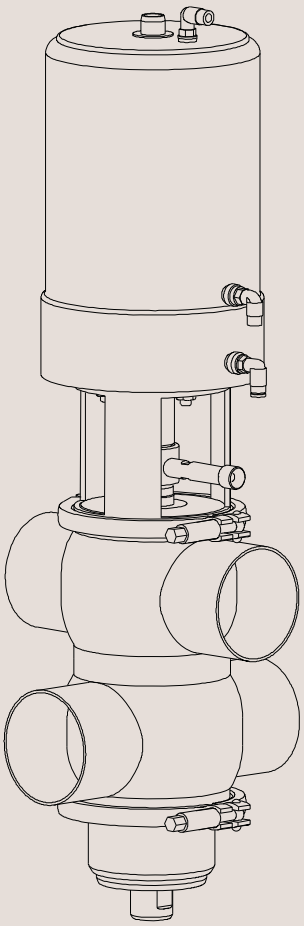
Instruction Manual

Unique **Sanitary Mixproof Valve** **(including US versions)**



TD 449-006_1

ESE00923EN/ENUS 2010-04

Original Instructions

1 Declaration of Conformity

Revision of Declaration of Conformity 2009-12-29

The Designated Company

Alfa Laval Kolding A/S
Company Name

Albuen 31, DK-6000 Kolding, Denmark
Address

+45 79 32 22 00
Phone No.

hereby declare that

Valve
Designation

Unique std.
Type

From serial number 1181354 - 9999999

is in conformity with the following directive with amendments:

- Machinery Directive 2006/42/EC
- Regulation (EC) No 1935/2004
- The valve is in compliance with the Pressure Equipment Directive 97/23/EC and was subjected to the following assessment procedure Module A. Diameters ≥ DN125 may not be used for fluids group 1.

The person authorised to compile the technical file is the signer of this document

QHSE Manager, Quality, Health and safety & Environment		Annie Dahl
Title		Name
Kolding	2000-01-01	
Place	Date	Signature

1.1 Important information
1.2 Warning signs

Unsafe practices and other important information are emphasized in this manual.
Warnings are emphasized by means of special signs.

Important information

Always read the manual before using the valve!

WARNING!
Indicates that special procedures **must** be followed to avoid severe personal injury.

CAUTION!
Indicates that special procedures **must** be followed to avoid damage to the valve.

NOTE!
Indicates important information to simplify or clarify practices.

Warning signs

General warning:

Caustic agents:

Transportation:

Always secure that compressed air is released
Always secure that all connections is disconnected before attemt to remove the valve from the installation
Always drain liquid out of valves before transportation
Always used predesigned lifting points if defined
Always secure sufficient fixing of the valve during transportation - if special designed packaging material is available it must be used

All warnings in the manual are summarized on this page.
Pay special attention to the instructions below so that severe personal injury and/or damage to the valve are avoided.

Installation

- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.
- **Never** touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).
- **Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.

Operation

- **Always** read the technical data thoroughly (see chapter 5).
- **Never** touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).
- **Never** pressurise air connections (AC1, AC3) simultaneously as both valve plugs can be lifted (can cause mixing).
- **Never** touch the valve or the pipelines when processing hot liquids or when sterilizing.
- **Never** throttle the leakage outlet.
- **Never** throttle the CIP outlet, if supplied.

- **Always** handle lye and acid with great care.

Maintenance

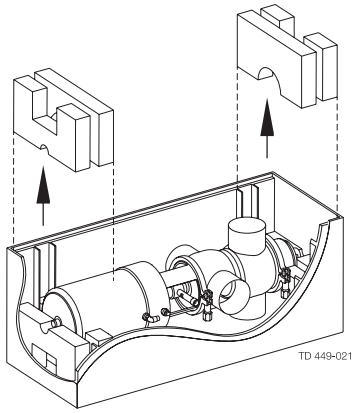
- **Always** read the technical data thoroughly (see chapter 5).
- **Always** fit the seals correctly.
- **Always** release compressed air after use.
- **Always** remove the CIP connections, if supplied, before service.
- **Never** service the valve when it is hot.
- **Never** pressurise the valve/actuator when the valve is serviced.
- **Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.
- **Never** touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).

The instruction manual is part of the delivery.
Study the instructions carefully.
Fit the warning label supplied on the valve after installation so that it is normally visible.

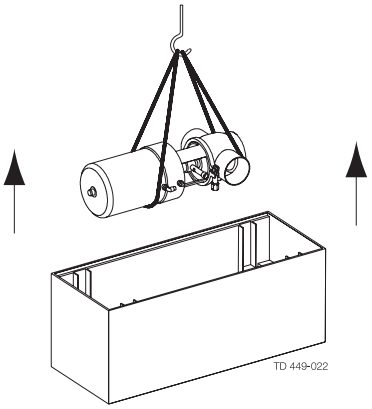
Step 1
CAUTION!
Alfa Laval cannot be held responsible for incorrect unpacking.

Check the delivery for:
1. Complete valve.
2. Delivery note.
3. Warning label.

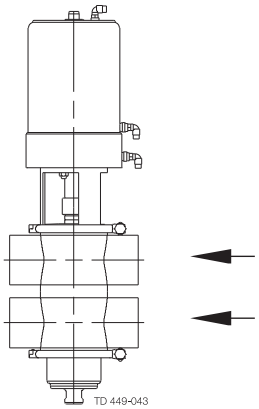
Step 2
Remove upper support.



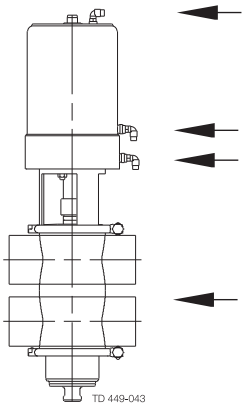
Step 3
Lift out the valve.
NOTE!
Please note weight of valve as printed on box.



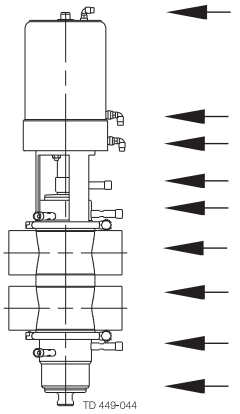
Step 4
Remove possible packing materials from the valve ports.



Step 5
Inspect the valve for visible transport damages.

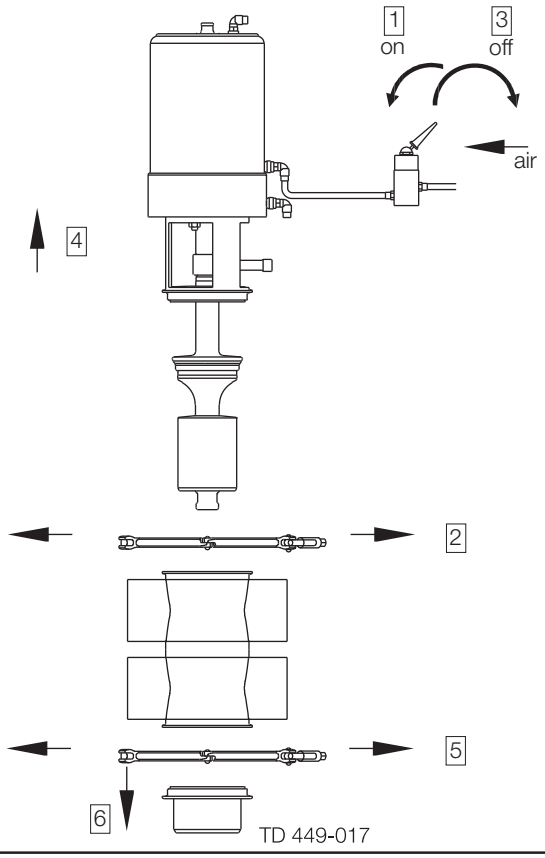


Step 6
Avoid damaging the air connections, the leakage outlet, the valve ports and the CIP connections, if supplied.

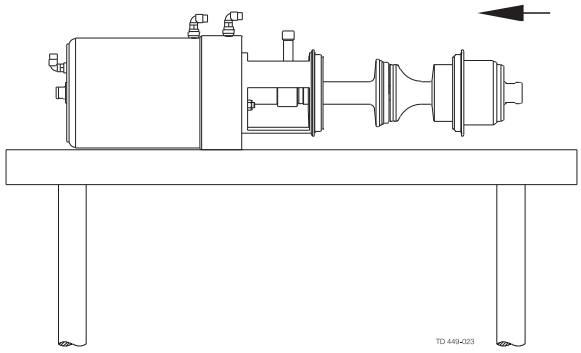


Step 7
Disassemble according to illustrations 1 to 6 (please also see section 4.2).

1. Supply compressed air.
2. Remove upper clamp.
3. Release compressed air.
4. Lift out actuator with plugs.
5. Remove lower clamp.
6. Take away lower sealing element.

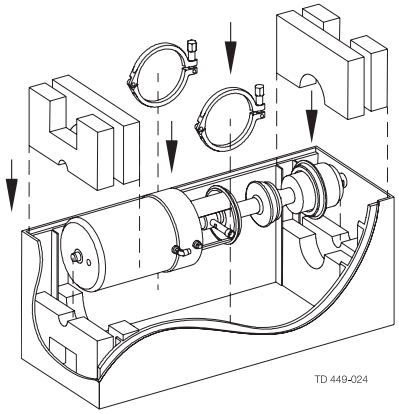


Step 7
Mount sealing element on valve.



Step 8
1. Place actuator part in the box.
2. Add supports.
3. Close box and store.

ADVISE!
Mark the valve body and box with the same number before intermediate storage.



Recycling information.
• Unpacking

- Packing material consists of wood, plastics, cardboard boxes and in some cases metal straps.
- Wood and cardboard boxes can be reused, recycled or used for energy recovery.
- Plastics should be recycled or burnt at a licensed waste incineration plant.
- Metal straps should be sent for material recycling.

• Maintenance

- During maintenance oil and wear parts in the machine are replaced.
- All metal parts should be sent for material recycling.
- Worn out or defective electronic parts should be sent to a licensed handler for material recycling.
- Oil and all non metal wear parts must be taken care of in agreement with local regulations.

• Scrapping

- At end of use, the equipment shall be recycled according to relevant, local regulations. Beside the equipment itself, any hazardous residues from the process liquid must be considered and dealt with in a proper manner. When in doubt, or in the absence of local regulations, please contact the local Alfa Laval sales company.

Study the instructions carefully and pay special attention to the warnings!
The valve has ends for welding as standard but can also be supplied with fittings.

Step 1

⚠

- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.
- **Never** touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).

CAUTION!

- Fit the supplied warning label on the valve so that it is normally visible.
- Alfa Laval cannot be held responsible for incorrect installation.

NOTE!

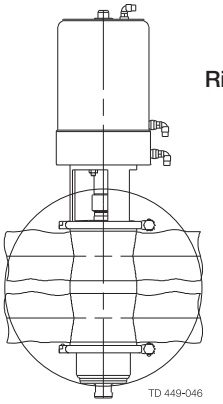
- **Always** install the valve vertically.
- The leakage outlet must be turned downwards!

Step 2

Avoid stressing the valve as this can result in deformation of the sealing area and misfunction of the valve (leakage or faulty indication).

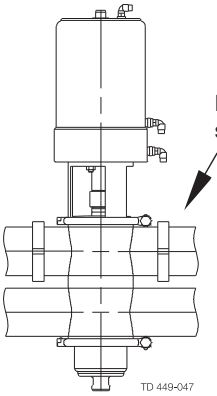
Pay special attention to:

- Vibrations.
- Thermal expansion of the tubes.
- Excessive welding.
- Overloading of the pipelines.



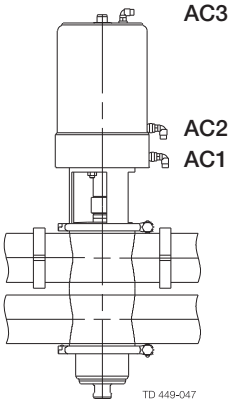
Step 3

Fittings:
Ensure that the connections are tight.

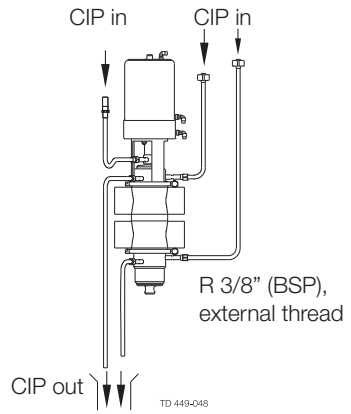


Step 4

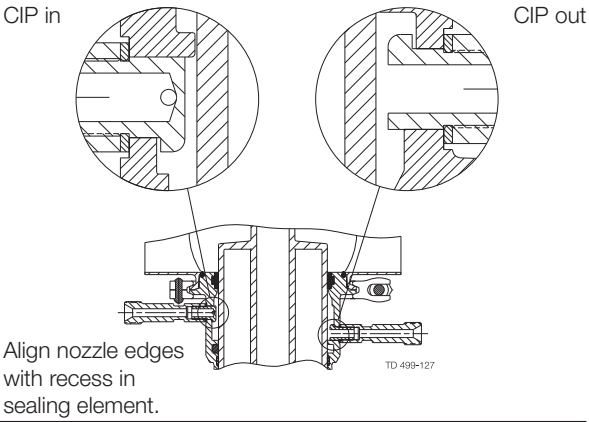
Air connection: R 1/8" (BSP).
AC1: Cleaning of upper seat.
AC2: Open valve.
AC3: Cleaning of lower seat.



Step 5
CIP connection (optional extra):
1. See description of cleaning in section 3.3.
2. Connect CIP correctly.



Step 6
It is important to connect CIP inlet to the small inlet nozzle to avoid built-up pressure in the cleaning chamber.

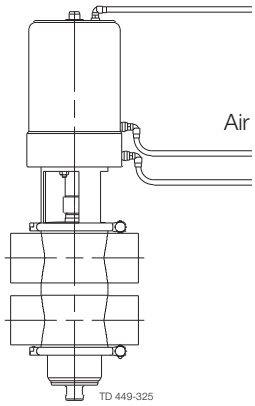


Study the instructions carefully and pay special attention to the warnings!
The valve has ends for welding as standard.
Weld carefully/aim at stressless welding to avoid deformation on sealing areas.
Check the valve for smooth operation after welding.

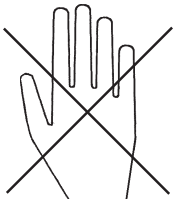
Step 1

⚠

Never stick your fingers through the valve ports if the actuator is supplied with compressed air.



Cutting danger!

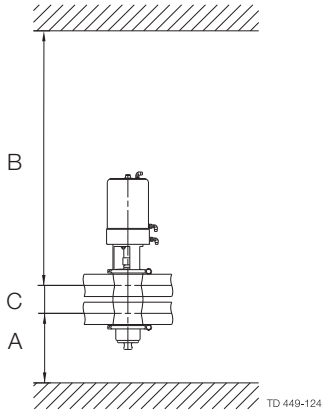


Step 2
Dismantle the valve in accordance with step 1 in section 4.2.

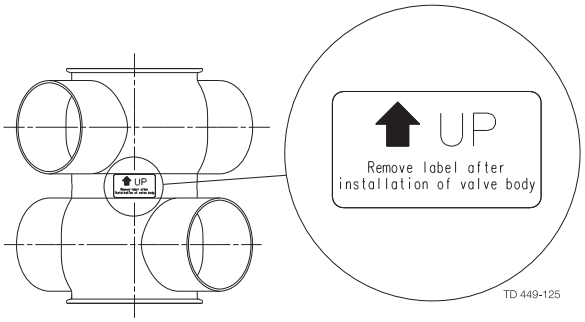
Step 3
NOTE!
Maintain the minimum clearances so that the actuator with the internal valve parts can be removed - please see later this section!

⚠

If there is a risk of foot damage, Alfa Laval recommends to leave a distance of 120 mm (4.7”) below the valve (look at the specific built-in conditions).



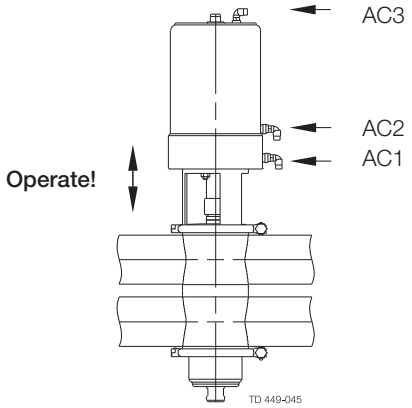
Step 4
Warning!
Make sure to turn the valve body correctly - conical valve seat upwards.



