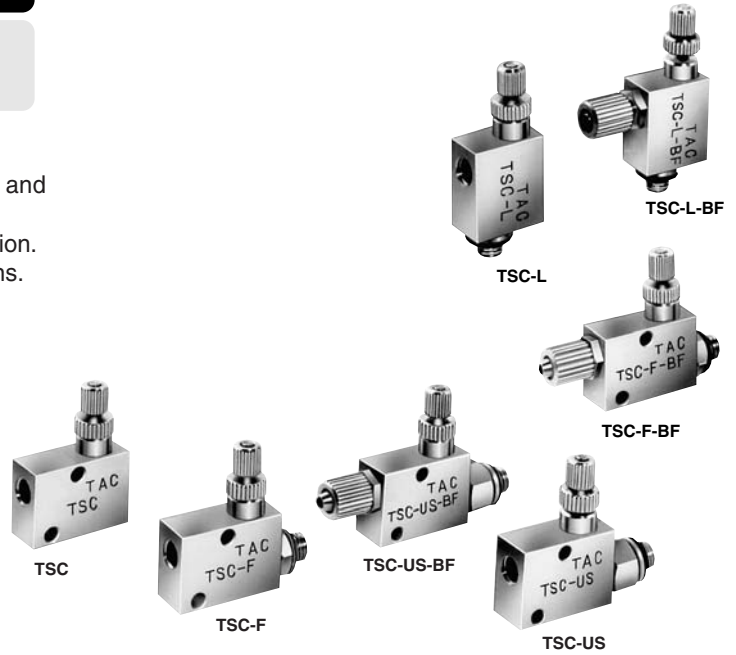
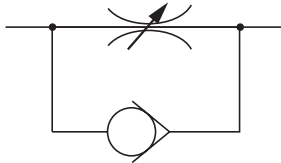


SPEED CONTROLLERS TSC SERIES

M5×0.8, With Clamp Fitting

- Compact and lightweight, optimum for Pen Cylinders and Jig Cylinders.
- Wide variation of products allows mounting in any direction.
- Straight type and L type offer a choice of piping directions.

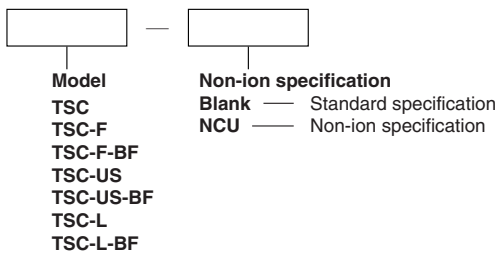
Symbol



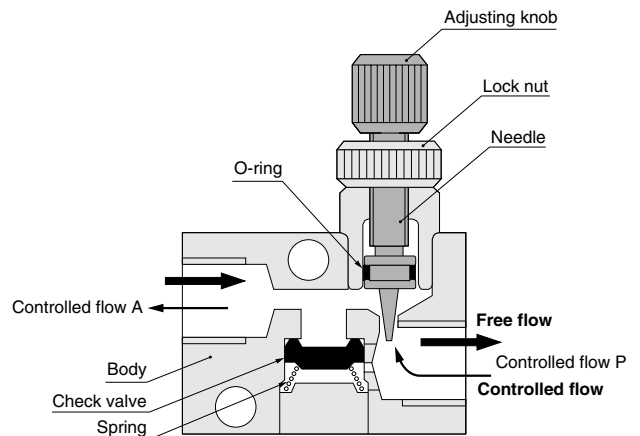
Specifications

| Item | Model | TSC | TSC-F | TSC-F-BF | TSC-US | TSC-US-BF | TSC-L | TSC-L-BF |
|-----------------------------|-------------------|----------------------|--------------------|---|--------------------------|---|----------------------|---|
| Piping type and port size | Controlled flow P | Female thread M5×0.8 | Male thread M5×0.8 | | Union male thread M5×0.8 | | Male thread M5×0.8 | |
| | Controlled flow A | Female thread M5×0.8 | | For urethane tube φ 4×2.5 Clamp fitting | Female thread M5×0.8 | For urethane tube φ 4×2.5 Clamp fitting | Female thread M5×0.8 | For urethane tube φ 4×2.5 Clamp fitting |
| Media | | Air | | | | | | |
| Operating pressure range | MPa [psi.] | 0~0.9 [0~131] | | | | | | |
| Proof pressure | MPa [psi.] | 1.32 [191] | | | | | | |
| Cracking pressure | MPa [psi.] | 0.05 [7.3] | | | | | | |
| Operating temperature range | °C [°F] | 5~60 [41~140] | | | | | | |
| Mass | g [oz.] | 16 [0.56] | 18 [0.63] | 20.5 [0.72] | 19 [0.67] | 21.5 [0.76] | 15 [0.53] | 17 [0.60] |

Order Codes



Inner Construction and Major Parts



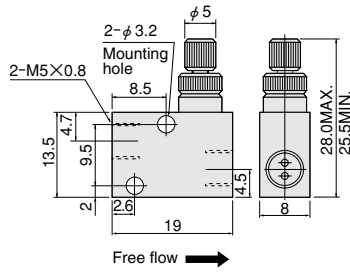
Major Parts and Materials

| Parts | Materials |
|----------------|------------------------|
| Body | Brass (nickel plated) |
| Needle | Stainless steel |
| Lock nut | Brass (nickel plated) |
| Check valve | Synthetic rubber (NBR) |
| O-ring | |
| Adjusting knob | Brass (nickel plated) |

