

Stop valve

User's Manual



Thank you for choosing our product.

This User's manual contains important information for safe use of our product, so please be sure to read it before handling the product. After reading this manual, please be sure to keep it in a place where the user can see it at any time.

ASAHI YUKIZAI CORPORATION

-SAFETY PRECAUTIONS-



This User's manual is written on the assumption that the person who handles our products has a basic knowledge of our products, electrical equipment, machinery, control, etc., and it contains technical terms depending on the handling contents.

Please read this manual carefully and fully understand the contents and observe the safety precautions for proper use.

In this manual, the warning, caution, prohibition, and enforcement are categorized together with the symbol to inform the situation and scale of human injury or property damage.

Failure to observe this precaution may result in unexpected failure or damage. Be sure to observe this precaution.

<WARNING/CAUTION indications>

 Warning	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage.

<Prohibited/Forced display>



 Prohibition	In the handling of the product, it is prohibited to do it in "Do not do it".
 Forcing	In the handling of the product, it is forced by "contents to be carried out without fail".

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1. Our product warranty coverage

Unless otherwise stated in the Contract or Specifications, etc., the warranty for the piping material products (hereinafter referred to as "applicable products") such as valves manufactured or sold by us is as follows.

Applicable to

This warranty applies only when the product is used in Japan. If you intend to use the product overseas, please contact us.

Warranty Period

The warranty period is one year after delivery.

Guaranteed range

In the event of failure or malfunction due to our responsibility during the above warranty period, we will replace or repair the product with a substitute free of charge.

Provided, however, that even within the warranty period, the warranty shall not apply to any of the following cases (charged service).



- ▶ When the storage, operating conditions, precautions, etc. described in the specifications, User's manual, etc. are not adhered to in the construction, installation, handling, maintenance, etc.
- ▶ Defects, such as the design of the customer's equipment or software, caused by other than the target product.
- ▶ The fault is due to modification or secondary processing of the product by something other than us.
- ▶ In the case of a failure which can be deemed to have been avoided if the periodic inspection described in the User's manual, etc. or the maintenance or replacement of consumable parts has been performed normally.
- ▶ The component is used for purposes other than the product's intended use.
- ▶ Failure or malfunction due to causes that could not be foreseen by our level of science and technology at the time of shipment.
- ▶ The fault is due to an external factor that is not our responsibility, such as natural disaster or disaster.




Disclaimer

- ▶ The warranty will not cover secondary damage (damage to equipment, loss of opportunity, loss of profit, etc.) or any other damage caused by the failure of our product.
- ▶ Although we strive to improve the quality and reliability of our products, we do not guarantee their integrity. Especially when using this product for equipment that may infringe human life, body or property, take appropriate safety design measures, etc., with full consideration of problems that may normally occur. We assume no responsibility for such use if we have not obtained our consent in advance in writing of specifications, etc.
- ▶ Please observe the product specifications and precautions when using our products. We shall not assume any responsibility for any damage to the customer caused by the customer's negligence. However, this does not apply to damage caused by a defect in our product.



2. Safety Instructions




Unpacking, Transportation and Storage

 Warning	
 Forcing	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ When hanging or slinging a valve, pay sufficient attention to safety, and do not enter under the load.

 Caution	
 Prohibition	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Do not subject the product to impact by throwing, dropping or hitting. ▶ Do not scratch or pierce the product with a sharp object such as a knife or hand hook. ▶ Do not pile up cardboard boxes forcefully to prevent the load from collapsing. ▶ Avoid contact with coal tar, creosote (a wood preservative), white pesticides, insecticides, paints, etc. ▶ Do not hang the handle when transporting the valve.
 Forcing	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Keep in cardboard until just before piping, and store indoors (at room temperature) away from direct sunlight. Also, avoid storing the product in places of high temperature. (The strength of cardboard packaging decreases when it gets wet. Be very careful when storing and handling it.) ▶ After unpacking, make sure that the product is correct and that it meets the specifications.

