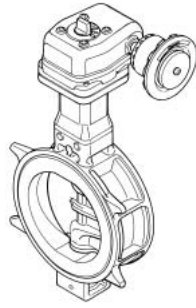


TOMOE®

The revolutionary design provides higher performance and a wider range of applications.

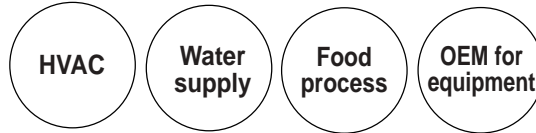
Instruction Manual



A revolutionary rubber lined butterfly

NAV

773Z
778Z
PAT.PENDING



Standard Specifications

Type	773Z	778Z
Connection	Wafer type	
Valve Nominal Size	40, 50, 65, 80, 100, 125, 150, 200, 250, 300mm	50, 65, 80, 100, 125, 150, 200mm
Applicable Flange Standard	JIS5K/10K, ANSI150Lb, BS4504 PN10, DIN NP10	
Design Standard	JIS B 2002	
Max. Working Pressure	1.0MPa	
Flow direction	Bi-directional	
Pressure Test	Body Shell Test	1.5MPa (Water pressure)
	Seat Leak Test	1.1MPa (Air pressure)
Working temperature range	- 20 ~ 120	- 30 ~ 130
Allowable temperature range in continuous use	- 10 ~ 100	- 30 ~ 130
Standard Materials	Body	ADC12
	Disc	SCS14, PPS
	Stem	SUS420J2
	Seat ring	EPDM
Actuator mounting flange	ISO5211	
Surface treatment	Epoxy-Melanin Baked with Munsell 2.5BG 6/12 No condensation is formed on gear actuator and its mounting flange under 34 °C room temperature with 75% humidity on 5 °C chilled water line.	

Rubber seated butterfly valves

Piping instructions

- Verify the materials of the seat ring and disc of the valve before installation.
- When installing a butterfly valve directly to a check valve or pump, install an extension or spacer to prevent the disc of the butterfly valve from contacting the check valve or pump.
- Install the valve only after completing all welding operations around the valve to prevent damage caused by the solder and other welding materials.
- After welding is performed on a flange, wait until it has sufficiently cooled before installing the valve. Never perform welding on a flange with the valve installed.
- In the surrounding piping, make sure that no welding remains, pipe wastes, scaling, or dust remain in the pipe. Clean the inside of the pipes if necessary prior to installation.
- Before blowing air to remove any foreign matter in the piping, install an extension tube with face-to-face dimensions equal to that of the valve in place of the valve. Do not blow air with the valve installed in the pipe, for this may damage the seat ring.
- Clean the mating surface of the flange with compressed air before installation. Remove rust or foreign particles with a cleaning alcohol or neutral detergent.
- With a zinc plated flange, attention must be paid to avoid flange leakage due to an uneven surface of the flange.
- Make sure that there is no warpage in the flange, misalignment, or damage to the mating surface

of the flange.

- Be sure to properly align the valve and mounting flanges.
- Install the jack bolts taking care not to damage the seat ring of the valve and adjust the face-to-face dimensions. The face-to-face dimensions should be such that the piping must be spread open 3 to 5mm to allow the valve to be inserted. (A jack bolt is available on request.)
- After centering the pipes, insert bolts at the proper locations so that the bottom of the valve can rest upon them to prevent the valve from falling through.
- Before tightening the installation bolts, make sure that the disc of the valve does not contact any portion of the flange when it is fully opened.
- The installation bolts should be tightened evenly and in the proper sequence. Tighten one bolt a small amount, and then proceed to another bolt that is located on the other side. Proceed tightening each bolt a little at a time by crisscrossing across the flange to insure well-balanced tightening.
- On the completion of the installation, fully open and close the valve to once again make sure that the disc does not touch the piping or gasket.

Operational instructions

- Prior to operation, clean the outside of the piping with compressed air, and the inside of the piping with running water.
- If the valve is to be used at an opening angle of 30° or under for flow constriction, consult us in advance.

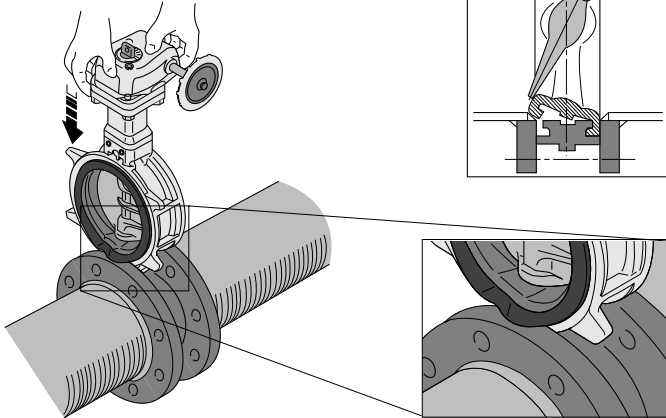
Others

- After installation, open and close the valve once every two weeks if the valve is not used for a long period of time, and open and close the valve a few times before starting actual operation.
- For pressure tests of the piping (where pressures exceed the rated pressure), always keep the valve fully open. Never fully close the valve or use it as a blind flange.
- If the actuator is a manual gear, pneumatic cylinder, electric motor, or diaphragm, or other similar type, and the ambient temperature is extremely high, it may be necessary to change the O-rings and other rubber components using special materials or change the motor or solenoids to those with higher insulation levels, so be sure to consult us in advance.
- Always operated lock lever, worm gear, or center handle type actuators by hand. Never use an extension bar on the lever or a wheel key on the gear handle, for they might damage the handle or lever. Unlike gate valves or globe valves, tightening with a high torque is unnecessary.