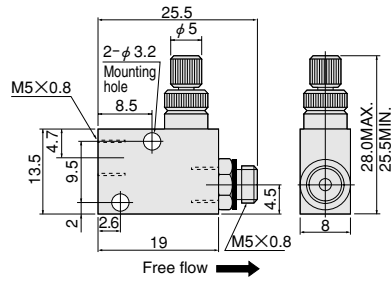
Dimensions (mm)



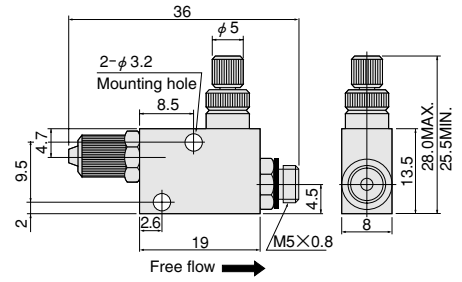
● Straight type ● TSC



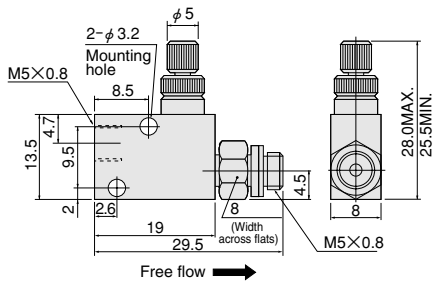
● TSC-F



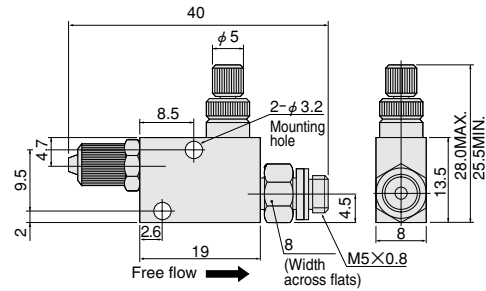
● TSC-F-BF



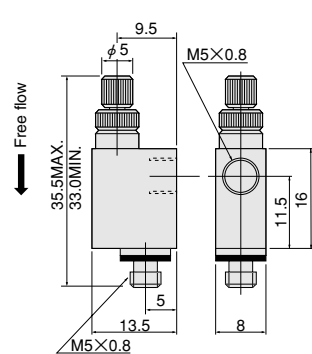
● TSC-US



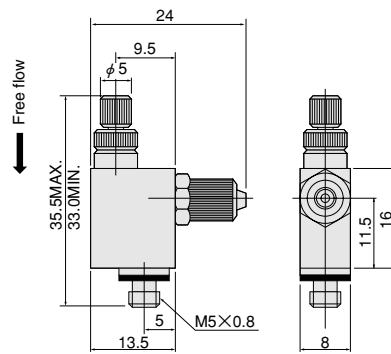
● TSC-US-BF



● L type ● TSC-L

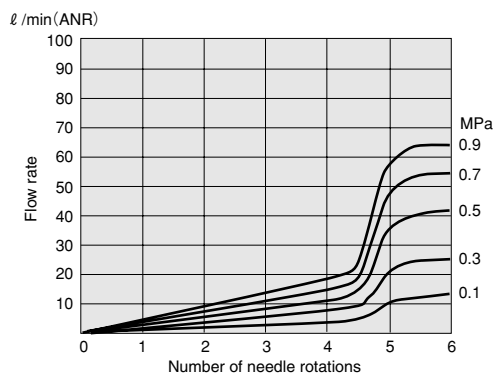


● TSC-L-BF



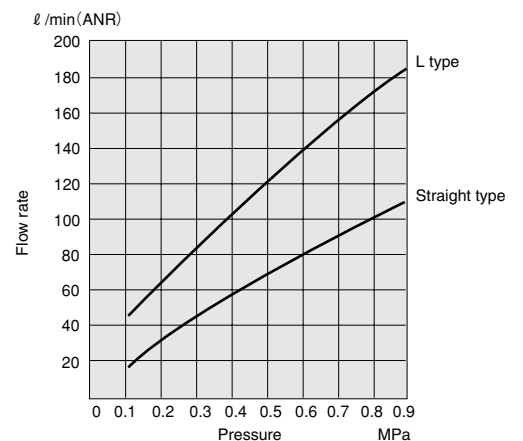
Flow Rate Characteristics

● Controlled flow



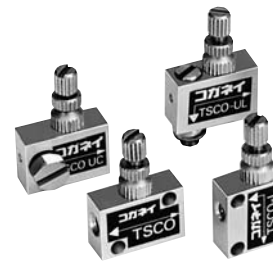
1MPa = 145psi. 1 l/min = 0.0353ft³/min.

● Free flow



SPEED CONTROLLERS TSCO SERIES

M3×0.5

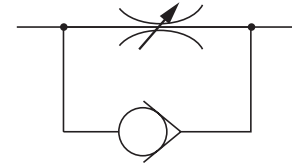


- Offer fine speed control for the M3 ported Pen Cylinders.
- Compact, lightweight, and easy to handle.

