Inspired by
temperature

Flow-through cooler

Installation Guide

huber

INSTALLATION GUIDE

Flow-through cooler

Flow-through cooler

This installation guide is a translation of the original German installation guide.
Valid in conjunction with: Immersion circulator thermostat with pump connection.

VALID FOR:

DC®30
DC®31
DC®32

Table of contents

V1.0.0en/18.04.16

Foreword

Dear Customer,

Thank you for choosing accessories from Peter Huber Kältemaschinenbau SE. You have made a good choice. Thank you for your trust.

Please read the installation guide carefully before putting the unit into operation. Strictly follow all notes and safety instructions.

Follow the installation guide with regard to transport, start-up, operation, maintenance, repair, storage and disposal of accessories.

We offer full warranty on accessories for the specified normal operation.

1 Introduction

1.1 Details on the declaration of conformity

CE The equipment complies with the basic health and safety requirements of the European Directives listed below:

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC

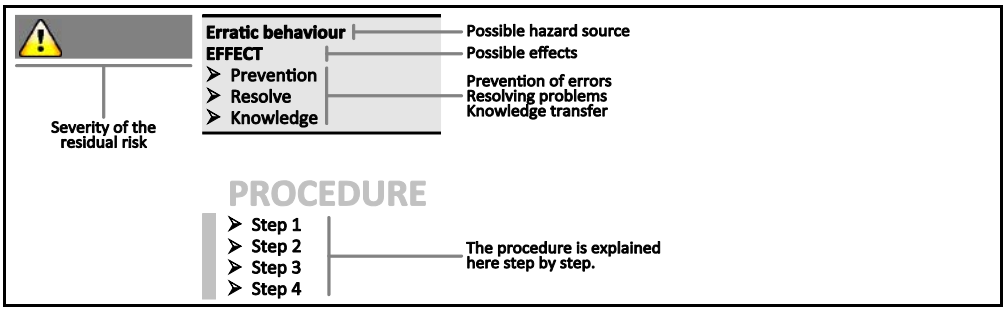
1.2 Safety

1.2.1 Symbols used for Safety Instructions

Safety instructions are marked by the below combinations of pictograms and signal words. The signal word describes the classification of the residual risk when disregarding the installation guide.

DANGER	**Denotes an immediate hazardous situation that will result in death or serious injuries.**
WARNING	**Denotes a general hazardous situation that may result in death or serious injuries.**
CAUTION	**Denotes a hazardous situation that can result in injury.**
NOTE	**Denotes a situation that can result in property material damage.**
INFORMATION	Denotes important notes and usable hints.

Safety information and procedure



The safety information in the installation guide is designed to protect the responsible body, operator and the equipment from damage. Safety information must always appear **before** instructions and at the beginning of each chapter. First inform yourself about any residual risks due to misuse before you start an operation.

1.2.2 Safety during commissioning

The following chapters are only relevant for accessories in connection with a HUBER temperature control unit and apply in addition to the operation manual of the temperature control unit used. If

you have any questions regarding the installation guide, please contact our Customer Support (see page 24 in section **»Phone number and company address«**). The installation guide is to be kept for future use.

1.2.3 Extension of specified normal operation

The accessory is suitable for counter-cooling when properly installed at the temperature control unit. The accessory itself can **not** be used without being connected to the temperature control unit. Otherwise the intended use as described in the temperature control unit's operation manual applies.

1.3 Responsible bodies and operators – Obligations and requirements

1.3.1 Obligations of the responsible body

Store the installation guide near the accessory where it is easy to access. Only adequately qualified operators (e.g. machine operators, chemists, chemical technical assistants, physicist etc.) may work with the accessory. Operators must be trained before handling the accessory. Verify that the operators have read and understood the installation guide. Define precise responsibilities for the operators. Personal protective equipment must be provided to the operators.

