

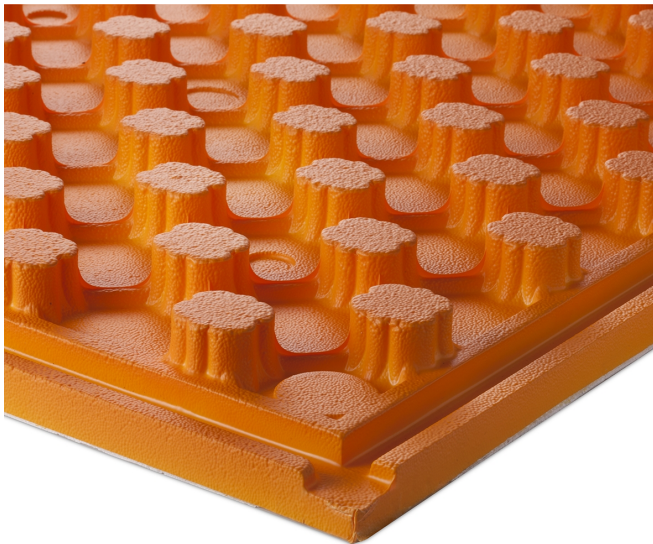


# Ashlar panel in expanded polystyrene for radiant floor systems

## ▶ FAST-ORG

*Ashlar panel in expanded polystyrene with a very easy laying, suitable for pipes with a diameter from 16 to 20 mm and available in different thicknesses and thermal resistance values.*

## ■ PRESENTATION



Insulating panel for underfloor radiant systems made of closed-cell sintered polystyrene foam, thermally coupled with HIPS 170  $\mu\text{m}$  orange laminated film.

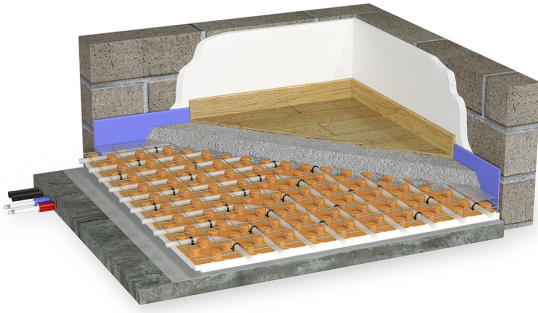
The panel is CE marked and suitable for radiant systems fed with water for heating and cooling applications, integrated into structures according to the UNI EN 1264-4 standards.

## ■ RANGE

IVAR range offers the FAST-ORG panel with different polystyrene thickness to meet any technical need. The insulating thicknesses available are as follows:

- 20 mm
- 30 mm
- 40 mm
- 50 mm
- 60 mm.

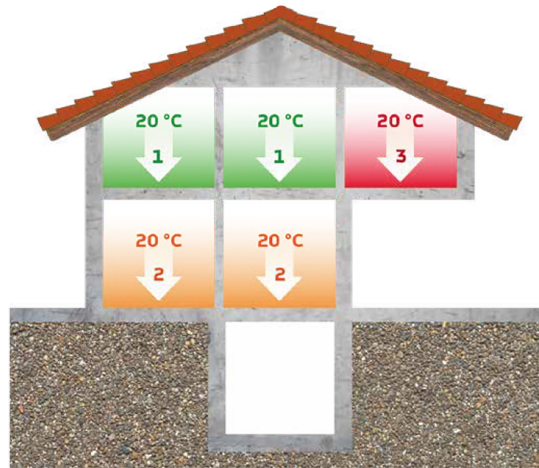
## ■ PLUS



FAST-ORG is IVAR radiant panel specifically designed for multiple applications, thanks to its easy installation and compatibility with different pipe diameters and laying steps.

FAST-ORG panel is suitable for pipes with diameter of 16, 17 and 20 mm and is available in different thicknesses with different values of thermal resistance.

## ■ PRESCRIPTIONS AND WARNINGS



To limit heat dispersions to the underlying room through the floor, standard UNI EN 1264-4 recommends a minimum thermal resistance value ( $R_d$ ) for the insulation layers (panel) according to thermal conditions below the heated room.

