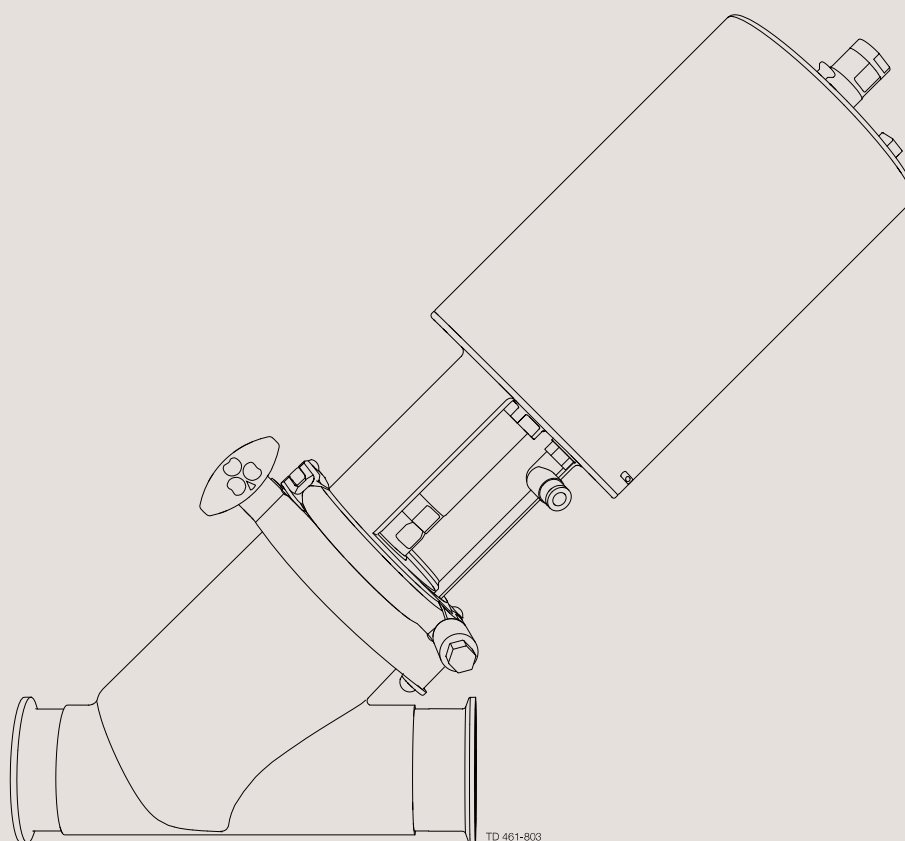




# Instruction Manual

## Unique Single Seat Valve Y-body



ESE00691-EN7 2022-10

Original manual



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

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# 1 Declarations of Conformity

## EU Declaration of Conformity

The Designated Company

Alfa Laval Kolding A/S, Albuen 31, DK-6000 Kolding, Denmark, +45 79 32 22 00  
Company name, address and phone number

---

Hereby declare that

Valve  
Designation

---

Unique SSV LS PN10  
Type

---

Serial number from 1000000 to 70000000000

is in conformity with the following directives with amendments:

- Machinery Directive 2006/42/EC
- Pressure Equipment Directive 2014/68/EU category 1 and subjected to assessment procedure Module A.

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

Global Product Quality Manager  
Title

---

Lars Kruse Andersen  
Name

---

Kolding, Denmark  
Place

---

2022-10-01  
Date (YYYY-MM-DD)

---

  
Signature

---

This Declaration of Conformity replaces Declaration of Conformity dated 2018-04-01

---



# 1 Declarations of Conformity

## UK Declaration of Conformity

The Designated Company

Alfa Laval Kolding A/S, Albuen 31, DK-6000 Kolding, Denmark, +45 79 32 22 00

Company name, address and phone number

Hereby declare that

Valve

Designation

Unique SSV LS PN10

Type

Serial number from 1000000 to 70000000000

is in conformity with the following directives with amendments:

- The Supply of Machinery (Safety) Regulations 2008
- The Pressure Equipment (Safety) Regulations 2016 category 1 and subjected to assessment procedure Module A

Signed on behalf of: Alfa Laval Kolding A/S

Global Product Quality Manager

Title

Lars Kruse Andersen

Name

Kolding, Denmark

Place

2022-10-01

Date (YYYY-MM-DD)



Signature

DoC Revison\_01\_102022

**UK  
CA**



## 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.

This Instruction manual is designed to provide the user with the information to perform tasks safely for all phases in the lifetime of the product supplied.

The user shall always read the safety section first. Hereafter the user can skip to the relevant section for the task to be carried out or for the information needed.

This is the complete manual for the supplied product.

#### **Operators**

The operators shall read and understand the instruction manual for the supplied product.

#### **Maintenance personnel**

The maintenance personnel shall read and understand the instruction manual.

The maintenance personnel or technicians shall be skilled within the field required to carry out the maintenance work safely.

#### **Trainees**

Trainees can perform tasks under the supervision of an experienced employee.

#### **People in general**

The public shall not have access to the supplied product.

#### **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 directly.

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

## 2.2 Warning signs

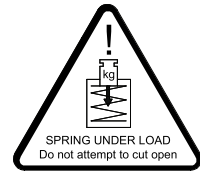
General warning



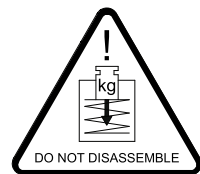
Caustic agents



Danger of injury: (an extra yellow label marked on the actuator from June 2016)  
Do **NOT** attempt to cut the actuator open due to spring under load.  
(The lock wire opening is locked).



Danger of injury (lasermarked on the actuator)  
Do **NOT** attempt to disassemble the actuator due to spring under load danger!  
(The lock wire opening is locked)



## 2 Safety

All warnings in the manual are summarised on this page.

Pay special attention to the instructions below so that severe personal injury and/or damage to the valve are avoided.

