

Precision Adjustable Flow Controls

Supply Air Flow Controls, M 5, to G 1/4 ISO and 10 UNF to 1/8" NPT

FESTO

Flow Control Valve

With Swivel Connector

Type GRLZ-...-B
GRLZ-...-NPT-B

With External Adjustment Screw

Type GRLZ-...-RS-B
GRLZ-...-NPT-RS-B

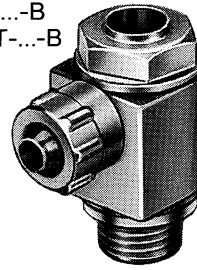


These valves are used to regulate flow of supply air to single-acting cylinders, to control the piston speed.

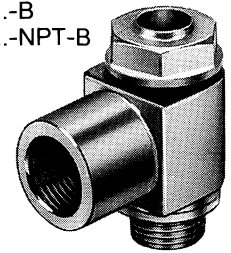
An adjustment screw allows variable flow in one direction. In the opposite direction, air flows freely through the valve.

These space-saving valves mount directly into the cylinder supply port, saving cost of fitting accessories. The body can be rotated 360° for easy alignment.

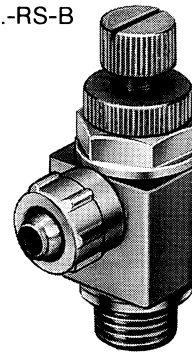
Type GRLZ-...-PK-...-B
GRLZ-...-NPT-...-B



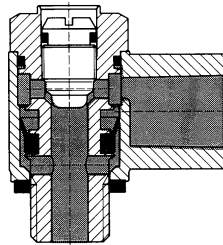
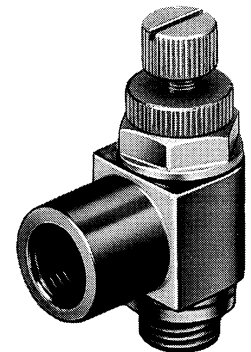
Type GRLZ-...-B
GRLZ-...-NPT-B



Type GRLZ-...-PK-...-RS-B



Type GRLZ-...-RS-B
GRLZ-...-NPT-RS-B



Order Number	ISO	151183 GRLZ-M 5-B	151188 GRLZ-1/8-B	151195 GRLZ-1/4-B
Part No./Type		151184 GRLZ-M 5-PK-3-B	151189 GRLZ-1/8-PK-3-B	—
		151185 GRLZ-M 5-PK-4-B	151190 GRLZ-1/8-PK-4-B	151196 GRLZ-1/4-PK-4-B
	NPT	—	151191 GRLZ-1/8-PK-6-B	151197 GRLZ-1/4-PK-6-B
		151576 GRLZ-10 UNF-B	151561 GRLZ-1/8 NPT-B	—
		151577 GRLZ-10 UNF-3/16-B	151562 GRLZ-1/8 NPT-1/4-B	—
		151578 GRLZ-10 UNF-1/4-B	151563 GRLZ-1/8 NPT-3/8-B	—
With External Adjustment Screw	ISO	151186 GRLZ-M 5-RS-B	151192 GRLZ-1/8-RS-B	151198 GRLZ-1/4-RS-B
		151187 GRLZ-M 5-PK-3-RS-B	151193 GRLZ-1/8-PK-4-RS-B	151199 GRLZ-1/4-PK-4-RS-B
	NPT	—	151194 GRLZ-1/8-PK-6-RS-B	151200 GRLZ-1/4-PK-6-RS-B
		151579 GRLZ-10 UNF-RS-B	151564 GRLZ-1/8 NPT-RS-B	—
Medium	Compressed air, filtered (lubricated or unlubricated)			
Design	Needle valve with check valve and rotatable body			
Mounting	Male thread			
Connection	Threaded	10 UNF / M 5	1/8 NPT / G 1/8 ISO	1/4 NPT / G 1/4 ISO
	Tube Size (in / mm)	3/16, 1/4 / 3, 4	3/16, 1/4, 3/8 / 3, 4, 6	1/4, 3/8 / 4, 6
Orifice Size (in / mm)		0.08 / 2	0.16 / 4	0.24 / 6
Standard Nominal Flow Rate Controlled Flow Direction Flow open (C _v / l/min)	Threaded	0 to 0.100 / 0 to 100	0 to 0.380 / 0 to 380	0 to 0.720 / 0 to 720
	Tube O.D. (in / mm)			
	0.12 / 3 (PK-3)	0 to 0.085 / 0 to 85	0 to 0.120 / 0 to 120	—
	0.15 / 4 (PK-4)	0 to 0.100 / 0 to 100	0 to 0.250 / 0 to 250	0 to 0.250 / 0 to 250
0.24 / 6 (PK-6)	—	0 to 0.300 / 0 to 300	0 to 0.580 / 0 to 580	
Free Flow Direction Flow open (closed) (C _v / l/min)	Threaded	0.110(0.070) / 110(70)	0.380(0.160) / 380(160)	0.720(0.310) / 720(310)
	Tube O.D. (in / mm)			
	0.12 / 3 (PK-3)	0.090(0.060) / 90(60)	0.100(0.100) / 100(100)	—
	0.15 / 4 (PK-4)	0.100(0.060) / 100(60)	0.250(0.130) / 250(130)	0.270(0.190) / 270(190)
0.24 / 6 (PK-6)	—	0.300(0.140) / 300(140)	0.620(0.330) / 620(330)	
Maximum Installation Torque	lb in / Nm	13.32 / 1.5	53.28 / 6	97.68 / 11
Pressure Range		3.0 to 150 psi / 0.2 to 10 bar	4.5 to 150 psi / 0.3 to 10 bar	
Temperature Range		14 to 140°F / -10 to +60°C		
Materials		Swivel fitting: Diecast zinc; Gaskets, O-Ring: Buna-N		
Weight		0.033 lb / 0.015 kg	0.066 lb / 0.030 kg	0.21 lb / 0.060 kg

