

The complete range of flow control valves – all from a single source!

Festo flow control valves facilitate high precision adjustment of flow volumes and are used to precisely control the piston speed of a drive.

Reliability is ensured – with the GRXA-HG-... thanks to speed regulation and the additional function for intermediate stops. When the pneumatic control signal decays, the valve shuts off the exhaust air of the drive and thereby prevents any unwanted piston rod movement.

Throttle functions and possible applications

Double-acting cylinder with one-way flow control valve

Exhaust air flow control For adjustable speed via exhaust air flow control. The piston moves between air cushions created through freely flowing supply air and restricted exhaust air. The benefit is improved operating behaviour, even in the event of load changes.

Supply air flow control For adjustable speed via supply air flow control. The piston is moved via an air cushion at one end, created by freely flowing exhaust air and restricted supply air. In contrast with exhaust air restriction, there is a tendency towards a stick-slip effect.

Single-acting cylinder with one-way flow control valve

Supply air flow control For adjustable speed in the advancing stroke.

Retracting stroke. The piston moves via an air cushion at one end, created by freely flowing exhaust air and restricted supply air.

Single-acting cylinder with flow control valve

Flow control acting on both sides The adjustment of speed by means of flow control at both ends is often used with single-acting or small cylinders.

Quick navigation In the first column, select the characteristic(s) relevant to your requirements. Wherever a black square is shown, you will find products with the relevant characteristic(s).

Example: You are looking for a flow control valve with male thread (see last line). A square is shown in column 10. You now move into the field marked 10 in the poster and select your product (e.g. GRU-...).

Characteristics	1	2	3	4	5	6	7	8	9	10	11	12	13
Exhaust air flow control, at one end	■					■				■	■	■	■
Supply air flow control, at one end		■				■							
Flow control, at both ends			■			■							
Flow control without non-return function, at both ends						■			■				
Flow control with non-return function, at one end					■	■	■	■	■				
Additional functions													■
Manual operation (adjustment of flow)	■	■		■	■	■	■	■	■				
Mechanical operation (adjustment of flow)										■	■	■	■
QS push-in fitting	■	■	■	■	■	■	■	■	■				■
Female thread connection	■	■	■	■	■	■	■	■	■		■	■	■
Barbed fitting connection	■	■	■	■	■	■	■	■	■				
Male thread connection										■			

Precision adjustment and control – with flow control valves from Festo

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Flow rate adjustment
Exhaust air flow control, active on one side

Flow control valve with non-return function for single or double acting drives for direct mounting on the cylinder