### 2.3 Safety precautions

#### Actuators

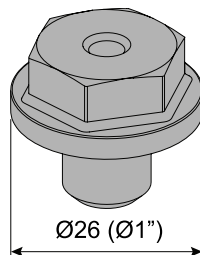
If support air is utilised:



- Shock in the actuator must **NEVER** occur
- Support air on high pressure actuator versions is **NOT** allowed

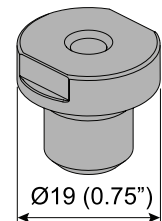
To prevent shock in the actuator and to prevent exceeding 10 bar/145 PSI product pressure, Alfa Laval recommends **NOT** to exceed 3 bar/43.5 PSI support air on the spring side in all the Unique SSV actuators.

If support air is connected always use the 3 bar/43.5 PSI air relief fittings = 9611995903. Using the air relief fitting also extends the service life of the actuator piston o-ring.



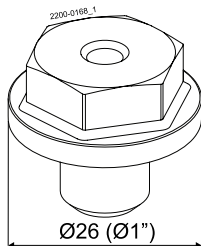
#### Pos. no. 5

For actuators, manufactured year 2005-2018, with serial number from 1000000 - 5999999 and from 20000000000 - 59999999999 always use steel adapter (pos 5) = 9614065301  
Tighten torque = 30 Nm



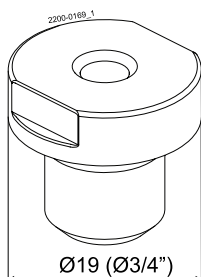
#### Pos. no. 5

For actuators, manufactured year 2019 --> with serial number from 6000000 to 7000000 and from 60000000000 to 70000000000 always use steel adapter (pos 5) = 9615374701  
Tighten torque = 15 Nm



#### Pos. no. 5

For actuators, manufactured year 2005-2018, with serial number from 1000000 - 5999999 and from 20000000000 - 59999999999 always use steel adapter (pos 5) = 9614065301  
Tighten torque = 30 Nm



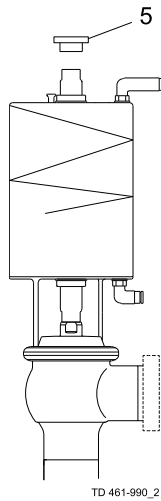
#### Pos. no. 5

For actuators, manufactured year 2019 --> with serial number from 6000000 to 7000000 and from 60000000000 to 70000000000 always use steel adapter (pos 5) = 9615374701  
Tighten torque = 15 Nm



All warnings in the manual are summarised on this page.

Pay special attention to the instructions below so that severe personal injury and/or damage to the valve are avoided.



Alfa Laval recommends max. 3 bar support air  
Always use the "3 bar air relief fittings" on support air.  
Alfa Laval article number = 9611995903

TD 461-990\_2

## 2 Safety

---

All warnings in the manual are summarised 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 section 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



**Never** cut the actuator open, due to spring under load - if marked with this warning



Do **NOT** attempt to disassemble the actuator due to spring under load danger!



### 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 section 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 section 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

**Always** use Alfa Laval genuine spare parts



**Never** cut the actuator open, due to spring under load danger - if marked with this warning



Do **NOT** attempt to disassemble the actuator due to spring under load danger!



### 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

*All warnings in the manual are summarised on this page.*

*Pay special attention to the instructions below so that severe personal injury and/or damage to the valve are avoided.*

---

### **STORAGE**

Ideally, as a guide Alfa Laval recommend:

- Store supplied product as supplied in original packaging
  - Port opening should be protected against any ingress
  - Bare steel (not stainless) should be lightly oiled/greased
  - Store in a clean, dry place without direct sunlight or UV light
  - Temperature range -5 to 40°C
  - Relative humidity less than 60%
  - No exposure to corrosive substances (also air contained).
-

## 3 Installation

*The instruction manual is part of the delivery. Study the instructions carefully.  
The items refer to parts list and service kits section.  
The valve is 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.

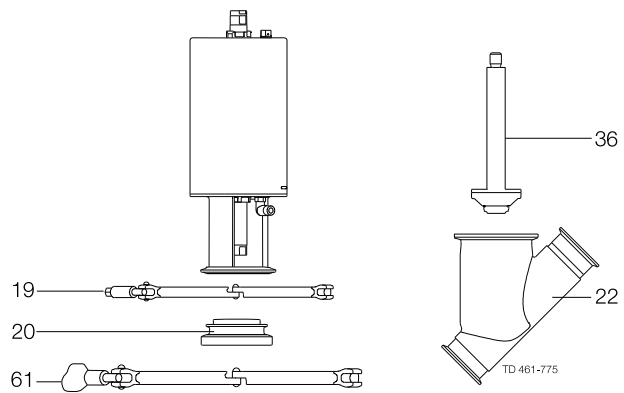
#### Check the delivery for:

1. Complete valve.
2. Delivery note.
3. Instruction Manual

#### Step 2

##### Complete actuator:

1. Bonnet (20).
2. Upper clamp (19).
3. Valve plug (36).
4. Valve body (22).
5. Lower clamp (61)



#### 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.

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

## 3.2 General installation

### Step 1



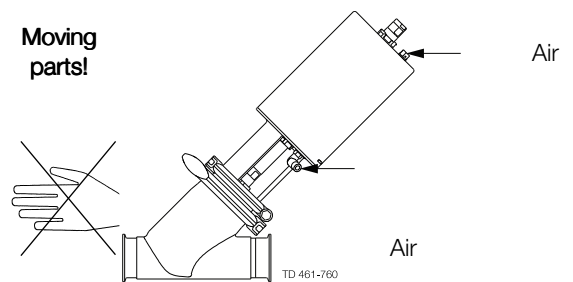
**- CAUTION**

- Alfa Laval cannot be held responsible for incorrect installation.
  - **Always** release compressed air after use.
  - **Always** read the technical data thoroughly.
- See section 6 Technical data.

