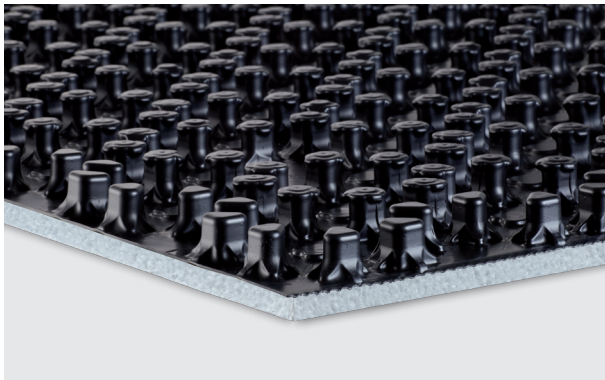


# TECHNICAL DATA SHEET

## BLANKE PERMATOP BF+

Thin-layer underfloor heating and cooling system for tiles and natural stone coverings as well as alternative coverings such as carpet, parquet, linoleum and vinyl



### Technical data

#### BLANKE BF+ Base studded panel

Art. no.:	671-906
Material:	PS
Material thickness:	0.6 mm
Panel height:	31 mm
Panel dimensions:	145 cm x 85 cm
Usable dimensions:	140 cm x 80 cm
Useful floor area:	1.12 m <sup>2</sup>
Rated insulation thickness:	11 mm DEO
Thermal conductivity level:	035 (0.035 W/(mK))
Heat transfer resistance:	0.30 m <sup>2</sup> K/W
Fire classification to DIN EN 13501-1:	E
Maximum live load:	5.0 kPa/(kN/m <sup>2</sup> )/(500 kg/m <sup>2</sup> )
Screed requirement per m <sup>2</sup> :	approx. 20 l/m <sup>2</sup> (approx. 41 kg/m <sup>2</sup> ) at 8 mm stud elevation
Weight per m <sup>2</sup> :	approx. 42.5 kg/m <sup>2</sup> at 8 mm stud elevation
Packing unit:	13 panels in a carton = 14.56 m <sup>2</sup>

#### BLANKE PIPE heating pipe 16 x 2 mm or 14 x 2 mm

Art. no.:	687-904-XXX (070 - 600) 16 x 2 mm
Art. no.:	661-909-XXX (070 - 600) 14 x 2 mm

Material:	oxygen diffusion-tight PE-RT
Diameter:	16 x 2.0 mm/14 x 2.0 mm
Roll length:	70/120/200/600 m

#### Material requirement for installation gap:

VA 10 cm:	10.00 m/m <sup>2</sup>
VA 15 cm:	6.70 m/m <sup>2</sup>
VA 20 cm:	5.00 m/m <sup>2</sup>

**Note:** Please observe the technical data sheet for BLANKE PERMAT.

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### Properties

- > Thin layer
- > Fast-reacting
- > Low mass per unit area
- > Integrated thermal insulation
- > Perfectly matched system components

### Product description

BLANKE PERMATOP BF+ (Basic Floor Plus) consists of a polystyrene (PS) studded panel that has an installation height of 31 mm including the integrated thermal insulation. The system features a high-quality PE-RT heating pipe 16 x 2 mm and, alternatively, a PE-RT heating pipe 14 x 2 mm (BLANKE PIPE) with an internal protective oxygen barrier layer (EVOH). Furthermore, the system includes the single-sided self-adhesive edge insulation strip for adhesion to the wall (BLANKE RDS 10/120). The system also comprises the BLANKE RDS 10/120 SK, which was specially developed for BLANKE FILLOTHERM. This has a double-sided adhesive base on the underside for adhesion to the floor, and is designed to create a permanent, sealed connection between the edge strip and the system studded panel in order to prevent flowing mortar from leaking.

### Substrate / application areas

BLANKE PERMATOP BF+ can be used on firm, load-bearing substrates that are suitable for the anticipated live loads. The supporting substrate must be sufficiently dry and level to accommodate the planned installation (compliant with DIN 18202 tolerances in building construction).

On-site insulation in the form of insulating underlay (DEO and DES) can be used under the BLANKE BF+ BASE studded panel.

Impact sound insulation layers (DES insulation) may be used under the BF+ BASE studded panel only as a single layer. The maximum permissible overall compressibility of the insulation should not exceed 2 mm (max. 3 mm) (recommended cp = 2).

