EMPUR®

Manifold technology

Manifold technology

Heat distribution with a system

A company of the EMGRUPPE®

EMPUR® surface heating systems

Increased comfort and efficiency

The decision to install surface heating is a sensible decision for increased comfort, economy and sustainability. Surface heating systems are ideal for combining with modern heat generators and regenerative sources of energy.

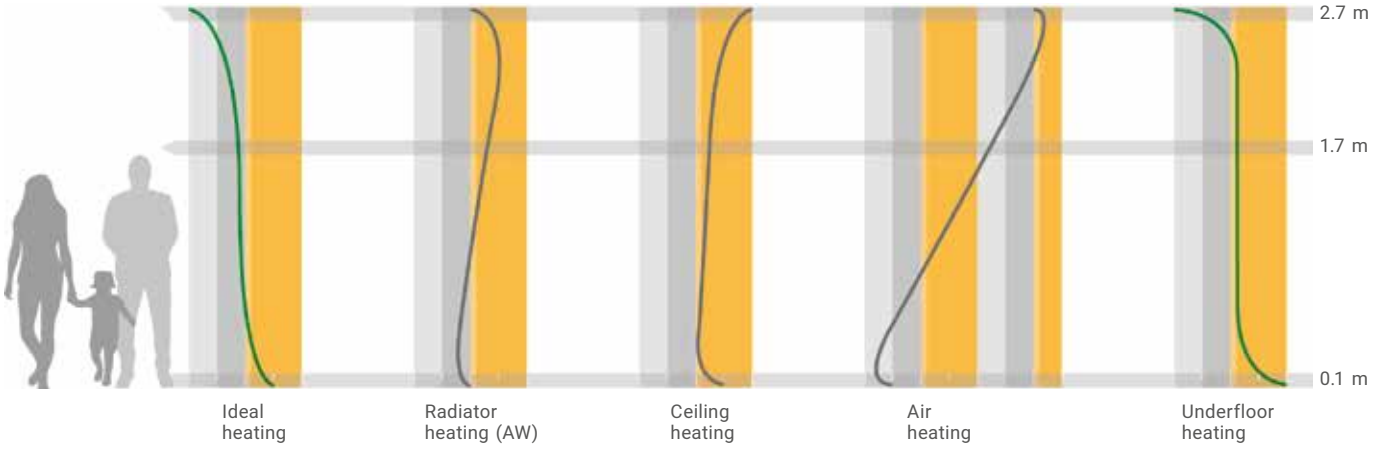
Mild heat radiation from the bottom up creates an increased sense of wellbeing. As a heat source with a large surface area, it can make an exceptional contribution to lowering energy costs at low flow temperatures. In this way, it also makes a significant contribution to sustainability and to protecting the environment.

Underfloor heating is also especially suited to people with allergies, as the heat rises across the entire room and hardly swirls up any dust across the large surface area. It affords the client completely new design possibilities without any visible radiators and increases the building's value in the long term.

Surface heating systems are also being used more and more in modernisation projects. Particular requirements, for example installation height, load capacity, weight, insulating properties and sound absorption can be guaranteed alongside efficient heating.

Surface temperatures

Temperature curve progression: Comparison of "ideal heating" with an underfloor heating system



EMPUR® surface heating systems

Quality “Made in Germany” from one source

EMPUR® Produktions GmbH is a producer and full-range retailer of innovative, high-quality panel heating systems and has the right solution for every requirement:

- **Surface heating/cooling systems for floor, walls and ceilings**
- **Systems without additional installation height or with minimum installation height for modernisation**
- **Diverse systems with composite panels and additional insulation for new buildings in the private, municipal or industrial sectors**
- **System accessories and tools**
- **High-quality heat distribution and drinking water systems**
- **Innovative control technology**

The company manufactures over 90% of the system components in its own production and under its own responsibility on modern equipment at our site in Buchholz-Mendt. We work under a structured quality management system, which is certified by DEKRA in accordance with the DIN EN ISO 9001:2015 international standard.

In the interests of the most objective and neutral product evaluation possible, EMPUR® subjects its products to material testing and certification by nationally recognised testing institutes and assessment centres. High quality, continual and pioneering product developments, technical advice and support, a three-level distribution network across Germany, reliable services, as well as specialist training for wholesalers, specialised craftsmen and planners make EMPUR® a competent partner in the heating industry.

Manifold technology

Heat distribution with a system

Manifold technology

Heat distribution with a system

At our Buchholz-Mendt location, EMPUR® produces high-quality manifolds and special solutions from brass and stainless steel for client-specific requirements.

