Butterfly valve Type 55
Butterfly valve Type 55IS
(Lever type/Side gear type)

User's Manual

Thank you for choosing our product.
This instruction 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 instruction 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".

Table of contents

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, instruction 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 instruction 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	
Prohibition	**Serious injury can result.** ▶ When hanging or slinging a valve, pay sufficient attention to safety, and do not enter under the load.

Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ 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	**The valve can be damaged, or leak.** ▶ 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	**The valve can be damaged or seriously injured.** ▶ 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. Please inquire at the bank counter of Money if you have any questions. When conducting a leak test of a pipe line after completion of piping construction, check with water pressure. Contact us in advance if you are unavoidable to test with a gas.

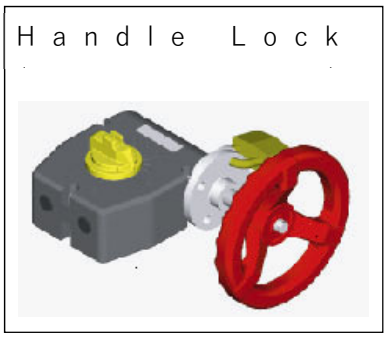
⚠ Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ Do not step on the valve or place heavy objects on it. ▶ Do not subject the valve to large vibrations. ▶ Do not use instruments or tools to assist manual operation.
Forcing	**There is a danger of injury.** ▶ Allow sufficient space for maintenance and inspection. **The valve can be damaged, or leak.** ▶ When installing piping, gaskets are basically not required. However, when connecting to resin flanges that are prone to dents, scratches, or warping, use gaskets to ensure stable sealing performance. ▶ Keep away from fire and hot objects. (There is a risk of deformation, damage or fire.) ▶ Keep the operating temperature and pressure within the allowable range. (The maximum allowable pressure includes water hammer pressure. The valve may be damaged if it is used outside the allowable range.) ▶ Select and use an appropriate material. (The parts may be damaged depending on the type of chemical solution. Contact us in advance for details.) ▶ Do not recrystallize in fluids containing crystalline substances. (The valve will not operate normally.) ▶ Avoid any place where water or dust is constantly splashed or where the product is exposed to direct sunlight, or provide a cover to cover the entire area. (The valve will not operate normally.) ▶ Perform periodic maintenance. (Leakage may occur due to changes in temperature or aging during long-term storage, resting, or use.)

⚠Caution

Forcing

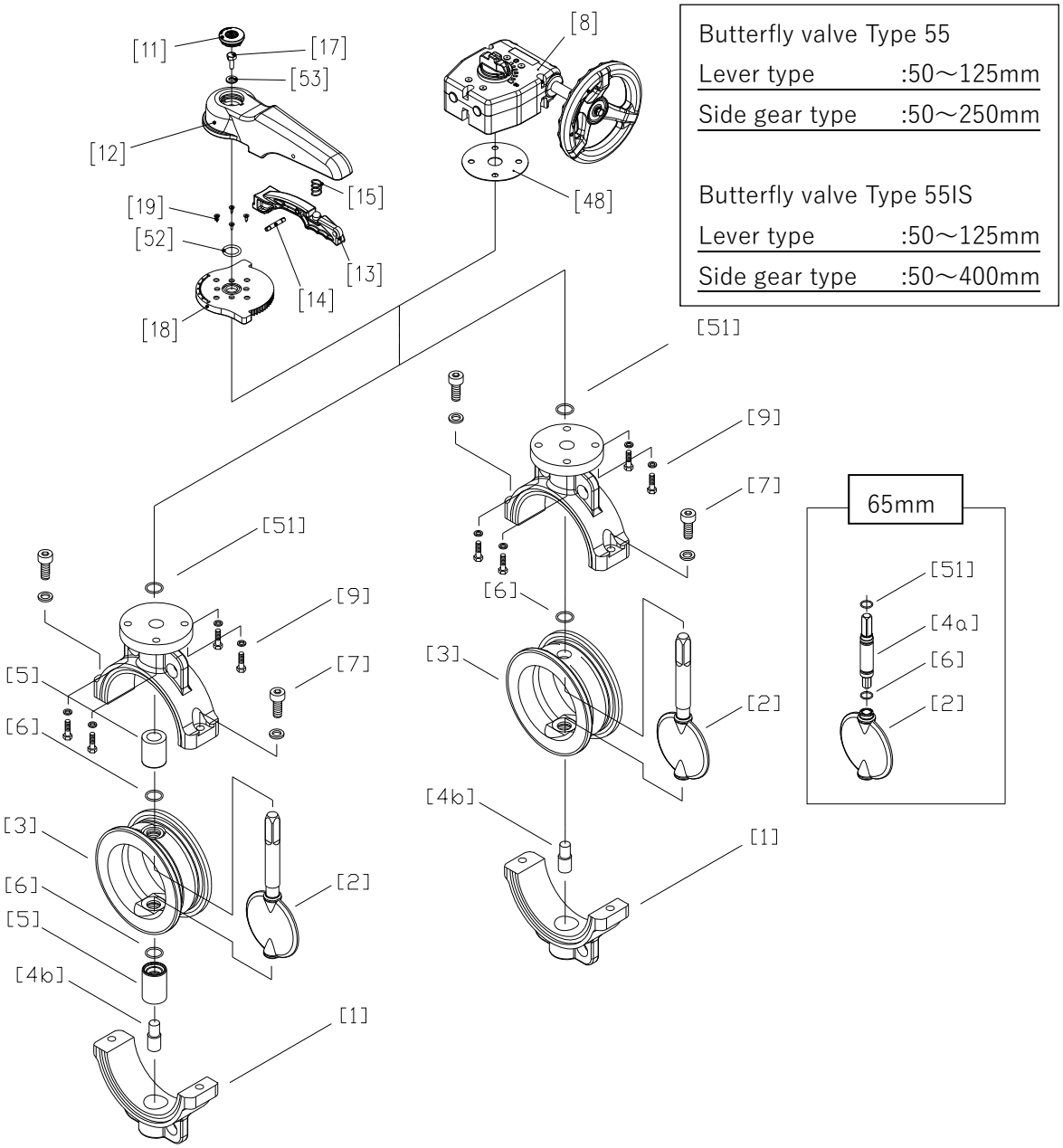
The valve can be damaged, or leak.

