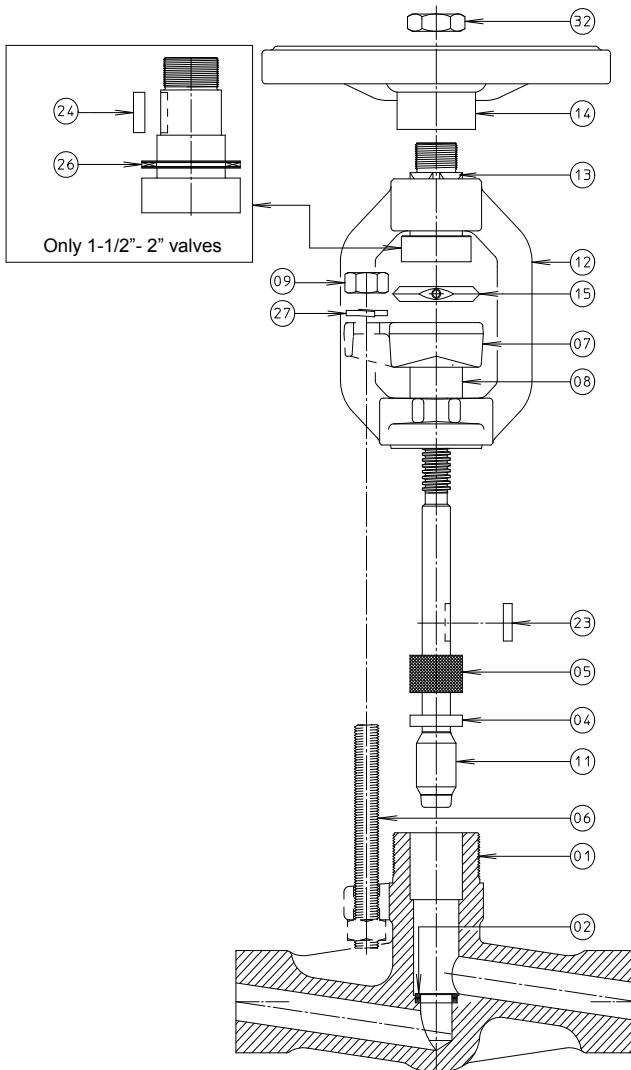


**DISASSEMBLY & ASSEMBLY THROTTLE GLOBE VALVE
WITH FLOATING BACKSEAT**



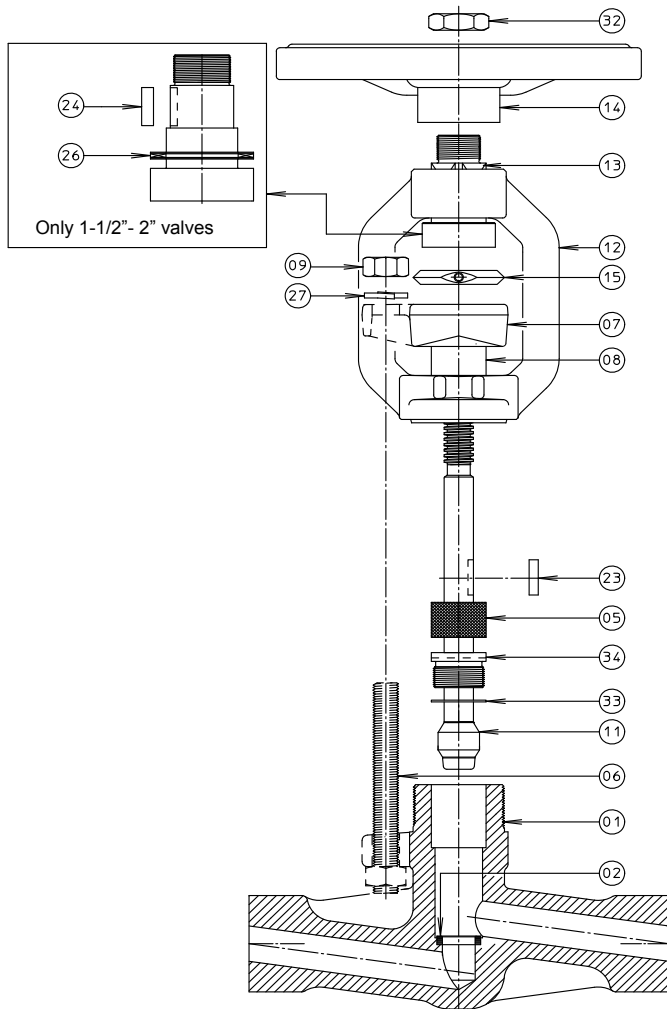
1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.
2. Unscrew the nuts (09) from the gland bolts (06) and remove the gland bolts from the gland flange (07).
3. Operate the valve to the open position.
4. Loosen the yoke (12) by rotating it in a counter clockwise direction and unscrew it partly from the body (01) :
 - 7 revolutions for 3/8" - 1/2" valves
 - 10 revolutions for 3/4" - 1" valves
 - 17 revolutions for 1 1/4" - 2" valves
5. Rotate the handwheel (14) counter clockwise, past the fully open position to force the packing (05) and the floating backseat (04) out of the stuffing box.
6. Unscrew the yoke (12) and pull it together with the remaining parts out of the valve body (01).
7. Unscrew the nut (32) from the yoke sleeve (13) and remove the handwheel (14).
8. Unscrew the stem/disc (11) from the yoke sleeve (13) and remove the position indicator (15), the gland flange (07) and parallel key (23).
9. Remove the gland flange (07), the packing (05) and the floating backseat (04) from the stem/disc (11) by pressing down on the floating backseat (04) whilst holding the stem/disc (11) upside down.

