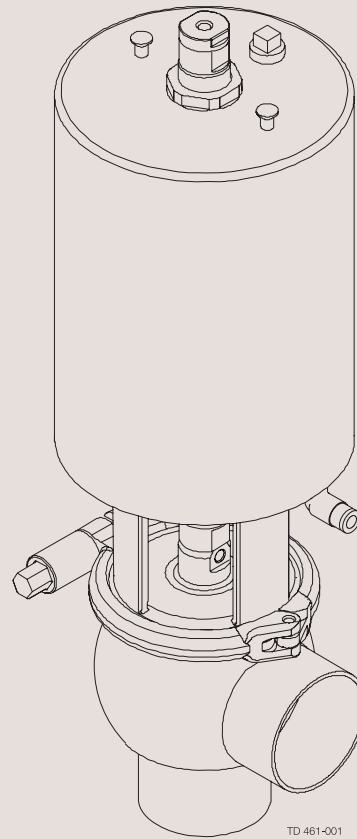
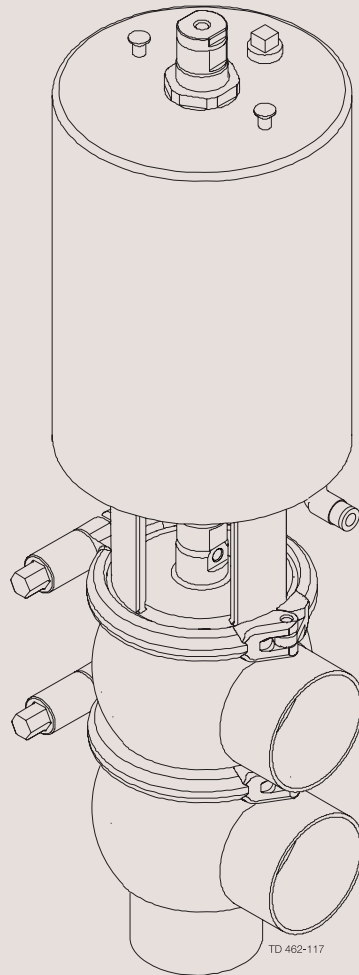




# Instruction Manual

## Unique Single Seat Valve - Standard and Reverse Acting



ESE00202-EN4 2011-05

Original manual



The information herein is correct at the time of issue but may be subject to change without prior notice

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# 1 EC Declaration of Conformity

The designating company

Alfa Laval

Company Name

Albuen 31, DK-6000 Kolding, Denmark

Address

+45 79 32 22 00

Phone No.

hereby declare that

Unique Single Seat Valve

Denomination

Standard and Reverse Acting

Type

Year

is in conformity with the following directives:

- Machinery Directive 2006/42/EC

- Pressure Equipment Directive 97/23/EC category 1 and subjected to assessment procedure Module A.

Manager, Product Centres, Compact  
Heat Exchangers & Fluid Handling

Title

Bjarne Søndergaard

Name

Alfa Laval Kolding  
Company

Signature



Designation



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

---

### 2.1 Important information

---

**Always read the manual before using the valve!**

**WARNING**

Indicates that special procedures must be followed to avoid serious personal injury.

**CAUTION**

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

**NOTE**

Indicates important information to simplify or clarify procedures.

---

### 2.2 Warning signs

---

General warning:



Caustic agents:



## 2 Safety

---

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.

---

### 2.3 Safety precautions

---

#### Installation:

**Always** read the technical data thoroughly (See chapter 6 Technical data)

**Always** release compressed air after use

**Never** touch the moving parts if the actuator is supplied with compressed air

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

**Never** dismantle the valve with valve and pipelines under pressure

**Never** dismantle the valve when it is hot



#### Operation:

**Never** dismantle the valve with valve and pipelines under pressure

**Never** dismantle the valve when it is hot

**Always** read the technical data thoroughly (See chapter 6 Technical data)

**Always** release compressed air after use

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

**Never** touch the moving parts if the actuator is supplied with compressed air

**Always** rinse well with clean water after the cleaning

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



#### Maintenance:

**Always** read the technical data thoroughly (See chapter 6 Technical data)

**Always** release compressed air after use

**Never** service the valve when it is hot

**Never** service the valve with valve and pipelines under pressure

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

**Never** touch the moving parts if the actuator is supplied with compressed air



#### Transportation:

**Always** secure that compressed air is released

**Always** secure that all connections is disconnected before attempt 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.

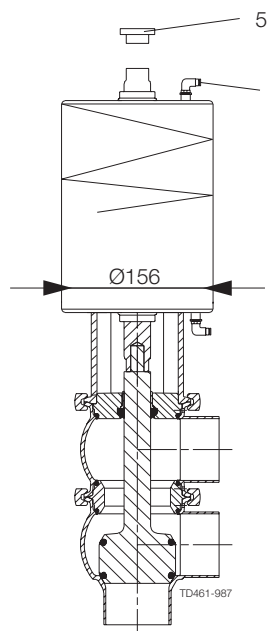


### WARNING!

When using “support air” on spring side in all the Unique SSV actuators, the pressure must **NOT** exceed 3 bar.

When using Unique SSV actuators with OD156mm with support air, **always** use the “steel adapter” (pos. 5). Tighten the “steel adapter” with torque of 30 Nm and use Loctite 243.

The actuator with OD156mm is mainly used on valves ISO76/DN80 – ISO101/DN100.  
The outer actuator diameter = 156 mm.



Max. 3 bar “support air” on spring side.

### 3 Installation

The instruction manual is part of the delivery. Study the instructions carefully.

The items refer to parts list and service kits section.

The valve is supplied as separate parts as standard (for welding).

The valve is assembled before delivery, if it is supplied with fittings.

#### 3.1 Unpacking/delivery

##### Step 1

##### CAUTION

Alfa Laval cannot be held responsible for incorrect unpacking.

##### Check the delivery for:

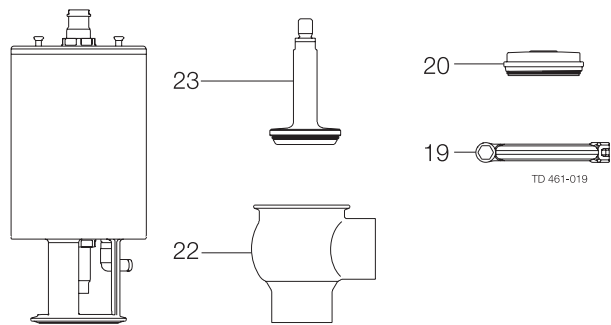
1. Complete valve, shut off valve (RA) or change-over valve (RA) (see steps 2a, 2b, 2c and 2d).
2. Delivery note.

##### Step 2

##### 2a

##### Shut-off valve:

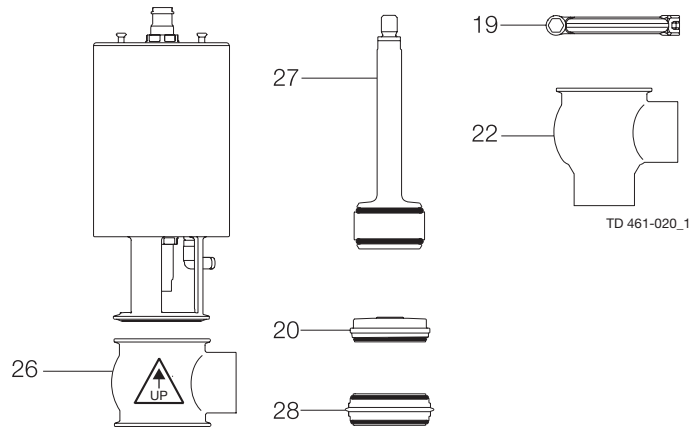
1. Complete actuator.
2. Bonnet (20).
3. Clamp (19).
4. Valve plug (23).
5. Valve body (22).



##### 2b

##### Change-over valve:

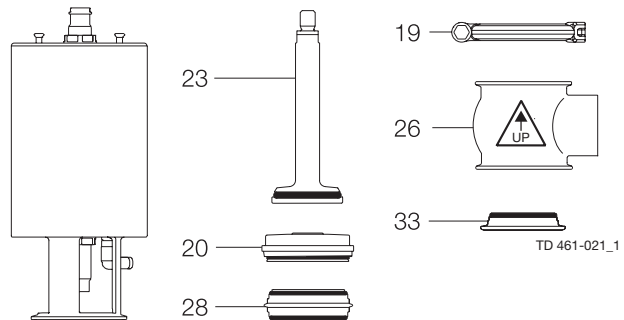
1. Complete actuator.
2. Bonnet (20).
3. 2 x clamp (19).
4. Valve plug (27).
5. Lower valve body (22).
6. Valve seat (28).
7. Upper valve body (26).



##### 2c

##### Shut-off valve - Reverse Acting:

1. Complete actuator.
2. Bonnet (20).
3. 3 x clamp (19).
4. Valve plug (23).
5. 2 x upper valve body (26).
6. Valve seat (28).
7. Lower bonnet (33).



