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Operating instructions Maintenance / Storage 3-pce ball valve series DG DN 8 – DN 100 full bore DN 15 – DN 150 reduced bore

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

- Check whether the pipeline has been rendered depressurised and is empty.
- Set valve in **open position** and remove centre section.
- Close the valve and remove centre ring (DN 65-100 / 27) seats (5) and ball (3). Be careful not to damage the ball.
- Remove body seals (17).
- Remove handle nut/screw (15/25), hand lever (13/23 and 24) and stop plate (DN 65-100 / 22) respectively security cap (DN 8-50 / 28) 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 (28)
- 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), centre ring (DN 65-100 / 27), seats (5) and body seals (17).
- Mount complete centre section (ball in open position) between the ends.
- Set ball in **closed position** and tighten the body screws (18/19) (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	8/10	15	20	25	32	40	50	65	80	100
M [Nm]	7	15	15	15	35	35	60	80	80	125

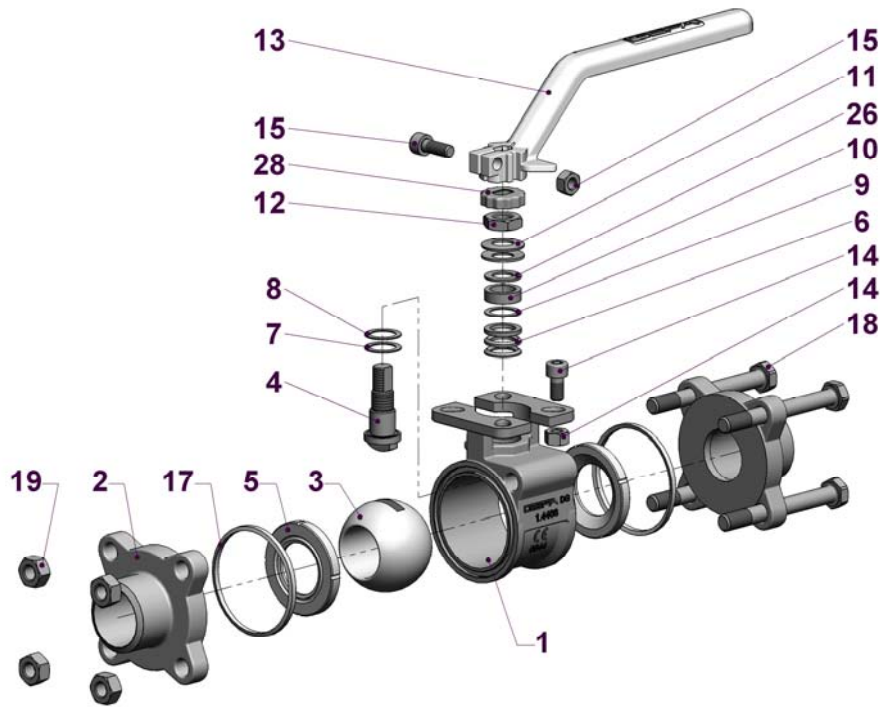
Tightening moments for gland nut / screws

DN	8/10	15	20	25	32	40	50	65	80	100
M [Nm]	10	14	14	14	18	18	25	7	7	7

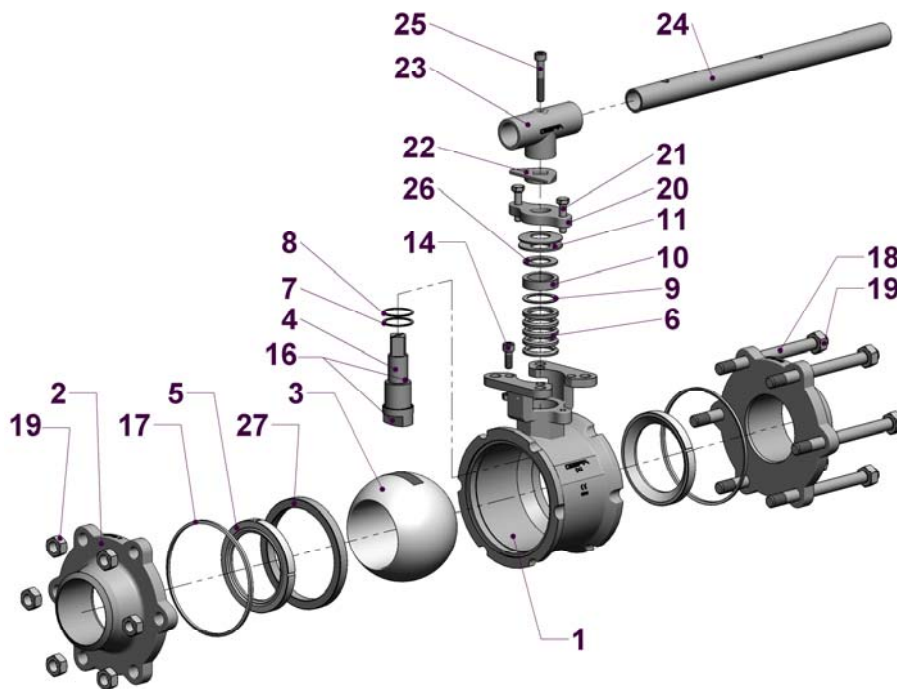
Storage

- 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!).

DN8-50



DN65-100



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|----|-----------------|----|----------------------|----|----------------|
| 1 | Body | 11 | Disk spring washer | 21 | Hexagon screw |
| 2 | End cap | 12 | Hexagon nut | 22 | Stop plate |
| 3 | Ball | 13 | Hand lever | 23 | T-piece |
| 4 | Stem | 14 | Cylinder screw / nut | 24 | Pipe |
| 5 | Seat | 15 | Cylinder screw / nut | 25 | Cylinder screw |
| 6 | Stem packing | 16 | Antistatic device | 26 | Washer |
| 7 | Thrust washer | 17 | Body seal | 27 | Centre ring |
| 8 | Primary sealing | 18 | Stud bolt | 28 | Security cap |
| 9 | Thrust washer | 19 | Hexagon nut | | |
| 10 | Gland | 20 | Gland flange | | |