Butterfly valve Type 56/75 (Body material: PP, PVDF) Butterfly valve Type 56D /75D (Body material: PDCPD) 400～600mm

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

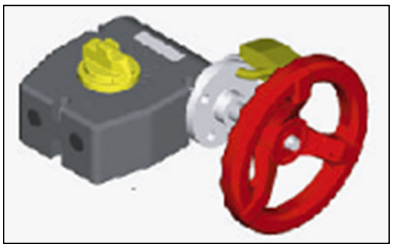
Warning	
Prohibition	**Serious injury can result.** ▶ When hanging or slinging a valve, pay sufficient attention to safety, and do not enter under the load.

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

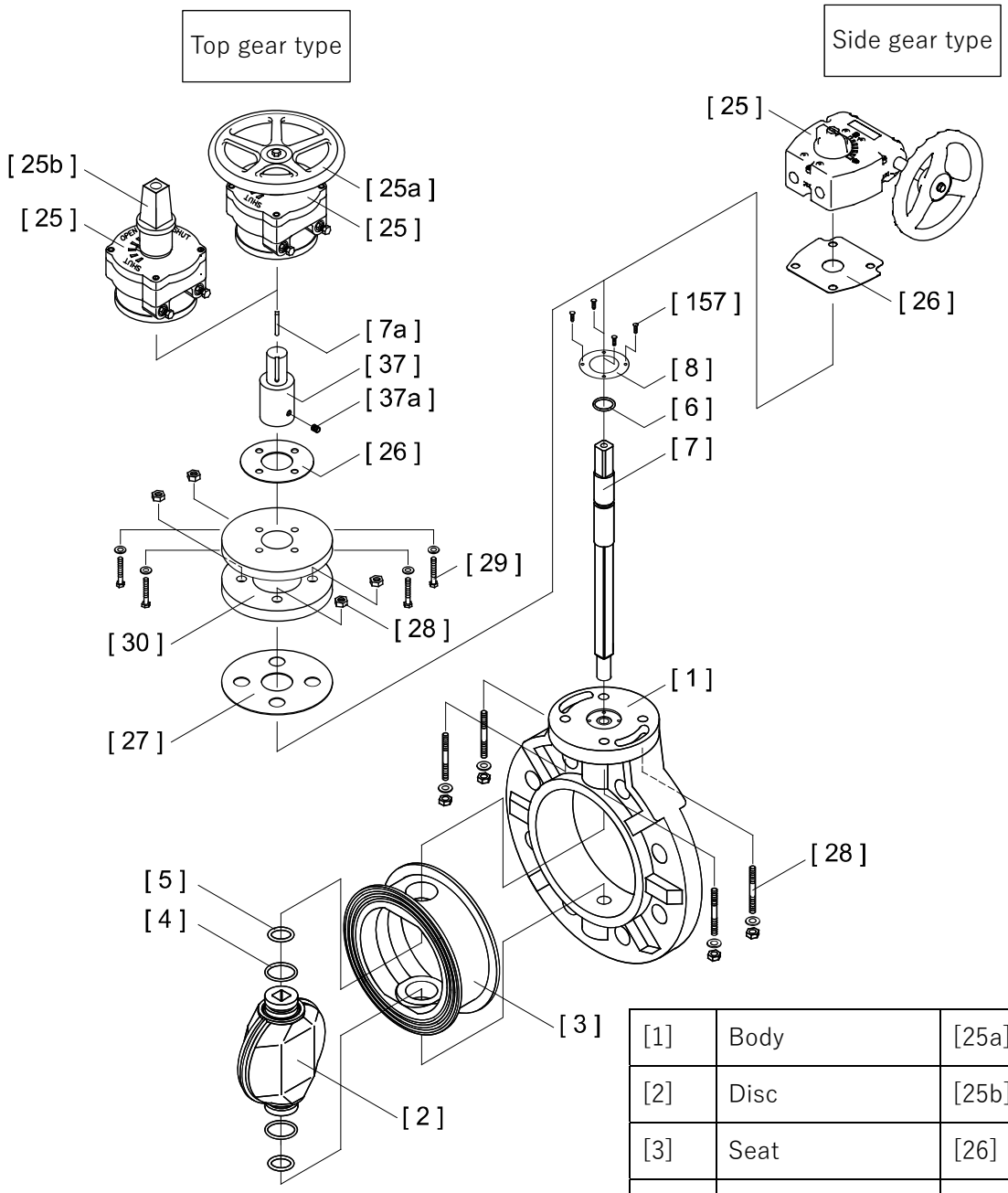
⚠ Warning	
Forcing	**The valve can be damaged or seriously injured.** ▶ If positive pressure gas is used for our resin piping material, a dangerous condition may occur due to the repulsive force peculiar to compressible fluids even if the pressure is the same as the water pressure. Therefore, be sure to take safety measures for the surrounding area, such as covering the piping with protective materials. 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	**Damage may occur.** ▶ Do not step on the valve or place heavy objects on it. **The product can be deformed, damaged, or cause a fire.** ▶ Keep away from fire and hot objects.
Forcing	**The valve can be damaged, or leak.** ▶ 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.) ▶ 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 on a regular basis referring to "00. Inspection items." Pay particular attention to temperature changes and aging during long-term storage or shutdown or use.

⚠Caution	
Forcing	**The valve can be damaged, or leak.** ▶ The butterfly valve (side gear type) has a self-locking worm gear structure. Under normal operating conditions, the valve opening can be adjusted as desired to adjust the flow rate. Depending on the effects of vibration or fluid (high flow velocity, turbulence, etc.), the disk may move to the closed side when used at a medium opening. Specify the optional "Handle Lock" as required. The handle lock mechanism prevents the valve opening from being changed when the valve is operated at an arbitrary opening under severe conditions.  ▶ When used with a high temperature fluid, the misalignment of the valve and flange shaft may cause sheet damage. Exercise due caution when installing the valve.