Step 5
Assemble the valve in accordance with section 4.5 after welding.
Pay special attention to the warnings!

Step 6
Pre-use check:
1. Supply compressed air to AC1, AC2 and AC3 one by one.
2. Operate the valve several times to ensure that it runs smoothly.

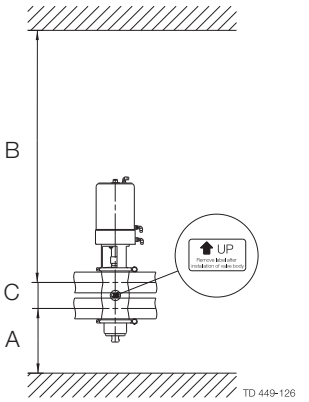
Pay special attention to the warnings!



NOTE!
- If *Think***Top**® is mounted, add 180 mm (7,1") to B measure.

Upper table:
A: Lower sealing element can be removed without taking out actuator and internal valve parts.
B: Actuator and internal valve parts can be lifted out of the valve body.

Lower table:
A: Lower sealing element can only be dismantled if actuator and internal parts are removed.



(All measures in mm) (1 mm = 0.0394")

	ISO					DIN							SCH. 5				
Size	DN/OD 38 1½"	DN/OD 51 2"	DN/OD 63.5 2½"	DN/OD 76.1 3"	DN/OD 101.6 4"	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	Sch. 5 2"	Sch. 5 3"	Sch. 5 4"	Sch. 5 5"	Sch. 5 6"
A Basic/ SeatClean	160	200	250	250	290	160	200	240	220	280	320	305	190	210	265	315	300
A HighClean/ UltraClean	200	265	300	300	360	200	265	290	270	350	390	375	230	260	340	385	370
*C	60.8	73.8	86.3	98.9	123.6	64	76	92	107	126	151	176	83	110.7	136.1	161.8	188.8
B Basic SeatClean	700 700	760 760	909 880	909 880	1148 1050	700 700	760 760	909 880	909 880	1148 1050	1350 1250	1370 1270	760 760	909 880	1148 1050	1350 1250	1370 1270
B HighClean/ UltraClean	810	870	1020	1020	1250	810	870	1020	1020	1250	1400	1420	870	1020	1250	1420	1420

NOTE!
* The measure C can always be calculated by the formula C = ½ID_{upper} + ½ID_{lower} + 26 mm (1").

	ISO					DIN							SCH. 5				
Size	DN/OD 38 1½"	DN/OD 51 2"	DN/OD 63.5 2½"	DN/OD 76.1 3"	DN/OD 101.6 4"	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	Sch. 5 2"	Sch. 5 3"	Sch. 5 4"	Sch. 5 5"	Sch.5 6"
A Basic/ Seat Clean	120	140	170	170	200	120	140	170	160	200	250	235	140	160	190	245	230
A HighClean/ UltraClean	170	190	220	220	270	170	190	220	210	270	320	305	180	210	270	315	300

The valve is adjusted and tested before delivery.
Study the instructions carefully and pay special attention to the warnings!
Pay attention to possible faults.
The items refer to the parts list and service kits section.

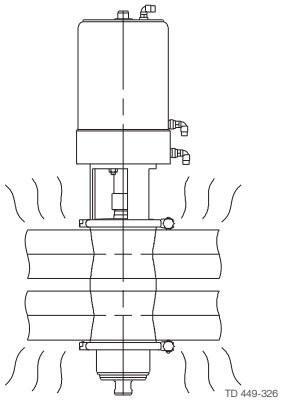
Step 1

- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.
- **Never** touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).
- **Never** pressurise air connections (AC1, AC3) simultaneously as both valve plugs can be lifted (can cause mixing).

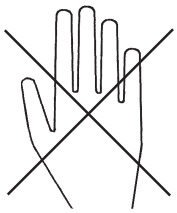
CAUTION!
Alfa Laval cannot be held responsible for incorrect operation.

Step 2

Never touch the valve or the pipelines when processing hot liquids or when sterilizing.



Burning danger!



Fault finding and repair
NOTE!
Study the maintenance instructions carefully before replacing worn parts. - See “General Maintenance” section 4.1

Problem	Cause/result	Repair
Leakage between sealing element (79) and lower plug (75)	Worn/product affected o-rings/ lip seal (76/77/78)	- Replace the o-rings/lip seal - Change rubber grade - Lubricate correctly
Leakage at the leakage outlet	- Particles between valve seats and plug seals (56/74) - Worn/product affected plug seal rings (56/74) - Plug not assembled correctly	- Remove the particles - Check the plug seals - Replace the plug seals - Change rubber grade - Assemble plug, see step 3 section 4.5
Leakage at sealing element (48)/ upper plug (55)	Worn/product affected o-rings/lip seal (sizes 38/39/46/49)	- Replace the o-rings/lip seal - Change rubber grade - Clean and if necessary replace guide ring (45)
Leakage at clamp (64)	- Too old/product affected o-rings (76 and 47) (and 52 if clamped valve body) - Loose clamp (64)	- Replace the o-rings - Change rubber grade - Tighten the clamp
CIP leakage	Worn o-rings (40/67/71)	Replace the o-rings
Leakage at spindle clamp (43)	Damaged o-ring (39) Worn/product affected lip seal (57) or spray nozzle (58)	- Replace the o-ring - Replace the plug seals - Change rubber grade
Lower plug not returning to closed position	- Wrong rubber grade - Wrongly fitted gasket - Mounted incorrectly (see section 2.3)	- Change rubber grade - Fit new gasket correctly - Correct installation
Plug returns with uneven movements (slip/stick effect)	- Wrong rubber grade - Wrongly fitted gasket - Mounted incorrectly (see section 2.3)	- Change rubber grade - Fit new gasket correctly - Correct installation

The valve is designed for cleaning in place (CIP). CIP = Cleaning In Place.
Study the instructions carefully and pay special attention to the warnings!
NaOH = Caustic Soda.
HNO_3 = Nitric acid.

Step 1

Always handle lye and acid with great care.

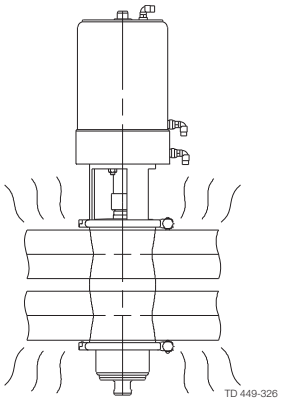
Caustic danger!

Always use rubber gloves!

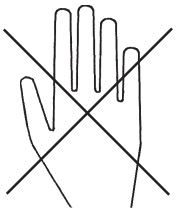
Always use protective goggles!

Step 2

Never touch the valve or the pipelines when sterilizing.

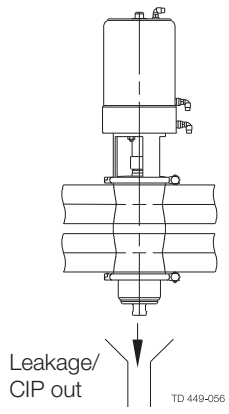


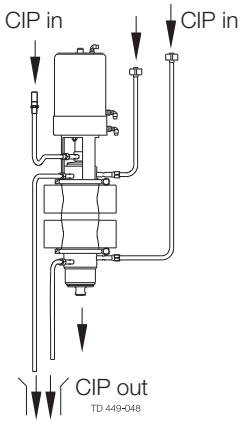
Burning danger!



Step 3

- **Never** throttle the leakage outlet.
- **Never** throttle the CIP outlet, if supplied. (Risk of mixing due to overpressure).





Step 4
Examples of cleaning agents:
Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C (158°F).

1 kg (2.2 lb) NaOH	+	100 l (26.4 gal) water	= Cleaning agent.
2.2 l (0.6 gal) 33%NaOH	+	100 l (26.4 gal) water	= Cleaning agent.

2. 0.5% by weight HNO_3 at 70° C (158°F).

0.7 l (0.2 gal) 53% HNO_3	+	100 l (26.4 gal) water	= Cleaning agent.

Internal leakage in the valve is externally visible by means of the leakage outlet.
Study the instructions carefully.

Step 5

1. Avoid excessive concentration of the cleaning agent
   ⇒ **Dose gradually!**
2. Adjust the cleaning flow to the process
   Milk sterilization/viscous liquids
   ⇒ **Increase the cleaning flow!**

Step 6

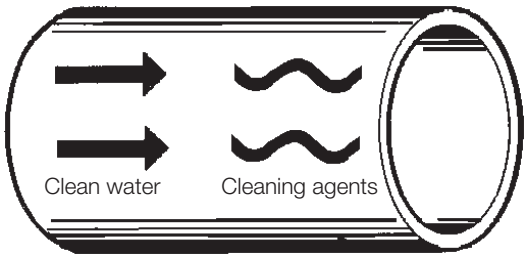
Advisory seat lift cleaning periods:
Cleaning periods of 3-6 seconds per CIP sequence.

Product	Periods
Milk	1-2
Yoghurt	3-5
Beer	2-5
Cold wort	5-10

Step 7

Always rinse well with clean water after the cleaning.

Always rinse!



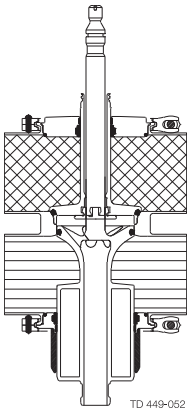
Step 8

NOTE!

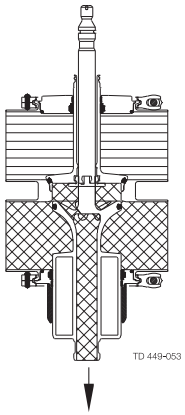
The cleaning agents must be stored/disposed of in accordance with current rules/directives.

Seat-cleaning cycles:
Pay special attention to the warnings!

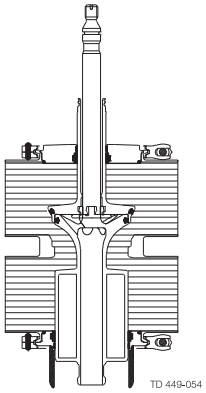
1. Closed valve



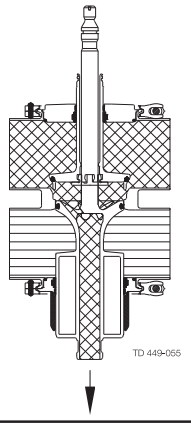
2. Cleaning through lower line



3. Open valve



4. Cleaning through upper line



Maintain the valve/actuator regularly.
Study the instructions carefully and pay special attention to the warnings!
Always keep spare rubber seals and guide rings in stock.
The items refer to the parts list and service kits section.

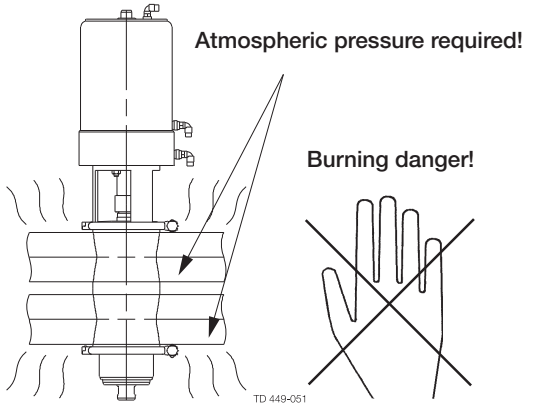
Step 1

- **Always** read the technical data thoroughly (see chapter 5).
- **Always** fit the seals correctly (risk of mixing).
- **Always** release the compressed air after use.
- **Always** remove the CIP connections, if supplied, before service.

NOTE!
All scrap must be stored/disposed of in accordance with current rules/directives.

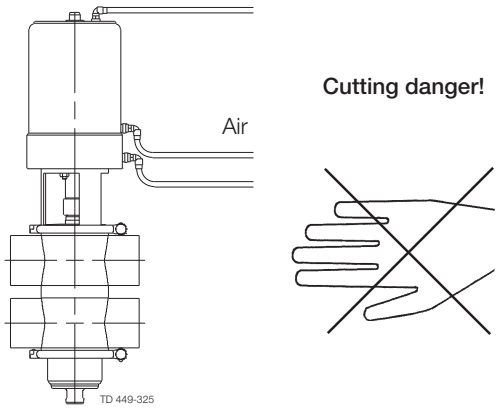
Step 2

- **Never** service the valve when it is hot.
- **Never** service the valve with valve/actuator under pressure.



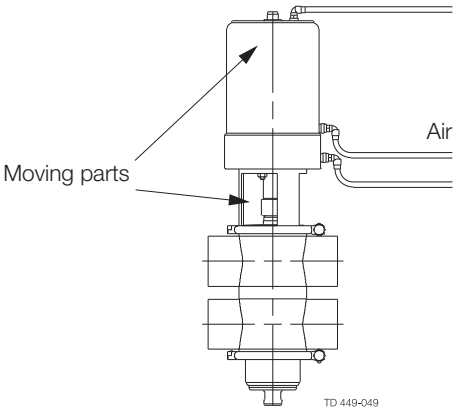
Step 3

Never stick your fingers through the valve ports if the actuator is supplied with compressed air.



Step 4

Never touch the clip assembly or the actuator piston rod if the actuator is supplied with compressed air (see the warning label).



The valve is designed so that internal leakages do not result in the products becoming mixed.
Internal leakage in the valve is externally visible.
Study the instructions carefully.
Always keep spare rubber seals and guide rings in stock. Check the valve for smooth operation after service.

Recommended spare parts: Service kits (see chapter 6)
Order service kits from the service kits section (see chapter 6)
Ordering spare parts: Contact the Sales Department.

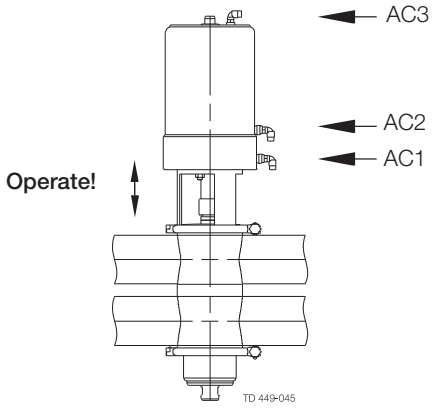
	Valve rubber seals	Valve plug seals	Valve guide rings
Preventive maintenance	**Replace after 12 months(*)**	**Replace after 12 months(*)**	Replace when required
Maintenance after leakage (leakage normally starts slowly)	**Replace after production cycle**	**Replace after production cycle**	
Planned maintenance	- Regular inspection for leakage and smooth operation - Keep a record of the valve - Use the statistics for planning of inspections	- Regular inspection for leakage and smooth operation - Keep a record of the valve - Use the statistics for planning of inspections	Replace when required
Lubrication	**When assembling** Klüber Paraliq GTE 703 or similar USDA H1 approved oil/grease (**) (suitable for EPDM)	**When assembling** Klüber Paraliq GTE 703 or similar USDA H1 approved oil/grease (**) (suitable for EPDM)	**None**

NOTE!
Lubricate thread in valve plug parts with Klüber Paste UH1 84-201 or similar.
(*) Depending on working conditions! Please contact Alfa Laval.
(**) All products wetted seals.

Repairing of actuator:
- The actuator is maintenance-free but repairable.
- If repair is required, replacing all actuator rubber seals is recommended.
- Lubricate seals with Klüberplex BE31.
- To avoid possible black remains on pos. 1 and 29, Alfa Laval recommends Klüber Paraliq GTE703 (white) for these two positions.

Pre-use check
1. Supply compressed air to AC1, AC2 and AC3 one by one.
2. Operate the valve several times to ensure that it operates smoothly.

