

Uponor Combi Port M-Base

EN

Installation and operation manual

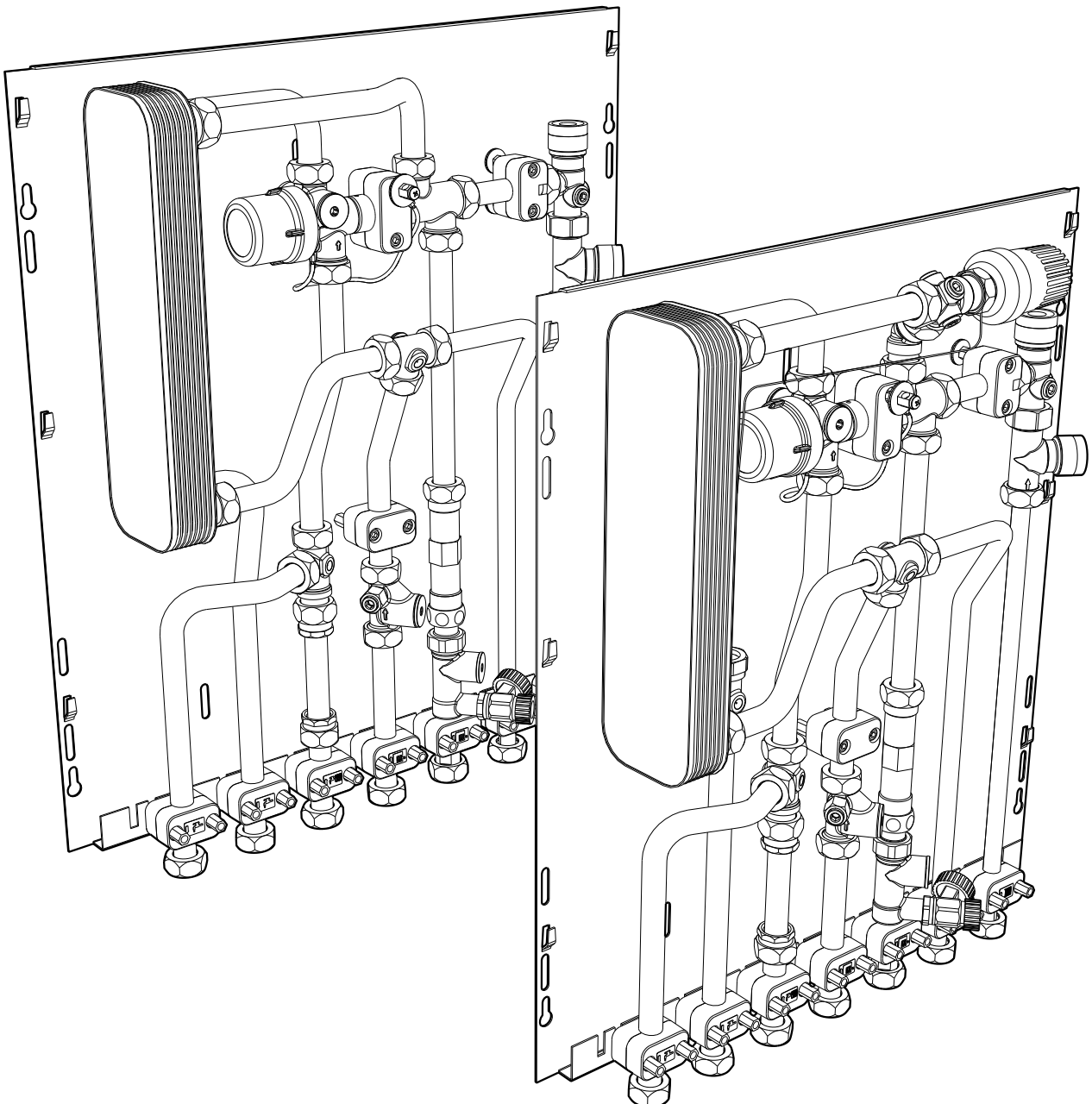


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2 Preface

This installation and operation manual describes how to install and operate the components of the system.





2.1 Safety instructions

Safety messages used in this document


	Warning! Risk of injury and damage. Ignoring warnings can cause personal injury and/or damage to products and other property.
	Caution! Risk of malfunctions. Ignoring cautions can cause the product to not operate as intended.
	Note Important information to the section in the manual.

Uponor uses safety messages in the document to indicate special precautions required for the installation and operation of any Uponor product.


Power

	Warning! Risk of electric shock if touching the components! The unit operates with a 230 V AC voltage.
	Warning! Risk of electrical shock! Electrical installation and service behind secured 230 V AC covers must be done under the supervision of a qualified electrician.
	Warning! Uponor system power supply: 230 V AC, 50 Hz. In case of emergency, immediately disconnect the power.
	Warning! Prior to any work on the controller or the components connected to it, switch off the controller according to the regulations.

Technical constraints

	Caution! To avoid interference, keep data cables away from components bearing power of more than 50 V.
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Safety measures


	Note For safe and proper use, obey the instructions given in this document. Keep them for future reference.
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The installer and operator agree to comply with following measures regarding Uponor products:

- Read and obey the instructions and processes in the document.
- The installation must be performed by a qualified installer in accordance with local regulations.
- Uponor is not liable for modifications not specified in this document.
- Switch off all connected power supplies before starting any wiring work.
- Do not expose the Uponor components to flammable vapours or gases.
- Do not use water to clean electrical Uponor products/ components.

Uponor is not liable for damage caused by ignoring the instructions in this document or the applicable building code.

2.2 Standards and regulations

	Note The installation must be carried out in accordance with current local standards and regulations!
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Planning and designing of the heating system must be performed in accordance with applicable global and country-specific standards and guidelines

- Ensure that no aggressive substances, such as acids, lubricants, bleach, flux, strong liquid cleaning agents, contact sprays or concrete including its components, come into contact with the stainless steel manifold and manifold components.
- A water analysis is recommended for each installation. In the event of warranty claims, it is mandatory. It is essential that the heating circuits are regulated on the water side so that a sufficient hydraulic function of the individual heating circuits or the entire underfloor heating system is guaranteed!

For Combi Ports with an assembled water meter, **planning and implementation of the drinking water system** must be done in accordance with the Infection Protection Ordinance.

A few points to be high-lighted:

- Flush and disinfect the system before commissioning and handing over to the user.
- Provide the domestic hot water pipes with required thermal insulation strength.
- Insulate the drinking cold water pipes to secure that no heating in excess of the requirements takes place.

2.3 Correct disposal of this product (Waste Electrical and Electronic Equipment)

	Note Applicable in the European Union and other European countries with waste separation systems.
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This icon on the product, or in the related documents indicates that it should not be disposed with household waste.

Please, recycle responsibly to support the sustainable use of resources and prevent possible harm to human health and/or the environment.

Household users should contact the retailer where they purchased this product, or their local government office, for details on where and how they can take it for recycling.

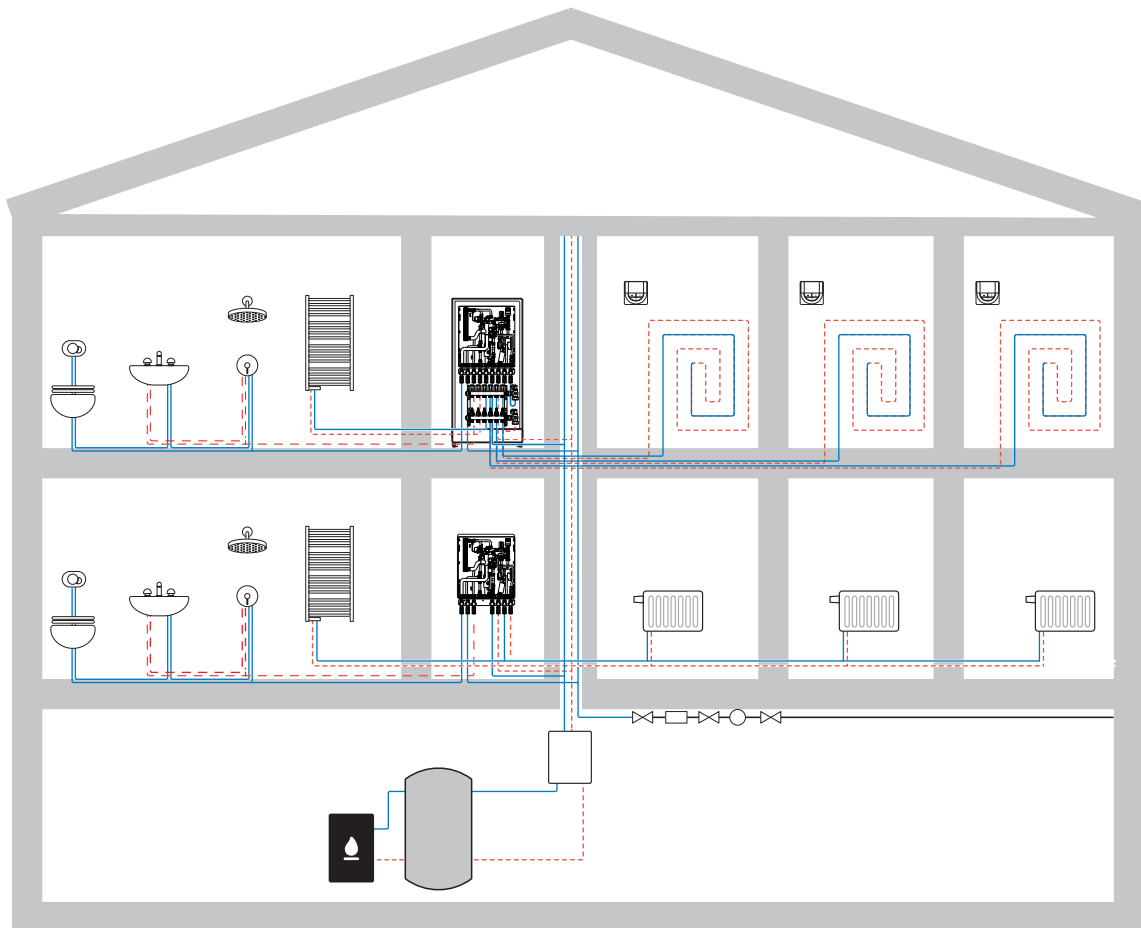
Business users should contact their supplier and check the terms and conditions of the purchase contract. Do not dispose this product with other commercial waste.

3 System description

The Uponor Combi Port M-Base is a prefabricated heating cabinet suited for use in residential buildings due to enormous time and cost savings they enable. The ready-to-install cabinet supplies domestic

hot water and enables control of the domestic heating system and measurement of heating energy and cold water consumption.

3.1 Operating principle



SD0000080

3.2 Functional description

In the Uponor Combi Port M-Base cabinet, the cold water is heated only when required in the flow-through principle via a stainless steel high-performance plate heat exchanger. This always ensures a low return temperatures of the heating water. The energy is supplied by heating water with a flow temperature of at least 55 °C via the heating water flow.

Domestic hot water: The domestic hot water is generated only on demand. A mechanical proportional quantity control valve controls the process. As more hot water is required, as more the valve is opening the flow of the heating water through the heat exchanger. This ensures a constant hot water temperature. If no hot water is needed, the valve stops the supply of heating water through the heat exchanger. The hot water can cool down, which is beneficial for hygiene.

Domestic heating: A hydraulic balancing of the domestic heating circuit for hot water preparation within the heat interface unit can be

carried out with the control valves. The room temperature control is carried out in the underfloor heating system in connection with either Uponor Smatrix or Uponor Base flexiboard.

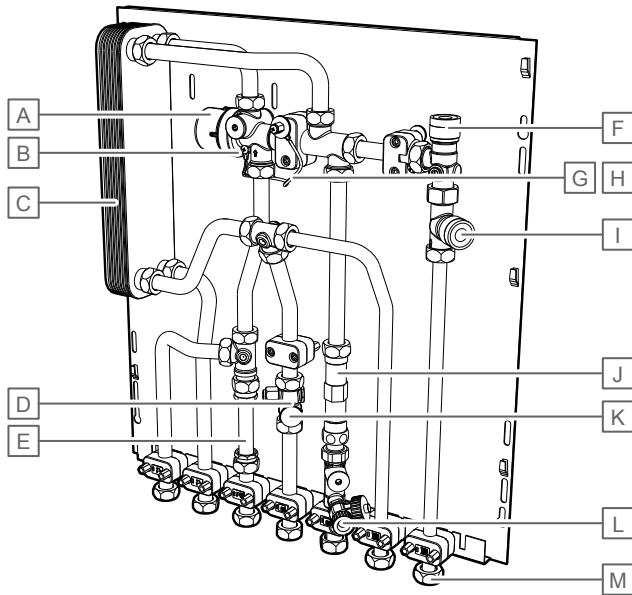
Ready to be installed

When delivered to the construction site, the customer-specified unit is ready for in-wall installation.

