

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



Precision adjustment and control – with flow control valves from Festo

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

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 advance

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										■			

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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...LFC	M5	9,2	QS-3	175053	
			QS-4	175056	
			QS-6	199139	
GRLA...QS...D	M5	8,9	QS-3	199137	Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	199138	
			QS-6	199142	
			QS-8	199145	
GRLA...QS...MF-D	G 1/8	17,8	QS-4	199143	Double flow rate approx. 400 l/min
			QS-6	199144	
			QS-8	199145	
			QS-10	199147	
GRLA...QS...D	G 1/4	17,8	QS-6	199146	
			QS-8	199147	
			QS-10	199148	
			QS-12	199152	
GRLA...QS...D	G 3/8	22,4	QS-6	199149	
			QS-8	199150	
			QS-10	199151	
			QS-12	199152	
GRLA...QS...	M3	8	QS-3	175044	Optimised for compact drives
			QS-4	175062	
GRLA...QS...LFC	M5	9,2	QS-3	175064	
			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	
			QS-8	195809	
GRLA...QS...D	G 1/8	13,8	QS-4	195810	
			QS-6	195811	
			QS-8	195812	
			QS-10	195813	
GRLA...QS...RS-D	M5	8,9	QS-3	195776	Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	195777	
			QS-6	195778	
			QS-8	195779	
GRLA...QS...MF-RS-D	G 1/8	17,8	QS-6	195780	Double flow rate approx. 400 l/min
			QS-8	195781	
			QS-10	195782	
			QS-12	195783	
GRLA...QS...RS-D	G 1/4	17,8	QS-6	195792	
			QS-8	195793	
			QS-10	195794	
			QS-12	195795	
GRLA...QS...RS-B	G 1/4	16	QS-6	162965	Swivel joint 360° horizontally rotatable in assembled condition
			QS-8	162966	
			QS-10	162967	
			QS-12	162968	
GRLA...QS...D	G 1/8	13,8	QS-6	162970	Lightweight design, high flow rate
			QS-8	162971	
			QS-10	162972	
			QS-12	162973	
GRLA...QS...D	G 1/8	13,8	QS-6	162974	Corrosion-resistant design, temp. range up to 100° C
			QS-8	162975	
			QS-10	162976	
			QS-12	162977	
GRLA...QS...D	G 1/4	17,8	QS-6	195600	Swivel joint 360° horizontally rotatable in assembled condition
			QS-8	195601	
			QS-10	195602	
			QS-12	195603	

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number			
GRLA...B	M3	5	M3	175038	Compact and robust design		
GRLA...LFC	M5	8	M5	175047			
GRLA...B	M5	10	M5	151160			
			G 1/8	16		G 1/8	151165
GRLA...B	G 1/4	20	G 1/4	151172			
			G 3/8	25		G 3/8	151178
			G 1/2	32		G 1/2	151179
			G 3/4	41		G 3/4	151180
			M5	10		M5	151183
			G 1/8	16		G 1/8	151189
GRLA...RS-B	G 1/4	20	G 1/4	151175	Compact and robust design		
			G 3/8	25		G 3/8	151176
			G 1/2	32		G 1/2	151177
GRGRA...B	M5	10	M5	161403	Excellent corrosion resistance Design for the food processing industry		
			G 1/8	16		G 1/8	161404
			G 1/4	20		G 1/4	161405
			G 3/8	25		G 3/8	161406
			G 1/2	32		G 1/2	161407
			G 3/4	41		G 3/4	161408

Barbed fitting connection

Product family	Connection	Width [mm]	Variants	Part number	
GRLA...PK...LFC	M5	8	PK-3	175050	Compact and robust design
GRLA...PK...B	M5	10	PK-3	151161	
			PK-4	151162	
GRLA...PK...B	G 1/8	16	PK-3	151166	
			PK-4	151167	
			PK-6	151168	
			PK-8	151173	
GRLA...PK...B	M5	10	PK-3	151174	Compact and robust design
			PK-4	151175	
			PK-6	151176	
			PK-8	151177	

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Flow rate adjustment
Supply air flow control, active on one side
Flow control valve with non-return function for single-acting and compact drives for direct mounting on the cylinder

