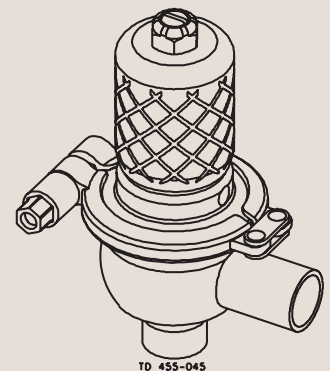
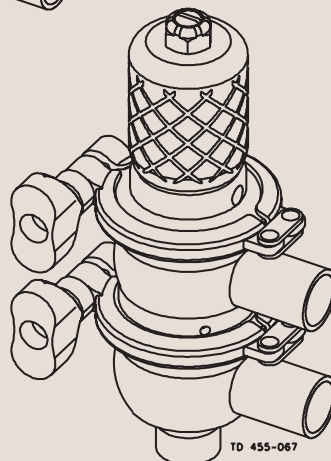
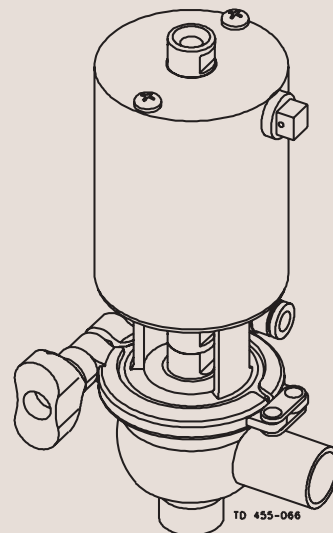
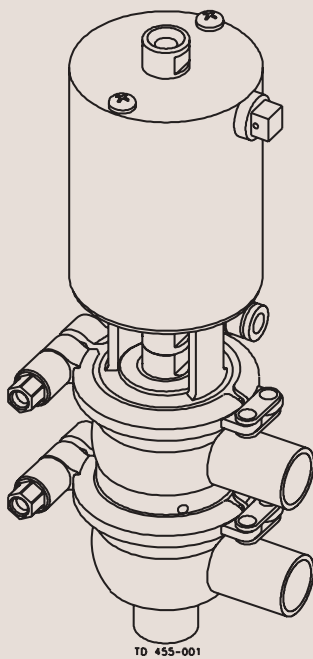




Instruction Manual

Small Single Seat Valve



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

SMALL SINGLE SEAT VALVE

Denomination

SEAT VALVE

Type

2003

Year

Was manufactured in conformity with the provisions in the COUNCIL DIRECTIVE of 14 June 1989 on mutual approximation of the laws of the Member States on the safety of machines (89/392/EEC as amended by directives 91/368/EEC and 93/44/EEC) with special reference to Annex 1 of the directive on essential safety and health requirements in relation to the construction and manufacture of machines.

Vice President, R & D

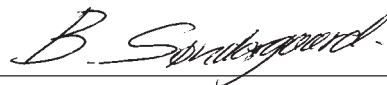
Title

Bjarne Søndergaard

Name

Alfa Laval

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

1. Safety

*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 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.

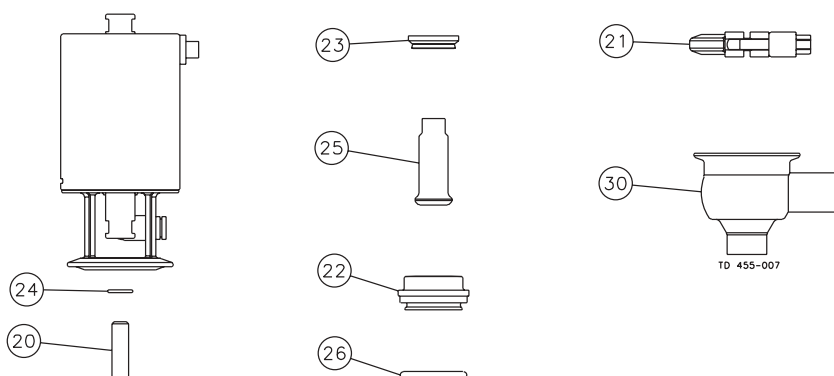
Check the delivery for:

1. Complete valve, stop valve, change-over valve, manual stop valve or manual change-over valve (see steps 2, 3, 4 and 5) .
2. Delivery note.
3. Instruction Manual.

Step 2

Stop valve:

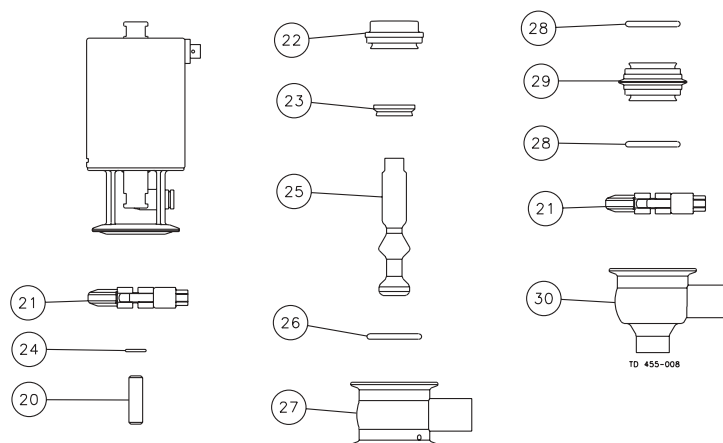
1. Complete actuator with bonnet.
2. Lip seal (23).
3. Clamp (21).
4. Stop plug (25).
5. Lower valve body (30).
6. O-ring (26).
7. Threaded pin (20).
8. Sealing element (22).
9. O-ring (24).



Step 3

Change-over valve:

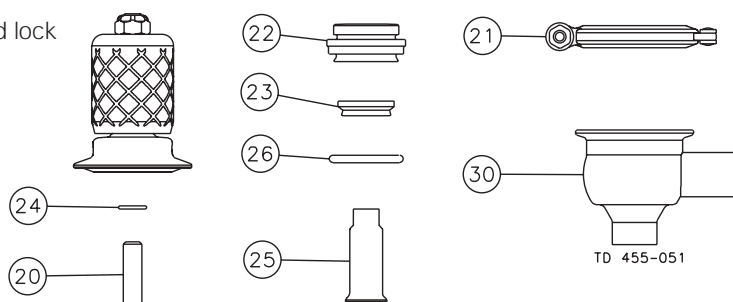
1. Complete actuator with bonnet.
2. Lip seal (23).
3. Two clamps (21).
4. Change-over plug (25).
5. Upper valve body (27).
6. Valve seat (29).
7. O-ring (26).
8. Threaded pin (20).
9. Sealing element (22).
10. O-ring (24).
11. Two O-rings (28).
12. Lower valve body (30).



Step 4

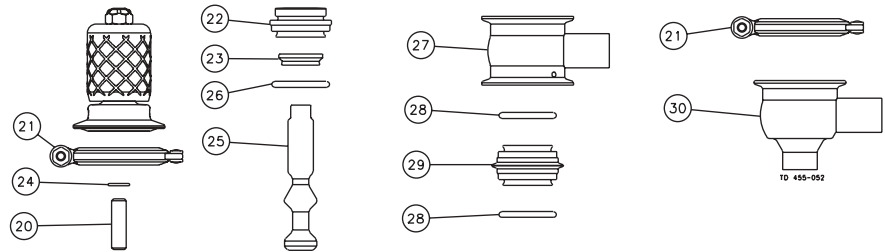
Manual stop valve:

1. Complete bonnet with handle, plug extension and lock hexnut.
2. Clamp (21).
3. Lower valve body (30).
4. O-ring (26).
5. Lip seal (23).
6. Sealing element (22).
7. O-ring (24).
8. Threaded pin (20).
9. Stop plug (25).

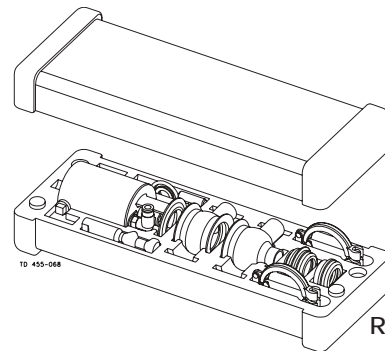


Step 5**Manual change-over valve:**

1. Complete bonnet with handle, plug extension and lock hexnut.
2. Change-over plug (25).
3. Two clamps (21).
4. Upper valve body (27).
5. O-ring (26).
6. Lip seal (23).
7. Sealing element (22).
8. Valve seat (29)
9. O-ring (24).
10. Threaded pin (20).
11. Two O-rings (28).
12. Lower valve body (30).

