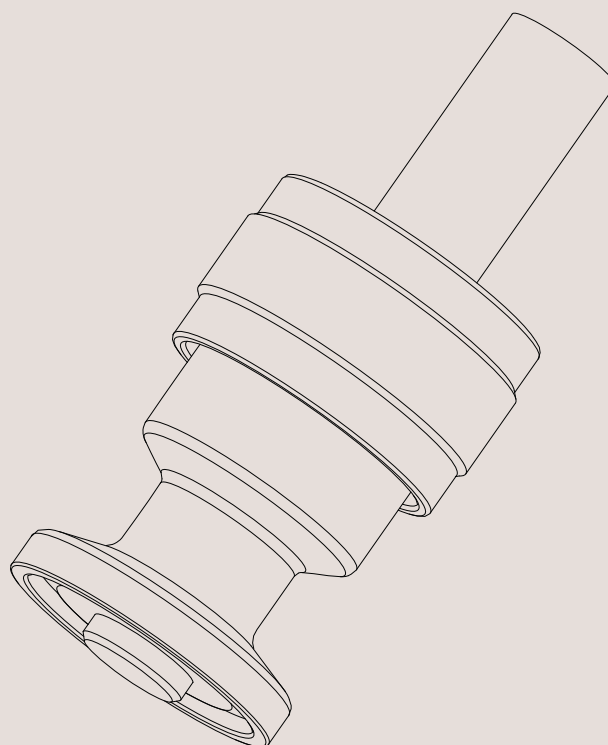




Instruction Manual

Unique Sampling Valve - Accessories - Non-Return Valves



2900-0084

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

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1 Safety

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

1.1 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.

1.2 Warning signs

General warning:



Caustic agents:



All warnings in the manual are summarised on this page.

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

1.3 Safety precautions

Installation:

Always read the technical data thoroughly. (See chapter 5 Product information)

Always release compressed air after use.

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

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

Never dismantle the valve with the valve and pipelines under pressure.

Never dismantle the valve when it is hot.



Operation:

Never dismantle the valve with the valve and pipelines under pressure.

Never dismantle the valve when it is hot.

Always read the technical data thoroughly. (See chapter 5 Product information)

Always release compressed air after use.

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

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

Always rinse well with clean water after cleaning.

Always handle lye and acid with great care.



Maintenance:

Always read the technical data thoroughly. (See chapter 5 Product information)

Always release compressed air after use.

Never service the valve when it is hot.

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

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

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



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 pre-designed lifting points if available.

Always ensure sufficient fixing of the valve during transportation - if specially designed packaging material is available, it must be used.

2 Installation

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

2.1 Unpacking/delivery

Step 1

CAUTION

Alfa Laval cannot be held responsible for incorrect unpacking.

Check the delivery for:

1. Valve
2. Instruction manual

Step 2

Remove possible packing materials from the valve/valve parts.
Inspect the valve/valve parts for visible transport damage.
Avoid damaging the valve/valve parts.

2.2 General installation

Step 1



Always read the technical data thoroughly.
See chapter 5 Product information

CAUTION

Alfa Laval cannot be held responsible for incorrect installation.

Mount the Non-Return Valve on the upper connection with a clamp ring and seal.

NB: Clamp ring and clamp seal are not included in this package.

A - Clamp ring:

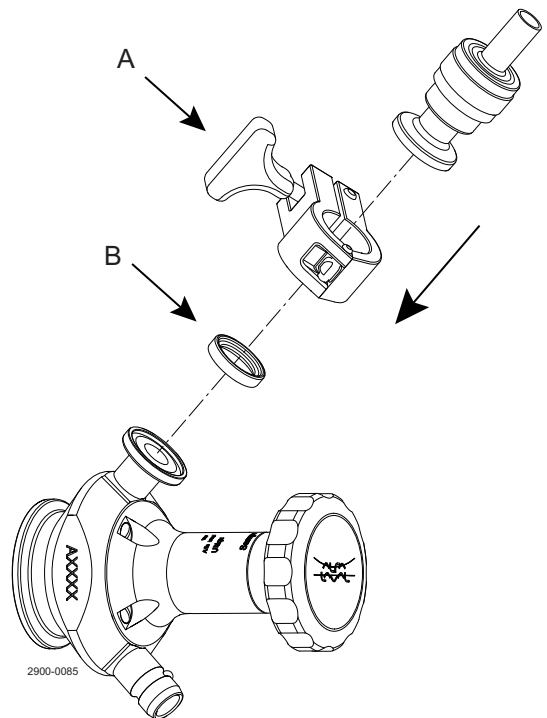
For Unique Sampling Valve sizes 4 and 10: Art. no. **211290**

For Unique Sampling Valve size 25: Art. no. **211053**

B - Clamp seal:

For Unique Sampling Valve sizes 4 and 10: Art. no. **290273**

For Unique Sampling Valve size 25: Art. no. **290044**



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

2.3 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 or defective electronic parts should be sent to a licensed handler for material recycling.
- Oil and all non-metal wearing parts must be dealt with in accordance with local regulations.