Precision Adjustable Flow Controls

Supply Air Flow Controls, M 5 to G 1/4 ISO and 10 UNF to 1/8" NPT Dimensions

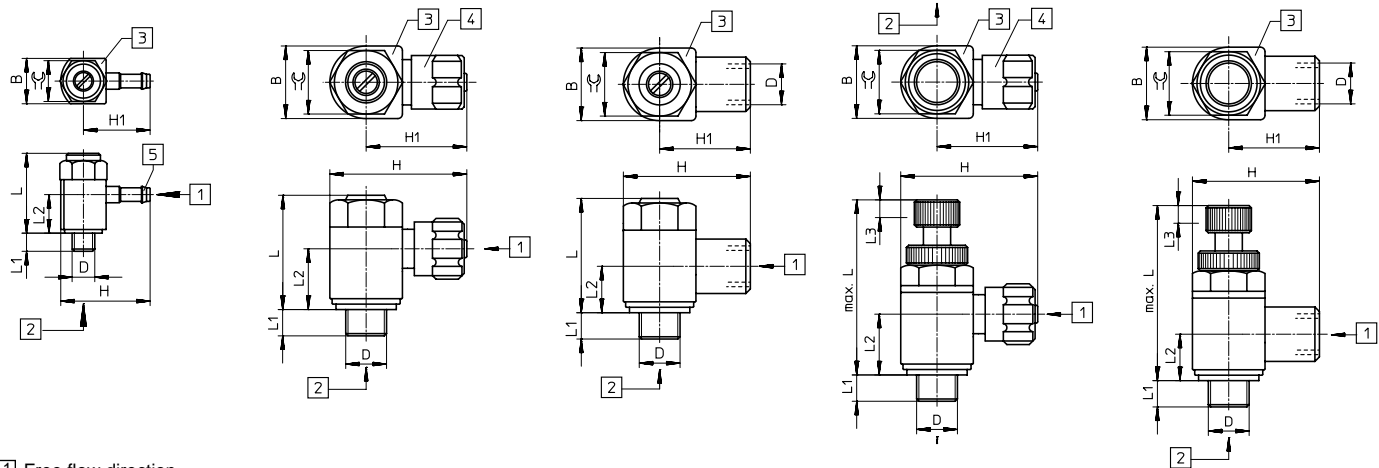
Type GRLZ-M5-PK-...-B

Type GRLZ-...-PK-...-B
GRLZ-...-NPT-...-B

Type GRLZ-...-B
GRLZ-...-NPT-B

Type GRLZ-...-PK-...-RS-B

Type GRLZ-...-RS-B
GRLZ-...-NPT-RS-B



- 1 Free flow direction
- 2 Controlled flow direction
- 3 Rotatable 360°
- 4 Connector nut included on Types ...-PK-3, ...-PK-4, ...-PK-6
- 5 Barbed fitting on Types PK-3 and PK-4

⊘ = Wrench size (mm)

