

Screw-in pressure regulators



AVENTICS™ Screw-in pressure regulators

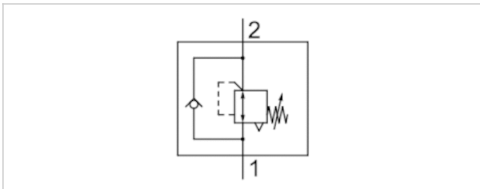


Pressure regulator

- Qn 1►2 = 400-600 l/min
- External thread / push-in fitting
- Poppet valve



Version	Poppet valve
Working pressure min./max.	1 ... 16 bar
Adjustment range min./max.	1 ... 8 bar
Ambient temperature min./max.	-10 ... 70 °C
Medium temperature min./max.	-10 ... 70 °C
Medium	Compressed air
Weight	See table below



Technical data

Part No.	Compressed air connection Input	Compressed air connection type Input	Compressed air connection Output
0821302083	G 1/8	External thread	Ø 4
0821302084	G 1/8	External thread	Ø 6
0821302086	G 1/8	External thread	Ø 6
0821302085	G 1/8	External thread	Ø 8
0821302087	G 1/8	External thread	Ø 8
0821302088	G 1/4	External thread	Ø 6
0821302089	G 1/4	External thread	Ø 8
0821302090	G 1/4	External thread	Ø 10

Part No.	Compressed air connection type Output	Flow	Weight	Fig.
		Qn 1►2		
0821302083	push-in fitting	400 l/min	0.075 kg	Fig. 1
0821302084	push-in fitting	400 l/min	0.075 kg	Fig. 1
0821302086	push-in fitting	600 l/min	0.105 kg	Fig. 2
0821302085	push-in fitting	400 l/min	0.075 kg	Fig. 1
0821302087	push-in fitting	600 l/min	0.105 kg	Fig. 2
0821302088	push-in fitting	600 l/min	0.08 kg	Fig. 1
0821302089	push-in fitting	600 l/min	0.08 kg	Fig. 1
0821302090	push-in fitting	600 l/min	0.08 kg	Fig. 1