	1	2	3		
<b>Application case</b>	Underlying room heated	Underlying room not heated, non-continuously heated or directly on the ground	Underlying outdoor temperature		
			Design outdoor T. $T_d \geq 0 \text{ }^\circ\text{C}$	Design outdoor T. $0 \text{ }^\circ\text{C} > T_d \geq -5 \text{ }^\circ\text{C}$	Design outdoor T. $-5 \text{ }^\circ\text{C} > T_d \geq -15 \text{ }^\circ\text{C}$
<b>Min. thermal resistance of the insulation layer (<math>\text{m}^2\text{k/W}</math>)</b>	<b>0.75</b>	<b>1.25</b>	<b>1.25</b>	<b>1.5</b>	<b>2.0</b>

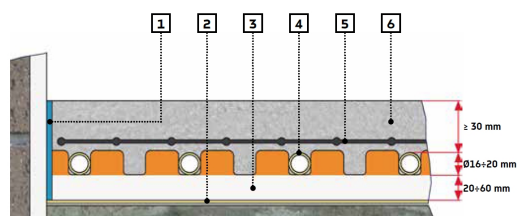
## ■ TECHNICAL DATA

Features	Standard	FAST20-ORG	FAST30-ORG	FAST40-ORG	FAST50-ORG	FAST60-ORG
Material class	UNI EN 13161	EPS 200	EPS 200	EPS 200	EPS 200	EPS 200
Plastic film	-	170 µm	170 µm	170 µm	170 µm	170 µm
Thermal conductivity	EN 12667	0.033 W/m*K	0.033 W/m*K	0.033 W/m*K	0.033 W/m*K	0.033 W/m*K
Thermal resistance	EN 12667	0.79 m²K/W	1.09 m²K/W	1.39 m²K/W	1.69 m²K/W	2.00 m²K/W
Compressive strength at 10% deformation	UNI EN 826	200 kPa	200 kPa	200 kPa	200 kPa	200 kPa

## ■ CONSTRUCTION DETAILS

Features	Norm	Value	Class
Durability of thermal conductivity against heat, atmospheric agents, degradation and aging	UNI EN 13163-13	The thermal conductivity of EPS does not change over time	-
Reaction to fire	EN ISO 11925-2:2010; EC 1:2011	EUROCLASSE - E - UNI EN 13501:2011	E
Durability of reaction to fire against heat, atmospheric agents, degradation and aging	UNI EN 13163:2013	The reaction to fire of EPS does not change over time	E
Long-term water absorption (25%)	UNI EN 12087:2013	2	WL(T)
Dimensional tolerance of thickness (mm)	UNI EN 823:2013	± 2	(T)2
Dimensional stability at 23 °C and 50 % U.R. (%)	UNI EN 12086:2013	0.2	DS (N)2
Resistance to water vapor diffusion of EPS µ (num)	UNI EN 12086:2013	40-100	Z 40-100

## ■ COMPONENTS



1. Perimeter edging
2. Humidity barrier
3. Insulation panel
4. Piping
5. Electro-welded mesh
6. Screed with additive

## ■ INSTALLATION

The FAST-ORG panel can be installed in many situations depending on the thickness available for the radiant system to be placed under the floor of the house and in compliance with UNI EN 1264-4.

The minimum size required to use this type of panel is 66 mm.

The laying step of the pipe is 5 cm and its multiples, while the installable pipes are those with a thickness of 2 mm and diameters from 16 to 20 mm.

## ■ DIMENSIONS

Code	Insulation thickness	Total thickness	Useful dimensions	Pcs for package	Packaging
FAST20-ORG	20 mm	45 mm	140 x 80 cm	16	17.92 m <sup>2</sup>
FAST30-ORG	30 mm	55 mm	140 x 80 cm	12	13.44 m <sup>2</sup>
FAST40-ORG	40 mm	65 mm	140 x 80 cm	10	11.20 m <sup>2</sup>
FAST50-ORG	50 mm	75 mm	140 x 80 cm	8	8.96 m <sup>2</sup>
FAST60-ORG	60 mm	85 mm	140 x 80 cm	7	7.84 m <sup>2</sup>

## ■ SPECIFICATIONS SUMMARY

**IVAR FAST-ORG FAST20-ORG:** Ashlar panel in sintered expanded polystyrene with closed cells EPS 200 thermally coupled with laminated HIPS film 170 µm eco-compatible with high density orange color. Panel marked CE, suitable for radiant systems fed with water for heating and cooling integrated into the structures according to the UNI EN 1264 standard. On the perimeter edges of the panel a batten is provided to allow a solid coupling between adjacent panels. The coupling between the EPS base and the HIPS film gives the system a mechanical strength. The film also acts as a vapor barrier during use of the system. Insulation thickness: 20 mm. Total thickness: 45 mm. Multiple laying steps: 50 mm. Pipes diameter: 16/2 - 17/2 - 20/2 mm. Dimensions: 1400 x 800 mm. Thermal conductivity: 0,033 W/mK.

