SWING CHECK VALVE

User's Guide

For the Owner and the Installing Contractor

ASAHI AV

Serial No. :UA－004E

Read and use the information contained within these documents.

This User's Guide contains information important to the proper installation, maintenance and safe use of the SWING CHECK VALVE store in an easily accessable location.

Warning & Caution Signs

Warning	This symbol reminds the user to take caution due to the potential for serious injury or death.
Caution	This symbol reminds the user to take caution due to the potential for damage to the valve if used in such a manner.

Prohibited & Mandatory Action Signs

	Prohibited: When operating the valve, this symbol indicates an action that should not be taken.
	Mandatory action: When operating the valve, this symbol indicates mandatory actions that must be adhered to.

General Information for Transportation, Unpacking and Storage

Warning

-When suspending and supporting a valve, take care and do not stand under a suspended valve.

Caution

-This valve is not designed to handle impacts of any kind. Avoid throwing or dropping the valve.
-Avoid scratching the valve with any sharp object.
-Do not over-stack cardboard shipping boxes. Excessively stacked packages may collapse.
-Avoid contact with any coal tar creosote, insecticides, vermicides or paint.
(These chemicals may cause damage to the valve.)

-Store products in their corrugated cardboard boxes. Avoid exposing products to direct sunlight, and store them indoors (at room temperature). Also avoid storing products in areas with excessive temperatures. (Corrugated cardboard packages become weaker as they become wet with water or other liquid. Take care in storage and handling.)
-After unpacking the products, check that they are defect-free and meet the specifications.

Inspection Items

Caution

- ☐ Check for flaw, crack, or deformation on the valve.
- ☐ Check that all fasteners are tight.
- ☐ Check for leaks to the outside or inside.
- ☐ Check the tightness of bolt nut.

General Operating Instructions

Caution

-Do not change or replace valve parts under line pressure.

-Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force particular to compressible fluids even when the gas is under similar pressures used for liquids. 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. If absolutely necessary to use a gas in testing, please consult your nearest service station beforehand.
-Be sure to conduct a safety check on all hand and power tools to be used before beginning work.
-Wear protective gloves and safety goggles as fluid remain in the valve even if the pipeline is empty. (You may be injured.)

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General Operating Instructions

Caution

-Do not step on or apply excessive weight on valve. (It can be damaged.)
-When installing a pipe support by means of a U-band or something similar, take care not to over-tighten. (Excessive force may damage the pipe.)
-Do not use the valve in conditions where the fluid may have crystallized. (The valve will not operate properly.)
-Do not use the valve to fluid containing slurry. (The valve will not operate properly.)

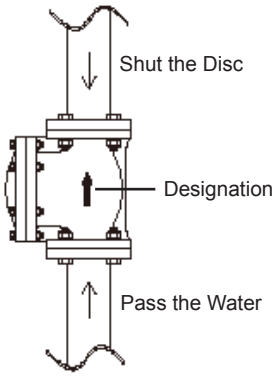
-Keep the valve away from excessive heat or fire. (It can be damaged, or destroyed.)
-Always operate the valve within the pressure vs. temperature range. (The valve can be damaged or deformed by operating beyond the allowable range.)
-Allow sufficient space for maintenance and inspection.
-Select a valve material that is compatible with the media. For chemical resistance information, refer to “CHEMICAL RESISTANCE ON ASAHI AV VALVE”. (Some chemicals may damage incompatible valve materials.)
-Keep the valve out of direct sunlight, water and dust. Use cover to shield the valve. (The valve will not operate properly.)
-Perform periodic maintenance. (Leakage may develop due to temperature changes or periods of prolonged storage, rest, or operation.)
-Bonnet bolt torque should be checked before installation, as they may become loose after long-term storage. A periodic check of the valve condition as well as bonnet & flange bolt torque should be made part of preventative maintenance program properly re-tightening the bolts as necessary. It is especially important to re-tighten all bolts during the first shutdown.
-Before a water test, be sure that the Flange is tightly fastened.
-Use the valve at a pressure exceeding the minimum operating differential pressure. (Table 1)

Table 1. Test Result of Minimum Pressure (Water Pressure: at R. T.) Unit:MPa{kgf/cm^2}