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

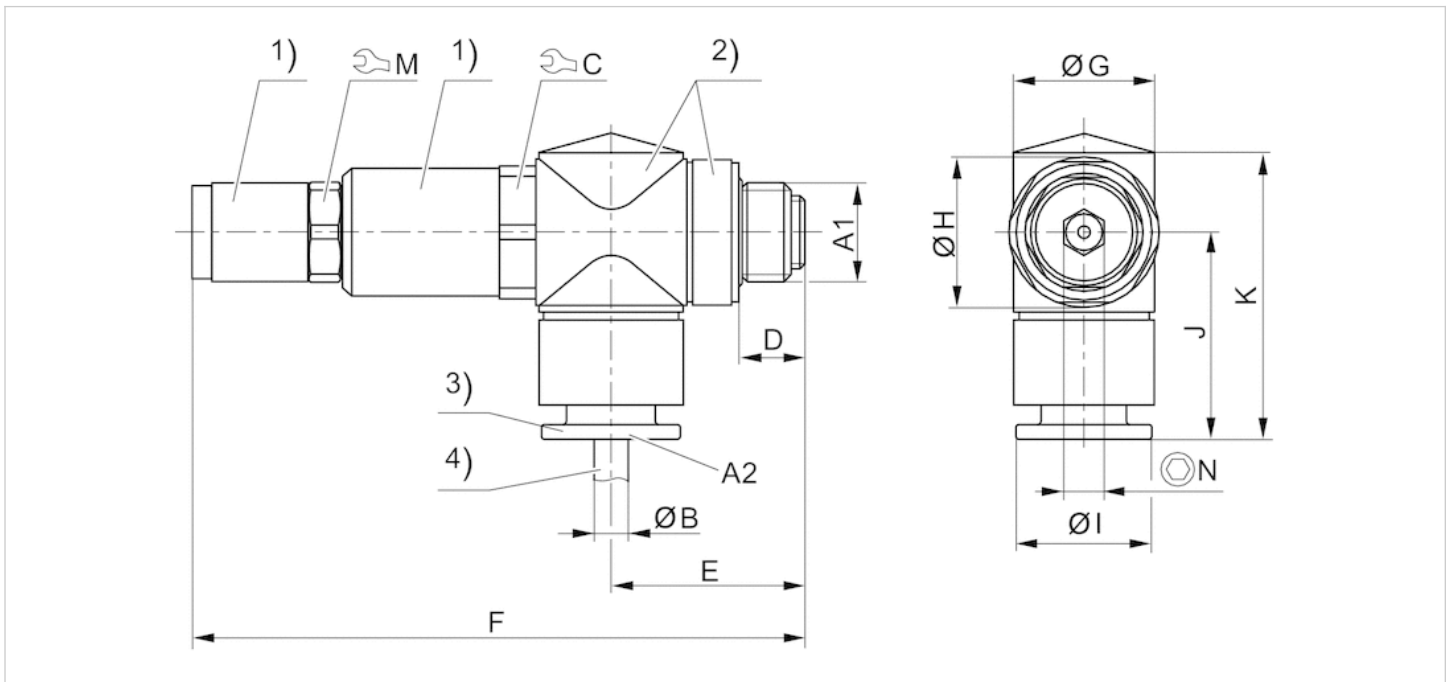
Technical information

Material

Housing	Brass Polyamide, galvanized
Seals	Acrylonitrile butadiene rubber

Dimensions

Fig. 1



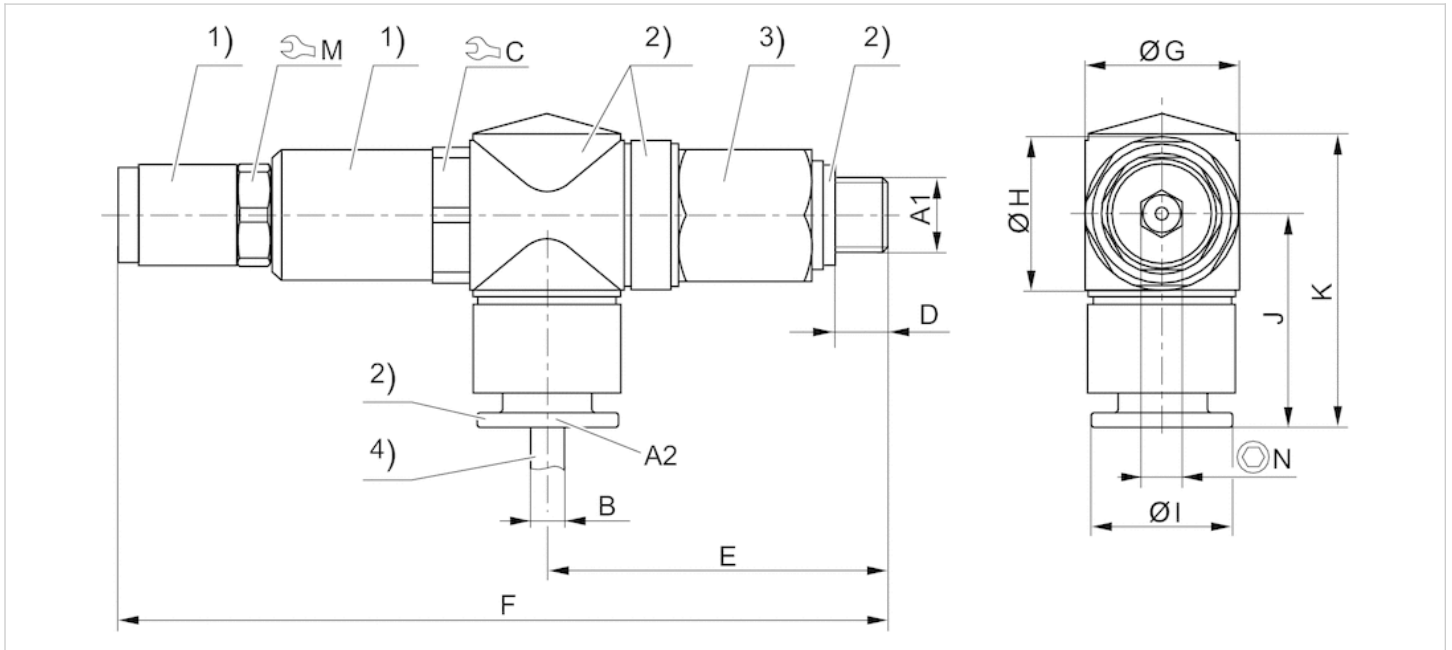
- 1) galvanized brass
- 2) polyamide
- 3) polyamide
- 4) tubing

Dimensions

Part No.	A1	A2	C	D	E	F	G	H	I	J	K	M	N
0821302083	G 1/8	4	17	6.3	19.8	70.8	11	15	11	21.7	31.4	13	5
0821302084	G 1/8	6	17	6.3	19.8	70.8	13	15	13	25	33.9	13	5
0821302085	G 1/8	8	17	6.3	19.8	70.8	14	15	18	25.2	35.3	13	5
0821302088	G 1/4	6	17	9.5	25.8	78.8	13	19	13	26	38.1	13	5
0821302089	G 1/4	8	17	9.5	25.8	78.8	18	19	18	27	39.8	13	5
0821302090	G 1/4	10	17	9.5	25.8	78.8	18	19	18	27	39.8	13	5

Dimensions

Fig. 2



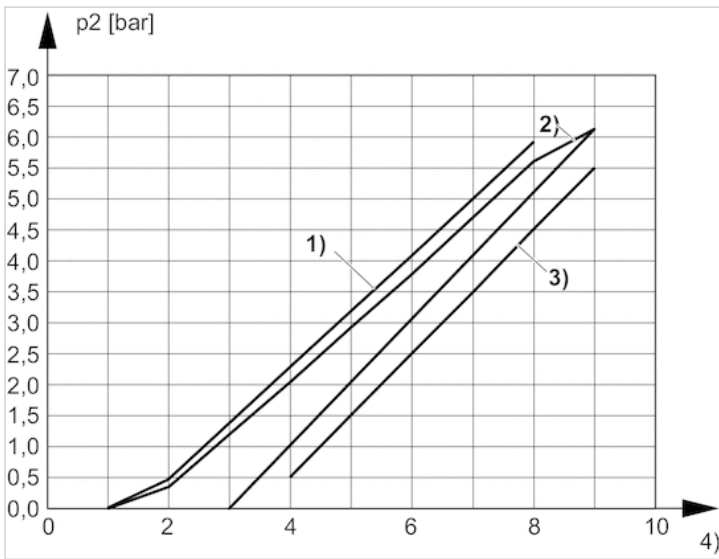
- 1) galvanized brass
- 2) polyamide
- 3) galvanized brass
- 4) tubing
- A1 = input
- A2 = output

Dimensions

Part No.	A1	A2	C	D	E	F	M
0821302086	G 1/8	6	17	6.5	42.3	95.3	13
0821302087	G 1/8	8	17	6.2	42.3	95.3	13

