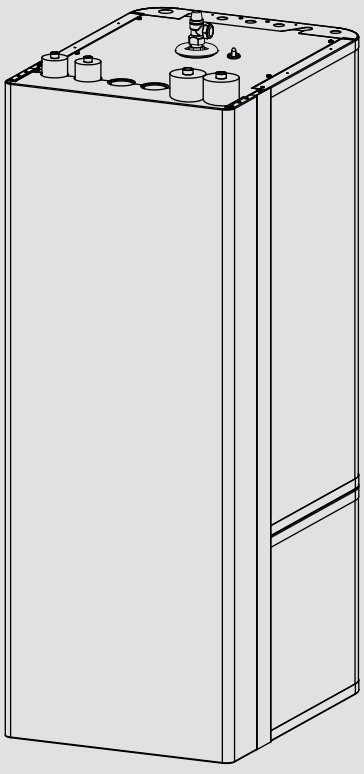
OPERATION AND INSTALLATION

Integral cylinder

» HSBC 300 cool (AU)



STIEBEL ELTRON

SPECIAL INFORMATION

- The appliance may be used by children over 8 years of age and persons with reduced physical, sensory or mental capabilities or a lack of experience and expertise, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.
- The connection to the power supply must be in the form of a permanent connection. Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.
- Observe all applicable national and regional regulations and instructions.
- Observe minimum distances (see chapter "Installation / Preparations / Installation site").
- Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

DHW cylinders

- Drain the appliance as described in chapter "Installation / Maintenance / Draining the DHW cylinder".
- Observe the maximum permissible pressure (see chapter "Installation / Specification / Data table").

OPERATION

1. General information

The chapters "Special information" and "Operation" are intended for both users and qualified contractors.

The chapter "Installation" is intended for qualified contractors.

Note
Read these instructions carefully before using the appliance and retain them for future reference.
Pass on the instructions to a new user if required.

1.1 Relevant documents

- Operating and installation instructions for the connected heat pump
- Operating and installation instructions for all other system components

1.2 Safety instructions

1.2.1 Structure of safety instructions

KEYWORD Type of risk
Here, possible consequences are listed that may result from failure to observe the safety instructions.
▶ Steps to prevent the risk are listed.

1.2.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

1.2.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

1.3 Other symbols in this documentation

Note
General information is identified by the adjacent symbol.
▶ Read these texts carefully.

Symbol	Meaning
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

1.4 Information on the appliance

Connections

Symbol	Meaning	
	Inlet / intake	Red arrow: Hot Blue arrow: Cold Green arrow: Neutral
	Drain / outlet	Red arrow: Hot Blue arrow: Cold Green arrow: Neutral
	Domestic hot water	
	DHW circulation	
	Heat pump	
	Heating	

1.5 Units of measurement

Note
All measurements are given in mm unless stated otherwise.

ENGLISH

2. Safety

2.1 Intended use

This appliance is intended to be used for seasonal heating and cooling of interiors (7 °C / 12 °C) and for DHW heating.

The appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in non-domestic environments, e.g. in small businesses, as long as it is used in the same way.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of the instructions for any accessories used is also part of the correct use of this appliance.

2.2 General safety instructions

WARNING Burns
There is a risk of scalding at outlet temperatures in excess of 43 °C.

WARNING Injury
The appliance may be used by children over 8 years of age and persons with reduced physical, sensory or mental capabilities or a lack of experience and expertise, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.

WARNING Injury
For safety reasons, only operate the appliance with the front casing closed.

Note
The DHW cylinder is under supply pressure. During the heat-up process, expansion water will drip from the safety valve.
▶ If water continues to drip when heating is completed, please inform your qualified contractor.

Material losses
The system's active frost protection is not guaranteed if the power supply is interrupted.
▶ Never interrupt the power supply even outside the heating season.

2.3 Test symbols

See type plate on the appliance.

3. Appliance compatibility

The appliance can be operated in conjunction with the following air | water heat pumps:

- WPL 10 AC
- WPL 15/20/25 AC(S)
- WPL 19/24 I

4. Appliance description

The buffer cylinder and DHW cylinder with indirect coil are arranged one above the other and can be separated for easier handling.

The appliance has a plastic jacket with foam insulation and is equipped with a removable front casing. The appliance is connected hydraulically and electrically to the heat pump. All hydraulic connections are made at the top (heating) and rear (DHW).

In addition to the DHW cylinder and the buffer cylinder, further system components are integrated:

- Highly efficient circulation pump for a heating circuit without mixer
- 3/2-way diverter valve
- Cylinder charging pump

DHW cylinders

The steel cylinder is coated on the inside with special direct enamel and is equipped with a signal anode. The anode with consumption indicator protects the cylinder interior from corrosion.

The heating water heated by the heat pump is pumped through an indirect coil inside the DHW cylinder. The heat channelled through the indirect coil is thus transferred to the domestic hot water.

Buffer cylinder

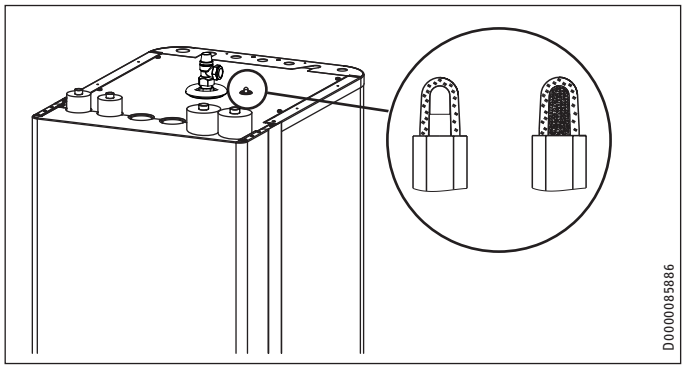
The steel cylinder provides hydraulic separation between the flow rates of heat pump and heating circuit. The heating water heated by the heat pump is transferred into the buffer cylinder by the cylinder charging pump. When a demand is issued, the integral heating circuit pump delivers the heating water to the heating circuit.

5. Cleaning, care and maintenance

- ▶ Have the electrical safety of the appliance and the function of the safety assembly regularly checked by a qualified contractor.
- ▶ Never use abrasive or corrosive cleaning agents. A damp cloth is sufficient for cleaning the appliance.

Signal anode with consumption indicator

Material losses
If the consumption indicator changes colour from white to red, have the signal anode checked by a qualified contractor and if necessary replaced.



1 White = Anode OK
2 Red = Requires checking by qualified contractor

Scaling

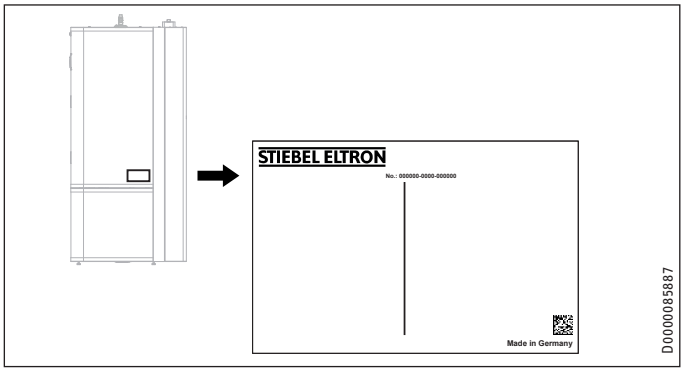
Almost every type of water will deposit limescale at high temperatures. This settles inside the appliance and affects both performance and service life. A qualified contractor who knows the local water quality will tell you when the next service is due.

- ▶ Check the taps regularly. Limescale deposits at the tap outlets can be removed using commercially available descaling agents.
- ▶ Regularly activate the safety valve to prevent it from becoming blocked, e.g. by limescale deposits.

6. Troubleshooting

Problem	Cause	Remedy
The water does not heat up. The heating does not work.	There is no power.	Check the fuses/MCBs in your fuse box/distribution board.

If you cannot remedy the fault, contact your qualified contractor. To facilitate and speed up your enquiry, please provide the serial number from the type plate (000000-0000-000000).



INSTALLATION

7. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

7.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.

7.2 Instructions, standards and regulations

Note
Observe all applicable national and regional regulations and instructions.

8. Appliance description

8.1 Standard delivery

The following are delivered with the appliance:

- 4 adjustable feet

8.2 Accessories

8.2.1 Required accessories

Safety assemblies and pressure reducing valves are available to suit the prevailing supply pressure. These type-tested safety assemblies protect the appliance against impermissible excess pressure.

8.2.2 Additional accessories

- Pump assembly for a heating circuit with mixer HSBC 3-HKM
- Pressure hoses
- Water softening fitting HZEA
- Temperature sensor for cooling

Pipe assembly RBS-SBC

The hydraulic connections can be routed upwards at the rear of the DHW cylinder using the RBS-SBC pipe assembly available as an accessory.

9. Preparation

9.1 Installation site

Material losses
Never install the appliance in wet rooms.

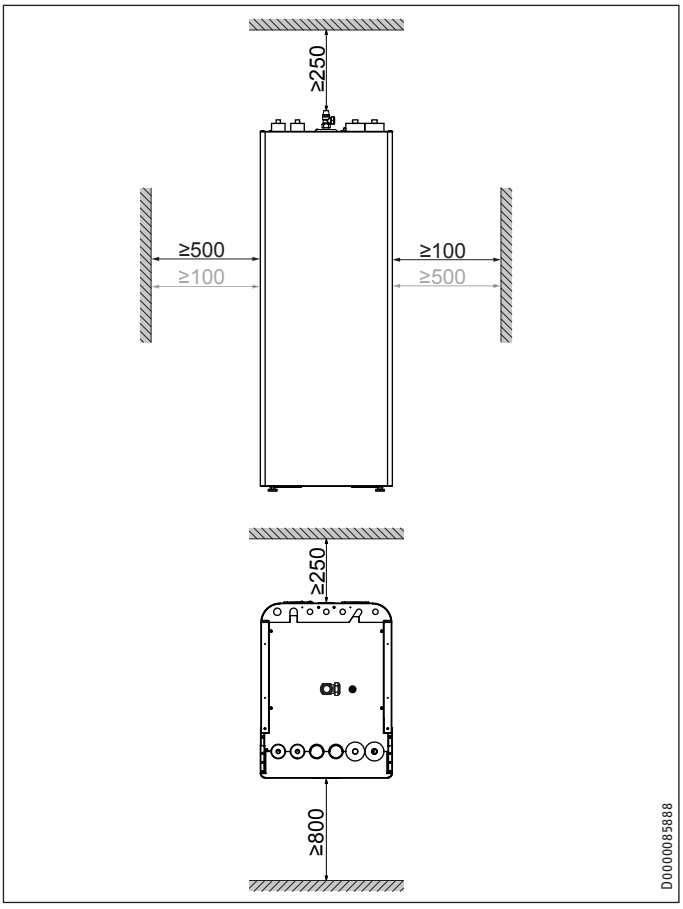
Install the appliance near the draw-off point in a dry room free from the risk of frost. To reduce line losses, keep the distance short between the appliance and the heat pump.

Ensure the floor has sufficient load bearing capacity and evenness (for weight, see chapter "Specification / Data table").

The room must not be subject to a risk of explosions arising from dust, gases or vapours.

If you are installing the appliance in a boiler room together with other heating equipment, ensure that the operation of the other heating equipment will not be impaired.

Minimum clearances



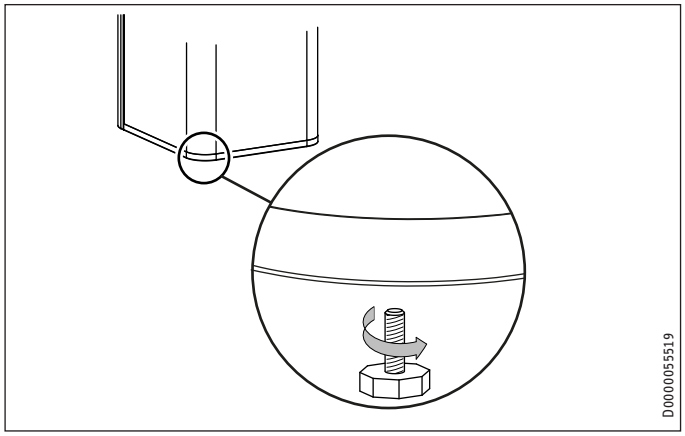
The minimum side clearances can be swapped between left and right.

