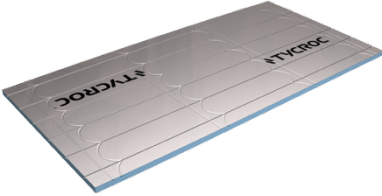
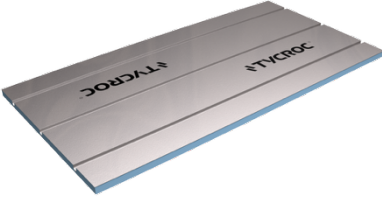
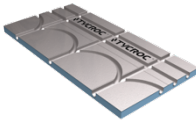
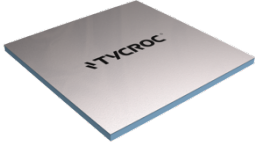




# TYCROC® UHP UNDERFLOOR HEATING PANEL INSTALLATION INSTRUCTIONS

Revision Date: 24 April 2026

## 1. PRODUCT IDENTIFICATION

UHP05	
UHP16A / UHP20A	
UHP16B / UHP20B	
UHP16C / UHP20C	

ARTICLES	DIMENSIONS	DESCRIPTION
UHP05	1200 × 600 × 20 mm	for heating cables ≤ Ø 7 mm
UHP16A	1200 × 600 × 25 mm	straight panel for Ø 16 – 17 mm pipe
UHP16B	300 × 600 × 25 mm	return panel for Ø 16 – 17 mm pipe
UHP16C	600 × 600 × 25 mm	plain panel
UHP20A	1200 × 600 × 30 mm	straight panel for Ø 18 – 20 mm pipe
UHP20B	300 × 600 × 30 mm	return panel for Ø 18 – 20 mm pipe
UHP20C	600 × 600 × 30 mm	plain panel

## 2. CUTTING AND STORAGE

Tycroc UHP panels are easy to cut using a utility knife (carpet knife / drywall knife) or an electric circular saw. For cutting new grooves, the best tools are a hot knife (foam cutter) or a router with a suitable profile.

There are no special storage requirements. However, storing panels on edge is not recommended, as this may cause damage (for example broken corners or edges). Panels should also not be leaned diagonally against a wall, as this may cause bending. Prolonged exposure to UV radiation must be avoided.

### 3. APPLICATION CONDITIONS

Tycroc UHP underfloor heating panels are designed for installation on a stable, load-bearing substrate that complies with applicable building standards.

When installing Tycroc UHP underfloor heating panels, the underlying surface must be level, dry, strong, rigid, and stable. It should also be clean, free of dirt, oil, or other lubricants, and must not be frozen. If needed, the surface should be leveled using appropriate products designed for this purpose.



### 4. UHP PANEL INSTALLATION

Panels may be installed on timber structures (for example floorboards, OSB panels, plywood, etc.) as well as on concrete substrates that comply with the above-mentioned application conditions. The preferred installation method for Tycroc UHP panels is bonding. This ensures a rigid and stable substrate beneath the floor covering and also helps to reduce impact noise (including horizontal sound transmission).

Using Tycroc Fast Fix acrylic adhesive or a suitable tile adhesive (selection depending on the substrate), install the panels in accordance with the previously prepared heating layout.

The general installation requirements for Tycroc UHP panels and the subsequent flooring remain unchanged, regardless of whether the panels are used for installing heating pipes or heating cables.

#### 4.1

First install Tycroc PES perimeter strip in the wall/floor corner. It acts as thermal and acoustic insulation as well as an expansion joint.

Apply the strip around the entire heated room (self-adhesive tape on the reverse side) and around all structural elements (columns, stairs, pipes, etc.). Tycroc PES perimeter strip is 6 mm thick and 140 mm high, and should be cut to the required height before installing the final floor covering.

The strip is also equipped with a 300 mm polyethylene (PE) foil apron. Care must be taken to prevent this foil from ending up beneath bonded panels or bonded floor coverings.



#### 4.2

- a) Apply Tycroc Fast Fix acrylic adhesive to the substrate using a B3 notched trowel. For detailed conditions of use and instructions, see page 3.
- b) Apply a suitable tile adhesive to the substrate. If recommended by the adhesive manufacturer, first apply an appropriate bonding primer to improve adhesion (tested tile adhesives on page 10).



## 4.2.1 TYCROC FAST FIX APPLICATION CONDITIONS

The product is designed for fixing Tycroc UHP panels onto the wooden structures (e.g. boards, OSB boards, plywood, etc.), various building boards (e.g. cement fiber board, gypsum board, etc.) and concrete surfaces.

Usage temperature between +18 °C and +25 °C. Relative humidity in the room should not exceed 65%. Prior to bonding, the adhesive and the material to be glued should achieve the same temperature as the floor (+18 °C to +25 °C). Relative humidity of the substrate should be 85–90% RH at the maximum, depending on the material. Protect from moisture, if needed.

The product is not suitable for use between two waterproof layers where drying is difficult or impossible. When installing floor or wall coverings, instructions by the manufacturer should always be followed.



## 4.2.2 TYCROC FAST FIX APPLICATION INSTRUCTIONS

**Preparation:** The substrate should be ready for installation, i.e. strong, clean, dry, and free of oil, dust and grease. Usage conditions should be checked in accordance with applicable construction requirements and DIN 18356. Grind cement, concrete and self-levelling substrates and uneven, older and unstable substrates, until a strong, adherent surface is achieved. After grinding, remove dust from the floor.

**Application:** Prior to application, the adhesive should be well stirred. Apply the adhesive to the substrate, by using a trowel. Do not use more adhesive than is needed for bonding the flooring. Install the flooring immediately or after a short waiting period. Spread the adhesive well in order to remove excess air and ensure a good contact between the adhesive and the flooring. Best results are achieved by using a flooring roller. Make sure that the whole flooring surface has a good contact with the adhesive.

**Wet bonding:** Apply the adhesive by using a trowel. Place the material to be glued on a wet adhesive. The latest time for wet bonding is up to 20 minutes after applying adhesive to the substrate. The glued material should be well rubbed by using a suitable tool.