### Step 2



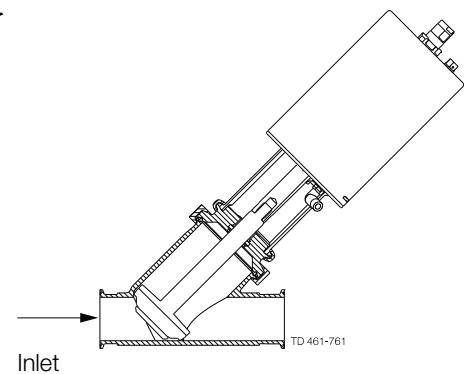
**Never** touch moving parts if the actuator is supplied with compressed air.



### Step 3

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

**Avoid water hammering!**



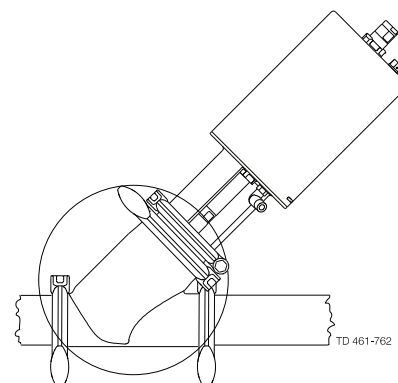
### Step 4

Avoid stressing the valve.

**Pay special attention to:**

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

**Risk of damage!**



### 3 Installation

---

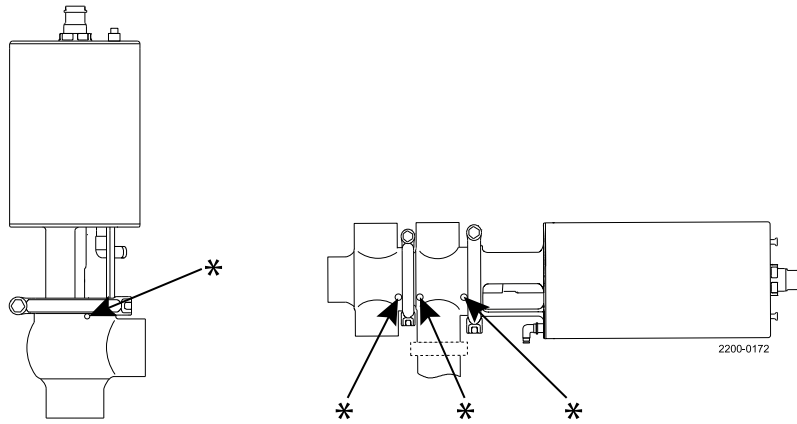
*Study the instructions carefully and pay special attention to the warnings!*

---

#### Step 5

Make sure that the leak detection hole in the valve body:

1. is visible, when mounting the valve vertically
2. always is downwards due to self-draining, when the valve is mounted horizontally.



\* = Leakage detection hole

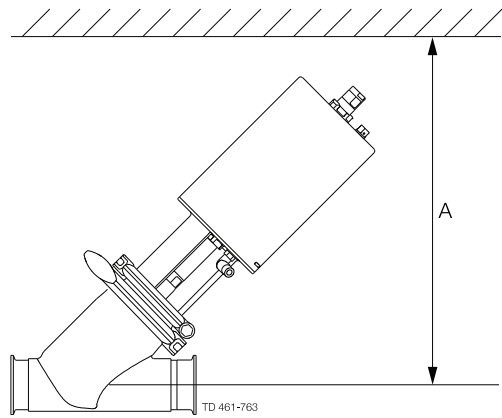
---

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

## 3.3 Welding

### Step 1

Valve size	A (mm)
DN50/51 mm	478
DN65/63.5 mm	490
DN80/76.1 mm	564
DN100/101.6 mm	605

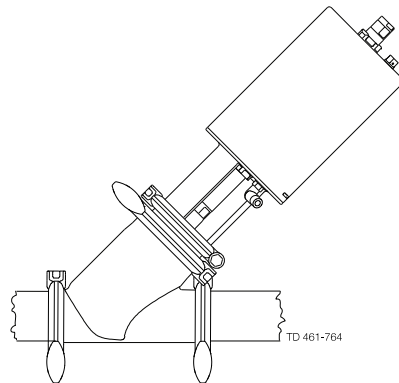


A = Incl. top unit

### Step 2

Assemble the valve in accordance with the steps in section 5.4 Valve assembly.

**Pay special attention to the warnings!**

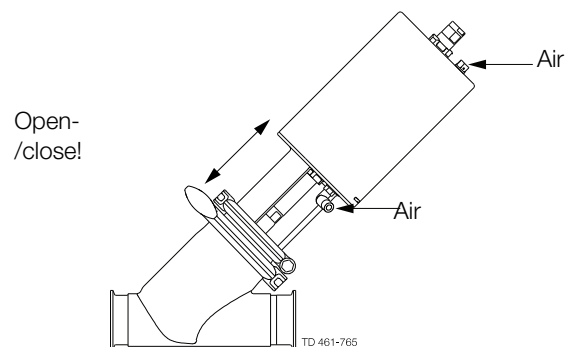


### Step 3

#### 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 items refer to the parts list and service kits section.

---

### 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 reused, recycled or used for energy recovery
- Plastics should be recycled or burnt at a licensed waste incineration plant
- Metal straps should be sent for material recycling

#### • Maintenance

- During maintenance, oil and 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 wearing parts must be disposed of in accordance with local regulations

#### • Scrapping

- At end of use, the equipment must be recycled in accordance with 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. If the actuator is marked with a danger warning, do not attempt to cut the actuator open.



Do **NOT** attempt to disassemble the actuator due to spring under load danger!



If marked with this warning, do **NOT** attempt to cut the actuator open, due to spring under load danger!

---



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

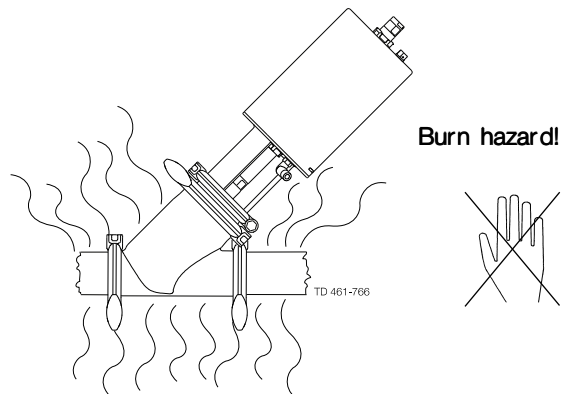


- **CAUTION**  
 Alfa Laval cannot be held responsible for incorrect installation.
- **Always** release compressed air after use.
- **Always** read the technical data thoroughly.  
 See section 6 Technical data.
- **Always** use Alfa Laval genuine spare parts.  
 The warranty of Alfa Laval products is dependent on use of  
 Alfa Laval genuine spare parts.

