

Maintenance

- The ball valves are maintenance-free.
- Should a leakage occur at the gland packing, retighten the gland nut/screws (12/21). Take care that the gland nut/screws are not tightened too much. Normally the leakage can be stopped by simply turning the nut/screws by 30° to 60°.

Replacement of seats and seals

- Ensure that the pipeline has been rendered depressurised and emptied.
- Loosen and remove the flange screws and nuts.
- Spread the flanges using a suitable tool and remove the valve.
- Close the valve.
- Loosen and remove the hexagon nuts (19) from the stud bolts (18).
- Remove the body connector (2) from the body (1).
- Remove seats (5), ball (3) and body seal (17). Be careful not to damage the ball.
- Remove handle nut/screw (15/25), hand lever (13/23 and 24) and stop plate (DN 65-100 / 22) respectively security cap (DN 15-50 / 27) and unscrew gland nut/screws (12/21).
- Take off gland flange (DN 65-100 / 20), disk spring washers (11), washer (26) and remove gland (10).
- Push stem (4) into the valve body and remove it carefully.
- Remove thrust washer (7) and primary sealing (8) from the stem.
- Remove stem packing (6) and thrust washer (9).
- Clean all parts, especially the sealing surfaces of the ends.

Assembly

- Put the thrust washer (7) and the primary sealing (8) on the stem (4) and insert stem from the inside of the body.
- Put stem packing (6), thrust washer (9), gland (10), washer (26) and disk spring washers (11) on stem.
- DN 8-50: Replace gland nut (12) and tighten. Avoid rotating the stem (4) by applying a suitable wrench. Secure the gland nut by mounting the security cap (27).
DN 65-100: Replace gland flange (20) and fix it using the screws (21).
See table tightening moments for gland nut/screws.
- Replace stop plate (DN 65-100 / 22), hand lever (13/23 and 24) and handle nut/screw (15/25).
- Insert ball (3), seats (5) and body seal (17).
- Leave ball in **closed position**, put the body connector (2) on the body (1) and tighten the hexagon nuts (19) crosswise (see table tightening moments for body screws).
- Open and close the valve for test run.
- **CAUTION:** The rotating ball may cause injury. Keep away from space between ball and body!

Tightening moments for body screws

Max. tightening moments must not be significantly exceeded.

DN	15/20	25/32	40/50	65-100 (PN16)	65-100 (PN40)
M [Nm]	15	30	55	55	120

Tightening moments for gland nut / screws

DN	15/20	25/32	40/50	65-100
M [Nm]	14	18	25	7

Storage

- Storage and transport of the valves to be dry and clean (without any dirt).
- Temperatures for storing: - 15°C to + 30°C
- In humid rooms drying material respectively heating is necessary to avoid condensation of water.
- Valves have to be protected against force (shock, blow, vibration etc.).
- During storage or transport the ball valve must be either in open or closed position (no intermediate position!).