Model BFV-1S Butterfly Valve Product Manual

Thank you very much for choosing the Yoshitake's product. To ensure the correct and safe use of the product, please read this manual before use. This manual shall be kept with care for future references.

The symbols used in this manual have the following meanings.

⚠ Warning

This symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

⚠ Caution

This symbol indicates a hazardous situation that, if not avoided, may result in minor or moderate injury or may result in only property damage.

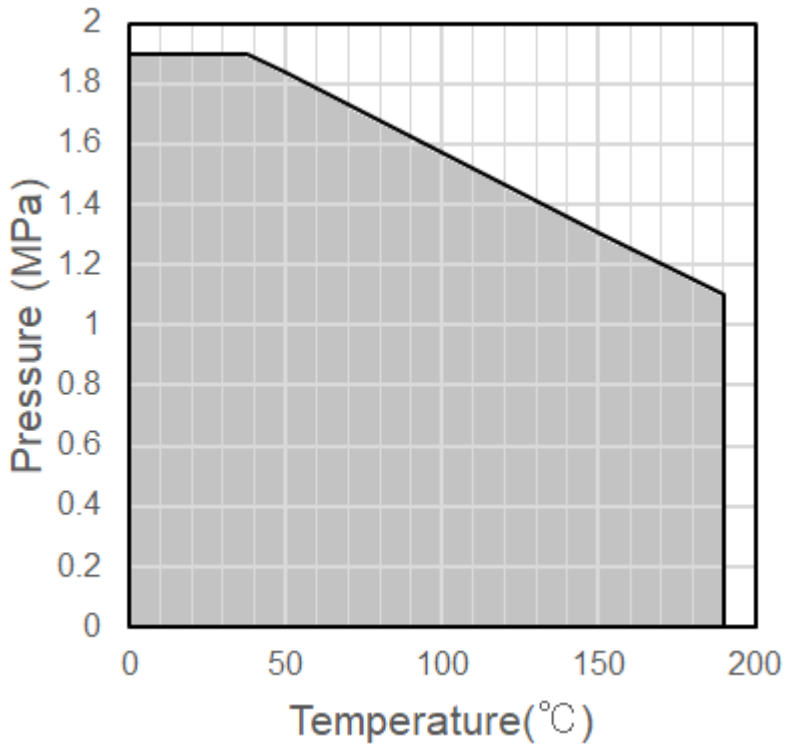
Contents

YOSHITAKE

■EPDT-383■

1. Specifications

Model		BFV-1S
Nominal size		50-150A (Lever-operated), 200-300A (Gear-operated)
Application		Steam, air, water, oil and other non-dangerous fluid
Max. pressure Max. temperature		According to the Pressure-Temperature rating
Material	Body	Stainless steel
	Disc	Stainless steel
	Seat	PTFE
Connection		Wafer (Applicable flange standards: JIS 10K, ANSI 150lb and EN PN16)
Features		● The valve has double-eccentric structure with minimal seat wear. ● Pneumatic actuator KA and electric actuator DA are mountable (50 to 150A)



Use the valve within this range.