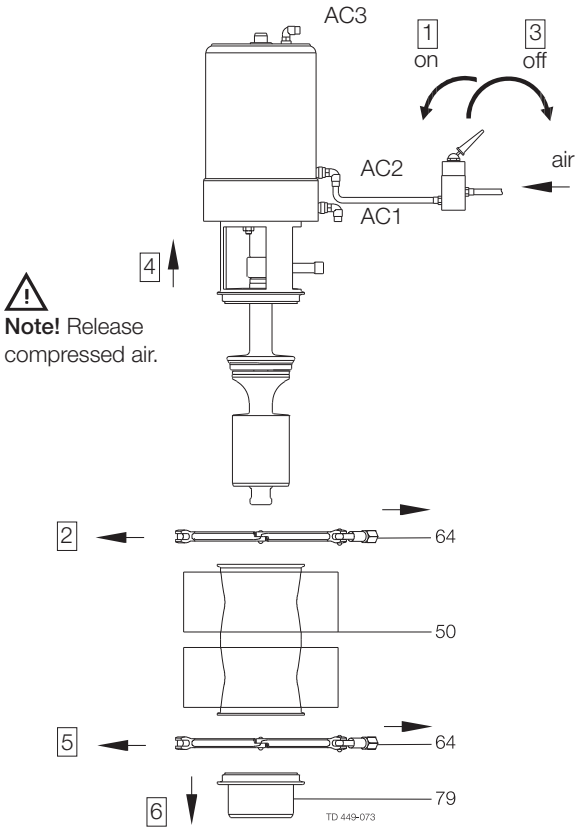
Pay special attention to the warnings!



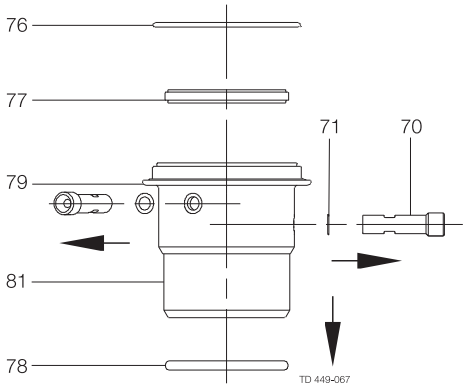
Study the instructions carefully.
The items refer to the parts list and service kits section.
Handle scrap correctly.
Replace seals if necessary.

Step 1
Disassemble valve acc. to illustrations (1 to 6).
1. Supply compressed air to AC2.
2. Loosen and remove upper clamp (64).
3. Release compressed air.
4. Lift out the actuator together with the internal valve parts from valve body (50).
5. Loosen and remove lower clamp (64).
6. Take away lower sealing element (79).

OPTION:
If clamped valve body: Loosen and remove clamp and pull upper (51) and lower (53) valve bodies apart. Pull out o-ring (52).

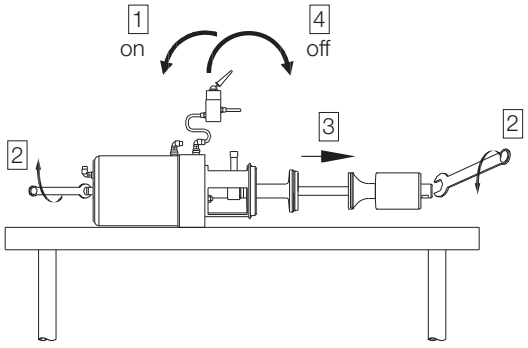


Step 2
Dismantling of lower sealing element:
1. Pull out o-ring (76) and lip seal (77).
2. Remove o-ring (78).
3. Screw out flushing tubes (70).
4. Remove o-rings (71) and nozzles (72 + 73).



Step 3
3A:
If air fitting AC1 is present, supply compressed air and follow procedure 3A.
1. Supply compressed air for AC1.
2. Loosen lower plug (75) while counterholding upper stem (1).
3. Remove the plug.
4. Release compressed air.

If upper seat lift available



Step 3 (continued)

3B:

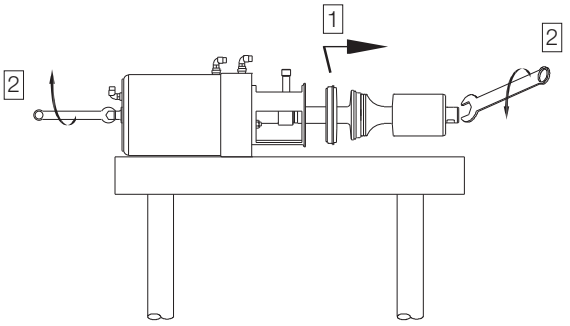
If no air fitting AC1 is present, follow procedure 3B.

1. Push upper sealing element (48) free of intermediate piece (37).
2. Loosen lower plug while counterholding upper stem
3. Remove the plug (75).

Replace o-ring (38).

Note: For replacement of seal ring (74), please see section 4.3.

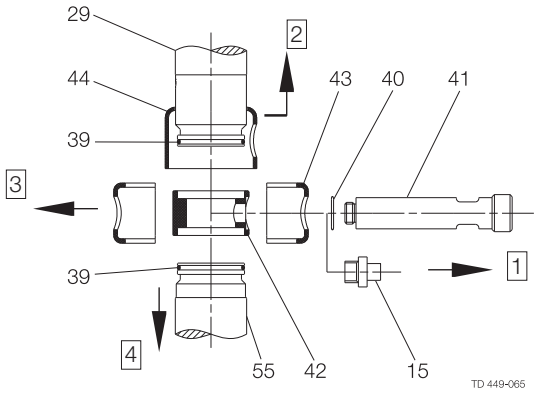
If no upper seat lift available



Step 4

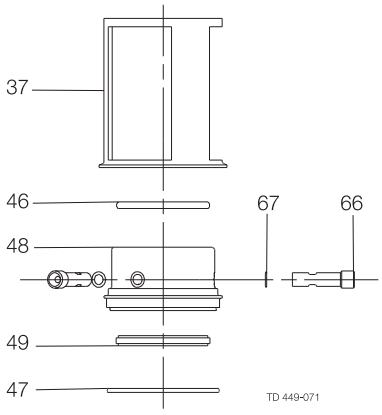
Remove coupling system and upper plug according to illustrations (1 to 4).

1. Unscrew flushing tube (41) (or plug (15) if no CIP). Remove o-ring (40).
2. Pull up lock (44) over piston rod (29).
3. Pull away clamps (43) from spindle liner (42).
4. Pull out upper plug (55). Make sure spindle liner is free of both piston rod and upper plug.
   If external CIP to leakage chamber: Remove o-rings (39).



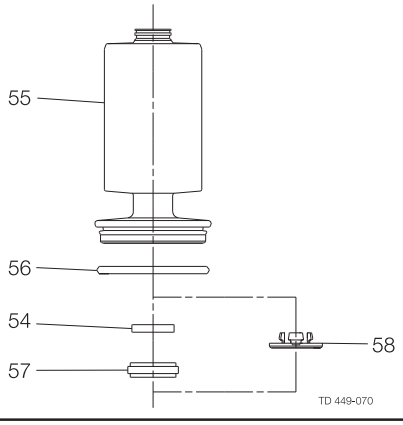
Step 5

1. If present, unscrew flushing tubes (66) and remove o-rings (67) and nozzles (68 + 69).
2. Pull out upper sealing element (48) from intermediate piece (37).
3. Pull out o-ring (47), lip seal (49) and o-ring (46) from upper sealing element.



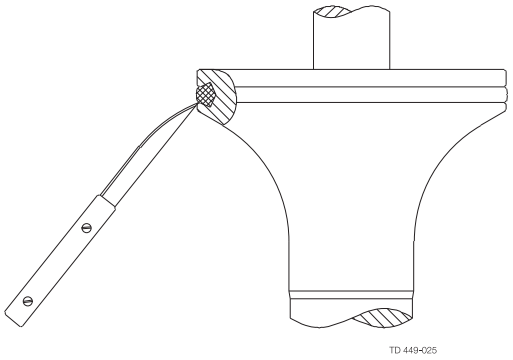
Step 6

Remove lip seal (57) (or spray nozzle (58) if valve is supplied with Spiral-Clean). For removal and replacement of seal ring (56), please see section 4.3.



Study the instructions carefully.
The items refer to the parts list and service kits section.
Handle scrap correctly.

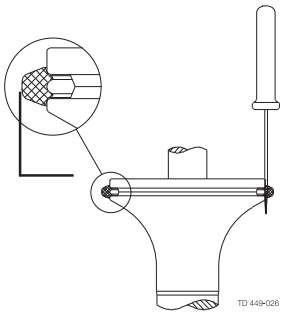
Step 1
Cut and remove old seal ring (74) using a knife, screwdriver or similar. Be careful not to scratch the plug.

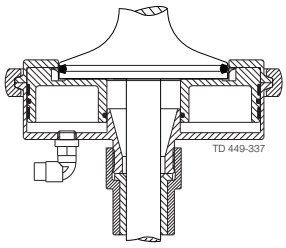


Step 2
Pre-mount seal ring as shown on drawing.

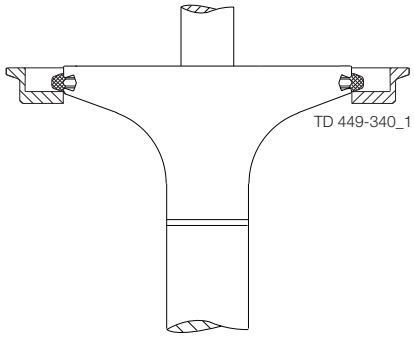
Rotate along circumference to fix gasket as shown in the picture

Carefully lubricate sealings with acceptable soap or lubricant, before pre-mounting.



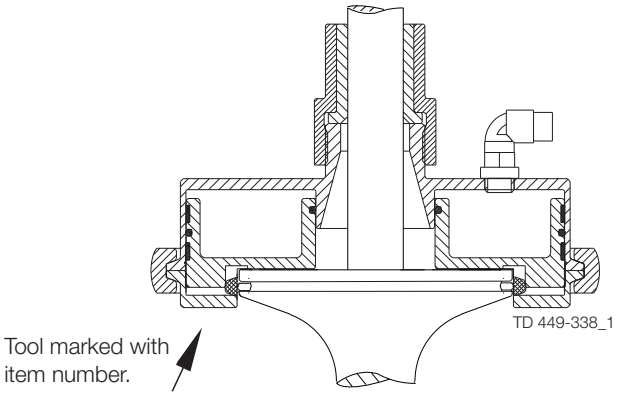
Item No.	Item No.	Item No.	Item No.	
Seat ø53	**Seat ø81**	**Seat ø110**	**Seat ø115**	**Tool for radial sealing, lower plug**
9613-4260-01	9613-4260-02	9613-4260-03	9613-4260-04	

Step 3
Place lower tool part.



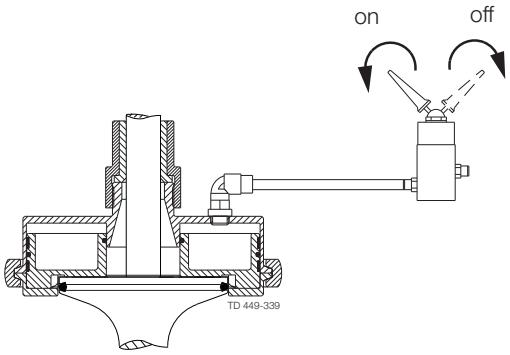
Step 4

1. Place upper tool part including piston.
2. Clamp the two tool parts together.



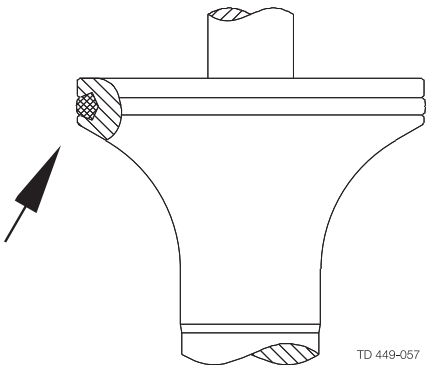
Step 5

1. Supply compressed air.
2. Release compressed air.
3. Remove tool parts.



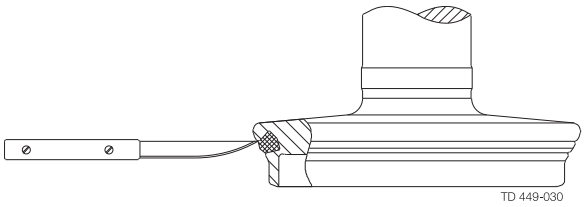
Step 6

Inspect the seal to ensure it does not twist in the groove, and press in the 4 outsticking points with a screwdriver!

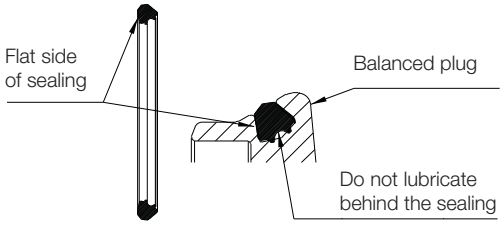


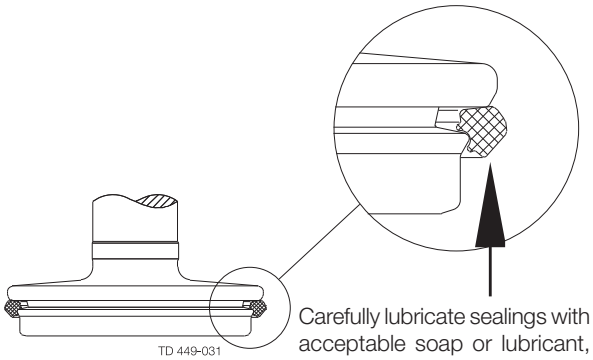
Study the instructions carefully.
The items refer to the parts list and service kits section.
Handle scrap correctly.

Step 1
Remove old seal ring (56) using a knife, screwdriver or similar.
Be careful not to scratch the plug.

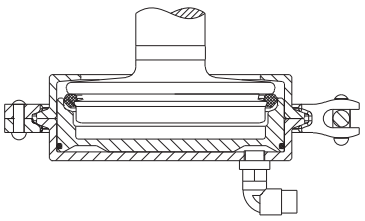


Step 2
Pre-mount seal ring as shown on drawing.

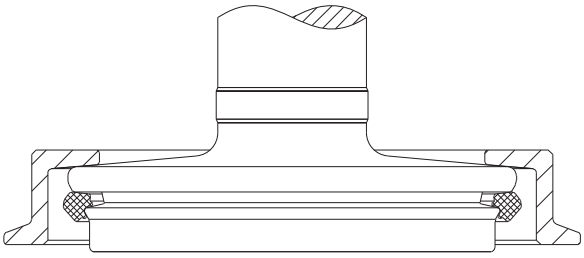




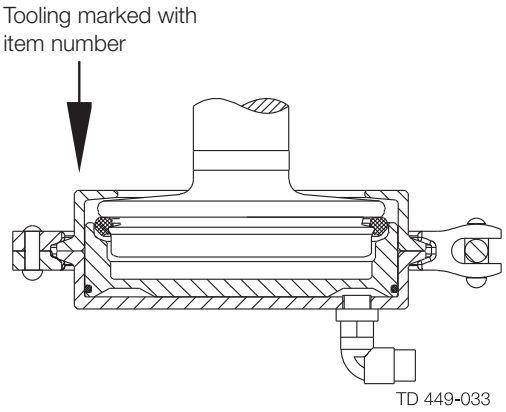
Carefully lubricate sealings with acceptable soap or lubricant, before pre-mounting.

Item no.	Item no.	Item no.	Item no.	
Seat ø53	**Seat ø81**	**Seat ø100**	**Seat ø115**	**Tool for axial sealing, upper plug**
9613-0505-01	9613-0505-02	9613-0505-08	9613-0505-03	

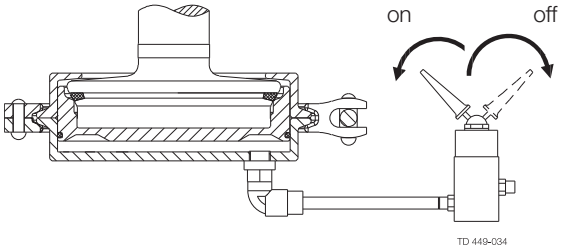
Step 3
Place tool part 1.



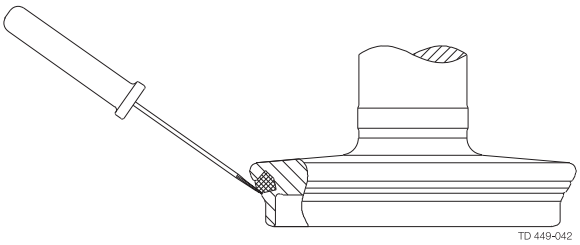
Step 4
1. Place tool part 2 including piston.
2. Clamp the two tool parts together.



