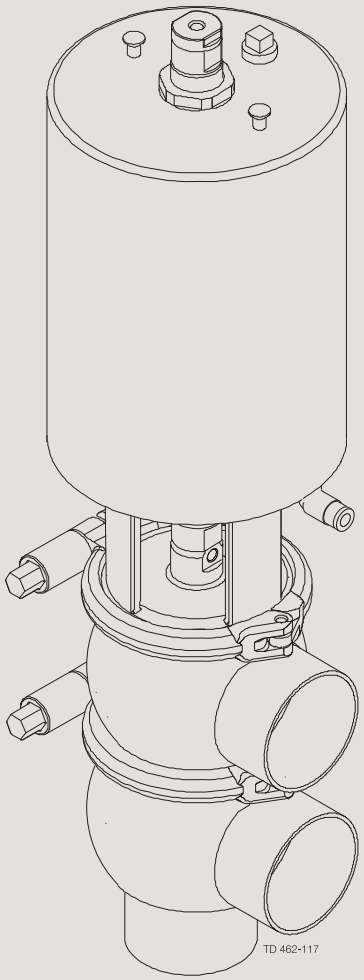
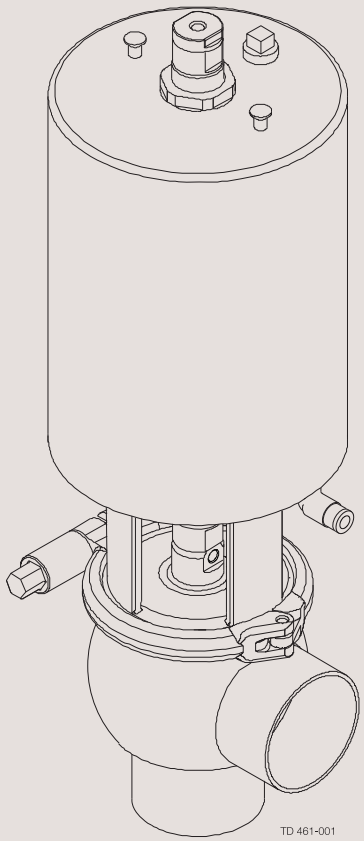
Instruction Manual

Unique Single Seat Valve - Standard and Reverse Acting





ESE00202-EN9 2015-04

Original manual

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

1 EC 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 SSV PN10
Type

From serial number 5099880 to 29999999999

is in conformity with the following directive with amendments:

- Machinery Directive 2006/42/EC
- Regulation (EC) No 1935/2004

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	2013-12-03	
Place	Date	Signature

2 Safety

Unsafe practices and other important information are emphasised in this manual.
Warnings are emphasised 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:

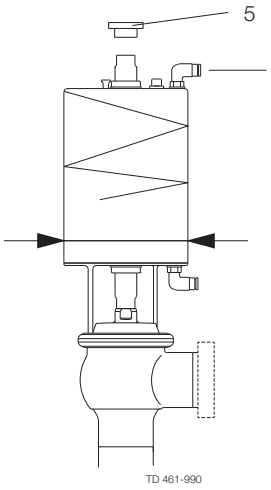
2 Safety

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

2.3 Safety precautions

Actuators marked with year 2012 (new actuator design):

Alfa Laval recommends not to exceed 3 bar support air on the spring side in all the Unique SSV actuators, to ensure 10 bar product pressure without leakage. Plastic adapter (pos. 5) is always used on the new design.



Alfa Laval recommends max. 3 bar

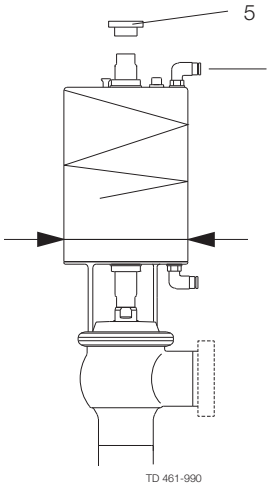
ø157.5 mm

Actuators marked with year 2006-2011 (old actuator design):

⚠
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 ø156mm with support air, **always** use the “steel adapter” (pos. 5). Tighten the “steel adapter” to a torque of 30 Nm and use Loctite 243.

The actuator with ø156mm is mainly used on valves ISO76/DN80 – ISO101/DN100. The outer actuator diameter = ø156 mm.



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

ø156 mm

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

Installation:

Always read the technical data thoroughly (see chapter 6 Technical data)
Always release compressed air after use
Never touch moving parts if the actuator is supplied with compressed air
Never touch the valve or the pipelines when processing hot liquids or when sterilising
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 sterilising
Never touch moving parts if the actuator is supplied with compressed air
Always rinse well with clean water after 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 moving parts if the actuator is supplied with compressed air

Transportation:

Always ensure that compressed air is released
Always ensure that all connections are disconnected before attempting to remove the valve from the installation
Always drain liquid out of valves before transportation

Always use predesigned lifting points if defined
Always ensure sufficient fixing of the valve during transportation - if specially designed packaging material is available, it must be used

3 Installation

This instruction manual is part of the delivery. Study the instructions carefully.
The items refer to the 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.

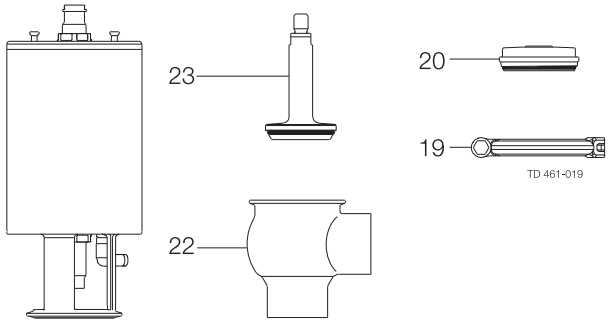
3.1 Unpacking/delivery

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

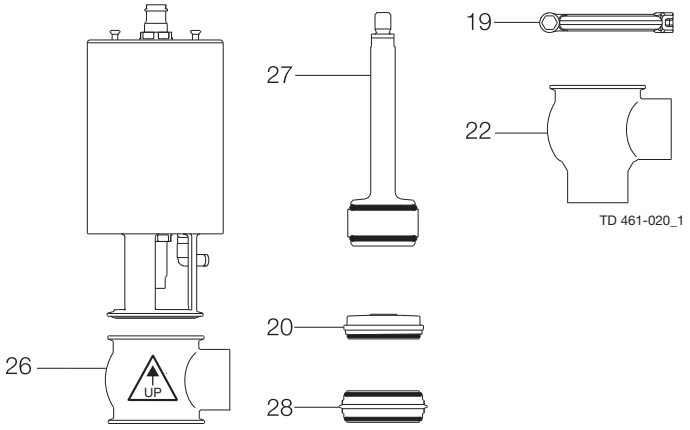
Check the delivery for:
1. Complete valve, shut off valve (RA) or change-over valve (RA) (see steps 2a, 2b, 2c and 2d).
2. Delivery note.

Step 2

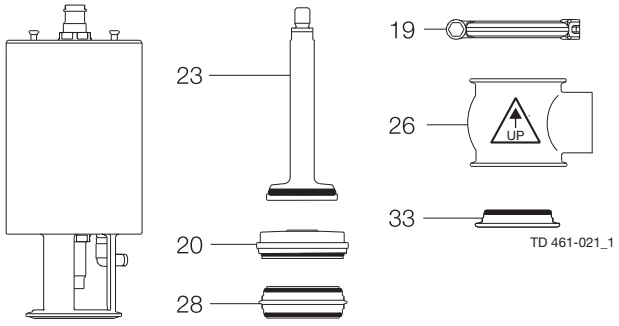
2a
Shut-off valve:
1. Complete actuator.
2. Bonnet (20).
3. Clamp (19).
4. Valve plug (23).
5. Valve body (22).



2b
Change-over valve:
1. Complete actuator.
2. Bonnet (20).
3. 2 x clamps (19).
4. Valve plug (27).
5. Lower valve body (22).
6. Valve seat (28).
7. Upper valve body (26).