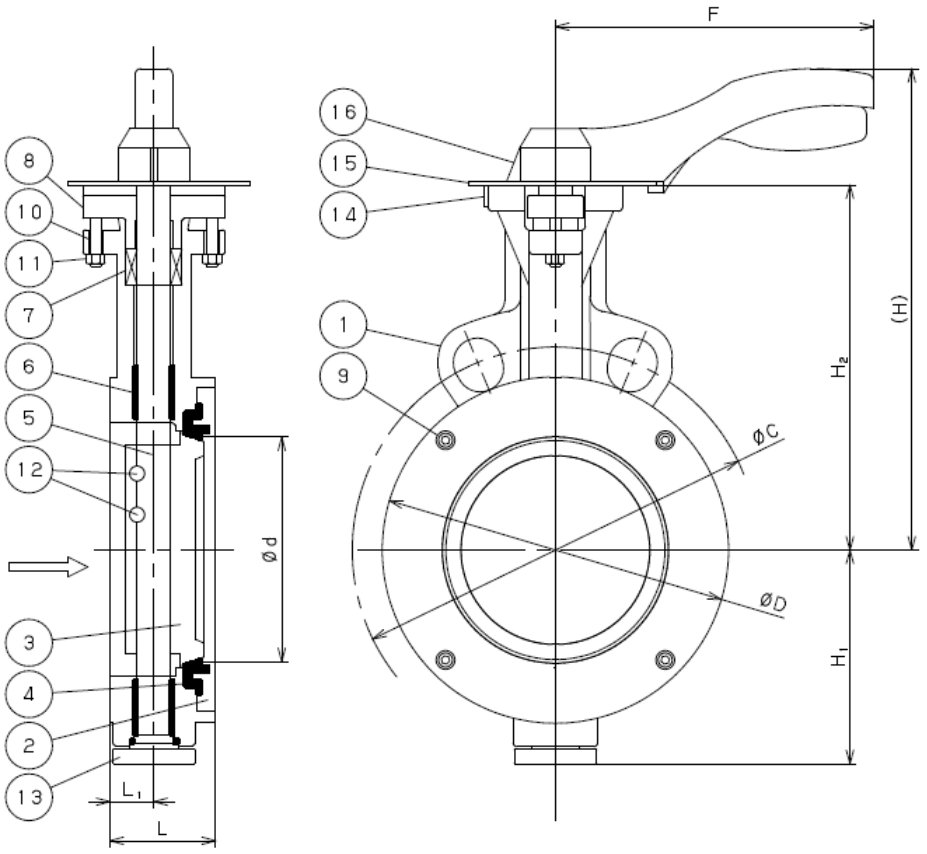
Pressure-Temperature Rating

⚠ Caution

Confirm that the indications on the nameplate correspond with the specifications of ordered product.
*If they are different, do not use the product and contact us.

2. Structure and dimensions

2.1. Structure and dimensions of 50-150A



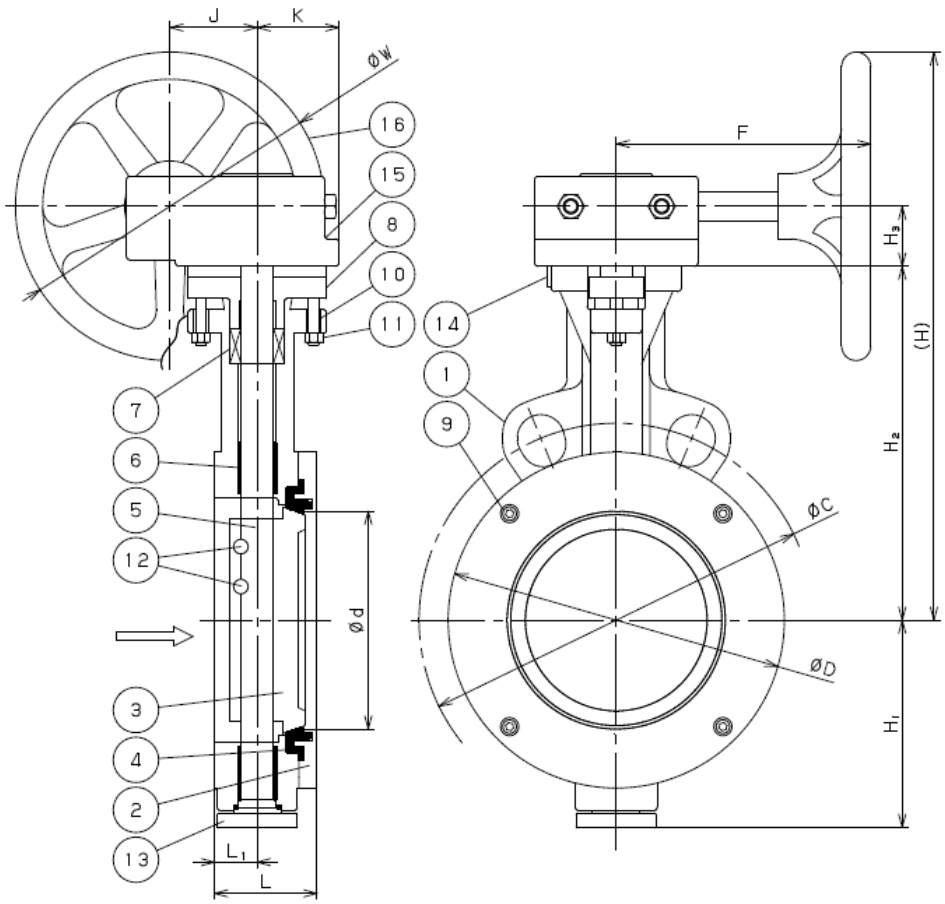
No.	Part name	Q'ty	No.	Part name	Q'ty
1	Body	1	9	Retainer Bolt	1 set
2	Seat Retainer	1	10	Bolt	2
3	Disc	1	11	Nut	2
4	Seat	1	12	Taper Pins	1 set
5	Stem	1	13	Plug	1
6	Bearing	1	14	Name Plate	1
7	Gland Packing	1 set	15	Indicator Plate	1
8	Gland	1	16	Handle*	1