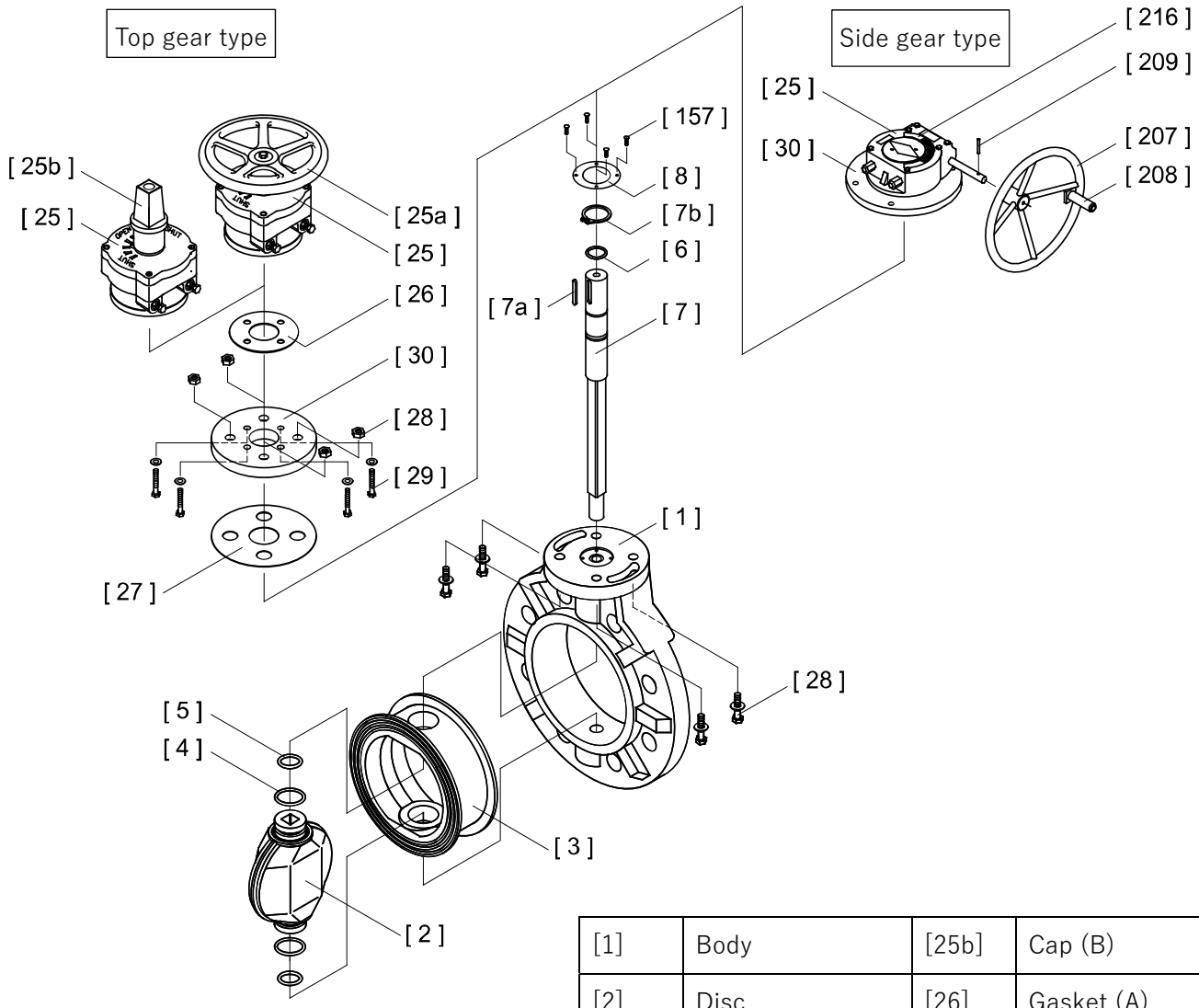
3. Name of part

Type 56 [400mm] / Body material: PP, PVDF



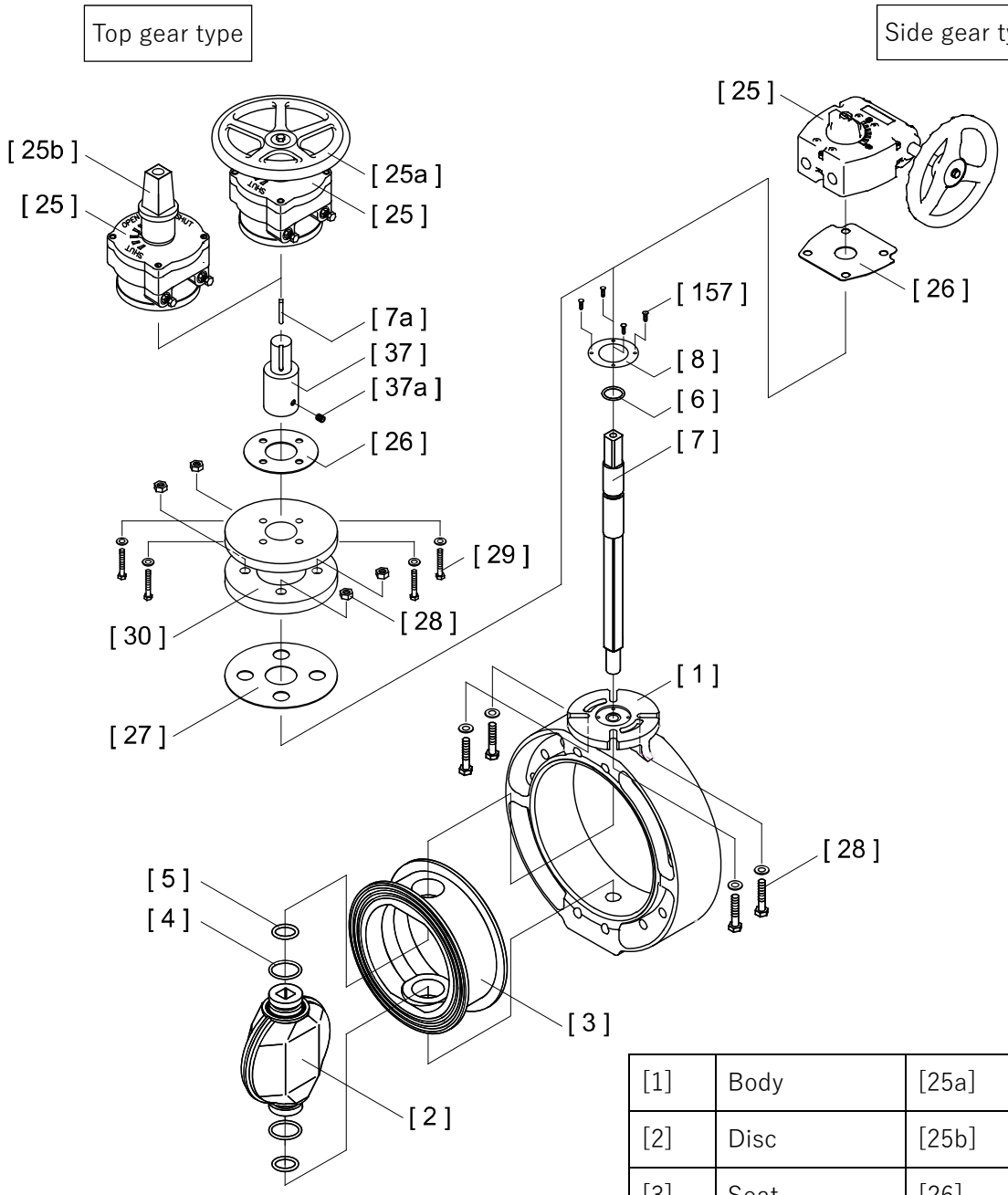
[1]	Body	[25a]	Handle Wheel (A)
[2]	Disc	[25b]	Cap (B)
[3]	Seat	[26]	Gasket (A)
[4]	O-ring (A)	[27]	Gasket (B)
[5]	O-ring (B)	[28]	Bolt/nut (G)
[6]	O-ring (C)	[29]	Bolt (D)
[7]	Stem	[30]	Stand
[7a]	Key (A)	[37]	Joint
[8]	Stem retainer (A)	[37a]	Screw (C)
[25]	Gear box	[157]	Screw (F)

Type 75 [450 to 600mm] / Body material: PP, PVDF



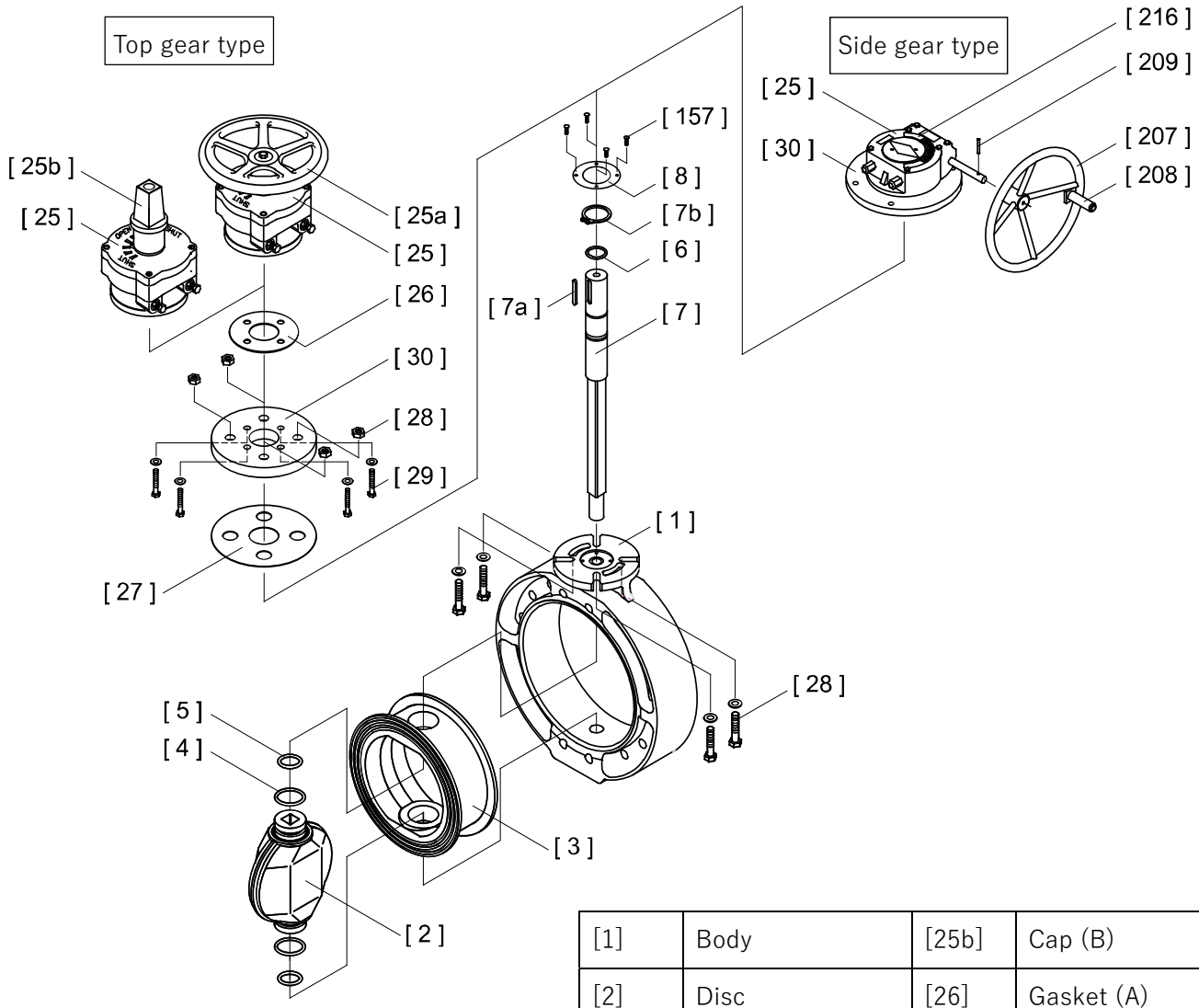
[1]	Body	[25b]	Cap (B)
[2]	Disc	[26]	Gasket (A)
[3]	Seat	[27]	Gasket (B)
[4]	O-ring (A)	[28]	Bolt/nut (G)
[5]	O-ring (B)	[29]	Bolt (D)
[6]	O-ring (C)	[30]	Stand
[7]	Stem	[157]	Screw (F)
[7a]	Key (A)	[207]	Handle (C)
[7b]	Snap ring	[208]	Handle grip
[8]	Stem retainer (A)	[209]	Spring pin
[25]	Gear box	[216]	Scale Plate
[25a]	Handle Wheel (A)		