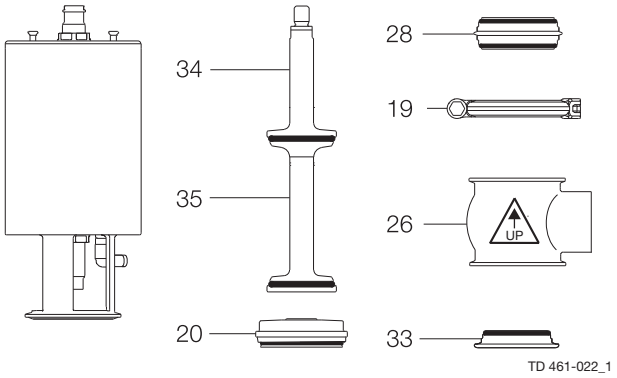
2c
Shut-off valve - Reverse Acting:
1. Complete actuator.
2. Bonnet (20).
3. 3 x clamps (19).
4. Valve plug (23).
5. 2 x upper valve bodies (26).
6. Valve seat (28).
7. Lower bonnet (33).



This instruction manual is part of the delivery. Study the instructions carefully.
The items refer to the 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 clamps (19).
4. Upper valve plug (34).
5. Lower valve plug (35).
6. 3 x upper valve bodies (26).
7. 2 x valve seats (28).
8. Lower bonnet (33).



Step 3
Remove possible packing materials from the valve/valve parts.
Inspect the valve/valve parts for visible transport damage.
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

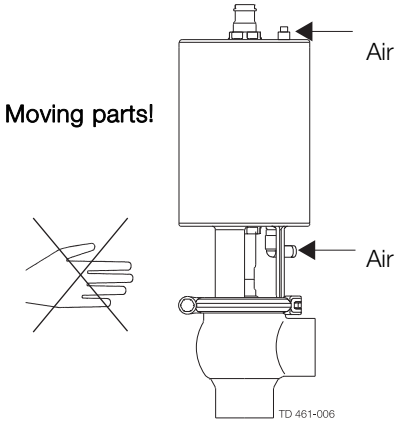
⚠
Always read the technical data thoroughly. See chapter 6 Technical data.

⚠
Always release compressed air after use.

CAUTION
Alfa Laval cannot be held responsible for incorrect installation.

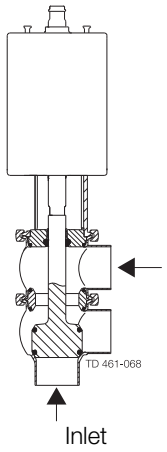
Step 2

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

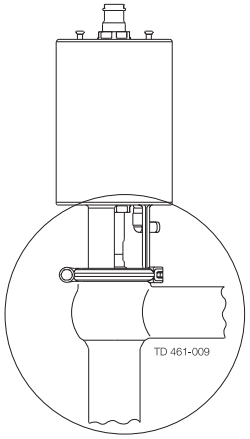


Step 3
To avoid water hammer, it is recommended to install the valve so that the flow is against the closing direction.

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.



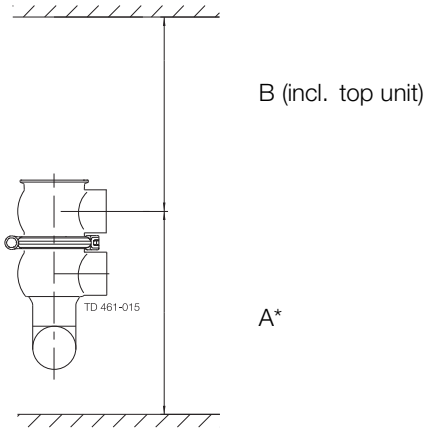
Study the instructions carefully.
The valve is supplied as separate parts to facilitate welding.
The items refer to the parts list and service kits section.
Check the valve for smooth operation after welding.

3.3 Welding

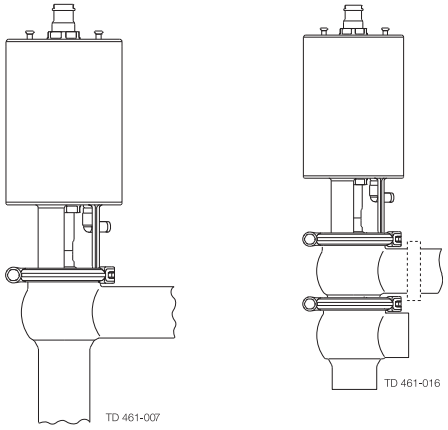
Step 1
Always install valves with more than one valve body so that the seals between the valve bodies can be replaced. Do not weld more than one valve body into the system.

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.

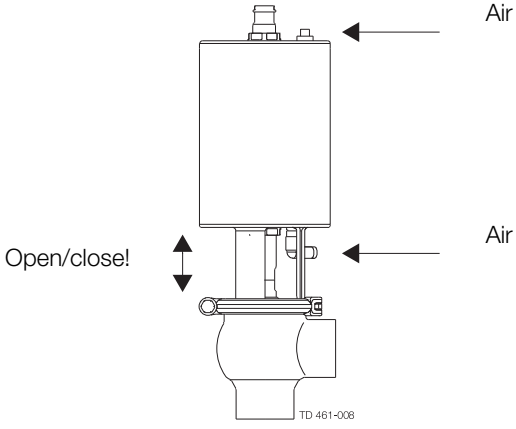


Step 2
Assemble the valve in accordance with the steps on page 19.
Pay special attention to the warnings!



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 welding.
The items refer to the parts list and service kits section.
Check the valve for smooth operation after welding.

3.4 Recycling information

• Unpacking

- Packing material consists of wood, plastics, cardboard boxes and in some cases metal straps
- Wood and cardboard boxes can be re-used, 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 wearing 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 disposed off in agreement with local regulations

• Scrapping

- At end of use, the equipment must be recycled according to the relevant, local regulations. Besides 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 your 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

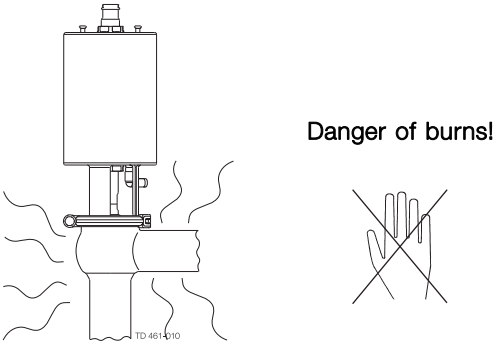
⚠
Always read the technical data thoroughly. See chapter 6 Technical data.

⚠
Always release compressed air after use.

CAUTION
Alfa Laval cannot be held responsible for incorrect operation.

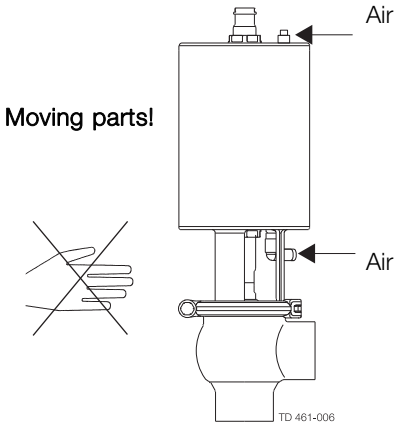
Step 2

⚠
Never touch the valve or the pipelines when processing hot liquids or when sterilising.

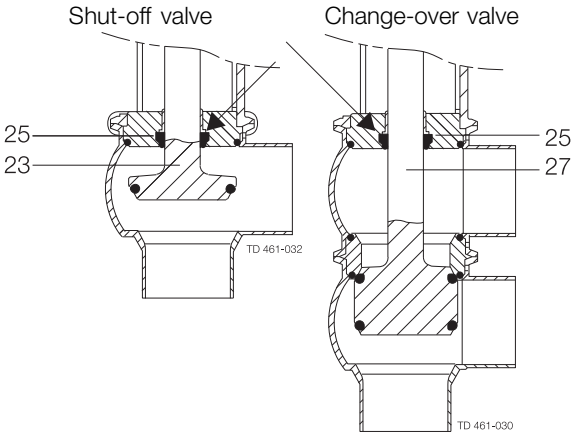


Step 3

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



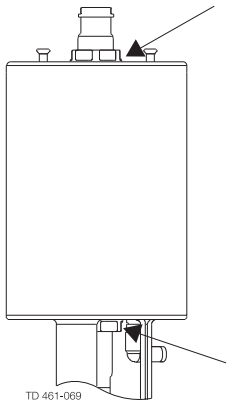
Step 4
Lubrication of valves:
1. Ensure smooth movement between lip seal (25) and plug stem (23, 27).
2. Lubricate with Klüber Paraliq GTE 703 if necessary (see page 16).