3.3 Components

!	Note
	The illustrations that follow show example set-ups for all units. Individual components can vary in appearance.

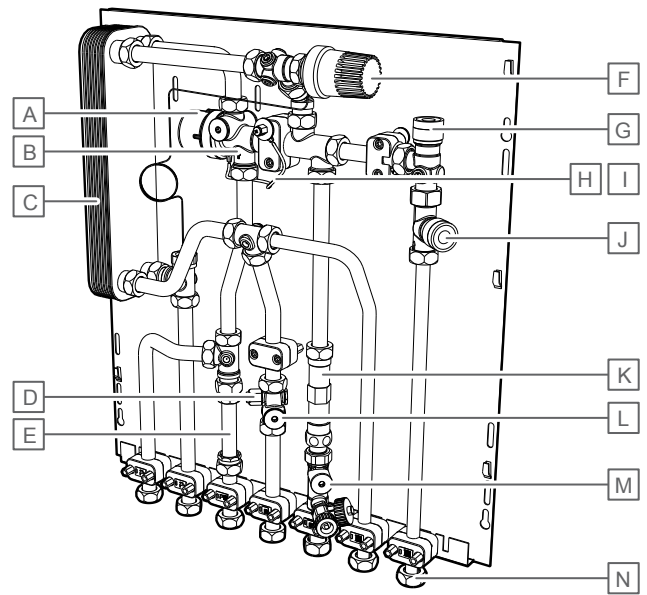
Uponor Combi Port M-Base RC



CD0000311

Item	Description
A	Proportional volume control (PM)
B	Cold water throttle disc
C	Plate heat exchanger
D	Sensor pocket heat meter
E	Cold water meter distance piece
F	Valve (for thermostatic control of secondary heating)
G	Equipotential bonding connection
H	Earthing on site
I	Zone valve for limiting heating flow to the flat
J	Heat meter distance piece
K	Strainer
L	Draining and filling valve
M	Connection, ball valve

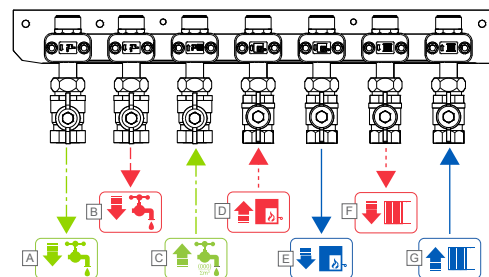
Uponor Combi Port M-Base RC-TL



CD0000312

Item	Description
A	Proportional volume control (PM)
B	Cold water throttle disc
C	Plate heat exchanger
D	Sensor pocket heat meter
E	Cold water meter distance piece
F	Thermostatic hot water temperature limiter (TL)
G	Valve (for thermostatic control of secondary heating)
H	Earthing on site
I	Equipotential bonding connection
J	Zone valve for limiting heating flow to the flat
K	Heat meter distance piece
L	Strainer
M	Draining and filling valve
N	Connection, ball valve

Connection description



Item	Description
A	Cold water to apartment (PWC)
B	Domestic hot water to apartment (PWH)
C	Cold water from riser (CW)
D	Heating supply (primary)
E	Heating return (primary)
F	Heating supply (secondary)
G	Heating return (secondary)

3.4 Optional components

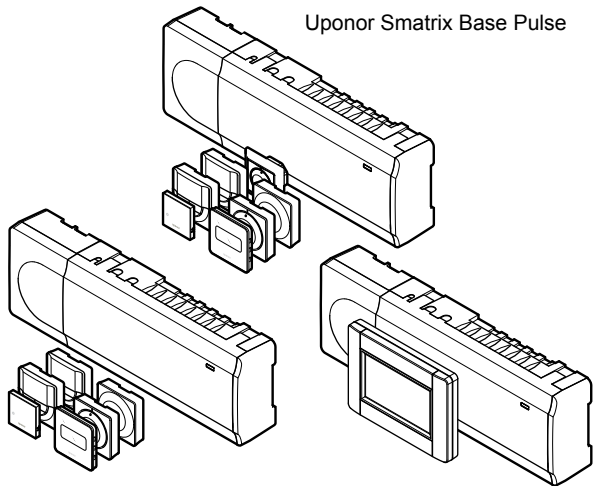
Room temperature control



Note

Thermostats and remote control modules are not part of the Uponor Combi Port delivery. They must be ordered separately.

Uponor Smatrix



Uponor Smatrix Wave Pulse Uponor Smatrix Base PRO

CD0000271

Uponor Smatrix is a fully equipped range of components for room temperature control, optionally via radio or wired. The unique auto-balancing technology eliminates the need for manual balancing of the loops. The smart system accurately determines and controls the exact energy needed for an optimal room temperature. The result is highly comfortable underfloor heating and cooling with reduced energy consumption.

Room control functions

This list shows available functions for the different systems.

Basic functions	Wave Pulse	Base Pulse	Base PRO
Autobalancing	✓	✓	✓
Cooling function	✓	✓	✓
Modularity	✓	✓	✓

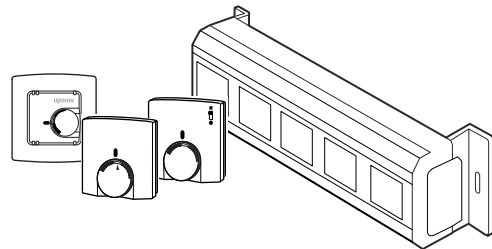
Installation and configuration functions	Wave Pulse	Base Pulse	Base PRO
Installation wizard	✓	✓	
Offline configuration	✓	✓	
Over-the-air updates	✓	✓	
Remote support	✓	✓	

Comfort functions	Wave Pulse	Base Pulse	Base PRO
Mobile app	✓	✓	
Smart notifications	✓	✓	
Trend visualization	✓	✓	✓
Multi home control	✓	✓	
Smart home integration	✓	✓	
Comfort settings	✓	✓	✓
ECO profiles	✓	✓	✓
Electrical underfloor heating control	✓	✓	
Ventilation integration	✓	✓	
Fan coil integration	✓		

Technical functions	Wave Pulse	Base Pulse	Base PRO
Uponor cloud services	✓	✓	
Data storage	✓	✓	✓
Pump management	✓	✓	✓
System diagnostics	✓	✓	✓
Heat pump (HP) integration	✓*)	✓*)	✓
Room bypass	✓	✓	✓
Room check			✓
KNX BMS integration			✓
Modbus RTU BMS integration			✓

*) cloud connectivity with selected HP for dynamic heat curve adjustment

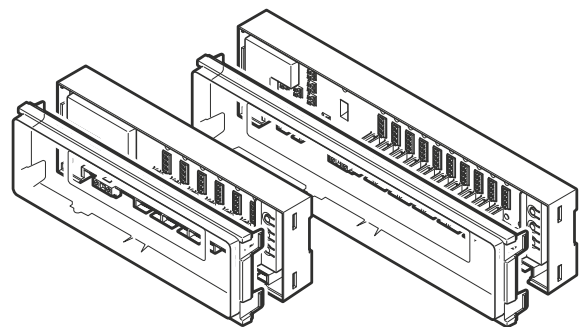
Uponor Base flexiboard



CD0000270

Uponor Base flexiboard is a 230 V control that enables individual room control for 6 or 8 rooms. There are also 2 variants with integrated pump logic available. This switches the circulating pump on or off as required and enables an energy-efficient operation.

Uponor Base X-60 and X-80



CD0000623

Uponor Base X-60 and X-80 are control units with autobalance function for 230 V standard wiring:

- Base X-60 supports up to 6 thermostats and 12 actuators 230 V.
- Base X-80 supports up to 10 thermostats and 12 actuators 230 V (also for cooling applications).

Available functions

This list shows available functions for the different systems.




Basic functions	X-80	X-60
Autobalancing	✓	✓
Time limit by-pass with autobalance	✓	✓
Heating/cooling switch	✓	
Input: condensation	✓	
Input: day/night switch	✓	✓
Technical functions	X-80	X-60
Pump relay	✓	✓
Boiler relay	✓	
Four wires thermostat connection	✓	✓
Works with three wires thermostat	✓	

3.5 Spare parts

For spare parts to the Uponor Combi Port units, see separate price list.

4 Prepare for installation

4.1 General information

	Warning! The fittings are under pressure. Escaping pressurised media can cause serious injury such as scalding or eye damage. Depressurise the system before performing any installation work. For retrofits to an existing system: Drain the system or close the supply lines of the section and depressurise it.
	Warning! Risk of injury due to the heavy weight of the unit: Do not perform the installation alone. Always wear safety shoes during the assembly. The unit can be of considerable weight, depending on the configuration. If the station falls over, this could lead to injuries, particularly to the feet.
	Caution! Leaks in the unit may occur during transport or installation. Check the nuts to ensure that they are properly tightened before the connection to avoid property damages.

Before installing the heat interface unit ensure that:

- the primary pipes are laid in the building site.
- the primary pipe installation is flushed and checked for leaks.
- the power and ground cables are routed to the installation site.
- the unit can be installed in a dry and frost-free room with an ambient temperature lower than +40 °C.
- the unit can be installed upright (not inclined, upside down or lying down).
- the unit is always easy to access even after the assembly.

4.2 Water analysis

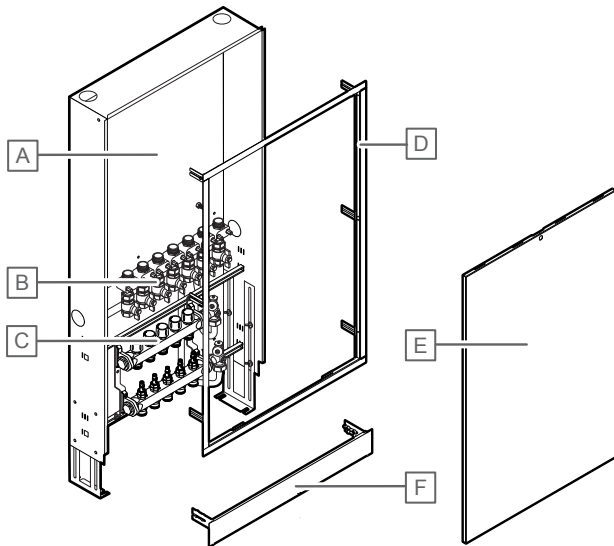
A water analysis of the tap water must be checked before using the device. The limit values can be found in our technical information. The heating water quality must be in accordance to VDI 2035. In case of warranty claims, the report must be presented.

5 Mechanical installation

5.1 In-wall installation

Cabinet components

Note
See the chapter "Dimensional drawings" for measurements.



Item	Description
A	Cabinet body
B	Connection rail
C	Manifolds
D	Frame
E	Door
F	Screed baffle plate

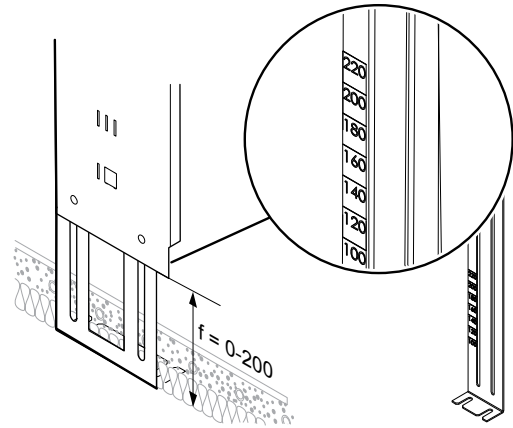
Preparation

1. Dismount the frame and door.
2. Store the frame and door for later mounting.

Adjust the in-wall cabinet

The in-wall cabinets are adjustable inside the recess in height and depth.

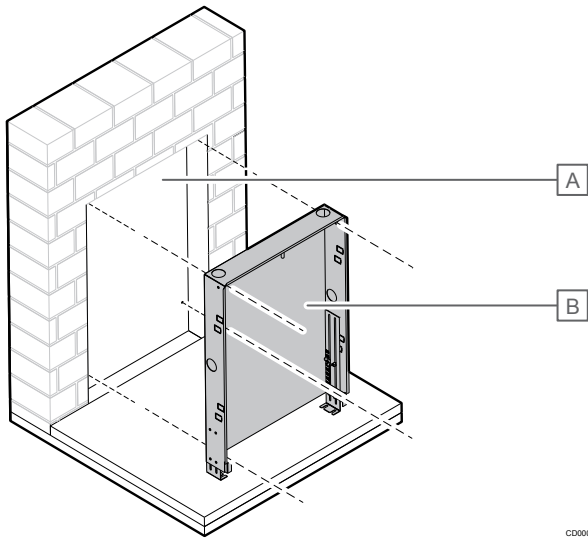
The recess height is calculated using the floor height and is measured from the bare floor. The specified floor installation height has to be set according to the values visible on the feet.