Step 5
1. Supply compressed air.
2. Release compressed air.
3. Rotate the tool 45° with regards to the plug.
4. Supply compressed air.
5. Release compressed air and remove tool.



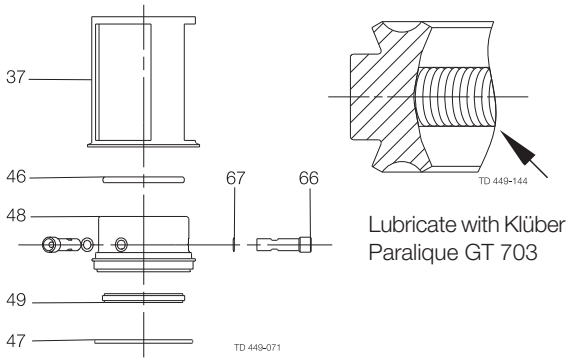
Step 6
1. Inspect the seal.
2. Release air at 3 different positions of the circumference.



Study the instructions carefully.
The items refer to the parts list and service kits section.
Handle scrap correctly.
Replace seals if necessary.

Step 1

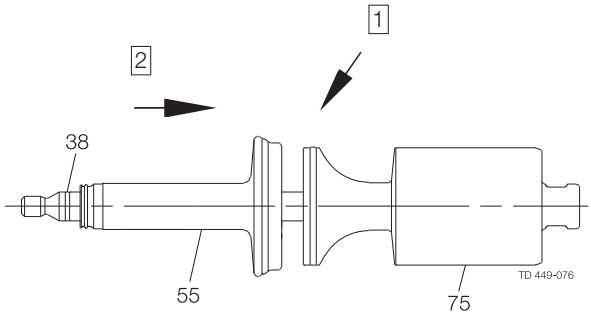
1. Fit o-ring (47) (do not twist), lip seal (49) and o-ring (46) in upper sealing element (48) (Lubricate with Klüber Paralique GT 703).
   NOTE: The o-ring should be gently pressed into the groove
2. Fit upper sealing element in intermediate piece (37).
3. Place o-rings (67) and mount flushing tubes (66). Be sure to align nozzles (68 + 69) towards recess.



Lubricate with Klüber Paralique GT 703

Step 2

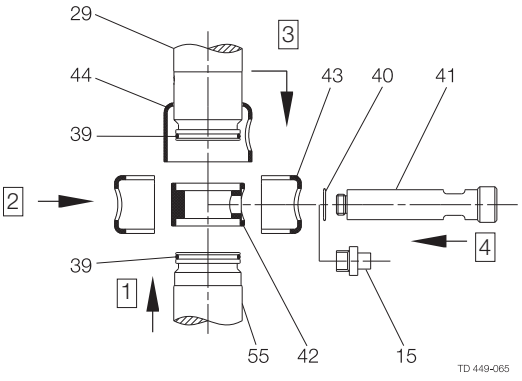
1. Place lip seal (57) in upper plug (or spray nozzle if the valve has Spiral**Clean**) and the o-ring (38) in the lower plug.
2. Press lower plug (75) rapidly into upper plug (55) through the lip seal.
   Note: Do not damage the lips when lower plug (75) with o-ring (38) passes the lip seal.



Step 3

Place coupling system and upper plug according to illustrations (1 to 4).

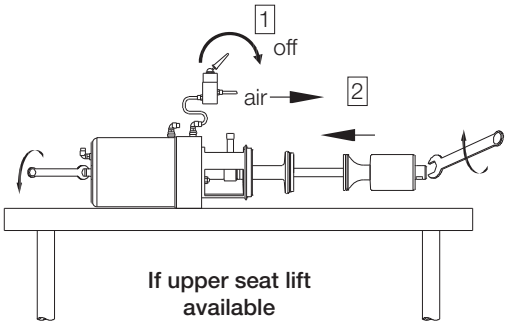
1. Push lock (44) up over piston rod (29).
2. If external CIP to leakage chamber: Place o-rings (39).
3. Place spindle liner (42) on piston rod. Fit upper plug (55).
4. Mount clamps (43) on spindle liner (42).
5. Fit lock (44).
6. Fit o-ring (40). Fit flushing tube (41) (or plug (15) if no CIP).



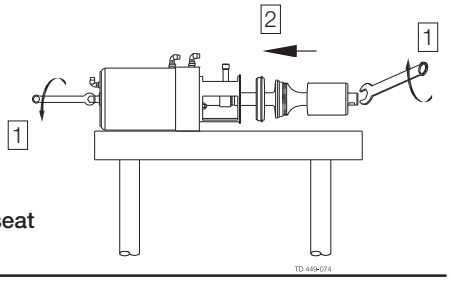
Step 4

Recommended torque values for fitting upper and lower plug parts

Dimension	Torque (Nm)/(lbf-ft)
38 mm/DN 40 51 mm/DN 50 Sch. 5 2”	5/(3.7)
All others	20/(14.8)



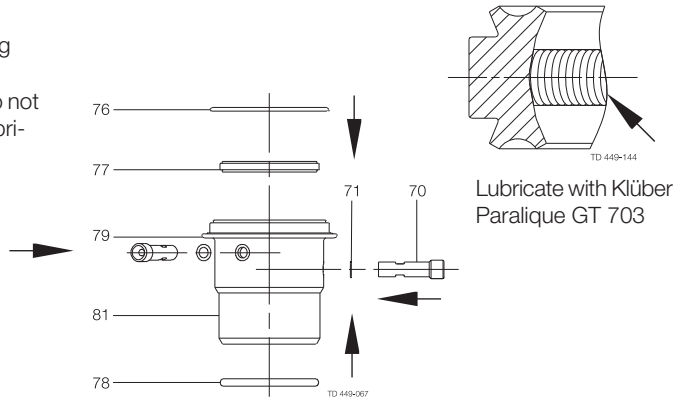
If upper seat lift available



If no upper seat lift available

Step 5

1. Place o-rings (71) and fit nozzles (72 + 73) and flushing tubes (70), if present.
2. Place o-ring (78) and fit lip seal (77) and o-ring (76) (do not twist the o-ring) and press it gently into the groove (lubricate with Klüber Paralique GT703)



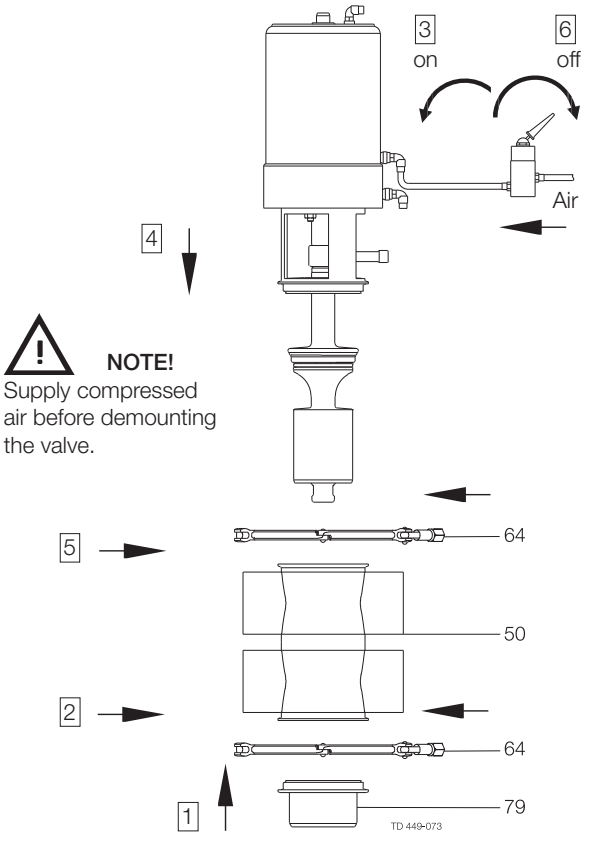
Step 6

- **Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.
- **Always** supply compressed air, before demounting the valve.

If clamped valve body: First place o-ring (52) and fit upper (51) and lower (53) valve bodies. Fit and tighten clamp (64).

Reassemble valve according to illustrations (1 - 6).

1. Fit lower sealing element (79).
2. Fit and tighten lower clamp (64).
3. Supply compressed air and mount the actuator together with the internal valve parts from valve body (50).
4. Fit and tighten upper clamp (64). Greasing of clamp and clamp nut recommended!
   (Maximum torque for clamp nut: 10Nm/7.4 lbf-ft)
5. Release compressed air.



Study the instructions carefully.
The items refer to the parts list and service kits section.
Handle scrap correctly.
Replace seals if necessary.

Step 1
1. Dismantle the valve in accordance with instructions in section 4.2
   Pay special attention to the warnings!
2. The actuator is now ready for service.
   Please see drawing when dismantling according to steps 2 to 6 on this page.

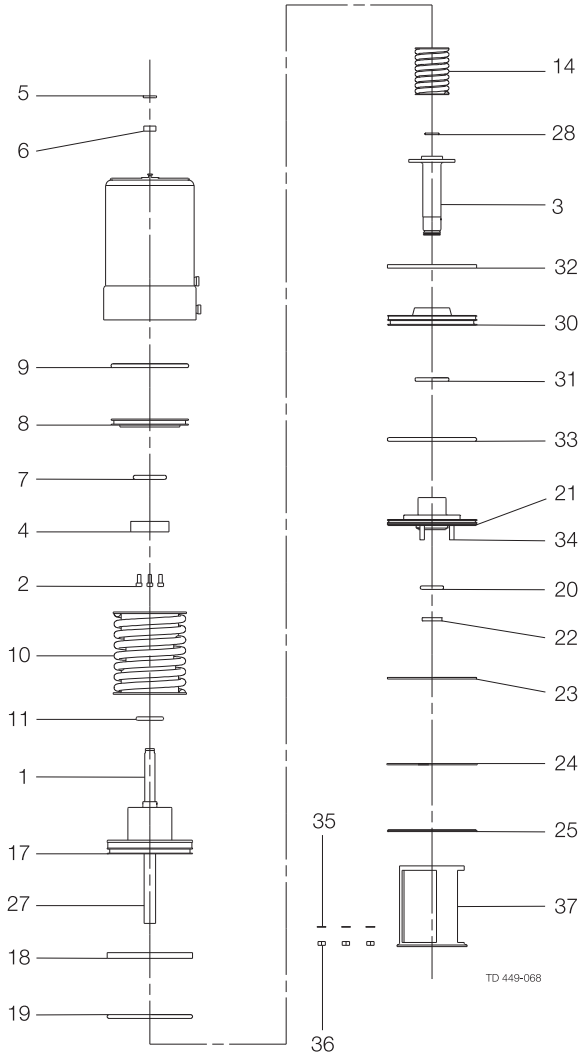
Step 2
1. Remove nuts (36) and washers (35).
2. Pull out intermediate piece (37) from the actuator.
3. Remove cover disk (25).
4. Remove retaining ring (24).

Step 3
1. Remove piston rod (29), bottom (21) and lower piston (30).
2. Separate the three parts.
3. Remove o-rings (20, 22 and 23) from bottom, o-rings (33 and 31) and guide ring (32) from lower piston as well as o-ring (28) from piston rod.
4. Remove spring assembly (14).

Step 4
1. Remove inner stem (27), main piston (17) and distance spacer (11) if present. Remove guide ring (18) and o-ring (19).
2. Remove spring assembly (10).

Step 5
NOTE! Not on actuator 3.
1. Unscrew screws (2) (are glued!).
2. Remove stop (4).
3. Remove upper piston (8). Remove o-rings (7 and 9).

Step 6
Remove o-ring (5) and guide ring (6).



Study the instructions carefully.
The items refer to the parts list and service kits section.
Replace seals if necessary.
Lubricate the rubber seals before fitting them.

Step 1
Please see drawing when reassembling according to steps 2 to 5 on this page.

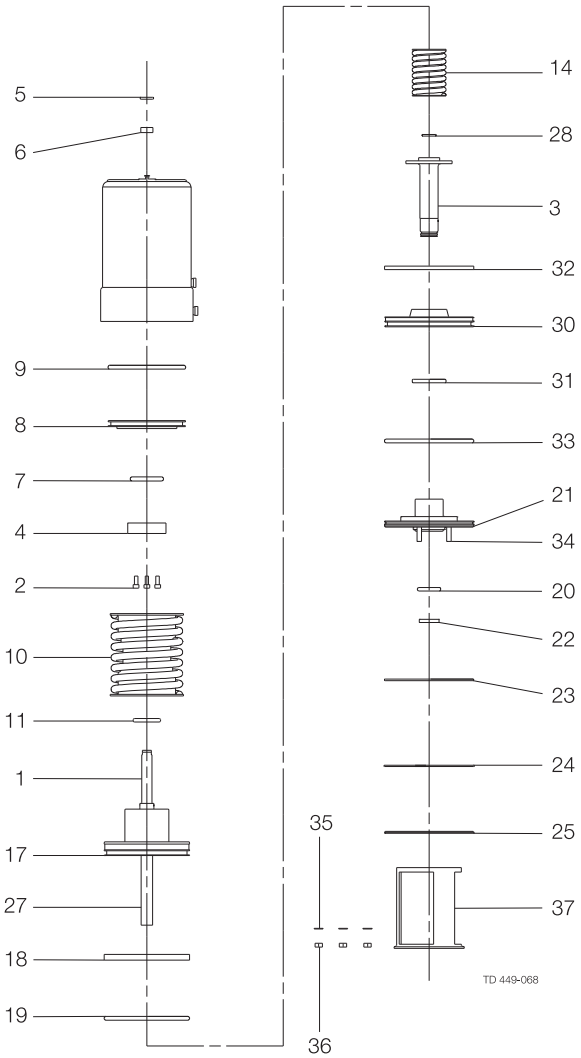
Step 2
1. Fit guide ring (6) and o-ring (5).

NOTE! Not on actuator 3:
2. Fit o-rings (7 and 9). Place upper piston (8).
3. Fit stop (4).
4. Tighten screws (2).(Secure with glue)

Step 3
1. Place spring assembly (10).
2. Fit o-ring (19) and guide ring (18). Mount distance spacer (11), main piston (17) and inner stem (27).

Step 4
1. Fit spring assembly (14).
2. Fit o-ring (28) in piston rod, fit o-rings (33 and 31) and guide ring (32) in lower piston and fit o-rings (20, 22 and 23) in bottom.
3. Fit piston rod (29), lower piston (30) and bottom (21).
4. Mount the three parts.

Step 5
1. Fit retaining ring (24).
2. Fit cover disk (25).
3. Mount intermediate piece (37) on actuator.
4. Fit and tighten nuts (36) and washers (35).



It is important to observe the technical data during installation, operation and maintenance.
Inform the personnel about the technical data.

Data	
Max. product pressure:	1000 kPa (10 bar) (145 psi)
Min. product pressure:	Full vacuum
Recommended min. pressure for Spiral**Clean**:	2 bar (29 psi)
Temperature range:	-5°C to +125°C (23°F - 257°F) (Depending on rubber quality)
Air pressure:	Max. 800 kPa (8 bar) (116 psi)
Products acc. to PED 97/23/EC	Category I, Fluids group 1, DN ≥ 125 Fluids group 2

Size	**DN/OD**					**DN**							**Sch. 5**				
ISO/DIN/Sch.5	38	51	63.5	76.1	101.6	40	50	65	80	100	125	150	2"	3"	4"	5"	6"
	1½"	2"	2½"	3"	4"												
Kv-value Upper Seat-lift [m³/h]	1.5	1.5	2.5	2.5	3.1	1.5	1.5	2.5	2.5	3.1	3.7	3.7	1.5	2.5	3.1	3.7	3.7
Kv-value Lower Seat-lift [m³/h]	0.9	0.9	1.9	1.9	2.5	0.9	0.9	1.9	1.9	2.5	3.1	3.1	0.9	1.9	2.5	3.1	3.1
Air consumption Upper Seat-lift *[n litre]	0.2	0.2	0.4	0.4	0.62	0.2	0.2	0.4	0.4	0.62	0.62	0.62	0.2	0.4	0.62	0.62	0.62
Air consumption Lower Seat-lift *[n litre]	1.1	1.1	0.13	0.13	0.21	1.1	1.1	0.13	0.13	0.21	0.21	0.21	1.1	0.13	0.21	0.21	0.21
Air consumption Main Movement *[n litre]	0.86	0.86	1.63	1.63	2.79	0.86	0.86	1.62	1.62	2.79	2.79	2.79	0.86	1.63	2.79	2.79	2.79
Kv-value SpiralClean Spindle CIP [m³/h]	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Kv-value SpiralClean External CIP of leakage chamber [m³/h]	0.25	0.25	0.29	0.29	0.29	0.25	0.25	0.29	0.29	0.29	0.29	0.29	0.25	0.29	0.29	0.29	0.29

Note:
* [n litre] = volume at atmospheric pressure.