1.3.2 Requirements for operators

Work on the temperature control unit / accessory is reserved for appropriately qualified specialists, who have been assigned and trained by the responsible body to do so. Operators must be at least 18 years old. Persons under the age of 18 years may operate the temperature control unit / accessory only under the supervision of a qualified specialist. The operator is responsible for other people within the unit's working range.

1.3.3 Obligations of the operators

Carefully read the installation guide before handling the temperature control unit / accessory. Always observe the safety instructions. Wear appropriate personal protective equipment (e.g. safety goggles, protective gloves, non-slip shoes) when operating the temperature control unit / accessory.

1.4 Safety devices to DIN 12876

- Temperature control with heating correspond to class number III/FL.
- Temperature control without heating correspond to class number I/NFL.

Rating of laboratory thermostats and laboratory baths

Rating	Temperature control fluid	Technical requirements	Identification [d]
I	Non-combustible [a]	Overheat control [c]	NFL
II	Combustible [b]	Adjustable overheat control	FL
III	Combustible [b]	Adjustable overtemperature protection and additional low level protection	FL

[a] Usually water; a) other fluids only if non-combustible even within the temperature range of an individual fault.

[b] The temperature control media must have a combustion point of ≥ 65 °C; i.e. if ethanol is used, only supervised operation is possible.

[c] A suitable fill level sensor or a suitable temperature limiter may be used as an overheat control device.

[d] Optional at the choice of the manufacturer.

The rating of your temperature control unit is stated on the data sheet in the appendix.

2 Commissioning

2.1 In-plant transport

CAUTION

Accessories are not transported / moved according to the specifications in this installation guide

INJURIES DUE TO CRUSHING

- ➢ Always transport / move accessories according to the specifications in this installation guide.
- ➢ Wear personal protective equipment during transport.

NOTE

Accessories are transported in a horizontal position

PROPERTY DAMAGE

- ➢ Only transport accessories in an upright position.

- Protect accessories from transport damage.

2.2 Unpacking

WARNING

Using damaged accessories

MORTAL DANGER FROM ELECTRIC SHOCK

- ➢ Do not operate damaged accessories.
- ➢ Please contact Customer Support. The telephone number can be found on page 24, section **»Phone number and company address«**.

PROCEDURE

- ➢ Check for damage to the packaging. Damage can indicate property damage to the accessory.
- ➢ Check for any transport damage when unpacking the accessory.
- ➢ Always contact your forwarding agent regarding the settlement of claims.

2.3 Ambient conditions

CAUTION

Unsuitable ambient conditions/unsuitable installation

SERIOUS INJURY DUE TO CRUSHING

- ➢ Comply with the requirements under sections **»Ambient conditions«** and **»Installation conditions«**.

INFORMATION

Make sure there is adequate fresh air available at the site for the accessory. The warm exhaust air must be able to escape upwards unhindered.

Use of the accessory is permitted only under normal ambient conditions in accordance with DIN EN 61010-1:2001:

- Use only indoors.
- Installation altitude up to 2,000 meters above sea level.
- Maintain wall and ceiling clearance for adequate air exchange (dissipation of waste heat, supply of fresh air for the accessory and work area). Ensure adequate floor clearance for air-cooled accessories. Do not operate the accessory from within the box or with an inadequately dimensioned bath as this inhibits the air exchange.
- Ambient temperature values are provided on the technical data sheet; to ensure trouble-free operation, compliance with the ambient conditions is mandatory.
- Relative humidity max 80% to 32 °C and 40 °C decreasing linearly to 50%.
- Short distance to supply connections.
- The accessory must not be installed so as to hinder or prevent access to the disconnecting device (to the power supply).

- Magnitude of the power supply fluctuations: see data sheet from page 25 in section **»Annex«**.
- Transient surges, as would normally occur in the power supply system
- Installation Class 3
- Applicable degree of soiling: 2.
- Surge category II.