4 Operation

Pay attention to possible faults. Study the instructions carefully.
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.



4.2 Troubleshooting

NOTE!

Study the maintenance instructions carefully before replacing worn parts - see page 16.

Problem	Cause/result	Repair
External product leakage	Worn or damaged lip seal and/or O-ring	- Replace the seals - Replace with seals of a different rubber grade
Internal product leakage	- Worn or product affected plug seal	- Replace the seal - Replace with a seal of a different rubber grade
	- Product deposits on the seat and/or plug	- Frequent cleaning
	- Product pressure exceeds actuator specification	- Replace with a high pressure actuator - Use auxiliary air on the spring side (do not exceed 3 bar). See 2.3 Safety precautions - Reduce product pressure
Water hammer	The flow direction is the same as the closing direction	- The flow direction should be against the closing direction - Throttle air release of solenoid in top unit
The valve does not open/close	Product pressure exceeds actuator specification	- Replace with a high pressure actuator - Use auxiliary air on the spring side - Reduce product pressure

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

4.3 Recommended cleaning

Step 1

Always handle lye and acid with great care.

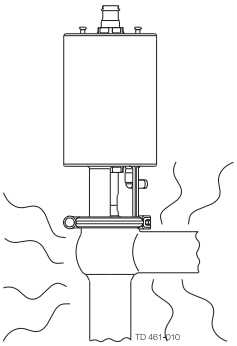
Caustic danger!

Always use rubber gloves!

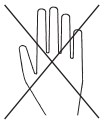
Always use protective goggles!

Step 2

Never touch the valve or the pipelines when sterilising.

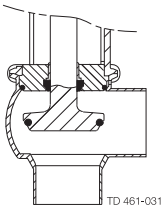


Danger of burns!

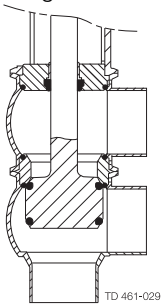


Step 3
Clean the plug and the seats correctly.
Pay special attention to the warnings
Lift and lower valve plug momentarily!

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.

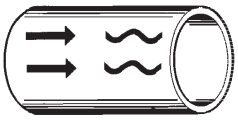
2. 0.5% by weight HNO_3 at 70° C

0.7 l 53% HNO_3	+	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.

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

Always rinse!



Clean water Cleaning agents

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.

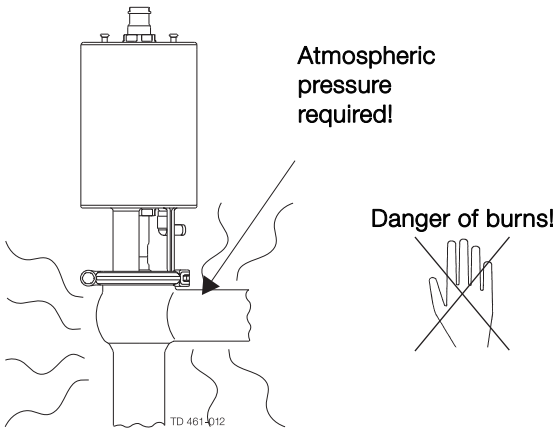
⚠ **Always** release compressed air after use.

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

Step 2

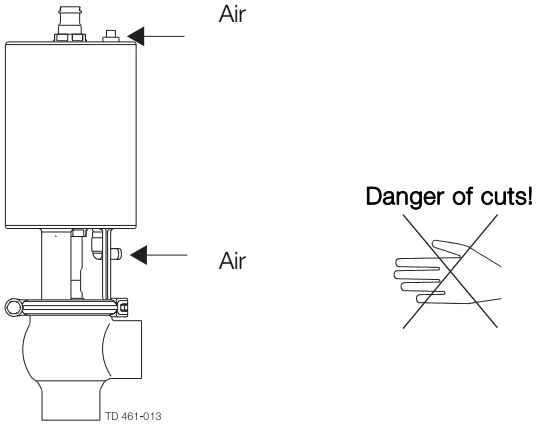
⚠ **Never** service the valve when it is hot.

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



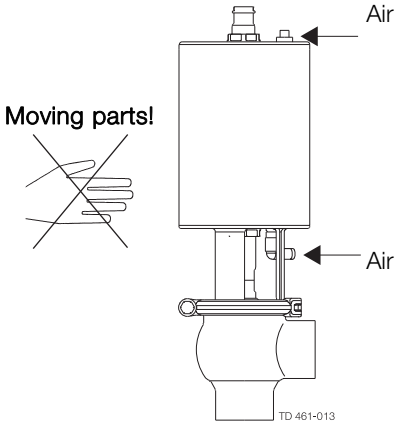
Step 3

⚠ **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.



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.

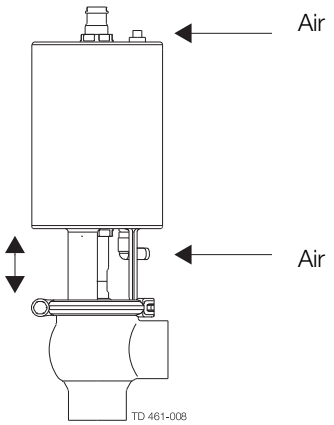
Below are some guidelines for maintenance and lubrication intervals. Please note that the guidelines are for normal working conditions in one shift.

	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	- Regular inspection for leakage and smooth operation - Keep a record of the valve - Use the statistics for inspection planning **Replace after leakage**	- Regular inspection for leakage and smooth operation - Keep a record of the actuator - Use the statistics for inspection planning **Replace after leakage**
Lubrication	**Before fitting** Klüber Paraliq GTE 703 or similar USDA H1 approved oil/grease	**Before fitting** 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!

Open/close!



Recommended spare parts
Service kits (see page 27)

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 the valve

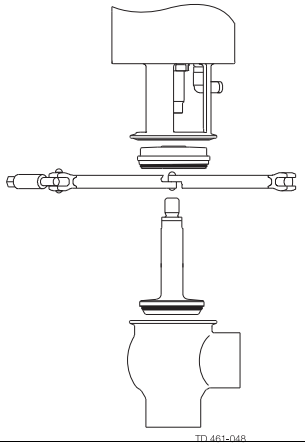
Step 1

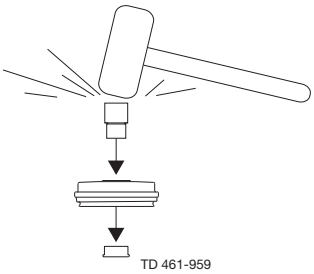
1a
Shut-off valve:
1. Supply compressed air to the actuator (only NC).
2. Loosen and remove clamp.
3. Release compressed air (only NC).
4. Lift away the actuator.
5. Unscrew and remove valve plug.
6. Remove O-ring, lip seal and bushing in bonnet. (Use bushing tool and rubber mallet).

Note! Be careful not to damage the bushing.

Pay special attention to the warnings!

Note! For plug seal replacement see page 19.





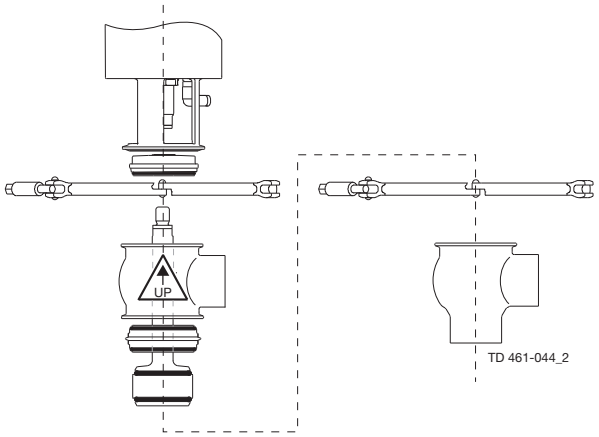
Note!
Be careful not to damage the bushing.

