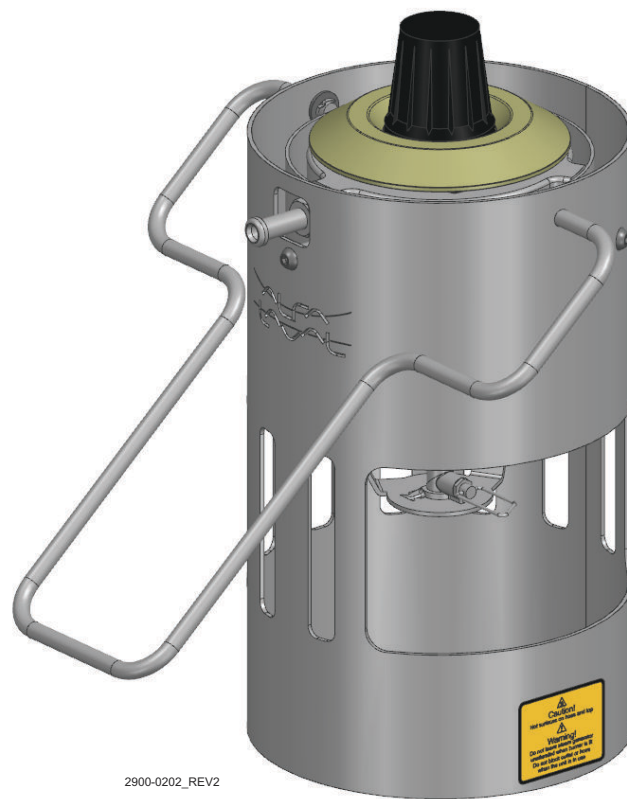


Alfa Laval Steam Generator



Lit. Code

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Instruction Manual

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The original instructions are in English

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1 Introduction

Alfa Laval Steam Generator is a portable device designed to provide steam in sampling locations where a fixed steam supply is not available.

1.1 Application



The Steam Generator is used for steaming sampling valves as a mean of cleaning and disinfecting the sampling valve prior to extracting the sample. This ensures the sample taken is free of any critical level of microorganisms and is representative of the greater content of the product being sampled.







An important note, microorganisms have different lethality depending on temperature and exposure time. The steam produced in the Steam Generator is not pressurized, so the steam temperature is around 100° C (212° F). Make sure that the type and level of critical microorganisms in your application are such that steam at 100° C (212° F) will suffice.

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2 Safety





2.1 Safety Instructions and Warnings


 	<p>Read this first</p> <p>Always read the manual before using the Steam Generator!</p> <p>Unsafe practices and other important information are emphasized in this manual. Warnings are emphasized by means of special signs.</p> <p>All warnings in the manual are summarized on this page.</p> <p>Pay special attention to the instructions below so that serious personal injury and/or damage to the Steam Generator is avoided.</p>
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Safety Sign	
	Use eye protection - Safety Glasses.
	Use protective hand wear - Safety Gloves.
	Wear protective equipment - safety helmet.
	Wear protective equipment - safety shoes.
	Hot surface and burning danger.
	Hot liquid and steam.


