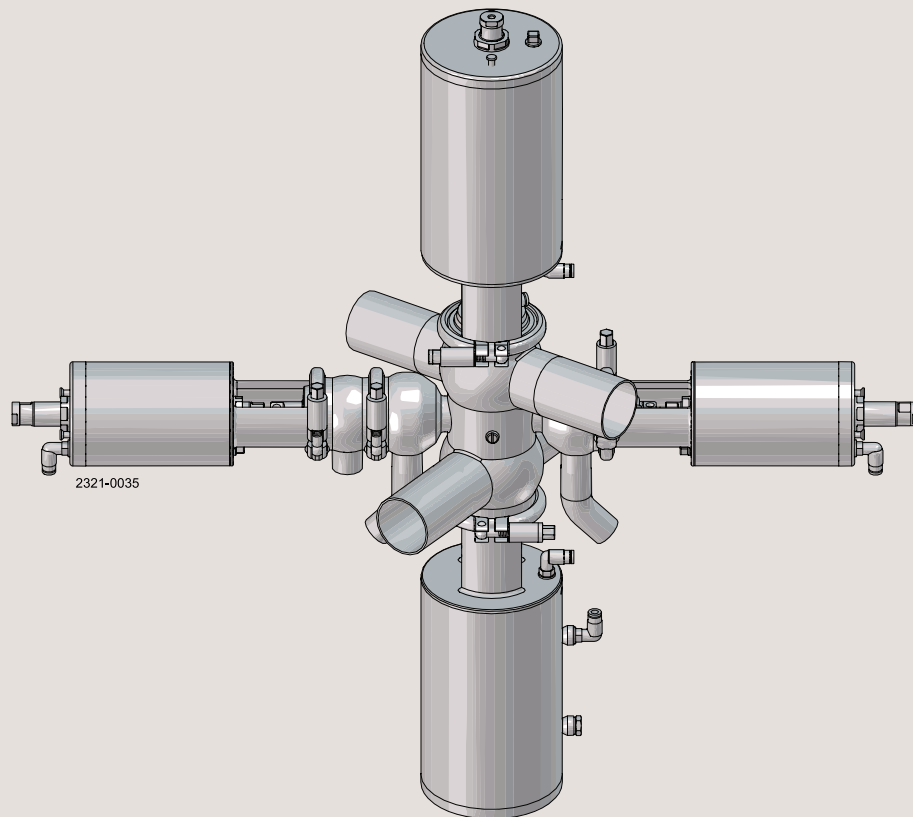




Instruction Manual

Aseptic Mixproof Valve



100000827-EN6 2022-10

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

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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

Aseptic Mixproof PN8

Type

Serial number from AMV 000001

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. May only be used for fluids in Group 2

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 October 11th, 2018



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

Aseptic Mixproof PN8

Type

Serial number from AMV 000001

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. May only be used for fluids in Group 2

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



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 to access the information directly.

2.2 Warning signs

General warning



Caustic agents



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

Warnings are emphasised by means of special signs.

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.

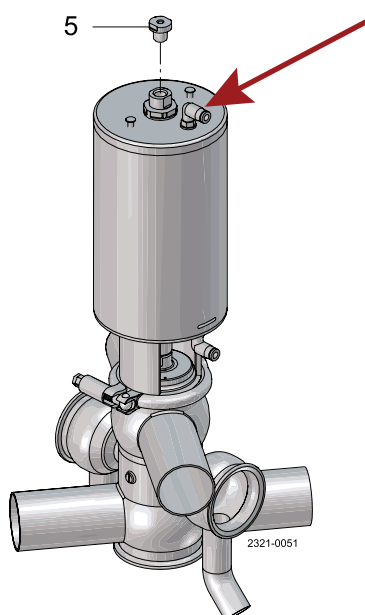
To prevent shock in the actuator and to prevent exceeding 8 bar product pressure, Alfa Laval recommends **NOT** to exceed 3 bar support air on the spring side in the actuators.

Use the “3 bar air relief fitting” = 9611995903

Using the “3 bar air relief fitting” also extends the service life of the actuator piston O-ring.

If support air is connected then the following must be done:

- **Always** use the steel adapter (pos. 5) = 9614065301
Tighten torque 30 Nm
- **Always** use the 3 bar air relief fittings = 9611995903



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

2 Safety

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

Warnings are emphasised by means of special signs.

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 6.1 Technical data)

Always release compressed air after use

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

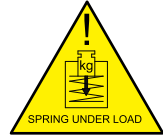
Never touch the valve or the pipelines when processing hot liquids or when sterilising

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 6.1 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 6.1 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

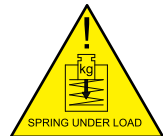
Never stick your fingers through the valve ports if the actuator is supplied with compressed air

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!



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

Warnings are emphasised by means of special signs.

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

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

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

*This instruction manual is part of the delivery. Study the instructions carefully.
The valve is supplied as separate parts as standard (for welding).*

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. Warning label.

Step 2

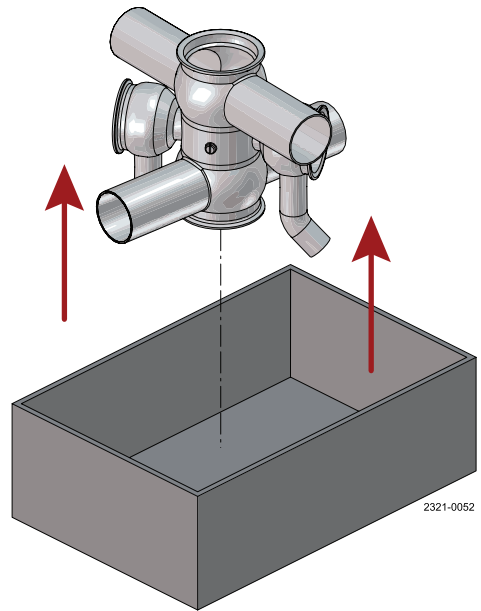
Remove transportation strips.

Step 3

Lift out the valve.

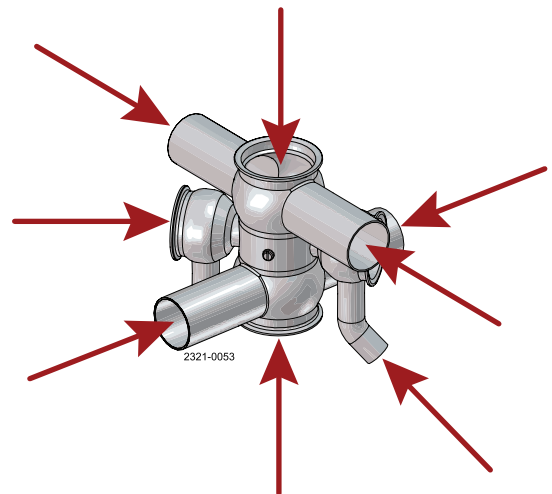
NOTE!

Please note weight of valve printed on the box.



Step 4

Remove possible packing materials for the valve ports.



Step 5



CAUTION

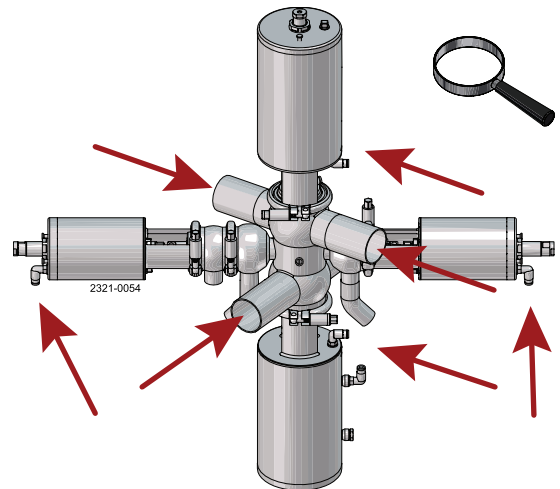
Alfa Laval cannot be held responsible for incorrect installation.

1. Complete valve, shut-off valve or change-over valve.
2. Delivery note.

*This instruction manual is part of the delivery. Study the instructions carefully.
The valve is supplied as separate parts as standard (for welding).*

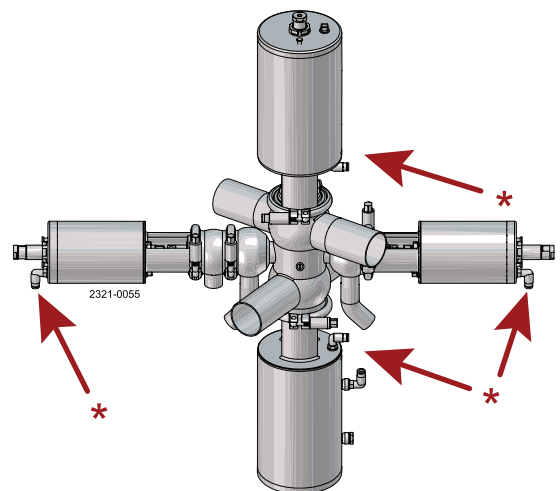
Step 6

Inspect the valve for visible transport damages.



Step 7

Avoid damaging the air connections*, the valve ports and the CIP connections.



3 Installation

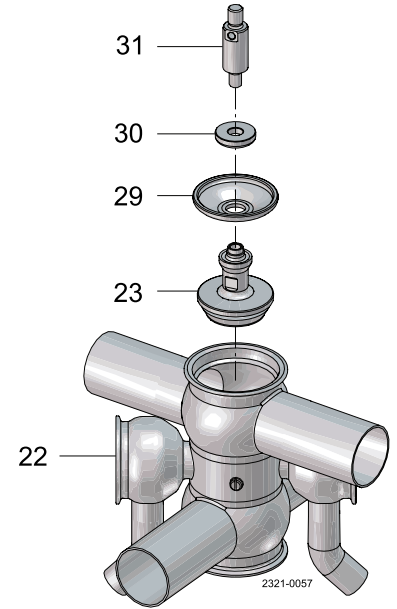
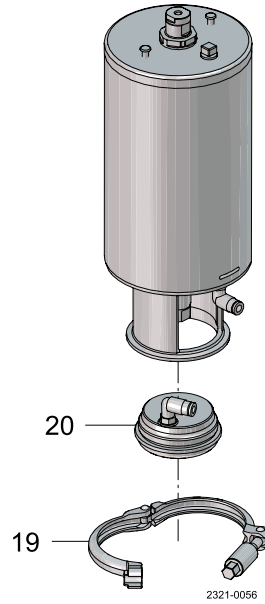
This instruction manual is part of the delivery. Study the instructions carefully.
The valve is supplied as separate parts as standard (for welding).

Step 8

3a

Shut-off valve:

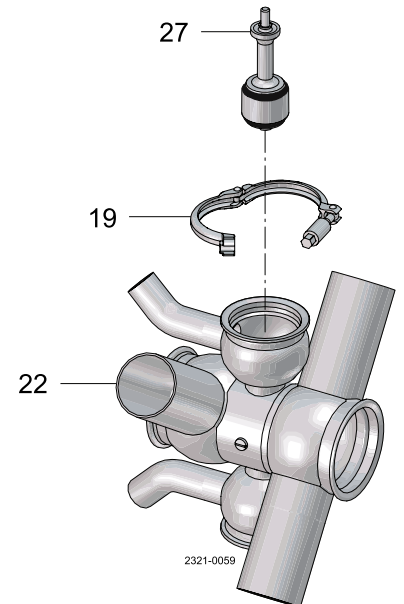
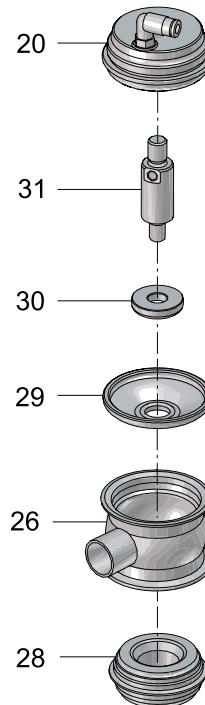
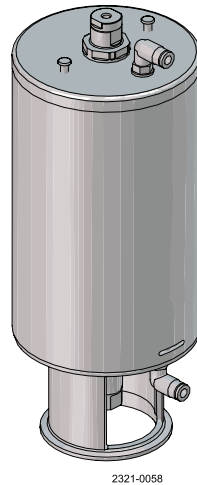
1. Complete actuator
2. Bonnet (20)
3. Clamp (19)
4. Valve plug (23)
5. Valve body (22)
6. Diaphragm (29)
7. Disc for diaphragm (30)
8. Upper spindle (31)



3b

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)
8. Diaphragm (29)
9. Disc for diaphragm (30)
10. Upper spindle (31)



Step 9

Remove possible packing material 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

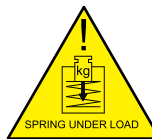


- CAUTION

- Alfa Laval cannot be held responsible for incorrect installation.
- **Always** release compressed air after use.
- **Always** read the technical data thoroughly.
See section 6.1 Technical data.



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

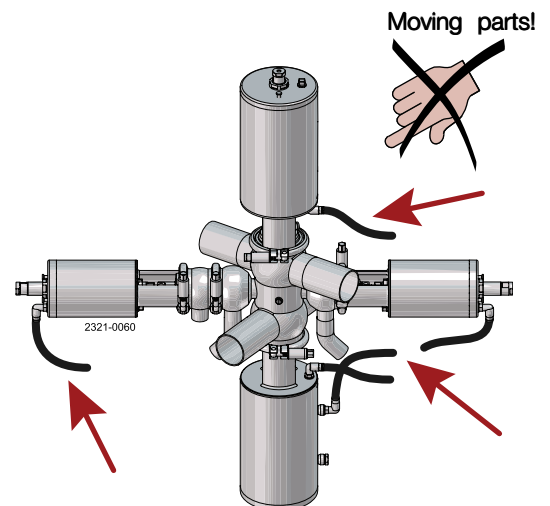


If marked with this warning, do **NOT** attempt to cut the actuator open, due to spring under load danger!

Step 2



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



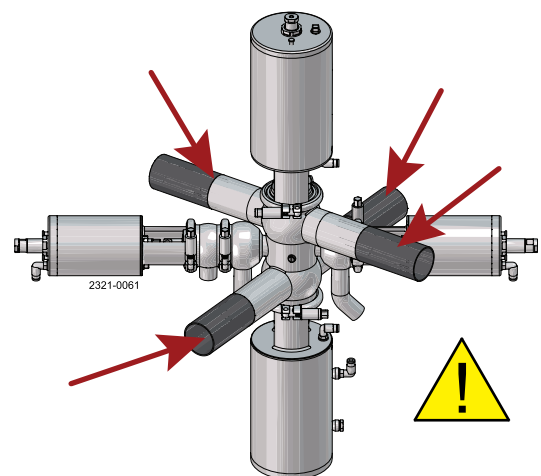
Step 3

Avoid stressing the valve.

Pay special attention to:

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

Risk of damage!



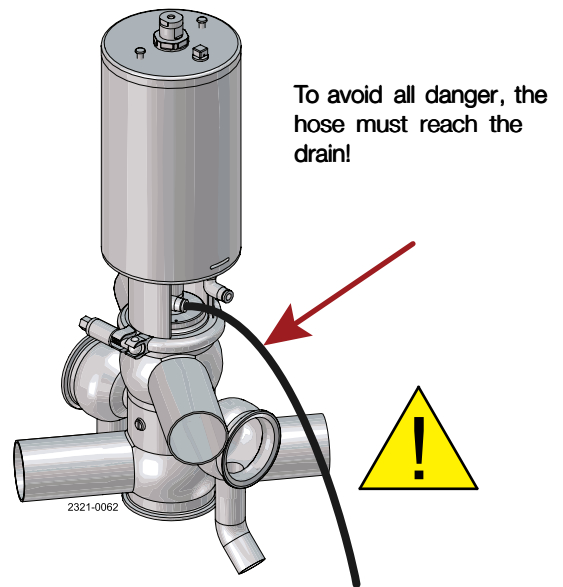
3 Installation

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

Step 4



Always check if the diaphragm is tight - it can be dangerous if it leaks steam/CIP.
The hose must be a 4 mm (1/6") hose for $\varnothing 25$ and a 6 mm (1/4") hose for larger types.



Study the instructions carefully.
 The valve is supplied as separate parts to facilitate welding.
 Check the valve for smooth operation after welding.

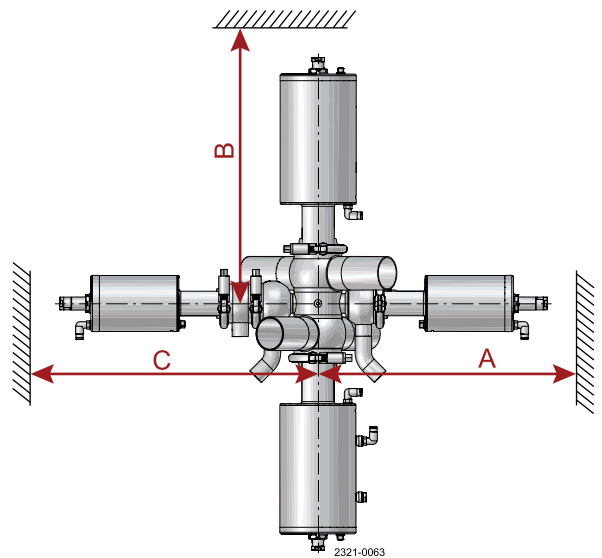
3.3 Welding

Step 1

To ensure safe operation and easy maintenance of the valve, be sure to follow the recommended installation dimensions in the table below.

Valve size	A (mm)*	B (mm)*	C (mm)*
51 mm / 2"	596	603	644
63.5 mm / 2½"	604	609	652
76 mm / 3"	611	643	659

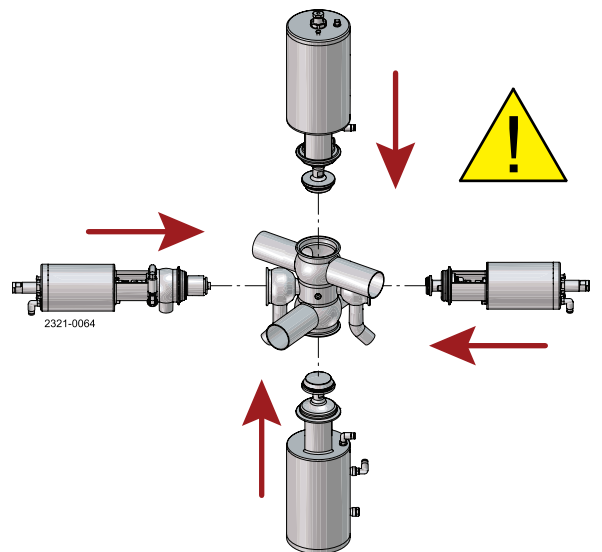
* Recommended clearance for ThinkTop® included.



Step 2

Assemble the valve.

Pay special attention to the warnings!



3 Installation

Study the instructions carefully.

The valve is supplied as separate parts to facilitate welding.

Check the valve for smooth operation after welding.