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 19.

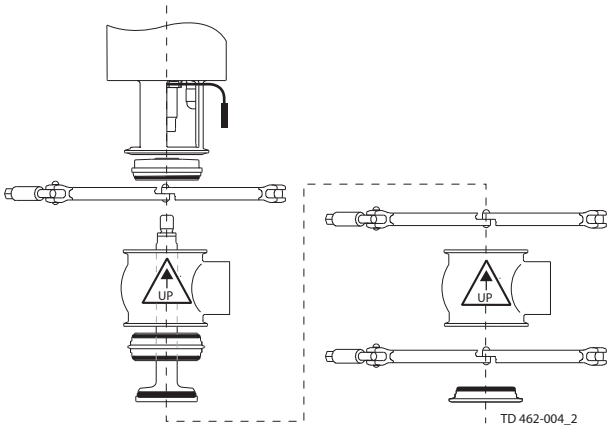


1c
Shut-off valve - Reverse Acting:
1. Loosen and remove lower clamp.
2. Remove lower bonnet and O-ring from lower body.
3. Loosen and remove middle clamp.
4. Lift away the actuator and upper valve body.
5. Supply compressed air to the actuator (only NC).
6. Unscrew and remove valve plug.
7. Release 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!

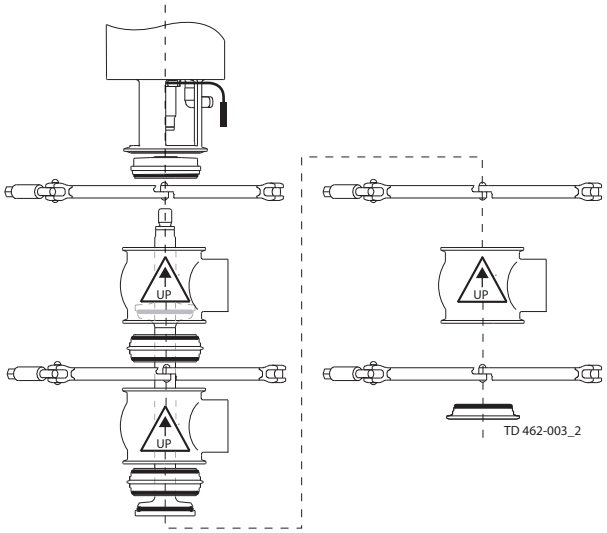
Note! For plug seal replacement please see page 19.



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 19.

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

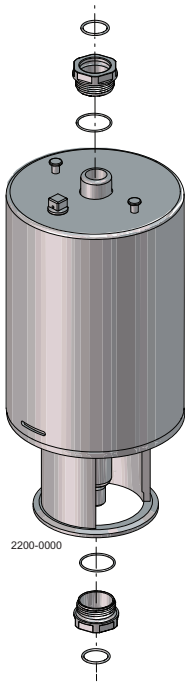
Reverse order of 5.2 Dismantling the valve.
Lubricate O-ring (21) and lip seal (25) with Klüber Paraliq GTE 703.
Remember to tighten spindle and plug to a torque of 30 Nm (to use two 17 mm spanners)
If there are vibrations in the pipeline, Alfa Laval recommends the using of Loctite no. 243.

5 Maintenance

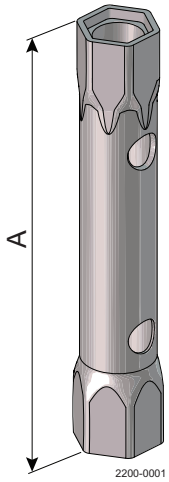
Study the instructions carefully.
The items refer to the parts list and service kits section. Handle scrap correctly.
A/A = Air/air activated.
Service tool: See spare parts.

5.5 Actuator bushing replacement

Step 1
Introduction
- The actuator service kit contains two bushings and four o-rings.
- Mount the thick o-ring inside and the thin o-ring outside the bushing.
- Always lubricate the spindle and o-rings thoroughly with “Molykote LongTerm 2 Plus” before mounting the new bushings.

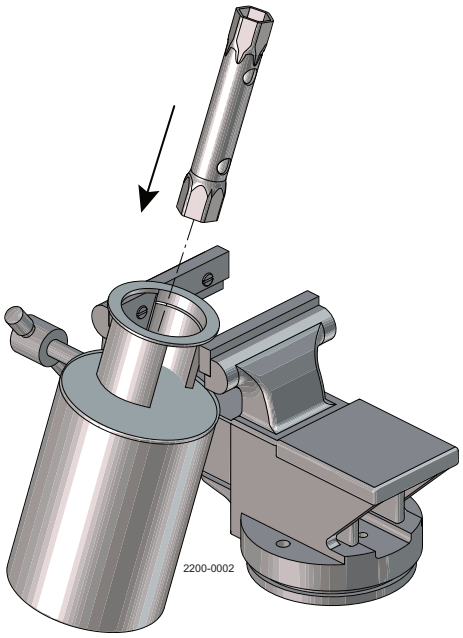


Step 2
Introduction - Standard socket wrench
Use a 27 mm socket wrench to mount the bushings, as the space in the yoke is limited.
A socket wrench 24x27 (length = 185 mm) is a standard tool, which can be purchased from all tool shops.



A = 185 mm

Example:
Socket wrench - 24x27 mm
Supplier: Gedore Tool
EAN4010886621264



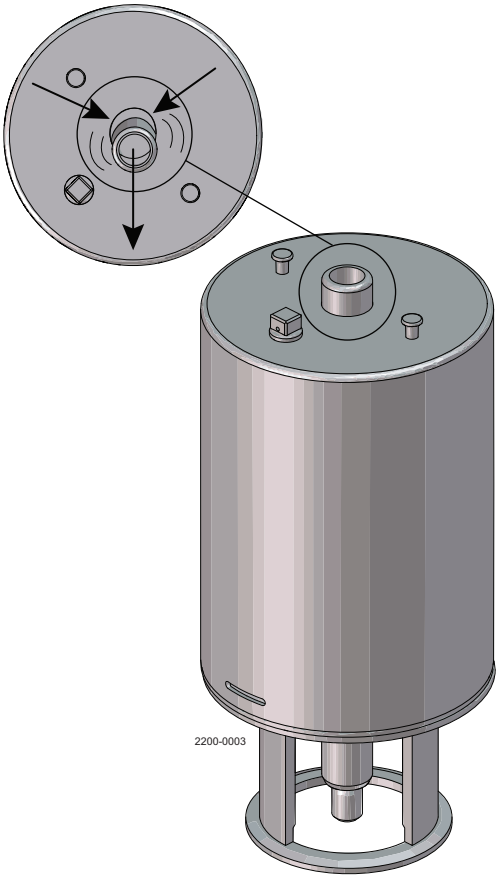
Study the instructions carefully.
The items refer to the parts list and service kits section. Handle scrap correctly.
A/A = Air/air activated.
Service tool: See spare parts.

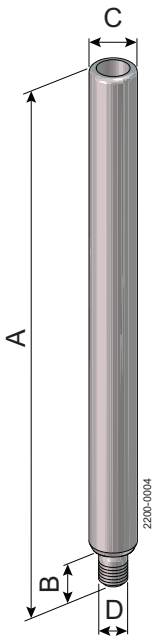
Step 3

Introduction - Aligning spindle

The actuator spindle can in some cases be forced off centre by the internal spring, see drawing below.
In these cases, the alignment spindle shown below, together with the socket wrench, is a great help and ensures a reliable mounting of the bushing. The spindle can either be purchased from Alfa Laval together with the socket wrench (9614-1984-01) or it can be manufactured locally using the below dimensions.