▶ The butterfly valve of the side gear type has a self-locking worm gear structure. In general use conditions, the flow rate can be adjusted by changing the opening arbitrarily. When the valve is used at an intermediate position, the disk may move to the closed side depending on the effects of vibration or fluid (high flow velocity, turbulence, etc.). Specify the optional "Handle Lock" as necessary. The handle lock mechanism prevents the valve opening from being changed when the valve is used at an intermediate position.



▶ The butterfly valve 55 and 55IS are sealed by PTFE discs and seats. PTFE is not wear-resistant material. Periodically check the condition of leakage when fully closed, and use it while checking the usage limits.

3. Name of each part



Butterfly valve Type 55
Lever type :50～125mm
Side gear type :50～250mm

Butterfly valve Type 55IS
Lever type :50～125mm
Side gear type :50～400mm

No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
[1]	Body	[8]	Gear box	[18]	Locking plate
[2]	Disk	[9]	Bolt (B)	[19]	Set screw
[3]	Seat	[11]	Cap	[48]	Gasket (C)
[4a]	Stem (A)	[12]	Handle	[51]	O-ring (B)
[4b]	Stem (B)	[13]	Handle lever	[52]	O-ring (C)
[5]	Bush	[14]	Pin	[53]	Rubber washer
[6]	O-ring (A)	[15]	Spring		
[7]	Bolt (A)	[17]	Bolt (C)		

4. Product Specifications

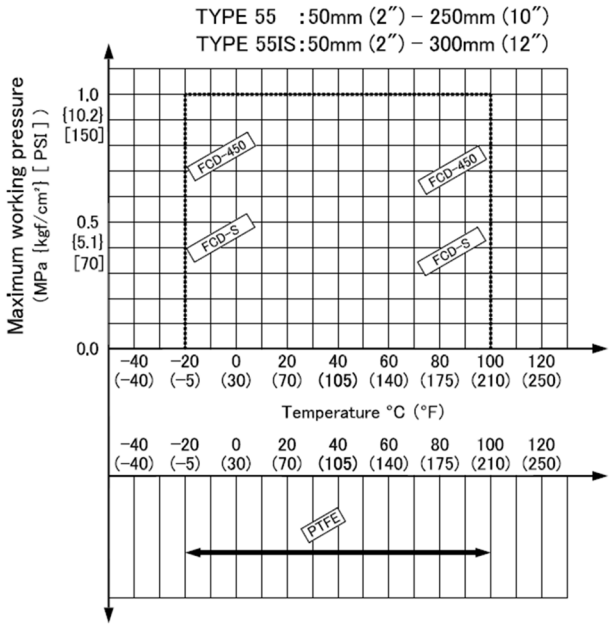
Product Model Code List (Type 55)

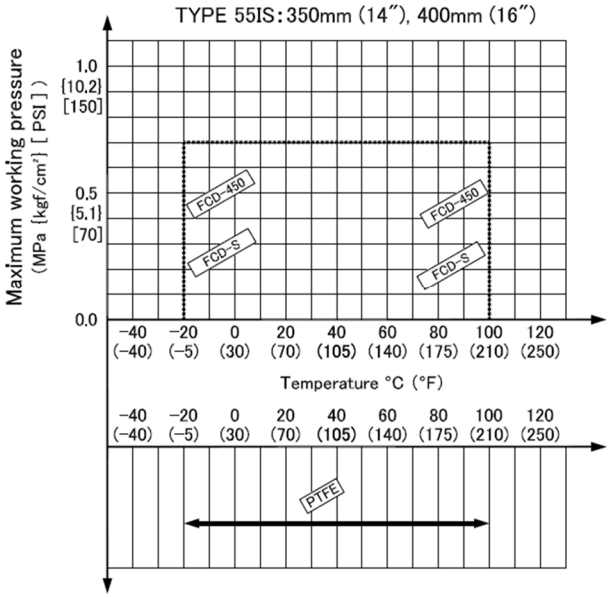
ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	Connection	Standard	Size
V	55	* *	S	T	W	*	* * *
V MANUAL	**55** TYPE 55	**LV** LEVER TYPE	**S** FCD-S	**T** PTFE	**W** WAFER	**1** JIS 10K	**050** 50mm
		SG SIDE GERE TYPE				**5** JIS 5K	**080** 80mm
						D DIN	**100** 100mm
						A ANSI	**125** 125mm
							150 150mm
							200 200mm
							250 250mm

