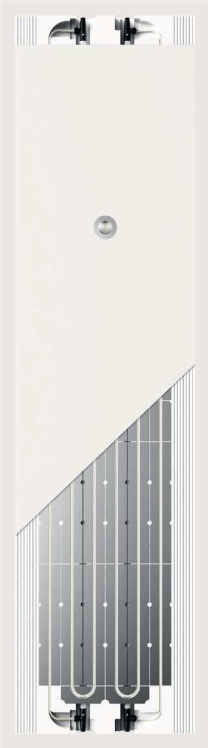
UTbeams

PATENTED

UTbeams is the panel designed to create radiating surfaces between exposed beams made of wood, metal or concrete.

UTbeams is a prefabricated radiant panel designed to be installed in ceilings with exposed beams made of metal or wood. The panel can be cut to size up until 45 cm of width only by using a cutter, and until 40 cm with a circular handsaw, and the two lengths of the panels, 120 cm and 240 cm, can be combined thanks to sub-modularity.

Thanks to the high superficial net-to-gross radiating ratio, equal to 88%, the UTbeams panel allows to obtain an higher radiating power considering the same occupied surfaces. The 240x120 panel can be combined in order to obtain new sub-modules which increase the adaptability of the radiating surface.



technical specifications

- thermal insulation support in pre-moulded expanded polystyrene, class 200 density, 39 mm thick, shaped to fit in the aluminium heat exchangers;
- pre-moulded aluminium heat exchangers 400 µm thickness, shaped to fit in the hydraulic circuit;
- hydraulic circuit with triple layer pipe in PE-Xc ∅ 8x1 mm, with intermediate oxygen barrier, specially shaped to be connected to the backbone ends in the panel and to be cut in half to get base sub-modules of 600 x 1200 mm;
- backbones in multy-layer PeX-Al-PeX ∅ 20x2 mm pipe incorporated into the panel along the major centre axis, with triple fittings at the backbone ends for the connection both to the 8 mm pipe and to another panel through push-button joint or to the supply line.
  The backbones are not anchored to the panel, to facilitate the joint insertion and also to ensure the thermal expansion and tolerance for small transversally misalignments between the panels;
- longitudinal electrical duct (on demand) cut from the polystyrene board (sect. 28 x 20 mm) placed between the back bones for the passage of the cables and connecting the half moon ends;
- gypsum finishing plasterboards, Habito Activ'Air® 6 or 12.5 mm type, that improves the indoor air quality, with reduction of the VOC (Volatile Organic Compounds), in particular the formaldehyde (10.2 kg/sqm) with glass fibre additive to give more hardness to the surface, mechanical strength, thermal conductivity and sound absorption; the surface is white papered to facilitate the finishing operations and has laser-traced drawing of the hydraulic circuits and marks for the anchorage screws at 40 and 60 mm. The board is glued to the whole set of insulated support pipe-heat exchangers with water-based vinyl glue. The panel can be cut to size up until 45 mm of width only by using a cutter, and until 40 mm with a circular handsaw, and the two lengths of the panels, 1200 and 2400 mm, can be combined thanks to sub-modularity.

modularity

- The 2400x600 mm size panel can be modulated: it can be cut along the center line of the main module to get new sub-modules and increase the adaptability of the radiating surface.

integrated LED lighting

- During the construction phase, the laser marking, which shows the hydraulic circuit, helps the easy placement of LED lights (up to 50 mm diameter). This innovative technology, fully engineered by UnderTree ensures a lighting solution with increased energy saving and the most advanced lighting comfort. Moreover, between the two panel backbones there is a longitudinal site where the electrical cables can be placed.

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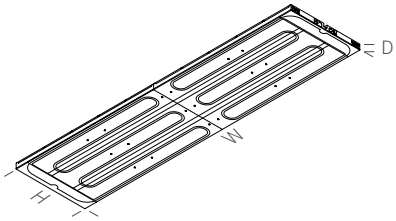
technical specifications

		UTbeams
features	radiant gross area (single UTbeams panel total surface)	0,96 ÷ 1,44 sqm
	water content single UTbeams panel	1.24 l
	board thermal conductivity	0.21 W/mK
dimensions and weight note 1	dimensions (W x H x D) 2400 x 1200 x 46 mm (UTbeams) 2400 x 1200 x 52.5 mm (UTbeams 13)	
	weight 22.5 kg (UTbeams) 36 kg (UTbeams 13)	
complementary panels	UTclassic neutral e UTflex neutral: blank panel for not radiant surfaces to be combined with UTbeams radiant panels (dimensions 2400 x 1200 x 40 ÷ 52.5 mm)	
available additional finishes	UTgrafite note 1	
	UTfibra	
	UThydro	
	UTfire	
notes	1. All the indicated dimensions have a tolerance of ± 1 mm. The UTbeams panel will be supplied on standard 2400x1200 mm dimension from wich will be obtained two single 2400 x 400 ÷ 600 mm UTbeams panels. 2. Supply subject to availability or minimum purchasing requirements.