

Maintenance of SISTO-B valves / Replacement of the diaphragms

- Please read the operation instructions
- Not following the instructions could cause damage to persons or to property and the environment
- Do not manipulate the valves or the actuators, this could cause trouble with the SISTO-equipment

KSB

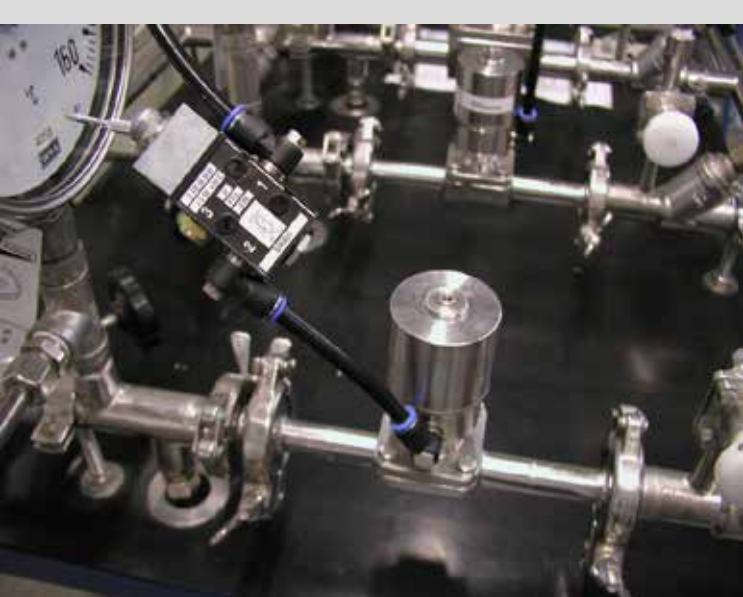


Replacement of SISTO-B diaphragms

Subdivision and Marking of SISTO-Diaphragms:

SISTO-B:

According to the length: (ML32, 46, 52, 58, 67, 82, 90, 108, 132, 158, 226)



Replacement of SISTO-B diaphragms Recommendation for maintenance in plants/facilities:

- If it is possible in a plant, you can open the actuators by external pneumatic handvalve (to win time)
- If there is no air supply, you can open the actuators by accumulator air pump

Replacement of SISTO-B diaphragms

- Valve as delivered



Replacement of SISTO-B diaphragms

Dismantling the actuator

- Make sure that the system is empty and without pressure !!!
- Take the valve to the open position



Replacement of SISTO-B diaphragms

Dismantling the actuator



- Undo the hexagon screws and dismantle the actuator

Replacement of SISTO-B diaphragms



- Take actuator to the closed position
- Screw out the old diaphragm
- Screw in the new diaphragm until you feel a resistance
never turn more forward
- If necessary, turn back by an angle of max. 180°,

Replacement of SISTO-B diaphragms



- Pay attention that the seal in the middle of the diaphragm must be identical to the base in the valve body
- Pay attention of cleanness

Replacement of SISTO-B diaphragms

Assembly of the actuator



- Take the actuator to the open position
- Control the position of the diaphragm again

Replacement of SISTO-B diaphragms

Assembly of the actuator

- Fit the actuator on the valve body
- Screw in the hexagon screws with tool but only hand tight until there is no gap between body, diaphragm and bonnet.
- And then STOP screwing!!!

Replacement of SISTO-B diaphragms Assembly of the actuator



- Now take the valve to the closed position
- Consequently the diaphragm is moving to the optimal position