### Step 2



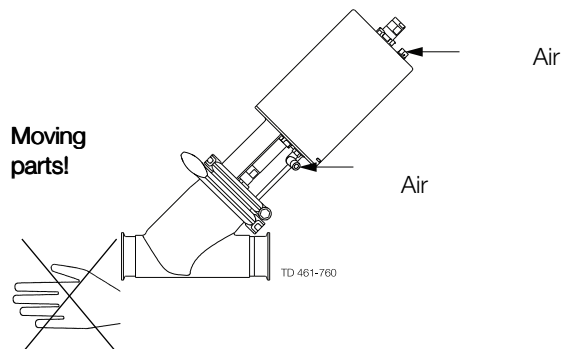
**Never** touch the valve or the pipelines when processing hot liquids or when sterilising.



### Step 3



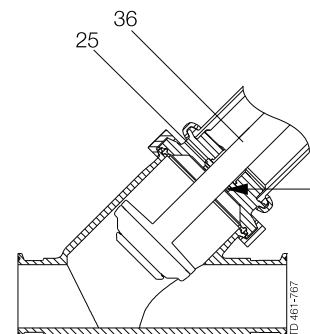
**Never** touch moving parts if the actuator is supplied with compressed air.



### Step 4

#### Lubrication of valves:

1. Ensure smooth movement between lip seal (25) and plug stem (367).
2. Lubricate the lip seal with Alfa Laval Lubricant if necessary (see section 4.1).



## 4 Operation

---

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

*Ensure that the valve operates smoothly.*

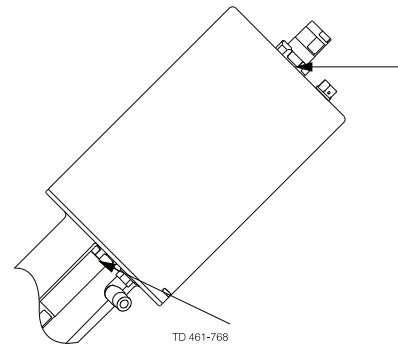
*The items refer to the parts list and service kits section.*

---

### Step 5

#### Lubrication of actuator

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



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

## 4.2 Troubleshooting

### NOTE!

Study the maintenance instructions carefully before replacing worn parts. - See section 4.11

Problem	Cause/r esult	Repair
External product leakage	Worn or damaged lip seal and/or O-ring	<ul style="list-style-type: none"> <li>- Replace the seals</li> <li>- Replace with seals of a different rubber grade</li> </ul>
Internal product leakage	<ul style="list-style-type: none"> <li>- Worn or product affected plug seal</li> <li>- Product deposits on the seat and/or plug</li> <li>- Product pressure exceeds actuator specification</li> </ul>	<ul style="list-style-type: none"> <li>- Replace the seal</li> <li>- Replace with a seal of a different rubber grade</li> <li>- Frequent cleaning</li> <li>- Replace with a high pressure actuator</li> <li>- Use auxiliary air on the spring side (do not exceed 3 bar). Alfa Laval article number = 9611995903. See section and section ,</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. See section ,</li> <li>- Throttle air release of solenoid in top unit</li> </ul>
The valve does not open/close	Product pressure exceeds actuator specification	<ul style="list-style-type: none"> <li>- Replace with a high pressure actuator</li> <li>- Reduce product pressure</li> <li>- Use auxiliary air on the spring side. Always use the pressure relief fittings (3 bar) on support side. Alfa Laval article number = 9611995903</li> </ul>

If marked with a danger warning, do **NOT** attempt to cut the actuator open, due to spring under load.



Do **NOT** attempt to disassemble the actuator due to spring under load danger!



Do **NOT** attempt to cut the actuator open due to spring under load danger!

## 4 Operation

The valve is designed for cleaning in place (CIP). CIP = Cleaning In Place.  
Study the instructions carefully and pay special attention to the warnings!  
NaOH = Caustic Soda.  
HNO<sub>3</sub> = Nitric acid.

### 4.3 Recommended cleaning

#### Step 1



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

**Caustic danger!**



**Always** use  
rubber gloves!

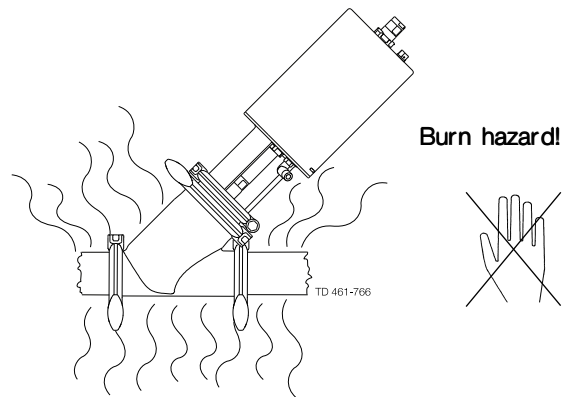


**Always** use  
protective goggles!

#### Step 2



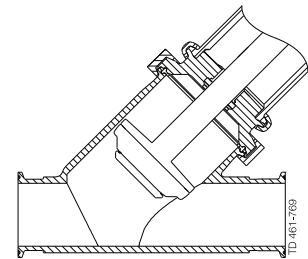
**Never** touch the valve or the pipelines when sterilising.



**Burn hazard!**

#### Step 3

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



#### Step 4

**Examples of cleaning agents:**

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C

1 kg NaOH + 100 l water = Cleaning agent.