Type 56D [400mm] / Body material: PDCPD



[1]	Body	[25a]	Handle Wheel (A)
[2]	Disc	[25b]	Cap (B)
[3]	Seat	[26]	Gasket (A)
[4]	O-ring (A)	[27]	Gasket (B)
[5]	O-ring (B)	[28]	Bolt/nut (G)
[6]	O-ring (C)	[29]	Bolt (D)
[7]	Stem	[30]	Stand
[7a]	Key (A)	[37]	Joint
[8]	Stem retainer (A)	[37a]	Screw (C)
[25]	Gear box	[157]	Screw (F)

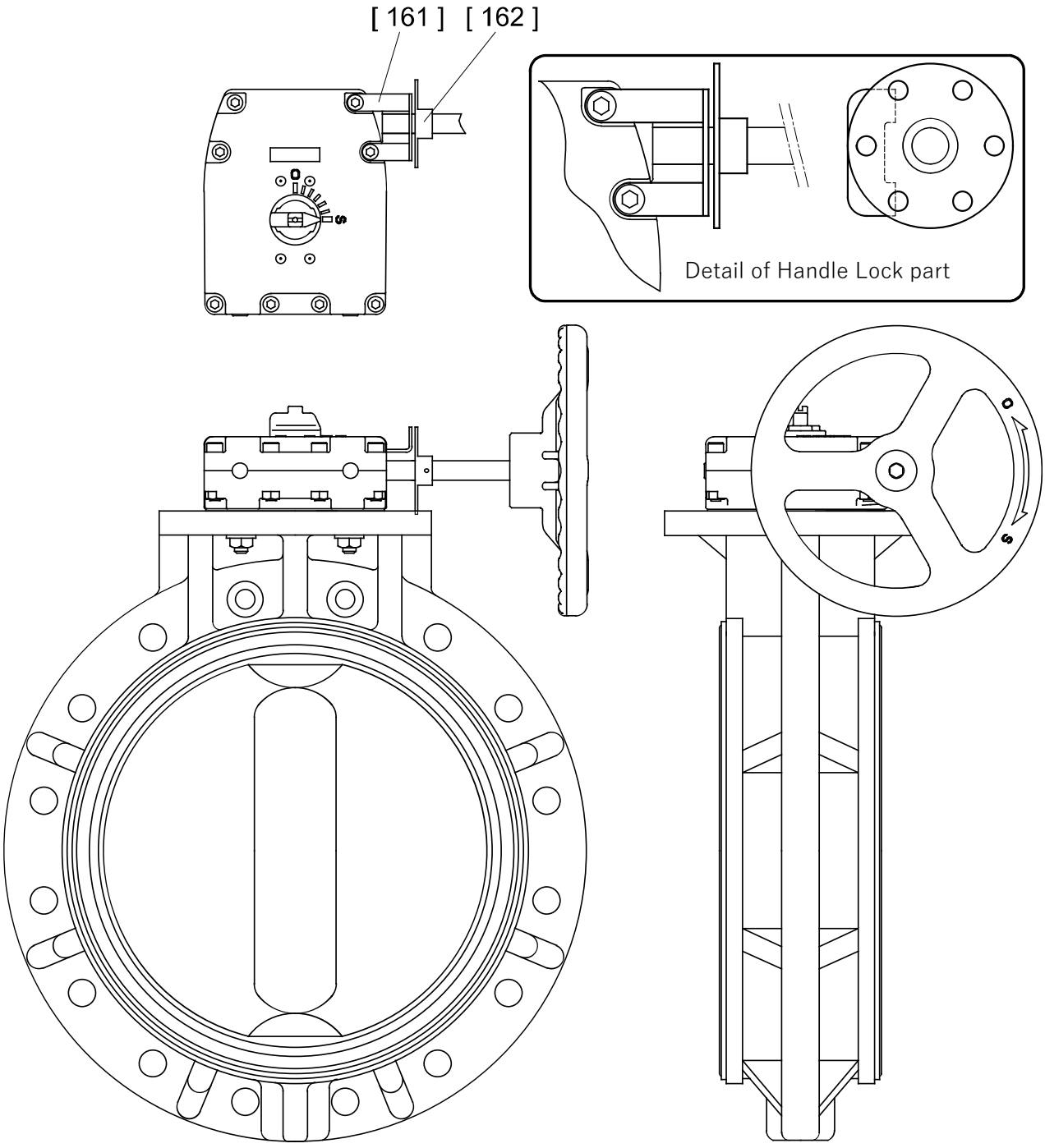
Type 75D [450 to 600mm] / Body material: PDCPD



[1]	Body	[25b]	Cap (B)
[2]	Disc	[26]	Gasket (A)
[3]	Seat	[27]	Gasket (B)
[4]	O-ring (A)	[28]	Bolt/nut (G)
[5]	O-ring (B)	[29]	Bolt (D)
[6]	O-ring (C)	[30]	Stand
[7]	Stem	[157]	Screw (F)
[7a]	Key (A)	[207]	Handle (C)
[7b]	Snap ring	[208]	Handle grip
[8]	Stem retainer (A)	[209]	Spring pin
[25]	Gear box	[216]	Scale Plate
[25a]	Handle Wheel (A)		

Type 56 [400mm] / Body material: PP, PVDF
Type 56D [400mm] / Body material: PDCPD