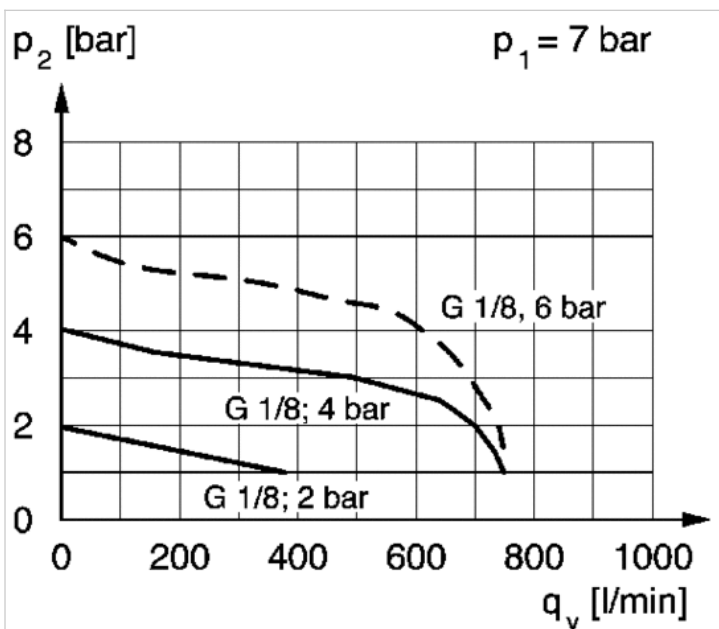
Diagrams

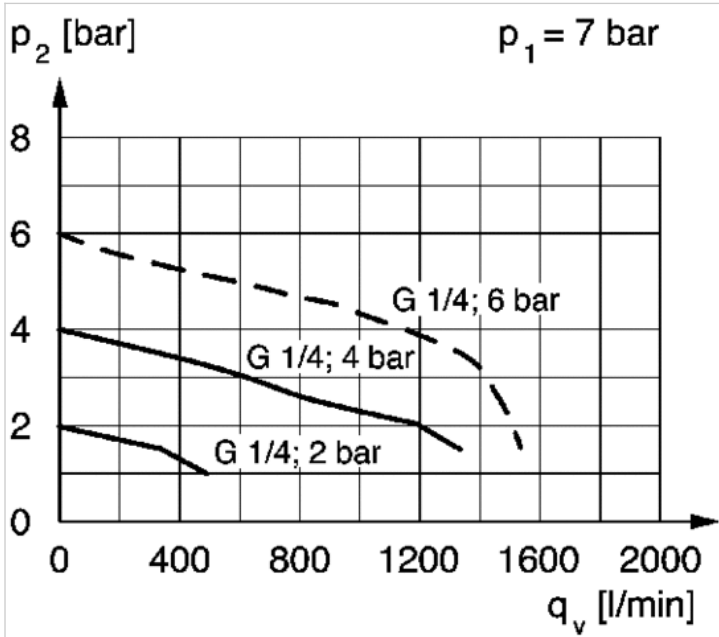
Hysteresis



- 1) Overfill hysteresis
- 2) Control hysteresis
- 3) Refill hysteresis
- 4) Adjustment screw rotations

Pressure characteristics curve (flow rate from 1 to 2)

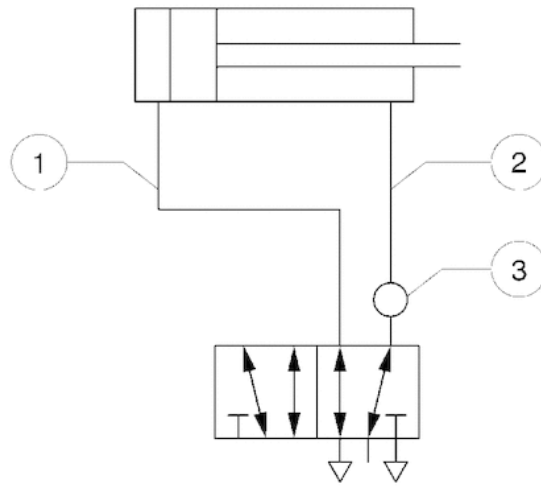




p_1 = working pressure, p_2 = secondary pressure, q_v = nominal flow

Circuit diagram

Application example



- 1) e.g. forward stroke with max. pressure
- 2) return stroke with reduced pressure
- 3) installation point on directional control valve

At low tightening torque, the sealing ring enables the banjo union to swivel through 360°. Further tightening locks the banjo union into position.

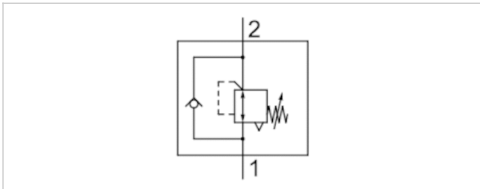
Adjust pressure via adjustment screw with hexagon socket. Lock using counter nuts.

Pressure regulator

- Qn 1►2 = 600 l/min
- plug-in with tube nut / External thread
- Poppet valve



Version	Poppet valve
Working pressure min./max.	1 ... 16 bar
Adjustment range min./max.	1 ... 8 bar
Ambient temperature min./max.	-10 ... 70 °C
Medium temperature min./max.	-10 ... 70 °C
Medium	Compressed air
Weight	See table below



Technical data

Part No.	Compressed air connection Input	Compressed air connection type Input	Compressed air connection Output
0821302074	G 1/4	plug-in with tube nut	Ø 4
0821302072	G 1/8	plug-in with tube nut	Ø 4

Part No.	Compressed air connection type Output	Flow	Weight	Fig.
		Qn 1►2		
0821302074	External thread	600 l/min	0.08 kg	Fig. 1
0821302072	External thread	600 l/min	0.1 kg	Fig. 2

