

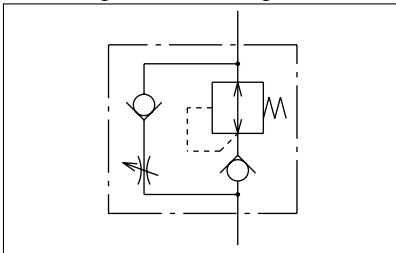
Air Saving Valve Pressure Valve Flow Valve

Series ASR/Series ASQ

Pressure valve: Series ASR



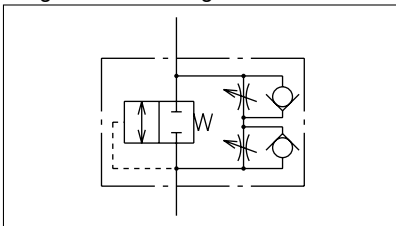
Regulator with check valve and flow control valve integrated into a single construction



Flow valve: Series ASQ



Pilot valve and two-way flow control valve integrated into a single construction



How to Order

ASR 4 3 0 F - 02 - 06 S - F20

- Model**
 - ASR Pressure valve
 - ASQ Flow valve
- Body size**
 - 4 1/4 standard
 - 5 3/8 standard
 - 6 1/2 standard
- Type**
 - 3 Universal

With One-touch fitting
- With seal**
 - Option
 - Nil Variable set pressure type (0.1 to 0.3 MPa)
 - F20 Fixed set pressure type (0.2 MPa)
- Applicable tubing O.D.**
 - 06 6 mm
 - 08 8 mm
 - 10 10 mm
 - 12 12 mm
- Port size**
 - 02 R1/4
 - 03 R3/8
 - 04 R1/2

Model

Model		Port size	Applicable tubing O.D. (mm)			
Pressure valve	Flow valve		6	8	10	12
ASR430F-02	ASQ430F-02	R1/4	●	●	●	
ASR530F-02	ASQ530F-02	R1/4	●	●	●	●
ASR530F-03	ASQ530F-03	R3/8	●	●	●	●
ASR630F-03	ASQ630F-03	R3/8			●	●
ASR630F-04	ASQ630F-04	R1/2			●	●

Specifications

Proof pressure	1.5 MPa	
Maximum operating pressure	1.0 MPa	
Set pressure range	Variable	0.1 to 0.3 MPa
	Fixed (option)	0.2 MPa
Ambient and fluid temperature	-5 to 60°C (with no freezing)	
Number of needle rotations	10 rotations	
Applicable tubing material	Nylon, Soft nylon, Polyurethane	

Effective Area

Pressure Valve: Series ASR

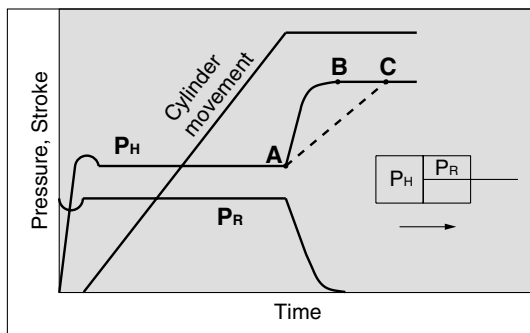
Type	Free flow mm ²	Controlled flow mm ²
ASR430F-02-06S(-F20)	5.4	5.9
ASR430F-02-08S(-F20)	5.9	6.7
ASR430F-02-10S(-F20)	5.9	6.7
ASR530F-02-06S(-F20)	7.3	8.1
ASR530F-02-08S(-F20)	8.9	11.8
ASR530F-02-10S(-F20)	9.2	13.3
ASR530F-02-12S(-F20)	9.5	13.7
ASR530F-03-06S(-F20)	7.3	8.1
ASR530F-03-08S(-F20)	8.9	11.8
ASR530F-03-10S(-F20)	9.2	13.3
ASR530F-03-12S(-F20)	9.5	13.7
ASR630F-03-10S(-F20)	15.3	17.8
ASR630F-03-12S(-F20)	16.0	19.1
ASR630F-04-10S(-F20)	15.3	17.8
ASR630F-04-12S(-F20)	16.0	19.1

Flow Valve: Series ASQ

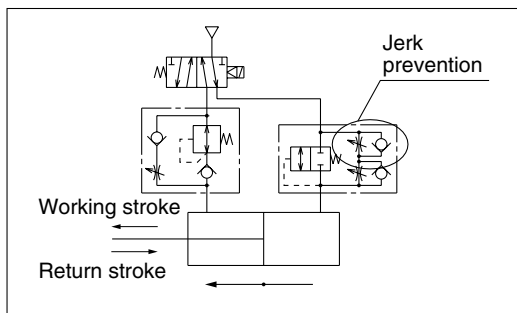
Type	Meter-out mm ²	Meter-in mm ²
ASQ430F-02-06S(-F20)	4.1	4.9
ASQ430F-02-08S(-F20)	4.6	5.5
ASQ430F-02-10S(-F20)	4.6	5.5
ASQ530F-02-06S(-F20)	6.6	7.8
ASQ530F-02-08S(-F20)	9.2	10.1
ASQ530F-02-10S(-F20)	9.8	10.8
ASQ530F-02-12S(-F20)	10.8	11.6
ASQ530F-03-06S(-F20)	6.6	7.8
ASQ530F-03-08S(-F20)	9.2	10.1
ASQ530F-03-10S(-F20)	9.8	10.8
ASQ530F-03-12S(-F20)	10.8	11.6
ASQ630F-03-10S(-F20)	15.3	17.1
ASQ630F-03-12S(-F20)	16.2	18.0
ASQ630F-04-10S(-F20)	15.3	17.1
ASQ630F-04-12S(-F20)	16.2	18.0

