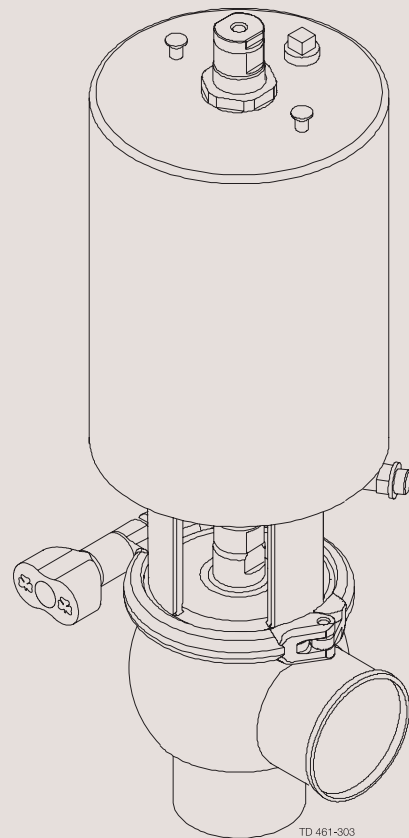
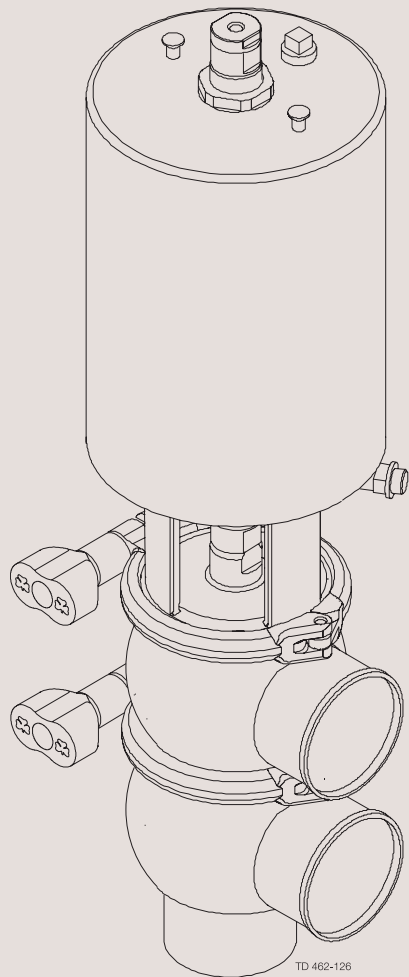




800.654.5635  
www.csidesigns.com

# Instruction Manual

## Unique 7000 Series Valve - Standard and Reverse Acting





# 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

**Sanitary 7000 Series Valve**

Denomination

**Unique 7000 Series Valve**

Type

**2006**

Year

is in conformity with the following directive:

- Machinery Directive 98/37/EEC
- 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





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

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## 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.*

---

**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.

---

General warning:



Caustic agents:



---

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 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 5).
- **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 5).
- **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.



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.

**Step 1**

**CAUTION!**

Alfa Laval cannot be held responsible for incorrect unpacking.

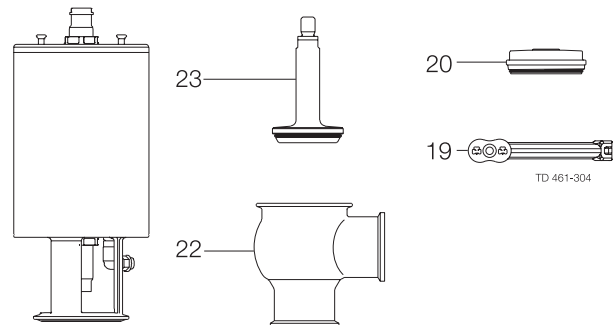
Check the delivery for:

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

**2a**

**Shut-off valve:**

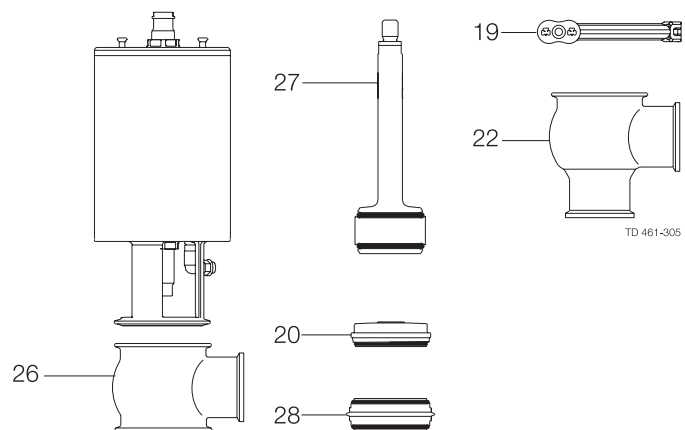
1. Complete actuator.
2. Bonnet (20).
3. Clamp (19).
4. Valve plug (23).
5. Valve body (22).



**2b**

**Change-over valve:**

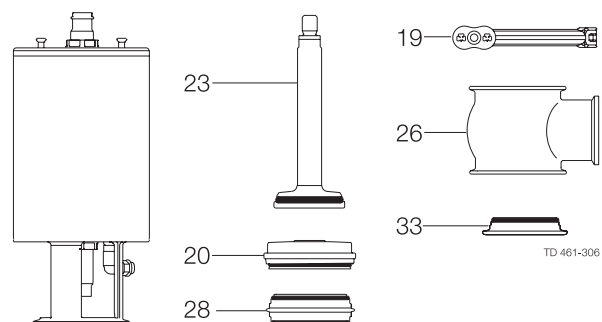
1. Complete actuator.
2. Bonnet (20).
3. 2 x clamp (19).
4. Valve plug (27).
5. Lower valve body (22).
6. Valve seat (28).
7. Upper valve body (26).