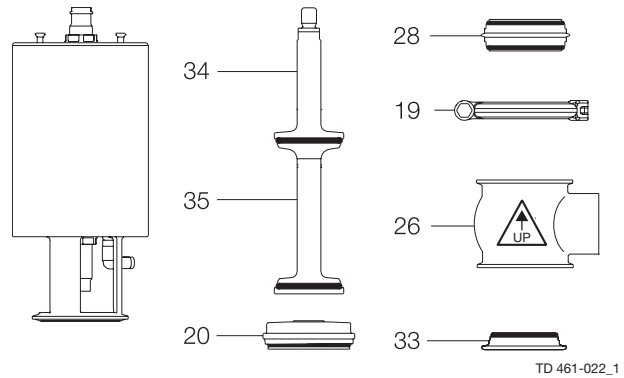


The instruction manual is part of the delivery. Study the instructions carefully.  
The items refer to parts list and service kits section.  
The valve is supplied as separate parts as standard (for welding).  
The valve is assembled before delivery, if it is supplied with fittings.

### 2d

#### Change-over valve - Reverse Acting:

1. Complete actuator.
2. Bonnet (20).
3. 4 x clamp (19).
4. Upper valve plug (34).
5. Lower valve plug (35).
6. 3 x upper valve body (26).
7. 2 x valve seat (28).
8. Lower bonnet (33).



### Step 3

Remove possible packing materials from the valve/valve parts.  
Inspect the valve/valve parts for visible transport damages.  
Avoid damaging the valve/valve parts.

### 3 Installation

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

#### 3.2 General installation

##### Step 1



**Always** read the technical data thoroughly.  
See chapter 6 Technical data



**Always** release compressed air after use.

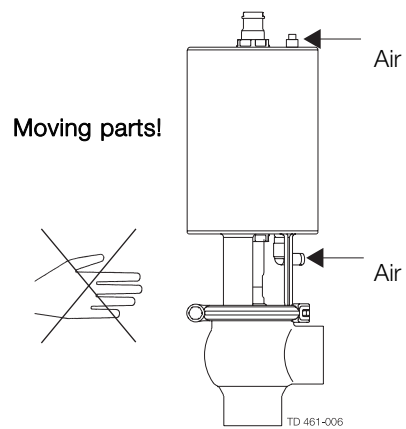
##### CAUTION

Alfa Laval cannot be held responsible for incorrect installation.

##### Step 2



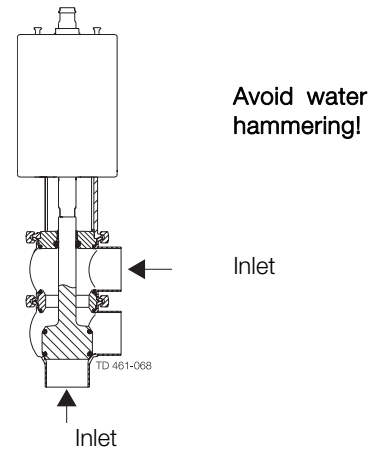
**Never** touch the moving parts if the actuator is supplied with compressed air.



##### Step 3

It is recommended to install the valve so that the flow is against the closing direction to avoid water hammer.

Shock in the actuator must **never** occur.

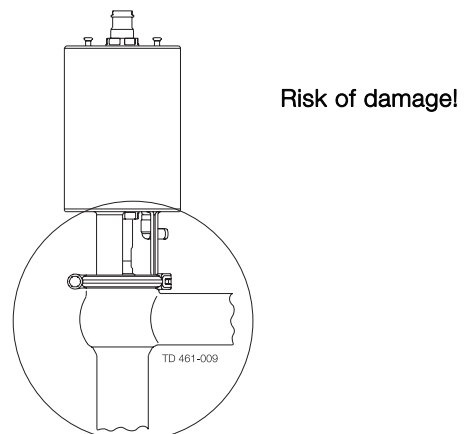


##### Step 4

Avoid stressing the valve.

**Pay special attention to:**

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



Study the instructions carefully.  
 The valve is supplied as separate parts to facilitate the welding.  
 The items refer to the parts list and service kits section.  
 Check the valve for smooth operation after welding.

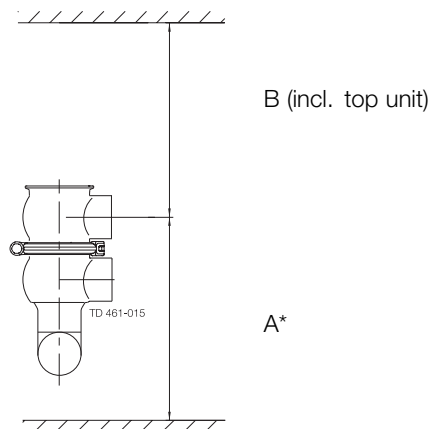
#### 3.3 Welding

##### Step 1

**Always** install valves with more than one valve body so that the seals between the valve bodies can be replaced. Do not weld more than one valve body into the system.

Valve size	A (mm)	B (mm)
DN25/25 mm	*	630
DN40/38 mm	*	700
DN50/51 mm	*	750
DN65/63.5 mm	*	740
DN80/76 mm	*	800
DN100/101.6 mm	*	790

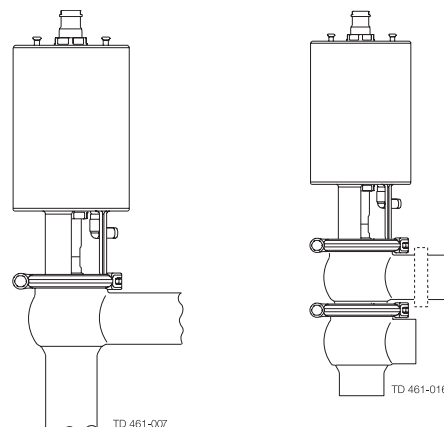
\* Depending on body combination and piping solution.



##### Step 2

Assemble the valve in accordance with the steps on page 21.

**Pay special attention to the warnings!**

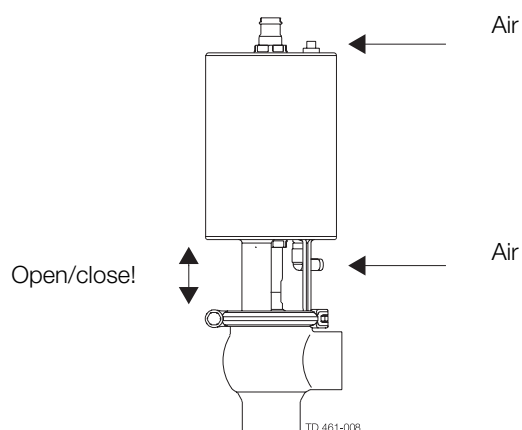


##### Step 3

###### Pre-use check:

1. Supply compressed air to the actuator.
2. Open and close the valve several times to ensure that it operates smoothly.

**Pay special attention to the warnings!**



## 3 Installation

---

*Study the instructions carefully.*

*The valve is supplied as separate parts to facilitate the welding.*

*The items refer to the parts list and service kits section.*

*Check the valve for smooth operation after welding.*

---

### 3.4 Recycling information

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- **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!  
 Ensure that the valve operates smoothly.  
 The items refer to the parts list and service kits section.

### 4.1 Operation

#### Step 1



**Always** read the technical data thoroughly.  
 See chapter 6 Technical data



**Always** release compressed air after use.

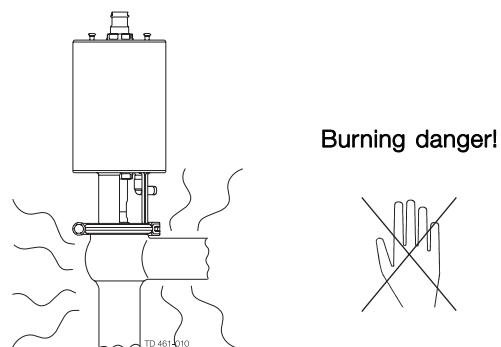
#### CAUTION

Alfa Laval cannot be held responsible for incorrect operation.

#### Step 2



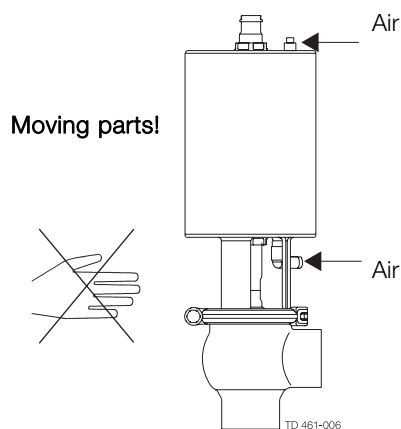
**Never** touch the valve or the pipelines when processing hot liquids or when sterilizing.



