

Precision one-way flow control valves GRP

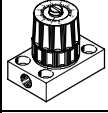
FESTO



Precision one-way flow control valves GRP

FESTO

Product range overview and type codes

Product range overview									
Version	Valve function	Version	Type	Connection direction	Pneumatic connection 1	Pneumatic connection 2	q _N ¹⁾ [l/min]	Adjustment component	→ Page/ Internet
Precision one-way flow control valve	One-way flow control function		GRP	–	G $\frac{1}{8}$	G $\frac{1}{8}$	40.7 ... 75.8	Rotary knob with scale	3
				–	PK-3, PK-4	PK-3, PK-4	3.8 ... 75.8	Rotary knob with scale	

1) Standard nominal flow rate in direction of flow control.

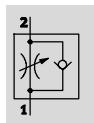
Type codes										
				GRP	-	70	-	1/8	-	AL
Type										
GRP	Precision one-way flow control valve									
Size										
10, 70, 160										
Pneumatic connection 1, 2										
Size 70, 160										
1/8	Thread G1/8									
Size 10, 70										
PK-3	Push-in connector for tubing with 3 mm I.D.									
Size 160										
PK-4	Push-in connector for tubing with 4 mm I.D.									
Sub-base material										
Thread G1/8										
AL	Wrought aluminium alloy									

Precision one-way flow control valves GRP

FESTO

Technical data

One-way flow control function



- Flow rate
3.8 ... 75.8 l/min
- Temperature range
-10 ... +50 °C
- Operating pressure
0 ... 8 bar



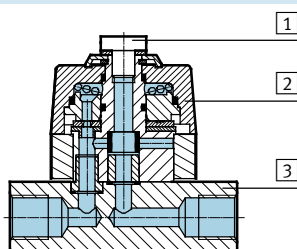
General technical data			
Valve function	One-way flow control function		
Type	GRP-...-AL	GRP-...-PK	
Pneumatic connection 2	G1/8	PK-3	PK-4
Pneumatic connection 1	G1/8	PK-3	PK-4
Adjustment component	Rotary knob with scale		
Actuation type	Manual		
Type of mounting	On sub-base	Front panel mounting	
Mounting position	Any		

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

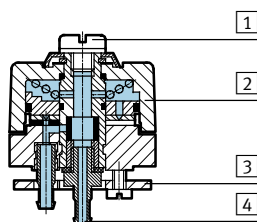
Operating and environmental conditions		
Operating pressure	[bar]	0 ... 8
Operating pressure 2 → 1	[bar]	0 ... 8
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [5:4:3]	
	Inert gases	
Note on operating/pilot medium	Operation with lubricated medium not possible	
Ambient temperature	[°C]	-10 ... +50
Temperature of medium	[°C]	-10 ... +50

Materials

Sectional view



Precision one-way flow control valve GRP-...-AL	
1	Screws
2	Housing
3	Sub-base
-	Seals
Note on materials	Contains PWIS (paint-wetting impairment substances)



Precision one-way flow control valve GRP-...-PK	
1	Screws
2	Housing
3	Retainer
4	PK connections
-	Seals
Note on materials	Contains PWIS (paint-wetting impairment substances)

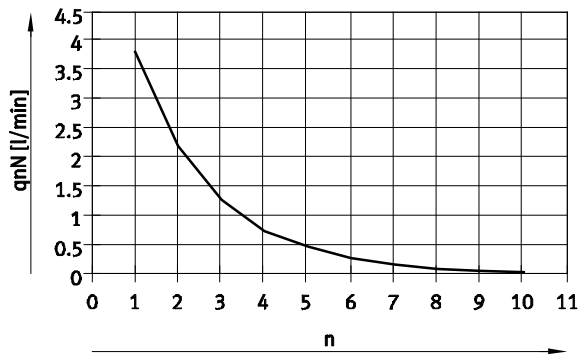
Precision one-way flow control valves GRP

Technical data

FESTO

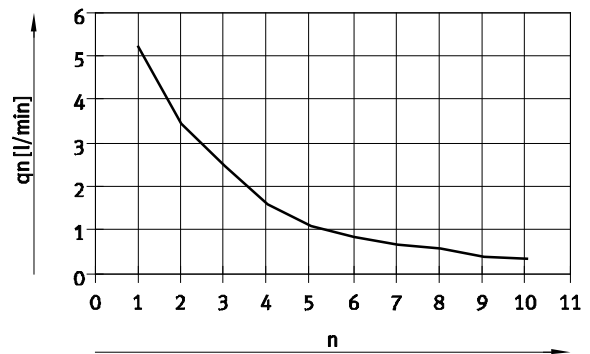
Standard nominal flow rate q_{nN} at 6 bar $\rightarrow$ 5 bar
as a function of spindle rotations n