**2c**

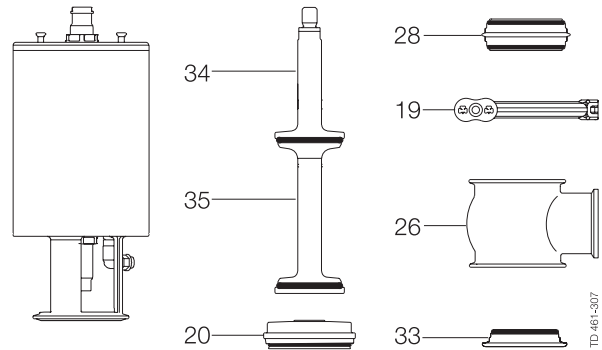
**Shut-off valve - Reverse Acting:**

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).



**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.

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.

**Step 1**



- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.

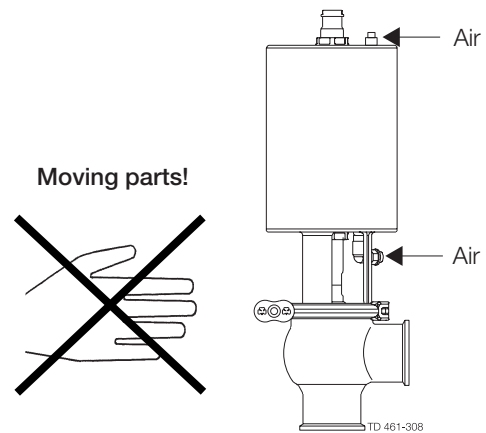
**CAUTION!**

Alfa Laval cannot be held responsible for incorrect installation.

**Step 2**

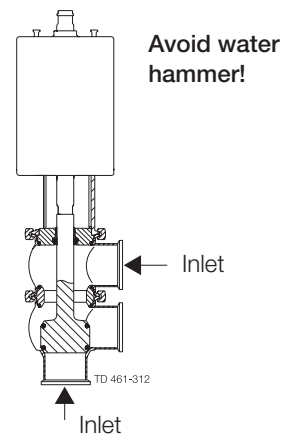


**Never** touch the moving parts if the actuator is supplied with compressed air.



**Step 3**

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

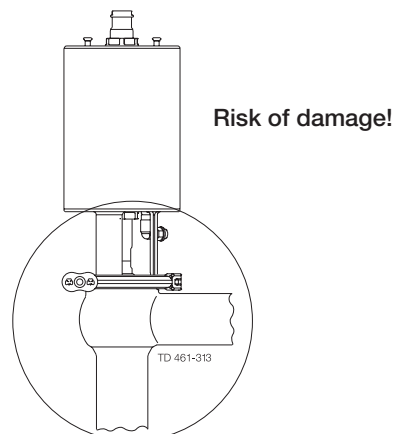


**Step 4**

Avoid stressing the valve.

**Pay special attention to:**

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



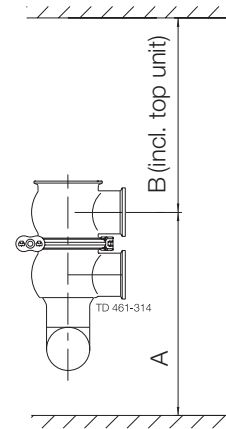
Study the instructions carefully.  
 The valve is supplied as separate parts to facilitate the welding.  
 The items refer to the parts list and service kits section.  
 Check the valve for smooth operation after welding.

**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 (inch)	B (inch)
DN25/25 mm	*	24,8
DN40/38 mm	*	27,6
DN50/51 mm	*	29,5
DN65/63.5 mm	*	29,1
DN80/76 mm	*	31,5
DN100/101.6 mm	*	31,1

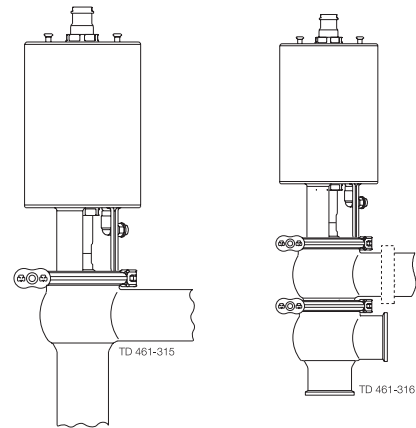
\* Depending on body combination and piping solution.



**Step 2**

Assemble the valve in accordance with the steps in section 4.4.

**Pay special attention to the warnings!**

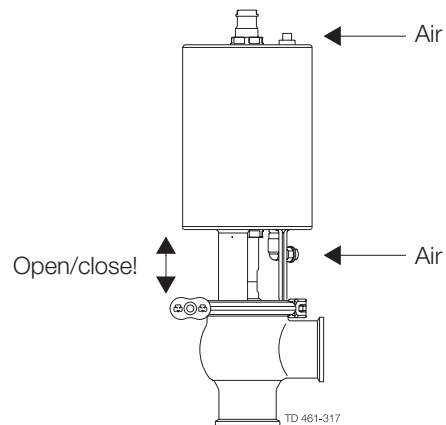


**Step 3**

**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!**



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 1**



- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.

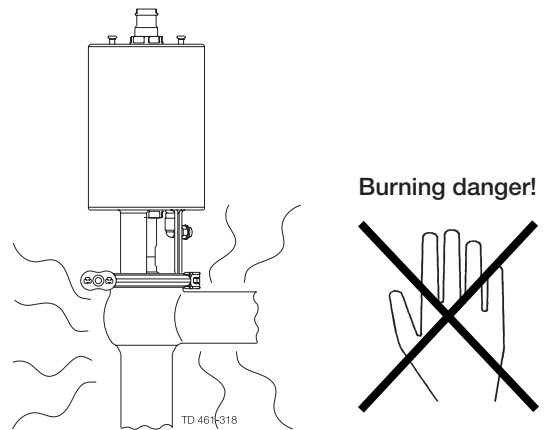
**CAUTION!**

Alfa Laval cannot be held responsible for incorrect operation.