Replacement of SISTO-B diaphragms

Assembly of the actuator

- Finally tighten the hexagon screws crosswise with the recommended torque

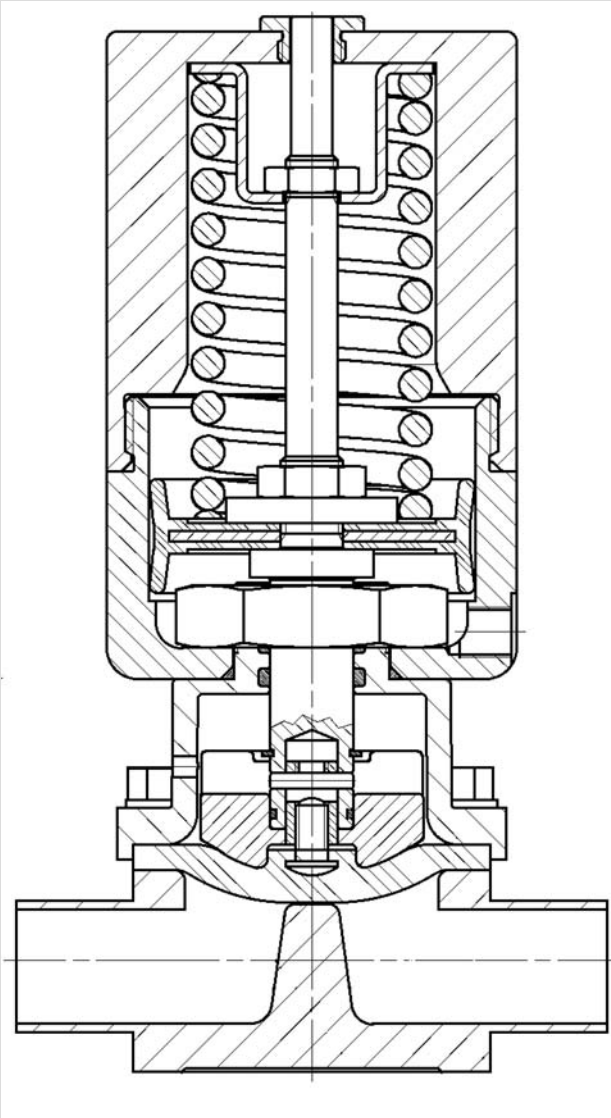
Replacement of SISTO-B diaphragms

Assembly of the actuator

Torques in Nm (see operating instructions page 15)

SISTO-B

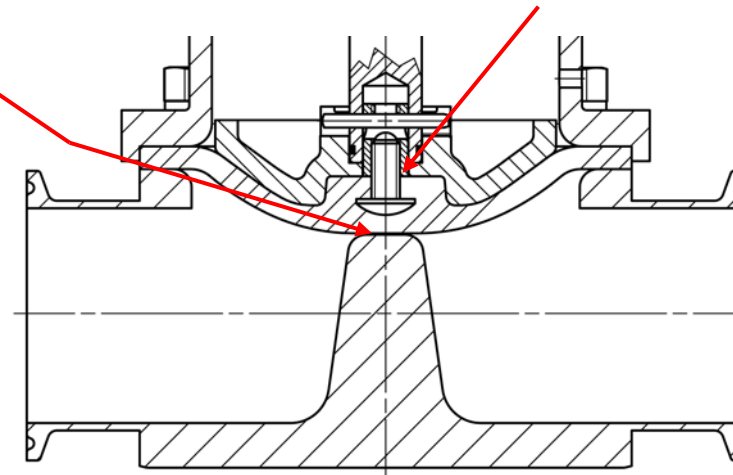
Diaphragm	Diaphragm lenth (ML)												
	32	46	52	58	67	82	90	108	132	158	226	260	304
EPDM	0,8	3,5	2,5	6	8	12	15	25	30	45	30	35	50
TFM foil bonded	1	4	2,5	7	9	13	17	26					
PTFE, TFM (2 layer)	2	6		8	10	15	18	28	35	50	35	40	55



