

Handling Manual for Dual Check Valve

1. Transportation

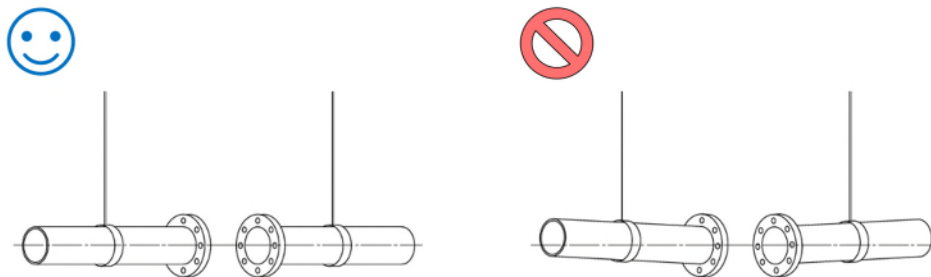
- If using the cardboard box for package, the strength of the box may be decreased due to moisture. Be sure to protect the package and handle it carefully.
- Please avoid strong shock (drop, overturn, or thrown out) or vibration toward valves.

2. Storage

- Please be sure not to expose valves with the package to rain, water, or dew, etc. while in storage.
- Please store valves inside the house and assure the surrounding temperature to normal temperature 0 ~ 40 degree C, and do not place them directly on the ground or on concrete.
- Please avoid using or storing valves at corrosive environment
- Please avoid shock (drop, overturn, etc.) or vibration to valves while in storage. Moreover, do not load on valves.
- Please do not dismantle valves.

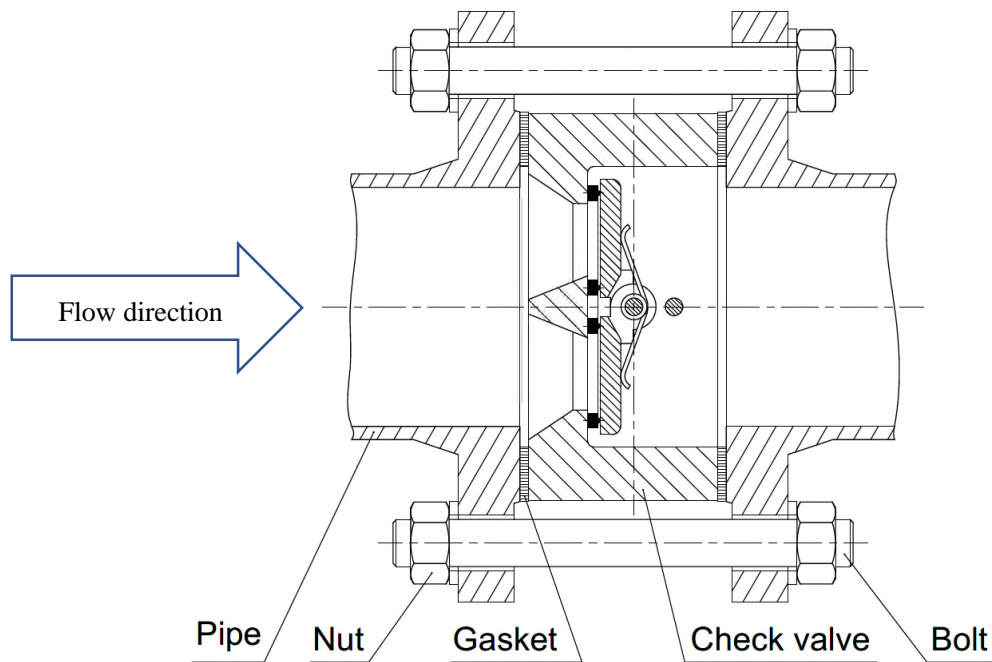
3. Installation

- Before install the check valve, please make sure that :
 1. Make sure the install location are required the correct function of wafer check valve.
 2. Make sure to clean up the valve internal area & seat part. There are not allow to left any object inside.
- Accurate centering between upstream and downstream pipes is essential for trouble-free operation of valves (Drawing 1).