BLANKE PERMATOP BF+ is suitable for heating and cooling living areas, offices and commercial premises up to a live load of 5.0 kN/m<sup>2</sup> (kPa) where only low installation heights are available.

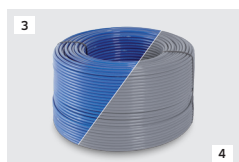
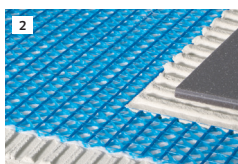
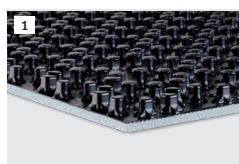
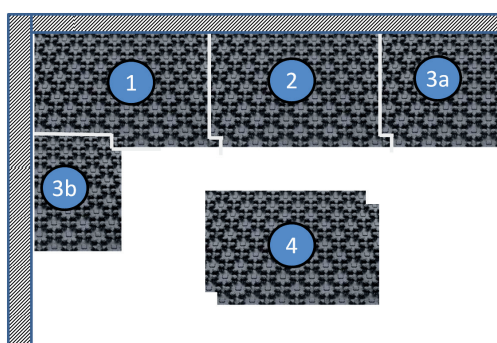
### Installation

The system edge insulation strip BLANKE RDS 10/120, or RDS 10/120 SK with a 10 mm thickness and 120 mm height, must be applied before the BLANKE BF+ BASE studded panel is laid; it needs to be affixed cleanly and, in corners and bends, tightly to the structural element for all rising structural elements such as walls, columns, kitchen units or similar. The base of the edge insulation strip is laid level on the underfloor and accommodates the BLANKE BF+ BASE studded panel.

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### BLANKE PERMATOP BF+

Thin-layer underfloor heating and cooling system for tiles and natural stone coverings as well as alternative coverings such as carpet, parquet, linoleum and vinyl



- 1 BLANKE BF+ BASE
- 2 BLANKE PERMAT
- 3 BLANKE PIPE 16
- 4 BLANKE PIPE 14
- 5 BLANKE RDS 10/120
- 6 BLANKE RDS 10/120 SK

The studded panels each have a negative and a positive studded structure on two sides. This allows the panels to be connected to each other with an overlap of 50 mm. The result is an interconnected, sealed surface. The studded panel can be cut to size using a cutter knife or an angle grinder.

The BLANKE PIPE 14/16 heating pipes are laid out in a spiral or serpentine pattern, observing the specified stud pattern for the BLANKE BF+ BASE studded panel.

The minimum installation gap (VA) is 10 cm. Please refer to the surface heating plan for the maximum installation gap; in living areas, however, this should not exceed 20 cm. Where areas are also to be used for cooling purposes, we recommend a maximum installation gap of 15 cm. The minimum PE-RT heating pipe bending radius of 80 mm (90° deflection) or 160 mm (180° deflection) must not be undercut for BLANKE PIPE 16. The minimum PE-RT heating pipe bending radius for BLANKE PIPE 14 is 70 mm (90° deflection) or 140 mm (180° deflection).

The studs on the BLANKE BF+ BASE installation panel must be covered by at least 8 mm of standard cement-based screed that meets quality level CT-C25-F4 (max. F5), CA-C25-F4 (max. F5). For ceramic surfaces the studs must be covered by a maximum of 25 mm.

The installation height of the BLANKE PERMAT is 5 mm, including the mortar. This height must be taken into account in terms of the envisaged construction height.

For alternative floor coverings such as parquet, laminate, carpet, linoleum etc., the studs on the BLANKE BF+ BASE installation panel must be covered by at least 15 mm of standard screed that meets quality level CT-C25-F4 (max. F5), CA-C25-F4 (max. F5). The studs must be covered by a maximum of 25 mm of screed. Please observe the values for the acceptable level of residual moisture.

Alternatively, BLANKE FILLOTHERM, which has been specially developed for the BLANKE BASE system, can be used in the BF+. In this case please use the BLANKE RDS 10/120 SK, which has a double-sided adhesive base on the underside for adhesion to the floor, and is designed to create a permanent connection between the edge strip and the system studded panel in order to prevent flowing mortar from leaking.

Note: Self-levelling mortar must not be used for installing BF system studded panels.

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