**Double-sided bonding:** Apply the glue with a trowel. Place the material to be glued on a wet adhesive, separate the surfaces and let the adhesive dry for 5–10 minutes before connecting the glued surfaces again. When using double-sided contact bonding, it is very important that the cover is pressed strongly against the surface. In wet rooms, all joints of the flooring should be sealed.

Attention! The Tycroc Fast FIX safety data sheet and technical data sheet can be found at [www.tycroc.com](http://www.tycroc.com).

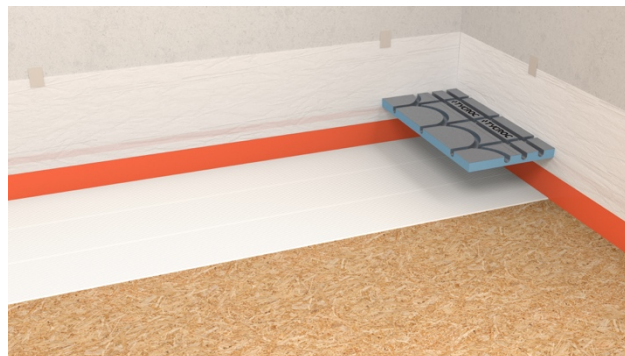
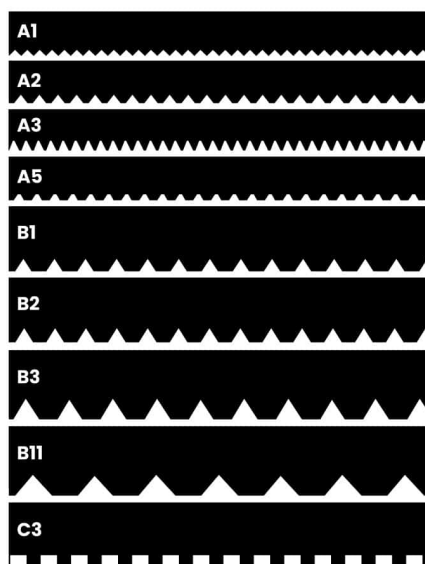
## 4.3

According to the direction of the pipe circuit layout, **B panels**, i.e. **return panels**, must be installed along the walls.

Place the panels onto Tycroc Fast Fix acrylic adhesive or a suitable tile adhesive and press them down so that the panel bonds to the substrate. Check that the panels are level on the floor (a hammer together with a wooden support board or block is a useful tool for levelling the panels into position).

## RATE OF CONSUMPTION FOR TYCROC UHP PANELS:

Approximately 0.6 kg per square meter, which equates to one 15 kg bucket covering 25 square meters, using trowel with B3 notching. (Using different trowels or bonding different materials will result in different consumption rates.)

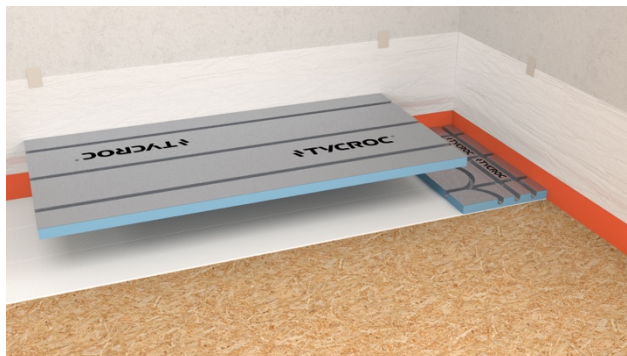


## 4.4

Continue with A panels, i.e. straight panels.

Place the panels onto the Tycroc Fast Fix or tile adhesive and press them down so that the panel bonds to the substrate. Check that the panels are level on the floor (a hammer together with a wooden support board or block is a useful tool for levelling the panels into position).

Recommendation! If necessary, place additional weight on top of the panels while the adhesive or mortar cures (for example a bucket of adhesive or a bag of compound). If an additional 2–5 Tycroc fixing screws with washers are used per panel, or Tycroc metal anchors in the case of a concrete subfloor, no additional weight is required during curing and the installation process is faster.



## 4.5

For subsequent floating surface coverings, Tycroc UHP panels can be secured as follows:

- wooden floors - use Tycroc fixing screws and washers;
- concrete subfloors - use Tycroc metal dowels.

The maximum allowable distance between fixing points is 300 mm.

Fixing Consumption Rate:

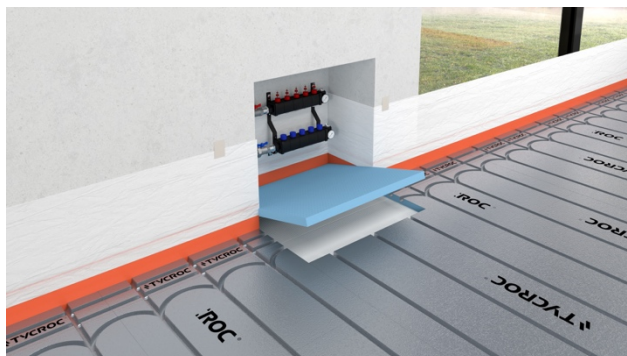
15 fixings are required for each 1200 x 600 mm Tycroc UHP panel.



## 4.6

C panels, i.e. plain panels, are intended for use:

- under electric heating mats, where they act simultaneously as an insulating, heat-distributing and heat-reflecting substrate;
- in irregularly shaped rooms where grooves need to be cut according to project-specific requirements (for example corners, transitions between rooms, etc.);
- in the manifold area.

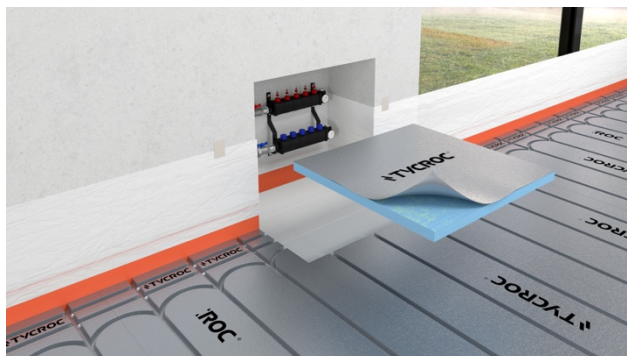


### 4.6.1

Directly in front of the manifold, the spacing of the future pipes is tighter than in the rest of the floor area. To avoid a significantly higher floor temperature in this zone, it is recommended to cut pipe grooves into the underside of the C panel, i.e. the side without aluminium foil.

