

Air Saving Valve

Series ASR

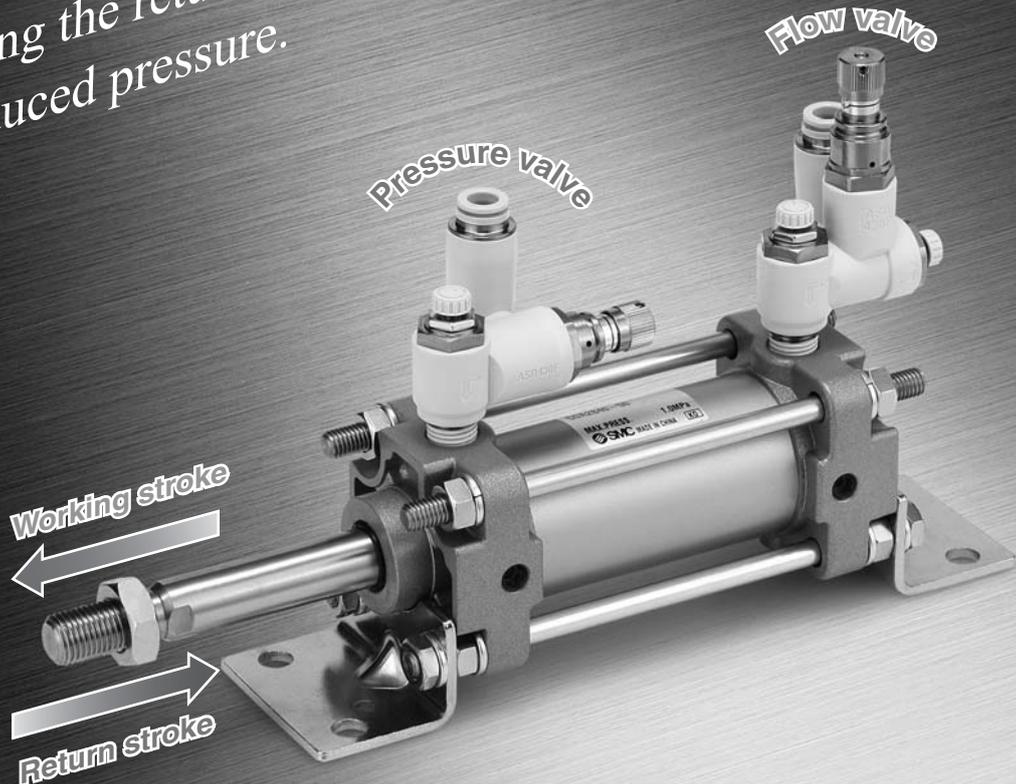
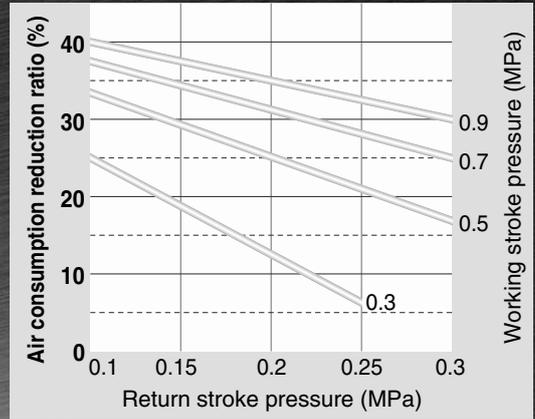
Series ASQ

Pressure Valve

Flow Valve

40% reduction in air consumption

Cuts air consumption by operating the return stroke at a reduced pressure.



Pressure valve



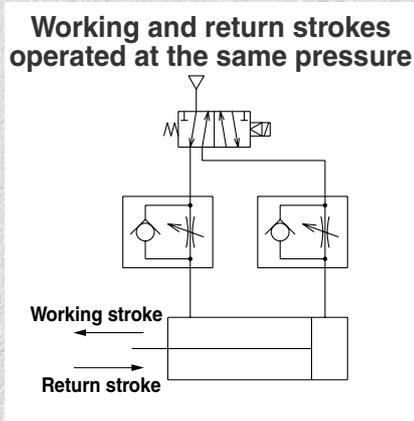
Flow valve

- AS
- ASP
- ASN
- AQ
- ASV
- AK
- VCHC
- ASS
- ASR**
- ASQ**
- KE
- TMH

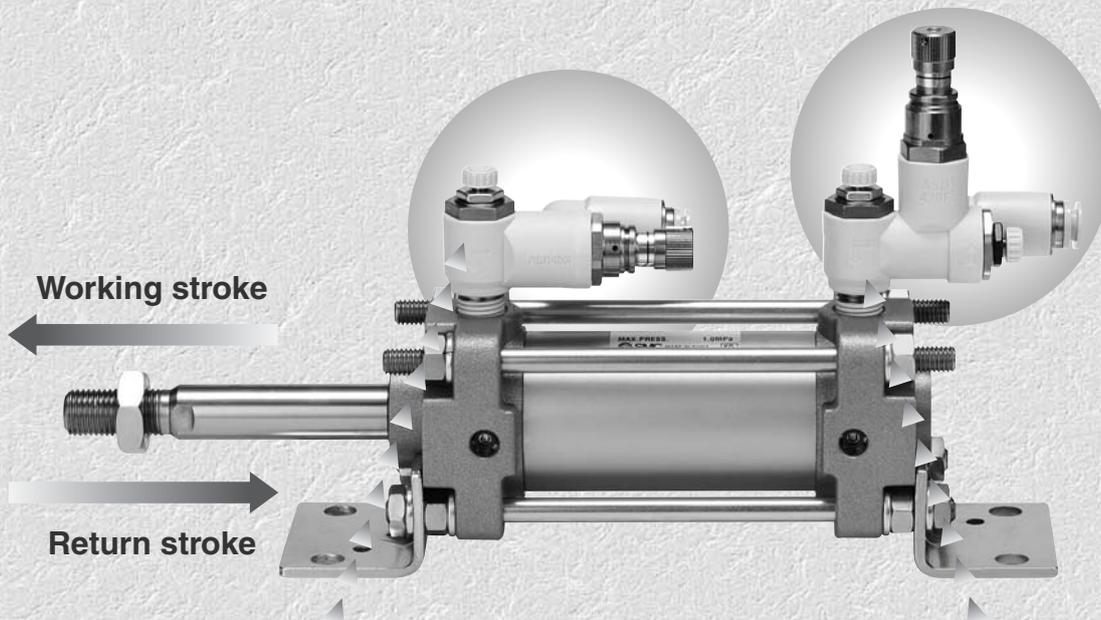
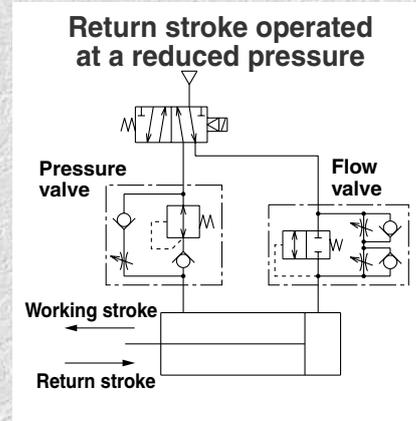


Cuts air consumption by operating the return stroke at a reduced pressure.

