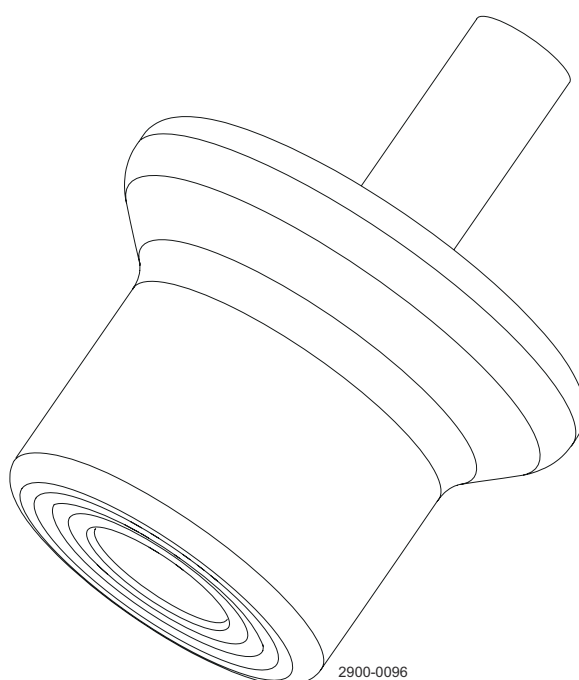


Unique Sampling Valve - Accessories - Quick Connection



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Instruction Manual

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The original instructions are in English

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1 Safety

Read this first



This Instruction Manual is designed for operators and service engineers working with the supplied Alfa Laval product.

Operators must read and understand the **Safety, Installation and Operating** instructions of the supplied Alfa Laval product before carrying out any work or before you put the supplied Alfa Laval product into service!

Not following the instructions can result in serious accidents.

This documentation describes the authorized way to use the supplied Alfa Laval product. Alfa Laval will take no responsibility for injury or damage if the equipment is used in any other way.

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

The operator shall always read the chapter **Safety** first. Hereafter the operator can skip to the relevant section for the task to be carried out or for the information needed.

Always read the chapter **Technical Data** thoroughly.

This is the complete Instruction Manual for the supplied Alfa Laval product.

NOTE

The illustrations and specifications in this Instruction Manual were effective at the date of printing. However, as continuous improvements are our policy, we reserve the right to alter or modify the Instruction Manual without prior notice or any obligation.





The English version of the Instruction Manual is the original manual. Alfa Laval cannot be held responsible for incorrect translations. In case of doubt, the English version applies.



1.1 Safety Signs

Mandatory Action Signs

	General mandatory action sign.
	Refer to instruction manual.
	Use eye protection - safety glasses.
	Use protective hand wear - safety gloves.
	Wear protective equipment - safety helmet.
	Use ear protection in noisy environments - noise protector.
	Wear protective equipment - safety shoes.

Warning Signs

	General warning.
	Transportation with forklift truck or other industrial vehicles if heavy.
	Hot surface and burning danger.
	Cutting danger.

	Corrosive substance.
	Crushing of hands.

1.2 Safety Precautions

All warnings in the Instruction Manual are summarised on these pages. Pay special attention to the instructions below so that severe personal injury and/or damage to the supplied Alfa Laval product is avoided.






General

	<p>To prevent unexpected start and contact with electrical live and moving parts.</p> <p>Always disconnect the power supply safely:</p> <ul style="list-style-type: none"> The power supply disconnecting device must be disconnected (in off position) and locked.
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Transportation and Lifting

 	<p>Never lift or elevate in any way other than described in this manual.</p> <p>Always use the original packaging or similar during transportation.</p> <p>Always ensure that personnel must have experience with lifting operations.</p> <p>Always ensure that all connections are disconnected before attempting to remove the valve from the installation.</p> <p>Always ensure that no leakage of lubricants can occur.</p> <p>Always drain liquid out of the valves before transportation.</p> <p>Always ensure sufficient fixing of the valve during transportation - if specially designed packaging material is available, it must be used.</p> <p>Always ensure that compressed air is released.</p>
 	<p>Always use designated lifting points if defined. Ensure that the lifting equipment is suitable for the supplied Alfa Laval product.</p> <p>Always ensure that the unit is securely fixed during transportation.</p> <p>Always ensure the lifting point to be in line with center of gravity. Adjust lifting point if necessary.</p> <p>Always use suitable transport device ie. forklift or pallet lifter.</p> <p>Always use appropriate lifting equipment for heavy parts when relevant. Use lifting logs when available.</p> <p>Always keep an eye on the load and stay clear during the lifting operation.</p>