**Step 2**



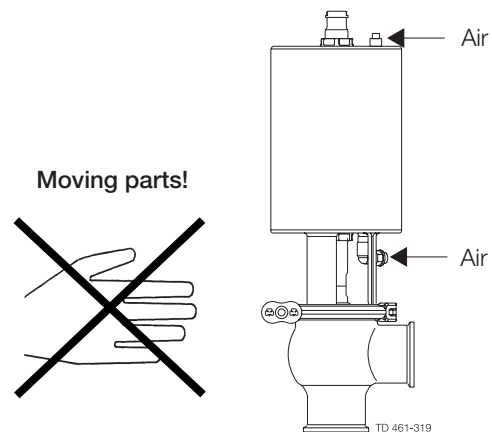
**Never** touch the valve or the pipelines when processing hot liquids or when sterilizing.



**Step 3**



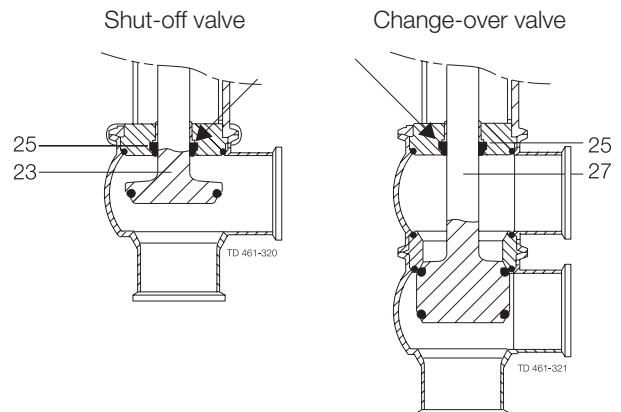
**Never** touch the moving parts if the actuator is supplied with compressed air.



**Step 4**

**Lubrication of valves:**

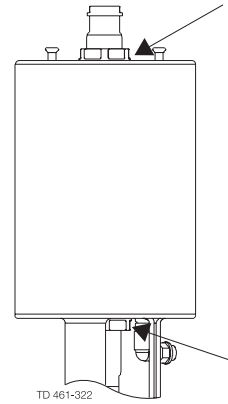
1. Ensure smooth movement between lip seal (25) and plug stem (23, 27).
2. Lubricate with Klüber Paraliq GTE 703 if necessary. (see section 4.1)



---

**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*

**NOTE!**

Study the maintenance instructions carefully before replacing worn parts. - See section 4.1!

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</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	<ul style="list-style-type: none"> <li>- Product pressure exceeds actuator specification</li> </ul>	<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>

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 1**



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

**Caustic danger!**



**Always** use rubber gloves!

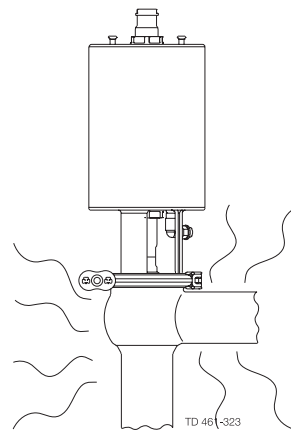


**Always** use protective goggles!

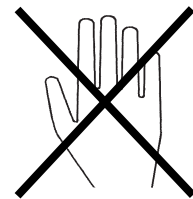
**Step 2**



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



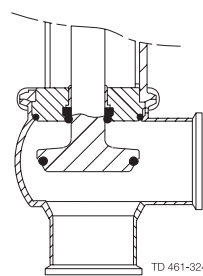
**Burning danger!**



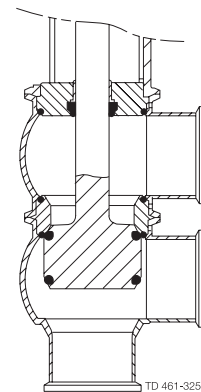
**Step 3**

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% by weight NaOH at 158°F

2.2 lb NaOH	+	26.4 gal water	= Cleaning agent.
----------------	---	-------------------	-------------------

0.6 gal 33% NaOH	+	26.4 gal water	= Cleaning agent.
---------------------	---	-------------------	-------------------

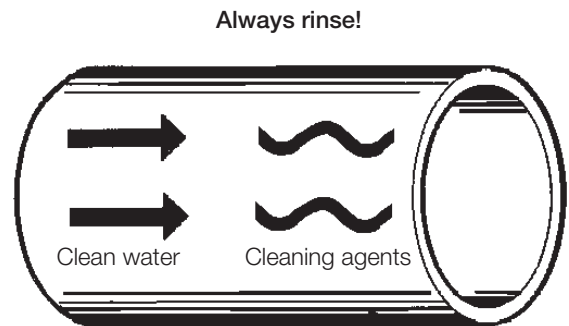
- 0.5% by weight HNO<sub>3</sub> at 158°F

0.2 gal 53% HNO <sub>3</sub>	+	26.4 gal 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.



Step 6

**NOTE!**

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

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.

**Step 1**



- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release the compressed air after use.

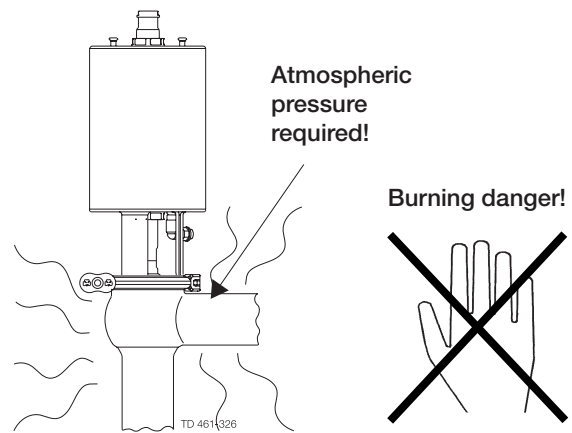
**CAUTION!**

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

**Step 2**



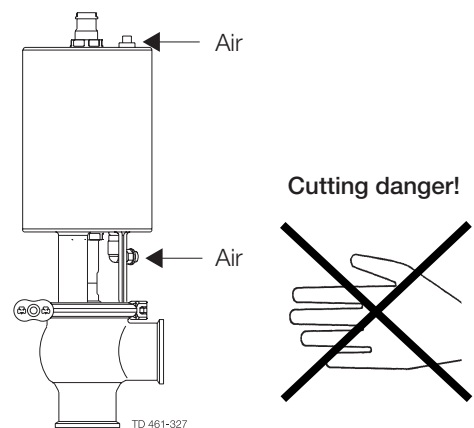
- **Never** service the valve when it is hot.
- **Never** service the valve with valve and pipelines under pressure.