#### Step 3



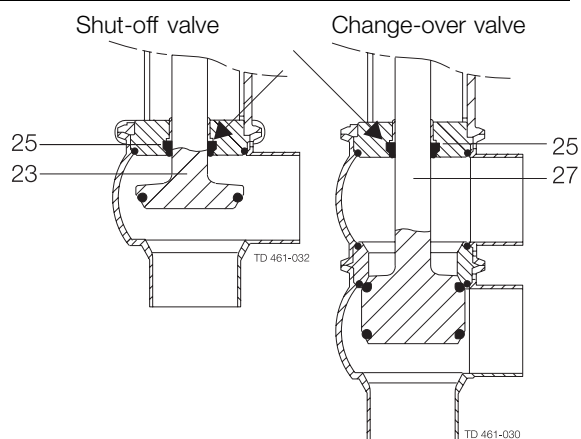
**Never** touch the moving parts if the actuator is supplied with compressed air.



#### Step 4

##### Lubrication of valves:

1. Ensure smooth movement between lip seal (25) and plug stem (23, 27).
2. Lubricate with Klüber Paraliq GTE 703 if necessary (see page 18).



## 4 Operation

---

*Study the instructions carefully and pay special attention to the warnings!*

*Ensure that the valve operates smoothly.*

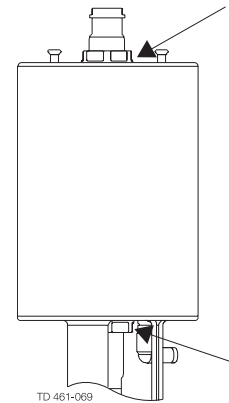
*The items refer to the parts list and service kits section.*

---

### Step 5

#### Lubrication of actuator

1. Ensure smooth movement of the actuator (the actuator is lubricated before delivery).
2. Lubricate with Molykote Longterm 2 plus if necessary.



Pay attention to possible faults. Study the instructions carefully.  
The items refer to the parts list and service kits section.

## 4.2 Troubleshooting

### NOTE!

Study the maintenance instructions carefully before replacing worn parts. - See page 18!

Problem	Cause/result	Repair
External product leakage	Worn or product affected lip seal and/or O-ring	<ul style="list-style-type: none"> <li>- Replace the seals</li> <li>- Replace with seals of a different rubber grade</li> </ul>
Internal product leakage	<ul style="list-style-type: none"> <li>- Worn or product affected plug seal</li> <li>- Product deposits on the seat and/or plug</li> <li>- Product pressure exceeds actuator specification</li> </ul>	<ul style="list-style-type: none"> <li>- Replace the seal</li> <li>- Replace with a seal of a different rubber grade</li> <li>- Frequent cleaning</li> <li>- Replace with a high pressure actuator</li> <li>- Use auxiliary air on the spring side (do not exceed 3 bar)</li> <li>- Reduce product pressure</li> </ul>
Water hammer	The flow direction is the same as the closing direction	<ul style="list-style-type: none"> <li>- The flow direction should be against the closing direction</li> <li>- Throttle air release of solenoid in top unit</li> </ul>
The valve does not open/close	Product pressure exceeds actuator specification	<ul style="list-style-type: none"> <li>- Replace with a high pressure actuator</li> <li>- Use auxiliary air on the spring side</li> <li>- Reduce product pressure</li> </ul>

## 4 Operation

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<sub>3</sub> = Nitric acid.

### 4.3 Recommended cleaning

#### Step 1



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

**Caustic danger!**



**Always** use rubber gloves!

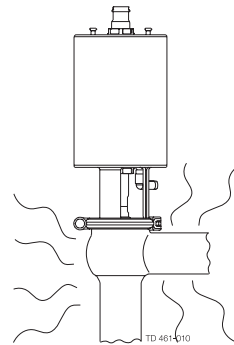


**Always** use protective goggles!

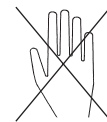
#### Step 2



**Never** touch the valve or the pipelines when sterilizing.



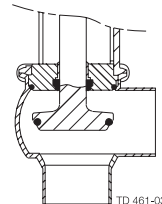
**Burning danger!**



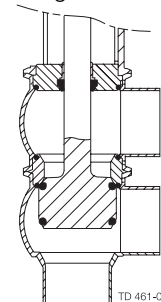
#### Step 3

Clean the plug and the seats correctly.  
**Pay special attention to the warnings!**  
**Lift and lower valve plug momentarily!**

Shut-off valve



Change-over valve



#### Step 4

**Examples of cleaning agents:**

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C

1 kg NaOH + 100 l water = Cleaning agent.

2.2 l 33% NaOH + 100 l water = Cleaning agent.

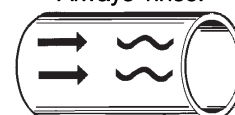
2. 0.5% by weight HNO<sub>3</sub> at 70° C

0.7 l 53% HNO<sub>3</sub> + 100 l water = Cleaning agent.

#### Step 5

1. Avoid excessive concentration of the cleaning agent.
2. Adjust the cleaning flow to the process.
3. **Always** rinse well with clean water after the cleaning.

**Always rinse!**



Clean water    Cleaning agents



*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<sub>3</sub> = Nitric acid.*

---

### **Step 6**

#### **NOTE**

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

---

## 5 Maintenance

Maintain the valve regularly.

Study the instructions carefully and pay special attention to the warnings!

Always keep spare rubber seals and lip seals in stock.

Check the valve for smooth operation after service.

### 5.1 General maintenance

#### Step 1



**Always** read the technical data thoroughly.  
See chapter 6 Technical data



**Always** release compressed air after use.

#### NOTE

All scrap must be stored/discharged in accordance with current rules/directives.

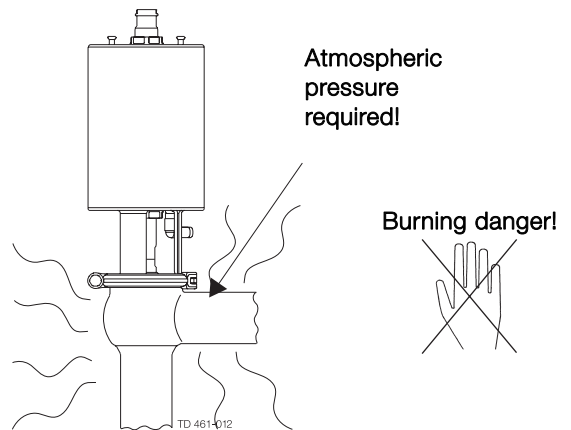
#### Step 2



**Never** service the valve when it is hot.



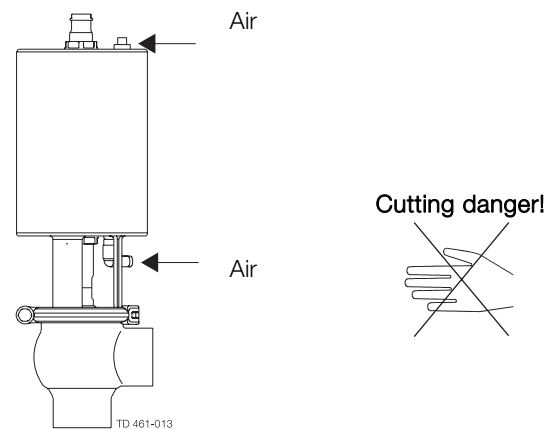
**Never** service the valve with valve and pipelines under pressure.



#### Step 3



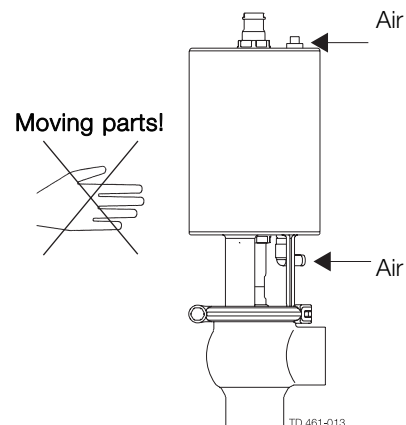
**Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.



#### Step 4



**Never** touch the moving parts if the actuator is supplied with compressed air.



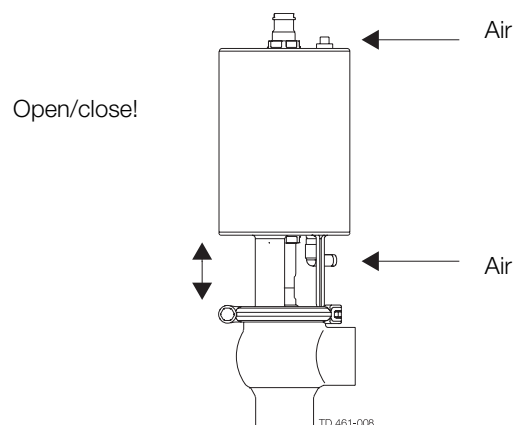
Maintain the valve regularly.  
 Study the instructions carefully and pay special attention to the warnings!  
 Always keep spare rubber seals and lip seals in stock.  
 Check the valve for smooth operation after service.

Below are some guidelines for maintenance and lubrication intervals. Please note that the guidelines are for normal working conditions in one shift.

