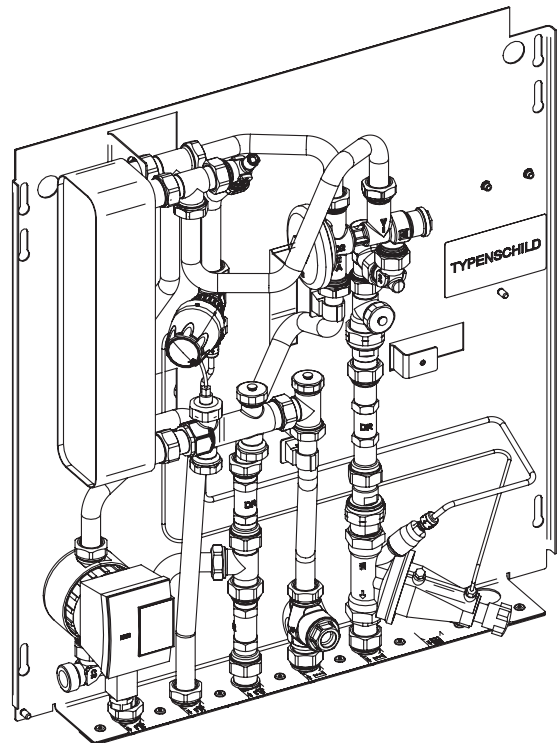
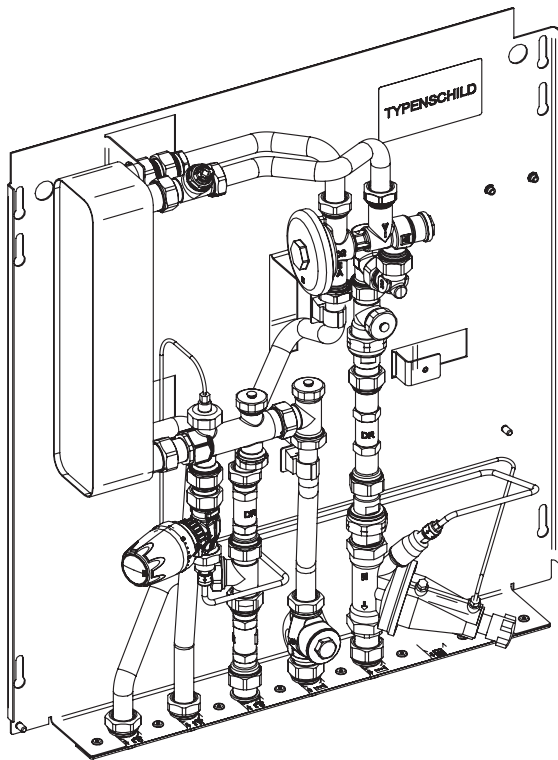


# TA-COMFORT-W Hot water units

Installation | Operation



# Safety instructions

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To reduce risk and avoid accidents and injuries, please follow the safety instructions carefully.

## Target group

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These instructions are intended for authorised service personnel only.  
Work on the heating system and the drinking water, gas and electricity networks may only be carried out by skilled service personnel or installation engineers who have been authorised by the relevant authorities.

## Regulations

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### Work on the system is covered by the following regulations

- Statutory accident prevention rules.
- Statutory environmental protection rules.
- Accident prevention regulations issued by the Employer's Liability Insurance Association.
- The applicable safety provisions contained in the following standards and norms:
  - DIN, EN, DVGW, TRGI, TRF, VDE and ACS standards.
  - ÖNORM, EN, ÖVGW-TR Gas, ÖVGW-TRF and ÖVE
  - SEV, SUVA, SVGW, SVTI, SWKI and VKF.

All new regulations and standards applicable at regional/national level.

### Rules when working on the system and network parameters

- Isolate the system from the power supply and verify the absence of power (e.g. at the separate fuse or a main switch).
- Ensure that the system cannot be switched back on.

**IMPORTANT:** Risk of scalding: Temperature of medium > 60°C

Network parameters for heating:	Max. operating temperature:	90°C
Network parameters for potable water:	Max. operating temperature:	90°C
Pressure class:	PN 10	

The equipment must be installed in enclosed rooms that are protected from frost in compliance with EN 60529. Compliant protection zones must be observed during the planning and installation process EN 60520 IP rating – IP42.

**NOTE:** Nickel soldered heat exchanger can be delivered on request for tap water with higher conductivity as 500 µS or pH >9,0. It is not allowed to use copper soldered heat exchangers under those conditions.

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# Description of functions

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TA-COMFORT heating interface units supply a home with domestic hot water. The domestic hot water is heated instantaneously using a stainless steel plate heat exchanger and a pressure-controlled proportional flow controller with an antibacterial coating.

## Principle of operation

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The proportional flow controller only allows the domestic hot water and heating water to flow over the plate heat exchangers while domestic hot water is being drawn off. When the draw-off ends, the valve closes to stop the flow through the heat exchanger.

## Notes

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If the heating supply temperature is kept constant, proportional flow control means that the same hot water temperature is reached regardless of the volumes being drawn off.

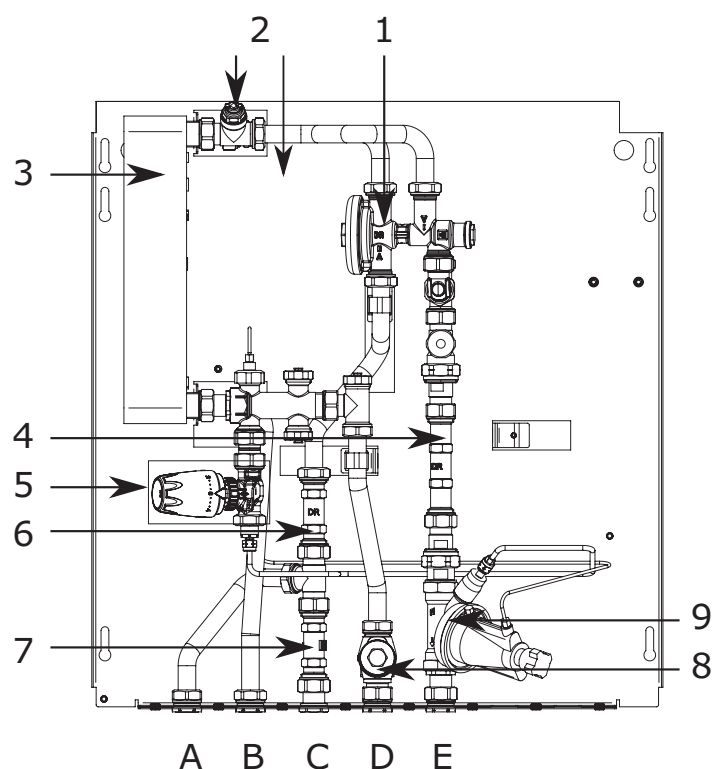
If the heating water temperature is very high or fluctuates widely, producing an expected domestic hot water temperature exceeding 60°C, scald protection should be added by installing a temperature mixing valve module (optional).