Model Model Code List (Type 55IS)

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	Connection	Standard	Size
V	5S	* *	S	T	W	*	* * *
V MANUAL	**5S** TYPE 55IS	**LV** LEVER TYPE	**S** FCD-S	**T** PTFE	**W** WAFER	**1** JIS 10K	**050** 50mm
		SG SIDE GERE TYPE				**D** DIN	**065** 65mm
						A ANSI	**080** 80mm
							100 100mm
							125 125mm
							150 150mm
							200 200mm
							250 250mm
							300 300mm
							350 350mm
							400 400mm

Relationship between maximum allowable pressure and temperature

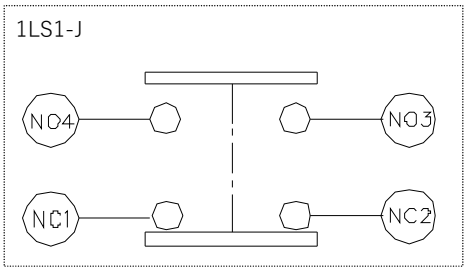




Limit switch specifications

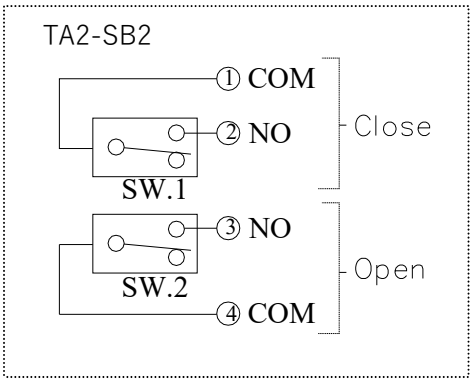
DN (mm)	Operation method	Model	Protection grade
50～125	Lever type	1LS1-J	IP67
50～400	Side gear type	TA2-SB2	IP65

Internal circuit diagram
(At intermediate position)



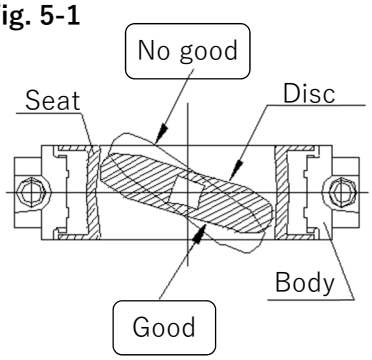
Limit switch rating

Model	Rated voltage (V)	Resistive loading (A)	Induction load (A)
1LS1-J	125AC	10	6
	250 AC	10	6
	115 DC	0.8	0.2
	230DC	0.4	0.1
TA2-SB2	125AC	11	7
	250AC	11	7
	125 DC	0.5	-
	250DC	0.25	-



5. Piping

Warning	
Prohibition	**Serious injury can result.** ▶ When hanging or slinging a valve, pay sufficient attention to safety, and do not enter under the load.

Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ Do not over-tighten when piping support is removed with a U-band, etc. ▶ When installing piping, do not install it in the fully closed state. (The disc may get caught in the seat and the operating torque may become heavy, making it impossible to open and close it.) ▶ Never carry or install the disc in the condition "Not feasible" in **Fig. 5-1**, as it will scratch the sealing surface of the disc. ▶ Do not tighten the bolt nut for piping with the specified torque or more. **Fig. 5-1** 

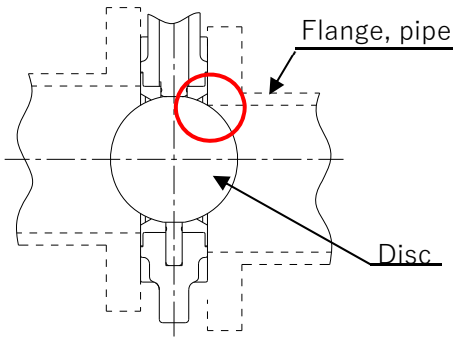
Caution	
Forcing	**There is a danger of injury.** ▶ Be sure to perform safety inspections of the machine tool and power tool beforehand. ▶ Wear appropriate protective equipment according to the type of work being performed. **The valve can be damaged, or leak.** ▶ When installing pipes, gaskets are basically not required, but when connecting with resin flanges that are prone to dents, scratches, or warping, use gaskets to ensure stable sealing performance. ▶ When installing the product, make sure that no excessive stress such as tension, compression, bending or impact is applied to the piping or valve. ▶ Use a connection flange with a full-face seat. ▶ Check that the flange standards of each other are correct. ▶ The unit is shipped in the "Good" state as shown in the figure. Be sure to return the disc to the original condition ("Good" in the figure) after operation before installing the piping if the valve is to be opened or closed. Never transport or install the disc in the condition shown in the figure as this will damage the sealing surface of the disc.

