DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH FLOATING BACKSEAT 3"

Fig.01
Fig.02
Fig.03
DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH FLOATING BACKSEAT 3"

1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.

2. Unscrew the bolts (16) which secure the gearbox (17), rotate the gearbox clockwise to remove it from the stem/disc (2).

3. Unscrew the gland nuts (7) from the gland bolts (9) and remove them from the gland flange (11).

4. Unscrew the hexagon socket screw (15) from the position indicator (13). Remove parallel key (12) out of the stem/disc (2). Unscrew the hexagon socket screws (14) which secures the yoke (10) to the valve body (1).

5. Rotate the yoke (10) 90° counter clockwise. Now remove the yoke (10) together with gland flange (11) and position indicator (13) from the valve body (1).

6. Remove the gland (6), the packing (5) and loose backseat (4) out of the valve body (1) by pulling the stem/disc (2) from the valve body (1).

INSPECTION PRIOR TO RE-ASSEMBLY

1. Thoroughly clean all parts with solvent and a clean cloth.

2. Examine the following parts for signs of damage, i.e. pitting, erosion or scratches:
   A. SEAT (1) - Sealing surface
   B. STEM (2) - Packing area
   C. DISC (2) - Sealing surface
   D. BACKSEAT (2 & 4) - Sealing surface

3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.

4. Insert the stem/disc (2) together with loose backseat (4) into the valve body (1).

5. Insert the first packing (5) into the stuffing box (markings facing down). Insert the second packing (5) into the stuffing box (markings facing up). Place the gland (6) over the stem (2) on top of the packing (5).

6. Install the yoke (10) together with the gland flange (11) and position indicator (13), to the valve body (1). Ensure the position indicator (13) gets locked up by the yoke (10), in order to prevent the stem/disc (2) from rotating. Rotate the yoke (10) 90° and secure it with the hexagon socket screw (14) to the valve body (1).

7. Place the parallel key (12) into the stem/disc (2), place the position indicator (13) over the parallel key (12) and fixate it with the hexagon socket screw (15).

8. Install the bevel gear (17) by rotating it counter clockwise on the stem/disc (2) until the stem/disc (2) is no longer in contact with the seat, the gearbox (17) can now be secured to the yoke (10) with the bolts (16).

9. Fixate the gland flange (11) with the gland bolts (19), the spring washers (8) and the gland nuts (7).

10. Tighten the gland nuts (7) to compress the packing (5).

11. Now loosen the gland nuts (7) slightly. Carefully retighten the gland nuts (7) again.

12. Pressurise the system and check the packing (5) for signs of leakage.

13. In case leakage is observed, tighten the gland nuts (7) carefully until the leakage stops.

14. The valve is now ready for use.

IN CASE SEVERE DAMAGE IS OBSERVED, USE REPLACEMENT PARTS INSTEAD!
DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH FIXED BACKSEAT 3"

1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.

2. Unscrew the bolts (16) which secure the gearbox (17), rotate the gearbox clockwise to remove it from the stem/disc (2).

3. Unscrew the nuts (7) from the gland bolts (9) and remove the gland bolts. (see Fig.02)

4. Unscrew the gland nuts (7) from the gland bolts (9) and remove them from the gland flange (11)

5. Unscrew the hexagon socket screw (15) from the position indicator (13). Remove parallel key (12) out of the stem/disc (2). Unscrew the hexagon socket screws (14) which secures the yoke (10) to the valve body (1).

6. Rotate the yoke (10) 90° counter clockwise. Now remove the yoke (10) together with gland flange (11) and position indicator (13) from the valve body (1).

7. Remove the gland (6) and packing (5) out of the valve body (1). Make sure to not damage the stuffing box.

8. Place the backseat-removal tool on the valve body (1); Rotate the backseat removal tool adaptor (18) 90° clockwise to engage it to the valve body (1). Loosen the backseat (4) by rotating the backseat removal tool 1 turn counter clockwise. Now rotate the backseat removal tool adaptor (18) 90° counter clockwise to disengage it from the valve body (1), the backseat (4) can now be screwed out of the valve body (1). (see Fig.03)

9. Remove the backseat removal tool (18) from the valve body (1). Remove the stem/disc (2) together with the backseat (4) and gasket (3) by pulling the stem/disc (2) out of the valve body (1). (see Fig.04)

INSPECTION PRIOR TO RE-ASSEMBLY

1. Thoroughly clean all parts with solvent and a clean cloth.

2. Examine the following parts for signs of damage, i.e. pitting, erosion or scratches:
   A. SEAT (1) - Sealing surface
   B. STEM /disc (2) - Packing area
   C. DISC /disc (2) - Sealing surface
   D. Backseat (2 & 4) - Sealing surface

3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.

4. Insert the stem/disc (2) together with a replacement gasket (3) and the backseat (4) into the valve body (1).

5. Insert the backseat removal tool (18) in the valve body (1), screw the backseat (4) into the valve body (1) rotating it clockwise. Now engage the backseat removal tool adaptor (18) by rotating it 90° clockwise. Fasten the backseat (4) by rotating it clockwise, be aware over tightening can cause problems for future disassembly.

6. Insert the first packing (5) into the stuffing box (markings facing down). Insert the second packing (5) into the stuffing box (markings facing up). Place the gland (6) over the stem (2) on top of the packing (5).