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 (02) - Sealing surface
 - B. STEM /disc (11) - Packing area
 - C. DISC /disc (11) - Sealing surface
 - D. Backseat (04) - Sealing surface
3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Insert the stem/disc (11) into the valve body (01).
5. Insert the floating backseat (04) (with radius down) into the valve body (01).
6. Insert the packing (05) (with markings down) into the valve body (01).
7. Insert the parallel key (23) into the stem/disc (11) and grease it with high temperature grease, i.e. Molykote HSC.
8. Place the yoke (12) together with the gland flange (07), position indicator (15) and yoke sleeve (13) (optional with thrust bearing (26)) over the stem/disc (11) and screw the yoke (12) on the valve body (01) by rotating it clockwise.
9. Align the gland flange (07) to the correct position whilst sliding the parallel key (23) in the designated slot provided in the gland flange (07). Now fixate the gland flange (07) with the gland bolts (06).
10. Rotate the yoke sleeve (13) counter clockwise until it is in contact with the yoke (12).
11. Install the handwheel (14) to the yoke sleeve (13) and fixate it with the sleeve nut (32).
12. Tighten the gland bolting (06/09) to compress the packing.
13. Loosen the gland nuts (09). Then carefully retighten the gland nuts (09) again.
14. Pressurise the system and check the packing (05) for signs of leakage.
15. In case leakage is observed, tighten the gland nuts (09) carefully until the leaking stops.
16. Adjust the position indicator (15) and fixate it with the hexagon socket screw.
17. The valve is now ready for use.