Specifications

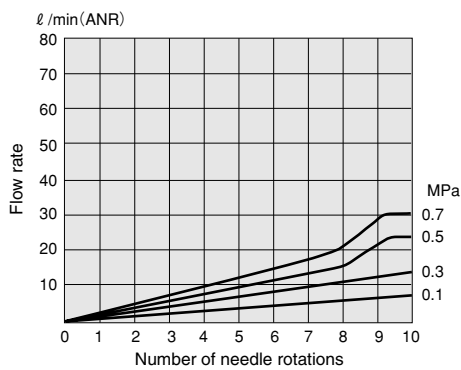
| Item | Model | TSCO | TSCO-L | TSCO-UC | TSCO-UL |
|-----------------------------|-------------------|---------------|----------|-----------------------|----------|
| Piping type | Controlled flow P | Female thread | | Universal male thread | |
| | Controlled flow A | Female thread | | | |
| Port size | | M3×0.5 | | | |
| Media | | Air | | | |
| Operating pressure range | MPa [psi.] | 0~0.7 [0~102] | | | |
| Proof pressure | MPa [psi.] | 1.03 [149] | | | |
| Cracking pressure | MPa [psi.] | 0.05 [7.3] | | | |
| Operating temperature range | °C [°F] | 5~60 [41~140] | | | |
| Mass | g [oz.] | 5 [0.18] | 4 [0.14] | 6 [0.21] | 6 [0.21] |

Symbol

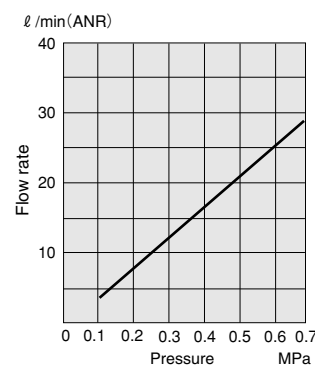


Flow Rate Characteristics

● Controlled flow

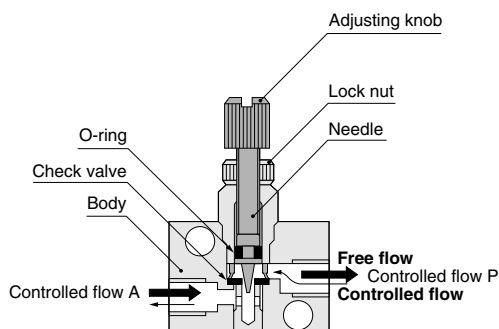


● Free flow



1MPa = 145psi. 1 l/min = 0.0353ft³/min.

Inner Construction and Major Parts



Major Parts and Materials

| Parts | Materials |
|----------------|------------------------|
| Body | Brass (nickel plated) |
| Needle | Stainless steel |
| Lock nut | Brass (nickel plated) |
| Check valve | Synthetic rubber (NBR) |
| O-ring | |
| Adjusting knob | Brass (nickel plated) |

Order Codes



Model

TSCO

TSCO-L

TSCO-UC

TSCO-UL

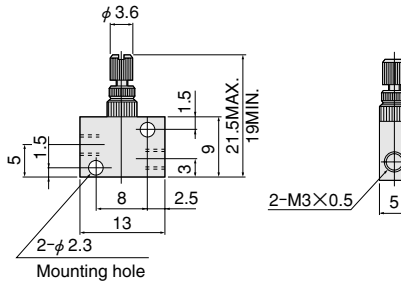
Non-ion specification

Blank — Standard specification

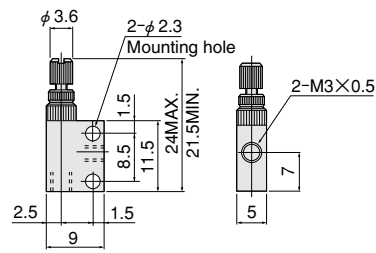
NCU — Non-ion specification

Dimensions (mm)

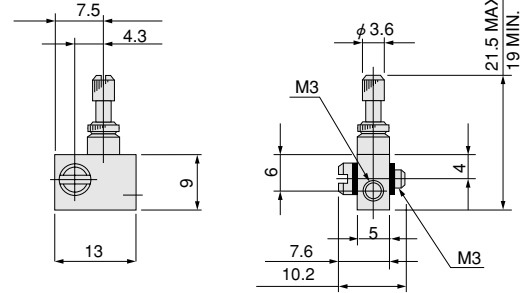
TSCO



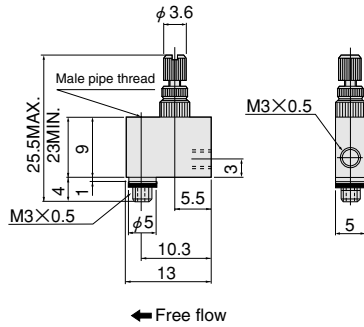
TSCO-L



TSCO-UC



TSCO-UL



Handling Instructions and Precautions

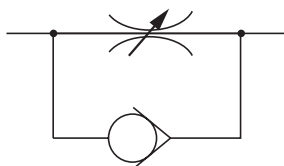
- Always use fingertips to rotate and tighten the lock nut and needle.
Use of excessive tightening force with tools, etc., could cause damage to the units.
- When using a universal male thread type for piping, secure at the male pipe thread portion. The tightening torque should not exceed 0.5N · m [4.4in · lbf].