Step 3

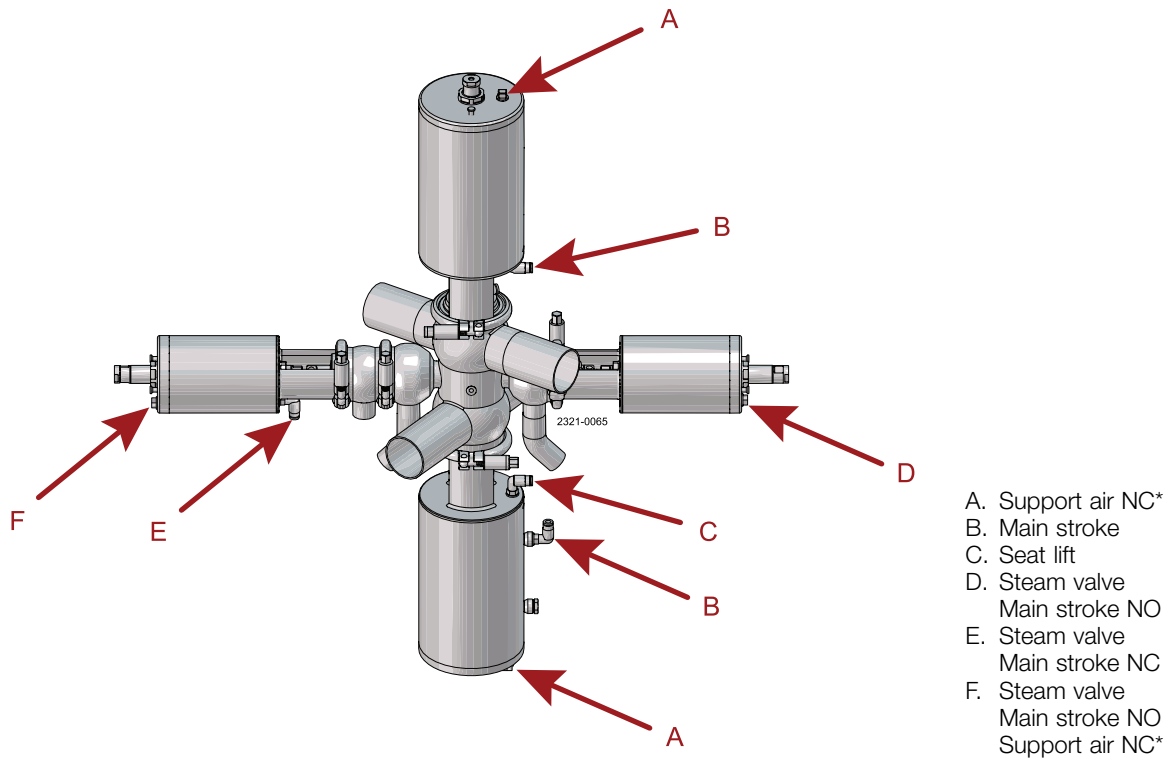
Pre-use check:

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!

* Max. 3 bar support air



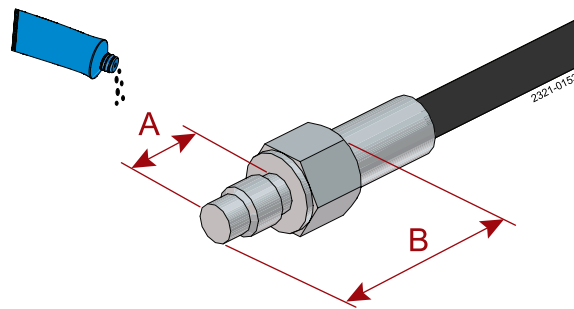
*Study the instructions carefully.
The valve is supplied as separate parts to facilitate welding.
Check the valve for smooth operation after welding.*

3.4 Temperature sensor

The optional temperature sensor should be mounted in the threaded hole between the two valve bodies with a tightening torque of 1.5 Nm.

When mounting, thermal paste must be applied to the thread and end of the sensor (A) to ensure the best possible heat transfer to the temperature sensor.

Make sure that the sensor is protected from outside effects, that could influence the temperature readings (detectable area B)



- A. Thermal paste
 - B. Detectable area
-

3 Installation

3.5 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

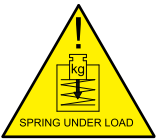
- During maintenance, oil and wearing parts in the machine are replaced
- All metal parts should be sent for material recycling
- Worn out or defective electronic parts should be sent to a licensed handler for material recycling
- Oil and all non-metal wearing parts must be disposed of in accordance 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.

4.1 Operation

Step 1

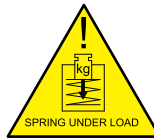


- CAUTION

- Alfa Laval cannot be held responsible for incorrect installation.
- **Always** release compressed air after use.
- **Always** read the technical data thoroughly.
See section 6.1 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.



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



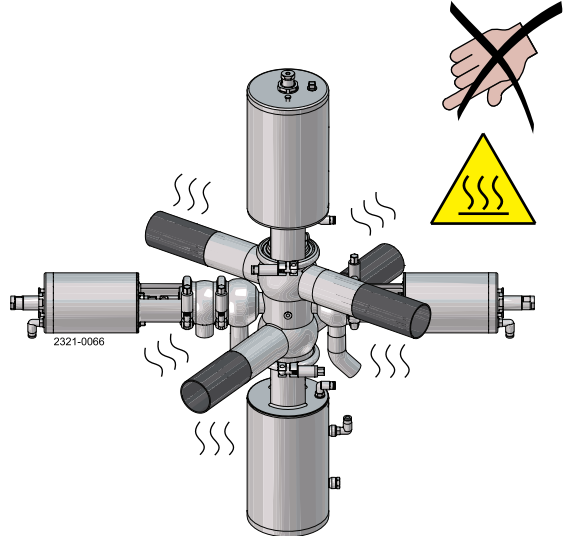
If marked with this warning, do **NOT** attempt to cut the actuator open, due to spring under load danger!

Step 2



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

Burn hazard!

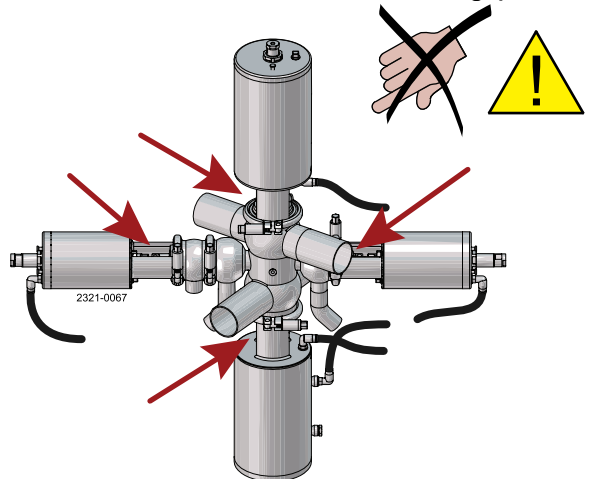


Step 3



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

Moving parts!



4 Operation

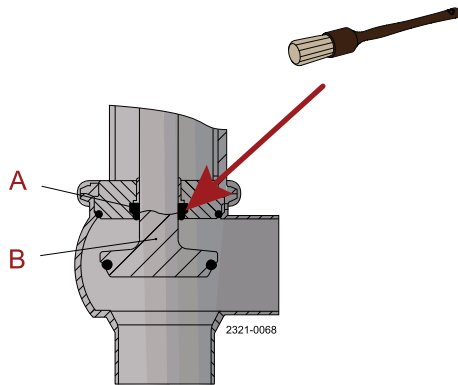
*Study the instructions carefully and pay special attention to the warnings!
Ensure that the valve operates smoothly.*

Step 4

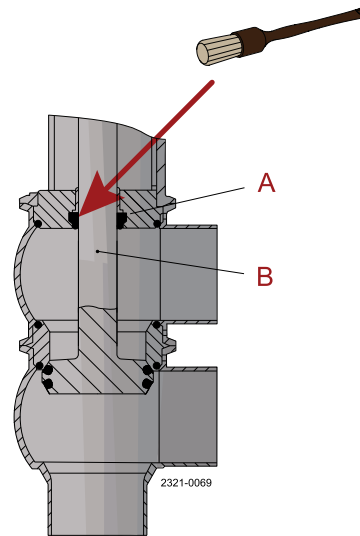
If fitted with hyg. plugs:

1. Ensure smooth movement between lip seal (A) and plug stem (B).
2. Lubricate the lip seal with Alfa Laval Lubricant if necessary.

Shut-off valve



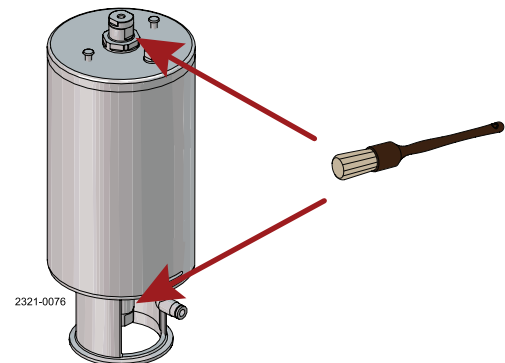
Change-over valve



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.



*Study the instructions carefully and pay special attention to the warnings!
Ensure that the valve operates smoothly.*

4.2 Temperature sensor

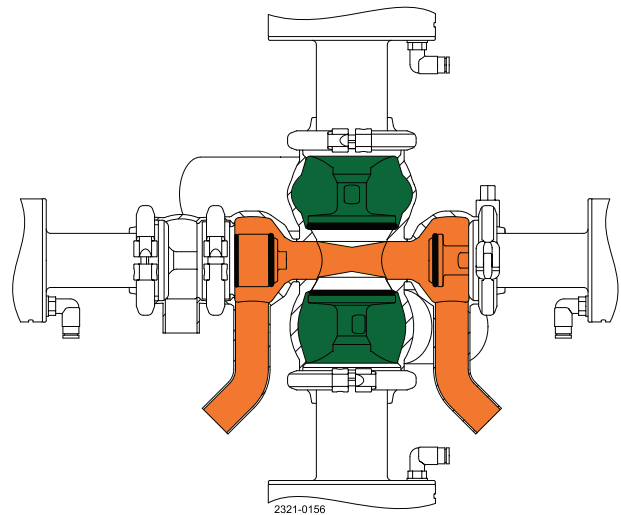
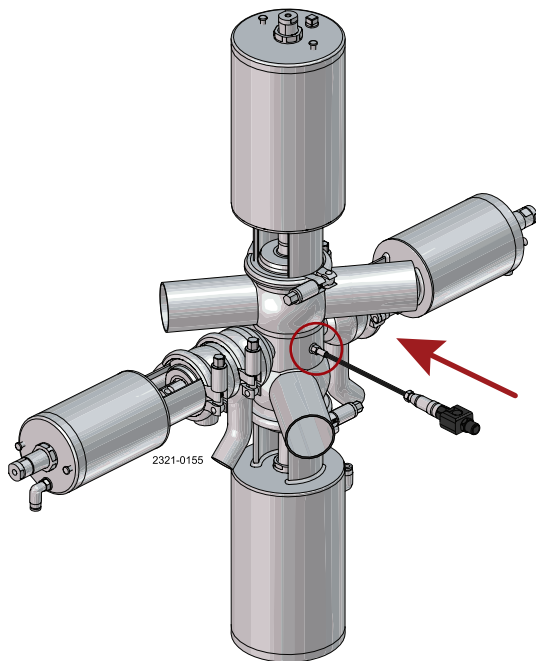
The optional temperature sensor enables validation of the sterilization process. It is placed in the sidewall of the valve body, surrounding the leakage chamber and not inside to ensure an obstacle-free flow through the valve.

The measured temperature will be affected by the actual temperature of the product, the sterile barrier and the surrounding environment the valve is exposed to. This will give a deviation of the actual sterile barrier temperature inside the leakage chamber and the measured temperature.

Ensure validation of temperatures during commissioning and before starting up the production.

For sterilization of the whole valve use min. 130°C for 20 minutes.

Always consult instruction manual of the sensor, to ensure proper installation.



4 Operation

Pay attention to possible faults. Study the instructions carefully.

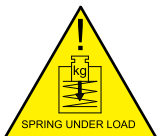
4.3 Trouble shooting

Problem	Cause/r esult	Repair
External product leakage	Worn or damaged lip seal and/or O-ring	<ul style="list-style-type: none"> - Replace the seals - Replace with seals of a different rubber grade
Internal product leakage	<ul style="list-style-type: none"> - Worn or product affected plug seal - Product deposits on the seat and/or plug - Product pressure exceeds actuator specification 	<ul style="list-style-type: none"> - Replace the seal - Replace with a seal of a different rubber grade - Frequent cleaning - Use auxiliary air on the spring side (do not exceed 3 bar). Alfa Laval article number = 9611995903. - See section 2.3 Safety precautions - Reduce product pressure
Water hammer	The flow direction is the same as the closing direction	<ul style="list-style-type: none"> - The flow direction should be against the closing direction. - See section 3.2 General installation - Throttle air release of solenoid in top unit
The valve does not open/close	Product pressure exceeds actuator specification	<ul style="list-style-type: none"> - Reduce product pressure - Use auxiliary air on the spring side. Always use the pressure relief fittings (3 bar) on support side. Alfa Laval article number = 9611995903

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!

The valve is designed for cleaning in place (CIP).
 Study the instructions carefully and pay special attention to the warnings!
 NaOH = Caustic soda. HNO₃ = Nitric acid.
 Internal leakage in the valve is externally visible by means of the leakage outlet.

4.4 Recommended cleaning

Step 1



Always handle lye and acid with great care.

Caustic danger!



Always use rubber gloves!



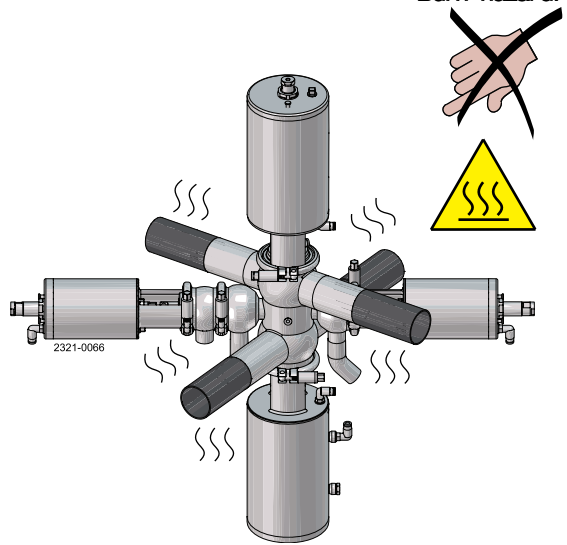
Always use protective goggles!

Step 2



Never touch the valve or the pipelines when sterilising.

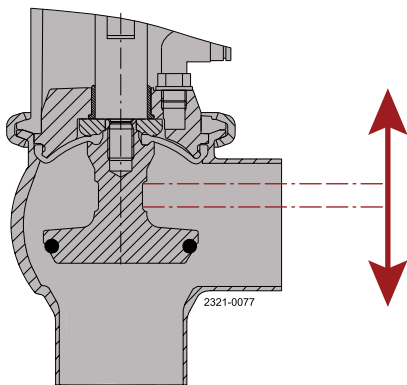
Burn hazard!



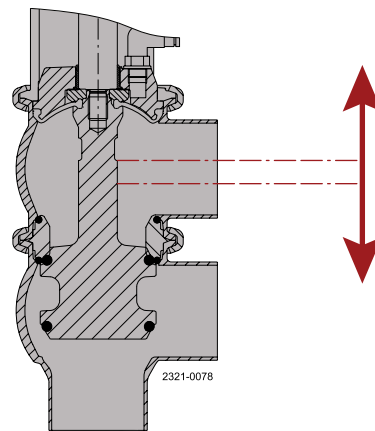
Step 3

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

Shut-off valve



Change-over valve



4 Operation

The valve is designed for cleaning in place (CIP).

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

NaOH = Caustic soda. HNO₃ = Nitric acid.

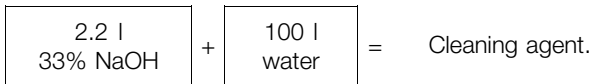
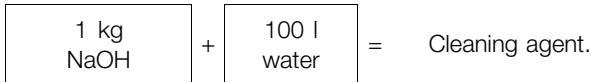
Internal leakage in the valve is externally visible by means of the leakage outlet.

Step 4

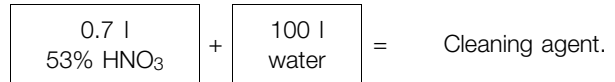
Examples of cleaning agents:

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C



2. 0.5% by weight HNO₃ at 70° C

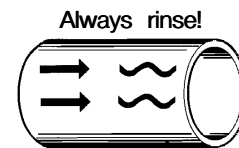


Step 5

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.



Clean water Cleaning agents

The valve is designed for cleaning in place (CIP).

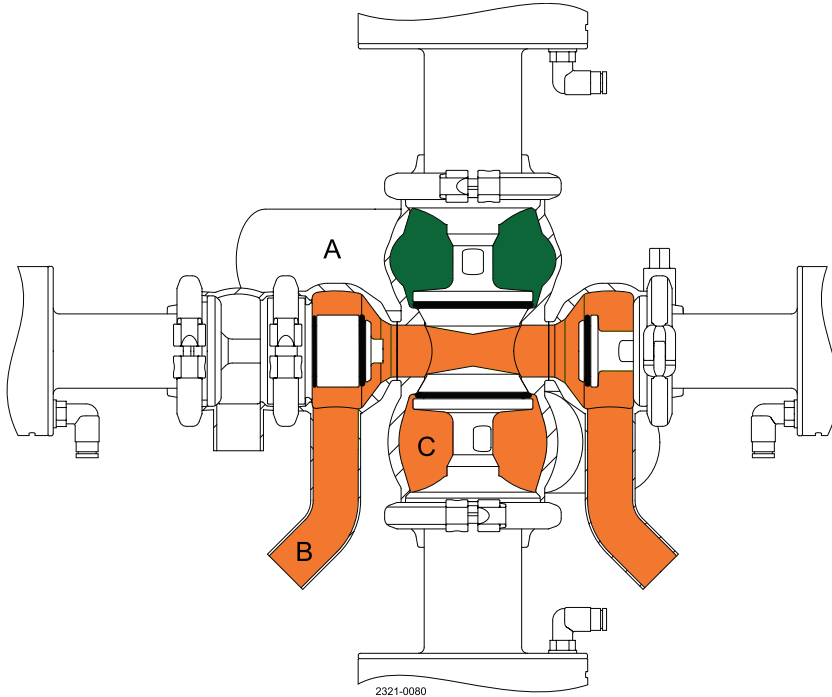
Study the instructions carefully and pay special attention to the warnings!

NaOH = Caustic soda. HNO₃ = Nitric acid.

Internal leakage in the valve is externally visible by means of the leakage outlet.

Sterilization before production*

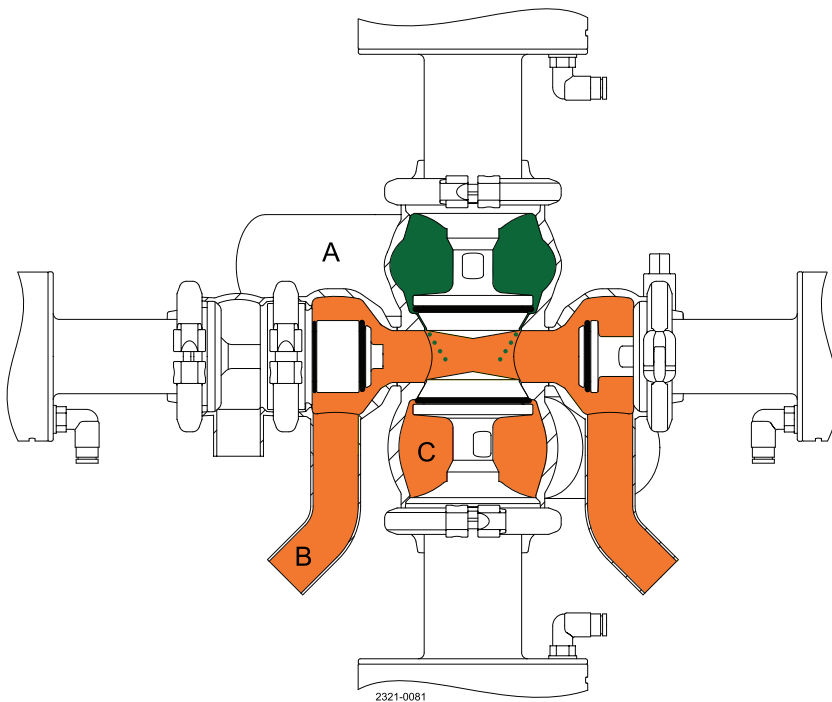
No seat lift



- A. From UHT plant.
Water 135°C
- B. Steam inlet 3 bar
- C. To sterile tank
steam 3 bar

Sterilization before production subsequence*

Seat lift upper



- A. From UHT plant.
Water 135°C
- B. Steam inlet 3 bar
- C. To sterile tank
steam 3 bar

* = Always ensure that the drain plug is the last to close, to prevent a pressure build-up between the valve seats.

4 Operation

The valve is designed for cleaning in place (CIP).