Installation

	<p>If the local safety regulations prescribe that the installation has to be inspected and approved by responsible authorities before the valve is put into service, consult with such authorities before installing the equipment and have the projected installation approved by them.</p> <p>Always release compressed air after use.</p> <p>Always assemble the valve completely before startup and make sure everything is in place and correctly tightened.</p>
  	<p>Always ensure that the valve and pipelines are depressurized, emptied, and cooled down to ambient temperature before installation, inspection, assembly, or dismantling of the valve.</p> <p>Never touch the valve or the pipelines when processing hot liquids or when sterilising.</p>
	<p>Never work on the valve or touch moving parts if the actuator is supplied with compressed air.</p>


Operation

	<p>Always read Technical Data thoroughly.</p> <p>Never operate the valve unless a correct installation has been verified.</p>
	<p>Never touch the valve or pipelines when hot.</p> <p>Never touch the valve or the pipelines when processing hot liquids or when sterilising.</p>
	<p>Always rinse well with clean water after cleaning.</p> <p>Always handle lye and acid with great care.</p> <p>Always follow the instructions in the safety data sheets from the suppliers of cleaning agents, detergents, oils etc.</p>
	<p>Never touch moving parts of the valve during operation.</p> <p>Never dismantle the valve during operation or when pressurized.</p> <p>Always release compressed air after use.</p> <p>Never touch the moving parts if the actuator is supplied with compressed air.</p>


Maintenance

	<p>In order to optimise the operation of the supplied Alfa Laval product and to minimize the down time due repair activities, the maintenance includes:</p> <ul style="list-style-type: none"> • Inspection and maintenance of the supplied Alfa Laval product: strictly follow the technical documentation • Preventive maintenance: visual inspection of the supplied Alfa Laval product followed by necessary adjustments and planned periodic replacement of wear and tear parts • Repairs: unscheduled break down of a component, often causing the system to stop. Damaged components must be replaced • Stock of Alfa Laval genuine spare parts: Alfa Laval recommend keeping a stock of genuine spare parts facilitating preventive maintenance and reducing downtime in case of unplanned break downs
 	<p>Always release compressed air after use.</p> <p>Always ensure that the valve and pipelines are depressurized, emptied, and cooled down to ambient temperature before dismantling the valve.</p>



Storage


	<p>Alfa Laval recommend:</p> <ul style="list-style-type: none"> • Store the supplied Alfa Laval product as supplied in original packaging • Port opening(s) should be protected against any ingress • Store in a clean, dry place without direct sunlight or UV light • Temperature range -5 °C to +40 °C (23 °F - 104 °F) • Relative humidity less than 60% • No exposure to corrosive substances (including contained air)
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Noise


	<p>Under certain operating conditions, the supplied Alfa Laval product and/or the systems in which they are installed can produce high sound pressure levels. Appropriate noise protection measures should be taken when necessary and in accordance with local legislation.</p>
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Hazards


 	<p>Burn Hazard</p> <ul style="list-style-type: none"> • Lubrication oil, machine parts and various machine surfaces can be hot and cause burns. Wear protective gloves
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	<p>Corrosive Hazard</p> <ul style="list-style-type: none"> • Always handle cleaning liquids, lye and acid with great care and in accordance with separate instructions for those fluids • When using chemical cleaning agents and lubricants, make sure you follow the general rules and suppliers recommendation regarding ventilation, personnel protection etc.
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	<p>Cut Hazard</p> <ul style="list-style-type: none"> • Sharp edges, especially on bowl discs and threads, can cause cuts. Wear protective gloves
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	<p>Crushing Hazard</p> <ul style="list-style-type: none"> • Avoid placing hands into valve orifice pinch points
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Safety check

	<p>A visual inspection of any protective device (shield, guard, cover or other) on the supplied Alfa Laval 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.</p> <p>Inspection acceptance criteria:</p> <ul style="list-style-type: none"> • 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 <p>Procedure in case of non-acceptance:</p> <ul style="list-style-type: none"> • Fix and/or replace the protective device
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1.3 Warning Signs in Text

Pay attention to the safety instructions in this Instruction Manual.