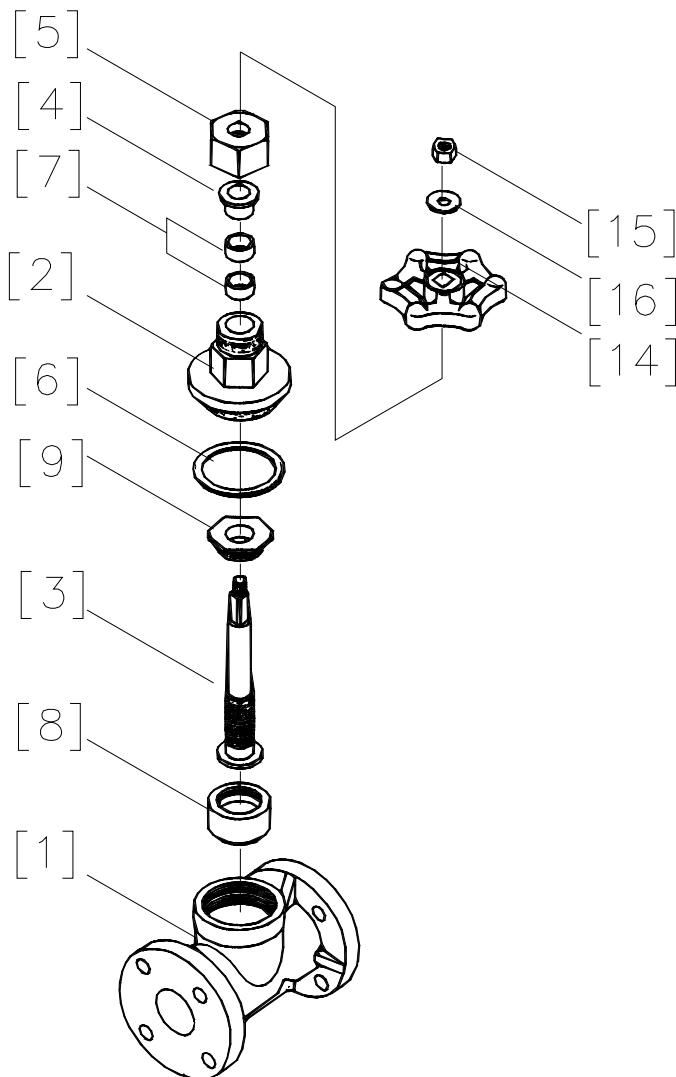
Product Handling

 Warning	
 Forcing	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ If positive pressure gas is used for our resin piping material, a dangerous condition may occur due to the repulsive force peculiar to compressible fluids even if the pressure is the same as the water pressure. Therefore, be sure to take safety measures for the surrounding area, such as covering the piping with protective materials. If you have any questions, please contact us separately. ▶ When conducting a pipe leak test after completion of piping construction, be sure to check with water pressure. Contact us in advance if you are unavoidable to test with a gas.

 Caution	
 Prohibition	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Do not step on the valve or place heavy objects on it. ▶ Keep away from fire and hot objects. ▶ Do not subject the valve to large vibrations. ▶ Do not use instruments or tools to assist manual operation.
 Forcing	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Keep the pressure and temperature of the fluid within the allowable range. (The maximum allowable pressure includes water hammer pressure.) ▶ Secure sufficient space for maintenance and inspection when piping. ▶ Use a valve of suitable material for the operating conditions. (Depending on the type of chemical liquid, the parts may be damaged. Contact us in advance for details.) ▶ Use fluids containing crystalline material under conditions that do not recrystallize. ▶ Avoid any place where the valve is constantly exposed to splashes of water and dust, or direct sunlight, or protect the valve with a cover or the like to cover the entire area. ▶ Perform maintenance periodically by referring to "8. Inspection items". Pay particular attention to temperature changes and aging during long-term storage or shutdown or use.