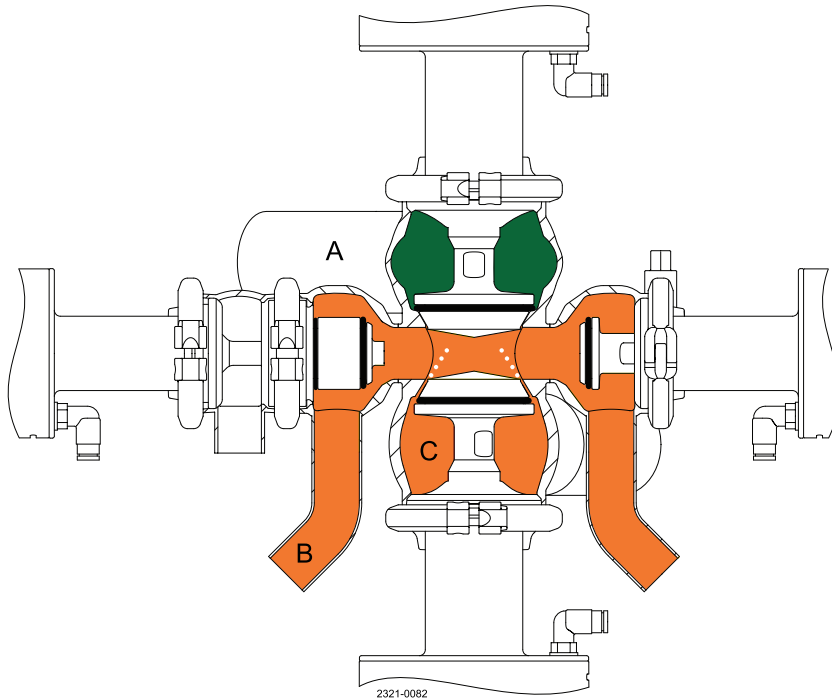
Study the instructions carefully and pay special attention to the warnings!

NaOH = Caustic soda. HNO₃ = Nitric acid.

Internal leakage in the valve is externally visible by means of the leakage outlet.

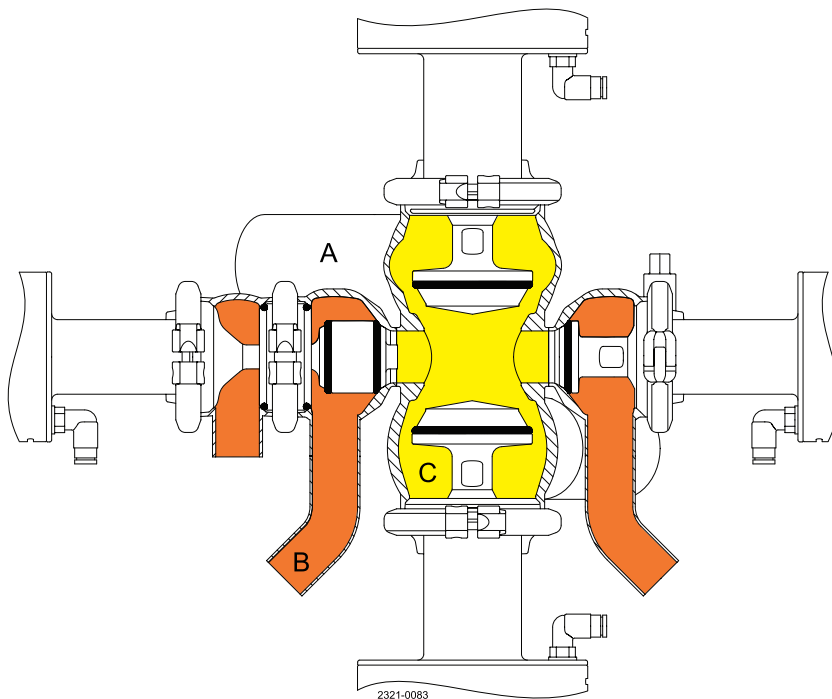
Sterilization before production subsequence*

Seat lift lower



- A. From UHT plant.
Water 135°C
- B. Steam inlet 3 bar
- C. To sterile tank
steam 3 bar

Open valve**
Production



- A. From UHT
- B. Steam inlet 1.2 bar
- C. To sterile tank

*** Always ensure that the drain plug is the last to close, to prevent a pressure build-up between the valve seats.

** When main plugs are closed after production, immediately open the drain and steam forward valves to prevent product build-up in the leakage chamber.

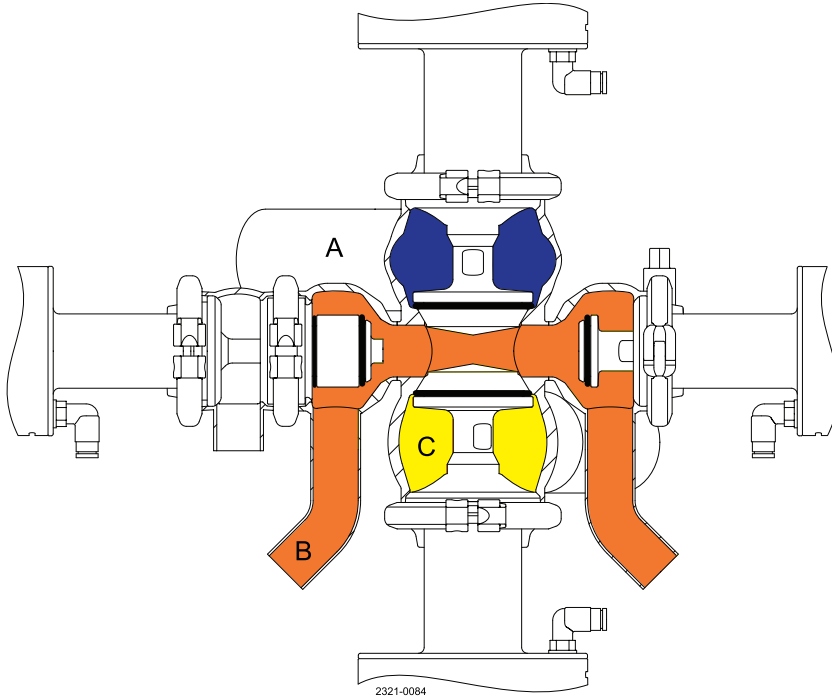
The valve is designed for cleaning in place (CIP).

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

NaOH = Caustic soda. HNO₃ = Nitric acid.

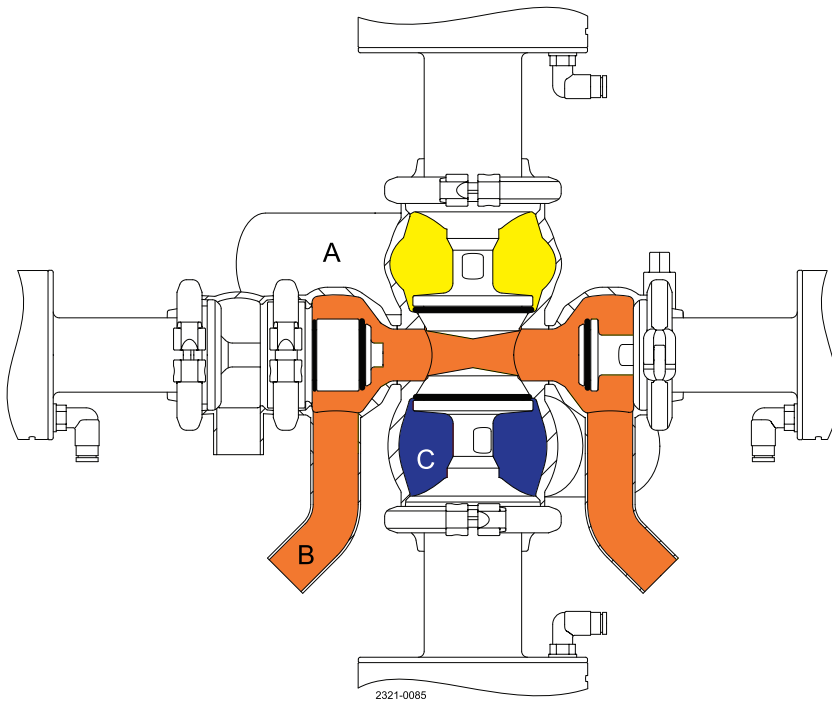
Internal leakage in the valve is externally visible by means of the leakage outlet.

Closed valve*
UHT sterile CIP



- A. UHT plant
Sterile CIP
- B. Steam inlet 1.2 bar
- C. Sterile tank
Tank standby

Closed valve*
Standby



- A. From UHT
- B. Steam supply 1.2 bar
- C. To sterile tank

* Always ensure that the drain plug is the last to close, to prevent a pressure build-up between the valve seats.

4 Operation

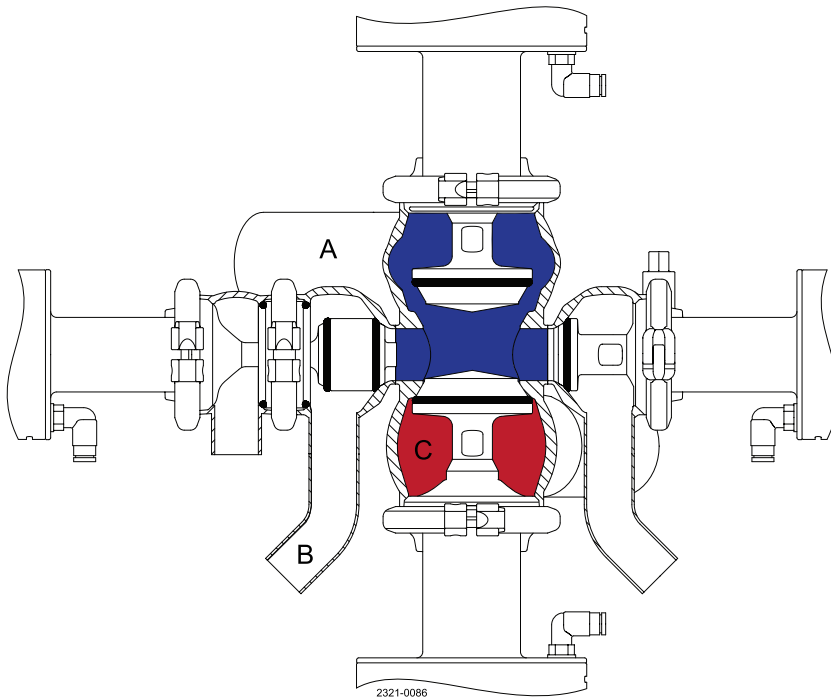
The valve is designed for cleaning in place (CIP).

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

NaOH = Caustic soda. HNO₃ = Nitric acid.

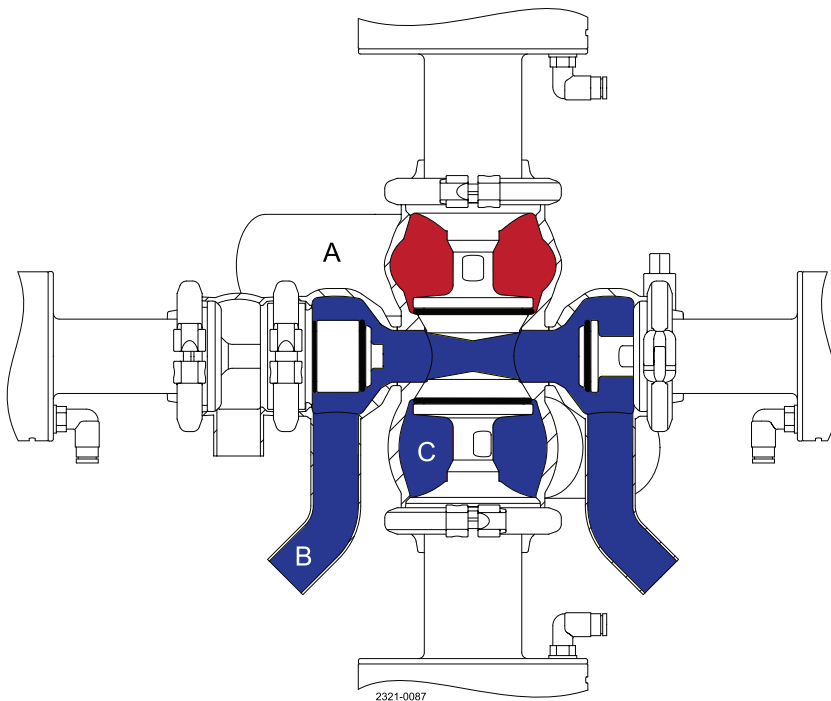
Internal leakage in the valve is externally visible by means of the leakage outlet.

Standard CIP-UHT*



- A. CIP of line from UHT plant (valve open in order to create turbulence for cleaning leakage chamber)
- B. Both leakage chamber valves closed
- C. Sterile tank idle

Standard CIP-sterile tank*



- A. UHT plant
Idle
- B. CIP forward taken from CIP forward
to sterile tank
- C. CIP return to CIP return sterile tank

* Always ensure that the drain plug is the last to close, to prevent a pressure build-up between the valve seats.

The valve is designed for cleaning in place (CIP).

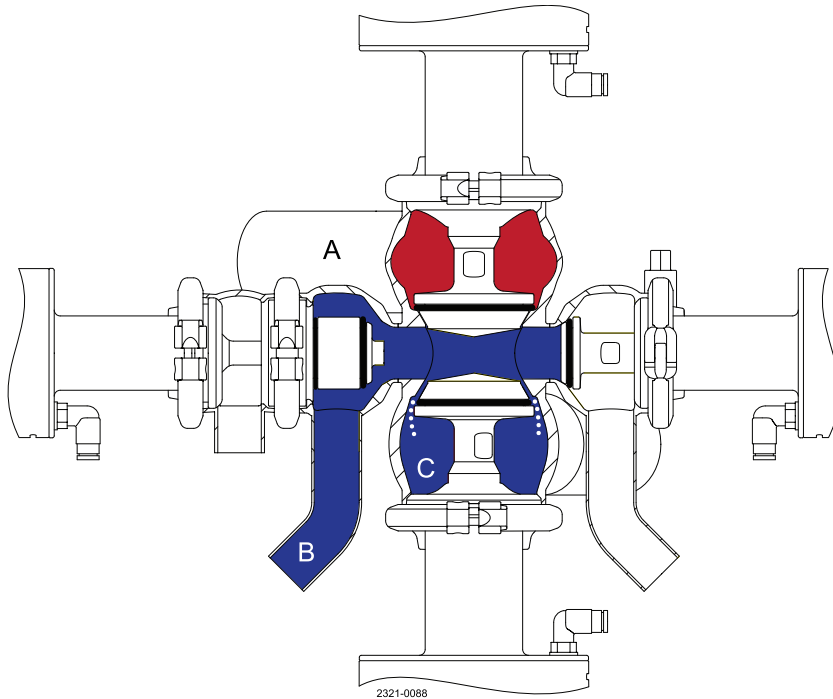
Study the instructions carefully and pay special attention to the warnings!

NaOH = Caustic soda. HNO₃ = Nitric acid.

Internal leakage in the valve is externally visible by means of the leakage outlet.

Standard CIP

Sterile tank subsequence seat lift*



- A. Line from UHT plant (not sterile)
- B. CIP forward taken from CIP forward to sterile tank.
- C. CIP return from sterile tank.

* Always ensure that the lower plug is the last to close, to prevent a pressure build-up between the valve seats.

5 Maintenance

Service the valve regularly.
Study the instructions carefully and pay special attention to the warnings!
Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.
Check the valve for smooth operation after servicing.

5.1 General maintenance

Step 1

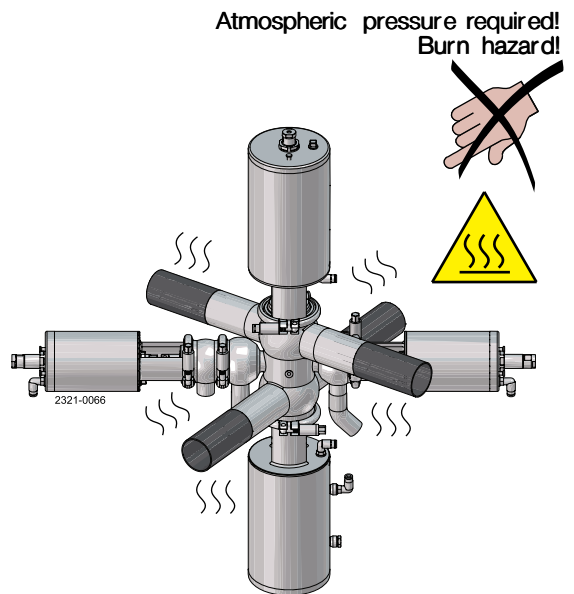


- **CAUTION**
Alfa Laval cannot be held responsible for incorrect installation.
- **Always** release compressed air after use.
- **Always** read the technical data thoroughly.
See section 6.1 Technical data.
- **Always** use Alfa Laval genuine spare parts.
The warranty of Alfa Laval products is dependent on use of Alfa Laval genuine spare parts.

Step 2



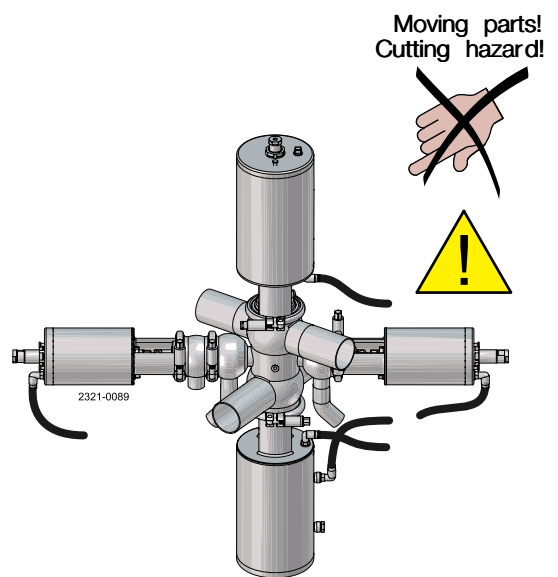
- Never** service the valve when it is hot.
- Never** service the valve with valve and pipelines under pressure.



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.



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

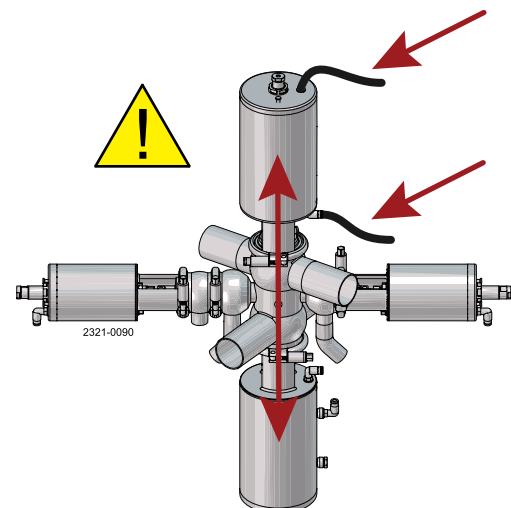
Below are some guidelines for maintenance and lubrication intervals. Please note that the guidelines are for normal working conditions in one shift.

	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"> - Regular inspection for leakage and smooth operation. - Keep a record of the valve. - Use the statistics for inspection planning. - Replace after leakage. 	<ul style="list-style-type: none"> - 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 Alfa Laval Silicon based Food-grade Lubricant USDA H1 approved 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!



Recommended spare parts

Service kits

5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

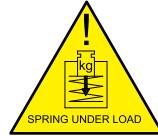
Check the valve for smooth operation after servicing.

5.2 Dismantling shut-off valve

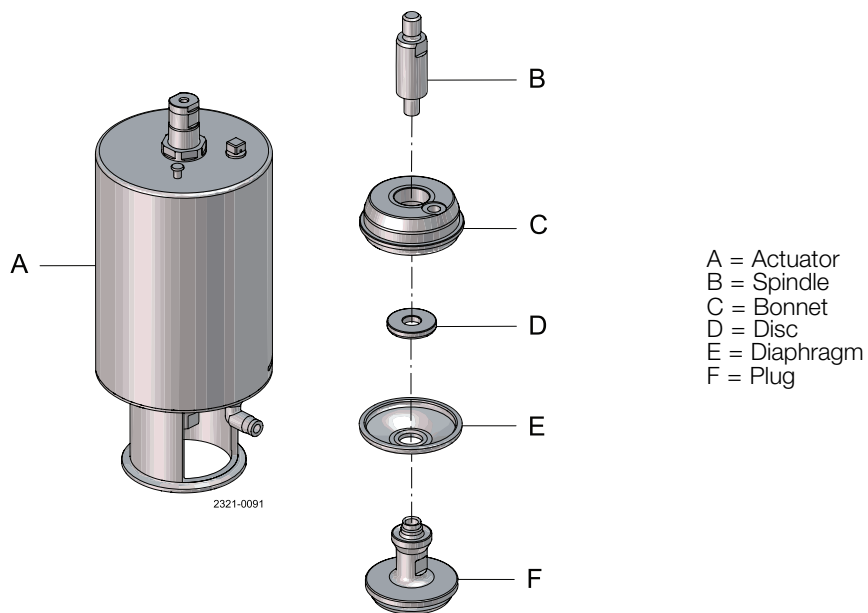
If the actuator is marked with a danger warning, do **NOT** attempt to cut the actuator open.



