

Uponor Comfort Port

EN

Technical information

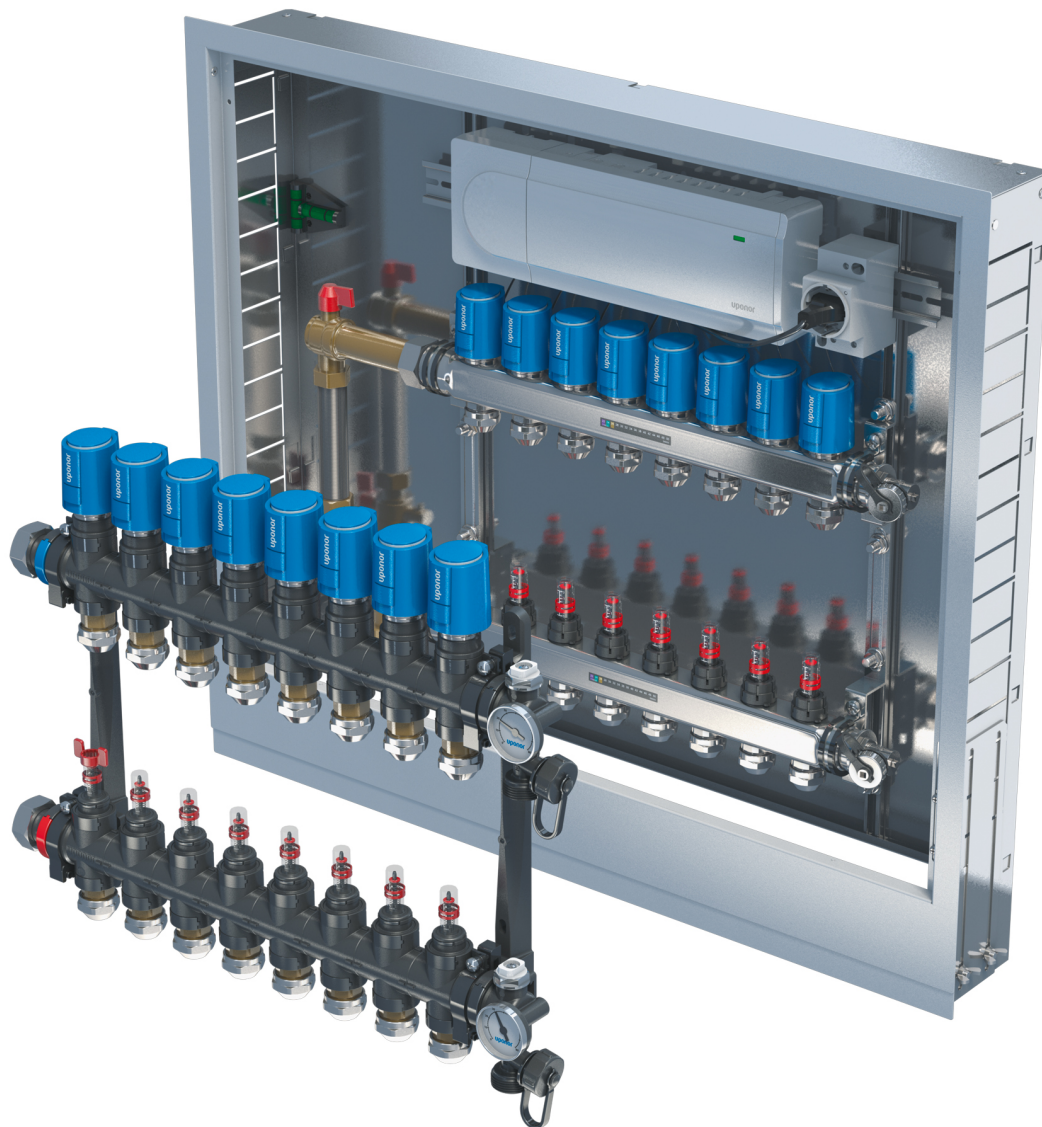


Table of contents

1	Uponor Comfort Port prefabricated cabinets.....	3
1.1	Benefits.....	3
1.2	Components.....	4
1.3	Operating principle.....	5
1.4	Configuration variances.....	6
2	Configuration and calculation.....	8
2.1	Select the variant for manifold connection.....	8
2.2	Select cabinet type and cabinet depth.....	8
2.3	Select the single room control.....	8
2.4	Select additional accessories.....	8
2.5	Result of the selection.....	9
3	Installation and operation.....	10
3.1	Preparing for installation.....	10
3.2	Installation.....	10
3.3	Operation.....	13
4	Standards and regulations.....	15
4.1	Planning and designing.....	15
4.2	Electrical installations.....	15
4.3	Implementing the drinking water system.....	15
5	Uponor Comfort Port technical data.....	16
5.1	Variant 1: Vertical without metering set.....	16
5.2	Variant 2: Horizontal without metering set.....	17
5.3	Variant 3: Vertical with metering set.....	18
5.4	Variant 4: Horizontal with metering set.....	19
5.5	Variant 5: Vertical with metering sets for heating and cold/warm water.....	20
5.6	Variant 6: Vertical with pump group Fluvia T Push-23.....	21
5.7	Variant 7: Vertical with dynamic balancing valve.....	22

1 Uponor Comfort Port prefabricated cabinets

Uponor Comfort Port is a pre-fabricated cabinet ideally suited for use in multi-family houses or large residential buildings due to enormous time and cost savings. It is available in two different versions, in-wall (IW) and on-wall (OW) mounting, for all common system installations and installation situations.

The ready-to-install cabinet is delivered to the construction site ready for installation according to customer specifications. Upon request, they can also be delivered with specific valves and heat meters, and with components from the Uponor Smatrix room temperature control system, both wired and as a flexible and convenient wireless solution.

1.1 Benefits

Custom-made design

The possible system configurations are so diverse that Uponor Comfort Port is not produced off the shelf, but made according to customer requirements. The pre-fabricated cabinet fulfills the functionalities required for the installation in the construction site.

Uponor Comfort Port Configurator is a convenient query and order process that ensures that no configuration parameters are forgotten. The pre-assembled Uponor Comfort Ports are then delivered directly to the construction site, with the appropriate allocation markings, in protective packaging suitable for the construction sites.

Assembly errors eliminated

Factory assembly and wiring of the control components in Uponor Comfort Ports virtually eliminates the likelihood of mistakes at the building site. All actuators are assigned to the respective heating zones, labelled and placed on the control terminal block. A factory pre-setting of the hydraulic balancing, as well as a function test of the actuators, ensure the defect-free assembly progress. No spirit level is required for vertical installation of the Uponor Comfort Port. It is already integrated. Finally, for the electrical connection, only one power supply cable is needed to connect to the factory-integrated safety socket.

Time savings



Conventional installation of individual components on the construction site requires time, which is often insufficient in hectic construction site operations. Especially if urgently needed components are missing. Valuable working time can be saved by installing pre-fabricated modules.

In Uponor Comfort Port, all components required for the hydraulic connection and for connection to the room controller of a Uponor underfloor heating system are already prepared for connection. Depending on the configuration, even the wired pump group for connection to a heat source without its own flow temperature control is factory-installed.

The installation expertise with Uponor Comfort Port becomes obvious when comparing a standard case (middle column) with a pre-fabricated Uponor Comfort Port cabinet (right column).

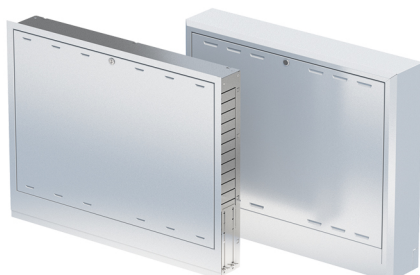
Time effort (%)	Conventional installation	Uponor Comfort Port
6	Checking delivered items	—
6	Selecting and configuration of components for the individual manifold	—
6	Material delivery to the installation site	Material delivery to the installation site
9	Unpacking of the cabinet, dismantling/storage of door and frame	—
9	Alignment and fastening of cabinet	—
13	Installation of manifold bars, heat meter sets, ball valves, etc	—
9	Tightness test	—
9	Installation of controller and actuators	—
7	Installation of distribution or power socket	—
9	Connection of actuators to the base unit	—
9	Assigning room thermostats	Assigning room thermostats
5	Designation of control circuits (option)	Designation of control circuits (option)
3	Installation of protective cover or mount frame, door and front sheet	Installation of protective cover or mount frame, door and front sheet
Installation time	approximately 150 minutes	approximately 35 minutes

1.2 Components

Uponor Comfort Ports are offered in a variety of types, which basically differ due to the primary-side connection situation. They all consist of general components that ensure a perfect functionality. In addition, design and equipment variants, as well as room controllers, can be configured.