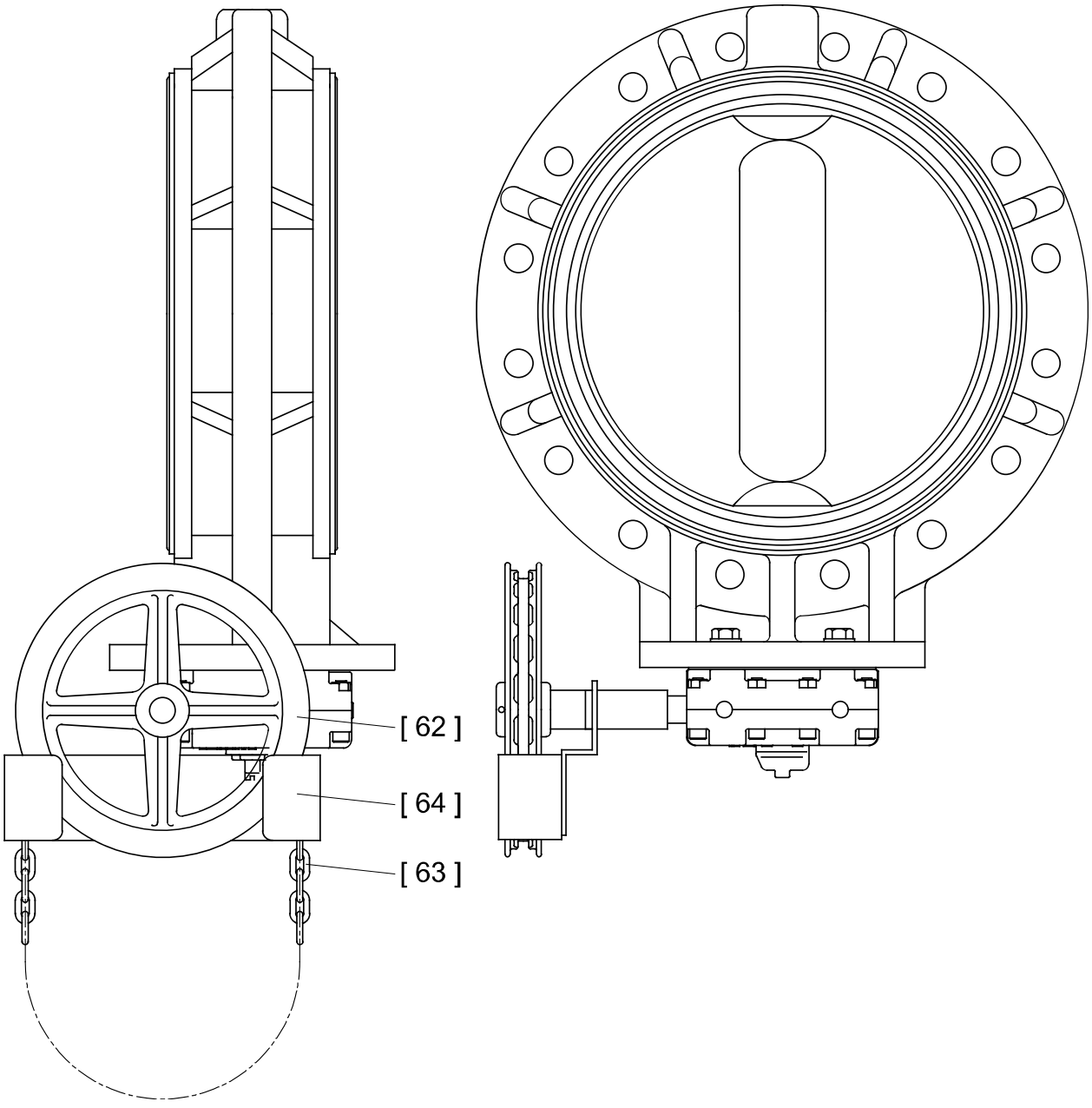
With handle lock (option)



[161]	Locking plate (A)
[162]	Locking plate (B)

Type 56 & 75 [400 to 600mm] / Body material: PP, PVDF
Type 56D & 75D [400 to 600mm] / Body material: PDCPD

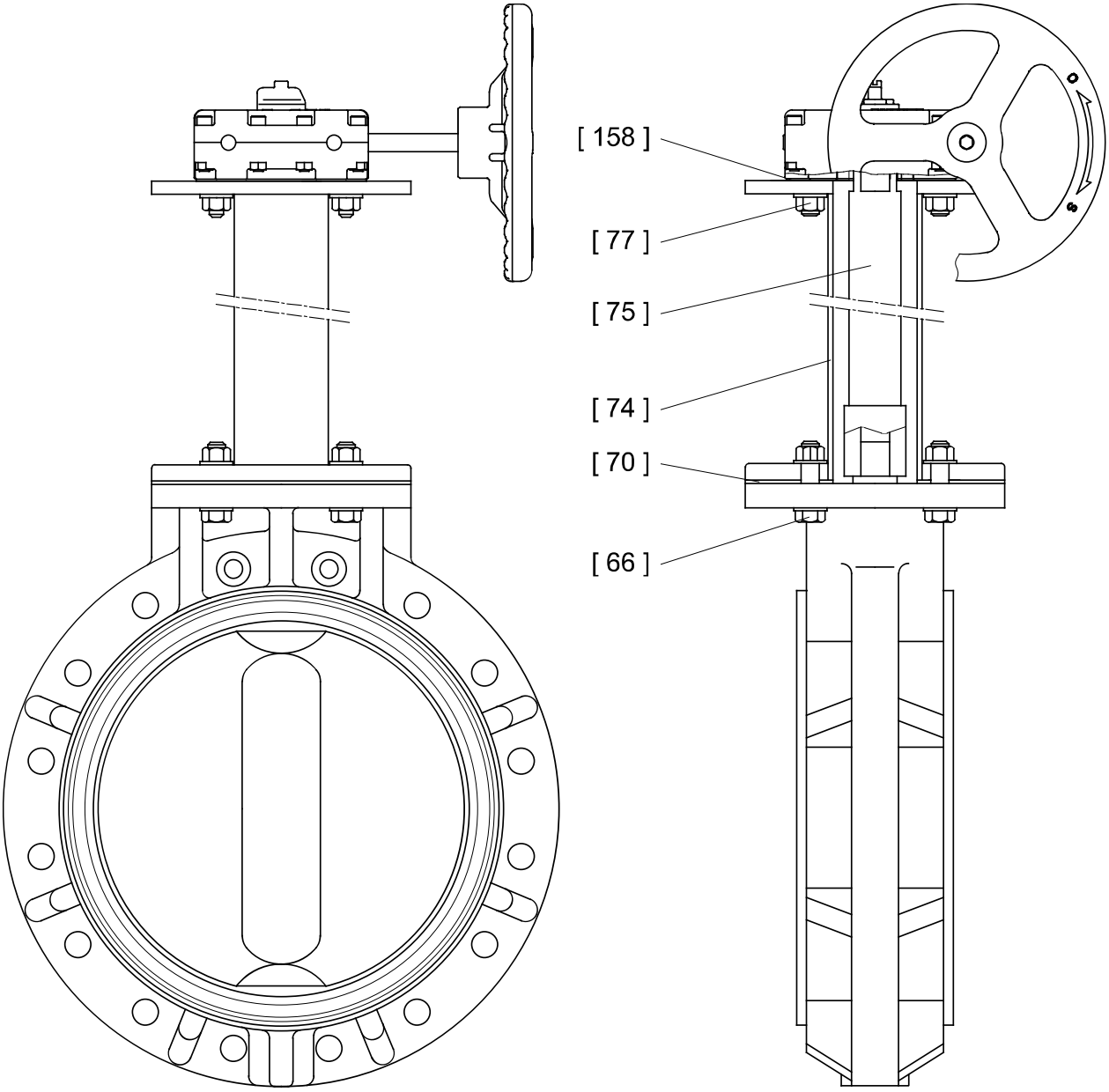
Chain type (option)



[62]	Sprocket Wheel
[63]	Chain (A)
[64]	Chain cover

Type 56 & 75 [400 to 600mm] / Body material: PP, PVDF
Type 56D & 75D [400 to 600mm] / Body material: PDCPD

Long stem type (option)