Dimensions of in-wall mounted cabinet (width x height x depth mm)	Recess dimensions in-wall (width x height x depth mm)
750 x 1264 x 110	770 x (1264 + 30 + f) x 115

Install the in-wall cabinet

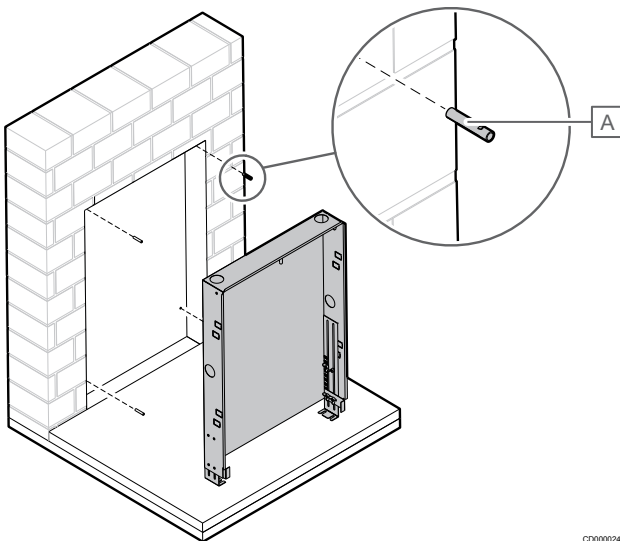
- Note**
The illustrations are simplified. Not all components are shown in every illustration.
- Note**
See the chapter "Dimensional drawings" for measurements.
- Note**
For free-standing installations: Refer to the illustration in chapter "Adjust the in-wall cabinet" and adjust the feet as necessary. Pay attention to the horizontal alignment.



CD0000241

Item	Description
A	Wall recess
B	In-wall mounted cabinet

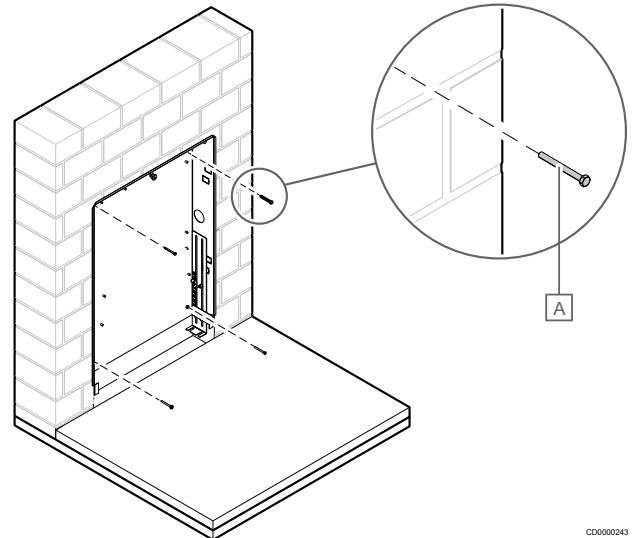
1. Mark the hole positions in the wall recess using the in-wall cabinet holes as a pattern.
2. Drill holes suitable for the wall plugs.



CD0000242

Item	Description
A	Wall plug (4 pcs)

3. Mount the included wall plugs in the drilled holes and place the cabinet body in the wall recess.

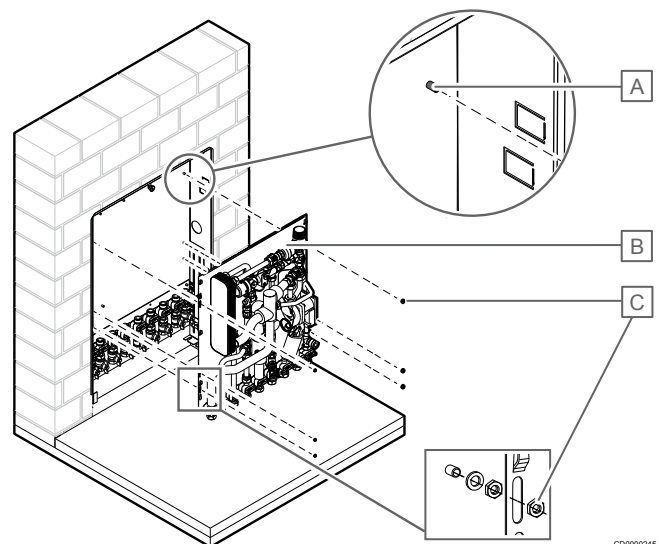


CD0000243

Item	Description
A	Hexagon screws (4 pcs)

4. Secure the cabinet body in the wall recess with the included hexagon screws.

Install the heat interface unit



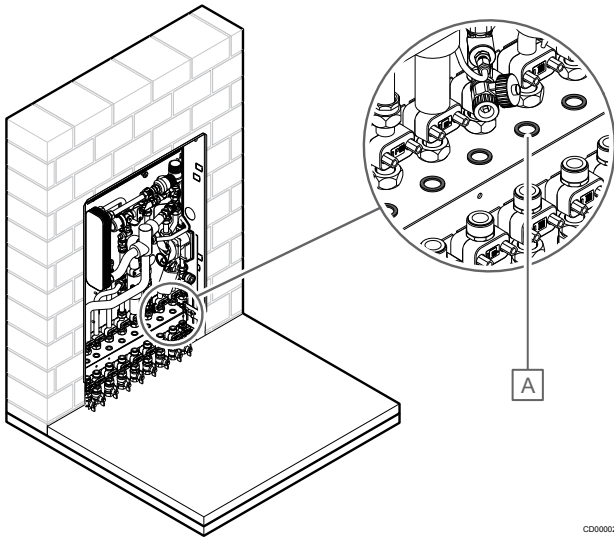
CD0000245

Item	Description
A	Fixed bolts
B	Heat interface unit
C	Hexagon nut (6 pcs)

1. Install the heat interface unit on the fixed bolts in the cabinet with the 6 included nuts.
2. Tighten the hexagon nuts.

Note
Check the flat gasket/-s for damage.

3. Place a flat gasket on each of the connection rail 3/4" screw connections.

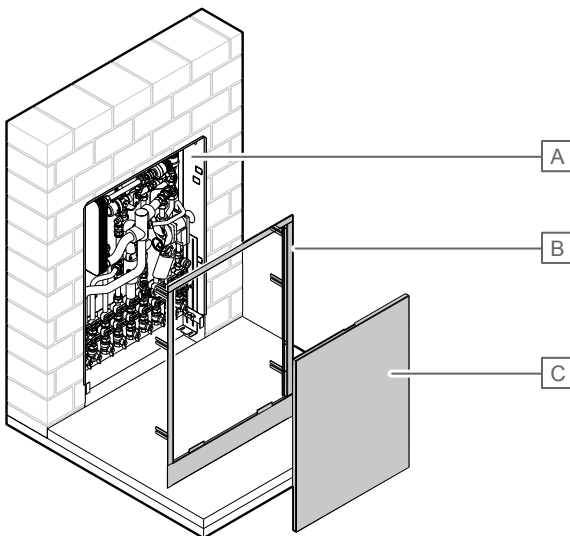


CD0000246

Item	Description
A	Flat gasket

4. Tighten the 3/4" swivel nuts.

Install the frame and door to the cabinet

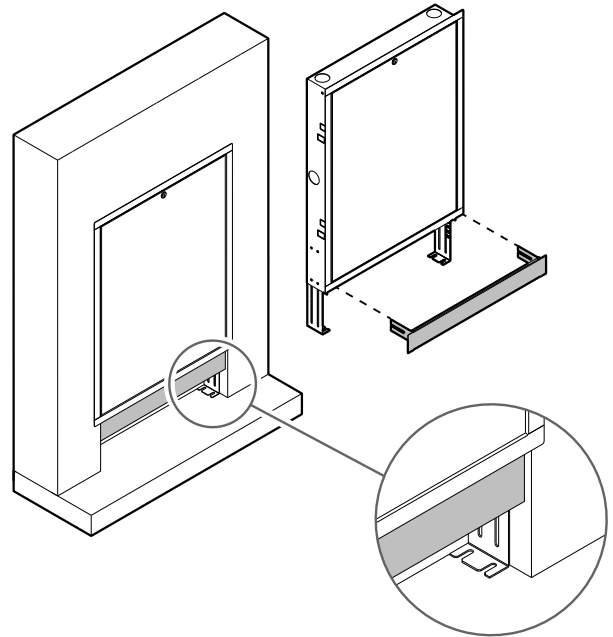


CD0000247

Item	Description
A	In-wall cabinet
B	Frame
C	Door

1. Attach the frame to the cabinet body using wing nuts.
2. Mount the door in the frame by fitting the two frame brackets into the recesses in the door.

Install the supporting plate

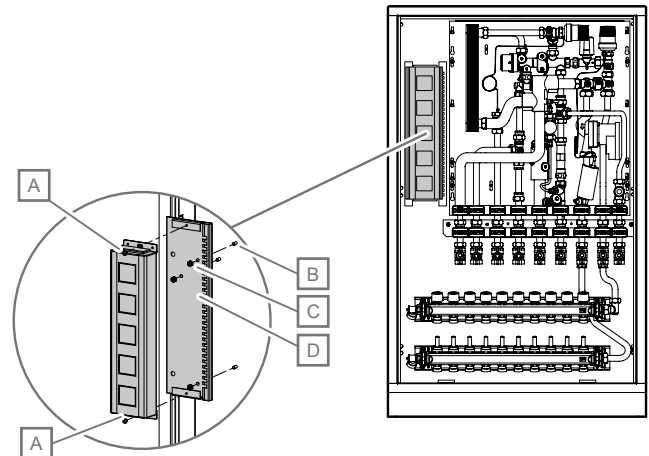


CD0000284

The supporting plate is mounted from the front and can later be covered with plasterboard.

5.2 Install optional components

Uponor Base flexiboard

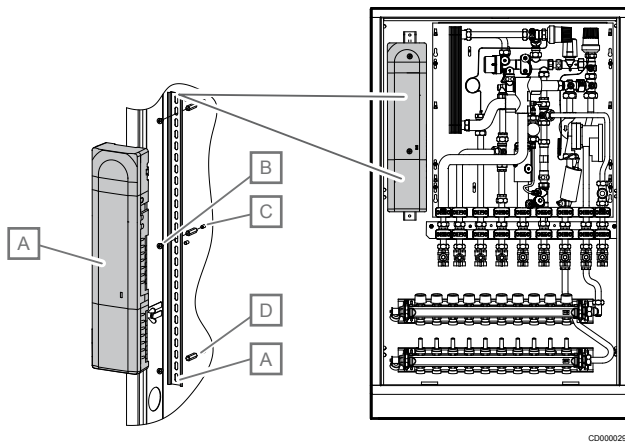


CD0000297

Item	Description
A	Uponor Base flexiboard
B	Bolt in wall cover
C	Nut
D	Mounting plate

1. Attach the mounting plate to the bolts.
2. Screw the nuts onto the bolts.
3. Attach the Uponor Base flexiboard room controller onto the mounting plate with the screws provided.

Uponor Smatrix



Item	Description
A	Uponor Smatrix
B	Bolts
C	Bolts
D	Distance nut

1. Fasten the distance nuts on the bolts.
2. Fasten the DIN rail with the bolts on the distance nuts.
3. Attach the Uponor Smatrix room controller to the DIN rail.

Additional information



Note

Visit the Uponor download centre for more information regarding the installation and configuration of Uponor Smatrix and Uponor Base flexiboard.