As Tycroc Fast Fix acrylic adhesive does not bond to aluminium, the aluminium foil must be removed before installing the panel (this is not necessary when fastening with screws).

Attention! Subsequent handling and installation of the floor covering will be more convenient and easier if the current underside of the panel is used as the top side, i.e. the smooth finished surface with small perforations. After removal of the aluminium foil, the other side may remain excessively uneven and partially covered with adhesive residues.

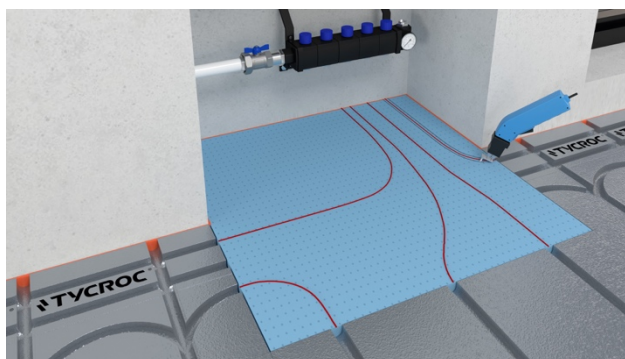


## 4.6.2

When cutting a groove, the size, depth and shape of the existing grooves (resembling an inverted omega shape) must be followed so that the edges of the newly cut groove also hold the pipe securely inside the groove.

Using a suitably shaped twisted hot knife (foam cutter) or a router with a suitable profile, cut the new groove along the previously marked route (ensure that the bending radius of the groove is nowhere less than 90 mm and that the pipe can still be installed into the groove).

If new grooves are planned on the aluminium foil side of A, B or C panels, the aluminium foil strips must first be removed. Using a utility knife, cut the aluminium foil with two cuts along the desired new route and remove the relevant section so that the blue XPS foam becomes visible. Then continue cutting the grooves.

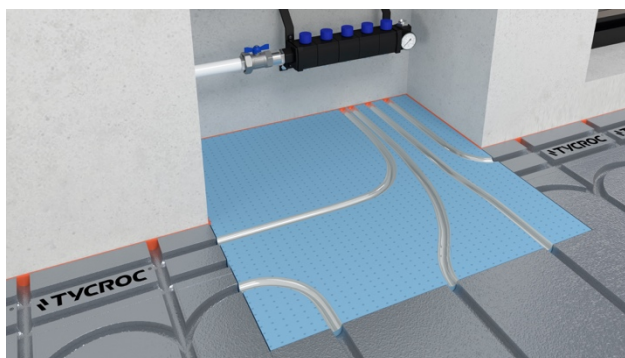


## 4.6.3

Before installing the heating pipe, apply Tycroc aluminium tape to the bottom of each new groove in order to transfer the pipe's heat energy to the aluminium surface of the panel.

It is important that the heating pipe and the blue XPS foam do not come into direct contact with each other in order to avoid later clicking or cracking noises that may be caused by the natural expansion and contraction of the heating pipe during heating and cooling.

Recommendation! To simplify installation of the tape into the groove, we recommend first applying the tape to one inner side of the groove and then to the other inner side. If necessary, the pipe may also be fixed from above with tape to ensure that it remains securely in the groove. Aluminium tape may also be used to cover larger gaps between panels.



## 4.7

Before installing the heating pipes, make sure that the grooves are clean and free from dirt and excess debris. Avoid excessive stepping on empty grooves in order not to damage or compress the edges.

Attention! If the floor covering is not installed immediately, then despite the fact that the new generation Tycroc UHP panels have a compressive strength of 450 kPa, we recommend temporarily covering walkways with a more rigid board material (for example OSB panel, plywood, etc.) in order to protect the surface until the floor covering material is installed.



## 5. HEATING PIPE INSTALLATION

Tycroc UHP panels are available for heating pipes in Ø16 mm and Ø17 mm sizes (UHP16A / UHP16B / UHP16C) as well as Ø20 mm size (UHP20A / UHP20B / UHP20C). In accordance with the previously prepared heating design, install Tycroc PERT underfloor heating pipe of the appropriate diameter and length (rate of consumption: 1 m<sup>2</sup> = 5 m pipe). Recommended heating water temperature inside the pipes is 35 - 40 °C.

### MAXIMUM PERMITTED PIPE LENGTHS:

- Ø16 mm – up to 80 m
- Ø17 mm – up to 90 m
- Ø20 mm – up to 120 m

(based on standard EVS 941-1:2024 – General quality requirements for construction works. Part 1: Heating and cooling systems)

Attention! Before installing Tycroc PERT underfloor heating pipe, read the product processing and installation instructions available at Tycroc website [www.tycroc.com](http://www.tycroc.com)

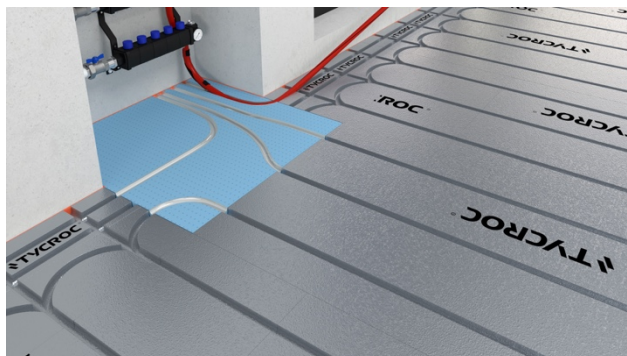


## 5.1

Place the pipe above the groove at the desired pressing-in point near the manifold. Keep the remaining pipe, which follows the circuit route, elevated above the floor surface (for example by standing upright and holding the pipe by hand), so that the angle between the pipe and the groove is greater, allowing the pipe to be pressed more easily into the omega-shaped groove.