**Step 6**

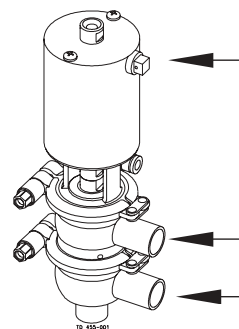
Remove any possible packing materials from the valve/valve parts.



Remove packing materials!

Step 7

Inspect the valve/valve parts for visible transport damages. Avoid damaging the valve/valve parts.



Inspection!

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

Step 1

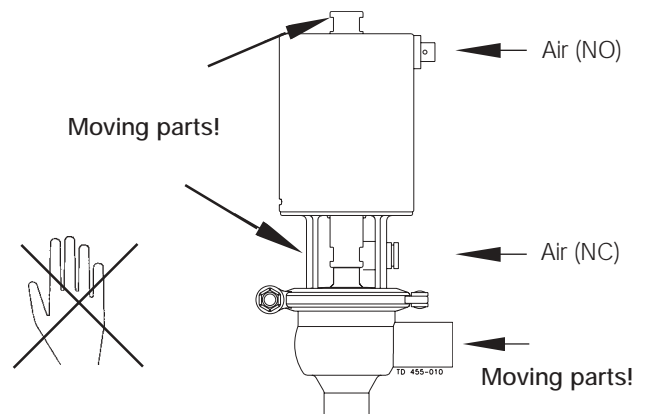
- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.

CAUTION!

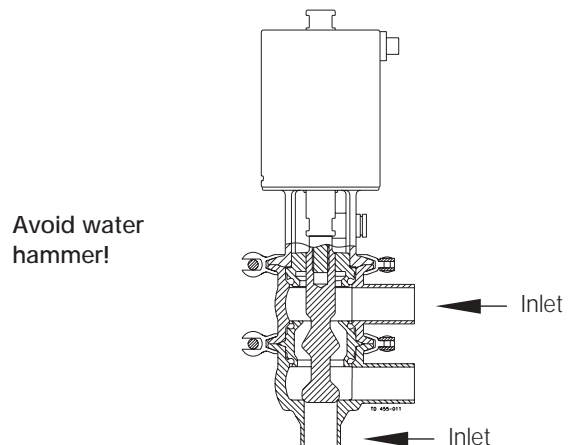
Alfa Laval cannot be held responsible for incorrect installation.

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.

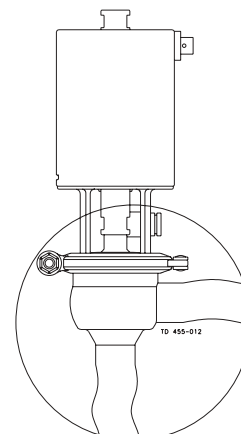
**Step 4**

Avoid stressing the valve.

Pay special attention to:

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

Risk of damage!

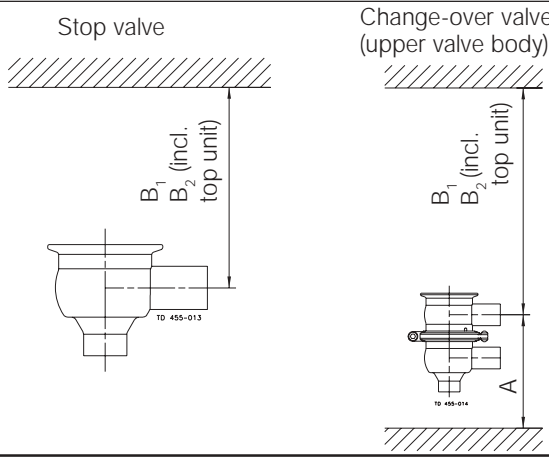


Study the instructions carefully.
The valve is supplied as separate parts to facilitate the welding. The items refer to the parts list and service kits section.
Check the valve for smooth operation after welding.
NO = Normally open. NC = Normally closed.

Step 1

Always weld the valve so that the seals between the valve bodies can be replaced.
 Maintain the minimum clearances (A and B) so that the lower valve body and plug (change-over valve) and the actuator with the internal parts can be removed.

Valve size DN/OD	A (mm) (inch)	B ₁ (mm) (inch)	B ₂ (mm) (inch)
12.7 mm	160 (6.3)	175 (6.9)	245 (9.7)
19 mm	175 (6.9)	180 (7.1)	250 (9.8)

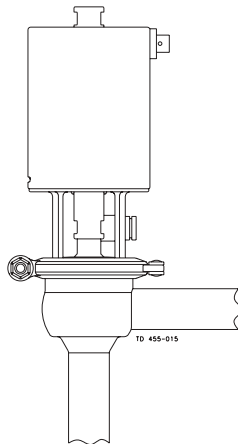


Step 2

Stop valve/manual stop valve:

Assemble the valve in accordance with the steps in section 4.3.

Pay special attention to the warnings!

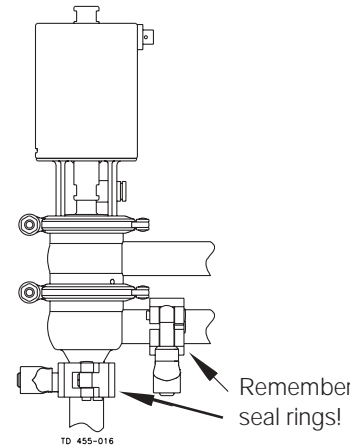


Step 3

Change-over valve/manual change-over valve:

Assemble the valve in accordance with the steps in section 4.3.

Pay special attention to the warnings!

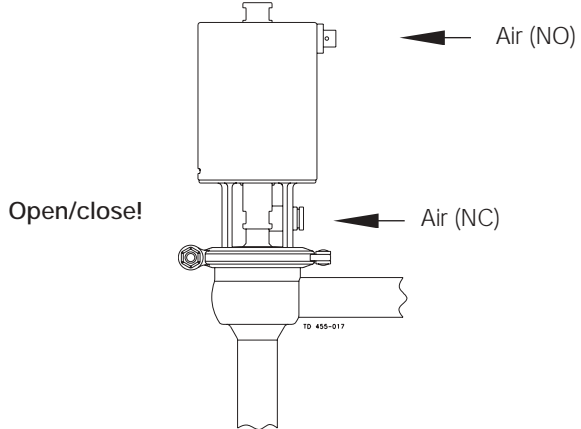


Step 4

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.
NO = Normally open. NC = Normally closed.

Step 1

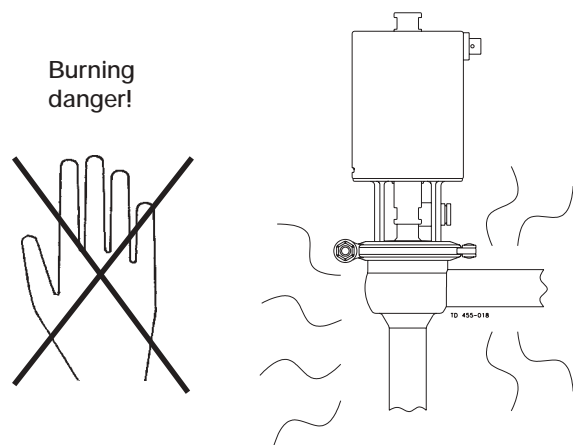
- **Always** read the technical data thoroughly (see chapter 5).
- **Always** release compressed air after use.

CAUTION!