Operating Principle

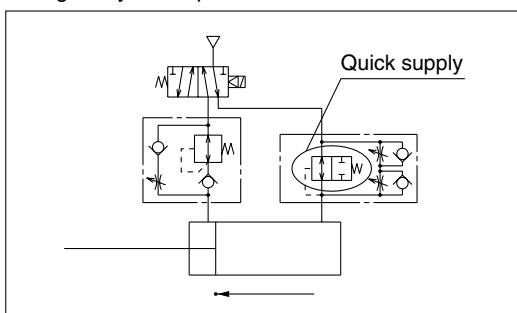
Working Stroke



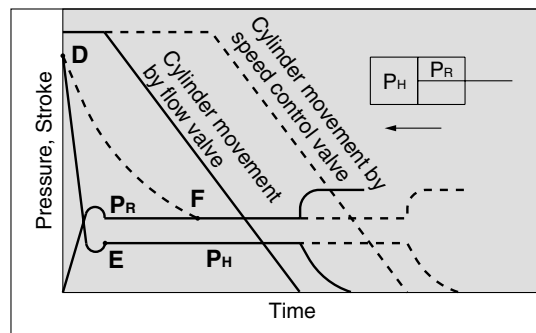
1. The cylinder starts smoothly because jerks are prevented by meter-in control.



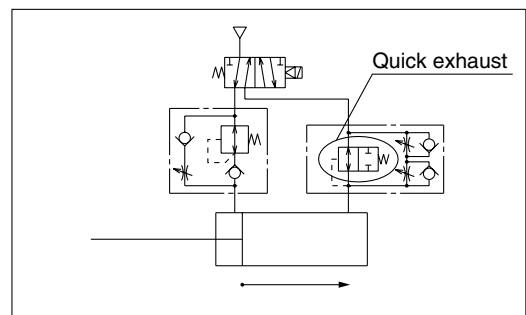
2. When the cylinder reaches the stroke end, the quick air charge by the flow valve rapidly increases the rear side pressure (PH) from A to B. If a speed controller is used instead of the flow valve, charging air will take more time as illustrated by line A-C, causing delay in the pressure rise.



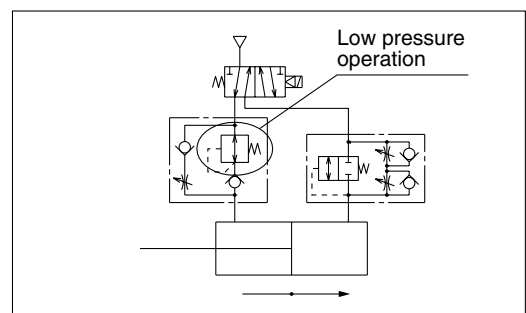
Return Stroke



3. To prevent delay due to the pressure gap, air is rapidly exhausted to decrease the pressure from D to E, after which the piston moves at a constant speed. If a speed controller is used instead of the flow valve, exhausting air will take more time as illustrated by line D-F, resulting in longer stop time of the cylinder and a consequent time loss.