Press the underfloor heating pipe into the grooves of the Tycroc UHP panels using your foot or hand. Ensure that the pipe reaches the connection point and allow an additional 1 m of spare length.

Recommendation! To preserve the shape and rigidity of the groove and to ensure secure retention of the pipe, it is not recommended to remove a pipe that has already been installed from the groove again.

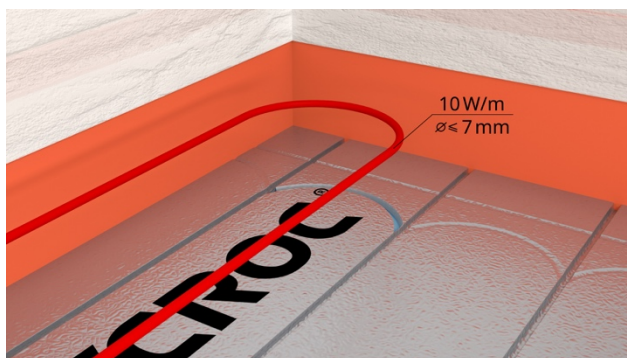


## 6. UHP05 & HEATING CABLE INSTALLATION

For Tycroc UHP panels (UHP05), it is optimal to use heating cables with a diameter of Ø5 mm to Ø7 mm and an output of 10 W/m. The heating cable must be installed in accordance with the previously prepared design and the installation instructions of the respective heating cable manufacturer.

When using a heating cable, the floor temperature must be controlled by a thermostat with a maximum setting of 28 °C (requirement of parquet manufacturers).

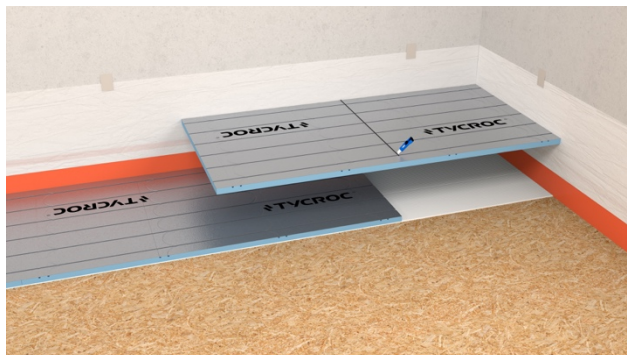
In the event of any conflict with the heating cable manufacturer's installation instructions, the respective manufacturer's instructions must always be followed. This also applies if the cable manufacturer permits the use of cables with a higher output than 10 W/m in Tycroc UHP panels.



## 6.1

Place the UHP05 panels onto adhesive or mortar and press them down so that the panel bonds to the substrate. Check that the panels are level on the floor (a hammer together with a wooden support board or block is a useful tool for levelling the panels into position).

Recommendation! If necessary, place additional weight on top of the panels while the adhesive or mortar cures (for example a bucket of adhesive or a bag of compound). If an additional 2–5 Tycroc fixing screws with washers are used per panel, or Tycroc metal anchors in the case of a concrete subfloor, no additional weight is required during curing and the installation process is faster.



## 6.2

For subsequent floating surface coverings, Tycroc UHP panels can be secured as follows:

- wooden floors - use Tycroc fixing screws and washers;
- concrete subfloors - use Tycroc metal dowels.

The maximum allowable distance between fixing points is 300 mm.

Fixing Consumption Rate:

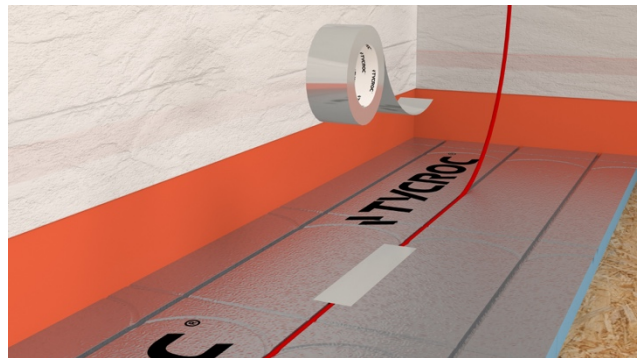
15 fixings are required for each 1200 x 600 mm Tycroc UHP panel.



## 6.3

Place the cable into the grooves of the Tycroc UHP (UHP05) panels. If necessary, press the cable to the bottom of the groove by hand or foot. If required, secure the cable occasionally with small strips of Tycroc aluminium tape.

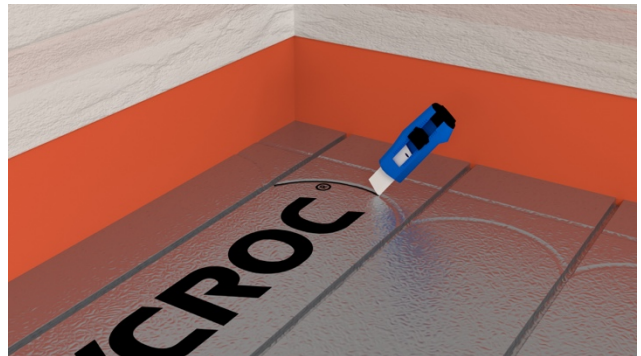
Recommendation! To preserve the shape and rigidity of the groove and to ensure secure retention of the cable, it is not recommended to remove a cable that has already been installed from the groove again.



## 6.4

For use of U-turns or transverse grooves along walls, first cut open the aluminium foil with a knife in order to open the grooves, then press the foil edges into the groove using, for example, the end of the knife handle. If necessary, additional space may also be cut with a knife for the thermostat sensor and for the cable end or joint connection.

When cutting a new groove for the heating cable, use a utility knife to cut a triangular groove (diagonal cuts from one side and the other side), following the size and depth of the existing grooves so that the heating cable fits properly into the groove. If necessary, secure the cable occasionally with small strips of Tycroc aluminium tape.