Depending on configuration, the following components are standard.

Cabinets

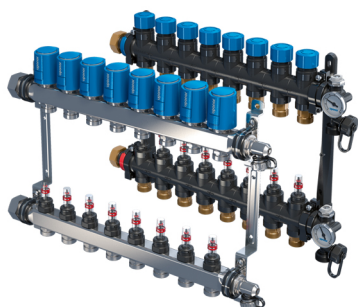


RP0000022

Cabinet made of Sendzimir galvanised sheet steel for in-wall (IW) or on-wall (OW) mounting. Optionally with a cabinet door made of sheet steel or plastic.

Cabinet type		Depth, mm
In-wall (IW)	flush-mounted	80
In-wall (IW)	flush-mounted	110
On-wall (OW)	surface-mounted	140

Manifolds



RP0000099

Optionally with the manifold in stainless steel or plastic (polyamide) with 230 V or 24 V actuators.

Stainless steel manifolds (2 – 16 loops) or polyamide manifolds (2 – 15 loops)

Uponor Smatrix room temperature control



RP0000097

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.



Note

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

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	✓	✓	
Third-party 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			✓
BMS integration			✓
SMS module			✓

Pump group Uponor Fluvia T Push-23-B-W



PH0000021

A constant-flow temperature control station for use in combined systems with radiators and Uponor underfloor heating systems.

Connection sets for heat meters



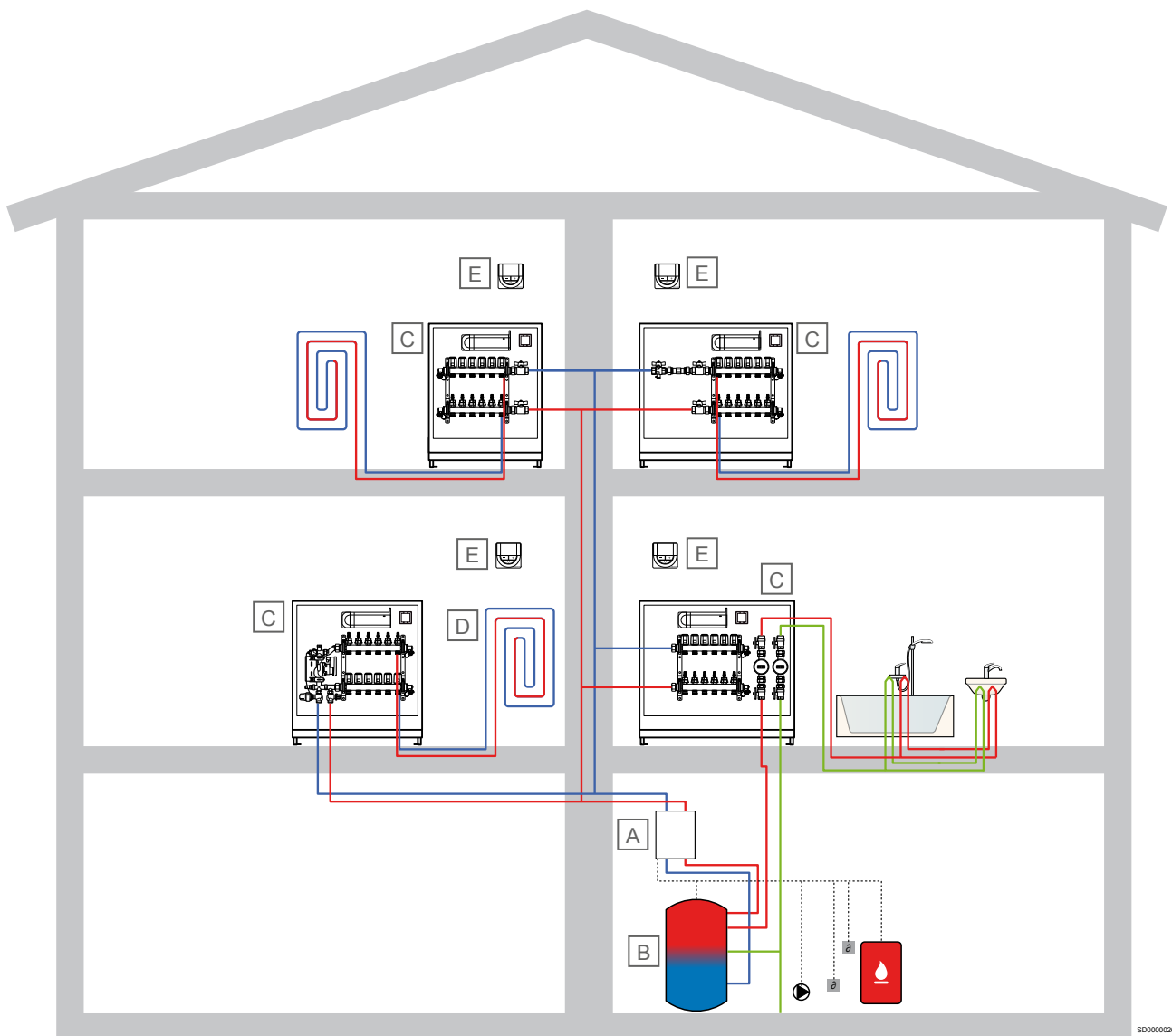
Optional; two different connection sets for horizontal or vertical installation of on-site heat meters.

Differential pressure control



A dynamic controller for hydraulic balancing in larger heating systems with multiple Uponor Comfort Ports.

1.3 Operating principle



A Boiler
B Buffer tank
C Uponor Comfort Port

D Underfloor heating
E Room thermostat

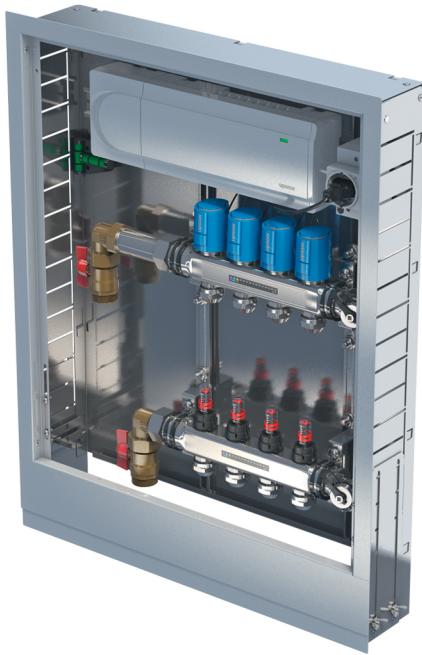
Variant 2: Horizontal without metering set

1.4 Configuration variances

About 9,800 different configuration variances can be assembled to a complete Uponor Comfort Port unit, all consisting of the general components that ensure a perfect functionality. In addition, design and equipment variants as well as control equipment, can be configured.

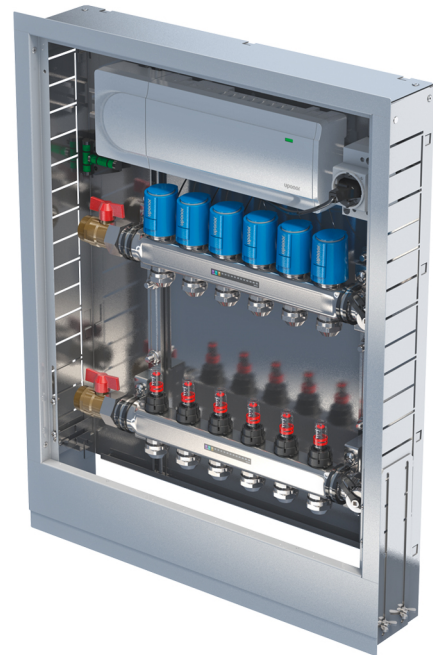
Seven configuration variances equipped with different components are shown below as examples.

Variant 1: Vertical without metering set



RP0000011

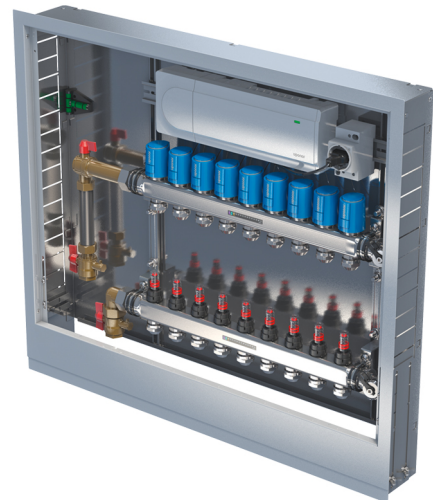
In-wall cabinet with Uponor Vario S manifold, 4 loops, ball valve G $\frac{3}{4}$ ", vertical connection.