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

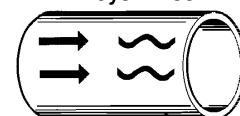
2. 0.5% by weight HNO<sub>3</sub> at 70° C

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

#### Step 5

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

**Always rinsel!**



Clean water    Cleaning agents

*The valve is designed for cleaning in place (CIP). CIP = Cleaning In Place.  
Study the instructions carefully and pay special attention to the warnings!  
NaOH = Caustic Soda.  
HNO<sub>3</sub> = Nitric acid.*

---

### **Step 6**

#### **NOTE**

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

---

## 5 Maintenance

Maintain the valve regularly.

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

Always keep spare rubber seals and lip seals in stock.

### 5.1 General maintenance

#### Step 1



#### - CAUTION

- Alfa Laval cannot be held responsible for incorrect installation.
- **Always** release compressed air after use.
- **Always** read the technical data thoroughly.  
See section 6 Technical data.
- **Always** use Alfa Laval genuine spare parts.  
The warranty of Alfa Laval products is dependent on use of Alfa Laval genuine spare parts.

#### Step 2

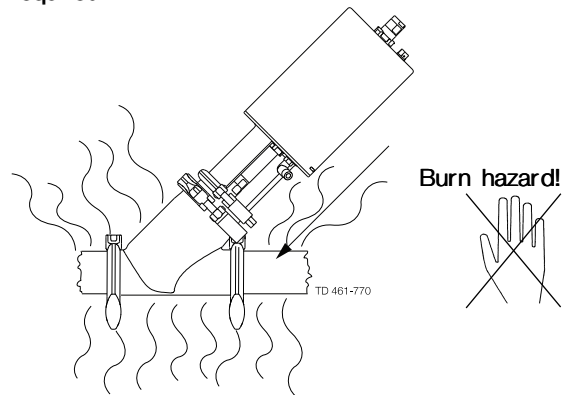


**Never** service the valve when it is hot.



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

Atmospheric  
pressure  
required!



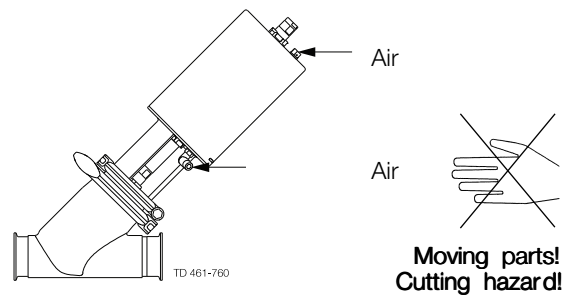
#### Step 3



**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.



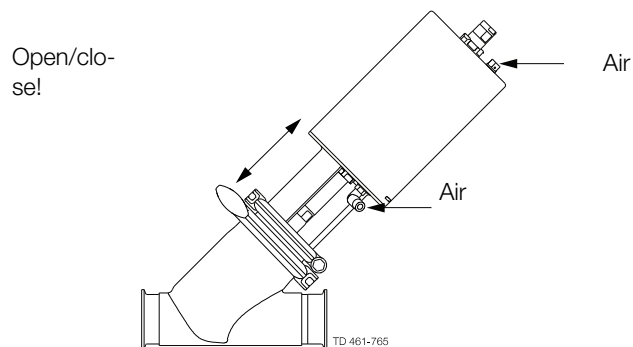
Maintain the valve regularly.  
Study the instructions carefully and pay special attention to the warnings!  
Always keep spare rubber seals and lip seals in stock.

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 inspection planning</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 inspection planning</li> </ul> <b>Replace after leakage</b>
Lubrication	<b>Before fitting</b> Alfa Laval Silicon based Food-grade Lubricant USDA H1 approved 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).

## 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

If the actuator is marked with a danger warning, do **NOT** attempt to cut the actuator open.



Do **NOT** attempt to disassemble the actuator due to spring under load danger!

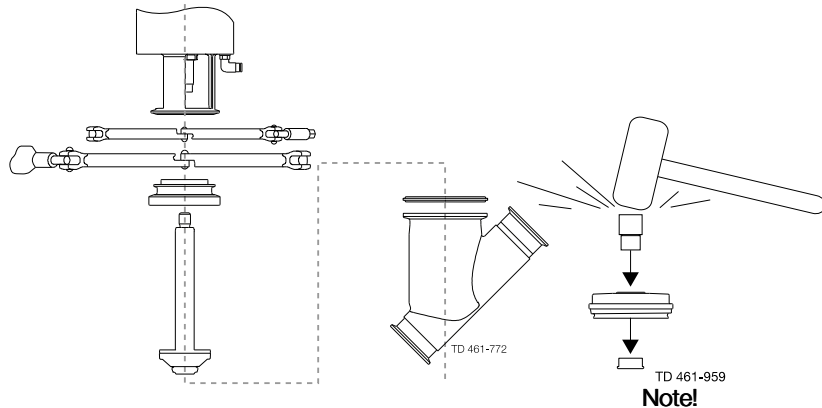


Do **NOT** attempt to cut the actuator open due to spring under load danger!

#### Step 1

##### 1 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. Remove body gasket.
6. Unscrew and remove valve plug.
7. Loosen and remove upper clamp.
8. Remove O-ring, lip seal and bushing in bonnet.  
(Use bushing tool and rubber mallet. See drawing).



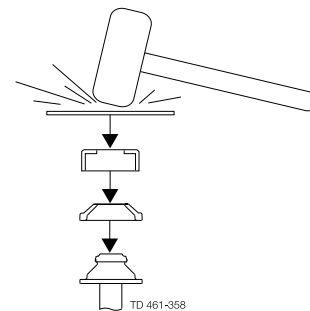
**Pay special attention to the warnings!**

Be careful not to damage the bushing.

**Note!** For plug seal replacement please see section 5.3 TR2 seal ring replacement

### 5.3 TR2 seal 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 seal assembly tool).
5. Using a piece of metal and a rubber mallet, place a precise tap to madke the TR2 plug snap on to the stem. Reverse the tool and tap again to secure proper fit.
6. Examine seal assembly to be sure the TR2 plug is properly mounted, holding the seal assembly in one hand - rotate the TR2 plug.  
(For proper CIP cleaning the TR2 plug should turn freely on the stem.)