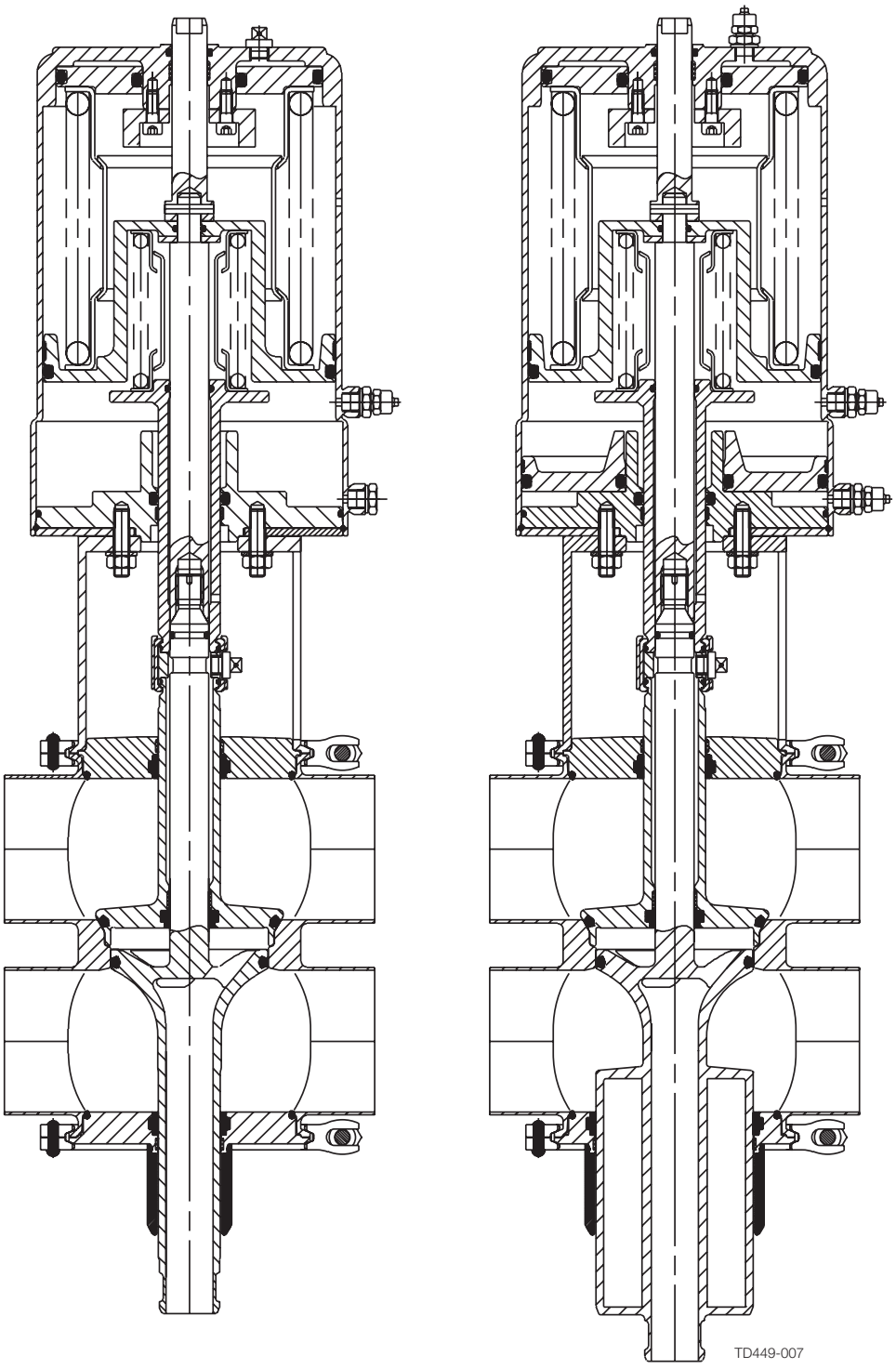
Formula to estimate CIP flow during seat lift (for liquids with comparable viscosity and density to water):

$Q = Kv \bullet \sqrt{\Delta p}$
Q = CIP - flow (m^3/h).
Kv = Kv value from the above table.
Δp = CIP pressure (bar).
Cv = 1.163 x Kv gpm
1 bar = 14.5 psi

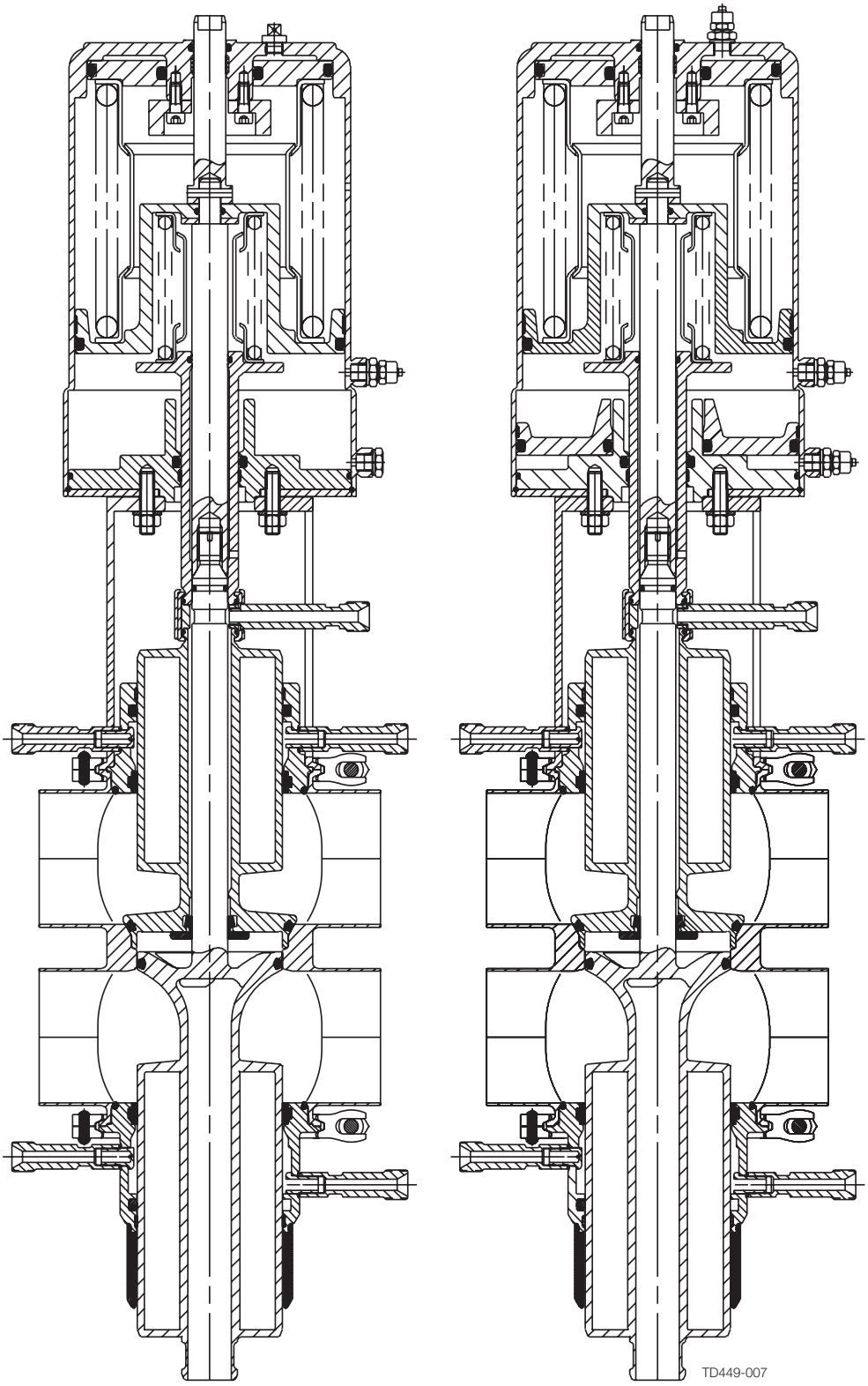
Materials	
Product wetted steel parts:	Acid-resistant steel AISI 316L.
Other steel parts:	Stainless steel AISI 304
Product wetted parts:	EPDM, HNBR, NBR or FPM.
Other seals:	CIP seals: EPDM.
Actuator seals:	NBR.
Surface finish:	Internal/external matt (blasted) Ra < 1.6 (64 µ") Internal bright (polished) Ra < 0.8 (32 µ") Internal/external bright (internal polished) Ra < 0.8 (32 µ")

Note! The Ra-values are only for the internal surface.

Noise
One meter away from - and 1.6 meter above the exhaust the noise level of a valve actuator will be approximately 77db(A) without noise damper and approximately 72 db(A) with damper - Measured at 7 bars air-pressure.



Basic SeatClean



HighClean **Ultraclean**

The drawing and the parts list include all items.

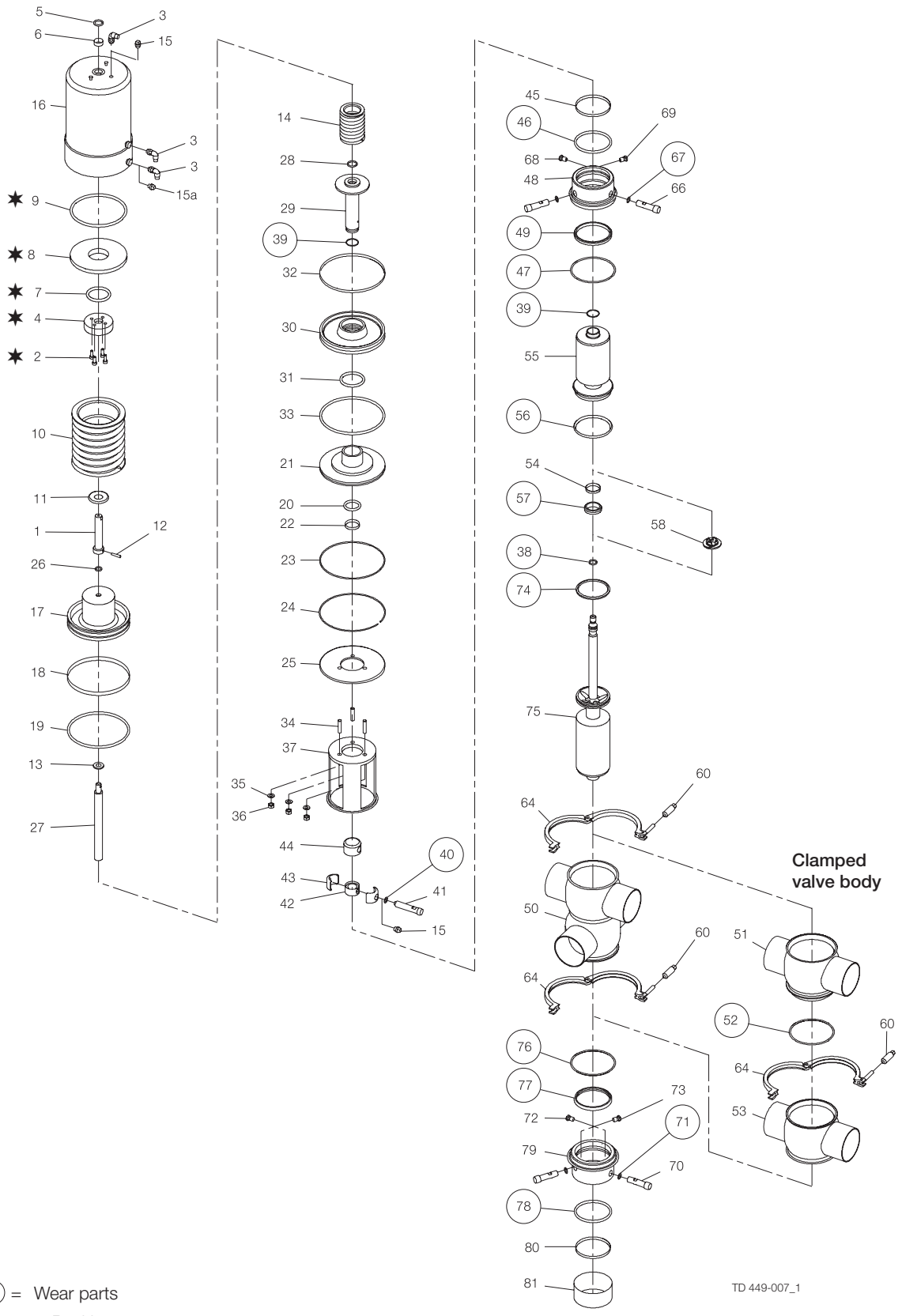
Parts list

Pos.	Qty.	Denomination
1	1	Upper stem
2✶	4	Screw
3	3	Air fitting
4✶	1	Stop for upper piston
5	1	O-ring
6	1	Guide ring, Turcite
7✶	1	O-ring
8✶	1	Upper piston
9✶	1	O-ring
10	1	Spring assembly
11	1	Distance spacer
12	1	Pin
13	1	Washer
14	1	Spring assembly
15	1	Plug
15a	1	Plug
16	1	Cylinder
17	1	Main piston
18	1	Guide ring, Turcite
19	1	O-ring
20	1	O-ring
21	1	Bottom
22	1	Guide ring, Turcite
23	1	O-ring
24	1	Retaining ring
25	1	Cover disk
26	1	O-ring
27	1	Inner stem
28	1	O-ring
29	1	Piston rod
30	1	Lower piston
31	1	O-ring
32	1	Guide ring, Turcite
33	1	O-ring
34	3	Bolt
35	3	Washer
36	3	Nut
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
50	1	Valve body
51	1	Valve body, upper
52	1	O-ring (if clamped valve body)
53	1	Valve body, lower
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
60	2*	Hexnut
64	2*	Clamp without nut
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover

Note!

* 3 if clamped valve body

✶ Positions not present on actuator ø120



◯ = Wear parts

✶ = Positions not present on actuator ø120

The drawing and the parts list include all items.