RP0000012

In-wall cabinet with Uponor Vario S manifold, 6 loops, ball valve G $\frac{3}{4}$ ", horizontal connection.

Variant 3: Vertical with metering set



RP0000014

In-wall cabinet with Uponor Vario S manifold, 9 loops, metering set G $\frac{3}{4}$ ", vertical connection.

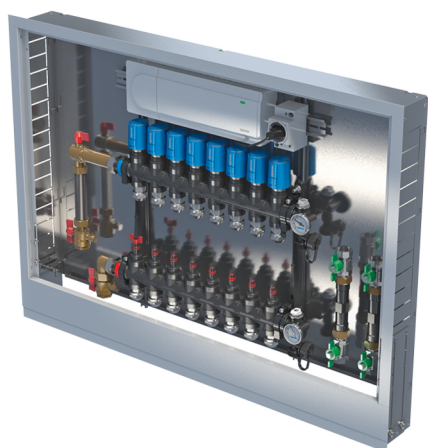
Variant 4: Horizontal with metering set



RP0000010

On-wall cabinet with Uponor Vario S manifold, 6 loops, metering set G $\frac{3}{4}$ ", horizontal connection.

Variant 5: Vertical with metering set and water counters



RP0000020

In-wall cabinet with Uponor Vario M manifold, 8 loops, metering set G $\frac{3}{4}$ ", vertical connection, with water meters.

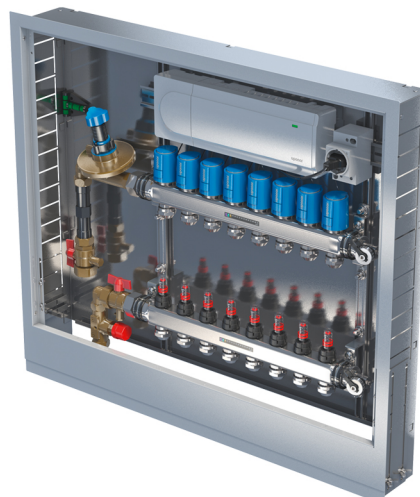
Variant 6: Vertical with pump group Fluvia T Push-23



RP0000017

In-wall cabinet with Uponor Vario S manifold, 9 loops, pump group Uponor Fluvia T Push-23, vertical connection.

Variant 7: Vertical with dynamic balancing valve



RP0000013

In-wall cabinet with Uponor Vario S manifold, 9 loops, balancing valve, vertical connection.

2 Configuration and calculation

Pre-fabricated Uponor Comfort Ports can be configured fast and easily according to customer requirements with the online Uponor Comfort Port configurator. The configurator guides you through the entire process step-by-step until all parameters are in place.

2.1 Select the variant for manifold connection

uponor Comfort Port, pre-mounted underfloor heating cabinets Register Log in

Comfort Port Configurator

Configure your Comfort Port step-by-step


Manifold Cabinet Single room control Accessories

Manifold


Select all options around the manifold by clicking on them. The colour-marked selections will be considered for the Comfort Port.

Type of installation


Select installation option of the Comfort Port.



Vertical without heat meter



Horizontal without heat meter



Horizontal with heat meter

SC0000014

2.2 Select cabinet type and cabinet depth

uponor Comfort Port, pre-mounted underfloor heating cabinets Register Log in

Comfort Port Configurator

Configure your Comfort Port step-by-step

Manifold Cabinet Single room control Accessories

Cabinet

Select all options for the Comfort Port by clicking on them. The colour-marked selections will be considered for the Comfort Port.

Type of installation

Select installation option of the Comfort Port.

☒ In-wall

☐ On-wall

Depth of the cabinet

Select cabinet depth.

Cabinet door

Select cabinet door. The plastic door is particularly suitable for the radio reading of heat meters. As standard, the door has a knob.

☐ Steel

☒ Plastic

SC0000015

2.3 Select the single room control

uponor Comfort Port, pre-mounted underfloor heating cabinets Register Log in


Comfort Port Configurator

Configure your Comfort Port step-by-step


Manifold Cabinet Single room control Accessories

Single room control

Select a factory wired single room control for the Comfort Port.



Smatrix Base Pulse
Wired single room control with auto-balancing function as a 24 Volt controller. Note: 4-wire bus connection. Please use bus cable 4-wire only AWG 22, ca. 4 x 0.34 mm² (Item No. 1071670). It is possible to install a series connection (looping through the cable from room sensor to room sensor) as well as conventional star-shaped wiring of the room thermostats.



Smatrix Wave Pulse
Radio single room control with auto-balancing function as a 24 Volt controller, suitable for touch-screen operation and U@home remote control via app.

SC0000016

2.4 Select additional accessories

uponor Comfort Port, pre-mounted underfloor heating cabinets Register Log in

Comfort Port Configurator

Configure your Comfort Port step-by-step

Manifold Cabinet Single room control Accessories

Accessories

Select the accessories for connection to the heating circuits as well as to the primary-side flow and return.

Compression adapter Eurocone

Do you need fittings for connection to the heating circuits?

☒ Yes

☐ No

Type of pipe

For which type of underfloor heating pipe?

☒ PE-Xa pipes

☐ MLC pipe

Pipe dimension

For which pipe dimension?

☐ 9.9 mm

☐ 14 mm

☒ 16 mm

☐ 17 mm

☐ 20 mm

SC0000017

2.5 Result of the selection

uponor

Comfort Port, pre-mounted underfloor heating cabinets

Register

Log in

Park Grand Paddington

18-138 Sussex Gardens,
London W2 2RU

Send an inquiry

Pre-assembled underfloor heating cabinet complete with:

– Underfloor heating/cooling manifold with 4 loops, made of polyamide, with flow meters

– Primary connection vertical with ball valves G½", connection on left side

– Cabinet made of galvanized steel with protective cardboard, height-adjustable feet, adjustable pipe deflection bar and integrated water level for optimal alignment

– In-wall cabinet, dimensions in mm: width 510, height 740-855, depth 110 mm

– Door and frame powder coated, white (RAL 9016), with plastic door, frame height adjustable, with key lock

– Danfoss differential pressure controller DN 20 ASV-PV and DN 20 ASV-M

– Uponor Vario compression adapters for PEX 16x1.8/2.0-G3/4" FT Euro, with pipe bend supports

– Single room control with factory-connected electrical wiring of actuators, consisting of Uponor Smatrix Wave single room controller, with auto-balancing function, for heating and cooling application, with Uponor Smart actuators S 24V

1P04LK11P16DASP1UP11

Edit

Copy

Delete

Number of heating loops:

4

Connection on:

Left

Right

Quantity:

1

Configure next Comfort Port

SC0000018





The result of your selections is finally displayed as plain text followed by a manufacturing code. The code is used as product identification in the ordering process, manufacturing and delivery on time.

This information will be sent via e-mail to Uponor's customer service. They will contact you for further information before an official order will be created.

Uponor Comfort Port | Technical information | 9

3 Installation and operation

3.1 Preparing for installation

	Warning! Risk of electric shock! The connections of the thermal actuators are under 230 V mains voltage even when not actuated!
	Warning! Required electrical connections and installations, commissioning and maintenance must only be performed by an authorised person in accordance with local standards and regulations.
	Warning! Do not remove any part of the Uponor manifold or any other hydraulic components when the system is under pressure. It can cause serious injuries. Switch the control module to voltage-free in accordance with the regulations prior to any work on the module itself or its connected components.
	Caution! Uponor is not liable for any damage resulting from improper use of Uponor products.