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!



Max weight to handle during maintenance (actuator with bonnet and plug fitted):

51mm/2"	63.5mm/2,5"	76.1mm/3"
6.2 kg (13.7 lb)	6.5 kg (14.3 lb)	10.1 kg (22.3 lb)

Service the valve regularly.

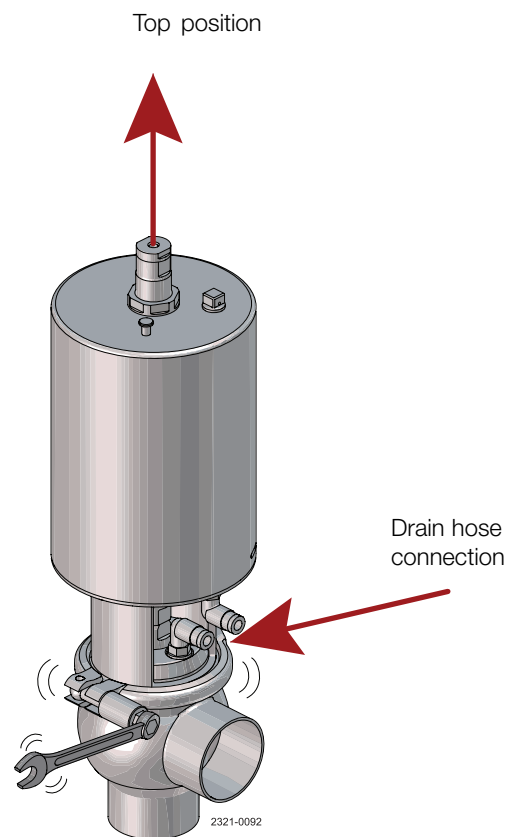
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

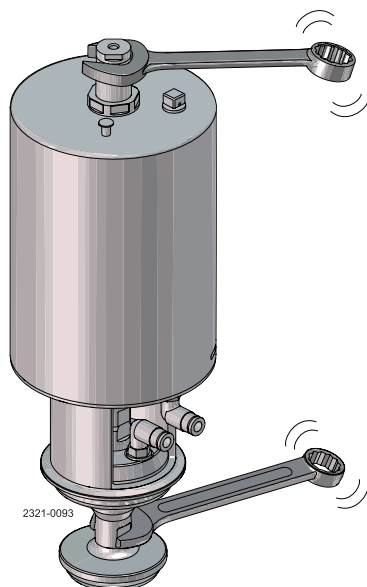
Step 1

1. Move the plug in top position.
2. Remove the air drain hose.
3. Ensure pipe is empty and not pressurized and then loosen the clamp using a 10 mm spanner.



Step 2

Loosen the plug from the actuator by using two 17 spanners



5 Maintenance

Service the valve regularly.

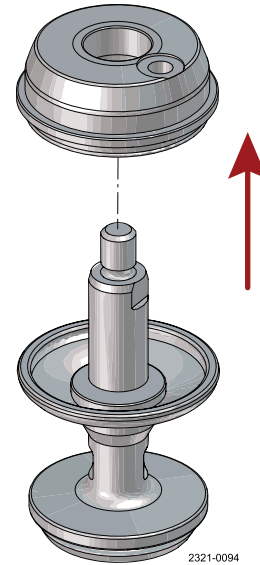
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 3

Remove the bonnet

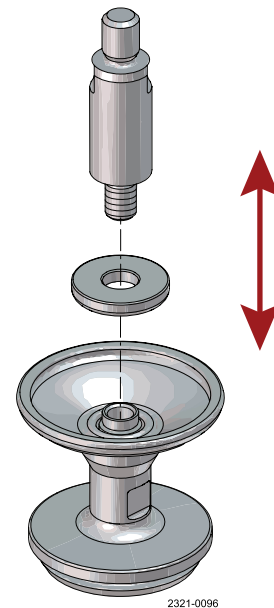
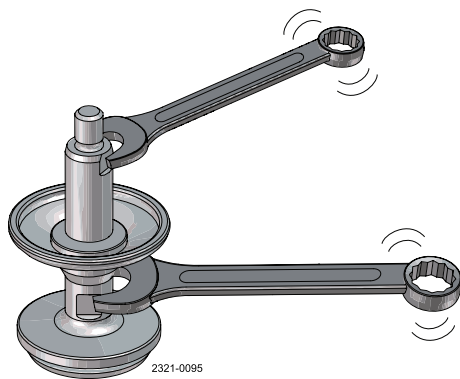


Step 4

Loosen the plug from the spindle by using two 17 spanners

If necessary can the bushing (24) in the bonnet be changed

Clean all parts and replace diaphragm and plug seal



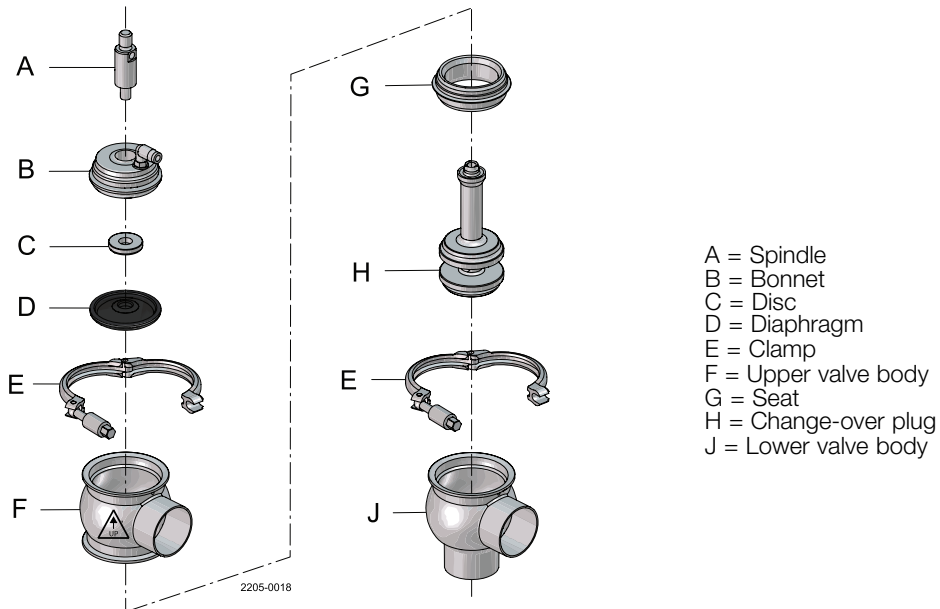
Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

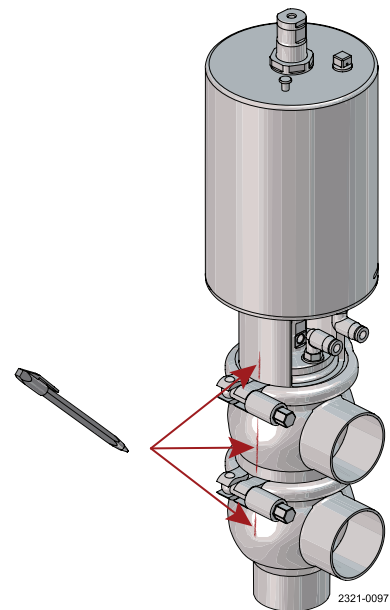
5.3 Dismantling change-over valve



Step 1

When dismantling always mark the position of actuator, upper and lower valve body,

This makes the reassembly much easier, as the valve can be mounted up in the same position in the workshop.



WARNING

CORRECT assembling and disassembling to avoid destroying (stretching) diaphragm

5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

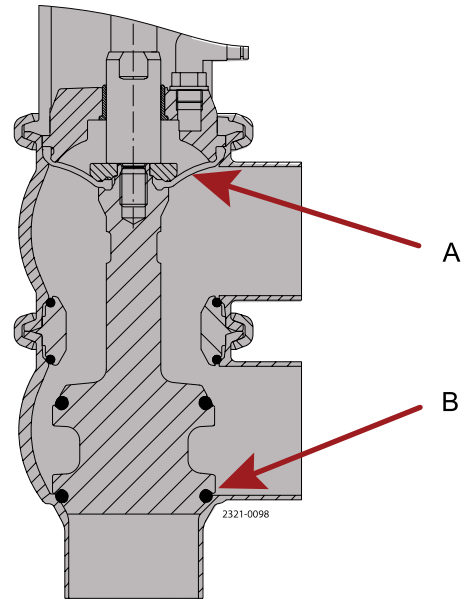
IMPORTANT!

The mechanical stop is in lower body.

To avoid overstretching the diaphragm the lower body clamp must not be loosened before the upper body clamp.

A. = Diaphragm

B. = Mechanical stop

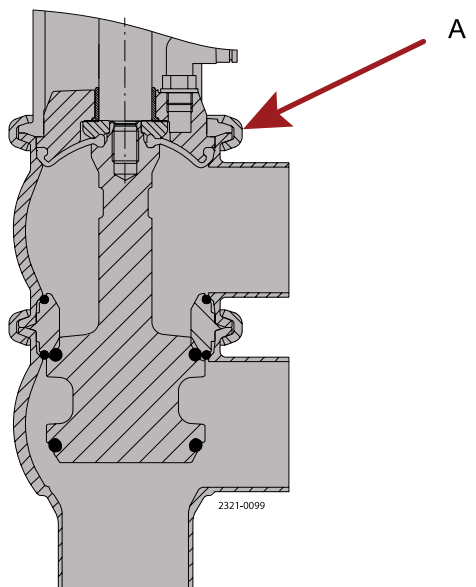


Recommended spare parts

Service kits

Place the plug in upper position and loosen the upper clamp

A. = Upper clamp



Service the valve regularly.

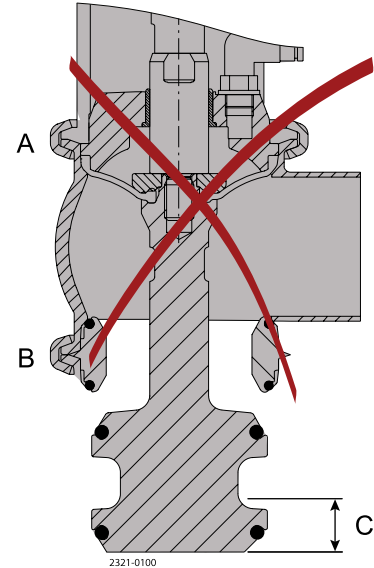
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

INCORRECT assembling and disassembling of Aseptic Mixproof Valve change-over valve

- A. = Upper clamp still mounted, which is wrong
- B. = Lower clamp dismantled
- C. = The plug is overstretching the diaphragm as it moves 10 mm further downwards



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 2

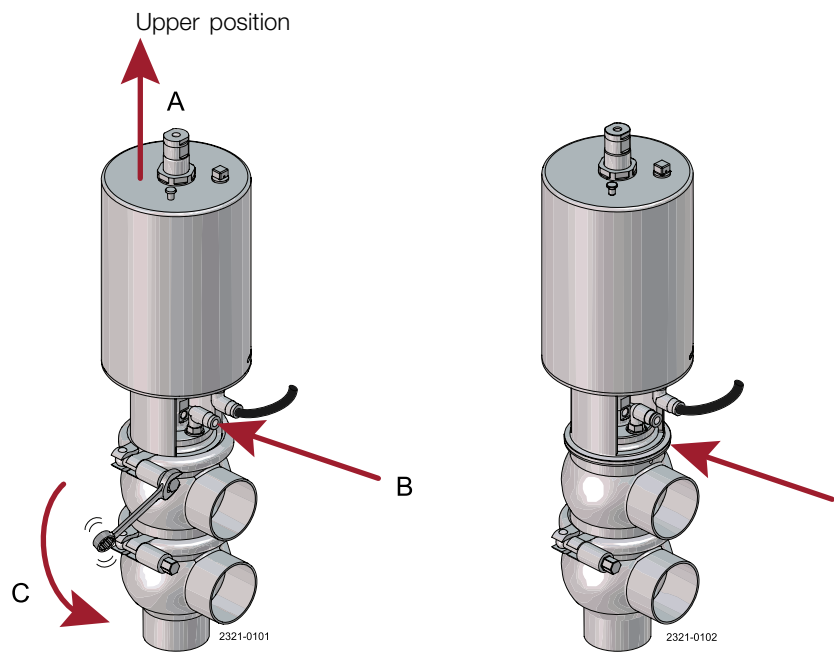
A
Ensure that the actuator stem is in upper position before loosening the upper clamp.

B
Remove the air drain hose.
Ensure pipe is empty and not pressurized.

C
ALWAYS start with dismantling the upper clamp to avoid damaging the diaphragm.

IMPORTANT

Please remember **NOT** to dismantle the lower clamp unless plug stays in the upper position (only type NO actuator), as diaphragm then will be destroyed if plug moves downwards.



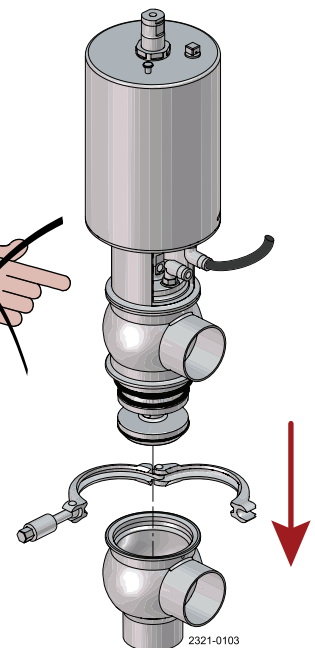
Step 3

Dismount lower clamp and lower valve body.



DANGER!

Finger cuts at "bonnet" and "seat ring"



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

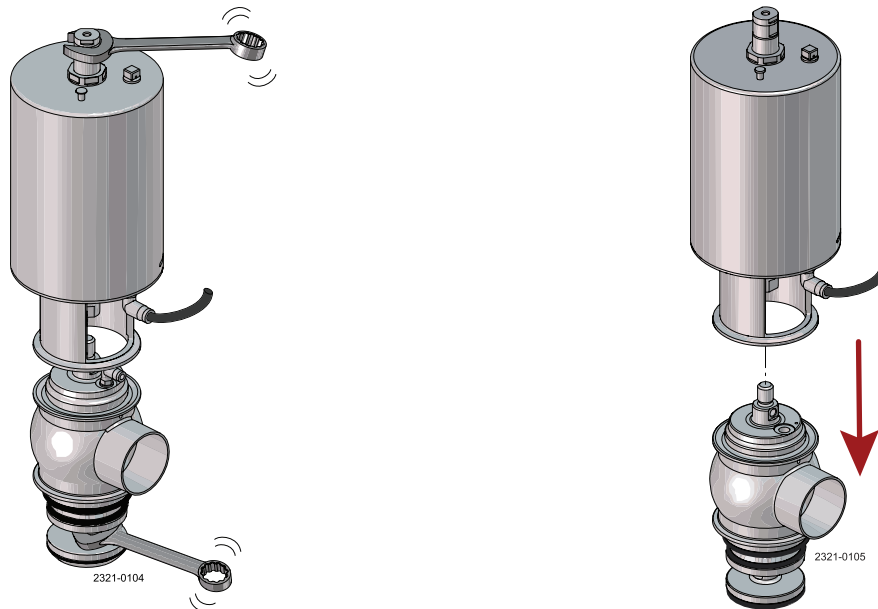
Check the valve for smooth operation after servicing.

Step 4

Loosen the spindle from the actuator. Use 17 mm spanners.

Ensure actuator stem is in lower position.

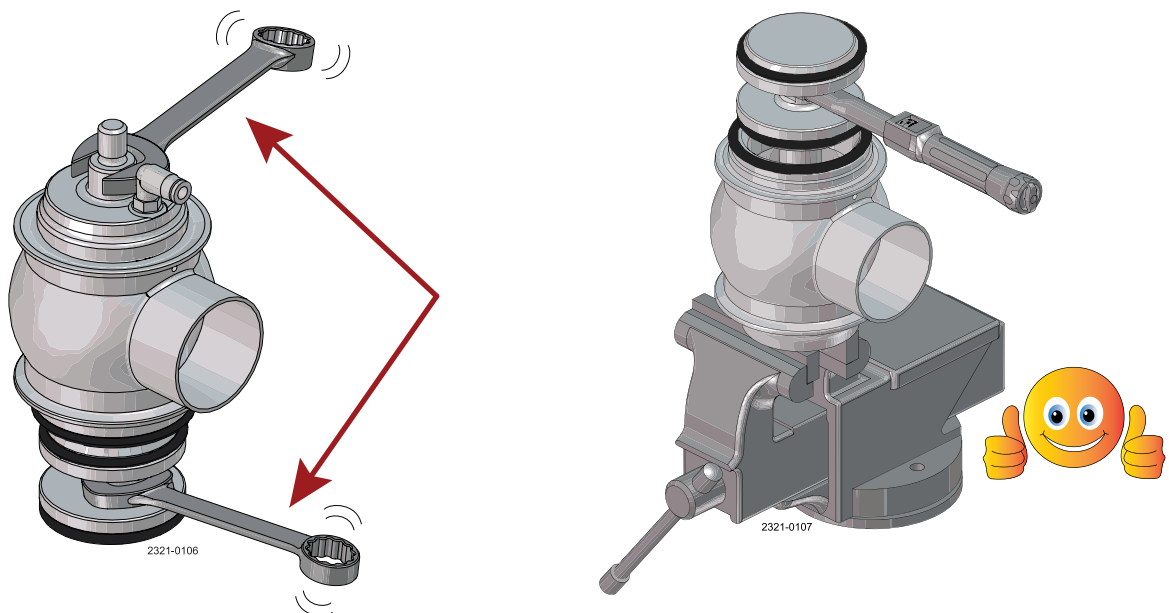
Now the plug/seat/upper valve body can be removed from the actuator yoke.



Step 5

Loosen the spindle from the plug. Use 17 mm spanners.

It is easiest to use a vice.



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

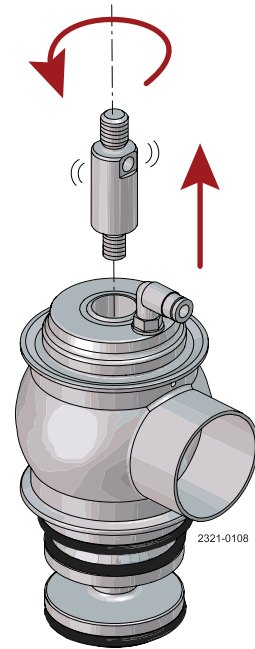
Check the valve for smooth operation after servicing.

Step 6

Dismount spindle from the plug.

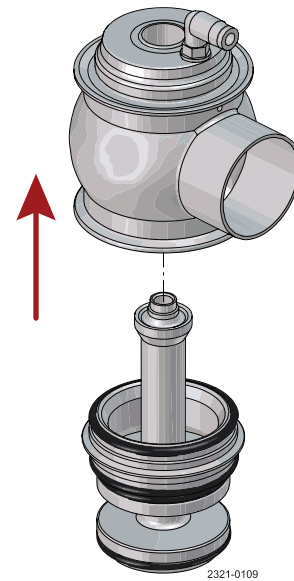
NOTE:

The leakage fitting in the bonnet does not need to be dismantled



Step 7

Dismount upper valve body from the plug/seat.



Service the valve regularly.

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

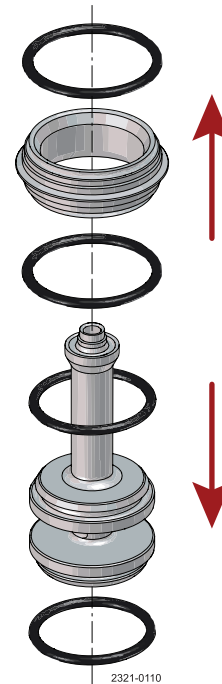
Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 8

Dismount seat from the plug.

Remember to replace o-rings in the seat and the plug.