Conventional valve



Air saving valve



Pressure valve

Regulator with check valve
+
Speed controller



Series ASR

Flow valve

Quick supply and exhaust valve
+
Speed controller
(Meter-in, Meter-out)



Series ASQ

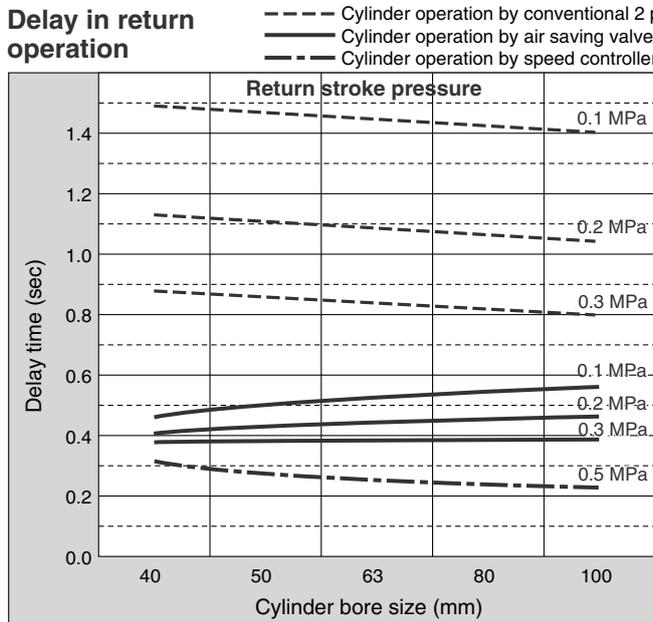
Smooth operation of working and return strokes possible.

Consistent speed control achieved by preventing jerky movement of working strokes.

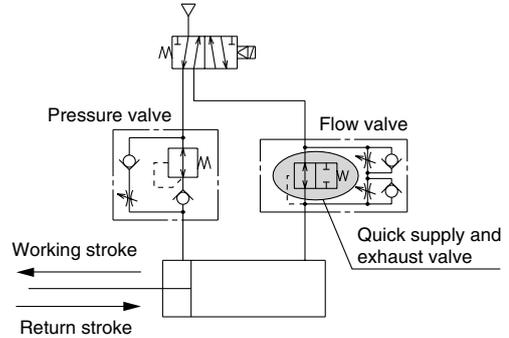
Improved response time

Operation delay in a return stroke is reduced by the use of a quick supply and exhaust valve.

Delay in return operation



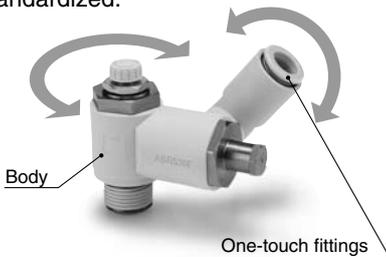
Cylinder speed: 200 mm/sec
Cylinder stroke: 200 mm



| Cylinder operating pressure (MPa) | Air consumption reduction ratio (%) | |
|-----------------------------------|-------------------------------------|---------------|
| | Working stroke | Return stroke |
| 0.5 | | 0.5 |
| | | 0.3 |
| | | 0.2 |
| | | 0.1 |
| | | 0 |
| | | 17 |
| | | 25 |
| | | 33 |

Easy piping

The body and one-touch fitting allow 360° rotation. The sealant on the male thread is standardized.



The set pressure can be either fixed or variable.

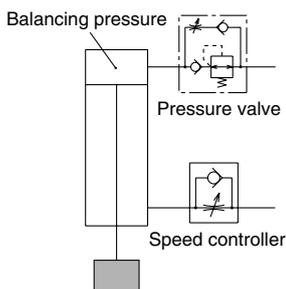
Fixed set pressure type (Fixed at 0.2 MPa) **Variable set pressure type** (Variable between 0.1 and 0.3 MPa)



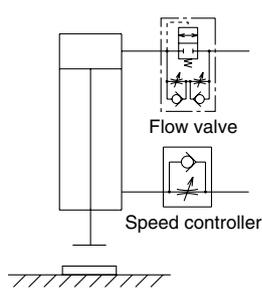
A knob cap is attached to the variable set pressure type.

Other applications

Jerk prevention in vertical operation of the cylinder



Quick air charge at the end of stroke for press applications



Series Variations

| 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 | | | ● | ● |

- AS
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- ASR
- ASQ
- KE
- TMH

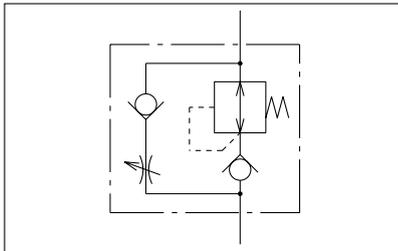
Air Saving Valve Pressure Valve Flow Valve

Series ASR / Series ASQ

Pressure valve: Series ASR



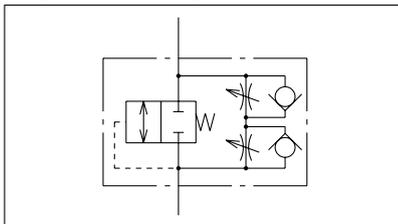
Regulator with check valve and flow control valve integrated into a single construction



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

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

| | | |
|--------------------------------------|---------------------------------|----------------|
| Fluid | Air | |
| 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 | |

AS
ASP
ASN
AQ
ASV
AK
VCHC
ASS
ASR
ASQ
KE
TMH

Series ASR/Series ASQ

Effective Area

Pressure Valve: Series ASR

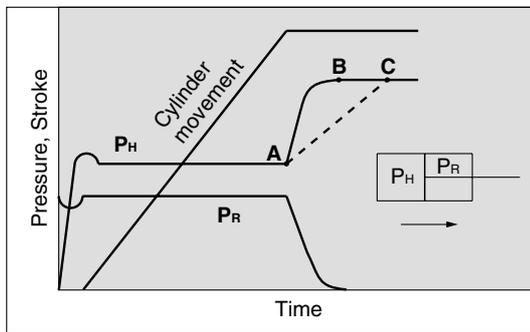
| Type | Free flow mm ² | Controlled flow mm ² |
|----------------------|---------------------------|---------------------------------|
| ASR430F-02-06S(-F20) | 5.4 | 5.9 |
| ASR430F-02-08S(-F20) | 5.9 | 6.7 |
| ASR430F-02-10S(-F20) | 5.9 | 6.7 |
| ASR530F-02-06S(-F20) | 7.3 | 8.1 |
| ASR530F-02-08S(-F20) | 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