General Safety Precautions


	<p>GENERAL</p> <p>Study the instructions carefully and pay special attention to the warnings!</p> <p>Ensure that the Steam Generator operates smoothly.</p> <p>The items refer to the parts list and exploded view section (see Parts list and exploded view on page 29).</p> <p>Always read safety precautions carefully before operation.</p>
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	<p>INSTALLATION</p> <p>Always read the technical data thoroughly (see Technical data on page 25).</p> <p>Always use Steam Generator in a well-ventilated area.</p> <p>Never touch the Steam Generator or the hoses when processing hot liquids or when sterilizing.</p> <p>Never dismantle the Steam Generator or the hoses, while pressurized.</p> <p>Never dismantle the Steam Generator or the hoses when hot.</p> <p>Never use the Steam Generator in a flammable area.</p> <p>Always ensure all pipe lines (product, air, and water) are depressurized and emptied before installation, inspection, assembling and disassembling.</p> <p>Always assemble the valve completely before start and make sure everything is in place and properly tightened</p>
	<p>OPERATION</p> <p>Never dismantle the Steam Generator or the hoses, while pressurized.</p> <p>Never dismantle the Steam Generator or the hoses when hot.</p> <p>Always read the technical data thoroughly (see Technical data on page 25).</p> <p>Never touch the Steam Generator or the hoses when processing hot liquids or when sterilizing.</p> <p>Never run “dry”, without water, in the water container. When emptied, turn off the burner.</p> <p>Always rinse well with clean water after cleaning.</p> <p>Always handle lye and acid with great care.</p> <p>Do not block outlet, or hose when the burner is lit.</p> <p>Do not leave Steam Generator unattended when burner is lit.</p> <p>Always use the Steam Generator in an upright position.</p> <p>Always check for steam leakages.</p> <p>Always check for gas leakages.</p>
	<p>MAINTENANCE</p> <p>Always read the technical data thoroughly (see Technical data on page 25).</p> <p>Never service the Steam Generator when it is hot.</p> <p>Never service the Steam Generator with the valve and pipelines under pressure.</p> <p>Preventive maintenance: visual inspection of the supplied product followed by necessary adjustments and planned periodic replacement of wear and tear parts.</p> <p>Repairs: unscheduled break-down of a component, often causing the system to stop. Damaged components shall be replaced or repaired.</p> <p>Stock of Alfa Laval genuine spare parts: Alfa Laval recommends keeping a stock of genuine spare parts facilitating preventive maintenance and reducing down time in case of unplanned break-downs.</p>
	<p>TRANSPORTATION</p> <p>Always drain liquid from the Steam Generator before transportation.</p> <p>Always ensure that all connections are disconnected before attempting to remove the valve from the installation.</p>

	<p>STORAGE</p> <p>Storage</p> <p>Ideally, as a guide Alfa Laval recommend:</p> <ul style="list-style-type: none"> • 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)
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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 • Avoid placing hands into valve pinch points
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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

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 in Text

Pay attention to the safety instructions in this 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 product damage.



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



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



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



Indicates important information to simplify or clarify procedures.

2.3 Requirements of Personnel

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.

In some cases special skilled personnel may need to be hired, like electricians and others. In some of these cases the personnel has to be certified according to local regulations with experience of similar types of work.

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.

2.4 Recycling Information

Unpacking

Packing material consists of wood, plastics, cardboard boxes and in some cases metal straps.



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

Maintenance

During maintenance oil and wear parts in the machine are replaced.

- Oil and all non-metal wearing 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 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 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.

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3 Installation

3.1 Unpacking/delivery



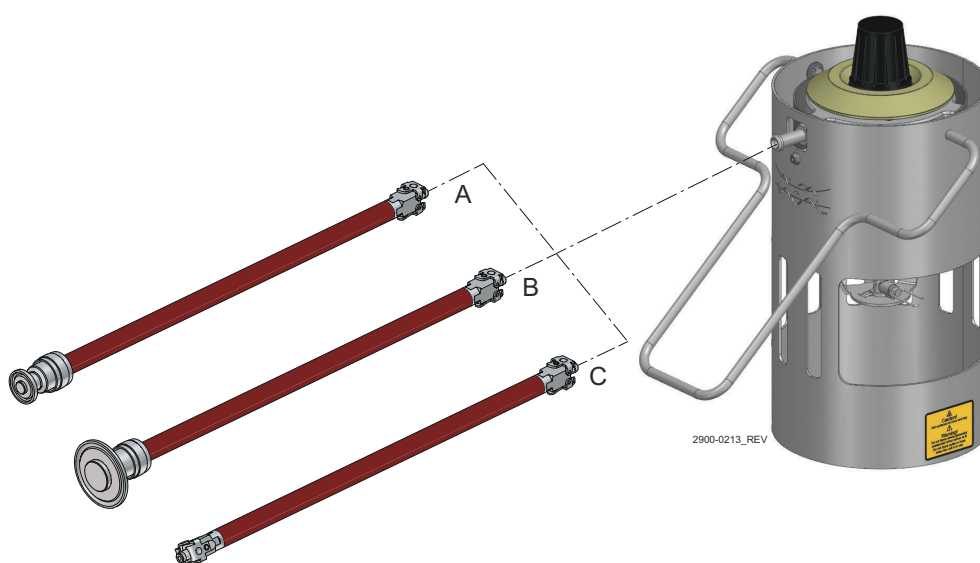
Alfa Laval **cannot** be held responsible for incorrect unpacking.