SPEED CONTROLLERS SC SERIES

M5×0.8, Rc1/8

- Compact and lightweight, optimum for Pen Cylinders, Jig Cylinders, and Slim Cylinders.
- Straight type and L type offer mounting in any direction.
- Union type allows piping and needle setting in any direction.

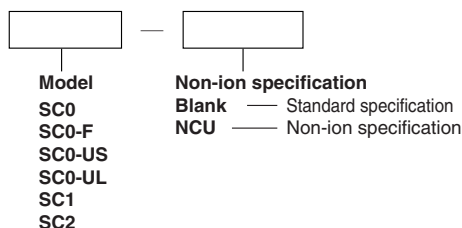
Symbol



Specifications

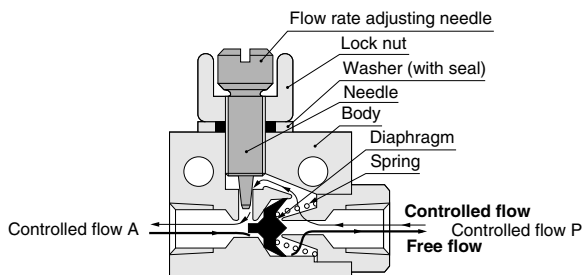
| Item | Model | SC0 | SC0-F | SC0-US | SC0-UL | SC1 | SC2 |
|-----------------------------|------------|---------------|-------------|-------------------------------------|-----------|---------------|------------|
| Piping type | | Female thread | Male thread | Union male thread Straight Elbow | | Female thread | |
| Port size | | M5×0.8 | | | | | Rc1/8 |
| Operating pressure range | MPa [psi.] | 0~0.9 [0~131] | | | | | |
| Proof pressure | MPa [psi.] | 1.32 [191] | | | | | |
| Cracking pressure | MPa [psi.] | 0.05 [7.3] | | | | 0.04 [5.8] | 0.03 [4.4] |
| Operating temperature range | °C [°F] | 5~60 [41~140] | | | | | |
| Mass | g [oz.] | 30 [1.06] | 35 [1.23] | 36 [1.27] | 88 [3.10] | 55 [1.94] | |

Order Codes

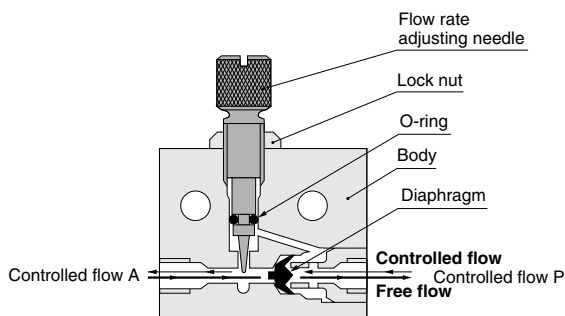


Inner Construction and Major Parts

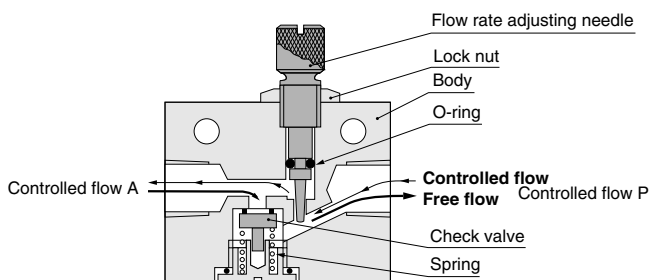
●SC0



●SC1



●SC2



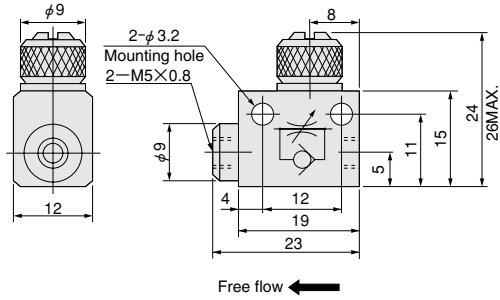
Major Parts and Materials

| Parts | Materials |
|----------------------------|---------------------------------------|
| Body | Brass (nickel plated) ^{Note} |
| Needle | Stainless steel |
| Lock nut | Brass (nickel plated) |
| Check valve | Synthetic rubber (NBR) |
| O-ring | |
| Flow rate adjusting needle | Brass (nickel plated) |

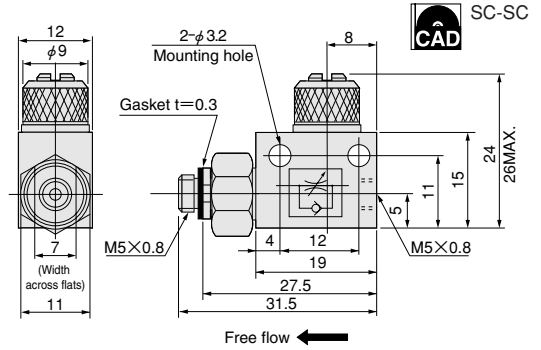
Note :SC2 is made of aluminum alloy (anodized).

