

INSTALLATION

1. Prior to installation of butterfly valve, ensure : -
 - Pressure rating and material of construction of the valve is compatible with the intended service conditions. Ref. tag plate of the valve.
 - The mating pipe flange faces are parallel and coaxial. Also see that bolt holes on mating flanges are concentric.
 - It is essential that the pipeline have been flushed prior to valve installation. Strainers to be installed in the pipeline at critical locations to protect the soft liner of valve from solid particles, debris, burr etc.
 - Permissible clearance for swing of disc is provided. Disc should not foul with I.D or edges of pipe or flange.
 - Adjoining pipeline internals, flange faces, valve liner and disc surfaces are clean, smooth and free from any hard material (like dirt, debris, welding spatter, burr etc.). Such elements could scratch the body liner and disc, damaging it permanently and result in leakage.
 - If a valve is being used after lying in stock for a considerable amount of time (over a month), then it is recommended to apply a small qty. of grease to the liner & operate the valve 2 – 3 times before startup.
- Grease spec. - Dow Corning Silicone
200 fluid, 350 cs Food Grade.
2. The centric disc design of the Value Valve Butterfly valve makes it bi-directional and facilitates mounting in either direction.

CAUTION : The body should be always held by the locating holes, using nylon sling or neck of the body.

- Insert valve between the flanges
- First insert bottom flange bolts. This will form a cradle for valve during installation..
- Insert valve body with its face exactly parallel to flange faces. **Do not allow the liner to catch on mating pipe I.D. flange edges and fold over. This will damage the liner and result in flange leakage.** Now install the remaining bolts.

ISSUE : I, REV – 1, DATED – 12/06/2001

CAUTION: Flange gaskets are not required for sealing, as sealing seat edges on the liner serves this purpose.

- Place the valve concentric to pipeline, ensuring equal contacts of body liner with flange faces at all points. This must be strictly followed, particularly for wafer valves.
 - **After locating the valve properly between flanges, tighten the flange bolts crosswise, tightening each bolt gradually in crisscross pattern until all bolts are tightened equally.**
4. Slowly turn the disc through 90 deg. To check the freedom of disc movement, if any obstruction is observed, re-align the valve.
 5. After passing the fluid across the valve, observe for flange leakage, if required, further tighten the flange bolts.

CAUTION: Excessive tightening of flange bolts increases the interference between disc and liner, resulting in disc locking or liner damage. Flange bolts must be tightened, just enough to prevent flange leakage.

6. Ensure the handle position is at 0 deg. & 90 deg. at fully closed and open condition respectively. Operate the handle two or three times to check the smooth functioning of handle.
7. Ensure that the lock plate is firmly sitting on body flange and if there is any relative movement between lock plate and body, tighten the bolts.
8. Ensure that there is no relative movement between the handle and shaft by tightening the bolt , if necessary.
9. If the valve is to be removed for any reason, the valve must be closed, before any flange bolt is loosened. Retain this position, until the valve is lifted out of the pipeline.
10. Do not run sharp instruments between the valve and liner or valve and pipe flanges. This will result in severe liner damage.

MAINTENANCE

Butterfly valves are simple in operation and free from regular maintenance. However to ensure trouble free performance over a longer period, user must attend to the following points.

- Ensure the line service conditions are not exceeding the valve specifications. Ref tag plate.

Strictly follow the instructions for dis-assembly, re-assembly & seat/liner replacement as given below.

**Installation, Operation and Maintenance
Instructions
For VALUE VALVE BUTTERFLY VALVE**

MODEL VF730, VF733

1. Take the valve out from pipeline by removing the flange bolts.
2. Secure the valve body firmly in a vice.
3. Remove the handle or operator by removing the bolts.
4. Remove the rubber or silicone Q pin slot filler. Remove the Q pin by rotating stem until Q-pin lines up with "tail" of Q slot. Using a small flat head screwdriver, gently pull the Q pin into the Q tail slot. Remove the Q pin.
5. Remove the valve stem, upper bearings, and 'O' rings by using proper tools to ensure that soft parts do not get damaged.
6. To remove body liner, insert a screwdriver at the bottom of liner and pull outward .

CAUTION: Extreme care shall be taken, while performing step no.6, to ensure that liner does not get damaged.

7. Inspect all sealing/soft parts and replace them, if worn out.
8. For re-assembling of valve, follow the steps, given below.
 - Apply silicon grease, grade specified on page 1, to the upper and lower stem areas and seat
 - Insert lower stem bushing into body. When applicable, insert stem seal reinforcement ring into the bottom portion of the body over the lower stem bushing. (see note below)
 - Insert the seat into the body ensuring the top and bottom holes in the seat are aligned with the corresponding holes in the body, and the seat engages the stem seal retaining ring in the molded - in grooves.

NOTE: Newer versions of this seat retainer ring are molded into the seat and do not require this step.

- Insert disc into seat aligning top and bottom holes with top and bottom holes of seat. Each Value Valve disc has a small arrow at the **bottom** of each disc showing correct orientation.
- **Ensure at this point that the top and bottom holes of the seat and body are in proper alignment**
- Insert shaft into body and through seat. Valve Valves True ISO5211 shaft is square and must be positioned such that the orientation of the square shaft corresponds to the orientation of the operator to be used. (i.e. flats 45 degrees to disc or parallel to disc.) The octagon internal drive allows rotation in 45 degree increments.

NOTE: As standard, the top stem is scored showing the square 45 degrees to disc and the position of the disc in the pipeline. If other orientation is desired, this score needs to be removed and shaft needs to be re-scored to show position of the disc.

- Once proper orientation is achieved, slide upper bearing on to shaft and seat in upper body cavity.
- Slide o-rings over shaft and seat.
- Align hole in stem with Q-slot. Insert stem retention pin in Q slot and gently push the pin through the shaft such that pin is only engaged with Q slot and out of the Q tail. Insert rubber insert or silicone seal into Q pin tail cavity to keep pin from sliding out of shaft and into Q pin tail slot

NOTE: Valve shaft must then be oriented such that when the valve is operated it CANNOT align or pass through a position that will allow the Q pin to align with the Q pin tail slot. If the Q pin aligns with the Q pin tail slot, and the rubber insert or silicone is missing, the Q pin could possibly slide into the slot, allowing the stem to lose its retention and be ejected from the valve

- Operate the valve to ensure the proper functioning of valve and Q pin. Test the valve for pressure rating, specified on tag plate, before putting the valve to pipeline.
- Now assemble the lock plate , or actuator taking particular note of the warning above, by fastening it with bolts, lock washers and nuts
- Insert the handle on stem and tighten the bolt . Ensure that lever of handle is engaging properly in lock plate notches.

LIST OF RECOMMENDED SPARE PARTS

- Seal kit includes:
Seat, Stem Seal Reinforcement Rings

While ordering spares, please specify all details mentioned on valve tag plate.

ISSUE : I, REV – 1, DATED – 12/06/2001