The structural design of our new manifold generation, in combination with the EMPUR® manifold cabinets, offers a significantly reduced assembly time for the tradesman. With the specially developed quick manifold assembly technology, the manifolds are simply suspended in the guide rails of the manifold cabinet and fixed using two fillister head screws.

Thanks to extensive manifold accessories, we enable the right connection in every situation for a perfectly adapted system – ranging from connection sets and heat volume measurement sets to line regulating or zone valves, pointer thermometers and restrictors.

Our manifold technology is optimally attuned to the EMPUR® surface heating system and takes all requirements of our diverse systems into account. This offers both the specialised tradesman and the end consumer security and reliability in the optimum laying of a new heating system in new builds and modernisation projects.

EMPUR® manifold technology impresses

- Reduced assembly time thanks to the delivery of pre-assembled manifolds
- Compact valve clearance for a small installation width
- Quick manifold assembly in EMPUR® manifold cabinets through adjusted suspension rails
- Simple and exact positioning of the manifold in the manifold cabinet, continuously adjustable in a horizontal direction
- Extensive accessories for expansion
- All system components from a single source and manufactured in-house – Made in Germany quality

EMPUR® **QUICK MANIFOLD ASSEMBLY** – **PRACTICE-ORIENTED** AND **EASY**!

We are happy to answer any questions you might have regarding our manifold technology. Give us or your specialist craftsman a call!

Manifold technology

Stainless steel manifold, series 03

Stainless steel manifold, series 03

Our system manifolds made of a high-quality, corrosion-resistant and durable stainless steel section pipe and the manifold holder is pre-fitted with flow rate indicators and additional sound insulation inserts. The installation width is minimal as a result of the compact valve clearance.

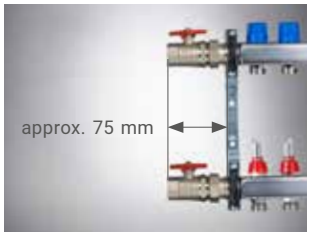
EMPUR® actuators can be installed directly instead of the blue protection cap on the return flow valves. The feed flow valves underneath are equipped with controllable and adjustable flow rate indicators (0-2.5 l/min). The two manifold end-pieces with a reducer for filling, bleeding and draining the heating circuit manifold can be rotated and are enclosed in the bag.

Your benefits

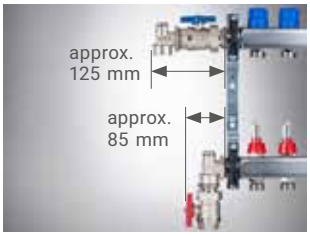
- High-quality stainless steel section pipe 1"
- Corrosion-resistant and durable
- Small installation width
- Available for 2-12 heating circuits with connection 1" IG
- For quick installation in EMPUR® manifold cabinets “Top Standard” and “Exclusiv”

Stainless steel manifolds to manifold connection sets and WMZ connection sets

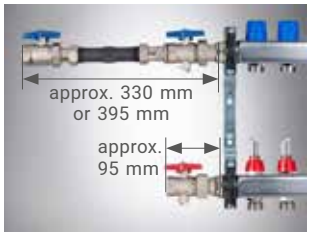
The following combinations are possible (and should be ordered separately as a set):



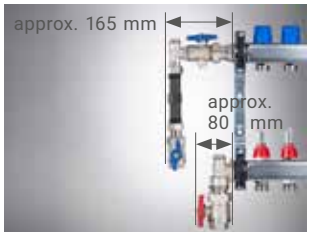
Ball valve set passageway



Manifold connection set 90°



WMZ connection set passageway



WMZ connection set 90°

NOTE The diagrams show potential installation situations. Additional combinations with valves and the assignment of manifold or manifold cabinet are possible, but not available as a set.