Parts list

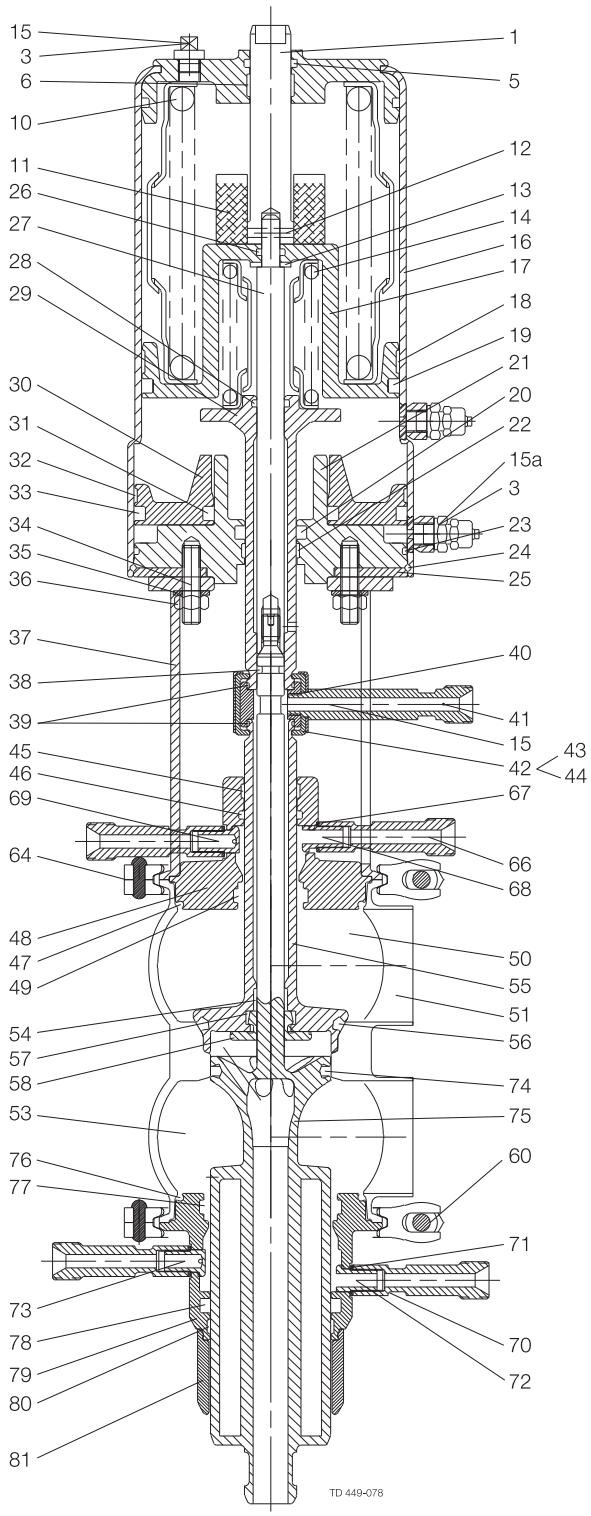
Pos.	Qty.	Denomination
1	1	Upper stem
2✶	4	Screw
3	3	Air fitting
4✶	1	Stop for upper piston
5	1	O-ring
6	1	Guide ring, Turcite
7✶	1	O-ring
8✶	1	Upper piston
9✶	1	O-ring
10	1	Spring assembly
11	1	Distance spacer
12	1	Pin
13	1	Washer
14	1	Spring assembly
15	1	Plug
15a	1	Plug
16	1	Cylinder
17	1	Main piston
18	1	Guide ring, Turcite
19	1	O-ring
20	1	O-ring
21	1	Bottom
22	1	Guide ring, Turcite
23	1	O-ring
24	1	Retaining ring
25	1	Cover disk
26	1	O-ring
27	1	Inner stem
28	1	O-ring
29	1	Piston rod
30	1	Lower piston
31	1	O-ring
32	1	Guide ring, Turcite
33	1	O-ring
34	3	Bolt
35	3	Washer
36	3	Nut
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
50	1	Valve body
51	1	Valve body, upper
52	1	O-ring (if clamped valve body)
53	1	Valve body, lower
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
60	2*	Hexnut
64	2*	Clamp without nut
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover

Note!

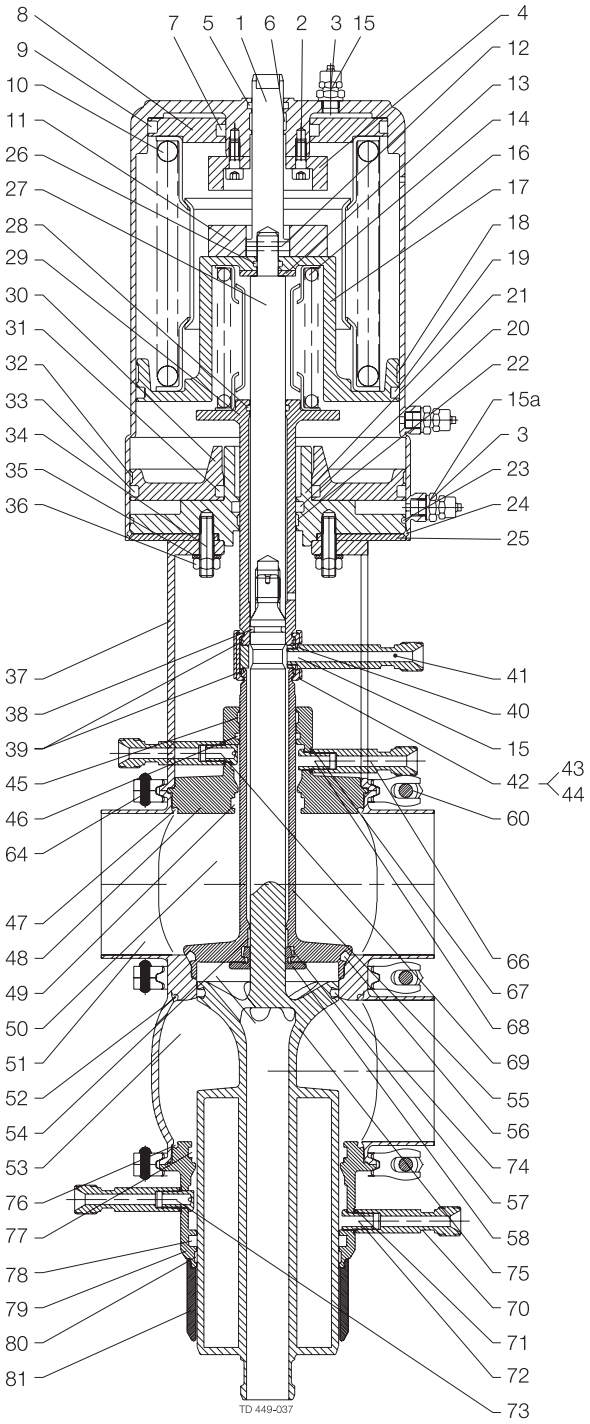
* 3 if clamped valve body

✶ Positions not present on actuator ø120

(ø120)



(ø157/ø186)



Examples of other valve set-ups see section 6.1.

The drawing and the parts list include all items.

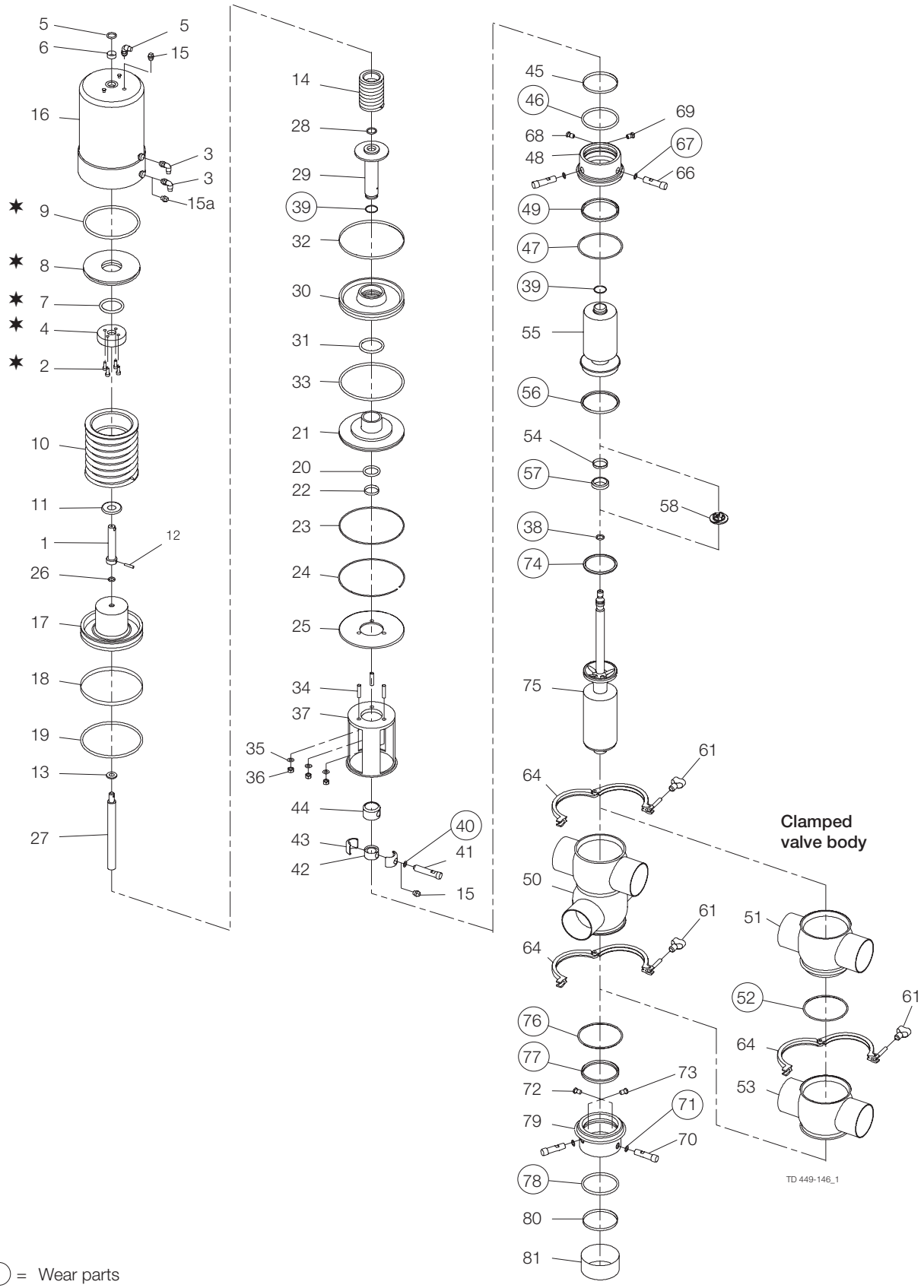
Parts list

Pos.	Qty.	Denomination
1	1	Upper stem
2✶	4	Screw
3	3	Air fitting
4✶	1	Stop for upper piston
5	1	O-ring
6	1	Guide ring, Turcite
7✶	1	O-ring
8✶	1	Upper piston
9✶	1	O-ring
10	1	Spring assembly
11	1	Distance spacer
12	1	Pin
13	1	Washer
14	1	Spring assembly
15	1	Plug
15a	1	Plug
16	1	Cylinder
17	1	Main piston
18	1	Guide ring, Turcite
19	1	O-ring
20	1	O-ring
21	1	Bottom
22	1	Guide ring, Turcite
23	1	O-ring
24	1	Retaining ring
25	1	Cover disk
26	1	O-ring
27	1	Inner stem
28	1	O-ring
29	1	Piston rod
30	1	Lower piston
31	1	O-ring
32	1	Guide ring, Turcite
33	1	O-ring
34	3	Bolt
35	3	Washer
36	3	Nut
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
50	1	Valve body
51	1	Valve body, upper
52	1	O-ring (if clamped valve body)
53	1	Valve body, lower
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
61	2	Wingnut
64	2*	Clamp without nut
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover

Note!

* 3 if clamped valve body

✶ Positions not present on actuator ø120



◯ = Wear parts

✶ = Positions not present on actuator ø120

The drawing and the parts list include all items.

Parts list

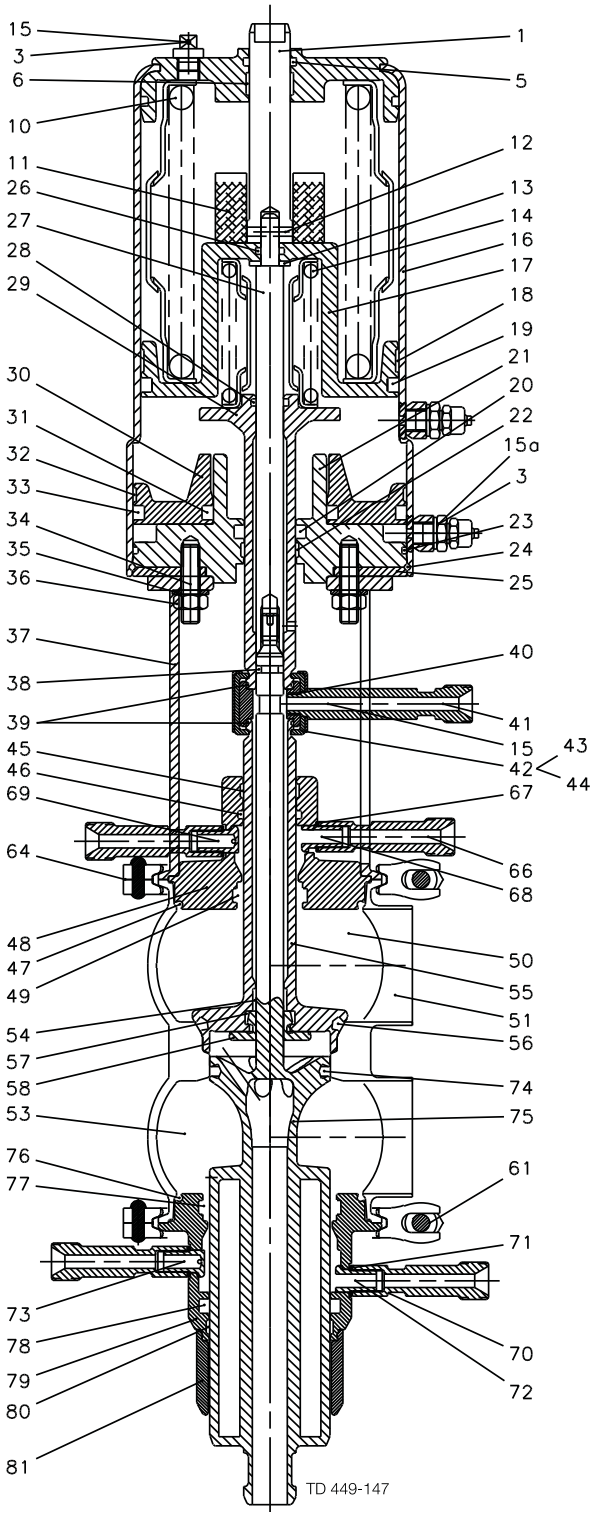
Pos.	Qty.	Denomination
1	1	Upper stem
2✶	4	Screw
3	3	Air fitting
4✶	1	Stop for upper piston
5	1	O-ring
6	1	Guide ring, Turcite
7✶	1	O-ring
8✶	1	Upper piston
9✶	1	O-ring
10	1	Spring assembly
11	1	Distance spacer
12	1	Pin
13	1	Washer
14	1	Spring assembly
15	1	Plug
15a	1	Plug
16	1	Cylinder
17	1	Main piston
18	1	Guide ring, Turcite
19	1	O-ring
20	1	O-ring
21	1	Bottom
22	1	Guide ring, Turcite
23	1	O-ring
24	1	Retaining ring
25	1	Cover disk
26	1	O-ring
27	1	Inner stem
28	1	O-ring
29	1	Piston rod
30	1	Lower piston
31	1	O-ring
32	1	Guide ring, Turcite
33	1	O-ring
34	3	Bolt
35	3	Washer
36	3	Nut
37	1	Intermediate piece
38	1	O-ring
39	2	O-ring
40	1	O-ring
41	1	Flushing tube
42	1	Spindle liner
43	2	Clamp
44	1	Lock
45	1	Guide ring
46	1	O-ring
47	1	O-ring
48	1	Upper sealing element
49	1	Lip seal
50	1	Valve body
51	1	Valve body, upper
52	1	O-ring (if clamped valve body)
53	1	Valve body, lower
54	1	Guide ring
55	1	Upper plug
56	1	Seal ring
57	1	Lip seal
58	1	Spray nozzle
61	2*	Wingnut
64	2*	Clamp without nut
66	2	Flushing tube
67	2	O-ring
68	1	Drain
69	1	Nozzle
70	2	Flushing tube
71	2	O-ring
72	1	Drain
73	1	Nozzle
74	1	Seal ring
75	1	Lower plug
76	1	O-ring
77	1	Lip seal
78	1	O-ring
79	1	Lower sealing element
80	1	Guide ring
81	1	Cover

Note!