Below are definitions of the four grades of warning signs used in the text where there is a risk for injury to personnel or damage to the supplied Alfa Laval product.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate damage to the supplied Alfa Laval product.

NOTE

Indicates important information to simplify or clarify procedures.

1.4 Requirements of Personnel

Operators

The operators shall read and understand this Instruction Manual.

Maintenance personnel

The maintenance personnel shall read and understand this 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 Alfa Laval product.

In some cases, specially skilled personnel may need to be hired (i.e. electricians, welders). In some cases the personnel has to be certified according to local regulations with experience of similar types of work.

1.5 Recycling Information

Unpacking

Packing material may consist 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 (if used) and wear parts in the supplied Alfa Laval product should be replaced.

- Oil and all non-metal wear parts must be disposed of in accordance with local regulations
- Rubber and plastics should be burnt at a licensed waste incineration plant. If not available they should be disposed of in accordance with local regulations
- Bearings and other metal parts should be sent to a licensed handler for material recycling
- Seal rings and friction linings should be disposed of to a licensed land fill site. Check your local regulations
- All metal parts should be sent for material recycling
- Worn out or defected electronic parts should be sent to a licensed handler for material recycling

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.

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 Introduction

The Alfa Laval Quick Connection is a hygienic sampling accessory for connection when using the Alfa Laval Unique Sampling Valve. It can be used individually or in combination with sampling accessories, such as the Alfa Laval Non-return Valve.

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3 Installation

3.1 Unpacking/delivery

NOTE

This instruction manual is part of the delivery.

Study the instructions thoroughly.

The items refer to [Parts Lists and Exploded Views](#) on page 31.

CAUTION

Alfa Laval cannot be held responsible for incorrect unpacking.

Check the delivery for:

1. Quick Connection
2. Instruction manual

1

Remove possible packing materials from the Quick Connection.

2

Inspect the Quick Connection for visible transport damage.

Avoid damaging the Quick Connection.

3.2 General installation - standard Quick Connection

NOTE

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.

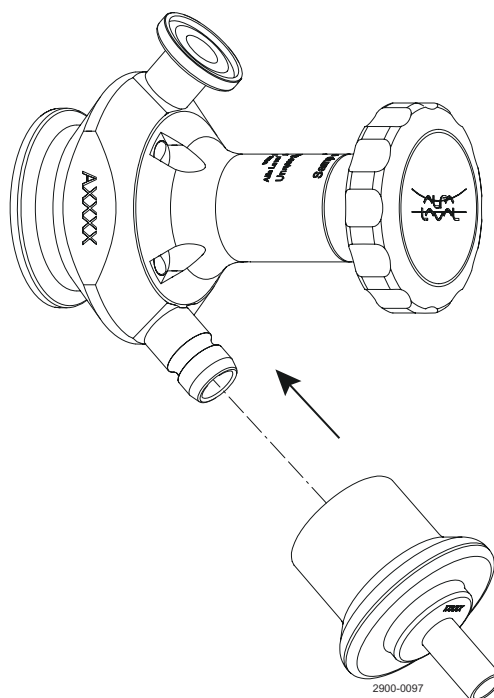
WARNING

Always read *Technical Data* on page 27 thoroughly.