## 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.*

---

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

---

## 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.

---

### 5.4 Valve assembly

---

Reverse order of 5.2 Dismantling the valve.

Lubricate O-ring (21) and lip seal (25) with Alfa Laval Lubricant.

Remember to tighten spindle and plug (use two 17 mm spanners).

- Change-over plug tighten torque = **30 Nm**
- Shut-off plug tighten torque = **20 Nm**

If there are vibrations in the pipeline, Alfa Laval recommends to use Loctite no. 243.

The clamps' thread must be lubricated before tightening - max. torque for the clamps is 10-12 Nm.



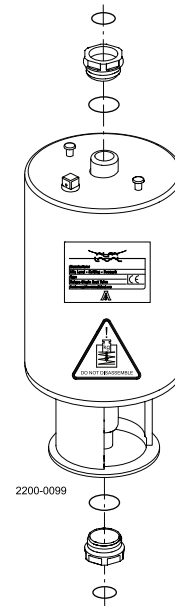
Pay special attention to the warnings.

---

### 5.5 Actuator types

---

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



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 Actuator types

If the actuator is marked with a danger warning, do **NOT** attempt to cut the actuator open.



Do **NOT** attempt to disassemble the actuator due to spring under load danger!

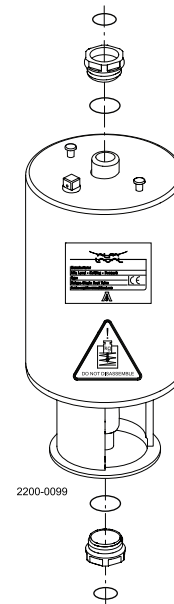


Do **NOT** attempt to cut the actuator open due to spring under load danger!

#### 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.



## 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.

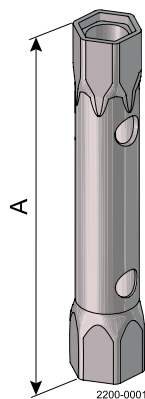
Service tool: see spare parts.

### Step 2

#### Introduction - Standard socket wrench

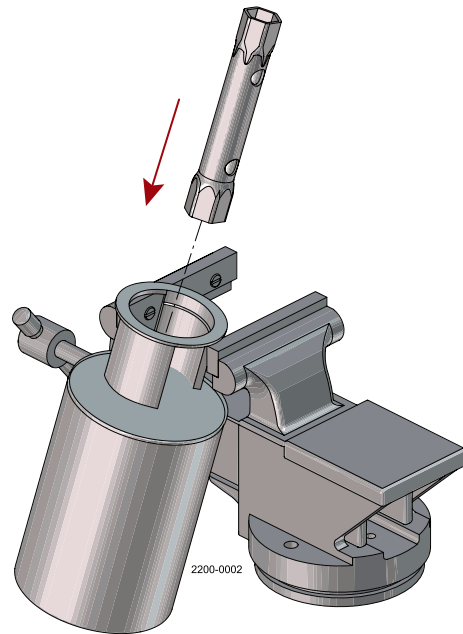
Use a 27 mm socket wrench to mount the bushings, as the space in the yoke is limited.

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



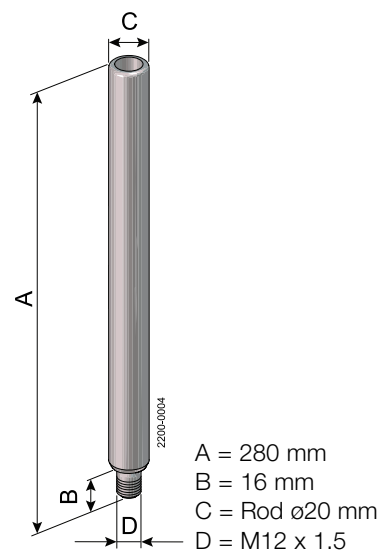
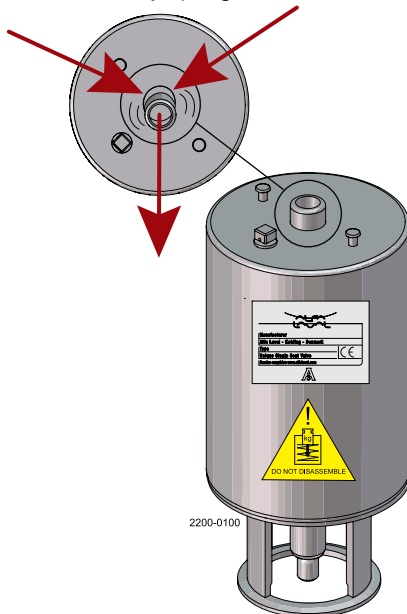
### Step 3

#### 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 (**9614198401**) or it can be manufactured locally using the below dimensions.

Spindle forced off centre by spring inside actuator



Study the instructions carefully.

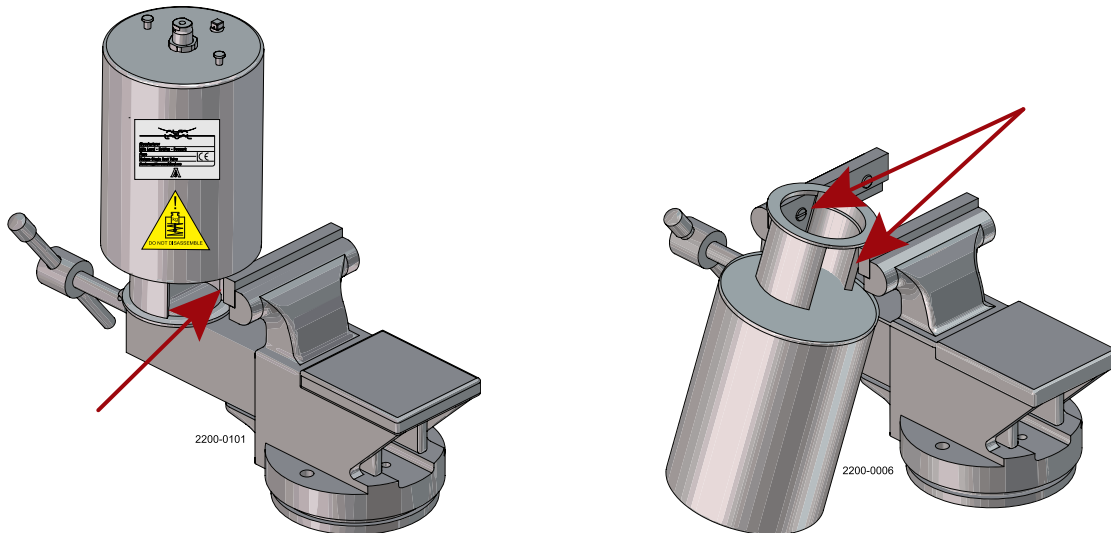
The items refer to the parts list and service kits section. Handle scrap correctly.