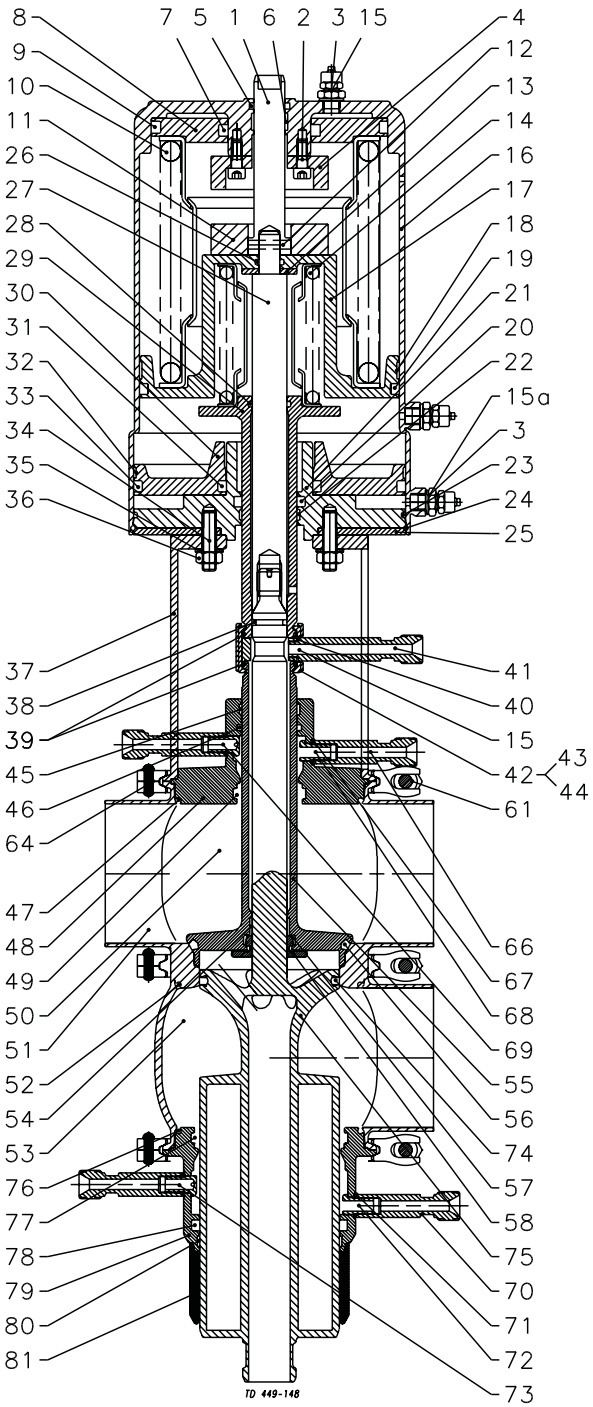
* 3 if clamped valve body

✶ Positions not present on actuator ø120

(ø120)



(ø157/ø186)



Examples of other valve set-ups see section 6.1.

The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5” and Sch. 5 6”, it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 1	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1550
NBR	9611-92-1556
FPM	9611-92-1562
HNBR	9611-92-1568
63.5-76.1 mm/DN65-DN80/Sch. 5 3”	
EPDM	9611-92-1552
NBR	9611-92-1558
FPM	9611-92-1564
HNBR	9611-92-1570
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1554
NBR	9611-92-1560
FPM	9611-92-1566
HNBR	9611-92-1572
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6334
NBR	9611-92-6335
FPM	9611-92-6336
HNBR	9611-92-6337
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6025
NBR	9611-92-6026
FPM	9611-92-6027
HNBR	9611-92-6028
Plug set-up 2	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1574
NBR	9611-92-1580
FPM	9611-92-1586
HNBR	9611-92-1592
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-1576
NBR	9611-92-1582
FPM	9611-92-1588
HNBR	9611-92-1594
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1578
NBR	9611-92-1584
FPM	9611-92-1590
HNBR	9611-92-1596
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6338
NBR	9611-92-6339
FPM	9611-92-6340
HNBR	9611-92-6341
DN125 -DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6029
NBR	9611-92-6030
FPM	9611-92-6031
HNBR	9611-92-6032

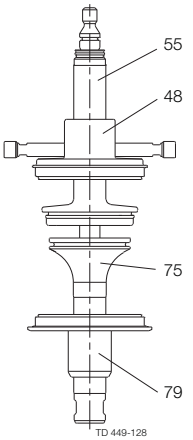
Denomination	Item number
Plug set-up 3	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1598
NBR	9611-92-1605
FPM	9611-92-1611
HNBR	9611-92-1617
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-1599
NBR	9611-92-1606
FPM	9611-92-1612
HNBR	9611-92-1618
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1602
NBR	9611-92-1608
FPM	9611-92-1614
HNBR	9611-92-1620
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6342
NBR	9611-92-6343
FPM	9611-92-6344
HNBR	9611-92-6345
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6033
NBR	9611-92-6034
FPM	9611-92-6035
HNBR	9611-92-6036
Plug set-up 4	
38 mm/DN40	
EPDM	9611-92-1622
NBR	9611-92-1628
FPM	9611-92-1634
HNBR	9611-92-1640
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1623
NBR	9611-92-1629
FPM	9611-92-1635
HNBR	9611-92-1641
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-1624
NBR	9611-92-1630
FPM	9611-92-1636
HNBR	9611-92-1642
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1626
NBR	9611-92-1632
FPM	9611-92-1638
HNBR	9611-92-1644
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6346
NBR	9611-92-6347
FPM	9611-92-6348
HNBR	9611-92-6349

The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5” and Sch. 5 6”, it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

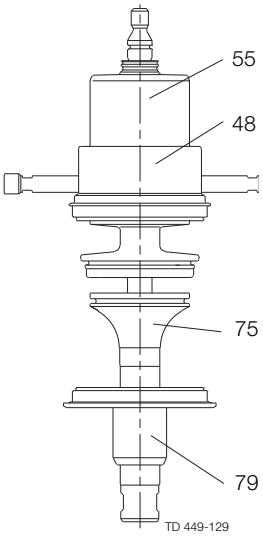
Denomination	Item number
Plug set-up 4 (continued)	
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6037
NBR	9611-92-6038
FPM	9611-92-6039
HNBR	9611-92-6040
Plug set-up 5	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1647
NBR	9611-92-1653
FPM	9611-92-1659
HNBR	9611-92-1665
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-1648
NBR	9611-92-1654
FPM	9611-92-1660
HNBR	9611-92-1666

Denomination	Item number
Plug set-up 5 (continued)	
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1650
NBR	9611-92-1656
FPM	9611-92-1662
HNBR	9611-92-1668
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6350
NBR	9611-92-6351
FPM	9611-92-6352
HNBR	9611-92-6353
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6041
NBR	9611-92-6042
FPM	9611-92-6043
HNBR	9611-92-6044

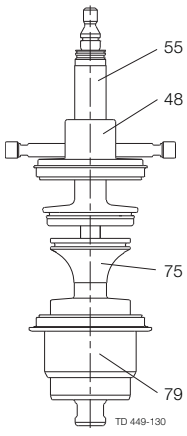
Plug set-up 1



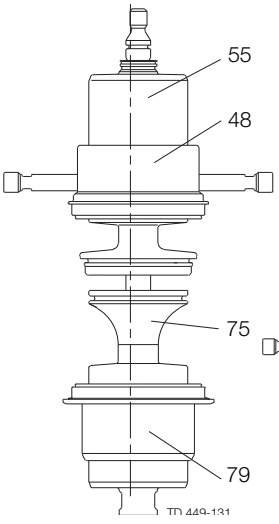
Plug set-up 2



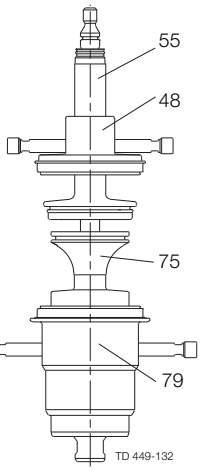
Plug set-up 3



Plug set-up 4



Plug set-up 5



The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5" and Sch. 5 6", it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 6	
38 mm/DN40	
EPDM	9611-92-1670
NBR	9611-92-1676
FPM	9611-92-1682
HNBR	9611-92-1688
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1671
NBR	9611-92-1677
FPM	9611-92-1683
HNBR	9611-92-1689
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1672
NBR	9611-92-1678
FPM	9611-92-1684
HNBR	9611-92-1690
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1674
NBR	9611-92-1680
FPM	9611-92-1686
HNBR	9611-92-1692
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6354
NBR	9611-92-6355
FPM	9611-92-6356
HNBR	9611-92-6357
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6045
NBR	9611-92-6046
FPM	9611-92-6047
HNBR	9611-92-6048
Plug set-up 7	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1695
NBR	9611-92-1701
FPM	9611-92-1707
HNBR	9611-92-1713
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1697
NBR	9611-92-1703
FPM	9611-92-1709
HNBR	9611-92-1715
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1699
NBR	9611-92-1705
FPM	9611-92-1711
HNBR	9611-92-1717
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6358
NBR	9611-92-6359
FPM	9611-92-6360
HNBR	9611-92-6361

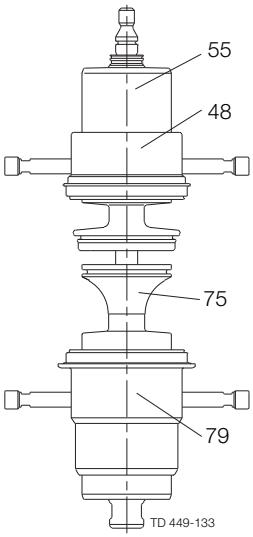
Denomination	Item number
Plug set-up 7 (continued)	
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6049
NBR	9611-92-6050
FPM	9611-92-6051
HNBR	9611-92-6052
Plug set-up 8	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1719
NBR	9611-92-1725
FPM	9611-92-1731
HNBR	9611-92-1737
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1721
NBR	9611-92-1727
FPM	9611-92-1733
HNBR	9611-92-1739
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1723
NBR	9611-92-1729
FPM	9611-92-1735
HNBR	9611-92-1741
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6350
NBR	9611-92-6351
FPM	9611-92-6352
HNBR	9611-92-6353
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6053
NBR	9611-92-6054
FPM	9611-92-6055
HNBR	9611-92-6056
Plug set-up 9	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1743
NBR	9611-92-1749
FPM	9611-92-1755
HNBR	9611-92-1761
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1745
NBR	9611-92-1751
FPM	9611-92-1757
HNBR	9611-92-1763
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1747
NBR	9611-92-1753
FPM	9611-92-1759
HNBR	9611-92-1765
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6362
NBR	9611-92-6363
FPM	9611-92-6364
HNBR	9611-92-6365

The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5” and Sch. 5 6”, it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

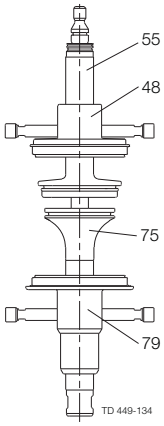
Denomination	Item number
Plug set-up 9 (continued)	
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6057
NBR	9611-92-6058
FPM	9611-92-6059
HNBR	9611-92-6060
Plug set-up 10	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-1767
NBR	9611-92-1773
FPM	9611-92-1779
HNBR	9611-92-1785
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-1769
NBR	9611-92-1775
FPM	9611-92-1781
HNBR	9611-92-1787

Denomination	Item number
Plug set-up 10 (continued)	
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1771
NBR	9611-92-1777
FPM	9611-92-1783
HNBR	9611-92-1789
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6366
NBR	9611-92-6367
FPM	9611-92-6368
HNBR	9611-92-6369
DN125 - DN150/Sch. 5 5” - Sch. 5 6”	
EPDM	9611-92-6061
NBR	9611-92-6062
FPM	9611-92-6063
HNBR	9611-92-6064

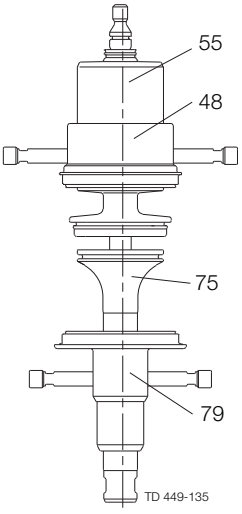
Plug set-up 6



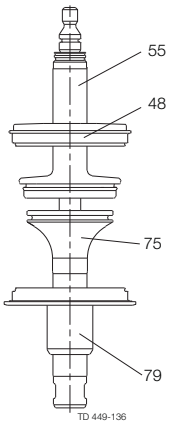
Plug set-up 7



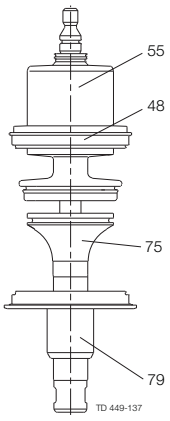
Plug set-up 8



Plug set-up 9



Plug set-up 10



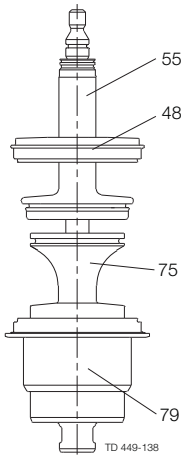
The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5" and Sch. 5 6", it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 11	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1791
NBR	9611-92-1797
FPM	9611-92-1803
HNBR	9611-92-1809
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1792
NBR	9611-92-1798
FPM	9611-92-1804
HNBR	9611-92-1810
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1794
NBR	9611-92-1800
FPM	9611-92-1806
HNBR	9611-92-1812
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6366
NBR	9611-92-6367
FPM	9611-92-6368
HNBR	9611-92-6369
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6065
NBR	9611-92-6066
FPM	9611-92-6067
HNBR	9611-92-6068
Plug set-up 12	
38 mm/DN40	
EPDM	9611-92-1814
NBR	9611-92-1820
FPM	9611-92-1826
HNBR	9611-92-1832
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1815
NBR	9611-92-1821
FPM	9611-92-1827
HNBR	9611-92-1833
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1816
NBR	9611-92-1822
FPM	9611-92-1828
HNBR	9611-92-1834
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1818
NBR	9611-92-1824
FPM	9611-92-1830
HNBR	9611-92-1836
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6370
NBR	9611-92-6371
FPM	9611-92-6372
HNBR	9611-92-6373
DN125 -DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6069
NBR	9611-92-6070
FPM	9611-92-6071
HNBR	9611-92-6072

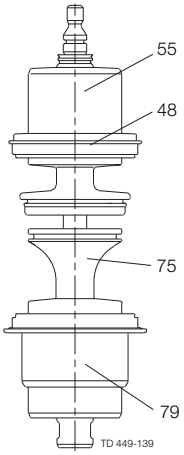
Denomination	Item number
Plug set-up 13	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1839
NBR	9611-92-1845
FPM	9611-92-1851
HNBR	9611-92-1857
63.5-76 .1mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1840
NBR	9611-92-1846
FPM	9611-92-1852
HNBR	9611-92-1858
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1842
NBR	9611-92-1848
FPM	9611-92-1854
HNBR	9611-92-1860
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6338
NBR	9611-92-6339
FPM	9611-92-6340
HNBR	9611-92-6341
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6073
NBR	9611-92-6074
FPM	9611-92-6075
HNBR	9611-92-6076
Plug set-up 14	
38 mm/DN40	
EPDM	9611-92-1862
NBR	9611-92-1868
FPM	9611-92-1874
HNBR	9611-92-1880
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1863
NBR	9611-92-1869
FPM	9611-92-1875
HNBR	9611-92-1881
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1864
NBR	9611-92-1870
FPM	9611-92-1876
HNBR	9611-92-1882
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1866
NBR	9611-92-1872
FPM	9611-92-1878
HNBR	9611-92-1884
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6346
NBR	9611-92-6347
FPM	9611-92-6348
HNBR	9611-92-6349
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6077
NBR	9611-92-6078
FPM	9611-92-6079
HNBR	9611-92-6080

The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5" and Sch. 5 6", it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

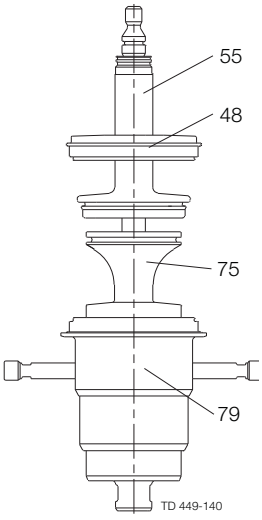
Plug set-up 11



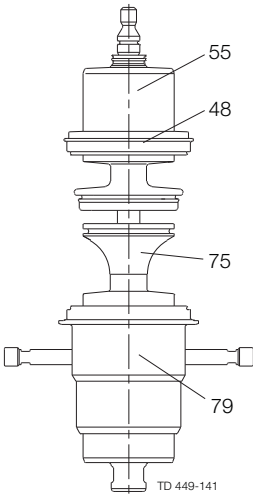
Plug set-up 12



Plug set-up 13



Plug set-up 14

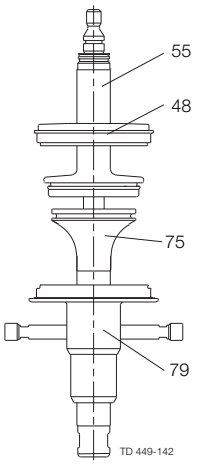


The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5" and Sch. 5 6", it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