QS push-in connector

Product family	Connection	Width [mm]	Variants	Part number	
GRZL...QS...	M3	8	QS-3	175043	Optimised for compact drives
GRZL...QS...LFC	M5	9,2	QS-3	175055	
			QS-4	175058	
			QS-6	199139	
GRZL...QS...D	M5	8,9	QS-3	199133	Swivel joint 360° horizontally rotatable in assembled condition
			QS-4	199134	
			QS-6	199135	
			QS-8	199136	
GRZL...QS...D	G 1/8	13,8	QS-4	199137	
			QS-6	199138	
			QS-8	199139	
			QS-10	199140	
GRZG...QS...	M3	8	QS-3	175046	Optimised for compact drives
			QS-4	175067	
GRZG...QS...LFC	M5	9,2	QS-3	175054	
			QS-4	175061	

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number			
GRZL...	M3	5	M3	175040	Optimised for compact drives		
GRZL...LFC	M5	8	M5	175049			
GRZL...B	M5	10	M5	151183			
			G 1/8	16		G 1/8	151188
GRZL...RS-B	G 1/4	20	G 1/4	151195	Compact and robust design		
			G 3/8	25		G 3/8	151196
			G 1/2	32		G 1/2	151197
			G 3/4	41		G 3/4	151198

Barbed fitting connection

Product family	Connection	Width [mm]	Variants	Part number	
GRZL...PK...LFC	M3	8	PK-3	175052	Optimised for compact drives
GRZL...PK...B	M5	10	PK-3	151184	
			PK-4	151185	
GRZL...PK...B	G 1/8	16	PK-3	151189	
			PK-4	151190	
			PK-6	151191	
			PK-8	151192	
GRZG...PK...LFC	M5	8	PK-3	151197	Optimised for compact drives
			PK-4	151198	
			PK-6	151199	
			PK-8	151200	

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Flow rate adjustment
Flow control acting on both sides
Flow control valve without non-return function for single-acting small drives for direct mounting on the cylinder

QS push-in connector

Product family	Connection	Width [mm]	Variants	Part number	
GRZG...QS...	M3	8	QS-3	175042	Optimised for compact drives
GRZG...QS...LFC	M5	9,2	QS-3	175054	
			QS-4	175057	
			QS-6	199139	
GRZG...QS...D	M3	8	QS-3	175045	Optimised for compact drives
			QS-4	175066	
GRZG...QS...LFC	M5	9,2	QS-3	175063	
			QS-4	175066	

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number	
GRZG...QS...	M3	5	M3	175039	Optimised for compact drives
GRZG...LFC	M5	8	M5	175048	
GRZG...B	M5	10	M5	151181	
			G 1/8	16	

Barbed fitting connection

Product family	Connection	Width [mm]	Variants	Part number	
GRZG...PK...LFC	M5	8	PK-3	151193	Optimised for compact drives
GRZG...PK...B	M5	10	PK-3	151192	
			PK-4	151194	
GRZG...LFC	M5	8	PK-3	175060	

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Flow rate adjustment
Flow control acting on one side
Flow control valve with non-return function for single or double acting drives for in-line assembly

QS push-in connector

Product family	Connection	Width [mm]	Variants	Part number	
GR-QS...	QS-3	14	QS-3	199965	Flexible assembly possible by means of holder Low flow types for particularly precise flow rate adjustment
	QS-4	14	QS-4	199967	
	QS-6	16	QS-6	199969	
	QS-8	16	QS-8	199970	

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number			
GR...B	M3	6	M3	15899	Optimised for compact drives		
GR...B	M5	16	M5	151213			
			G 1/8	16		G 1/8	151215
GR...B	G 1/4	26,5	G 1/4	6509			
			G 3/8	33	G 3/8		6308
			G 1/2	42	G 1/2		3720
			G 3/4	40	G 3/4		2103

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Flow rate adjustment
Flow control acting on both sides
Flow control valve without non-return function for in-line assembly

QS push-in connector

Product family	Connection	Width [mm]	Variants	Part number	
GRZG...QS...	QS-3	14	QS-3	199971	Flexible assembly possible by means of holder
	QS-4	14	QS-4	199972	
	QS-6	16	QS-6	199973	
	QS-8	16	QS-8	199974	

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number	
GRZG...	M5	14	M5	151214	Optimised for compact drives
GRZG...B	M5	16	M5	151216	
			G 1/8	16	
G 1/4	20	SW24	G 1/4	2109	

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Flow rate adjustment
Flow control acting on one side
Flow control valve with non-return function for single-acting cylinders for in-line assembly

Female thread connection

Product family	Connection	Width [mm]	Variants	Part number
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