Metric Series

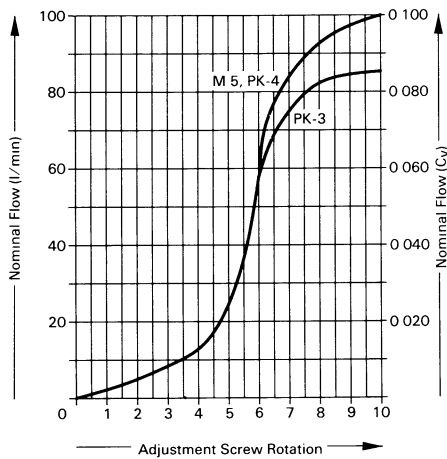
Type	B in / mm	D thread	H in / mm	H1 in / mm	L in / mm	L1 in / mm	L2 in / mm	L3 in / mm	⊘ mm
With Swivel Connector									
GRLA-M5-B	0.39 / 10	M5	0.69 / 17.5	0.49 / 12.5	0.69 / 17.6	0.16 / 4	0.28 / 7.1	—	9
GRLA-M5-PK-3-B	0.39 / 10	M5	0.78 / 19.7	0.58 / 14.7	0.69 / 17.6	0.16 / 4	0.33 / 8.5	—	9
GRLA-M5-PK-4-B	0.39 / 10	M5	0.85 / 21.7	0.66 / 16.7	0.69 / 17.6	0.16 / 4	0.33 / 8.5	—	9
GRLA-1/8-B	0.63 / 16	G 1/8 ISO	1.10 / 28	0.79 / 20	0.99 / 25.2	0.23 / 5.8	0.41 / 10.3	—	14
GRLA-1/8-PK-3-B	0.63 / 16	G 1/8 ISO	1.07 / 27.1	0.75 / 19.1	0.99 / 25.2	0.23 / 5.8	0.53 / 13.4	—	14
GRLA-1/8-PK-4-B	0.63 / 16	G 1/8 ISO	1.19 / 30.2	0.87 / 22.2	0.99 / 25.2	0.23 / 5.8	0.53 / 13.4	—	14
GRLA-1/8-PK-6-B	0.63 / 16	G 1/8 ISO	1.19 / 30.3	0.88 / 22.3	0.99 / 25.2	0.23 / 5.8	0.47 / 12	—	14
GRLA-1/4-B	0.79 / 20	G 1/4 ISO	1.42 / 36	1.02 / 26	1.21 / 30.8	0.33 / 8.3	0.52 / 13.2	—	17
GRLA-1/4-PK-4-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.95 / 24.2	1.21 / 30.8	0.33 / 8.3	0.67 / 16.9	—	17
GRLA-1/4-PK-6-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.96 / 24.3	1.21 / 30.8	0.33 / 8.3	0.68 / 17.2	—	17
GRLA-3/8-B	0.98 / 25	G 3/8 ISO	1.61 / 41	1.12 / 28.5	1.46 / 37.2	0.35 / 8.8	0.61 / 15.5	—	22
GRLA-1/2-B	1.26 / 32	G 1/2 ISO	2.09 / 53	1.46 / 37	1.91 / 48.6	0.50 / 12.8	0.74 / 18.9	—	27
GRLA-3/4-B	1.61 / 41	G 3/4 ISO	2.52 / 64	1.71 / 43.5	2.37 / 60.2	0.53 / 13.5	0.96 / 24.5	—	36
With External Adjustment Screw									
GRLA-M5-RS-B	0.39 / 10	M5	0.69 / 17.5	0.49 / 12.5	1.07 / 27.3	0.16 / 4	0.28 / 7.1	0.10 / 2.5	9
GRLA-M5-PK-3-RS-B	0.39 / 10	M5	0.78 / 19.7	0.58 / 14.7	1.07 / 27.3	0.16 / 4	0.33 / 8.5	0.10 / 2.5	9
GRLA-1/8-RS-B	0.63 / 16	G 1/8 ISO	1.10 / 28	0.79 / 20	1.52 / 38.6	0.23 / 5.8	0.41 / 10.3	0.14 / 3.5	14
GRLA-1/8-PK-4-RS-B	0.63 / 16	G 1/8 ISO	1.19 / 30.2	0.87 / 22.2	1.52 / 38.6	0.23 / 5.8	0.53 / 13.4	0.14 / 3.5	14
GRLA-1/8-PK-6-RS-B	0.63 / 16	G 1/8 ISO	1.19 / 30.3	0.88 / 22.3	1.52 / 38.6	0.23 / 5.8	0.47 / 12	0.14 / 3.5	14
GRLA-1/4-RS-B	0.79 / 20	G 1/4 ISO	1.42 / 36	1.02 / 26	2.16 / 54.8	0.33 / 8.3	0.52 / 13.2	0.14 / 3.5	17
GRLA-1/4-PK-4-RS-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.95 / 24.2	2.16 / 54.8	0.33 / 8.3	0.67 / 16.9	0.14 / 3.5	17
GRLA-1/4-PK-6-RS-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.96 / 24.3	2.16 / 54.8	0.33 / 8.3	0.68 / 17.2	0.14 / 3.5	17