Wall clearance to accessory

Side of accessory	Clearance to the accessory in cm
Top	free standing
Front	min. 10
Right	min. 10
Left	min. 10
Rear	min. 10

2.3.1 EMC-specific notes

- Class A Group 1 equipment according to IEC_EN CiSPR 55011 is intended to be used in “industrial electromagnetic environments”. Their electromagnetic compatibility may be affected if operated in other electromagnetic environments.
- Class B equipment according to IEC_EN CiSPR 55011 is suitable for use in “basic electromagnetic environments”.
- The temperature control unit has the immunity required by EN 61326-1 for the operation in “industrial electromagnetic environments”.
- See the data sheet from page 25 in section **»Annex«** for the classification of your temperature control unit.
- For more information on electromagnetic compatibility see www.huber-online.com.

2.4 Installation conditions

WARNING

The accessory is put onto the power supply line

DEATH FROM ELECTRICAL SHOCK BY DAMAGE TO THE POWER CABLE.

➢ Do not put the accessory on power cables.

- Allow the accessory to acclimate for about 2 hours when changing from a cold to a warm environment (or vice versa). Do not turn on the accessory beforehand!
- Transport upright.
- Install upright, stable and without tilt.
- The accessory **must be aligned horizontally**.
- Use a non-combustible, sealed subsurface.
- Keep environment clean: Prevent slip and trip hazards.
- Wheels must be locked after the installation, if installed!
- Drip catcher below the accessory for condensation / thermofluid.
- Spilled/leaked thermofluid must be discarded immediately and correctly.
- The responsible body must check whether national regulations require the mandatory installation of a drain tray for the installation area of the accessory / the entire system.
- Observe the ambient conditions.

2.5 Wrench sizes and torques

Observe the proper wrench sizes for the thermofluid connection at the accessory. The following table lists the thermofluid connections and the resulting wrench sizes, as well as the torque values. Always perform a leak test afterwards and re-tighten the connections if required. The values of the maximum torque (see table) must **not** be exceeded.

Overview wrench sizes and torques

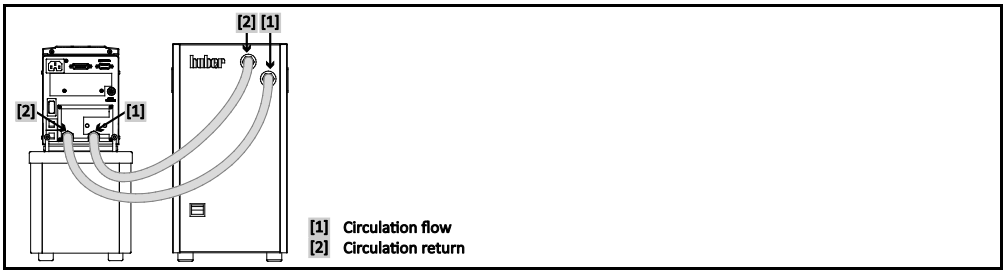
Thermofluid connection	Sleeve nut wrench size	Connector wrench size	Recommended torques in Nm	Maximum torques in Nm
M16x1	19	17	20	24
M24x1.5	27	27	47	56
M30x1.5	36	32	79	93
	36	36	79	93
M38x1.5	46	46	130	153