	Product wetted seals	Actuator bushings complete
Preventive maintenance	Replace after 12 months depending on working conditions	Replace after 5 years depending on working conditions
Maintenance after leakage (leakage normally starts slowly)	Replace at the end of the day	Replace when possible
Planned maintenance	<ul style="list-style-type: none"> <li>- Regular inspection for leakage and smooth operation</li> <li>- Keep a record of the valve</li> <li>- Use the statistics for planning of inspections</li> </ul> <b>Replace after leakage</b>	<ul style="list-style-type: none"> <li>- Regular inspection for leakage and smooth operation</li> <li>- Keep a record of the actuator</li> <li>- Use the statistics for planning of inspections</li> </ul> <b>Replace after leakage</b>
Lubrication	<b>Before fitting</b> Klüber Paraliq GTE 703 or similar USDA H1 approved oil/grease	<b>Before fitting</b> Molykote Longterm 2 plus

### Pre-use check:

1. Supply compressed air to the actuator.
  2. Open and close the valve several times to ensure that it operates smoothly.
- Pay special attention to the warnings!**



**Recommended spare parts**  
 Service kits (see page 26)

## 5 Maintenance

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

NC = Normally closed.

NO = Normally open.

A/A = Air/air activated.

### 5.2 Dismantling of valve

#### Step 1

##### 1a

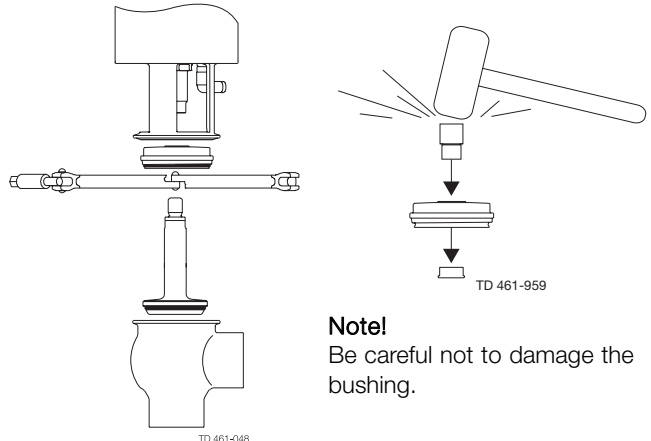
##### Shut-off valve:

1. Supply compressed air to the actuator (only NC).
2. Loosen and remove clamp.
3. Release compressed air (only NC).
4. Lift away the actuator.
5. Unscrew and remove valve plug.
6. Remove O-ring, lip seal and bushing in bonnet.  
(Use bushing tool and rubber mallet).

**Note!** Be careful not to damage the bushing.

##### Pay special attention to the warnings!

**Note!** For plug seal replacement please see page 21.



##### Note!

Be careful not to damage the bushing.

##### 1b

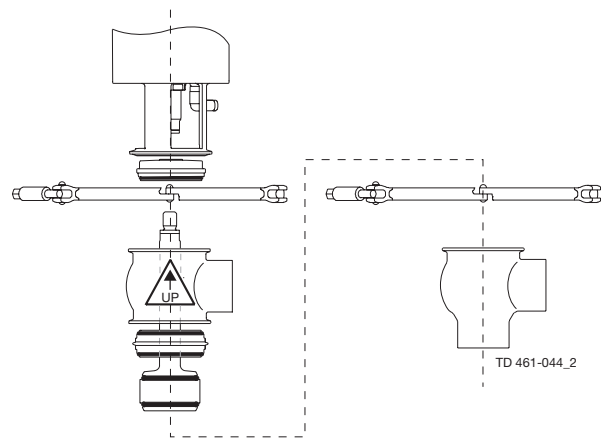
##### Change-over valve:

1. Supply compressed air to the actuator (only NC).
2. Loosen and remove lower clamp.
3. Release compressed air (only NC).
4. Lift away the actuator and upper valve body.
5. Supply compressed air to the actuator (only NO).
6. Unscrew and remove valve plug.
7. Release compressed air (only NO).
8. Remove seat and O-rings.
9. Loosen and remove upper clamp.
10. Remove upper valve body.
11. Remove O-ring, lip seal and bushing in bonnet.  
(Use bushing tool and rubber mallet.  
See drawing, step 1a).

**Note!** Be careful not to damage the bushing.

##### Pay special attention to the warnings!

**Note!** For plug seal replacement please see page 21.



##### 1c

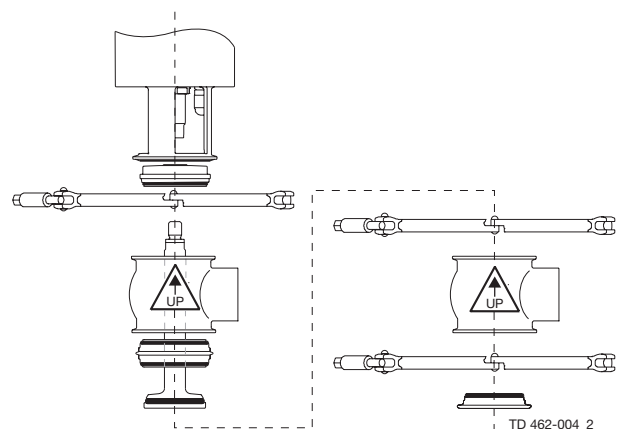
##### Shut-off valve - Reverse Acting:

1. Loosen and remove lower clamp.
2. Remove lower bonnet and O-ring from lower body.
3. Loosen and remove middle clamp.
4. Lift away the actuator and upper valve body.
5. Supply compressed air to the actuator (only NC).
6. Unscrew and remove valve plug.
7. Release compressed air (only NC).
8. Remove seat and O-rings.
9. Loosen and remove upper clamp.
10. Remove upper valve body.
11. Remove O-ring, lip seal and bushing in bonnet.  
(Use bushing tool and rubber mallet.  
See drawing, step 1a).

**Note!** Be careful not to damage the bushing.

##### Pay special attention to the warnings!

**Note!** For plug seal replacement please see page 21.



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

NC = Normally closed.

NO = Normally open.

A/A = Air/air activated.

### 1d

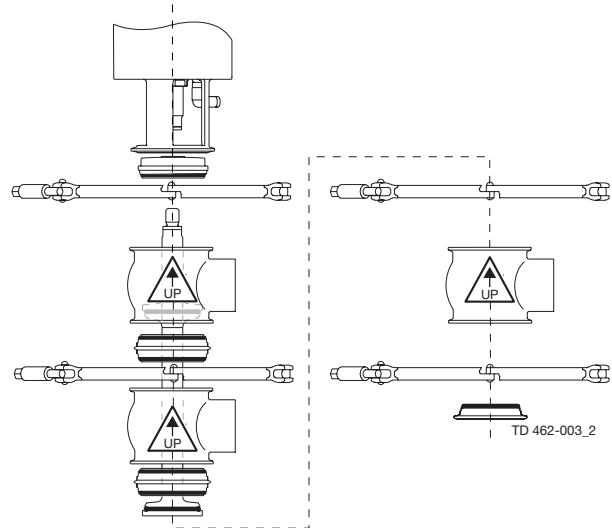
#### Change-over valve - Reverse Acting:

1. Loosen and remove lower clamp.
2. Remove lower bonnet and O-ring.
3. Loosen and remove clamp between lower and middle valve body
4. Lift away the actuator and upper + middle valve body.
5. Supply compressed air to the actuator (only NC).
6. Unscrew and remove lower valve plug.
7. Release compressed air (only NC).
8. Remove lower seat and O-rings.
9. Supply compressed air to the actuator (only NO).
10. Loosen and remove clamp between middle and upper valve body.
11. Remove middle valve body and upper seat with O-rings.
12. Release compressed air (only NO).
13. Loosen and remove upper clamp.
14. Remove upper valve body.
15. Unscrew and remove upper valve plug.
16. Remove O-ring, lip seal and bushing in bonnet.  
(Use bushing tool and rubber mallet. See drawing, step 1a).

**Note!** Be careful not to damage the bushing.

**Pay special attention to the warnings!**

**Note!** For plug seal replacement please see page 21.



### 5.3 Plug seal replacement

1. Remove old seal ring using a knife, screwdriver or similar.  
Be careful not to damage metal parts.
2. Pre-mount plug seal without pressing it into the groove.
3. Squeeze plug seal into the groove using opposite pressure points.
4. Release compressed air behind plug seal.

**Note!** For plug seal replacement please read instruction in service kit.

### 5.4 Assembly of valve

Reverse order of 4.2, Dismantling of valve.

Lubricate O-ring (21) and lip seal (25) with Klüber Paraliq GTE 703.

Remember to tighten spindle and plug with a torque  $M= 30 \text{ Nm}$  (Use two 17 mm spanners)

If there are vibrations in the pipeline Alfa Laval recommend to use loctite no. 243.

## 5 Maintenance

---

Study the instructions carefully.

