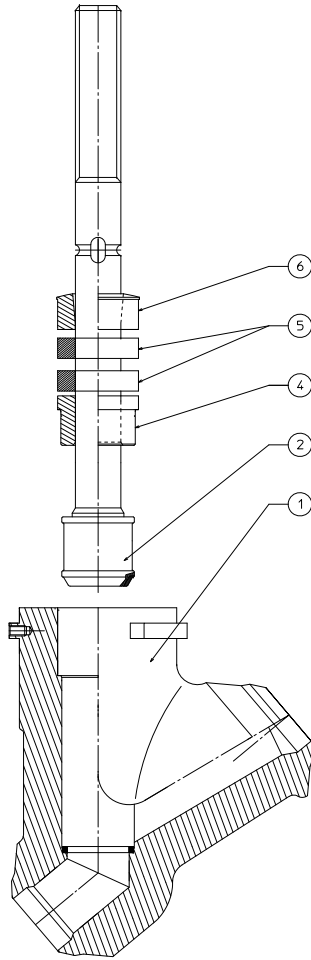
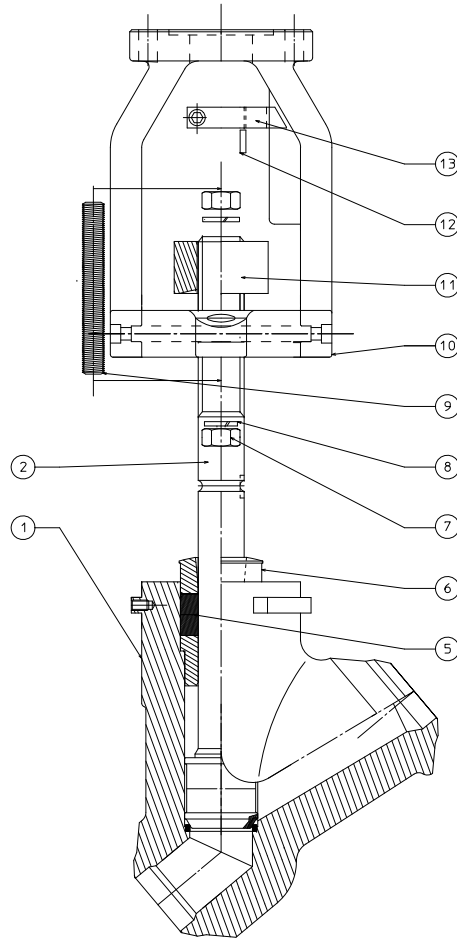


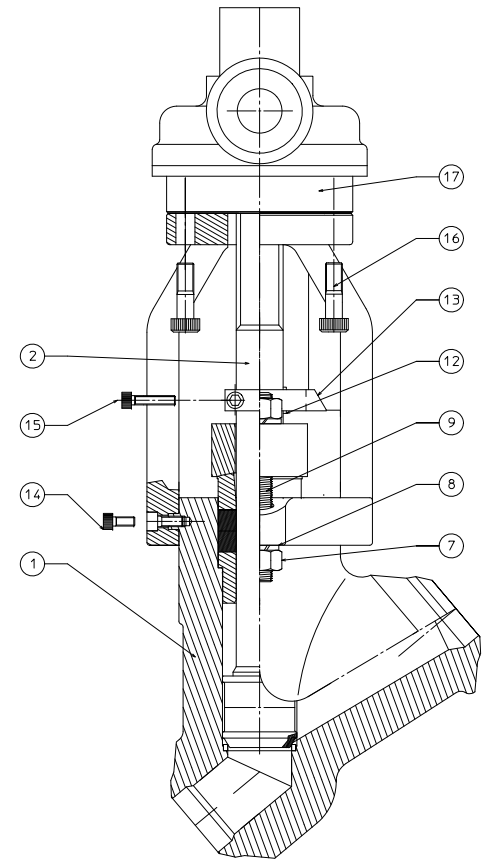
**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
 WITH FLOATING BACKSEAT 3"**