Uponor Smatrix
Uponor Base Flexiboard



www.uponor.com/services/download-centre

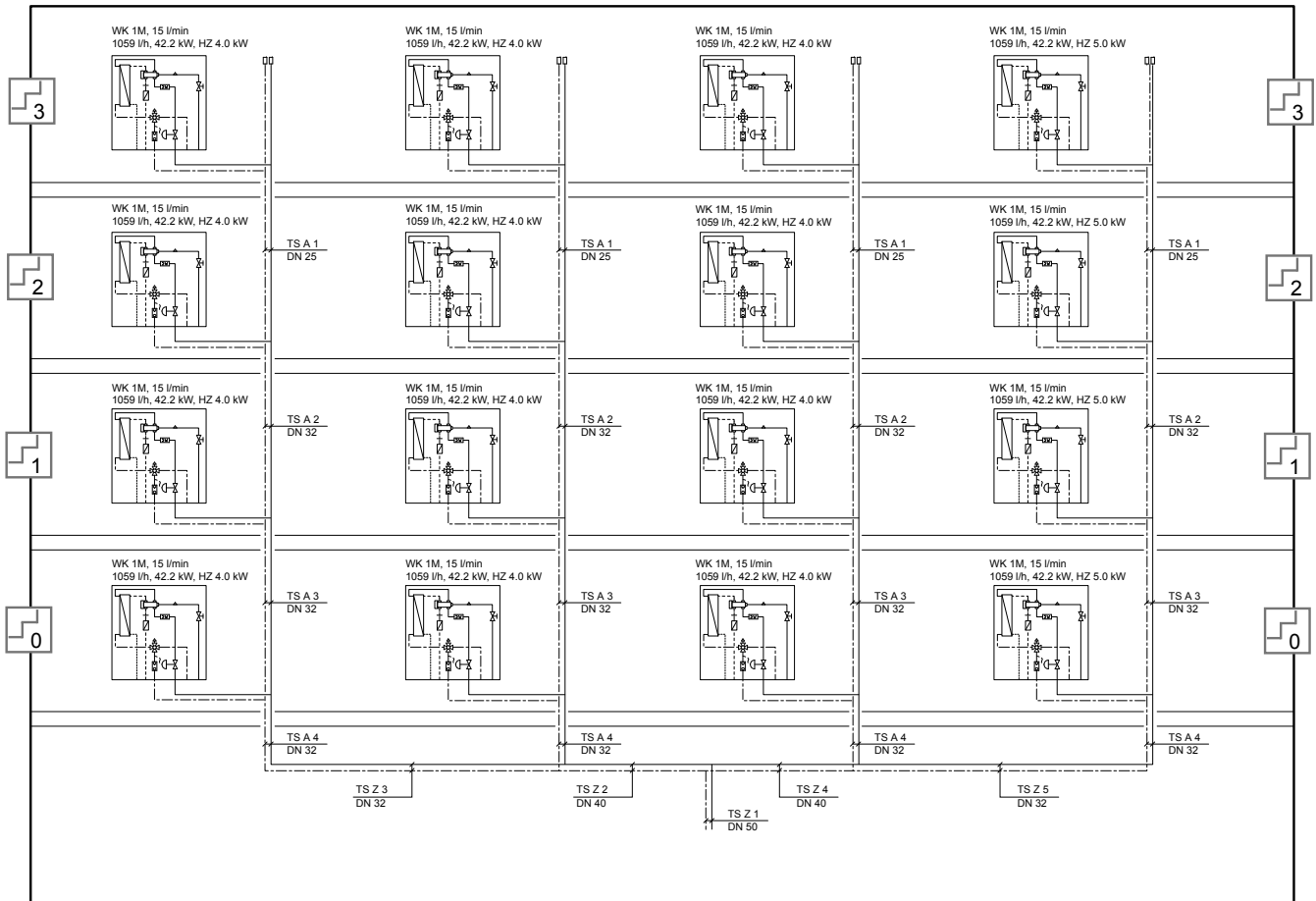
6 Finishing installation

	Warning! Leaks can cause personal injury and property damage.
	Note Install the pipes in accordance with the planning documentation.

To ensure proper functionality for the heating system, do not reduce the specified cable cross-sections. Replace the heat meter distance piece with the heat meter.



If a plastic distance piece is not to be replaced with an optional component, replace it with a stainless steel **1.4401** pipe. Contact manufacturer for more information.

- Connect the hydraulics correctly.
- When connecting the pipes, use the supplied gaskets.
- Connect the heating supply, heating return and the hot and cold water.
- Install a filling and draining valve on site at a suitable central point to fill the central heating system.
- See the hydraulic scheme as an installation guide example.



CD0000264

6.1 Visual inspection

	Caution! Incorrect finishing of the installation can lead to property damage.
	Note If an installation error is found during visual inspection, temporarily stop and correct the error.

Follow these steps to finish the installation:

1. Examine the complete installation:
 - 1.1. Make sure that the hydraulics are connected correctly.

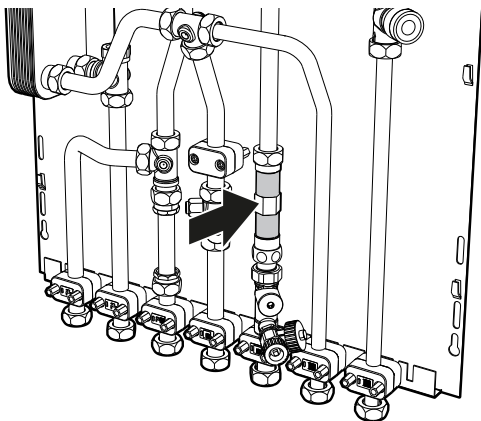
- 1.2. Make sure that any dirt accumulated during installation and/or dust on the unit has been removed. Examine the strainers and, if necessary, flush/clean them.
- 1.3. Examine the tightness of all gaskets on pipe and device connections and tighten them if necessary. When tightening connections, always lock the opposite side.
- 1.4. Optional: Make sure that all electrical connections are correct, including the polarity of the mains connection. Make sure that the system is correctly earthed.
2. Make sure that the installation is filled and flushed.

7 Operation

7.1 Heat meter distance piece

!	<p>Note</p> <p>The heat meter to be installed must have these specifications:</p> <ul style="list-style-type: none"> • Qn = 1,5 m³/h with fast scanning frequency 1,5 - 2 seconds • Construction length of 110 mm • ¾" external threaded connection
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!	<p>Note</p> <p>The heat meter distance piece is not suitable for continuous operation.</p>
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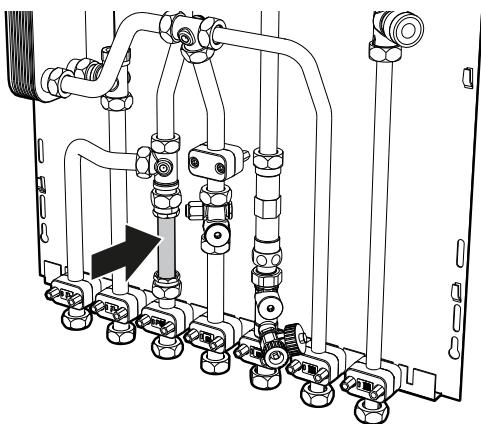


CD0000313

The heat meter distance piece is intended to be replaced with a heat meter to record energy consumption. A M10 x 1 mm sensor pocket is available for the flow sensor.

7.2 Cold water meter distance piece

!	<p>Note</p> <p>Operating pressure: PN 10</p>
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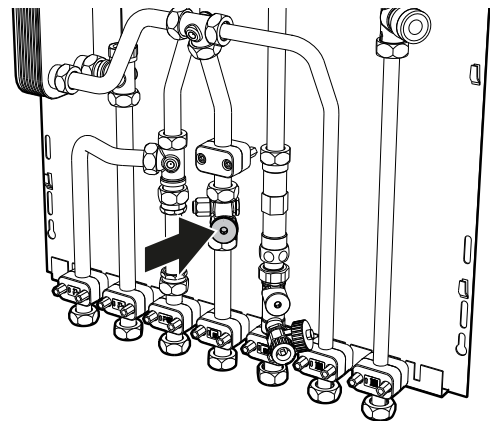
CD0000314

The cold water meter distance piece (**110 mm x ¾"**) is intended to be replaced with a water meter that measures the units overall cold water consumption. The inlet supplies cold water to the residence and water for the heating circuit.

7.3 Strainer

!	<p>Caution!</p> <p>Shut off the ball valves for cold water from riser, heating supply (primary) and heating return (primary) and relieve the pressure in the unit before any work with the strainer.</p>
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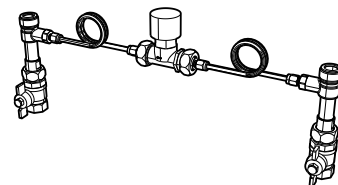
!	<p>Note</p> <p>To open the strainer, use an internal hexagon (6 mm).</p>
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CD0000315

The strainer collects dirt and its filter can be removed for inspection and cleaning.

7.4 Thermostatic lead module (BP) (optional)



CD0000316

The thermostatic temperature lead module (BP) serves the heat retention function of the supply line. It is used on the last unit on a line or at greater distances from the main line and prevents the risers from cooling down when not dispensing.

The valve is adjustable and the setting range is printed on the cap. The temperature is measured by a sensor inside the valve.

!	<p>Note</p> <p>The valve flow can also change by connecting to the capillary pipe \varnothing 6 mm.</p>
---	---

!	<p>Note</p> <p>A too high temperature setting can cause the heating water return temperature to rise.</p>
---	--

!	<p>Note</p> <p>A too low temperature setting can lead to longer waiting times when preparing domestic hot water.</p>
---	---

1. Set the BP line temperature to approximately **15 K** below the network supply temperature.

General information	Value
Kvs value	1.55
Max. heating operating pressure	10 bar (PN 10)
Hysteresis	+/- 2-3 K
Kvs value	5
Threaded connection	2 x 3/4" FT - conic with cone transitions

7.5 Thermostatic hot water temperature limiter (TL)

The domestic hot water temperature is limited through a thermostatically controlled hot water limiter.

Scale	1	2	3	4	5	6	7	8
WW temp. (35-70 °C)	35	40	50	55	60	65	65	70

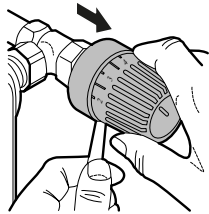
Changing default settings



Caution!

Make sure not to bend or break the capillary line.

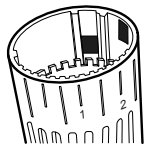
1. Remove the thermostatic head from the valve



SI0000286

- 1.1. Using a welding wire, slide out the locking tabs next to the adjustment number, on the left and right, in the direction of the swivel nut.
- 1.2. If the valve tip is limited in an upward direction (valve can be closed), only one locking tab needs be to removed. Using a welding wire, slide out the locking tabs next to the adjustment number, on the left and right, in the direction of the swivel nut.
- 1.3. Remove the top part of the thermostatic head and lift out the internal anchor using a strong round object.

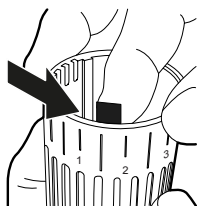
2. Adjust the handwheel



SI0000287

- 2.1. Line up the white marking on the toothed sleeve with the white alignment mark underneath the lettering.
- 2.2. Gently turn the handwheel to desired setting.

3. Block the setting



SI0000288

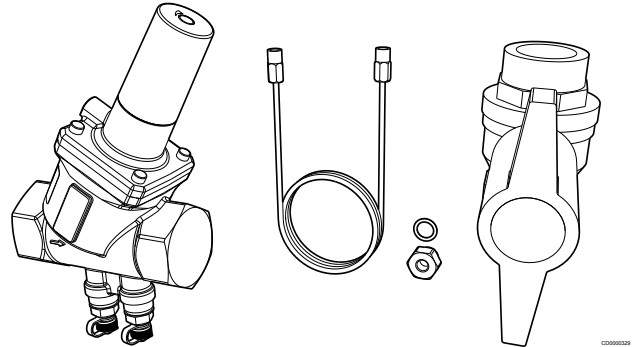
- 3.1. Insert the clips behind the number set on the handwheel.

- 3.2. Reinstall the handwheel to the set value so that it is blocked with the new setting.

4. Install the thermostatic head

- 4.1. Screw the valve tip on to the valve and the standard setting is changed.

7.6 Differential pressure regulator (optional)



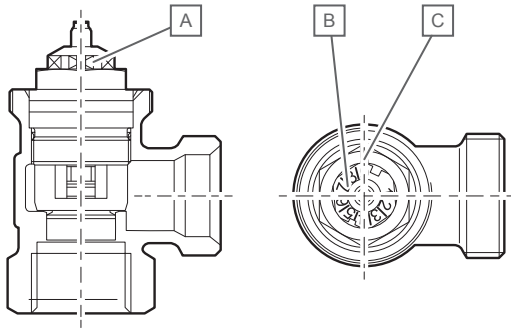
The differential pressure regulator **DN32** is optional for assembly in the line and protects other control valves, such as the proportional volume control from the excessive differential pressure that otherwise could cause the fitting to overflow.

Description	Value
Kvs value	6.8
Setting range	50-300 mbar (default 300 mbar)
Max. volume flow	3000 kg/h at 300 mbar. Heat resistant up to 80 °C with insulating shells
Ball valve	DN32 MT with pulse power connection, SFE tap and measuring connection (without insulating shells)
Pulse lead	length 1 m with screw connections

7.7 Zone valve (AV 9)

Note
It is possible to change the valve setting during operation without leakage.

