ASAHI AV PRECAUTIONS IN HANDLING AND USE OF VALVES

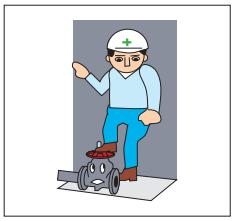
Below are general precautions for safely using ASAHI AV valves.
Precautions specific to each product are provided in a separate instruction manual. For details, please contact our nearest distribution agent or sales office.

1. Notes for pipe design

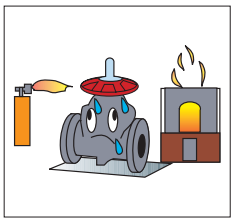
- Make sure that the working temperature and pressure are within the tolerance range during operation.
  (The maximum working pressure is the value including the water hammer pressure. If the tolerance range is exceeded during use, the valve may be damaged.)
- Select an appropriate material to use. (Some kinds of chemical may erode the surface of parts, causing breakage.) For details, consult our nearest sales office in advance.
- When using a fluid that contains crystalline fluid, use it in a condition where the fluid does not recrystallize. (The valve may become unable to work properly.)
- Consult us when using a fluid containing slurry.
- This product is not explosion-proof. Do not use it in explosive atmospheres. (Doing so may cause breakage or explosion.)
- Operating pressure of pneumatic type automatic valve: The standard operating pressure of pneumatic type is 0.4 MPa {4.1 kgf/cm^2}. When increasing the operating pressure, ensure that the pressure is within the specified range of operating pressure.
- Do not joint with solvent adhesive or welding connection on differential plastic materials.(It may cause damage.)

2. Notes for acceptance, transportation and storage

- Do not ride on the valve or place a heavy object on the valve. (Doing so may cause breakage.)



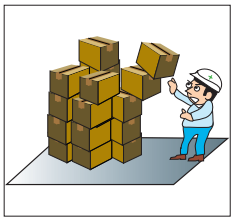
- Keep fire and hot object away from the valve. (Doing so may cause deformation, breakage or fire.)



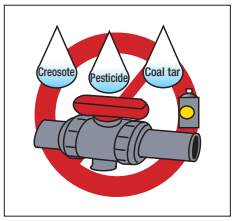
- Avoid direct sunlight and store it indoors. Also avoid storing the valve in a place that may be exposed to high temperatures. (Doing so may cause deformation.)

- Do not give an impact by throwing, dropping or hitting the valve. (Doing so may cause damage or breakage.)
- Do not scratch or stick a sharp object (such as a knife and hook) into the valve.

- Do not pile packed cardboard boxes on top of another too much, to prevent collapsing of the boxes.

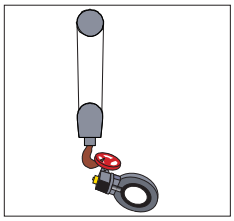


- Do not allow the valve to come in contact with coal tar, creosote (wood preservative agent), white ant exterminating agent, pesticide, or coating material. (Doing so may cause swelling and resulting breakage.)



- Be very careful when hanging or slinging the valve. Do not stand under the suspended object.
- Keep the valve in a cardboard box until just before piping installation. Avoid direct sunlight and store it indoors (at room temperatures). Also avoid storing the valve in a place that may be exposed to high temperatures. (Cardboard boxes become weak when get wet. (Take due care when handling and storing the boxes.)

- When transporting the valve, do not use the handle to secure the valve.



- After unpacking, check that the product has no abnormality and conforms to the specifications.

3. Notes for commissioning of pipe

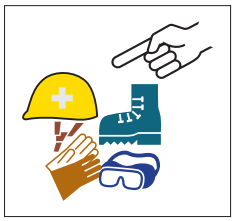
1) General precautions

- Secure an adequate space for maintenance and inspection.
- Test completed items with hydraulic pressure. (Airtight test using air (gas) is very dangerous.)
- When a positive pressure gas is used for our resin pipe, note that a dangerous situation may occur due to the reaction force peculiar to compressed fluids even when the pressure is the same as the hydraulic pressure. Always take appropriate measures to ensure the safety of surrounding area, such as coating the pipe with a protecting material. If you have any uncertainty, please contact us.

  After the completion of piping work, perform a leak test of the conduit with hydraulic pressure. If it is inevitable to perform a test with air, be sure to consult our nearest sales office in advance.

- Avoid using in places that are constantly exposed to water, dust or direct sunlight. Or, cover the whole product. (The valve may become unable to work properly.)