9.2 Transport and handling

Material losses
Store and transport the appliance at temperatures between -20 °C and +60 °C.

Handling

▶ Undo the 4 screws from the non-returnable pallet.

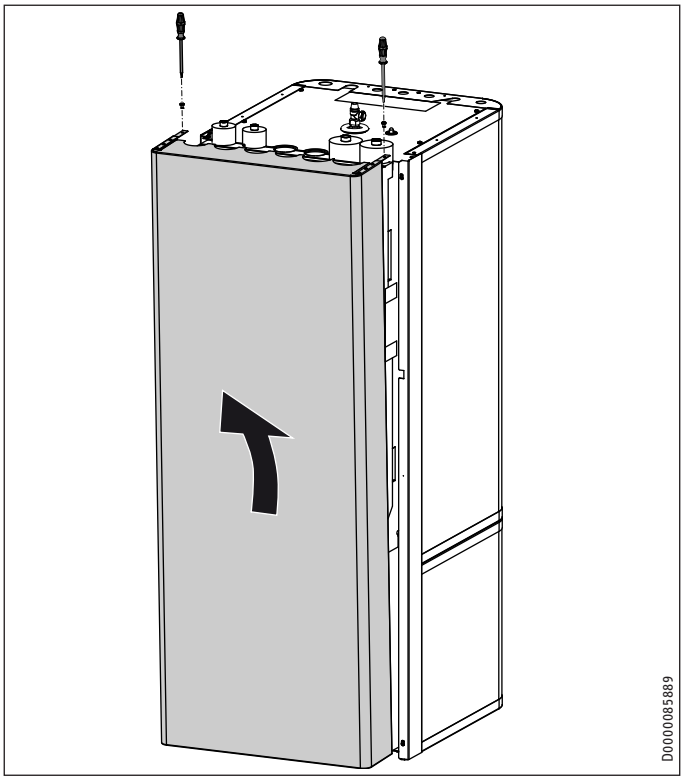


▶ Tilt the appliance and screw the 4 adjustable feet into the appliance.

▶ Lift the appliance off the pallet.

If narrow doors or hallways hinder handling, you can separate the upper and lower sections of the appliance as described in the following chapters.

9.2.1 Removing/fitting the front casing



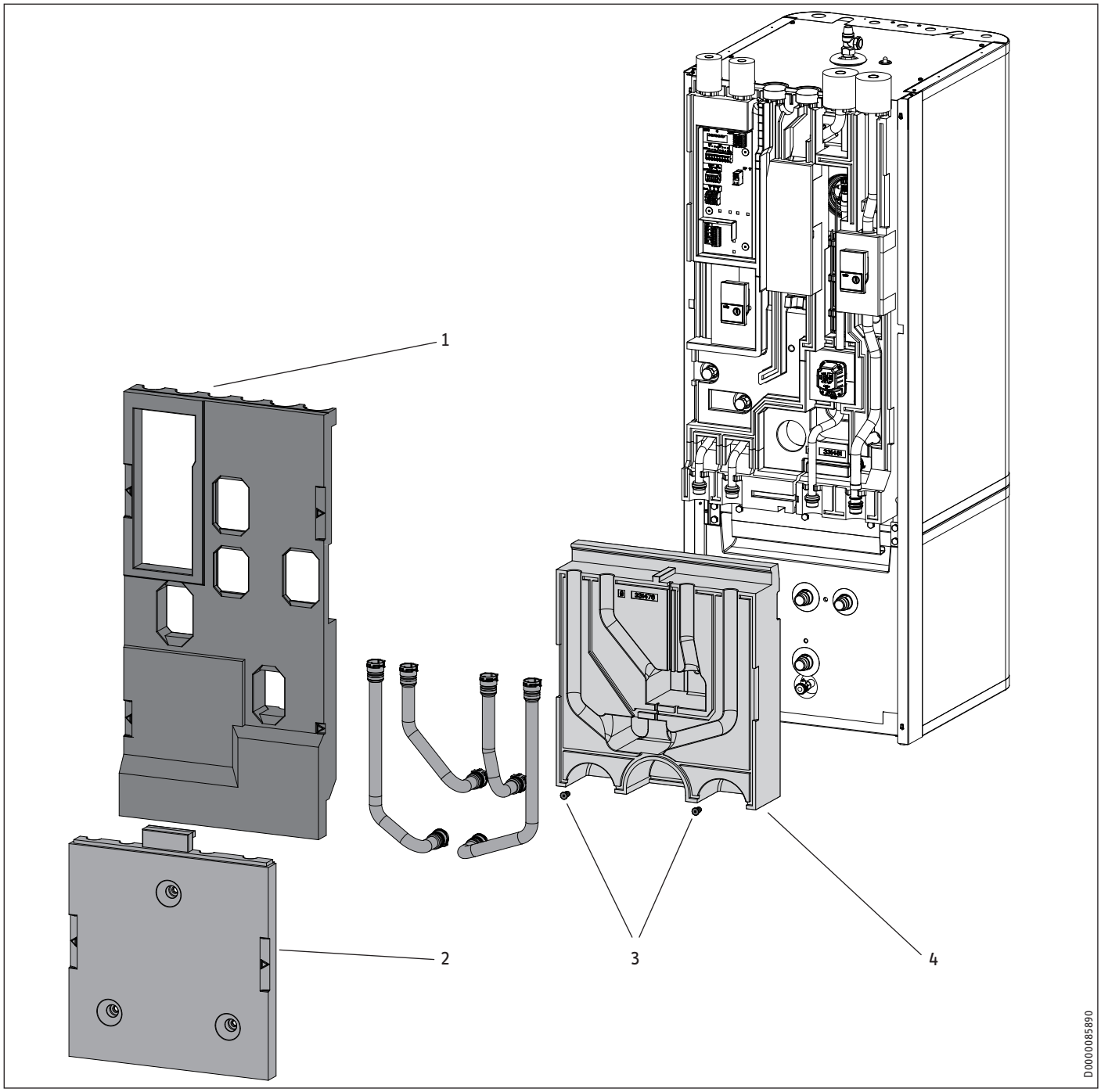
▶ Remove the 2 locking screws on the top of the front casing.

▶ Unhook the front casing towards the top.

▶ Remove the earth cable from the front casing.

▶ Fit the front casing in reverse order.

9.2.2 Overview of insulation segments

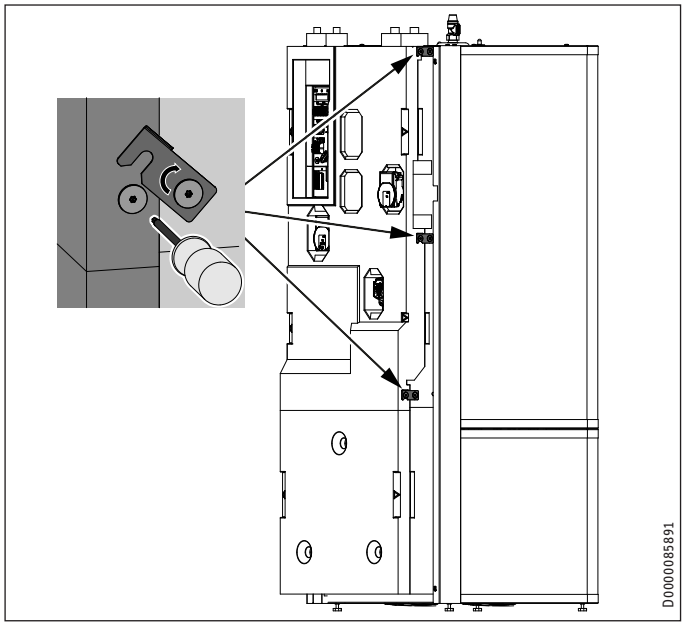


1 Insulation segment 1
2 Insulation segment 2
3 Insulation material screw
4 Insulation segment 3

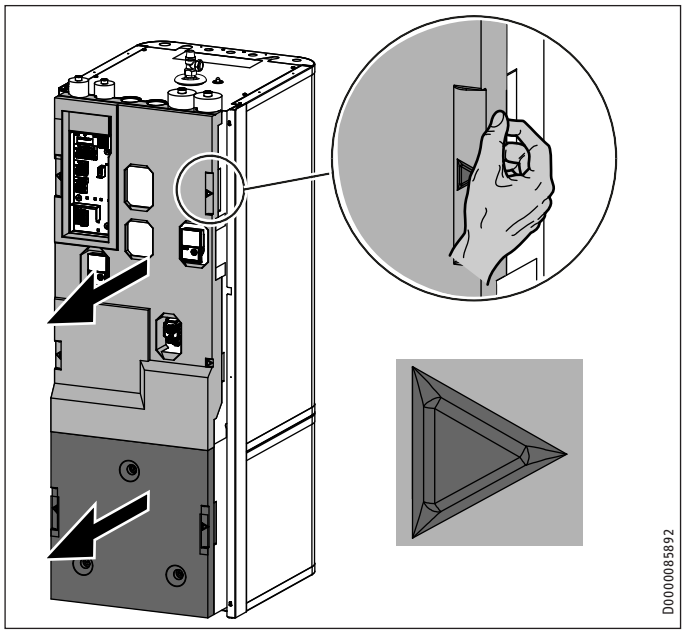
9.2.3 Separating / joining the appliance sections

Separating the appliance sections

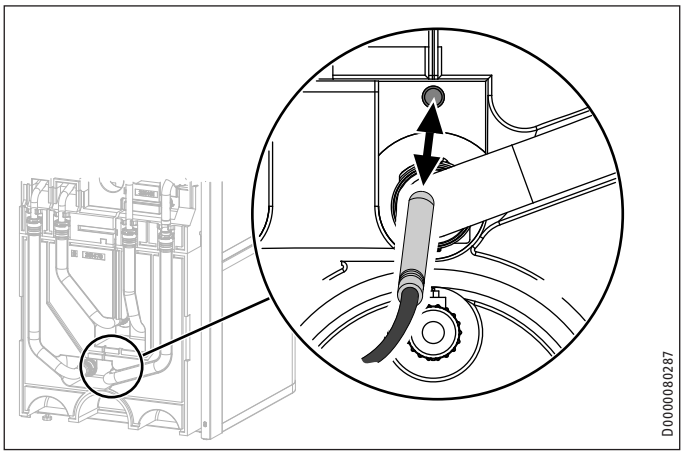
Material losses
Unscrewing the fastening screws destroys the threads in the insulation segment.
- ▶ To open the 3 fixing tabs, loosen the fastening screws slightly but do not unscrew them completely.



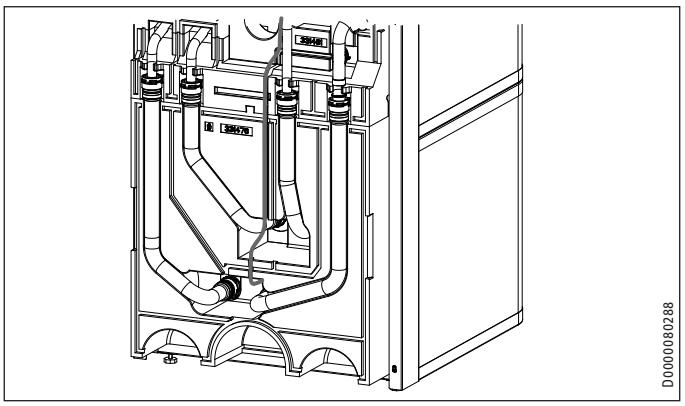
Note
To make removal simpler, the insulation segments have labelled recessed grips on the left and right.