Check the delivery for: Scratches, and visible transport damages before use.

3.2 General installation

Always read the technical data thoroughly (see [Technical data](#) on page 25).

Before using the steam generator it is necessary to install either the hose for MSV (Membrane Sampling Valve) or the hose for the USV (Unique Sampling Valve), which is sold separately.



- A.** Hose for Unique Sampling Valve size 4 - 10 with connection for Steam Generator, item no. 8010031436
- B.** Hose for Unique Sampling Valve size 25 with connection for Steam Generator, item no. 8010031434
- C.** Hose for Scandi Brew Membrane Sampling Valve with connection for Steam Generator, item no. 8010031433

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4 Operation

The Alfa Laval Steam Generator can be used with both Alfa Laval Unique Sampling Valve (USV) and the Alfa Laval SB Membrane Sampling Valve (MSV).

The water container is heated using a standard 100-gram gas canister EN417 (not included).

NOTE

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

Always read the technical data thoroughly (see [Technical data](#) on page 25).

Always read safety precautions carefully before operation.

Ensure that the Steam Generator operates smoothly.

Alfa Laval **cannot** be held responsible for incorrect operation.

The items refer to parts list and exploded view (see [Parts list and exploded view](#) on page 29).

WARNING

Never dismantle Steam Generator or hoses while hot.

Never touch the Steam Generator or the hoses when processing hot liquids or when sterilizing.

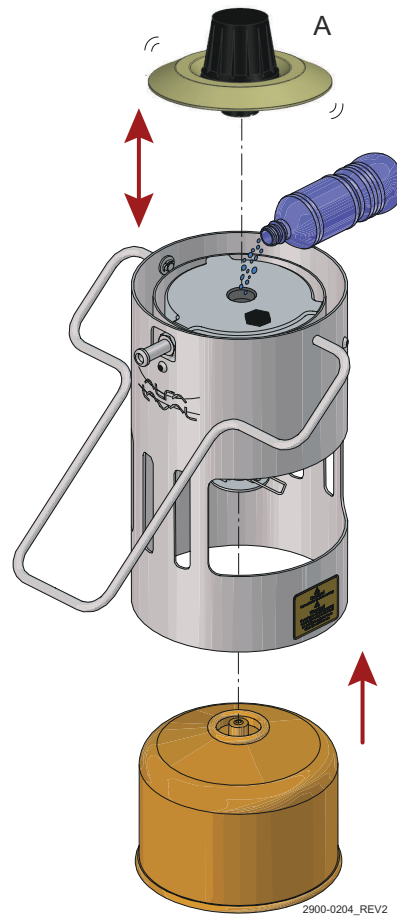


1

Unscrew the water container cap (A), and pour 0.5L water in the water container. Screw the water container cap firmly on again and mount the standard 100-gram gas canister EN417.

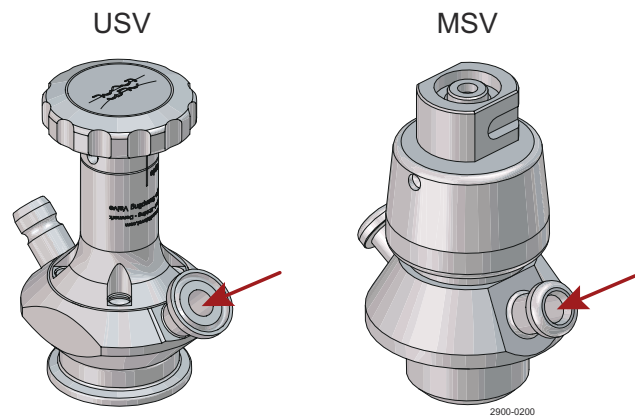
CAUTION

Always ensure that the water container is full before each operation.