Precision Adjustable Flow Controls

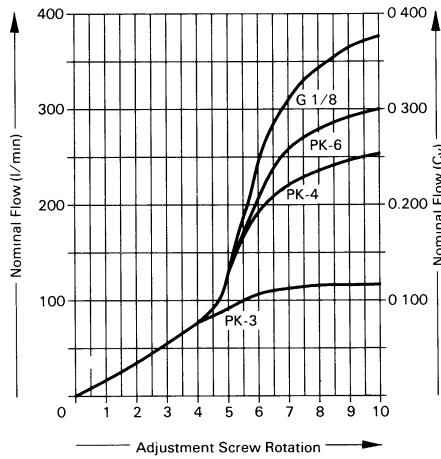
Flow vs. Adjustment Screw Rotation

Flow vs Adjustment Screw Rotation (Supply air) for Type GRLZ-...-B

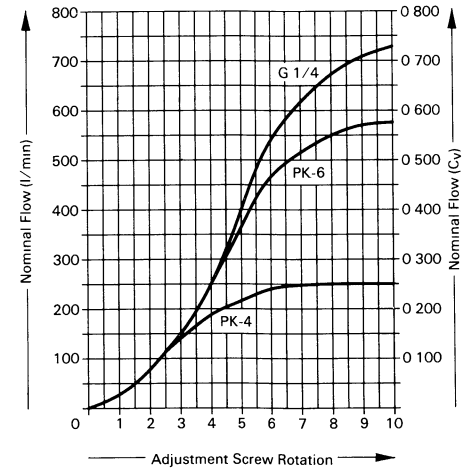
Type GRLZ-M 5-...-B (NPT)



Type GRLZ-1/8-...-B (NPT)

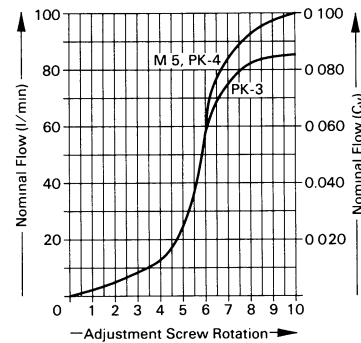


Type GRLZ-1/4-...-B

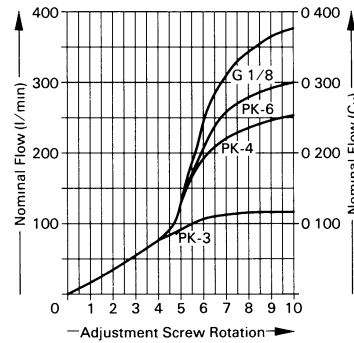


Flow vs Adjustment Screw Rotation (Exhaust air) for Type GRLA-...-B

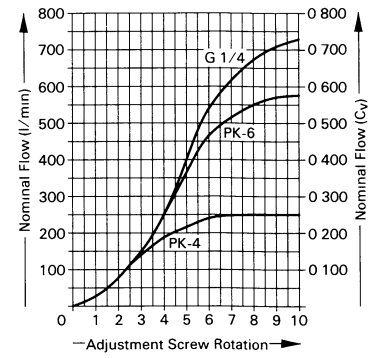
Type GRLA-M 5-...-B (NPT)



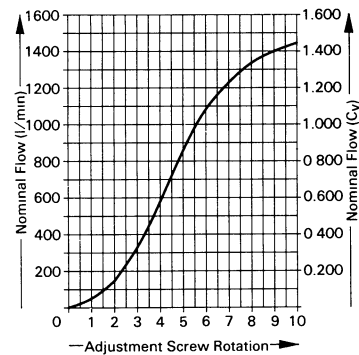
Type GRLA-1/8-...-B (NPT)



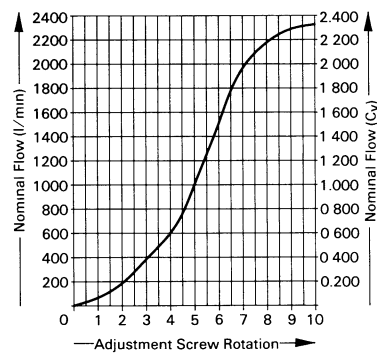
Type GRLA-1/4-...-B (NPT)



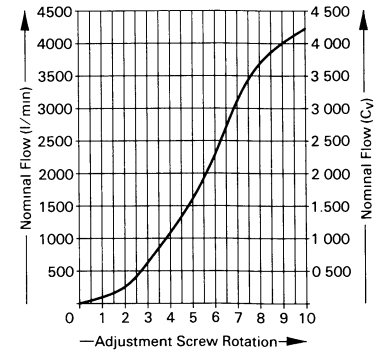
Type GRLA-3/8-...-B (NPT)