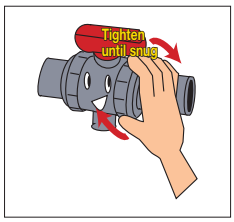
- When using the valve in unfavorable conditions, it is recommended to cover the whole valve with a protective plastic bag. The automatic driving parts, in particular, may have a malfunction due to corrosion.
- When supporting the pipe with a U-band, be careful not to over-tighten. (It may cause breakage.)
- Before starting the work, be sure to perform safety check of mechanical and electric tools to be used.
- During piping work, always use protective equipment appropriate for the work. (Failure to do so may cause injury.)



- During installation, be careful not to give a forcible stress, such as tension, compression, bending and impact, on the piping and valves.
- Before replacement of valve or parts, completely remove the fluid from the pipe. If the fluid cannot be removed, reduce the fluid pressure to zero.

2) Notes for connection of true union type

- During piping installation, assembly or disassembly, steady the end connector.
- Before a water flow test, be sure to check that the union nut is securely tightened.

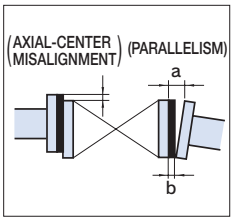


- When tightening the union nut, pay attention to axial-center misalignment and face-to-face dimensions.
- When connecting a resin valve to a metal pipe, be careful that piping stress is given to the resin valve.
- Do not over-tighten the union nut. (It may cause breakage.)

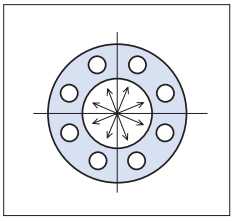
3) Notes for connection of flange

- Ensure that the parallelism and axial-center misalignment dimensions do not exceed the values below. (Failure to do so may cause breakage due to the stress given on the piping.)

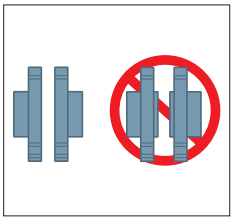
SIZE (mm)	AXIAL-CENTER MISALIGNMENT	PARALLELISM
40 — 80	1.0mm	0.8mm
100 — 150	1.0mm	1.0mm
200 — 600	1.5mm	1.0mm



- Tighten the bolts and nuts of the connection flange diagonally according to the specified torque.
  (Failure to do so may cause leak or breakage.)



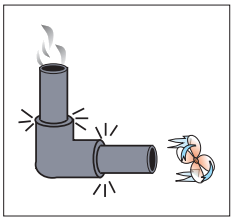
- The connection flanges recommended to be flat face type.



- Check that the flange standard of both sides are not different.
- Be sure to tighten the flanges using sealing gaskets (AV packings), bolts, nuts, and washers, according to the specified tightening torque (except for butterfly valves).

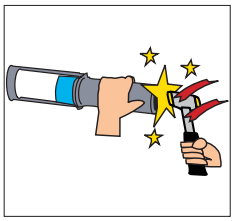
4) Notes for connection of socket (bonding) type

- During installation at low temperatures, be very careful because the solvent fume is difficult to evaporate and liable to remain. (It may cause a solvent crack and resulting breakage.) After piping work, open the both sides of the pipe and ventilate the inside using a blower (of low pressure type) to remove the solvent fume.
- Do not apply too much adhesive. (Doing so may cause a solvent crack and resulting breakage.)

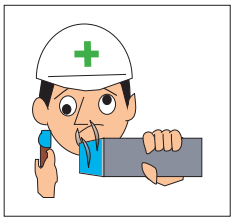


▶3. Notes for commissioning of pipe

● Never stroke the component to insert it. Doing so may cause the pipe to break.



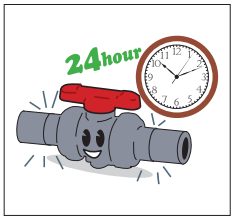
● When using adhesive, ventilate the area well and avoid using fire nearby. Do not inhale the fume directly.



● If the adhesive contacts the skin, remove it immediately. If you feel sick or sense that something is wrong with your body, immediately seek medical attention and receive appropriate treatment.

● For adhesive, use only AV adhesive. (For U-PVC products, use **ASAHIAV** adhesive No. 32, No. 52 or No. 62. For C-PVC products, use **ASAHIAV** adhesive No. 88.)