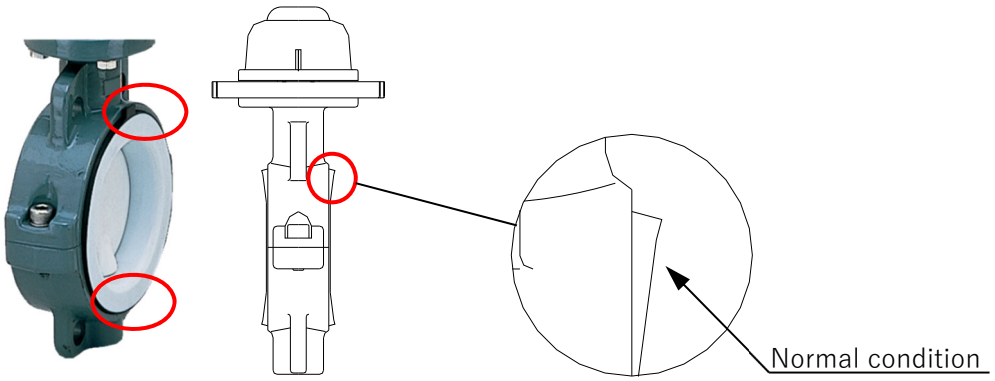
⚠Caution

Forcing

▶ If the inner diameter of the connection (flange or pipe) is small, chamfer the inside of the connection to avoid contact between the valve disc and the inner surface of the connection.

▶ As shown in the figure below, the upper and lower parts of the sheet are slightly warped when shipped. This condition is normal. When inserting the valve between the flanges, fully widen the space between the faces before inserting.

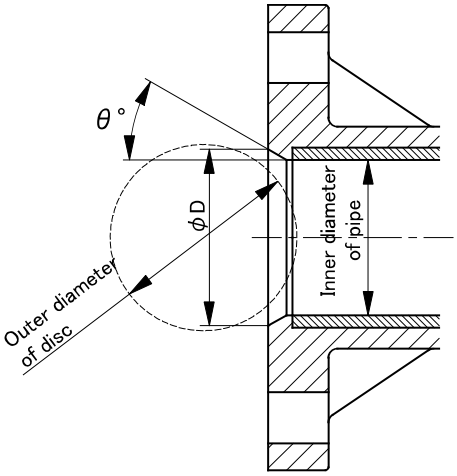




○Confirm that the inner diameter of the connecting part is equal to or greater than the value in the table below.

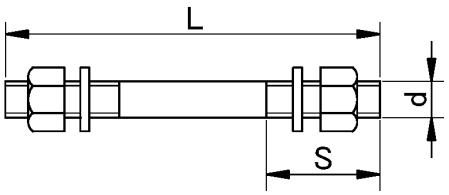
Size	Bore diameter D (mm)		Chamfer angle θ°
mm (inch)	Type 55	55IS type	55-inch and 55IS types
50 (2)	47	42	40
65 (2½)	-	54	40
80 (3)	71	74	30
100 (4)	92	94	30
125 (5)	119	121	25
150 (6)	143	149	25
200 (8)	182	186	15
250 (10)	237	241	15
300 (12)	-	293	15
350 (14)	-	322	15
400 (16)	-	372	15

Perform chamfering in the cases below the numerical values in the table below. (Disk outer diameter interferes)



Preparations	▶ Torque Wrench ▶ Wrench ▶ Through bolts, nuts, and washers (with the following dimensions) ▶ AV packing (if required)

Dimensions of Through Bolt (Bolt A)



▼JIS10K

Nominal diameter	D	Bolt A				Quantity	
		Type 55		Type 55IS			
Mm (inch)		L(mm)	S(mm)	L(mm)	S(mm)	Bolt A	Nut and washer
50 (2)	M16	130	35	130	35	4	8
65 (2½)		—		135		8	16
80 (3)		140					
100 (4)		145		140			
125 (5)	M20	165	40	160	40		
150 (6)		180					
200 (8)		195		165		12	24
250 (10)	M22	215		180	45		
300 (12)		-	-	190		16	32
350 (14)		-	-	210			
400 (16)	M24	-	-	230	50		

▼JIS5K

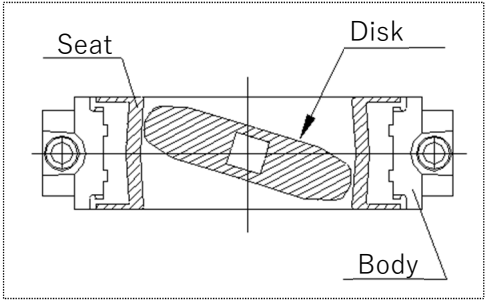
Nominal diameter	D	Bolt A				Quantity	
		Type 55		Type 55IS			
Mm (inch)		L(mm)	S(mm)	L(mm)	S(mm)	Bolt A	Nut and washer
50 (2)	M12	110	35	110	30	4	8
65 (2½)	M16	—	40	120			
80 (3)		125					
100 (4)		135		130	40	8	16
125 (5)		140		135			
150 (6)		155					
200 (8)	M20	195	45	165			
250 (10)		210		-	-	12	24
300 (12)	-	-	-	-	-	-	-
350 (14)	-	-	-	-	-	-	-
400 (16)	-	-	-	-	-	-	-

NOTE 1. The above figures are dimensions when JIS B2220 steel pipe flanges are used.