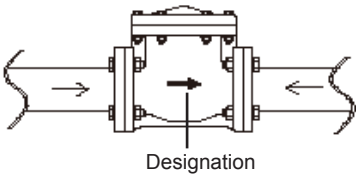
Test Items		Vertical Piping		Horizontal Piping	
Nominal Size mm(inch)	Material	Shut the Disc	Pass the Water	Shut the Disc	Pass the Water
15 ($^1/_2$")	EPDM	0.02 {0.2}	0.01 {0.1}	0.02 {0.2}	0.01 {0.1}
	PTFE	0.03 {0.3}	0.01 {0.1}	0.03 {0.3}	0.01 {0.1}
20 ($^3/_4$")	EPDM	0.02 {0.2}	0.01 {0.1}	0.02 {0.2}	0.01 {0.1}
	PTFE	0.035 {0.35}	0.01 {0.1}	0.035 {0.35}	0.01 {0.1}
25 (1")	EPDM	0.03 {0.3}	0.01 {0.1}	0.035 {0.35}	0.01 {0.1}
	PTFE	0.05 {0.5}	0.01 {0.1}	0.06 {0.6}	0.01 {0.1}
40 (1 $^1/_2$")	EPDM	0.03 {0.3}	0.01 {0.1}	0.035 {0.35}	0.01 {0.1}
	PTFE	0.05 {0.5}	0.01 {0.1}	0.06 {0.6}	0.01 {0.1}
50 (2")	EPDM	0.03 {0.3}	0.01 {0.1}	0.035 {0.35}	0.01 {0.1}
	PTFE	0.05 {0.5}	0.01 {0.1}	0.06 {0.6}	0.01 {0.1}
65 (2 $^1/_2$")	EPDM	0.03 {0.3}	0.01 {0.1}	0.035 {0.35}	0.01 {0.1}
	PTFE	0.05 {0.5}	0.01 {0.1}	0.06 {0.6}	0.01 {0.1}
80 (3")	EPDM	0.035 {0.35}	0.01 {0.1}	0.04 {0.4}	0.01 {0.1}
	PTFE	0.055 {0.55}	0.01 {0.1}	0.06 {0.6}	0.01 {0.1}
100 (4")	EPDM	0.035 {0.35}	0.01 {0.1}	0.04 {0.4}	0.01 {0.1}
	PTFE	0.06 {0.6}	0.01 {0.1}	0.065 {0.4}	0.01 {0.1}
125 (5")	EPDM	0.035 {0.35}	0.01 {0.1}	0.04 {0.4}	0.01 {0.1}
	PTFE	0.06 {0.6}	0.01 {0.1}	0.065 {0.65}	0.01 {0.1}
150 (6")	EPDM	0.04 {0.4}	0.015 {0.15}	0.045 {0.45}	0.01 {0.1}
	PTFE	0.065 {0.65}	0.015 {0.15}	0.07 {0.7}	0.01 {0.1}
200 (8")	EPDM	0.04 {0.4}	0.02 {0.2}	0.045 {0.45}	0.015 {0.15}
	PTFE	0.07 {0.7}	0.02 {0.2}	0.07 {0.7}	0.015 {0.15}

<Test Method>
Measurement minimum pressure (Shut the Disc and Pass the Water).

[Vertical Piping]



[Horizontal Piping]



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ASAHIAV

Serial No. :UA－004E

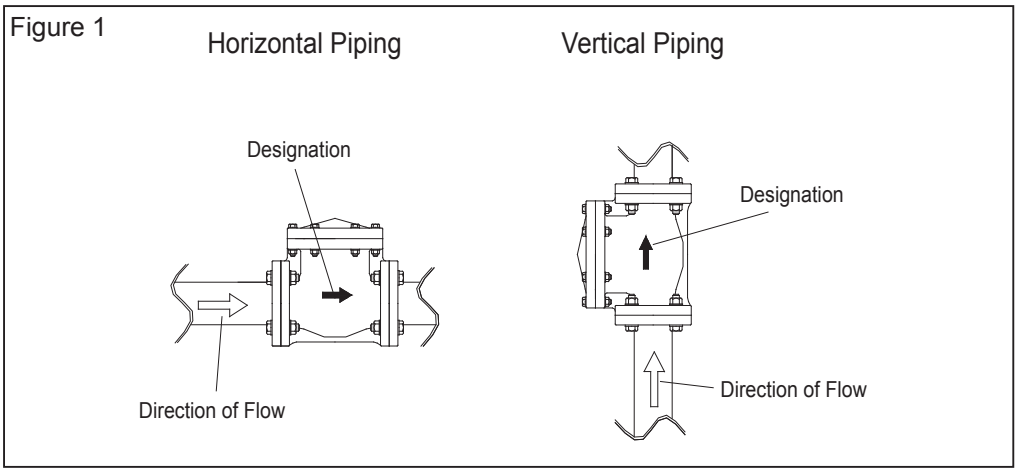
General Operating Instructions

Caution

-The valve is applicable to both types: vertical and horizontal piping. In the case of vertical piping, use the valve in applications where the fluid travels upwards.

