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Operating instructions Maintenance / Mounting PTFE-seated butterfly valve series K

Maintenance

- The valves do not require any special maintenance.

Disassembly

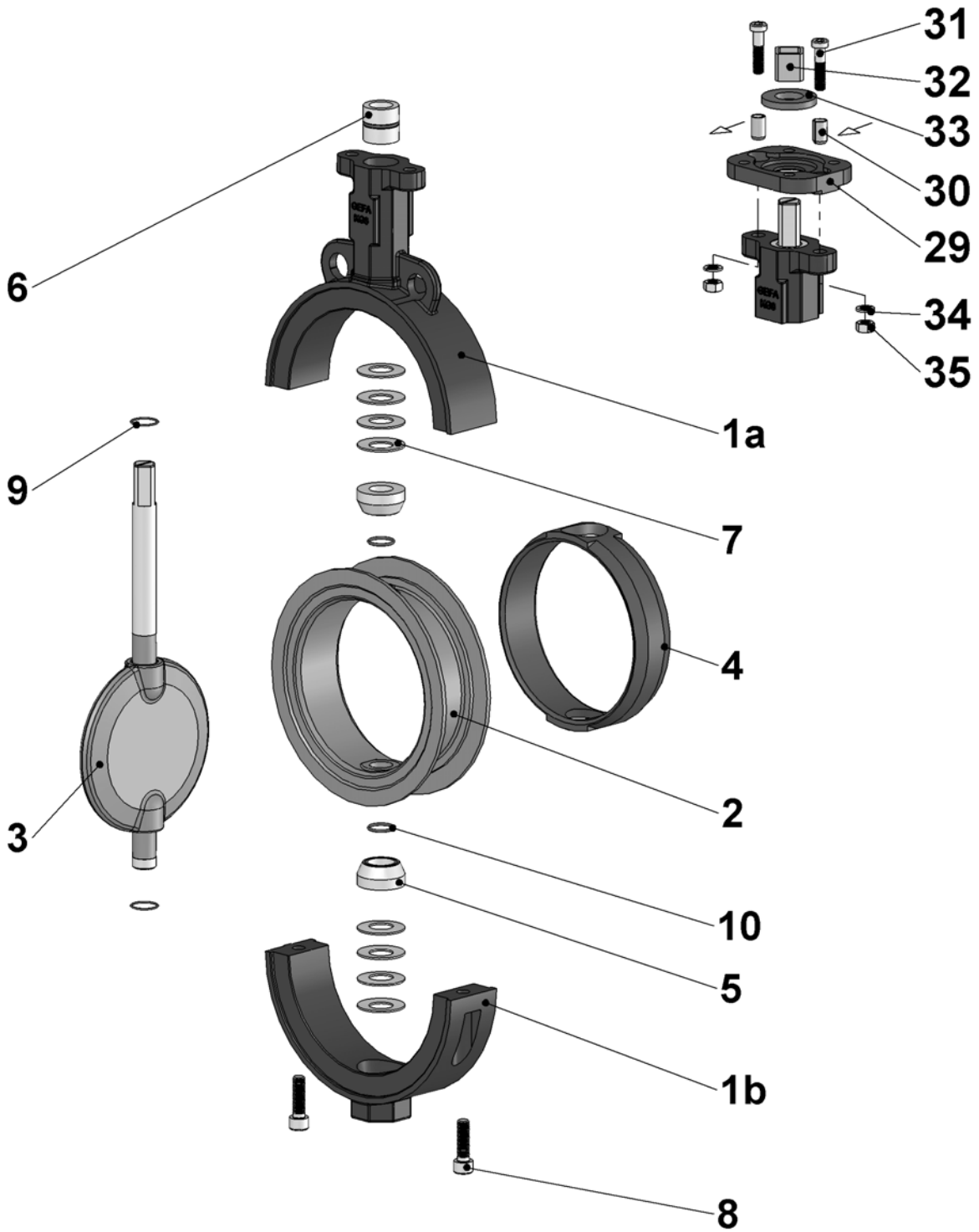
- Valves with hand lever:
  Loosen the lateral screw joint of the hand lever and pull the hand lever off the valve stem (3).
  If only the seat (2) or the disc (3) have to be replaced, the throttle plate can be left mounted.
  Remove the throttle plate by loosening the screws to replace the bearing (6).
- Valves with actuator:
  Loosen the fastening screws between the MULTITOP mounting plate (29) and the actuator or between the valve and the bracket and remove the actuator to replace the bearing (6).
  Remove the MULTITOP mounting plate (29) from the valve by loosening the fastening screws (31) and the clamping sleeves (30).
  If only the seat (2) or the disc (3) has to be replaced, the actuator may remain on the valve.
- Turn the disc to "OPEN" position.
- Loosen and remove the two body screws (8).
- Pull off the lower part of the body (1b). The lower part or the body can easily be pulled off by pressing screw drivers into the body split.
- Pull the disc (3) with the seat (2) out of the upper part of the body (1a).
- If the disc (3) is to be reused, it should be heated together with the seat (2) to at least 100 °C (better 150 °C). This can be achieved in a water bath (boiling, 100°C) or better in a heating furnace.
  After warming the disc / seat unit, the seat ring becomes pliable. Deform the seat into an oval and pull it first over the lower stem part of the disc. Thereafter, pull the seat upwards.
- Allocate the thrust pads (5), disc spring washers or compression springs (7) and the adjusting washers (if present) to the upper and lower body part (1a/1b) in the same way as they were found.
  Comment: Four disc spring washers are used per body half for DN 50 to DN 150 and DN 500.
  One compression spring is used per body half for DN 200 to DN 400.
- Check all part for flawless condition and renew them, if required. Only use original GEFA spare parts.