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar

Technical information

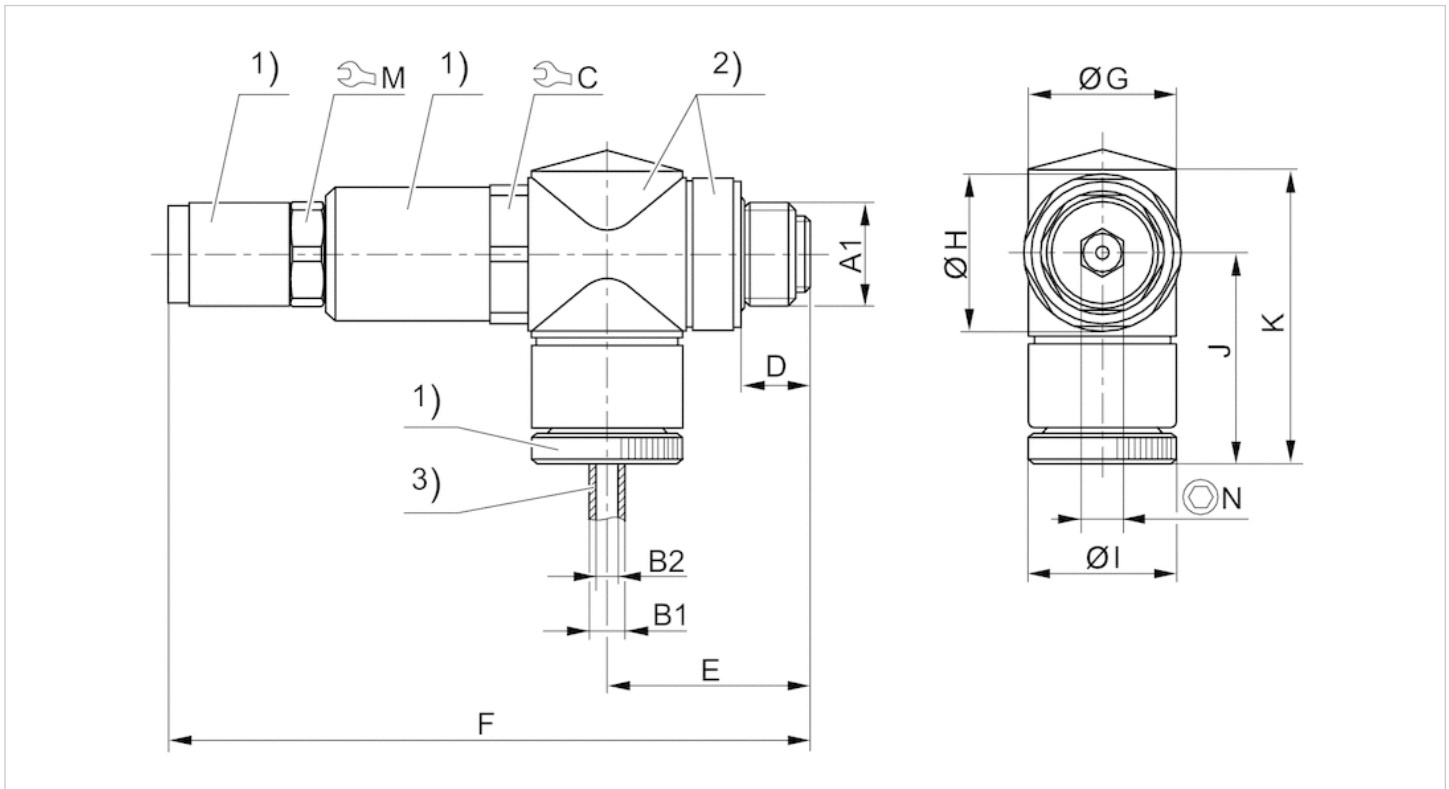
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Technical information

Material	
Housing	Brass Polyamide, galvanized
Seals	Acrylonitrile butadiene rubber

Dimensions

Fig. 1



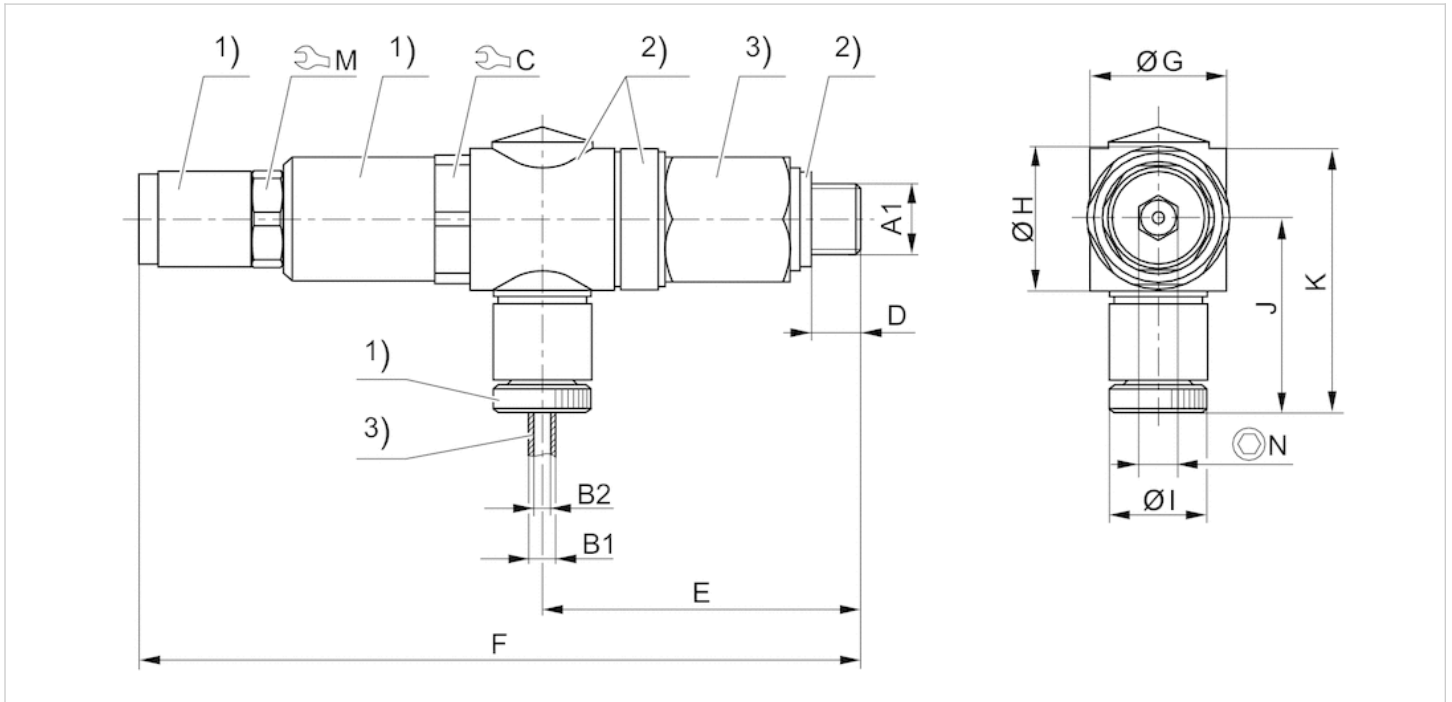
- 1) galvanized brass
- 2) polyamide
- 3) tubing
- A1 = input
- B1 = output