In order to guarantee thermal stability and to reduce the time taken to reach the desired domestic hot water temperature, a thermostatic circulation bypass is included in the heating interface unit.

Designated pipe sections for water and heat meter installation are provided in every home unit.

See our catalogues and price list for other accessories and further options.

# Hydraulic diagram



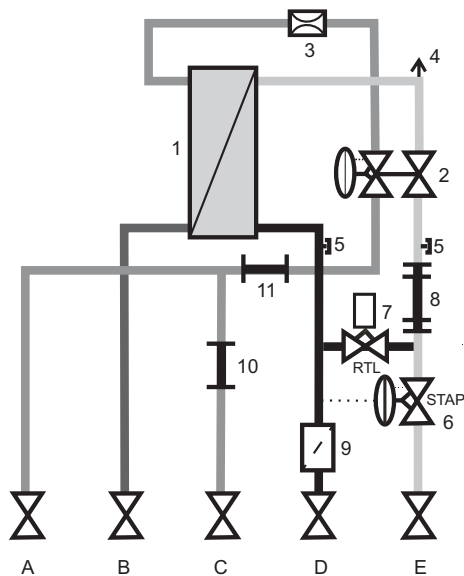
- A. Cold water outlet
- B. Hot water outlet
- C. Cold water inlet
- D. Heating supply
- E. Heating return

- 1. Proportional controller
- 2. Air vent
- 3. Stainless steel plate heat exchanger
- 4. Dummy piece for heat meter sensor
- 5. RTL TRV thermal circulation bypass
- 6. Dummy piece for hot water meter
- 7. Dummy piece for cold water meter
- 8. Strainer
- 9. Internal  $\Delta p$  controller, setting range 10 - 60 kPa, presetting 35 kPa

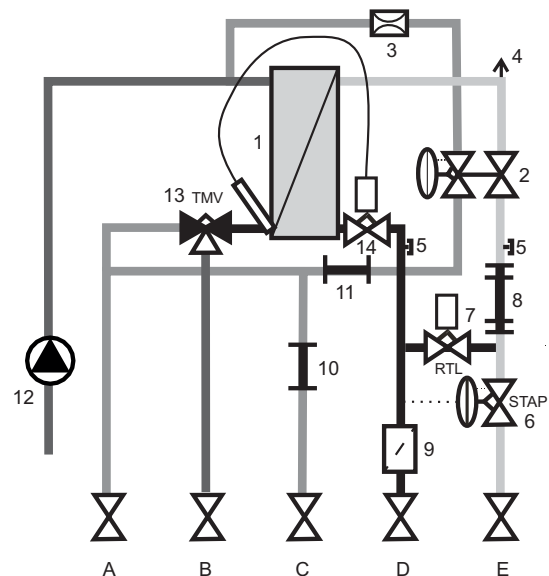
! Not all the options are available for every heating interface unit type or may not be available in combination.

# Hydraulic diagram

## TA-COMFORT-W Basic version



## TA-COMFORT-W Unit with all options



- A. Cold water outlet
- B. Hot water outlet
- C. Cold water inlet
- D. Heating supply
- E. Heating return

- 1. Heat exchanger
- 2. PM controller
- 3. Flow limiter
- 4. Vent
- 5. Connection for external heating circuit (for example bathroom radiators)
- 6. STAP: Internal  $\Delta p$  controller, setting range 10 - 60 kPa, presetting 35 kPa
- 7. RTL TRV thermal circulation summer bypass
- 8. Dummy piece for heat meter
- 9. Strainer
- 10. Dummy piece for cold water meter
- 11. Dummy piece for hot water meter
- 12. Circulation circuit for hot tap water (optional)
- 13. Thermostatic mixing valve (optional)
- 14. Thermostatic temperature control valve with immersion sensor (optional)

! Not all the options are available for every heating interface unit type or may not be available in combination.

# Installation

Please follow the safety and additional installation instructions during installation.

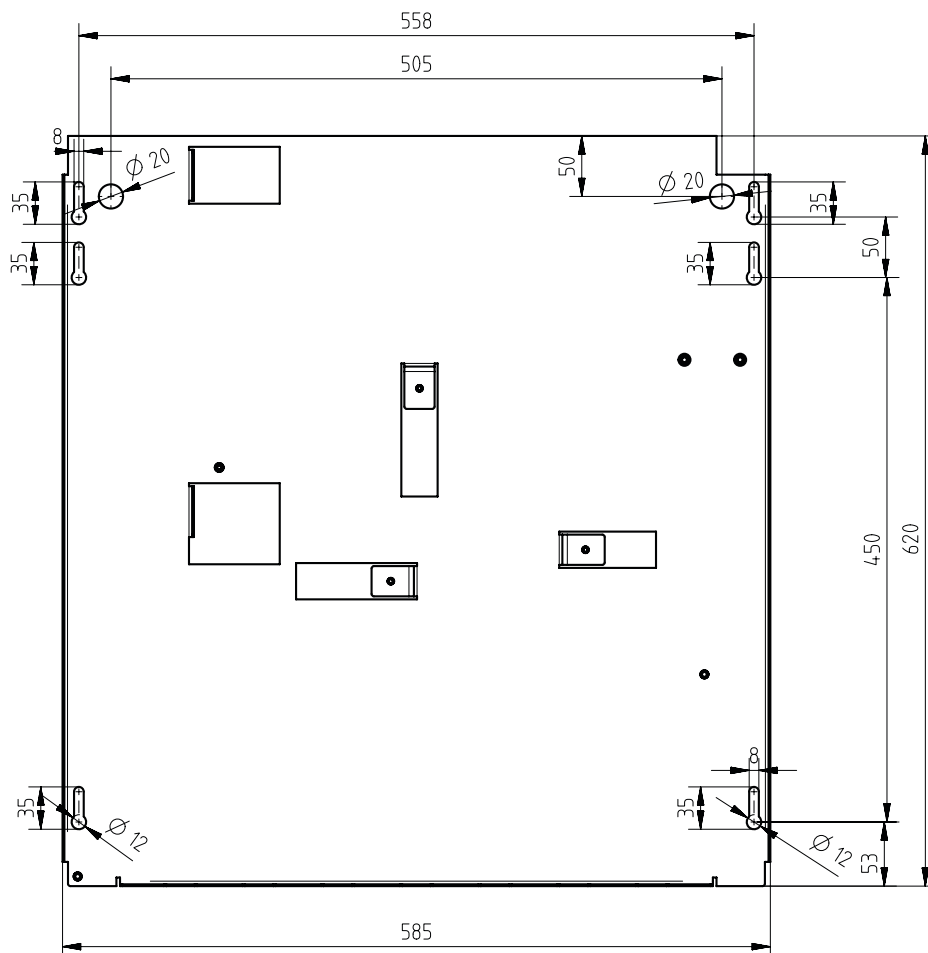
Incorrect installation and operation of the heating interface units will lead to losing any claims under the warranty.