Dimensions (mm)

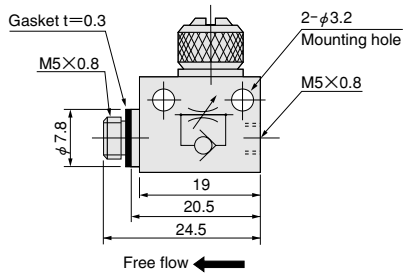
SC0



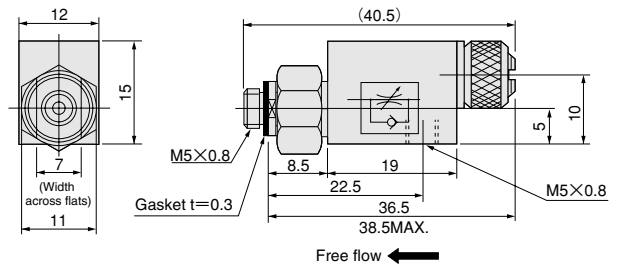
SC0-US



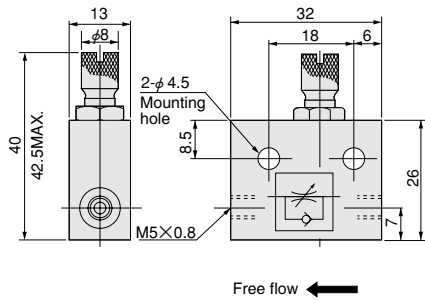
SC0-F



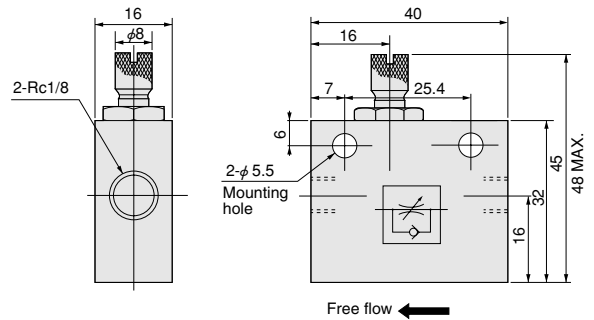
SC0-UL



SC1

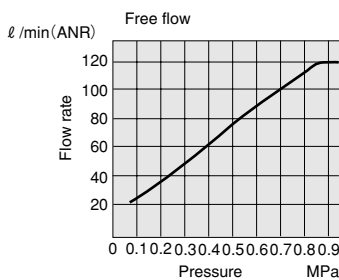
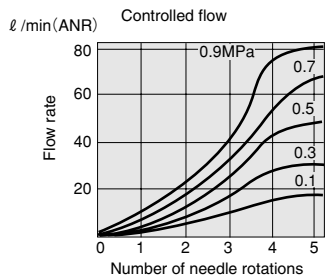


SC2

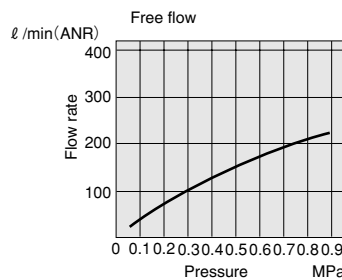
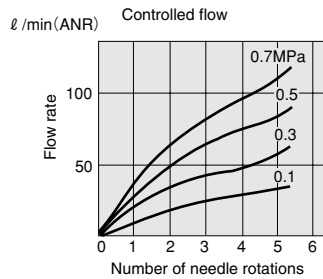


Flow Rate Characteristics

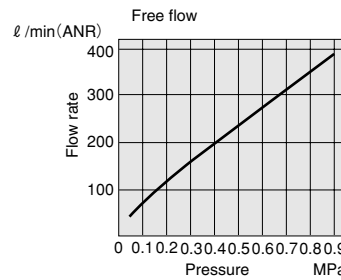
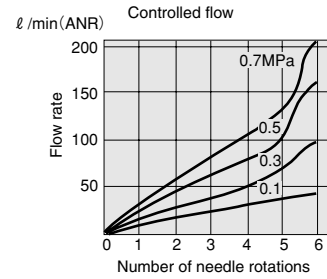
SC0



SC1



SC2



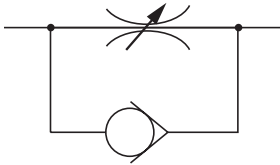
1 MPa = 145psi.
1 ℓ / min = 0.0353ft³/min.

SPEED CONTROLLERS SCL SERIES

Male thread, R1/8, R1/4
Female thread, Rc1/8, Rc1/4

- Compact and lightweight, optimum for Slim Cylinders, etc.
- Enables direct connection to cylinder connection ports, eliminating the piping work and materials.
- Can install L shaped piping to maintain compact piping setups.