**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

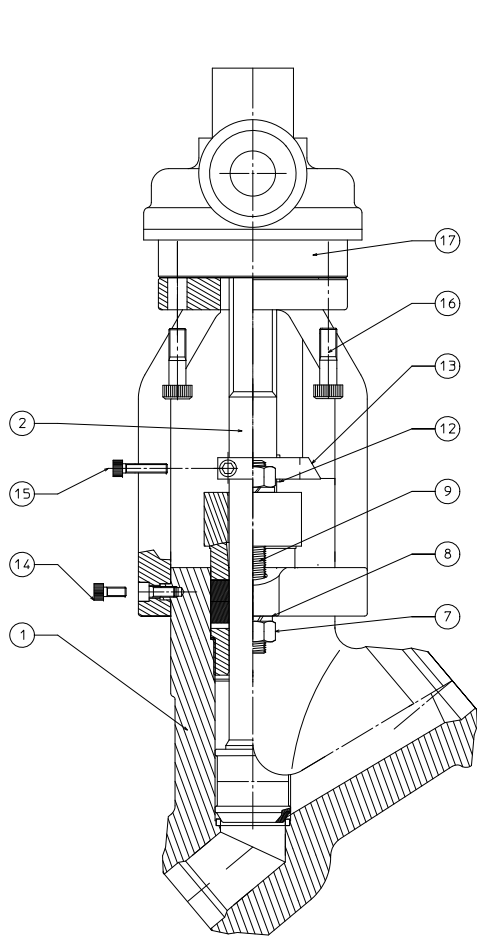
1. Thoroughly clean all parts with solvent and a clean cloth.
2. Examine the following parts for signs of damage, i.e. pitting, erosion or scratches:
  - A. SEAT (1) - Sealing surface
  - B. STEM (2) - Packing area
  - C. DISC (2) - Sealing surface
  - D. BACKSEAT (2 & 4) - Sealing surface



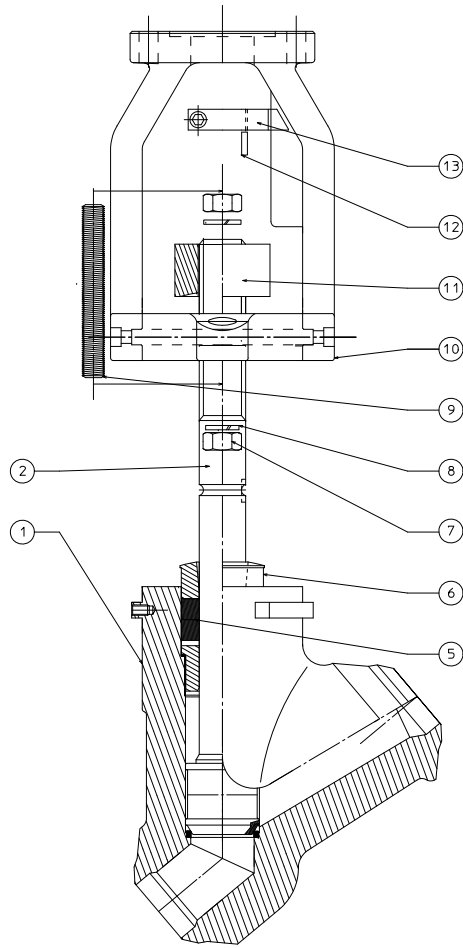
**IN CASE SEVERE DAMAGE IS OBSERVED,  
USE REPLACEMENT PARTS INSTEAD!**

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.

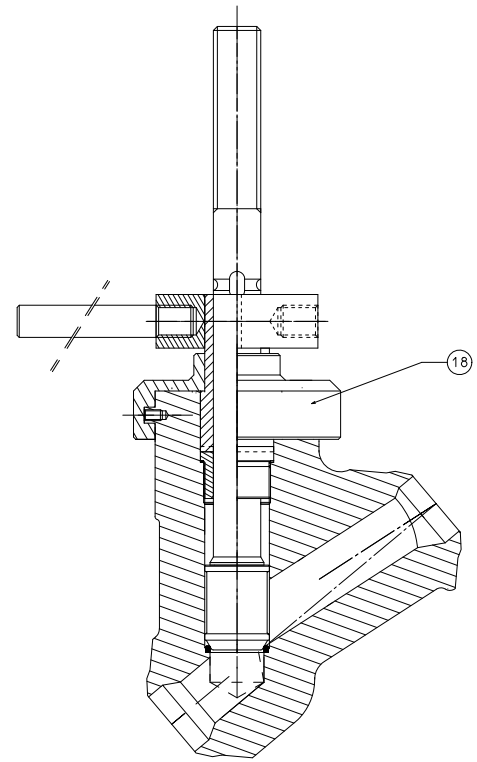
**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
 WITH FIXED BACKSEAT 3"**