CAUTION

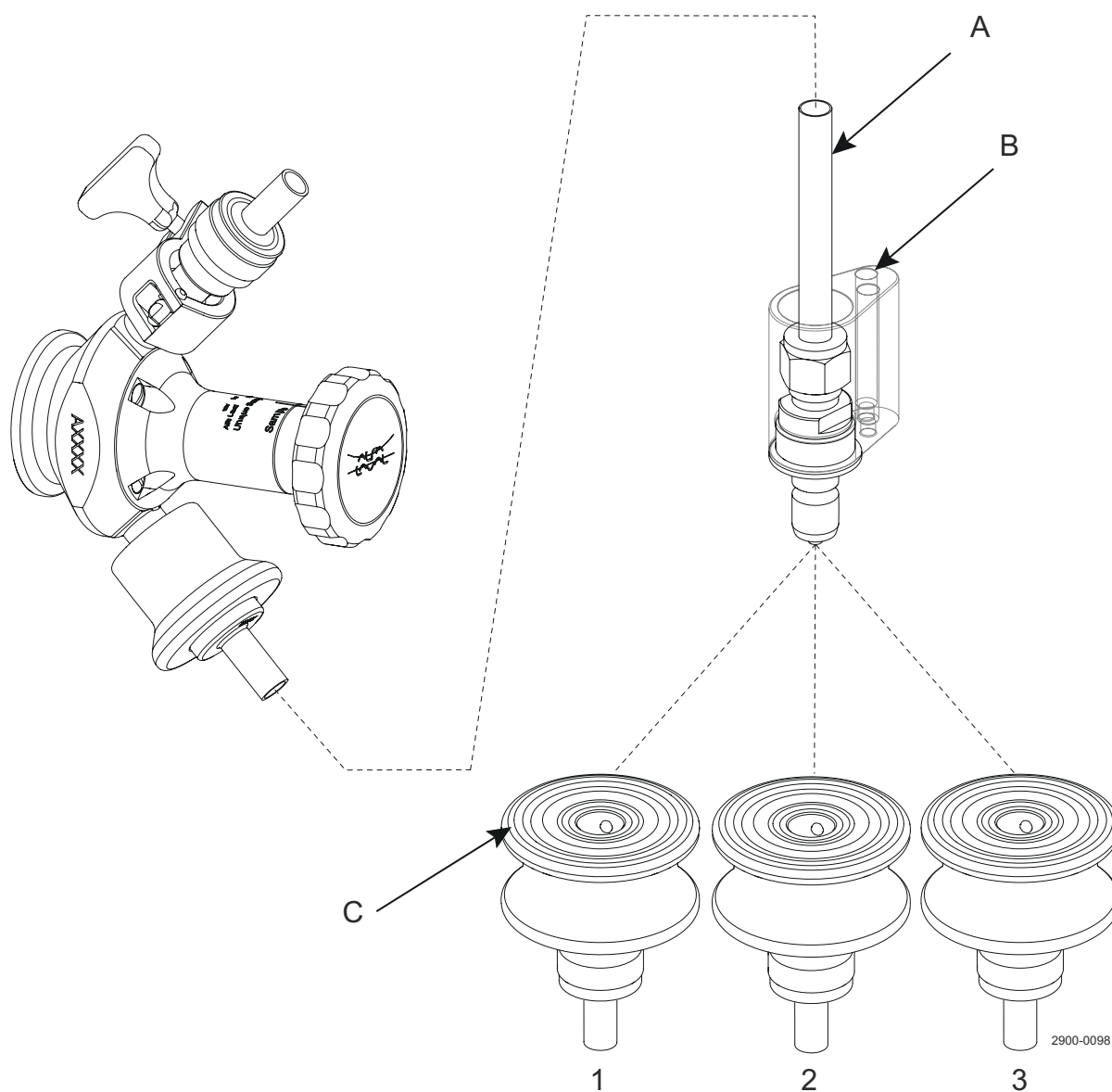
Alfa Laval cannot be held responsible for incorrect installation.

Mount the Quick Connection on the lower connection on the Sampling Valve.



3.3 General Installation - special Quick Connection

Quick Connections with Non-Return Valve



A. Pipe (OD = Ø10 mm)

B. Mount holes for proximity switch¹

C. Indicator rings for different applications²

¹ Proximity switch is not included

² Indication rings are included

Example of use

1. CIP acid outlet
2. CIP lye outlet
3. CIP water outlet

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4 Operation

4.1 Operation - standard Quick Connection

NOTE

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

Ensure that the Quick Connection operates smoothly.

The items refer to [Parts Lists and Exploded Views](#) on page 31.

WARNING

Always read [Technical Data](#) on page 27 thoroughly.