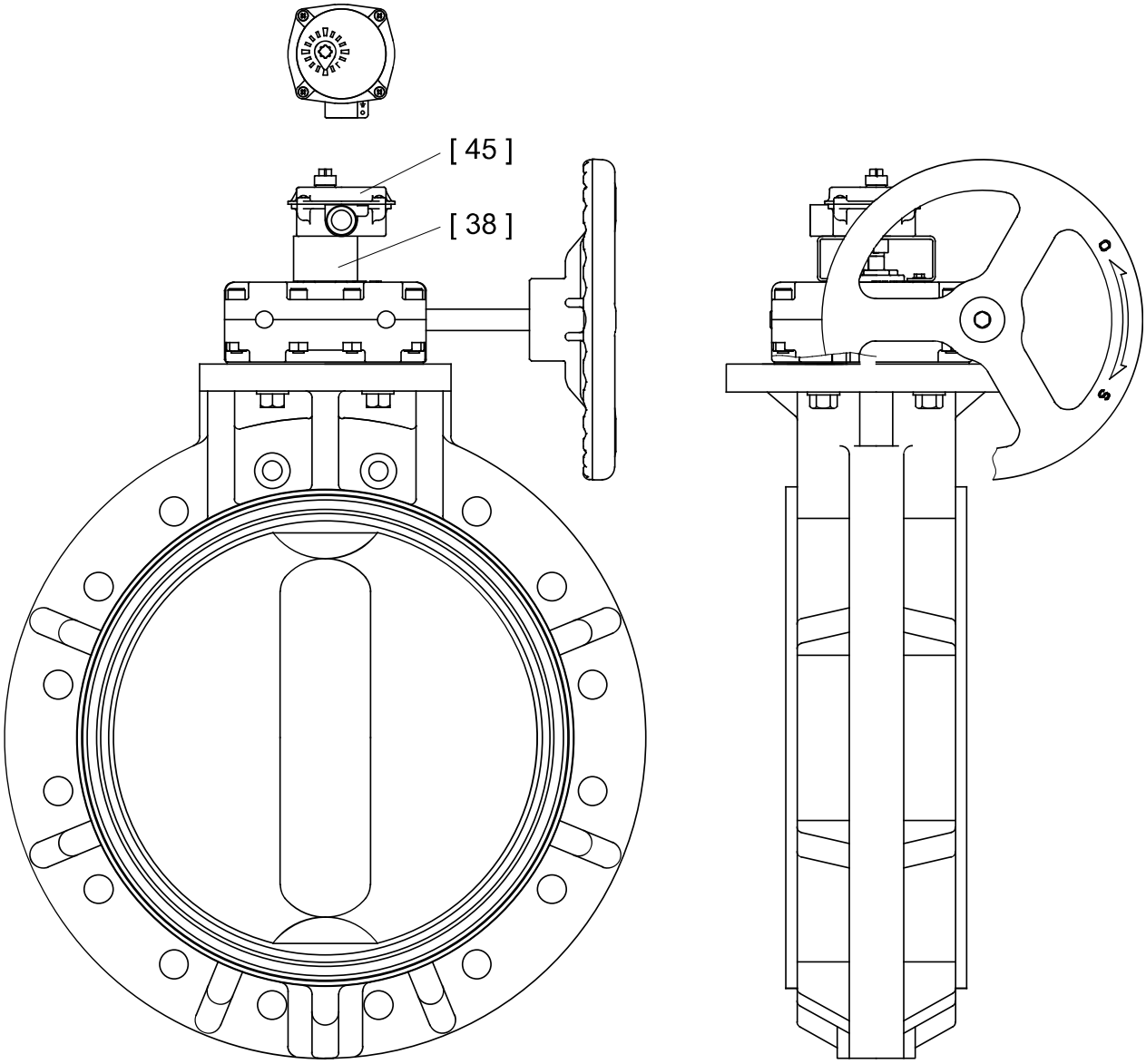


[66]	Bolt/nut (B)	[75]	Shaft
[70]	Gasket (C)	[77]	Bolt (H)
[74]	Pipe	[158]	Gasket (L)

Type 56 [400mm] / Body material: PP, PVDF

Type 56D [400mm] / Body material: PDCPD

With limit switch box (option)



[38]	Bracket (A)
[45]	Limit switch box

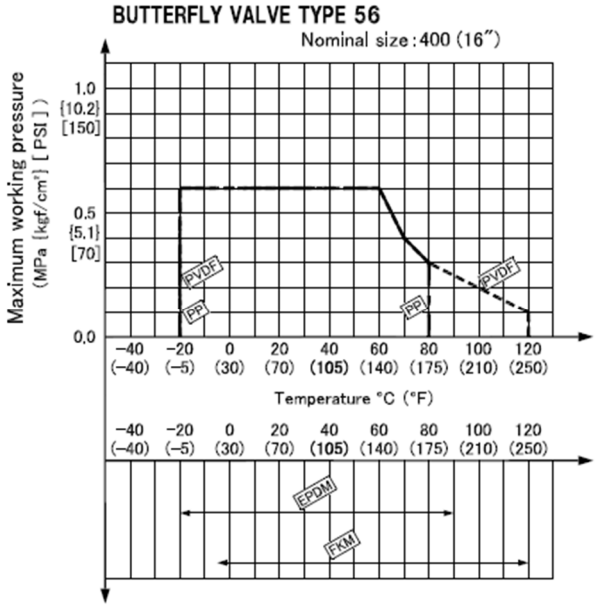
4. Product Specifications

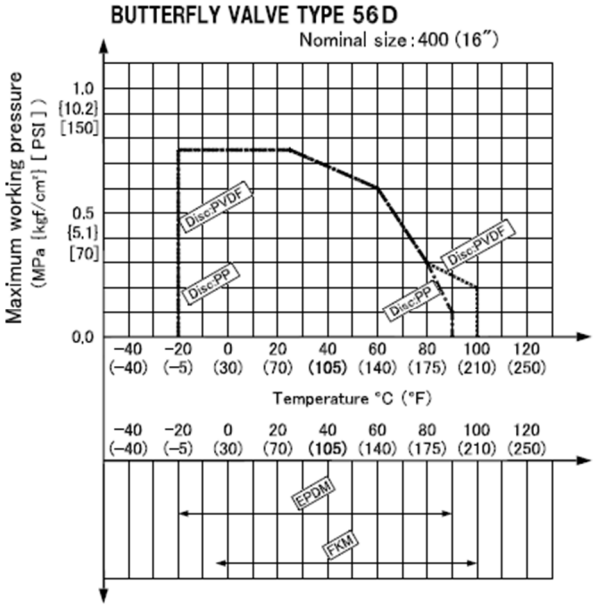
Product Model Code List

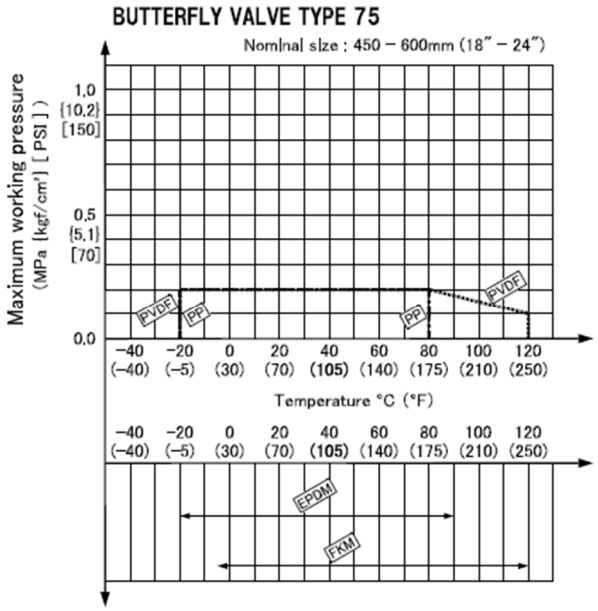
ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE	DISC PVDF
V	* *	S G	*	*	W	*	* * *	0Q※

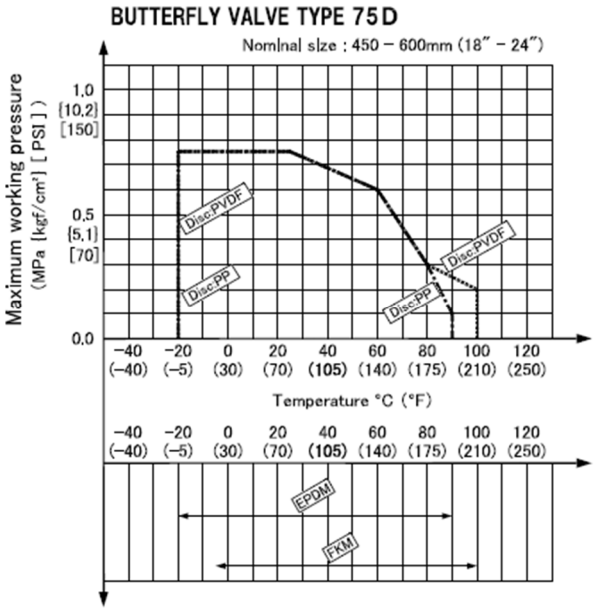
V MANUAL VALVE	56 TYPE 56 75 TYPE 75	SG SIDE GEAR TYPE	P PP F PVDF D PDCPD	E EPDM V FKM	W WAFER	1 JIS 10K D DIN A ANSI	400 400mm 450 450mm 500 500mm 600 600mm	※ Used when the disc material is PVDF.