2.6 Preparations for operation

2.6.1 Connecting the accessory to the temperature control unit

2.6.1.1 Without externally closed application

Connection without application



INFORMATION

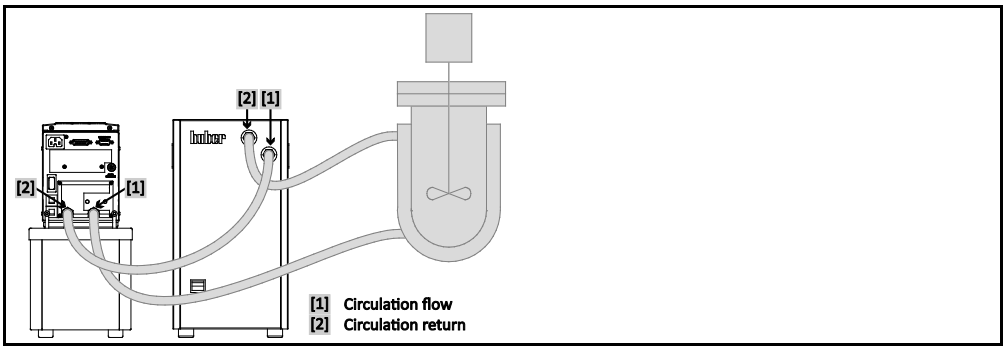
The accessory are connected to your temperature control unit instead of an **externally closed** application. Follow the operation manual of the temperature control unit when connecting the device. Avoid bending the temperature control hoses. Use suitable angle pieces and lay the hose connections with a large radius. Take the minimum bending radius from the data sheet of the temperature control hoses used.

PROCEDURE

- Remove the protective plastic caps on your accessory from the connections **>Circulation flow<** [1] and **>Circulation return<** [2].
- Use a temperature control hose to connect the **>Circulation flow<** [1] on the temperature control unit with the **>Circulation return<** [2] on the accessory.
- Use a temperature control hose to connect the **>Circulation flow<** [1] on the accessory with the **>Circulation return<** [2] on the temperature control unit.
- Check the connections for leaks.

2.6.1.2 With externally closed application

Connection with application



INFORMATION

The accessory can be connected to the return of your temperature control unit in conjunction with an **externally closed application**. Follow the operation manual of the temperature control unit when connecting the device. Avoid bending the temperature control hoses. Use suitable angle pieces and lay the hose connections with a large radius. Take the minimum bending radius from the data sheet of the temperature control hoses used.

PROCEDURE

- Remove the protective plastic caps on your accessory from the connections **>Circulation flow<** [1] and **>Circulation return<** [2].
- Use a temperature control hose to connect the **>Circulation flow<** [1] on the temperature control unit with the return on the externally closed application.
- Use a temperature control hose to connect the return of the externally closed application with the **>Circulation return<** [2] on the accessory.
- Use a temperature control hose to connect the **>Circulation flow<** [1] on the accessory with the **>Circulation return<** [2] on the temperature control unit.
- Check the connections for leaks.

2.7 Connecting to the power supply

INFORMATION

Based on local circumstances, it may be that you need to use an alternative power cable instead of the supplied original power cable. Do not use a power cable that is longer than **3 m** to be able to disconnect the accessory from the mains at any time. Have the mains cable only installed by a qualified electrician.

2.7.1 Connection using socket with protective earth (PE)

DANGER

Connecting to a power socket without protective earth (PE)

MORTAL DANGER FROM ELECTRIC SHOCK

- Always connect the accessory to safety sockets (PE).

DANGER

Damaged power cable/power cable connection

MORTAL DANGER FROM ELECTRIC SHOCK

- Do not start up the accessory.
- Isolate the accessory from the power supply.
- Have the power supply cable/power supply connection replaced and inspected by an electrician.
- Do not use a power cable that is longer than **3 m**.

NOTE

Incorrect power supply connection

DAMAGE TO THE CALIBRATION BATH

- Your building's existing power supply voltage and frequency must match the data provided on the rating plate of the accessory.

INFORMATION

In case of uncertainties about an existing protective earth (PE), have the connection inspected by an electrician.

3 Function description

3.1 Function description of the accessory

3.1.1 General functions

The **flow-through cooler** can only be used in combination with a **temperature control unit**. It is ideal for counter-cooling a bath thermostat.
The **flow-through cooler** can be integrated into the return of an externally closed application. After switching on the **>Mains switch<** [37], the cooling machine runs in continuous operation mode.