Spindle forced off centre by spring inside actuator



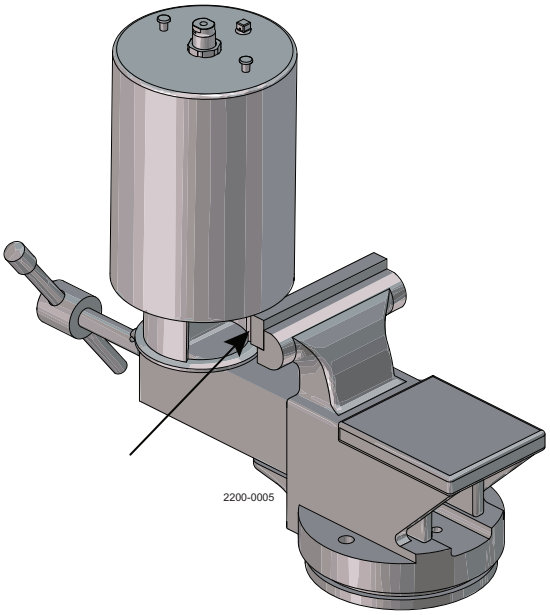


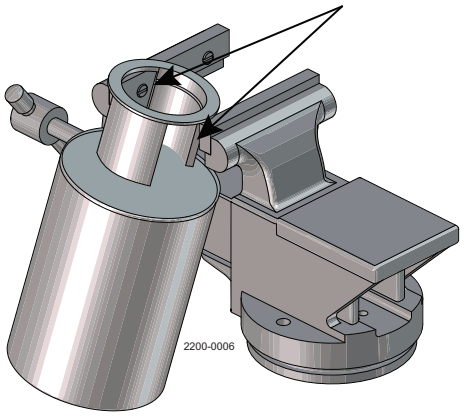
A = 280 mm
B = 16 mm
C = Rod ø20 mm
D = M12 x 1.5

5 Maintenance

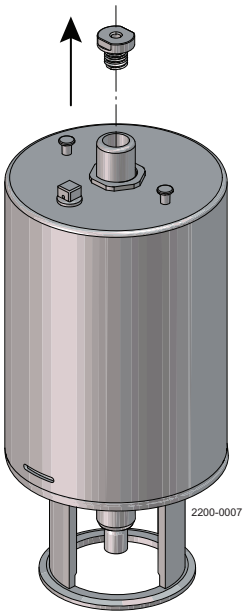
Study the instructions carefully.
The items refer to the parts list and service kits section. Handle scrap correctly.
A/A = Air/air activated.
Service tool: See spare parts.

Step 1
The actuator must be carefully fixed in a vice - if it is dismounted from the valve. Be careful not to press the yoke flange oval when fixing the actuator in the vice. Only fix carefully on the “yoke leg” as shown below



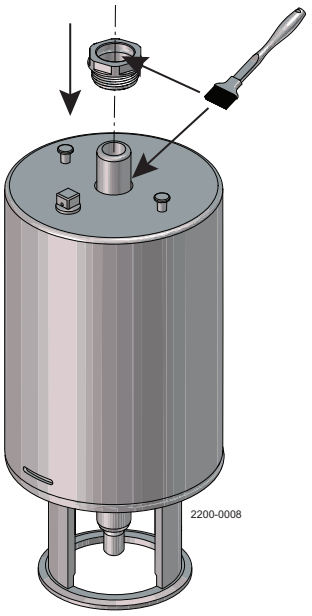


Step 2
Remove adapter screw.
(After spindle alignment the adapter screw has to be remounted.)

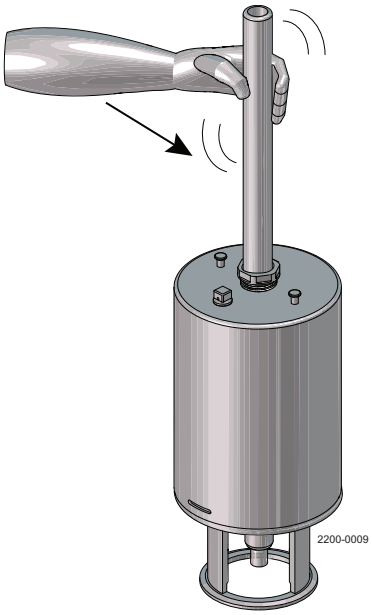


Study the instructions carefully.
The items refer to the parts list and service kits section. Handle scrap correctly.
A/A = Air/air activated.
Service tool: See spare parts.

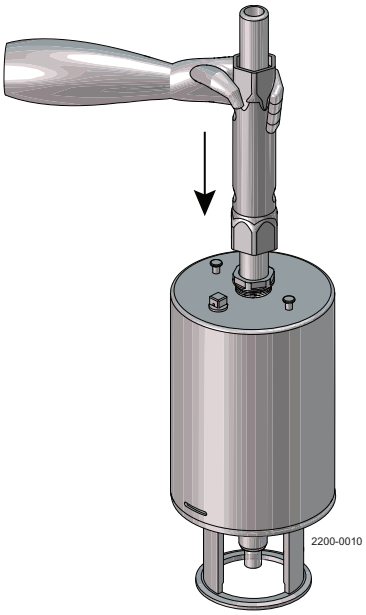
Step 3
1. Lubricate thoroughly both the actuator spindle and o-rings.
2. Grease with “Molykote LongTerm 2 plus”.
3. Fit the **bushing** on the spindle.



Step 4
Fit the aligning spindle to the actuator spindle, and then mount the socket wrench.



Aligning spindle



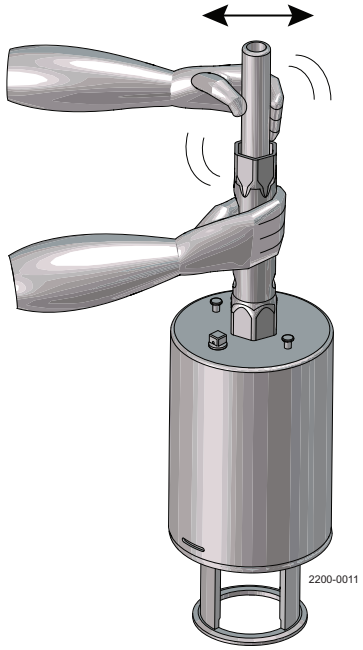
Socket wrench

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.

Step 5

Now pull the aligning spindle to centre the actuator spindle. In this position rotate the **bushing** 180° backwards and then begin to fasten the bushing. Make sure that the thread catches evenly!
The bushing must only be tightened with a torque of 10 Nm (7 lbf -ft) - which can be done by turning “hard” by hand.



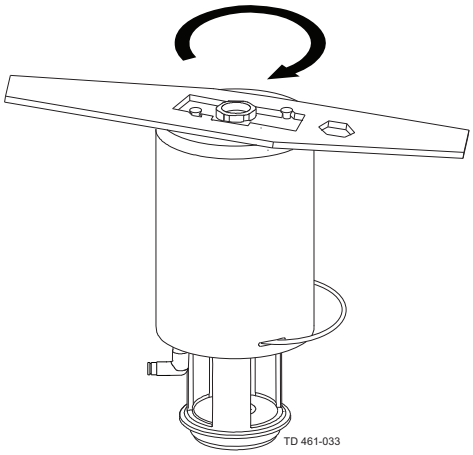
Study the instructions carefully.
The items refer to the parts list and service kits section. Handle scrap correctly.
A/A = Air/air activated.
Service tool: See spare parts.

5.6 Dismantling of optional maintainable actuator

1. Rotate cylinder.
2. Remove lock wire and pull away cylinder.
3. Unscrew nuts and remove yoke.
4. Tighten nuts to a torque of 17 Nm.
5. Top and bottom bushings.
6. Remove piston with O-ring and spring assembly.
7. Remove O-rings and support disc.

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

Rotate cylinder with service tool.

