

AIR VENT

INSTALLATION

OPERATION

AND

MAINTENANCE MANUAL



Handling Manual for Air vent

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 valve.
- Please do not hang the valve through handle as the handle may come off and the valve may drop.
- Please handle the painted valves with care to prevent them from cracking and peeling off.

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 immoderately.

Installation, usage and maintenance

- The steps are necessary before setting up the air vent:
 1. Verify carefully in order to ensure that the specifications of air vent valve matches with its usage conditions including the working pressures and working temperature, and the connecting pipe size.
 2. Have to clear up thread of the air vent.
- Pressure / Temperature rating (as per table 1)

Table 1

Model	Maximum working pressure	Minimum working pressure	Testing pressure	Working temperature	Media
CAAV-B	16 bar		24 bar	-10°C~120°C	Water
DAAV-B25	25 bar		37.5 bar		

- Installation

1. Please set the air vent valve high position in the pipeline. Please pay attention to when you set up it.
2. Please make sure the position of installation should be convenient for usage and maintenance.
3. The air vent valve shall be installed vertically with allowance of within 5 ° from horizontal pipe line.
(as per Figure 1) Also, the inlet thread is below. It will be necessary for normal operation.

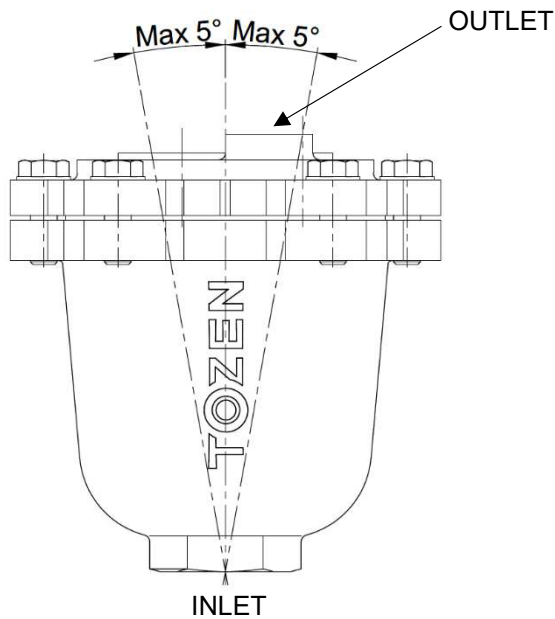


Figure 1

4. Ensure that the thread standards is suitable for the valve. If the thread is mismatch for the valve, it would damage valve seat and cause body crack, and it would cause leakage from the connection part.
5. Please install a gate valve or ball valve at the inlet for maintenance purposes. (as per Figure 2)
6. A copper tube to be connected from the outlet of the air vent valve up to drainage ditch, to prevent any leakage of the water, if any valve failure. (as per Figure 2)