Dimensions

Part No.	A1	B1	B2	C	D	E	F	G	H	I	J	K	M	N
0821302074	G 1/4	6	4	17	9.5	25.8	78.8	13	19	13	25.5	37.6	13	5

Dimensions

Fig. 2



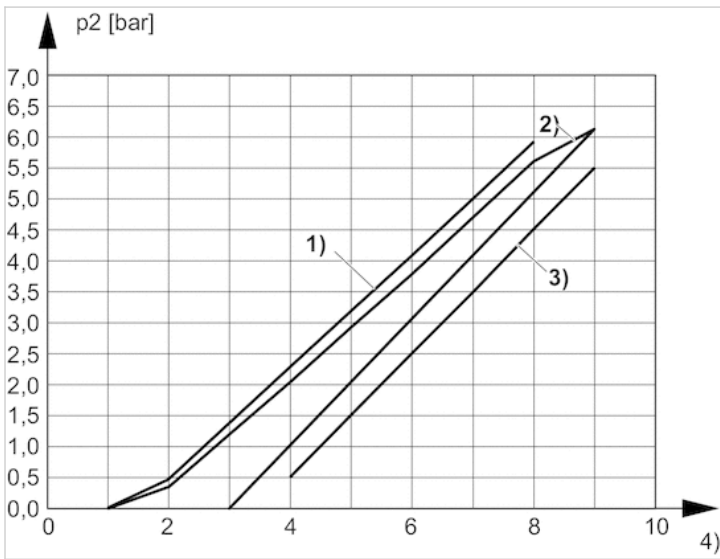
- 1) galvanized brass
- 2) polyamide
- 3) galvanized brass
- 4) hose
- A1 = input
- B1 = output

Dimensions

Part No.	A1	B1	B2	C	D	E	F	M
0821302072	G 1/8	6	4	17	6.5	42.3	95.3	13

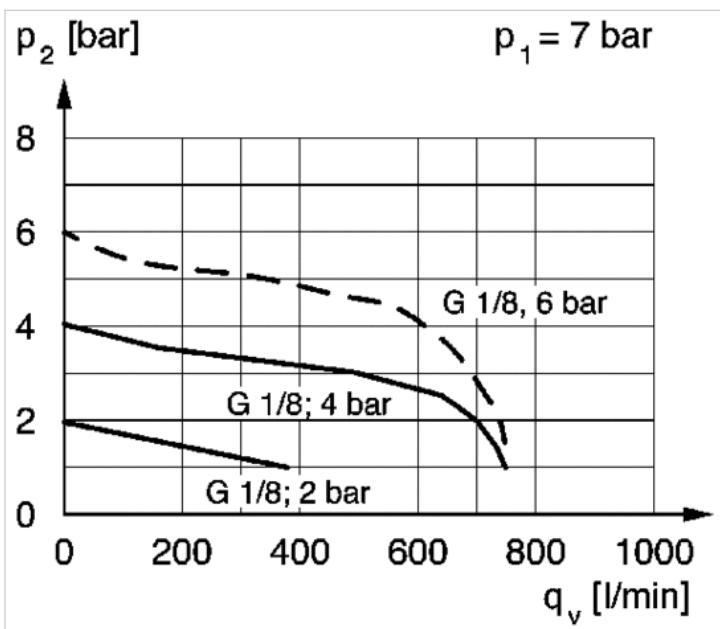
Diagrams

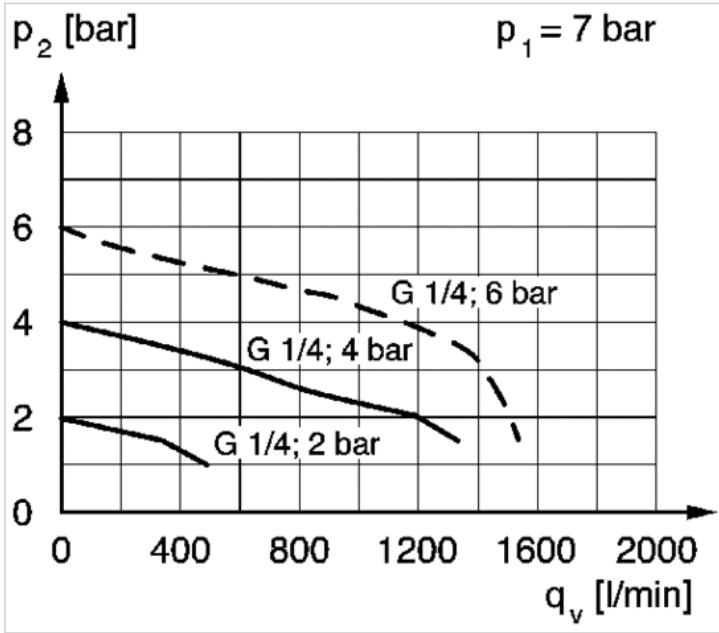
Hysteresis



- 1) Overfill hysteresis
- 2) Control hysteresis
- 3) Refill hysteresis
- 4) Adjustment screw rotations