3.2 Information on the thermal fluids

CAUTION

Non-compliance with the safety data sheet for the thermal fluid to be used
INJURIES

- Risk of injury to the eyes, skin, respiratory tract.
- The safety data sheet for the thermal fluid to be used must be read prior to use and its contents respected.
- Observe the local regulations/work instructions.
- Wear your personnel protective equipment (e.g. temperature-resistant safety gloves, safety goggles, safety footwear).
- Danger of slipping through contamination of floor and work area.

NOTE

Non-compliance with the compatibility between the thermofluid and your temperature control unit
PROPERTY DAMAGE

- Water up to a temperature of 5 °C must not be used without an anti-freeze as a thermofluid (risk of freezing and potential destruction of the evaporator).
- A water-ethylene glycol mixture must use as a thermofluid at temperatures below 5 °C. It is recommended to use a mixture that allows a temperature 10 K lower than the allowable min. temperature range of the temperature control unit (see data sheet from page 25 in section **»Annex«**). The freeze protection must be deactivated. For information about water quality, see www.huber-online.com.
- Observe the rating of your temperature control unit in accordance with DIN 12876.
- Ensure the following materials are resistant with respect to the thermofluid: Stainless steel 1.4301/ 1.4401 (V2A), copper, nickel, FKM, red bronze/brass, silver solder and plastic.
- The maximum viscosity of the thermofluid must not exceed 50 mm²/s at the lowest working temperature!
- The maximum density of the thermofluid may not exceed 1 kg/dm³!

INFORMATION

We recommend the ethylene glycols listed in the Huber catalogue.

3.3 To be noted when planning the test

INFORMATION

Also observe page 11, section **»Extension of specified normal operation«**.

The focus is on your application. Bear in mind that system performance is influenced by heat transfer, temperature, thermal fluid viscosity, volume flow and the flow speed.

- Make sure that the electrical connection is adequately dimensioned.
- The place of installation of the accessory should be selected so as to ensure adequate fresh air.
- A cross-section reduction or shut-off in the thermofluid circulation must be avoided.
- Avoid bending the temperature control and cooling water hoses (if required). Use suitable angle pieces and lay the hose connections with a large radius. Take the minimum bending radius from the data sheet of the temperature control hoses used.
- The selected hose connections must be resistant to the thermofluid, the working temperatures and the permitted maximum pressure.
- Check the hoses at regular intervals for any material fatigue (e.g. cracks, leaks).

4 Setup mode

4.1 Setup mode

CAUTION

Moving the accessory during operation

SERIOUS BURNS/FREEZING OF THE HOUSING PARTS/ESCAPING THERMOFLUID

- Do not move the accessory when in operation.

NOTE

When the accessory is switched off, the thermofluid temperature is higher/lower than the room temperature

DAMAGE TO THE ACCESSORY

- Use the temperature control unit to temper the thermofluid in the accessory to room temperature (20 °C).
- Do not close the shut-off valves in the thermofluid circuit.

4.1.1 Freeze protection for the accessory

NOTE

Non-compliance with the compatibility between the thermofluid and your temperature control unit

PROPERTY DAMAGE

- Water up to a temperature of 5 °C must not be used without an anti-freeze as a thermofluid (risk of freezing and potential destruction of the evaporator).
- A water-ethylene glycol mixture must use as a thermofluid at temperatures below 5 °C. It is recommended to use a mixture that allows a temperature 10 K lower than the allowable min. temperature range of the temperature control unit (see data sheet from page 25 in section **»Annex«**). The freeze protection must be deactivated. For information about water quality, see www.huber-online.com.
- Observe the rating of your temperature control unit in accordance with DIN 12876.
- Ensure the following materials are resistant with respect to the thermofluid: Stainless steel 1.4301/ 1.4401 (V2A), copper, nickel, FKM, red bronze/brass, silver solder and plastic.
- The maximum viscosity of the thermofluid must not exceed 50 mm²/s at the lowest working temperature!
- The maximum density of the thermofluid may not exceed 1 kg/dm³!