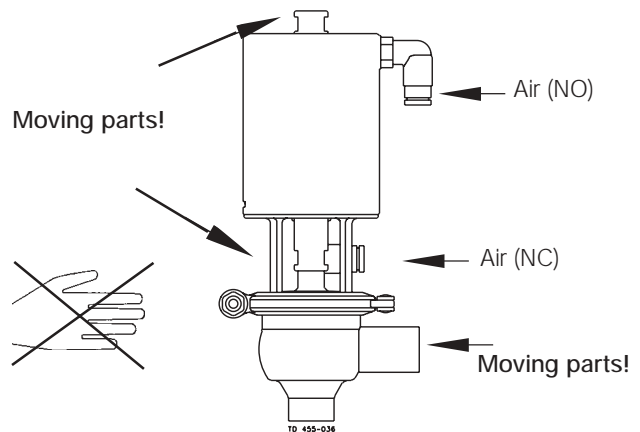
Alfa Laval cannot be held responsible for incorrect operation.

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.

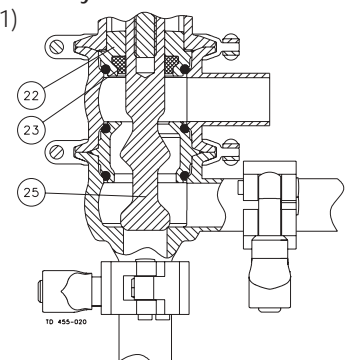
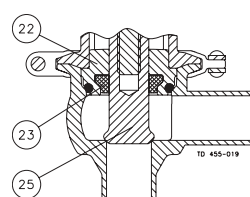
**Step 4****Lubrication of valves:**

1. Ensure smooth movement between sealing element (22), lip seal (23) and plug (25).
2. Lubricate with silicone oil/grease if necessary.

Stop valve

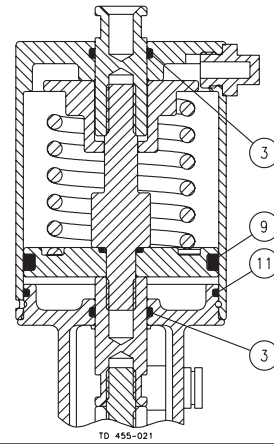
Change-over valve

Lubricate 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 grease 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
The valve plug jerks	The sealings seize	Lubricate: - O-rings (3) - O-ring (9) and the inside of cylinder (1) - Lip seal (23)
Product leakage at stem and/or clamp	Worn/product affected lip seal (23) and/or O-ring (26/28)	- Replace the seals - Replace with seals of a different rubber grade
Product leakage (closed valve)	- Worn/product affected - Loose plug parts (vibrations) - Product deposits on the seat and/or plug	- Replace the plug - Tighten the loose parts - Frequent cleaning
Product leakage (too high pressure)	- Worn actuator O-rings - Too weak spring	- Replace the O-rings - Fit a stronger spring
Water hammer	The flow direction is the same as the closing direction	- The flow direction should be against the closing direction
The valve does not open/close	- Faulty plug/piston rod assembly - The pressure on the plug is too high	- Replace O-ring (24) between plug and piston rod - Reduce the pressure

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.
 HNO₃ = Nitric acid.

Step 1

Always handle lye and acid with great care.

Caustic danger!



Always use
rubber gloves!

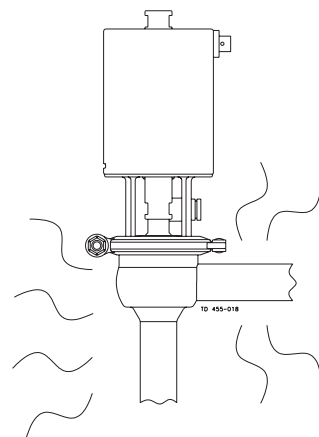
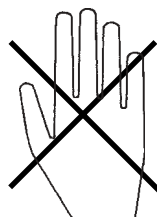


Always use
protective goggles!

Step 2

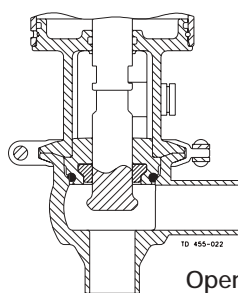
Never touch the valve or the pipelines when sterilizing.

Burning danger!

**Step 3**

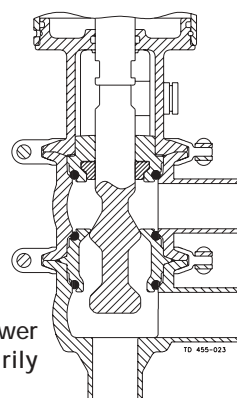
Clean the plug and the seats correctly.
Pay special attention to the warnings!

Stop valve



Open!

Change-over valve



Lift and lower
momentarily
(flip)!

Step 4

Examples of cleaning agents:

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70°C (158°F).

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

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

2. 0.5% by weight HNO₃ at 70°C (158°F).

0.7 l (0.2 gal) 53% HNO ₃	+	100 l (26.4 gal) water	= Cleaning agent.
---	---	---------------------------	-------------------

Step 5

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

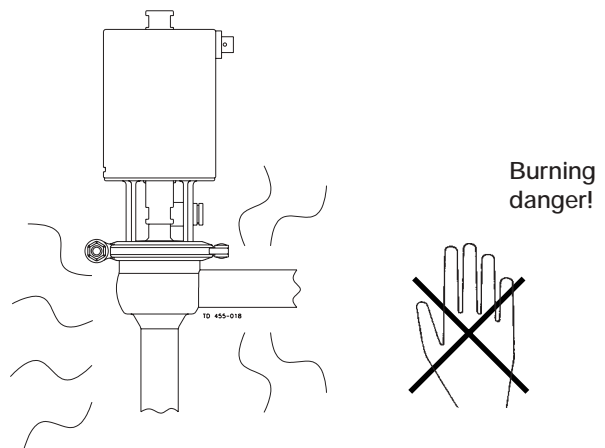
CAUTION!

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

Step 2



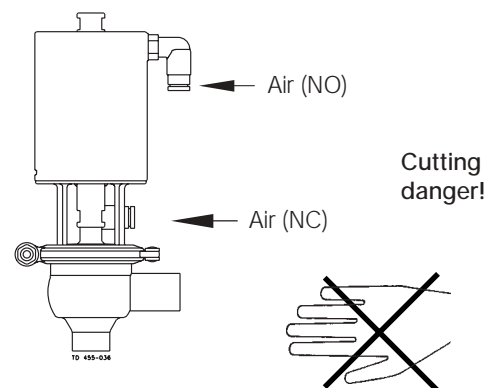
- **Never** service the valve when it is hot.
- **Never** service the valve with valve and pipelines under pressure.



Step 3



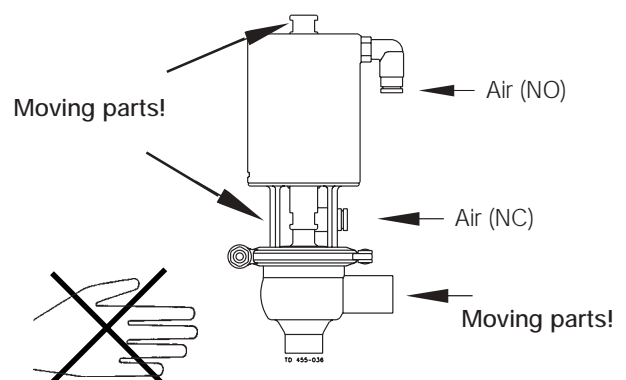
Never stick your fingers through the valve ports if the actuator is supplied with compressed air.



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.

NO = Normally open. NC = Normally closed.

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

	Valve rubber seals	Valve lip seal	Actuator rubber seals
Preventive maintenance	Replace after 12 months	Replace when replacing the rubber seals	Replace after 5 years
Maintenance after leakage (leakage normally starts slowly)	Replace at the end of the day	Replace when replacing the rubber seals	Replace when possible
Planned maintenance	<ul style="list-style-type: none"> - Regular inspection for leakage and smooth operation - Keep a record of the valve - Use the statistics for planning of inspections Replace after leakage	Replace when replacing the rubber seals	<ul style="list-style-type: none"> - Regular inspection for leakage and smooth operation - Keep a record of the actuator - Use the statistics for planning of inspections Replace after leakage
Lubrication (USDA H1 approved oil/grease)	Before fitting Silicone oil or silicone grease	Before fitting Silicone oil or silicone grease	Before fitting Oil or grease

Pre-use check:

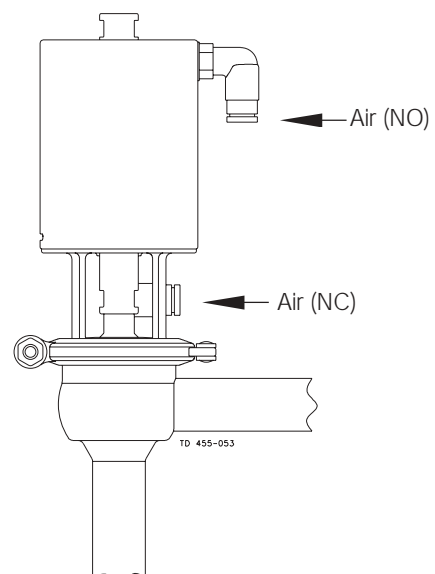
1. Supply compressed air to the actuator.
2. Open and close the valve several times to ensure that it operates smoothly.