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

A/A = Air/air activated.

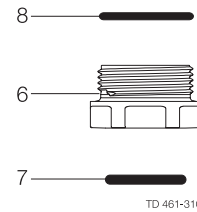
Service tool: See Spare Parts.

---

### 5.5 Actuator bushing replacement

---

1. Unscrew and remove top and bottom bushings with O-rings.
2. Lubricate O-rings with Molykote Longterm 2 plus before fitting.
3. Fit bushings and O-rings. Tighten brushing with a torque = 10Nm.  
Be careful not to overtighten.

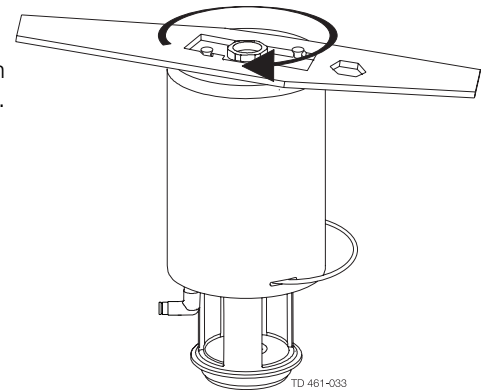


### 5.6 Dismantling of optional maintainable actuator

---

1. Rotate cylinder.
2. Remove lock wire and pull away cylinder.
3. Unscrew nuts and remove yoke.
4. Unscrew top and bottom bushings.
5. Remove piston with O-ring and spring assembly.
6. Remove O-rings and support disc.

Rotate cylinder with service tool.



**Note!** The A/A actuator has no spring assembly.

---

### 5.7 Use

---

Reverse order of 4.6. Dismantling of actuator.

Lubricate O-ring (3, 7, 11) with Molykote Longterm 2 plus before fitting.

---

*Study the instructions carefully.*

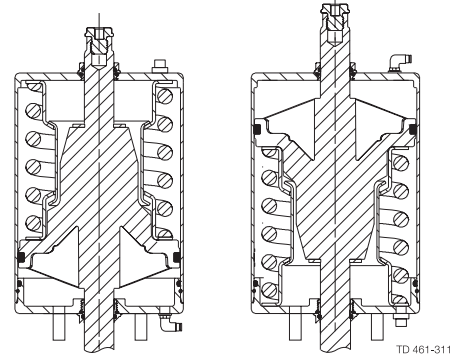
*The items refer to the parts list and service kits section. Handle scrap correctly.*

*AVA = Air/air activated.*

*Service tool: See Spare Parts.*

### 5.8 Additional equipment

1. Rotate cylinder.
2. Remove lock wire and pull away cylinder.
3. Reverse piston and spring assembly.
4. Reverse adapter, air fitting and plug to opposite end.
5. Re-assemble in reverse order (3 to1).



Pneumatic movement  
upwards

Pneumatic movement  
downwards

## 6 Technical data

---

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

---

### 6.1 Technical data

---

Data - valve/actuator	
Max. product pressure	1000 kPa (10 bar).
Min. product pressure	Full vacuum (depending on product specifications).
Temperature range	-10° C to + 140° C (standard EPDM seal).
Air pressure, actuator	500 to 700 kPa (5 to 7 bar).
Materials - valve/actuator	
Product wetted steel parts	1.4404 (316L) (internal Ra < 0.8 µm).
Other steel parts	1.4301 (304).
Plug seal	EPDM / PTFE (TR2).
Other product wetted seals	EPDM (standard).
Optional product wetted seals	HNBR and FPM.
Other seals	NBR.

#### 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.

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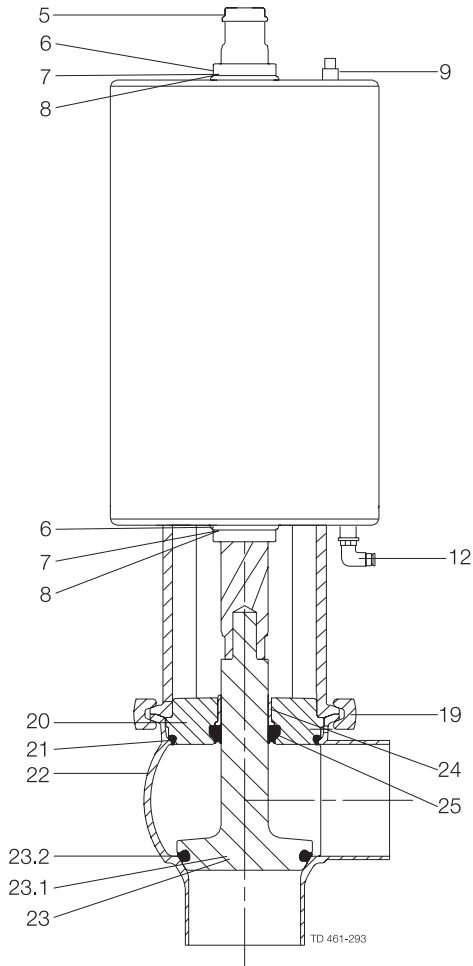




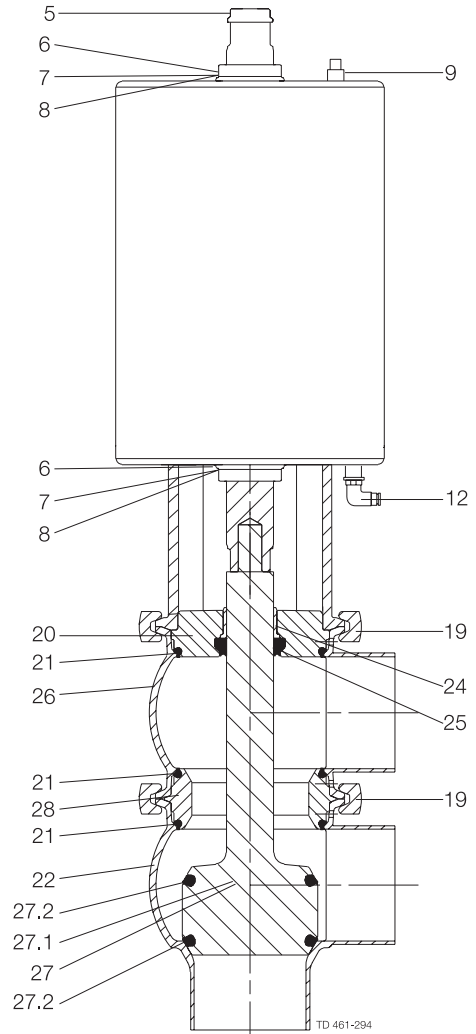
## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve.  
The items refer to the parts lists in the following sections

### 7.1 Drawing



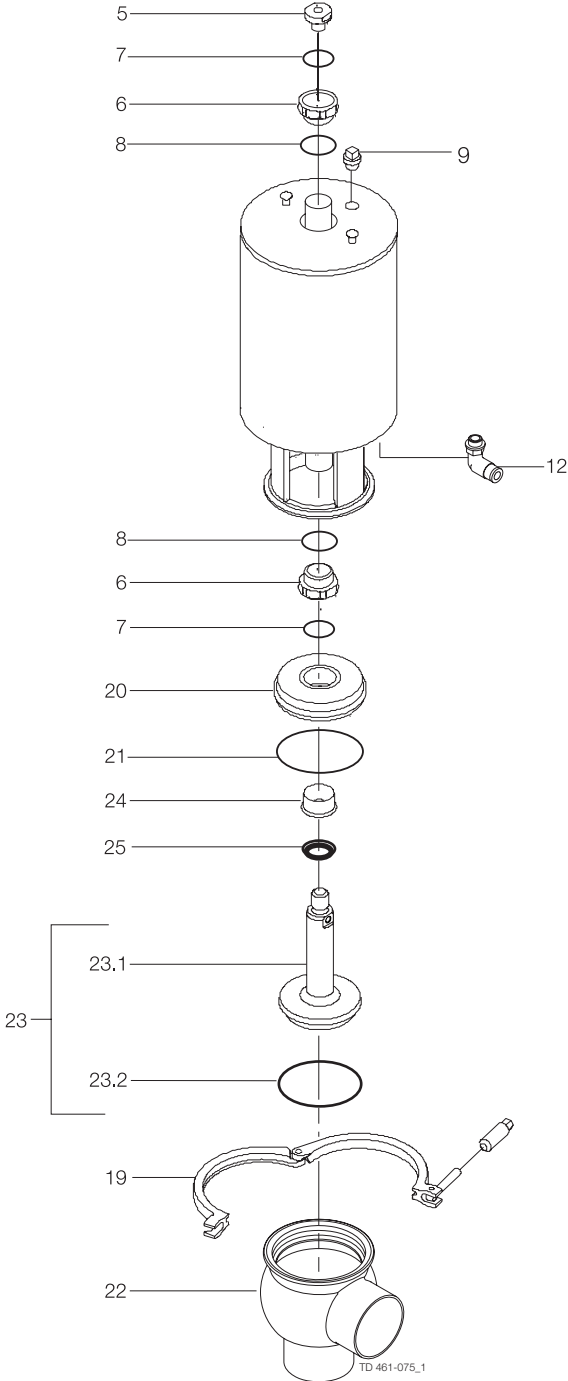
Shut-off valve



Change-over valve

The drawing shows Unique Single Seat Valve - Shut-off.  
The items refer to the parts lists in the following sections.