The units can be installed;

A) wall-mounted: with cover for surface mounting.

B) wall-mounted: with cover for flush-mounted.

Dimensions of base plate [mm]:



Dimensions (H/W/D in mm):

620 x 585 x 200 (depth from wall cover / depth from flush-mounted is variable)

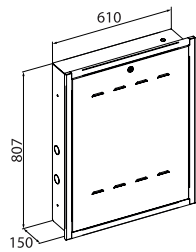
Distance from wall to connection axes:

47 mm, take account of the installation rail if there is a mixing circuit

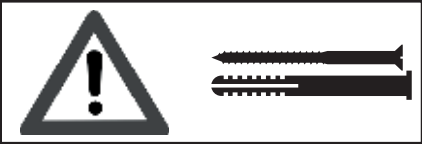
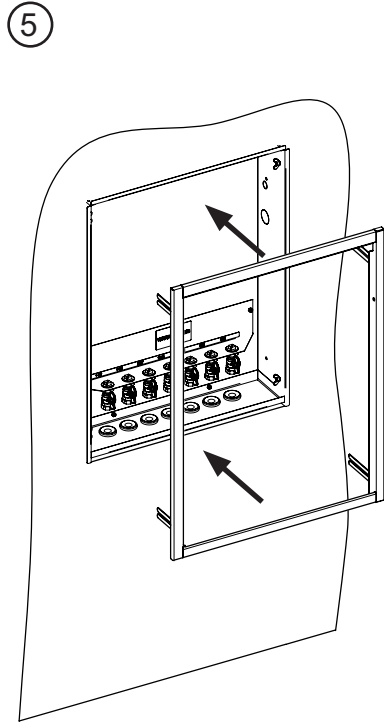
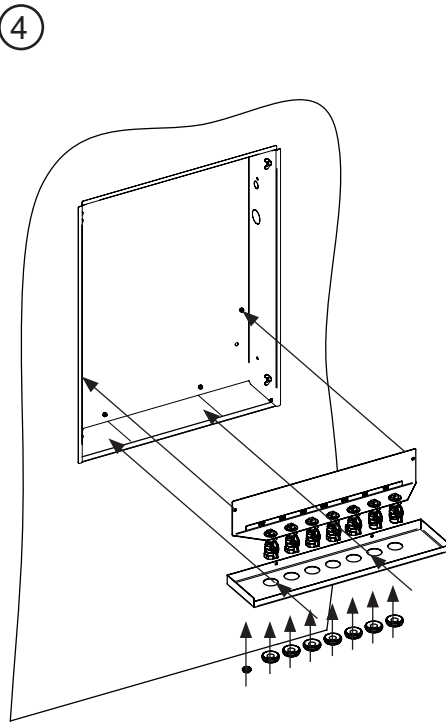
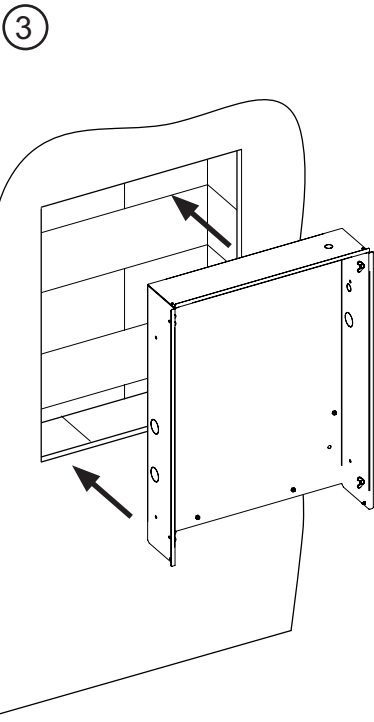
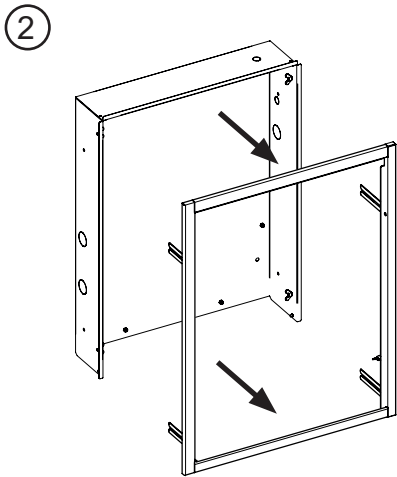
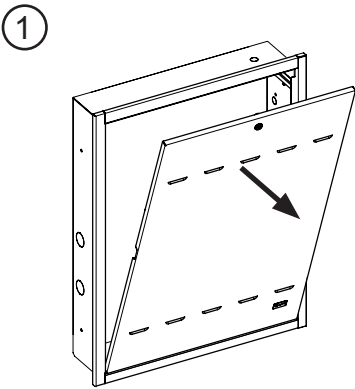
# Installation

## Installation of cabinet

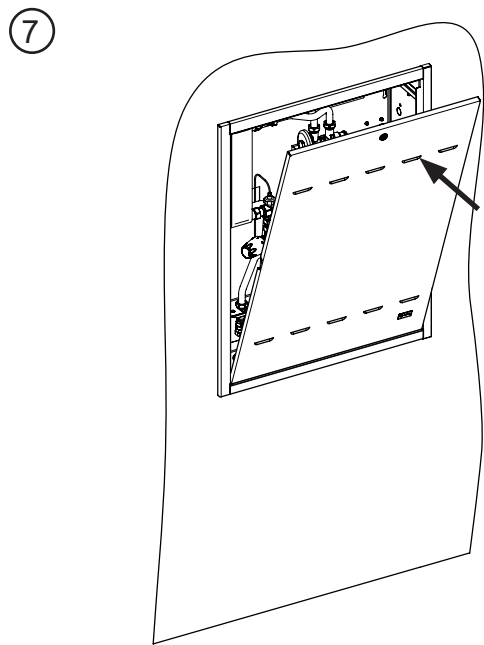
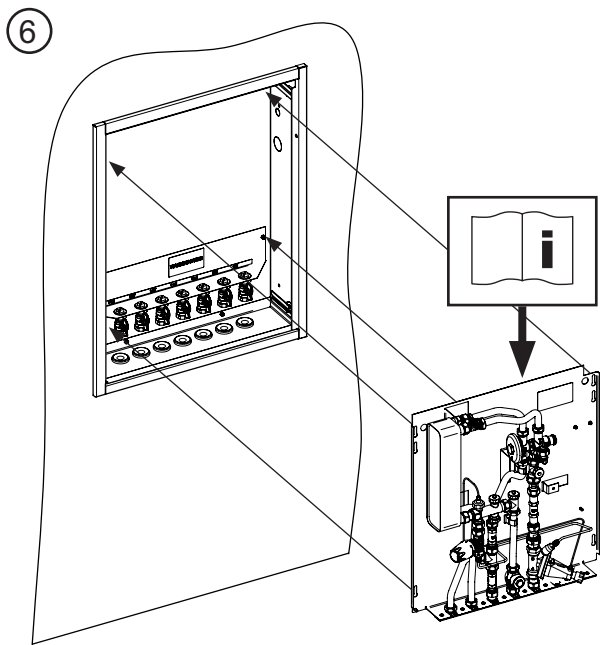
Dimensions [mm]:  
The total height of the heating interface unit is 1519 mm including the cover for surface mounting.