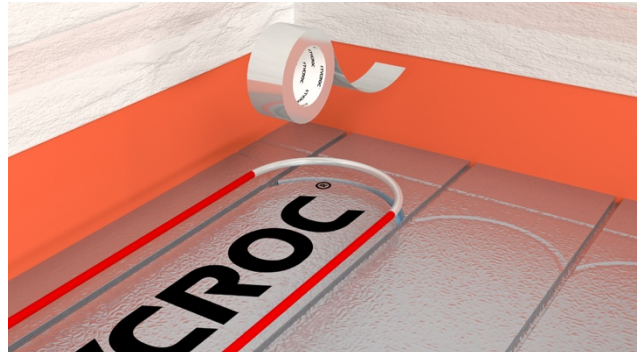
## 6.5

Before placing the cable into an opened U-turn groove or an additional groove, the cable itself must be insulated over the required length with Tycroc aluminium tape in order to transfer the cable's heat energy to the aluminium surface of the panel and to prevent possible overheating of the cable inside the insulation material. The thermostat sensor and the cable end or joint connection must also be insulated with aluminium tape.

It is important that the heating cable and the blue XPS foam do not come into direct contact with each other in order to prevent local overheating of the cable.

Tape consumption: 1 roll per approx. 50 panels.

Attention! If the floor covering is not installed immediately, then despite the fact that the new generation Tycroc UHP panels have a compressive strength of 450 kPa, we recommend temporarily covering walkways with a more rigid board material (for example OSB panel, plywood, etc.) in order to protect the surface until the floor covering material is installed.



## 7. INSTALLATION OF FLOOR COVERING MATERIALS

After successful connection of the heating system and completion of the pressure test, the surface is ready for installation of the floor covering. Before installing the floor covering, the heating system must be switched off and the heating pipes/cables must be allowed to cool down.

The excess part of the Tycroc PES perimeter strip must also be cut off and removed. If preferred, this may also be done after installation of the floor covering.

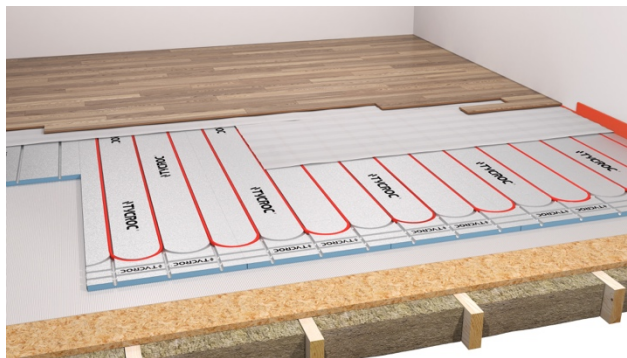
Tycroc UHP panels are suitable beneath all common floor coverings, including parquet, vinyl flooring, wood flooring, ceramic floor tiles and natural stone.

If necessary, Tycroc UHP panels may also be covered with concrete or gypsum screed, as well as various dry floor elements, including gypsum fibre board, cement fibre board or plasterboard.

## 7.1

### Laminate floor and natural parquet:

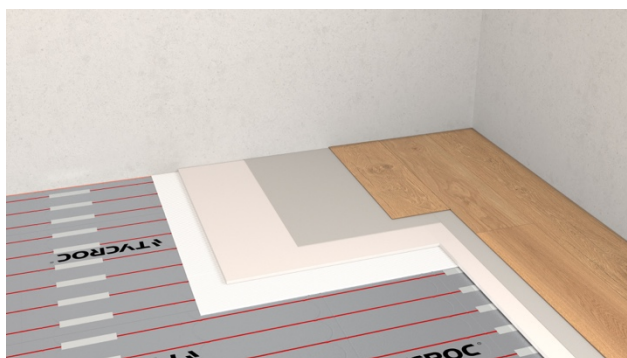
- Install laminaate floor and natural wooden parquet in accordance with the respective manufacturer's installation instructions;
- first install impact sound insulation underlay, if required by the respective manufacturer;
- provided the manufacturer does not prohibit it, install the parquet as a floating floor directly over Tycroc UHP panels and, where possible, perpendicular to the pipe grooves;
- if required by the manufacturer, or in the case of glued parquet, use an additional intermediate layer such as levelling compound (tested levelling compounds on page 10) or an additional insulating and rigidifying building board (floor gypsum board, OSB panel, plywood, cement fibre board, etc.) onto which the parquet can be installed or bonded;
- we recommend installing any intermediate building board by bonding, following the installation instructions of the respective board manufacturer and using adhesives or tile adhesives suitable for Tycroc UHP panels (tested tile adhesives on page 10).



## 7.2

### Vinyl flooring (LVT, LVP, SPC) and PVC:

- Install vinyl flooring (LVT, LVP, SPC) and PVC in accordance with the respective manufacturer's installation instructions;
- provided the respective manufacturer does not prohibit it, and provided the floor covering itself is sufficiently rigid, it may be installed directly over Tycroc UHP panels;
- if required by the manufacturer, or if the floor covering material does not provide sufficient rigidity, use an additional intermediate layer such as levelling compound (tested levelling compounds on page 10) or an additional insulating and rigidifying building board (floor gypsum board, OSB panel, plywood, cement fibre board, etc.);
- we recommend installing any intermediate building board by bonding, following the installation instructions of the respective board manufacturer and using adhesives or tile adhesives suitable for Tycroc UHP panels (tested tile adhesives on page 10).



## 7.3

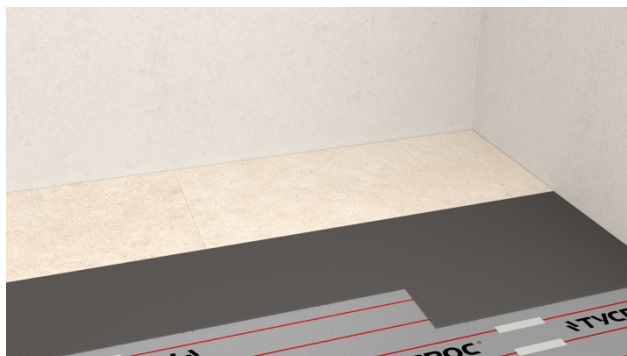
### Wooden floor / wooden planks:

- install the wooden planks in accordance with the manufacturer's installation instructions or the general installation standards for wooden planks;
- to ensure proper installation, we recommend avoiding direct contact between the wooden board and Tycroc UHP panels. Instead, create an air gap by using battens or similar materials;
- after installing the wooden planks, trim and remove any excess from the Tycroc PES perimetral strip before installing the skirting boards.