Size 10

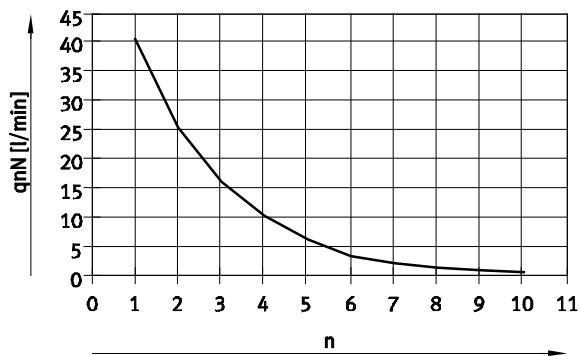


Standard flow rate q_n at 6 bar $\rightarrow$ 0 bar
as a function of spindle rotations n

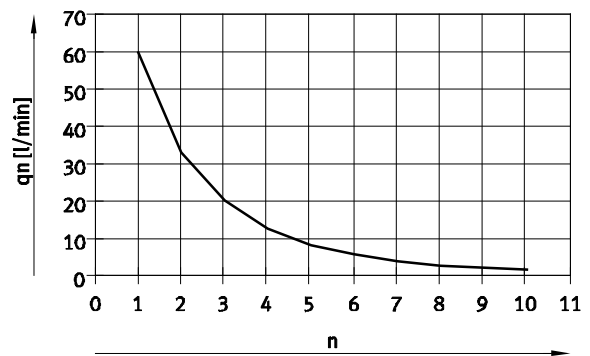
Size 10



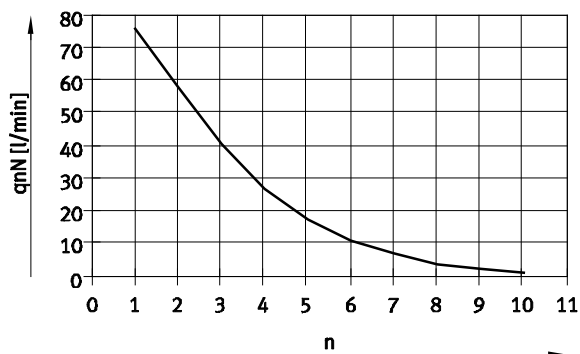
Size 70



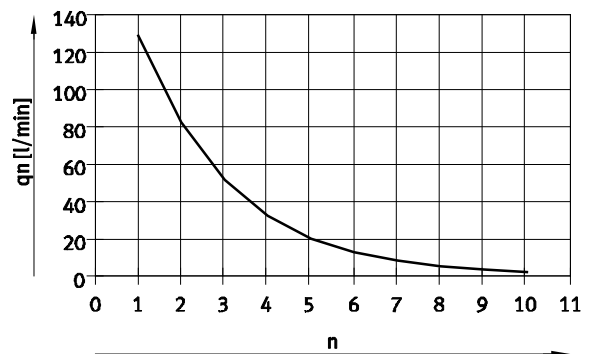
Size 70



Size 160



Size 160



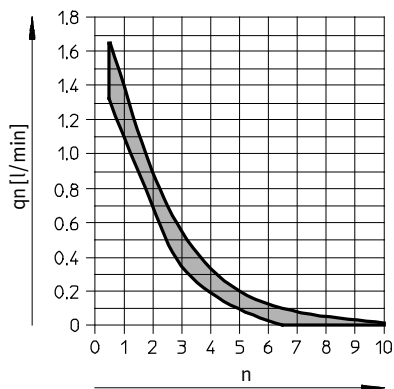
Precision one-way flow control valves GRP

Technical data

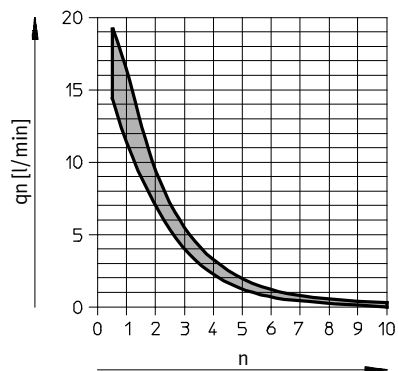
FESTO

Standard flow rate q_n at 1 bar $\rightarrow$ 0 bar as a function of spindle rotations n