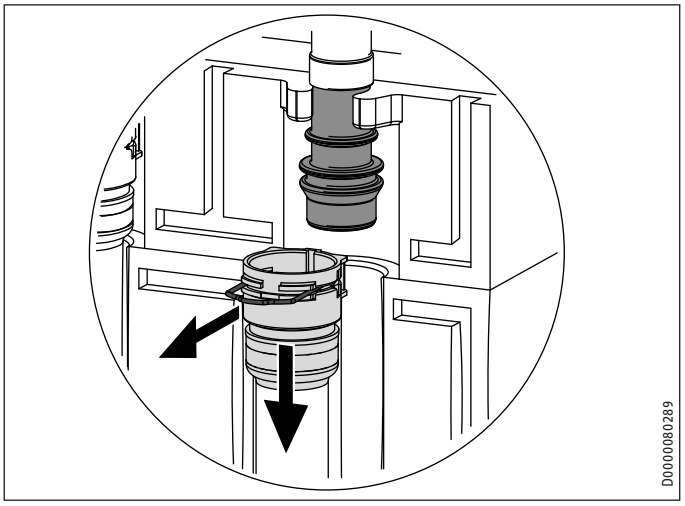
- ▶ Remove insulation segment 1.
- ▶ Remove insulation segment 2.



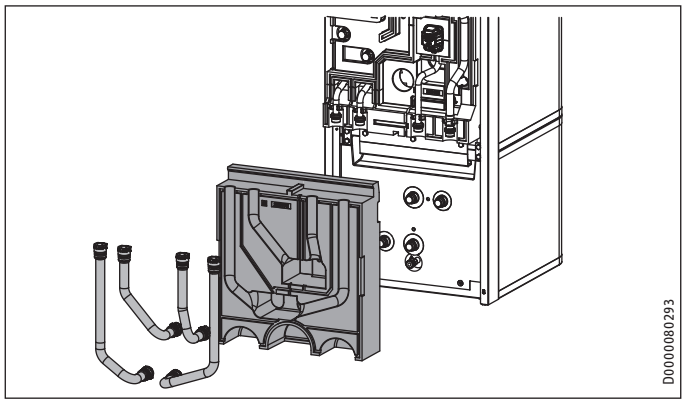
- ▶ Pull the "heating sensor" out of the buffer cylinder.



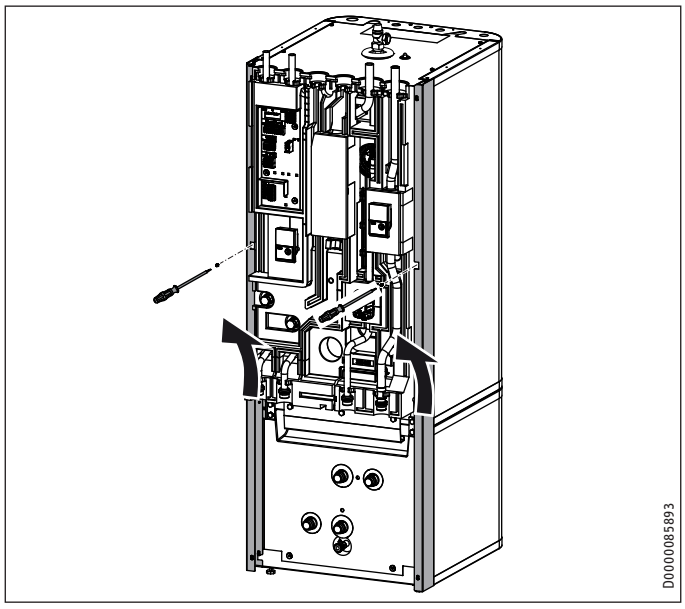
- ▶ Release the sensor lead from the guide groove.



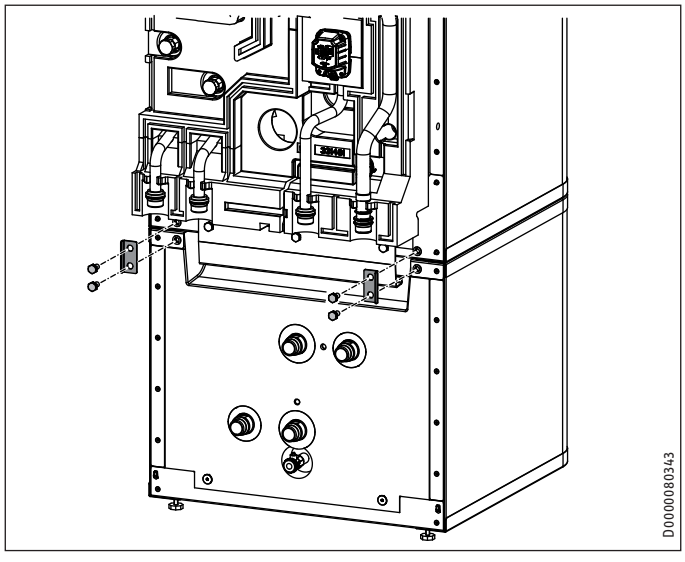
- ▶ Disconnect the push-fit connectors of the 4 hydraulic connections. To do this, pull the spring clips fully out with a screwdriver.
- ▶ Pull the hydraulic connectors as indicated.



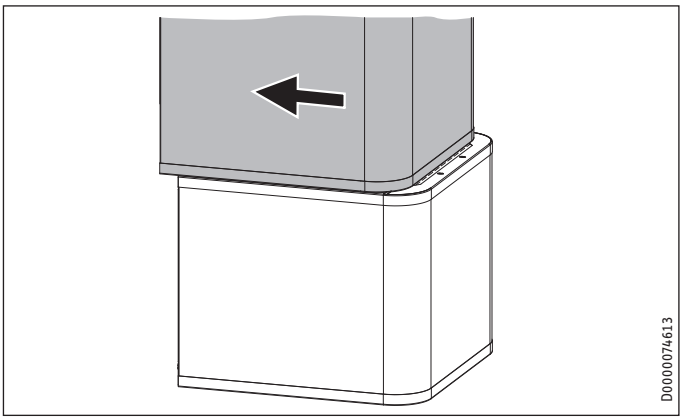
- ▶ Remove the 4 hydraulic hoses.
- ▶ Remove the 2 insulation material screws.
- ▶ Remove insulation segment 3.



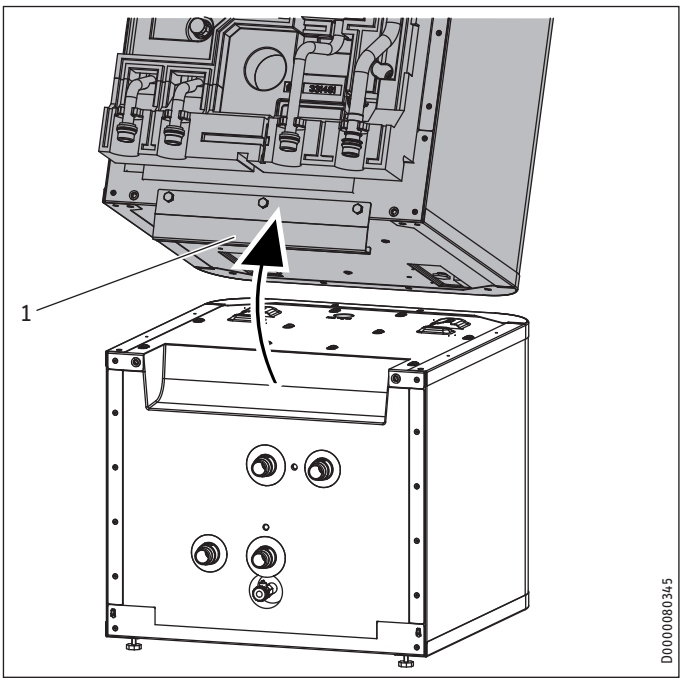
- ▶ Undo the 2 locking screws on the side profile strips.
- ▶ Lift up and unhook the side profile strips.



- ▶ Release the 4 screws on the tabs at the front of the appliance.

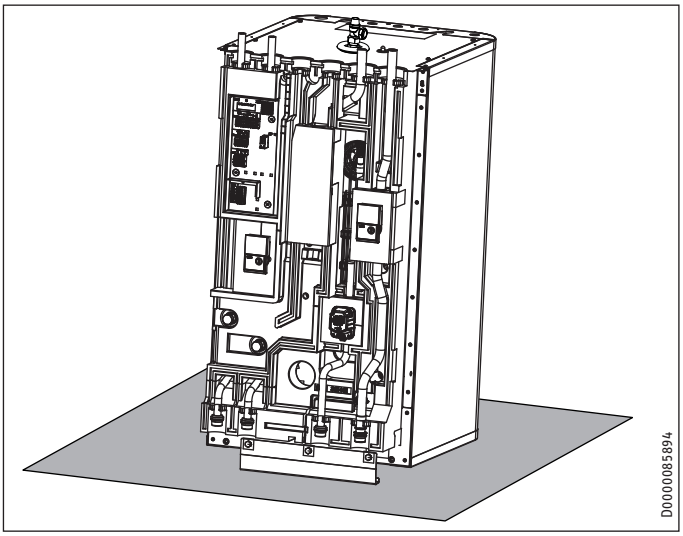


- ▶ Pull the upper section of the appliance towards the front.



1 Handle

- ▶ Tip the upper section of the appliance backwards. Use the handle for improved grip.



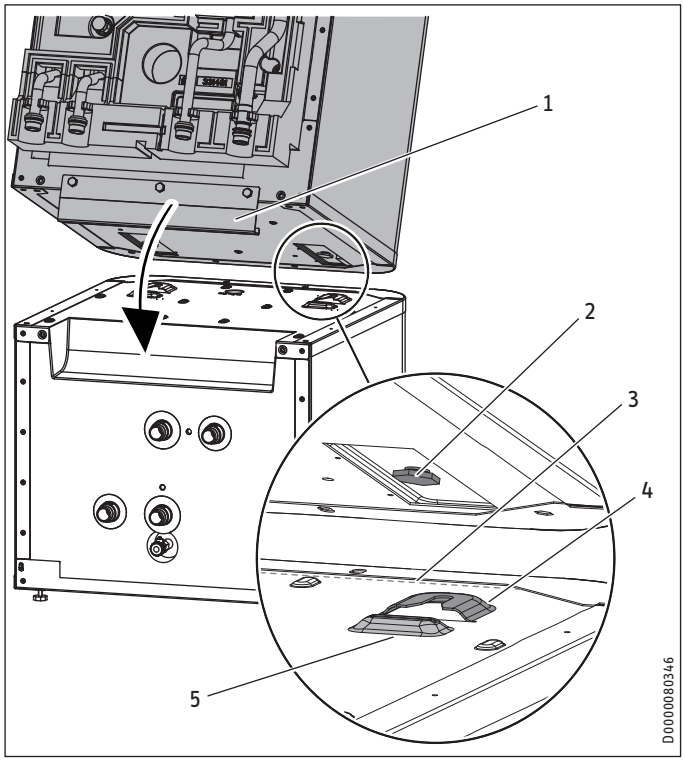
- ▶ Place the upper section of the appliance on a base to prevent damage.

Joining appliance sections

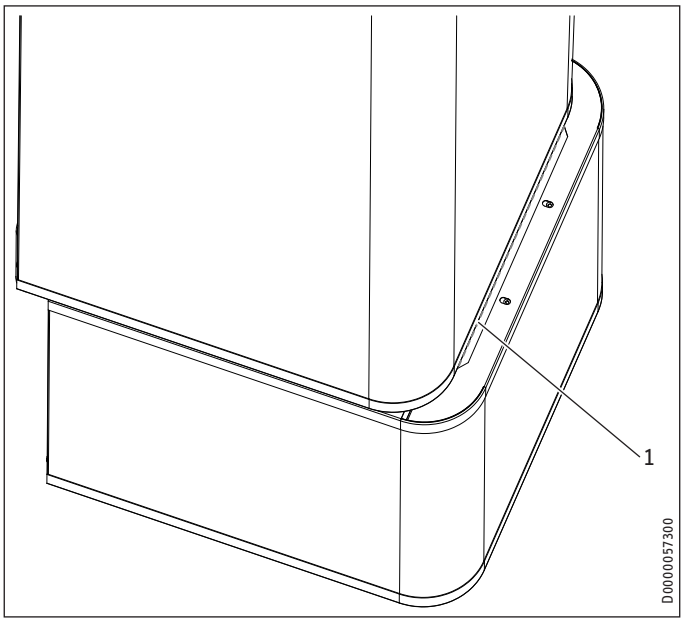
Material losses
To prevent condensation forming, the insulation segments must fit closely against the lower section with no gaps.
- ▶ When inserting the insulation segments, ensure that the joint grooves are kept clear
- ▶ Tap the insulation segments down with your hand.