Replacement of SISTO-B diaphragms

Ideal position of the diaphragm

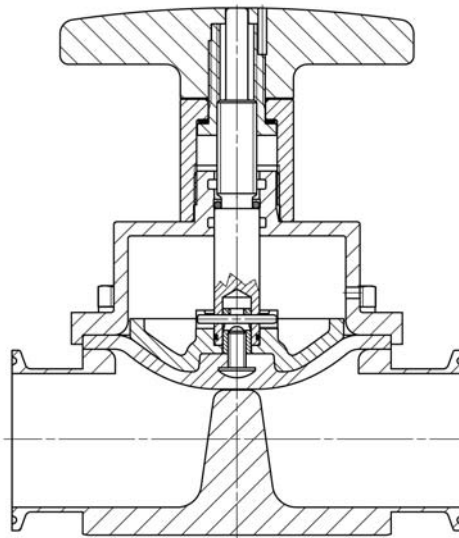
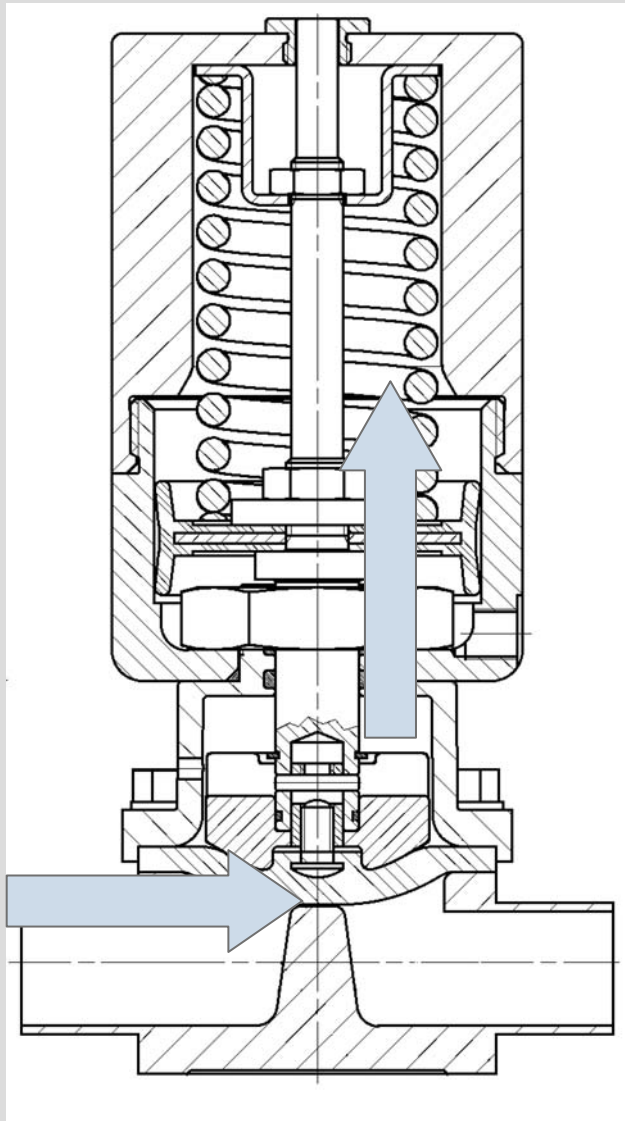
- Assembly in closed position
- Screwed in the right way



Replacement of SISTO-B diaphragms

Assembly of the bonnet with handwheel

- After fitting the actuator in as described the diaphragm is not damaged on the base of the valve body because the spring in the actuator is moving
- In bonnets with handwheel there is no spring, there is a spindle with winding, so we have here a special procedure to fit the bonnet:



15 T.Feige, 28.03.2011



Replacement of SISTO-B diaphragms

Assembly of the bonnet with handwheel

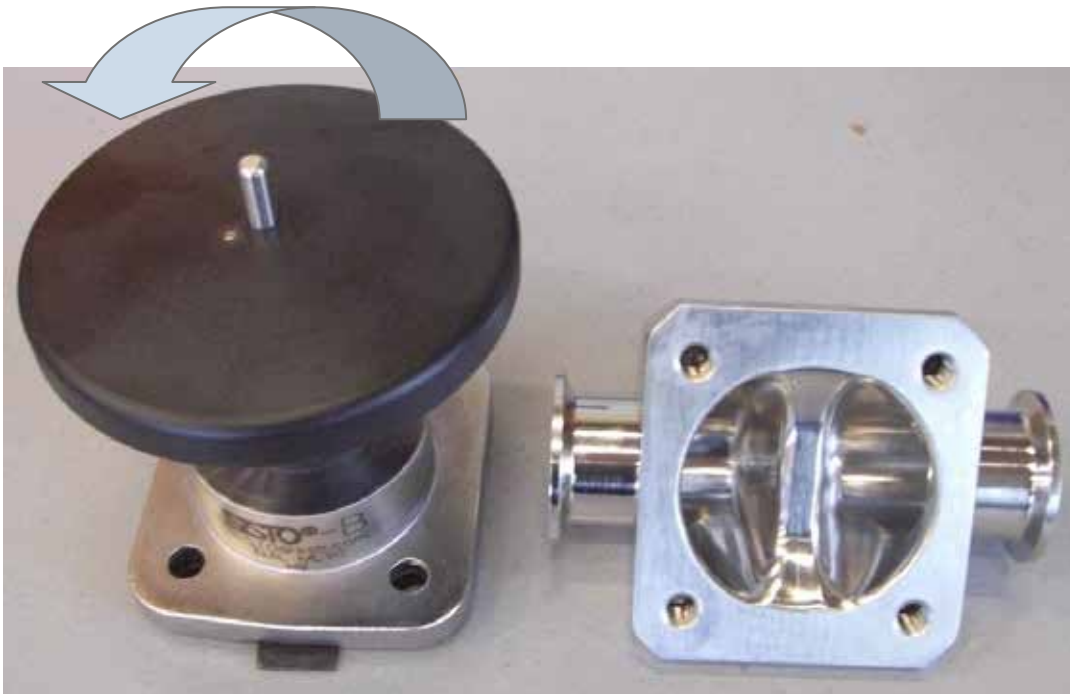


- Take bonnet to the closed position
- Screw out the old diaphragm
- Screw in the new diaphragm until you feel a resistance
never turn more forward
- If necessary, turn back by an angle of max. 180°,