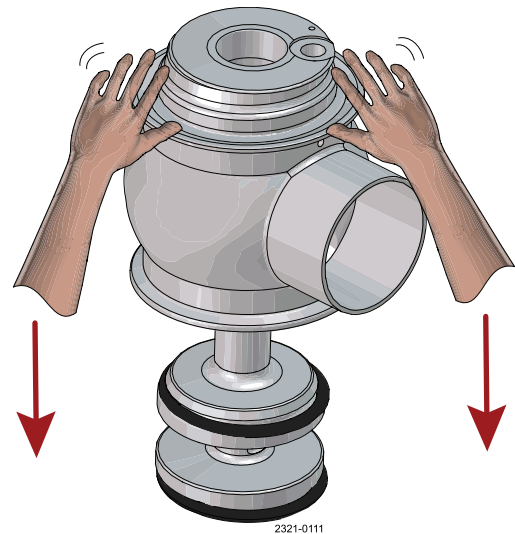
Step 9

Remove bonnet from upper valve body.

To do this - use the plug to press the bonnet out of the valve.

Remove the seat from the plug. Place the plug in the upper valve body and press down on upper valve body until bonnet is loose.

Be careful not to damage the plug.



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 10

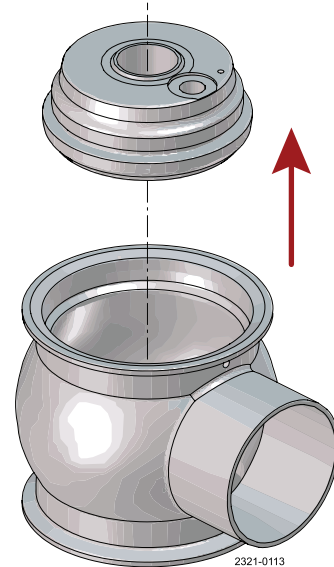
NOTE!

It is also possible to use a screw driver between the bonnet and valve. There is an "opening" marked in the bonnet where the screw driver can be fitted.



Step 11

Dismount bonnet and diaphragm

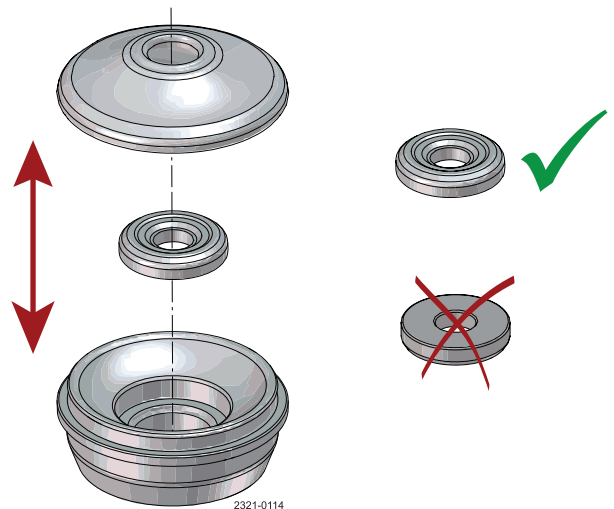


Step 12

Replace the diaphragm.

It is important that the rounded face of the disc point towards the diaphragm.

The bushing (24) in the bonnet can be changed, if necessary.



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

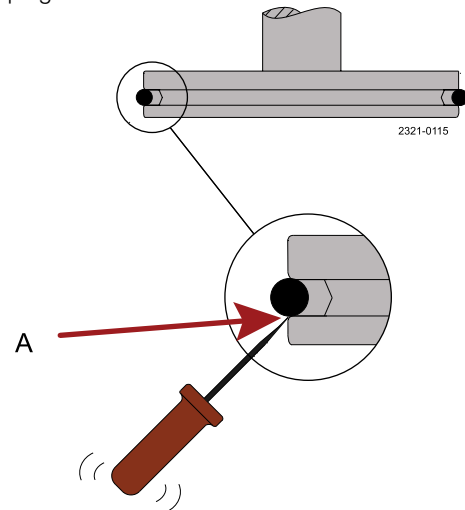
5.4 Plug seal replacement

Step 1

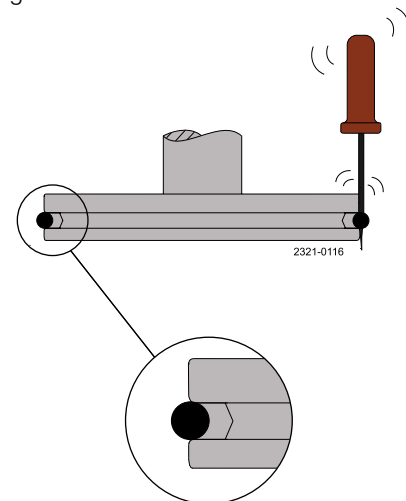
1. Remove old seal ring using a knife, screwdriver or similar.
Be careful not to damage the plug surface.
If using a screwdriver it must be placed underneath the plug groove (see drawing 1).
2. Grease the new seal ring with Paralique GTE 703, which is included in the service kit.
Only use a very small amount of grease.
3. Fit the seal ring on the plug without pressing it into the groove.
Be careful not to twist the seal ring.
Use a screwdriver (two turns) to fit the seal ring properly and to ensure it is not twisted (see drawing 2).
4. The seal ring can now be mounted by hand or with the Alfa Laval plug tool.

Drawing 1

A = It is important to place the screwdriver underneath the plug.



Drawing 2



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

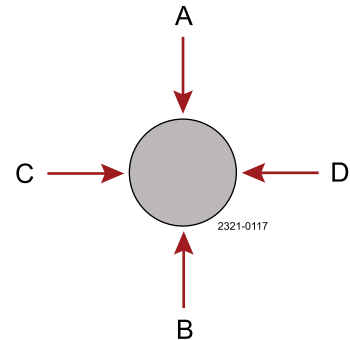
Check the valve for smooth operation after servicing.

Step 2

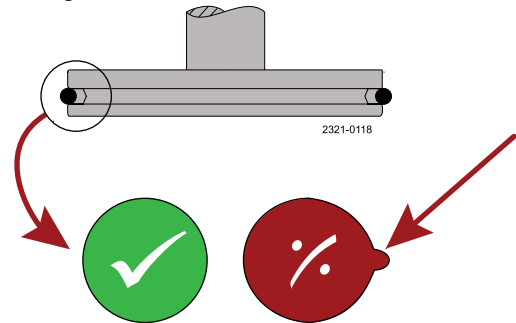
Mounting plug seal ring by hand

1. Check the seal ring is premounted as described in step 1.
To ensure correct mounting, press with your thumb on the seal ring, which must be done approximately 10 times and always with opposite pressure points, from A to B, to C and D (see drawing 3).
The rest of the seal ring can now be pressed into the groove so the whole seal ring is mounted. Check that there are NO "bulge" (see drawing 4).
If there is a little bulge – then use the screwdriver to eliminate the bulge.
Again press with the thumb on the seal ring and keep the pressure while rotating 360° (see drawing 3).
2. It is important to release compressed air behind the seal ring. This is done with a screwdriver and always underneath the plug as shown (A).
It must be done at one or two different points on the circumference.
Be careful not to make marks on the surface of the plug and seal ring (see drawing 5).

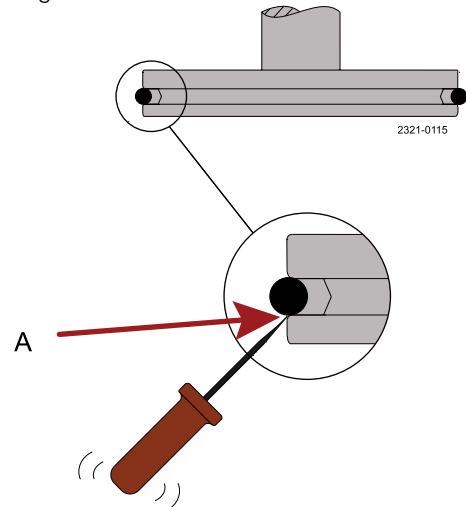
Drawing 3



Drawing 4



Drawing 5



Service the valve regularly.

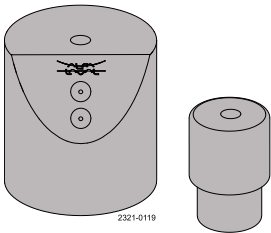
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 3

Mounting plug seal ring with Alfa Laval plug seal tool

Mounting tool for elastomer plug seals	25 mm	51 mm - 63.5 mm	76.1 mm
	9614060001	9614060003	9614060004

1. Part B

"Part B" has a small and a large diameter as the tool can be used for two plug sizes – e.g. plug tool = 9614060003 can be used for ISO51 (small) and ISO63 (large).

"Part B" therefore has to be turned so it matches the plug size diameter.

2. Part A

"Part A" has an upper and lower exhaust hole, as the tool can be used for two plug sizes – e.g. plug tool = 9614060003.

The upper exhaust hole is for the small plug size e.g. ISO51 (small) and the lower exhaust hole is for ISO63 (large).

When using a "change-over plug" the spindle must also be fitted in "part A" and "part B" (see drawing 2).

When using a "standard shut-off plug" the spindle is only fitted in "part B" (see drawing 1).

3. Fit the plug spindle in "part B" or "part A".

Place "part A" onto "part B" and then press "hard" down on top of "part A".

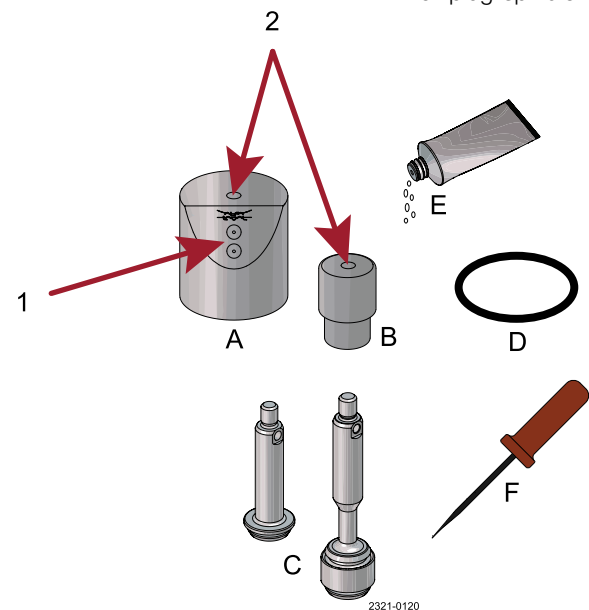
Now fit the screwdriver into the exhaust hole and underneath the plug groove meanwhile keeping the pressure on "part A". This should ensure correct removal of air behind the seal ring. Normally the sound "Psst" can be heard one time (see drawing 3).

A "drill press" can of course also be used to press down on "part A".

4. It is important to release compressed air behind the seal ring. This is done with a screwdriver and always underneath the plug as shown (see drawing 4).

1 Exhaust holes for screwdriver

2 Hole for plug spindle



- A. Part A
- B. Part B
- C. Plugs
- D. O-ring
- E. Grease Paralique GTE703 from service kit
- F. Screwdriver (no sharp corner)

5 Maintenance

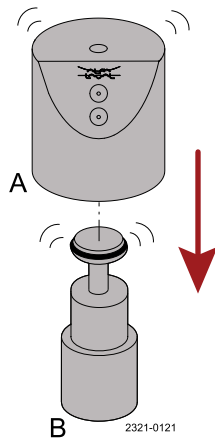
Service the valve regularly.

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

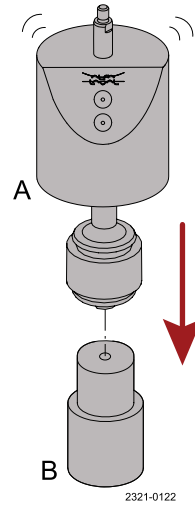
Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

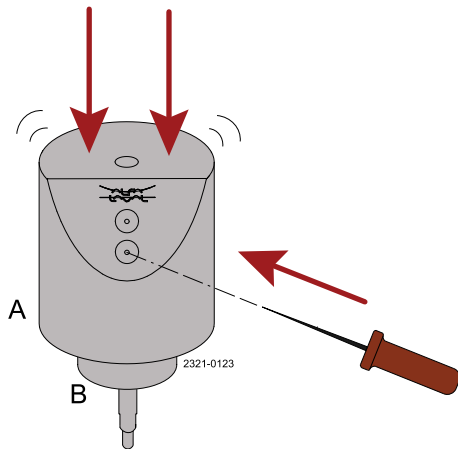
Drawing 1



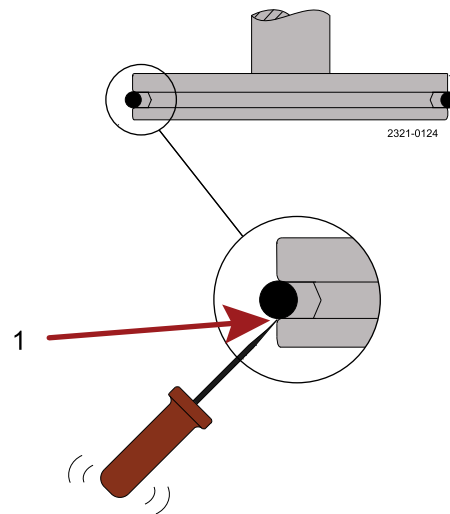
Drawing 2



Drawing 3



Drawing 4



1
It is important to place the screwdriver underneath the plug.

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

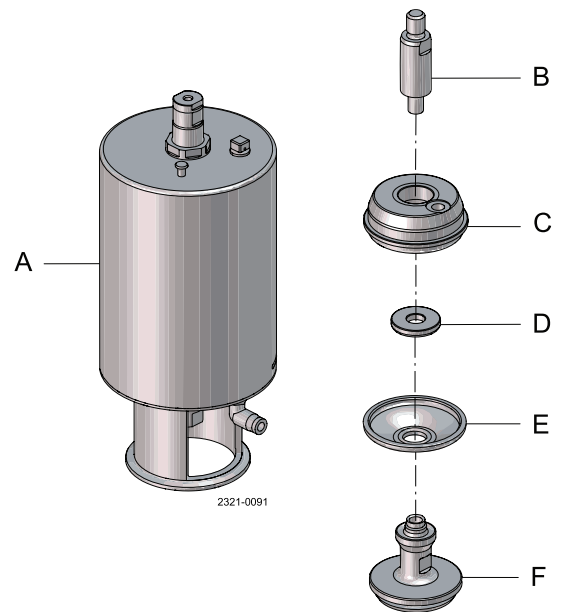
Check the valve for smooth operation after servicing.

5.5 Assembly of shut-off valve

Step 1

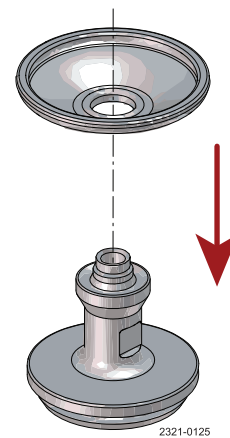
Before mounting all parts must be cleaned

- A. Actuator
- B. Spindle
- C. Bonnet
- D. Disc
- E. Diaphragm
- F. Plug



Step 2

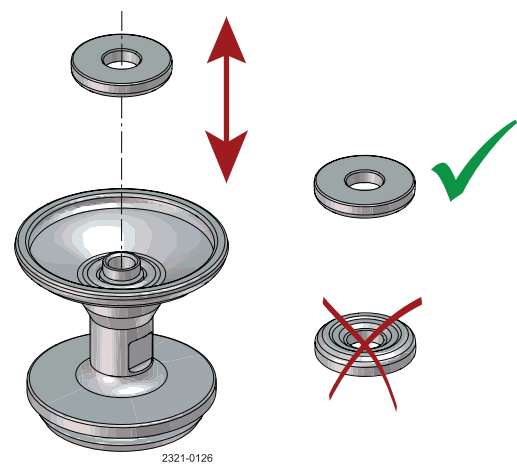
Mount a new diaphragm.



Step 3

Fit disc on plug.

It is important that the rounded face of the disc point towards the diaphragm.



5 Maintenance

Service the valve regularly.

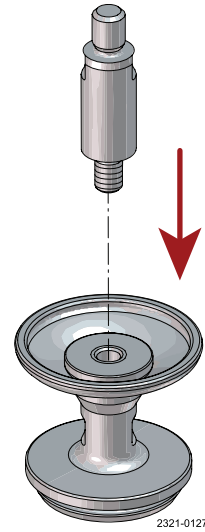
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 4

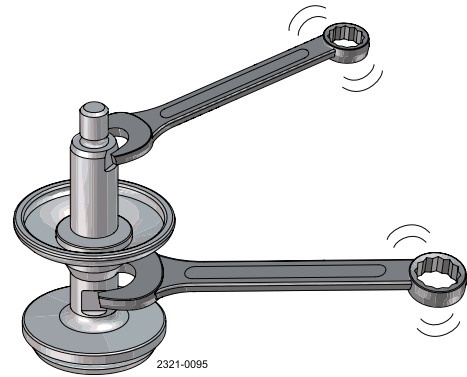
Mount spindle.



Step 5

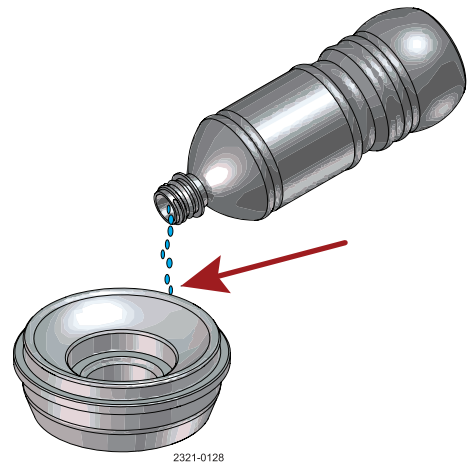
Tighten spindle and plug with:

- 51 mm (2") to 76.1 mm (3") with torque = 33 Nm
- 25 mm (1") with torque = 17 Nm



Step 6

We strongly recommend to use some water to "lubricate" on the bonnets round edge, before mounting the diaphragm. This makes it much easier to mount diaphragm correctly.



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 7

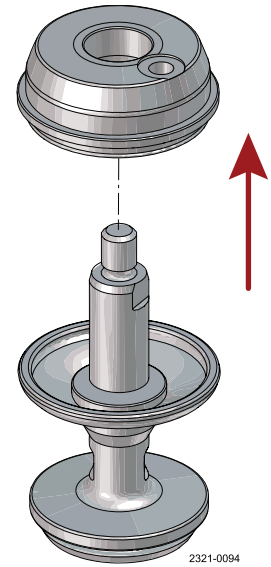
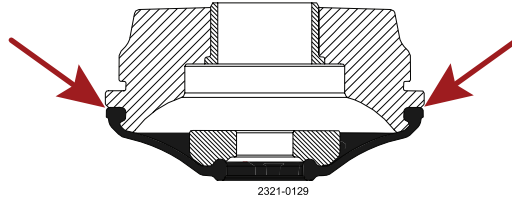
Mount bonnet on spindle and fit diaphragm.

Press only with the fingers to avoid scratches on diaphragm.

Be sure that diaphragm is correctly fitted on the "round edge" on the bonnet.

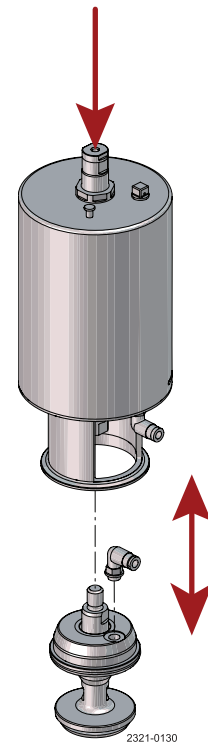
NOTE!

Make sure that the diaphragm is securely mounted on the bonnet before installing the complete diaphragm/stem into the valve body.



Step 8

Mount the fitting for leakage in the bonnet. Be sure the actuator stem is in lower position. Mount the assembled "plug unit" onto the actuator stem.



5 Maintenance

Service the valve regularly.