7. Install the yoke (10) together with the gland flange (11) and position indicator (13), to the valve body (1). Ensure the position indicator (13) gets locked up by the yoke (10), in order to prevent the stem/disc (2) from rotating. Rotate the yoke (10) 90° and secure it with the hexagon socket screw (14) to the valve body (1).

8. Place the parallel key (12) into the stem/disc (2), place the position indicator (13) over the parallel key (12) and fixate it with the hexagon socket screw (15).

9. Install the bevel gear (17) by rotating it counter clockwise on the stem/disc (2) until the stem/disc (2) is no longer in contact with the seat, the gearbox (17) can now be secured to the yoke (10) with the bolts (16).

10. Fixate the gland flange (11) with the gland bolts (19), the spring washers (8) and the gland nuts (7).

11. Tighten the gland nuts (7) to compress the packing (5). Now loosen the gland nuts (7) slightly. Carefully retighten the gland nuts (7) again.

12. Pressurise the system and check the packing (5) for signs of leakage.

13. In case leakage is observed, tighten the gland nuts (7) carefully until the leakage stops.

14. The valve is now ready for use.
DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH INTEGRAL BACKSEAT 4"

1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.
2. Unscrew the bolts (20) which secure the gearbox to the top flange and remove them. Rotate the gearbox (21) clockwise to remove it from the stem/disc (2).
3. Unscrew and remove the bolt (18) which secures the position indicator (17) and remove the parallel key (16) from the stem/disc (2).
4. Unscrew the gland nuts (11) from the gland bolts (13) and remove them together with the spring washers (12), (see Fig.02)
5. Unscrew and remove the bolts (19) which secure the yoke (14) to the valve body (1). Rotate the yoke (14) 90° clockwise to disengage it from the valve body (1).
6. Remove the yoke (14) together with the position indicator (17), the gland flange (15) and gland (10) from the valve body (1).
7. Unscrew the bolts (8) from the retaining ring (7) and remove them (see Fig.03).
8. Unscrew the retaining ring (7) from the bonnet (3), while securing the stem/disc (2) in place, in order to prevent it from damaging. After the retaining ring (3) has been removed, lower the stem/disc (2), bonnet (3), the packing (9), gasket (4) and ring (5) into the valve body (1).
9. Remove the segmental ring (6) from the valve body (1) by tapping a punch tool through the designated holes (30) provided in the bonnet area of the valve body (01). Now the valve internals can be removed by pulling the stem/disc (2) from the valve body (1).

INSPECTION PRIOR TO RE-ASSEMBLY

1. Thoroughly clean all parts with solvent and a clean cloth.
2. Examine the following parts signs of damage, i.e. pitting, erosion or scratches:
   A. SEAT (1) - Sealing surface
   B. STEM /disc (2) - Packing area
   C. DISC /disc (2) - Sealing surface
   D. Backseat (2 & 3) - Sealing surface

IN CASE SEVERE DAMAGE IS OBSERVED, USE REPLACEMENT PARTS INSTEAD!

3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Apply a thin film of Molykote D321 R to the sealing surface of the gasket (4) and bonnet (3). Place gasket (4) and gasket ring (5) over the bonnet (3), (see Fig.03) and place this assembly over the stem/disc (2).
5. Insert this completed assembly into the valve body (1).
6. Insert the segmental ring (6) into the valve body (1). Make sure the segments are located at such place, there is a segment placed in front of each disassembly hole (30). Pull up the stem/disc (2) together with the bonnet (3) through the segmental ring (6). Screw the retaining ring (7) to the bonnet (3) rotating it clockwise and tighten it (hand tight).
7. Insert the bolts (8) in the retaining ring (7) and tighten them.
8. Place packing (9) (first with markings down, second with markings up) over the stem/disc (2) and into the bonnet (3). Place the gland (10) over the stem/disc (2) on top of the packing (9).
9. Place the yoke (14) together with position indicator (17) and gland flange (15), over the stem/disc (2) and engage the yoke (14) to the valve body. Make sure the position indicator (17) gets locked up by the yoke (14), in order to prevent the stem/disc (2) from rotating.
10. Rotate the yoke (14) 90° clockwise and secure it with the hexagon socket screw (19) to the valve body (1).
11. Place the parallel key (16) into the stem/disc (2), place the position indicator (17) over the parallel key (16) and secure it with the bolt (18).
12. Fixate the gland flange (15) with the gland bolts (13), spring washers (12) and gland nuts (11).
13. Tighten the gland nuts (11) to compress the packing (9).
14. Loosen the gland nuts (11). Now carefully tighten the gland nuts (11) again.
15. Install the bevel gear (21) by rotating it counter clockwise on the stem/disc (2) until the stem/disc (2) is no longer in contact with the seat, the gearbox (21) can now be secured to the yoke (14) with the bolts (20).
16. Pressureise the system and check the packing (9) and bonnet (3) for signs of leakage.

Important:
After starting up the system, once the valve has reached its working temperature and pressure, It is recommended to tighten the bolts (8) into the retaining ring (7) to force the bonnet (3) into the gasket (4) for optimum sealing.

17. In case of leakage of the packing (9), tighten the gland nuts (11) carefully until leakage stops.
18. In case of leaking of the bonnet (3) tighten the bolts (8) located in the retaining ring (7).
19. The valve is now ready for use.
DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH PNEUMATIC ACTUATOR 4"

Fig.01

Fig.02

Fig.03

Disassembly hole
DISASSEMBLY & ASSEMBLY GLOBE VALVE
WITH PNEUMATIC ACTUATOR 4"