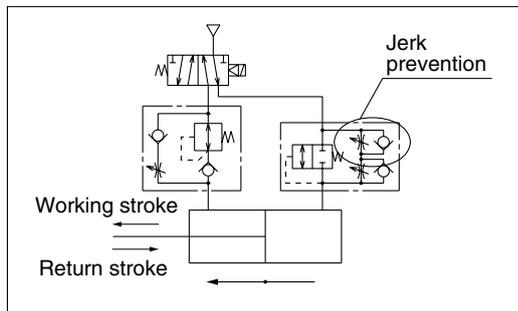
| Type | Meter-out mm ² | Meter-in mm ² |
|----------------------|---------------------------|--------------------------|
| ASQ430F-02-06S(-F20) | 4.1 | 4.9 |
| ASQ430F-02-08S(-F20) | 4.6 | 5.5 |
| ASQ430F-02-10S(-F20) | 4.6 | 5.5 |
| ASQ530F-02-06S(-F20) | 6.6 | 7.8 |
| ASQ530F-02-08S(-F20) | 9.2 | 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

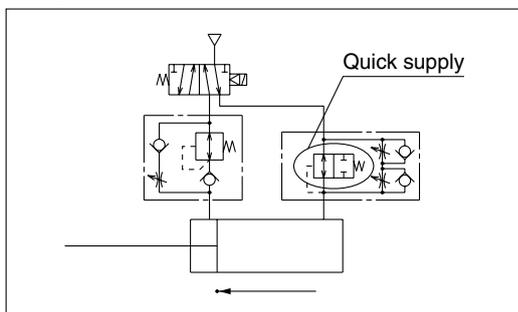
Working Stroke



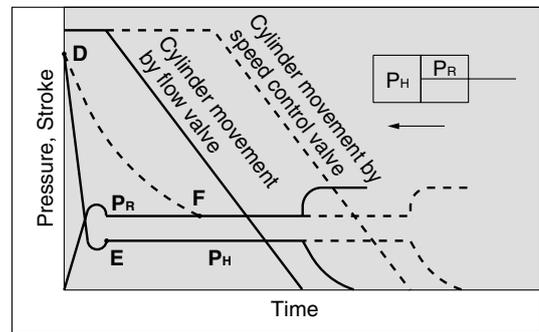
1. The cylinder starts smoothly because jerks are prevented by meter-in control.



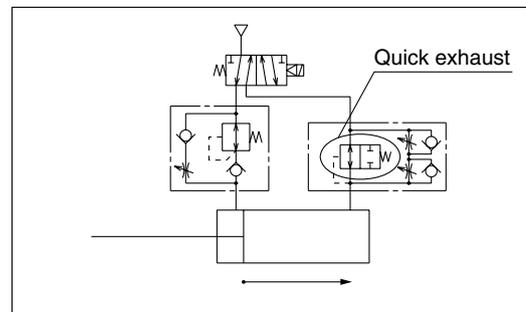
2. When the cylinder reaches the stroke end, the quick air charge by the flow valve rapidly increases the rear side pressure (PH) from A to B. If a speed controller is used instead of the flow valve, charging air will take more time as illustrated by line A-C, causing delay in the pressure rise.



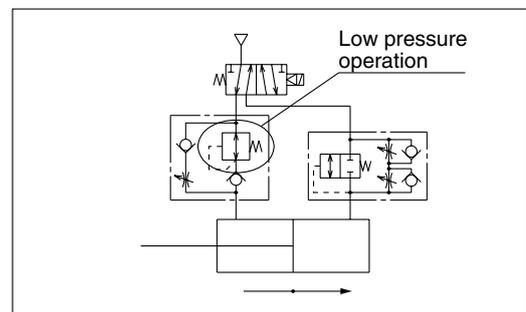
Return Stroke



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.



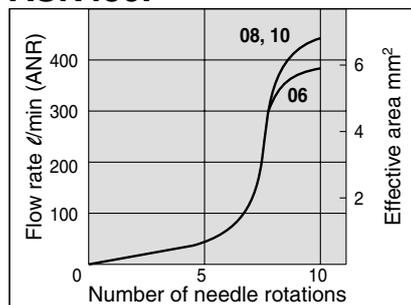
4. The cylinder operates at a low pressure required for a return.



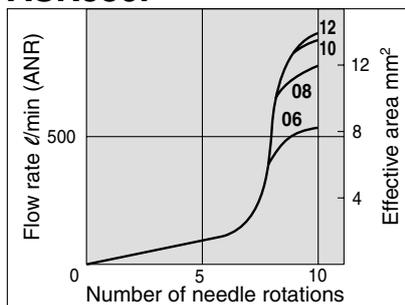
Flow Characteristics

Pressure Valve: Series ASR (Inlet pressure: 0.5 MPa)

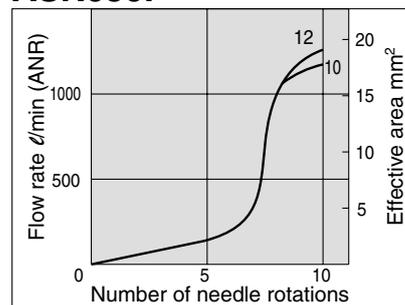
ASR430F



ASR530F



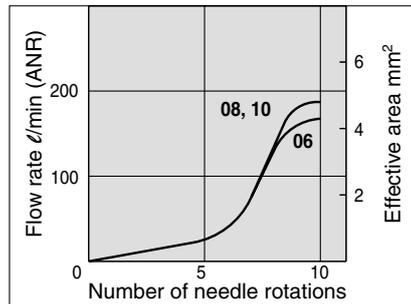
ASR630F



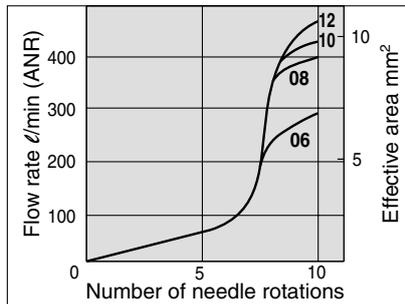
Flow Valve: Series ASQ

Meter-out Type (Inlet pressure: 0.3 MPa)

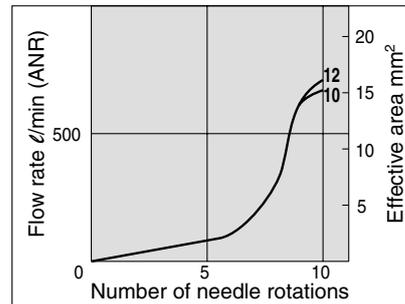
ASQ430F



ASQ530F

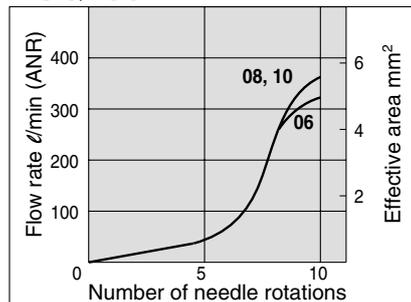


ASQ630F

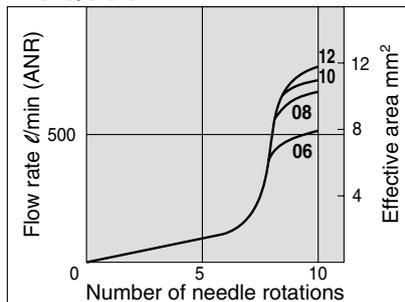


Meter-in Type (Inlet Pressure: 0.5 MPa)