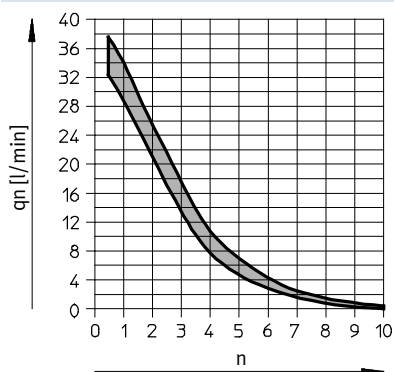
Size 10



Size 70



Size 160



Precision one-way flow control valves GRP

Technical data

FESTO

Dimensions

GRP-...-AL

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Download CAD data → www.festo.com

GRP-...-PK

Ports
1 → 2 Direction of flow control
2 → 1 Non-return direction

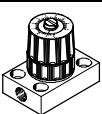
Mounting aperture for front panel mounting

Type	Connection D2	B1	B2	D1	D3
GRP-70-1/8-AL	G1/8	36	23	32	8
GRP-160-1/8-AL					

Type	D4	H1	H2	H3	L1	L2
GRP-70-1/8-AL	4.5	47.4	15.5	4.6	50	36
GRP-160-1/8-AL						

Type	B1	D1	D2	D3
GRP-10/70-PK-3	2.6	32	30	22
GRP-160-PK-4				

Type	H1	H2	H3	L1
GRP-10/70-PK-3	45.6	31.2	1.5 ... 10	23.5
GRP-160-PK-4	44.5			

Ordering data											
	Pneumatic connection		Standard nominal flow rate q _N at 6 bar → 5 bar		Standard flow rate q _N at 6 bar → 0 bar		Standard flow rate q _N at 1 bar → 0 bar		Weight	Part No.	Type
			In direction of flow control	In non-return direction	In direction of flow control	In non-return direction	In direction of flow control	In non-return direction			
	1	2	[l/min]	[l/min]	[l/min]	[l/min]	[l/min]	[l/min]	[g]		
Rotary knob with scale											
	G1/8	G1/8	40.7	88	60	127	19	20 ... 60	110	542022	GRP-70-1/8-AL
			75.8	245	129	245	38	25 ... 90	110	542023	GRP-160-1/8-AL
	PK-3	PK-3	3.8	95	5.2	131	1.65	15 ... 50	48	12743	GRP-10-PK-3
			40.7	88	60	127	19	20 ... 60	48	10802	GRP-70-PK-3
	PK-4	PK-4	75.8	245	129	245	38	25 ... 90	48	12961	GRP-160-PK-4

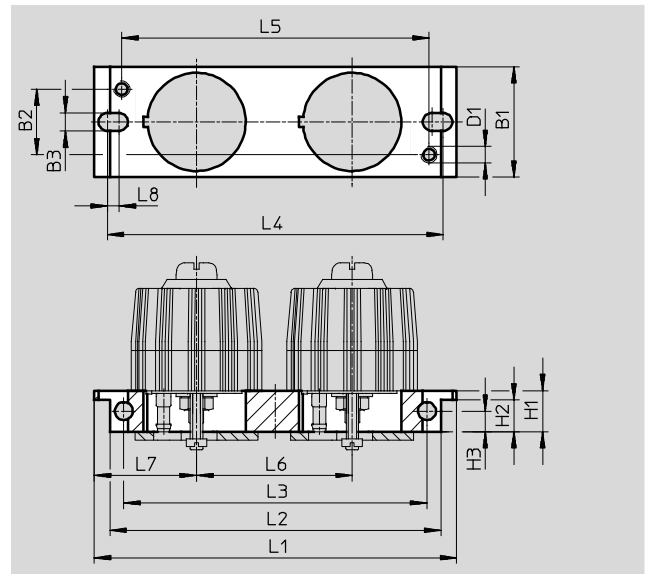
Precision one-way flow control valves GRP

FESTO

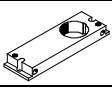
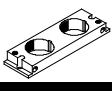
Accessories

Mounting plates APL-2N-GRP
for precision one-way flow control
valve GRP-...-PK

Material: PA



Dimensions														
B1	B2	B3	D1	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8
26.8	16	4.4	M4	10	7.7	5	88.5	80.8	74	81	75	38	25	2.3

Ordering data				
	Bore $\varnothing$ [mm]	Weight [g]	Part No.	Type
	22	16	10391	APL-2N-GRP
	2 x 22	22	10392	APL-2N-GRPX2