Product family	Connection	Width [mm]	Variants	Part number		
GRLA...QS...	M3	8	QS-3	175041		Optimised for compact drives
GRLA...QS...LF-C	M5	9,2	QS-3	175053		
			QS-4	175056		
GRLA...QS...D	M5	8,9	QS-3	193137		Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	193138		
			QS-6	193139		
	G 1/8	13,8	QS-3	193142		Double flow rate approx. 400 l/min
			QS-4	193143		
			QS-6	193144		
GRLA...QS...MF-D	G 1/8	17,8	QS-6	537075		Double flow rate approx. 400 l/min
			QS-8	537076		
			QS-6	193146		
GRLA...QS...D	G 1/4	17,8	QS-8	193147		Double flow rate approx. 400 l/min
			QS-10	193148		
			QS-6	193149		
	G 3/8	22,4	QS-8	193150		Double flow rate approx. 400 l/min
			QS-10	193151		
			QS-12	193152		
GRLA...QS...	M3	8	QS-3	175044		Optimised for compact drives
GRLA...QS...LF-C	M5	9,2	QS-3	175062		
			QS-4	175065		
GRXA...QS...D	M5	8,9	QS-3	195806		Swivel joint 360° horizontally and vertically rotatable in assembled condition
			QS-4	195807		
			QS-6	195808		
	G 1/8	13,8	QS-3	195809		Swivel joint 360° horizontally and vertically rotatable in assembled condition
			QS-4	195810		
			QS-8	195811		
	G 1/4	17,8	QS-6	195812		Swivel joint 360° horizontally and vertically rotatable in assembled condition
			QS-8	195813		
			QS-10	195814		
GRLA...QS...RS-D	M5	8,9	QS-3	195815		Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	195816		
			QS-6	195817		
	G 1/8	13,8	QS-3	195818		Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	195819		
			QS-6	195820		
GRLA...QS...MF-RS-D	G 1/8	17,8	QS-6	534337		Double flow rate approx. 400 l/min
			QS-8	534338		
			QS-10	534339		
GRLA...QS...RS-D	G 1/4	17,8	QS-6	534338		Double flow rate approx. 400 l/min
			QS-8	534339		
			QS-10	534340		
	G 3/8	22,4	QS-6	534341		Double flow rate approx. 400 l/min
			QS-8	534342		
			QS-10	534343		
GRLA...QS...RS-B	G 1/2	27,8	QS-12	534344		Double flow rate approx. 400 l/min
			QS-6	534345		
			QS-8	534346		
	G 1/4	16	QS-6	534347		Double flow rate approx. 400 l/min
			QS-8	534348		
			QS-10	534349		
GRLA...QS...RS-B	G 1/8	16	QS-6	534350		Double flow rate approx. 400 l/min
			QS-8	534351		
			QS-10	534352		
GRLA...QS...RS-B	G 1/4	16	QS-6	534353		Double flow rate approx. 400 l/min
			QS-8	534354		
			QS-10	534355		
GRLA...QS...RS-B	G 3/8	22,4	QS-6	534356		Double flow rate approx. 400 l/min
			QS-8	534357		
			QS-10	534358		
GRLA...QS...RS-B	G 1/2	27,8	QS-12	534359		Double flow rate approx. 400 l/min
			QS-6	534360		
			QS-8	534361		
GRLA...QS...RS-B	G 3/4	35,3	QS-14	534362		Double flow rate approx. 400 l/min
			QS-6	534363		
			QS-8	534364		
GRLA...QS...RS-B	G 1	44,5	QS-16	534365		Double flow rate approx. 400 l/min
			QS-6	534366		
			QS-8	534367		
GRLA...QS...RS-B	G 1 1/4	57,1	QS-18	534368		Double flow rate approx. 400 l/min
			QS-6	534369		
			QS-8	534370		
GRLA...QS...RS-B	G 1 1/2	63,5	QS-20	534371		Double flow rate approx. 400 l/min
			QS-6	534372		
			QS-8	534373		
GRLA...QS...RS-B	G 1 3/4	71,1	QS-22	534374		Double flow rate approx. 400 l/min
			QS-6	534375		
			QS-8	534376		
GRLA...QS...RS-B	G 2	80	QS-24	534377		Double flow rate approx. 400 l/min
			QS-6	534378		
			QS-8	534379		
GRLA...QS...RS-B	G 2 1/4	89,1	QS-26	534380		Double flow rate approx. 400 l/min
			QS-6	534381		
			QS-8	534382		
GRLA...QS...RS-B	G 2 1/2	95,5	QS-28	534383		Double flow rate approx. 400 l/min
			QS-6	534384		
			QS-8	534385		
GRLA...QS...RS-B	G 2 3/4	101,9	QS-30	534386		Double flow rate approx. 400 l/min
			QS-6	534387		
			QS-8	534388		
GRLA...QS...RS-B	G 3	114,3	QS-32	534389		Double flow rate approx. 400 l/min
			QS-6	534390		
			QS-8	534391		
GRLA...QS...RS-B	G 3 1/4	121,9	QS-34	534392		Double flow rate approx. 400 l/min
			QS-6	534393		
			QS-8	534394		
GRLA...QS...RS-B	G 3 1/2	127,5	QS-36	534395		Double flow rate approx. 400 l/min
			QS-6	534396		
			QS-8	534397		
GRLA...QS...RS-B	G 3 3/4	135,1	QS-38	534398		Double flow rate approx. 400 l/min
			QS-6	534399		
			QS-8	534400		