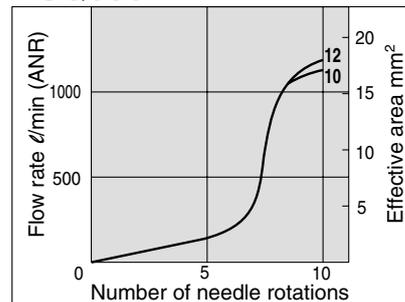
ASQ430F



ASQ530F

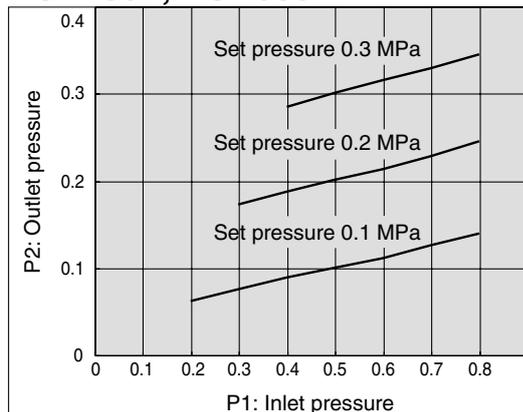


ASQ630F

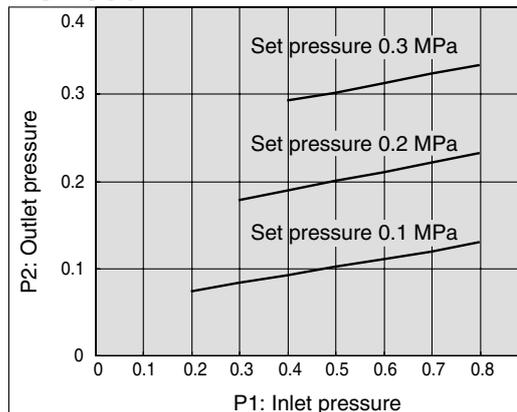


Pressure Characteristics (ASR)

ASR430F, ASR530F



ASR630F



- AS
- ASP
- ASN
- AQ
- ASV
- AK
- VCHC
- ASS
- ASR
ASQ
- KE
- TMH

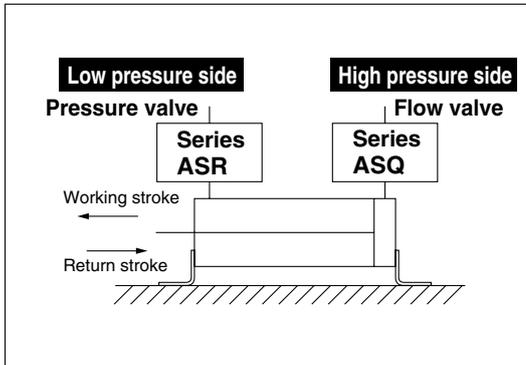
Series ASR/Series ASQ

Selection and Adjustment

Install a flow valve on the working side which requires the cylinder output and a pressure valve on the return side. The product cannot be used in cases where the same pressure is necessary for both working and return strokes. In such cases use a speed controller.

Horizontal mounting

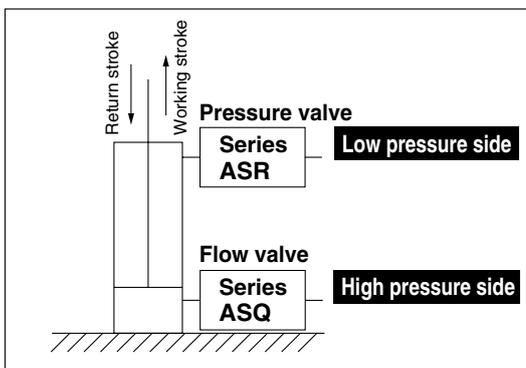
Low pressure side: Pressure valve
High pressure side: Flow valve



Refer to **Adjustment Procedure 1** for pressure and speed adjustment.

Vertical mounting

Low pressure side: Pressure valve
High pressure side: Flow valve

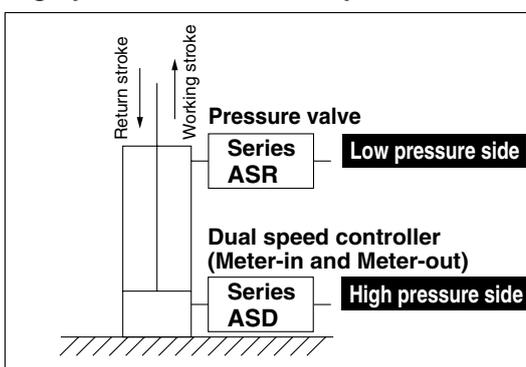


In case the load ratio is 50% or lower at the set pressure of the flow valve:

Refer to **Adjustment Procedure 1** for pressure and speed adjustment.

If the load ratio at the set pressure of the flow valve exceeds 50%, install a dual speed controller (meter-in and meter out control) on the high pressure side.

Low pressure side: Pressure valve
High pressure side: Dual speed controller

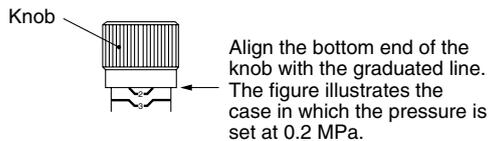


Refer to **Adjustment Procedure 2** for pressure and speed adjustment.

Adjustment Procedure 1

Pressure Adjustment

1. The fixed set pressure type (-F20) does not require adjustment because the pressure is fixed at 0.2 MPa for both the pressure valve and the flow valve.
2. The set pressures of the variable set pressure type pressure valve and flow valve are adjusted with knob (A) and knob (B) respectively. Turn the knob clockwise to increase the pressure and counterclockwise to decrease the pressure.
3. The graduations 1, 2 and 3 correspond to 0.1, 0.2 and 0.3 MPa respectively. Align the bottom end of the knob with the graduated line for adjustment.



4. Set the same pressure for the pressure valve and the flow valve (0.2 MPa as the recommended value).
5. The inlet side should be supplied with a pressure which is higher than the set pressure by 0.1 MPa or more.
6. Cap the valve after adjustment.

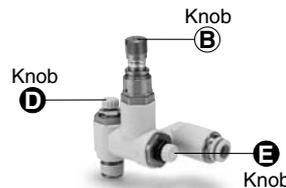
Pressure Valve: Series ASR



Speed Control

1. The cylinder speed is adjusted with knobs (C), (D) and (E). First have all the knobs fully closed and then open them gradually for adjustment. Turn the knob clockwise to close (decrease the speed of the piston rod) and counterclockwise to open (increase the speed of the piston rod).
2. Speed adjustment for the working stroke
The speed is adjusted with the pressure valve and the flow valve.
Open knobs (C) and (E) gradually until the required speed is achieved. Make sure that knobs (C) and (E) are opened by the same number of rotations.
Note 1) If the piston rod jerks, close knob (E) until the smooth operation is achieved.
3. Speed adjustment for return stroke
The speed is adjusted with the flow valve.
Open knob (D) gradually until the required speed is achieved.
4. Be sure to tighten the lock nut after adjustment.