**Fig.01**



**Fig.02**



**Fig.03**

**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
WITH FIXED BACKSEAT 3"**

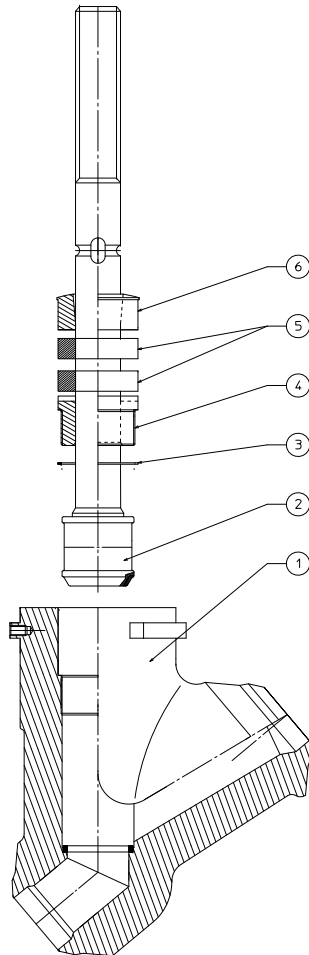


Fig.04

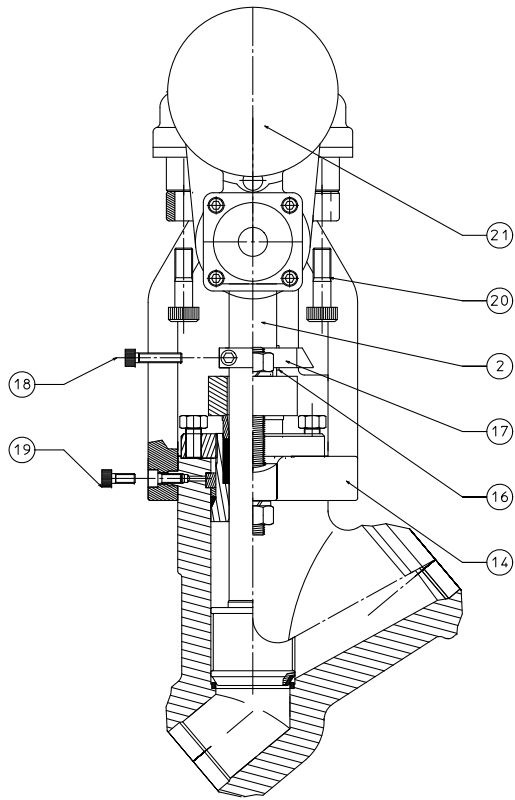
1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.
2. Unscrew the bolts (16) which secure the gearbox (17), rotate the gearbox clockwise to remove it from 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**

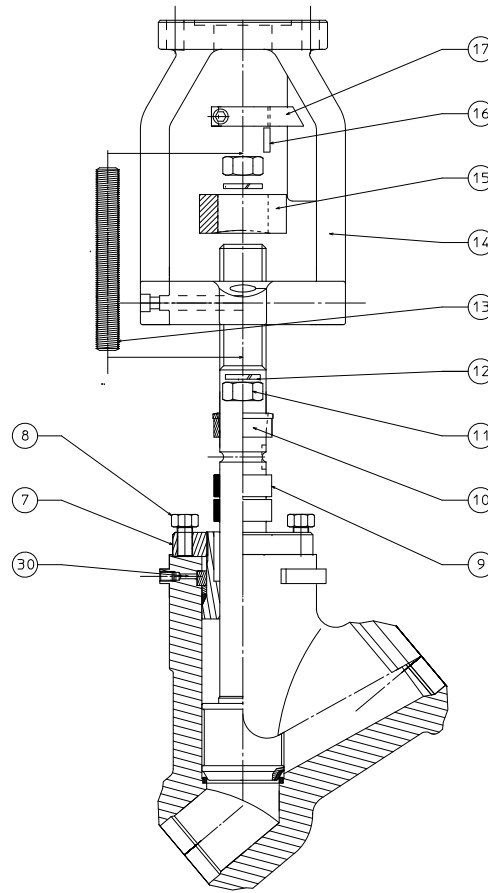
1. Thoroughly clean all parts with solvent and a clean cloth.
2. Examine the following parts for signs of damage, i.e. pitting, erosion or scratches:
  - A. SEAT (1) - Sealing surface
  - B. STEM /disc (2) - Packing area
  - C. DISC /disc (2) - Sealing surface
  - D. Backseat (2 & 4) - Sealing surface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