Pay special attention to the warnings!

Recommended spare parts

Service kits (see chapter 6).

Order service kits from the service kits list (see chapter 6).



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

NC = Normally closed.

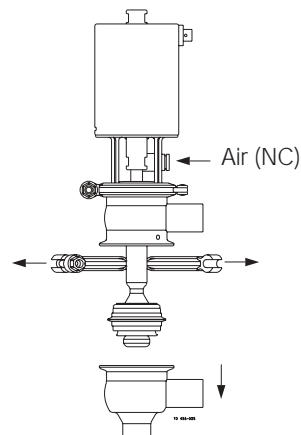
NO = Normally open.

Step 1

Change-over valve:

1. Supply compressed air to the actuator (only NC).
2. Loosen and remove lower clamp (21).
3. Remove lower valve body (30).
4. Release compressed air.

Pay special attention to the warnings!

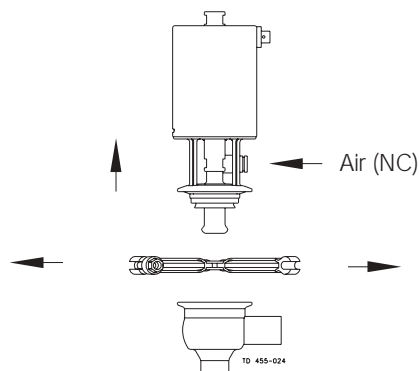


Step 2

Stop valve:

1. Supply compressed air to the actuator (only NC).
2. Loosen and remove clamp (21).
3. Lift out the actuator.
4. Release compressed air.

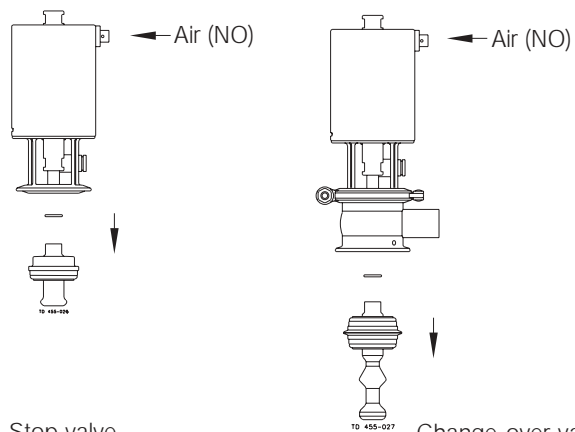
Pay special attention to the warnings!



Step 3

1. Supply compressed air to the actuator (only NO).
2. Remove plug (25) and O-ring (24). Use 11mm spanner and counterhold on actuator shaft.
3. Release compressed air.
4. Remove O-rings (28) from seat (only ch/o).

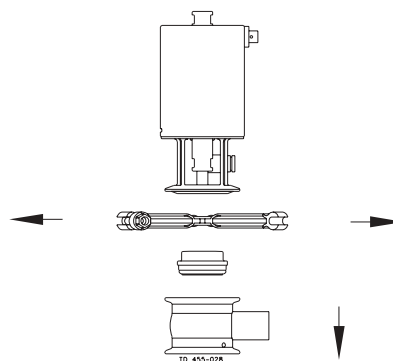
Pay special attention to the warnings!



Step 4

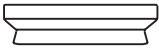
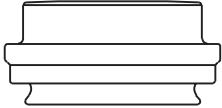
Change-over valve:

1. Remove upper clamp (21).
2. Remove upper valve body (27).



Step 5

Remove lip seal (23) and O-ring (26) from sealing element (22).

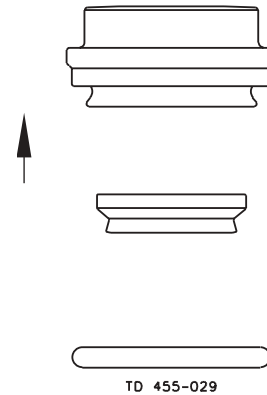


TD 455-029

*Study the instructions carefully.
The items refer to the parts list and service kits section.
Lubricate the rubber seals and the lip seal before fitting them.*

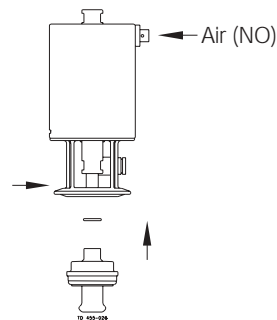
Step 1

Fit lip seal (23) and O-ring (26) on sealing element (22).

**Step 2****Stop Valve:**

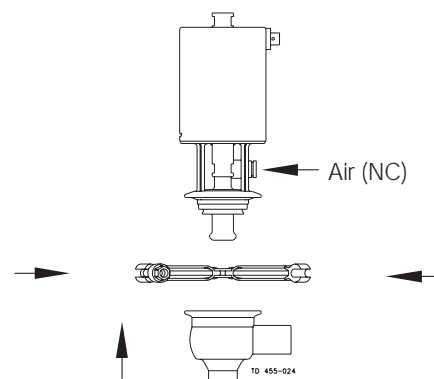
1. Supply compressed air to the actuator (only NO).
2. Fit threaded pin (20) using Loctite 326 or similar glue.
3. Fit sealing element (22), plug (25) and O-ring (24).
4. Release compressed air.

Pay special attention to the warnings!

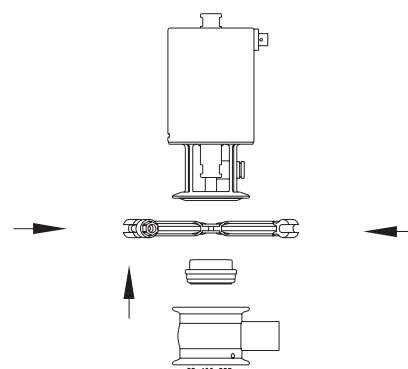
**Step 3****Stop valve:**

1. Supply compressed air to the actuator (only NC).
2. Fit the actuator.
3. Fit and tighten clamp (21).
4. Release compressed air.

Pay special attention to the warnings!

**Step 4****Change-over valve:**

1. Fit threaded pin (20) using Loctite 326 or similar glue.
2. Assemble upper valve body (27), sealing element (22) and the actuator.
3. Fit and tighten upper clamp (21).

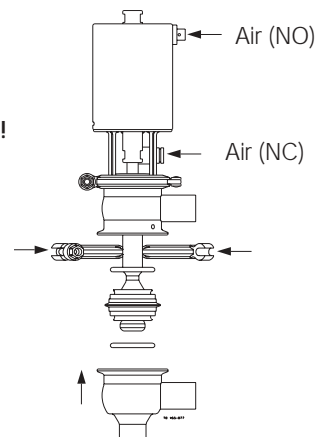


Step 5**Change-over valve:**

1. Supply compressed air to the actuator (only NO).
2. Fit O-rings (28) on valve seat (29).
3. Fit valve seat (29), O-ring (24) and plug (25). Use 11 mm spanner to counterhold actuator stem.
4. Gently release compressed air (NO).
5. Supply compressed air (only NC).
6. Assemble lower and upper valve bodies (27 and 30).
7. Fit and tighten lower clamp (21).
8. Release compressed air (NC).

Pay special attention to the warnings!

Turn the diagonal surface of valve seat (29) upwards!