Manifold technology

Stainless steel manifold, series 03 Balance

Stainless steel manifold, series 03 Balance

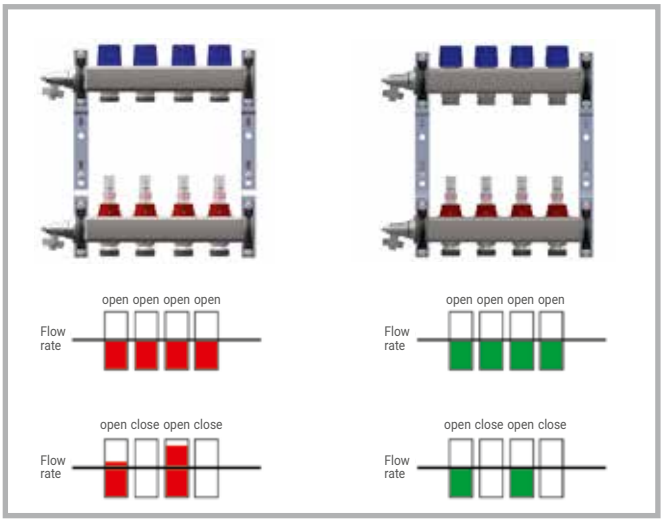
The stainless steel system manifolds are supplemented by the Balance manifold variant with integrated valve for dynamic flow control. The valve is integrated in the return flow of the manifold and adjusts the flow rate to the preset value almost independently of the differential pressure.

With our manifold Balance, over/undersupply to the adjacent circuits is not possible. A continuous function check is possible via the flow rate display in the flow pipe of each heating circuit. The required flow rate is set just once during installation and then later continuously adjusted to the preset value.

Due to its dynamic control function, the stainless steel manifold is particularly suitable for renovating systems with complicated hydraulics or unknown heating circuit lengths.

Additional benefits

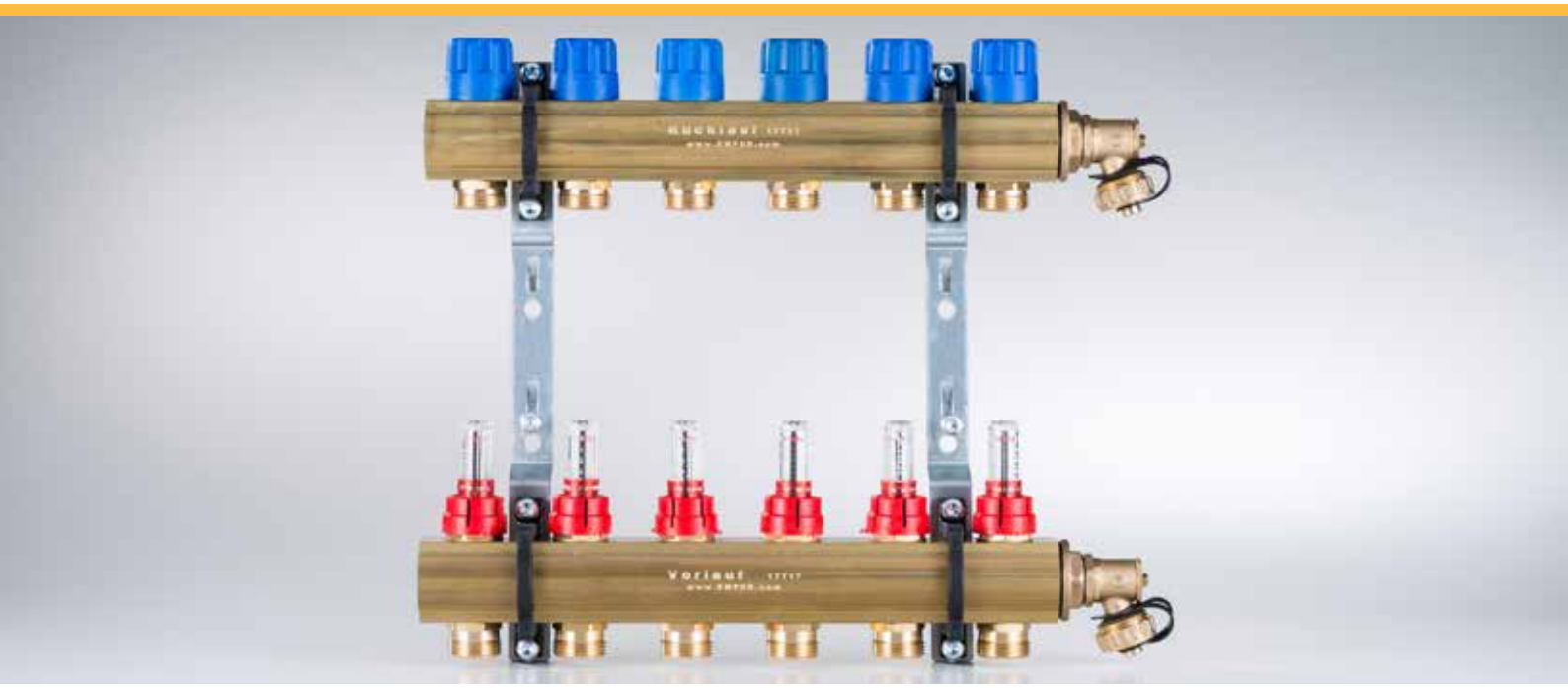
- Dynamic-hydraulic adjustment based on a simple calculation possible
- Constant flow through integrated, self-regulating valve bonnets
- One-time flow presetting directly on the valve
- Low investment costs due to the elimination of differential pressure regulators
- Fast and cost-effective initial operation due to time saved during installation
- Low-noise and energy-saving operation



In contrast to conventional heating circuit manifolds (right), the Balance system manifold achieves hydraulic equilisation automatically with a control cartridge, so that the set flow rate is maintained.