Conform to the following measures when installing and operating Uponor Comfort Ports:

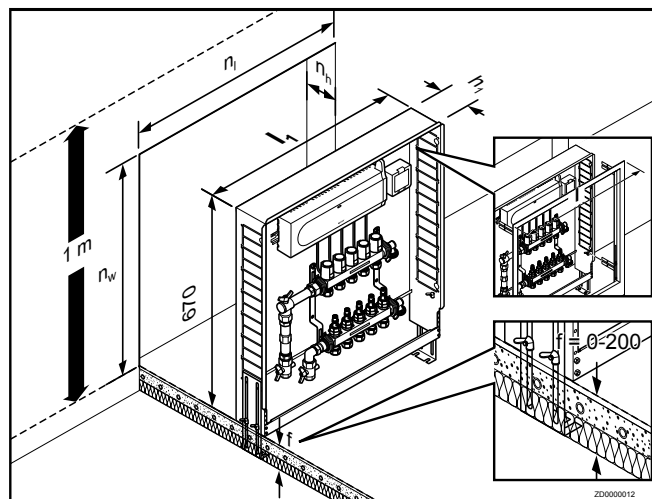
1. Pre-fabricated Uponor Comfort Ports are only suitable for distributing heating water into the heating circuits of an underfloor heating system. Do not use the Uponor stainless steel manifold in drinking water systems or sanitary installations.
2. Check the stations for completeness prior to installation. Retighten any screws that have become loose during transport.
3. Plan and construct the heating system in accordance with the recognised rules of technology as well as current DIN standards and VDI guidelines. Also observe applicable and comparable country-specific regulations or standards.
4. Ensure that the heating water used complies with the requirements of VDI 2035. A water analysis is mandatory in case of claims.
5. Regulate the individual heating circuits in order to ensure the hydraulic function of the individual heating circuits and the entire underfloor heating system.
6. Read and follow the instructions in the installation and operation manual.
7. Conversion or modification of Uponor Comfort Ports are only permitted upon agreement with Uponor.
8. Damage caused to Uponor Comfort Ports, the heating system or the building as a result of an infringement will void the Uponor warranty.
9. Properly inform the end user about the operation of the system and hand over this technical information together with the inventory documents.
10. If you have questions regarding the application or operation of Uponor products, please contact your local Uponor office or visit www.uponor.com.

3.2 Installation

Overall installation dimensions

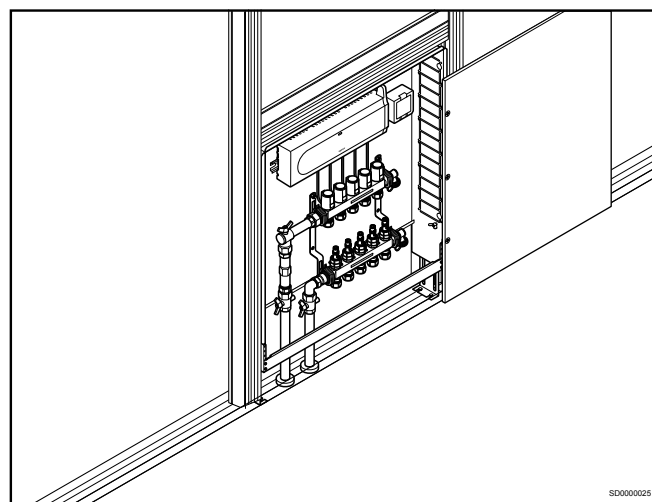
Uponor Comfort Port IW 110 and 80

Uponor Comfort Port IW 110



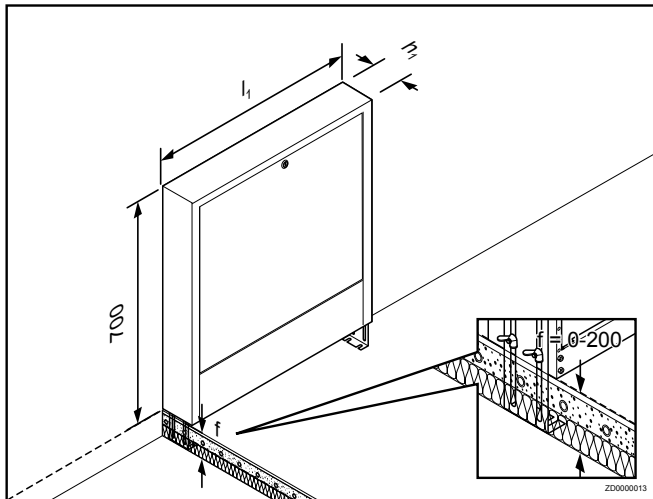
Type (mm)	l_1	h_1	l	n_1	n_w	n_h
410/110	410	110	443	450	690+f	110-150
510/110	510	110	543	550	690+f	110-150
610/110	610	110	643	650	690+f	110-150
760/110	760	110	793	800	690+f	110-150
910/110	910	110	943	950	690+f	110-150
1060/110	1060	110	1093	1100	690+f	110-150
1210/110	1210	110	1243	1250	690+f	110-150
1510/110	1510	110	1543	1550	690+f	110-150

Uponor Comfort Port IW 80



Type (mm)	l_1	h_1	l	n_l	n_w	n_h
410/80	410	80	443	450	690+f	80-120
510/80	510	80	543	550	690+f	80-120
610/80	610	80	643	650	690+f	80-120
760/80	760	80	793	800	690+f	80-120
910/80	910	80	943	950	690+f	80-120
1060/80	1060	80	1093	1100	690+f	80-120
1210/80	1210	80	1243	1250	690+f	80-120
1510/80	1510	80	1543	1550	690+f	80-120

Uponor Comfort Port OW 140



Type (mm)	l_1	h_1
410/140	410	140
510/140	510	140
610/140	610	140
760/140	760	140
910/140	910	140
1060/140	1060	140
1210/140	1210	140
1510/140	1510	140

Basic installation of Uponor Comfort Ports

Uponor Comfort Ports are delivered pre-fabricated and ready to connect to the construction site. They can be used directly in the on-site wall niche.

Some basic installation steps follow, based on the in-wall (IW) cabinet. Detailed installation and operation manuals for the components are available in the packaging of each Uponor Comfort Port.



Uponor Comfort Port cabinets are equipped with two in-built spirit levels for easy horizontal and vertical levelling without additional tools.



Adjust the adjustable cabinet feet in accordance with the height of the intended floor structure. Ensure that the frame and door can be easily mounted when the screed and floor covering has been laid. In the event of any unevenness in the spaces between the frame and the skirting board, the frame can be extended to compensate for height differences.

After alignment, Uponor Comfort Ports can be fixed to the unfinished floor with screws and dowels, and to the side with installation foam.

3



The built-in components of the Uponor Comfort Port should be protected against damage and contamination with the delivered protective cover during work interruptions, as well as during plastering and screed work.

4



Connection of distribution lines and heating circuits

The primary-side supply and return connections are connected with G1" or G¾" transition fittings. The connection is either from below or from the side, depending on the configuration. For side connections, the pre-punched side panel segments of the manifolds can simply be punched out at the appropriate location. The underfloor heating pipes are laid in the calculated distance and connected to the manifold in the Uponor Comfort Port. The G¾" Euroconus fittings matching to the installed Uponor underfloor heating pipes are already included if this option was selected in the Uponor Comfort Port Configurator.

Electrical connections

Electrical wires and a 230 V socket are pre-installed in the Uponor Comfort Port and tested before delivery. The cabinet only needs to be connected to the supply network at the construction site.



Warning!

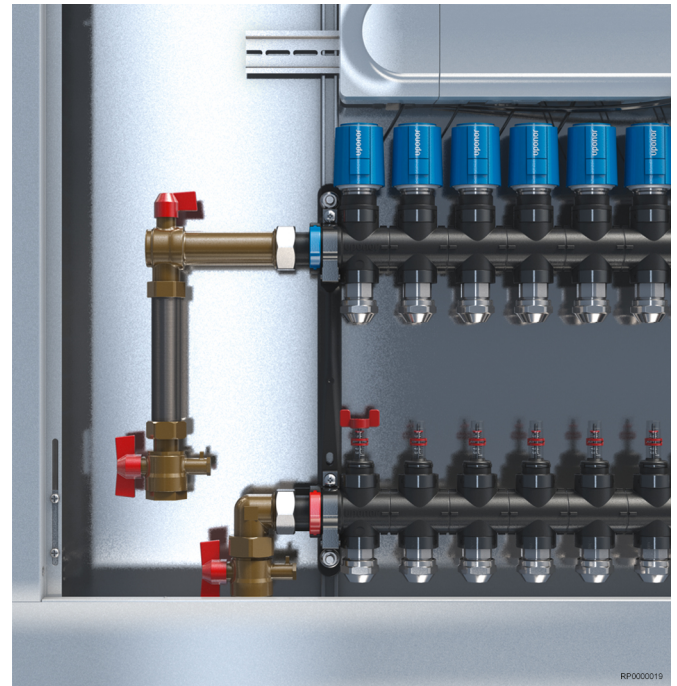
Risk of electrical shock! Electrical installation and service behind secured 230 V AC covers must be carried out under the supervision of a qualified electrician.

If a wired Uponor room control system has been selected for the configuration, the required cables from the room sensors to the Uponor Comfort Port must be connected. For further information, please see the installation and operation manual for the control system.

If a wireless Uponor Smatrix Wave Pulse system has been selected for room temperature control, no cable connection is required between the room thermostats and the base unit installed in the Uponor Comfort Port.

Installation of heat meter

Depending on the configuration, Uponor Comfort Ports can be equipped with a heat meter with a construction length of 110 mm. A special ball valve with sensor connection M10 is part of the installation in accordance with DIN 4713/EN 1434.

