

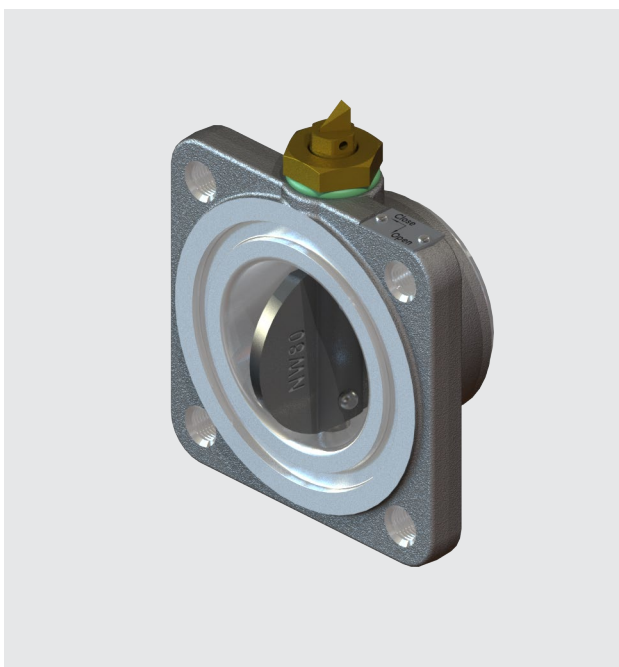
# Operating Manual

*Technical instruction / Radiator valves / Welding neck type / Metal sealed*

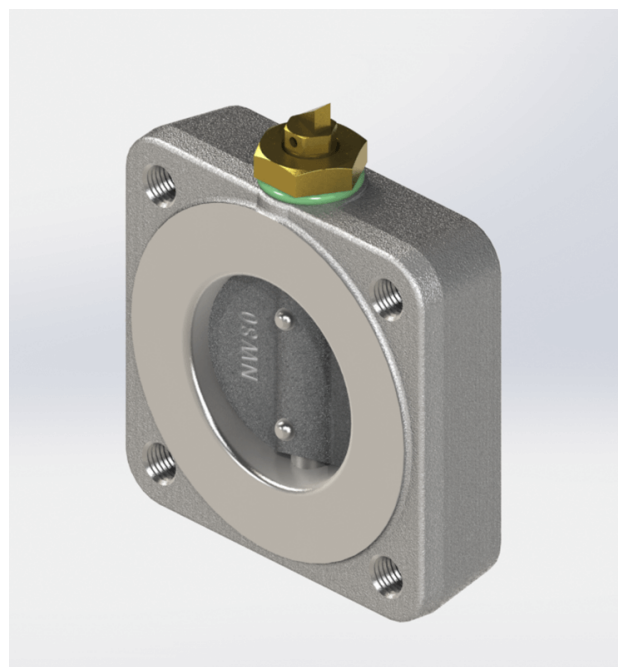


***The efficient and reliable sealing system!***

**Welding Neck - Type A**



**Welding Neck - Type N1610**



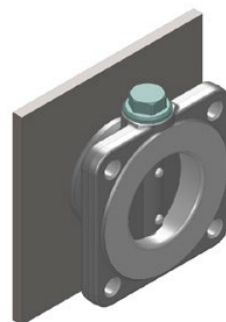
# 1. Welding & Painting

All butterfly valve types are delivered in tested and closed condition. To gain maximum tightness we produce our valves with very small tolerances between flapper and valve housing. To remain its function please always handle the butterfly valve as further described.

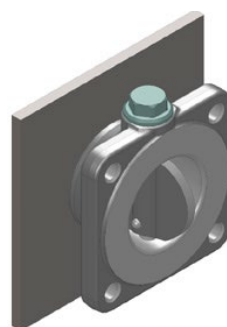


*Do always remain the valve in protected and closed condition until all work on the transformer tank is completed (welding, sand blasting, painting, etc.).*