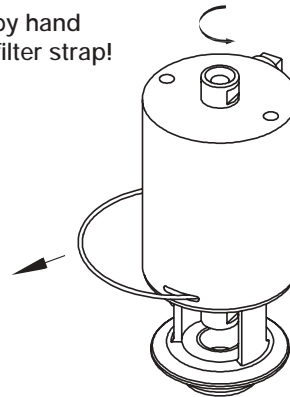
Study the instructions carefully.

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

Step 1

1. Rotate cylinder (1).
2. Remove lock wire (12).

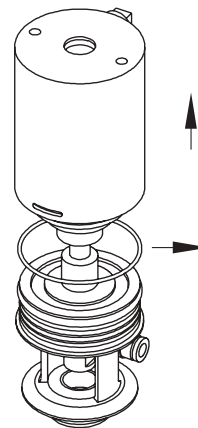
Rotate by hand
or with filter strap!



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Step 2

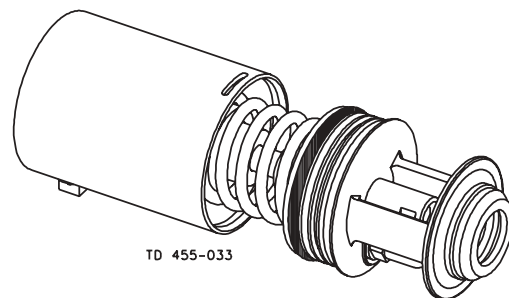
1. Remove cylinder (1).
2. Remove O-rings (3, 11) from bonnet (13) and O-ring (3) from cylinder (1).



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Step 3

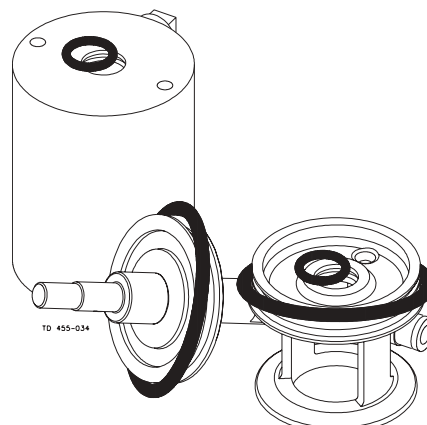
1. Remove piston/spring package.
2. Remove O-ring (9) from the piston (10).



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Step 4

Replace the rubber seals.

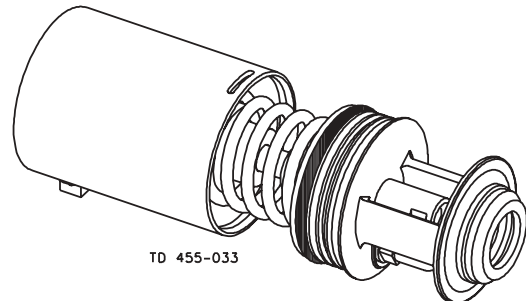


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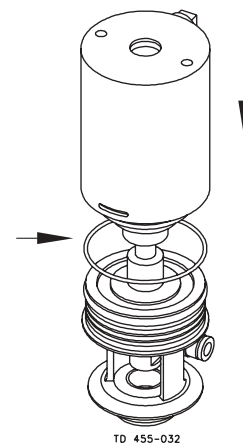
*Study the instructions carefully.
The items refer to the parts list and service kits section.
Lubricate the rubber seals before fitting them.*

Step 1

1. Fit O-ring (9) on piston (10).
2. Fit the piston/spring package.

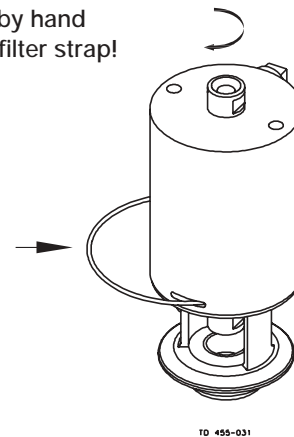
**Step 2**

1. Fit O-rings (3, 11) in bonnet (13) and O-ring (3) on cylinder (1).
2. Fit the cylinder.

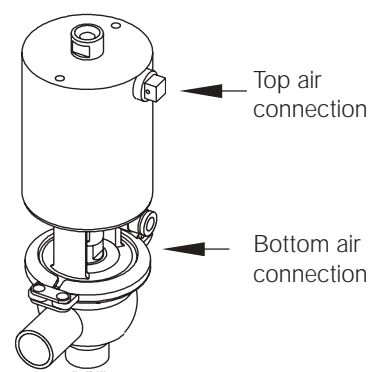
**Step 3**

1. Fit lock wire (12) through the slot in cylinder (1) into the hole in bonnet (13).
2. Rotate the cylinder 360° (see step 4).

**Rotate by hand
or with filter strap!**

**Step 4****NOTE!**

It is recommended to rotate cylinder (1) further 180° in relation to bonnet (13) so that the top and bottom air connections are fixed on the same side.

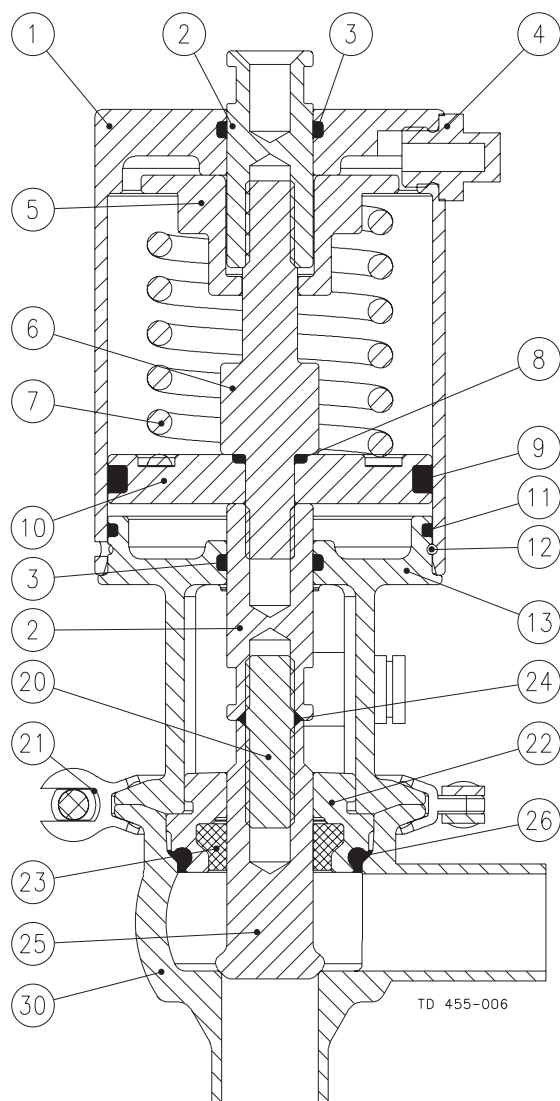


*It is important to observe the technical data during installation, operation and maintenance.
Inform the personnel about the technical data.*