344 030 400 24  
344 030 400 31  
344 030 400 34







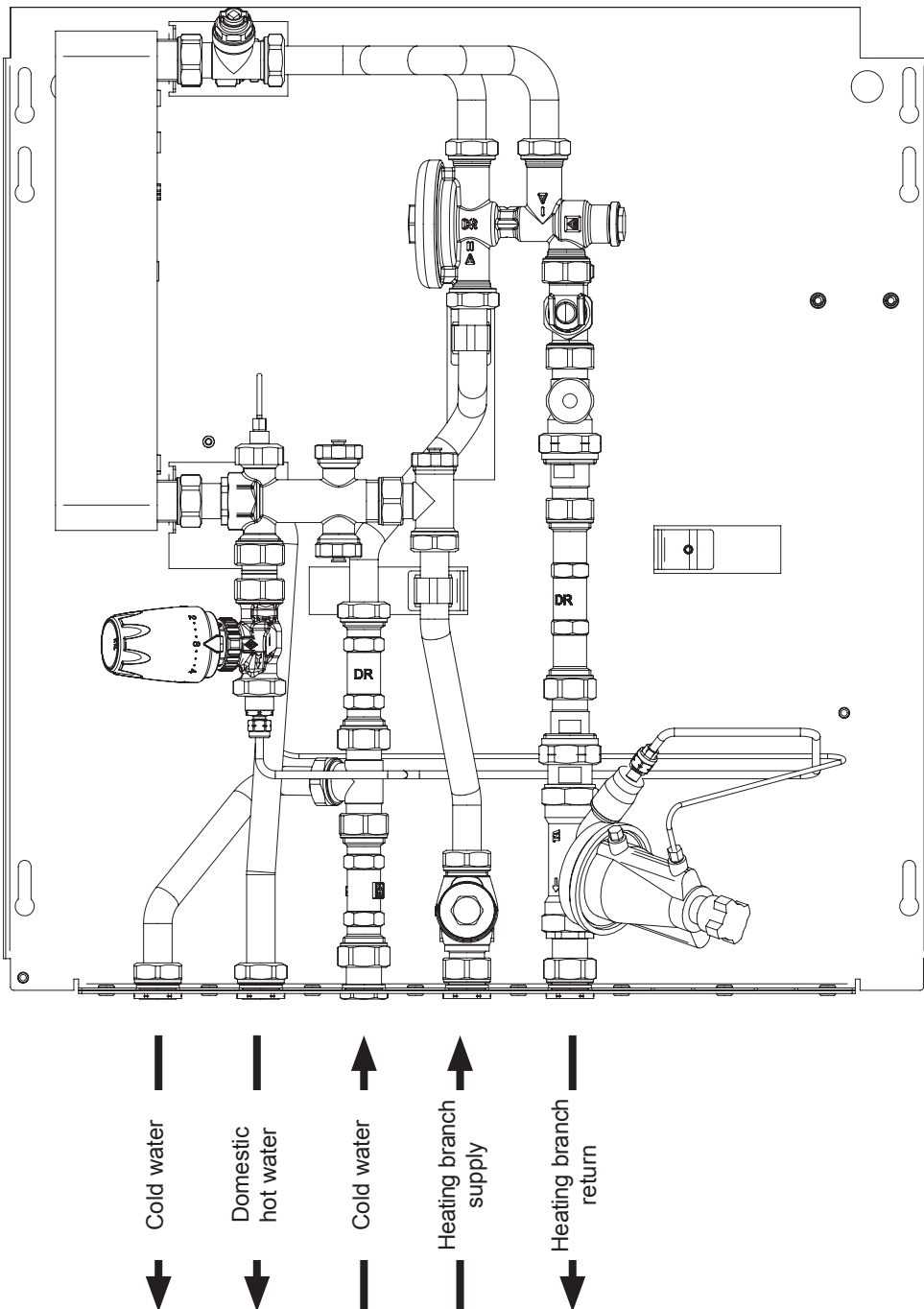
## Flushing and filling

Before being filled, the system must be carefully flushed.

All connections must be checked and tightened if necessary.

After tightening, screwed joints must be securely locked with a counter nut.

When the system has been filled, the heating interface unit must be vented and the heating system topped up if necessary.



# Connections

## Heat meter installation

The heat meter must not be installed until the overall heating system has been flushed. TA-COMFORT heating interface units are supplied with a dummy pipe section for the heat meter, which must be removed before the heat meter can be installed. Due to the universal dummy piece heat meters with 1" thread and 190 mm length, as well as those with 110 mm and 3/4" connection, can be installed.

## Procedure

Close all shut-off valves "A" (on mounting bracket).  
Reduce the system pressure by opening the vent "B".  
Undo the screwed joints on pipe section "C".

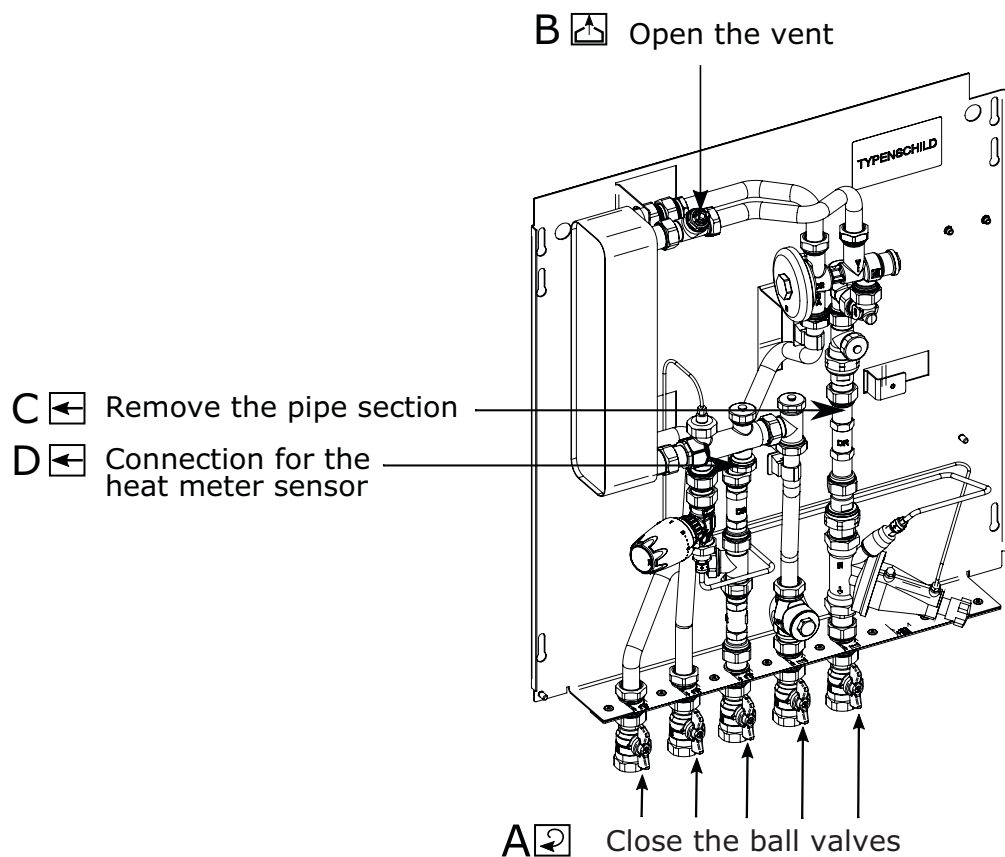
! Water may escape.