**RIGHT: Closed and protected valve**



**WRONG: Opened clap**



# 2. Protecting the Valve

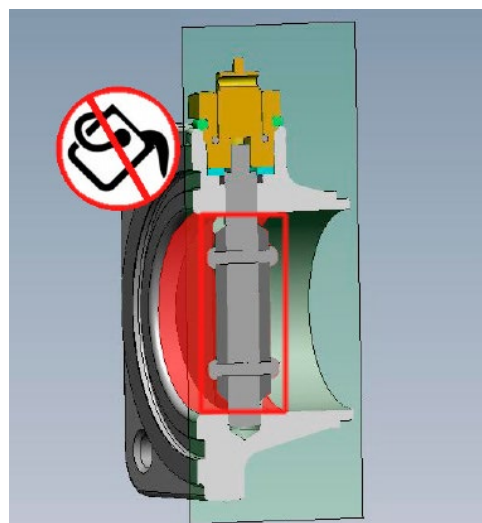
*Welding Types (Type A and Type N1610)*

In case the butterfly valve will be welded onto the transformer tank it is absolutely necessary to keep the sealing surface between flap and housing clean. No welding debris should get in contact with the sealing surface.

In order not to damage the O-rings used, the setting device has to be removed before welding. The 1" thread has to be protected with a screw plug.



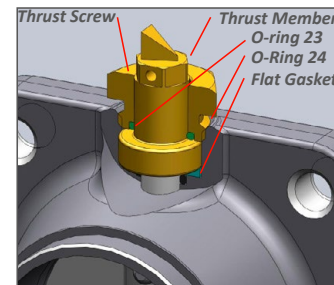
*Therefore, the inside of the butterfly valve and the flap have to be covered with a form-fit shield while welding, sand blasting, painting and other activities.*



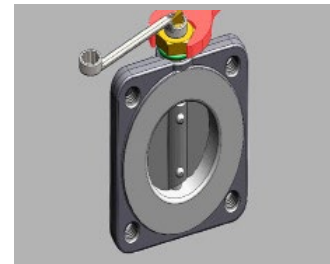
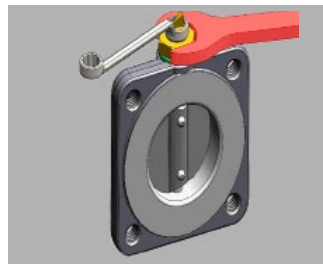
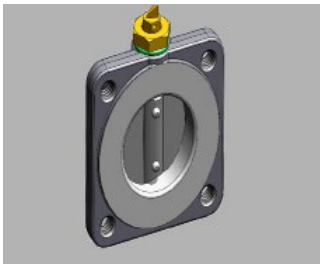
## 3. The Setting Device

The Setting Device consists basically in all different versions of a thrust member (inner brass part) and a thrust screw (hexagon brass screw). The thrust screw presses the inner thrust member to assure tightness at the area of the spindle.

This means that the valve can't be operated without loosening the thrust screw. In case the valve should be welded the device has to be dismantled for welding process to protect sealing materials. The thread has to be protected.



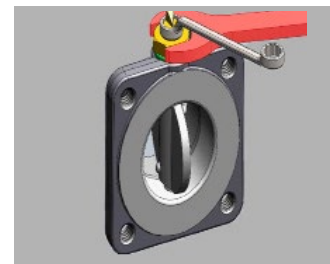
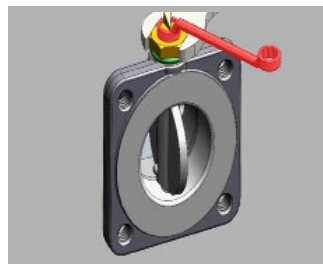
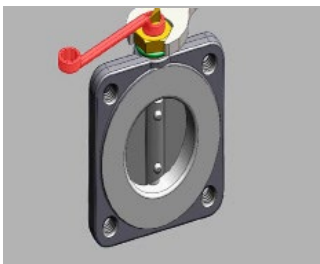
### 3.1 Remount the setting device



Remount the setting device. Place the flat gasket around the spindle then mount the thrust member in correct direction, then assemble small O-ring, brass screw and large outer O-ring as shown in drawing.

Loose the outer thrust screw with the 36 mm spanner about 90° counterclockwise in order to ease pressure on the inner thrust member. (tightening torque SW36: 15 Nm)

### 3.2 Open the radiator valve



Open the valve counterclockwise using the 17 mm spanner at the thrust member until its final position. (tightening torque when closing SW17: 70 Nm) Retighten the outer thrust screw clockwise using the 36 mm spanner while holding the flap with the 17 mm spanner in position Tighten the thrust screw with a maximum of 50 Nm to remain the flap in its position. (tightening torque SW36: 50 Nm)



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