

# Operation Instruction

Butterfly Valve DN100 - 2400



1. Product description and scope of application
2. Design Features
3. Flange Informations
4. Installation
5. Operation and application
6. Maintenance

Kelebek Vanalarla ile bağlantılı olarak her zaman bu işletim talimatı kullanın!

## 1. 1. Product description and scope of application

- TSE EN 593 Belgeli
- Body sealing surface welded by stainless steel aisi 316 and precision finished
- Max temperature is 50 oc

## 7. Design Features

- Valve disk double offset
- Mechanical position indicator and limit stops on gearbox
- Ayarlanabilir Ve Değiştirilebilir Sızdırmazlık Lastiği
- Body is Ductile Iron EN-JS 1030 (GGG-40)
- Disk Ductile Iron EN-JS 1030 (GGG-40)
- Valve Shaft Stainless Steel AISI 420
- Shaft Bearing Bronze
- Sealing Ring and O-Ring EPDM
- Suitable for Drinking Water

## 3. Flange Information

- Double Flanges
- Flanges DIN EN 1092
- Face to Face Dimension EN 558-1 serie 14 (DIN 3202,F4)

## 4. installation

Remove all packing materials from valve. Check pipeline on pollutions and foreign parts prior to installation and clean if necessary.

### Attention !

Please take care that the valve is accessible from all sides for operation and maintenance. At installation outdoors protect valve at site against influences of the weather.

During installation of the valve the distance between the pipe flanges should be at least 20 mm larger than the overall size of the valve, in order not to damage the function strips and to allow insertion of the gaskets. As flange gaskets we recommend steel reinforced rubber gaskets, mandatory required at lap-joint flanges (media and temperature compatibility must be observed).

The piping counter flanges must be plan parallel and concentric.

The connecting bolts must be tightened equally and crosswise (tension free). The pipe may

in no case be pulled to the valve.

SEMSAN butterfly valves may be installed in all positions.

The valve disc protrudes in open position the butterfly valve length. Observe relevant distance to installations, such as flap valves.

When using loose flange valves the pipeline counter flanges must not be spread for valve replacement. Here the loose flange will be pulled to the pipeline counter flange and tightened crosswise, as described above. For new installations it is recommended to install the loose flange valve in a way, which keeps the standard overall length (see table 1).

## 5. Operation and application

Check valve after installation in the pipe on soft running by traveling with the actuator over the complete actuation distance (open - closed).

### 5.1 Permissible mode of operation

The valve disc can be streamed along from both the direct side (A preferred through flow direction) and from the indirect side (B).

The valve is actuated by means of hand wheel, chain wheel or actuator key DIN 3223. Do not use excessive force.

Maximum permissible through flow speeds:

PN10: 4 m/s

PN16: 5 m/s

### 5.2 Not permissible mode of operation

Installation after manifolds or other disturbing installed parts should be avoided. Continuous operation in choked position causes increased wear. Check suitability of butterfly valve for that mode of operation when using it as throttle device.

Do not exceed media temperature limit values.

Do not exceed media operating over pressure limit values.

The closed valve may only be loaded up to nominal pressure.

At EPDM profiled gaskets and O rings: No contact of rubber parts with mineral oil or grease (EPDM swells).

## 6. Maintenance

### 6.1 Maintenance and inspection

butterfly valves are equipped with maintenance free bearing sleeves. Gear spindles and gear bearings are provided with long-term greasing



**Close revision valve prior to commencing wrks and make pipe section pressure-less.**

Check appearance of the valve, including gears. Clean if necessary and repair coating.

Check leakage at flanges. Check smooth running of valve and gears. Move manually over the complete stroke.

Check leakage at joint: bring valve into close position.

Check pressure drop of the valve upstream and downstream.

## 6.2 Repair

### 6.2.1 Adjustment of Sealing Ring

SEMSAN butterfly valves are equipped with an adjustable sealing system. The profiled gasket allows readjustment in closed position. Loosen worm-screws and retighten the countersunk bolts equally crosswise. Since the profiled gasket reacts quickly at tightening we are recommending to proceed in small steps (half bolt revolution). Tighten worm-screws following by right turn and counter in this way the profiled gasket.

### 6.2.2 Replacing Sealing Ring

- Move out valve disc approx. 20° up to 30° from the seat from „CLOSED“-position.
- Loosen counter sunk bolts and remove.
- Lever out profiled gasket (7).
- Clean the profile groove in the valve disc and repair corrosion protection if required.
- Insert new profiled gasket with a turning movement into the valve disc.
- Profiled gaskets made of EPDM may not come in contact with mineral lubricant!
- Screw in counter sunk bolts (9) and tighten crosswise with torques listed in table 1.
- Following screw in worm-screws and tighten firmly.
- Therefore a final leakage test must be performed mandatory.