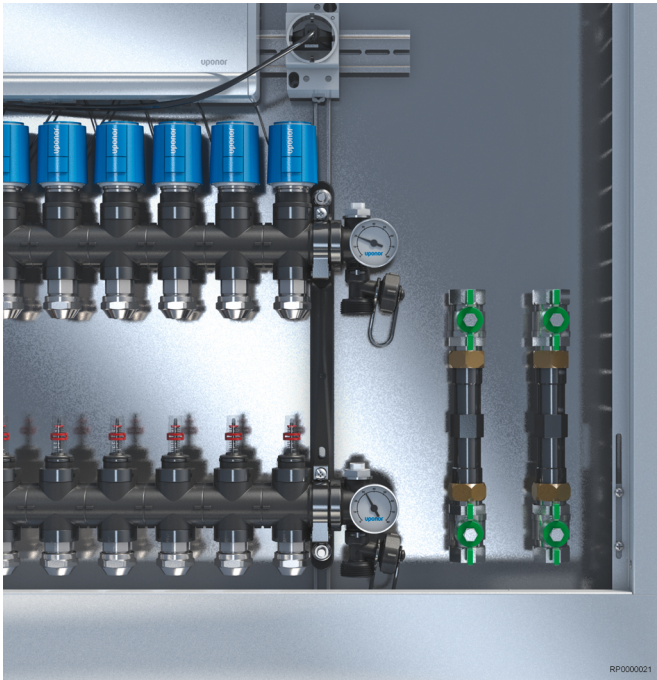


If no heat meter is used, it may be necessary to replace the pre-mounted plastic fitting with a metal fitting for continuous operation at higher temperatures.

Please consider: in a cabinet where a heat meter should be installed, the depth needs to be minimum 95 mm.

Installation of a water meter

If a water meter is to be installed in Uponor Comfort Port, a section in the cabinet is prepared for it at the factory. This enables the installation of a surface-mounted water meter with length of 110 mm.



If no water meter is used, it may be necessary to replace the pre-mounted plastic fitting with a metal fitting for continuous operation at higher temperatures.

3.3 Operation

Filling and pressure test

When all hydraulic connections are made, the system should be filled with heating water, and vented. The water must comply with the requirements in the standard guidelines VDI 2035 for water heating installations.

The connections and valves required for filling and venting are part of the manifold installed in the Uponor Comfort Port. For detailed information, please see the installation and operation manual for the Uponor heating manifold.

Uponor Comfort Port and the underfloor heating system must be pressure-tested before commissioning, in accordance with EN 1264-4 and VOB DIN 18380 to avoid leakages. The pressure-testing process is described in the technical information for the Uponor underfloor heating system.

Hydraulic balancing of the heating circuits

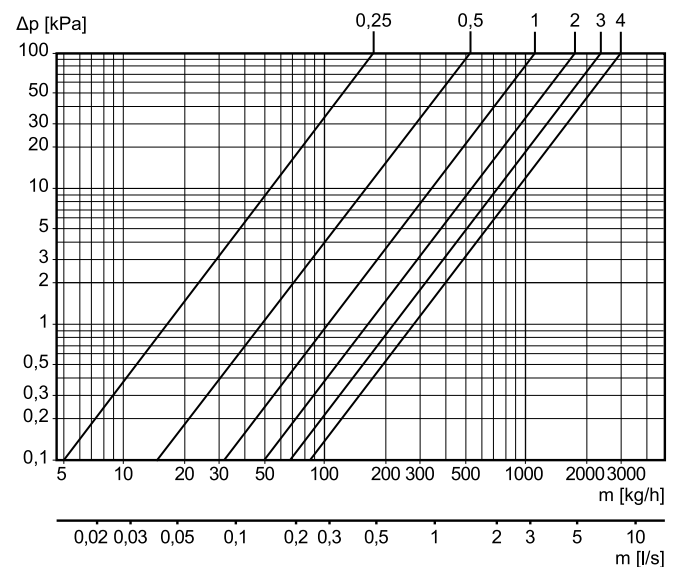
The individual heating circuits must be hydraulically balanced via the respective preset return control valves in order to ensure the required flow according to the design calculation. The setting can be made on the return flow control valve according to the diagram (kv value) or according to the flow rate read, depending on whether a manifold with or without flow indicator is selected.

Settings Uponor Vario S manifold



Follow the below instructions to balance the settings in the Uponor Vario S manifold.

1. Open the flow meter completely.
2. Remove the hand cap from the return valve and then use the hand wheel on the drain valve to close the return valve.
3. Open the return valve a quarter turn to ensure that the return valve is in the start-position for setting.
4. Open the return valve by following the diagram below.



Adjustment diagram return valve.

Settings Uponor Vario M manifold FM



The calculated flow rate in the Uponor Vario M manifold is set directly on the flow indicators in accordance with the designed values.

For detailed information about hydraulic balancing, please see the installation and operation manual and technical information for the installed Uponor heating manifold.

Pre-wired controls with autobalancing functions



Note

Autobalancing can be used in combination with hydronic balancing.

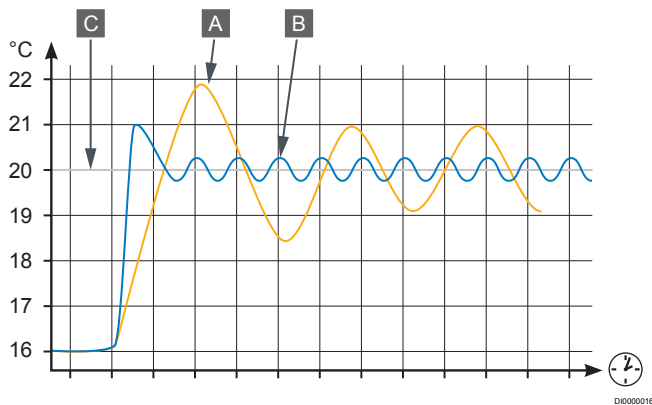
The Uponor Smatrix room controller can operate the actuator outputs by either on/off signals or by Autobalancing (on by default), using pulse width modulation (PWM) signals.

Autobalancing is a function where the system calculates the actual energy need of single rooms and adapts the output power of each loop to its length. This means a short loop might get 20% on time while a long loop might get about 60%.

The automatic balancing continues through the seasons and throughout the household's changing lifestyle and usage patterns, removing the need of manual balancing.

This gives more even floor temperatures and faster system reaction times with lower energy consumption than any standard on/off system.

While manual hydraulic balancing only takes account of initial conditions, the autobalancing function automatically adjusts the temperature changes in the system or room without any need for complex re-calculation or adjustment by the installer.



A Manual balancing

B Autobalancing

C Set point value

Thermal actuator connection



PH0000022

Uponor Vario 230 V/24 V thermoelectric actuator for opening and closing valves on manifolds for underfloor heating systems. The thermal actuator is connected to the flow valve via an adapter VA 10 with M30 x 1.5 thread.

The initial factory default position for the actuator is open due to a First-Open function. This enables heating operation in the shell construction phase. When commissioning an Uponor Comfort Port, the first-open function is automatically deactivated by applying the operating voltage (must be minimum of 10 minutes). After that, the actuator is closed and ready for operation.



Warning!

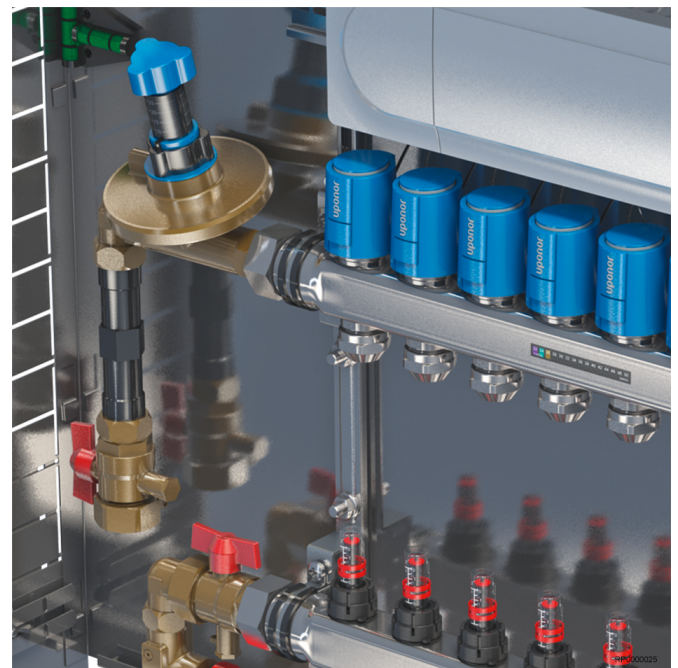
Risk of electrical shock! Electrical installation and service behind secured 230 V AC covers must be carried out under the supervision of a qualified electrician.