The “freeze protection” of the accessory requires that only water is used as a thermofluid. This ensures that a temperature of 5 °C is **not** undercut. A water-ethylene glycol mixture must use for temperatures below 5 °C. For the accessory to temper below 5 °C, the freeze protection **must** be turned off.

The freeze protection is switched on or off at the rear of the accessory by using the **>Freeze protection switch<** [77]. Position “I”: ON; Position “0”: OFF.

4.1.2 Turning on the accessory

NOTE

The accessory is turned on before filling

DAMAGE TO THE ACCESSORY

- Dry running can damage the accessory if the temperature control unit and the accessory are not filled.
- Turn on the accessory only **after** filling it.

INFORMATION

The accessory can be turned on only when
- the temperature control unit and the application are filled
- the temperature control unit is turned on.

PROCEDURE

- Switch the temperature control unit on.
  The temperature control unit must be filled and vented.
- Switch on the accessory using the **>Mains switch<** [37].

4.2 Filling and draining the accessory

CAUTION

Non-compliance with the safety data sheet for the thermal fluid to be used

INJURIES

- Risk of injury to the eyes, skin, respiratory tract.
- The safety data sheet for the thermal fluid to be used must be read prior to use and its contents respected.
- Observe the local regulations/work instructions.
- Wear your personnel protective equipment (e.g. temperature-resistant safety gloves, safety goggles, safety footwear).
- Danger of slipping through contamination of floor and work area.

4.2.1 Filling the accessory

NOTE

The accessory is turned on before filling

DAMAGE TO THE ACCESSORY

- Dry running can damage the accessory if the temperature control unit and the accessory are not filled.
- Turn on the accessory only **after** filling it.

PROCEDURE

- Check whether the steps described on page 14 in section **»Preparations for operation«** were implemented.
- For filling, venting and degassing of the temperature control unit, proceed as described in the operation manual of the temperature control unit.

4.2.2 Draining the accessory

CAUTION

Hot or very cold thermofluid

SERIOUS BURNS/FREEZING OF LIMBS

- Before draining, ensure that the thermofluid has room temperature (20 °C).
- If, at this temperature, the thermofluid is too viscous to be drained: Control the temperature of the thermofluid for a few minutes until the viscosity will allow drainage.
- Danger of burns when draining thermofluid at temperatures above 20 °C.
- Wear your personal protective equipment when carrying out the drainage operation.

PROCEDURE

- Proceed as described in the operation manual of the temperature control unit when draining it. The accessory is emptied via the temperature control unit.
- Wait until the temperature control unit, the application and the accessory have emptied.
- From the accessory, remove the temperature control hose at the **>Circulation flow<** [1].
- From the accessory, remove the temperature control hose at the **>Circulation return<** [2].
- Leave the accessory open for a while for to allow it to dry out and the residue to drain.
- On the accessory, connect the temperature control hose with the **>Circulation flow<** [1].
- On the accessory, connect the temperature control hose with the **>Circulation return<** [2].
- The accessory is now drained.

5 Normal operation

5.1 Automatic operation

CAUTION

Hot or cold thermal fluid and surfaces

BURNS TO LIMBS

- Avoid direct contact with the thermal fluids or the surfaces.
- Wear your personnel protective equipment (e.g. temperature-resistant safety gloves, safety goggles, safety footwear).

5.1.1 Temperature control

5.1.1.1 Starting the temperature control process

The temperature control process can be started only after the connected temperature control unit has been started. Prerequisite: The temperature control unit (optional: incl. external application) and accessory are filled and vented.

PROCEDURE

- Switch on the accessory using the **>Mains switch<** [37].

5.1.1.2 Ending the temperature control process

NOTE

When the accessory is switched off, the thermofluid temperature is higher/lower than the room temperature

DAMAGE TO THE ACCESSORY

- Use the temperature control unit to temper the thermofluid in the accessory to room temperature (20 °C).
- Do not close the shut-off valves in the thermofluid circuit.

The temperature control process can be ended at any time. The temperature control process in the connected temperature control unit continues to run after turning off the accessory. The temperature control process in the connected temperature control unit must be stopped separately.