Flow Valve: Series ASQ



Adjustment Procedure 2

Pressure Adjustment

1. The fixed set pressure type (-F20) does not require adjustment because the pressure is fixed at 0.2 MPa.
2. The pressure at the low pressure side (return stroke side) is adjusted by the pressure valve.
3. The set pressure is adjusted with knob (A). Turn the knob clockwise to increase the pressure and counterclockwise to decrease the pressure.
4. The graduations 1, 2 and 3 correspond to 0.1, 0.2 and 0.3 MPa respectively. Align the bottom end of the knob with the graduated line for adjustment.
5. Keep the set pressure as low as possible in order to achieve good air saving effect.
6. Cap the valve after adjustment.

Pressure Valve: Series ASR



Speed Control

1. The cylinder speed is adjusted with knobs (C), (F) and (G). First have all the knobs fully closed and then open them gradually for adjustment. Turn the knob clockwise to close (decrease the speed of the piston rod) and counterclockwise to open (increase the speed of the piston rod).
2. Speed adjustment for the working stroke
The speed is adjusted with the pressure valve and the dual speed controller.
Open knobs (C) and (G) gradually until the required speed is achieved. Make sure that knobs (C) and (G) are opened by the same number of rotations.
Note 1) If the piston rod jerks, close knob (G) until the smooth operation is achieved.
3. Speed adjustment for return stroke
The speed is adjusted with the dual speed controller.
Open knob (F) gradually until the required speed is achieved.
4. Be sure to tighten the lock nut after adjustment.

Dual Speed Controller: Series ASD



AS

ASP

ASN

AQ

ASV

AK

VCHC

ASS

ASR
ASQ

KE

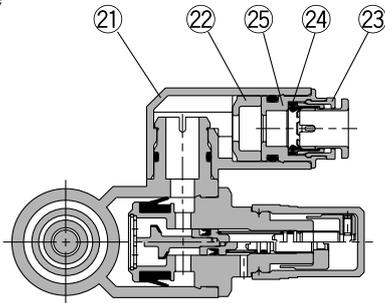
TMH

Series ASR/Series ASQ

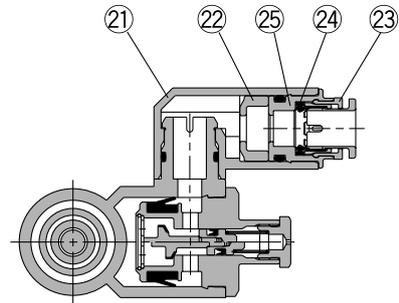
Construction

Pressure Valve: Series ASR

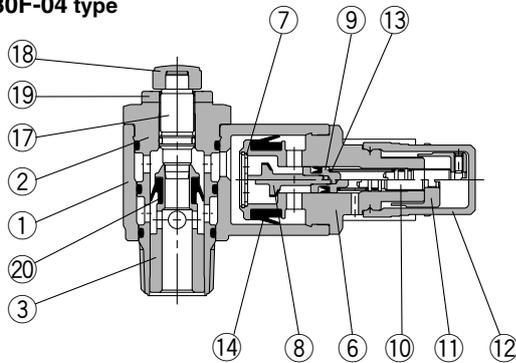
Variable type



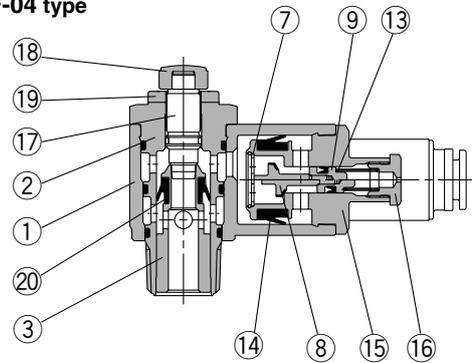
Fixed type



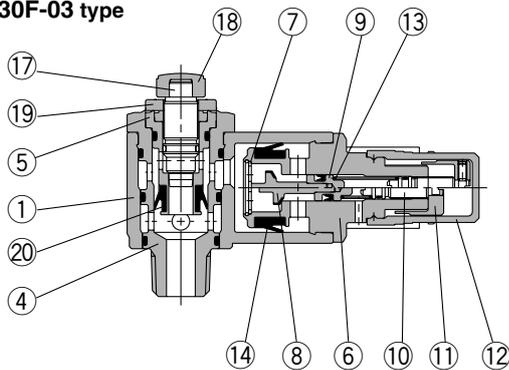
ASR430F-02 type ASR530F-03 type ASR630F-04 type



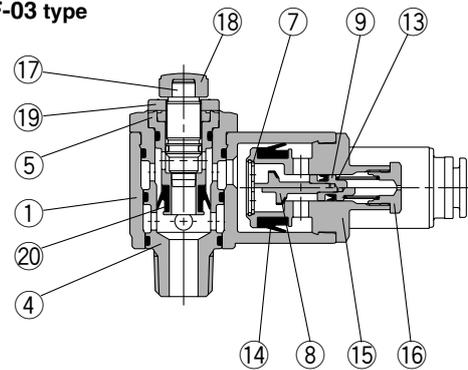
ASR430F-02 type ASR530F-03 type ASR630F-04 type



ASR530F-02 type ASR630F-03 type



ASR530F-02 type ASR630F-03 type



Component Parts

| No. | Description | Material | Note |
|-----|-------------------|-----------------|---------------------------|
| 1 | Body A | PBT | |
| 2 | Body B | Brass | Electroless nickel plated |
| 3 | Seat ring | Brass | Electroless nickel plated |
| 4 | Body B1 | Brass | Electroless nickel plated |
| 5 | Body B2 | Brass | Electroless nickel plated |
| 6 | Body C | Brass | Electroless nickel plated |
| 7 | Stopper | Stainless steel | |
| 8 | Valve | HNBR/Brass | |
| 9 | Piston | Brass | |
| 10 | Adjustment screw | Brass | Electroless nickel plated |
| 11 | Knob | Brass | Electroless nickel plated |
| 12 | Cap | Polypropylene | |
| 13 | Adjustment spring | Steel wire | Zinc chromated |

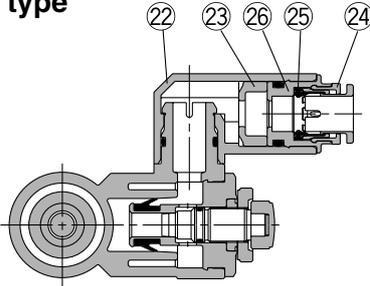
| No. | Description | Material | Note |
|-----|---------------------------|----------|---------------------------|
| 14 | U seal | HNBR | |
| 15 | Body C | Brass | Electroless nickel plated |
| 16 | Adjustment plug | Brass | Electroless nickel plated |
| 17 | Needle | Brass | Electroless nickel plated |
| 18 | Knob | PBT | |
| 19 | Lock nut | Steel | Zinc chromated |
| 20 | U seal | HNBR | |
| 21 | Elbow body | PBT | |
| 22 | Spacer ⁽¹⁾ | PBT | |
| 23 | Cassette | — | |
| 24 | Seal | NBR | |
| 25 | Drive body ⁽²⁾ | Brass | Electroless nickel plated |

Note 1) Not used for ø6 and ø8.