Note
The required setting value must correspond to the marking. The default setting between 1-9 can be selected. The factory default setting is 7.

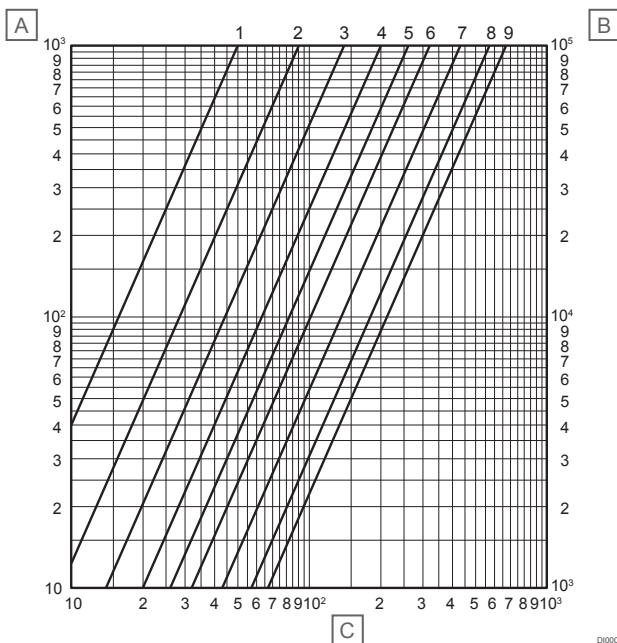


CD0000254

Item	Description
A	Hexagonal 13 mm
B	Setting value
C	Mark

The mass flux in the secondary heating circuit can be regulated with the zone valve. The housing of this valve has a threaded connection (30 x 1,5) for a 2-point actuator.

Change setting value



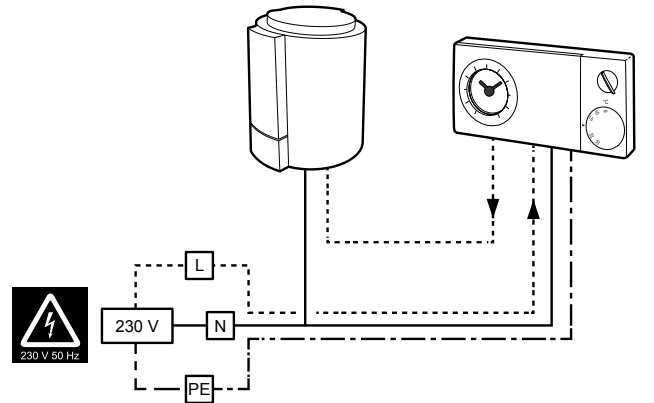
D10000125

Item	Description
A	Pressure drop Δp [mbar]
B	Pressure drop Δp [Pascal]
C	Mass flux [kg/h]

Pre-setting	1	2	3	4	5	6	7	8	9
Kv value / 2 K P deviation	0,05	0,09	0,14	0,20	0,26	0,32	0,43	0,57	0,67

Adjust the value setting with a hexagonal (SW 13 mm) open-ended spanner or with a special key.

Actuator on the zone valve



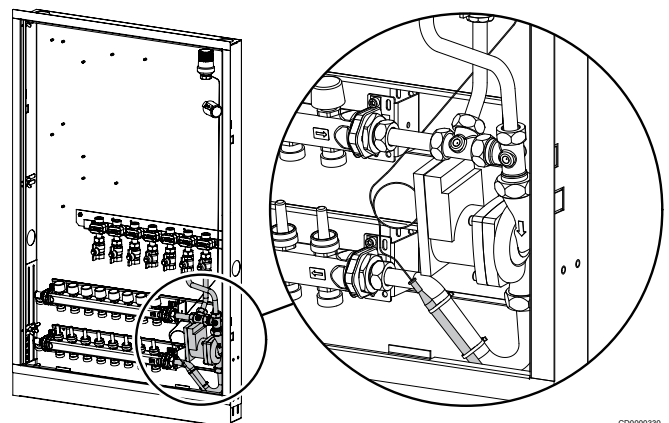
CD0000260

The thermal actuator is installed on the zone valve and is controlled by a room thermostat. All users can set the required room temperature here including night-time reduction.

The unit is EnEV compliant in this combination.

Description	Value
Operating voltage	230 V AC, 50/60 Hz
Operating line	1 W
Line	2 x 0,75 mm ² (1x Blue / 1x Brown)

7.8 Thermostatic regulated mixed circuit



CD0000330

The pre-installed mixed injection circuit is regulated by a thermostatic hot water temperature limiter (TL). Mount the sensor on the supply pipe as shown in the illustration.

Scale value	1	2	3	4	5	6	7
Flow temp. 20-50 °C	20	25	30	35	40	45	50

7.9 Heating pump settings



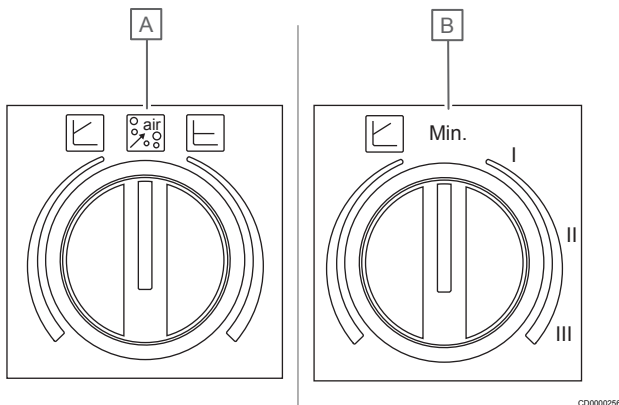
Note

Read the pump manufacturer's documentation.



Note

In the event of a power outage, all settings and displays are retained.

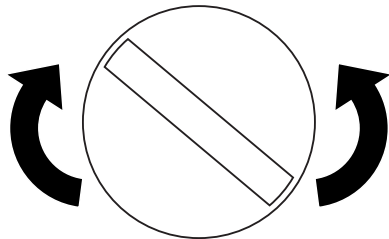


CD0000256

Item	Description
A	RKA = Pump with operating button for $\Delta p-v$, $\Delta p-c$
B	RKC = Pump with operating button for $\Delta p-v$, constant speed I, II, III

The delivered heating circulation pump can either switch between constant or variable curves, or be set to operate with a constant speed.

Change the settings



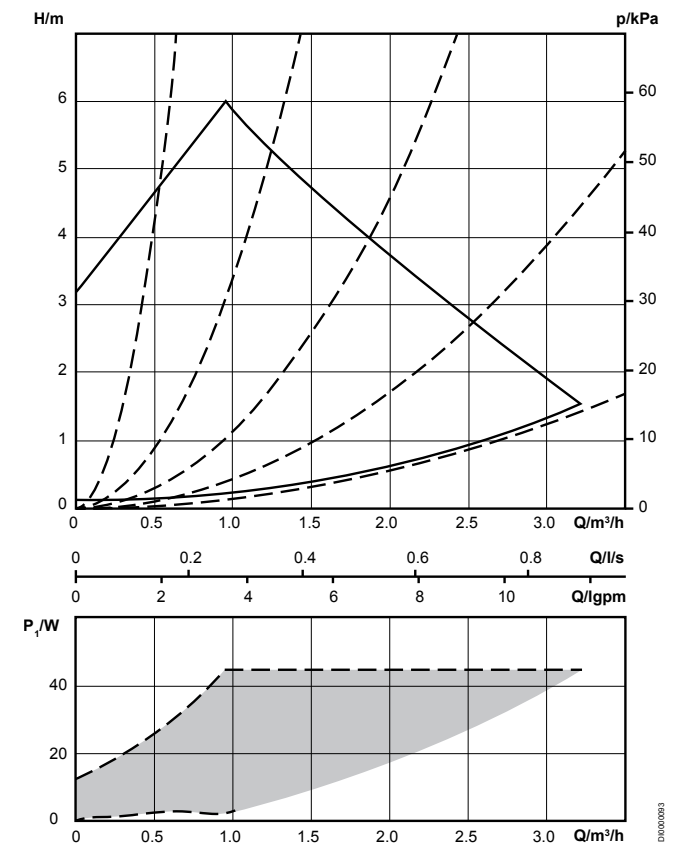
CD0000257

Turn the operating dial to the desired symbol.

- Variable differential pressure ($\Delta p-v$):
The variable mode ($\Delta p-v$) is positioned to the left of the centre position.
- Constant differential pressure ($\Delta p-c$):
The constant mode ($\Delta p-c$) is positioned to the right of the centre position.
Constant speed I, II, III:
The constant speed mode is positioned to the right of the centre position.

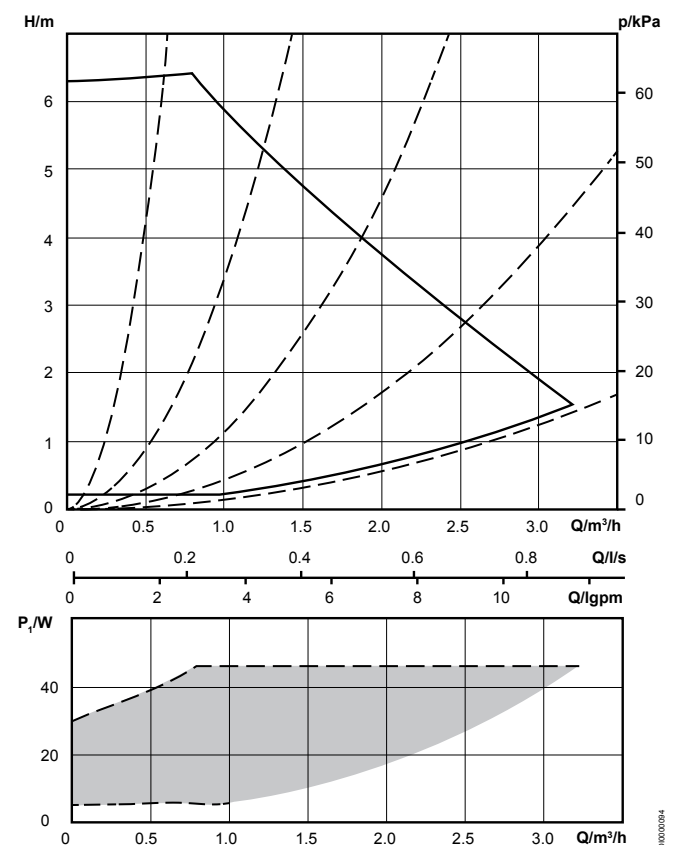
Pump values

Variable differential pressure curve $\Delta p-v$



00000003

Constant differential pressure curve $\Delta p-c$



00000004

7.10 Cold water throttle disc

Note

The installed cold water throttle disc can be replaced if required. The colour indicates the maximum volume flow (see table below).

The cold water throttle disc is in the connection between the cold water connection of the proportional volume control and the strainer.

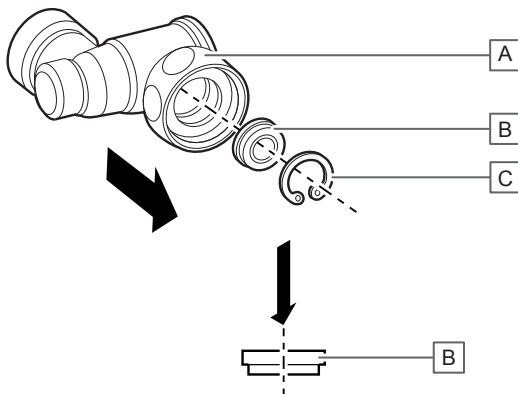
The throttle disc limits the amount of cold water to the heat exchanger and prevents the hot water supply from exceeding the calculated volume.

Cold water throttle disc colour	l/min
Black	6
White	8
Orange	9
Blue	10
Red	12
Green	15
Brown	17
Black	19
Purple	22

Replacing the throttle disc

Note

Observe the flow direction when replacing the throttle disc!



CD0000258

Item	Description
A	Strainer
B	Cold water throttle disc
C	Retaining ring

1. Disassemble the strainer.
2. Disassemble the retaining ring. Use special pliers for this.
3. Replace the throttle disc.
4. Install the retaining ring.
5. Install the strainer.

7.11 Hydraulic balancing on the manifold



Warning!

The pressure in the valves can cause personal injury.