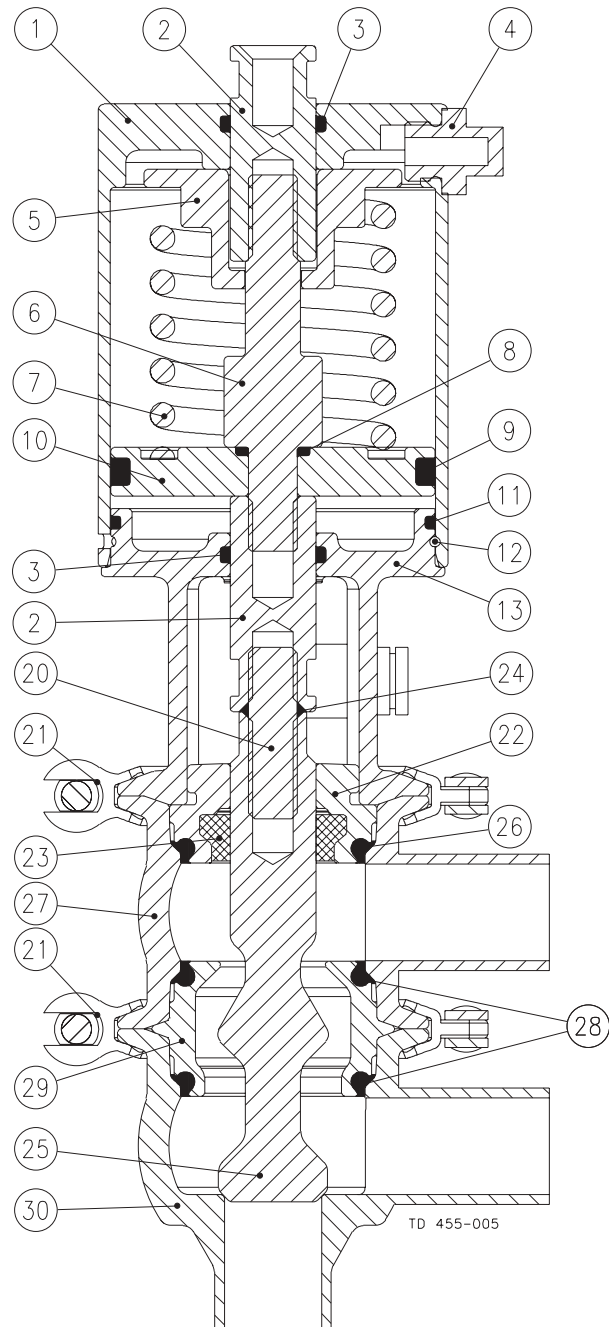
Data - valve/actuator	
Max. product pressure	1000 kPa (10 bar) (145 psi)
Min. product pressure	Full vacuum
Temperature range	-10°C to + 140°C (14°F to 284°F) (EPDM)
Air pressure, actuator	100 to 700 kPa (1 to 7 bar) (14.5 to 101.5 psi)
Materials - valve/actuator	
Product wetted steel parts	Acid-resistant steel 1.4404 (AISI 316L)
Finish, Outside	Semi bright
Finish, Inside	Ra ≤ 0.5µm
Other steel parts	Stainless steel 1.4307 (AISI 304L)
Plug	PVDF
Product wetted seals	EPDM
Actuator seals	Nitrile (NBR)
Alternative product wetted seals	HNBR and FPM

The drawings include all items.

See parts list in section 6.2 and 6.4.



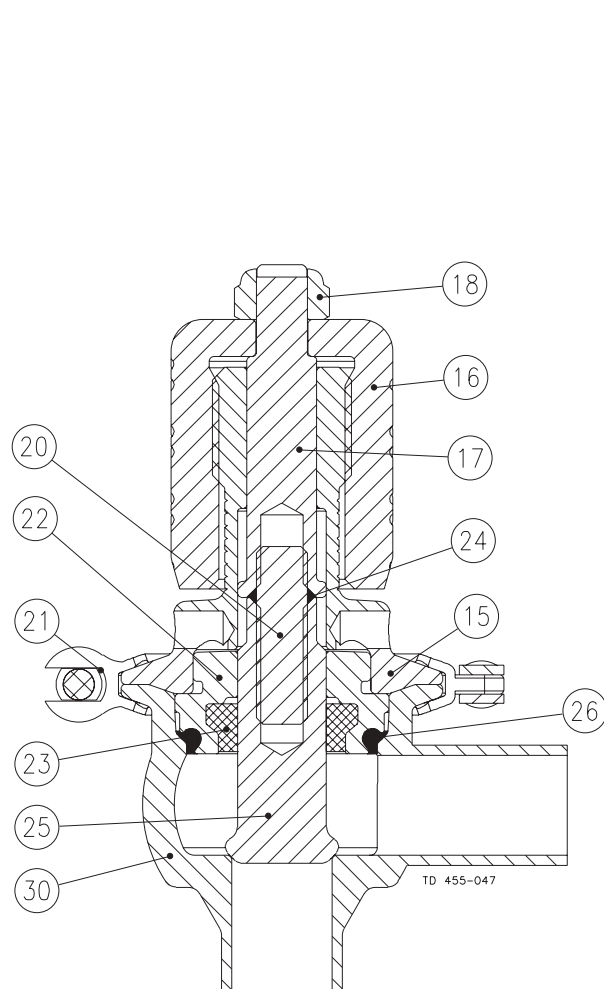
Stop Valve



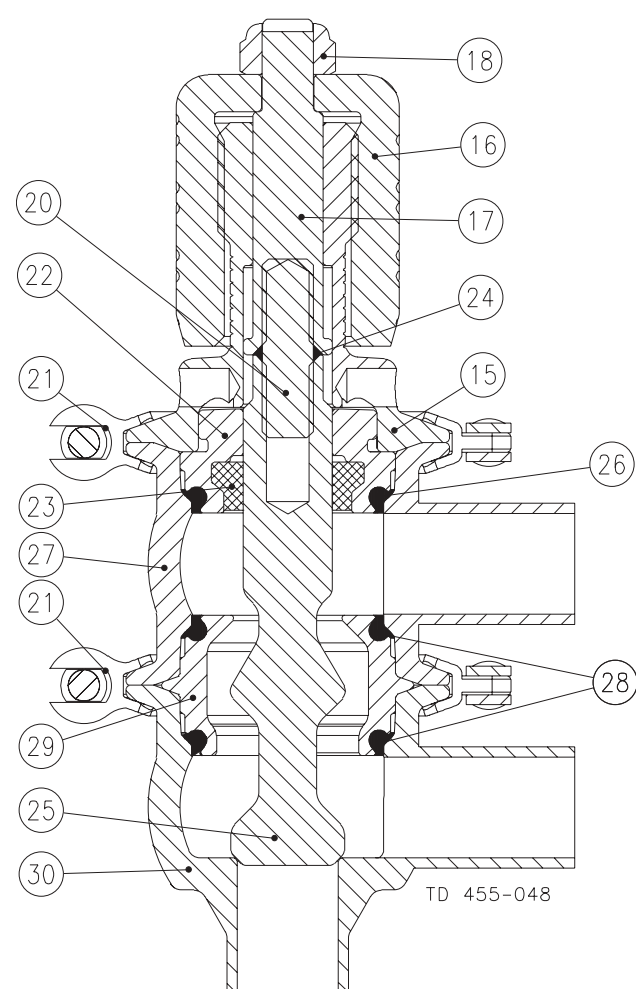
Change-over Valve

The drawings include all items.

See parts list in section 6.3 and 6.5.



Stop Valve



Change-over Valve

6.2 Small Single Seat Valve Stop Valve DN/OD12.7-19mm

6. Parts list and Service Kits

The parts list includes all items.

Parts List			Service Kits	
Pos.	Qty.	Denomination	Denomination	Item number
1	1	Cylinder	Actuator	
2	2	Middle piece	DN/OD12.7-19mm	9611-92-6323
3●	2	O-ring, NBR		
4	1	Plug		
5	1	Guide pin	Product wetted parts (Standard)	
6	1	Piston rod	DN/OD12.7mm	
7	1	Spring	EPDM	9611-92-6319
8	1	O-ring, NBR	HNBR	9611-92-6317
9●	1	O-ring, NBR	FPM	9611-92-6318
10	1	Piston		
11●	1	O-ring, NBR	DN/OD19mm	
12	1	Lock wire	EPDM	9611-92-6330
13	1	Bonnet	HNBR	9611-92-6328
14	1	Air fitting	FPM	9611-92-6329
19	2	Screw		
20	1	Threaded pin		
21	1	Clamp		
22	1	Sealing element		
23Δ	1	Lip seal, EPDM		
	1	Lip seal, HNBR		
	1	Lip seal, FPM		
24Δ	1	O-ring, NBR		
25Δ	1	Stop plug		
26Δ	1	O-ring, EPDM		
	1	O-ring, FPM		
	1	O-ring, HNBR		
30	1	Lower valve body with welding ends 2 ports		
	1	Lower valve body with welding ends 3 ports		
	1	Lower valve body with clamp ends 2 ports		
	1	Lower valve body with clamp ends 3 ports		

