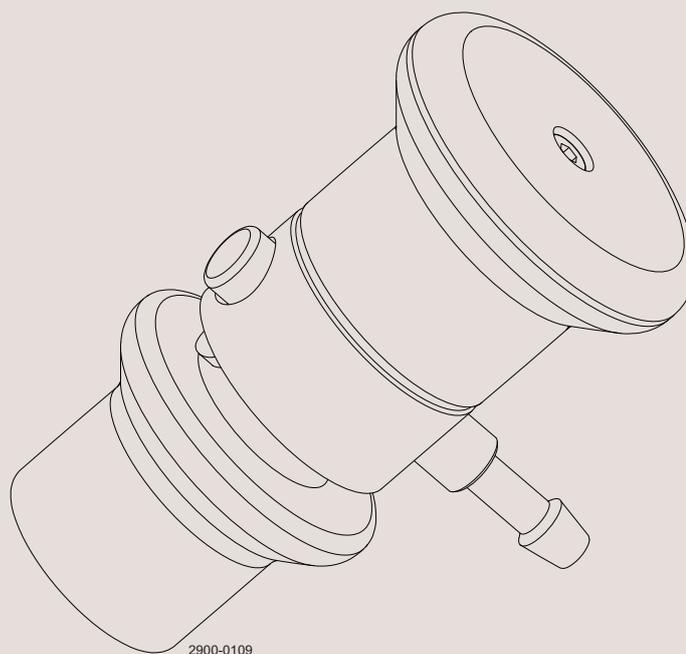




Instruction Manual

Unique Sampling Valve - Accessories - Pressure Relief Valves



2900-0109

ESE02426-EN1 2013-04

Original manual

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

1. Safety	4
1.1. Important information	4
1.2. Warning signs	4
1.3. Safety precautions	5
2. Installation	6
2.1. Unpacking/delivery	6
2.2. General installation	6
2.3. Recycling information	7
3. Operation	8
3.1. Operation	8
3.2. Troubleshooting	9
3.3. Recommended cleaning	10
4. Maintenance	11
4.1. General maintenance	11
4.2. Dismantling the valve	12
4.3. Assembly of valve	12
5. Product information	13
5.1. Technical data	13
5.2. Product range	14
6. Parts list and service kits	16
6.1. Pressure Relief Valve - sizes 4 and 10	16
6.2. Pressure Relief Valve - size 25	18

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 6 Parts list and service kits)

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 6 Parts list and service kits)

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 6 Parts list and service kits)

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 is disconnected before attempt to remove 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



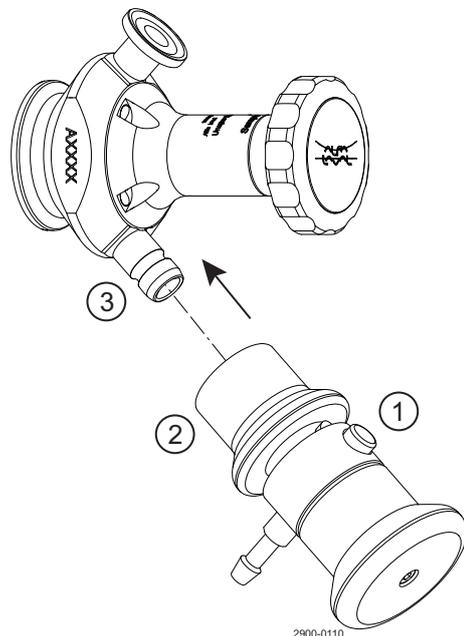
Always read the technical data thoroughly.
See chapter 5.1 Technical data

CAUTION

Alfa Laval cannot be held responsible for incorrect installation.

Mount the Pressure Relief Valve on the lower connection as shown below.

1. Push down and hold the safety button
2. Pull back the handle
3. Mount the Pressure Relief Valve on the lower connection on the Sampling Valve



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

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 5.1 Technical data

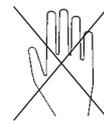
CAUTION

Alfa Laval cannot be held responsible for incorrect operation.