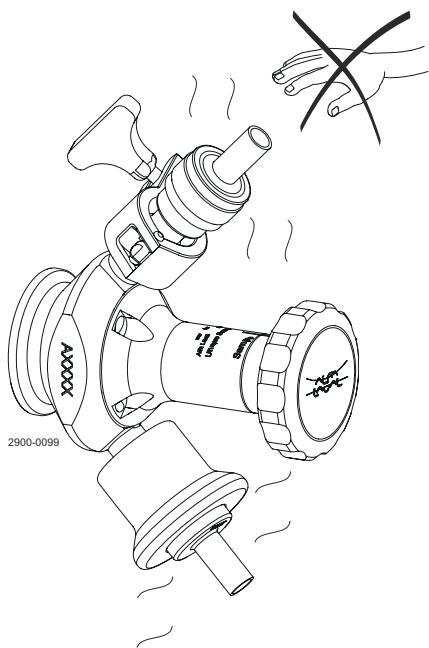
CAUTION

Alfa Laval cannot be held responsible for incorrect operation.

WARNING

Danger of burns!

Never touch the Quick Connection or the pipelines when processing hot liquids or when sterilising.



The Quick Connections are used as a connection on the outlet on the Sampling Valve.

4.2 Operation - special Quick Connection

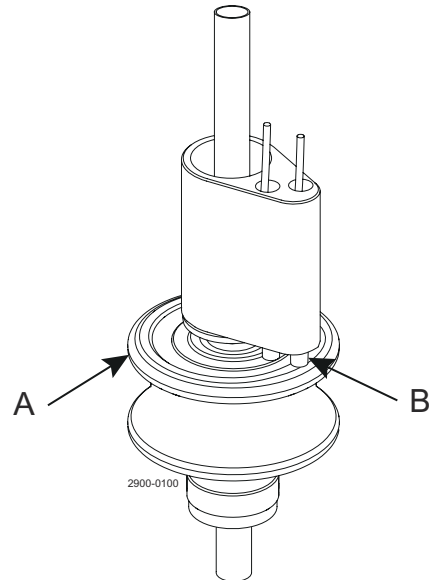
The male and female Quick Connection with Non-Return Valve, is normally used together.

When the two Quick Connections are connected together, the integrated Not Return Valves on both will be open.

It is possible to mount up to two proximity switches (not included), which are used for surveillance on the connection.

A = Indication rings

B = Proximity switch



4.3 Troubleshooting

! NOTE

Study the maintenance instructions carefully before replacing worn parts.

Problem	Cause	Repair
Product leakage	O-ring is damaged or worn	Replace o-ring

4.4 Recommended Cleaning

NOTE

The supplied product is designed for cleaning in place (CIP).

NaOH = Caustic soda.

HNO₃ = Nitric acid.

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

CAUTION

Never touch the supplied product or the pipelines when sterilizing.

Always handle lye and acid with great care.

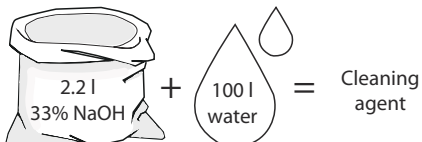
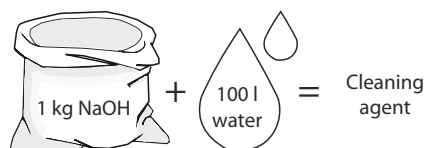


Examples of cleaning agents

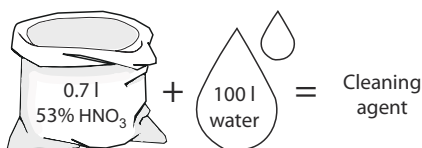
Use clean water free from chlorides

Metric System

1. 1% by weight NaOH at 70°C

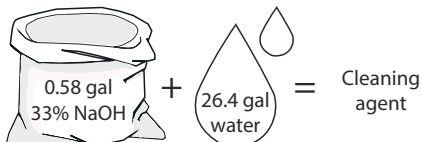
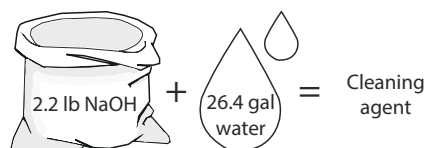


2. 0.5% by weight HNO₃ at 70°C

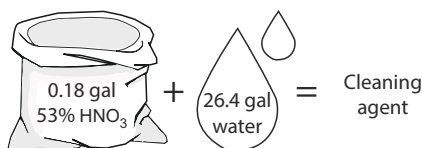


Imperial System

1. 1% by weight NaOH at 158°F



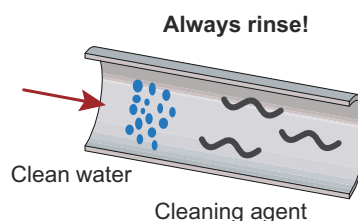
2. 0.5% by weight HNO₃ at 158°F



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

CAUTION

Always rinse well with clean water after the cleaning.