**DISASSEMBLY & ASSEMBLY THROTTLE GLOBE VALVE
WITH FIXED BACKSEAT**



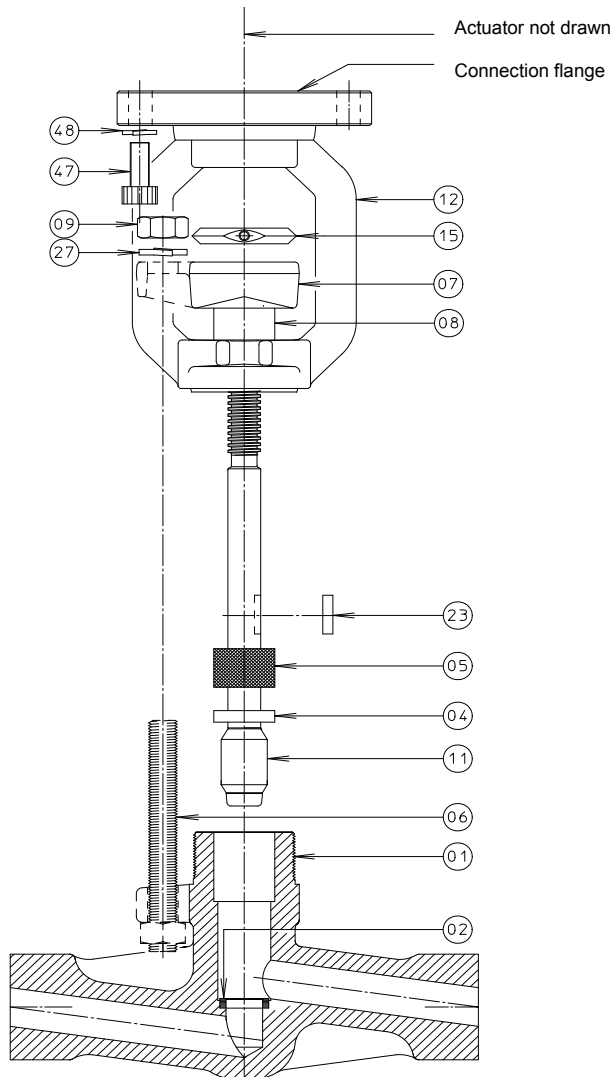
1. Caution, before any attempt is made to disassemble, verify that the valve is sufficiently cooled down, depressurised, isolated from system pressure and secured against accidental pressurisation.
2. Unscrew the nuts (09) from the gland bolts (06) and remove the gland bolts from the gland flange (07).
3. Remove the hexagon socket screw from the position indicator (15).
4. Loosen the yoke (12) by rotating it counter clockwise.
5. Unscrew the yoke (12) from the valve body (01) while rotating the handwheel (14) clockwise to unscrew the stem/disc (11) from the yoke sleeve (13) until it disengages. Remove the yoke (12), position indicator (15) and gland flange (07) from the valve body (01).
6. Remove the sleeve nut (32) which secures the handwheel (14) and remove the handwheel (14) and yoke sleeve (13) from the yoke (12).
7. Remove the parallel key (23) from the stem/disc (11) and remove the packing (05) out of the valve body (01).
8. Install the backseat removal tool on to the valve body (01) by screwing the adaptor to the threaded part of the valve body (01).
9. Loosen the backseat (34) by rotating the backseat removal tool in counter clockwise direction.
10. Unscrew the backseat removal tool from the valve body (01) and remove it together with the backseat (34), gasket (33) and stem/disc (11).

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 (02) - Sealing surface
 - B. STEM /disc (11) - Packing area
 - C. DISC /disc (11) - Sealing surface
 - D. BACKSEAT (34) - Sealing surface
3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Insert the stem/disc (11) into the valve body (01).
5. Insert the gasket (33) and the backseat (34) into the valve body (01).
6. Install the backseat removal tool on to the valve body (01) by screwing the adaptor to the threaded part of the valve body (01).
7. Screw the backseat (34) into the valve body (01) and fasten it by rotating it clockwise.
8. Insert the packing (05) with markings facing down into the valve body (01).
9. Place the parallel key (23) in the stem/disc (11) and lubricate it with high temperature grease, i.e. Molykote HSC.
10. Place the yoke (12) together with the gland flange (07), position indicator (15) and yoke sleeve (13) (optional with thrust bearing (26)) over the stem/disc (11) and screw the yoke (12) on the valve body (01) by rotating it clockwise.
11. Align the gland flange (07) to the correct position whilst sliding the parallel key (23) in the designated slot, provided in the gland flange (07). Now fixate the gland flange (07) with the gland bolts (06).
12. Rotate the yoke sleeve (13) counter clockwise until it is in contact with the yoke (12).
13. Install the handwheel (14) to the yoke sleeve (13) and fixate it with the sleeve nut (32).
14. Tighten the gland bolting (06/09) to compress the packing.
15. Loosen the gland nuts (09). Then carefully retighten the gland nuts (09) again.
16. Pressurise the system and check the packing (05) for signs of leakage.
17. In case leakage is observed, tighten the gland nuts (09) carefully until the leaking stops.
18. Adjust the position indicator (15) and fixate it with the hexagon socket screw.
19. The valve is now ready for use.



