

Design & selection

⚠ CAUTION

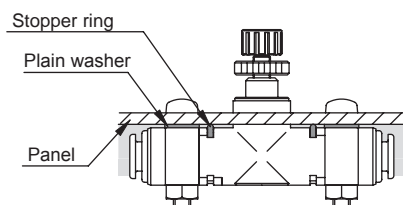
- Do not use this valve in circuits where ozone is generated intentionally. Ozone resistance is sufficient for naturally generated ambient ozone. Packing deteriorates if ozone levels are high.

- This valve cannot be used as a stop valve that has no leakage. Slight leakage is allowed in product specifications.
- Not all of the needle valve's resin parts are flameresistant.
- The flow path in the needle valve is not completely free of dust generation. A final clean filter should be used in circuits where dust generation could be a problem.

Mounting / Installation / adjustment

⚠ CAUTION

- Rotate the mounting hole section at no pressurized state.
- When installing on a panel, the stopper ring interferes with the panel, so insert a flat washer between the mounting hole and panel.



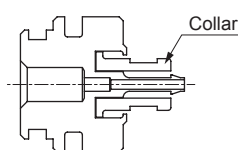
- Tighten bolts in mounting holes within the torque below.

Model No.	Tightening torque
SCL (D) 2-04	0.5 N·m
SCL (D) 2-06/08/10	0.8 N·m

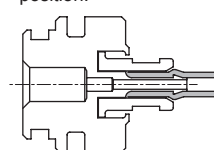
- As tubing may be dislocated due to product oscillation or torsion, fix the product with bolts or Insulok ties, etc., when piping.
 - Do not turn the dial with force when fully opening or closing the dial (0.05 N·m or less). Do not use the lock nut to adjust the needle. Otherwise this could cause needle galling or damage.
 - Tightening the lock nut excessively can cause problems. Do not use a torque higher than what is indicated in the following table.
- | Model No. | Tightening torque |
|-----------------|-------------------|
| SCL (D) 2-04/06 | 0.2 N·m |
| SCL (D) 2-08/10 | 0.3 N·m |
- The adjustment knob of "P80 (oil-prohibited specifications)" option may be slightly hard to turn.

- There is no direction for needle valve piping.
- Connect fiber tube (1.8 diameter fitting) as follows ((1) to (5)):

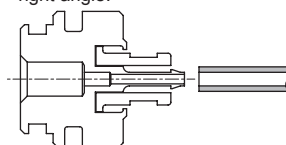
(1) Set the collar at the very back.



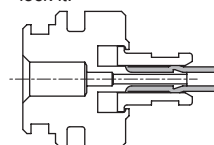
(4) Insert fiber tube to the last position.



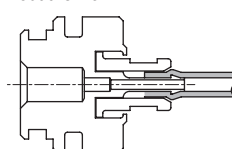
(2) Cut the end of fiber tube at a right angle.



(5) Pull the collar forward to lock it.



(3) Pass the collar through, and confirm that the fiber tube is correctly inserted while carrying out the work.



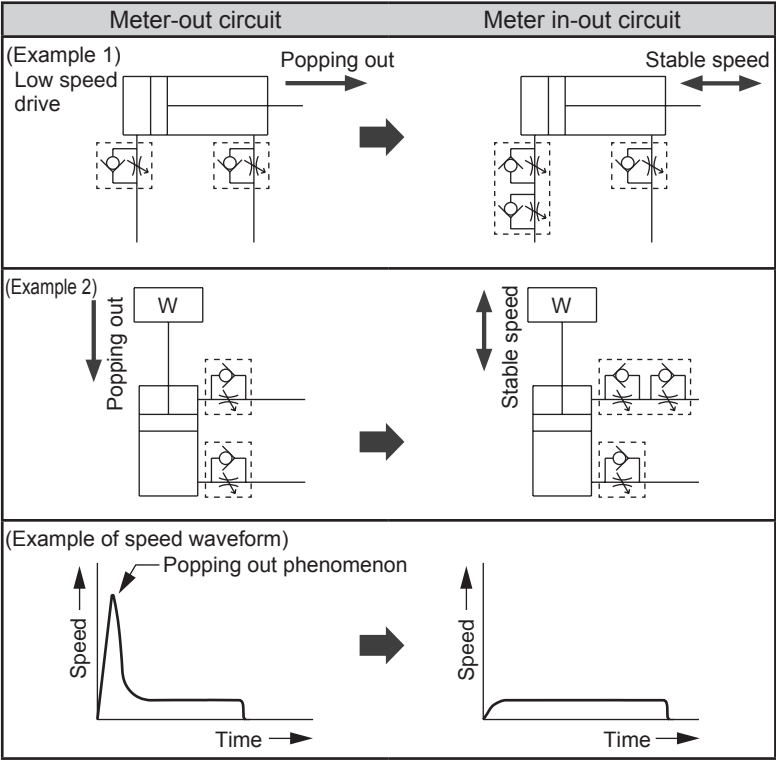
Example of in-out speed controller

1 Speed is stabilized by controlling with an in-out speed controller.

(Example 1) In low-speed control with a single rod cylinder, the cylinder pops out immediately after the PUSH side operates if a meter-out circuit is used.

(Example 2) At vertical mounting, the cylinder pops out immediately after actuation because of the load's weight.

Speed is stabilized by using a meter in-out circuit.



(Cause of popping out phenomenon)
When using the meter-out circuit, flow on the exhaust side is restricted, so both sides reach the same pressure immediately after the valve is switched.
The thrust equivalent to the difference in the piston's pressurized area or the thrust equivalent to the load's weight causes popping out.
When the piston moves, exhaust pressure rises, speed decelerates, and the set speed is reached.
If popping out is caused by this phenomenon, fluctuation in sudden thrust is suppressed by restricting the flow on the supply side, and popping out is resolved.

2 Danger can be prevented by suppressing popping out at beginning of movement after residual pressure is released.

3 Reciprocating speed control is possible with a single acting cylinder.