Δ : Service kits - product wetted parts
● : Service kits for actuator, NBR



6.3 Small Single Seat Valve Manual Stop Valve DN/OD12.7-19mm

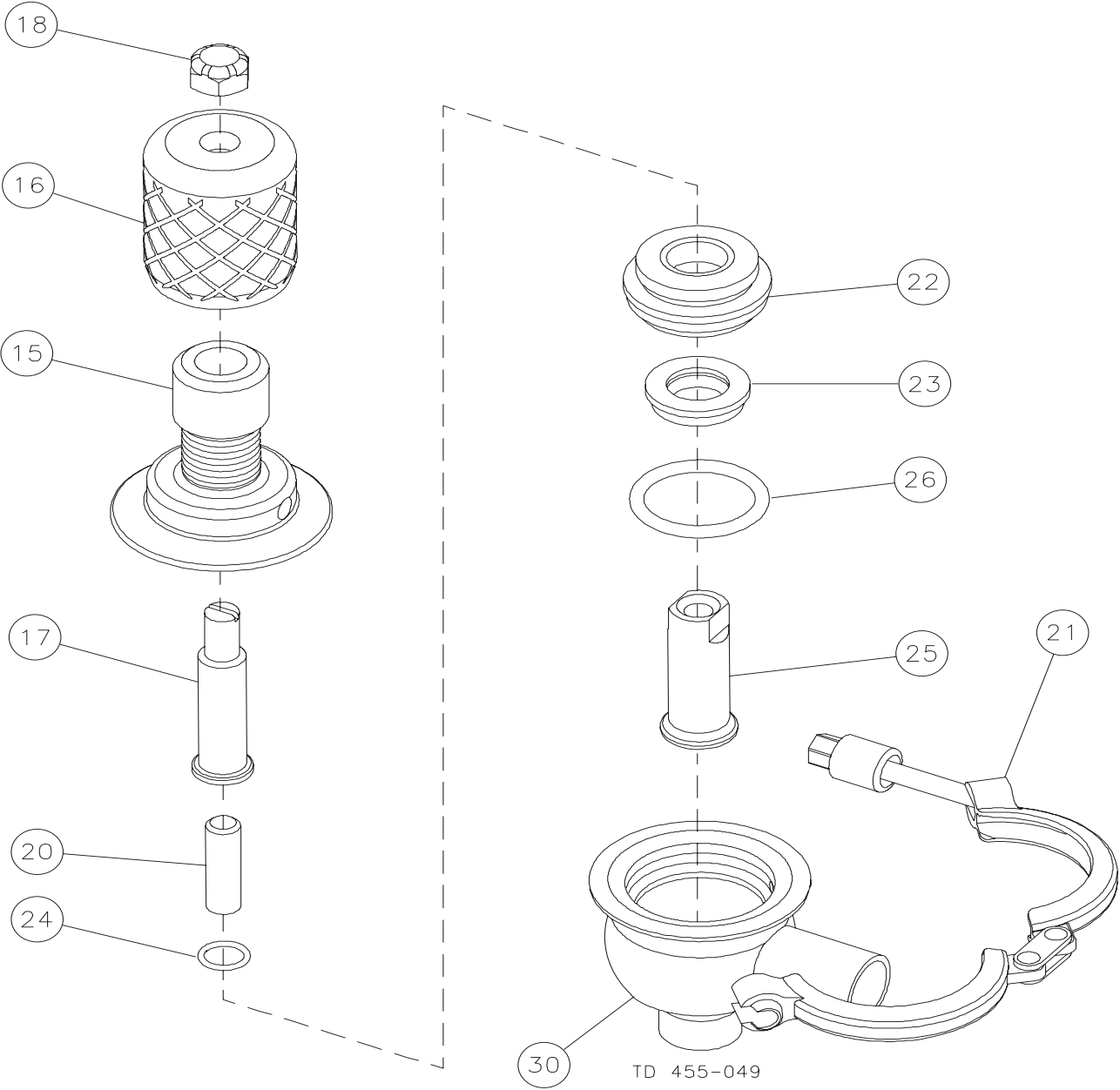
6. Parts list and Service Kits

The parts list includes all items.

Parts List			Service Kits	
Pos.	Qty.	Denomination	Denomination	Item number
15	1	Manual bonnet	Product wetted parts (Standard)	
16	1	Handle		
17	1	Stem extension		
18	1	Lock nut	DN/OD12.7mm	
20	1	Threaded pin	EPDM	9611-92-6319
21	1	Clamp	HNBR	9611-92-6317
22	1	Sealing element	FPM	9611-92-6318
23Δ	1	Lip seal, EPDM	DN/OD19mm	
	1	Lip seal, HNBR	EPDM	9611-92-6330
	1	Lip seal, FPM	HNBR	9611-92-6328
24Δ	1	O-ring, NBR	FPM	9611-92-6329
25Δ	1	Stop plug		
26Δ	1	O-ring, EPDM		
	1	O-ring, FPM		
	1	O-ring, HNBR		
30	1	Lower valve body with welding ends		
		2 ports		
	1	Lower valve body with welding ends		
		3 ports		
	1	Lower valve body with clamp ends		
		2 ports		
	1	Lower valve body with clamp ends		
		3 ports		

Δ : Service kits - product wetted parts

This page shows an exploded drawing of Small Single Seat Valve, manual stop valve.



6.4 Small Single Seat Valve Change-over Valve DN/OD12.7-19 mm

6. Parts list and Service Kits

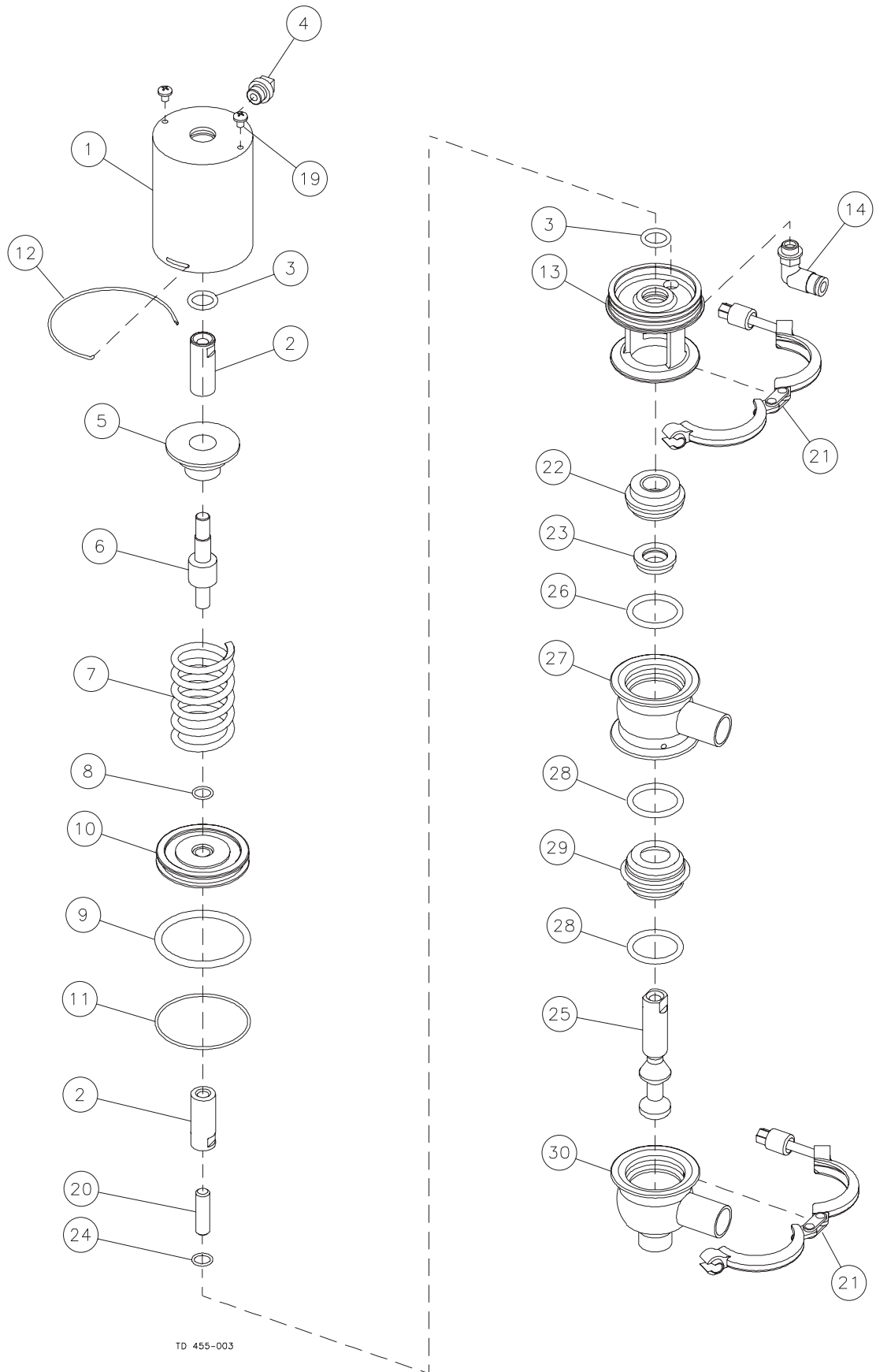
The parts list includes all items.