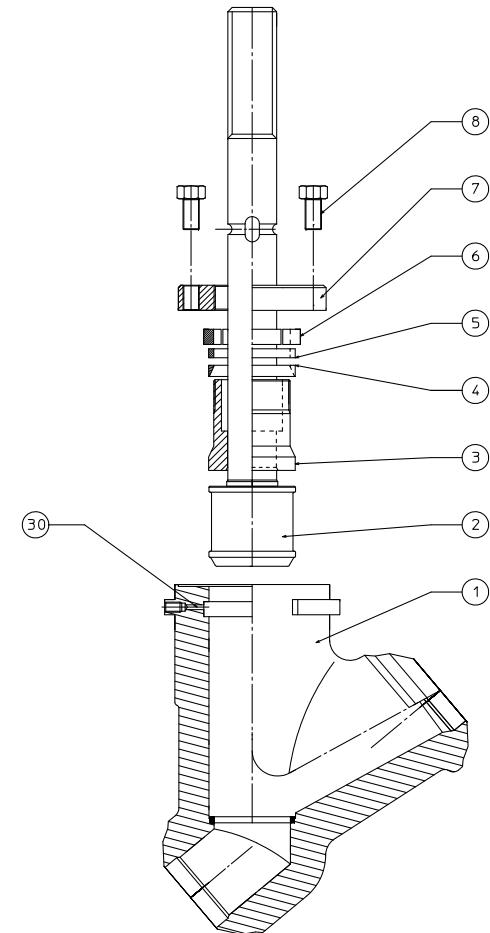
**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
 WITH INTEGRAL BACKSEAT 4"**



**Fig.01**



**Fig.02**



**Fig.03**

**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
WITH INTEGRAL BACKSEAT 4"**

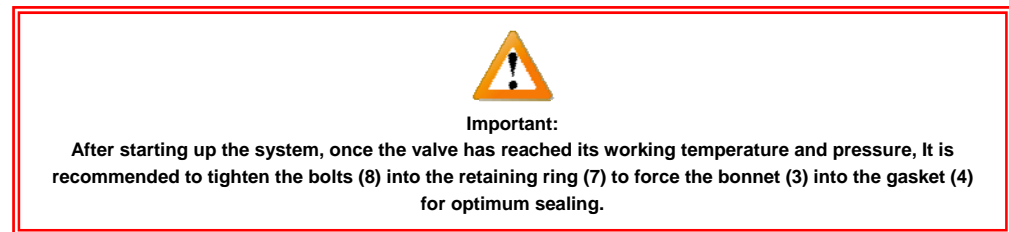
1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.
2. Unscrew the bolts (20) which secure the gearbox to the top flange and remove them. Rotate the gearbox (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



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. Pressurise the system and check the packing (9) and bonnet (3) for signs of leakage.