- **Scrapping**

- At the end of use, the equipment should be recycled according to the relevant, local regulations. As well as 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.
-

3 Operation

Study the instructions carefully and pay special attention to the warnings!
Ensure that the valve operates smoothly.
The items refer to the parts list and service kits section.

3.1 Operation



Always read the technical data thoroughly.
See chapter 5 Product information

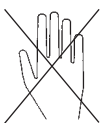
CAUTION

Alfa Laval cannot be held responsible for incorrect operation.



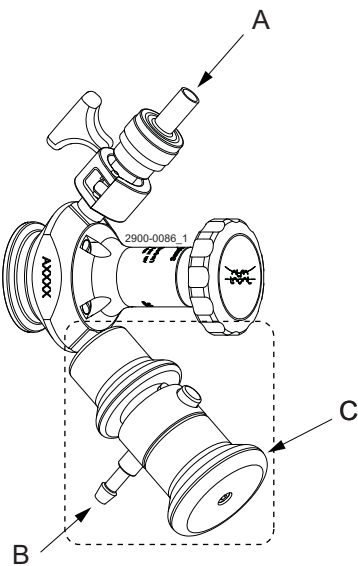
Never touch the valve or the pipelines when processing hot liquids or when sterilising.

Danger of burns!



The Non-Return Valve is used when performing a steam sterilisation on the Unique Sampling Valve.
The valve allows steam to pass through and blocks for product when taking a sample.
The Non-Return Valve can stay on the upper connection between sterilisations.

- A. Steam inlet
- B. Steam outlet
- C. We recommend the use of a pressure relief valve when performing steam sterilisation.
(N.B. Not included in this package)



3.2 Troubleshooting

NOTE!

Study the maintenance instructions carefully before replacing worn parts.

Problem	Cause	Repair
Steam leakage	O-ring is worn or damaged	Replace o-ring
	Clamp seal is worn or damaged	Replace clamp seal
Product leakage	Clamp seal is worn or damaged	Replace clamp seal
	Plug seal is worn or damaged	Replace plug seal

Study the instructions carefully and pay special attention to the warnings!
Ensure that the valve operates smoothly.
The items refer to the parts list and service kits section.

3.3 Recommended cleaning

Step 1



Always handle lye and acid with great care.

Caustic danger!



Always use
rubber gloves!



Always use
protective goggles!

Step 2



Never touch the valve or the pipelines when sterilising.

Danger of burns!



Step 3

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

Step 4

Examples of cleaning agents:

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70° C

1 kg NaOH + 100 l water = Cleaning agent.

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

2. 0.5% by weight HNO₃ at 70° C

0.7 l
53% HNO₃ + 100 l water = Cleaning agent.

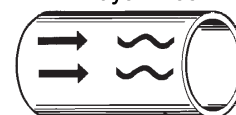
Step 5

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

NOTE

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

Always rinse!



Clean water Cleaning agents

4 Maintenance

Maintain the valve regularly.

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

Check the valve for smooth operation after service.

4.1 General maintenance

Maintenance	Action
Maintenance after leakage	<ul style="list-style-type: none">- Replace o-ring- Replace clamp seal- Replace plug seal
Planned maintenance	Regular inspection for leakage and smooth operation Keep a record of the valve Use the statistics for inspection planning Replace after leakage
Lubrication	None

Recommended spare parts

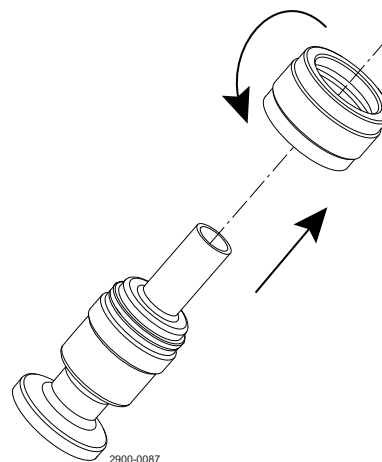
Service kits (see section 6 Parts List and Service Kits)

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

4.2 Dismantling of valve

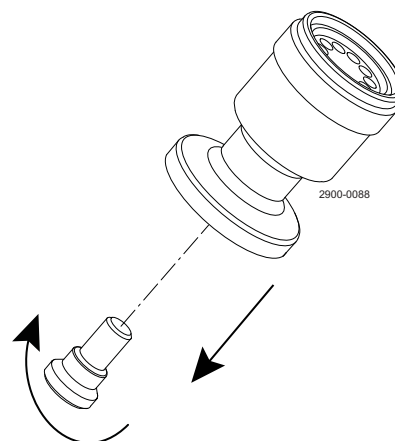
Step 1

1. Unscrew nut.
2. Remove pipe end.



Step 2

Unscrew plug.



4.3 Assembly of valve

Step 1

Follow the reverse order of chapter 4.2 Dismantling of valve
Use Loctite 243 on thread before assembly.

5 Product information

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

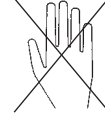
5.1 Technical data



Attention!

