



# Alfa Laval HTC (Hygienic Tank Connection)

Cleaning validation

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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.

### Warning Signs

	General warning.
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## 1.2 Safety precautions

All warnings in the manual are summarised on this page. Pay special attention to the instructions below so that severe personal injury and/or damage to the Supplied Alfa Laval Product is avoided.

### Installation



Install the device only when depressurized and in ambient temperature conditions.

This device may only be installed by qualified technical personnel who has read and understood the Instruction Manual!

### Storage



**Alfa Laval recommend:**

- Store the supplied Alfa Laval product as supplied in original packaging
- Port opening(s) 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 °C to 40 °C (23 °F - 104 °F)
- Relative humidity less than 60%
- No exposure to corrosive substances (including contained air)

## 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.



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 to the supplied Alfa Laval product.



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](http://www.alfalaval.com) to access the information directly.

## 2 General Information

### 2.1 Intended Use

The Alfa Laval Hygienic Tank Connection 9614-0708-01 has been developed for being welded into vessels and tanks and having instrumentation installed that has a correct opposing process connection.

It is the operator's responsibility to check and verify the suitability of the device for the intended application. If any doubts remain, please contact out local Alfa Laval representative in order to ensure proper usage. Alfa Laval Kolding A/S is not liable for any incorrect selections and their effects.

Permissible media are gases and liquids that are compatible with the media wetted parts.

### 2.2 Package Content

Please verify that all listed parts are undamaged included in the delivery and check for consistency specified in our order:

- Hygienic Tank Connection
- Instruction Manual including mounting instruction

### 2.3 Product Identification

The device can be identified by the markings on the device. It provides the most important data. By serial number (s/n) or ordering code the product can be clearly identified.

**Hygienic Tank Connection**  
**s/n.: yyyy-xxxxxx**

Alfa Laval. DK-Kolding, Albuen 31

4517-0001

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## 3 Installation

### 3.1 Mounting and Safety Instructions



Install the device only when depressurized and temperature less condition.

This device may only be installed by qualified technical personnel who has read and understood the instruction manual!



Leak detection hole shall be positioned at the lowest point.

## 3.2 Welding Recommendations

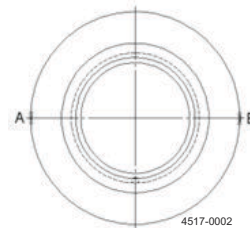
### NOTE

**Always** allow flange to cool after each side is welded.

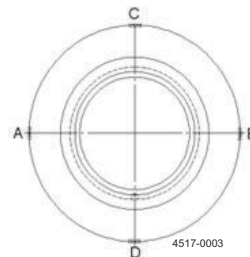
Flange diameter:  $\varnothing 98 \pm 0.2$  mm

Flange thickness at welding zone: 6 mm

- 1 Align the inside of the device with the inside of the tank wall.
- 2 Turn the device into an orientation where the leakage hole is pointing downwards (if mounted on non-horizontal wall).
- 3 Spot weld at A and B.



- 4 Adjust alignment with inner tank wall.



- 5 Spot weld at C and D.

- 6 Weld the device completely by continuously weld one quarter at a time and opposing quarters each time.



- 7 Finish by grinding and polish the inside to be flush with the tank wall.

To ensure a hygienic weld it is recommended to either use shielding gas or pre-treat the welding zone to remove any discolouration.

### 3.3 Mounting Instrumentation

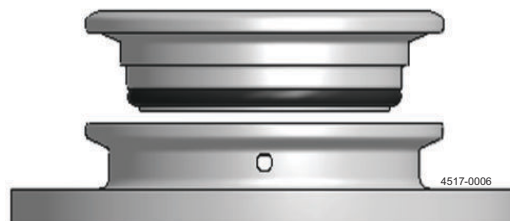
This process connection carries the EHEDG symbol and is authorised to carry the 3-A symbol. Both symbols are only valid when appropriate instrumentation connections are used together with this process connection. The instrumentation connection that fits this process connection is the Alfa Laval HTC connection, male part. For other instrument connections contact your local Alfa Laval office for support.

- 1 Ensure that the instrument connection is an Alfa Laval HTC connection.

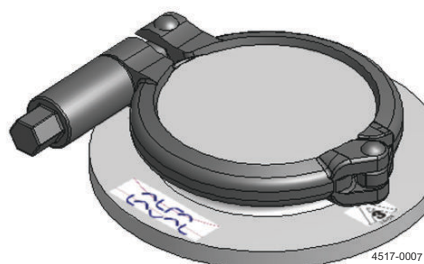
- 2 Mount the O-ring gasket (Item number 9611-99-4285) that fits the instrument connections (or blind cap) O-ring groove.



- 3 Insert the instrument (or blind cap) into the process connection.



- 4 Put the clamp (Item number 9612-93-9303) around the assembly point and tighten the bolt for applying pressure until metal-to-metal contact in the connection.



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## 4 Accessories

O-ring <sup>1</sup>	Alfa Laval Item number 9611-99-4285
Blind cap	Alfa Laval Item number 9613-13-0102
Clamp	Alfa Laval Item number 9612-93-9303

<sup>1</sup> Spare part that is included with the instrumentation. For Blind cap it must be ordered separately.

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## 5 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.

### 5.1 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

### 5.2 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.

### 5.3 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.