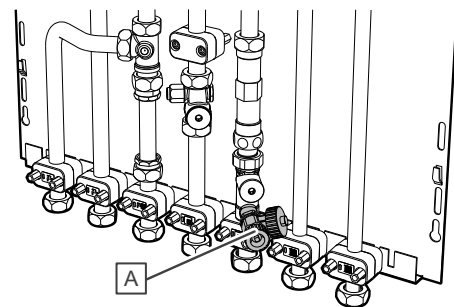
Room heating circuit data
 Ruimte- en verwarmingsgroepgegevens
 Données des pièces - circuits de chauffage
 Dati circuito riscaldamento locale

Room No. Stue No. N° de pièce Room, locale	Heating circuit No. Verwarminggroep n° N° au circuit de chauffage risaldamento locale	Quantity of water Waterhoeveelheid Quantité d'eau Quantità d'acqua	Valve adjustment Ventielinstelling Déplacement de la valve Struttura della valvola
1	1	2	0,5
1	2	5	3
2	3	2	1
3	4	4	4
4	5	1,5	2

S10000745

1. Unlock the flowmeter. Pull the outer ring approximately 6 mm up.
2. Set the flowmeter to the system flow rate (l/min). Set each heating loop obeying the system calculation.
3. Mark the setting with the memory ring.
4. Lock the flowmeter. Push the outer ring down.

7.12 Filling and flushing



CD0000769

The filling and draining valve (A) of the heat interface unit is used to fill and flush the system.

Filling and flushing the system






Caution!


Refer to VDI 2035 or local standards for information about the necessary water quality.

1. Open the draining valve (A).
2. Fill and flush the system with heating water.

7.13 Tightness testing

	Warning! Leaks can cause personal injury and property damage.
	Caution! Pressure leaks can occur even at normal operating pressure and must be repaired immediately.
	Caution! For the tightness test of both, heating installation and domestic water installation, refer to local standards and regulations.

7.14 Finishing the installation and hand over

	Caution! Incorrect finishing of the installation can lead to property damage.
---	---

Follow these steps and finish the installation:

1. Check the settings.
2. Complete the acceptance/ finishing protocol and record any adjusted settings in the "Setting log" (chapter 8).
3. Hand over the documentation and the protocol to the homeowner.

8 Maintenance

8.1 General information

Important information


Read and obey these instructions to ensure the safe and correct operation. This increases the reliability and lifespan of the system.

Function and energy savings

The heat interface unit is a compact station that can operate in a system with several units or as a supplement to an existing heating system. The unit can supply, control and measure domestic cold water (PWC), domestic hot water (PWH) and radiant heating.

Hot water is only prepared when needed and not stored. This allows to dispense large amounts of hot water in a most convenient and hygienic way. Restrictions are only imposed by the central heating.

Water heating

	Caution! All water pipes are filled and pressurised.
---	--

The cold water supply for the apartment is provided via the central house connection and distribution line.

The heat interface unit is equipped with a central shut-off ball valve for cold water (C).

All ball valves should be exercised (open-close) at regular intervals (about once per month).

The ball valves (A) and (B) should only be closed for assembly/disassembly reasons.

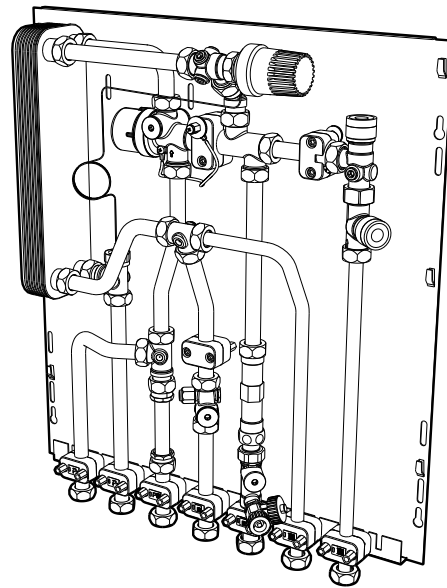
Water hygiene

The unit uses the flow principle, which is the most hygienic method of water heating. Still, the water pipes should always be flushed if they have not been used for a longer period.

The tapping duration should then be around 1-2 minutes. The water must be allowed to run at least every 7 days for about 1-2 minutes (refer to local standards).

8.2 Turning off the heat interface unit

Ball valves C, D and E must be closed in the event of malfunctions. A visual inspection is required every 3 to 6 months.



CD0000331

Item	Description
A	Cold water to apartment (PWC)
B	Domestic hot water to apartment (PWH)
C	Cold water from riser (CW)
D	Heating supply (primary)
E	Heating return (primary)
F	Heating supply (secondary)
G	Heating return (secondary)

If the system is to be shut down for a longer period:

1. Shut off the cold water ball valve (C). Do not close ball valves D, E, F, G.
2. Protect the heating unit against frost.
3. After restart, let the hot water run for about 5 minutes (refer to local standards).

8.3 Setting log heat interface units

Date:	Setting log heat interface units													
Site:	Type:							Serial no:						
Component	Description											Setting range	Factory setting	Set on site
Zone valve	Setting value	1	2	3	4	5	6	7	8	9	1-9	7		
	Kv value / 2 K P deviation	0.05	0.09	0.14	0.20	0.26	0.32	0.49	0.57	0.67	continuous			
TL	The thermostatic hot water temperature limiter, infinitely adjustable downwards											35-70 °C	6	
	Scale value 35-70 °C	1	2	3	4	5	6	7	8	(limited to 60 °C)				
	Hot water temperature	35 °C	40 °C	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C					
	Safety temperature monitor											55 °C		
Component	Description											Type		
Cold water throttle disc	Colour	Green					Black							
	Max. flow l/min	15					19							
Exchanger	Type	GKE 228H-24 CU					GKE 228H-40 CU							
		DW GVH 228H-24 VA					DW GVH 228H-40 VA							
Heat meter distance piece	Heat meter line Qn 1.5 installation length, 110 mm x ¾"													

Other components/devices

Component	Description	Type	Not used
Installer, signature:	Installer, in capital letters:	Service partner:	

9 Troubleshooting

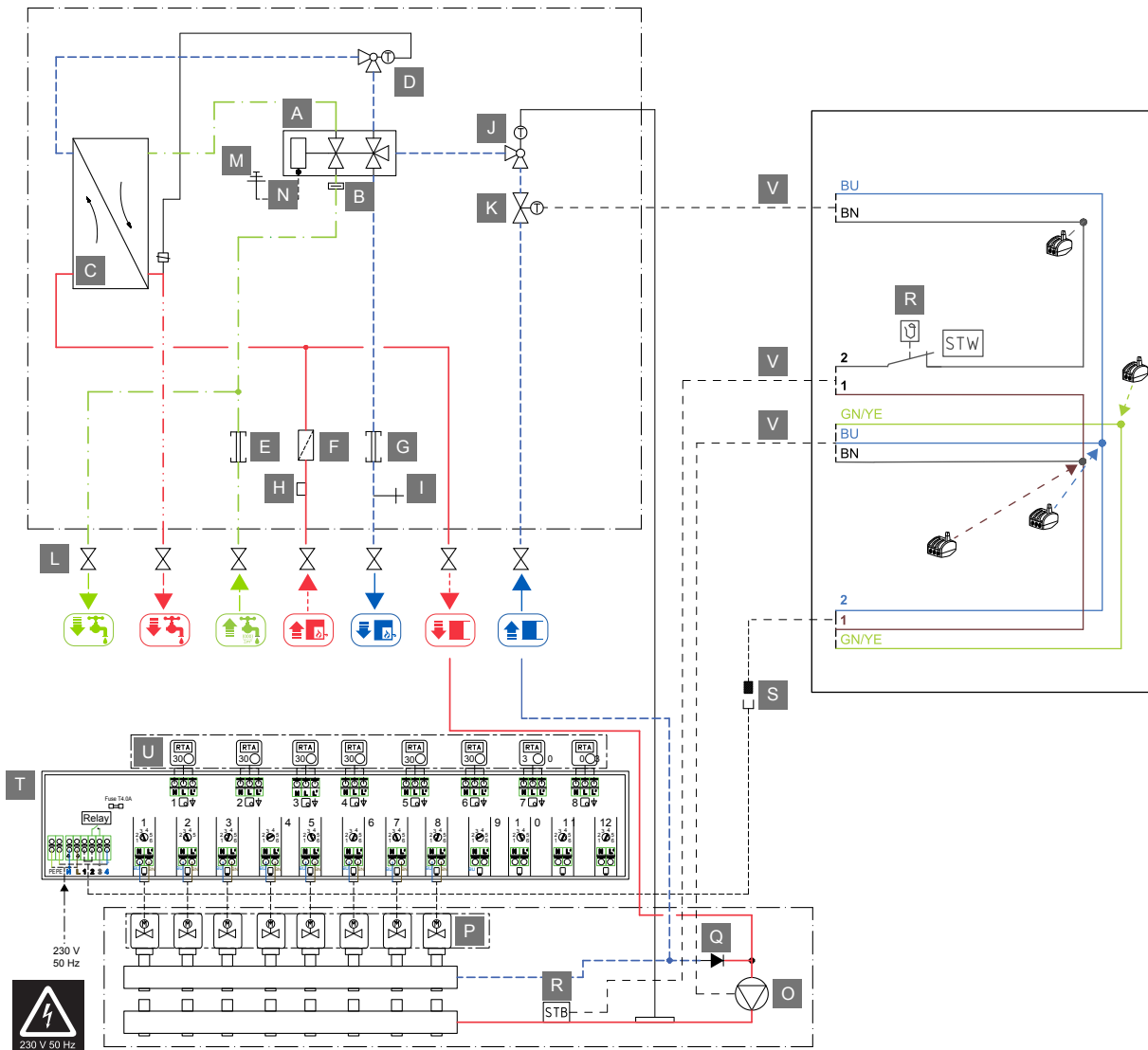
9.1 Fault description

Fault description	Cause	Solution
Hot water function		
Hot water temperature too low or fluctuating	Central heating	
	Buffer temperature too low	Buffer temperature must be 10 K above hot water setpoint
	Heating circuit pump type not supported	The following pump type is supported: Wilo Stratos
	Setting for heating circuit pump is not correct	Heating circuit pump setting: Constant pressure
	Pump performance too low	Check the pump performance
	Mixing valve faulty	Check the mixing valve function
	Setting for heating circuit control is not correct	Check the heating circuit control setting
	Heating circuit control faulty	Check the heating control function
	Air trapped in buffer storage	Vent buffer storage tank
	Cold water pressure too low / too high	Cold water pressure at unit: Min. 2 bar, Max. 4 bar
	Combination heat interface unit	
	Strainer in primary flow dirty	Clean the strainer in the primary flow
	Insufficient differential pressure	Clean the capillary of the differential pressure control, check the differential pressure control is working
	Air in the system	Vent the system while dispensing
	Insufficient heating volume flow passes through the heat exchanger	Check the volume flow during maximum dispensing using heat meters:
		Uponor Combi Port M-Base - 24 approximately 815 l/h Uponor Combi Port M-Base - 40 approximately 987 l/h
Heat meter type not supported	Use heat meter type with Qn 1.5	
Insufficient heating volume flow	Increase differential pressure	
Heat exchanger dirty	Clean the heat exchanger	
Thermostatic hot water temperature limiter setting is not correct:	Check the thermostatic hot water temperature limiter if it is working and correctly set	
Proportional volume control does not switch over	Replace the proportional volume control	
Waiting time for hot water is too long	Check the pump setting in the central heating system	Pump setting: Constant pressure
	The temperature setting on the thermostatic lead module (BP) is too low	Increase the temperature setting on the thermostatic lead module (BP) or in the line
	The capillary on the thermostatic lead module (BP) is dirty	Clean the capillary on the thermostatic lead module (BP) or in the line
	No thermostatic lead module (BP) available	Retrofit the thermostatic lead module (BP) or line
Noise generation		
Noise generated in the station	Pipe clamps too tight	Loosen the pipe clamps
	Cold water throttle disc is dirty	Clean the cold water throttle disc
Noise generated in the PM valve	Noise generated via a third route	Replace the inductor disc, spring and locking ring using are placement kit for PM valves, 3rd route
Heating function		
Heating system does not heat up	General	
	Supply temperature too low at the heat source	Check the supply temperature at the heat source
	Volumetric flow rate is too low	Check the fittings in the device
	Check the heat meter type	The heat meter type must be Qn 1.5
	Check the pump setting in the central heating system	Pump setting: Constant pressure
	Air trapped in buffer storage	Vent the buffer storage tank
Insufficient differential pressure	Clean the capillary of the differential pressure control, check the differential pressure control is working	

Fault description	Cause	Solution
	Air in the system	Vent the system
	Radiator supply	
	Zone valve flow too low / too high	Check the Kv value on the zone valve
	Setting for room temperature controller is not correct	Check the setting for the room temperature controller
	Strainer is dirty	Clean the strainer
	Room temperature controller wiring is not correct	Check the wiring for the room temperature controller
	Actuator not connected to the zone valve	Actuator closed without current on the zone valve connect this electrically
	Radiator thermostatic valves or return screw connections closed	Check the thermostatic valves and return screw connections
No hot water and no heating	No heating/no hot water	
	Ball valves/locking devices closed	Open locking devices
	Central heating circuit pump not working	Check that the central heating circuit pump is working and correctly set
	Central strainer is dirty	Clean the central strainer
	Heating system is not working correctly	Check the heating system
	Buffer storage tank is not filled	Check the buffer storage tank filling