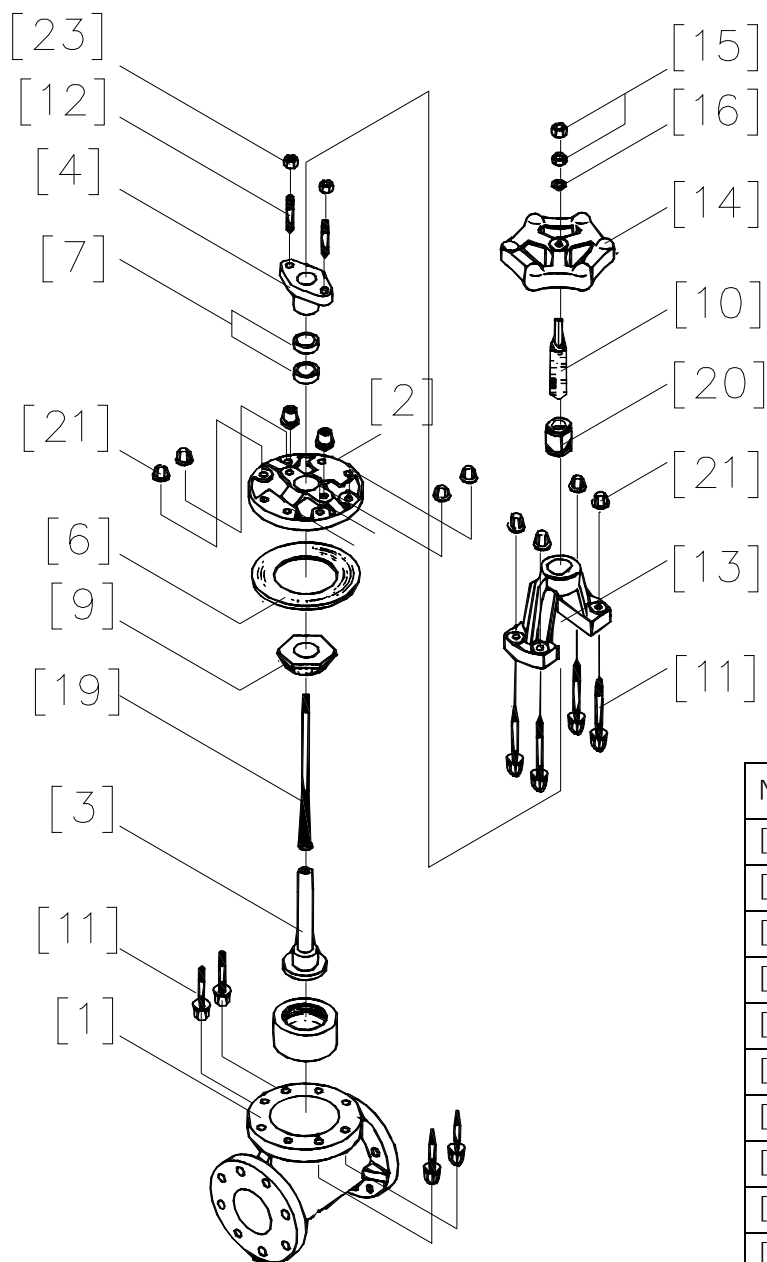
3. Name of each part

Nominal size 15mm~50mm



Number	Name
[1]	Body
[2]	Bonnet
[3]	Stem
[4]	Grand
[5]	Gland nut
[6]	Packing
[7]	Seat gasket
[8]	Disc
[9]	Stem retainer
[14]	Hand wheel
[15]	Nut (A)
[16]	Washer

