

Precision one-way flow control valves GRP

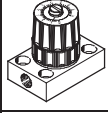

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Precision one-way flow control valves GRP

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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	Metal One-way flow control function		GRP	–	G ¹ / ₈	G 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.

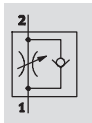
Type codes	

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Technical data

One-way flow control function



Flow rate

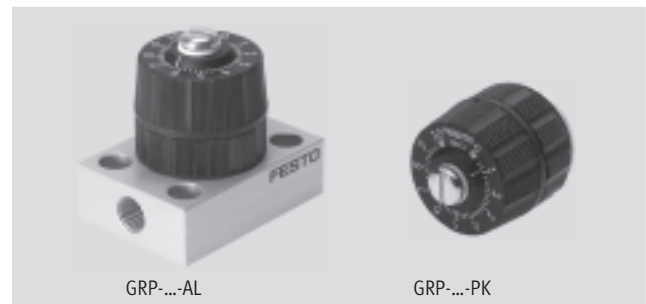
3.8 ... 75.8 l/min

Temperature range

-10 ... +50 °C

Pressure

0 ... 8 bar



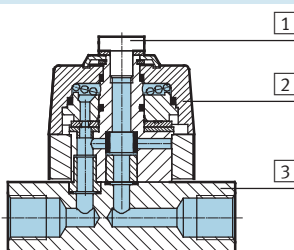
General technical data			
Valve function	One-way flow control function		
Type	GRP-...-AL	GRP-...-PK	
Pneumatic connection 2	G1/8	PK-3	PK-4
Pneumatic connection 1	G1/8	PK-3	PK-4
Adjustment component	Rotary knob with scale		
Actuation type	Manual		
Type of mounting	On sub-base	Front panel mounting	
Mounting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

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

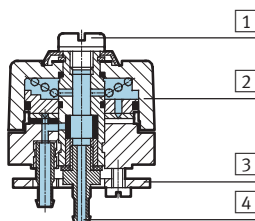
Operating and environmental conditions	
Operating pressure [bar]	0 ... 8
Operating pressure 2 → 1 [bar]	0 ... 8
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [5:4:3] Inert gases
Note on operating/pilot medium	Operation with lubricated medium not possible
Ambient temperature [°C]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

Materials

Sectional view



Precision one-way flow control valve GRP-...-AL	
1 Screws	Steel
2 Housing	PA, reinforced
3 Sub-base	Wrought aluminium alloy
- Seals	NBR, PVC
Note on materials	Contains PWIS (paint-wetting impairment substances)



Precision one-way flow control valve GRP-...-PK	
1 Screws	Steel
2 Housing	PA, reinforced
3 Retainer	Wrought aluminium alloy
4 PK connections	Brass, wrought aluminium alloy
- Seals	NBR, PVC
Note on materials	Contains PWIS (paint-wetting impairment substances)

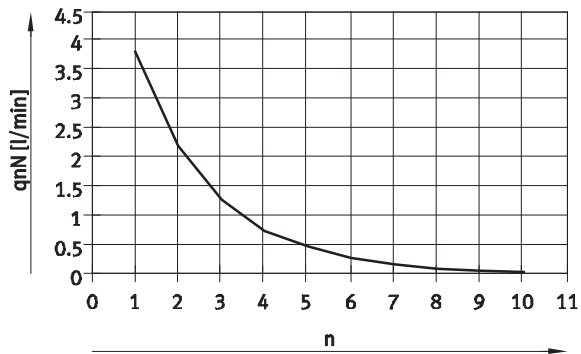
Precision one-way flow control valves GRP

Technical data

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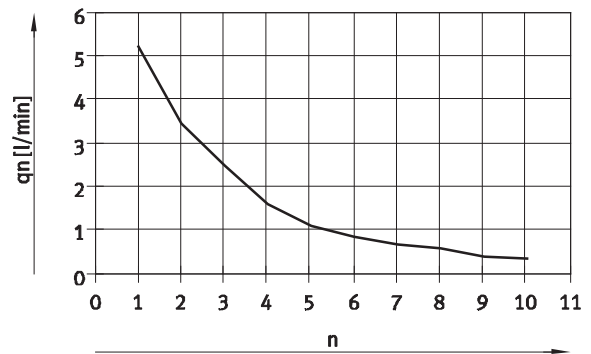
Standard nominal flow rate q_{nN} at 6 bar \rightarrow 5 bar
as a function of spindle rotations n

Size 10

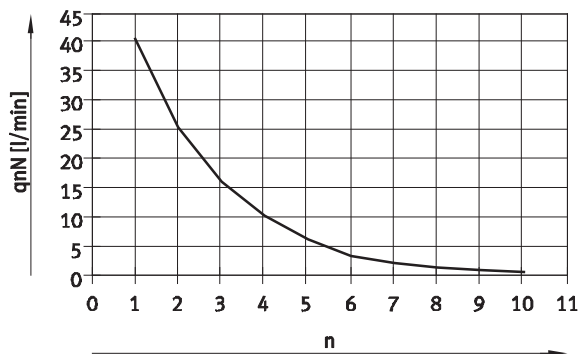


Standard flow rate q_n at 6 bar \rightarrow 0 bar
as a function of spindle rotations n