Pressure characteristics curve (flow rate from 1 to 2)

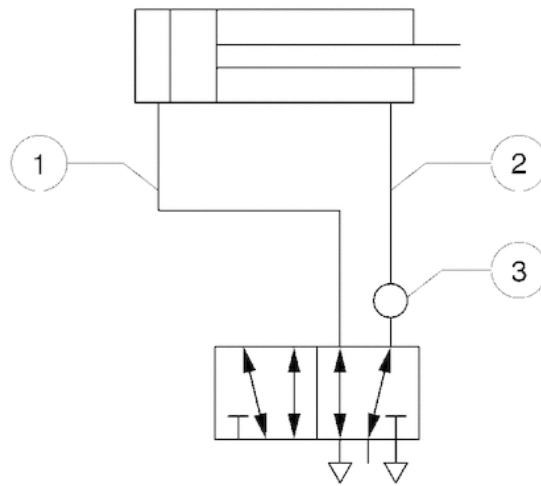




p_1 = working pressure, p_2 = secondary pressure, q_v = nominal flow

Circuit diagram

Application example



- 1) e.g. forward stroke with max. pressure
- 2) return stroke with reduced pressure
- 3) installation point on directional control valve

At low tightening torque, the sealing ring enables the banjo union to swivel through 360°. Further tightening locks the banjo union into position.

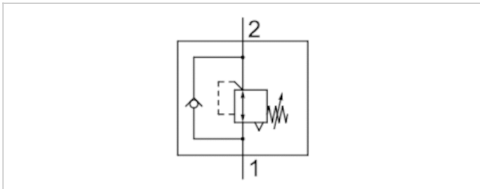
Adjust pressure via adjustment screw with hexagon socket. Lock using counter nuts.

Pressure regulator

- $Q_n 1 \rightarrow 2 = 400-750 \text{ l/min}$
- Internal thread / External thread
- Poppet valve



Version	Poppet valve
Working pressure min./max.	1 ... 16 bar
Adjustment range min./max.	1 ... 8 bar
Ambient temperature min./max.	-10 ... 70 °C
Medium temperature min./max.	-10 ... 70 °C
Medium	Compressed air
Weight	See table below



Technical data

Part No.	Compressed air connection Input	Compressed air connection type Input	Compressed air connection Output
0821302078	G 1/8	Internal thread	G 1/8
0821302080	G 1/4	Internal thread	G 1/4
0821302081	G 3/8	Internal thread	G 3/8
0821302082	G 1/2	Internal thread	G 1/2
0821302079	G 1/8	Internal thread	G 1/4

Part No.	Compressed air connection type Output	Flow	Weight	Fig.
		$Q_n 1 \rightarrow 2$		
0821302078	External thread	400 l/min	0.08 kg	Fig. 1
0821302080	External thread	600 l/min	0.11 kg	Fig. 1
0821302081	External thread	750 l/min	0.075 kg	Fig. 1
0821302082	External thread	750 l/min	0.075 kg	Fig. 1
0821302079	External thread	400 l/min	0.11 kg	Fig. 2

Nominal flow Q_n at 6 bar and $\Delta p = 1 \text{ bar}$

Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

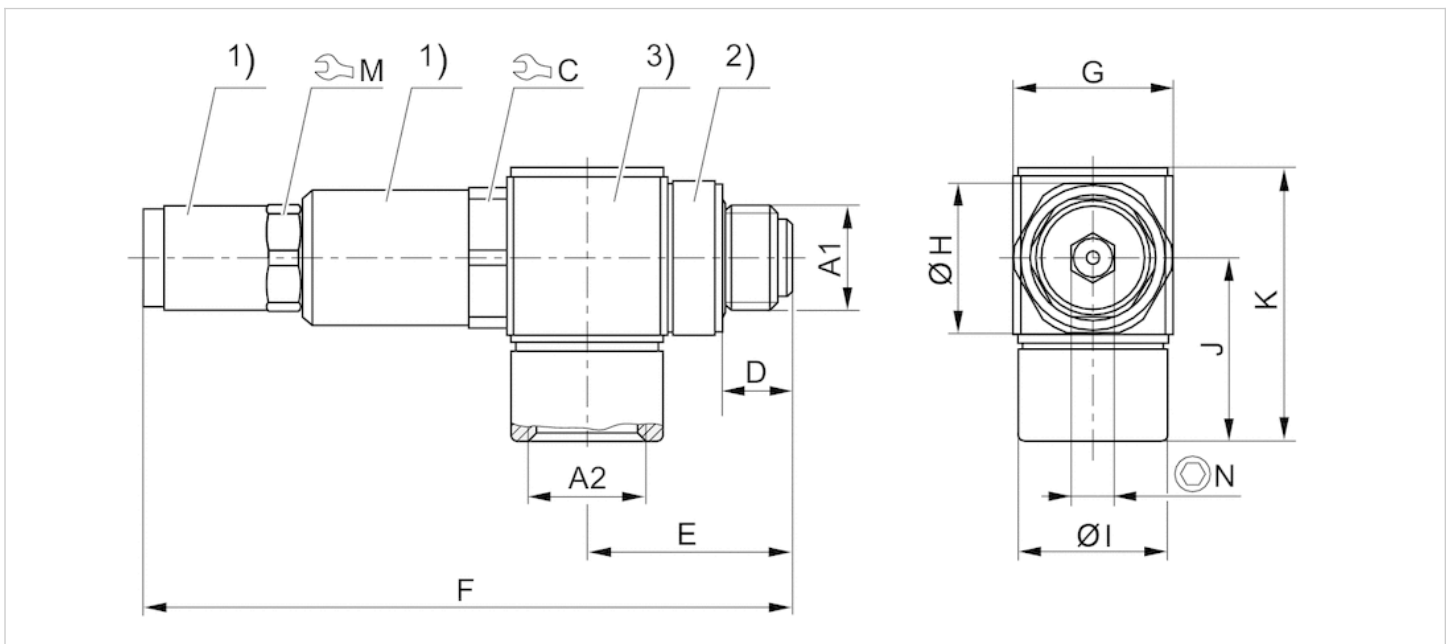
Technical information

Material

Housing	Brass Polyamide Aluminum, galvanized black anodized
Seals	Acrylonitrile butadiene rubber