**DISASSEMBLY & ASSEMBLY THROTTLE GLOBE VALVE
WITH FLOATING BACKSEAT AND ELECTRIC ACTUATOR**



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 nuts (09) from the gland bolts (06) and remove the gland bolts from the gland flange (07).
3. Remove the hexagon socket screw from the position indicator (15). Operate the valve to the open position, using the actuator emergency handwheel rotating it counter clockwise. Now rotate it past the fully open position to force the packing (05) and the floating backseat (04) out of the stuffing box.
4. Unscrew the bolting (47) to loosen the actuator from the yoke (12).
5. Rotate the actuator clockwise in order to unscrew it from the stem/disc (11).
6. Grind off the tack weld and unscrew the yoke (12) from the valve body (01) and remove the position indicator (15), gland flange (07), gland (08) and parallel key (23) from the stem/disc (11).
7. Pull the stem/disc (11) together with the remaining parts out of the valve body (01).
8. Remove the packing (05) and the floating backseat (04) from the stem/disc (11) by pressing down on the floating backseat (04) whilst holding the stem/disc (11) upside down.

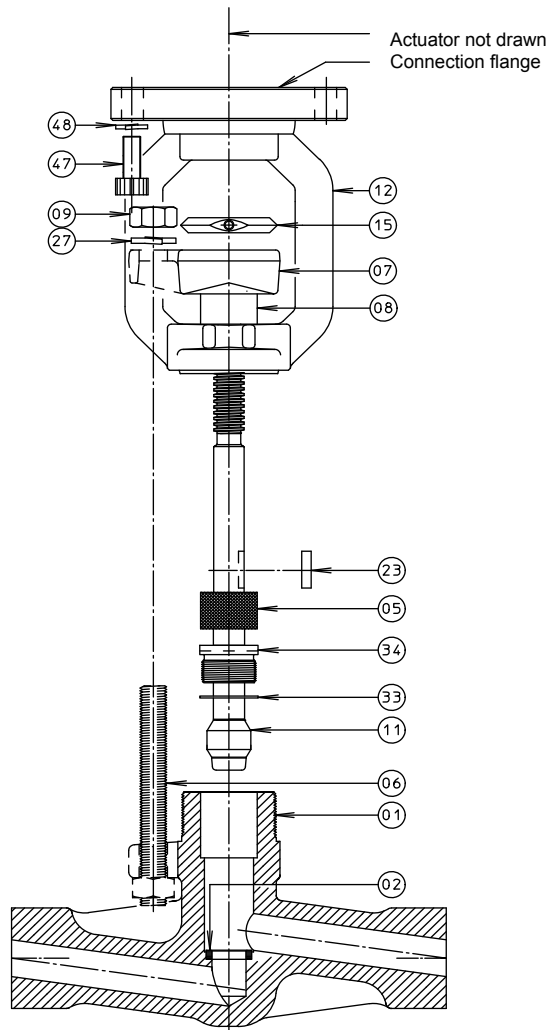
INSPECTION PRIOR TO RE-ASSEMBLY

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 (02 - Sealing surface
 - B. STEM /disc (11) - Packing area
 - C. DISC /disc (11) - Sealing surface
 - D. BACKSEAT (04) – Sealing surface
3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Insert the stem/disc (11) into to valve body (01).
5. Insert the floating backseat (04) (with radius down) and the packing (05) (with markings down) into the valve body.
6. Place the parallel key (23) in the stem/disc (11) and lubricate it with high temperature grease, i.e. Molykote HSC.
7. Place the yoke (12) together with the gland flange (07) and position indicator (15) over the stem/disc (11) and screw the yoke (12) on the valve body (01) by rotating it clockwise.
8. Align the gland flange (07) to the correct position whilst sliding the parallel key (23) in the designated slot, provided in the gland flange (07). Now fixate the gland flange (07) with the gland bolts (06).
9. Tighten the gland bolting (06/09) to compress the packing.
10. Loosen the gland nuts (09). Then carefully retighten the gland nuts (09) again.
11. Mount the actuator on top of the connection flange (12) and tighten the bolts (47). Adjust the limit switches of the actuator.
 - 3/8" - 1/2" valve 10mm travel
 - 3/4" - 1" valve 16mm travel
 - 1 1/2" - 2" valve 36mm travel
12. Operate the actuator in manual mode, until the valve is in closed position and adjust the switch setting according the actuator manufacturers manual. Now fixate the yoke (12) to the valve body (01) by means of a tack weld.
13. Pressurise the system and check the packing (05) for signs of leakage.
14. In case leakage is observed, tighten the gland nuts (09) carefully until the leaking stops.
15. Adjust the position indicator (15) and fixate it with the hexagon socket screw.
16. The valve is now ready for use.