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

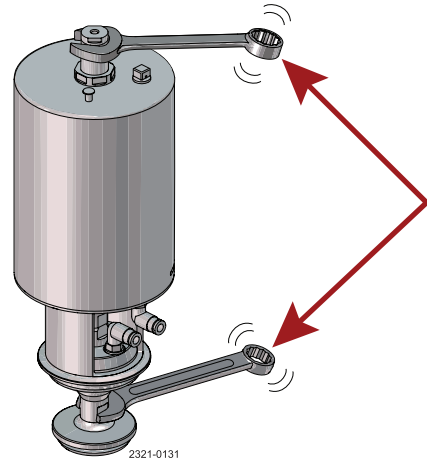
Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 9

Tighten plug and actuator with:

- 51 mm (2") to 76.1 mm (3") with torque = 33 Nm
- 25 mm (1") with torque = 17 Nm



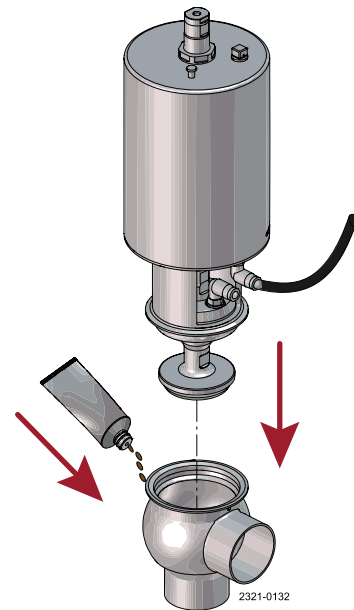
Step 10

Before mounting bonnet/diaphragm into valve body use grease (Paraliq GTE 703) on sealing surface. This will reduce friction when diaphragm is pressed into the valve body.

Make sure that the actuator stem is in lower position, as this makes it easiest to fit diaphragm into the valve body.

Mount actuator type "NC" without air pressure.

Mount actuator type "NO" with air pressure.



Step 11

Ensure that the actuator stem is still in lower position.

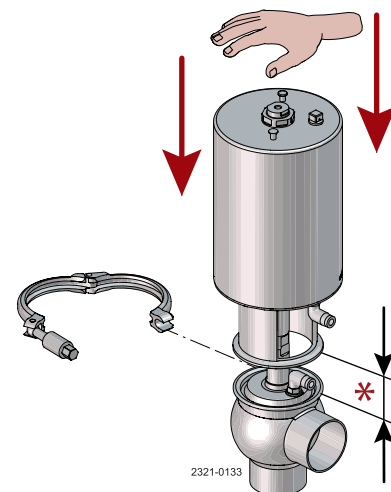
Then press hard on top of the actuator to fit the bonnet/diaphragm in the valve body.

There is a "big" gap opening, but diaphragm is now placed into the valve body.

NOTE!

There is a "big" gap, but diaphragm is now placed into the valve body.

* = Big gap



Step 12

Now move the actuator stem in top position and press **HARD** on top of the actuator to reduce the gap to approx. 1 mm.

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

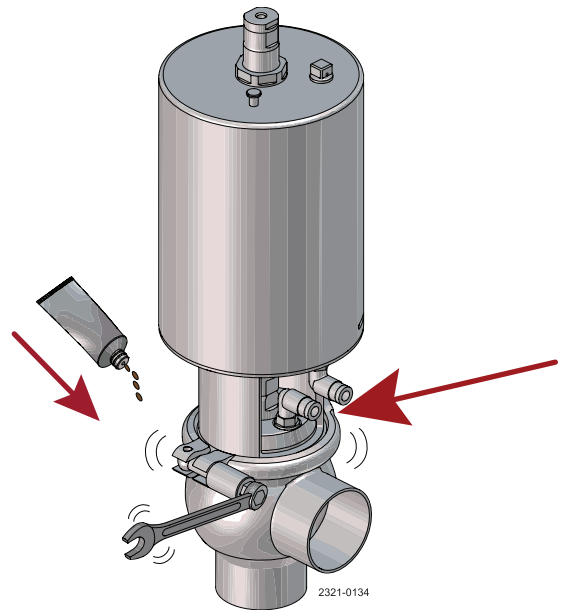
Step 13

Mount the clamp (make sure it is located correctly).

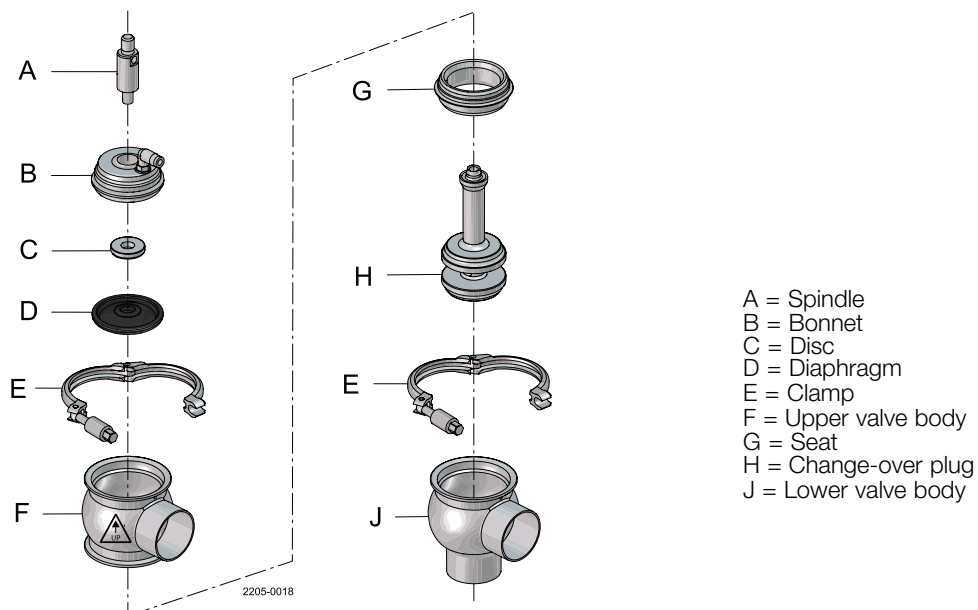
Tighten with a 10mm spanner. Torque = 10-12 Nm.

Grease the thread with Molykote.

Place a hose in the fitting in the sealing element (hole for leakage detection).



5.6 Assembly of change-over valve



5 Maintenance

Service the valve regularly.

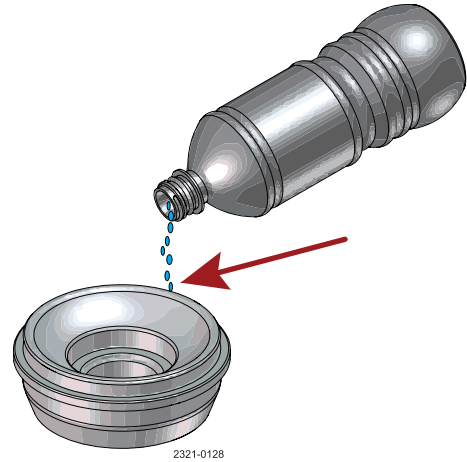
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

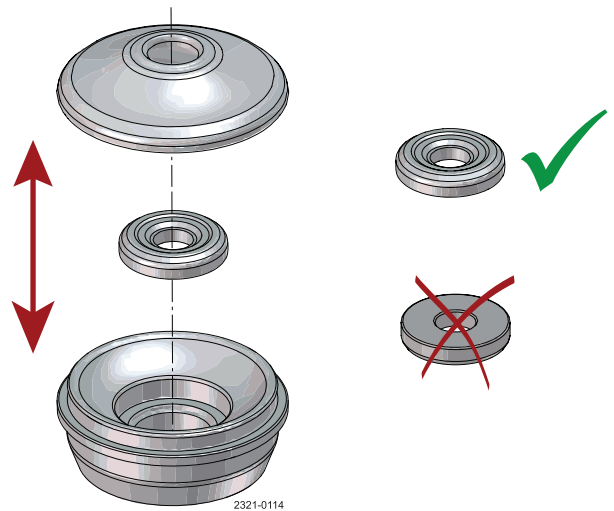
Step 1

We recommend to use some water to "lubricate" on the bonnets round edge, before mounting the diaphragm. This makes it much easier to mount diaphragm correctly.



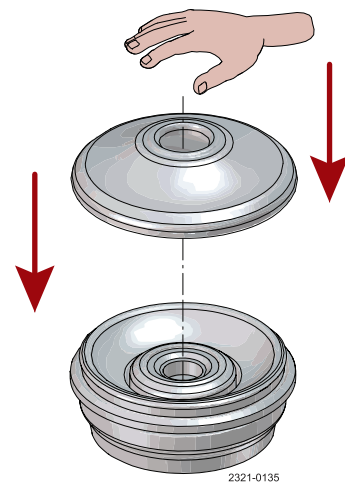
Step 2

Mount the disc in the bonnet, with the plane disc side towards the bonnet bushing. It is important that the rounded face of the disc point towards the diaphragm.



Step 3

Fit diaphragm to the bonnet. Press only with the fingers so no scratch comes on the diaphragm as this might result in leakage. Be sure that the diaphragm is fitted correctly on the "round edge" on the bonnet.



Service the valve regularly.

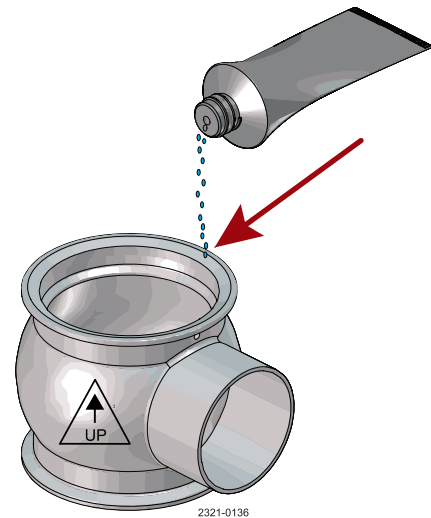
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

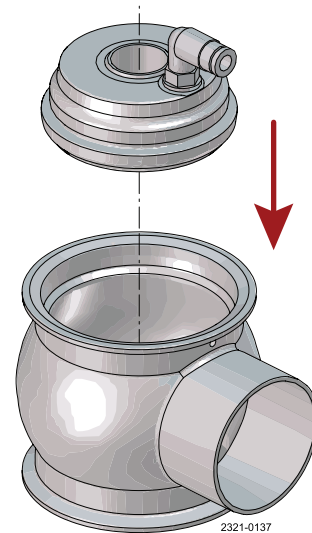
Step 4

We strongly recommend to use grease (Paraliq GTE 703) on the edges of the upper valve body to ensure that the diaphragm is mounted correctly. The sealing surface must be clean to avoid leakage.



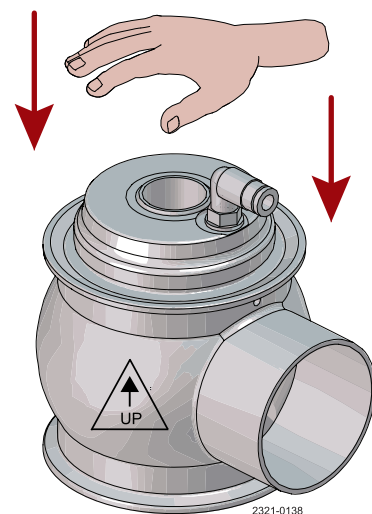
Step 5

Mount bonnet and diaphragm (disc inside) into upper valve body.



Step 6

Remember to position valve body with the $\varnothing 2$ hole upwards. Press hard on the bonnet to fit it in the upper valve body.



5 Maintenance

Service the valve regularly.

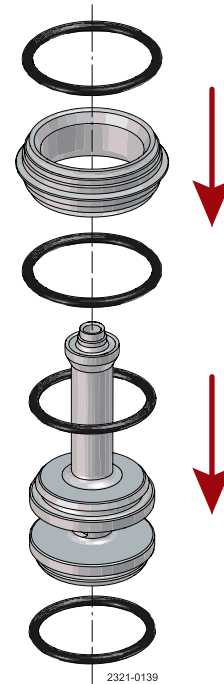
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 7

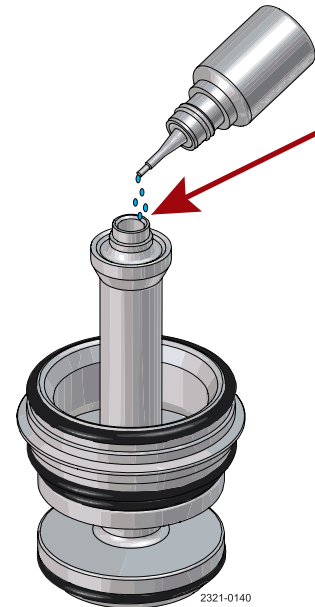
Place the seat on the plug. Remember to mount new O-rings in the seat and plug.



Step 8

Use a little amount of "Loctite 243" on the plug treat.

Be careful not to spill a drop outside the threaded hole, as this will glue the disc and plug together and this can make it difficult to dismount the valve next time service is carried out.



Service the valve regularly.

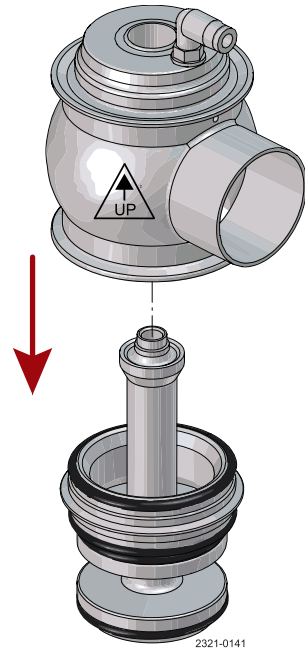
Study the instructions carefully and pay special attention to the warnings!

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

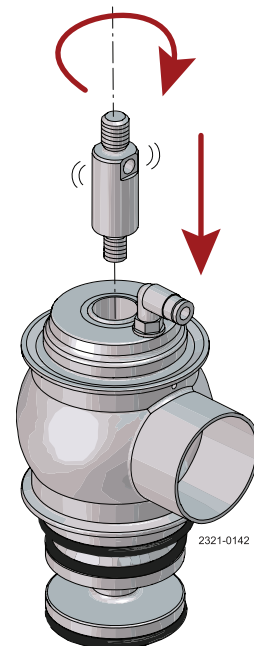
Step 9

Mount upper valve body onto the plug/seat.



Step 10

Assemble spindle and plug. Be sure that the disc is placed correctly on the plug while screwing spindle and plug together. Remember to mount the leakage fitting in the bonnet!



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

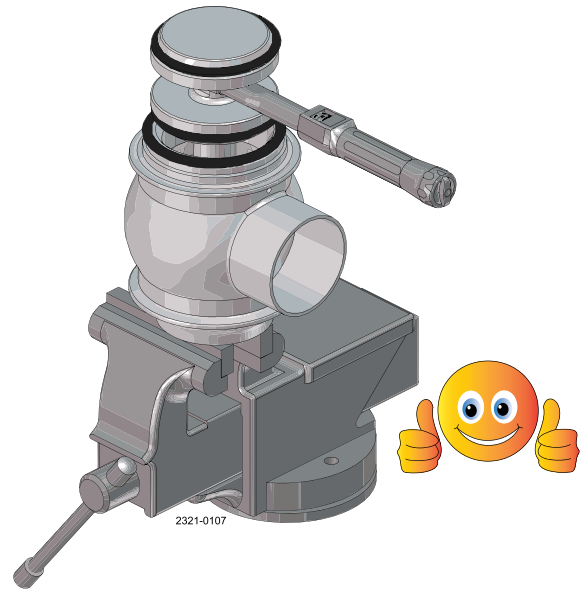
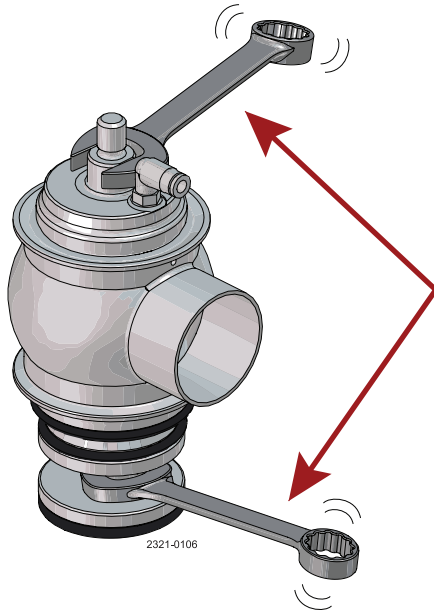
Step 11

Tighten the spindle and plug. Use 17 mm spanners.

It is easiest to use a vice.

Tighten valve size 51 mm (2") to 76.1 mm (3") with torque = 33 Nm

Tighten valve size 25 mm (1") with torque = 17 Nm



Step 12

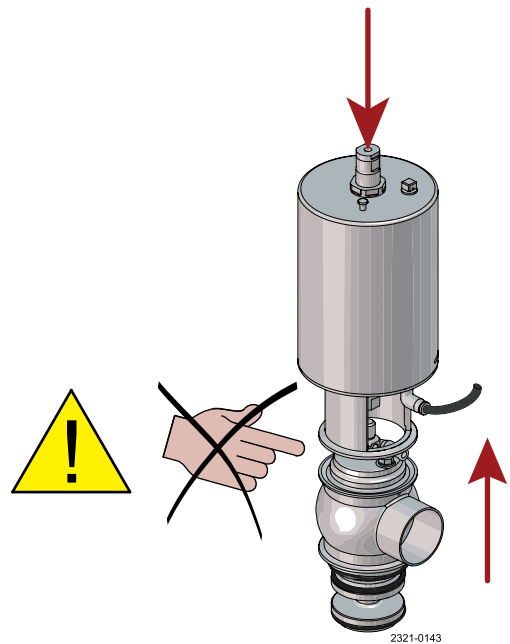
Ensure that the actuator stem is in lower position.

Tighten the valve body/plug together with the actuator.

Activate the actuator, if it is a NO version, so the actuator stem moves downwards to ensure right mounting.

DANGER!

Finger cut at "bonnet" and "upper valve body".



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

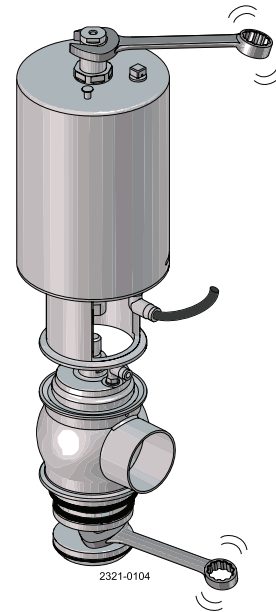
Check the valve for smooth operation after servicing.

Step 13

Tighten the actuator stem and plug. Use 17 mm spanners.

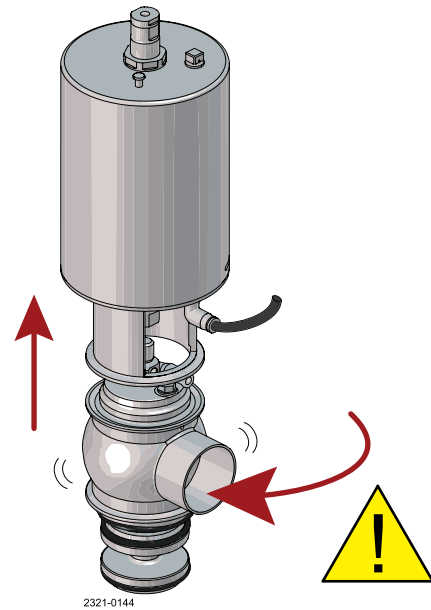
Tighten valve size 51 mm (2") to 76.1 mm (3") with torque = 33 Nm

Tighten valve size 25 mm (1") with torque = 17 Nm..



Step 14

Align upper valve body and actuator if necessary. This is done by rotating the valve body only clockwise (only the valve body can rotate as diaphragm is locked).



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

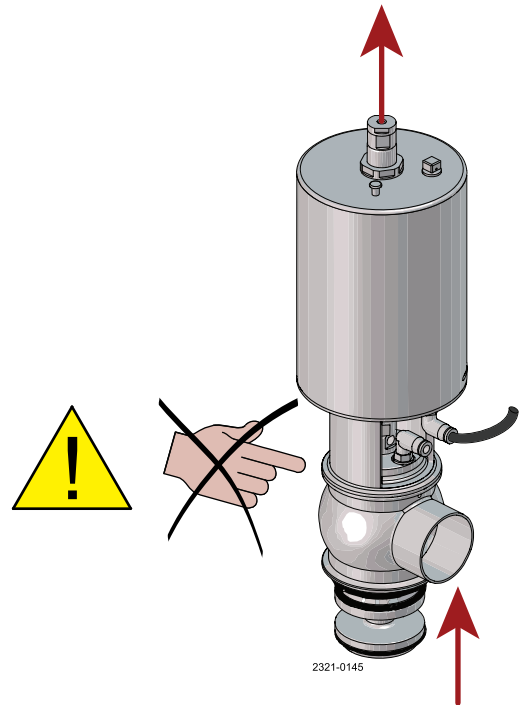
Check the valve for smooth operation after servicing.