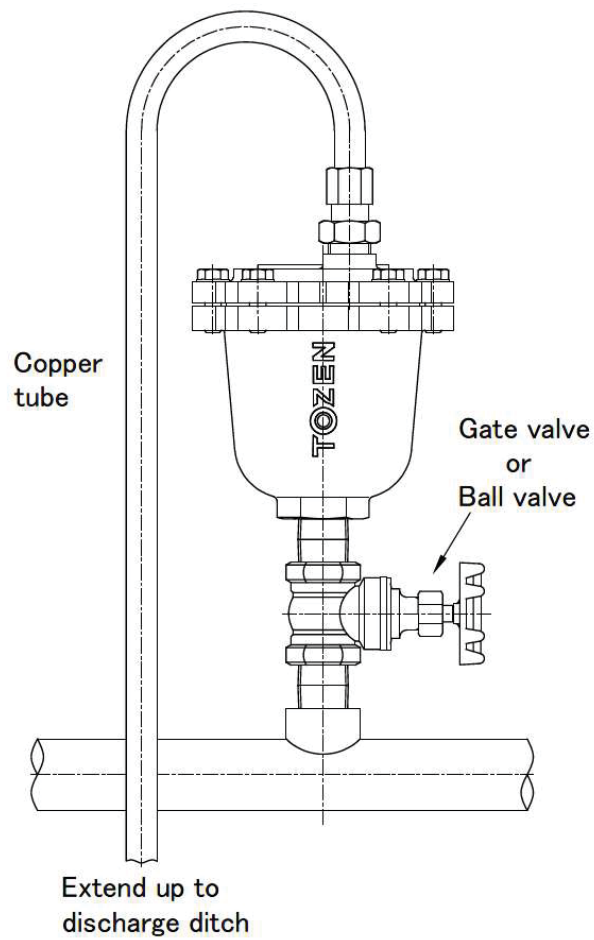


Figure 2

7. Please use seal tape or liquid gasket between the inlet thread and pipe for installation.
8. Do not overtighten of air vent valve to pipe for installation. Overtighten may cause the damage of thread.
9. Please prevent the intrusion of dust or foreign matter. Intrusion of dust or foreign matter may cause malfunction. Using strainer at upstream is recommended for removing dust or foreign matte.

- Structure (As per Figure 3, Table 2)

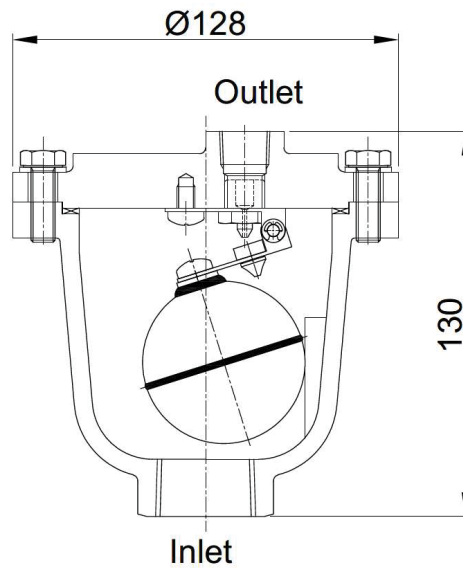


Figure 3

Table 2

Size	Inlet	Outlet	Orifice (mm)
15	PT1/2 or NPT1/2	PT3/8 or NPT3/8	1.6
20	PT3/4 or NPT3/4	PT3/8 or NPT3/8	1.6
25	PT1 or NPT1	PT3/8 or NPT3/8	1.6

- Cap bolts connected with body flange must be screwed alternately, diagonally and evenly. (See. Figure4)

Since the sealing material is rubber gasket, it does not need large tightening torques. t

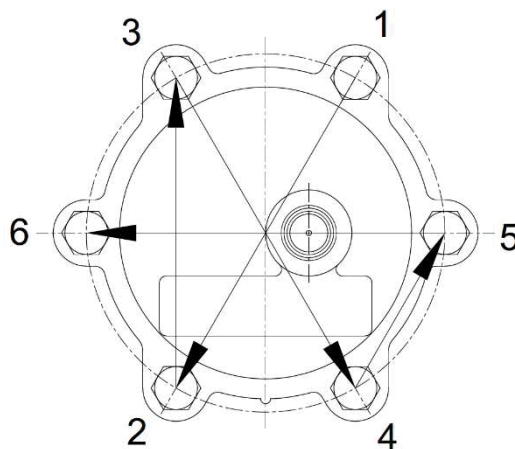


Figure 4

- On the process of the usage of air vent valve, workers should check periodically for finding malfunction
- Possible trouble, cause and removing method

Possible trouble	Cause	Measure
Leak in body and cover	<ol style="list-style-type: none"> 1. Bolts connected cap are loosened due to vibration, etc. 2. Sealing gasket is damaged 	<ol style="list-style-type: none"> 1. Re-tighten the bolts with proper tightening torque 2. Change sealing gasket
Leak in the connection between air vent valve and pipe	<ol style="list-style-type: none"> 1. The thread size is not appropriate and damage of the thread. 2. Seal tape or liquid gasket between air vent valve and pipe is aging. 	<ol style="list-style-type: none"> 1. Confirm the thread size is appropriate and no damage on the thread. 2. Re-install air vent valve with new seal tape or liquid gasket.
Not good quality	<ol style="list-style-type: none"> 1. Intrusion of dust or foreign matter 2. Damage to internal parts 	<ol style="list-style-type: none"> 1. Using strainer at upstream or like 2. Please contact to TOZEN



When disassembling the air vent valve, relieve the inside pressure so that the pressure in the air vent valve and pipeline is "0MPa". If pressure is remained inside, it may cause personal injury.



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