Rejoin the appliance sections in reverse order.

The positioning aids and the dotted line marking provide assistance when positioning and inserting the upper appliance section into the guide groove on the lower section:

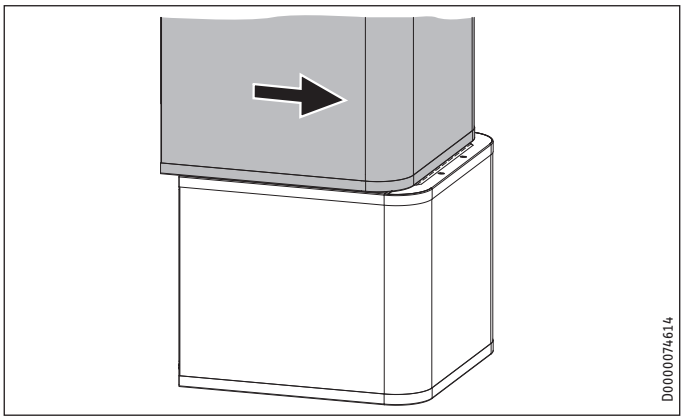


1 Handle
2 Guide pin
3 Dotted line (perforation in the panel)
4 Guide groove
5 Positioning aid



1 Dotted line (perforation in the panel)

▶ Place the upper appliance section onto the lower appliance section along the dotted line.



- ▶ Slide the upper appliance section to the back until it is flush with the lower appliance section. If the appliance sections are joined correctly, the final position is determined by the guide groove and guide pin.
- ▶ Secure the tabs on the appliance front.
- ▶ Fit the side profile strips.
- ▶ Fit insulation segment 3 and the 4 hydraulic hoses.
- ▶ Connect the push-fit connectors of the 4 hydraulic connections. Ensure that the spring clips click into place.
- ▶ Insert the "heating sensor" into the buffer cylinder.
- ▶ Lay the sensor lead in the guide groove provided for this purpose.
- ▶ Fit insulation segment 2.
- ▶ Fit insulation segment 1.
- ▶ Fit the front casing.

10. Installation

10.1 Positioning the appliance

- ▶ When positioning the appliance, observe minimum clearances (see chapter "Preparations / Installation site").
- ▶ Use the adjustable feet to compensate for any unevenness in the floor.

10.2 Heating water connection and safety valve

10.2.1 Safety instructions

Material losses
The heating system to which the appliance is connected must be installed by a qualified contractor in accordance with the water installation drawings in the technical guides.

Material losses
When fitting additional shut-off valves, install a further safety valve in an accessible location on the heat generator itself or in the flow line in close proximity to the heat generator.
There must be no shut-off valve between the heat generator and the safety valve.

Oxygen diffusion

Material losses
Avoid open vented heating systems and underfloor heating systems with plastic pipes that are permeable to oxygen.

In underfloor heating systems with plastic pipes that are permeable to oxygen and in open vented heating systems, oxygen diffusion may lead to corrosion on the steel components of the heating system (e.g. on the indirect coil of the DHW cylinder, on buffer cylinders, steel radiators or steel pipes).

Material losses
The products of corrosion (e.g. rusty sludge) can settle in the heating system components, which may result in a lower output or fault shutdowns due to reduced cross-sections.

Supply lines

- ▶ The maximum permissible line length between the appliance and the heat pump will vary, depending on the version of the heating system (pressure drop). As a standard value, assume a maximum line length of 10 m and a pipe diameter of 22-28 mm.
- ▶ Insulate the flow and return lines in accordance with regional regulations.
- ▶ Connect the hydraulic connections with flat gaskets.

Pressure hoses against structure-borne sound transmission:

The appliance and the heat pump are connected to each other hydraulically via pipes carrying heating water. To reduce the transmission of structure-borne sound on the water side, connect the appliance to the heat pump with pressure hoses if these are not already installed in the heat pump.

Pressure differential:

If the available external pressure difference is exceeded, the pressure drop in the heating system could result in a reduced heating output.

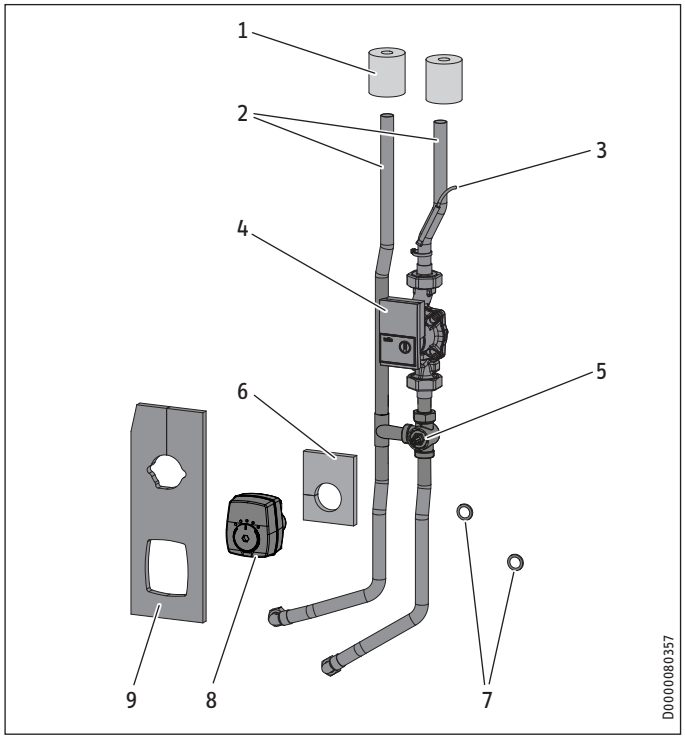
- ▶ When sizing the pipes, ensure that the available external pressure differential is not exceeded (see chapter "Specification / Data table").
- ▶ When calculating the pressure drop, take account of the flow and return lines and the pressure drop of the heat pump. The pressure drop must be covered by the available pressure differential.

10.2.2 Fitting the pump assembly (accessory) if required

WARNING Electrocution
Before starting work on the appliance, disconnect all poles from the power supply and drain the heating circuit via the drain valve on the buffer cylinder.

To extend the appliance with a heating circuit with mixer, you can install pump assembly HSBC 3-HKM (available as an accessory).

Standard delivery HSBC 3-HKM

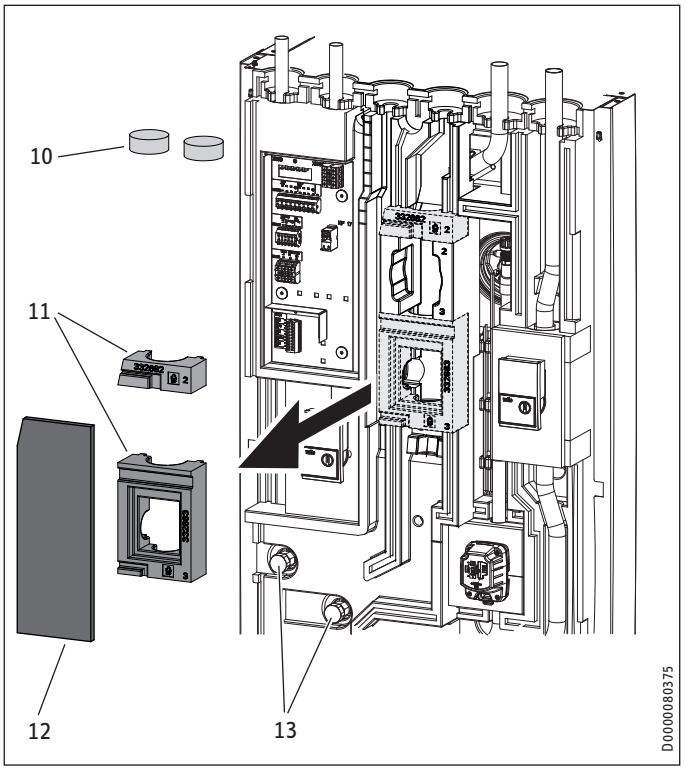


1 Pipe insulation
2 Connection pipes (*)
3 Temperature sensor
4 Heating circuit pump (*)
5 3-way mixer (*)
6 Insulation mat for 3-way mixer
7 Flat gaskets
8 Servomotor for 3-way mixer (*)
9 Insulation mat for 3-way mixer and heating circuit pump
(*) Pipe assembly

Preparation for installation of HSBC 3-HKM

▶ Remove the front casing and insulation segment 1 (see chapter "Installation / Preparations / Transport and handling").

The following components are prefitted on the HSBC side at the pump assembly installation site:



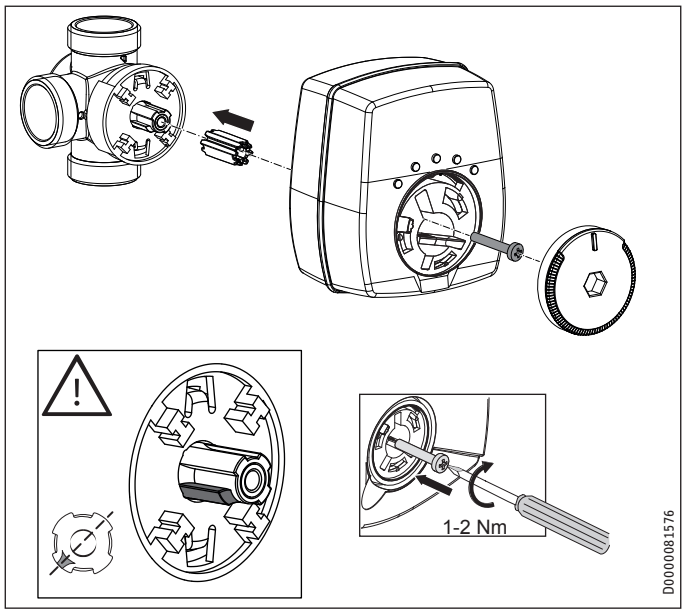
10 Insulation plugs
11 Profiles for 3-way mixer
12 Insulation mat, closed
13 Adaptor with dummy cap screwed on

▶ Remove the insulation plugs.

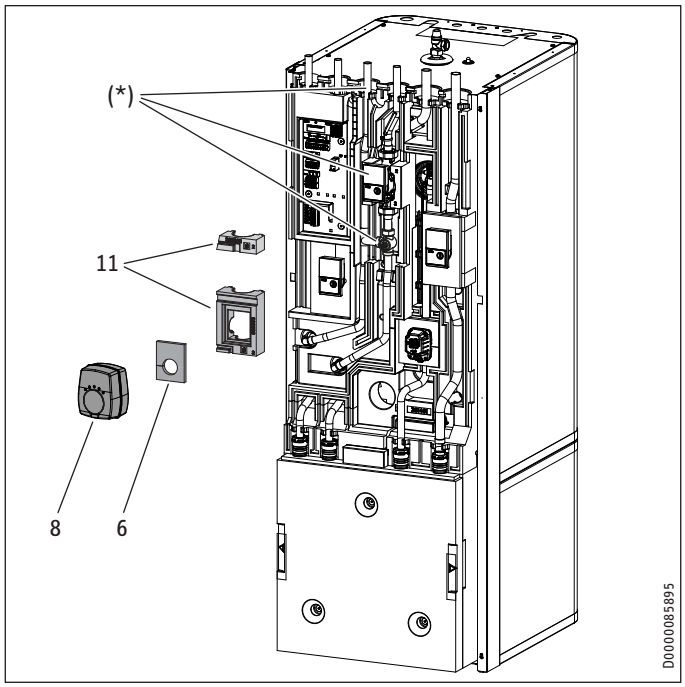
▶ Remove the closed insulation mat and profiles for the 3-way mixer and the heating circuit pump.

▶ Counterhold and unscrew the dummy caps from the adaptors.