4. The cylinder operates at a low pressure required for a return.



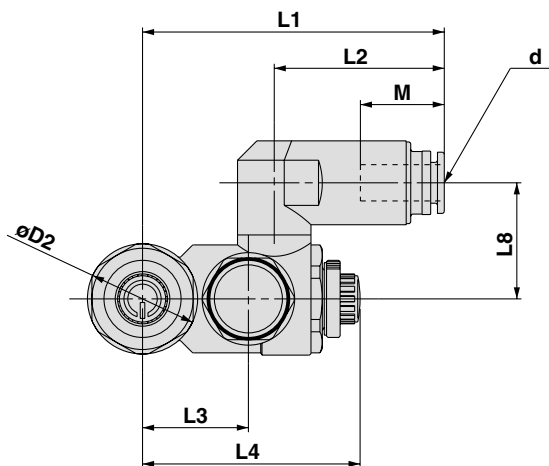
AS
ASP
ASN
AQ
ASV
AK
ASS
ASR
ASF

Series ASR/ASQ

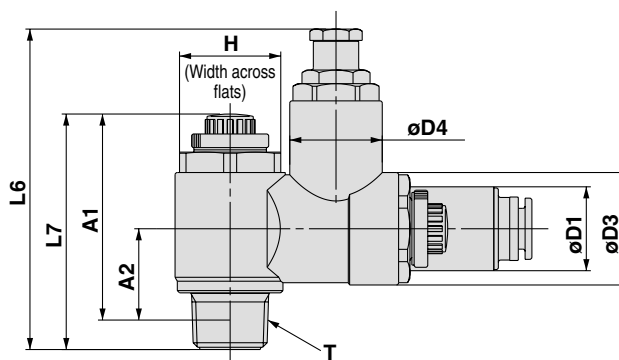
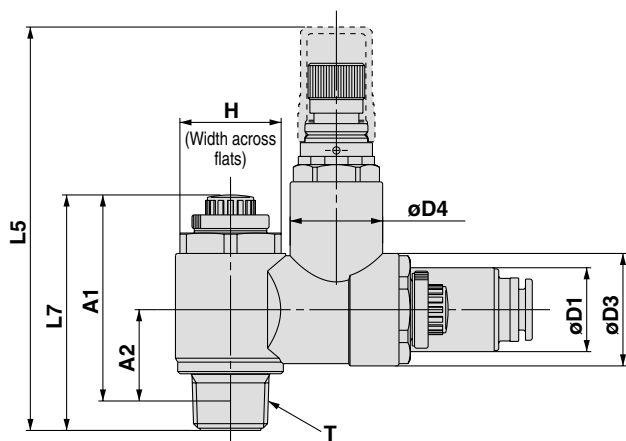
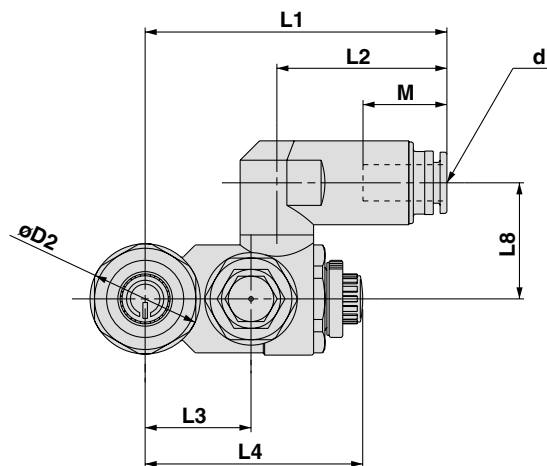
Dimensions

Flow Valve: Series ASQ

Variable set pressure type



Fixed set pressure type



Model	Note 1) d	T	H	D1	D2	D3	D4	L1	L2	L3	L4		Note 2) L5	Note 3) L6	L7		L8	A1 Note 4)		Note 4) A2	M	Weight (g) Note 5)	
											MAX.	MIN.			MAX.	MIN.		MAX.	MIN.			*1	*2
ASQ430F-02-06S,-F20	6							61.6	34.9												17	136	114
ASQ430F-02-08S,-F20	8	R1/4	17	18.5	20	21.5	19.5	62.6	35.9	20.3	49.4	44.4	88.8	68.7	50.6	45.6	23	44.6	39.6	17.9	18.5	139	117
ASQ430F-02-10S,-F20	10							57.7	31												21	130	108
ASQ530F-02-06S,-F20	6							65.6	36.5												17	178	155
ASQ530F-02-08S,-F20	8							66.6	37.5												18.5	181	158
ASQ530F-02-10S,-F20	10	R1/4	21	18.5	24.3	24.8	20.4	61.7	32.6	23.4	53.5	48.5	92.2	72	55.8	50.8	25.6	49.8	44.8	19	21	172	149
ASQ530F-02-12S,-F20	12							63.5	34.4												22	174	151
ASQ530F-03-06S,-F20	6							65.6	36.5												17	188	165
ASQ530F-03-08S,-F20	8							66.6	37.5												18.5	191	168
ASQ530F-03-10S,-F20	10	R3/8	21	18.5	24.3	24.8	20.4	61.7	32.6	23.4	53.5	48.5	93.8	73.6	57.4	52.4	25.6	51	46	20.2	21	182	159
ASQ530F-03-12S,-F20	12							63.5	34.4												22	184	161
ASQ630F-03-10S,-F20	10							74.8	32.6												21	310	292
ASQ630F-03-12S,-F20	12	R3/8	25	18.5	29.7	30.7	30	76.6	34.4	30.8	74.3	66.8	107.9	86.9	67.6	60.1	28	61.2	53.7	20.8	22	312	294
ASQ630F-04-10S,-F20	10							74.8	32.6												21	330	312
ASQ630F-04-12S,-F20	12	R1/2	25	18.5	29.7	30.7	30	76.6	34.4	30.8	74.3	66.8	111.4	90.4	71.1	63.6	28	62.9	55.4	24.1	22	332	314

Note 1) "d" indicates the applicable tubing O.D..

Note 2) L5 is the dimension for the variable set pressure type.

Note 3) L6 is the dimension for the fixed set pressure type.

Note 4) A1 and A2 are reference dimensions after installation.

Note 5) *1 is the weight for the variable set pressure type and *2 is that for the fixed set pressure type.