7.2 Unique Single Seat Valve - Shut-off Valve



## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Shut-off.  
The items refer to the parts lists in the following sections.

### Parts list

Pos.	Qty	Denomination
		Actuator
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		Lip seal set (10 pcs.) EPDM
		Lip seal set (10 pcs.) HNBR
		Lip seal set (10 pcs.) FPM
		Plug seat set (10 pcs.) EPDM
		Plug seat set (10 pcs.) HNBR
		Plug seat ser (10 pcs.) FPM
5	1	Adapter
	1	Adapter, steel
6 □	2	Bushing
7 □	2	O-ring
8 □	2	O-ring
9	1	Plug
12	1(2)	Air fitting
19	1	Clamp
20	1	Bonnet
21 ♦	1	O-ring
22	1	Valve body
23	1	Plug
23.1	1	Plug
23.2 ♦	1	Plug seal
24	1	Bushing
25 ♦	1	Lip seal

### Service kits

#### Denomination

#### Service kit for Actuator

□ Service kit, actuator ..... 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500

#### Service kit for Product wetted parts, standard

♦ Service kit, EPDM ..... 9611-92-6501 9611-92-6502 9611-92-6503 9611-92-6504 9611-92-6505 9611-92-6506

♦ Service kit, HNBR ..... 9611-92-6507 9611-92-6508 9611-92-6509 9611-92-6510 9611-92-6511 9611-92-6512

♦ Service kit, FPM ..... 9611-92-6513 9611-92-6514 9611-92-6515 9611-92-6516 9611-92-6517 9611-92-6518

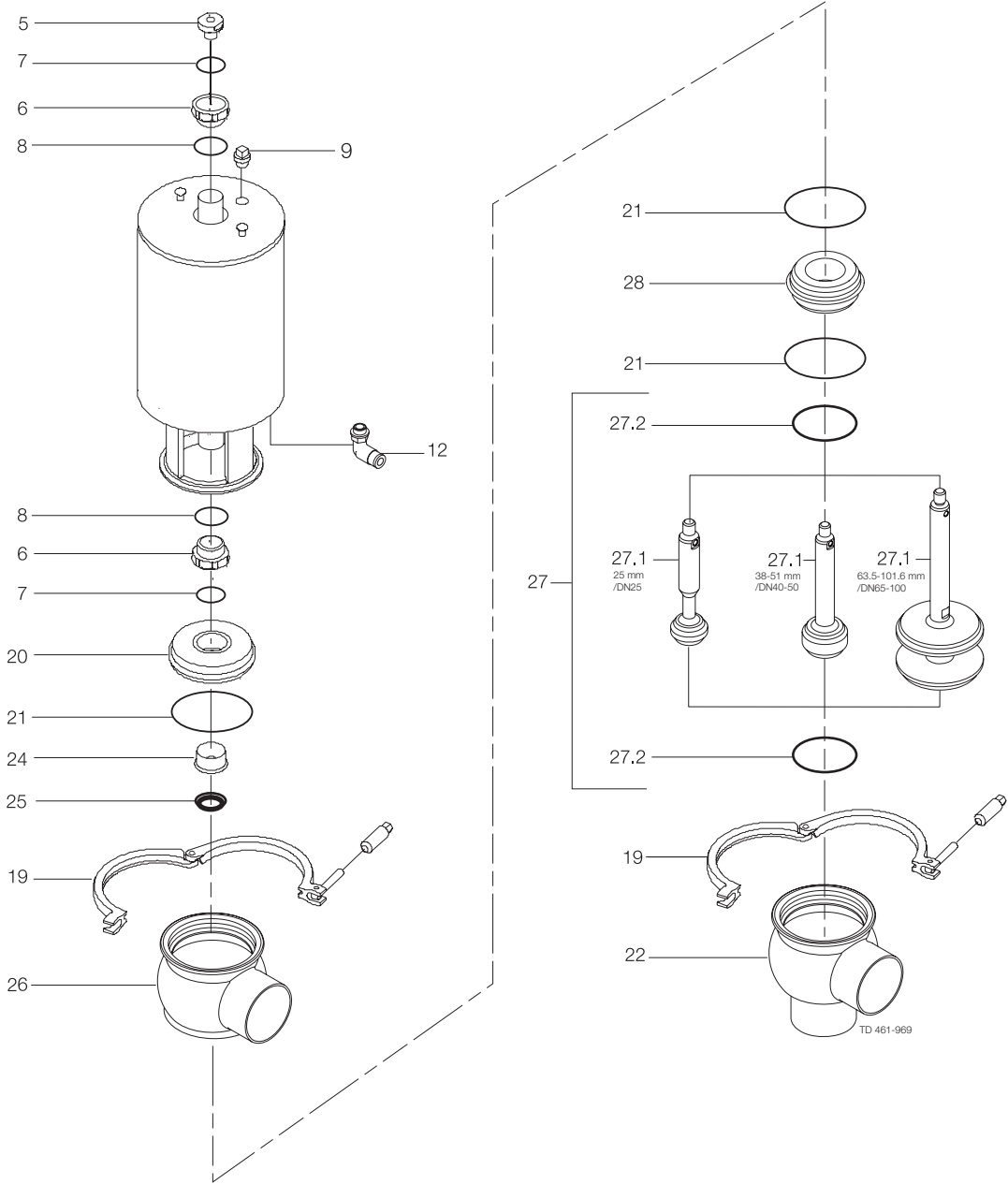
Parts marked with □♦ are included in the service kits.

Recommended spare parts: Service kits.

TD 900-254/1

The drawing shows Unique Single Seat Valve - Change-over.  
 The items refer to the parts lists in the following sections.

7.3 Unique Single Seat Valve - Change-over Valve



## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Change-over.  
The items refer to the parts lists in the following sections.

### Parts list

Pos.	Qty	Denomination
		Actuator
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		Plug seal set (10 pcs.) EPDM
		Plug seal set (10 pcs.) HNBR
		Plug seal set (10 pcs.) FPM
5	1	Adapter
	1	Adapter, steel
6	□	2 Bushing
7	□	2 O-ring
8	□	2 O-ring
9		1 Plug
12	1(2)	Air fitting
19	2	Clamp
20	1	Bonnet
21	◆	3 O-ring
22		1 Valve body
24		1 Bushing
25	◆	1 Lip seal
26		1 Valve body
27		1 Plug
27.1		1 Plug
27.2	◆	2 Plug seal
28		1 Seat

### Service kits

#### Service kit for Actuator

□ Service kit, actuator ..... 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500 9611-92-6500

#### Service kit for Product wetted parts, standard

◆ Service kit, EPDM ..... 9611-92-6579 9611-92-6580 9611-92-6581 9611-92-6582 9611-92-6583 9611-92-6584

◆ Service kit, HNBR ..... 9611-92-6585 9611-92-6586 9611-92-6587 9611-92-6588 9611-92-6589 9611-92-6590

◆ Service kit, FPM ..... 9611-92-6591 9611-92-6592 9611-92-6593 9611-92-6594 9611-92-6595 9611-92-6596

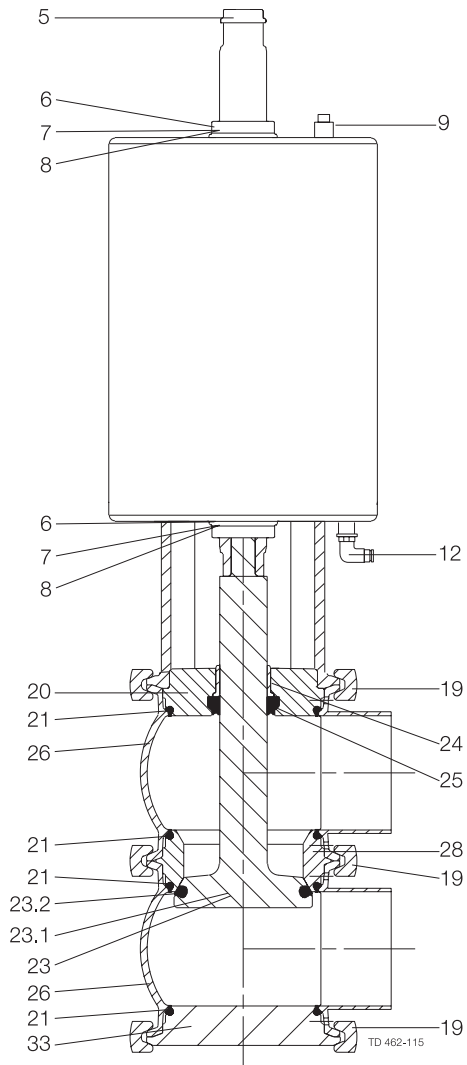
Parts marked with □◆ are included in the service kits. Recommended spare parts: Service kits. ....TD 900-254/1