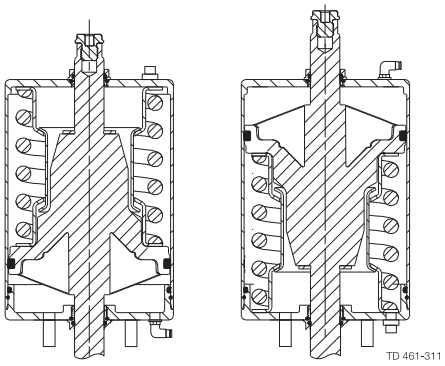


5.7 Mounting of optional maintainable actuator

Reverse order of 5.6 Dismantling of optional maintainable actuator.
Lubricate O-rings (3, 7, 11) with Molykote Longterm 2 plus before fitting.

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 to 1).



Pneumatic movement upwards

Pneumatic movement downwards

6 Technical data

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

6.1 Technical data

The valve is a pneumatic seat valve in a hygienic and modular design for a wide field of duties, e.g. as a shut-off valve with two (2) or three (3) ports or as a change-over valve with three (3) to five (5) ports. The valve is remote-controlled by means of compressed air. It has few and simple moveable parts which results in a very reliable valve and low maintenance cost.

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.

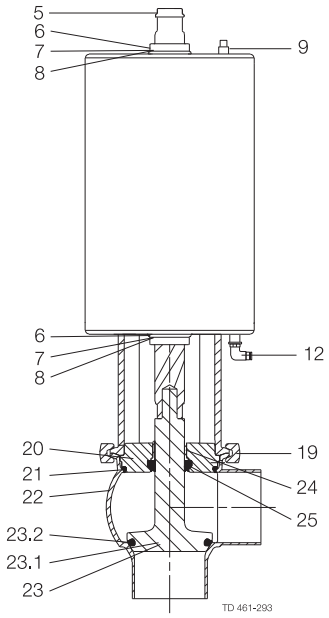
Weight (kg)

Nominal size	Inch tubes DN/OD						DIN tubes DN					
	25	38	51	63.5	76.1	101.6	25	40	50	65	80	100
Stop valve	3.1	3.3	5.5	6.5	11.3	13.6	3.2	3.4	5.5	6.6	11.8	13.6
Change-over valve	3.9	4.2	7.1	8.5	14	18	4.1	4.5	7.2	8.8	14.9	17.9
Stop valve: High pressure	4.7	4.8	9.5	10.0	9.8	14.2	4.8	4.9	9.5	10.1	10.2	14.2
Change-over valve: High pressure	4.9	5.1	10.1	10.8	10.9	16.5	5.1	5.3	10.1	11.1	11.8	16.4

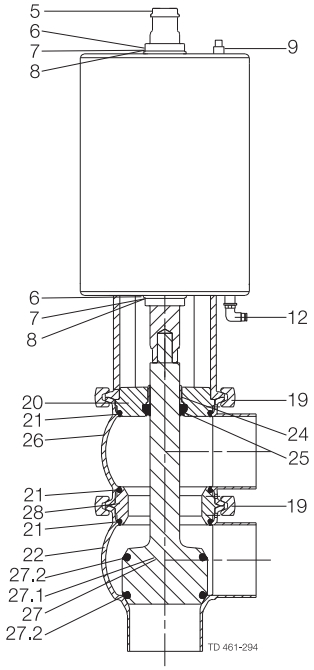
Noise
One metre away from and 1.6 metres above the exhaust the noise level of a valve actuator will be approximately 77db (A) without noise damper and approximately 72 db (A) with damper - measured at 7 bar air-pressure.

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

7.1 Drawing



Shut-off valve



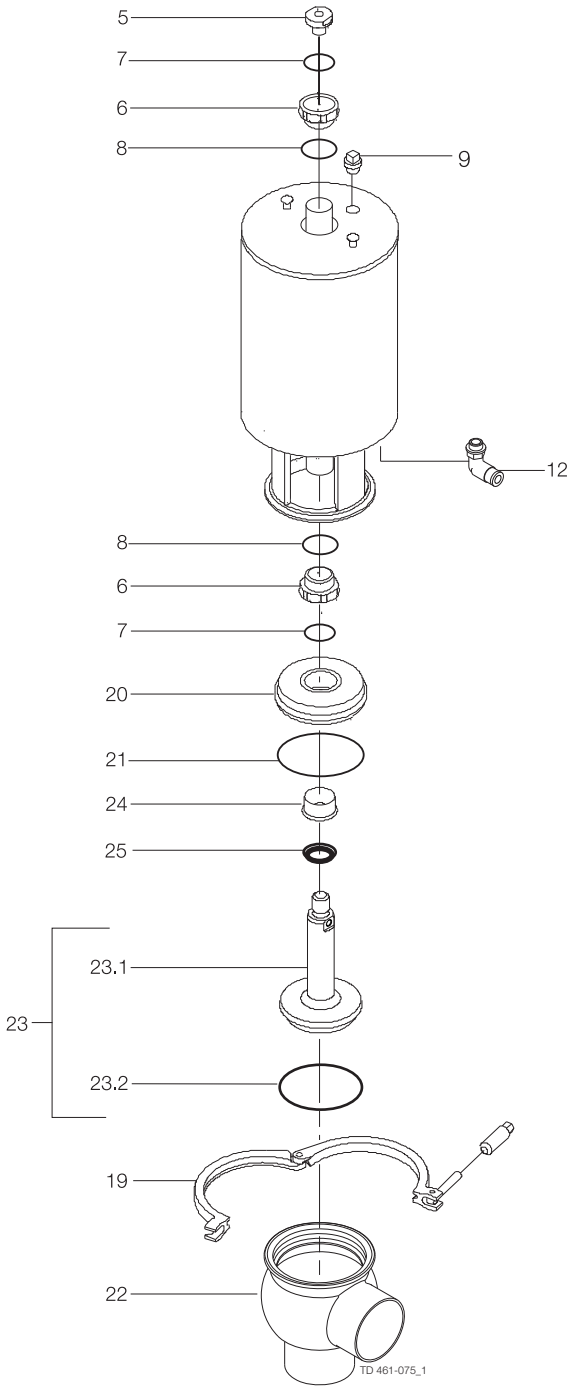
Change-over valve

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.

7.2 Unique Single Seat Valve - Shut-off Valve

Standard - shut off valve - 25-101.6 mm/DN25-100



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
5		1	Adapter
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	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, actuator	9611926500	9611926500	9611926500	9611926500	9611926500	9611926500
Service kit for product wetted parts, standard							
♦	Service kit, EPDM	9611926501	9611926502	9611926503	9611926504	9611926505	9611926506
♦	Service kit, HNBR	9611926507	9611926508	9611926509	9611926510	9611926511	9611926512
♦	Service kit, FPM	9611926513	9611926514	9611926515	9611926516	9611926517	9611926518

Parts marked with □are included in the service kits (actuator)
Parts marked with ♦are included in the service kits (product wetted parts)
Tool for bushing (pos. 24) - item no: 9613160901