Remove the pipe section, position the heat meter and tighten.

! Observe the direction of the flow. (Do not forget the seals.)

Remove the brass plug "D" and screw in and seal the supply sensor for the heat meter.

When finished with the previous step, open the shut-off valves and use the vent to vent the system. Check for leaks.



# Connections

## Cold and hot water meter installation (optional)

TA-COMFORT home units are supplied with two dummy pipe sections for the cold and, if necessary hot water meter, which must be removed before the water meter can be installed.

### Procedure

Close all shut-off valves "A" (optional) in the home unit.

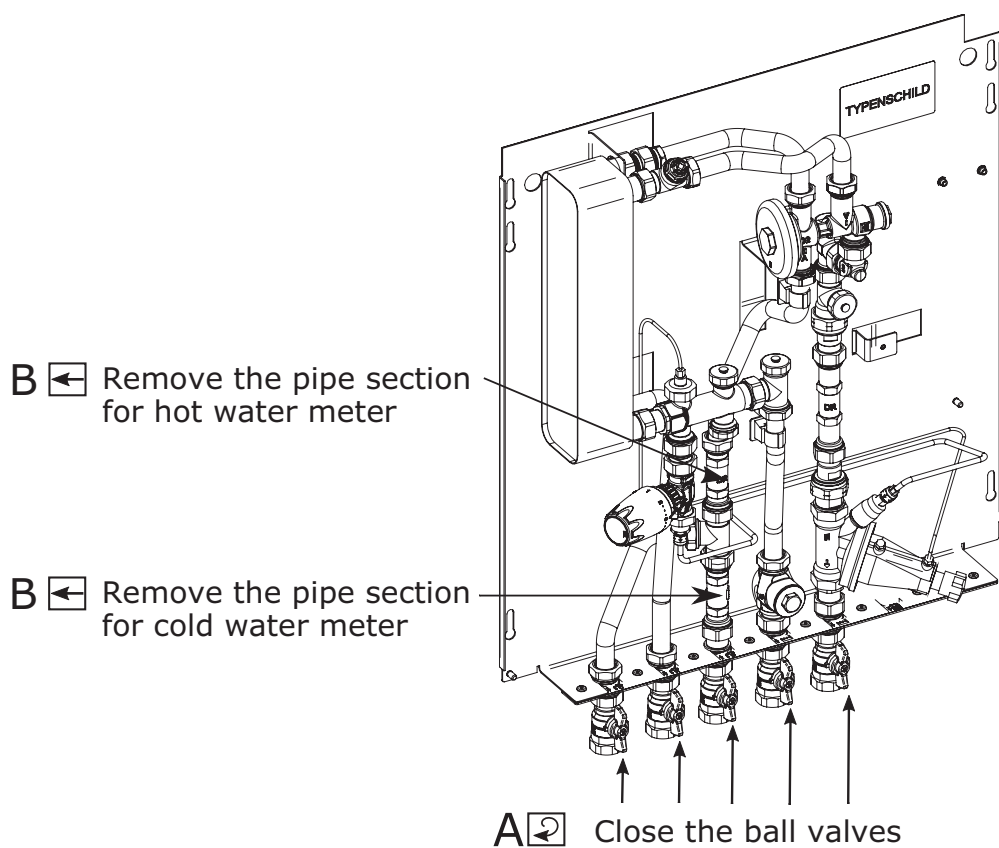
Undo the screwed joints on pipe section "B".

**!** Water may escape.

Remove the pipe section, position the water meter and tighten.

**!** Observe the direction of the flow. (Do not forget the seals.)

When finished with the previous step, open the shut-off valves and check the screwed joints for leaks.



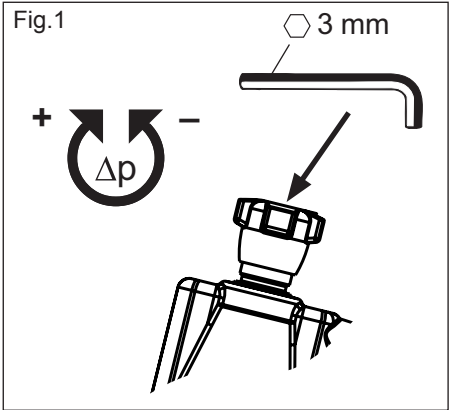
# Equipment and components


## Differential pressure controller – STAP

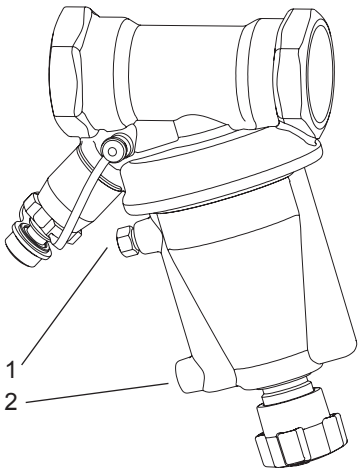
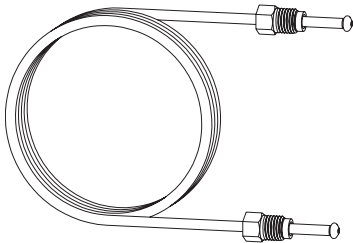
**!** When pressure-testing the system, the maximum static test pressure is 0,6 MPa (6 bar). The valve is preset to 35 kPa differential pressure.

### Balancing procedure

1. Fully open all control valves.
2. Adjust all terminals to give the design flow.
3. Deaerate the system and then deaerate the capillary pipe by opening (1) or (2) (depending on which is uppermost) until only water emerges.
4. Check the differential pressure for the station using a TA-SCOPE measuring instrument attached to the measuring points (see page 17). Use the connections for the supply and return pipe for additional radiator.
5. If the designed differential pressure cannot be achieved, it may be due to:
  - a) Blockages in the system. Find and rectify the fault and measure again.
  - b) The circuit requires higher  $\Delta p_L$  than the delivery setting. Adjust the differential pressure using a 3 mm allen key in the shut-off handwheel (fig. 1). For the variation of differential pressure corresponding to the number turns, see the table below. Measure the flow again, as above, or measure  $\Delta p_L$ . Wait 2 – 3 minutes before reading the value.