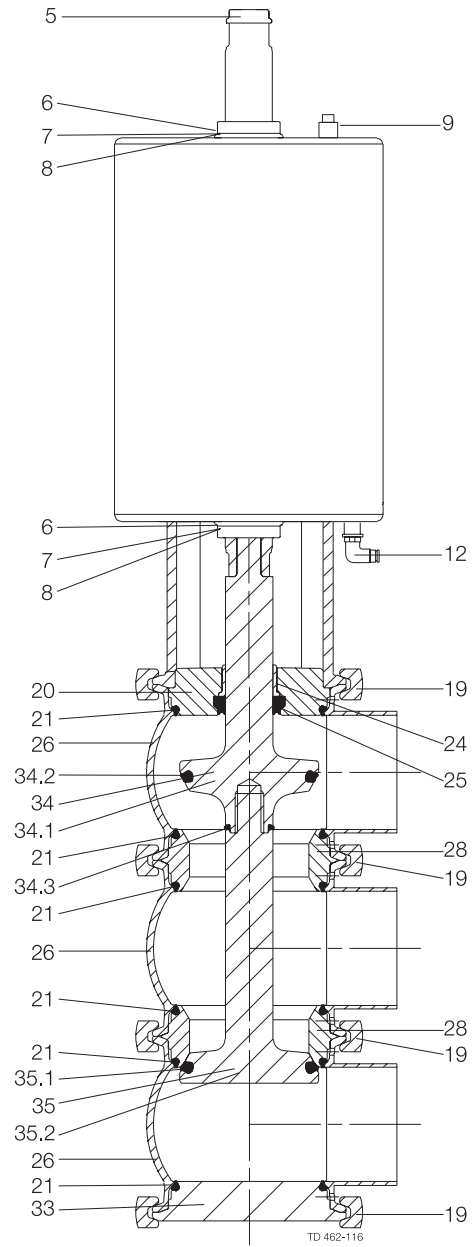
## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Change-over.  
 The items refer to the parts lists in the following sections.

### 7.4 Drawing



Shut-off valve - Reverse Acting



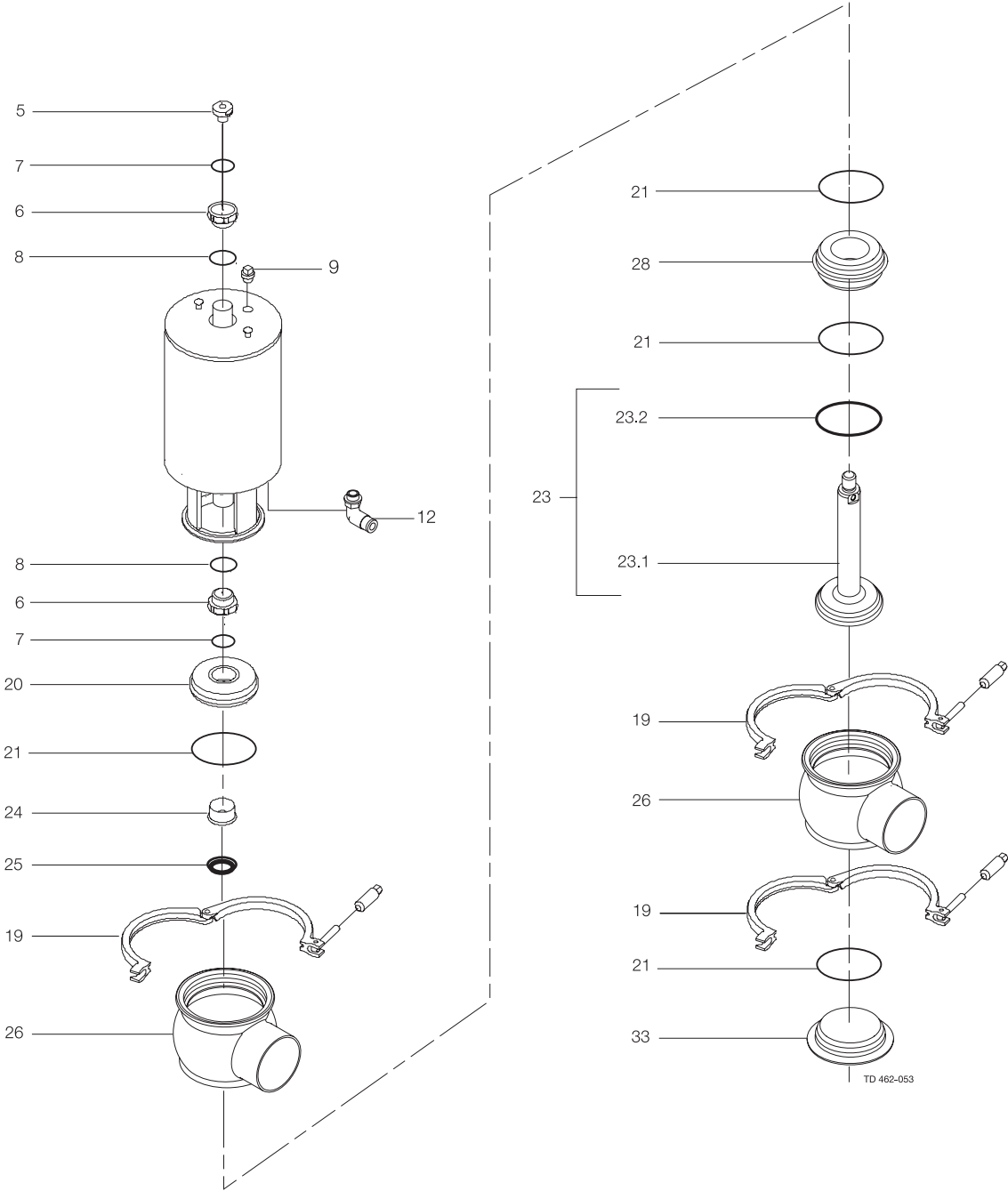
Change-over valve - Reverse Acting



# 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Reverse Acting, Shut-off.  
The items refer to the parts lists in the following sections.

## 7.5 Unique Single Seat Valve Reverse Acting - Shut-off Valve



## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Reverse Acting, Shut-off.  
The items refer to the parts lists in the following sections.

### Parts list

Pos.	Qty	Denomination
		Actuator
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		Lip seal set (10 pcs.) EPDM
		Lip seal set (10 pcs.) HNBR
		Lip seal set (10 pcs.) FPM
		Plug seal set (10 pcs.) EPDM
		Plug seal set (10 pcs.) HNBR
		Plug seal set (10 pcs.) FPM
5	1	Adapter
6 □	2	Bushing
7 □	2	O-ring
8 □	2	O-ring
9	1	Plug
12	1(2)	Air fitting
19	3	Clamp
20	1	Bonnet
21 ♦	4	O-ring
23	1	Plug
23.1	1	Plug
23.2 ♦	1	Plug seal
24	1	Bushing
25 ♦	1	Lip seal
26	2	Valve body
28	1	Seat
33	1	Lower bonnet

### Service kits

Denomination	DN 25 25 mm	DN 40 38 mm	DN 50 51 mm	DN 65 63.5 mm	DN 80 76.1 mm	DN 100 101.6 mm
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#### Service kit for Actuator

□	Service kit .....	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500
---	-------------------	--------------	--------------	--------------	--------------	--------------	--------------

#### Service kit for Product wetted parts, standard

♦	Service kit, EPDM .....	9611-92-6525	9611-92-6526	9611-92-6527	9611-92-6528	9611-92-6529	9611-92-6530
♦	Service kit, HNBR .....	9611-92-6531	9611-92-6532	9611-92-6533	9611-92-6534	9611-92-6535	9611-92-6536
♦	Service kit, FPM .....	9611-92-6537	9611-92-6538	9611-92-6539	9611-92-6540	9611-92-6541	9611-92-6542

Parts marked with □♦ are included in the service kits.