Symbol



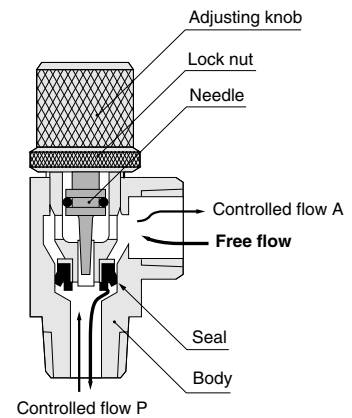
SCL1

SCL2

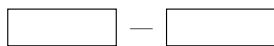
Specifications

| Item | Model | SCL1 | SCL2 |
|-----------------------------|------------|--|--|
| Mounting type | | Male thread specification, enabling direct cylinder mounting | |
| Port size | | R1/8 Controlled flow P: male thread A: female thread Rc1/8 | R1/4 Controlled flow P: male thread A: female thread Rc1/4 |
| Media | | Air | |
| Operating pressure range | MPa [psi.] | 0~0.9 [0~131] | |
| Proof pressure | MPa [psi.] | 1.32 [191] | |
| Cracking pressure | MPa [psi.] | 0.06 [8.7] | |
| Operating temperature range | °C [°F] | 5~60 [41~140] | |
| Mass | g [oz.] | 46 [1.62] | 125 [4.41] |
| Materials | Body | Brass (nickel plated) | |
| | Needle | Stainless steel | |
| | Seal | Synthetic rubber (NBR) | |

Inner Construction and Major Parts



Order Codes

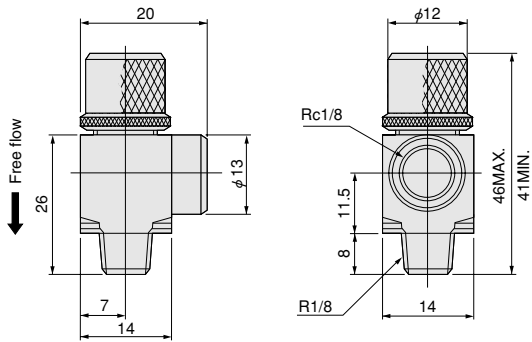


Model
SCL1
SCL2

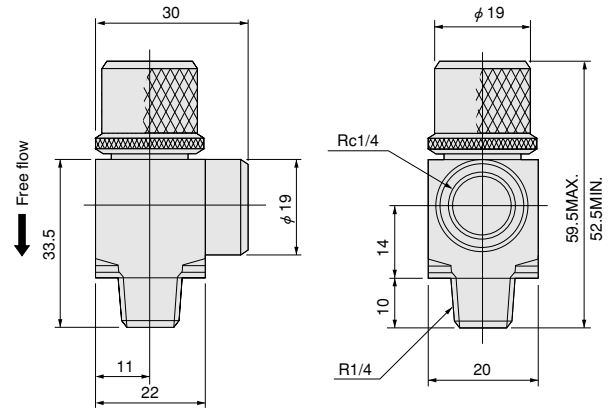
Non-ion specification
Blank — Standard specification
NCU — Non-ion specification

Dimensions (mm)

● SCL1

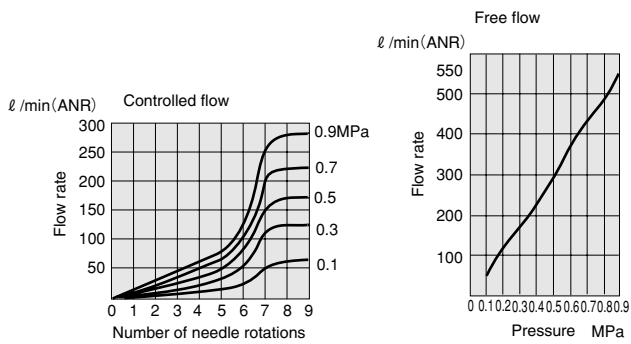


● SCL2



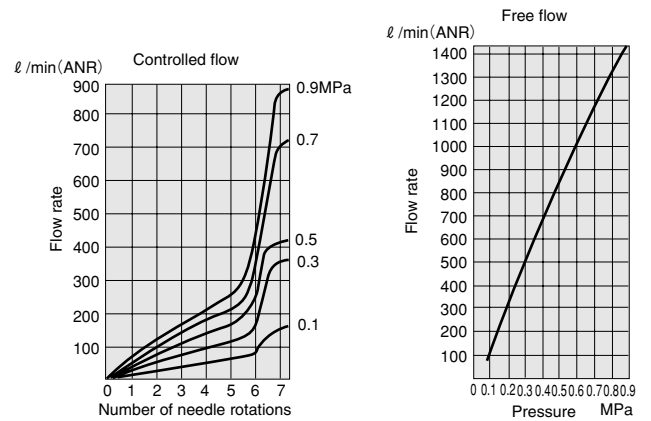
Flow Rate Characteristics

● SCL1



1MPa = 145psi. 1 l/min = 0.0353ft³/min

● SCL2



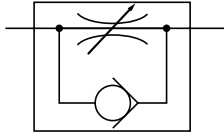
1MPa = 145psi. 1 l/min = 0.0353ft³/min.

SPEED CONTROLLERS KSC SERIES

Rc1/8 ~ Rc1

- Easy to adjust flow rate.
- Maintain stable flow rate.
- Compact and easy mounting.