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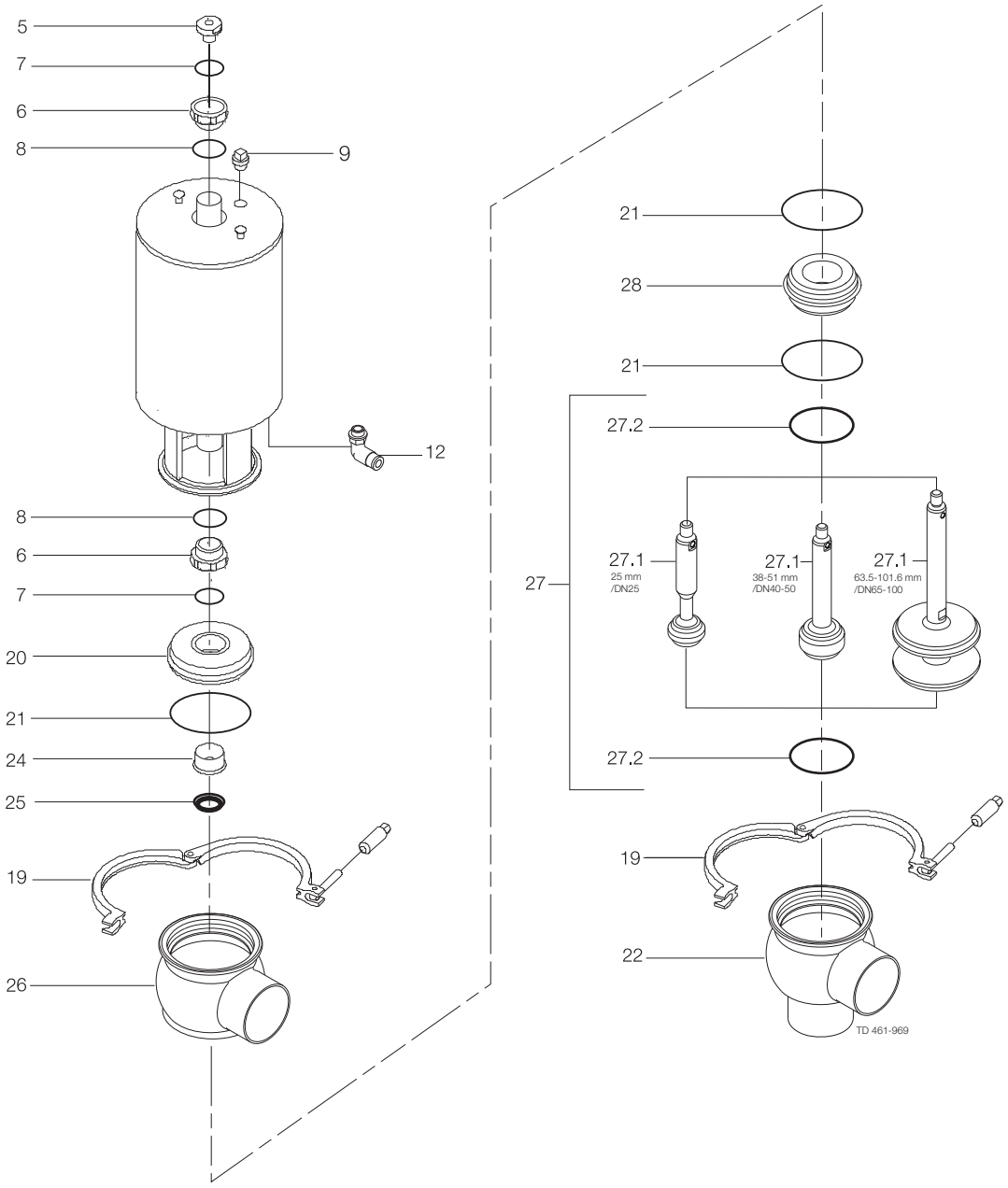
7 Parts list and service kits

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

7.3 Unique Single Seat Valve - Change-over Valve

Standard - change-over valve - 25 -101.6 mm/DN25-100



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
5		1	Adapter
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	9611926500	9611926500	9611926500	9611926500	9611926500	9611926500

Service kit for product wetted parts, standard

♦	Service kit, EPDM	9611926579	9611926580	9611926581	9611926582	9611926583	9611926584
♦	Service kit, HNBR	9611926585	9611926586	9611926587	9611926588	9611926589	9611926590
♦	Service kit, FPM	9611926591	9611926592	9611926593	9611926594	9611926595	9611926596

Parts marked with □ are included in the service kits (actuator)
Parts marked with ♦ are included in the service kits (product wetted parts)

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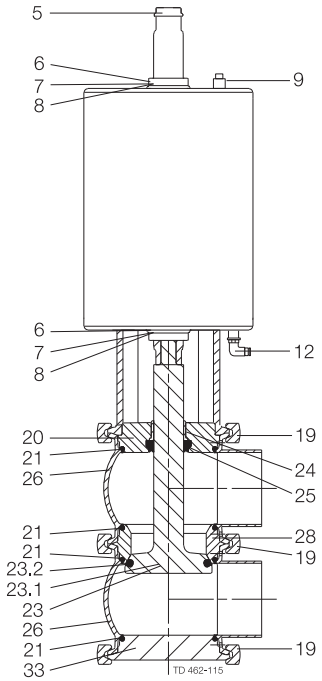
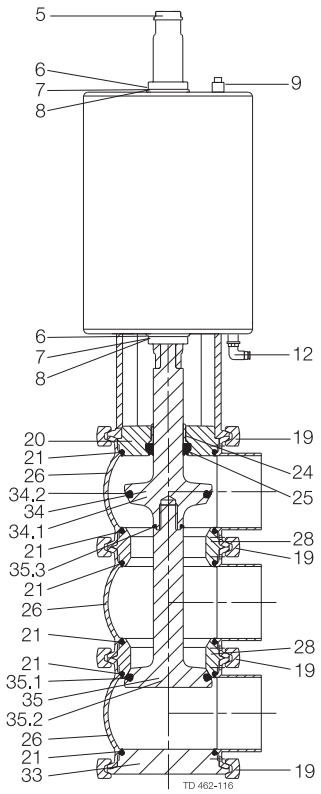
The drawing shows Unique Single Seat Valve - Change-over.
The items refer to the parts lists in the following sections.