10 Technical data

10.1 Wiring diagram



WD0000076

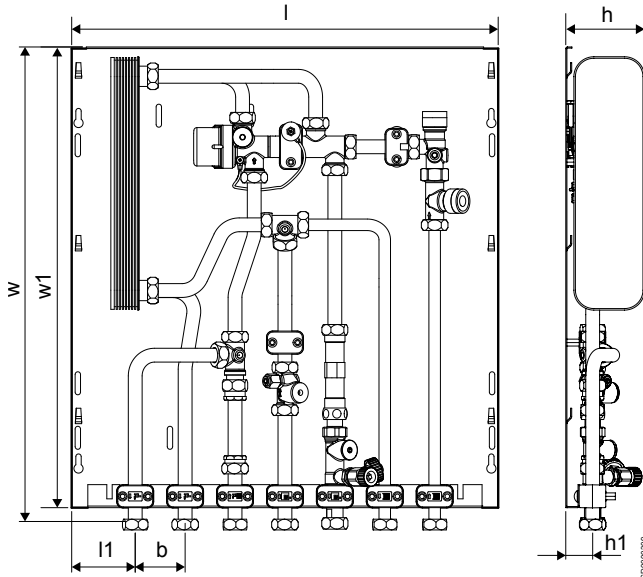
Item	Description
A	Proportional volume control (PM)
B	Cold water throttle disc
C	Plate heat exchanger
D	Thermostatic hot water temperature limiter (TL)
E	Cold water meter distance piece
F	Strainer
G	Heat meter distance piece
H	Sensor pocket heat meter
J	Valve
K	Zone valve for limiting heating flow to the flat
L	Ball valve

Item	Description
M	Earthing on site
N	Equipotential bonding connection
O	Pump
P	Zone valve for limiting heating flow to the flat
Q	Backflow preventer
R	Safety temperature limiter
S	Plug n' play connection (oil cable 3 x 1 mm ²)
T	Uponor Base flexiboard
U	Room temperature control
V	Component side cable

10.2 Dimensional drawings

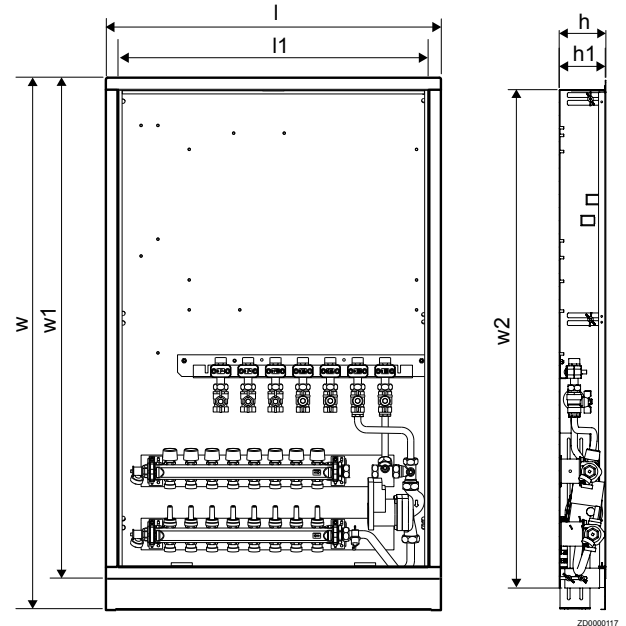
All dimensions are given in mm.

Uponor Combi Port M-Base RC



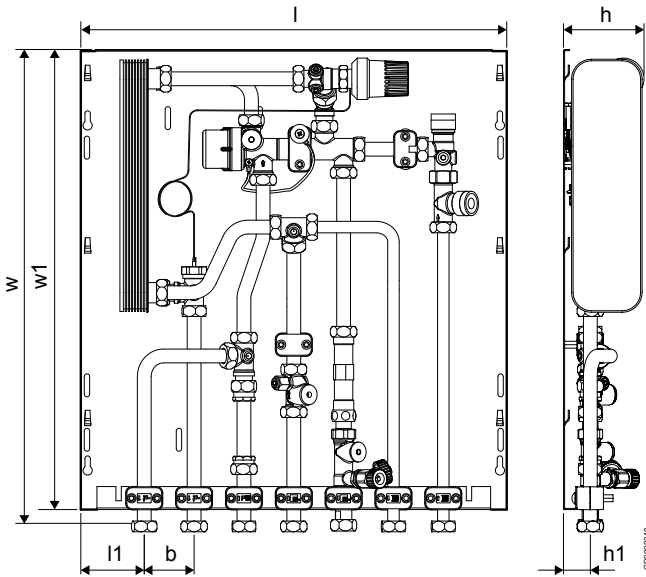
l	l1	w	w1	h	h1	b
555,5	82,75	618	600	103	35	65

In-wall cabinet UFH



l	l1	w	w1	w2	h	h1
795	750	1264	1189,5	1190	135	110

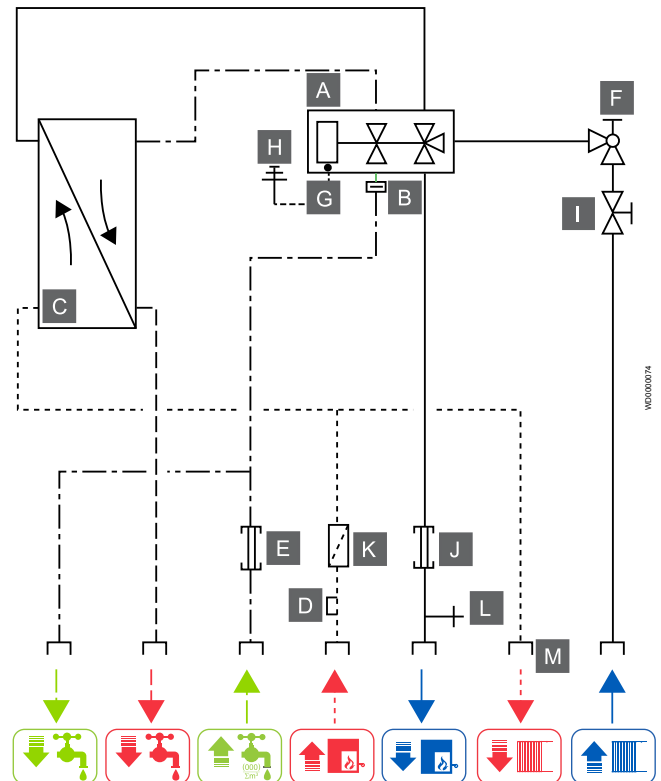
Uponor Combi Port M-Base RC-TL



l	l1	w	w1	h	h1	b
555,5	82,75	618	600	105	35	65

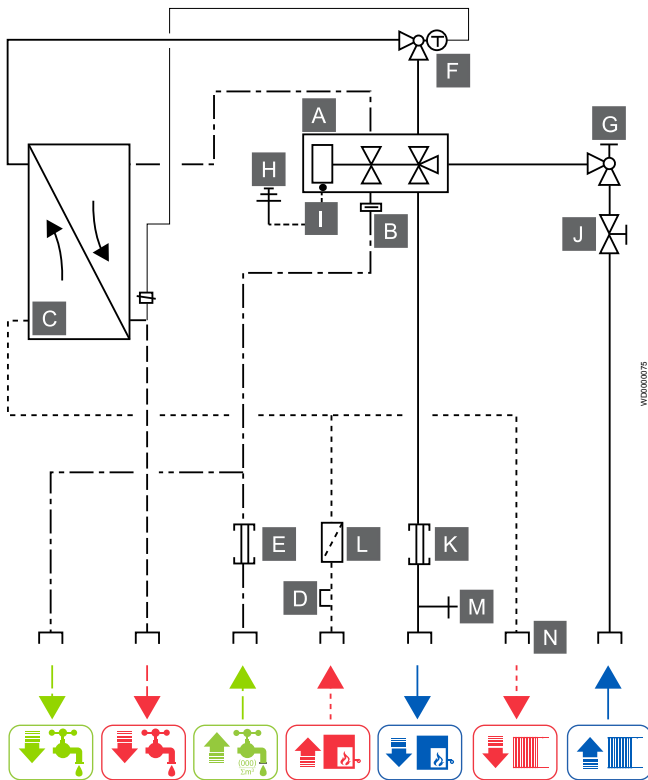
10.3 Hydraulic schemes

Uponor Combi Port M-Base RC



Item	Description
A	Proportional volume control (PM)
B	Cold water throttle disc
C	Plate heat exchanger
D	Sensor pocket heat meter
F	Valve
G	Equipotential bonding connection
H	Earthing on site
I	Zone valve for limiting heating flow to the flat
J	Heat meter distance piece
K	Strainer
L	Draining and filling valve
M	Connection, ball valve

Uponor Combi Port M-Base RC-TL

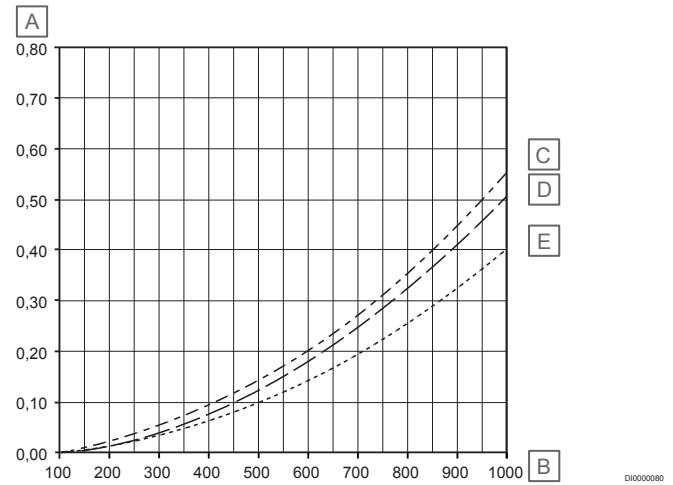


Item	Description
A	Proportional volume control (PM)
B	Cold water throttle disc
C	Plate heat exchanger
D	Sensor pocket heat meter
E	Cold water meter distance piece
F	Thermostatic hot water temperature limiter (TL)
G	Valve
H	Earthing on site
I	Equipotential bonding connection
J	Zone valve for limiting heating flow to the flat
K	Heat meter distance piece
L	Strainer
M	Draining and filling valve
N	Connection, ball valve

10.4 Performance curves

Pressure drops with 24 plates (15 l/min)

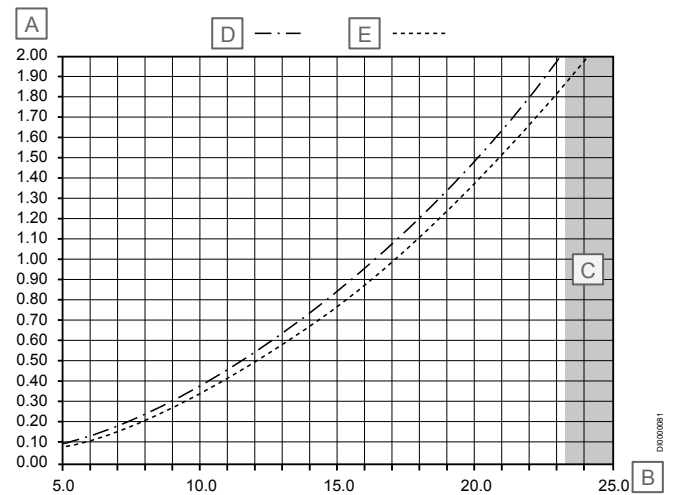
Heating side (primary)



Item	Description
A	Pressure drop in bar
B	Primary heating demand in litres/hour (l/h), max. 1000 l/h
C	dP station including TL
D	dP station including differential pressure control
E	dP station

Pressure drops including ball valve. Additional pressure drops, e.g. heatmeter with $Q_n 1,5$ of approximately **0,05 bar** and other internal/external fixtures must be included.