Symbol



Specifications

| Item | Model | KSC11 | KSC22 | KSC21 | KSC31 | KSC41 | KSC6 | KSC8 |
|-----------------------------|-----------------|-------------------|------------|------------|----------------------|-----------|------------|------------|
| Port size | Rc | 1/8 | 1/4 | | 3/8 | 1/2 | 3/4 | 1 |
| Effective area | mm ² | 5.5 [0.31] | 10 [0.56] | 32 [1.78] | 38 [2.11] | 38 [2.11] | 67 [3.72] | 90 [5] |
| | [Cv] | 3.0 [0.17] | 6.5 [0.36] | 22 [1.22] | 22 [1.22] | 22 [1.22] | 62 [3.44] | 103 [5.72] |
| Operating pressure range | MPa [psi.] | 0.9 [131] | | | | | | |
| Proof pressure | MPa [psi.] | 1.3 [189] | | | | | | |
| Cracking pressure | MPa [psi.] | 0.06 [8.7] | 0.02 [2.9] | | | | 0.01 [1.5] | |
| Operating temperature range | °C [°F] | 5 ~ 60 [41 ~ 140] | | | | | | |
| Mass | g [oz.] | 90 [3.17] | 130 [4.59] | 420 [14.8] | | | 960 [33.9] | 880 [31.0] |
| Body material | | Zinc die-casting | | | Aluminum die-casting | | | |

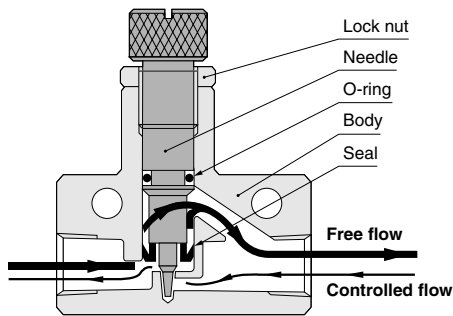
Order Codes



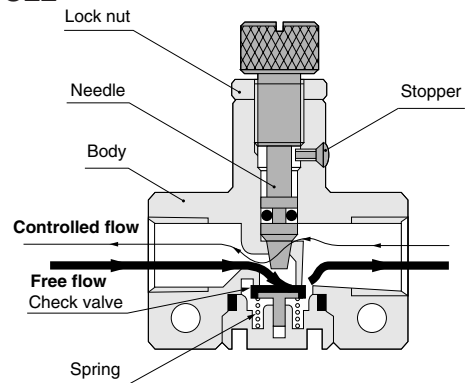
- Model
 KSC11
 KSC22 KSC41
 KSC21 KSC6
 KSC31 KSC8
- Non-ion specification
 Blank — Standard specification
 NCU — Non-ion specification

Inner Construction and Major Parts

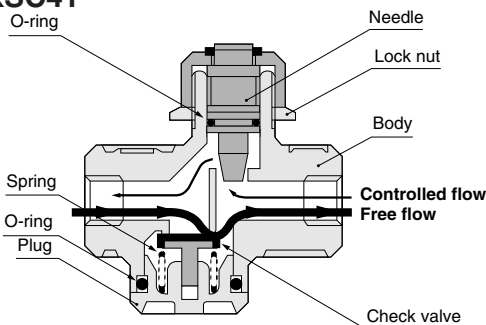
● KSC11



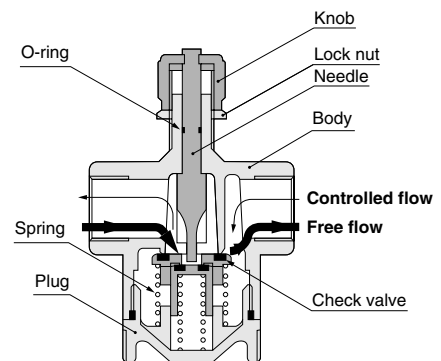
● KSC22



● KSC21 ● KSC31 ● KSC41



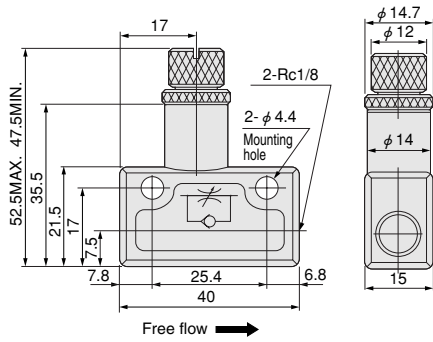
● KSC6 ● KSC8



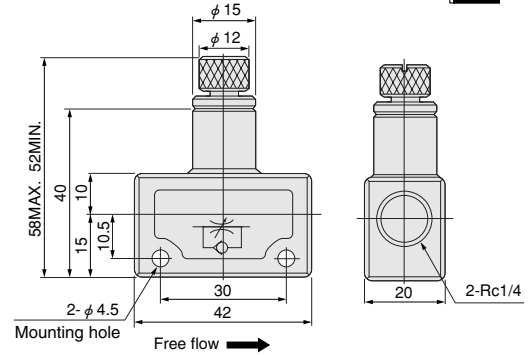
Note: In KSC6 and KSC8, turning the knob clockwise increases the controlled flow rate, while turning the knob counterclockwise reduces it.
 (For all other models, this is reversed.)