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

**DISASSEMBLY & ASSEMBLY THROTTLE GLOBE VALVE
WITH FIXED BACKSEAT AND ELECTRIC ACTUATOR**



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 nuts (09) from the gland bolts (06) and remove the gland bolts from the gland flange (07).
3. Remove the hexagon socket screw from the position indicator (15). Operate the valve to the open position, using the actuator emergency handwheel rotating it counter clockwise.
4. Unscrew the bolting (47) to loosen the actuator from the yoke (12).
5. Rotate the actuator clockwise in order to unscrew it from the stem/disc (11).
6. Grind off the tack weld and unscrew the yoke (12) from the valve body (01) and remove the position indicator (15), gland flange (07), gland (08) and parallel key (23) from the stem/disc (11).
7. Remove the packing (05) out of the valve body (01).
8. Install the backseat removal tool on to the valve body (01) by screwing the adaptor to the threaded part of the valve body (01).
9. Loosen the backseat (34) by rotating the backseat removal tool in counter clockwise direction.
10. Unscrew the backseat removal tool from the valve body (01) and remove it together with the backseat (34), gasket (33) and stem/disc (11).
11. Remove the packing (05) and the backseat (34) from the stem/disc (11) by pressing down on the backseat (34) whilst holding the stem/disc (11) upside down.

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 (02) - Sealing surface
 - B. STEM /disc (11) - Packing area
 - C. DISC /disc (11) - Sealing surface
 - D. BACKSEAT (34) - Sealing surface
3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Insert the stem/disc (11) into the valve body (01).
5. Insert the gasket (33) and the backseat (34) into the valve body (01).
6. Install the backseat removal tool on to the valve body (01) by screwing the adaptor to the threaded part of the valve body (01).
7. Screw the backseat (34) into the valve body (01) and fasten it by rotating it clockwise.
8. Insert the packing (05) with markings facing down into the valve body (01).
9. Place the parallel key (23) in the stem/disc (11) and lubricate it with high temperature grease, i.e. Molykote HSC.
10. Place the yoke (12) together with the gland flange (07) and position indicator (15) over the stem/disc (11) and screw the yoke (12) on the valve body (01) by rotating it clockwise.
11. Align the gland flange (07) to the correct position whilst sliding the parallel key (23) in the designated slot, provided in the gland flange (07). Now fixate the gland flange (07) with the gland bolts (06).
12. Tighten the gland bolting (06/09) to compress the packing.
13. Loosen the gland nuts (09). Then carefully retighten the gland nuts (09) again.
14. Mount the actuator on top of the connection flange (12) and tighten the bolts (47). Adjust the limit switches of the actuator.
 - a. 3/8" - 1/2" valve 10mm travel
 - b. 3/4" - 1" valve 16mm travel
 - c. 1 1/2" - 2" valve 36mm travel
15. Operate the actuator in manual mode, until the valve is in closed position and adjust the switch setting according the actuator manufacturers manual. Now fixate the yoke (12) to the valve body (01) by means of a tack weld.