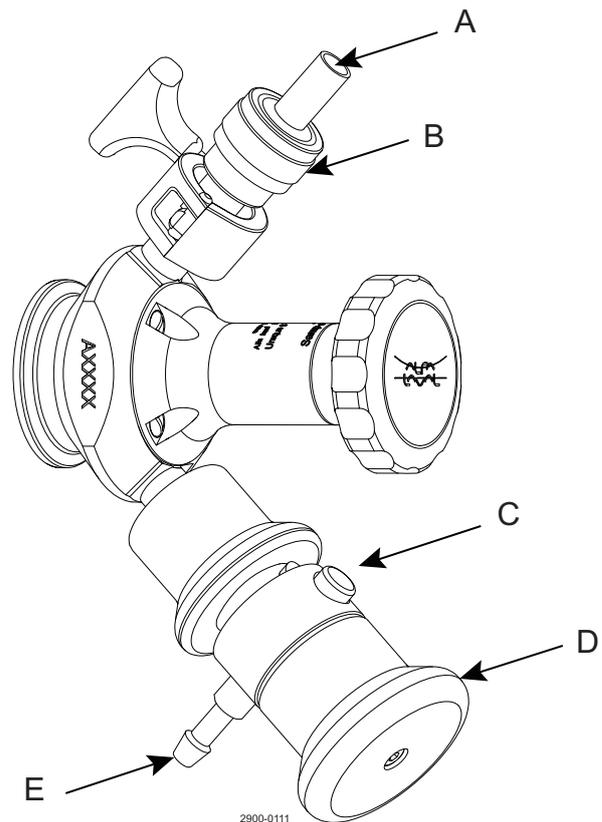
Never touch the valve or the pipelines when processing hot liquids or when sterilising.

Danger of burns!



The Pressure Relief Valve is used to ensure that the temperature is at the right level when performing steam sterilisation on the Sampling Valve.

1. Single Seat: Set the actuator to closed position
Double Seat: Set the actuator to seat lift/steam position.
2. Mount a hose on the steam outlet nozzle to ensure that the steam is led away.
3. Supply steam to the upper connection of the Sampling Valve (2.5-3.5 bar)
4. When steam appears from the steam outlet nozzle, then leave the steam on for 2 minutes.
5. Shut off the steam supply.
6. Pull the quick release handle to ensure that no steam pressure is present in the sampling valve.
7. The Sampling Valve is now clean and ready to take a sample.
We recommend that the Sampling Valve is steam sterilised after a sample has been taken.



- A. Steam inlet
- B. Non Return Valve
- C. Pressure Relief Valve
- D. Quick release of steam
- E. Steam outlet nozzle.

Be careful!

2900-0111

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.

3.2 Troubleshooting

NOTE!

Study the maintenance instructions carefully before replacing worn parts.

Problem	Cause	Repair
Steam leakage	O-ring worn or damaged Membrane worn or damaged	Replace o-ring Replace membrane
No steam at nozzle outlet	Steam pressure too low Blockage of the Pressure Relief Valve	Ensure that the supplied steam pressure is above 2 bars Inspect the Pressure Relief Valve and ensure that nothing is obstructing the valve
Steam temperature is below 120 °C at the Sampling Valve	Steam pressure too low The Pressure Relief Valve opens too early	Ensure the the supplied steam pressure is above 2 bars Inspect the Pressure Relief Valve and ensure that nothing is obstructing the valve

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.

3.3 Recommended cleaning

Step 1



Always handle lye and acid with great care.

Caustic danger!



Always use rubber gloves!



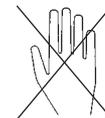
Always use protective goggles!

Step 2



Never touch the valve or the pipelines when sterilising.

Danger of burns!



Step 3

Pay special attention to the warnings!

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.

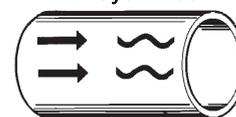
Step 5

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

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 membrane 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	Klüber Paraliq GTE703 or similar

Recommended spare parts

Service kits (see section 6 Parts list and service kits)

4 Maintenance

Maintain the valve regularly.

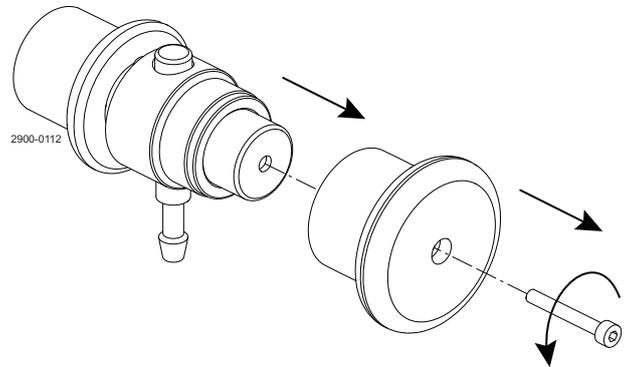
Study the instructions carefully and pay special attention to the warnings!