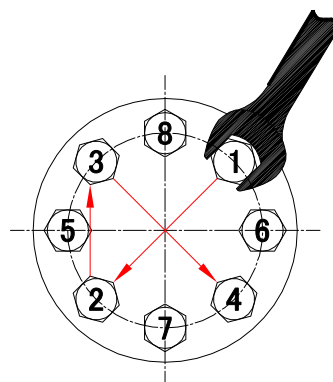
Drawing 1

- Wafer check valve is single direction usage. Install the check valve according to the flow direct (Drawing 2).



Drawing 2

- Install the check valve on the horizontal piping, the shaft have to vertical to the piping.
- Install the check valve on the vertical piping, make sure the flow is upward.
- Wafer check valve install location are recommended to have an enough free spaces for maintenance or ex-change.
- Verify the valve specification and use the correct flange.
- Select the correct bolts and nuts.
- To avoid leakage, please tighten flange bolts alternately, diagonally, and repeatedly with the same force (Drawing 3).



Drawing 3

4. Dimensions

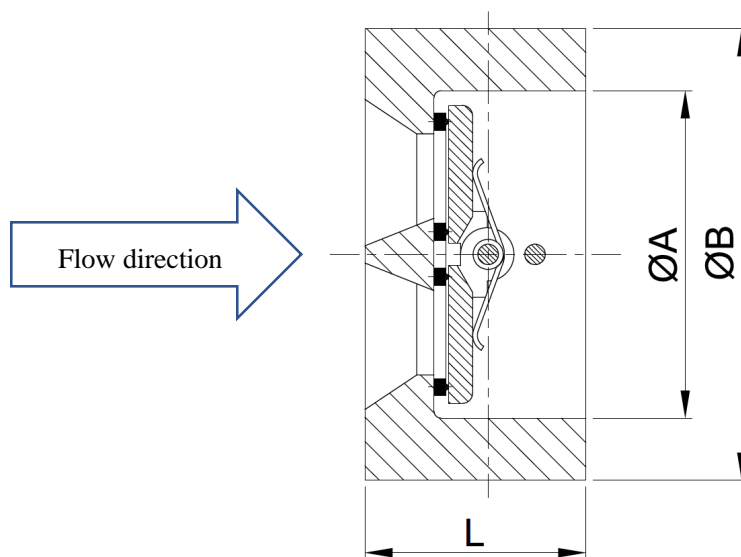


Table 1

Unit mm

SIZE	L	A	B
50A	43	65	101
65A	46	80	121
80A	64	94	131
100A	64	117	156
125A	70	145	187
150A	76	170	217
200A	89	224	267
250A	114	265	328
300A	114	310	375
350A	127	360	420
400A	140	410	483
450A	152	450	538
500A	152	505	593
600A	178	624	697

5. Possible troubles, causes and measures

Possible troubles	Causes	Measures
Leak in the sealing surface	<ol style="list-style-type: none"> 1. A disc or a sealing surface is dirty 2. The pipe flange does not match properly with the sealing surface of the wafer check valve. 3. The pressure is too high 	<ol style="list-style-type: none"> 1. Clean the butterfly valve disc and pipe 2. Disassemble the flanges and the product and reinstall them. 3. Do not use the pressure that exceeds the design pressure
Leak from the seat	<ol style="list-style-type: none"> 1. Wrong flow direction 2. Stuffed with dust 3. Damage in the internal parts that disc or seat. 	<ol style="list-style-type: none"> 1. Wafer check valve is single direction usage. Check the flow direction. 2. Consider usage of strainer. 3. Please inform TOZEN.
Noise and vibration	<ol style="list-style-type: none"> 1. The flow rate is too high. 2. Usage in turbulent regions 	<ol style="list-style-type: none"> 1. Please consider reducing flow rate. 2. Turbulence and pulsation can occur when used in close proximity to reducers and pumps. Please distance between reducers, pumps and valve.

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