Nominal size 65mm~100mm



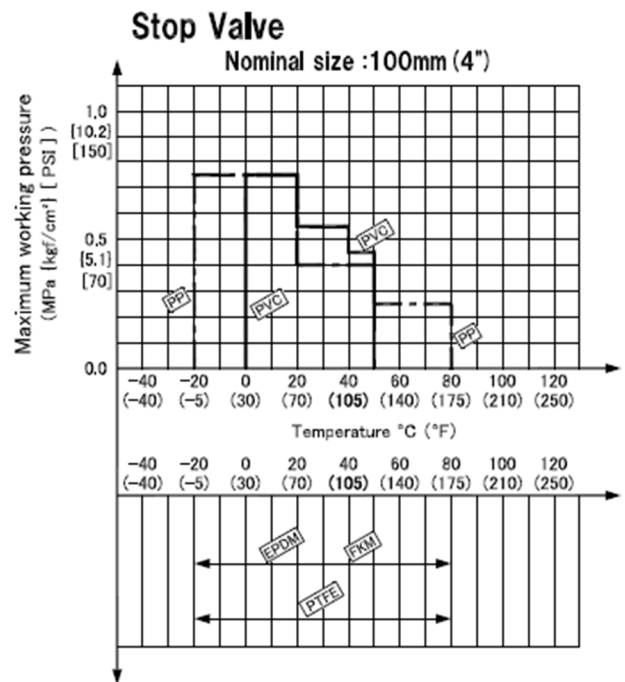
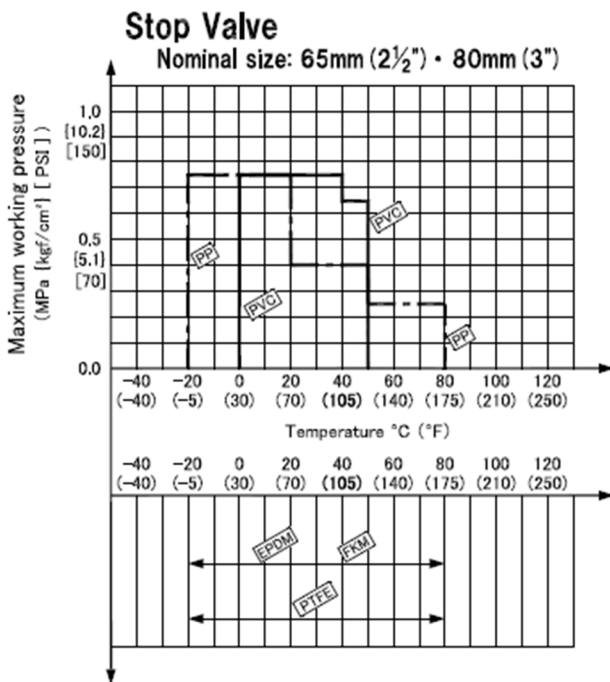
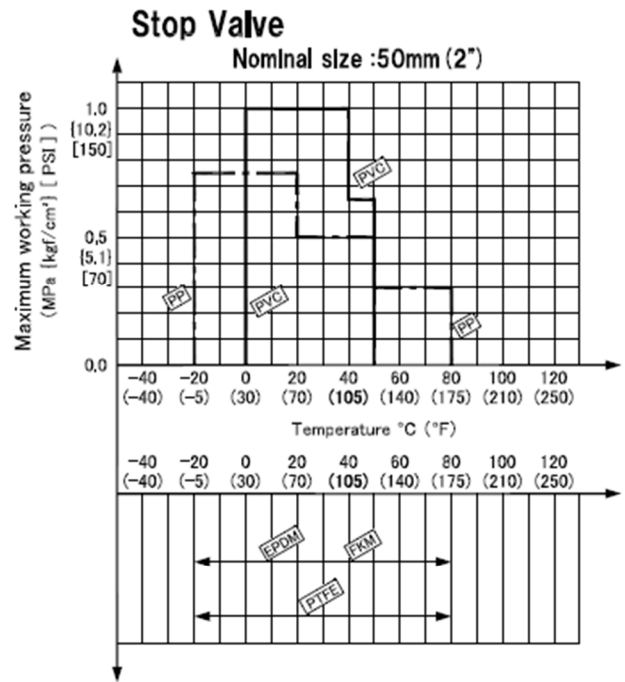
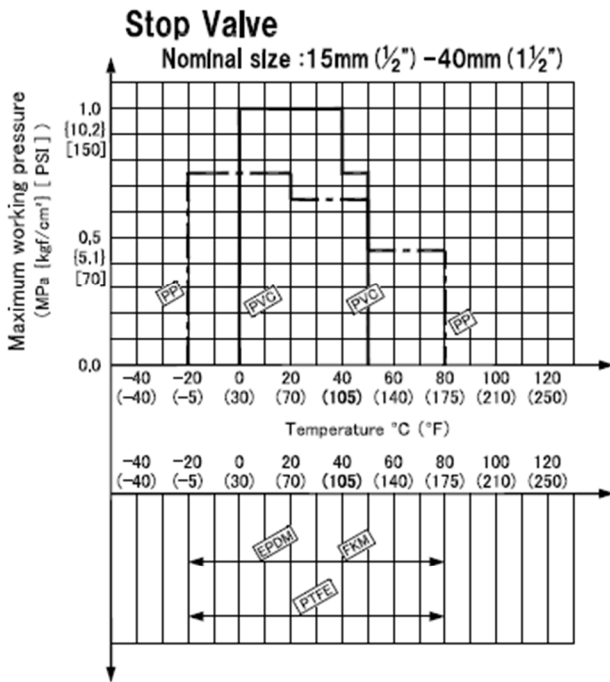
Number	Name
[1]	Body
[2]	Bonnet
[3]	Stem
[4]	Grand
[6]	Seat gasket
[7]	Gland packing
[9]	Stem holder
[10]	Stem with trapezoidal thread
[11],[21]	Bolts nut
[12],[23]	Stud bolt nut
[13]	Stem support
[14]	Hand wheel
[15]	Nut (A)
[16]	Washer
[18]	Stem recessed fitting
[20]	Inserted metal
[23]	Lock nut