NOTE 2. When using 2.AV packing, add 5mm to the length (L) of bolt A.

[Procedure]

1) Open the disc [2] slightly using the handle.
※Make sure that the disc [2] does not protrude from between the seat surfaces. (The disc [2] may be damaged.)
2) Set between the connecting flanges.
3) Temporarily set by hand with through bolts, washers, and nuts for connection.

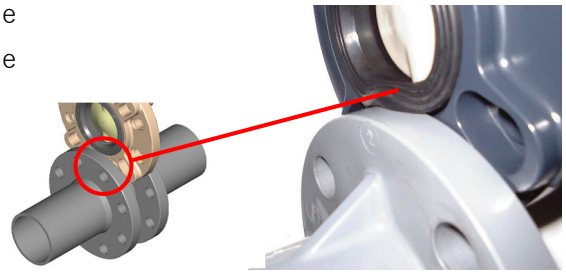


⚠Caution

Forcing

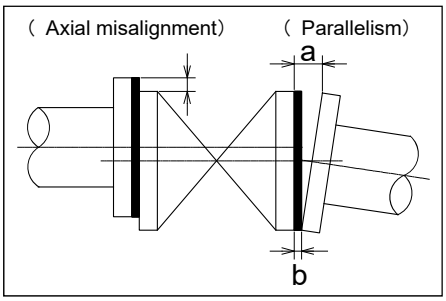
The valve can be damaged, damaged, or leak.

▶ When inserting the valve between the flanges, fully widen the space between the faces before inserting.
(If the valve is forcibly inserted without sufficiently expanding the space between the flanges, the seat may be flipped off and scratches may occur.)



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

DN (mm)	Shaft misalignment	Parallelism (a-b)
50～80	1.0mm	0.8mm
100～150	1.0mm	1.0mm
200～400	1.5mm	1.0mm



4) Gradually tighten to the specified torque value diagonally with a torque wrench.

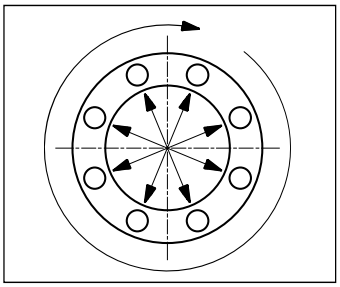
5) Tighten clockwise at least two turns at the specified torque value.

⚠Caution

Prohibition

The valve can be damaged, or leak.

▶ Do not tighten more than the specified torque value.
(risk of leakage or damage)



Flange tightening torque Units;N•m

DN (mm)	50	80,100	125,150	200,250
Type 55	22.5	30.0	40.0	55.0

DN (mm)	50～100	125, 150	200, 250	300, 350	400
Type 55IS	30.0	40.0	55.0	60.0	80.0

NOTE; The four bolted holes on the nominal 80mm of 55IS are holes for JIS10K and DIN PN10. Not used when piped with JIS5K or ANSI class150.

Limit switch wiring method

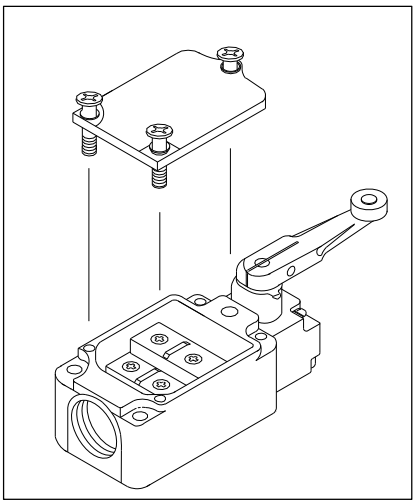
Warning	
Prohibition	**Electric shock or sudden start of the machine may occur.** ▶ Do not connect or separate lines to the limit switch in the power supply status.

Caution	
Prohibition	**The limit switch can be damaged.** ▶ Do not leave or use with the cover open. (Water or dust may penetrate and cause operation failure.) ▶ Connect the wires using solderless terminals with insulation covering so that they do not come into contact with the cover or housing. (If the crimp terminal comes into contact with the cover, the cover may not tighten or a ground fault may occur.)
Forcing	**The limit switch can be damaged.** ▶ Contact CKD when using the limit switch in a 1mA～100mA, DC5～30V. ▶ Securely attach the cover. (Rainwater may enter and cause malfunction.)