CAUTION



Forcing the valve between the pipe flanges may cause the seat ring to be peeled off and cause a leak.

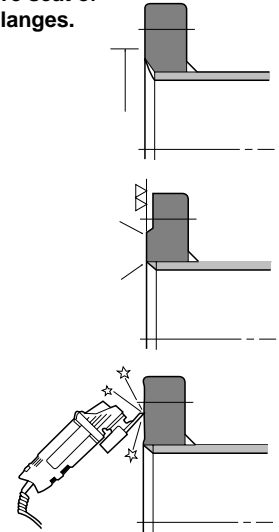


Below are causes of damage to the valve seat or leakage from the flanges.

- **Excessive weld**
The resulting oversized inner pipe diameter may cause a flange leak.

- **Sharp edges**
May cause damage to the seat ring.

- **Rough surface from grinding**
May cause a flange leak.

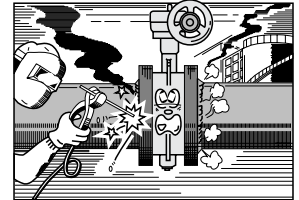


Do not throw or mishandle the valve. Do not stand on or put objects on the actuator.



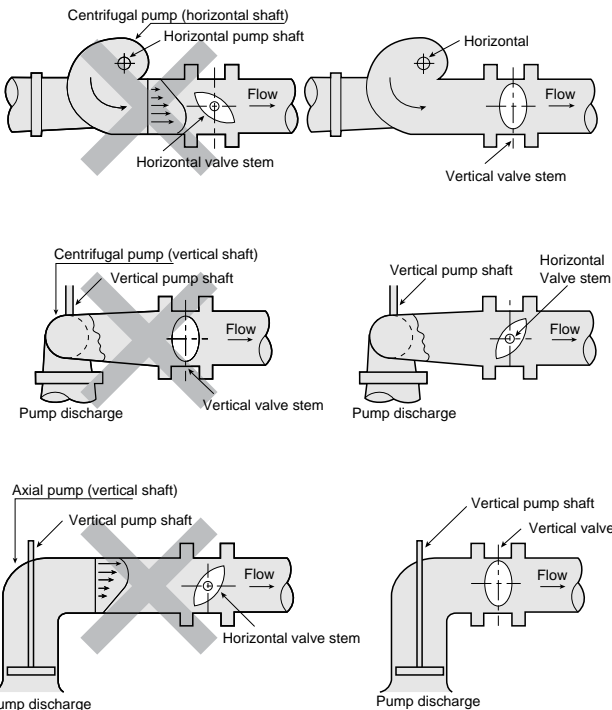
Do not install a valve to a flange that has just been welded.

Wait until it has sufficiently cooled before installing the valve. Never perform welding on a flange with the valve installed.



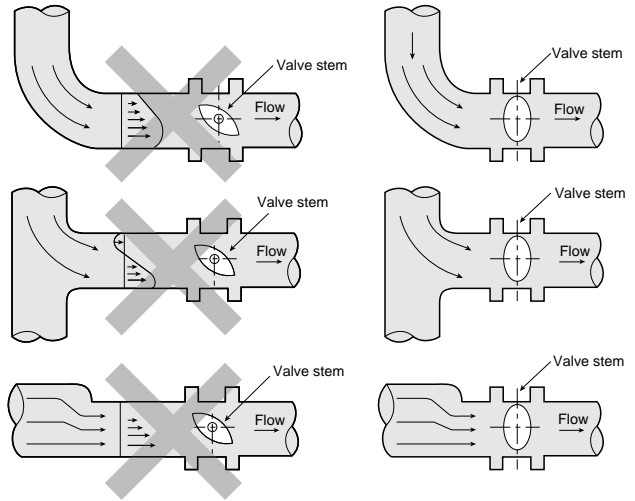
I Installing a valve at a pump outlet

Incorrect installation orientation Correct installation orientation



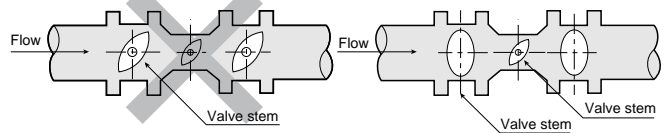
I Installing at an elbow or a reducer

Incorrect installation orientation Correct installation orientation



I Combination of a control valve and stop valve

Incorrect installation orientation Correct installation orientation



All the valve stems have the same orientation.

The orientation of the valve stems is alternating.

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