4. Product Specifications



Model number table



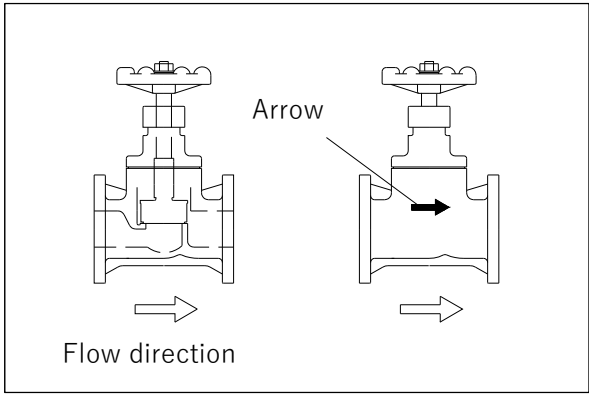

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE	HIGH PURITY SERIES
V	ST	MH	*	*	*	*	* * *	*
V MANUAL VALVE	ST STOP VALVE (GLOBE VALVE)	MH ROUND HANDLE	U PVC P PP	E EPDM V FKM T PTFE	S SOCKET N THREADED F FLANGED	J JIS D DIN A ANSI 1 JIS 10K 5 JIS 5K	015 10mm 020 20mm 025 25mm 032 32mm 040 40mm 050 50mm 065 65mm 080 80mm 100 100mm	BLANK NON 1 LIBRICANT FREE

Relationship between maximum allowable pressure and temperature



5. Piping method

 Warning	
 Prohibition	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ Do not stand the lifting and slinging of the valve under the load for safety. ▶ Be sure to perform safety inspections of the machine tool and power tool beforehand.

 Caution	
 Prohibition	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Be careful not to overtighten the pipe support when you remove it with a U band or the like. ▶ Do not use a pipe wrench. ▶ When installing the product, make sure that no excessive stress such as tension, compression, bending or impact is applied to the piping or valve. ▶ Horizontal or vertical piping can be used, but piping should be made by matching the direction of the fluid flow with the arrow on the valve body. <div style="text-align: center; margin: 10px 0;">  </div>
 Forcing	<p>There is a danger of injury.</p> <ul style="list-style-type: none"> ▶ When installing piping, be sure to wear the appropriate protective equipment according to the operation details.

Flanged end

⚠ Caution



Prohibition

The valve can be damaged or leak.