● Before performing a water flow test, wait until at least 24 hours have passed since the completion of bonding.



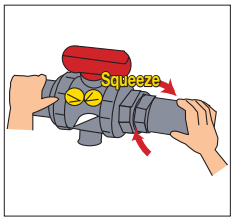
5) Notes for threaded connection

● Check that joint screws are made of resin. (If a metal screw is used for piping work, the end connector may be damaged.)

● For threaded joints of our resin pipe, use sealing tape. If fluid seal or liquid gasket is used, a stress crack (environmental stress crack) may occur.

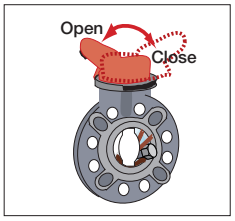
● Do not over-tighten joint screws. (Doing so may cause breakage.)

* For notes for socket (fusion) connection, refer to the instruction manual of each product. For details, please contact our nearest distribution agent or sales office.



4. Notes for operation and maintenance

● Do not open or close the valve when there is dust or foreign object in the fluid.



● Perform periodic maintenance. (Temperature changes or aging during long-term storage, operation stop or while in use may cause leakage. For inspection items, refer to the instruction manual of each product. For details, please contact our nearest distribution agent or sales office.)

● Before replacement of valve or parts, completely remove the fluid from the pipe. If the fluid cannot be removed, reduce the fluid pressure to zero.

● The valve body may be damaged due to freezing. In environments where freezing may occur, remove the water in the pipe or take anti-freezing measures using lagging materials.

● Move the valve handle and lever slowly to reduce water hammer.

● When disposing of the valve, always hand it over to a professional waste disposal company.

⚠ Be sure to read the following description of our product warranty

- Always observe the specifications of and the precautions and instructions on using our product.
- We always strive to improve the quality and reliability, but cannot guarantee perfection. Therefore, should you intend to use this product with any equipment or machinery that may pose the risk of serious or even fatal injury, or property damage, ensure an appropriate safety design or take other measures with sufficient consideration given to possible problems. We shall assume no responsibility for any inconvenience stemming from any action on your part without our written consent in the form of specifications or other documented approval.
- The related technical documents, operation manuals, and/or other documentation prescribe precautions on selecting, constructing, installing, operating, maintaining, and servicing our products. For details, consult with our nearest distributor or agent.
- Our product warranty extends for one and a half years after the product is shipped from our factory or one year after the product is installed, whichever comes first. Any product abnormality that occurs during the warranty period or which is reported to us will be investigated immediately to identify its cause. Should our product be deemed defective, we shall assume the responsibility to repair or replace it free of charge.
- Any repair or replacement needed after the warranty period ends shall be charged to the customer.
- The warranty does not cover the following inconveniences by:
  (1) Using our product under any condition not covered by our defined scope of warranty.
  (2) Failure to observe our defined precautions or instructions regarding the construction, installation, handling, maintenance, or servicing of our product.
  (3) Any product other than ours.
  (4) Remodeling, or otherwise modifying our product by anyone other than us.
  (5) Using any part of our product for anything other than the intended use of the product.

  In no event shall we be responsible or liable for any special, indirect, incidental or consequential damages arising in any way in connection with any products.

[Precautions]

* Our product warranty shall not apply in case of using a positive-pressure gas with our plastic piping. Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force peculiar to compressed fluids, even when the gas is under the same pressure as water. Therefore, be sure to take the necessary safety precautions such as covering the piping with protective material. For inquiries, please contact us.
  For conducting a leak test on newly installed piping, be sure to check for leaks under water pressure.
* Wrap the threaded joints on our plastic piping with sealing tape.
* Using a liquid sealing agent or liquid gasket may cause stress cracks (environmental stress cracking). Our product warranty shall not apply in case of said use, even when said use is unavoidable.

Export Control

In an effort to remain compliant with international agreements on security, many countries have instituted export controls for advanced goods and technologies which may be used for the proliferation of weapons of mass destruction.
Even in Japan we are sanctioned by the International Export Control Regime and the Chemical Weapons Convention to meet current regulations at home and in countries where we sell our goods and technologies.
In meeting this social and legal obligation, we are asking for your cooperation in providing us information relating to the intended use of our products. Information such as copies of agreements, company organization chart and affidavits of end-use may be required for export permission.
Your cooperation in this endeavor is greatly appreciated and our sales or Asahi distributor people are committed to working with you to continue to provide the best products and services Asahi has to offer.