Relationship between maximum allowable pressure and temperature





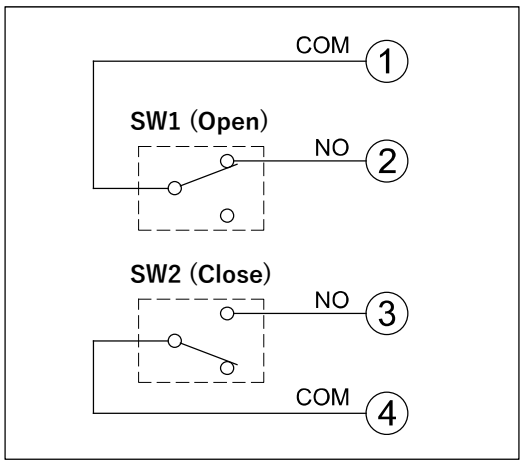




Limit Switch Box Specifications (Option)

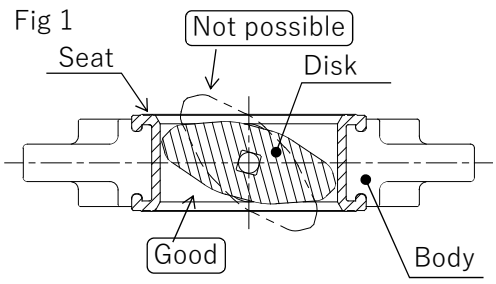
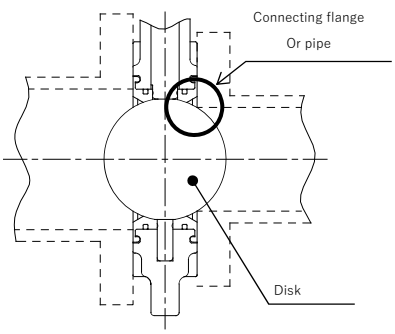
Size	Operation method	Model	Protection grade	Rated voltage (V)	Resistance load (A)	Induction load (A)
400mm	Side gear type	TA-200-SB2	IP55	125AC	11	7
				250AC	11	7
				125DC	0.5	0.1
				250DC	0.25	0.04

Internal circuit diagram (fully open)



5. Piping method

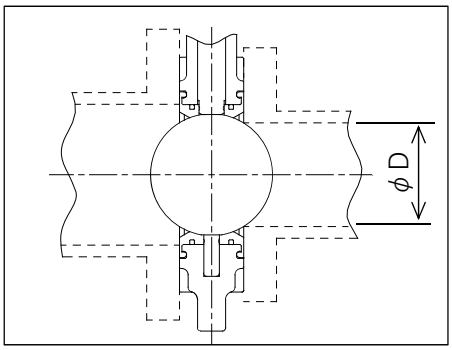
Warning	
Prohibition	**Serious injury can result.** ▶ When hanging or slinging a valve, pay sufficient attention to safety, and do not enter under the load.
Forcing	**There is a danger of injury.** ▶ Be sure to perform safety inspections of the machine tool and power tool beforehand. ▶ Wear appropriate protective equipment according to the type of work being performed.

Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ Be careful not to overtighten the pipe support when you remove it with a U band or the like. ▶ When installing piping, do not install it in the fully closed state. (The disc may bite into the seat, causing the operation torque to become heavy and the open/close operation may become impossible.)
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. ▶ Use a connection flange with a full-face seat. ▶ Check that the flange standards of each other are correct. ▶ No gasket is required. (Valve seat [3] acts as gasket) **Doing so may cause scratches.** ▶ The unit is shipped in the "Good" state as shown in Fig. 1. If the valve is opened or closed during piping installation, be sure to return the disc to the original condition (Refer to "Good" in Fig. 1) after operation before installing. Care should be taken to prevent damage to the sealing surface of the disc if it is transported or installed under the condition of "Not feasible" in Fig. 1. ▶ If the inner diameter of the connection (flange, pipe) is small, chamfer the inside of the connection to avoid contact between the valve disk and the inner surface of the connection. (Refer to Fig. 2.) Fig 1  Fig 2 

⚠Caution

Forcing

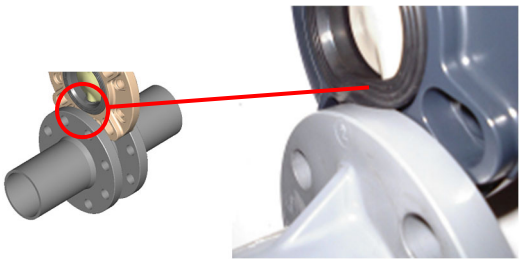
▶ When using one with a large wall thickness of the connecting part (flange/pipe) with the valve, make sure that the inner diameter of the connecting part is equal to or greater than the following value to avoid contact between the disk and the inner surface of the connecting part. Perform chamfering of the inner end of the connecting part in the following cases.



Size (mm)	Bore diameter D (mm)
400	370
450	422
500	472
600	572

Doing so may cause scratches.

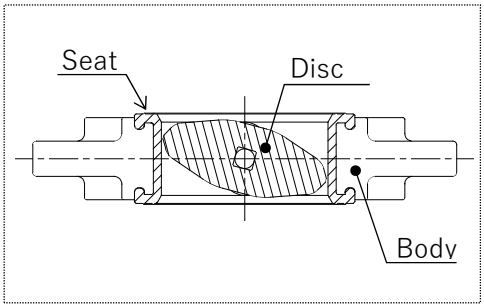
▶ When inserting the valve between the flanges, fully widen the space between the faces before inserting. (If the valve is forcibly inserted without sufficiently expanding the space between the flanges, the seat may be flipped off and scratches may occur.)



Preparations	▶ Torque wrench ▶ wrench ▶ Through bolts, nuts and washers (Dimensions in the next section)

[Procedure]

1) Slightly open the disc with 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.

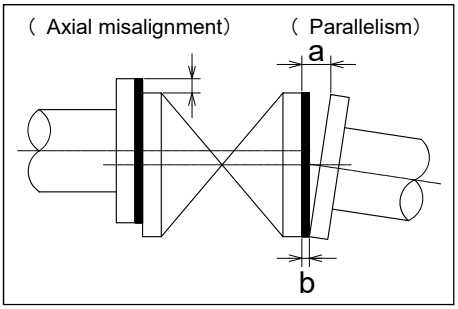


⚠Caution

Forcing

Damage may occur.

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



SIZE (mm)	Axial misalignment	Parallelism (a-b)
400～600	1.5mm	1.0mm

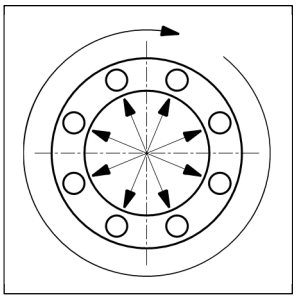
4) Gradually tighten to the specified torque value diagonally with a torque wrench.
5) Tighten clockwise at least two turns at the specified torque value.

⚠Caution

Prohibition

Damage or leakage may occur.

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



Flange tightening torque Unit; N-m

Size (mm)	400	450	500	600
Torque value	80.0		100.0	

Dimensions of through bolt (bolt A) and screw-in bolt (bolt B)

▶ JIS 10K [Body material: PP, PVDF, PDCPD]

Size		Bolt A				Bolt B			Nut & Washer
mm	Inch	d	L (mm)	S (mm)	Quantity	d_1	L_1 (mm)	Quantity	Quantity
400	16"	M24	290	60	14	M24	120	4	32
450	18"	M24	310	65	16	M24	120	8	40
500	20"	M24	320	65	16	M24	120	8	40
600	24"	M30	350	75	20	M30	140	8	48

Note 1. The Size 400～600mm in the above figures are the bolt dimensions when JIS B 2220 "Steel Pipe Flange" nominal pressure 10K is used.

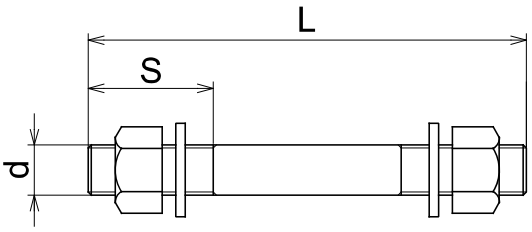
Note 2. The quantity of nuts and washers is the quantity of two sets (one bolt/two nuts and two washers) for bolt A, and one set (one bolt/one nut and one washer) for bolt B.

▶ JIS 5K [Body material: PP, PVDF]

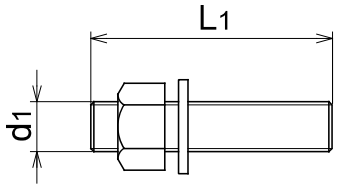
Size		Bolt A				Bolt B			Nut & Washer
mm	Inch	d	L (mm)	S (mm)	Quantity	d_1	L_1 (mm)	Quantity	Quantity
400	16"	M22	260	55	16	-	-	-	32
450	18"	M22	270	55	16	-	-	-	32
500	20"	M22	280	55	20	-	-	-	40
600	24"	M24	320	60	20	-	-	-	40

Note 1. The Size 400～600mm in the above figures are the bolt dimensions when JIS B 2220 "steel pipe flange" nominal pressure 5K is used.

Note 2. The quantity of nuts and washers is the quantity of two sets (one bolt/two nuts and two washers) for bolt A.