**Step 3**



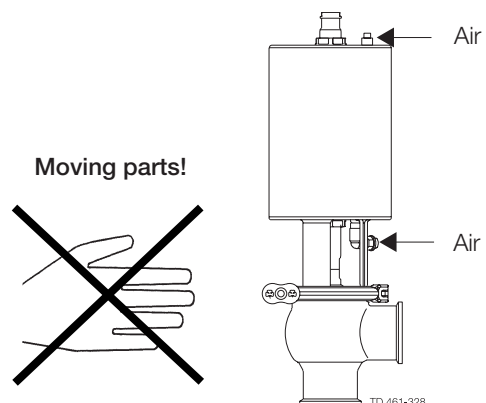
**Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.



**Step 4**



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



Maintain the valve regularly.  
 Study the instructions carefully.  
 Always keep spare rubber seals and lip seals stock.  
 Check the valve for smooth operation after service.

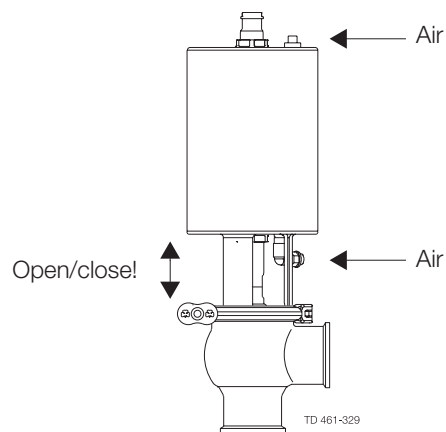
Below are some guidelines for maintenance and lubrication intervals. Please note that the guidelines are for normal working conditions in one shift.

	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 chapter 6)

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.

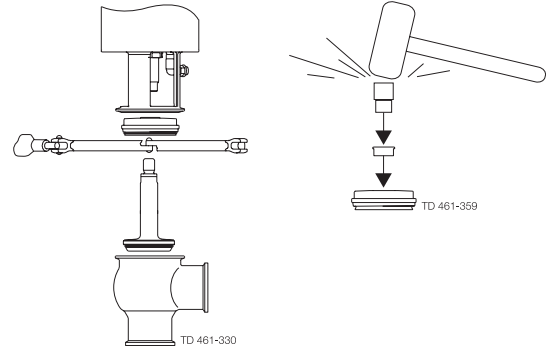
### Step 1a

#### 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).

#### Pay special attention to the warnings!

**Note!** For plug seal replacement please see section 4.3.



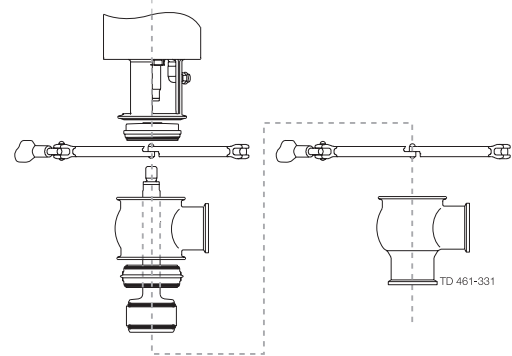
### Step 1b

#### 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).

#### Pay special attention to the warnings!

**Note!** For plug seal replacement please see section 4.3.



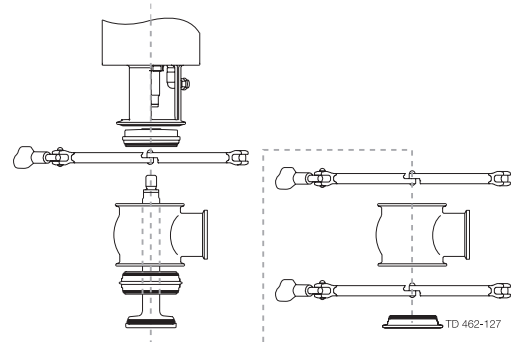
### Step 1c

#### 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).

#### Pay special attention to the warnings!

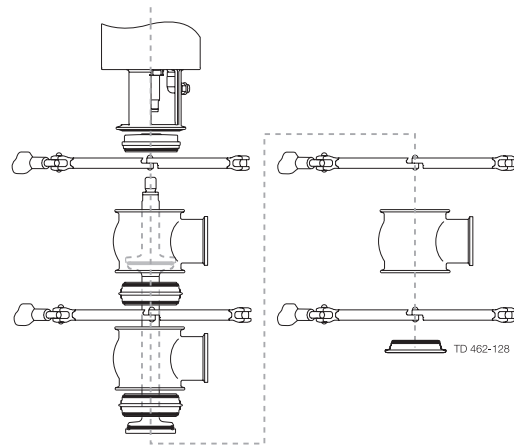
**Note!** For plug seal replacement please see section 4.3.



**Step 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).

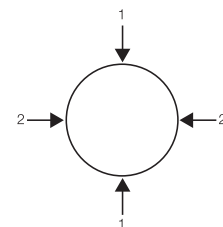


**Pay special attention to the warnings!**

**Note!** For plug seal replacement please see section 4.3.

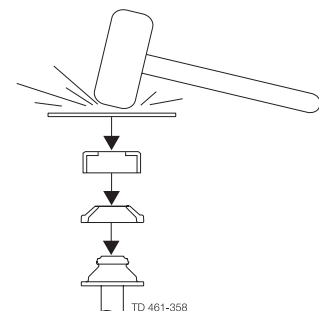
**4.3.a Elastomer seat ring replacement**

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.