Dimensions

Fig. 1



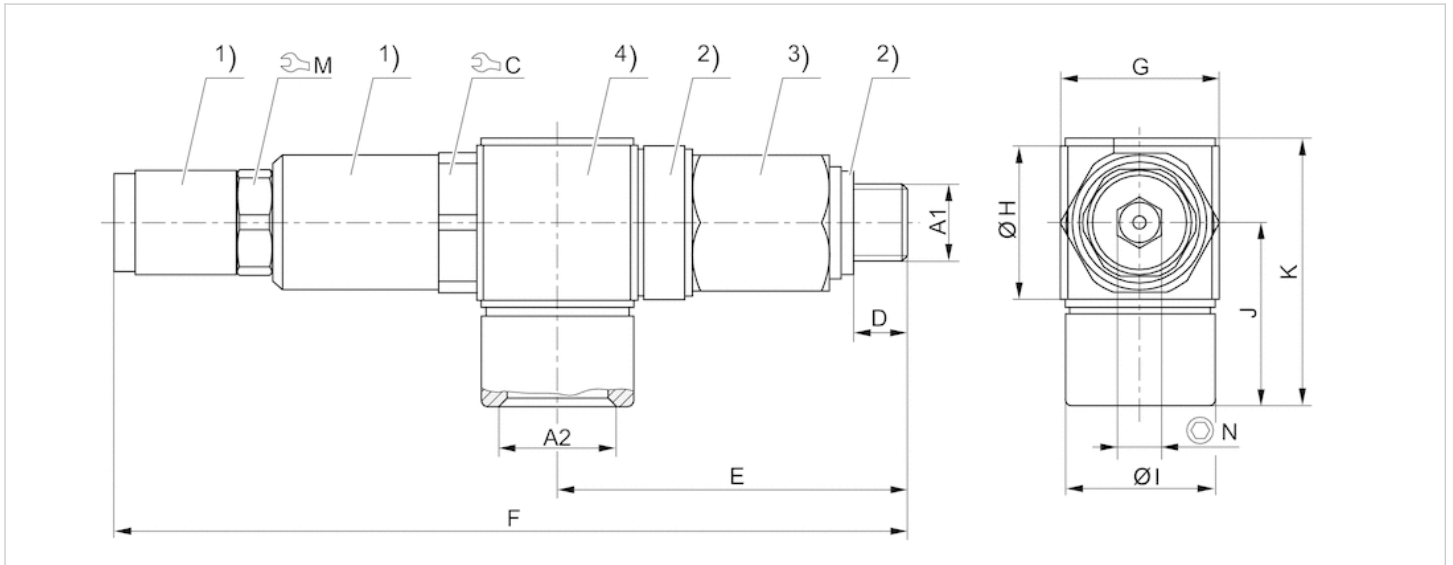
- 1) galvanized brass
- 2) polyamide
- 3) anodized black aluminum

Dimensions

Part No.	A1	A2	C	D	E	F	G	H	I	J	K	M	N
0821302078	G 1/8	G 1/8	17	6.3	19.8	70.8	15	15	13	18.5	26.7	13	5
0821302080	G 1/4	G 1/4	17	9.5	25.8	78.8	19	19	18	22.5	32.9	13	5
0821302081	G 3/8	G 3/8	22	9.5	29	85.2	23	23	23	28.5	41	17	6
0821302082	G 1/2	G 1/2	27	11.5	34	86.2	28	28	25	31	46.3	17	6

Dimensions

Fig. 2



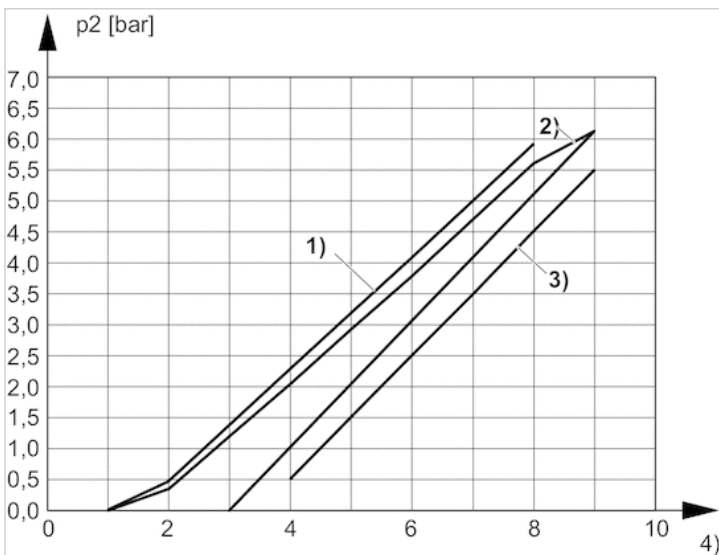
- 1) galvanized brass
- 2) polyamide
- 3) galvanized brass
- 4) anodized black aluminum
- A1 = input
- A2 = output