HSBC 3-HKM installation

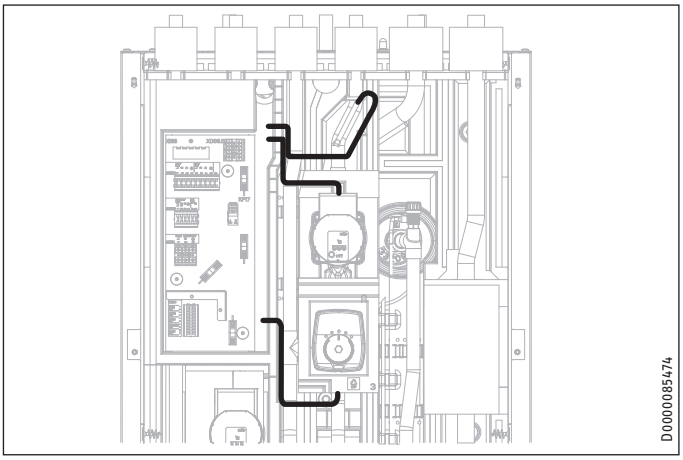


▶ Check the position of the 3-way mixer shaft. Adjust the position if necessary.



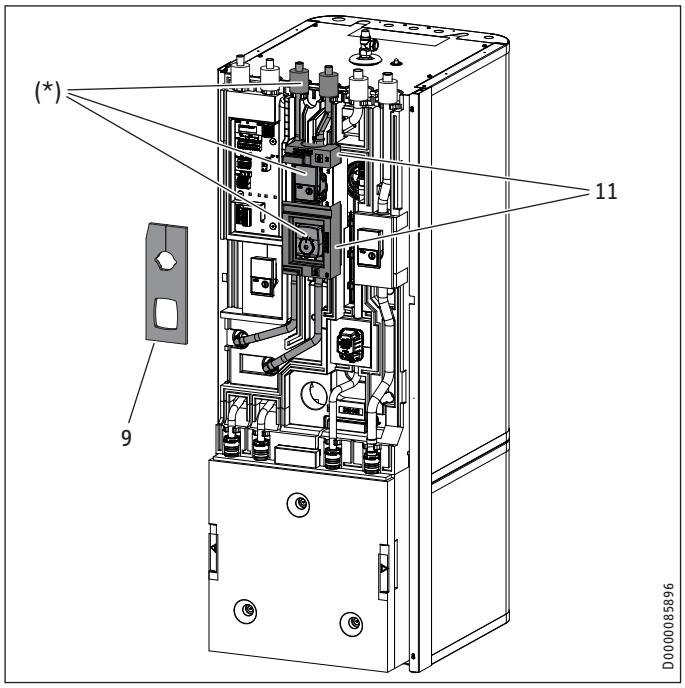
(*) Pipe assembly inserted
6 Insulation mat for 3-way mixer
8 Servomotor for 3-way mixer
11 Profiles for 3-way mixer

▶ Insert the pipe assembly.
▶ Insert the flat gaskets into the union nuts for the connection pipes.
▶ Counterhold and secure the union nuts to the adaptors.
▶ Check the alignment of the pipes and functional elements of the pump assembly. Retighten all fittings.
▶ Install the profiles for the 3-way mixer over the mixing valve body and above the pump.
▶ Place the insulation mat for the 3-way mixer on the valve body.
▶ Install the servomotor for the 3-way mixer



Material losses
To prevent condensation from forming, do not lay any cables in the joint grooves of the EPP parts.

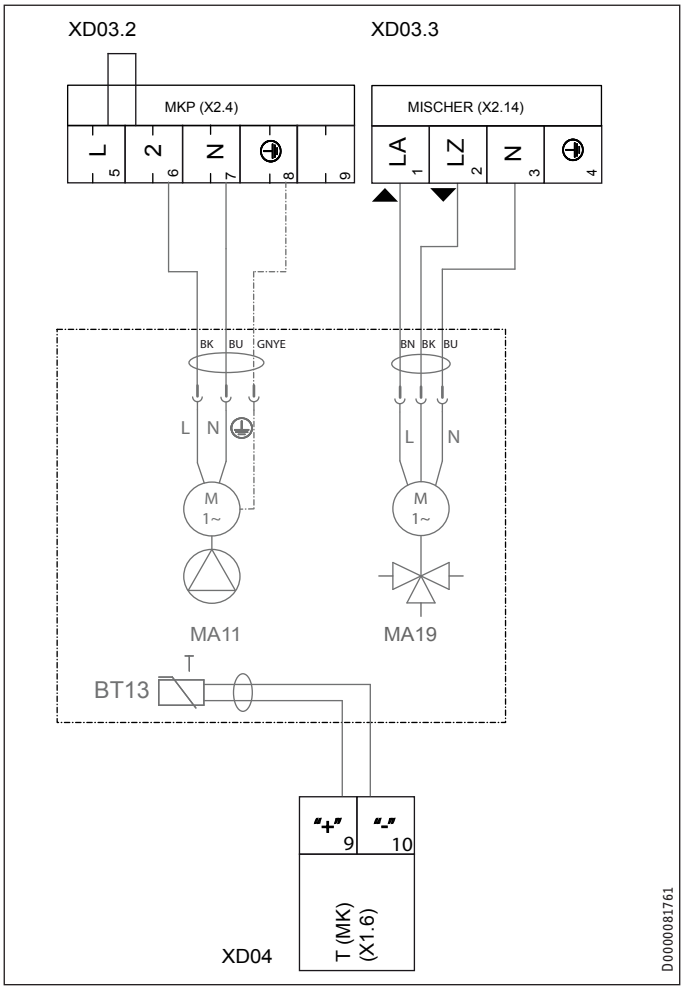
▶ Route the pump assembly connecting cable to the control panel as shown.
▶ Slide the pipe insulation over the connection pipe connectors from above.



(*) Pipe assembly inserted
9 Insulation mat for 3-way mixer and heating circuit pump
11 Profiles for 3-way mixer

▶ Insert the insulation mat on the HKM side for the 3-way mixer and the heating circuit pump.

Electrical connection HSBC 3-HKM



▶ Wire up the heating circuit pump and 3-way mixer (see chapter "Installation / Electrical connection / Control voltage").

10.2.3 Hydraulic connection

Note
▶ Observe the details specified in the chapter "Installation / Specification / Hydraulic diagrams".

- ▶ Thoroughly flush the pipes before connecting the heat pump. Foreign bodies (e.g. welding pearls, rust, sand, sealant, etc.) can impair the operational reliability of the heat pump.
- ▶ Install the heating water pipes (see chapter "Specification / Dimensions and connections").

10.3 DHW connection and safety assembly

10.3.1 Safety instructions

Material losses
The maximum permissible pressure must not be exceeded (see chapter "Specification / Data table").

Material losses
Operate the appliance only with pressure-tested taps.

Material losses
Install the T&P valve.

Material losses
The tundish and the discharge pipe should be installed away from electrical devices.

Note
If secondary return circuits are used then an additional expansion vessel may be required.

Cold water line

Galvanised steel, stainless steel, copper and plastic are approved materials.

Material losses
A safety valve is required.

DHW line, DHW circulation line

Stainless steel, copper and plastic are approved materials.

10.3.2 Installing the DHW circulation line, if applicable

A DHW circulation line with external DHW circulation pump can be fitted to the DHW circulation connection (see chapter "Specification / Dimensions and connections").

- ▶ Remove the sealing cap from the DHW circulation connection (see chapter "Specification / Dimensions and connections").
- ▶ Connect the DHW circulation line.

10.3.3 DHW connection and safety assembly

- ▶ Flush the pipes thoroughly.
- ▶ Install the DHW outlet line and the cold water inlet line (see chapter "Specification / Dimensions and connections"). Connect the hydraulic connections with flat gaskets.
- ▶ Install a type-tested safety valve in the cold water inlet line. Please note that, depending on the supply pressure, you may also need a pressure reducing valve.
- ▶ Size the drain pipe so that water can drain off unimpeded when the safety valve is fully opened.
- ▶ The safety valve drain aperture must remain open to atmosphere.
- ▶ Install the safety valve drain pipe with a constant fall to the drain.

10.4 Filling the system

Heating circuit water quality

Carry out a fill water analysis before filling the system. This analysis may, for example, be requested from the relevant water supply utility.

To avoid damage as a result of scaling, it may be necessary to soften or desalinate the fill water. The fill water limits specified in chapter "Specification / Data table" must always be observed.

- ▶ Recheck these limits 8-12 weeks after commissioning and during the annual system service.

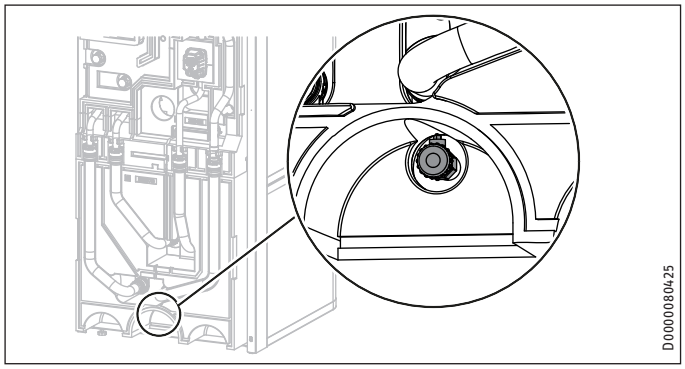
Note
With a conductivity >1000 µS/cm, desalination treatment is recommended in order to avoid corrosion.

Note
If you treat the fill water with inhibitors or additives, the same limits apply as for desalination.

Note
Suitable appliances for water softening, as well as for filling and flushing heating systems, can be obtained via trade suppliers.

Material losses
Never switch on the power before filling the system.

10.4.1 Filling the heating system

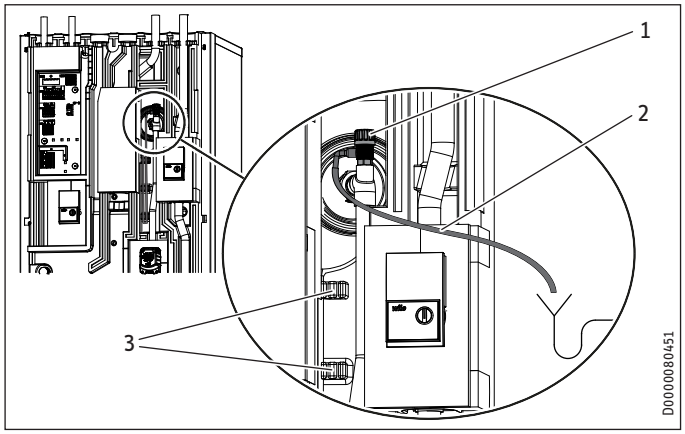


- ▶ Fill the heating system via the drain valve.
- ▶ Vent the pipework.

10.4.2 DHW cylinder filling

- ▶ Filling the DHW cylinder via the cold water inlet connection.
- ▶ Open all downstream draw-off valves until the appliance is full and the pipework is free of air.
- ▶ Adjust the flow rate. For this, observe the maximum permissible flow rate with a fully opened tap (see chapter "Specification / Data table"). If necessary reduce the flow rate at the butterfly valve of the safety assembly.
- ▶ Carry out a tightness check.
- ▶ Check the safety valve.

10.5 Venting the appliance



1 Air vent valve
2 Vent hose
3 Hose attachment

- ▶ Detach the vent hose from the hose attachment.
- ▶ Hang the free end of the vent hose in a container.
- ▶ To ventilate, open the air vent valve.
- ▶ After ventilation, close the air vent valve.
- ▶ Secure the vent hose.

11. Electrical connection

WARNING Electrocution
Carry out all electrical connection and installation work in accordance with relevant regulations.
Before any work on the appliance, disconnect all poles from the power supply.

WARNING Electrocution
The connection to the power supply must be in the form of a permanent connection. Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation. This requirement can be met by using contactors, circuit breakers, fuses/MCBs, etc.