*The Handle [16] is not attached when shipped.

(mm)

Size	d	L	L1	H	H1	H2	D	F	C			Weight (kg)
									JIS 10K	EN PN16	ANSI 150lb	
50	50	43	18	212	72	137	96	210	120	125	120.5	3.5
65	59	49	22	227	80	152	119	210	140	145	139.5	4.5
80	72	49	22	237	87	162	128	210	150	160	152.5	5
100	96	54	23	252	102	177	158	210	175	180	190.5	7
125	120	56	24	273	120	195	186	250	210	210	216	9
150	142	56	24	295	132	217	216	250	240	240	241.5	12

2.2. Structure and dimensions of 200-300A



No.	Part name	Q'ty	No.	Part name	Q'ty
1	Body	1	9	Retainer Bolt	1 set
2	Seat Retainer	1	10	Bolt	2
3	Disc	1	11	Nut	2
4	Seat	1	12	Taper Pins	1 set
5	Stem	1	13	Plug	1
6	Bearing	1	14	Name Plate	1
7	Gland Packing	1 set	15	Gearbox	1
8	Gland	1	16	Handle*	1

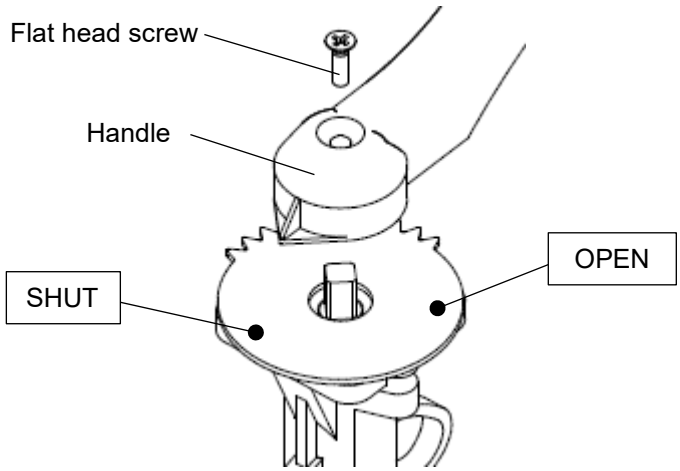
*The Handle [16] is not attached when shipped.