**IVAR FAST-ORG FAST30-ORG:** Ashlar panel in sintered expanded polystyrene with closed cells EPS 200 thermally coupled with laminated HIPS film 170 µm eco-compatible with high density orange color. Panel marked CE, suitable for radiant systems fed with water for heating and cooling integrated into the structures according to the UNI EN 1264 standard. On the perimeter edges of the panel a batten is provided to allow a solid coupling between adjacent panels. The coupling between the EPS base and the HIPS film gives the system a mechanical strength. The film also acts as a vapor barrier during use of the system. Insulation thickness: 30 mm. Total thickness: 55 mm. Multiple laying steps: 50 mm. Pipes diameter: 16/2 - 17/2 - 20/2 mm. Dimensions: 1400 x 800 mm. Thermal conductivity: 0,033 W/mK.

**IVAR FAST-ORG FAST40-ORG:** Ashlar panel in sintered expanded polystyrene with closed cells EPS 200 thermally coupled with laminated HIPS film 170 µm eco-compatible with high density orange color. Panel marked CE, suitable for radiant systems fed with water for heating and cooling integrated into the structures according to the UNI EN 1264 standard. On the perimeter edges of the panel a batten is provided to allow a solid coupling between adjacent panels. The coupling between the EPS base and the HIPS film gives the system a mechanical strength. The film also acts as a vapor barrier during use of the system. Insulation thickness: 40 mm. Total thickness: 65 mm. Multiple laying steps: 50 mm. Pipes diameter: 16/2 - 17/2 - 20/2 mm. Dimensions: 1400 x 800 mm. Thermal conductivity: 0,033 W/mK.

**IVAR FAST-ORG FAST50-ORG:** Ashlar panel in sintered expanded polystyrene with closed cells EPS 200 thermally coupled with laminated HIPS film 170 µm eco-compatible with high density orange color. Panel marked CE, suitable for radiant systems fed with water for heating and cooling integrated into the structures according to the UNI EN 1264 standard. On the perimeter edges of the panel a batten is provided to allow a solid coupling between adjacent panels. The coupling between the EPS base and the HIPS film gives the system a mechanical strength. The film also acts as a vapor barrier during use of the system. Insulation thickness: 50 mm. Total thickness: 75 mm. Multiple laying steps: 50 mm. Pipes diameter: 16/2 - 17/2 - 20/2 mm. Dimensions: 1400 x 800 mm. Thermal conductivity: 0,033 W/mK.

**IVAR FAST-ORG FAST60-ORG:** Ashlar panel in sintered expanded polystyrene with closed cells EPS 200 thermally coupled with laminated HIPS film 170 µm eco-compatible with high density orange color. Panel marked CE, suitable for radiant systems fed with water for heating and cooling integrated into the structures according to the UNI EN 1264 standard. On the perimeter edges of the panel a batten is provided to allow a solid coupling between adjacent panels. The coupling between the EPS base and the HIPS film gives the system a mechanical strength. The film also acts as a vapor barrier during use of the system. Insulation thickness: 60 mm. Total thickness: 85 mm. Multiple laying steps: 50 mm. Pipes diameter: 16/2 - 17/2 - 20/2 mm. Dimensions: 1400 x 800 mm. Thermal conductivity: 0,033 W/mK.

## ■ CODES

<b>FAST20-ORG</b>	IVAR FAST-ORG Insulation thickness: 20 mm. Total thickness: 45 mm
<b>FAST30-ORG</b>	IVAR FAST-ORG Insulation thickness: 30 mm. Total thickness: 55 mm
<b>FAST40-ORG</b>	IVAR FAST-ORG Insulation thickness: 40 mm. Total thickness: 65 mm
<b>FAST50-ORG</b>	IVAR FAST-ORG Insulation thickness: 50 mm. Total thickness: 75 mm
<b>FAST60-ORG</b>	IVAR FAST-ORG Insulation thickness: 60 mm. Total thickness: 85 mm

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