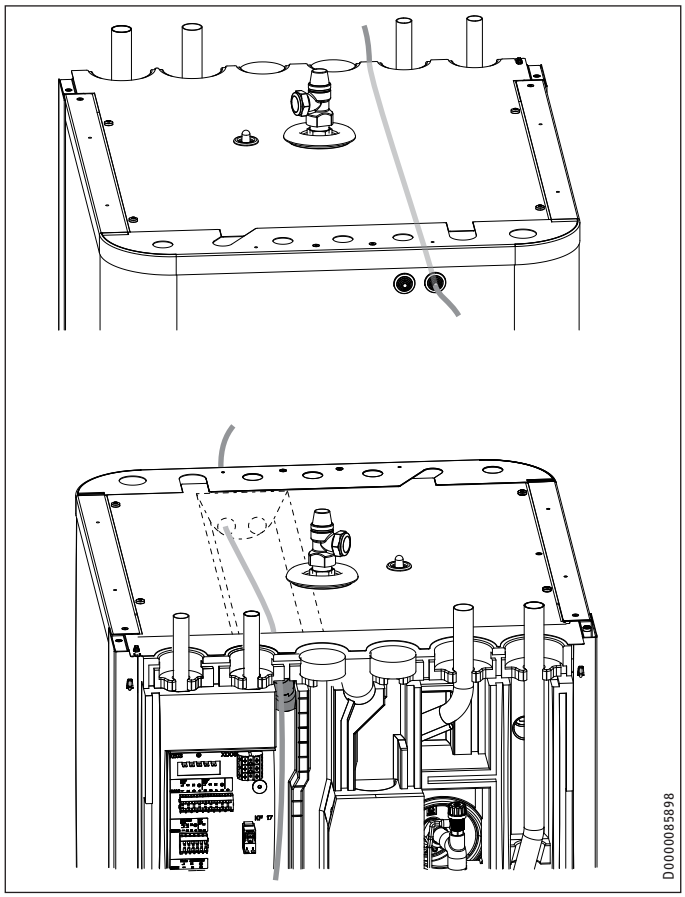
Material losses
Provide separate fuses for the two power circuits of the appliance and the control unit.

Material losses
Observe the type plate. The specified voltage must match the mains voltage.

Note
Leakage currents of up to 5 mA may occur.

Note
You must have permission to connect the appliance from the relevant power supply utility.

The terminal box of the appliance is located behind the front casing (see chapter "Preparations / Transport and handling / Removing/ fitting the front casing").



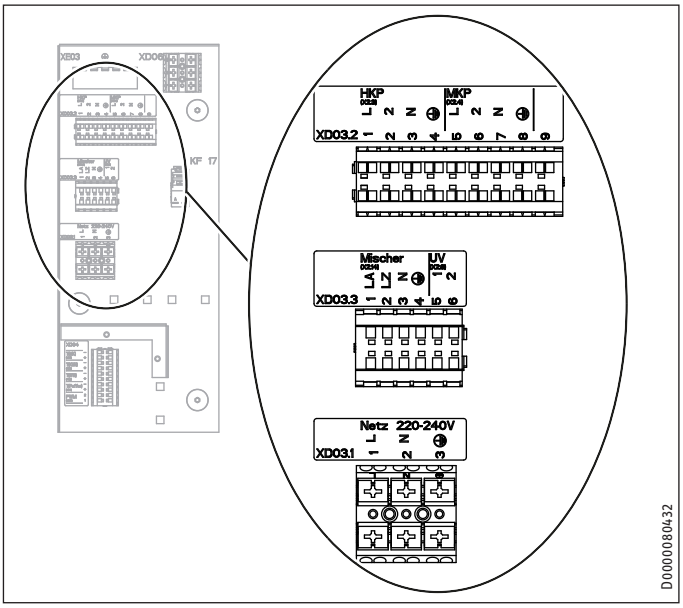
- ▶ Route all power cables and sensor leads into the appliance through the cable entry.
- ▶ Connect the power cables and sensor leads as detailed below.

Install cables with the following cross-sections in accordance with the respective fuse protection:

Fuse protection	Assignment	Cable cross-section
B 16 A	Control	1.5 mm²

11.1 Control voltage

Material losses
- ▶ Only connect energy efficient circulation pumps approved by us to the pump connections.



XD03.1 Control terminal
XD03.2 Control terminal
XD03.3 Control terminal
XE03 Earth terminal, control unit

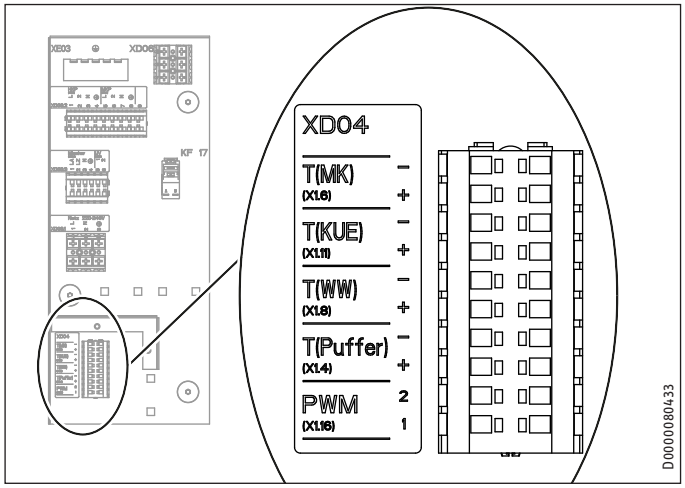
XD03.1	Control terminal	
	Power supply 220-240 V	Mains buffer charging pump

XD03.2	Control terminal	
	HKP	Heating circuit pump
	MKP	Mixer circuit pump, heating circuit 2

Note
At terminals XD03.2 HKP/MKP, you can install a temperature limiter for the underfloor heating system by removing the jumper between L and 2.

XD03.3	Control terminal	
	Mixer	Mixer, servomotor, heating circuit 2
	UV	Diverter valve, heating/DHW

11.2 Safety extra low voltage



XD04	Terminal, safety extra low voltage
T(MK)	Mixer circuit temperature sensor for HSBC 3-HKM (optional)
T(KUE)	Temperature sensor for area cooling (optional)
T(WW)	DHW temperature sensor
T(Puffer)	Temperature sensor, buffer cylinder
PWM	Control by WPM

Control by WPM via PWM signal

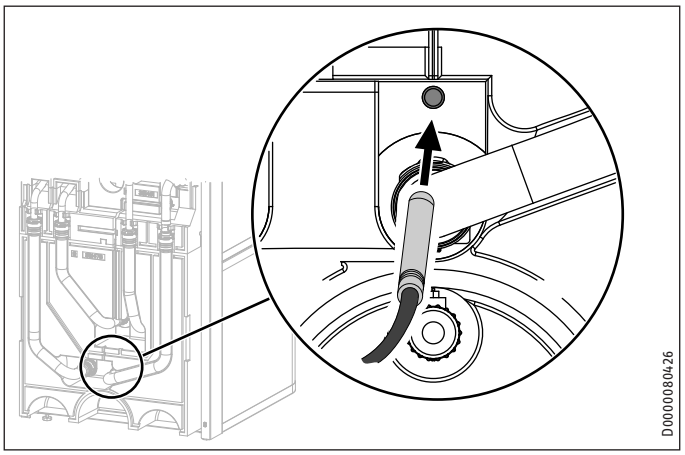
- ▶ Observe the information in the operating and installation instructions of the WPM heat pump manager.

11.3 Sensor installation

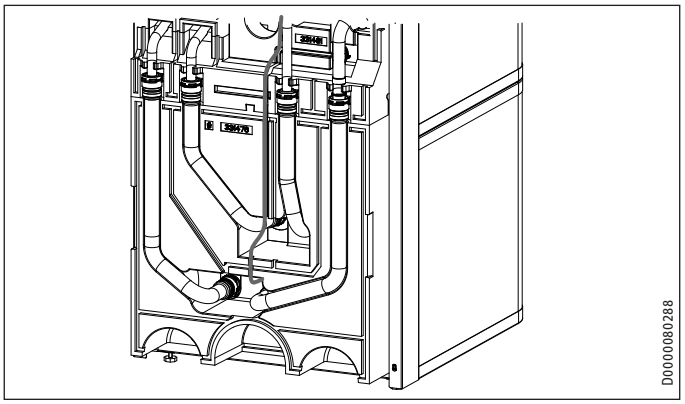
11.3.1 Temperature sensor for cooling (accessory), if required

Cooling requires the fitting of a temperature sensor, available as an accessory.

- ▶ Remove the front casing (see chapter "Preparations / Transport and handling / Removing/fitting the front casing").



- ▶ Insert the temperature sensor into the sensor well "Sensor heat pump cooling, optional".



- ▶ Lay the sensor lead in the guide groove provided for this purpose in the insulation segment.
- ▶ Connect the temperature sensor to T(KUE) of terminal XD04 of the appliance.

12. Commissioning

Our customer support can assist with commissioning, which is a chargeable service.

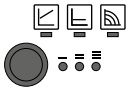
If the appliance is intended for commercial use, observe the rules of the relevant Health & Safety at Work Act during commissioning. For further details, check with your local authorising body (in Germany, for example, this is the TÜV).

12.1 Wilo-Para .../Sc circulation pumps

LED indicators

	Operation indicator: LED illuminates green in normal operation LED illuminates/flashes when there is a fault
	Display of selected control mode Δp-v, Δp-c and constant speed
	Display of selected curve (I, II, III) within the control mode
	Combinations of LED displays for venting function, manual re-start and key lock

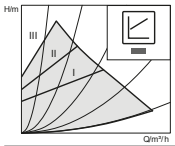
Operating button



Press
To select control mode
To select curve (I, II, III) within the control mode
Press and hold
To activate venting function (press for 3 seconds)
For manual restart (press for 5 seconds)
To lock/unlock keys (press for 8 seconds)

Control modes and functions

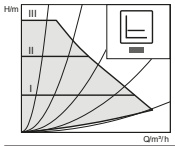
Variable differential pressure Δp-v (I, II, III)



Recommended for two-pipe heating systems with radiators to reduce flow noise at thermostatic valves

The pump reduces the delivery head by a half when the flow rate drops in pipework.
Saves energy by matching the delivery head to the flow rate demand and the lower flow velocities.
Choice of three pre-defined curves (I, II, III).

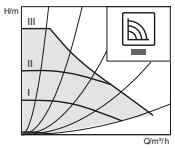
Constant pressure differential Δp-c (I, II, III)



Recommended for underfloor heating systems or with large-diameter pipework and for all applications with a non-varying pipework curve (e.g. cylinder charging pumps) and single-pipe heating systems with radiators

The control system keeps the set delivery head constant, irrespective of delivered flow rate.
Choice of three pre-defined curves (I, II, III).

Constant speed (I, II, III)



Recommended for systems with unchanging system resistance which require a constant throughput.

The pump runs at three preset fixed speed levels (I, II, III).

Note
Factory setting:
Constant speed, curve III

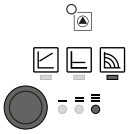
Venting

Fill the system properly and ventilate it
If the pump is not ventilated automatically:
Activate the venting function via the operating button, press button for 3 seconds, then release it.
Venting function starts (duration 10 minutes).
The top and bottom rows of LEDs flash alternately every second.
To cancel, press the operating button for 3 seconds.

Note
After venting, the LED indicator displays the previously set pump values.

Setting control modes

Selecting the control mode



The LEDs for the control modes and associated curves illuminate one after the other.

Briefly press the operating button (for approx. 1 second).
LEDs indicate the current selected control mode and curve (see following table).

Operating button	LED indicator	Control mode	Curve
1x		Constant speed	II
2x		Constant speed	I
3x		Variable differential pressure Δp-v	III
4x		Variable differential pressure Δp-v	II
5x		Variable differential pressure Δp-v	I
6x		Constant differential pressure Δp-c	III
7x		Constant differential pressure Δp-c	II
8x		Constant differential pressure Δp-c	I
*9x		Constant speed	III

(*) Pressing the button for the 9th time in succession returns the system to the factory setting (constant speed, curve III).

12.2 Appliance handover

- ▶ Explain the appliance function to users and familiarise them with how it works.
- ▶ Make users aware of potential dangers.
- ▶ Hand over these instructions.

13. Appliance shutdown

Material losses
Observe the temperature application limits and the minimum circulation volume on the heat consumer side (see chapter "Specification / Data table").

Material losses
Drain the system when there is a risk of frost and the heat pump is completely switched off (see chapter "Maintenance / Draining the DHW cylinder").