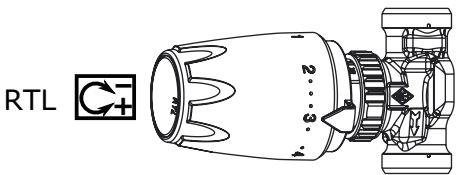
$\Delta p_L$ [kPa]	 [ $\Delta p_{L_{min}}$ ]  DN 20 (10-60 kPa)
5	-
10	5
15	13
20	19
25	23
30	27
35	30
40	33
45	35 *
50	37
55	39
60	41



\*) Delivery setting

## RTL TRV thermostatic circulation bypass

The thermostatic circulation bypass ensures that heated tap water can be provided without any delay. The reserve temperature is infinitely adjustable using the temperature scale of 0 - 50°C.



## Optional components

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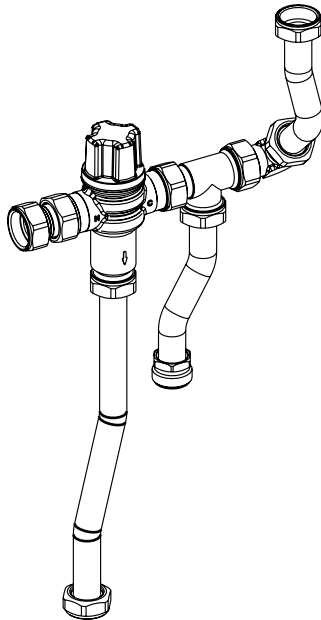
### Thermostatic hot water mixing valve – scald protection (optional)

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The thermostatic mixing valve limits the output temperature and provides protection from scalding in the hot water system.

Adjustment range: 35°C to 60°C

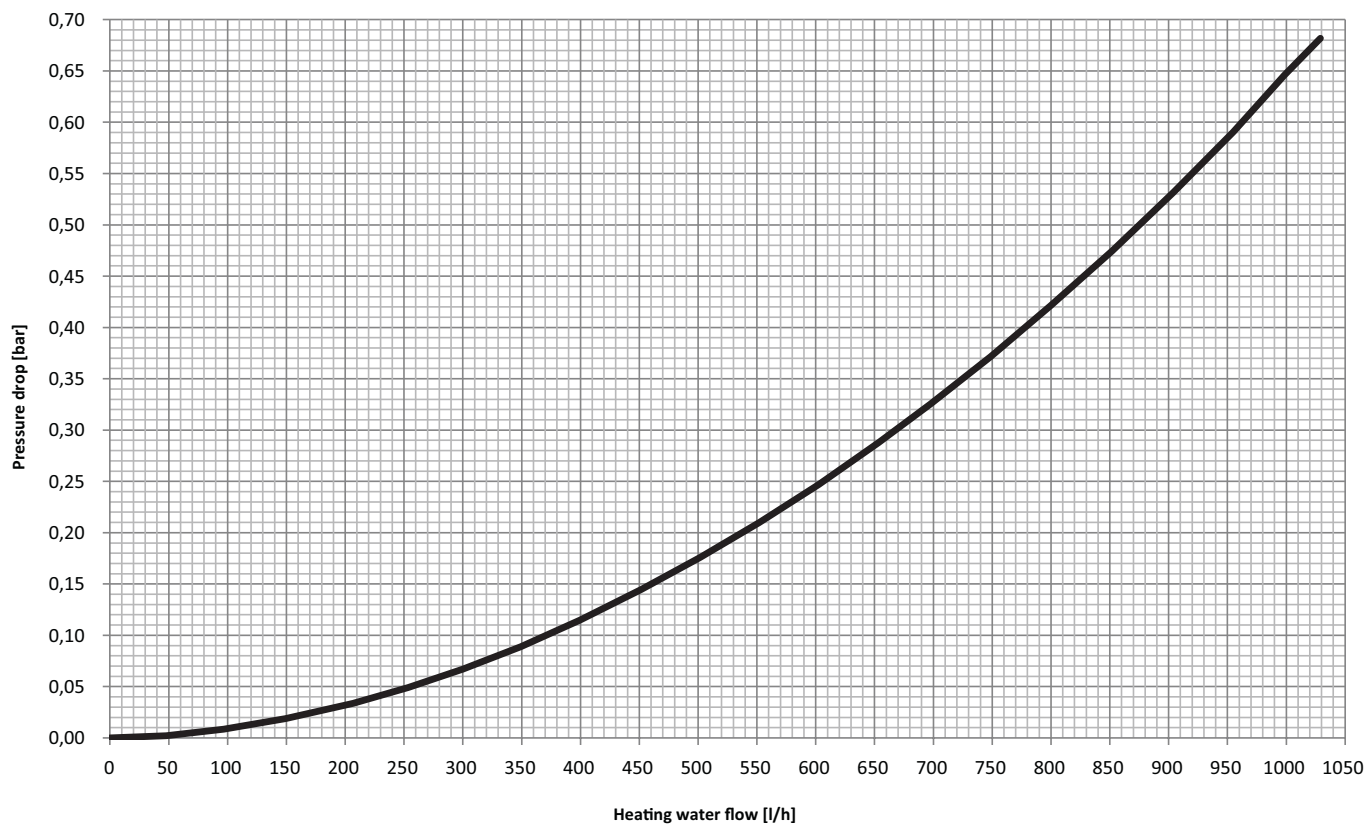
Adjust the value by turning the handwheel.