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5 Maintenance

5.1 General maintenance

NOTE

Maintain the Quick Connection regularly.

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

Check the Quick Connection for smooth operation after service.

Maintenance	Action
Maintenance after leakage	Replace O-ring
Planned maintenance	Regular inspection for leakage and smooth operation
	Keep a record of the Quick Connection
	Use the statistics for inspection planning
	Replace after leakage
Lubrication	Alfa Laval Silicone based Food-grade Lubricant

Recommended spare parts

See [Parts Lists and Exploded Views](#) on page 31

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6 Technical Data

NOTE

Technical data must be observed during installation, operation and maintenance.
All personnel should be informed about the technical data.

6.1 Technical Data

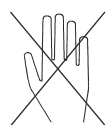


WARNING

Danger of burns!

Never touch the Quick Connection or the pipelines when processing hot liquids or when sterilising.

Never service the Quick Connection when it is hot.



Temperature

Temperature range:	1 °C - 130 °C / 33.8 °F - 266 °F
--------------------	----------------------------------

Pressure

Max. working pressure:	600 kPa (6 bar) / 87 psi
------------------------	--------------------------

Min. working pressure:	0 kPa (0 bar) / 0 psi
------------------------	-----------------------

6.2 Physical Data

Materials

Product wetted parts:	1.4404 (316L)
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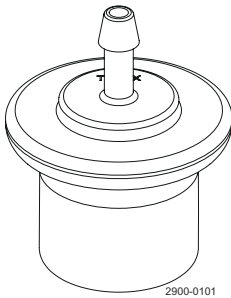
Other parts:	1.4301 (304), PA 6.6 30%, GF, EPDM
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6.3 Product range

Standard Quick Connections:

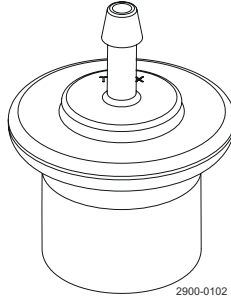
These Quick Connections are compatible with the Unique Sampling Valve sizes 4 and 10.

Hose nozzle
Ø6 mm



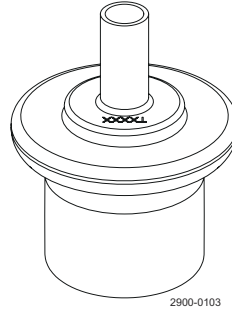
9614-1956-01

Hose nozzle
Ø8 mm



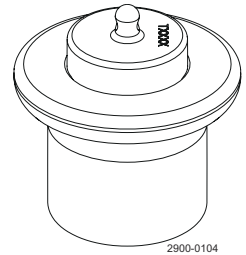
9614-1956-02

Pipe end
Ø10 mm



9614-1956-03

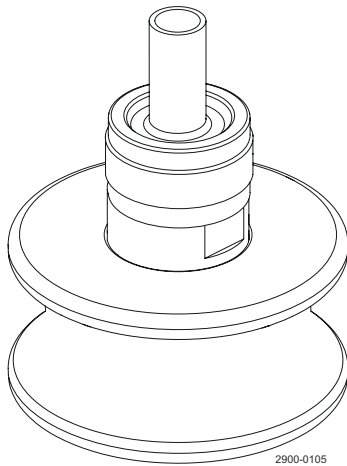
Blind cap



9614-1956-04

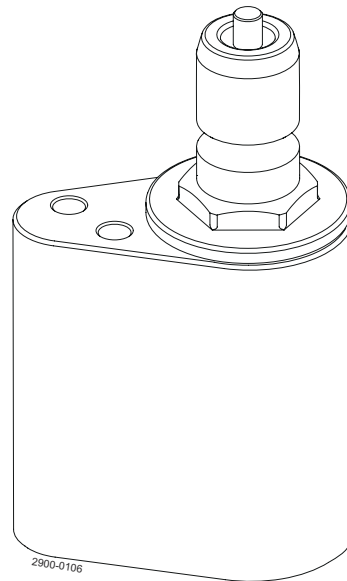
Special Quick Connections:

Female Quick Connect with Non-Return Valve



9614-1956-06

Male Quick Connect with Non-Return Valve



9614-1956-07

7 Spare Parts

For every delivered Alfa Laval Product, a spare part list is available.