Manifold technology

Brass manifold, version 2.0



Brass manifold, version 2.0

Our system manifolds made of brass profile tubes with flow rate indicators and integrated valves are also pre-mounted on the manifold holder with sound insulation insert at the factory. Here again the installation width is minimal as a result of the compact valve clearance.

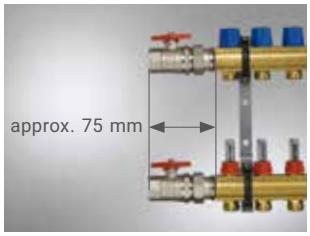
EMPUR® actuators can be installed directly instead of the blue protection cap on the return flow valves. The feed flow valves underneath are equipped with controllable and adjustable flow rate indicators (0-2.5 l/min). The two enclosed manifold end-pieces with a reducer for filling, bleeding and draining the heating circuit manifold can be rotated and are supplied in the bag for optional assembly on the right or left of the manifold.

Your benefits

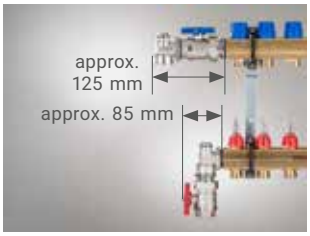
- Sturdy brass profile tube 1"
- Thick-walled and reasonably priced
- Small installation width
- Available for 2-16 heating circuits with connection 1" IT
- For quick installation in EMPUR® manifold cabinets “Top Standard” and “Exclusiv”

Brass manifolds to manifold connection sets and WMZ connection sets

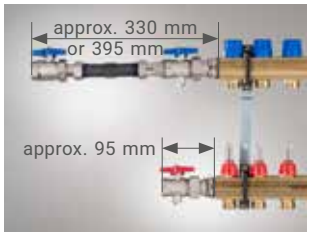
The following combinations are possible and should be ordered separately as a set:



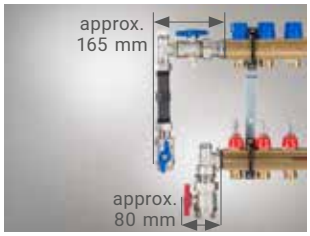
Ball valve set passageway



Manifold connection set 90°



WMZ connection set passageway



WMZ connection set 90°

NOTE The diagrams show potential installation situations. Additional combinations with valves and the assignment of manifold or manifold cabinet are possible, but not available as a set.

Manifold technology

Industrial manifold XXL-D

Industrial manifold

The EMPUR® industrial manifolds are made of robust 5/4" brass sectional tubing. They are supplied completely pre-assembled on manifold brackets with insulation inserts and integrated valves. EMPUR® actuators can be installed directly instead of the blue protection cap on the return flow valves. The feed flow valves on the lower distribution beam are equipped with flow rate indicators that can be adjusted and switched off (0-5 l/min. and 0-8 l/min. respectively) to regulate the required high volume flows. The maximum permissible volume flow of all heating circuits is 3 m^3/h. For filling, bleeding and draining the heating circuit manifold two manifold end pieces are included in the scope of delivery. Like all manifolds in our product range, they are for quick installation in our EMPUR® distribution cabinets.

Our large distributors are used to supply industrial and commercial areas. In combination with our industrial space heating systems, they are the core heart of a sensible and cost-effective heating concept, e.g. for halls and storage areas in trade, industry and trade.

Your benefits

- Sturdy brass profile tube 5/4"
- Thick-walled and reasonably priced
- Available for 5-16 heating circuits with connection 5/4" IT
- Heating circuit connections for pipe 20 x 2.0 / 25 x 2.3 and compression fittings included
- Accessories manifold and WMZ connection set available
- For quick installation in EMPUR® manifold cabinets „Top Standard plus“ und „Exclusiv plus“

Manifold technology

Control manifold, version 2.0

Control manifold, version 2.0

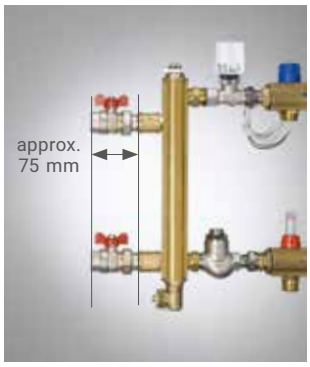
EMPUR® control manifolds are suitable for variable or constant flow temperature control in combination with control set V or K for the hydraulic integration of low-temperature floor heating in existing heating systems.