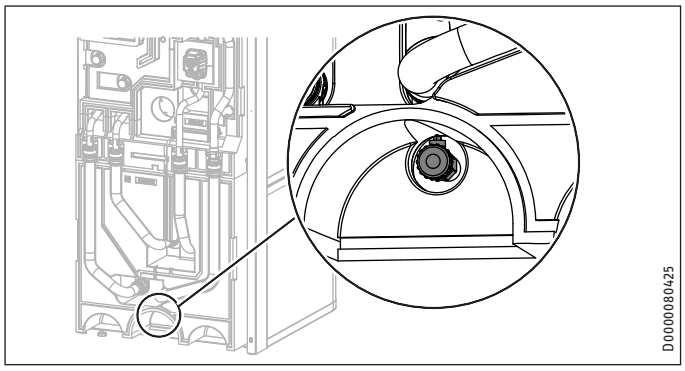
- ▶ If you take the system out of use, set the heat pump manager to standby so that the safety functions that protect the appliance (e.g. frost protection) remain active.

14. Maintenance

WARNING Electrocution
Carry out all electrical connection and installation work in accordance with relevant regulations.

WARNING Electrocution
Before any work on the appliance, disconnect all poles of the appliance from the power supply.

Draining the buffer cylinder



- ▶ Drain the buffer cylinder via the drain valve.

Draining the DHW cylinder

CAUTION Burns
Hot water may escape during draining.

- ▶ Close the shut-off valve in the cold water inlet line.
- ▶ Open the hot water taps on all draw-off points.
- ▶ Empty the DHW cylinder via the cold water inlet connection.

Cleaning and descaling the DHW cylinder

Material losses
Never use descaling pumps or descaling agents to clean the cylinder.

- ▶ Clean the appliance through the inspection port.

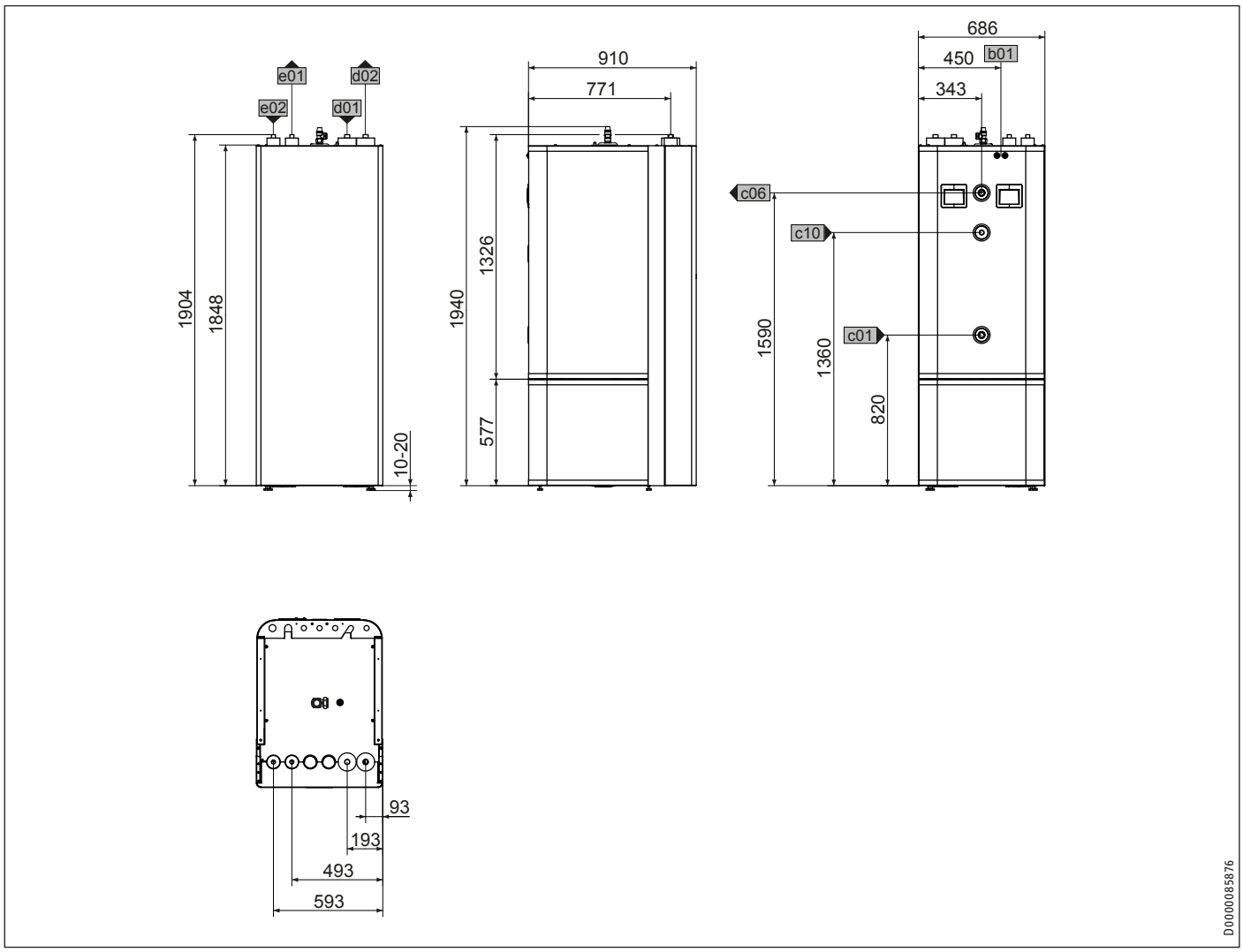
For the torque of the flange screws, see chapter "Specification / Dimensions and connections".

Replacing the signal anode

- ▶ Replace the signal anode if it becomes depleted.

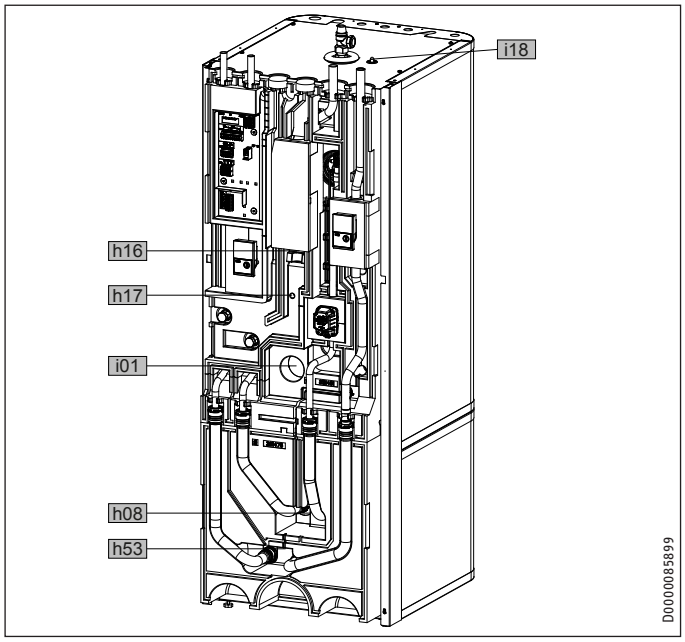
15. Specification

15.1 Dimensions and connections



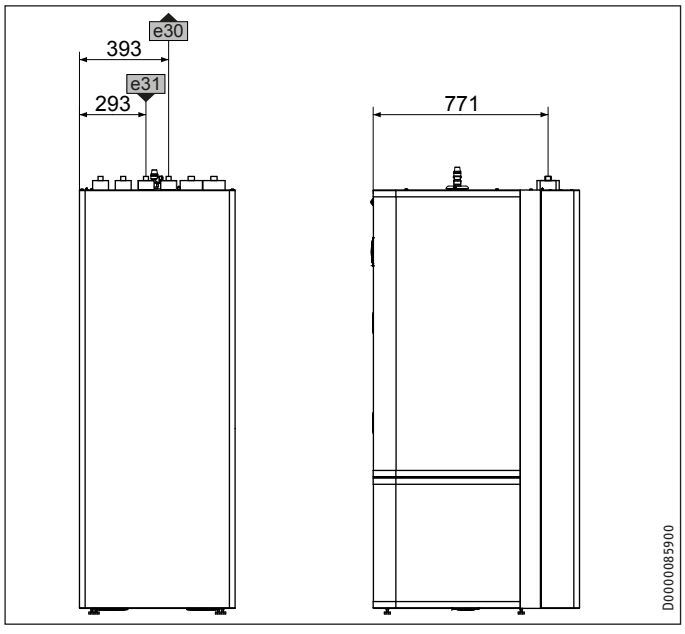
				HSBC 300 cool (AU)
b01	Entry electrical cables			
c01	Cold water inlet	Male thread		G 1
c06	DHW outlet	Male thread		G 1
c10	DHW circulation	Male thread		G 1/2
c13	T&P valve	Female thread		Rp 3/4
d01	Heat pump flow	Diameter	mm	28
d02	Heat pump return	Diameter	mm	28
e01	Heating flow	Diameter	mm	22
e02	Heating return	Diameter	mm	22

Other dimensions and connections



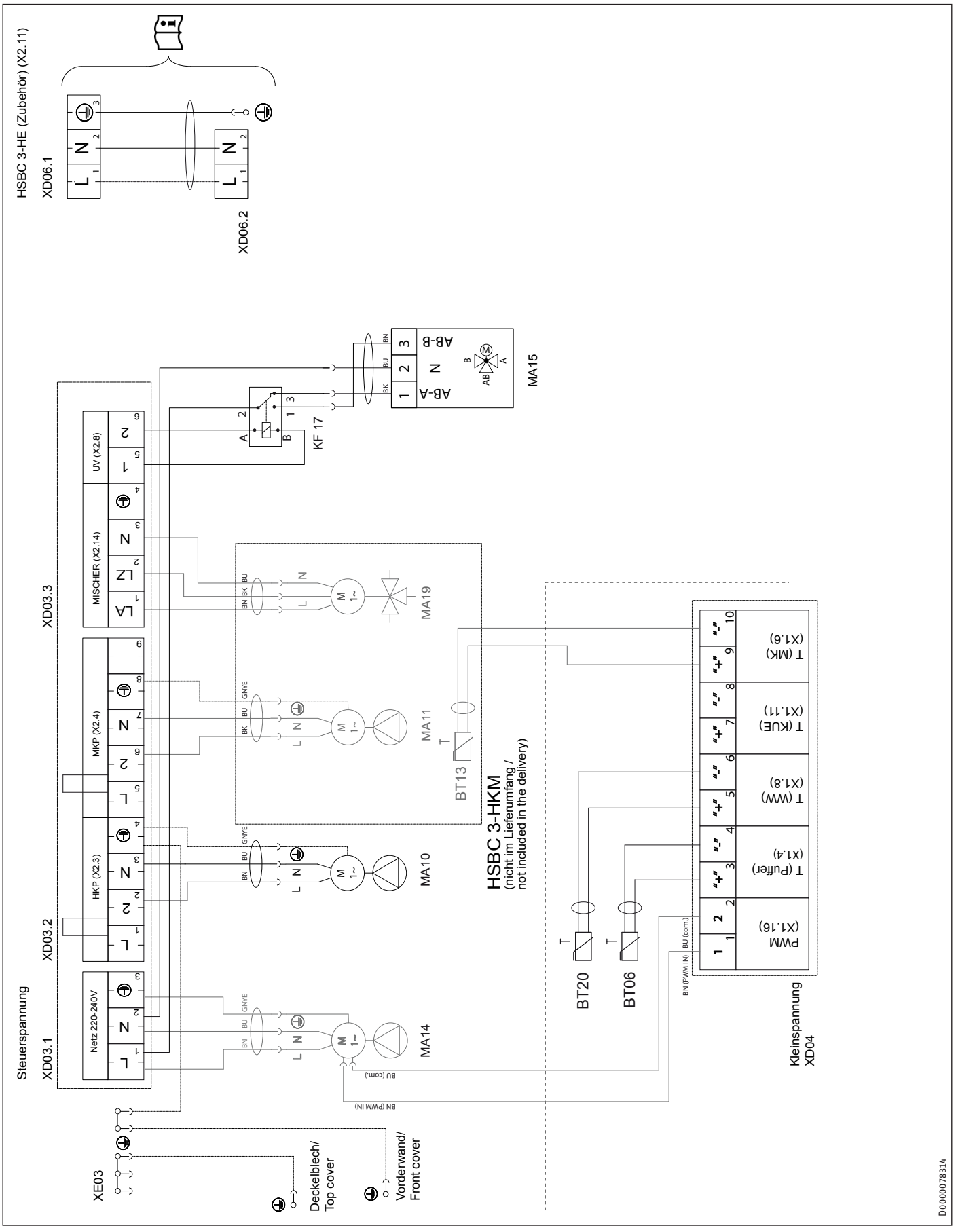
				HSBC 300 cool (AU)
h08	Sensor heat pump cooling, optional	Diameter	mm	9.5
h16	Sensor DHW	Diameter	mm	9.5
h17	Sensor, DHW, optional	Diameter	mm	9.5
h53	Sensor heating	Diameter	mm	9.5
i01	Flange	External diameter	mm	140
		Torque	Nm	45
i18	Protective anode	Female thread		G 1 1/4