2

1. Make sure that the sampling valve is in closed position (single seat) or in steam position (double seat), before steaming
2. Attach hose to either the USV using a clamp ring and seal (see step 3) or the clip-on connection on an MSV
3. Attach hose to Steam Generator



3

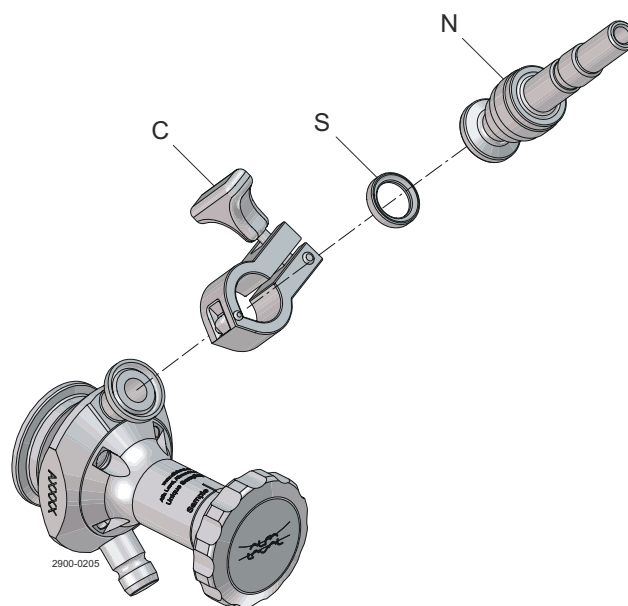
Use clamp ring and seal ring for mounting hose onto USV.

C: Clamp ring¹

- Sizes 4 and 10: 211290
- Size 25: 211053

S: Clamp seal¹

- Sizes 4 and 10: 290273
- Size 25: 9611992012



¹ not included in this package.

4

WARNING

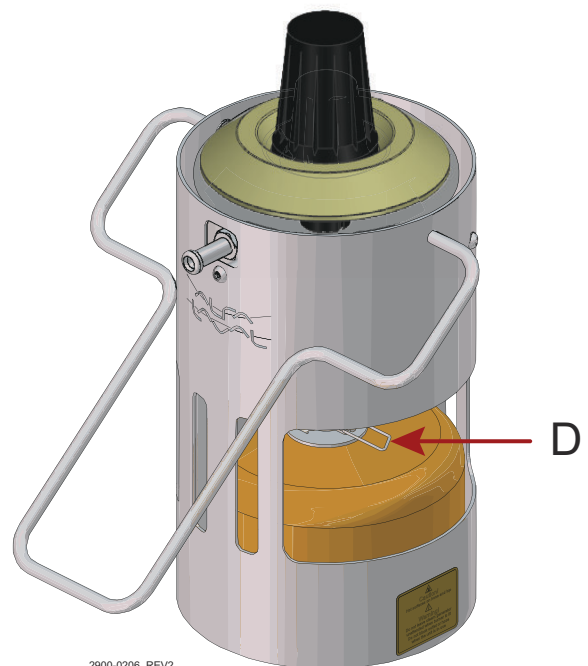
When operating a gas heating device **always** make sure the operating area is sufficiently ventilated.

Always use gloves, safety glasses and proper attire and handle with all necessary safety precautions.

Always be aware of hot surfaces, hot water and hot steam.



1. Open the gas using valve "D" and lit the burner with a long stem safety lighter ²
2. Wait 5 minutes until steam runs in a steady flow
3. Wait one minute or more to make sure the sampling valve is sterilized properly
4. Close valve "D" again
5. Wait until there is no pressure and a low temperature in the system
6. Disconnect the steam generator



2900-0206_REV2

² Not included in this package

4.1 Troubleshooting

NOTE

Study the maintenance instructions carefully before replacing wear parts (see [Maintenance](#) on page 23).