RP0000032

Uponor Vario thermal actuator with all-round function display.

Hydraulic adjustment



Depending on the configuration, Uponor Comfort Ports can be equipped with a differential pressure control, especially in larger heating networks with multiple Uponor Comfort Ports. It can be used to limit the flow of the entire manifold.

During commissioning, the string valve is set to the particular differential pressure setpoint of the manifold installed in the Uponor Comfort Port.

For further information about hydraulic adjustment, please see the installation and operation manual of the string valve.

4 Standards and regulations

4.1 Planning and designing

Planning and designing of the heating system must be performed in accordance with applicable global and country-specific standards and VDI guidelines. Some of them are:

Standard	Title
DIN EN 6946	Building Components and Building Elements - Thermal Resistance and Thermal Transmittance - Calculation Methods
DIN EN 12831	Energy performance of buildings - Method for calculation of the design heat load
DIN EN 12828	Heating systems in buildings - Design for water-based heating systems
DIN 18380	German construction contract procedures (VOB)
DIN 4109	Sound insulation in buildings
VDI 2035	Water heating installations
EnEV	Energy Saving Ordinance, a German regulation describing the minimum requirements regarding energy use of new and renovated buildings


1. According to EnEV, the heating load of the building must be re-calculated in event of a major renovation of the heating system (e.g. boiler replacement). The plant shall be provided with facilities enabling automatic control of the same according to time and temperature.
2. 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.
3. 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!

- **W 553** - Dimensioning of circulation systems in central drinking water systems
- **W 291** - Cleaning and disinfecting water distribution systems
- Regulations from local water companies
- Applicable and comparable country-specific regulations or standards

A few points to be high-lighted:

- Secure that the safety equipment of the drinking water and domestic hot water system complies with DIN 1988 or the comparable country-specific regulations or standards.
- Flush and disinfect the system before commissioning and handing over to the user.
- Provide the domestic hot water pipes with required thermal insulation strength in accordance with EnEV.
- Insulate the drinking cold water pipes to secure that no heating in excess of the requirements of the Drinking Water Ordinance or comparable country-specific regulations or standards takes place.
- Secure that the drinking cold water pipe is kept apart from warm water pipes. If possible, avoid installing them in the immediate vicinity.

4.2 Electrical installations

	Warning! Prior to any work on the controller or the components connected to it, switch off the controller according to the regulations.
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Electrical installations must be carried out in accordance with the following regulations: commissioning and maintenance IEC 364 or CENELEC HD 384 or DIN VDE 0100 and IEC Report 446 or DIN VDE 0110 as well as EN 50178, EN 60204, EN 60335 / Part 1 and Part 51 or local regulations.

4.3 Implementing the drinking water system

For Uponor Comfort Ports with an assembled water meter, planning and implementation of the drinking water system must be done in accordance with the Infection Protection Ordinance, in particular § 38 of the Drinking Water Ordinance, DIN 1988, DIN 50930 Part 6, DIN 2000, DIN 2001 and DIN 18381 and VDI 6003 and VDI 6023 and the DVGW Guidelines cited below.

Additionally obtain the following regulations:

- **W 551** - Tap water heating and distribution systems, technical measures to reduce legionella growth

5 Uponor Comfort Port technical data

5.1 Variant 1: Vertical without metering set

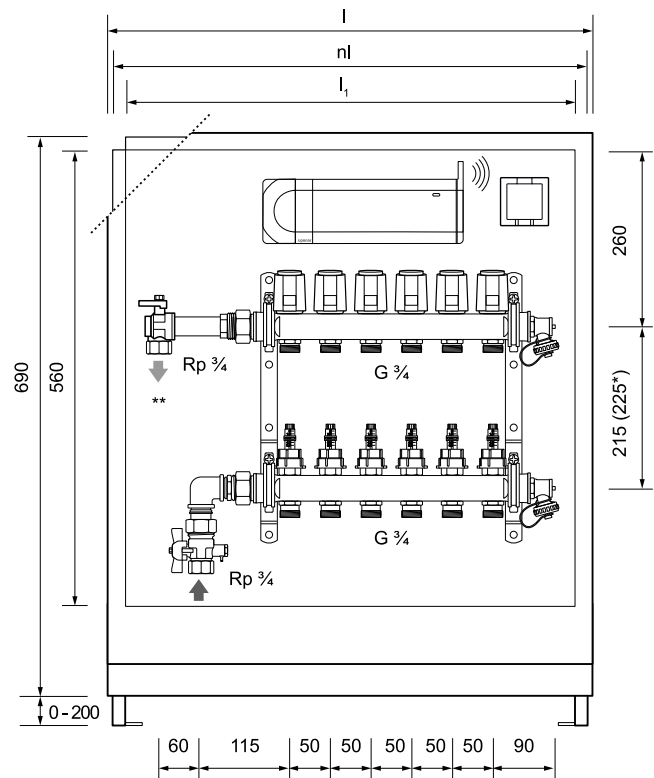


RP0000011

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection vertical with G $\frac{3}{4}$ " ball valves, connection on left or right
- Secondary connections G $\frac{3}{4}$ " Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimensions



ZD0000001

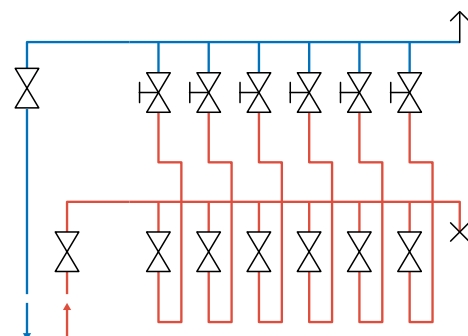
*) Uponor Vario M manifold

Optional: balancing valve or pressure control valve

In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm

Loops	l_1 (mm)	nl (mm)	l (mm)
2	410	450	443
3 – 4	510	550	543
5 – 6	610	650	643
7 – 9	760	800	793
10 – 12	910	950	943
13 – 15	1060	1100	1093
16 – 17	1210	1250	1243
18 – 20	1510	1550	1543

Hydraulic scheme



WD0000025

5.2 Variant 2: Horizontal without metering set

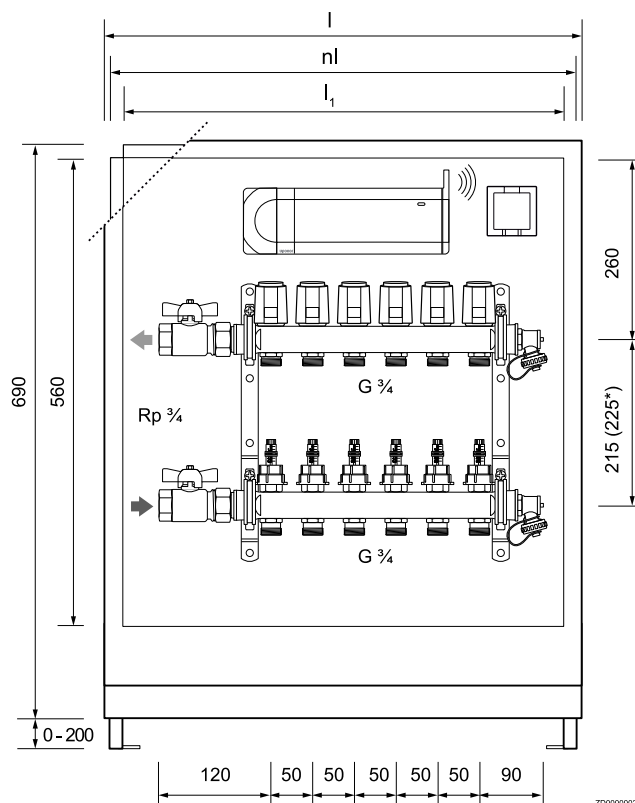


RP0000012

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection horizontal with ball valves $G\frac{3}{4}$, connection on left or right
- Secondary connections $G\frac{3}{4}$ " Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimensions



ZD0000002

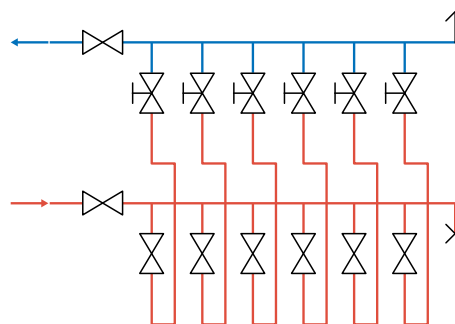
*) Uponor Vario M manifold

Optional: balancing valve or pressure control valve

In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm

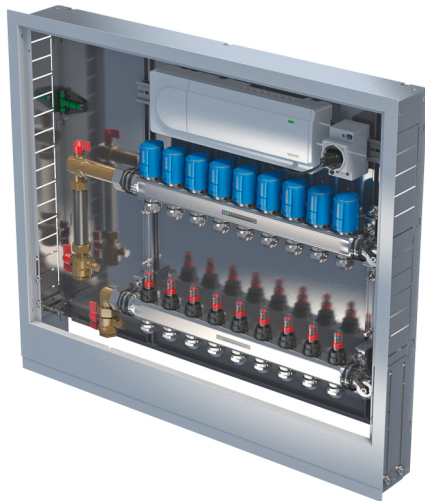
Loops	l_1 (mm)	nl (mm)	l (mm)
2 – 3	410	450	443
4 – 5	510	550	543
6 – 7	610	650	643
8 – 10	760	800	793
11 – 13	910	950	943
14 – 16	1060	1100	1093
17 – 18	1210	1250	1243
19 – 20	1510	1550	1543

Hydraulic scheme



WD0000026

5.3 Variant 3: Vertical with metering set

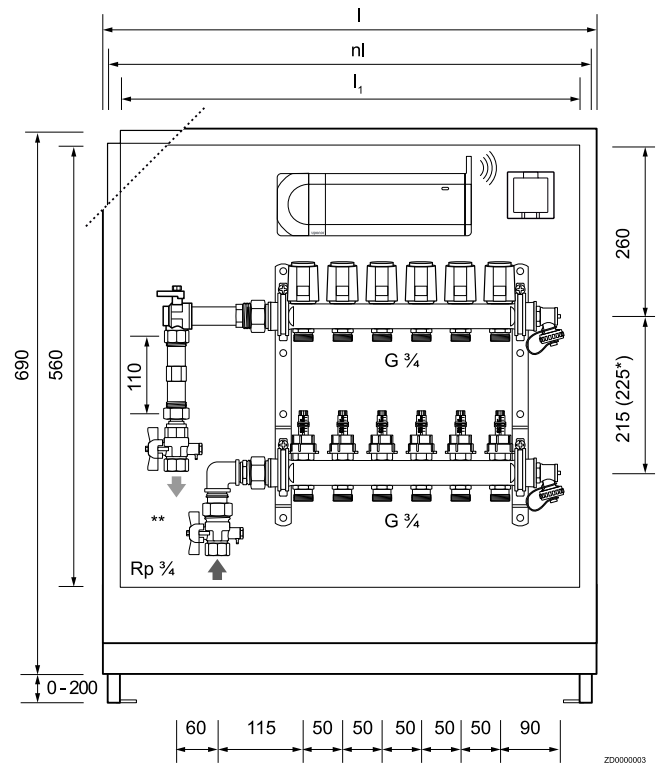


RP0000014

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection vertical with G¾" metering sets, connection on left or right
- Secondary connections G¾" Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexibord

Dimensions



ZD0000003

*) Uponor Vario M manifold

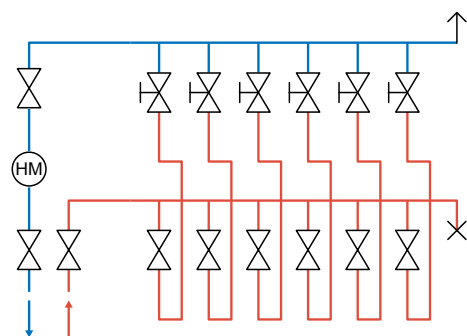
Optional: balancing valve or pressure control valve

*In-wall cabinet depth 95** – 120 mm or 110 – 150 mm, or on-wall cabinet depth 140 mm*

****)** *by heat meter depth ≥ 95 mm*

Loops	l_1 (mm)	nl (mm)	l (mm)
2	410	450	443
3 – 4	510	550	543
5 – 6	610	650	643
7 – 9	760	800	793
10 – 12	910	950	943
13 – 15	1060	1100	1093
16	1210	1250	1243
17 – 20	1510	1550	1543

Hydraulic scheme



WD0000027

HM = Heat meter

5.4 Variant 4: Horizontal with metering set

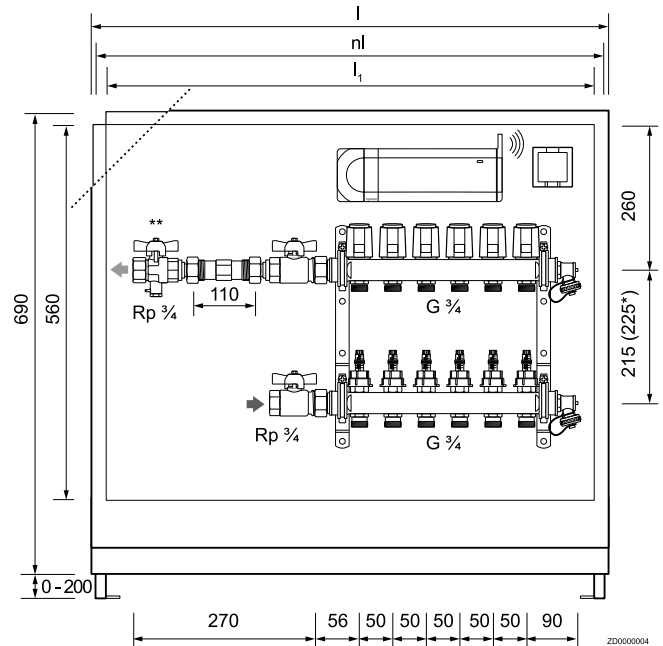


RP0000010

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection horizontal with metering sets $G\frac{3}{4}$, connection on left or right
- Secondary connections $G\frac{3}{4}$ " Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimensions



ZD0000004

*) Uponor Vario M manifold

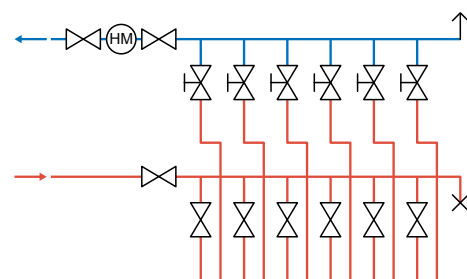
Optional: balancing valve or pressure control valve

In-wall cabinet depth 95** – 120 mm or 110 – 150 mm, or on-wall cabinet depth 140 mm

** by heat meter depth ≥ 95 mm

Loops	l_1 (mm)	nl (mm)	l (mm)
2 – 3	610	650	643
4 – 6	760	800	793
7 – 9	910	950	943
10 – 12	1060	1100	1093
13 – 15	1210	1250	1243
16 – 20	1510	1550	1543

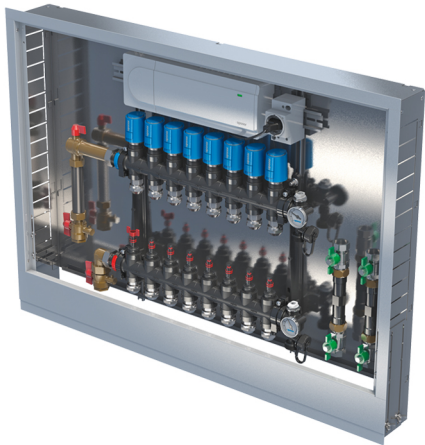
Hydraulic scheme



WD0000028

HM = Heat meter

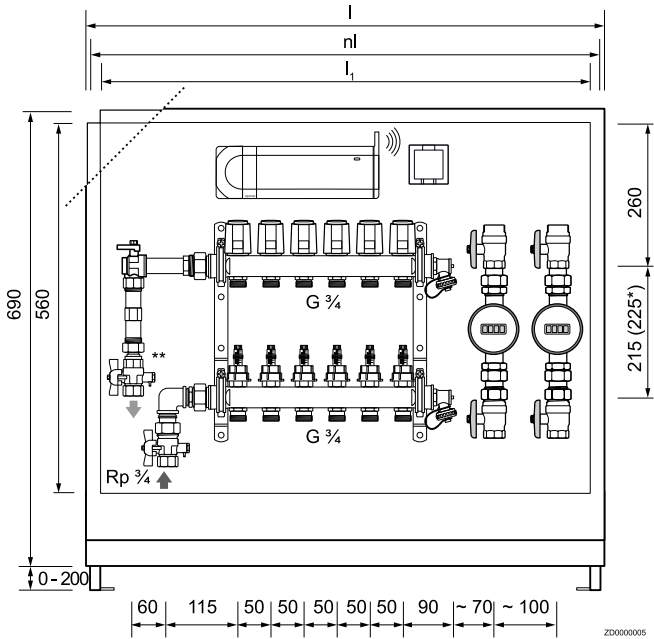
5.5 Variant 5: Vertical with metering sets for heating and cold/warm water



Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection vertical with G¾" metering sets for heating and cold/warm water connection on left or right
- Secondary connections G¾" Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimension



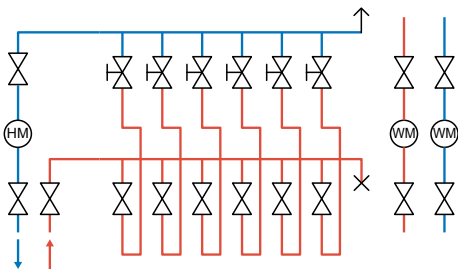
*) Uponor Vario M manifold
Optional: balancing valve or pressure control valve

In-wall cabinet depth 95** – 120 mm or 110 – 150 mm, or on-wall cabinet depth 140 mm

** by heat meter depth ≥ 95 mm

Loops	l ₁ (mm)	nl (mm)	l (mm)
2 – 4	760	800	793
5 – 6	910	950	943
7 – 9	1060	1100	1093
10 – 12	1210	1250	1243
13 – 15	1510	1550	1543

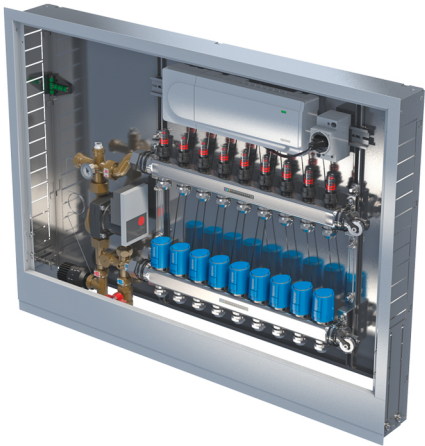
Hydraulic scheme



HM = Heat meter

WM = Water meter

5.6 Variant 6: Vertical with pump group Fluvia T Push-23

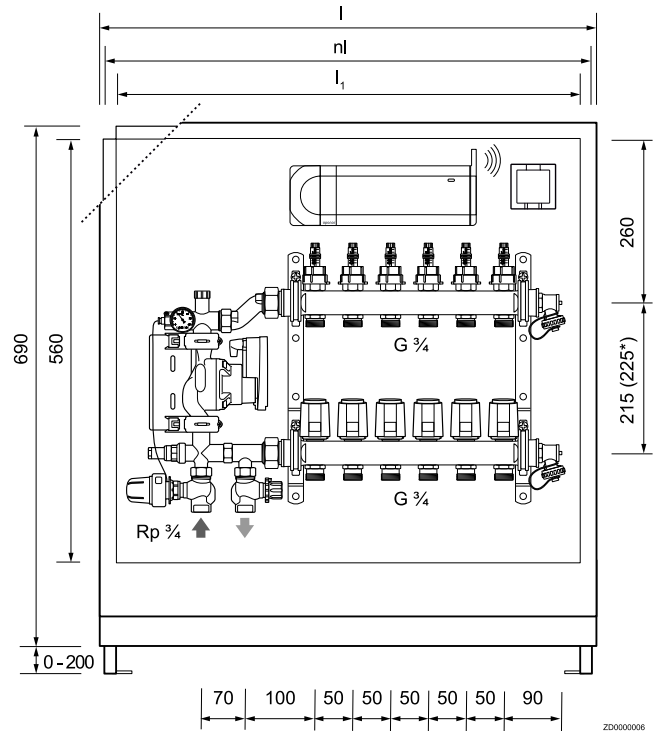


RP0000017

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm, or on-wall cabinet depth 140 mm
- Primary connection vertical with pump group Fluvia T Push-23, connection on left or right
- Secondary connections G¾" Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimensions



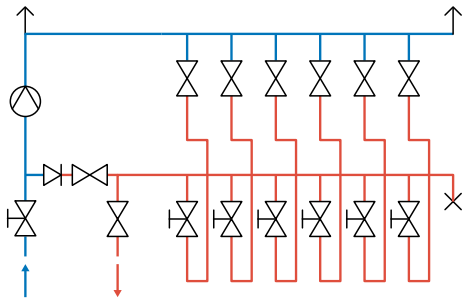
ZD0000006

*) Uponor Vario M manifold

In-wall cabinet depth 110 mm, or on-wall cabinet depth 140 mm

Loops	l_1 (mm)	nl (mm)	l (mm)
2 – 3	510	550	543
4 – 5	610	650	643
6 – 8	760	800	793
9 – 11	910	950	943
12 – 14	1060	1100	1093
15 – 16	1210	1250	1243
17 – 20	1510	1550	1543

Hydraulic scheme



WD0000030

5.7 Variant 7: Vertical with dynamic balancing valve

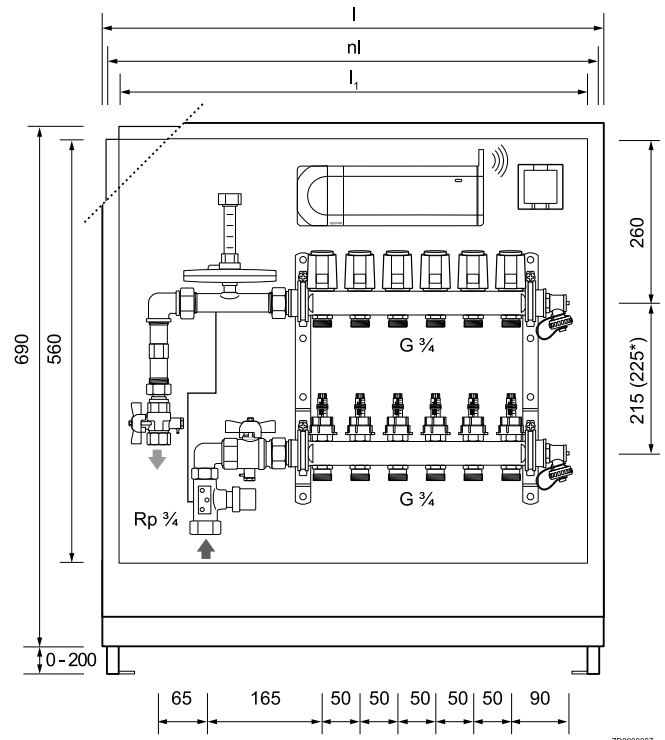


RP0000013

Pre-assembled underfloor heating cabinet complete with:

- Cabinet made of galvanized steel with protective cardboard, with height-adjustable feet and adjustable tube deflection bar
- Powder-coated door and frame, white (RAL 9016), optional: with plastic door, optional: with key lock
- Stainless steel manifold (2 – 20 loops), or polyamide manifold (2 – 15 loops), with flow meters or with lock shield valve
- In-wall cabinet depth 110 mm or 80 mm, or on-wall cabinet depth 140 mm
- Primary connection vertical with dynamic balancing valve and heat metering set
- Secondary connections G $\frac{3}{4}$ " Eurocone, optional: with compression adapters for PEX or MLC pipes
- Integrated water level for optimal alignment
- Single room control and factory-mounted electrical wiring of actuators (24 or 230 V). Possible options: Uponor Smatrix Base Pulse, Smatrix Wave Pulse, Smatrix Base PRO, Smatrix Base PRO KNX and Base Flexiboard

Dimensions



ZD0000007

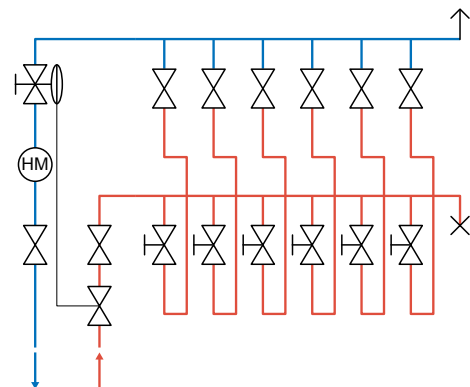
*) Uponor Vario M manifold

In-wall cabinet depth 95** – 120 mm or 110 – 150 mm, or on-wall cabinet depth 140 mm

**) by heat meter depth ≥ 95 mm

Loops	l_1 (mm)	nl (mm)	l (mm)
2 – 3	410	450	443
4 – 5	510	550	543
6 – 7	610	650	643
8 – 10	760	800	793
11 – 13	910	950	943
14 – 16	1060	1100	1093
17 – 18	1210	1250	1243
19 – 20	1510	1550	1543

Hydraulic scheme



WD0000035

HM = Heat meter



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Production: Uponor/DCO

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