Check the valve for smooth operation after service.

4.2 Dismantling the valve

Step 1

1. Unscrew the socket hex screw (4 mm).

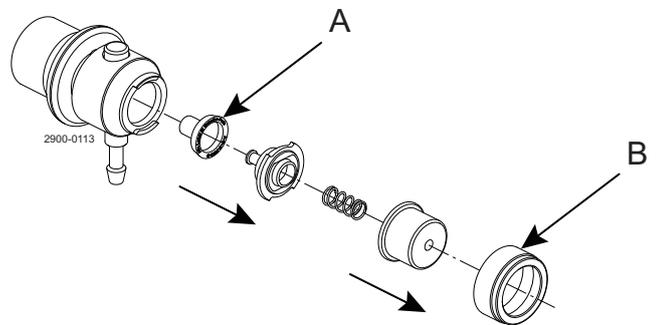


Step 2

Unscrew the nut.

A. Membrane

B. Nut



4.3 Assembly of valve

Follow the reverse order of chapter 4.2 Dismantling the valve

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

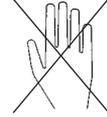
5.1 Technical data



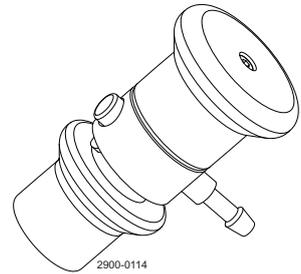
Attention!

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. working temperature	140 °C
Opening pressure	200 kPa (2 bar absolute)
Weight:	0.1 kg
Materials	
Steel parts	1.4301 (304)
Plastic parts	PA 6.6 30% GF
O-ring and membrane	EPDM
Spare parts	
Sealing kit	See section 6 Parts list and service kits

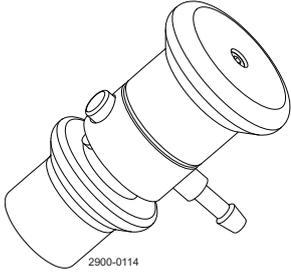
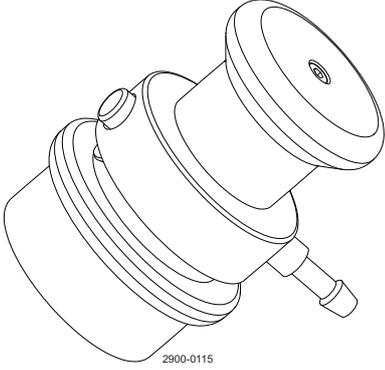


5 Product information

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

5.2 Product range

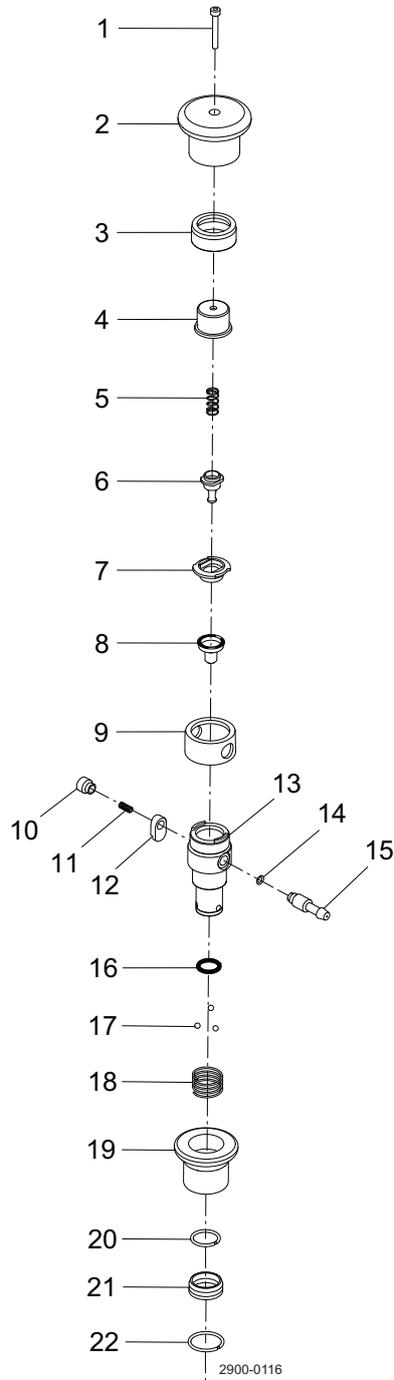
This is the standard Pressure Relief Valve range that is compatible with the Unique Sampling Valve.