Preparations	▶ Phillips screwdriver ▶ Connector (G1/2) ▶ Flat-blade screwdriver ▶ Wire stripper

[When limit switch is 1LS1-J]

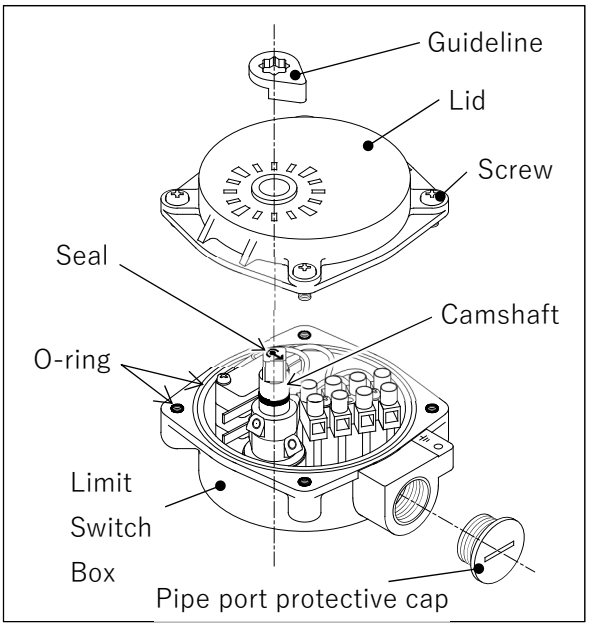
[Procedure]



1) Loosen the three screws holding the limit switch cover with a Phillips screwdriver and remove the cover. (The screws are structured so that they do not come off the cover.)
2) Pull off the resin protective cap.
3) Pass the cable through the connector.
4) Peel off the outer skin of the cable with a wire stripper.
5) Use a terminal crimping tool to attach the crimping terminal to the lead wire.
6) Wire the terminal screw with a Phillips screwdriver as shown in the internal circuit diagram on page 8. (Tighten the screws securely.)
7) Attach the cover by tightening the screws (3 places) holding the limit switch cover with a Phillips screwdriver.
8) Tighten the cable with the connector.

[When limit switch is TA2-SB2]

[Procedure]



1) Remove the pointer by hand.
2) Loosen the four screws holding the lid with a Phillips screwdriver and remove them. (Do not lose the O-ring)
3) Turn the pipe port protection cap counterclockwise to remove it.
4) Pass the cable through the connector.
5) Peel off the outer skin of the cable with a wire stripper.
6) Wire the terminal screw with a flat-blade screwdriver according to the internal circuit diagram on page 8.
7) Tighten the connector to secure the cable.
8) After attaching the lid, tighten the four screws alternately and evenly with a Phillips screwdriver.
9) Insert the pointer so that the direction of the seal arrow on the camshaft head matches the direction of the pointer.

6. Operation method

▶ Valve opening and closing operations

⚠Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ Do not turn the handle unnecessarily with excessive force when fully closing or opening the valve. ▶ Do not open or close the valve with dust or other foreign matter in the fluid.

⚠Caution	
Forcing	**The valve can be damaged, or leak.** ▶ 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. ▶ Handle operation must be done by hand. ▶ Be sure to pass water before opening/closing the oil-prohibited parts.

Lever type

▶ Turn gently to open/close operation.

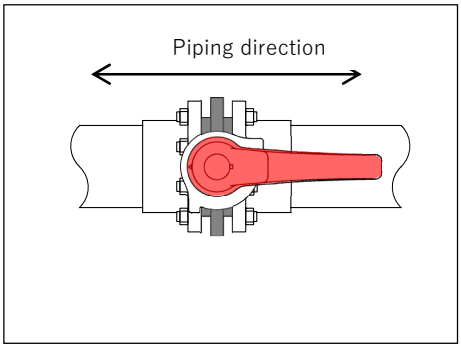
▶ For the lever type, the handle and the disc are oriented in the same direction.

When fully opened, the handle is parallel to the piping direction.

When fully closed, the handle is perpendicular to the piping direction.

The fully closed position has a tightening allowance of approximately 5 degrees, so fluid can be sealed within the closing side scale of the locking plate. (See **Fig. 6-1**.)