15.1.1 HSBC 3-HKM accessories



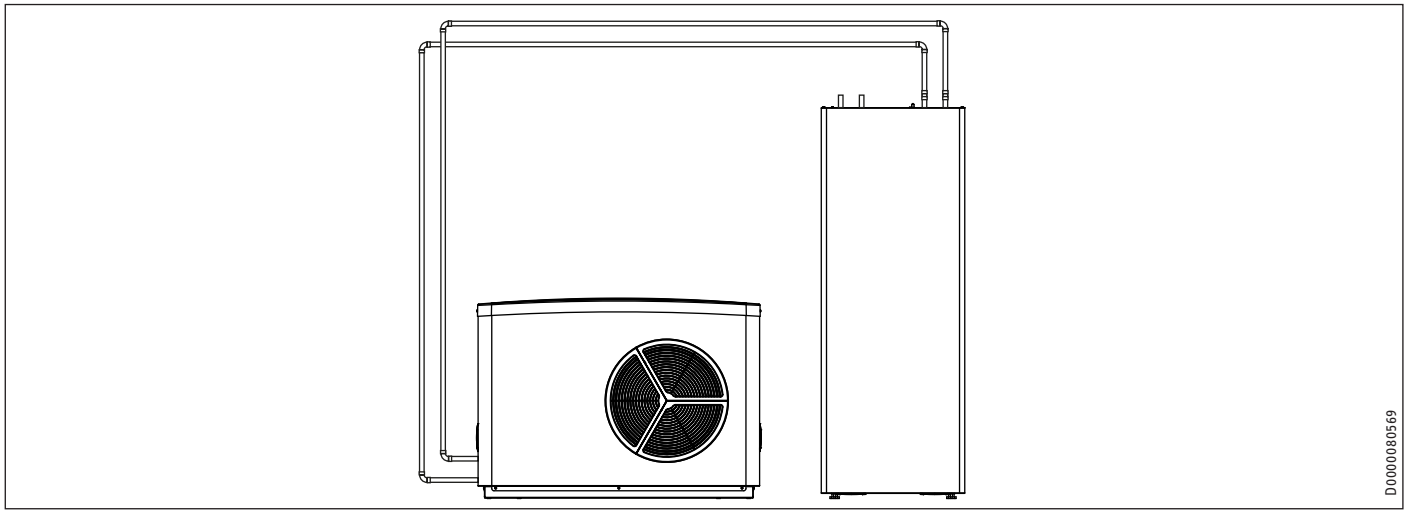
				HSBC 3-HKM
e30	Heating flow, mixed	Diameter	mm	22
e31	Heating return, mixed	Diameter	mm	22

15.2 Wiring diagram



BT06	Temperature sensor, heat pump buffer cylinder
BT20	Temperature sensor, DHW cylinder
BT13	Temperature sensor HP flow HC2 (accessories HSBC 3-HKM)
MA10	Motor, pump, heating circuit
MA11	Motor, pump, heating circuit 2
MA14	Buffer charging pump motor
MA15	Motor, diverter valve, heating, DHW
MA19	Motor, mixing valve heating circuit 2
XD04	LV terminal
XD06.1	Heater terminal (accessories HSBC 3-HE)
XD06.2	Heater terminal (accessories HSBC 3-HE)
XD03.1	Control terminal (mains buffer charging pump)
XD03.2	Control terminal (heating circuit pump, pump heating circuit 2)
XD03.3	Control terminal (mixer heating circuit 2, diverter valve)
KF17	Relay, diverter valve, heat source
XE03	Earth terminal, control unit

15.3 Hydraulic diagrams



15.4 Data table

		HSBC 300 cool (AU)
		202126
Hydraulic data		
Nominal capacity, DHW cylinder	l	270
Nominal capacity, buffer cylinder	l	100
Capacity, indirect coil	l	21
External available pressure differential, circulation pump/heat pump at 1.0 m³/h	hPa	656
External available pressure differential, circulation pump/heat pump at 1.5 m³/h	hPa	527
External available pressure differential, circulation pump/heat pump at 2.0 m³/h	hPa	210
External available pressure differential, circulation pump / heating circuit 1 at 1.0 m³/h	hPa	725
External available pressure differential, circulation pump / heating circuit 1 at 1.5 m³/h	hPa	663
External available pressure differential, circulation pump / heating circuit 1 at 2.0 m³/h	hPa	444
External available pressure differential, circulation pump / heating circuit 2 (optional) at 1.0 m³/h	hPa	665
External available pressure differential, circulation pump / heating circuit 2 (optional) at 1.5 m³/h	hPa	518
External available pressure differential, circulation pump / heating circuit 2 (optional) at 2.0 m³/h	hPa	189
Application limits		
Max. permissible pressure, DHW cylinder	MPa	1.00
Test pressure, DHW cylinder	MPa	1.50
Max. flow rate	l/min	25
Max. permissible pressure, buffer cylinder	MPa	0.30
Test pressure, buffer cylinder	MPa	0.45
Max. permissible temperature	°C	85
Max. permissible temperature, primary side	°C	75
Heating water quality requirements		
Water hardness	°dH	≤3
pH value (with aluminium fittings)		8.0-8.5
pH value (without aluminium fittings)		8.0-10.0
Conductivity (softening)	µS/cm	<1000
Conductivity (desalination)	µS/cm	20-100
Chloride	mg/l	<30
Oxygen 8-12 weeks after filling (softening)	mg/l	< 0.02
Oxygen 8-12 weeks after filling (desalination)	mg/l	< 0.1
Power consumption		
Max. power consumption, charging pump	W	60
Max. power consumption, circulation pump on the heating side	W	60
Energy data		
Standby energy consumption/24 h at 65 °C	kWh	1.50
Electrical data		
Frequency	Hz	50
Versions		
IP rating		IP20

		HSBC 300 cool (AU)
Values		
T&P valve, nominal set pressure	MPa	0.85
T&P valve, nominal set temperature	°C	99
Dimensions		
Height	mm	1918
Width	mm	680
Depth	mm	910
Height when tilted	mm	2123
Weights		
Weight, full	kg	641
Weight, empty	kg	250

Further details

		HSBC 300 cool (AU)
		202126
Maximum altitude for installation	m	2000

15.5 Accessories

Pump assembly HSBC 3-HKM

		HSBC 3-HKM
		238825
Connections		
Heating circuit connection	mm	22

Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

Environment and recycling

We would ask you to help protect the environment. After use, dispose of the various materials in accordance with national regulations.

Stiebel Eltron Warranty for Water Heaters – Model HSBC 300 cool (AU)

Who gives the warranty

1. The warranty is given by Stiebel Eltron (Aust) Pty Ltd (A.B.N. 82 066 271 083) of 294 Salmon Street, Port Melbourne, Victoria, 3207 ("we", "us" or "our").

The warranty

2. This warranty applies to Stiebel Eltron Water Heaters – Model HSBC 300 cool (AU) (the "unit").

3. Subject to the warranty exclusions we will repair or replace, at our absolute discretion, a faulty component in your unit free of charge if it fails to operate in accordance with its specifications during the warranty period.

4. If we repair or replace a faulty component to your unit under this warranty, the warranty period is not extended from the time of the repair or replacement.

5. The warranty period commences on the date of completion of the installation of the unit. Where the date of completion of installation is not known, then the warranty period will commence 2 months after the date of manufacture.

6. The warranty period for a unit used for domestic purposes is shown in the table below. Domestic purposes means that the unit is used in a domestic dwelling.

Component	Warranty period
All components, excluding PTR valve	5 years from the date of completion of the installation of the unit.

7. The warranty period for a unit used for commercial purposes is shown in the table below. Commercial purposes means that the unit is used for a non-domestic purpose and includes but not limited to being used in a motel, hotel, mining camp or nursing home.

Component	Warranty period
All components, excluding PTR valve	1 year from the date of completion of the installation of the unit.

Your entitlement to make a warranty claim

8. You are entitled to make a warranty claim if:

8.1. you own the unit or if you have the owner's consent to represent the owner of the unit;

8.2. you contact us within a reasonable time of discovering the problem with the unit;

How you make a warranty claim

9. To make a warranty claim you must provide us with the following information:

9.1. The model number of the unit;

9.2. A description of the problem with the unit;

9.3. The name, address and contact details (such as phone number and e-mail address) of the owner;

9.4. The address where the unit is installed and the location (e.g. in laundry);

9.5. The serial number of the unit;

9.6. The date of purchase of the unit and the name of the seller of the unit;

9.7. The date of installation of the unit;

9.8. A copy of the certificate of compliance when the unit was installed.

10. The contact details for you to make your warranty claim are:

Name:	Stiebel Eltron (Aust) Pty Ltd
Address:	294 Salmon Street, Port Melbourne, Victoria, 3207
Telephone:	1800 153 351 (8.00 am to 5.00 pm AEST Monday to Friday)
Contact person:	Customer Service Representative
E-mail:	service@stiebel.com.au

11. We will arrange a suitable time with you to inspect and test the unit.

Warranty exclusions

12. We may reject your warranty claim if:

12.1. The unit was not installed by registered and qualified tradespeople.

12.2. The unit was not installed and commissioned:

a) in Australia;
b) in accordance with the Operating and Installation Guide; and
c) in accordance with the relevant statutory and local requirements of the State or Territory in which the unit is installed.

12.3. The unit has not been operated or maintained in accordance with the Operating and Installation Guide.

12.4. The unit does not bear its original Serial Number or Rating Label.

12.5. The unit was damaged by any or any combination of the following:

d) normal fair wear and tear;
e) connection to an incorrect water supply;
f) connection to water from a bore, dam or swimming pool;
g) connection to an incorrect power supply;
h) connection to faulty equipment, such as damaged valves;
i) foreign matter in the water supply, such as sludge or sediment;
j) corrosive elements in the water supply;
k) accidental damage;
l) act of God, including damage by flood, storm, fire, lightning strike and the like;
m) excessive water pressure, negative water pressure (partial vacuum) or water pressure pulsation.

12.6. The unit was damaged before it was installed e.g. it was damaged in transit.

12.7. An unauthorised person has modified, serviced, repaired or attempted to repair the unit without our consent.

12.8. Non genuine parts other than those manufactured or approved by us have been used on the unit.

13. We may charge you:

13.1. for any additional transport costs if the unit is installed more than 30 kilometres from our closest authorised service technician.

13.2. for the extra time it takes our authorised service technician to access the unit for inspection and testing if it is not sited in accordance with the Operating and Installation Guide and not readily accessible for inspection.

13.3. for any extra costs of our authorised service technician to make the unit safe for inspection.

14. You must ensure that access to the unit by our authorised service technician is safe and free from obstruction.

15. Our authorised service technician may refuse to inspect and test the unit until you provide safe and free access to it, at your cost.

16. If we reject your warranty claim in accordance with clause 12, we may charge you for our authorised service technician's labour costs to inspect and test the unit.

17. In order to properly test the unit we may remove it to another location for testing.

Australian Consumer Law

18. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

19. The Stiebel Eltron warranty for the unit is in addition to any rights and remedies you may have under the Australian Consumer Law.

NOTES

NOTES

Deutschland
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