A/A = Air/air activated.

Service tool: see spare parts.

### Step 4

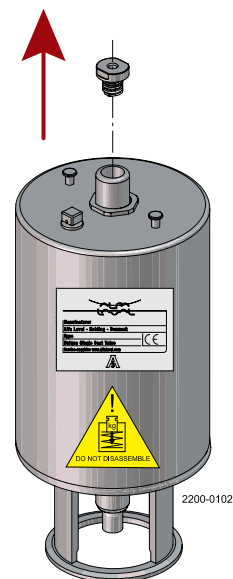
The actuator must be carefully fixed in a vice if it is dismantled from the valve. Be careful not to press the yoke flange oval when fixing the actuator in the vice. Only fix carefully on the "yoke leg" as shown below.



### Step 5

Remove adapter screw.

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



## 5 Maintenance

Study the instructions carefully.

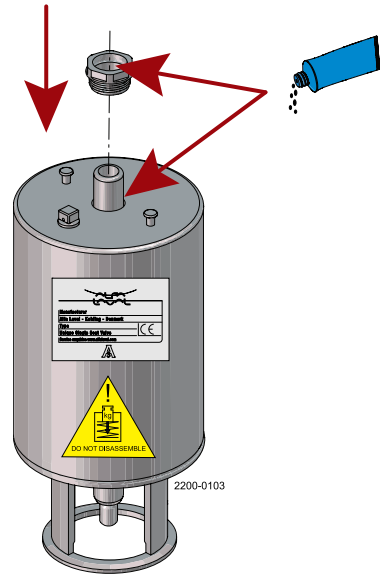
The items refer to the parts list and service kits section. Handle scrap correctly.

A/A = Air/air activated.

Service tool: see spare parts.

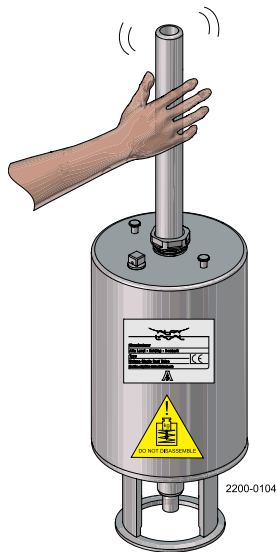
### Step 6

1. Lubricate thoroughly both the actuator spindle and o-rings.
2. Grease with "Molykote Longterm 2 plus".
3. Fit the **bushing** on the spindle.

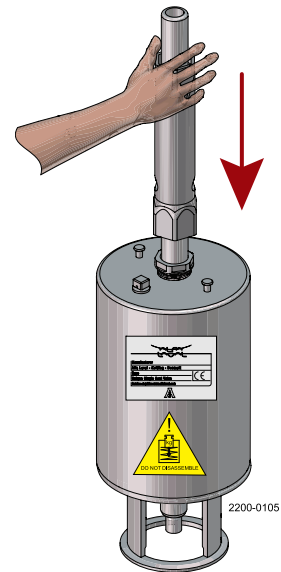


### Step 7

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



Aligning spindle



Socket wrench

*Study the instructions carefully.*

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

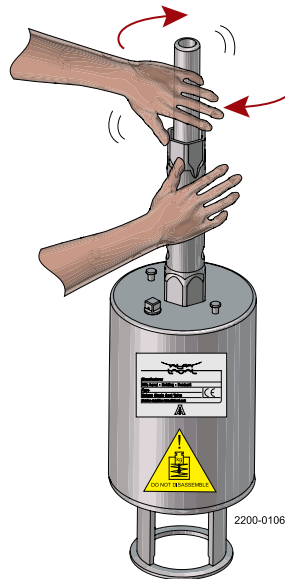
*A/A = Air/air activated.*

*Service tool: see spare parts.*

### Step 8

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 lb-ft) which can be done by turning “hard” by hand.



## 6 Technical data

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

### 6.1 Technical data

The valve is a pneumatic seat valve in a hygienic and modular design 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.

Standard design The valve is designed to deliver years of reliability and performance as can be expected from all Alfa Laval products.

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			
	DN/OD 51 mm	DN/OD 63.5	DN/OD 76 mm	DN/OD 101.6 mm
Weight (kg)	8.6	11.1	18.6	27.1

#### 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.

#### Safety check

A visual inspection of any protective device (shield, guard, cover or other) on the supplied product shall be carried out at least every 12 months.

If the protective device is lost or damaged, especially when this leads to deterioration of safety performance, it shall be replaced. The fixing of the protective device should only be replaced with fixings of the same or an equivalent type.

#### Inspection acceptance criteria:

- It should not be possible to reach moving parts originally protected by a protective device.
- The protective device must be securely mounted.
- Ensure that screws for the protective device are securely tightened.