Pressure Relief Valve for Sampling Valve sizes 4 and 10	Pressure Relief Valve for Sampling Valve size 25
 <p>2900-0114</p>	 <p>2900-0115</p>

6 Parts list and service kits

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

6.1 Pressure Relief Valve - sizes 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	Screw
2	1	Handle
3	1	Nut
4	1	Spring housing
5	1	Spring
6	1	Stem
7	1	Guide for membrane
8 ▲	1	Membrane
9	1	Cover
10	1	Push button
11	1	Spring
12	1	Safety pawl
13	1	Valve body
14 ▲	1	O-ring
15	1	Nozzle
16 ▲	1	O-ring
17	3	Ball
18	1	Spring
19	1	Handle
20	1	Lock ring
21	1	Handle insert
22	1	Lock ring

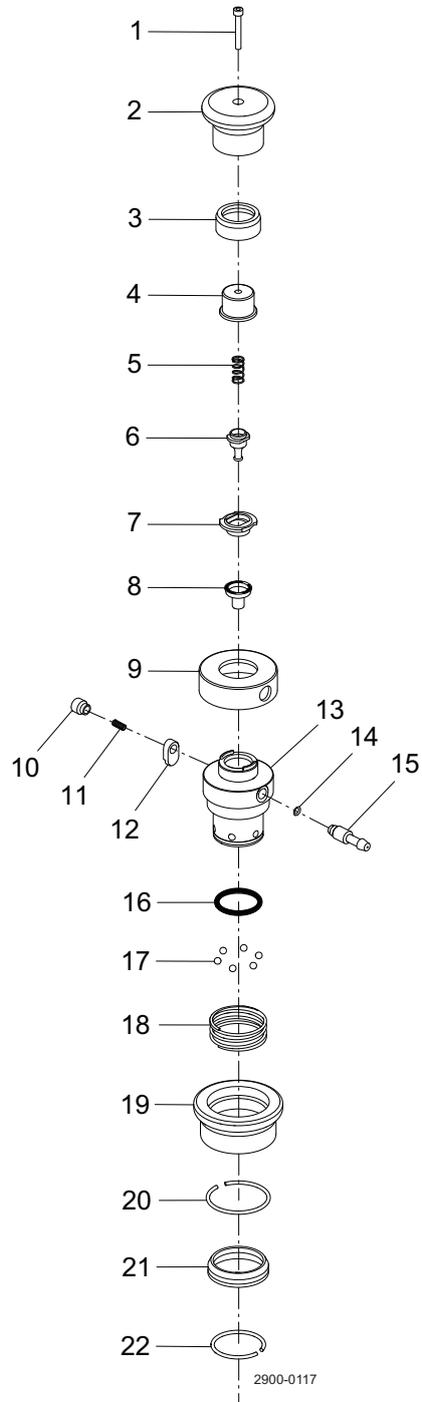
Service kits

	Denomination
▲	Service kit 9611-9243-10

6 Parts list and service kits

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

6.2 Pressure Relief 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	Screw
2	1	Handle
3	1	Nut
4	1	Spring housing
5	1	Spring
6	1	Stem
7	1	Guide for membrane
8 ▲	1	Membrane
9	1	Cover
10	1	Push button
11	1	Spring
12	1	Safety pawl
13	1	Valve body
14 ▲	1	O-ring
15	1	Nozzle
16 ▲	1	O-ring
17	6	Ball
18	1	Spring
19	1	Handle
20	1	Lock ring
21	1	Handle insert
22	1	Lock ring

Service kits

Denomination

Service kit 9611-9243-11

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.

© Alfa Laval Corporate AB

This document and its contents is owned by Alfa Laval Corporate AB and protected by laws governing intellectual property and thereto related rights. It is the responsibility of the user of this document to comply with all applicable intellectual property laws. Without limiting any rights related to this document, no part of this document may be copied, reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the expressed permission of Alfa Laval Corporate AB. Alfa Laval Corporate AB will enforce its rights related to this document to the fullest extent of the law, including the seeking of criminal prosecution.