The latest generation of EMPUR® control manifolds is manufactured from 1" resp. 5/4" brass profile pipe. They are completely pre-assembled on manifold holders with sound insulation inserts and are equipped as standard with a high-efficiency pump, fine control valve, valve body for rule set, thermoseparator, 2 shut-off valves, 2 rinsing, filling and drainage valves as well as a pointer thermometer.

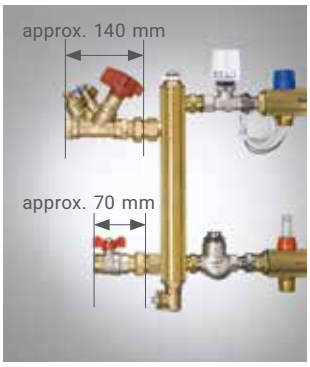
EMPUR® actuators can be installed directly instead of the blue protection cap on the return flow valves. The feed flow valves underneath are equipped with controllable and adjustable flow rate indicators (0-2.5 l/min).

HCM-DR control manifold including hydraulic separator

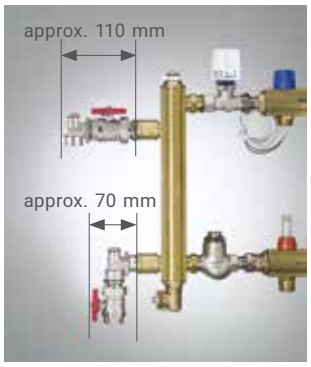
The following combinations are possible and should be ordered separately as a set:



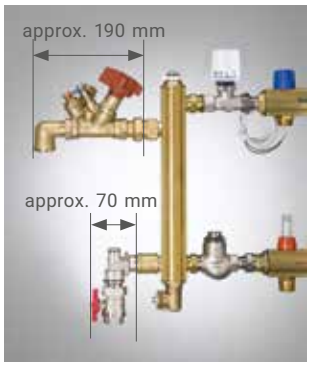
KH-DG



STAD-DG



KH-90°



STAD-90°

NOTE The diagrams show potential installation situations. The accessories shown for connection to the thermal switch, ball valve or STAD, are included with the manifold or can also be pre-assembled at the factory at an extra charge.

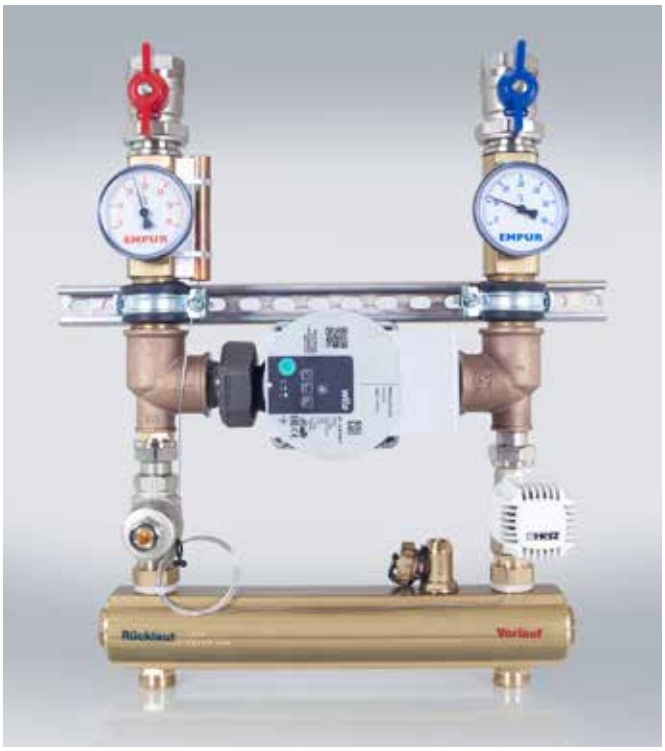
Your benefits

- Ideal for variable or constant flow temperature control in combination with control set V or K
- Possibility of subsequent hydraulic integration of the low-temperature floor heating in existing heating systems when modernising
- Hydraulic decoupling of the heat generator using the supplied thermoseparator
- Prevention of excess temperatures in the system using an overheat thermostat (accessories)
- Simple and safe limitation of the water volumes using an adjustable fine control valve
- Specially adapted accessories for an optimal connection to the heating system
- Available for 2-9 heating circuits with connection 1" IT or for 10-16 heating circuits with connection 5/4" IT
- For quick installation in EMPUR® manifold cabinets “Top Standard plus” and “Exclusiv plus”

CONTEMP alpha control station with high-efficiency pump and thermoseparator

For small and medium-sized heating systems with a minimum circulating water volume, the CONTEMP alpha control station in combination with modern heat pumps or condensing boilers is the perfect solution for “regulating” your heating system over several storeys.