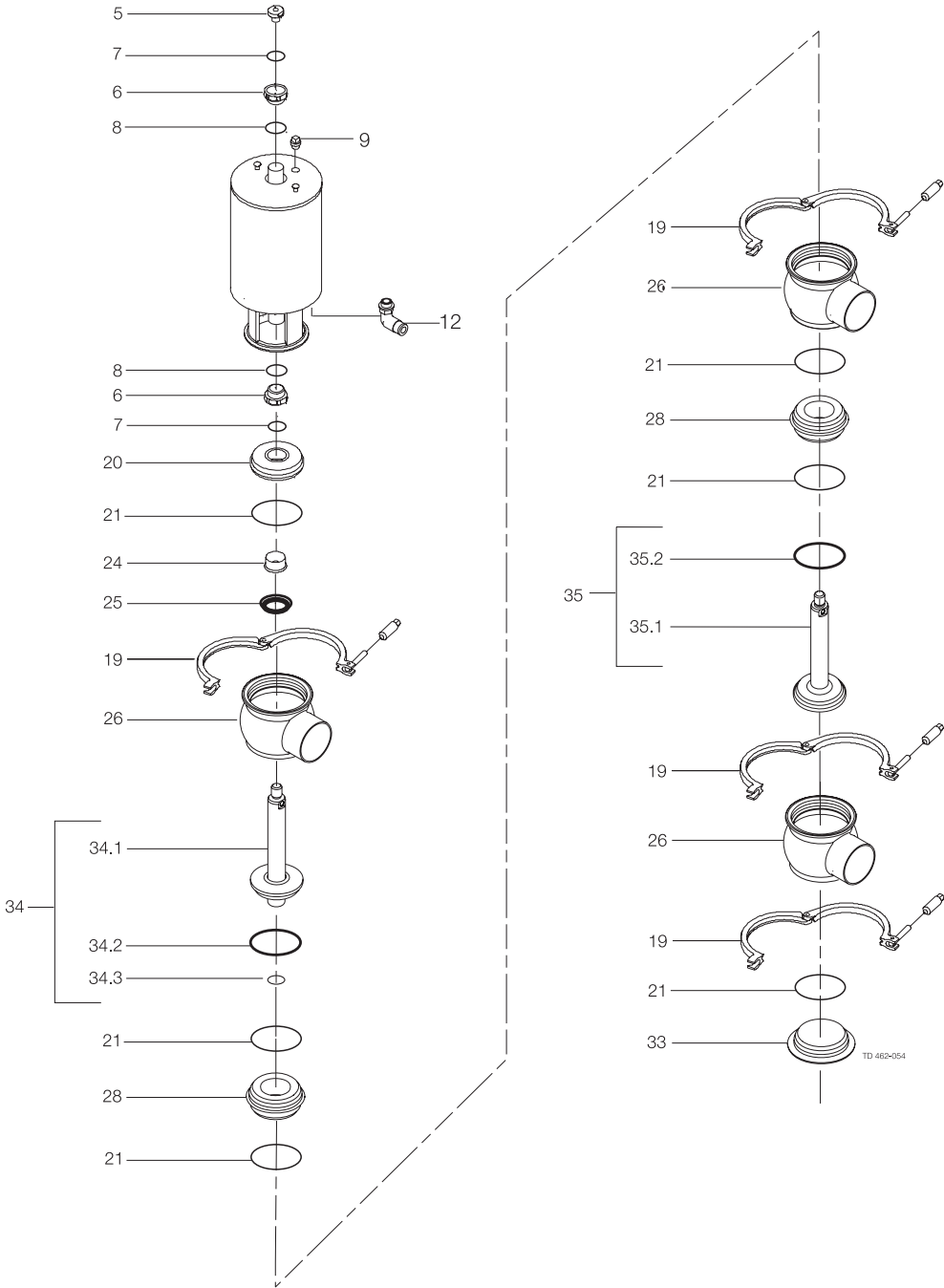
Recommended spare parts: Service kits.

TD 900-350/1

# 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Reverse Acting, Change-over.  
 The items refer to the parts lists in the following sections.

## 7.6 Unique Single Seat Valve Reverse Acting - Change-over Valve



## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Reverse Acting, Change-over.  
The items refer to the parts lists in the following sections.

### Parts list

Pos.	Qty	Denomination
		Actuator
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		Lip seal set (10 pcs.) EPDM
		Lip seal set (10 pcs.) HNBR
		Lip seal set (10 pcs.) FPM
		Plug seal set (10 pcs.) EPDM
		Plug seal set (10 pcs.) HNBR
		Plug seal set (10 pcs.) FPM
		O-ring set (10 pcs.) EPDM
		O-ring set (10 pcs.) HNBR
		O-ring set (10 pcs.) FPM
		Plug seal set (10 pcs.) EPDM
		Plug seal set (10 pcs.) HNBR
		Plug seal set (10 pcs.) FPM
5	1	Adapter
6 □	2	Bushing
7 □	2	O-ring
8 □	2	O-ring
9	1	Plug
12	1(2)	Air fitting
19	4	Clamp
20	1	Bonnet
21 ♦	6	O-ring
24	1	Bushing
25 ♦	1	Lip seal
26	3	Valve body
28	2	Seat
33	1	Lower bonnet
34	1	Plug
34.1	1	Plug
34.2 ♦	1	Plug seal
34.3 ♦	1	O-ring
35	1	Plug
35.1	1	Plug
35.2 ♦	1	Plug seal

### Service kits

Denomination	DN 25 25 mm	DN 40 38 mm	DN 50 51 mm	DN 65 63.5 mm	DN 80 76.1 mm	DN 100 101.6 mm
--------------	----------------	----------------	----------------	------------------	------------------	--------------------

#### Service kit for Actuator

□	Service kit .....	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500	9611-92-6500
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#### Service kit for Product wetted parts, standard

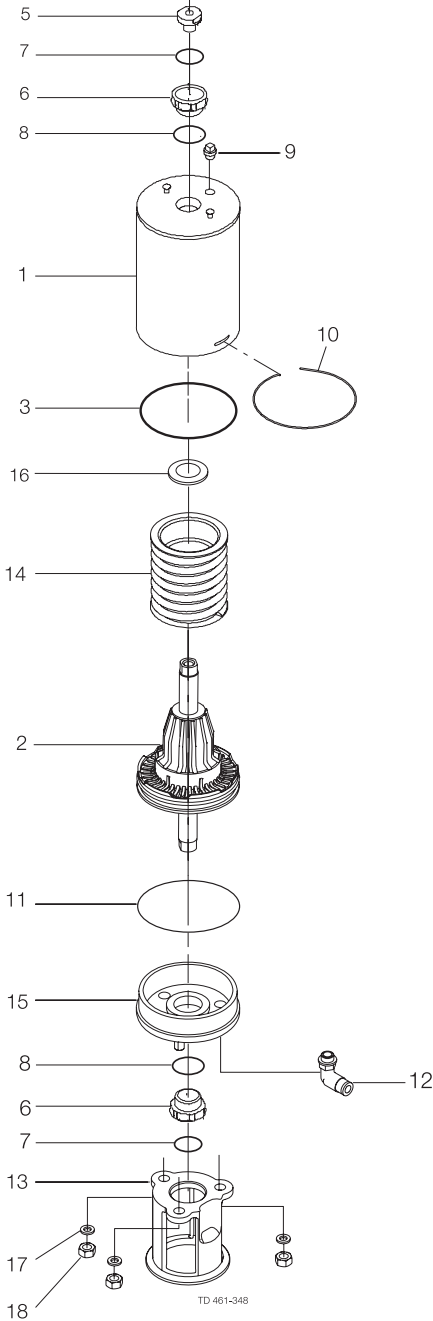
♦	Service kit, EPDM .....	9611-92-6597	9611-92-6598	9611-92-6599	9611-92-6600	9611-92-6601	9611-92-6602
♦	Service kit, HNBR .....	9611-92-6603	9611-92-6604	9611-92-6605	9611-92-6606	9611-92-6607	9611-92-6608
♦	Service kit, FPM .....	9611-92-6609	9611-92-6610	9611-92-6611	9611-92-6612	9611-92-6613	9611-92-6614

Parts marked with □♦ are included in the service kits.

Recommended spare parts: Service kits.

The drawing shows Unique Single Seat Valve - Reverse Acting, Change-over.  
The items refer to the parts lists in the following sections.

7.7 Maintainable actuator



## 7 Parts list and Service Kits

The drawing shows Unique Single Seat Valve - Reverse Acting, Change-over.  
The items refer to the parts lists in the following sections.

### Parts list

Pos.	Qty	Denomination
1	1	Actuator Cylinder
2	1	Piston
3	1	O-ring
5	1	Adapter
6	2	Bushing
7	2	O-ring
8	2	O-ring
9	1	Plug
10	1	Lock wire
11	1	O-ring
12	1(2)	Air fitting (only 2 for A/A)
13	1	Yoke
14	1	Spring assembly
15	1	Bottom
16	1(2)	Support disc (only 2 for A/A)
17	3	Washer
18	3	Nut

### Service kits

Denomination	DN 25 25 mm	DN 40 38 mm	DN 50 51 mm	DN 65 63.5 mm	DN 80 76.1 mm	DN 100 101.6 mm
--------------	----------------	----------------	----------------	------------------	------------------	--------------------

#### Service kit for Actuator

□	Service kit, NO , NC	.....	9611-92-6497	9611-92-6497	9611-92-6498	9611-92-6498	9611-92-6499	9611-92-6499
◆	Service kit, A/A	.....	9611-92-6519	9611-92-6519	9611-92-6520	9611-92-6520	9611-92-6521	9611-92-6521

Parts marked with □◆ are included in the service kits (actuator)

Recommended spare parts: Service kits.

TD900-361/1



**How to contact Alfa Laval**

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