**4.3.b TR2 seat ring replacement**

1. Place the plug element on a firm support.
2. Using a utility knife, partially AND CAREFULLY cut through the upper ring portion of the TR2 plug avoiding contact with stainless steel stem.
3. Force apart both cut ends of the plug for removal from stem.
4. TR2 plugs are installed by applying uniform pressure on all sides.  
 (Pressure can be applied by using the seat assembly tool.)
5. Using a piece of metal and a rubber mallet, place a precise tab to make the TR2 plug snap on to the stem. Reverse the tool and tab again to secure proper fit.
6. Examine seat assembly to be sure the TR2 plug is properly mounted, holding the seat assembly in one hand - rotate the TR2 plug.  
 (For proper CIP cleaning the TR2 plug should turn freely on the stem.)



For more explicit instructions, please refer to the maintenance video.

**4.4 Assembly of valve**

Reverse order of 4.2, Dismantling of valve.  
 Lubricate O-ring (21) and lip seal (25) with Klüber Paraliq GTE 703.

4. Maintenance    **4.5 Actuator bushing replacement - 4.6 Dismantling of optional maintainable actuator**  
**4.7 Assembly of optional maintainable actuator**  
**4.8 Reversing optional maintainable actuator operation**

Study the instructions carefully.

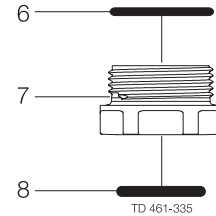
The items refer to the parts list and service kits section. Handle scrap correctly.

A/A = Air/air activated.

Service tool: See Spare Parts

**4.5 Actuator bushing replacement**

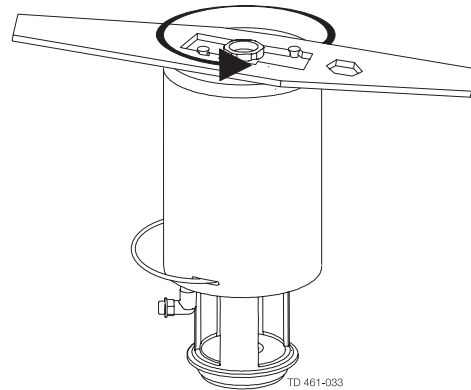
1. Unscrew and remove top and bottom bushings with O-rings.
2. Lubricate O-rings with Molykote Longterm 2 plus before fitting.
3. Fit bushings and O-rings. Be careful not to overtighten.



**4.6 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.

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



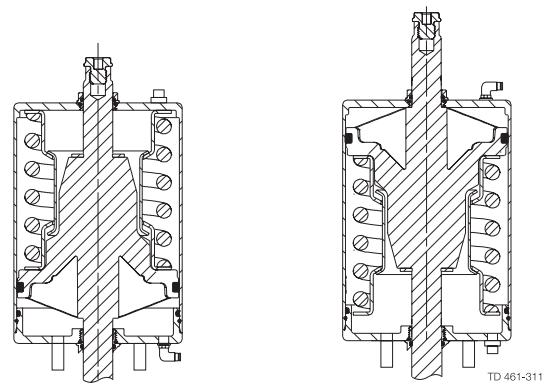
**4.7 Assembly of optional maintainable actuator**

Reverse order of 4.6. Dismantling of actuator.