Step 15

Ensure that the actuator stem is in upper position.

DANGER!

Finger cut at "bonnet" and "seat ring"



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

Step 16

CORRECT assembling and disassembling to avoid destroying (stretching) diaphragm

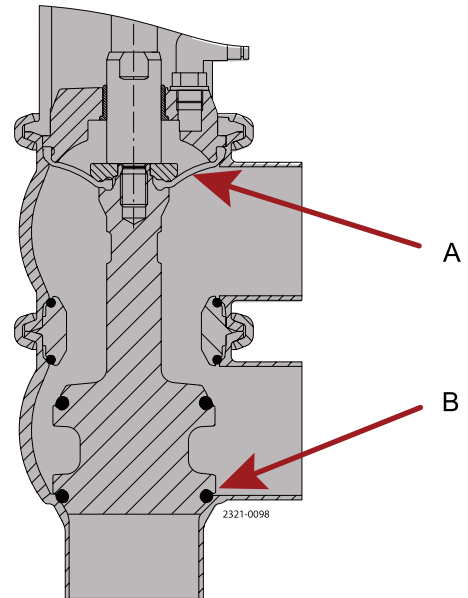
IMPORTANT!

The mechanical stop is in lower body.

To avoid overstretching the diaphragm the lower body clamp must not be loosened before the upper body clamp.

A. = Diaphragm

B. = Mechanical stop

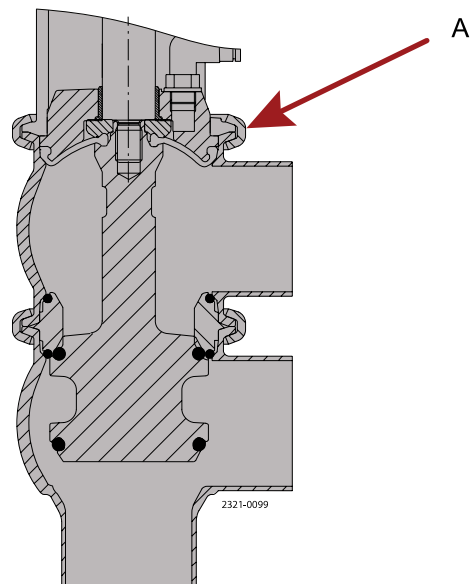


Recommended spare parts

Service kits

Place the plug in upper position and loosen the upper clamp.

A. = Upper clamp



5 Maintenance

Service the valve regularly.

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

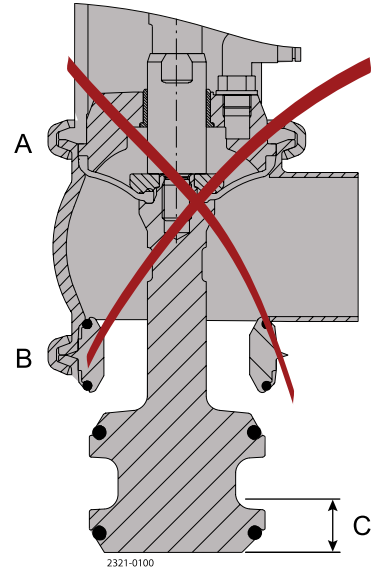
Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

Check the valve for smooth operation after servicing.

INCORRECT assembling and disassembling of Aseptic Mixproof Valve change-over valve

- A. Upper clamp still mounted, which is wrong
- B. Lower clamp dismantled
- C. The plug is overstretching the diaphragm as it moves 10 mm further downwards.

Lower clamp dismantled

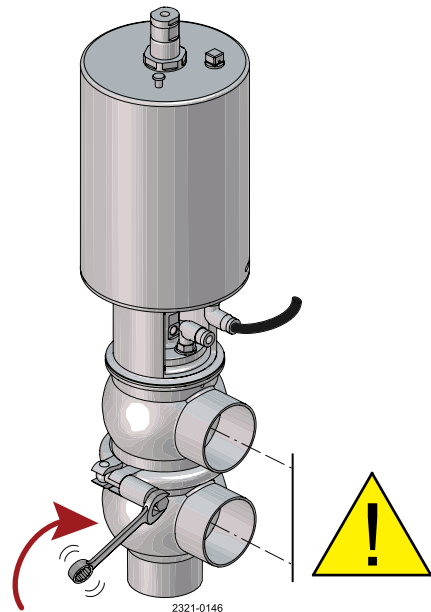


Step 17

Mount lower valve body, but remember to align with upper valve body, before tightening the lower clamp. Then tighten **LOWER** clamp with torque $M = 10-12 \text{ Nm}$.

IMPORTANT:

Remember always to fit the **LOWER** clamp first and the upper clamp as the last one to avoid damaging the diaphragm (also see Step 16).



Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

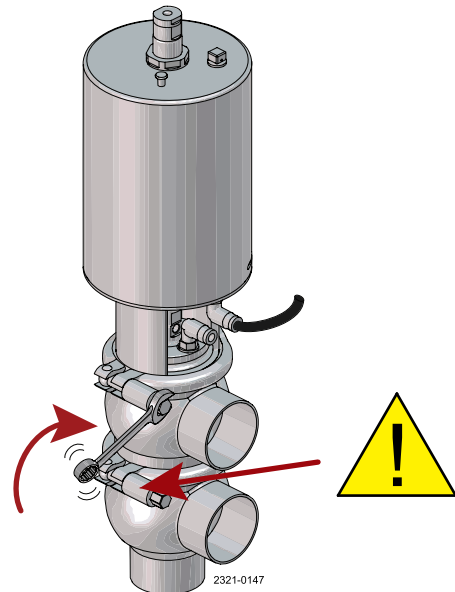
Check the valve for smooth operation after servicing.

Step 18

Now mount upper clamp and tighten - torque = 10-12 Nm.

IMPORTANT!

Please remember **NOT** to dismount the lower clamp unless plug stays in the upper position, as diaphragm will be destroyed if plug moves downwards (also see Step 16).

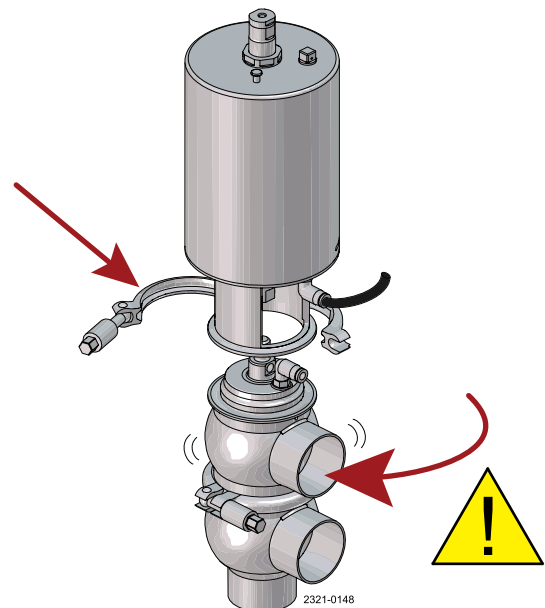


Step 19

If the upper valve body has to be rotated remember **ALWAYS** to start with dismounting the upper clamp.

IMPORTANT!

Please remember **NOT** to dismount the lower clamp unless plug stays in the upper position, as diaphragm will be destroyed if plug moves downwards. (see also step 16).



5 Maintenance

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

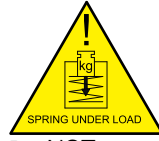
Check the valve for smooth operation after servicing.

5.7 Dismantling of fully maintainable actuator

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!

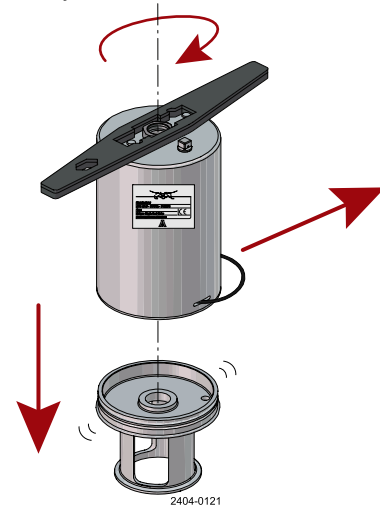


Do **NOT** attempt to cut the actuator open due to spring under load danger!

Before dismantling check that the actuator not is marked with a warning.

1. Rotate cylinder.
2. Remove lock wire and pull away cylinder.
3. Remove top and bottom bushings.
4. Remove piston with O-ring and spring assembly.

Rotate cylinder with service tool.



5.8 Mounting of fully maintainable actuator

NOTE! Depending on type of actuator choose step 1 or step 2.

Step 1

1. Reverse order of 5.7 Dismantling of fully maintainable actuator
 2. Lubricate O-rings (3, 7, 11) with Molykote Longterm 2 plus before fitting.
 3. Tighten bushings with a torque = 10 Nm and be careful not to overtightened.
-

Service the valve regularly.

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

Always use Alfa Laval genuine spare parts. Always keep spare rubber seals, lip seals and diaphragms in stock.

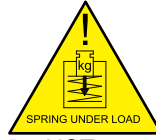
Check the valve for smooth operation after servicing.

5.9 Changing pneumatic movement on fully maintainable actuator (NC/NO)

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



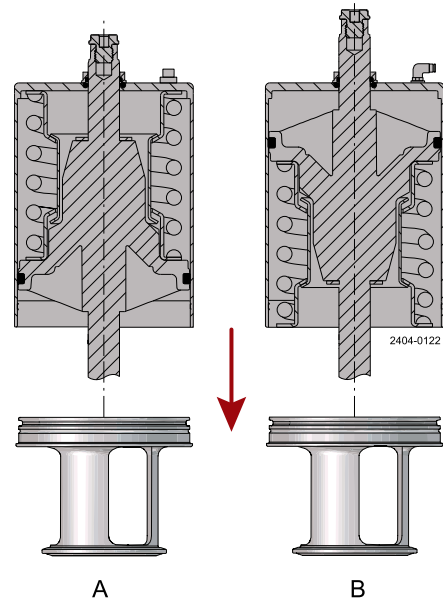
Do **NOT** attempt to disassemble the actuator due to spring under load danger!



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

Before dismantling check that the actuator not is marked with a warning.

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. Reassemble in reverse order (3 to 1).



- A. = Pneumatic movement - upwards (NC)
 B. = Pneumatic movement - downwards (NO)

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 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. An integrated valve plug/diaphragm secures aseptic operation.

Standard design

The Aseptic Mixproof Valve comes in different body configurations. With its module built structure it is designed for flexibility and easy customization through the electronic configurator.

Data - valve/actuator	
Max. product pressure	800 kPa (8 bar/116 psi).
Min. product pressure	Full vacuum.
Max. sterilisation temperature (steam - short time)	150° C (302° F) at pressure 380 kPa (3.8 bar/55 psi)
Temperature range	-10° C to + 140° C (14 to 284 °F) (standard EPDM seal).
Air pressure, actuator	500 to 700 kPa (5 to 7 bar/72.5 to 101.5 psi)).
Note: Vacuum is not recommended in aseptic applications.	
Materials - valve/actuator	
Product wetted steel parts	1.4404 (316L) (internal Ra < 0.8 µm/32 µ inch).
Other steel parts	1.4301 (304).
Plug seal	EPDM.
Diaphragm	EPDM/PTFE.
Other product wetted seals	EPDM (standard).
Optional product wetted seals	HNBR.
Other seals	NBR.

Weight

Size	51mm (2")	63.5mm (2,5")	76.1mm (3")
Maximum weight (depending on valve configuration)	29 kg (64 lb)	30 kg (66 lb)	46 kg (99 lb)

Noise

One metre away from and 1.6 metres above (3 ft away and 5 ft 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 (101.5 psi) air-pressure.

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

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:

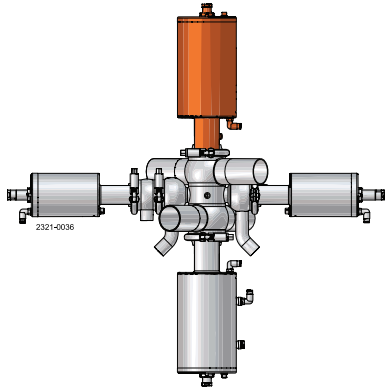
- Fix and/or replace the protective device.
-

7 Parts list and service kits

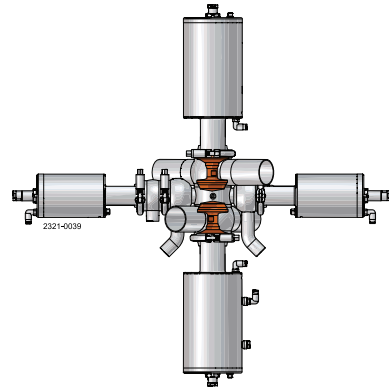
*It is important to observe the technical data during installation, operation and maintenance.
Inform all personnel about the technical data.*

7.1 Valve overview

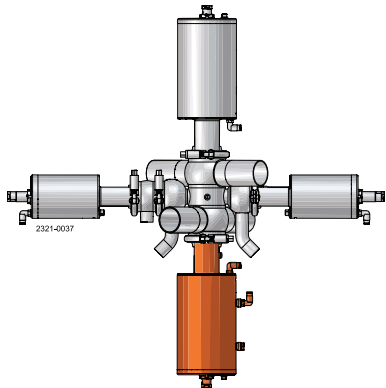
Actuator, primary valves (no seat lift)



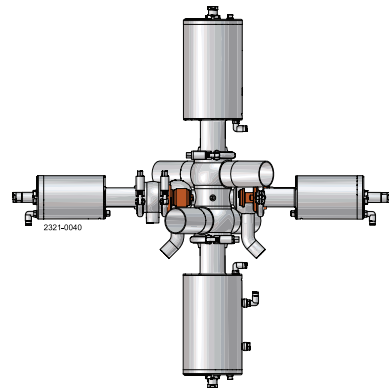
Plugs, primary valves



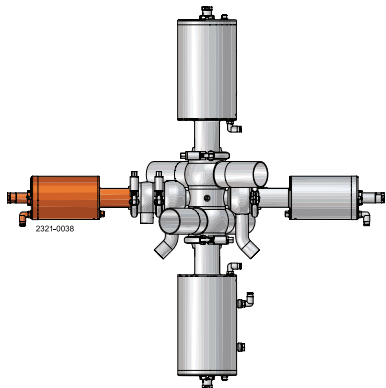
Actuator, primary valves (with seat lift)



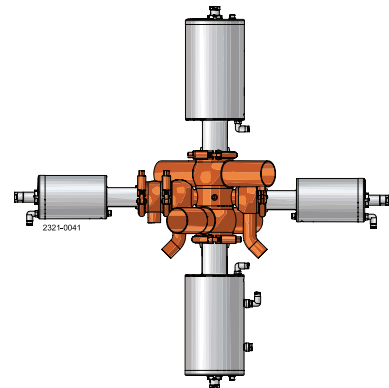
Plugs, secondary valves



Actuator, secondary valves



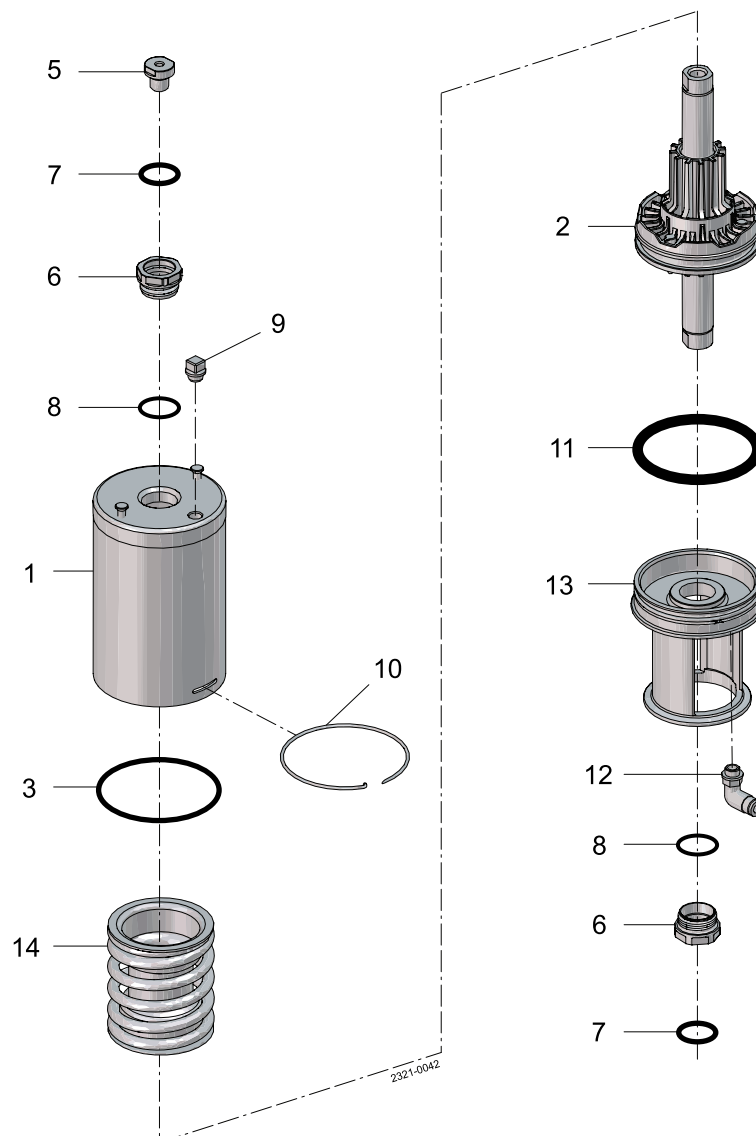
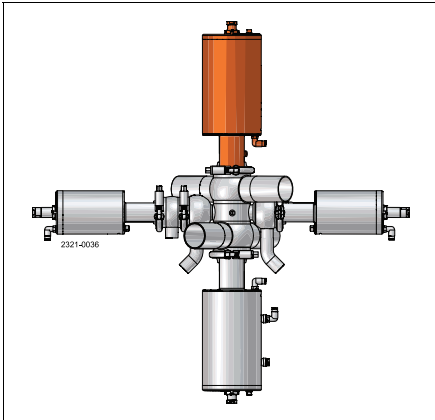
Clamps, bonnets and bodies



7 Parts list and service kits

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

7.2 Actuators, primary valves (no seat lift)



7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
	1	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, air vent
10	1	Lock wire
11	1	O-ring
12	1-2	Air fitting
13	1	Yoke
14	1	Spring assembly

Service kits

Denomination	51 mm	63.5 mm	76 mm
<input type="checkbox"/> Service kit for one actuator	9611926498	9611926498	9611926499

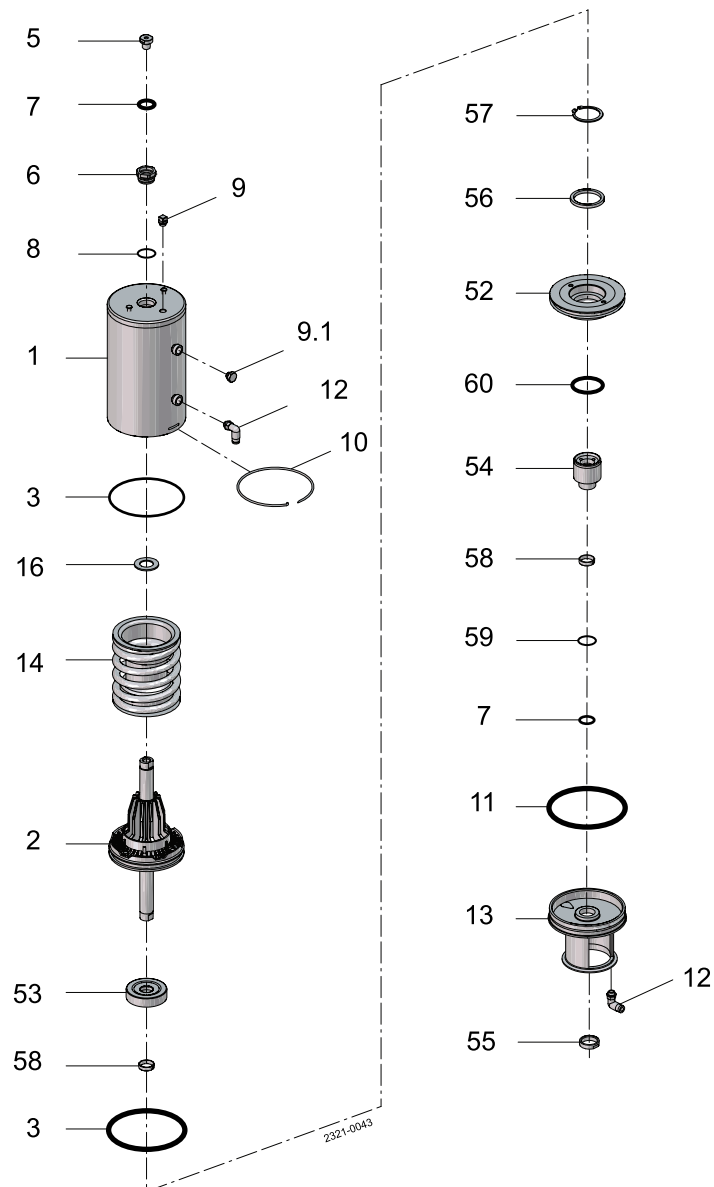
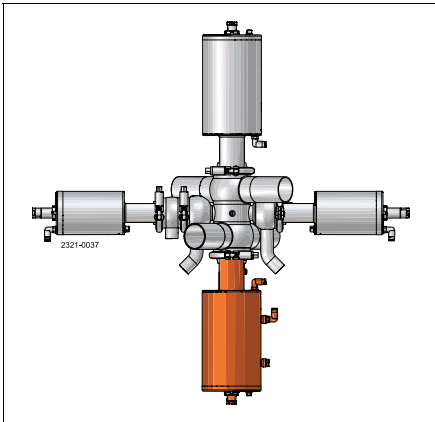
Parts marked with are included in the service kits (actuator).
Recommended spare parts: Service kits.