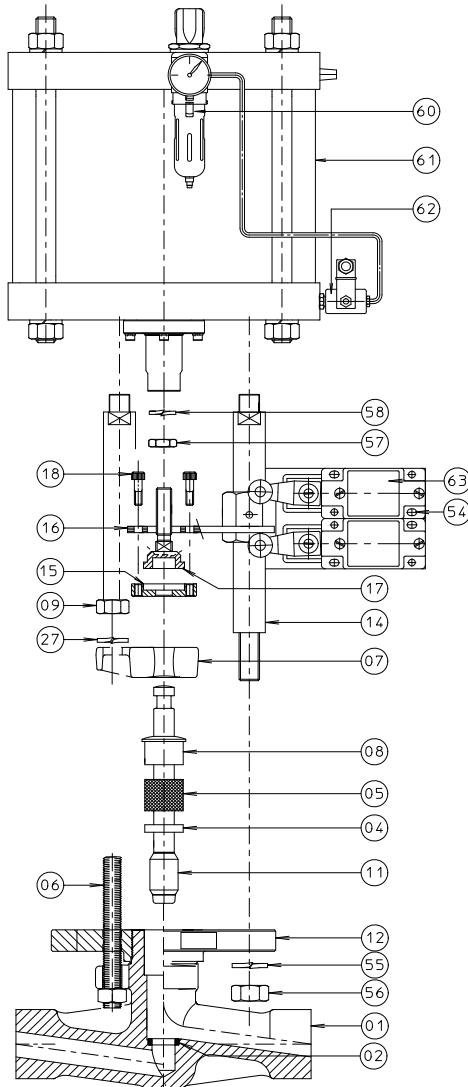


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Medium & high pressure valves
in accordance with ASME, EN, BS and API

16. Pressurise the system and check the packing (05) for signs of leakage.
17. In case leakage is observed, tighten the gland nuts (09) carefully until the leaking stops.
18. Adjust the position indicator (15) and fixate it with the hexagon socket screw.
19. The valve is now ready for use.

**DISASSEMBLY & ASSEMBLY THROTTLE GLOBE VALVE
WITH FLOATING BACKSEAT AND PNEUMATIC ACTUATOR**



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 (18) out of the coupling (15/17) to disconnect the upper coupling (17) from the lower coupling (15).
3. Switch the pneumatic actuator to the open position. Loosen the nut (57) of the upper coupling (17) and unscrew the upper coupling (17) together with the position indicator (16) out of the pneumatic actuator (61).
4. Unscrew the nuts (56) from the spacer columns (14) and disconnect the air feed line together with the electrical connections. Now remove the pneumatic actuator (61), spacer columns (14) and limit switches (63) from the pneumatic mounting flange (12). Unscrew the gland nuts (09) from the stud bolts (06) and remove them.
5. Pull the stem/disc (11) together with coupling (15), gland flange (07), gland (08), packing (05) and floating backseat (04) out of the valve body (01).
6. Remove the coupling (15) and the gland flange (07) from the stem/disc (11).
7. Remove the packing (05) and the floating backseat (04) from the stem/disc (11) by pressing down on the floating backseat (04) whilst holding the stem/disc (11) upside down.

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 (02) - Sealing surface
 - B. STEM /disc (11) - Packing area
 - C. DISC /disc (11) - Sealing surface
 - D. BACKSEAT (04) – Sealing surface
3. Lubricate all threaded parts with high temperature grease, i.e. Molykote HSC.
4. Insert the stem/disc (11) into the valve body (01). Insert the floating backseat (04)(with radius down) into the valve body (01). Insert the packing (05) with markings down into the valve body (01).
5. Place the gland (08) together with the gland flange (07) over the stem/disc (11). Fixate the gland flange (07) with the gland bolts (06).
6. Tighten the gland bolting (06/09) to compress the packing (05).
7. Loosen the gland nuts (09). Then carefully retighten the gland nuts (09) again.
8. Install the coupling (15) to the stem/disc (11). Lubricate stem radius with high temperature grease, i.e. Molykote HSC. Install the upper coupling (17) and place the position indicator (16) on top of it. Secure this assembly by screwing in the hexagon socket screws (18).
9. Place the actuator (61), spacer columns (14) and limit switches (63) on the actuator mounting flange (12). Reconnect the air feed line and electrical connections and switch the pneumatic actuator to the open position. Now secure the spacer columns (14) with the nuts (56) and washers (55).
10. Screw the upper coupling (17) into the pneumatic actuator until the stem contacts the loose backseat (04). Unscrew the threaded end one revolution counter clockwise.
11. Switch pneumatic actuator to the closed position and fasten the upper coupling (17) with the nut (57).
12. Pressurise the system and check the packing (05) for signs of leakage.
13. In case leakage is observed, tighten the gland nuts (09) carefully until the leaking stops.
14. The valve is now ready for use.