- ▶ Use a connection flange with a full-face seat.
- ▶ Check that there is no difference in mutual flange standards.
- ▶ Be sure to use the sealing gaskets (AV packing), bolts/nuts, and washers to tighten them to the specified tightening torque.
(The tightening torque will change if the gasket is not a AV gasket.)

- Preparations
- ▶ Torque wrench ▶ wrench
 - ▶ Bolts/nuts/washers ▶ AV packing

[Procedure]

- 1) Set AV packing between the flanges after checking the flow direction of the main body.
- 2) Insert the washer and bolt from the connecting flange side, insert the washer and nut from the valve side, and tighten temporarily by hand.

⚠ Caution

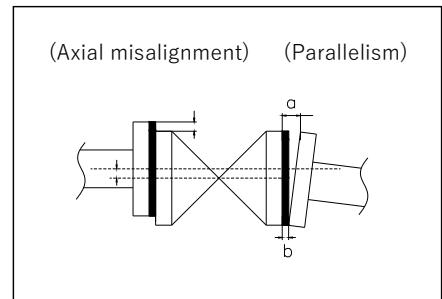


Prohibition



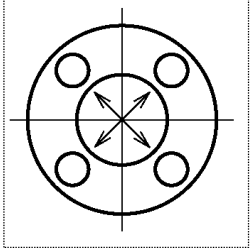
The valve can be damaged, damaged, or leak.

- ▶ Keep the parallelism of the flange surface and the dimension of the shaft misalignment below the values shown below.
(The piping may be damaged due to stress applied to it.)

Size (mm)	Shaft misalignment	Parallelism (a-b)
10~32	1.0mm	0.5mm
40~80	1.0mm	0.8mm
100	1.0mm	1.0mm



3) Gradually tighten to the specified torque value diagonally (see Fig. 1) with a torque wrench.




 Caution	
 Prohibition	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Tighten the bolts and nuts of the connection flange diagonally to the specified torque.
	<p>Fig 1</p> 

Flange tightening torque value

Units: N•m{kgf•cm}

DN (mm)	15, 20	25~40	50, 65	80, 100
PTFE · PVDF (coated)	17.5 {179}	20.0 {204}	22.5 {230}	30.0 {306}
Rubber	8.0 {82}	20.0 {204}	22.5 {230}	30.0 {306}

Threaded end




 Caution	
 Prohibition	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Do not overtighten the screws at the joints.
 Forcing	<p>The valve can be damaged, damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Make sure that the screws on the connections are plastic. (Piping with metal screws may damage the body cap.) ▶ Use sealing tape for the threaded joints of our resin piping materials. If liquid sealant or liquid gasket is used, stress cracking (environmental stress cracking) may occur.




: Preparations : ▶ Sealing tape ▶ Belt wrench ▶ wrench :

[Procedure]

- 1) Wrap sealing tape around the male thread of the fitting, leaving approximately 3mm at the end.
- 2) Tighten the male thread of the fitting and the body by hand.
- 3) Screw in with a belt wrench to avoid scratching.

Socket end (Adhesive)

 Warning	
 Prohibition	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ Ensure adequate ventilation when using adhesives, and prohibit the use of open flames and do not inhale odors directly.
 Forcing	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ If the adhesive adheres to the skin, remove it immediately. If you feel worse or feel unusual, promptly seek medical assistance and take appropriate action.

 Caution	
 Prohibition	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Care should be taken in construction at low temperatures because solvent vapors are less likely to evaporate and remain. (Solvent cracks may occur and damage) After piping, remove the solvent vapor by opening both ends of the pipe and ventilating with a blower (low-pressure type) or the like.
 Forcing	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Use ASAHI AV cement according to the material for the valve. ▶ Perform the water flow test at least 24 hours after completion of adhesion.

 : Preparations : ▶ ASAHI AV Cement :

[Procedure]

- 1) Wipe the socket part of the main unit clean with a waste cloth.
- 2) Apply adhesive evenly to the socket of the main body and the pipe socket.




 Caution	
 Prohibition	<p>The valve can be damaged, or leak</p> <ul style="list-style-type: none"> ▶ Do not apply too much adhesive. (It may cause a solvent crack.)