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

**4.8 Reversing optional maintainable actuator operation**

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



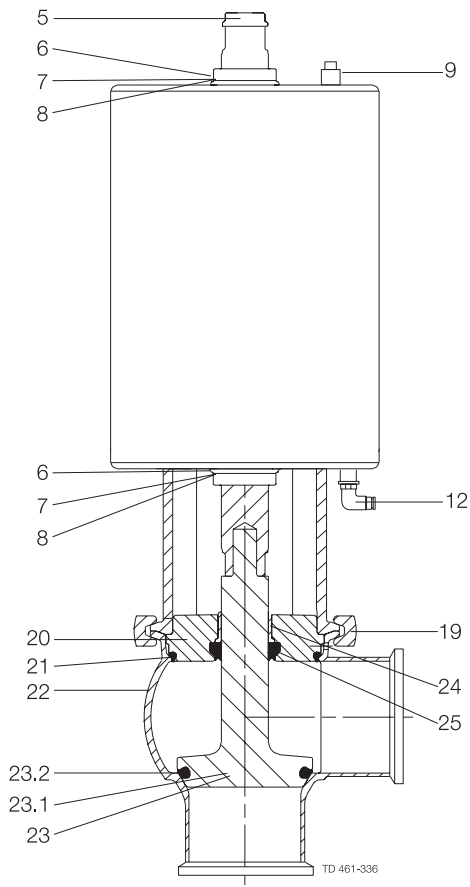
pneumatic movement upwards

pneumatic movement downwards

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

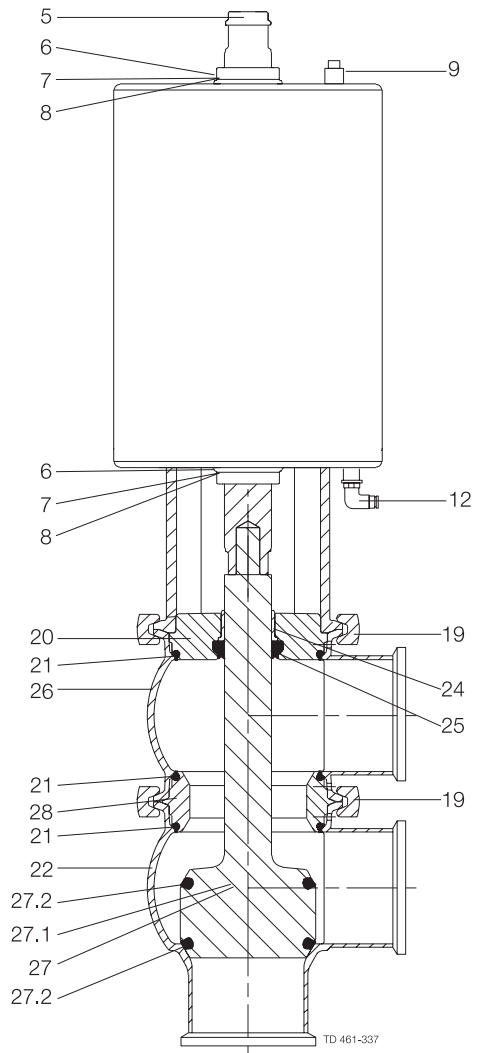
<b>Data - valve/actuator</b>	
Max. product pressure.....	145 psi (1000 kPa) (10 bar)
Min. product pressure.....	Full vacuum (depending on product specifications)
Temperature range .....	-50° F to + 284° F (standard EPDM seal)
Air pressure, actuator .....	72.5 to 101.5 psi (500 to 700 kPa) (5 to 7 bar)
<b>Materials - valve/actuator</b>	
Product wetted steel parts.....	AISI 316L (internal Ra < 32 μ inch)
Other steel parts .....	AISI 304
Plug seal.....	EPDM / PTFE (TR2)
Other product wetted seals .....	EPDM (standard)
Optional product wetted seals .....	HNBR and FPM
Other seals .....	NBR

For parts lists please see section 6.1. The drawings include all items.



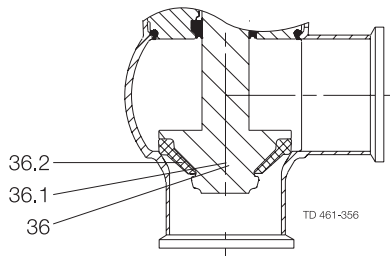
Shut-off valve (elastomer)

TD 461-336



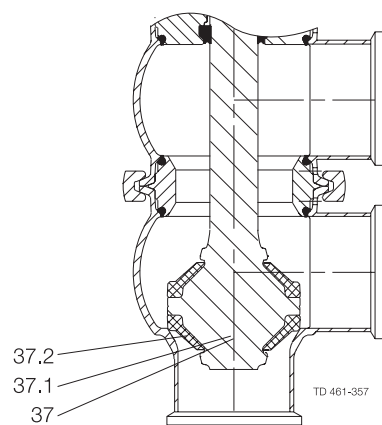
Change-over valve (elastomer)

TD 461-337



Shut-off valve (TR2)

TD 461-356



Shut-off valve (TR2)

TD 461-357

**6.1 Unique 7000 Series Valve - Shut-off  
1" - 4"**

6. Parts list and Service Kits

The parts list includes all items.

Parts List			Service Kits/Product wetted parts (shut-off)		
Pos.	Qty.	Denomination	Denomination	Elastomer	TR2
5	1	Actuator, complete	Actuator	9611-92-6500	9611-92-6500
6 ●	2	Adapter			
7 ●	2	Bushing			
8 ●	2	O-ring	<b>1"</b>		
9	1	O-ring	EPDM	9611-92-6501	9611-92-6576
12	1	Plug	HNBR	9611-92-6507	9611-92-6577
19	1(2)	Air fitting	FPM	9611-92-6513	9611-92-6578
20	1	Clamp			
21 Δ	1	Bonnet	<b>1½"</b>		
24 Δ	1	O-ring	EPDM	9611-92-6502	9611-92-6561
25 Δ	1	Bushing	HNBR	9611-92-6508	9611-92-6566
22	1	Lip seal	FPM	9611-92-6514	9611-92-6571
22	1	Valve body, lower, 2 ports			
22	1	Valve body, lower, 3 ports	<b>2"</b>		
		<b>Elastomer seat ring</b>	EPDM	9611-92-6503	9611-92-6562
23	1	Plug, shut-off, complete	HNBR	9611-92-6509	9611-92-6567
23.1	1	Plug, shut-off	FPM	9611-92-6515	9611-92-6572
23.2 Δ	1	Plug seal	<b>2½"</b>		
		<b>TR2 seat ring</b>	EPDM	9611-92-6504	9611-92-6563
36	1	Plug, shut-off, complete	HNBR	9611-92-6510	9611-92-6568
36.1	1	Plug, shut-off	FPM	9611-92-6516	9611-92-6573
36.2 Δ	1	Plug seal, PTFE	<b>3"</b>		
			EPDM	9611-92-6505	9611-92-6564
			HNBR	9611-92-6511	9611-92-6569
			FPM	9611-92-6517	9611-92-6574
			<b>4"</b>		
			EPDM	9611-92-6506	9611-92-6565
			HNBR	9611-92-6512	9611-92-6570
			FPM	9611-92-6518	9611-92-6575