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"**

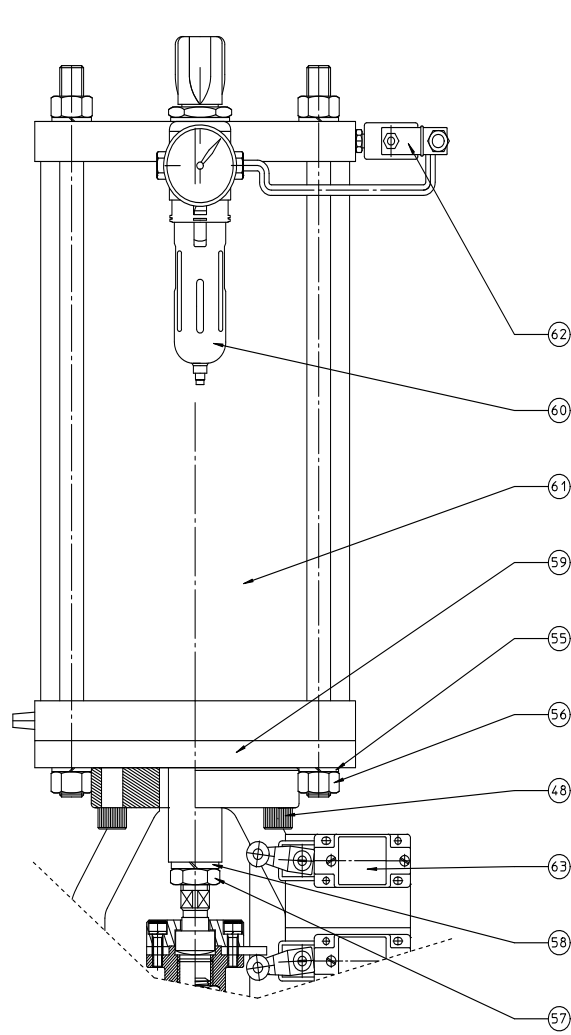


Fig.01

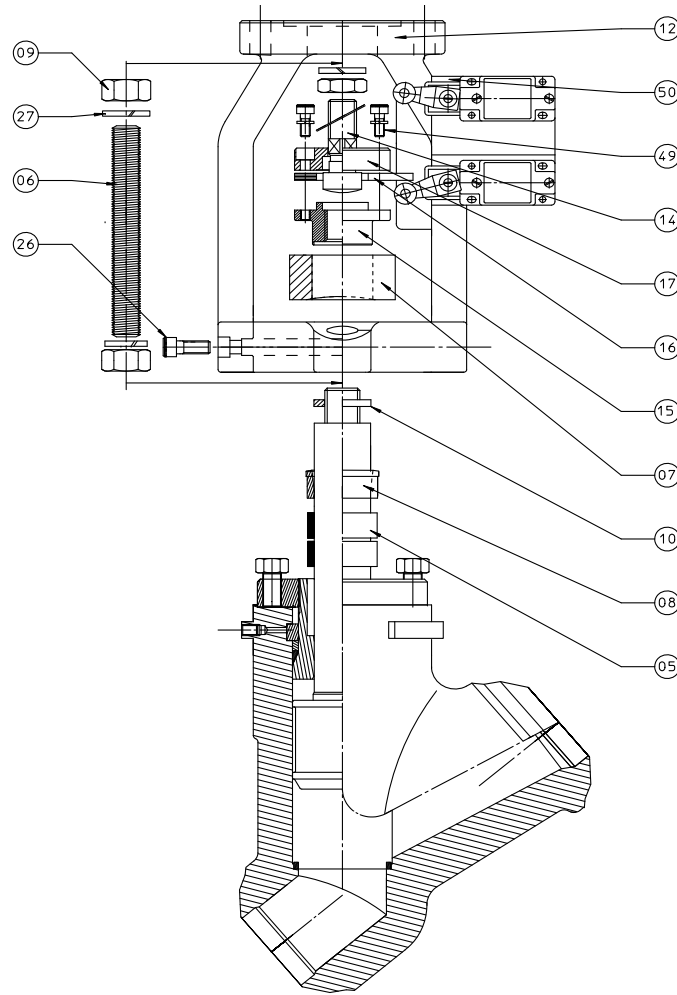


Fig.02

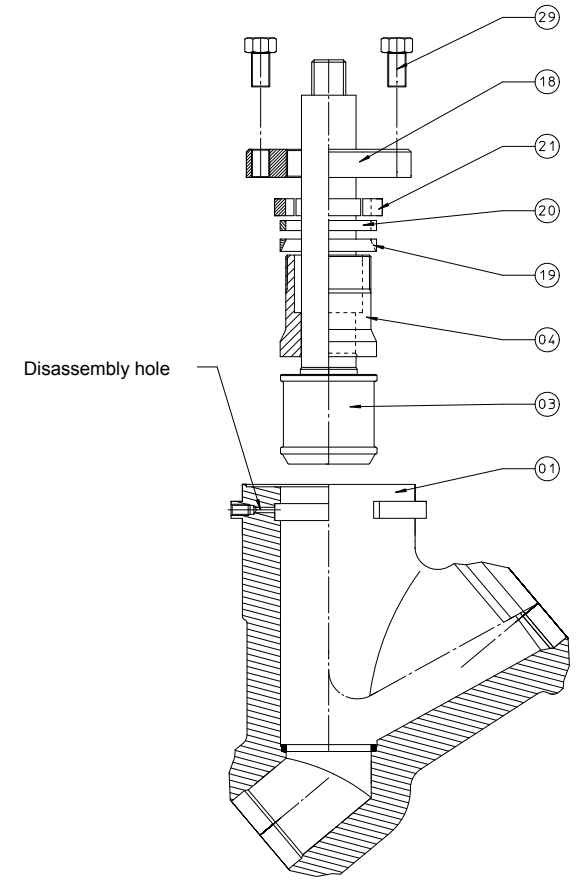


Fig.03

**DISASSEMBLY & ASSEMBLY GLOBE VALVE  
WITH PNEUMATIC ACTUATOR 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. Switch the pneumatic actuator to the closed position. Unscrew bolts (49) (4pcs) out of the coupling (15/17) to disconnect the upper coupling (17) from the lower coupling (15). (see Fig.02)
3. Switch the pneumatic actuator to the open position. Loosen the nut (57) of the threaded rod (14) and unscrew the threaded rod (14) out of the pneumatic actuator (61).
4. Unscrew the nuts (48) (4pcs) which secure the pneumatic actuator (61) on the top flange (12).
5. Disconnect the air feed line from the filter/reducer (60) and disconnect the electrical connections. Now remove the pneumatic actuator (61) together with the flange (59) from the valve top flange (12). (see Fig.02)
6. Unscrew the lower coupling (15) from the stem/disc (03) and remove it together with the spring washer (10).
7. Unscrew and remove the bolts (26) which secure the yoke (12) to the valve body (01). Rotate the yoke (12) 90° counter clockwise to disengage it from the valve body (01).
8. Unscrew the gland nuts (09) and remove them together with the stud bolts (06) and spring washers (27). (see Fig.02)
9. Remove the yoke (12) together with the gland flange (07) and gland (08) from the valve body (01).
10. Unscrew the bolts (29) (4pcs) from the retaining ring (18) and remove them.
11. Unscrew the retaining ring (18) from the bonnet (04); while securing the stem/disc (03) in place, in order to prevent it from damaging. After the retaining ring (18) has been removed, lower the stem/disc (03), bonnet (04), the packing (05), gasket (19) and ring (20) into the valve body (01).
10. Remove the segmental ring (21) from the valve body (01) by tapping a punch tool through the designated disassembly holes provided in the bonnet area of the valve body (01). Now the valve internals can be removed by pulling the stem/disc (03) from the valve body (01).

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 (01) - Sealing surface
  - B. STEM /disc (03) - Packing area
  - C. DISC /disc ( 03) - Sealing surface
  - D. Backseat (04) - Sealing surface



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 (19) and bonnet (04). Place the gasket (19) and gasket ring (20) over the bonnet (04), (see Fig.03) and place this assembly over the stem/disc (03).