The pre-assembled CONTEMP alpha control station is used for systems with surface heating and radiators to optimally control heat distribution. It ensures that flow temperatures are stabilised and extreme temperatures avoided.



NOTE The installation of a STAD valve for hydraulic balancing is required!

Manifold technology

Accessories

Extension set for system manifold HKV-D, 03

Extension set for system manifold HKV-D, 2.0

1/2" WMZ connection set passageway

Manifold connection set 90°

Manifold connection set passageway

WMZ connection set 90°

3/4" nickel-plated ball valve

Brass flow meter

Immersion sleeve

Balancing valve 2-16 l/min

STAD line regulating valve

Manifold crosspiece

Immersion thermometer indicator

Contact thermometer with spring

Zone valve

Connection set 90° for thermoseparator for HCM-DR

DG connection set for thermoseparator for HCM-DR

Actuator „Economy“ 230/24 V

Actuator „Man Open“ 230/24 V

DDC actuator 24 V AC

Manifold technology

Manifold cabinets

Manifold cabinets

Manifold cabinets provide the perfect location for manifolds and control stations. The “Top Standard” and “Exclusiv” versions are available as surface-mounted and flush-mounted cabinets for conventional manifold installation.

The “Exclusiv superflach” (super-flat) manifold cabinet enables manifold installation into narrow light-weight and dry walls. The large manifolds, control stations and control manifolds are installed in the “Top Standard plus” manifold cabinet for on-the-wall mounting or the “Exclusiv plus” for wall-integrated mounting.

The EMPUR® manifold cabinets has been completely reworked and are manufactured from galvanised and foil-coated sheet steel. They offer adapted suspension rails for the EMPUR® heating circuit manifold. With the specially developed **“quick manifold assembly technology”**, the manifolds are simply suspended in the guide rails of the manifold cabinet and fixed with two screws.

Additional benefits of the new generation of manifold cabinets include easy connection of the primary connections, time savings when feeding through electrical connection cables and, of course, secure and flexible mounting options.

Your benefits

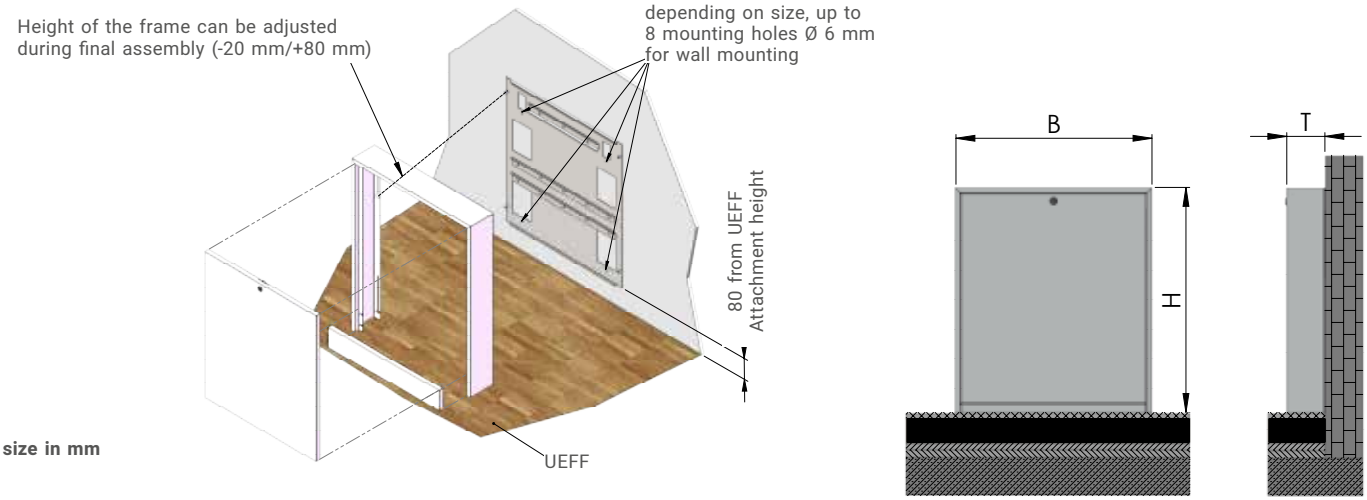
- Optimal suspension rails for the quick manifold installation of the EMPUR® system manifold
- High resistance of the surfaces through quality workmanship and an environmentally friendly film coating
- Simple connection of the primary connections through optimised lateral punch-outs
- Time saved when feeding through connection cables as a result of pre-punched openings
- Secure and flexible assembly of the manifold cabinets through various mounting options
- Individual, pre-assembled complete manifold solutions available on request