Bolt A



Bolt B

Limit switch box connection method (option)

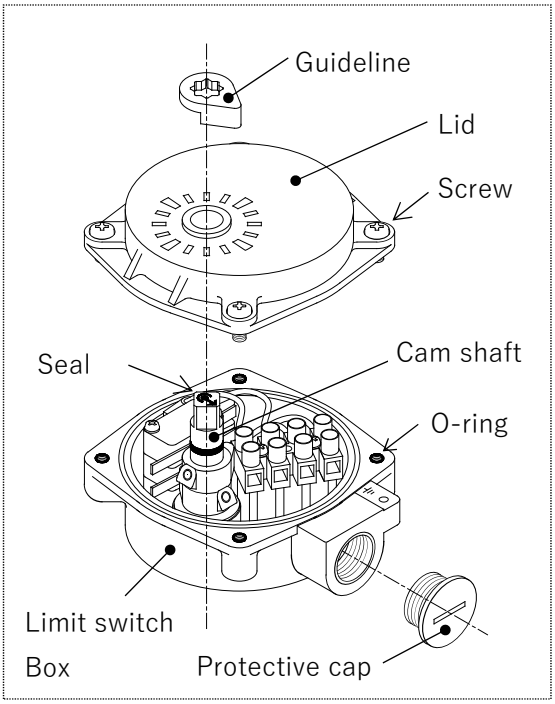
Warning	
Prohibition	**Serious injury can result.** ▶ Do not connect or detach lines to the limit switch in the electric power state. (Electric shock or sudden machine start)

Caution	
Prohibition	**The valve can be damaged, or leak.** ▶ Do not leave or use with the cover open. (Water or dust may penetrate and cause operation failure.)
Forcing	**The valve can be damaged, or leak.** ▶ 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.) ▶ Contact CKD when using the limit switch in a 1mA～100mA, 5～30V. ▶ Securely attach the cover. (Rainwater may enter and cause malfunction.)

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

[Procedure]

1) Remove the pointer by pulling it with your hand.
2) Loosen the four screws securing the lid with a Phillips screwdriver to remove it. (Do not lose the O-ring)
3) Remove the protective cap from the piping port by turning it counterclockwise.
4) Pass the cable through the connector.
5) Peel off the outer skin of the cable with a wire stripper.
6) Connect the terminal screws with a flathead screwdriver as shown in the internal circuit diagram on page 14.
7) Tighten the connector to secure the cable.
8) After attaching the lid, tighten the screws (4 locations) 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.



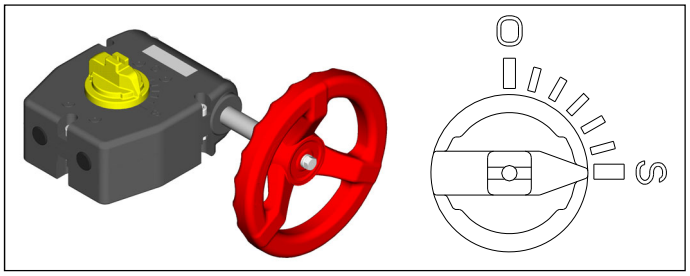
6. Operation method

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

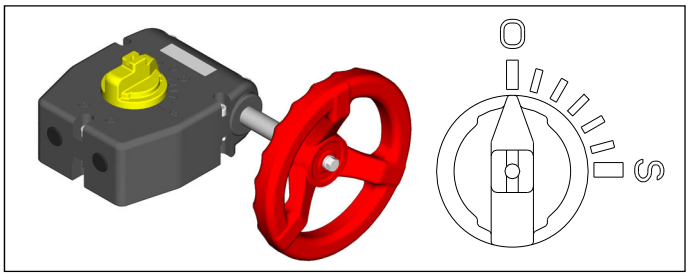
▶ When the valve is fully closed, the position of SHUT is indicated.
▶ When the valve is fully open, the opening is indicated, and OPEN position is oriented.

○Side Gear (Type 3) [Size: 400mm (Butterfly Valve 56, 56D Type)]

Fully closed state

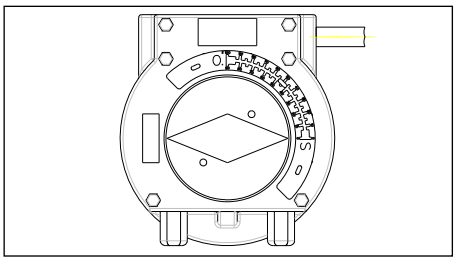


Fully open state

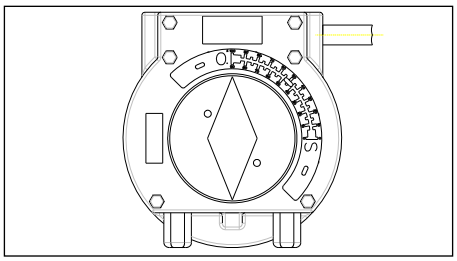


○Side Gear (AB1250N) [Size: 450 - 600mm (Butterfly Valve 75, 75D Type)]

Fully closed state

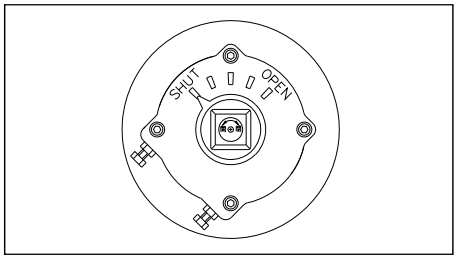


Fully open state

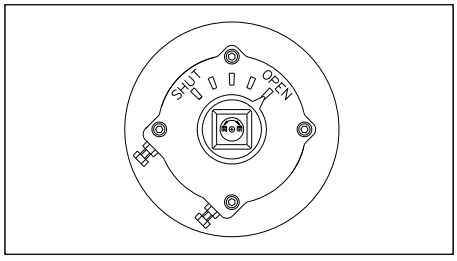


○Top-gear (RVA-03-UG, RVA-04-UG) [Size: 400-600mm (butterfly valve 56, 56D, 75, 75D type)]

Fully closed state



Fully open state



○Side Gear Type (Type 3/ AB1250N) Handle Operating Force

Size	Stem torque (sealing torque)		Handle Diameter	STRG control force	
Body material	PP, PVDF	PDCPD		PP, PVDF	PDCPD
mm	N-m	N-m	mm	N	N
400	760	1300	300	170	290
450	820	1500	400	127	236
500	1150	1800	400	178	286
600	1600	1900	400	248	302

※ The above values are for reference only. (It is a measured value in the standard condition, and it varies depending on various conditions)

※ The handle operating force (N) of the gear type is the value when the handle is operated with both hands.

○Top-gear (RVA-03-UG/ RVA-04-UG) steering wheel operating force

Size	Stem torque (sealing torque)		Handle Diameter	STRG control force	
Body material	PP, PVDF	PDCPD		PP, PVDF	PDCPD
mm	N-m	N-m	mm	N	N
400	760	1300	250	190	326
450	820	1500	315	98	178
500	1150	1800	315	134	212
600	1600	1900	315	190	224

※ The above values are for reference only. (It is a measured value in the standard condition, and it varies depending on various conditions)

※ The handle operating force (N) of the gear type is the value when the handle is operated with both hands.

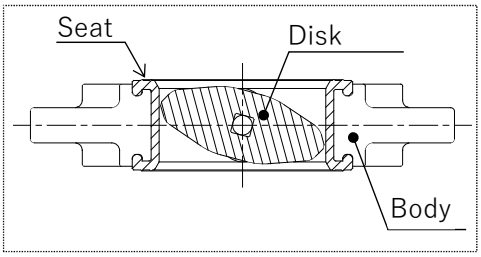
7. How to disassemble/assemble parts for replacement

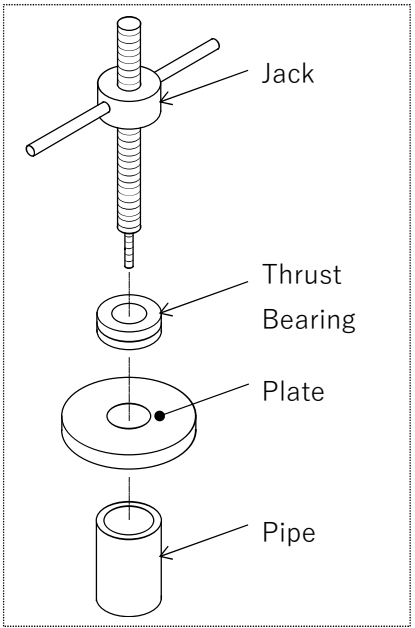
⚠Caution	
Forcing	**There is a danger of injury.** ▶ Wear appropriate personal protective equipment for the type of work you are working on. ▶ When installing the product, make sure that no excessive stress such as tension, compression, bending or impact is applied to the piping or valve. ▶ When replacing the valve or replacing parts, reduce the fluid pressure to zero and completely drain the fluid from the piping.