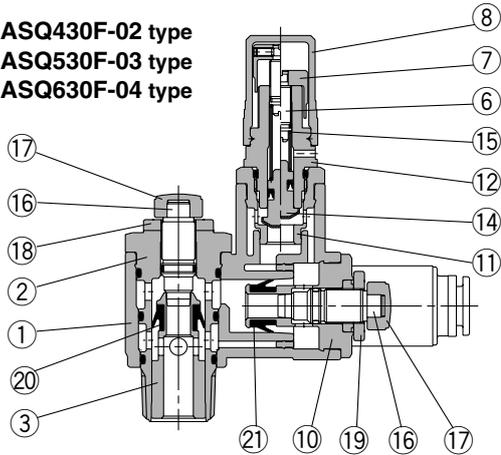
Note 2) Not used for ø10 and ø12.

Flow Valve: Series ASQ

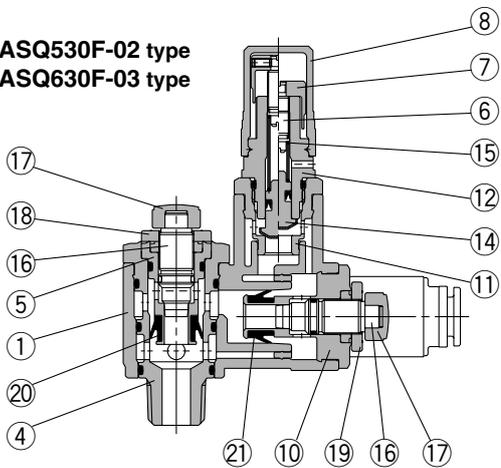
Variable type



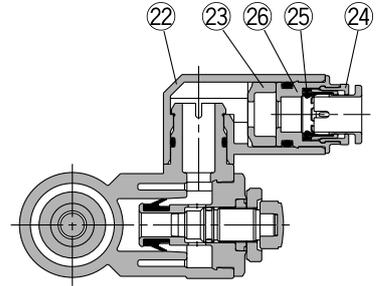
**ASQ430F-02 type
ASQ530F-03 type
ASQ630F-04 type**



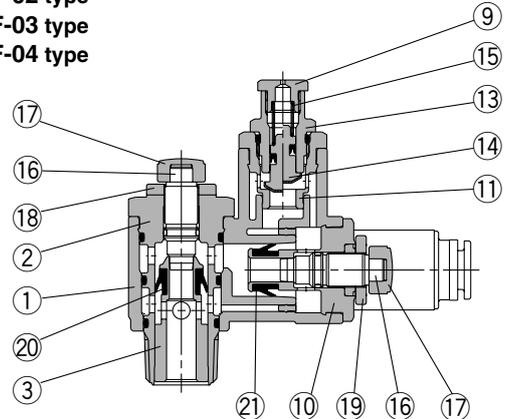
**ASQ530F-02 type
ASQ630F-03 type**



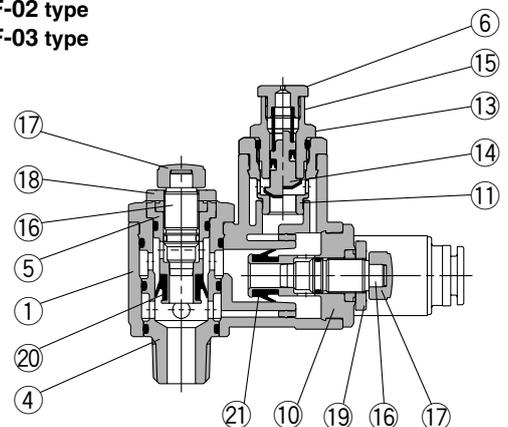
Fixed type



**ASQ430F-02 type
ASQ530F-03 type
ASQ630F-04 type**



**ASQ530F-02 type
ASQ630F-03 type**



Component Parts

| No. | Description | Material | Note |
|-----|------------------|---------------|---------------------------|
| 1 | Body A | PBT | |
| 2 | Body B | Brass | Electroless nickel plated |
| 3 | Seat ring | Brass | Electroless nickel plated |
| 4 | Body B1 | Brass | Electroless nickel plated |
| 5 | Body B2 | Brass | Electroless nickel plated |
| 6 | Adjustment screw | Brass | Electroless nickel plated |
| 7 | Knob | Brass | Electroless nickel plated |
| 8 | Cap | Polypropylene | |
| 9 | Adjustment plug | Brass | Electroless nickel plated |
| 10 | Body C | Brass | Electroless nickel plated |
| 11 | Body D1 | Brass | Electroless nickel plated |
| 12 | Body D2 | Brass | Electroless nickel plated |
| 13 | Body D3 | Brass | Electroless nickel plated |

| No. | Description | Material | Note |
|-----|---------------------------|------------|---------------------------|
| 14 | Piston valve | HNBR/Brass | |
| 15 | Adjustment spring | Steel wire | Zinc chromated |
| 16 | Needle | Brass | Electroless nickel plated |
| 17 | Knob | PBT | |
| 18 | Lock nut | Steel | Zinc chromated |
| 19 | Lock nut | Steel | Black zinc chromated |
| 20 | U seal | HNBR | |
| 21 | U seal | HNBR | |
| 22 | Elbow body | PBT | |
| 23 | Spacer ⁽¹⁾ | PBT | |
| 24 | Cassette | — | |
| 25 | Seal | NBR | |
| 26 | Drive body ⁽²⁾ | Brass | Electroless nickel plated |

Note 1) Not used for ø6 and ø8.

Note 2) Not used for ø10 and ø12.