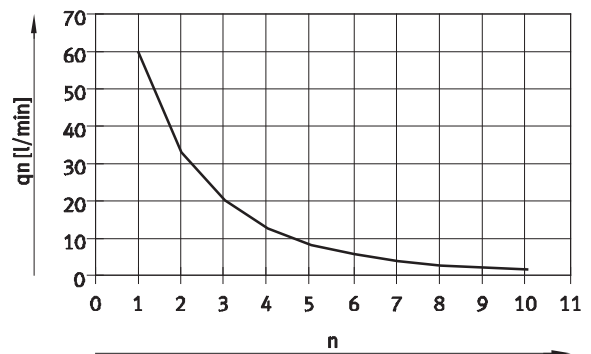
Size 10



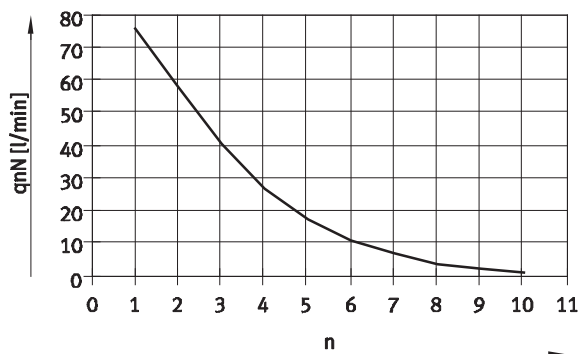
Size 70



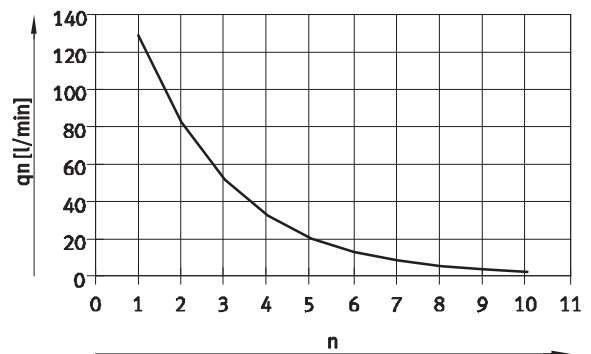
Size 70



Size 160



Size 160



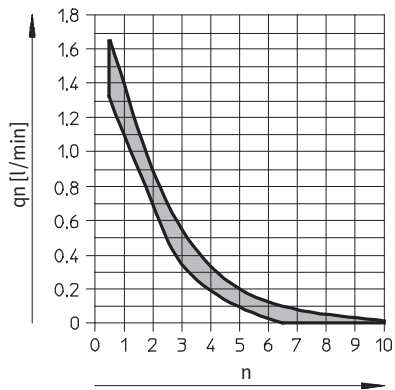
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Technical data

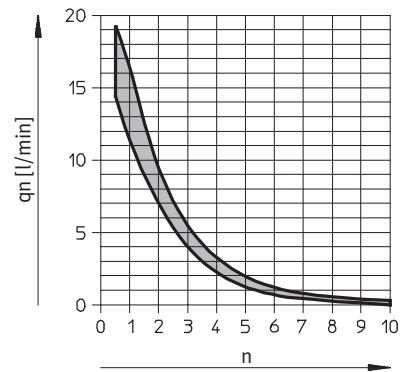
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Standard flow rate q_n at 1 bar \rightarrow 0 bar as a function of spindle rotations n

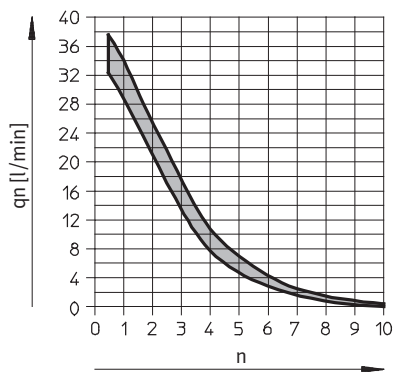
Size 10



Size 70



Size 160



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Technical data

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Dimensions

GRP-...-AL

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

Download CAD Data → www.festo.com/us/cad

GRP-...-PK

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

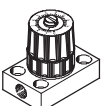

Mounting aperture for front panel mounting

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 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

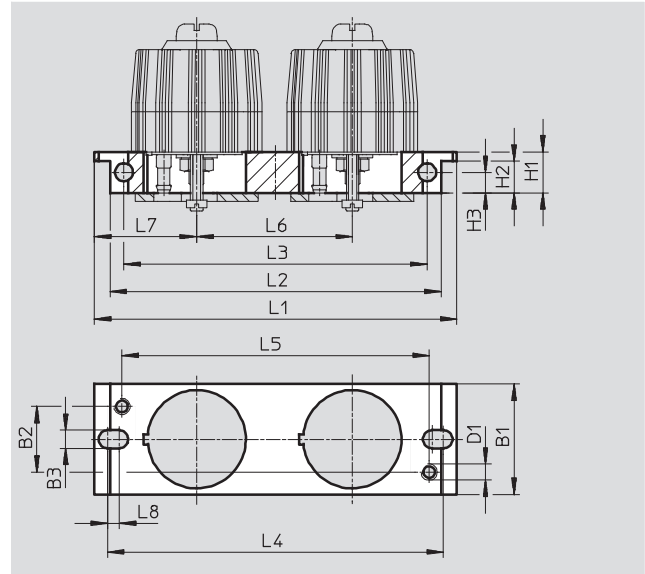
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Accessories

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 Ø [mm]	Weight [g]	Part No.	Type
	22	16	10391	APL-2N-GRP
	2 x 22	22	10392	APL-2N-GRPX2

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Custom Automation Components
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To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,

Call: 1.800.99.FESTO (1.800.993.3786)

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Call: 1.866.GO.FESTO (1.866.463.3786)

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Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)

Fax: 1.877.FX.FESTO (1.877.393.3786)

Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton

North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York

395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: info@festo-usa.com

www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: festo.canada@ca.festo.com

www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,
54020 Tlalneapantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: festo.mexico@mx.festo.com

www.festo.com/mx

Central USA

Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480



Western USA

Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286



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