PROCEDURE

- Switch off the accessory using the **>Mains switch<** [37].

6 Service/maintenance

6.1 Maintenance

DANGER

Cleaning/maintenance while the accessory is operating

MORTAL DANGER FROM ELECTRIC SHOCK

- Stop an ongoing temperature control process.
- Disconnect the accessory from the power supply by turning the **>Mains switch<** [37] on the accessory to “0”.
- Also disconnect the accessory from the current supply.

NOTE

Carrying out maintenance work not described in this installation guide

DAMAGE TO THE ACCESSORY

- Contact Peter Huber Kältemaschinenbau SE for any maintenance work not described in the installation guide.
- Maintenance work not described in this installation guide is reserved for qualified specialists trained by Huber.
- Only perform the following maintenance work on the accessory yourself.

6.1.1 Function check and visual inspection

Monitoring intervals

Cooling*	Description	Maintenance interval	Comment	Person responsible
L/W	Visually inspect hoses and hose connections	Prior to switching on the temperature control unit	Exchange leaking hoses and hose connections prior to switching on the temperature control unit.	Responsible body and/or operators
L/W	Inspect power supply cable	Prior to switching on the temperature control unit or on relocation	Do not start-up the temperature control unit if the power cable is damaged.	Qualified electrician (BGV A3)
L	Clean air inlet grille	As required	Clean the perforated sheet of the accessory with a damp cloth	Responsible body
L/W	Thermofluid inspection	As required		Responsible body and/or operators
L/W	Inspect the accessory for damage and stability	Every 12 months or after a change of location		Responsible body and/or operators
*L = Air cooling; W = Water cooling				

6.2 Thermal fluid inspection, replacement and circuit cleaning

PROCEDURE

- Do not disconnect the accessory.
- Proceed as described in the operation manual of the temperature control unit when performing the thermofluid inspection and changing and cleaning the thermofluid circuit.

6.3 Cleaning the surfaces

NOTE

Exposed plug contacts

DAMAGE CAUSED BY FLUID INGRESS

- Protect unused plug contacts with the protective caps supplied.
- Clean surfaces only with a damp cloth.

A standard stainless steel cleaning agent is suitable for cleaning the stainless steel surfaces. Carefully clean paint surfaces (damp) using the suds of a mild detergent.

6.4 Decontamination/repairs

CAUTION

Returning an accessory for repair that was not decontaminated

PHYSICAL INJURY AND PROPERTY DAMAGE CAUSED BY HAZARDOUS MATERIALS IN OR ON THE ACCESSORY

- Carry out appropriate decontamination.
- The decontamination process depends on the type and quantity of the materials used.
- Consult the relevant safety data sheet.
- You will find a prepared return receipt at www.huber-online.com.

As the responsible body you are responsible for carrying out decontamination **BEFORE** third-party personnel come into contact with the accessory. Decontamination must be carried out **BEFORE** the accessory is returned for repair or inspection (clearly stating in writing on the accessory that the decontamination has been carried out).

To simply the process, we have prepared a form for you. This is available for download at www.huber-online.com.

7 Shutting down

7.1 Safety instructions and basic principles

DANGER

Connection/adjustment to the power supply not carried out by an electrician and/or connection to a power socket without protective earth (PE)

MORTAL DANGER FROM ELECTRIC SHOCK

- Have the connection/adjustment to the power supply carried out by an electrician.
- Always connect the accessory to safety sockets (PE).

DANGER

Damaged power cable/power cable connection

MORTAL DANGER FROM ELECTRIC SHOCK

- Do not start up the accessory.
- Isolate the accessory from the power supply.
- Have the power supply cable/power supply connection replaced and inspected by an electrician.
- Do not use a power cable that is longer than **3 m**.

WARNING

Risk of tipping due to unstable accessory

SERIOUS INJURY AND PROPERTY DAMAGE

- Avoid risk of tipping due to unstable accessory.