7.4 Drawing



Shut-off valve - Reverse Acting



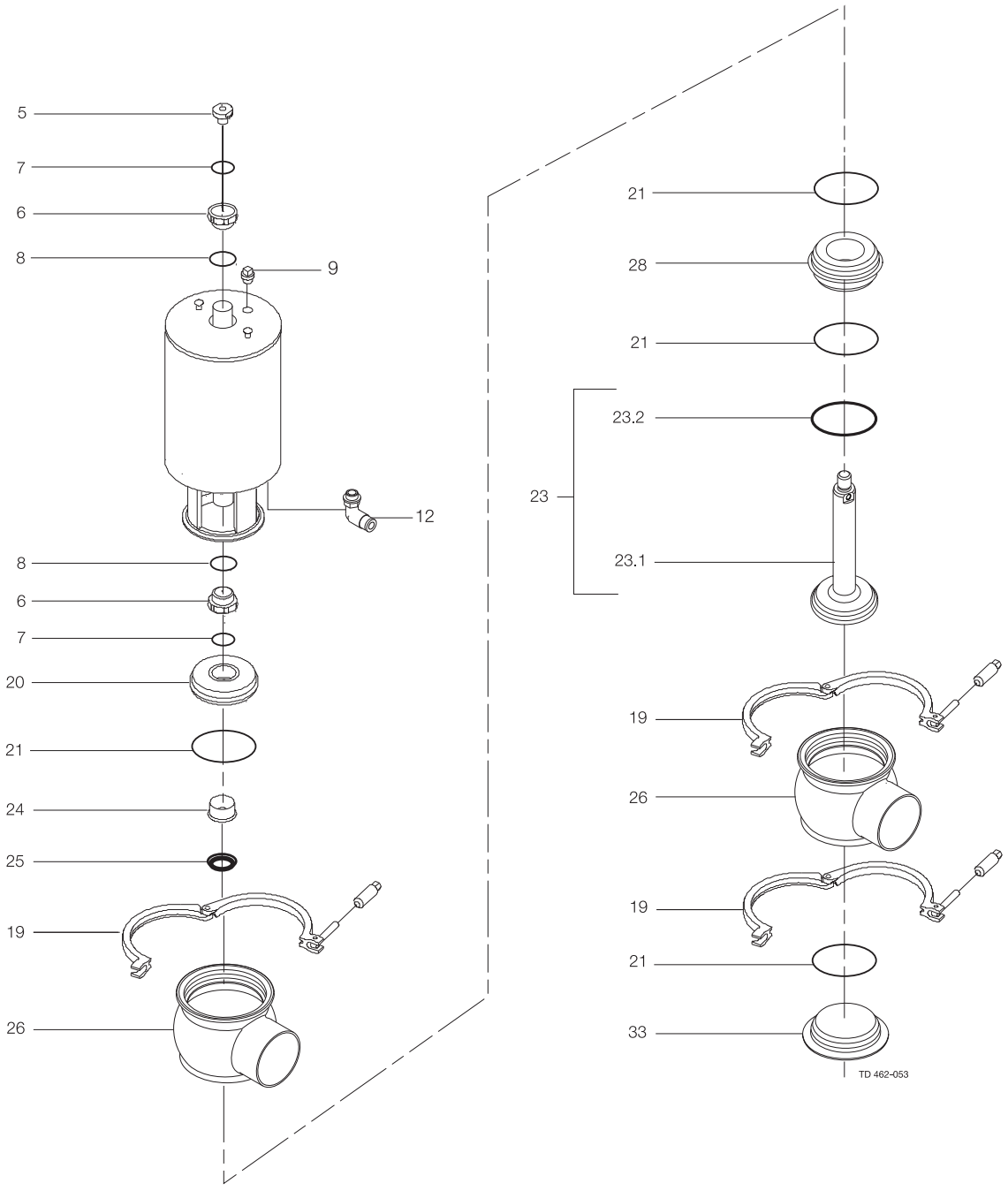
Change-over valve - Reverse Acting

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

Reverse Acting - shut off valve



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
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
Service kit for actuator							
□	Service kit	9611926500	9611926500	9611926500	9611926500	9611926500	9611926500
Service kit for product wetted parts, standard							
♦	Service kit, EPDM	9611926525	9611926526	9611926527	9611926528	9611926529	9611926530
♦	Service kit, HNBR	9611926531	9611926532	9611926533	9611926534	9611926535	9611926536
♦	Service kit, FPM	9611926537	9611926538	9611926539	9611926540	9611926541	9611926542

Parts marked with □♦ are included in the service kits.
Recommended spare parts: Service kits.

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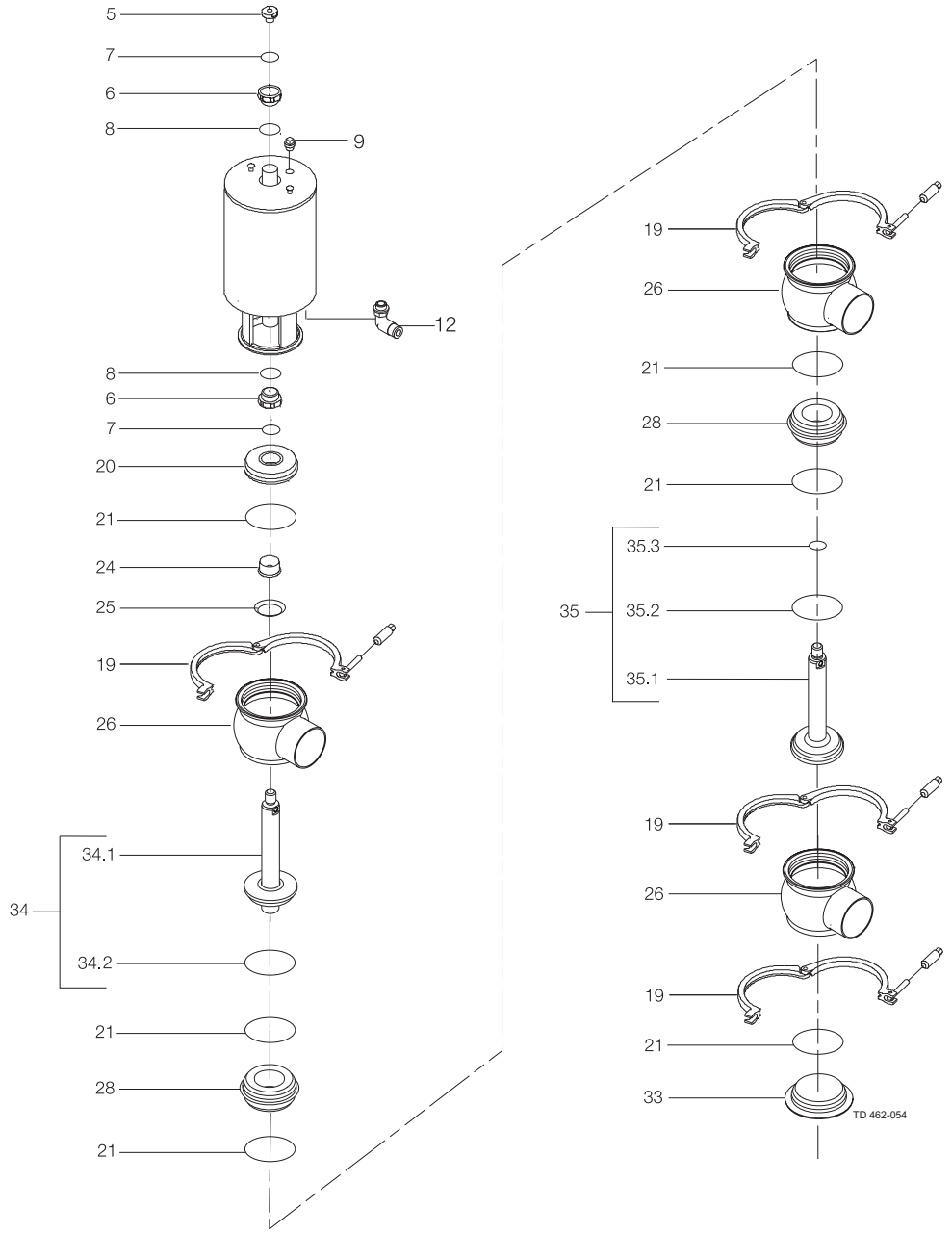
7 Parts list and service kits

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

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
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	9611926500	9611926500	9611926500	9611926500	9611926500	9611926500
Service kit for product wetted parts, standard							
♦	Service kit, EPDM	9611926597	9611926598	9611926599	9611926600	9611926601	9611926602
♦	Service kit, HNBR	9611926603	9611926604	9611926605	9611926606	9611926607	9611926608
♦	Service kit, FPM	9611926609	9611926610	9611926611	9611926612	9611926613	9611926614

Parts marked with □♦ are included in the service kits.
Recommended spare parts: Service kits.

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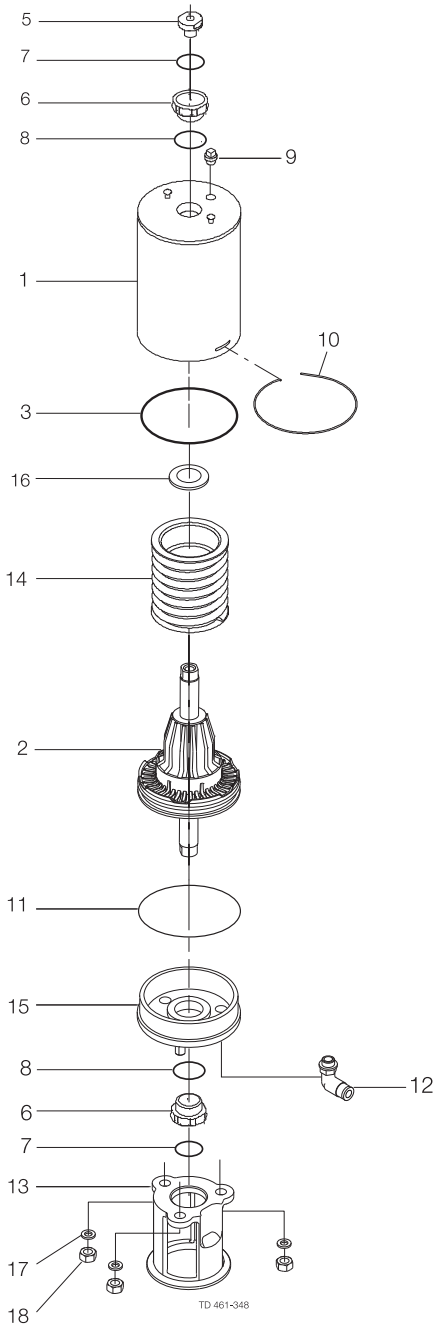
7 Parts list and service kits

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

7.7 Maintainable actuator

Maintainable actuator - 25-101.6 mm/DN25-100



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
1		1	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	9611926497	9611926497	9611926498	9611926498	9611926499	9611926499
♦ Service kit, A/A	9611926519	9611926519	9611926520	9611926520	9611926521	9611926521

Parts marked with □♦ are included in the service kits.
Recommended spare parts: Service kits.

TD900361/2

How to contact Alfa Laval
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