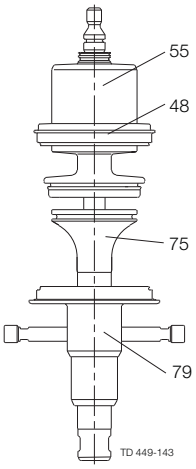
Denomination	Item number
Plug set-up 15	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1887
NBR	9611-92-1893
FPM	9611-92-1899
HNBR	9611-92-1905
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1889
NBR	9611-92-1895
FPM	9611-92-1901
HNBR	9611-92-1907
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1891
NBR	9611-92-1897
FPM	9611-92-1903
HNBR	9611-92-1909
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6334
NBR	9611-92-6335
FPM	9611-92-6336
HNBR	9611-92-6337
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6081
NBR	9611-92-6082
FPM	9611-92-6083
HNBR	9611-92-6084
Plug set-up 16	
51 mm/DN50/Sch. 5 2"	
EPDM	9611-92-1911
NBR	9611-92-1917
FPM	9611-92-1923
HNBR	9611-92-1929
63.5-76.1 mm/DN65 - DN80/Sch. 5 3"	
EPDM	9611-92-1913
NBR	9611-92-1919
FPM	9611-92-1925
HNBR	9611-92-1931
101.6 mm/DN100/Sch. 5 4"	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-1915
NBR	9611-92-1921
FPM	9611-92-1927
HNBR	9611-92-1933
101.6 mm/DN100/Sch. 5 4"	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6342
NBR	9611-92-6343
FPM	9611-92-6344
HNBR	9611-92-6345
DN125 - DN150/Sch. 5 5" - Sch. 5 6"	
EPDM	9611-92-6085
NBR	9611-92-6086
FPM	9611-92-6087
HNBR	9611-92-6088

The drawings and the parts list include all items.
Note! If different connection size on upper and lower body, except for sizes DN125, DN150, Sch. 5 5” and Sch. 5 6”, it is always the smallest body that determines the service kit!
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Plug set-up 15



Plug set-up 16



6.9 Service kits & drawings (plug set-up 1-6) Mix with DN125, DN150, Sch. 5 5” and Sch. 5 6”

The drawings and the parts list include all items.
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 1	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6105
NBR	9611-92-6106
FPM	9611-92-6107
HNBR	9611-92-6108
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6169
NBR	9611-92-6170
FPM	9611-92-6171
HNBR	9611-92-6172
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6233
NBR	9611-92-6234
FPM	9611-92-6235
HNBR	9611-92-6236
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6374
NBR	9611-92-6375
FPM	9611-92-6376
HNBR	9611-92-6377
Plug set-up 2	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6109
NBR	9611-92-6110
FPM	9611-92-6111
HNBR	9611-92-6112
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6173
NBR	9611-92-6174
FPM	9611-92-6175
HNBR	9611-92-6176
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6237
NBR	9611-92-6238
FPM	9611-92-6239
HNBR	9611-92-6240
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003) …	
EPDM	9611-92-6378
NBR	9611-92-6379
FPM	9611-92-6380
HNBR	9611-92-6381
Plug set-up 3	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6113
NBR	9611-92-6114
FPM	9611-92-6115
HNBR	9611-92-6116
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6177
NBR	9611-92-6178
FPM	9611-92-6179
HNBR	9611-92-6180

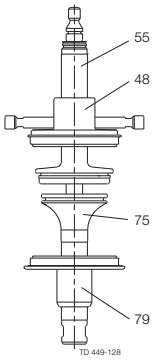
Denomination	Item number
Plug set-up 3 (continued)	
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6241
NBR	9611-92-6242
FPM	9611-92-6243
HNBR	9611-92-6244
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6382
NBR	9611-92-6383
FPM	9611-92-6384
HNBR	9611-92-6385
Plug set-up 4	
38 mm/DN40	
EPDM	9611-92-6089
NBR	9611-92-6090
FPM	9611-92-6091
HNBR	9611-92-6092
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6117
NBR	9611-92-6118
FPM	9611-92-6119
HNBR	9611-92-6120
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6181
NBR	9611-92-6182
FPM	9611-92-6183
HNBR	9611-92-6184
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6245
NBR	9611-92-6246
FPM	9611-92-6247
HNBR	9611-92-6248
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6386
NBR	9611-92-6387
FPM	9611-92-6388
HNBR	9611-92-6389
Plug set-up 5	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6121
NBR	9611-92-6122
FPM	9611-92-6123
HNBR	9611-92-6124
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6185
NBR	9611-92-6186
FPM	9611-92-6187
HNBR	9611-92-6188

The drawings and the parts list include all items.
Note! If clamped valve body an extra o-ring (pos. 52) is required.

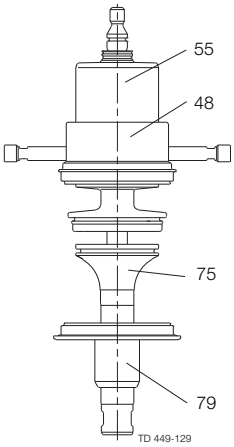
Denomination	Item number
Plug set-up 5 (continued)	
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6249
NBR	9611-92-6250
FPM	9611-92-6251
HNBR	9611-92-6252
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6390
NBR	9611-92-6391
FPM	9611-92-6392
HNBR	9611-92-6393
Plug set-up 6	
38 mm/DN40	
EPDM	9611-92-6093
NBR	9611-92-6094
FPM	9611-92-6095
HNBR	9611-92-6096

Denomination	Item number
Plug set-up 6 (continued)	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6125
NBR	9611-92-6126
FPM	9611-92-6127
HNBR	9611-92-6128
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6189
NBR	9611-92-6190
FPM	9611-92-6191
HNBR	9611-92-6192
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6253
NBR	9611-92-6254
FPM	9611-92-6255
HNBR	9611-92-6256
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6394
NBR	9611-92-6395
FPM	9611-92-6396
HNBR	9611-92-6397

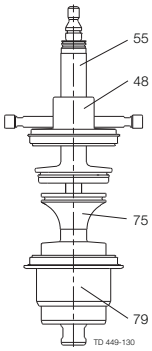
Plug set-up 1



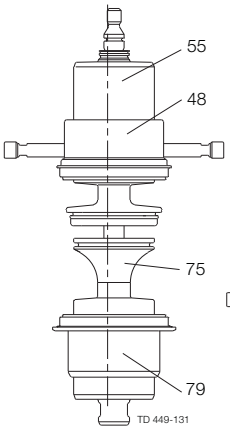
Plug set-up 2



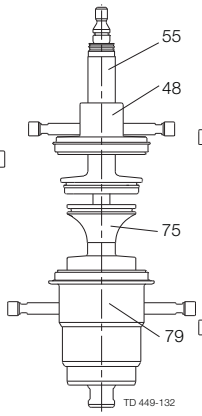
Plug set-up 3



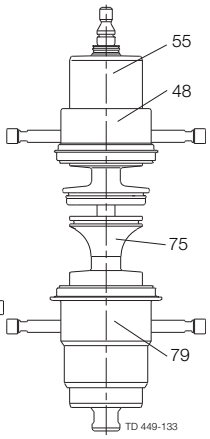
Plug set-up 4



Plug set-up 5



Plug set-up 6



6.10 Service kits & drawings (plug set-up 7-12) Mix with DN125, DN150, Sch. 5 5” and Sch. 5 6”

The drawings and the parts list include all items.
Note! If clamped valve body an extra o-ring (pos. 52) is required.

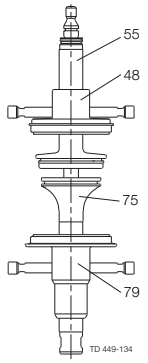
Denomination	Item number
Plug set-up 7	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6129
NBR	9611-92-6130
FPM	9611-92-6131
HNBR	9611-92-6132
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6193
NBR	9611-92-6194
FPM	9611-92-6195
HNBR	9611-92-6196
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6257
NBR	9611-92-6258
FPM	9611-92-6259
HNBR	9611-92-6260
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6398
NBR	9611-92-6399
FPM	9611-92-6400
HNBR	9611-92-6401
Plug set-up 8	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6133
NBR	9611-92-6134
FPM	9611-92-6135
HNBR	9611-92-6136
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6197
NBR	9611-92-6198
FPM	9611-92-6199
HNBR	9611-92-6200
101.6/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6261
NBR	9611-92-6262
FPM	9611-92-6263
HNBR	9611-92-6264
101.6/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6390
NBR	9611-92-6391
FPM	9611-92-6392
HNBR	9611-92-6393
Plug set-up 9	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6137
NBR	9611-92-6138
FPM	9611-92-6139
HNBR	9611-92-6140
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6201
NBR	9611-92-6202
FPM	9611-92-6203
HNBR	9611-92-6204

Denomination	Item number
Plug set-up 9 (continued)	
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6265
NBR	9611-92-6266
FPM	9611-92-6267
HNBR	9611-92-6268
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6402
NBR	9611-92-6403
FPM	9611-92-6404
HNBR	9611-92-6405
Plug set-up 10	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6141
NBR	9611-92-6142
FPM	9611-92-6143
HNBR	9611-92-6144
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6205
NBR	9611-92-6206
FPM	9611-92-6207
HNBR	9611-92-6208
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6269
NBR	9611-92-6270
FPM	9611-92-6271
HNBR	9611-92-6272
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6406
NBR	9611-92-6407
FPM	9611-92-6408
HNBR	9611-92-6409
Plug set-up 11	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6145
NBR	9611-92-6146
FPM	9611-92-6147
HNBR	9611-92-6148
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6209
NBR	9611-92-6210
FPM	9611-92-6211
HNBR	9611-92-6212
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6273
NBR	9611-92-6274
FPM	9611-92-6275
HNBR	9611-92-6276
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6406
NBR	9611-92-6407
FPM	9611-92-6408
HNBR	9611-92-6409

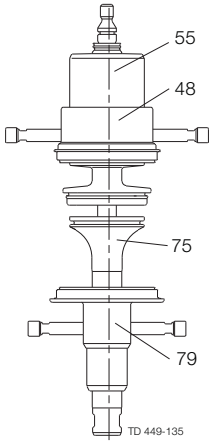
The drawings and the parts list include all items.
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 12	
38 mm/DN40	
EPDM	9611-92-6097
NBR	9611-92-6098
FPM	9611-92-6099
HNBR	9611-92-6100
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6149
NBR	9611-92-6150
FPM	9611-92-6151
HNBR	9611-92-6152
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6213
NBR	9611-92-6214
FPM	9611-92-6215
HNBR	9611-92-6216
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6277
NBR	9611-92-6278
FPM	9611-92-6279
HNBR	9611-92-6280
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6410
NBR	9611-92-6411
FPM	9611-92-6412
HNBR	9611-92-6413

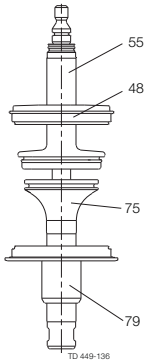
Plug set-up 7



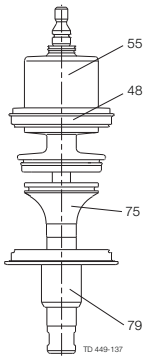
Plug set-up 8



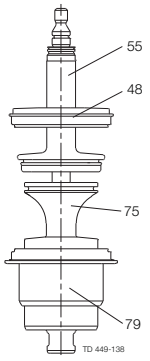
Plug set-up 9



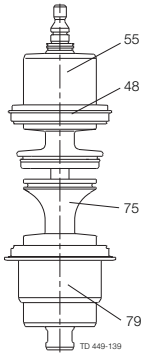
Plug set-up 10



Plug set-up 11



Plug set-up 12



6.11 Service kits & drawings (plug set-up 13-16) Mix with DN125, DN150, Sch. 5 5” and Sch. 5 6”

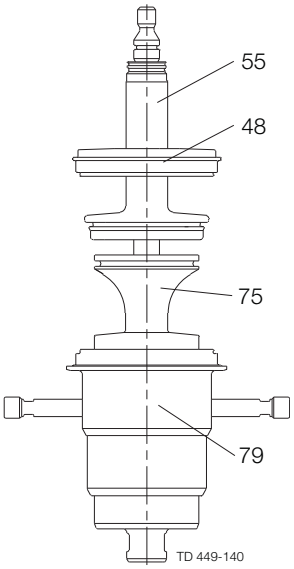
The drawings and the parts list include all items.
Note! If clamped valve body an extra o-ring (pos. 52) is required.

Denomination	Item number
Plug set-up 13	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6153
NBR	9611-92-6154
FPM	9611-92-6155
HNBR	9611-92-6156
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6217
NBR	9611-92-6218
FPM	9611-92-6219
HNBR	9611-92-6220
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6281
NBR	9611-92-6282
FPM	9611-92-6283
HNBR	9611-92-6284
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6378
NBR	9611-92-6379
FPM	9611-92-6380
HNBR	9611-92-6381
Plug set-up 14	
38 mm/DN40	
EPDM	9611-92-6101
NBR	9611-92-6102
FPM	9611-92-6103
HNBR	9611-92-6104
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6157
NBR	9611-92-6158
FPM	9611-92-6159
HNBR	9611-92-6160
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6221
NBR	9611-92-6222
FPM	9611-92-6223
HNBR	9611-92-6224
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6285
NBR	9611-92-6286
FPM	9611-92-6287
HNBR	9611-92-6288
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6386
NBR	9611-92-6387
FPM	9611-92-6388
HNBR	9611-92-6389

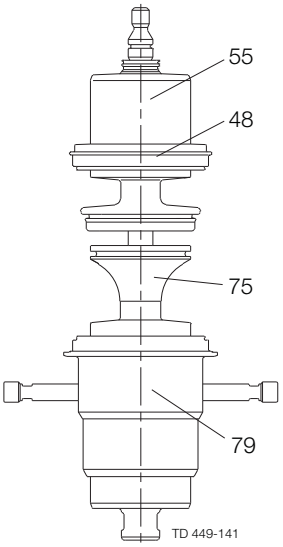
Denomination	Item number
Plug set-up 15	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6161
NBR	9611-92-6162
FPM	9611-92-6163
HNBR	9611-92-6164
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6225
NBR	9611-92-6226
FPM	9611-92-6227
HNBR	9611-92-6228
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6289
NBR	9611-92-6290
FPM	9611-92-6291
HNBR	9611-92-6292
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6374
NBR	9611-92-6375
FPM	9611-92-6376
HNBR	9611-92-6377
Plug set-up 16	
51 mm/DN50/Sch. 5 2”	
EPDM	9611-92-6165
NBR	9611-92-6166
FPM	9611-92-6167
HNBR	9611-92-6168
63.5-76.1 mm/DN65 - DN80/Sch. 5 3”	
EPDM	9611-92-6229
NBR	9611-92-6230
FPM	9611-92-6231
HNBR	9611-92-6232
101.6 mm/DN100/Sch. 5 4”	
(Serial number below 1030000 - manufactured before 1. October 2003)	
EPDM	9611-92-6293
NBR	9611-92-6294
FPM	9611-92-6295
HNBR	9611-92-6296
101.6 mm/DN100/Sch. 5 4”	
(Serial number above 1030000 - manufactured after 1. October 2003)	
EPDM	9611-92-6382
NBR	9611-92-6383
FPM	9611-92-6384
HNBR	9611-92-6385

6.11 Service kits & drawings (plug set-up 13-16) Mix with DN125, DN150, Sch. 5 5” and Sch. 5 6”

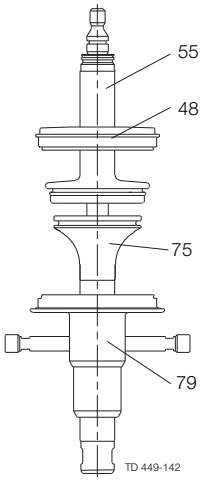
Plug set-up 13



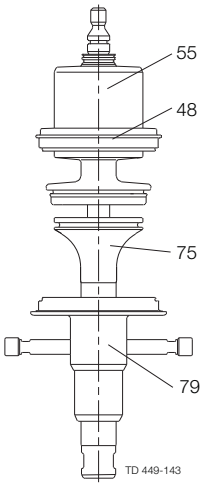
Plug set-up 14



Plug set-up 15



Plug set-up 16



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