Domestic hot water side (secondary)



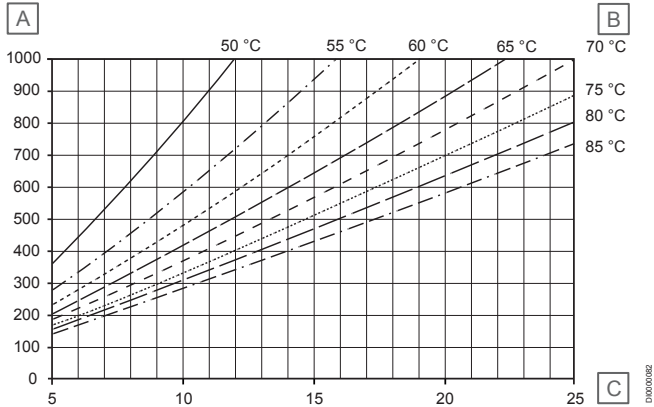
Item	Description
A	Pressure drop in bar
B	Tapping capacity in litres/minute (l/min)
C	Max range
D	dP station without throttle disc, including TL
E	dP station without throttle disc

Pressure drops at the throttle disc must be included in the calculation.

- 10 l/min = 0,65 - 0,85 bar
- 12 l/min = 0,68 - 0,88 bar
- 15 l/min = 0,70 - 0,90 bar
- 17 l/min = 0,75 - 0,95 bar
- 19 l/min = 1,00 - 1,20 bar

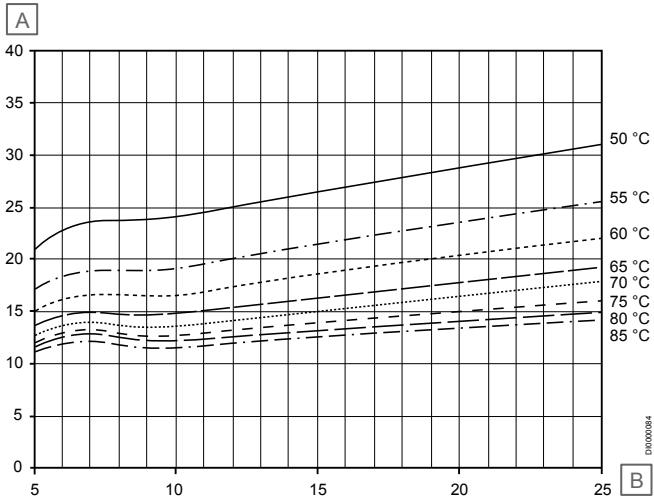
Performance curves and return temperatures with 24 plates (15 l/min)

Cold water warming 35 K (10-45 °C)



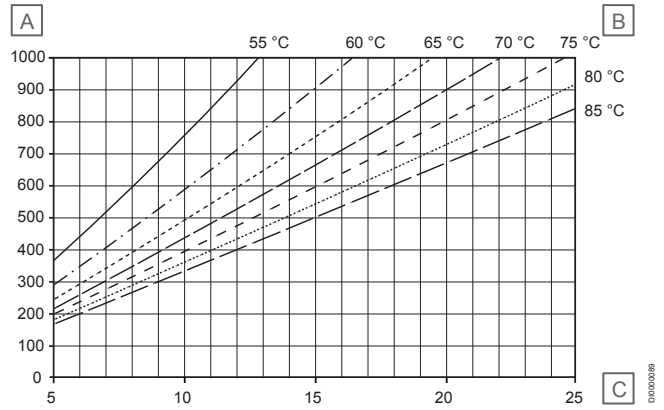
Item	Description
A	Primary heating demand in litres/hour (l/h), max. 1000 l/h
B	Primary heating supply temperatures
C	Tapping capacity in litres/minute (l/min)

Tapping capacity 35 K (10-45 °C)



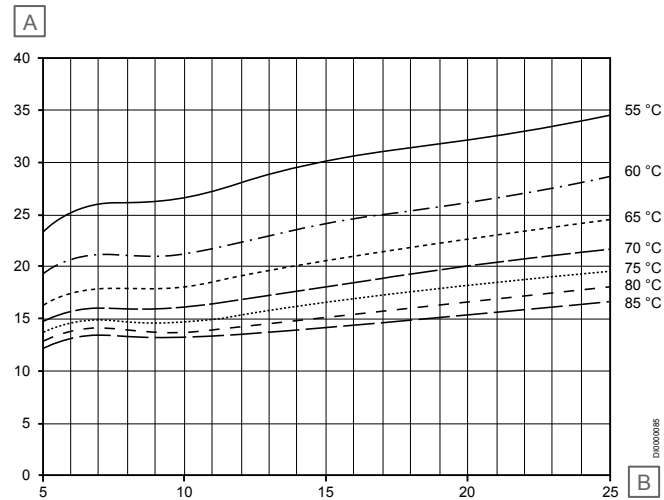
Item	Description
A	Return temperature °C
B	Tapping capacity in litres/minute (l/min)

Cold water warming 40 K (10-50 °C)



Item	Description
A	Primary heating demand in litres/hour (l/h), max. 1000 l/h
B	Primary heating supply temperatures
C	Tapping capacity in litres/minute (l/min)

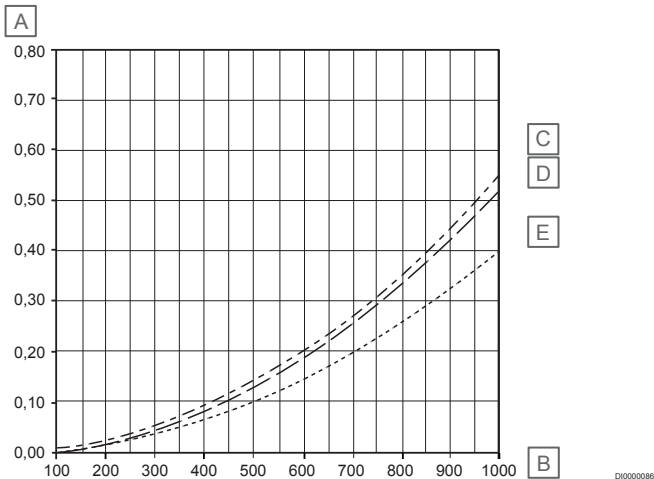
Tapping capacity 40 K (10-50 °C)



Item	Description
A	Return temperature °C
B	Tapping capacity in litres/minute (l/min)

Pressure drops with 40 plates (19 l/min)

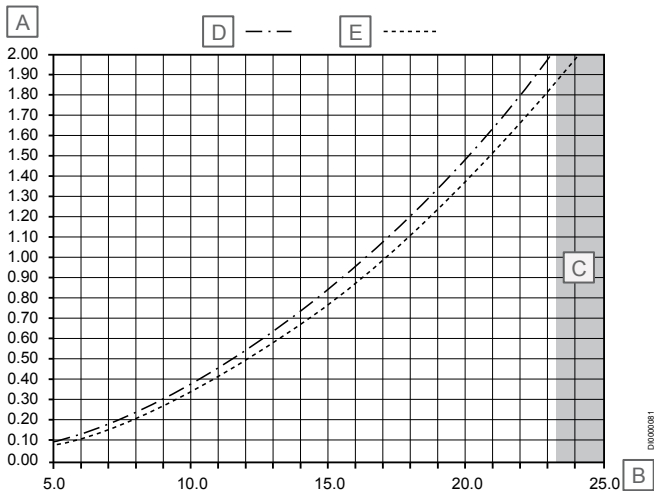
Heating side (primary)



Item	Description
A	Pressure drop in bar
B	Primary heating demand in litres/hour (l/h), max. 1000 l/h
C	dP station including TL
D	dP station including differential pressure control
E	dP station

Pressure drops including ball valve. Additional pressure drops, e.g. heat meter with **Qn 1,5** of approximately **0,05 bar** and other internal/external fixtures must be included.

Domestic hot water side (secondary)



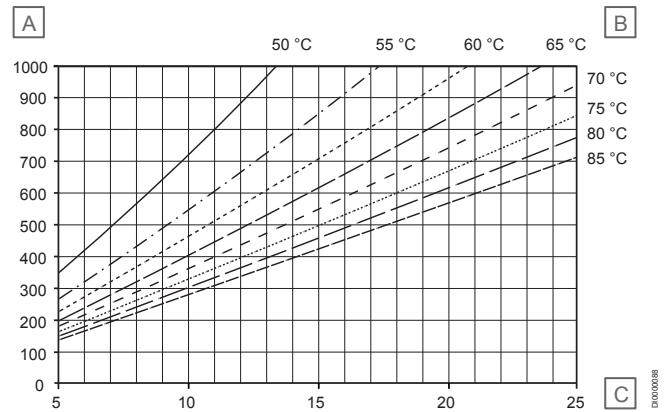
Item	Description
A	Pressure drop in bar
B	Tapping capacity in litres/minute (l/min)
C	Max range
D	dP station without throttle disc, including TL
E	dP station without throttle disc

Pressure drops at the throttle disc must be included in the calculation.

- 10 l/min = 0,65 - 0,85 bar
- 12 l/min = 0,68 - 0,88 bar
- 15 l/min = 0,70 - 0,90 bar
- 17 l/min = 0,75 - 0,95 bar
- 19 l/min = 1,00 - 1,20 bar

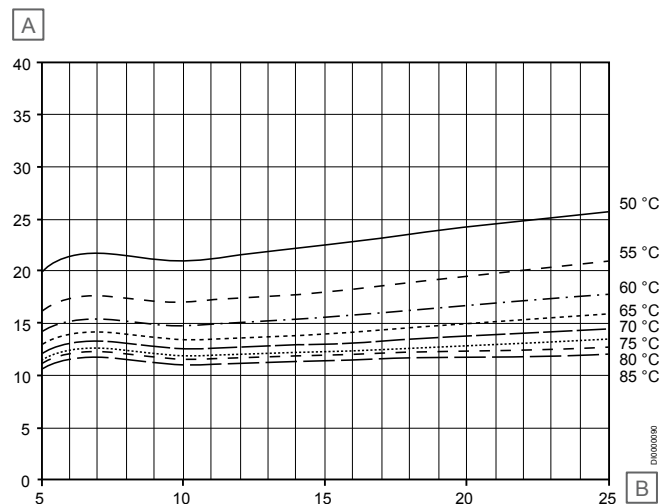
Performance curves and return temperatures with 40 plates (19 l/min)

Cold water warming 35 K (10-45 °C)



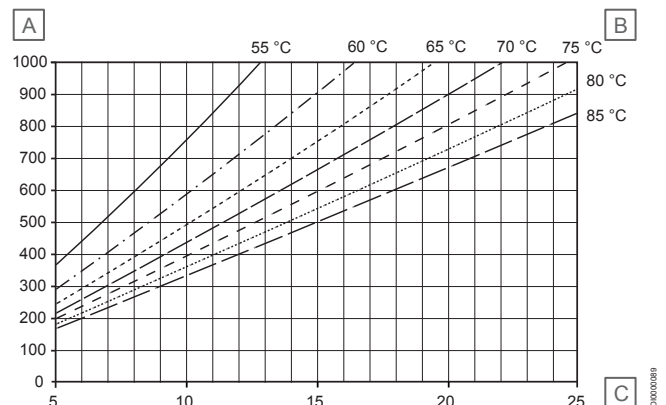
Item	Description
A	Primary heating demand in litres/hour (l/h), max. 1000 l/h
B	Primary heating supply temperatures
C	Tapping capacity in litres/minute (l/min)

Tapping capacity 35 K (10-45 °C)



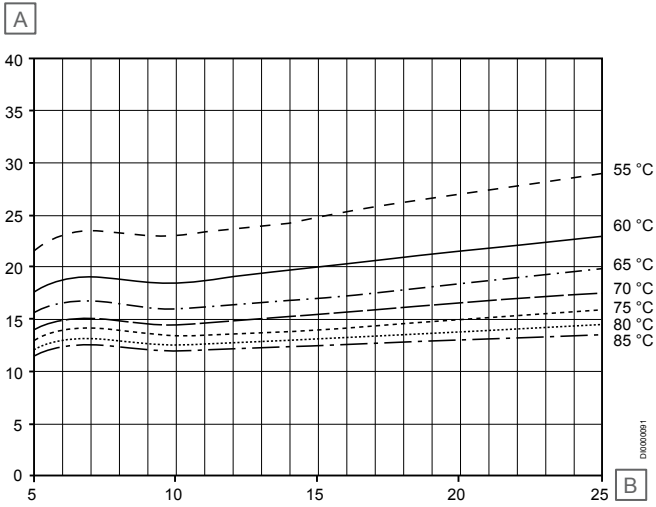
Item	Description
A	Return temperature °C
B	Tapping capacity in litres/minute (l/min)

Cold water warming 40 K (10-50 °C)



Item	Description
A	Primary heating demand in litres/hour (l/h), max. 1000 l/h
B	Primary heating supply temperatures
C	Tapping capacity in litres/minute (l/min)

Tapping capacity 40 K (10-50 °C)



Item	Description
A	Return temperature °C
B	Tapping capacity in litres/minute (l/min)



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