Type GRLA-1/2-...-B (NPT)



Type GRLA-3/4-...-B



Precision Adjustable Flow Controls

Exhaust Air Flow Controls, M 5 to G 3/4 ISO and 10 UNF to 1/2" NPT

Flow Control Valve

With Swivel Connector

Type GRLA-...-B
GRLA-...-NPT-B

With External Adjustment Screw

Type GRLA-...-RS-B
GRLA-...-NPT-RS-B

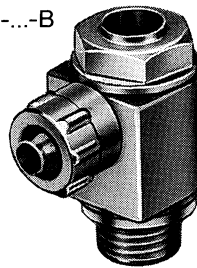


These valves are used to regulate flow of exhaust air to double-acting cylinders, to control the piston retraction speed.

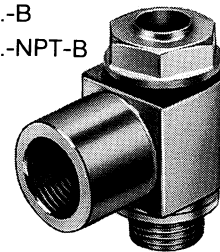
An adjustment screw allows variable flow in one direction. In the opposite direction, air flows freely through the valve.

These space-saving valves mount directly into the cylinder supply port, saving cost of fitting accessories. The body can be rotated 360° for easy alignment.

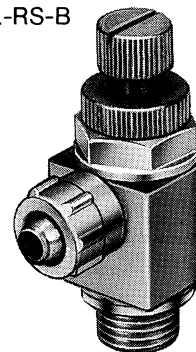
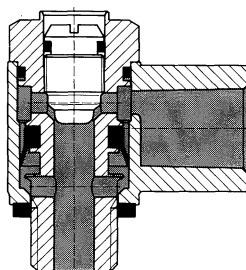
Type GRLA-...-PK-...-B
GRLA-...-NPT-...-B



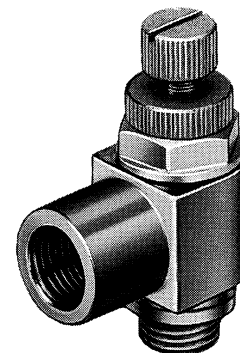
Type GRLA-...-B
GRLA-...-NPT-B



Type GRLA-...-PK-...-RS-B



Type GRLA-...-RS-B
GRLA-...-NPT-RS-B



Order Number Part No./Type	ISO	151160 GRLA-M 5-B	151165 GRLA-1/8-B	151172 GRLA-1/4-B	151178 GRLA-3/8-B	151179 GRLA-1/2-B	151180 GRLA-3/4-B
		151161 GRLA-M 5-PK-3-B	151166 GRLA-1/8-PK-3-B	—	—	—	—
		151162 GRLA-M 5-PK-4-B	151167 GRLA-1/8-PK-4-B	151173 GRLA-1/4-PK-4-B	—	—	—
		—	151168 GRLA-1/8-PK-6-B	151174 GRLA-1/4-PK-6-B	—	—	—
	NPT	151572 GRLA-10 UNF-B	151539 GRLA-1/8 NPT-B	151547 GRLA-1/4 NPT-B	151555 GRLA-3/8 NPT-B	151559 GRLA-1/2 NPT-B	—
		151573 GRLA-10 UNF-3/16-B	151540 GRLA-1/8 NPT-1/4-B	151548 GRLA-1/4 NPT-1/4-B	151556 GRLA-3/8 NPT-1/4-B	—	—
		151574 GRLA-10 UNF-1/4-B	151541 GRLA-1/8 NPT-3/8-B	151549 GRLA-1/4 NPT-3/8-B	151557 GRLA-3/8 NPT-3/8-B	—	—
	With External Adjustment Screw	151163 GRLA-M 5-RS-B	151169 GRLA-1/8-RS-B	151175 GRLA-1/4-RS-B	—	—	—
		151164 GRLA-M 5-PK-3-RS-B	151170 GRLA-1/8-PK-4-RS-B	151176 GRLA-1/4-PK-4-RS-B	—	—	—
		—	151171 GRLA-1/8-PK-6-RS-B	151177 GRLA-1/4-PK-6-RS-B	—	—	—
	NPT	151575 GRLA-10 UNF-RS-B	151542 GRLA-1/8 NPT-RS-B	151550 GRLA-1/4 NPT-RS-B	—	—	—
Medium		Compressed air, filtered (lubricated or unlubricated)					
Design		Needle valve with check valve and rotatable body					
Mounting		Male thread					
Connection	Thread	M 5 / 10 UNF	G 1/8 ISO / 1/8 NPT	G 1/4 ISO / 1/4 NPT	G 3/8 ISO / 3/8 NPT	G 1/2 ISO / 1/2 NPT	G 3/4 ISO / 3/4 NPT
	Tubing Size (in / mm)	3/16, 1/4 / 3, 4	3/16, 1/4, 3/8 / 3, 4, 6	1/4, 3/8 / 4, 6	—	—	—
Orifice Size (in / mm)		0.08 / 2	0.12 / 4	0.16 / 6	0.33 / 8.5	0.42 / 10.6	0.55 / 14
Standard Nominal Flow Rate	Threaded	0 to 0.100 / 0 to 100	0 to 0.380 / 0 to 380	0 to 0.720 / 0 to 720	0 to 1.450 / 0 to 1450	0 to 2.330 / 0 to 2330	0 to 4.320 / 0 to 4320
Controlled Flow Direction (Flow open)	Tubing O.D. (in / mm)	0.12 / 3 (PK-3)	0 to 0.120 / 0 to 120	—	—	—	—
(C _v / l/min)		0.16 / 4 (PK-4)	0 to 0.250 / 0 to 250	0 to 0.250 / 0 to 250	—	—	—
		0.24 / 6 (PK-6)	0 to 0.300 / 0 to 300	0 to 0.580 / 0 to 580	—	—	—
Free Flow Direction Flow open (closed)	Threaded	0.100(0.065) / 100(65)	0.410(0.230) / 410(230)	0.780(0.340) / 780(340)	1.520(0.780) / 1520(780)	2.400(1.250) / 2400(1250)	4.720(3.220) / 4720(3220)
(C _v / l/min)	Tubing O.D. (in / mm)	0.085(0.055) / 85(55)	0.110(0.090) / 110(90)	—	—	—	—
		0.16(0.060) / 100(60)	0.240(0.160) / 240(160)	0.230(0.170) / 230(170)	—	—	—
		0.24 / 6 (PK-6)	0.290(0.190) / 290(190)	0.600(0.320) / 600(320)	—	—	—
Maximum Installation Torque	lb in / Nm	13.32 / 1.5	53.28 / 6	97.68 / 11	177.60 / 20	355.19 / 40	532.8 / 60
Pressure Range		3.0 to 150 psi / 0.2 to 10 bar					
Temperature Range		14 to 140°F / -10 to +60°C					
Materials		Swivel fitting: Diecast zinc; Gaskets, O-Ring: Buna-N					
Weight		0.033 lb / 0.015 kg	0.066 lb / 0.030 kg	0.312 lb / 0.060 kg	0.220 lb / 0.100 kg	0.441 lb / 0.200 kg	0.882 lb / 0.400 kg