●: Service kits - Actuator

Δ: Service kits - EPDM

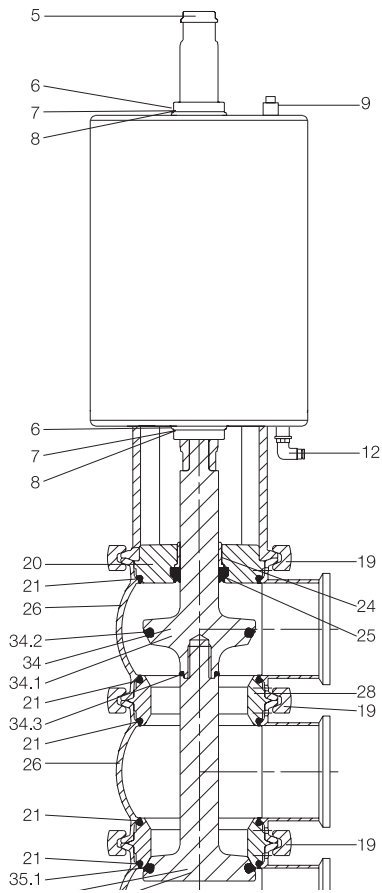
Δ: Service kits - HNBR

Δ: Service kits - FPM

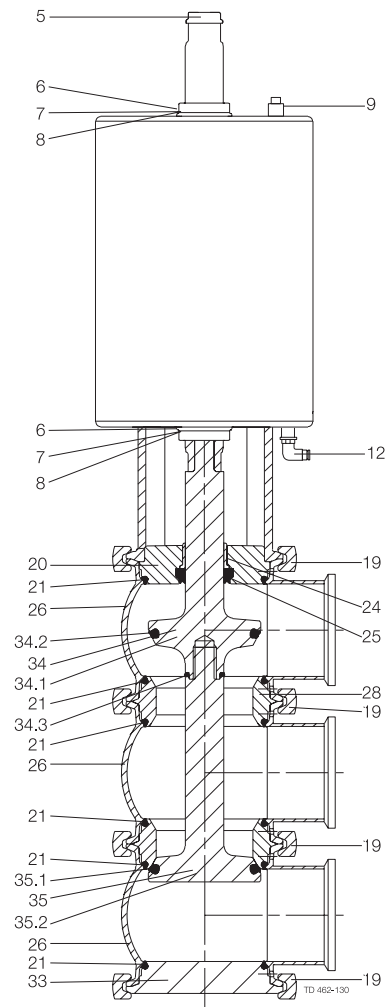
The parts list includes all items.

Parts List			Service Kits/Product wetted parts (Change-over)		
Pos.	Qty.	Denomination	Denomination	Elastomer	TR2
5	1	Actuator, complete	Actuator	9611-92-6500	9611-92-6500
6 ●	2	Adapter			
7 ●	2	Bushing			
8 ●	2	O-ring	<b>1"</b>		
9	1	O-ring	EPDM	9611-92-6579	-
12	1(2)	Plug	HNBR	9611-92-6585	-
19	2	Air fitting	FPM	9611-92-6591	-
20	1	Clamp			
21 Δ	3	Bonnet	<b>1½"</b>		
24 Δ	1	O-ring	EPDM	9611-92-6580	9611-92-6633
25 Δ	1	Bushing	HNBR	9611-92-6586	9611-92-6638
28	1	Lip seal	FPM	9611-92-6592	9611-92-6643
26	1	Seat			
26	1	Valve body, upper, 1 port	<b>2"</b>		
26	1	Valve body, upper, 2 ports	EPDM	9611-92-6581	9611-92-6634
22	1	Valve body, lower, 2 ports	HNBR	9611-92-6587	9611-92-6639
22	1	Valve body, lower, 3 ports	FPM	9611-92-6593	9611-92-6644
		<b>Elastomer seat ring</b>	<b>2½"</b>		
27	1	Plug, change-over, complete	EPDM	9611-92-6582	9611-92-6635
27.1	1	Plug, change-over	HNBR	9611-92-6588	9611-92-6640
27.2 Δ	2	Plug seal	FPM	9611-92-6594	9611-92-6645
		<b>TR2 seat ring</b>	<b>3"</b>		
37	1	Plug, change-over, complete	EPDM	9611-92-6583	9611-92-6636
37.1	1	Plug, change-over	HNBR	9611-92-6589	9611-92-6641
37.2 Δ	1	Plug seal, PTFE	FPM	9611-92-6595	9611-92-6646
			<b>4"</b>		
		Service kits - Actuator	EPDM	9611-92-6584	9611-92-6637
		Service kits - EPDM	HNBR	9611-92-6590	9611-92-6642
		Service kits - HNBR	FPM	9611-92-6596	9611-92-6647
		Service kits - FPM			

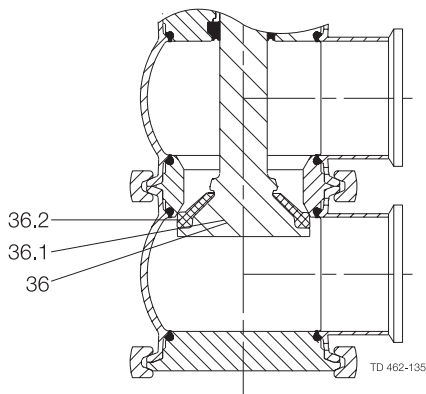
For parts lists please see section 6.2. The drawings include all items.



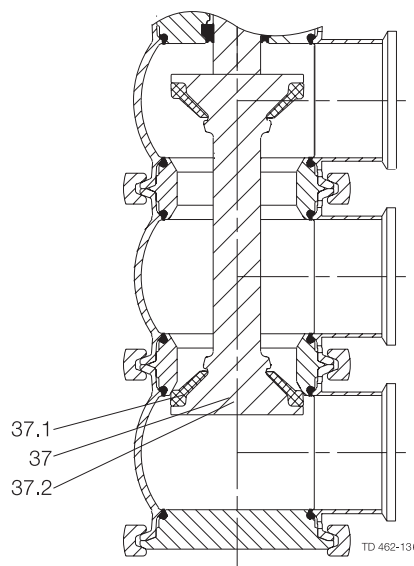
Shut-off valve (elastomer) - Reverse Acting



Change-over valve (elastomer) - Reverse Acting



Shut-off valve (TR2) - Reverse Acting



Change-over valve (TR2) - Reverse Acting

**6.2 Unique 7000 Series Valve - Reverse Acting - Shut-off  
1" - 4"**

6. Parts list and Service Kits

The parts list includes all items.