Fully open state



Fully closed state

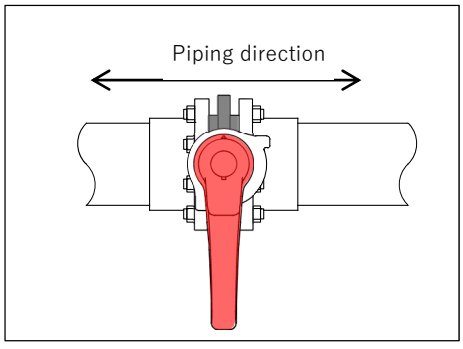
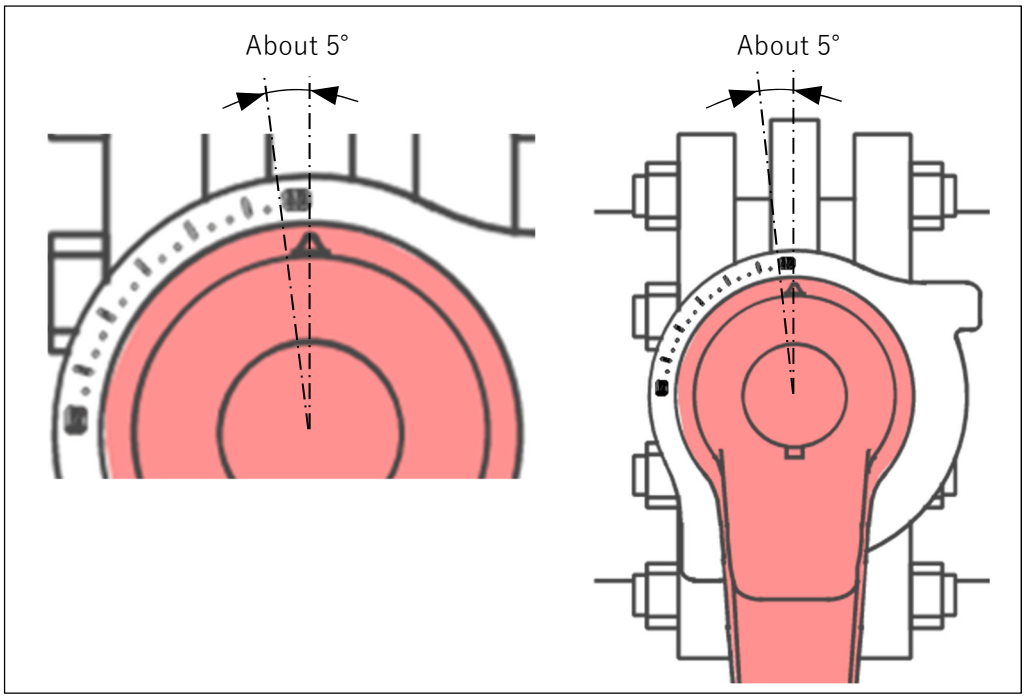


Figure 6-1 Fully Closed State (Enlarged View)

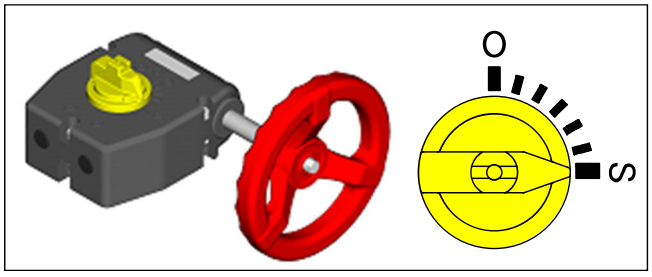


Side gear type

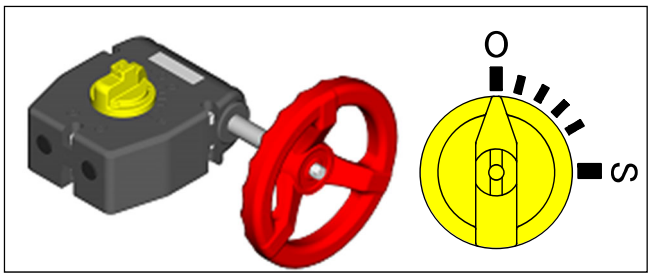
▶ For the gear type, check the movement of the opening instruction at the top of the gear box.
When the valve is fully closed, the position of "S" (SHUT) is pointed.
When the valve is fully open, the position of "O" (OPEN) will be oriented.

▶ The side gear type and top gear type are both infinitely adjustable. When you want to tighten the disc further, please adjust the stopper bolt on the gearbox.

Fully closed state



Fully open state



7. Disassembly/assembly method for parts replacement

⚠ Warning	
Forcing	**Serious injury can result.** ▶ Be sure to perform safety inspections of the machine tool and power tool before starting operation. ▶ Wear appropriate protective equipment for the work details when installing piping.

⚠ Caution	
Forcing	**The valve can be damaged, or leak.** ▶ When installing the product, make sure that no excessive stress such as tension, compression, bending or impact is applied to the piping or valve. ▶ Completely drain the fluid in the piping when replacing the valve or replacing parts.

Preparations	▶ Protective gloves	▶ Protective goggles	▶ Wrench
	▶ Socket wrench	▶ Phillips screwdriver	▶ Flat-blade screwdriver
	▶ AV packing (if required)	▶ Plastic hammer (if necessary)	

[Procedure]

<**Disassembly**>

1) Completely drain the fluid in the piping.

2) Put the valve in a slightly open state.

3) Loosen the connecting bolts and nuts with a wrench.

4) Disconnect the valve from the pipe.

5) For lever type

Remove cap [11] with a flathead screwdriver and loosen bolt (C) [17] with a socket wrench. Next, press the handle lever [13] and remove the handle [12]. Loosen the setscrew [19] with a Phillips screwdriver and remove the locking plate [18].

For gear type

Loosen the connecting bolt to the gearbox [8] with a spanner and pull the gearbox [8] upward to remove it.

<**Assembly**>

1) Follow the procedure from 5) to the disassembly procedure in reverse.