5. Insert this completed assembly into the valve body (01).
6. Insert the segmental ring (21) into the valve body (01). Make sure the segments are located at such place, there is a segment placed in front of each disassembly hole. Pull up the stem/disc (03) together with the bonnet (04) through the segmental ring (21). Screw the retaining ring (18) to the bonnet (04) rotating it clockwise (hand tight).
7. Insert the bolts (29) in the retaining ring (18) and tighten them.
8. Insert the packing (05) (first with markings down, second with markings up) over the stem/disc (03) and into the bonnet (04). Place the gland (08) over the stem/disc (03) on top of the packing (05).
9. Place the yoke (12) together with gland flange (07), over the stem/disc (03) and engage the yoke (12) to the valve body (01).
10. Rotate the yoke (12) 90° clockwise and secure it with the hexagon socket screw (26) to the valve body (01).
11. Fixate the gland flange (15) with the gland bolts (06), spring washers (27) and gland nuts (09).
12. Tighten the gland nuts (09) to compress the packing (05).
13. Loosen the gland nuts (09). Now carefully tighten the gland nuts (09) again.
14. Lubricate the stem/disc (03) with Molykote HCS or equivalent. Place the spring-washer (10) and screw the lower coupling (15) to the stem/disc (03).
15. Install the pneumatic actuator (61) to the valve top flange (12) and secure it with the nuts (48). Now reconnect the air feed line and reconnect al electrical connections.
16. Switch the pneumatic actuator to the open position. Install the threaded rod (14) together with the coupling (17), the position indicator (16), the nut (57) and the washer (58) to the pneumatic actuator. Fixate this assembly by screwing in the hexagon socket screws (49).
17. Adjust the threaded rod (17) by screwing it into the pneumatic actuator (61) until the stem/disc (03) contacts the backseat (04). Unscrew the threaded rod (14) one rotation counter clockwise and fixate it with the lock nut (57).
18. Switch the pneumatic actuator to the closed position and carefully tighten the gland nuts (09) again.
19. Pressurise the system and check the packing (05) and the bonnet (04) 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 (29) into the retaining ring (18) to force the bonnet (04) into the gasket (19) for optimum sealing.**

20. In case of leakage of the packing (05), tighten the gland nuts (09) carefully until leakage stops.
21. In case of leaking of the bonnet (04) tighten the bolts (29) located in the retaining ring (18).
22. The valve is now ready for use.