Problem	Cause	Remedy
Gas cannot be ignited	The gas is closed	Open the gas valve
	The gas canister is empty	Replace the gas canister
No steam coming out of outlet	The gas valve is not fully open	Open the gas valve
	The gas canister is almost empty	Replace the gas canister
Safety valve has blown up	Blockage in the steam generator Blockage in the hose	Open the end cap, clean the steam generator and hose, make sure hose does not kink, replace the safety valve

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5 Maintenance



Maintain the Steam Generator regularly.
Study the instructions carefully and pay special attention to the warnings!
Check the Steam Generator for smooth operation after service.

The Steam Generator can be cleaned using warm water.

We recommend that the water container on the steam generator is emptied after use.

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6 Technical data



Never touch the Steam Generator or the hoses when processing hot liquids or when sterilizing.

Never service or dismantle the Steam Generator when it is hot.



Technical data

Max. working pressure	100 kPa (1 bar)
Max- working temperature	130° C
Weight	3.7 kg
Burner	2600 W or 8872 Btu

Capacity

Water container volume	0.5 L
Total steam time (full water container)	Approx. 12 min
Time to steam	5 min

Materials

Water container	EN AW 6060 (aluminium)
Steam hose	Inside: PTFE Outside: Stainless steel 316 with pyrojacket
Other parts	PEEK, aluminium, brass, 1.4403 (304) and 1.4404 (316L)

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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

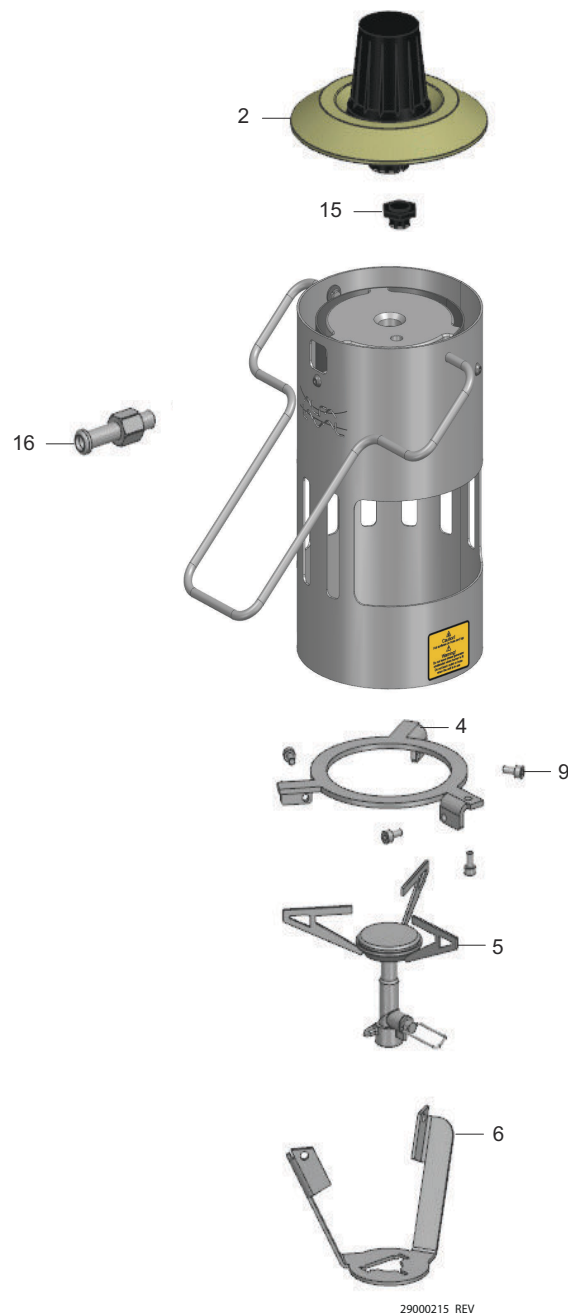
7.2 Alfa Laval Service

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.

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8 Parts list and exploded view



Pos.	Qty	Denomination
2	1	End cap with heat shield
4	1	Consol, upper
5	1	Burner
6	1	Consol, lower
9	4	Screw M4x8
15	1	Safety valve incl. o-ring
16	1	Connection