NOTE **We manufacture individual, pre-assembled complete distribution solutions on request!**

Manifold technology

Installation examples of manifold cabinets

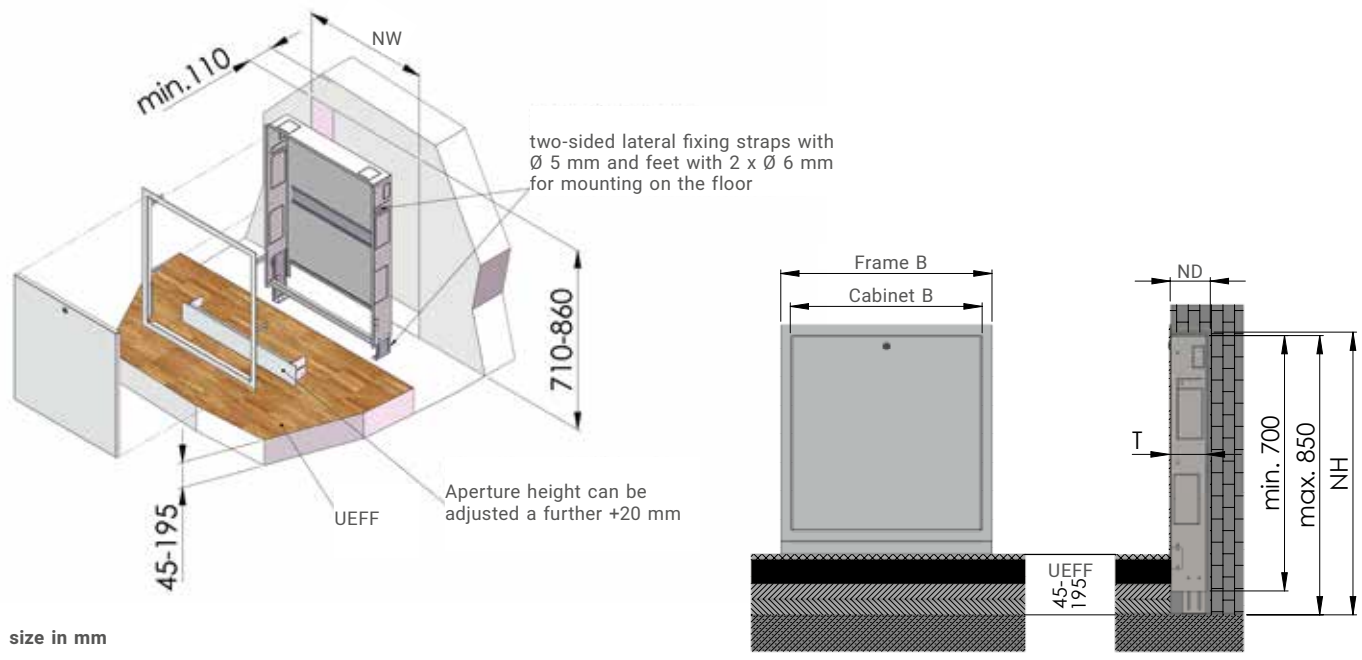
“Top Standard” manifold cabinet with removable rear panel for surface mounting



size in mm

NOTE When installing the “Top Standard” manifold cabinet, it is important to pay attention to the mounting height of the rear panel!

“Exclusiv” manifold cabinet for flush-mounting



size in mm

Key: B = width, H = height, T = depth, NB = niche width, NH = niche height, NT = alcove depth

Manifold technology

Our systems at a glance

Intelligent solutions for energy efficiency and comfort

Our components and accessories are optimally adapted to EMPUR® surface heating and cooling and take into account all the requirements of our diverse systems. This provides specialist tradesmen and building services planners with security and reliability in the professional design of a new heating and cooling system in new buildings or modernisation projects, as well as providing end users with the highest level of living comfort and a large potential for energy savings thanks to low flow temperatures.