Assembly

- Thoroughly clean all parts and check them for wear. Parts that show wear or corrosion must be replaced to ensure operational safety in future.
- Equip the thrust pads (5) with a new FPM O-ring (10), if required.
- Allocate the disc spring washers or compression springs (7) to the body halves (exchange them, when they are corroded). Insert the adjusting washers into the body parts in the original pattern.
- Check the disc (3) and slide a new FEP O-ring over both stem parts and into the groove of the disc.
- Heat the seat (2) in the form it is delivered as spare part with inlayed elastomer (4) in an heating furnace to 150°C (maximum 15 minutes) or in boiling water to 100°C.
- Pull the hot seat (2) over the long stem part of the prepared disc (3). Clamp the flat of the disc with a vice (use aluminium jaws).
  Pull the seat over the short stem part. For this purpose, the seat is distorted into an oval.
- Place the disc spring washers or compression spring (7) and the thrust pad (5) into the upper part of the body (1a).
- Insert the complete disc (3) / seat (2) unit into the upper part of the body (1a).
- Place the disc spring washers or compression spring (7) and the thrust pad (5) into the lower part of the body (1b).
- Assemble the upper and lower part of the body (1a/1b) and fasten them with the body screws (8).
  Each body half has a small moulded cam at the body split that shows the correct position of the body halves in relation to each other.
- Insert the bearing with the O-rings (6) into the upper body part (1a) if the bearing has to be replaced.
- After the assembly the disc has to be switched for several times (at least 4x) by 180°.
- Check the seat and the stem tightness. Test pressure 1.1 times nominal pressure.
- Valves with hand lever:
- Loosely attach the throttle plate with the screws to the top flange. Slide the hand lever onto the stem and position the throttle plate. Tighten the fastening screws of the throttle plate and attach the lever with the lateral screw joint.
- Valves with actuator:
  Attach the whole actuator unit, align it and fasten it with screws.

Mounting of the MULTITOP mounting plate.

- Position the mounting plate (29) on the body.
- Insert the spring dowel sleeves (30) through the mounting plate into the body. The slot in the spring dowel sleeve must point in the force direction (see arrow in the assembly drawing) to achieve a rigid connection. Do not insert the mounting plate without using spring dowel sleeves, as the transverse forces cannot be absorbed by the screws.
- Insert the cylinder screws (31) and tighten them.
- Slide a square adapter (32) onto the stem, if required. Prevent the square adapter from sliding down the stem by using the attached washer (33), if required.



1a	Upper part of the body	6	Bearing with O-ring	30	Spring dowel sleeve
1b	Lower part of the body	7	Disc spring washer/compression spring	31	Cylinder screw
2	Seat	8	Body screw	32	Square adapter
3	Disc	9	O-ring	33	Retaining washer
4	Elastomer	10	O-ring	34	Spring washer
5	Thrust pad	29	MULTITOP mounting plate	35	Hexagonal nut

Subject to modifications without notice Edition: 2010-09-30