Dimensions (mm)

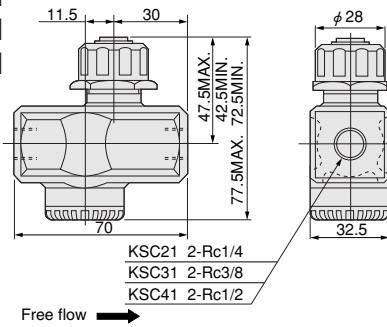
● KSC11



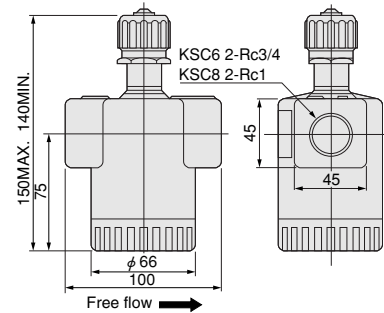
● KSC22



● KSC21 ● KSC31 ● KSC41

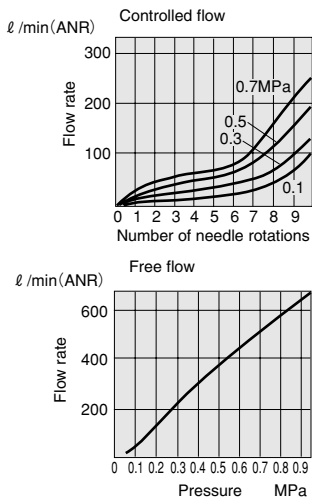


● KSC6 ● KSC8

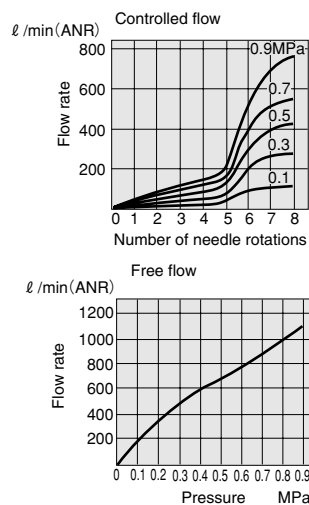


Flow Rate Characteristics

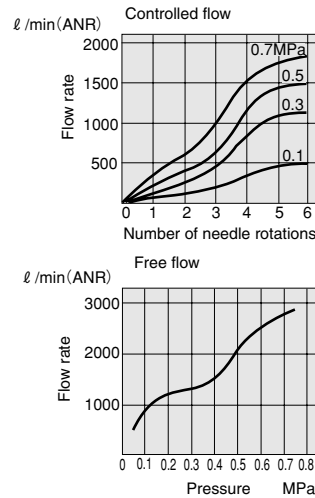
● KSC11



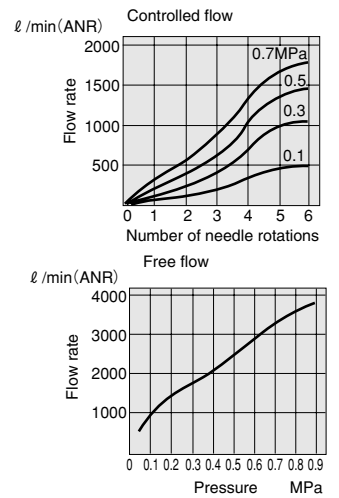
● KSC22



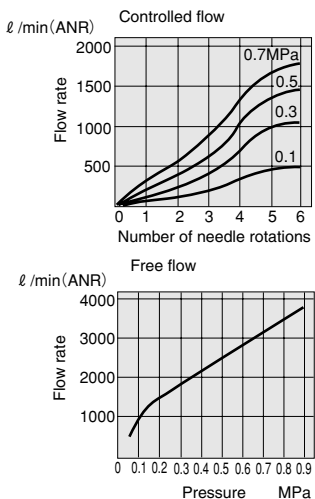
● KSC21



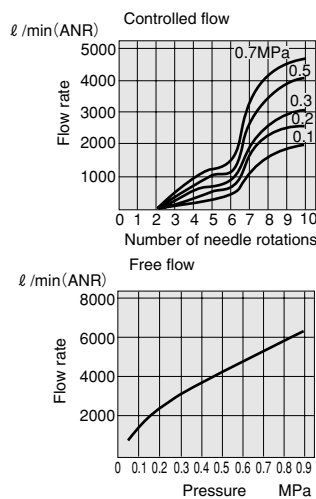
● KSC31



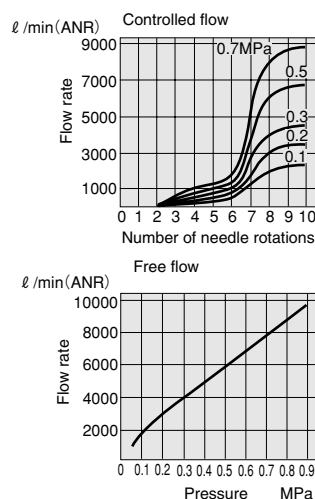
● KSC41



● KSC6



● KSC8



1 MPa = 145psi.
1 l/min = 0.0353ft³/min.