Precision Adjustable Flow Controls

Supply Air Flow Controls, M 5 to G 1/4 ISO and 10 UNF to 1/8" NPT Dimensions

FESTO

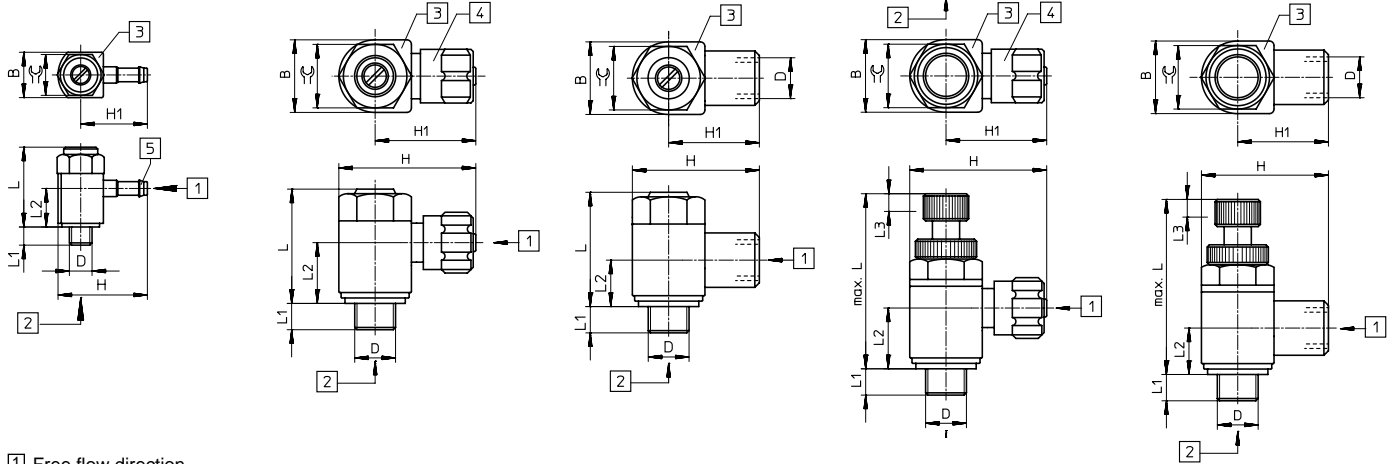
Type GRLA-M5-PK-...-B

Type GRLA-...-PK-...-B
GRLA-...-NPT-...-B

Type GRLA-...-B
GRLA-...-NPT-B

Type GRLA-...-PK-...-RS-B

Type GRLA-...-RS-B
GRLA-...-NPT-RS-B



- 1 Free flow direction
- 2 Controlled flow direction
- 3 Rotatable 360°
- 4 Connector nut included on Types ...-PK-3, ...-PK-4, ...-PK-6
- 5 Barbed fitting on Types PK-3 and PK-4