This spare part list contains a range of the most common wear parts for the machinery. If any component not mentioned is required, please contact your local Alfa Laval representative for availability.

You can find our spare part catalogue at <https://hygienicfluidhandling-catalogue.alfalaval.com>.

Always use Alfa Laval genuine spare parts. The warranty of Alfa Laval products is dependent on use of Alfa Laval genuine spare parts.

7.1 Ordering Spare Parts

When ordering spare parts, please always state:

1. Serial number (if available)
2. Item number/spare part number (if available)
3. Capacity or other relevant identification

7.2 Alfa Laval Service

Alfa Laval is represented in all larger countries of the world.

Do not hesitate to contact your local Alfa Laval representative, with any questions or requirement of spare parts for Alfa Laval equipment.

7.3 Warranty - Definition



The rules of Intended use are absolute. Use of the supplied Alfa Laval product is allowed only when in compliance with the technical data supplied with the Intended use.

Differing utilisation, other than agreed with Alfa Laval Kolding A/S, exclude any liability and warranty.

No modification or alteration of the supplied Alfa Laval product is allowed, unless explicit permission is granted by Alfa Laval Kolding A/S.



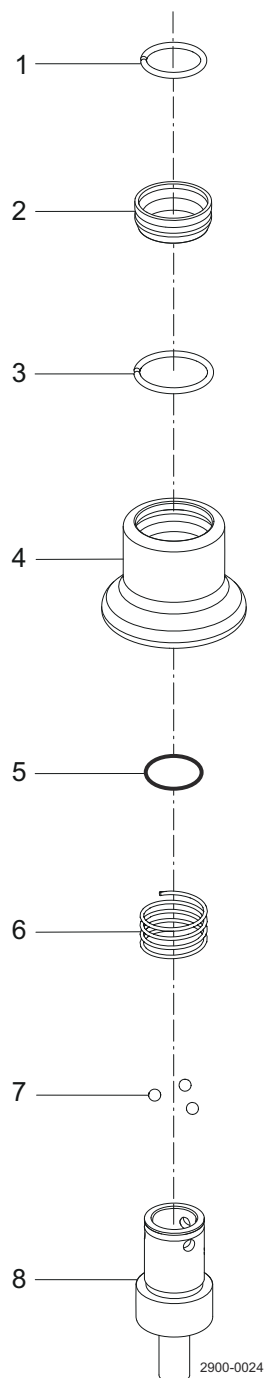
Liability and warranty are excluded:

- If advice and instruction of operating instructions are ignored
- For incorrect operation or for insufficient maintenance of the supplied Alfa Laval product
- For any kind of change of function of the supplied Alfa Laval product without prior written agreement by Alfa Laval Kolding A/S
- If supplied Alfa Laval product is modified by non-authorised persons
- If using the supplied Alfa Laval product without attention of appropriate safety regulations, (see [Safety](#) on page 5)
- If protection equipment is not used and vessel process / ancillary equipment is not brought to a standstill
- If the supplied Alfa Laval product and ancillary parts are not properly maintained (to be executed in intervals and including fitting of prescribed replacement parts)

When exchanging parts, only original replacement parts, released from the manufacturer, must be used.