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

Danger of burns!



Technical data

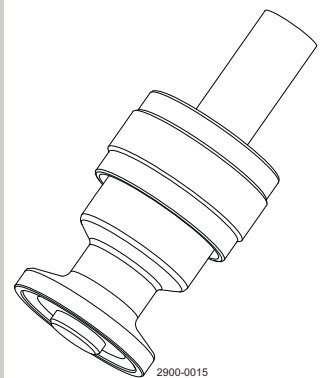
Max. product pressure	600 kPa (6 bar)
Max. working temperature	130 °C
Opening pressure	0-1 bar
Weight:	0.1 kg

Materials

Product wetted steel parts	1.4404* (316L) (internal Ra < 0.8 µm)
Other steel parts	1.4301 (304)
Sealing plug	PVDF* (3A, FDA and USP Class VI)
O-ring	EPDM (3A and FDA)

Spare parts

Sealing kit	See section 6 Parts List and Service Kits
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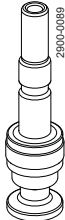
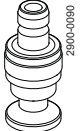
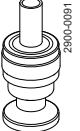
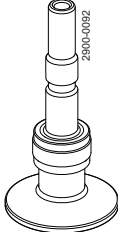
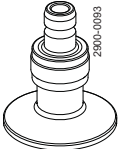
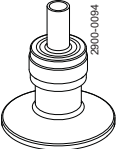


* = parts with traceability.

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

5.2 Product range

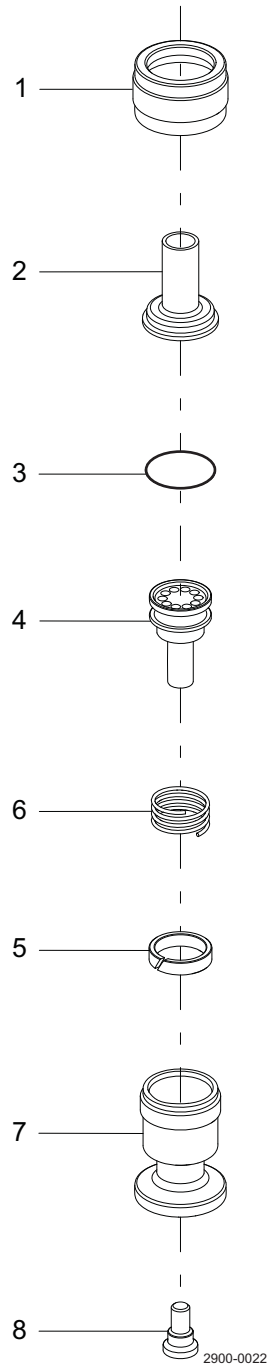
This is the standard Not Return Valve range that is compatible with the Unique Sampling Valve.

Non-Return Valve for Sampling Valve sizes 4 and 10			Non-Return Valve for Sampling Valve size 25		
For steam generator	For quick connection	For weld tube Ø10	For steam generator	For quick connection	For weld tube Ø10
					
9614-1955-01	9614-1955-02	9614-1955-03	9614-1955-04	9614-1955-05	9614-1955-06

6 Parts List and Service Kits

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

6.1 Non-Return Valve - size 4 and 10



6 Parts List and Service Kits

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

Parts list

Pos.	Qty	Denomination
1	1	Non-Return valve
2	1	Nut
3 ▲	1	Inlet
4	1	O-ring
5	1	Piston
6	1	Guide ring
7	1	Spring
8 ▲	1	Body
		Plug

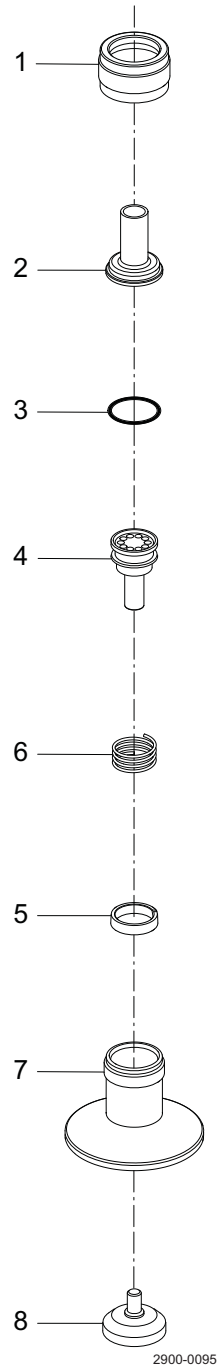
Service kits

Denomination	Size 4 and 10
▲ Service kit	9611-9243-08

6 Parts List and Service Kits

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

6.2 Non-Return Valve - size 25



6 Parts List and Service Kits

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

Parts list

Pos.	Qty	Denomination
1	1	Non-Return valve
2	1	Nut
3 ▲	1	Inlet
4	1	O-ring
5	1	Piston
6	1	Guide ring
7	1	Spring
8 ▲	1	Body
		Plug

Service kits

Denomination	Size 25
▲ Service kit	9611-9243-09

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.

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