

Installation, Operation, and Maintenance Manual

SERIES 55

Wafer and Lug Type *Butterfly Valves*



PARTS & MATERIAL

| PART NO. | PART NAME | MATERIAL |
|----------|----------------|--|
| 1 | Body | Ductile Iron ASTM A536 Cast Iron ASTM A126B |
| 2 | Shaft | 416 Stainless Steel ASTM A276 |
| 3 | Disc | 316 Stainless Steel ASTM A351 CF8M Aluminum Bronze B148-C954 Nylon Coated Ductile Iron |
| 4 | Seat | EPDM, Buna-N Viton® |
| 5 | Lower Bushing | PTFE |
| 6 | Middle Bushing | PTFE |
| 7 | Upper Bushing | PTFE |
| 8 | O-Ring | NBR |
| 9 | Retainer | Steel ASTM A283 |
| 10 | Retainer Bolts | Steel ASTM A283 |
| 11 | Stop Cover | Carbon Steel |

FEATURES:

1. Small in size, light in weight, easy to install and maintain, can be installed at any position of pipeline.
2. Simple and compact construction, minimal space occupied.
3. Quick quarter-turn action minimized torque to operate.
4. Flow character trend to straight line, satisfied regulation.
5. Tens of thousands working cycle guarantees a long service life.
6. Zero leakage under bubble-tight test to perform tight shut-off.
7. Different material can be selected as different medium to meet up various fields.

Installation

CAUTION :

1. Select a suitable valve according to the size and pressure of the pipeline.
2. Unpack the valve and check the valve as follow:
 - ✧ Confirm the valve meet the working condition according to the nameplate and other information.
 - ✧ Inspect the seat, inner chamber, connected surface and the disc sealing. There should be no damage or any other sundries inside.

CAUTION :

- In case that there are sundries between the sealing surface of seat and disc, the sealing surface both disc and seat will be damaged when move the disc.
 - Any damage on the surface of liner and disc sealing will make the sealing failure.
 - ✧ Check actuator. If it is tightly bolted with valve.
 - ✧ Operate the valve to check if it can be operated smoothly and in accurate position.
 - ✧ Confirm the mounting flange is matched with pipe flange.
3. According to the weight and intended position to install of the valve, choose the suitable tools to install the valve

Caution :

- ✧ Before installing, inspect the pipe, if any material, tool or other sundries are forgotten inside. These sundries will do serious damage to the valve.
 - ✧ The dimensions of connected flange should keep the liner a complete contact with the flange.
 - ✧ The connected bolts should be tightened in a sequence of diagonal with even force. Or else, leakage will occur from the connected flange.
4. When finishing installed, clear worksite, operate the valve to confirm the valve can works well and keep the valve in required status.

5.

Caution :

- When a shell test for the pipeline is conducted, the valve should be full opened.
- After finishing installed completely, a caution mark or any other method should be taken to prevent people not on business operating the valve.

STORAGE AND OPERATION

1. Valves not in use should be stored in a dry and clean room. Disc should be at 5-10 degree open.
2. When operating valve in pipeline, check the status of the valve first, then operate.

Caution :

- When a valve is stuck to operate, it should be checked and maintained timely. It is forbidden to operate the valve with heavy force, or else, the valve or actuator will be damaged.

CAUTIONS FOR ACTUATOR :

- The hand-wheel of gearbox is designed according to rated torque. It is forbidden to input an extra heavy torque to operate. The extra heavy torque will damage the actuator.
- In case that the disc moves normally but in incorrect open or close position, loose the adjusting screw first, operate the hand-wheel to move the disc at the correct close position, then tighten the adjusting screw. The same way to open position.
- In case that disc is in the correct open or close position but the indicator deviates the correct position, loose the screw for indicator, adjust the indicator to correct position, then tighten the screw.

MAINTENANCE AND REPAIR

1. Bushings for the valves mentioned in this manual are all self-lubricated, no lubricant is needed
2. A periodic check of lubrication for worm gear should be conducted annually. When the grease in the gear box is dirty or black, dismount and clean the worm gear and box with gasoil or kerosene. Pour proper lithic-lubricant, turn the worm gear 2-3 full travels to make the lubricant adhered on the gear surface even. At last, cover the box, tighten bolts, re- install the actuator on the valve.
3. Check and clean the position indicator periodically to keep it in an obvious and correct position.
4. Often check the connected flange. In case of light leakage, inspect the connecting bolt. If it still leaks after the bolts re-tightened, the valve should be dismounted and repaired.
5. Often check the end of stem. In case of leakage, the valve should to be dismounted and repaired.
6. When the valve is failure in sealing, it should be dismount and repaired.