⌀ = Wrench size (mm)

Metric Series

Type	B in / mm	D thread	H in / mm	H1 in / mm	L in / mm	L1 in / mm	L2 in / mm	L3 in / mm	⌀ mm
With Swivel Connector									
GRLA-M5-B	0.39 / 10	M5	0.69 / 17.5	0.49 / 12.5	0.69 / 17.6	0.16 / 4	0.28 / 7.1	—	9
GRLA-M5-PK-3-B	0.39 / 10	M5	0.78 / 19.7	0.58 / 14.7	0.69 / 17.6	0.16 / 4	0.33 / 8.5	—	9
GRLA-M5-PK-4-B	0.39 / 10	M5	0.85 / 21.7	0.66 / 16.7	0.69 / 17.6	0.16 / 4	0.33 / 8.5	—	9
GRLA-1/8-B	0.63 / 16	G 1/8 ISO	1.10 / 28	0.79 / 20	0.99 / 25.2	0.23 / 5.8	0.41 / 10.3	—	14
GRLA-1/8-PK-3-B	0.63 / 16	G 1/8 ISO	1.07 / 27.1	0.75 / 19.1	0.99 / 25.2	0.23 / 5.8	0.53 / 13.4	—	14
GRLA-1/8-PK-4-B	0.63 / 16	G 1/8 ISO	1.19 / 30.2	0.87 / 22.2	0.99 / 25.2	0.23 / 5.8	0.53 / 13.4	—	14
GRLA-1/8-PK-6-B	0.63 / 16	G 1/8 ISO	1.19 / 30.3	0.88 / 22.3	0.99 / 25.2	0.23 / 5.8	0.47 / 12	—	14
GRLA-1/4-B	0.79 / 20	G 1/4 ISO	1.42 / 36	1.02 / 26	1.21 / 30.8	0.33 / 8.3	0.52 / 13.2	—	17
GRLA-1/4-PK-4-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.95 / 24.2	1.21 / 30.8	0.33 / 8.3	0.67 / 16.9	—	17
GRLA-1/4-PK-6-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.96 / 24.3	1.21 / 30.8	0.33 / 8.3	0.68 / 17.2	—	17
GRLA-3/8-B	0.98 / 25	G 3/8 ISO	1.61 / 41	1.12 / 28.5	1.46 / 37.2	0.35 / 8.8	0.61 / 15.5	—	22
GRLA-1/2-B	1.26 / 32	G 1/2 ISO	2.09 / 53	1.46 / 37	1.91 / 48.6	0.50 / 12.8	0.74 / 18.9	—	27
GRLA-3/4-B	1.61 / 41	G 3/4 ISO	2.52 / 64	1.71 / 43.5	2.37 / 60.2	0.53 / 13.5	0.96 / 24.5	—	36
With External Adjustment Screw									
GRLA-M5-RS-B	0.39 / 10	M5	0.69 / 17.5	0.49 / 12.5	1.07 / 27.3	0.16 / 4	0.28 / 7.1	0.10 / 2.5	9
GRLA-M5-PK-3-RS-B	0.39 / 10	M5	0.78 / 19.7	0.58 / 14.7	1.07 / 27.3	0.16 / 4	0.33 / 8.5	0.10 / 2.5	9
GRLA-1/8-RS-B	0.63 / 16	G 1/8 ISO	1.10 / 28	0.79 / 20	1.52 / 38.6	0.23 / 5.8	0.41 / 10.3	0.14 / 3.5	14
GRLA-1/8-PK-4-RS-B	0.63 / 16	G 1/8 ISO	1.19 / 30.2	0.87 / 22.2	1.52 / 38.6	0.23 / 5.8	0.53 / 13.4	0.14 / 3.5	14
GRLA-1/8-PK-6-RS-B	0.63 / 16	G 1/8 ISO	1.19 / 30.3	0.88 / 22.3	1.52 / 38.6	0.23 / 5.8	0.47 / 12	0.14 / 3.5	14
GRLA-1/4-RS-B	0.79 / 20	G 1/4 ISO	1.42 / 36	1.02 / 26	2.16 / 54.8	0.33 / 8.3	0.52 / 13.2	0.14 / 3.5	17
GRLA-1/4-PK-4-RS-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.95 / 24.2	2.16 / 54.8	0.33 / 8.3	0.67 / 16.9	0.14 / 3.5	17
GRLA-1/4-PK-6-RS-B	0.79 / 20	G 1/4 ISO	1.35 / 34.2	0.96 / 24.3	2.16 / 54.8	0.33 / 8.3	0.68 / 17.2	0.14 / 3.5	17