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7 Parts list and service kits

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

7.3 Actuators, primary valves (with seat lift)



7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
	1	Actuator
1	1	Cylinder
2	1	Piston
3 □	2	O-ring
5	1	Adapter
6 □	1	Bushing
7 □	2	O-ring
8 □	1	O-ring
9	1	Plug, air vent.
9.1	1	Plug
10	1	Lock wire
11 □	1	O-ring
12	2-3	Air fitting
13	1	Yoke
14	1	Spring assembly
16 □	1	Support disc
52	1	Piston
53	1	Thrust plate
54	1	Guide
55	1	Nut
56	3	Spacer
57	1	Lock ring
58	2	Guide ring
59 □	1	O-ring
60 □	1	O-ring

Service kits

Denomination	51 mm	63.5 mm	76 mm
□ Service kits for one seat lift actuator	9611926738	9611926738	9611926739

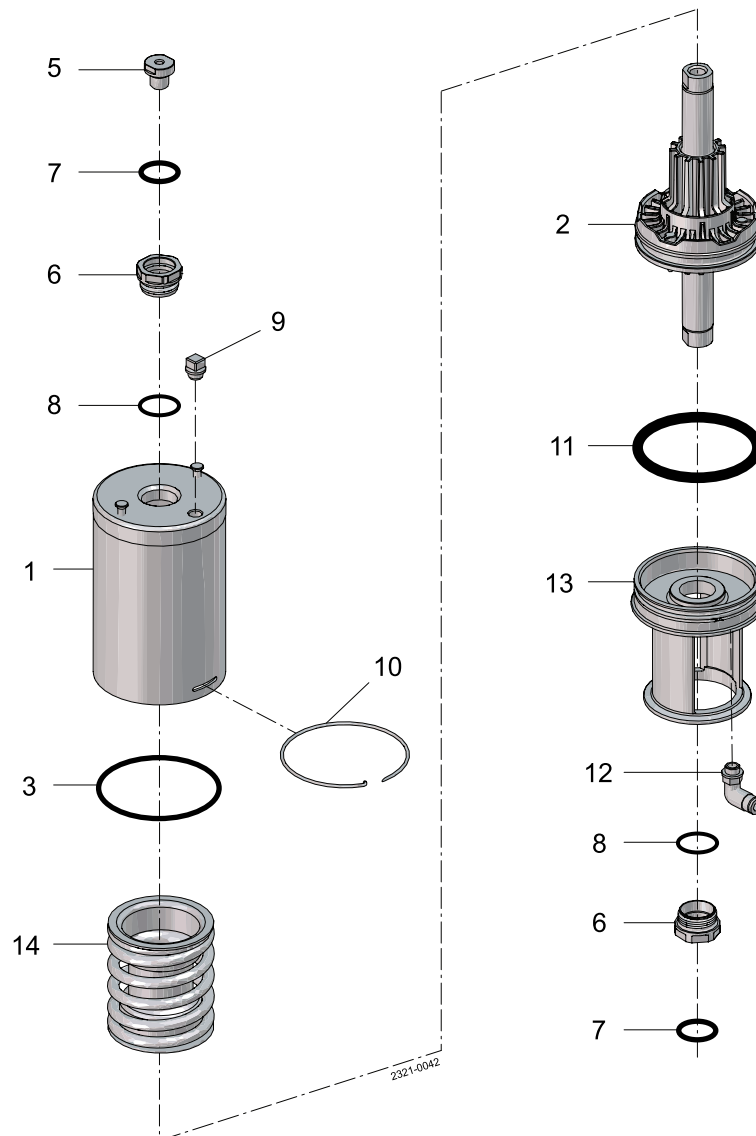
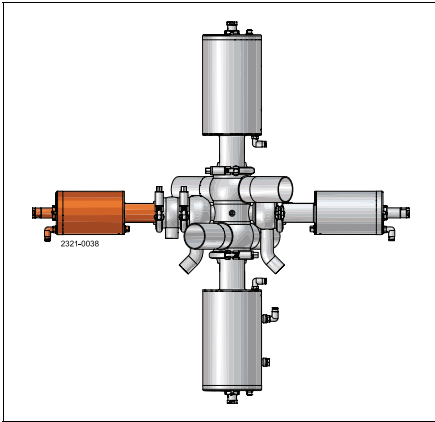
Parts marked with □ are included in the service kits (actuator).
Recommended spare parts: Service kits.

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7 Parts list and service kits

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7.4 Actuators, secondary valves



7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
	1	Actuator
1	1	Cylinder
2	1	Piston
3 <input type="checkbox"/>	1	O-ring
5	1	Adapter
6 <input type="checkbox"/>	2	Bushing
7 <input type="checkbox"/>	2	O-ring
8 <input type="checkbox"/>	2	O-ring
9	1	Plug
10	1	Lock wire
11 <input type="checkbox"/>	1	O-ring
12	1-2	Air fitting
13	1	Yoke
14	1	Spring assembly

Service kits

Denomination	25 mm
<input type="checkbox"/> Service kits for one actuator NC/NO	9611926497

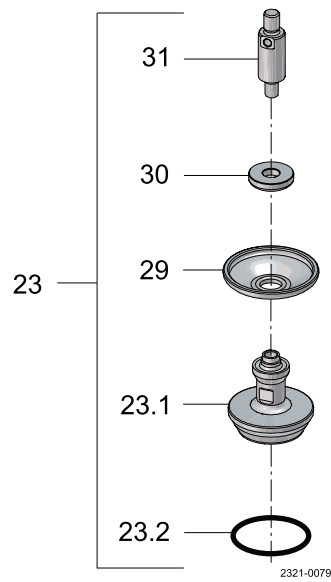
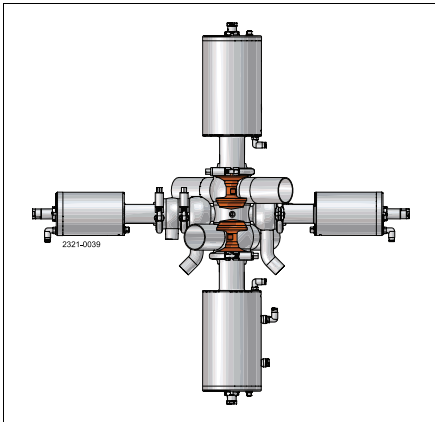
Parts marked with are included in the service kits (actuator).
Recommended spare parts: service kits.

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7 Parts list and service kits

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

7.5 Plugs, primary valves



7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
23	1	Plug
23.1	1	Plug
23.2 ▲	1	Plug seal
29 ▲	1	Diaphragm
30	1	Disc for diaphragm
31	1	Upper spindle

Service kits

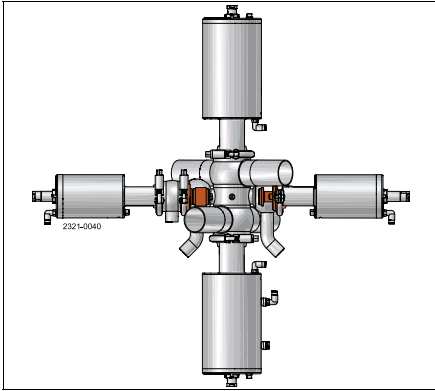
Denomination	51 mm	63.5 mm	76 mm
Service kit, product wetted parts			
▲ Service kit for one plug, EPDM	9611926545	9611926546	9611926547
▲ Service kit for one plug, HNBR	9611926551	9611926552	9611926553

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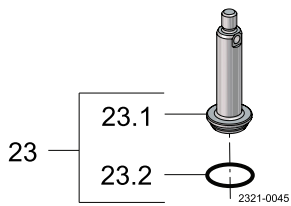
7 Parts list and service kits

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

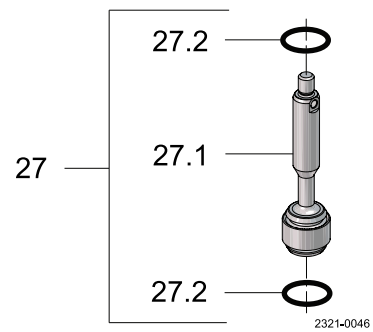
7.6 Plugs, secondary valves



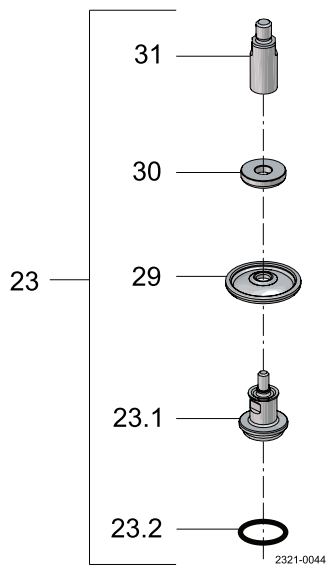
Hygienic plugs - shut-off



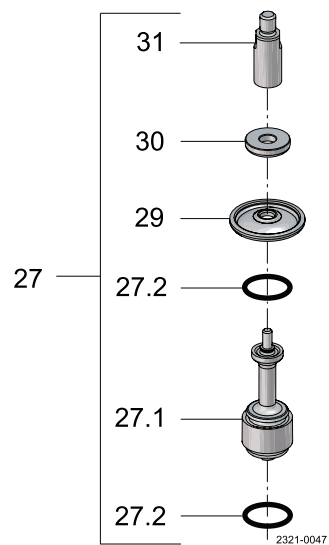
Hygienic plugs - change-over



Aseptic plugs - shut-off



Aseptic plugs - change-over



7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
23	1	Plug, complete
23.1	1	Plug
23.2 ▲	1	Plug seal
27	1	Plug, complete
27.1	1	Plug
27.2 ▲	2	Plug seal
29 ▲	1	Diaphragm
30	1	Disc for diaphragm
31	1	Upper spindle

Service kits

Denomination	Hygienic plugs shut-off	Hygienic plugs change-over	Aseptic plugs shut-off	Aseptic plugs change-over
▲ Service kit for one plug, EPDM	9611926501	9611926579	9611926543	9611926615
▲ Service kit for one plug, HNBR	9611926507	9611926585	9611926549	9611926621

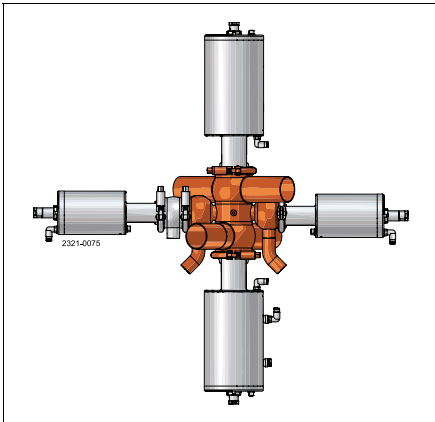
Parts marked with □▲ are included in the service kits (product wetted parts).
Recommended spare parts: Service kits.

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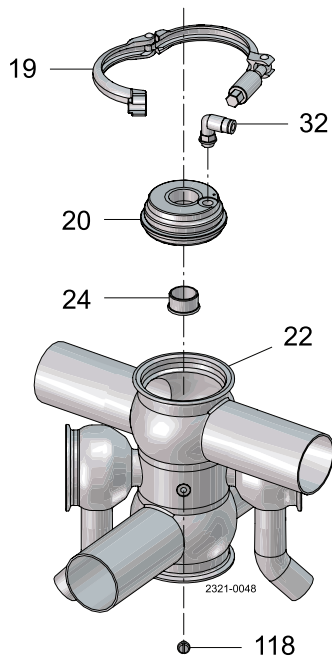
7 Parts list and service kits

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

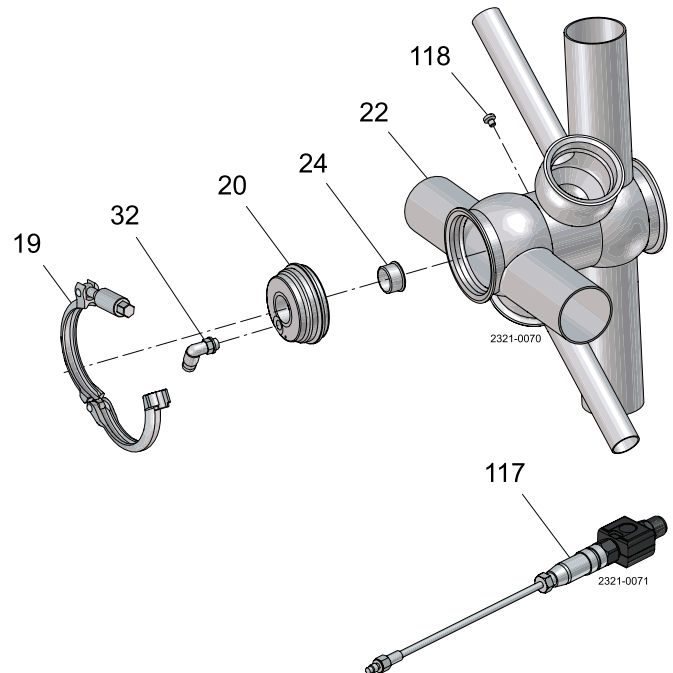
7.7 Clamp, bonnet and body, primary valves



Vertical mount



Horizontal mount



7 Parts list and service kits

*It is important to observe the technical data during installation, operation and maintenance.
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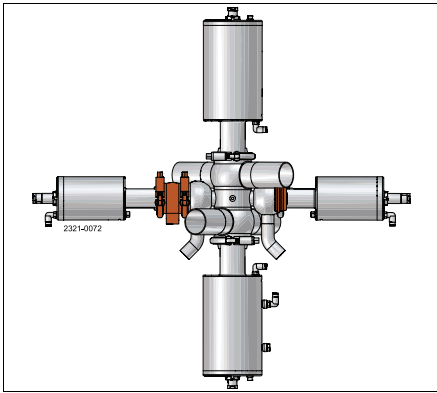
Parts list

Pos.	Qty	Denomination
19	2	Clamp
20	2	Bonnet
22	1	Valve body
24 ▲	2	Bushing
32	2	Air fitting
117	(1)	Temperature sensor + transmitter (accessories)
	(1)	Temperature sensor (accessories)
	(1)	Transmitter (accessories)
	(1)	Temperature sensor + transmitter w. individual certificates (accessories)
	(1)	Temperature sensor w. individual certificate (accessories)
	(1)	Transmitter w. individual certificate (accessories)
118	1	Screw

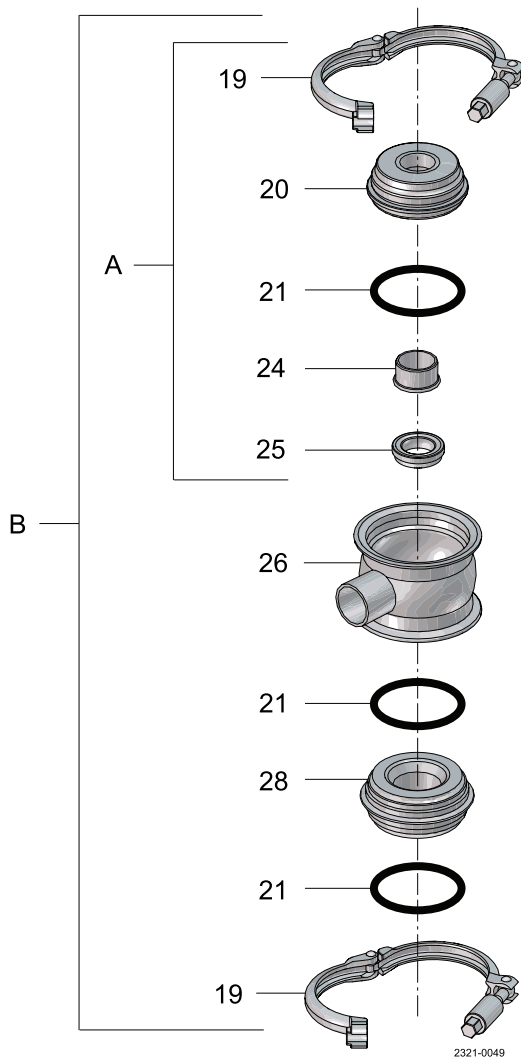
7 Parts list and service kits

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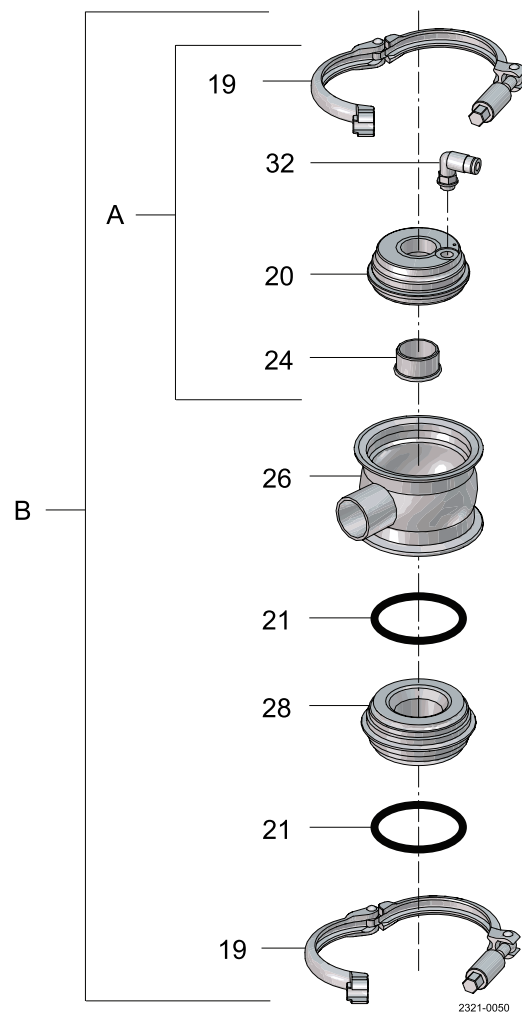
7.8 Clamp, bonnet and body, secondary valves



Hygienic



Aseptic



A = Shut-off, B = Change-over

7 Parts list and service kits

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

Parts list

Pos.	Qty	Denomination
19	2	Clamp
	3	Clamp
20	2	Bonnet
21	2	O-ring, EPDM (standard)
24	2	Bushing
25	2	Lip seal
26	1	Valve body
28	1	Seat
32	2	Air fitting

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