Amount of adhesive used (reference)

Nominal size (mm)	15	20	25	32	40	50
Amount used (g)	1.0	1.3	2.0	2.4	3.5	4.8

- 3) After applying the adhesive, quickly insert the pipe into the body and hold it for at least 60 seconds.
- 4) Wipe off any excess adhesive.

6. Operation method

 Caution	
 Prohibition	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Do not turn the handle unnecessarily with excessive force when fully closing or opening the valve.
 Forcing	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Since foreign matter such as sand may remain in the pipeline even after the valve is installed, open and close the valve after cleaning the inside of the pipe. ▶ Do not open or close the valve with dust or other foreign matter in the fluid. ▶ Handle operation must be done by hand.


- ▶ Quietly rotate to open/close operation

Close handle-display S (clockwise)

Open handle-display O (counterclockwise)

7. How to disassemble/assemble parts for replacement

⚠ Warning

 Forcing	<p>Serious injury can result.</p> <ul style="list-style-type: none"> ▶ Be sure to perform safety inspections of the machine tool and power tool beforehand. ▶ When installing piping, be sure to wear the appropriate protective equipment according to the operation details. ▶ Completely drain the fluid in the piping when replacing the valve or replacing parts. If the fluid does not escape, reduce the fluid pressure to zero.
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Preparations	▶ Torque wrench	▶ wrench	▶ protective gloves
	▶ Belt wrench	▶ screw (M4, M5, M6, M8)	

[Disassembly procedure]

- 1) Completely drain the fluid in the piping.
- 2) Slightly open the valve.

※For nominal size 15~50mm

- 3) Loosen the bonnet [2] and remove it from the body [1].
- 4) Unscrew nut (A) [15] and remove handle [14].
- 5) Loosen the gland nut [5] and remove the packing retainer [4] and gland packing [7].
- 6) Remove stem [3] from bonnet [2].
- 7) If necessary, loosen stem retainer [9] and remove stem [3] from disc [8].



※For nominal size 65~100mm

- 3) Loosen the bolts and nuts [11] and [21] and remove the bonnet [2] from the body [1].
- 4) Remove nut (A) [15] and pull out handle [14].
- 5) Loosen stud bolts and nuts [12] and [23] and remove gland packing [7].
- 6) Loosen stem [3] and remove it from bonnet [2].
- 7) If necessary, loosen stem retainer [9] and remove stem [3] from disc [3].

[Assembly Procedure]

- 1) Follow the disassembly procedure in reverse.
- 2) After assembly, check whether it can be opened and closed smoothly.

8. Inspection item

 Caution	
 Forcing	<p>The valve can be damaged, or leak.</p> <ul style="list-style-type: none"> ▶ Maintenance should be performed every 3 to 6 months as a guide in order to keep the watch in normal condition and use it for a long time. Pay particular attention to temperature changes and aging during long-term storage or shutdown or use. ▶ When removing the valve from the piping when replacing the valve or parts, completely remove the fluid from the piping before starting work. ▶ If any trouble is found, take the appropriate action referring to "9. Cause of malfunction and remedy"

Daily inspection

Inspection items and inspection methods	Guideline of judgment	Check point	Treatment method
External leakage (visual inspection)	No leakage	[Flanged end] Pipe flange connection	① Retighten the pipe bolts to the specified torque. ② Remove the valve from the pipe and retighten the pipe bolts. (Ref: 5. Piping method [Flanged end])
		[Socket end] Adhesive construction section	Remove the valve from the piping and retry the bonding process. (Ref: 5. Piping method [socket end])
		[Threaded end] Threaded connection	Remove the valve from the piping and screw the valve in again. (Ref: 5. Piping method [Threaded end])
		Surface of the entire valve	Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
Internal leakage (visual and measurement)	No leakage	Leakage to secondary side when valve is fully closed	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. How to disassemble/assemble parts for replacement)
		Measured values of flowmeters, pressure gauges, etc.	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. How to disassemble/assemble parts for replacement)
Abnormal noise (hearing)	No abnormal noise	Valves and surrounding piping	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. How to disassemble/assemble parts for replacement)
		Piping around the valve	Reconfirm the conditions of use (Ref: 2. Safety Instructions)