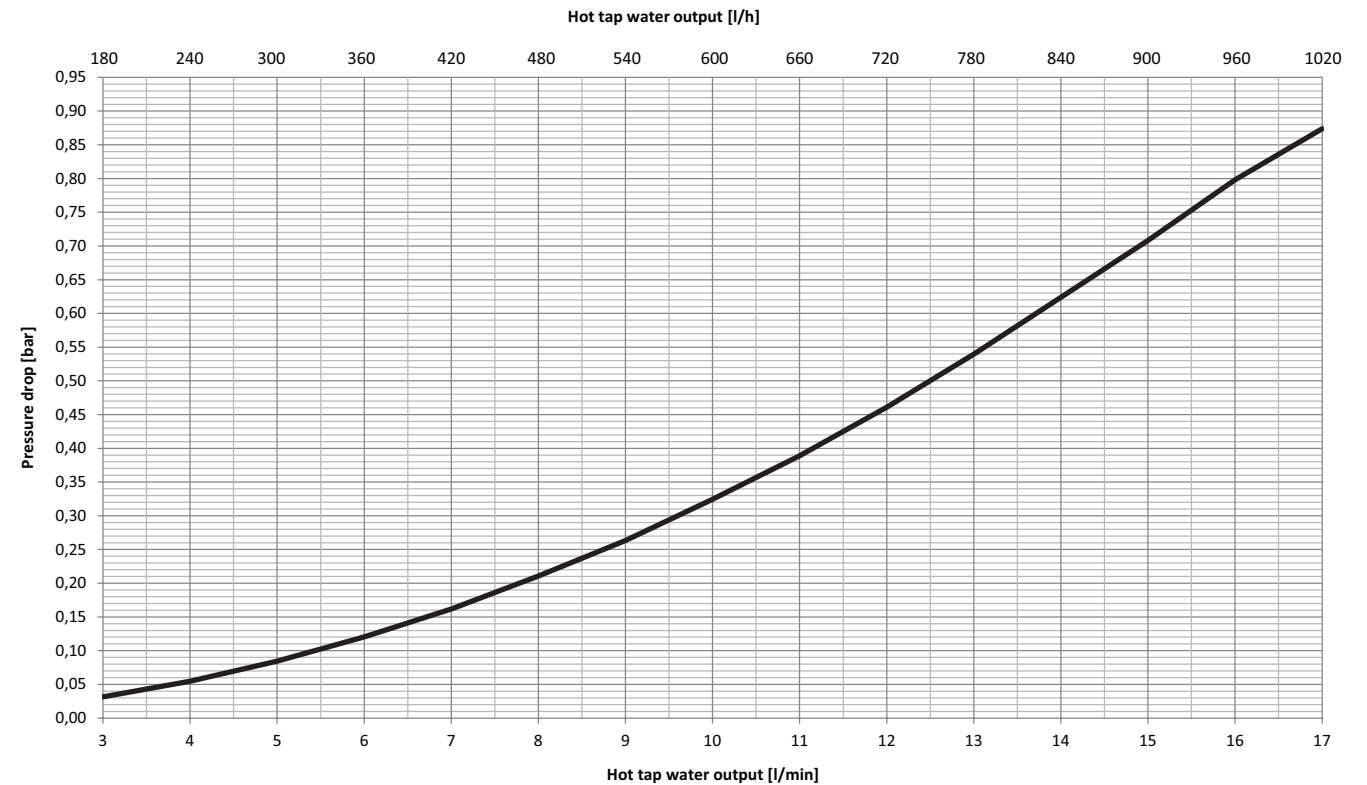
Available differential pressure, pressure drop and temperatures

Must be taken into account when sizing the domestic heating circuits.

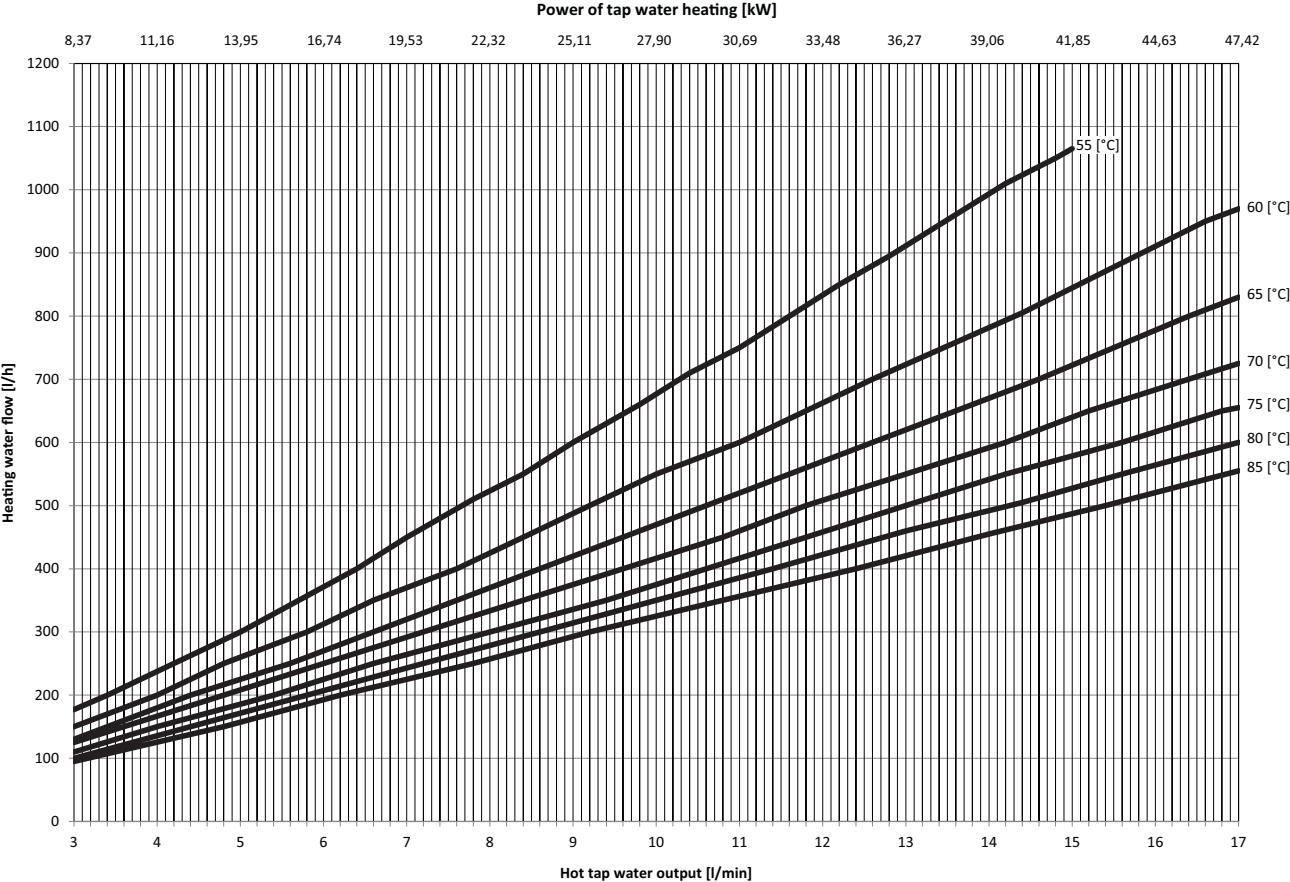
Pressure drop heating side during draw off