Preparations	▶ Protective gloves ▶ protective goggles ▶ socket wrench ▶ wrench ▶ Jack ▶ Plate ▶ Thrust Bearing ▶ Silicone Grease ▶ Phillips screwdriver ▶ flat-blade screwdriver

[Valve disassembly procedure]

1) Completely drain the fluid in the piping to make the valve slightly open.
2) Loosen the connecting bolts and nuts with a spanner and remove them.
3) Disconnect the valve from the pipe.
4) Loosen screws [28] and remove gear box [25].
5) Loosen the set screw (F) [157] with a Phillips screwdriver and remove the stem retainer (A).
6) Attach the jack, thrust bearing, plate, and pipe to the valve, screw the jack shaft into the stem [7], and turn the handle of the jack to remove the stem [7].
7) Remove the O-ring (C) [6].
8) Put the disc [2] in the fully open state.
9) Pull out both ends of the sheet [3] and remove the sheet [3] and the disc [2] gradually while shaking them.
10) Remove disc [2] from sheet [3].
11) Take out O-ring (A) [4] and O-ring (B) [5].





[Disassembly of gearbox handle procedure]

1) Use a tool to push out the spring pin [209] connecting the handle (C) [207] and the gear box [25].
2) Pull out handle (C) [207] from gearbox [25].

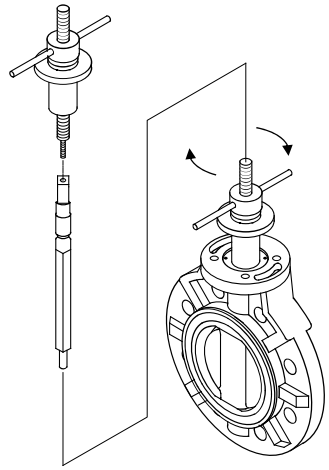
[Valve assembly procedure]

1) Before assembly, apply silicone grease to O-rings (A) [4], O-rings (B) [5], and O-rings (C) [6].

2) To assemble parts, reverse the procedure from <**Disassembly**>. However, when inserting the sheet [3] with the disc [2] set into the body [1], open the disc [2] halfway and insert the outer rim of the sheet [3] inside the body [1] around the hole direction of the stem [7] (align the stem hole positions of the body [1] and the sheet [3]) while holding it in place by hand.

3) After assembly is complete, perform manual operation and check if the disc [2] fits sufficiently in the seat [3].

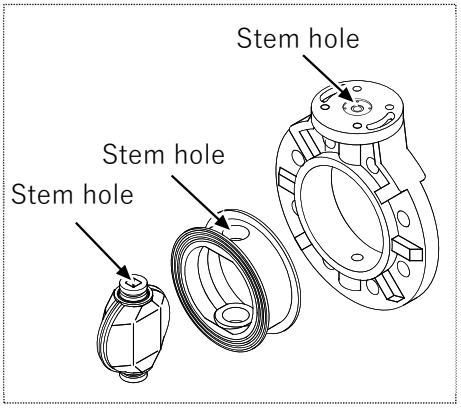
※Reference drawing



[Gearbox handle assembly procedure]

1) Apply silicone grease to the inside of the fitting hole on the gearbox [25] on the handle (C) [207], and install while aligning the spring pin hole position.

2) Use a hammer to push in the spring pin [209].



8. How to adjust the stopper

Preparations ▶ Protective glove ▶ Hex wrench ▶ Spanner wrench

※When changing the full-open and full-closed positions of the discs, they can be adjusted with the stopper bolts on the gear box.

[Procedure]

1) Side Gear Type (Size: 400mm)
Remove the cap of the gear box by hand.
Side Gear Type (Size: 450～600mm)
Remove the nut
For top-gear type (Size: 400～600mm)
Loosen the lock nut.

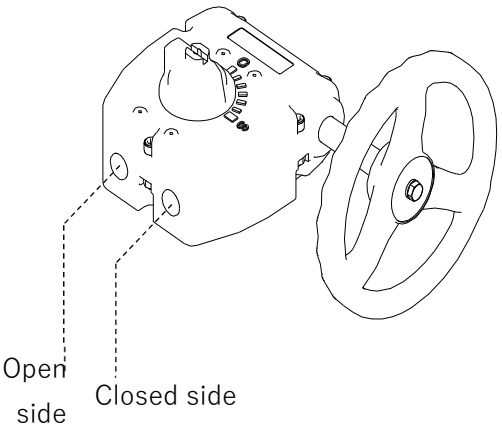
2) Loosen the stopper with an Allen wrench or wrench.

3) Manually operate the valve to move the disc to the desired fully open position (or fully closed position).

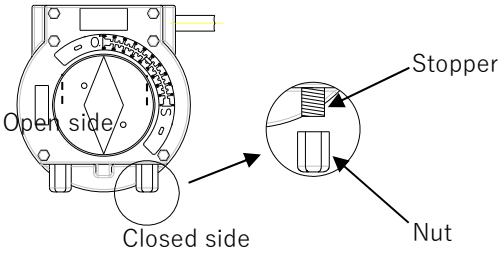
4) Apply silicone grease to the stopper bolt and tighten with an Allen wrench or wrench.

5) Side Gear Type (Size: 400mm)
Replace the cap on the gear box.
Side Gear Type (Size: 450～600mm)
Install the nut.
For top-gear type (Size: 400～600mm)
Fix the lock nut.

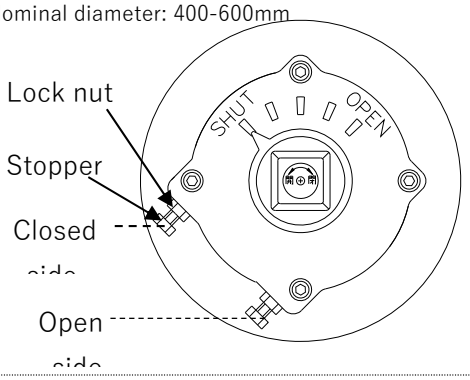
Butterfly valve type56, 56D side gear type
Nominal size: 400mm



Butterfly valve type75, 75D side gear type
Nominal size: 450-600mm



Butterfly valve 56, 56D, 75, 75D top-gear type
Nominal diameter: 400-600mm



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 "12. Troubleshooting."

Daily inspection

Inspection items and inspection methods	Guideline of judgment	Inspection point	Treatment method
External leakage (visual inspection)	No leakage	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. (Refer to 5. Piping method)
		Top flange of the valve	Remove the valve from the piping and replace the valve or defective part. (Ref: 7. How to disassemble/assemble parts for replacement)
		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	Valve	Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
		Piping around the valve	Reconfirm the conditions of use (Ref: 2. Safety Instructions)
Unusual odor (sniffing)	No odor	Valve	Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement

Periodic inspection

●Guideline for the inspection cycle: 3 months

Inspection items and inspection methods	Guideline of judgment	Inspection point	Remedy for malfunctions
Vibration (palpation)	No difference from other parts	Valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions)
			Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
		Piping around the valve	Recheck the operating conditions and remove the source of vibration. (Ref: 2. Safety Instructions)

Periodic inspection

●Guideline of the inspection cycle: 6 months

Inspection items and inspection methods	Guideline of judgment	Inspection point	Remedy for malfunctions
Operability of manual handle (touch)	Rotates smoothly	Manual operation unit	Remove the valve from the piping and replace the valve (Ref: 7. How to disassemble/assemble parts for replacement)
Looseness of bolts (visual and palpation)	No Loose	For flange piping	Retighten the pipe bolts to the specified torque. (Ref: 5. Piping method)
Corrosion Or rust (visual inspection)	No corrosion or rust	Appearance of the product	Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
Product damage	No scratches, cracks, or deformation	Appearance of the product	Remove the valve from the pipe and replace the valve. (Ref: 7. How to disassemble/assemble parts for 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 and 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. 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 Precautions)
	Gearbox failure	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)
	Stem corroded or damaged	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for replacement)

Cause of malfunction and remedy (continued)

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 Precautions)
	Seat or disc is worn or scratched	Remove the valve from the piping, replace 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 bolts are over-tightened or uni-tightened	Retighten the piping bolts (Ref.: 5. Piping method)
(external leak)	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)
	The sheet is unfolded.	Remove the valve from the piping, replace the relevant part, or replace the valve. (Ref: 7. How to disassemble/assemble parts for 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.

[Users' Manual]

Butterfly valve Type 56 / 75 [Body material: PP, PVDF]
Butterfly valve Type 56D / 75D [Body material: PDCPD)
400～600mm

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

Please note that the content of this manual is subject to change without notice. **March 2024**