## 7.4

### Ceramic floor tiles and natural stones in dry rooms:

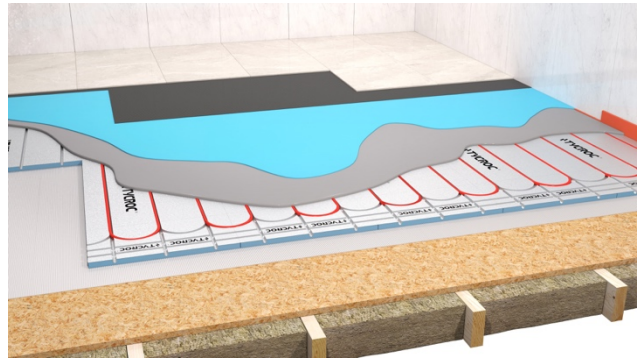
- Follow the installation instructions of the tile system manufacturer and the installation requirements of the specific floor covering material;
- floor tiles and natural stone from 15 × 15 cm onwards may be bonded directly to Tycroc UHP panels using a high-bond-strength flexible tile adhesive (if recommended by the adhesive manufacturer, first apply a suitable bonding primer to the aluminium surface to improve adhesion);
- for smaller tiles, first reinforce the Tycroc UHP surface with a levelling compound or filler suitable for aluminium surfaces;
- tested products for tiling works – see page 10.



## 7.5

Ceramic floor tiles and natural stones in wet rooms:

- Follow the installation instructions of the tile system manufacturer and the installation requirements of the specific floor covering material;
- in wet or damp rooms, apply levelling compound over Tycroc UHP panels (if necessary, create a fall towards the drain), and apply waterproofing membrane over the levelling compound (ensure that the selected levelling compound is suitable for covering aluminium surfaces);
- ceramic floor tiles and natural stone must be bonded using a high-bond-strength flexible tile adhesive;
- as the surface has been reinforced with levelling compound, there are no special restrictions regarding tile dimensions;
- tested products for tiling works – see page 10.



## 7.6

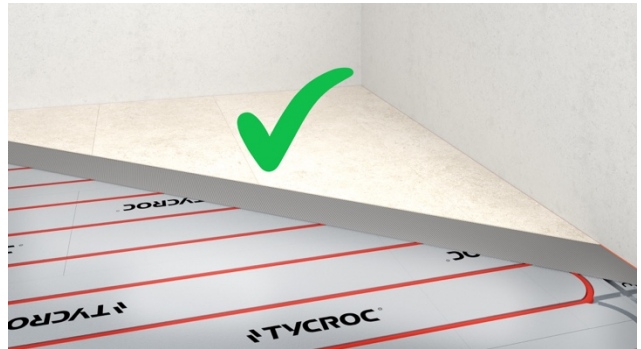
### PROHIBITED

The use of ceramic tiles and natural stone is not permitted when the Tycroc UHP panels themselves have been installed using the screw-fixing method.



### PERMITTED

The use of ceramic tiles and natural stone is permitted only when the Tycroc UHP panels themselves have been installed using the bonding method.



## 8. TESTED COMPATIBLE PRODUCTS

### Ceresit

In cooperation with Henkel Baltic OÜ, we have tested the compatibility of Tycroc UHP panels with the following Ceresit products:

- Tile adhesives for bonding Tycroc UHP panels to concrete – Ceresit CM17, CM29, CM49, CM90
- Cleaning of aluminium before surface treatment – acetone
- Bonding primers for Tycroc UHP panels – Ceresit CT19
- Levelling compounds for Tycroc UHP panels – Ceresit CN75 or CN76 + reinforcement mesh
- Waterproofing over levelling compound – Ceresit CL50 or CL51
- Tile adhesive for use directly over Tycroc UHP panels – Ceresit CM49
- Tile adhesives for use over Ceresit waterproofing and levelling compounds – Ceresit CM17, CM29, CM49, CM90

Henkel Balti OÜ draws attention to the following when using Tycroc UHP panels together with Ceresit products:

- when installing Tycroc UHP panels with Ceresit products, Ceresit installation instructions must be followed;
- before applying primer, thoroughly wipe the aluminium surface with acetone;
- when using Ceresit CM90 or CM17 tile adhesive, prime the surface depending on absorbency with concentrated or diluted Ceresit CN94 or Ceresit R766 bonding primer;
- as alkaline compounds (containing cement or lime) are generally not compatible with aluminium, we cannot recommend pouring Ceresit levelling compounds directly onto the aluminium surface; if levelling compound is required over UHP panels, the aluminium surface must first be cleaned with acetone and primed with Ceresit CT19 bonding primer, after which a minimum 12 mm layer of Ceresit CN75 or CN76 levelling compound should be applied; installation of a large-mesh alkali-resistant fibreglass reinforcement mesh within the levelling layer is recommended;
- in wet rooms, use Ceresit CL50 or CL51 waterproofing membrane over the levelling compound, and use Ceresit waterproofing fabrics / reinforcing tapes for expansion joints, corners and penetrations;
- further information is available in Ceresit installation instructions, Technical Data Sheets and Safety Data Sheets. If necessary, consult Ceresit technical support.



In cooperation with Kiilto Oy, we have tested the compatibility of Tycroc UHP panels and the following Kiilto products:

- Tile adhesives for fixing Tycroc UHP panels and tiling works – Kiilto Ultra Fix, Kiilto Flexfix, Kiilto Floorfix DF, Kiilto Superfix DF, Kerapid DF, Kiilto Highflex S2 DF;
- Levelling compounds for Tycroc UHP panels:
  - cleaning with acetone;
  - Kiilto Fix Primer bonding primer;
  - minimum levelling thickness 12 mm: Kiilto Kestonit Termo or Kiilto Pro Plan Craft;
- Waterproofing over levelling compound – Kiilto Fibergum or Kiilto Keramix A+X;
- Corner reinforcement tape – Kiilto Corner Reinforcement Tape;
- Pipe penetration reinforcement – Kiilto Kaivolaippa;
- Grout – Kiilto grouts;
- Sanitary silicone – Kiilto sanitary silicones.