Parts List			Service Kits/Product wetted parts (Shut-off)		
Pos.	Qty.	Denomination	Denomination	Elastomer	TR2
5	1	Actuator, complete	Actuator	9611-92-6500	9611-92-6500
6 ●	2	Adapter			
7 ●	2	Bushing			
8 ●	2	O-ring	<b>1"</b>		
9	1	O-ring	EPDM	9611-92-6525	-
12	1(2)	Plug	HNBR	9611-92-6531	-
19	3	Air fitting	FPM	9611-92-6537	-
20	1	Clamp			
21 Δ	4	Bonnet	<b>1½"</b>		
24 Δ	1	O-ring	EPDM	9611-92-6526	9611-92-6648
25 Δ	1	Bushing	HNBR	9611-92-6532	9611-92-6653
33	1	Lip seal	FPM	9611-92-6538	9611-92-6658
28	1	Lower bonnet			
26	2	Seat	<b>2"</b>		
26	1	Valve body, upper, 1 port	EPDM	9611-92-6527	9611-92-6649
26	2	Valve body, upper, 2 ports	HNBR	9611-92-6533	9611-92-6654
			FPM	9611-92-6539	9611-92-6659
		<b>Elastomer seat ring</b>			
23	1	Plug, shut-off RA, complete	<b>2½"</b>		
23.1	1	Plug, shut-off RA	EPDM	9611-92-6528	9611-92-6650
23.2 Δ	1	Plug seal	HNBR	9611-92-6534	9611-92-6655
			FPM	9611-92-6540	9611-92-6660
		<b>TR2 seat ring</b>			
36	1	Plug, shut-off RA, complete	<b>3"</b>		
36.1	1	Plug, shut-off RA	EPDM	9611-92-6529	9611-92-6651
36.2 Δ	1	Plug seal, PTFE	HNBR	9611-92-6535	9611-92-6656
			FPM	9611-92-6541	9611-92-6661
			<b>4"</b>		
●: Service kits - Actuator			EPDM	9611-92-6530	9611-92-6652
Δ: Service kits - EPDM			HNBR	9611-92-6536	9611-92-6657
Δ: Service kits - HNBR			FPM	9611-92-6542	9611-92-6662
Δ: Service kits - FPM					

The parts list includes all items.

Parts List			Service Kits/Product wetted parts (Change-over)		
Pos.	Qty.	Denomination	Denomination	Elastomer	TR2
		Actuator, complete			
5	1	Adapter	Actuator	9611-92-6500	9611-92-6500
6 ●	2	Bushing			
7 ●	2	O-ring	<b>1"</b>		
8 ●	2	O-ring	EPDM	9611-92-6597	-
9	1	Plug	HNBR	9611-92-6603	-
12	1(2)	Air fitting	FPM	9611-92-6609	-
19	4	Clamp			
20	1	Bonnet	<b>1½"</b>		
21 Δ	6	O-ring	EPDM	9611-92-6598	9611-92-6663
24 Δ	1	Bushing	HNBR	9611-92-6604	9611-92-6668
25 Δ	1	Lip seal	FPM	9611-92-6610	9611-92-6673
33	1	Lower bonnet			
28	2	Seat	<b>2"</b>		
26	3	Valve body, upper, 1 port	EPDM	9611-92-6599	9611-92-6664
26	3	Valve body, upper, 2 ports	HNBR	9611-92-6605	9611-92-6669
34	1	Plug, change-over upper RA, complete	FPM	9611-92-6611	9611-92-6674
34.1	1	Plug, change-over upper RA			
34.2 Δ	1	Plug seal	<b>2½"</b>		
34.3 Δ	1	O-ring	EPDM	9611-92-6600	9611-92-6665
			HNBR	9611-92-6606	9611-92-6670
		<b>Elastomer seat ring</b>	FPM	9611-92-6612	9611-92-6675
35	1	Plug, change-over lower RA, complete			
35.1	1	Plug, change-over upper RA	<b>3"</b>		
35.2 Δ	2	Plug seal	EPDM	9611-92-6601	9611-92-6666
			HNBR	9611-92-6607	9611-92-6671
		<b>TR2 seat ring</b>	FPM	9611-92-6613	9611-92-6676
37	1	Plug, change-over RA, complete			
37.1	1	Plug, change-over RA	<b>4"</b>		
37.2 Δ	1	Plug seal, PTFE	EPDM	9611-92-6602	9611-92-6667
			HNBR	9611-92-6608	9611-92-6672
			FPM	9611-92-6614	9611-92-6677

●: Service kits - Actuator

Δ: Service kits - EPDM

Δ: Service kits - HNBR

Δ: Service kits - FPM

### 6.3 Maintainable actuator

### 6. Parts list and Service Kits

The parts list includes all items.

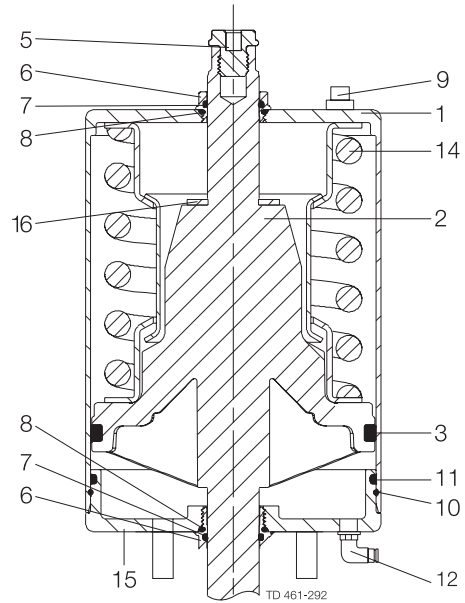
NC = Normally closed.

NO = Normally open.

A/A = Air/air activated.

#### Parts List

Pos.	Qty.	Denomination
		Actuator, complete
1	1	Cylinder
2	1	Stem
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 (2 only for A/A)
14	1	Spring assembly
15	1	Bottom
16 *	1(2)	Support disc (2 only for A/A)
13	1	Yoke (not shown in drawing)
17	3	Washer (not shown in drawing)
18	3	Nut (not shown in drawing)



●: Service kits - Actuator, NO, NC

\*: Service kits - Actuator, A/A

#### Service Kits

Denomination Item number

#### Product wetted parts

##### Service kit, actuator

##### 1" - 1½"

NO, NC .....9611-92-6497

A/A .....9611-92-6519

##### 2" - 2½"

NO, NC .....9611-92-6498

A/A .....9611-92-6520

##### 3" - 4"

NO, NC .....9611-92-6499

A/A .....9611-92-6521





**How to contact Alfa Laval**

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.



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**800.654.5635**  
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