(mm)

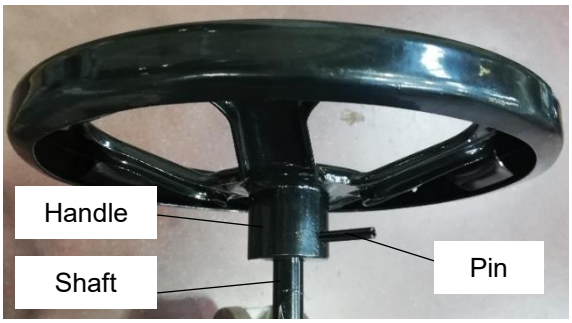
Size	d	L	L1	H	H1	H2	H3	D	F	J	K	W	C			Weight (kg)
													JIS 10K	EN PN16	ANSI 150lb	
200	190	64	27	411	167	245	35	265	210	53	57	260	290	295	298.5	24
250	238	71	32	490	205	298	42	320	210	66	77	300	355	355	362	40
300	282	81	36	527	245	335	42	378	210	66	77	300	400	410	432	55

2.3. Handle installation

- 50-150A
  Attach the Handle with its tip pointing at the “SHUT” position, and fix it with a flat head screw.



- 200-300A
  Align the holes of the Handle and the shaft. Insert the pin and hit it with a hammer to fix them.



3. Installation

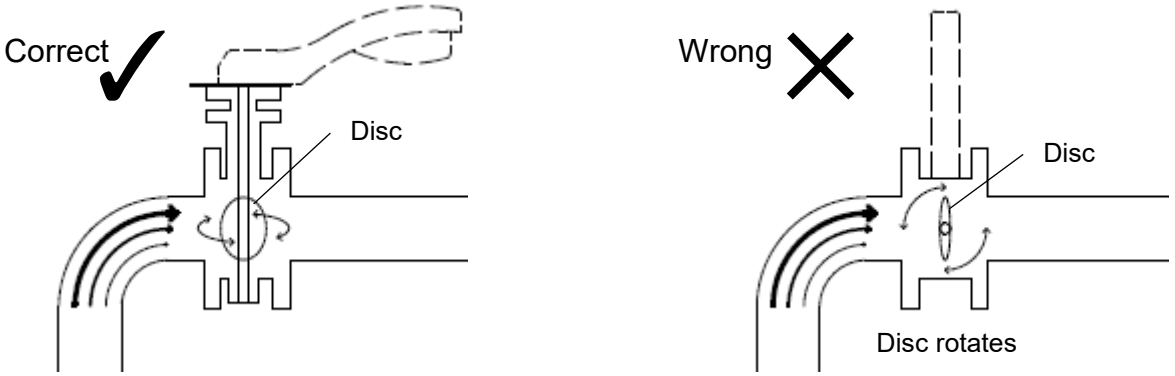
3.1. Cautions for installation

⚠ Caution

(1) Install the valve so that the directions of the flow and the arrow shown on the product match.
(2) Do not disassemble the product unless it is necessary.
*Disassembly may prevent the product from functioning properly.
(3) Use sheet gaskets when connecting the valve to pipes.
*Using other types of gasket may cause fluid leak.
(4) Connect the product firmly so that the fluid will not leak.
*If connection is not firm, fluid might leak by vibration. Hot fluid may cause burn.
*Tighten the bolts uniformly in diagonal order.
(5) Connect the product so that it is not subject to excessive load, bending and vibration.
*They may seriously shorten the lifetime of the product.
(6) If freezing is possible, take antifreeze measures such as draining or insulation.
*The frozen fluid may damage the product.

(7) Do not install the product on the suction side of the pump.
*Such installation will damage the product.

(8) Avoid installing the product at a location where the flow is uneven, such as near the discharge outlet of the pump, outlet of an elbow, downstream side of a reducer and outlet side of a control valve. If such installation is unavoidable, spare a distance about 5 times of the nominal size and install the valve with a posture in which the disc does not rotate by uneven flow.
*Uneven force applied on the valve disc may damage the product.



4. Operation

4.1. Warnings and cautions for product usage

⚠ Warning

(1) Before letting the fluid into the product, be sure that there will be no possibility of danger if fluid flows into the ends of piping, and that the product is firmly connected.
*If the fluid flows out from the pipe ends or connection part, the surroundings will get dirty. High temperature fluids may cause burn injury.