| |
|------|
| AS |
| ASP |
| ASN |
| AQ |
| ASV |
| AK |
| VCHC |
| ASS |
| ASR |
| ASQ |
| KE |
| TMH |

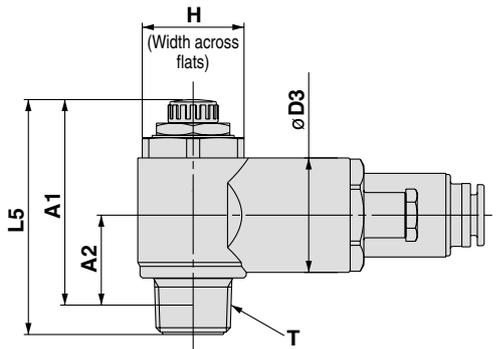
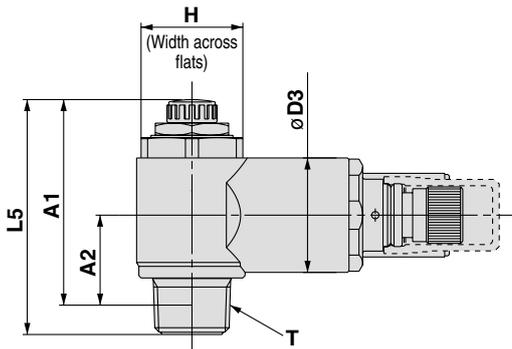
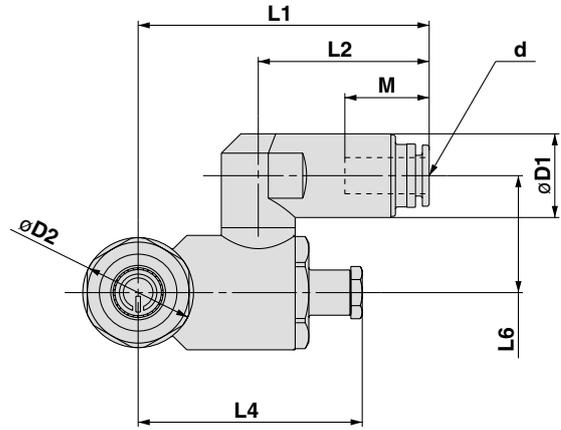
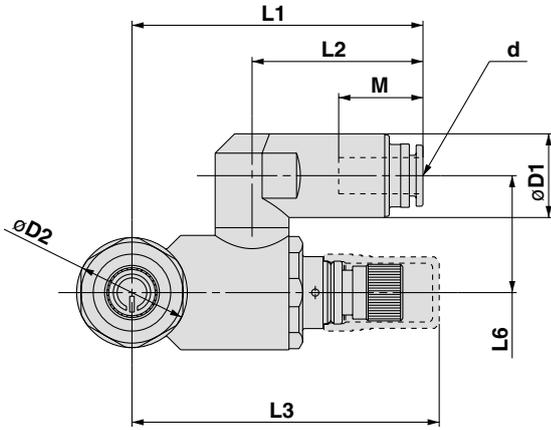
Series ASR/Series ASQ

Dimensions

Pressure Valve: Series ASR

Variable set pressure type

Fixed set pressure type (-F20)



| Model | d ⁽¹⁾ | T | H | D1 | D2 | D3 | L1 | L2 | L3 ⁽²⁾ | L4 ⁽³⁾ | L5 ⁽⁴⁾ | | L6 | A1 ⁽⁵⁾ | | A2 ⁽⁵⁾ | M | Mass (g) ⁽⁶⁾ | |
|---------------------|------------------|------|----|------|------|------|------|------|-------------------|-------------------|-------------------|------|------|-------------------|------|-------------------|------|-------------------------|-----|
| | | | | | | | | | | | Max. | Min. | | Max. | Min. | | | *1 | *2 |
| ASR430F-02-06S,-F20 | 6 | | | | | | 57.7 | 34.9 | | | | | | | | | 17 | 111 | 89 |
| ASR430F-02-08S,-F20 | 8 | R1/4 | 17 | 18.5 | 20 | 21.5 | 58.7 | 35.9 | 63.7 | 45.6 | 50.6 | 45.6 | 23 | 44.6 | 39.6 | 16.8 | 18.5 | 114 | 93 |
| ASR430F-02-10S,-F20 | 10 | | | | | | 53.8 | 31 | | | | | | | | | 21 | 105 | 82 |
| ASR530F-02-06S,-F20 | 6 | | | | | | 62.9 | 36.5 | | | | | | | | | 17 | 150 | 127 |
| ASR530F-02-08S,-F20 | 8 | R1/4 | 21 | 18.5 | 24.3 | 25.3 | 63.9 | 37.5 | 67.3 | 49.2 | 55.8 | 50.8 | 25.9 | 49.8 | 44.8 | 18.8 | 18.5 | 153 | 130 |
| ASR530F-02-10S,-F20 | 10 | | | | | | 59 | 32.6 | | | | | | | | | 21 | 143 | 120 |
| ASR530F-02-12S,-F20 | 12 | | | 20.9 | | | 60.8 | 34.4 | | | | | | | | | 22 | 146 | 122 |
| ASR530F-03-06S,-F20 | 6 | | | | | | 62.9 | 36.5 | | | | | | | | | 17 | 160 | 137 |
| ASR530F-03-08S,-F20 | 8 | | | | | | 63.9 | 37.5 | 67.3 | 49.2 | 57.4 | 52.4 | 25.9 | 51 | 46 | 20 | 18.5 | 163 | 140 |
| ASR530F-03-10S,-F20 | 10 | R3/8 | 21 | 18.5 | 24.3 | 25.3 | 59 | 32.6 | | | | | | | | | 21 | 153 | 130 |
| ASR530F-03-12S,-F20 | 12 | | | 20.9 | | | 60.8 | 34.4 | | | | | | | | | 22 | 156 | 133 |
| ASR630F-03-10S,-F20 | 10 | | | | | | 62.8 | 32.6 | 86.3 | 65.5 | 67.6 | 60.1 | 27.7 | 61.2 | 53.7 | 20.6 | 21 | 237 | 219 |
| ASR630F-03-12S,-F20 | 12 | R3/8 | 25 | 18.5 | 29.7 | 30 | 64.6 | 34.4 | | | | | | | | | 22 | 239 | 221 |
| ASR630F-04-10S,-F20 | 10 | | | | | | 62.8 | 32.6 | 86.3 | 65.5 | 71.1 | 63.6 | 27.7 | 62.9 | 55.4 | 24.1 | 21 | 257 | 239 |
| ASR630F-04-12S,-F20 | 12 | R1/2 | 25 | 18.5 | 29.7 | 30 | 64.6 | 34.4 | | | | | | | | | 22 | 259 | 239 |

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

Note 2) L3 is the dimension for the variable set pressure type.

Note 3) L4 is the dimension for the fixed set pressure type.

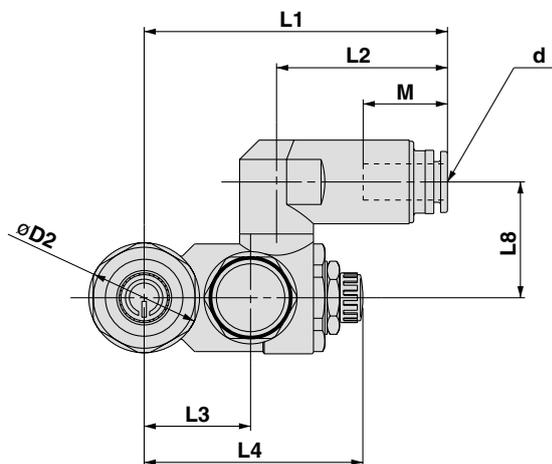
Note 4) Reference dimensions

Note 5) A1 and A2 are reference dimensions after installation.