GRLA...QS...RS-B	G 4	146,1	QS-40	534401		Double flow rate approx. 400 l/min
			QS-6	534402		
			QS-8	534403		
GRLA...QS...RS-B	G 4 1/4	154,3	QS-42	534404		Double flow rate approx. 400 l/min
			QS-6	534405		
			QS-8	534406		
GRLA...QS...RS-B	G 4 1/2	161,9	QS-44	534407		Double flow rate approx. 400 l/min
			QS-6	534408		
			QS-8	534409		
GRLA...QS...RS-B	G 4 3/4	170,1	QS-46	534410		Double flow rate approx. 400 l/min
			QS-6	534411		
			QS-8	534412		
GRLA...QS...RS-B	G 5	177,8	QS-48	534413		Double flow rate approx. 400 l/min
			QS-6	534414		
			QS-8	534415		
GRLA...QS...RS-B	G 5 1/4	186,1	QS-50	534416		Double flow rate approx. 400 l/min
			QS-6	534417		
			QS-8	534418		
GRLA...QS...RS-B	G 5 1/2	190,5	QS-52	534419		Double flow rate approx. 400 l/min
			QS-6	534420		
			QS-8	534421		
GRLA...QS...RS-B	G 5 3/4	199,1	QS-54	534422		Double flow rate approx. 400 l/min
			QS-6	534423		
			QS-8	534424		
GRLA...QS...RS-B	G 6	203,2	QS-56	534425		Double flow rate approx. 400 l/min
			QS-6	534426		
			QS-8	534427		
GRLA...QS...RS-B	G 6 1/4	211,9	QS-58	534428		Double flow rate approx. 400 l/min
			QS-6	534429		
			QS-8	534430		
GRLA...QS...RS-B	G 6 1/2	215,9	QS-60	534431		Double flow rate approx. 400 l/min
			QS-6	534432		
			QS-8	534433		
GRLA...QS...RS-B	G 6 3/4	224,3	QS-62	534434		Double flow rate approx. 400 l/min
			QS-6	534435		
			QS-8	534436		
GRLA...QS...RS-B	G 7	228,6	QS-64	534437		Double flow rate approx. 400 l/min
			QS-6	534438		
			QS-8	534439		
GRLA...QS...RS-B	G 7 1/4	236,8	QS-66	534440		Double flow rate approx. 400 l/min
			QS-6	534441		
			QS-8	534442		
GRLA...QS...RS-B	G 7 1/2	241,3	QS-68	534443		Double flow rate approx. 400 l/min
			QS-6	534444		
			QS-8	534445		
GRLA...QS...RS-B	G 7 3/4	249,1	QS-70	534446		Double flow rate approx. 400 l/min
			QS-6	534447		
			QS-8	534448		
GRLA...QS...RS-B	G 8	254,0	QS-72	534449		Double flow rate approx. 400 l/min
			QS-6	534450		
			QS-8	534451		
GRLA...QS...RS-B	G 8 1/4	262,1	QS-74	534452		Double flow rate approx. 400 l/min
			QS-6	534453		
			QS-8	534454		
GRLA...QS...RS-B	G 8 1/2	266,7	QS-76	534455		Double flow rate approx. 400 l/min
			QS-6	534456		
			QS-8	534457		
GRLA...QS...RS-B	G 8 3/4	274,3	QS-78	534458		Double flow rate approx. 400 l/min
			QS-6	534459		
			QS-8	534460		
GRLA...QS...RS-B	G 9	279,4	QS-80	534461		Double flow rate approx. 400 l/min
			QS-6	534462		
			QS-8	534463		
GRLA...QS...RS-B	G 9 1/4	287,1	QS-82	534464		Double flow rate approx. 400 l/min
			QS-6	534465		
			QS-8	534466		
GRLA...QS...RS-B	G 9 1/2	291,9	QS-84	534467		Double flow rate approx. 400 l/min
			QS-6	534468		
			QS-8	534469		
GRLA...QS...RS-B	G 9 3/4	299,1	QS-86	534470		Double flow rate approx. 400 l/min
			QS-6	534471		
			QS-8	534472		
GRLA...QS...RS-B	G 10	304,8	QS-88	534473		Double flow rate approx. 400 l/min
			QS-6	534474		
			QS-8	534475		
GRLA...QS...RS-B	G 10 1/4	312,7	QS-90	534476		Double flow rate approx. 400 l/min
			QS-6	534477		
			QS-8	534478		
GRLA...QS...RS-B	G 10 1/2	317,5	QS-92	534479		Double flow rate approx. 400 l/min
			QS-6	534480		
			QS-8	534481		
GRLA...QS...RS-B	G 10 3/4	325,1	QS-94	534482		Double flow rate approx. 400 l/min
			QS-6	534483		
			QS-8	534484		
GRLA...QS...RS-B	G 11	330,2	QS-96	534485		Double flow rate approx. 400 l/min
			QS-6	534486		
			QS-8	534487		
GRLA...QS...RS-B	G 11 1/4	338,1	QS-98	534488		Double flow rate approx. 400 l/min
			QS-6	534489		
			QS-8	534490		
GRLA...QS...RS-B	G 11 1/2	342,7	QS-100	534491		Double flow rate approx. 400 l/min
			QS-6	534492		
			QS-8	534493		
GRLA...QS...RS-B	G 11 3/4	350,3	QS-102	534494		Double flow rate approx. 400 l/min
			QS-6	534495		
			QS-8	534496		
GRLA...QS...RS-B	G 12	355,6	QS-104	534497		Double flow rate approx. 400 l/min
			QS-6	534498		
			QS-8	534499		
GRLA...QS...RS-B	G 12 1/4	363,1	QS-106	534500		Double flow rate approx. 400 l/min
			QS-6	534501		
			QS-8	534502		
GRLA...QS...RS-B	G 12 1/2	367,5	QS-108	534503		