Kiilto Oy draws attention to the following when using Tycroc UHP panels together with Kiilto products:

- when panels are fixed to the substrate with tile adhesive, the reverse side of the UHP panel must be roughened / sanded; alternatively, sufficient adhesion may be achieved by using the double-bonding method, applying adhesive both to the substrate and to the reverse side of the panel;
- clean the aluminium surface with acetone and prime it with Kiilto Fix Primer bonding primer;
- when tiling directly onto primed Tycroc UHP panels (dry rooms), the minimum tile size is 15 × 15 cm;
- for floors subject to higher-than-normal loads (for example under washing machines), we nevertheless recommend first levelling over the UHP panels with fibre-reinforced levelling compound, which increases floor rigidity and improves heat distribution;
- further information is available in Kiilto installation instructions, Technical Data Sheets and Safety Data Sheets. If necessary, consult Kiilto technical support.

## 9. LEGAL NOTICE

These installation instructions contain general recommendations and guidance for the construction of different types of structures and for the installation of floor covering materials. For more specific installation guidance regarding the selected floor covering material or the installation of a building board used as an intermediate layer, the manufacturer or supplier of the respective material must be consulted. In the event of any conflict, the instructions of the respective manufacturer shall always prevail.

Tycroc OÜ shall not be liable where applicable construction standards, these installation instructions, or the installation instructions of the floor covering manufacturer have not been followed. We recommend the use of qualified installers for product installation.

The information provided in these installation instructions is based on the knowledge and test results available at the time of publication. Tycroc OÜ reserves the right to amend these installation instructions without prior notice. Upon publication of new installation instructions, all previous instructions relating to the same product or system shall automatically become invalid.

## 10. TYCROC PRODUCTS FOR COMPLETE UNDERFLOOR HEATING SOLUTIONS

### Tycroc PERT pipe

PRODUCTS	DIMENSIONS
PERT16-120	16 × 2.0 mm 120 m
PERT16-240	16 × 2.0 mm 240 m
PERT16-480	16 × 2.0 mm 480 m
PERT16-640	16 × 2.0 mm 640 m
PERT17-120	17 × 2.0 mm 120 m
PERT17-240	17 × 2.0 mm 240 m
PERT17-480	17 × 2.0 mm 480 m
PERT20-120	20 × 2.0 mm 120 m
PERT20-240	20 × 2.0 mm 240 m
PERT20-480	20 × 2.0 mm 480 m
PERT20-640	20 × 2.0 mm 640 m



### Tycroc TSL manifold

PRODUCTS	DIMENSIONS
TSL1	1¼" - 1 × ¾" Euro
TSL2	1¼" - 2 × ¾" Euro
TSL5	1¼" - 5 × ¾" Euro



### Tycroc TSL valves with handles

PRODUCTS	DIMENSIONS
TSL-VA1	1¼"-1", L = 60 mm, (pair)



### Tycroc TSA actuator

PRODUCTS	DIMENSIONS
TSA230	230 V ~ 50–60 Hz 1,8 W NC M30 × 1,5
TSA24	24 V ~ 50–60 Hz 1,6 W NC M30 × 1,5



### Tycroc SmartOne thermostat

PRODUCTS	DIMENSIONS
SMART1	85 × 85 × 12 mm (screen: 4" 480 × 480 24 bit)
SENS-F floor sensor	4 × 45 mm / 3 m



## Tycroc TCA compression adapter

PRODUCTS	DIMENSIONS
TCA16	16 × 2 mm 3/4" Euro
TCA17	17 × 2 mm 3/4" Euro
TCA20	20 × 2 mm 3/4" Euro