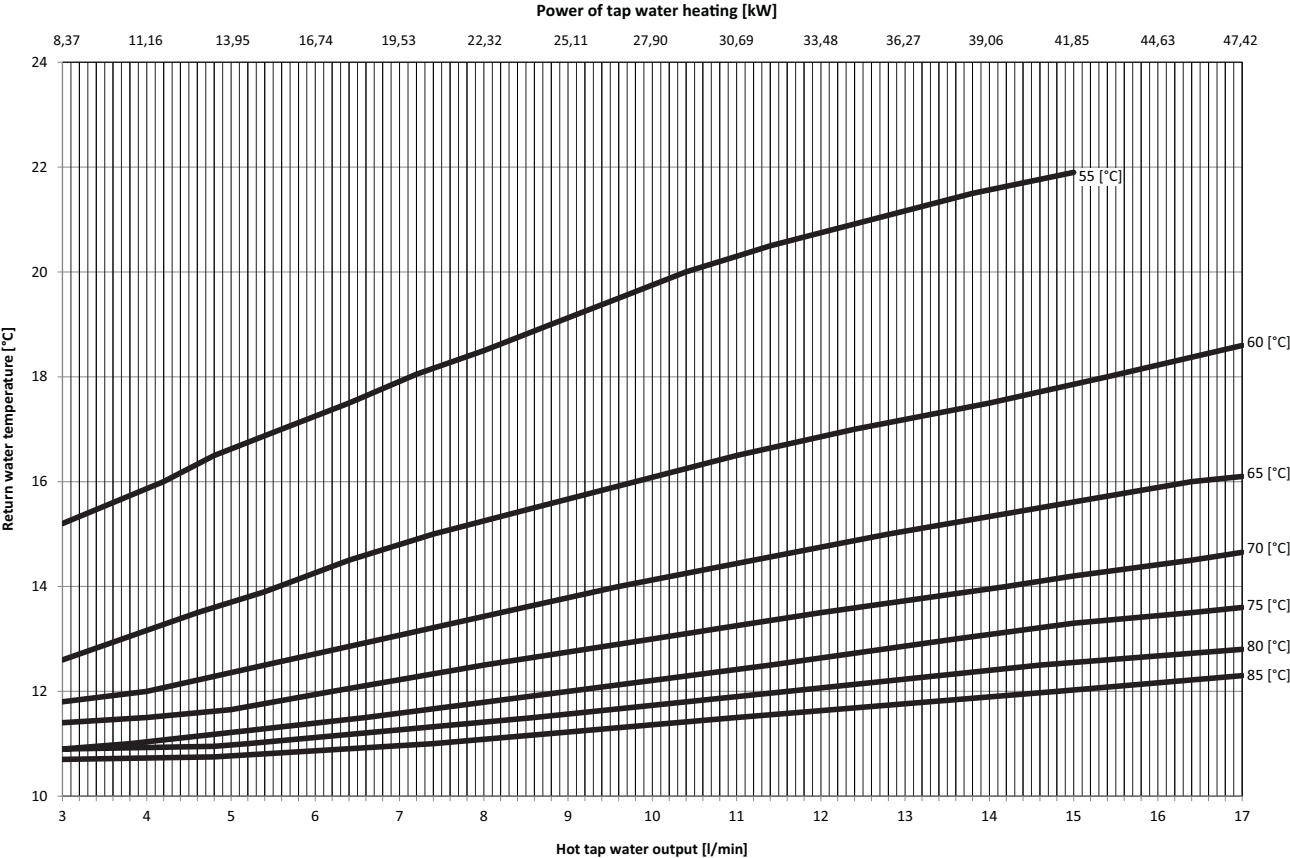
Pressure drop tap water side during draw off



Hot water tapping 10/50 [°C]



Drinking water heating 10/50 [°C]





# Connection of direct heating circuit

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## Additional connection for a direct domestic heating circuit

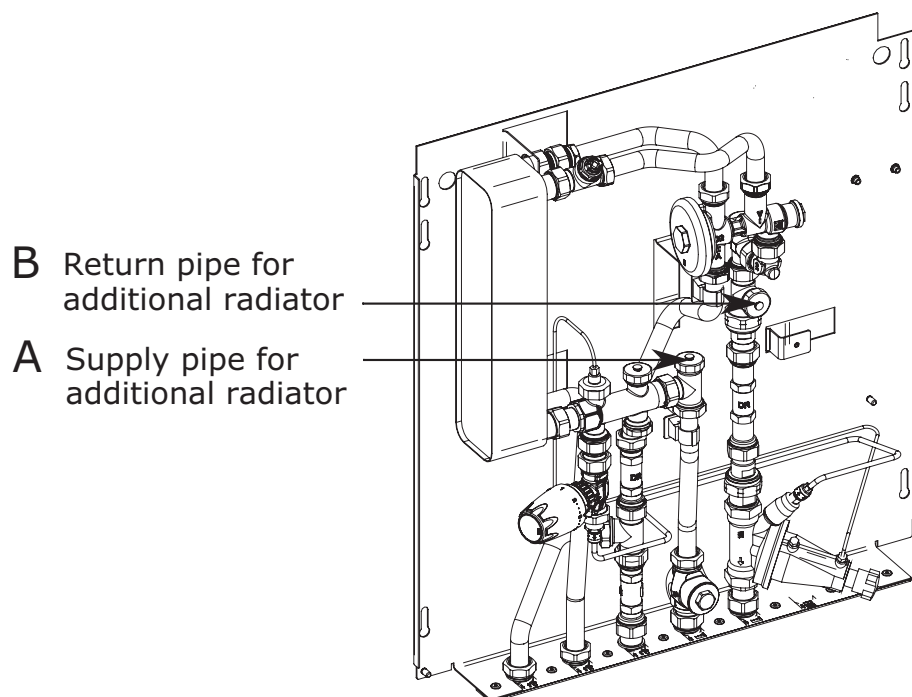
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In the TA-COMFORT-W hot water interface unit a direct heating circuit can be used. The connections to the direct heating circuit are positioned before and after the mixing circuit as seen in the picture.

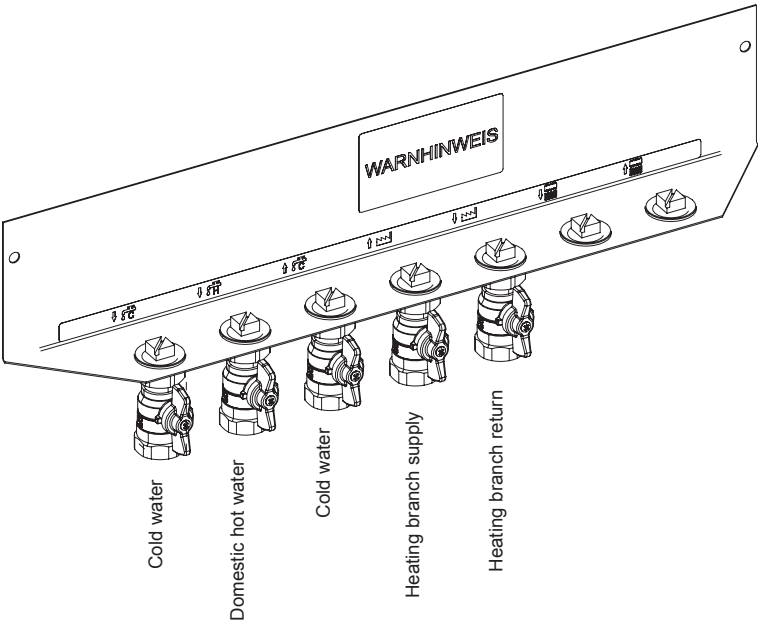
- A) Heating supply to the direct heating circuit
- B) Heating return from the direct heating circuit

For more information, please contact your nearest IMI Hydronic Engineering office.

Please note that the connection for the direct heating circuit has the same differential pressure as the setting of the STAP. If there is any risk of noise with the connected thermostatic valve please use a TA-COMPACT-DP valve in addition.



# Mounting rail TA-COMFORT-W



Dimensions of mounting rail

