



Flow Control Equipment Common Precautions

Be sure to read before handling.

Selection

Warning

1. **Products mentioned in this catalog are not designed for the use as stop valve with zero air leakage.**
Products specification allows for a small amount of air leakage.

Mounting

Warning

1. **Check that the lock nut is tightened.**
A loose lock nut is dangerous since it may cause actuator speed changes.
2. **Needle valve is equipped with a retainer to prevent accidental needle loss.**
When the needle is fully opened, it cannot be rotated anymore.
Over rotation will cause damage.
3. **Confirm air flow direction.**
If mounted in the wrong direction, the speed adjustment needle may not function and may cause uncontrolled extension of the piston rod.
4. **Adjust needle by opening the needle slowly after having closed it completely.**
Loose needle valves may cause unexpected sudden actuator extension. When needle valve is turned clockwise, it is closed and cylinder speed decreases. When needle valve is turned counter clockwise, it is open and cylinder speed increases.
5. **Do not tighten the handle with such tools as cutting pliers.**
It will cause damage or the handle to idle spin.
6. **Do not hit the body and fitting parts with an impacting tool.**
It will cause damage or air leakage.



Flow Control Equipment

Specific Product Precautions

Be sure to read before handling.

Refer to the main text for precautions for each series.

Handling of One-touch Fittings

⚠ Caution

Refer to Best Pneumatics No. 4 for handling of one-touch fittings.

Series 10-ASD Specific Product Precautions

Operation

⚠ Caution

1. Single acting cylinder

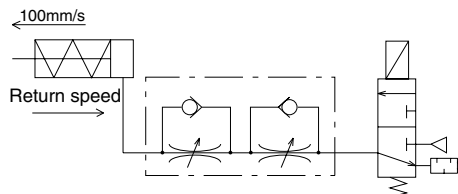
When single acting cylinder is controlled, cylinder retracted speed depends on operating condition. Confirm the maximum retracted speed mentioned in the table below.

Speed controller	Cylinder	Solenoid valve	Tubing	Silencer	Max. retracted speed mm/s
ASD230F	CJ2	VJ500	TU0604 1m	AN110-01	100
					200
					300
					ø6
ASD330F	CM2	VZ500	TU0604 1m	AN110-01	ø10
					ø16
					ø20
					ø25
					ø32
					Cylinder size

<Specification condition >

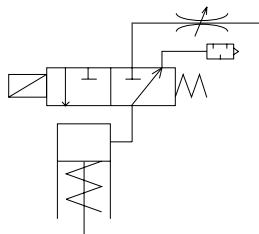
- Cylinder extending speed: 100mm/s
- Needle fully open at meter-out side

* At pressure 0.5 MPa, temperature 20°C



(Reference) Recommended circuit to accelerate the return speed.

When extended speed is low speed and retracted speed is required high speed, below circuit with 3 port is recommended.



Note) Use -X214 of AS-F series as speed controller.

Selection

⚠ Warning

1. Please confirm if it is compatible with PTFE.

PTFE powder (polytetrafluoroethylene resin) is included in sealant. Confirm if the use of it may cause any adverse effect in the system.

Mounting

⚠ Warning

1. To install/remove the Flow Control Equipment, tighten/loosen at wrench flat B as close to the thread as possible using the appropriate wrench.

Do not apply torque at other points as the product may be damaged. Rotate Body A manually for positioning after installation.

2. Do not use universal type fittings for applications involving continuous rotation.

It may cause failure of the fittings.

Tightening torque

⚠ Caution

1. Suitable torque for tightening fittings is shown in the table below. For standard installation, turn 2 to 3 turns using tool after fastening by hand.

Take care not to damage the product by over torque.

Male thread	Appropriate tightening torque (N·m)	Hexagonal width (mm)	Adjustable spanner nominal (mm)
M3	1/4 rotation after manual tightening	4.5	—
M5	1/6 rotation after manual tightening	8	100
1/8	7 to 9	12	150
1/4	12 to 14	17	200
3/8	22 to 24	19	200
1/2	28 to 30	24	200

Tightening Torque for Lock Nuts

⚠ Caution

1. The hexagon lock nut can be fastened by hand. When a stronger tightening is required, retighten using a tool. Recommended tightening torque for a hexagon lock nut using a tool is shown in the table below. For standard installation, turn 15 to 30° using tool, after fastening by hand.

Pay attention not to apply exceeded torque to the product.

Body size	Appropriate tightening torque (N·m)	Lock nut Hexagon width across flats
M3	0.07	5 ^{Note 1)}
M5	0.3 ^{Note 2)}	7 ^{Note 1)}
1/8	1	10
1/4	1.2	12
3/8	2	14
1/2	6	17

Note 1) 4.5 for 10-AS12□1F-M3-02, 10-AS12□1F-M5-02 and 10-AS1200-M3.

Note 2) 0.07 N·m for 10-AS12□1F-M5-02, 10-AS1□□1FM, 10-AS12□0M and 10-ASD230FM.