8 Parts Lists and Exploded Views

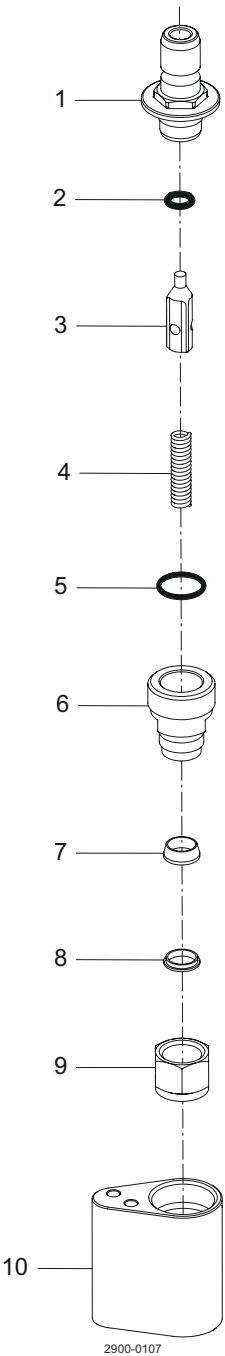
8.1 Quick Connection — sizes 4 and 10



Pos.	Qty.	Denomination
1	1	Lock ring
2	1	Handle insert
3	1	Lock ring
4	1	Handle

Pos.	Qty.	Denomination
5	1	O-ring
6	1	Spring
7	3	Ball
8	1	Body

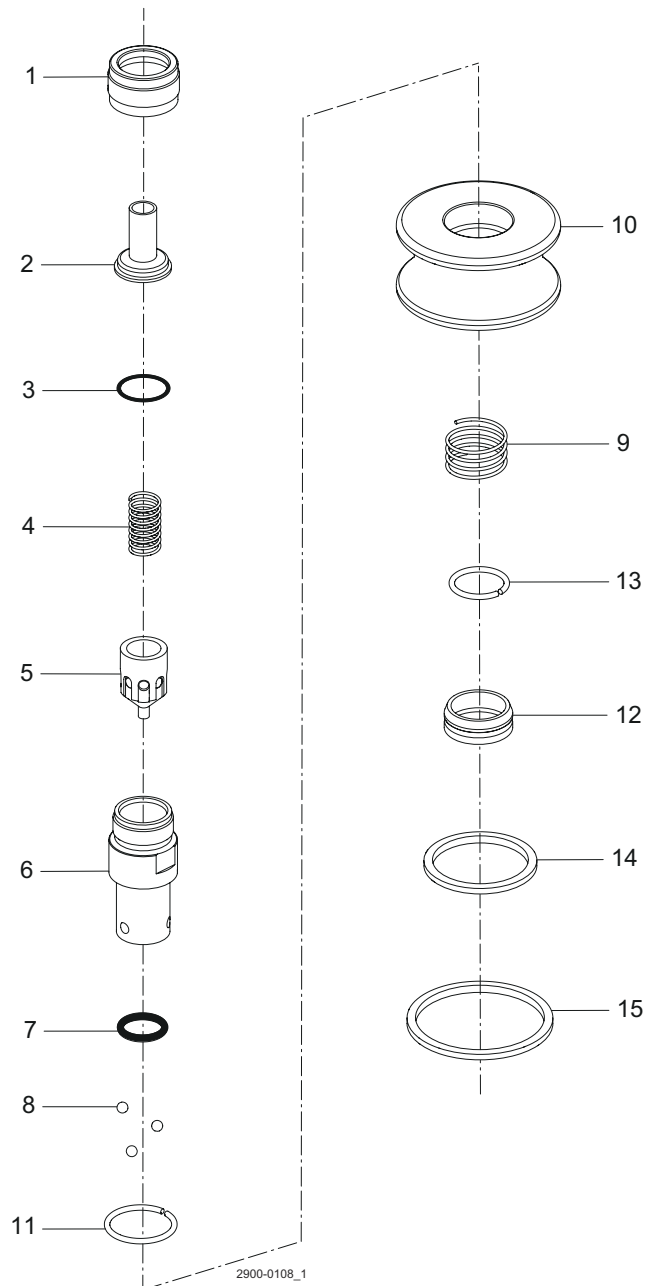
8.2 Male Quick Connection



Pos.	Qty.	Denomination
1	1	Male part
2	1	O-ring
3	1	Plug
4	1	Spring
5	1	O-ring

Pos.	Qty.	Denomination
6	1	Tube fitting, male coupling Ø10
7	1	Front ferrule tube fitting Ø10
8	1	Back ferrule tube fitting Ø10
9	1	Nut
10	1	Handle

8.3 Female Quick Connection



Pos.	Qty.	Denomination
1	1	Nut
2	1	Inlet
3	1	O-ring
4	1	Spring
5	1	Plug
6	1	Female part
7	1	O-ring
8	3	Ball

Pos.	Qty.	Denomination
9	1	Spring
10	1	Handle
11	1	Lock ring
12	1	Handle insert
13	1	Lock ring
14	1	Ring
15	1	Ring