8. How to adjust the stopper

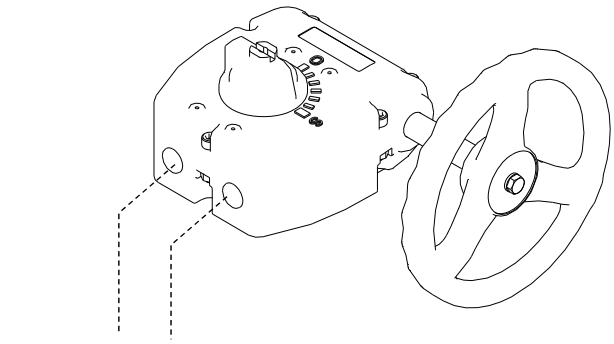
Preparations ▶ Protective gloves ▶ Hex wrench (4mm)

Lever-type opening adjustment is performed using the locking plate [18], but the farthest end of the lock is fully open and fully closed, and no further adjustment is possible.
The side gear type opening adjustment is stepless, and if you want to tighten the disc more deeply, you can do it by adjusting the stopper bolt on the gear box.

[Procedure]

For fully closed side adjustment

1) Remove the fully closed side cap of the gearbox by hand.
2) Loosen the stopper with an Allen wrench.
3) Carry out manual operation of the valve and move the disc to the position where you want to tighten.
4) Tighten the stopper with an Allen wrench.
5) Attach the fully closed side cap of the gearbox by hand.



For full-open side adjustment

1) Remove the fully open side cap of the gear box by hand.
2) Loosen the stopper with an Allen wrench.
3) Carry out manual operation of the valve and move the disc to the position where you want to open.
4) Tighten the stopper with an Allen wrench.
5) Attach the fully open side cap of the gear box by hand.

9. Inspection item

⚠Caution	
Forcing	**The valve can be damaged, or leak.** ▶ 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 "**10. Cause of trouble and remedy**".

Daily inspection

As inspection items Inspection method	Guideline of judgment	Check point	Treatment method
External leakage (visual inspection)	For leakage No	Pipe flange connection	① Retighten the pipe bolts to the specified torque. ② Remove the valve from the pipe and re-tighten the pipe bolts. (Ref: 5. Piping)
		Top flange of the valve	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. Disassembly/assembly method for parts replacement)
		Surface of the entire valve	Remove the valve from the pipe and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
Internal leakage (visual and measurement)	For leakage No	Leakage to secondary side when valve is fully closed	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. Disassembly/assembly method for parts replacement)
		Measured values of flowmeters, pressure gauges, etc.	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. Disassembly/assembly method for parts replacement)
Abnormal noise (hearing)	Of abnormal noise No	Valve	Remove the valve from the pipe and replace the valve or actuator. (Ref: 7. Disassembly/assembly method for parts replacement)
		Piping around the valve	Reconfirm the conditions of use (Ref: 2. Safety Instructions [Product handling])

Periodic inspection

●Guideline for the inspection cycle: 3 months

As inspection items Inspection method	Guideline of judgment	Check point	Remedy for malfunctions
Vibration (palpation)	To differences from other parts No	Valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions [Product handling])
			Remove the valve from the pipe and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
		Piping around the valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions [Product handling])

Periodic inspection

●Guideline of the inspection cycle: 6 months

As inspection items Inspection method	Guideline of judgment	Check point	Remedy for malfunctions
On the manual handle Operability (touch)	Smoothly turning	Manual operation unit	Remove the valve from the pipe and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
Of bolts looseness (visual and palpation)	Loose No	For flange piping	Retighten the pipe bolts to the specified torque. (Ref: 5. Piping)
Corrosion or rust (visual inspection)	Corrosion or of rust No	Product appearance	Remove the valve from the pipe and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
Product damage	No scratches, cracks, or deformation	Product appearance	Remove the valve from the pipe and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)

10. Cause of malfunction and remedy

⚠Caution	
Forcing	**There is a danger of injury.** ▶ If any malfunction is found, immediately stop using the product and take appropriate action. ▶ When removing the valve from the piping when replacing the valve or parts, completely remove the fluid from the piping before starting work.

Failure phenomenon	Possible cause	Measures
The handle does not turn (cannot turn) during manual operation.	The valve is already fully open (or fully closed).	Rotate the handle in the opposite direction (Ref.: 6. Operation method)
	Foreign matter caught in valve	Remove the valve from the piping, disassemble it, and remove foreign matter. (Ref: 7. Disassembly/assembly method for parts 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 [Product handling])
	Gearbox failure	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
	Stem corroded or damaged	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)

Failure phenomenon	Possible cause	Measures and measures
Fluid does not stop even when fully closed (Internal leakage)	High fluid pressure	Use below the maximum allowable pressure (Ref: 2. Safety Instructions [Product handling])
	Seat or disc is worn or scratched	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)
	Foreign matter caught in valve	Remove the valve from the piping, disassemble it, and remove foreign matter. (Ref: 7. Disassembly/assembly method for parts replacement)
	Piping bolts are over-tightened or uni-tightened	Retighten the piping bolts (Ref: 5. Piping method)
Fluid leaks from the valve. (external leak)	Valve is cracked or broken	Stop using the product immediately, remove the valve from the piping, and replace the valve. (Ref: 7. Disassembly/assembly method for parts replacement)

11. Disposal method of residual materials and waste materials

⚠ Warning	
Forcing	**When burnt, toxic gas is generated.** ▶ 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]

Butterfly valve Type 55
Butterfly valve Type 55IS
(Lever type/Side gear type)

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

Please note that the content of this manual is subject to change without notice. **November 2023**