## Tycroc PBS 90° plastic bend support

PRODUCTS	DIMENSIONS
PBS16	∅ 14 - 18 mm torule
PBS20	∅ 20 - 22 mm torule



## Acrylic adhesive

PRODUCTS	DIMENSIONS
Tycroc Fast Fix	15 kg



## Metal dowels

PRODUCTS	DIMENSIONS
MED50	8 × 50 mm
MED80	8 × 80 mm
MED110	8 × 110 mm



## Metal washers (430 stainless steel)

PRODUCTS	DIMENSIONS
MEW50 (50 tk/pk)	36 × 0,6 mm
MEW500 (500 tk/pk)	36 × 0,6 mm



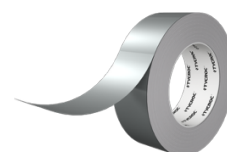
## Combiscrews

PRODUCTS	DIMENSIONS
MES35	M4 × 35 mm
MES55	M4 × 55 mm



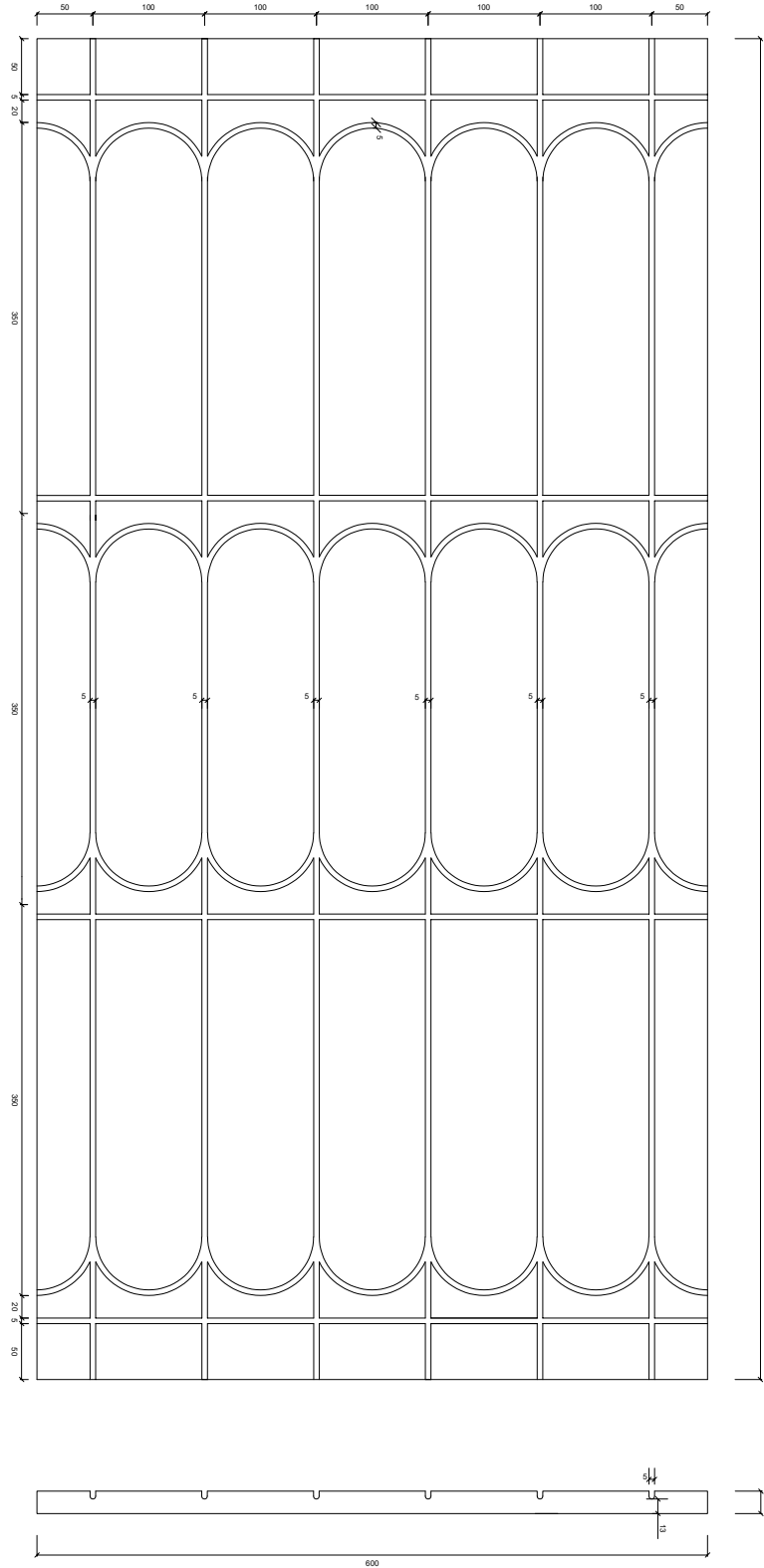
## Aluminium tape

PRODUCTS	DIMENSIONS
TAPE70	70 µm / 50 m / 45 mm

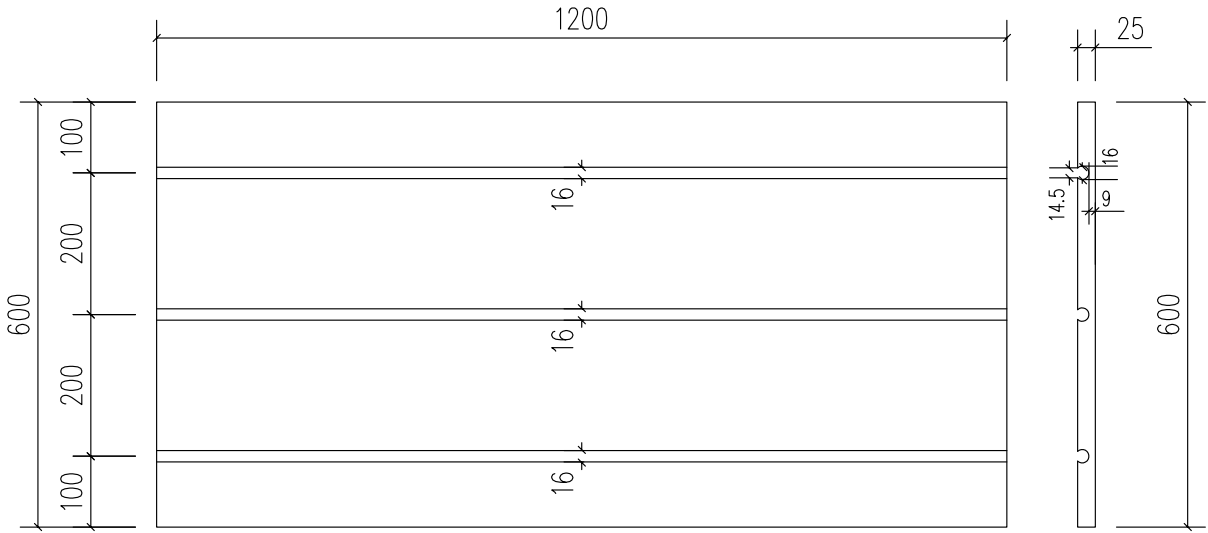


## 11. TECHNICAL DRAWINGS

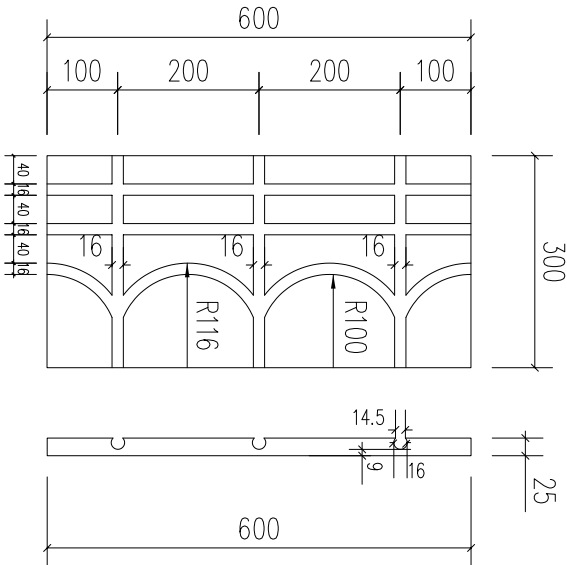
UHP05



**UHP16A**



**UHP16B**



**UHP16C**