(2) When using with a high temperature fluid, do not touch the product with your bare hands.
*It could result in burn injury.

⚠ Caution

(3) When applying the fluid into the valve, operate the valve slowly to prevent water hammer and condensate problem.
*Valves, fitting or other equipment may be damaged by water hammer or condensate problem if the valve is opened rapidly.

5. Maintenance and inspection

5.1. Warnings and cautions for maintenance and inspection

⚠ Warning

(1) When disassembling and inspecting the product, ensure that pressure in the valve and pipe is atmospheric pressure. If using with high temperature fluids, cool the product down well until it can be touched with bare hands.
*If the fluid flows out, the surroundings will get dirty. High temperature fluids may cause burn injury.

(2) Disassembly and inspection should be conducted by properly trained personnel or manufacturer.

5.2. Periodic inspection

Conduct periodic inspection once a year to maintain functions and performance of the product. If abnormalities were detected, refer to “5.3 Troubleshooting” and take measures.

Inspection items
○Whether opening and closing operation is normal
○Whether there is abnormal noise
○Whether there is external leak

5.3. Troubleshooting

Trouble	Cause	Remedy
External leak from the gland part	Nut [11] is loose.	Tighten nut [11]. If the leak does not stop, replace the product.
Seat leakage	Seat [4] is damaged.	Replace seat [4].
	Disc [3] is damaged.	Replace the product.
	Foreign substances are stuck.	Remove the foreign substances.
Abnormally high operation torque	Nut [11] is overtightened.	Loosen nut [11] and re-tighten so that there is no leak (but not too tightly).
	Seat [4] is damaged.	Replace seat [4].
	Foreign substances are stuck.	Remove the foreign substances.
Abnormal noise	Nut [11] is loose.	Tighten nut [11]

5.4. Cautions and procedures for seat replacement

⚠ Caution

(1) When replacing the seat, be careful not to drop parts. Keep the dismantled parts on soft cloth so that they will not be damaged.
*Damage on the parts may impair the product’s function.
(2) Do not disassemble the product unnecessarily for purposes other than replacing the seat.
*Disassembly may impair the product’s function.

Seat replacement procedure

(1) Fully close the valve.
(2) Detach the etainer bolts [9] and the seat retainer [2].
(3) Remove the seat [4] and clean the seating part of the body [1] and the retainer [2].
(4) Install the new seat [4].
(5) Install the seat retainer [2] and fix it with retainer bolts [9].

6. Disposal

When disposing the product, refer to the drawing to check material of each part and dispose them separately according to local rules and regulations.

Warranty Information

1. Limited warranty

   This product has been manufactured using highly-advanced techniques and subjected to strict quality control. Please be sure to use the product in accordance with instructions on the manual and the label attached to it.

   Yoshitake warrants the product to be free from any defects in material and workmanship under normal usage for a period of one year from the date of receipt by the original user, but no longer than 24 months from the date of shipment from Yoshitake's factory.

2. Parts supply after product discontinuation

   This product may be subject to discontinuation or change for improvement without any prior notice. After the discontinuation of the product, Yoshitake supplies the repair parts for 5 years otherwise individually agreed.

3. This warranty does not cover the damage due to any of below:
   (1) Valve seat leakage or malfunction caused by foreign substances inside piping.
   (2) Improper handling or misuse.
   (3) Improper supply conditions such as abnormal water pressure/quality.
   (4) Water scale or freezing.
   (5) Trouble with power/air supply.
   (6) Any alteration made by other than Yoshitake.
   (7) Use under severe conditions deviating from the design specifications
   (e.g. in case of corrosion due to outdoor use).
   (8) Fire, flood, earthquake, thunder and other natural disasters.
   (9) Consumable parts such as O-ring, gasket, diaphragm and etc.

   Yoshitake is not liable for any damage or loss caused by malfunction or defect of the product.

YOSHITAKE