Replacement of SISTO-B diaphragms

Assembly of the bonnet with handwheel

- Take the valve to the open position
- Control the position of the diaphragm again



Replacement of SISTO-B diaphragms

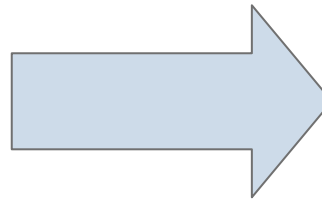
Assembly of the bonnet with handwheel

- Fit the bonnet on the valve body
- Screw in the hexagon screws with tool but only hand tight until there is no gap between body, diaphragm and bonnet.
- And then STOP screwing!!!

Replacement of SISTO-B diaphragms

Assembly of the bonnet with handwheel

- Now take the valve to the closed position
- Open the valve 2 rotations again for not damaging the diaphragm while tightening the screws



2 x

(Except ML32 only 1x)

19 T.Feige, 28.03.2011



Replacement of SISTO-B diaphragms

Assembly of the bonnet with handwheel

- Finally tighten the hexagon screws crosswise with the recommended torque



Replacement of SISTO-B diaphragms

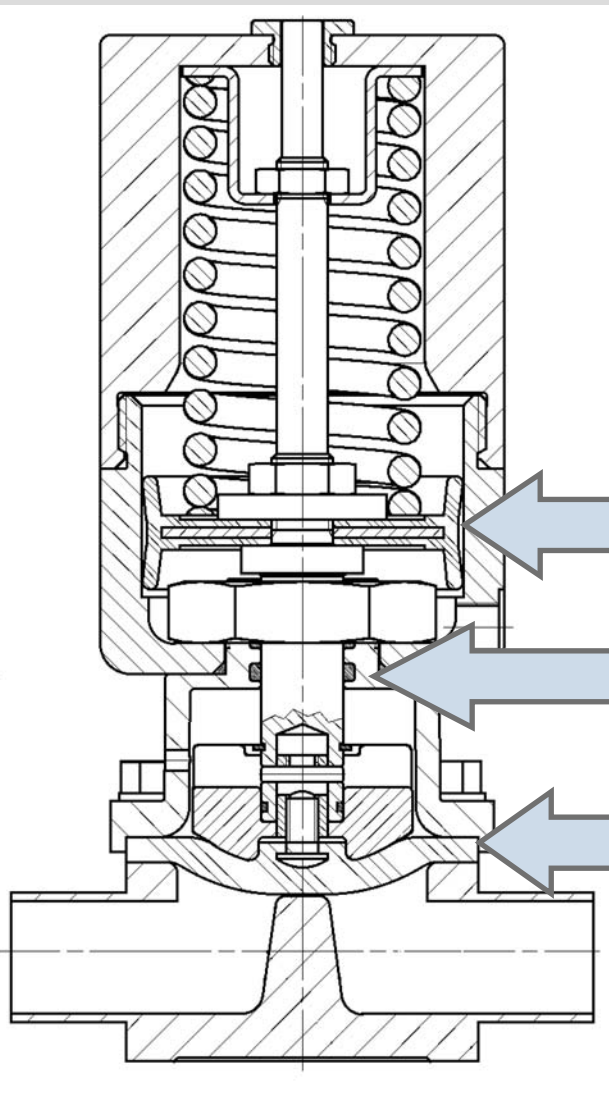
Assembly of the bonnet with handwheel

Torques in Nm (see operating instructions page 15)

SISTO-B

Diaphragm	Diaphragm lenth (ML)												
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Wear parts



Piston

O-Ring

Diaphragm

SISTO-Service

- **Replacement of diaphragms with SISTO-SERVICE-Team (also at valves of competitors)**
- **on site Service (repairs/attendance/reconstruction)**
- **maintenance agreements**
- **client trainings**
- **repairs/attendance/reconstruction of valve components (for example actuators) in SISTO plant**

END

Thank you very much for your
attention!