CAUTION

Non-compliance with the safety data sheet for the thermal fluid to be used

INJURIES

- Risk of injury to the eyes, skin, respiratory tract.
- The safety data sheet for the thermal fluid to be used must be read prior to use and its contents respected.
- Observe the local regulations/work instructions.
- Wear your personnel protective equipment (e.g. temperature-resistant safety gloves, safety goggles, safety footwear).
- Danger of slipping through contamination of floor and work area.

CAUTION

Hot or very cold thermofluid

SERIOUS BURNS/FREEZING OF LIMBS

- Before draining, ensure that the thermofluid has room temperature (20 °C).
- If, at this temperature, the thermofluid is too viscous to be drained: Control the temperature of the thermofluid for a few minutes until the viscosity will allow drainage.
- Danger of burns when draining thermofluid at temperatures above 20 °C.
- Wear your personal protective equipment when carrying out the drainage operation.

INFORMATION

All safety instructions are important and must be followed during working operations according to the installation guide!

7.2 Switch-off

PROCEDURE

- **>Mains switch<** [37] set to “0”.
- Disconnect the accessory from the power supply.

7.3 Draining the accessory

PROCEDURE

➢ Drain the accessory as described on page 18 in section **»Draining the accessory«**.

7.4 Separating the accessory from the temperature control unit

PROCEDURE

➢ Drain the temperature control unit **before** you disconnect the accessory. For more information, please refer to the operation manual of the temperature control unit.
➢ Remove the temperature control hose from the **>Circulation return<** [2] on the temperature control unit and from the output of you external application.
➢ Remove the temperature control hose from the input of your external application and from the **>Circulation flow<** [1] of the accessory.
➢ Remove the temperature control hose from the **>Circulation return<** [2] on the accessory and from the **>Circulation flow<** [1] on the temperature control unit.
➢ Mount the protective plastic caps onto the accessory connections **>Circulation flow<** [1] and **>Circulation return<** [2].
➢ Mount the protective plastic caps onto the temperature control unit connections **>Circulation flow<** [1] and **>Circulation return<** [2].

7.5 Packing

Use the original packaging wherever possible!

7.6 Shipping

NOTE

Accessories are transported in a horizontal position
PROPERTY DAMAGE
➢ Only transport accessories in an upright position.

NOTE

Improper transport of accessory
PROPERTY DAMAGE
➢ Comply with all requirements in this section to avoid damage to the accessory.

If fitted, use the lugs located on the top of the accessory for transportation. Do not transport the accessory alone and without aids.

- Always use the original packaging for transport.
- Protect attachments from damage during transport!
- Additionally secure (depending on model) with plastic film, cardboard and straps.

7.7 Disposal

Huber temperature control units and Huber accessories are made of high quality, recyclable materials. For example: Stainless steel 1.4301 / 1.4401 (V2A), copper, nickel, FKM, Perbunan, NBR, ceramic, carbon, Al-Oxid, red brass, brass, nickel-plated brass and silver solder. Proper recycling of the temperature control unit and accessories can actively help reduce CO_2 emissions in the production of these materials. Follow the laws and regulations of your jurisdiction when disposing material.

7.8 Phone number and company address

INFORMATION

Contact Customer Support **prior** to returning your temperature control unit. Please keep the serial number of the calibration bath ready. The serial number can be found on the nameplate of the calibration bath.

7.8.1 Telephone number: Customer Support

Telephone: +49-781-9603-244

7.8.2 Telephone number: Sales

Telephone: +49-781-9603-123

7.8.3 Email address: Customer Support

Email: support@huber-online.com

7.8.4 Service/return address

Peter Huber Kältemaschinenbau SE
Werner-von-Siemens-Straße 1
77656 Offenburg

7.9 Certificate of Compliance

Please read page 21, section **»Decontamination/repairs«**.

8 Annex

Inspired by **temperature** designed for you

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