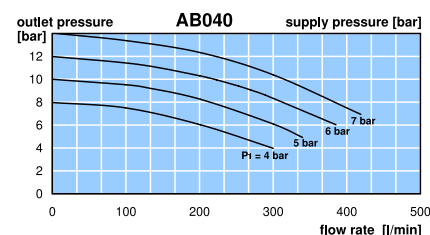
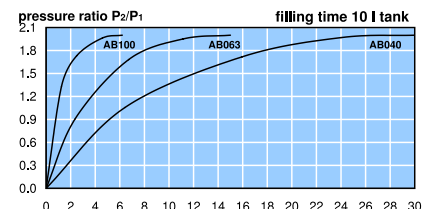
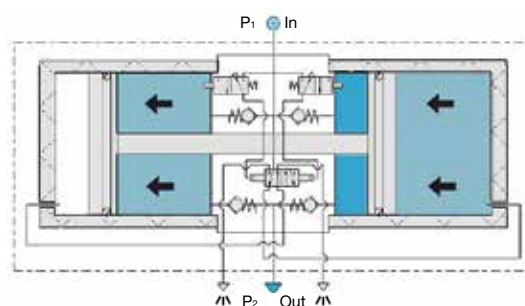


BW00-51

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



circuit with air tank



*1 at $P_2 = 8$ bar and 1 bar pressure drop

Pressure booster with 2 l to 20 l tank on request

PDF CAD
www.aircom.net

* Product group



Order example:
AB040