Dimensions

Part No.	A1	A2	C	D	E	F	G	H	I	J	K	M	N
0821302079	G 1/8	G 1/4	17	6.5	42.3	95.3	19	19	18	22.5	32.9	13	6

Diagrams

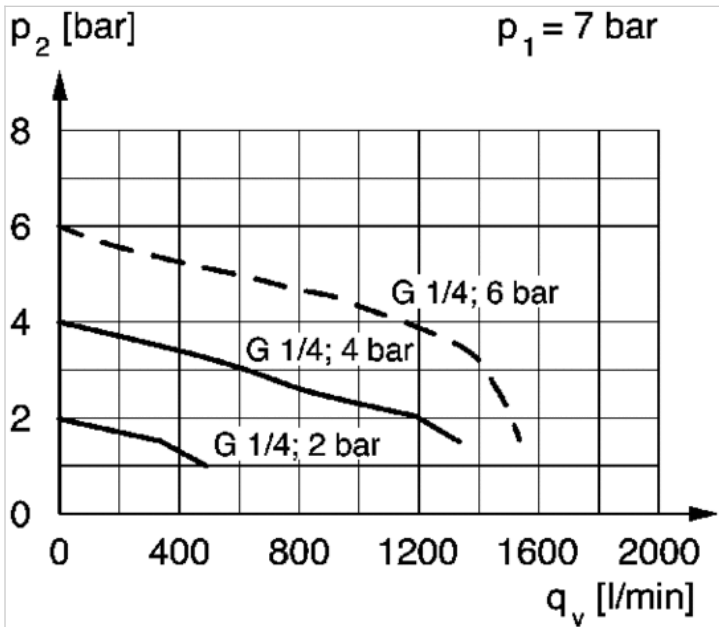
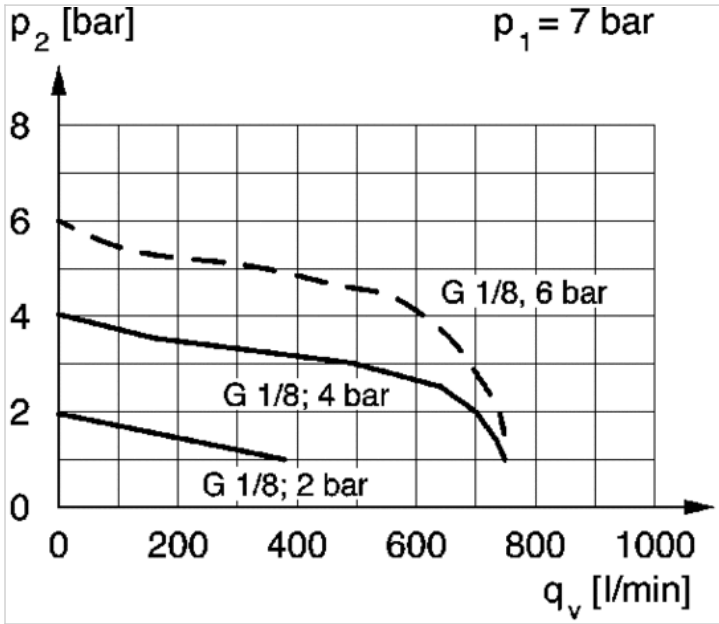
Hysteresis

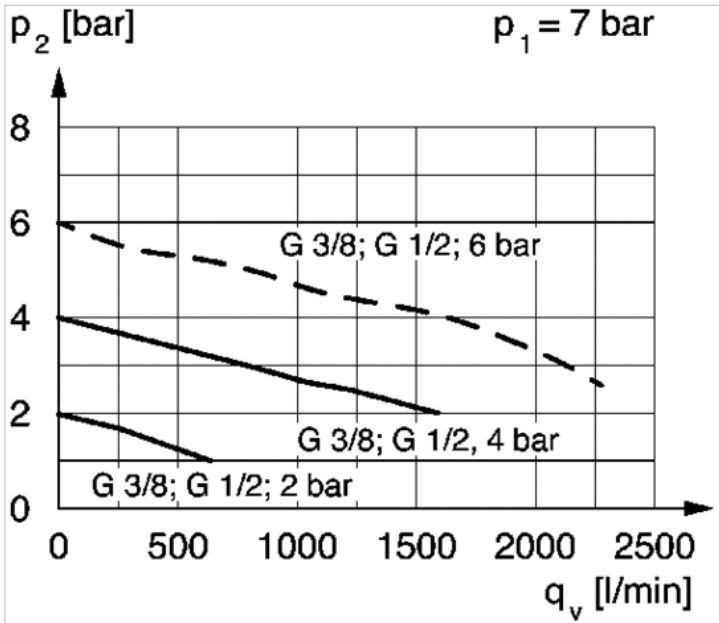


- 1) Overfill hysteresis

- 2) Control hysteresis
- 3) Refill hysteresis
- 4) Adjustment screw rotations

Pressure characteristics curve (flow rate from 1 to 2)

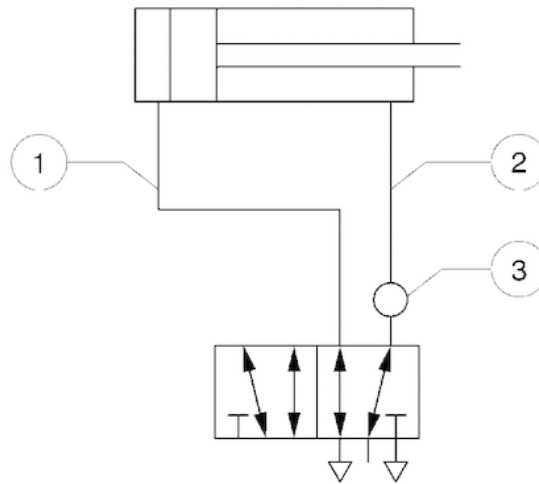




p_1 = working pressure, p_2 = secondary pressure, q_v = nominal flow

Circuit diagram

Application example



1) e.g. forward stroke with max. pressure

2) return stroke with reduced pressure

3) installation point on directional control valve

At low tightening torque, the sealing ring enables the banjo union to swivel through 360°. Further tightening locks the banjo union into position.

Adjust pressure via adjustment screw with hexagon socket. Lock using counter nuts.

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2019-03



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