Periodic inspection
●Guideline for the inspection cycle: 3 months

Inspection items and inspection methods	Guideline of judgment	Check point	Remedy for malfunctions
Vibration (palpation)	No different from other places	Valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions)
		Piping around the valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions)

●Guideline of the inspection cycle: 6 months

Inspection items and inspection methods	Guideline of judgment	Check point	Remedy for malfunctions
Operability of manual handle (feel)	Smoothly Turning	Manual operation unit	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. How to disassemble/assemble parts for replacement)
Looseness of bolts (visual inspection, palpation)	No looseness	[Flanged end] For flange piping	Retighten the pipe bolts to the specified torque. (Ref: 5. Mounting [Flange Type])
Corrosion or rust (visual inspection)	No corrosion or rust	Appearance of the product	Remove the valve from the pipe and replace the valve.
Product damage	No scratches, cracks, or deformation	Appearance of the product	Remove the valve from the pipe and replace the valve.

9. Cause of malfunction and remedy

 **Caution**



Forcing

The valve can be damaged or leak.

- ▶ Perform periodic maintenance. (Leakage may occur due to changes in temperature or aging during long-term storage or shutdown, or during use.)

Failure phenomenon	Possible cause	Measures and measures
The handle does not turn (cannot turn) during manual operation.	Foreign matter caught in valve	Remove the valve from the piping, disassemble it, and remove foreign matter. (Ref: 7. How to disassemble/assemble parts for replacement)
	Piping stress is applied to the valve.	Remove the piping stress
	The torque of the valve has increased due to the effects of the fluid (temperature, components, pressure, etc.)	Reconfirm the conditions of use (Ref: 2. Safety Instructions)
Fluid leaks even when fully closed (internal leak)	High fluid pressure	Use below the maximum allowable pressure (Ref: 2. Safety Instructions)
	Worn or scratched body or disc	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Missing parts	Remove the valve from the piping and attach the relevant part or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Foreign matter caught in valve	Remove the valve from the piping, disassemble it, and remove foreign matter. (Ref: 7. How to disassemble/assemble parts for replacement)
	Piping stress is applied to the valve.	Remove the piping stress
	High fluid pressure	Use below the maximum allowable pressure (Ref: 2. Safety Instructions)

Failure phenomenon	Possible cause	Measures and measures
Fluid leaks even when fully closed (internal leak)	Worn or scratched body or disc	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Missing parts	Remove the valve from the piping and attach the relevant part or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Foreign matter caught in valve	Remove the valve from the piping, disassemble it, and remove foreign matter. (Ref: 7. How to disassemble/assemble parts for replacement)
	Piping stress is applied to the valve.	Remove the piping stress
Fluid leaks from valve (external leak)	Loose bolts and nuts	Retightening the piping bolts and nuts (Ref: 5. Mounting [Flange Type])
	Crystallization of fluid components	Disassemble and clean or replace parts
	O-ring is scratched, worn, melted, or altered	Stop using the product immediately, remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Scratches or wear are found on the sliding or fixing surfaces of the O-ring.	Stop using the product immediately, remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Valve is cracked or broken	Stop using the product immediately, remove the valve from the piping, and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
Valve is corroded or deformed	The watch is exposed to water, chemical liquids, or other liquids.	Stop using the product immediately, remove the valve from the piping, and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)

10. Disposal method of residual materials and waste materials

 Warning	
 Forcing	<p>When burnt, toxic gas is generated.</p> <ul style="list-style-type: none"> ▶ When disposing of the product or parts, please dispose of them according to the guidelines of each local authority by a professional disposal company.

Inquiries

Contact the nearest dealer, our sales office, or our web website for inquiries about this product.

[User's Manual]

Stop valve



<https://www.asahi-yukizai.co.jp/en>

Please note that the content of this manual is subject to change without notice.

March 2024