

## INSTRUCTIONS FOR SAFE HANDLING

### Name: BUTTERFLY VALVE Type 120, Type 125 and Type 126 (PN 6/10/16)

Operating conditions shall comply with the Manufacturer's Declaration of Conformity or Performance.

#### 1. PRODUCT INSTALLATION - GENERAL

Correct installation of fittings and selection of component materials is a prerequisite for trouble-free operation. Before installing the valve, the flow must be closed or the pipeline must be emptied and in case of higher temperature cooled to room temperature:

- The butterfly valves are designed for installation between flanges according to EN, DIN, ANSI.
- The use of additional seals is not permitted, because they can damage the main seal.
- The butterfly valves have the same flow characteristics in both directions. We recommend installing the valves so that the axis is in a horizontal position and the lower part of the disc opens in the direction of flow (this is especially important for media containing solid particles that tend to settle).
- Do not spread the flanges with the butterfly valves, as this may damage the main seal.
- Before tightening the flange screws, we must check if the valve opens and closes without the disk hitting the pipeline or flange,
- **Never weld the flanges onto the pipeline when the valve is installed, because the increased temperature would severely damage the valve seal (3),**
- In pipeline systems, where it is not possible spacing of flanges (removal of valve from pipeline), it is also necessary to install a dismantling joint.
- For butterfly valves of bigger diameter (DN 200 and bigger) we recommend to install the shaft horizontally, especially if there is expected dirt (sand, ...) in the medium.

#### 1.1 INSTALLATION OF THE VALVE IN THE EXISTING PIPELINE

- Check if the distance between the flanges corresponds to the width of the existing butterfly valve which we want to install - the sealing surface of the flanges must not obstruct the insertion of the butterfly valve.
- Insert the lower screws in the flange for easier insertion of the valve.
- Close the valve so that the edge of the disk (2) is about 10 mm in the body (1).
- Insert the valve between the flanges, center it - insert the flange screws through the holes in the valve ears - and then insert all the other flange screws,
- Open the valve completely, evenly remove the tools for spacing the flanges and tighten the nuts on the flange screws by hand. In doing so, make sure that the flanges remain in the correct position.
- Slowly close the valve and check if the clearance between the pipeline and the disk (2) is correct.
- Open the valve again and tighten the screws crosswise - the sealing surface of the flanges must lay down on the valve body (1).

#### 1.2 INSTALLATION OF THE VALVE IN THE NEW PIPELINES

- Close the valve so that the edge of the disc (2) is about 10 mm in the body (1). We insert the valve in the middle of the flanges and screw it with four flange screws.
- Adjust the valve with screwed flanges in the pipeline.
- The flange is spot welded to the pipeline and the valve is pulled out from between the flanges.
- Finish the weld and wait for it to cool down.

- Install the valve as indicated in the procedure for installation into the existing pipeline system.

## 2. MAINTENANCE AND REPAIRS

Butterfly valves, wafer type soft-sealing centric valves do not require any maintenance or lubrication. For butterfly valves exposed to thermal loads, it is necessary to check the quality of the seal surface every two years. In case of visible damage (cracks, mechanical damage, etc.), the seal must be replaced. In the case of TYPE 125 flaps, if damage is detected, the entire flap must be replaced. For hatches that are not exposed to thermal loads, the inspection cycle is 3 years. The manufacturer recommends service of the flaps every 5 years - replacement of parts and sealing elements as necessary. In the event of damage to the flaps, the disassembly or assembly procedure is described below in points 5.1 and 5.2.

**2.1 DISASSEMBLY OF BUTERFLY VALVES** (it does not apply to the valve TYPE 125, which is to be completely replaced):

1. Remove the elastic pin (9) from the valve and pull out the lower shaft (5),
2. Clamp the valve firmly in a suitable device,
3. Turn the valvedisc (2) to the open position,
4. Remove the valve actuator,
5. Unscrew the screw pin (10) and pull out the upper shaft (4),
6. Remove the valve disc (2) from the main seal (3),
7. Press the main seal (3) at the opposite ends to form a heart shape and pull it out of the seat.

**5.2 ASSEMBLY OF THE BUTTERFLY VALVE** (it does not apply to the valve TYPE 125, which is to be completely replaced):

1. Before assembling the valve, check all components for damage. Damaged parts must be replaced with new ones, and other parts must be cleaned - preferably with silicone oil for assembly.
2. Firmly clamp the body (1) in a suitable device.
3. Press the main seal (3) on both sides into a heart shape and insert it into the body seat (1). It is necessary to make sure that the holes on the body (1) coincide with the holes of the main seal (3).
4. Install the valve disc (2) into the body - we must make sure that the hub of the disc with the stamped square groove is faced upwards towards the bore of the shaft (4) and center it with respect to the holes of the seal (3).
5. Insert the upper shaft (4) into the body (1) and push it into the disc hub. It is necessary to ensure that the square shape of the shaft (4) is parallel to the pressed groove of the disc (2). We must also be careful not to damage the main valve seal (3) due to the incorrect alignment of the holes of the seal (3) and the body (1).
6. Screw the threaded pin (10) into the body (1) up to the upper shaft (4) and then unscrew it by half a turn. Before this, the thread of the threaded pin (10) is lubricated with a liquid that protects the pin against unscrewing.
7. Remove the valve from the device. Push the lower shaft (5) into the lower part of the body (1) - being careful not to damage the seal (3). Push the lower shaft (5) so deep that the bore in the body (1) is aligned with the bore in the lower shaft (5). Drive an elastic pin (9) into the bore of the body (1) through the bore of the lower shaft (5).
8. Install the actuator onto the valve and test the functionality of the valve (open - closed position).

**COMPONENTS:**

Pos.	Title	Pos.	Title	Pos.	Title
1	VALVE BODY	2	FLAP DISC	3	MAIN GASKET
4	UPPER SHAFT	5	LOWER SHAFT	9	ELASTIC PIN
10	THREADED PIN	13	»O« SEAL	14	»O« SEAL