Precision Adjustable Flow Controls

Two-Way Flow Control Valves, M 5 and 10 UNF

Flow Control Valves

With Swivel Connection

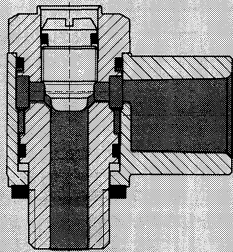
Type GRLO-...-B



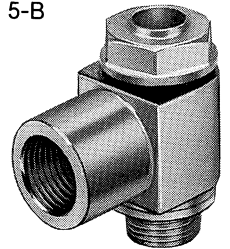
These valves regulate air flow, for example, to control the piston speed of a cylinder.

The air flow in both directions can be finely adjusted by the recessed adjusting screw. Air flow is approximately equal in both directions.

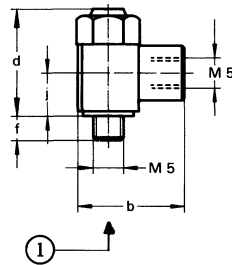
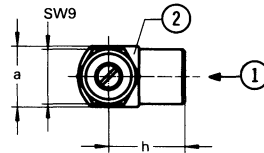
These flow control valves are mounted directly into the cylinder port, and the body may be rotated 360° for alignment.



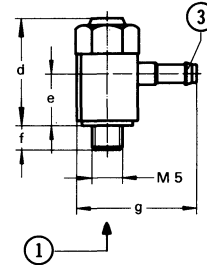
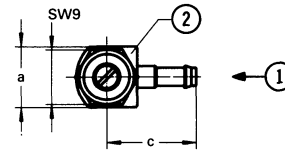
Type GRLO-M 5-B



Type GRLO-M 5-B
GRLO-10 UNF-B



Type GRLO-M 5-PK-3-B
GRLO-10 UNF-3/16-B

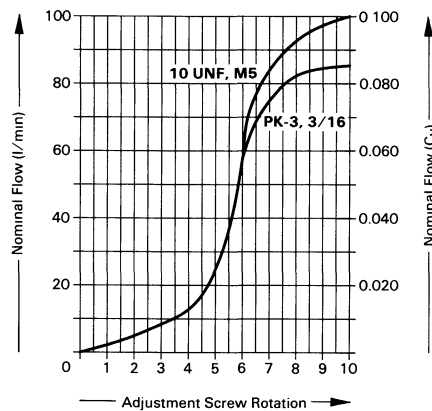


- ① Controlled flow direction
 - ② Can be rotated 360°
 - ③ Barbed fitting for 3/16 in / 3 mm tubing
- SW = Wrench size (mm)

Dimensions

- a 0.39 in / 10 mm
- b 0.69 in / 17.5 mm
- c 0.58 in / 14.7 mm
- d 0.69 in / 17.6 mm
- e 0.33 in / 8.5 mm
- f 0.16 in / 4 mm
- g 0.78 in / 19.7 mm
- h 0.49 in / 12.5 mm
- j 0.28 in / 7.1 mm

Flow Versus Adjustment Screw Rotation



Order Number	ISO	151181 GRLO-M 5-B	151182 GRLO-M 5-PK-3-B	
Part No./Type	Inch	151569 GRLO-10 UNF-B	151570 GRLO-10 UNF-3/16-B	151571 GRLO-10 UNF-1/4-B
Medium		Compressed air, filtered (lubricated or unlubricated)		
Design		Needle valve and rotatable body		
Mounting		Male thread		
Connection	ISO	M 5	M 5, barbed fitting for 3 mm tubing	
	Inch	10 UNF	10 UNF, barbed fitting for 3/16 in tubing	10 UNF, barbed fitting for 1/4 in tubing
Orifice Size		0.08 in / 2 mm		
Standard Nominal Flow Rate		0.100 C _v / 100 l/min	0.085 C _v / 85 l/min	
Operating Pressure Range		0 to 150 psi / 0 to 10 bar		
Temperature Range		+14 to 140°F / -10 to +60°C		
Materials		Swivel connection: Diecast zinc; Hollow screw and adjusting screw: Copper zinc		
Weight		0.033 lb / 0.015 kg	0.022 lb / 0.010 kg	

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