-Install the piping while matching the arrow on the valve body with the flow direction of the fluid. (Figure 1)

Figure 1



Installation Procedure

As for details, refer to the User's manual separately.

Flanged End

Caution

-Take care not to over-tighten the Flange. (The valve can be damaged.)

-The parallelism and axial misalignment of the flange surface should be under the values shown in the following table to prevent damage to the valve.（A failure to observe them can cause destruction due to stress application to the pipe）

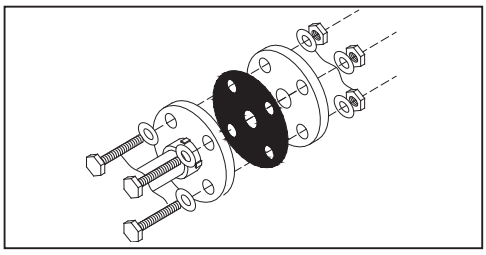
-Use flat faced flanges for connection to AV Valves.

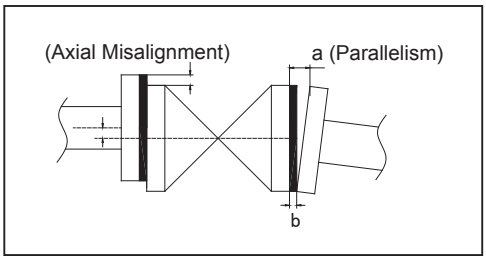
-Ensure that the mating flanges are of the same standards.

-Be sure to use sealing gaskets (AV Gasket), bolts, nuts, and washers and tighten them to specified torques.

< Axial Misalignment and Parallelism of Flanged face > Unit: mm (inch)

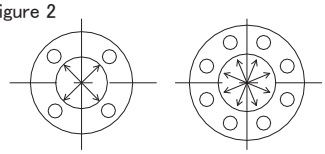
Nom. Size	Axial Misalignment	Parallelism（a-b）
15 - 32 (1/2"-1 1/4")	1.0 (0.04")	0.5 (0.02")
40 - 80 (1 1/2"-3")	1.0 (0.04")	0.8 (0.03")
100 - 150 (4"-6")	1.0 (0.04")	1.0 (0.04")
200 (8")	1.5 (0.05")	1.0 (0.04")





1. Cleaning: Confirm the flange face area is clean and free of dirt or foreign materials.
2. Set the AV gasket between the flanges. Insert washers and bolts from the pipe side, insert washers and nuts from the valve side, then temporarily tighten them by hand. Tighten the bolts and nuts gradually with a torque wrench to the specified torque level in a diagonal manner.

Figure 2



< Recommended Torque Value > Unit: N･m {kgf･cm} [lb･inch]

Nom. Size	15, 20 (1/2", 3/4")	25 - 40 (1"-1 1/2")	50, 65 (2", 2 1/2")	80, 100 (3", 4")	125, 150 (5", 6")	200 (8")
PTFE, PVDF coated	17.5 {179} [155]	20.0 {204} [177]	22.5 {230} [200]	30.0 {306} [266]	40.0 {408} [354]	55.0 {561} [487]
Rubber	8.0 {82} [71]	20.0 {204} [177]	22.5 {230} [200]	30.0 {306} [266]	40.0 {408} [354]	55.0 {561} [487]

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Handling of Residual and Waste Materials

Warning

Make sure to consult a waste treatment dealer for recommendations on the proper disposal of plastic valves. (Poisonous gas is generated when the valve is burned improperly.)

Product Warranty

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 product 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 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 cases:

(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 inconvenience caused by 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.

(6) Any abnormality that occurs due to a natural disaster, accident, or other incident not stemming from something inside our product.

Inquiries

As for details, refer to the User's manual (SWING CHECK VALVE: No. H-V013E).

ASAHI YUKIZAI CORPORATION http:www.asahi-yukizai.co.jp/en

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Information in this manual is subject to change without notice. 201711-(9)