Our systems at a glance

- **PUR-THERM® stapler system** – exceptional adhesion using staples
- **Exclusiv-Klett system** – perfect hook and loop technology and quick laying
- **top-Nopp® nub system** – laying using the press stud method
- **OPTIMAL II dry construction system** – for quick construction progress
- **CUT-THERM® milling system** – without additional installation height
- **top-Nopp® mini nub system** – for low installation heights
- **Wall heating/cooling** – different systems for drywall or wet installation
- **Ceiling heating/cooling** – for a comfortable Indoor climate all year round
- **XXL-Industry/concrete core temperature control** – efficient temperature control for large areas
- **Sports floor heating** – the solution for sports facilities

Further information about our surface heating and cooling systems can be found at our homepage or in personal consultation with your specialist consultant.

Manifold technology

Additional system components

Control technology

EMPUR® offers innovative and perfectly matched control components as an ideal addition to versatile surface heating systems. We offer cable-bound standard solutions for conventional surface heating, as well as solutions for heating/cooling applications with heat pumps depending on the type of application and installation.

In the case of retrofitting or modernisation, mostly wireless variants are used, which can be combined with modern heat generators.

We offer individual automation options with our Exclusiv modular-designed control technology (wireless/BUS). So you can also control your heating system via smartphone and PC.

The individual product ranges are supplemented with control terminal strips that – depending on the equipment – can also control a circulation pump. Dew point/humidity monitors and digital room temperature controllers with clock function round off the programme.

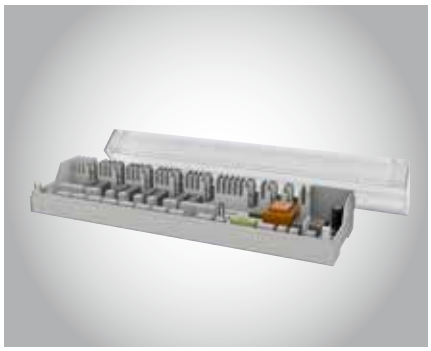
Opposite you will find a selection of our range. Please see our current price list for further components.

Give us a call. We'd be pleased to advise you!

Room operating unit 230 V/24 V analogue standard heating/cooling

Room operating unit 230 V/24 V Standard plus heating/cooling with display

Wireless/BUS room operating unit with display



Control terminal strip Balance heating/cooling 230 V

Humidity monitoring with external sensor

Wireless/BUS base station

Dew point monitor 230 V for top-hat rail mounting

Dew point sensor type 2 for dew point monitor 230 V

Dew point sensor type 3 for dew point monitor 230 V

You can find detailed information in our Control technology brochure.

EMPUR®

Your specialists for surface heating and cooling systems

Expertise, reliability and commitment are **EMPUR**®'s strengths. In addition to the production and sale of high-quality surface heating and cooling systems and components, the company's range of services also includes comprehensive services relating to the planning and installation of our complete systems.

EMPLAN®'s specialist engineers and planning consultants are available to help you with their expertise in demanding property planning in almost all TGA areas such as heating, air conditioning, ventilation, plumbing and electrical.

We have bundled our many years of experience in the installation of surface heating and cooling systems into our **EM**SOLUTION® and support tradesmen to complete their construction projects on time.

EMPUR®, **EM**PLAN® and **EM**SOLUTION® together form the **EM**GRUPPE®. Thus, the three core areas of expertise – production, planning and installation – come from a single source.

TBE . PLANNING . CONCEPTS

EMPLAN®

- Planning surface heating and cooling systems for new builds, modernisation projects and customised solutions
- Project planning for heating, ventilation and air conditioning applications, electrical engineering and swimming pool technology
- Creation of performance specifications
- Planning and designing Geniax projects
- Energy planning and assessment of residential and non-residential buildings (EnEV/GEG certificates)
- Construction supervision for technical building systems

www.em-plan.net

TBE . PRODUCTION . SALES

EMPUR®

- Plastic heating pipes, insulation and composite panels for surface heating and cooling systems for new builds and modernisation projects
- Manifold and control technology
- Geniax heat distribution systems
- Accessories and tools
- Customised solutions for industrial, sports and commercial buildings

www.empur.com

TBE . ASSEMBLY . SERVICE

EMSOLUTION®

- Installation of surface heating and cooling systems in new build and modernisation projects
- Installation of the CUT-THERM® milling system
- Commissioning of Geniax heat distribution systems and heat pump systems
- Service for technical building installations

www.em-solution.de

23-02-21

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