#### Procedure in case of non-acceptance:

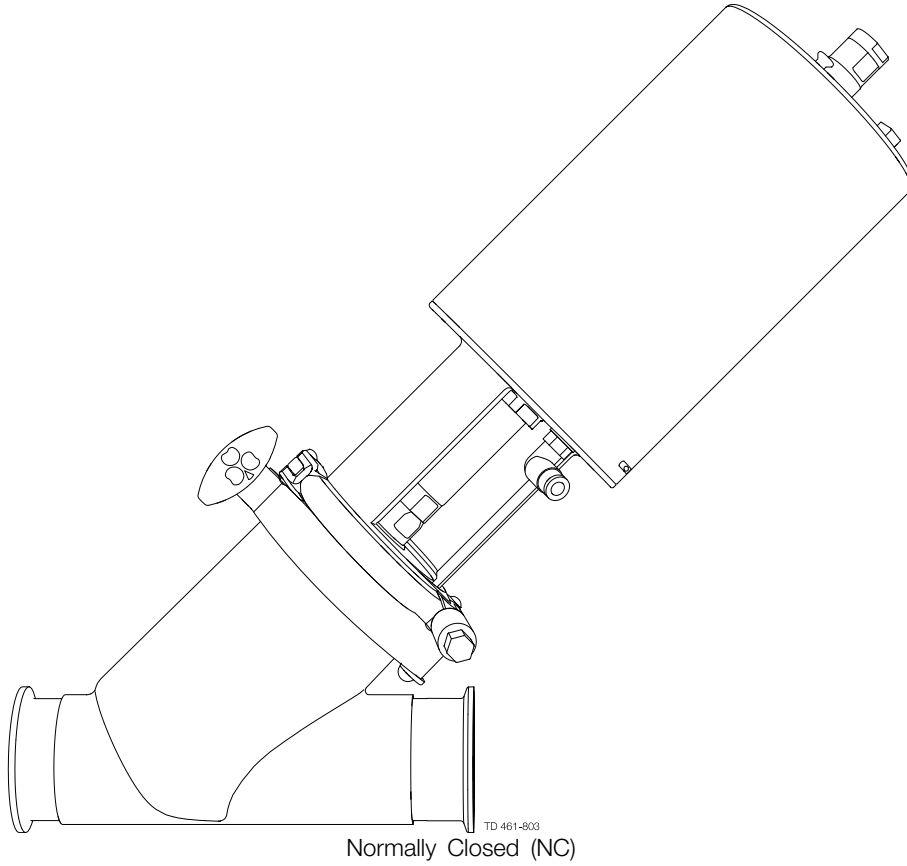
- Fix and/or replace the protective device.



## 7 Parts list and Service Kits

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

### 7.1 Drawing



## 7 Parts list and Service Kits

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

### 7.2 Unique Single Seat Valve – Y-body

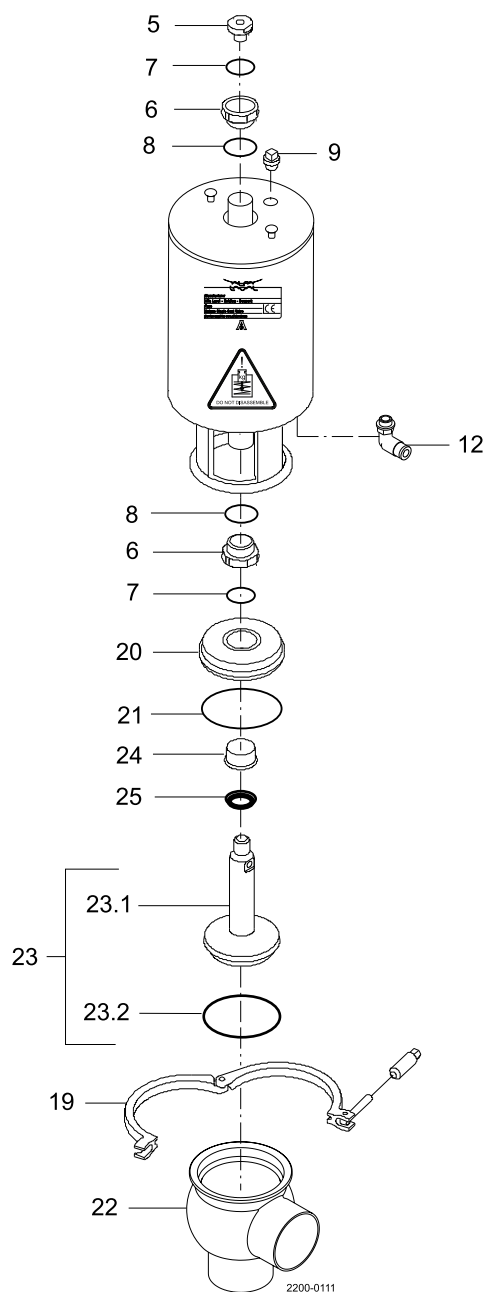
If the actuator is marked with a danger warning do **NOT** attempt to cut the actuator open.



Do **NOT** attempt to disassemble the actuator due to spring under load danger!



Do **NOT** attempt to cut the actuator open, due to spring under load danger!



## 7 Parts list and Service Kits

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

### Parts list

Pos.	Qty	Denomination
		Actuator
		Lip seal set (10 pcs.) EPDM
		Lip seal set (10 pcs.) HNBR
		Lip seal set (10 pcs.) FPM
5	1	Adapter
6 □	2	Bushing
7 □	2	O-ring
8 □	2	O-ring
9	1	Plug
12	1(2)	Air fitting
19	1	Clamp
20	1	Bonnet
22	1	Valve body
24	1	Bushing
25 ♦	1	Lip seal
36	1	Plug, complete
36.1	1	Plug
36.2 ♦	1	Plug seal, PTFE
61	1	Clamp, body
62 ♦	1	Gasket

### Service kits

Denomination	2" 51 mm	2½" 63.5 mm	3" 76.1 mm	4" 101.6 mm
<b>Service kit for Actuator</b>				
□ Service kit .....	9611926500	9611926500	9611926500	9611926500
<b>Service kit for Product wetted parts, standard</b>				
♦ Service kit, EPDM .....	9611926815	9611926816	9611926817	9611926818
♦ Service kit, HNBR/NBR .....	9611926819	9611926820	9611926821	9611926822
♦ Service kit, FPM .....	9611926823	9611926824	9611926825	9611926826

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

Recommended spare parts: Service kits.

TD-900-480/1

**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 directly.

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