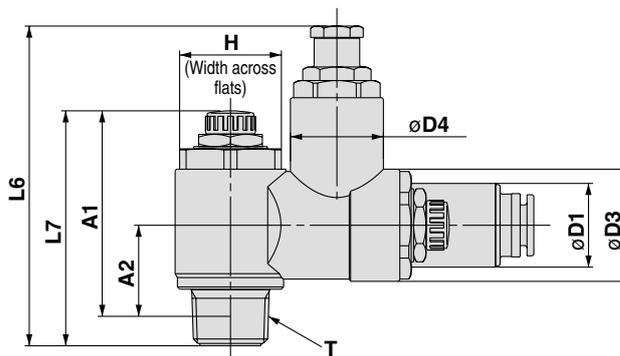
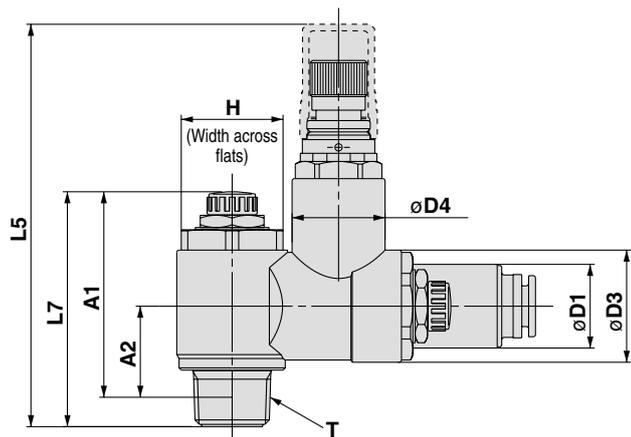
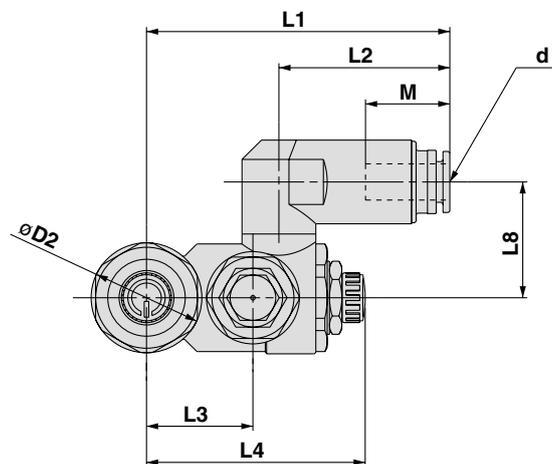
Note 6) *1 is the weight for the variable set pressure type and *2 is that for the fixed set pressure type.

Flow Valve: Series ASQ

Variable set pressure type



Fixed set pressure type



| Model | d (1) | T | H | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 (2) | | L5 (3) | L6 (4) | L7 (2) | | L8 | A1 (5) | | A2 (5) | M | Mass (g) (6) | |
|---------------------|-------|------|----|------|------|------|------|------|------|------|--------|------|--------|--------|--------|------|------|--------|------|--------|------|--------------|-----|
| | | | | | | | | | | | 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 | R1/4 | 21 | 18.5 | 24.3 | 24.8 | 20.4 | 66.6 | 37.5 | 23.4 | 53.5 | 48.5 | 92.2 | 72 | 55.8 | 50.8 | 25.6 | 49.8 | 44.8 | 19 | 18.5 | 181 | 158 |
| ASQ530F-02-10S,-F20 | 10 | | | | | | | 61.7 | 32.6 | | | | | | | | | | | | 21 | 172 | 149 |
| ASQ530F-02-12S,-F20 | 12 | | | | | | | 20.9 | 63.5 | | | | | | | | | | | | 34.4 | 22 | 174 |
| ASQ530F-03-06S,-F20 | 6 | | | | | | | 65.6 | 36.5 | | | | | | | | | | | | 17 | 188 | 165 |
| ASQ530F-03-08S,-F20 | 8 | R3/8 | 21 | 18.5 | 24.3 | 24.8 | 20.4 | 66.6 | 37.5 | 23.4 | 53.5 | 48.5 | 93.8 | 73.6 | 57.4 | 52.4 | 25.6 | 51 | 46 | 20.2 | 18.5 | 191 | 168 |
| ASQ530F-03-10S,-F20 | 10 | | | | | | | 61.7 | 32.6 | | | | | | | | | | | | 21 | 182 | 159 |
| ASQ530F-03-12S,-F20 | 12 | | | | | | | 20.9 | 63.5 | | | | | | | | | | | | 34.4 | 22 | 184 |
| ASQ630F-03-10S,-F20 | 10 | R3/8 | 25 | 18.5 | 29.7 | 30.7 | 30 | 74.8 | 32.6 | 30.8 | 74.3 | 66.8 | 107.9 | 86.9 | 67.6 | 60.1 | 28 | 61.2 | 53.7 | 20.8 | 21 | 310 | 292 |
| ASQ630F-03-12S,-F20 | 12 | | | 20.9 | | | | 76.6 | 34.4 | | | | | | | | | | | | 22 | 312 | 294 |
| ASQ630F-04-10S,-F20 | 10 | R1/2 | 25 | 18.5 | 29.7 | 30.7 | 30 | 74.8 | 32.6 | 30.8 | 74.3 | 66.8 | 111.4 | 90.4 | 71.1 | 63.6 | 28 | 62.9 | 55.4 | 24.1 | 21 | 330 | 312 |
| ASQ630F-04-12S,-F20 | 12 | | | 20.9 | | | | 76.6 | 34.4 | | | | | | | | | | | | 22 | 332 | 314 |

Note 1) "d" indicates the applicable tubing O.D..
 Note 2) Reference dimensions
 Note 3) L5 is the dimension for the variable set pressure type.
 Note 4) L6 is the dimension for the fixed set pressure type.
 Note 5) A1 and A2 are reference dimensions after installation.
 Note 6) *1 is the weight for the variable set pressure type and *2 is that for the fixed set pressure type.

- AS
- ASP
- ASN
- AQ
- ASV
- AK
- VCHC
- ASS
- ASR
- ASQ
- KE
- TMH



Series ASR/ASQ Specific Product Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 412 to 414 for Flow Control Equipment Precautions.

Selection

⚠ Warning

1. **Keep the set pressure range of the outlet pressure of the pressure valve within 85% that of the inlet pressure.**

If the value exceeds 85%, the outlet pressure may become unstable, affected by the fluctuation of the inlet pressure.

Installation

⚠ Warning

1. **The number of opening and closing rotations of the needle valve and adjustment screw should be adjusted within the range of the specifications.**

Since it has a pull-out stop mechanism, it will not rotate past the limit. Confirm the number of rotations for the product being used, as excessive turning of the needle will cause damage.

2. **The valve cannot be used if there are load fluctuations.**

The piston rod may jerk during operation.

3. **In case a closed-center solenoid valve is used, switch to the center position only after pressure charge inside the cylinder at the stroke end is completed.**

If the pressure charge is insufficient, the piston rod may jerk after restart.

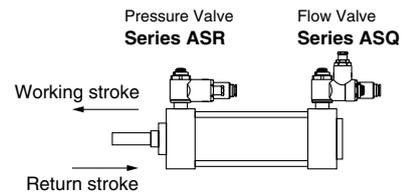
4. **When the valve is used for an actuator operating vertically, the actuator may lurch depending on the load.**

For the adjustment method, please refer to page 589.

Operating

⚠ Caution

- ① The valve cannot be used if the same pressure is required for both the working and return strokes. The pressure valve and flow valve are designed to save air by the difference in the operating pressure.
- ② Install a flow valve on the working side which requires the cylinder output and a pressure valve on the return side. The cylinder may not operate if the valves are installed on the wrong sides.



- ③ If a closed-center, exhaust-center, pressure-center or perfect solenoid valve is used and the solenoid valve is set at the center position, the cylinder may move to the position where the pressure balance and load balance are achieved.