Parts List			Service Kits	
Pos.	Qty.	Denomination	Denomination	Item number
1	1	Cylinder	Actuator	
2	2	Middle piece	DN/OD12.7 - 19mm	9611-92-6323
3●	2	O-ring, NBR		
4	1	Plug		
5	1	Guide pin	Product wetted parts (Standard)	
6	1	Piston rod	DN/OD12.7mm	
7	1	Spring	EPDM	9611-92-6322
8	1	O-ring, NBR	HNBR	9611-92-6320
9●	1	O-ring, NBR	FPM	9611-92-6321
10	1	Piston		
11●	1	O-ring, NBR	DN/OD19mm	
12	1	Lock wire	EPDM	9611-92-6333
13	1	Bonnet	HNBR	9611-92-6331
14	1	Air fitting	FPM	9611-92-6332
19	2	Screw		
20	1	Threaded pin		
21	2	Clamp		
22	1	Sealing element		
23Δ	1	Lip seal, EPDM		
	1	Lip seal, HNBR		
	1	Lip seal, FPM		
24Δ	1	O-ring, NBR		
25Δ	1	Change-over plug		
26Δ	1	O-ring, EPDM		
	1	O-ring, FPM		
	1	O-ring, HNBR		
27	1	Upper valve body with welding ends		
		1 ports		
	1	Upper valve body with welding ends		
		2 ports		
	1	Upper valve body with clamp ends		
		1 ports		
	1	Upper valve body with clamp ends		
		2 ports		
28Δ	2	O-ring, EPDM		
	2	O-ring, FPM		
	2	O-ring, HNBR		
29	1	Valve seat		
30	1	Lower valve body with welding ends		
		2 ports		
	1	Lower valve body with welding ends		
		3 ports		
	1	Lower valve body with clamp ends		
		2 ports		
	1	Lower valve body with clamp ends		
		3 ports		

Δ : Service kits - product wetted parts

● : Service kit for actuator, NBR

This page shows an exploded drawing of Small Single Seat Valve, change-over valve.



6.5 Small Single Seat Valve Manual Change-Over Valve DN/OD12.7-19mm

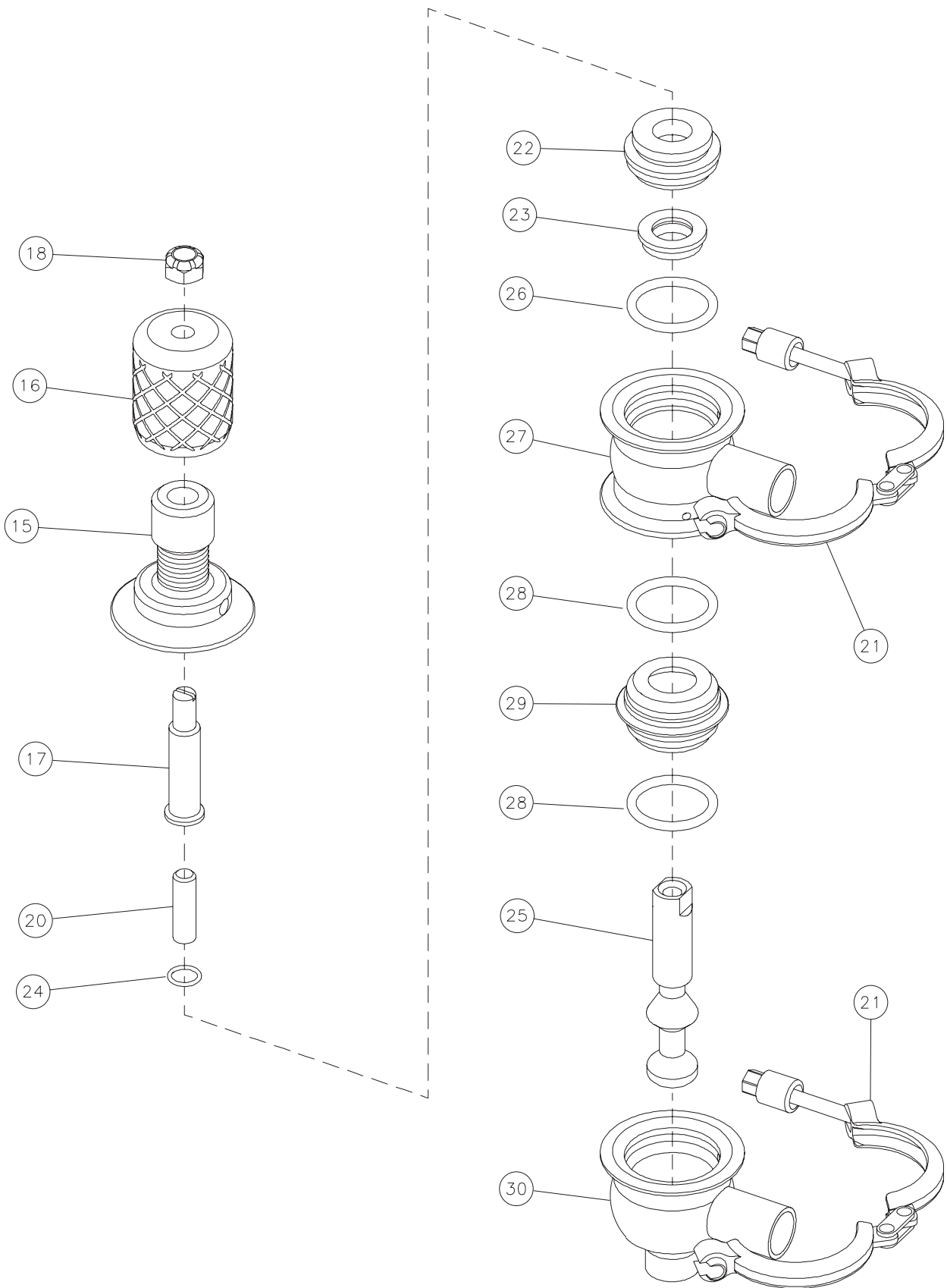
6. Parts list and Service Kits

The parts list includes all items.

Parts List			Service Kits	
Pos.	Qty.	Denomination	Denomination	Item number
15	1	Manual bonnet	Product wetted parts (Standard) DN/OD12.7mm	
16	1	Handle		
17	1	Stem extension		
18	1	Lock nut		
20	1	Threaded pin	EPDM	9611-92-6322
21	2	Clamp	HNBR	9611-92-6320
22	1	Sealing element	FPM	9611-92-6321
23Δ	1	Lip seal, EPDM	DN/OD19mm	
	1	Lip seal, HNBR		
	1	Lip seal, FPM		
24Δ	1	O-ring, NBR		
25Δ	1	Change-over plug	EPDM	9611-92-6333
26Δ	1	O-ring, EPDM	HNBR	9611-92-6331
	1	O-ring, FPM	FPM	9611-92-6332
	1	O-ring, HNBR		
27	1	Upper valve body with welding ends 1 ports		
	1	Upper valve body with welding ends 2 ports		
	1	Upper valve body with clamp ends 1 ports		
	1	Upper valve body with clamp ends 2 ports		
28Δ	2	O-ring, EPDM		
	2	O-ring, FPM		
	2	O-ring, HNBR		
29	1	Valve seat		
30	1	Lower valve body with welding ends 2 ports		
	1	Lower valve body with welding ends 3 ports		
	1	Lower valve body with clamp ends 2 ports		
	1	Lower valve body with clamp ends 3 ports		

Δ : Service kits - product wetted parts

This page shows an exploded drawing of Small Single Seat Valve, manual change-over valve.



TD 455-050

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.