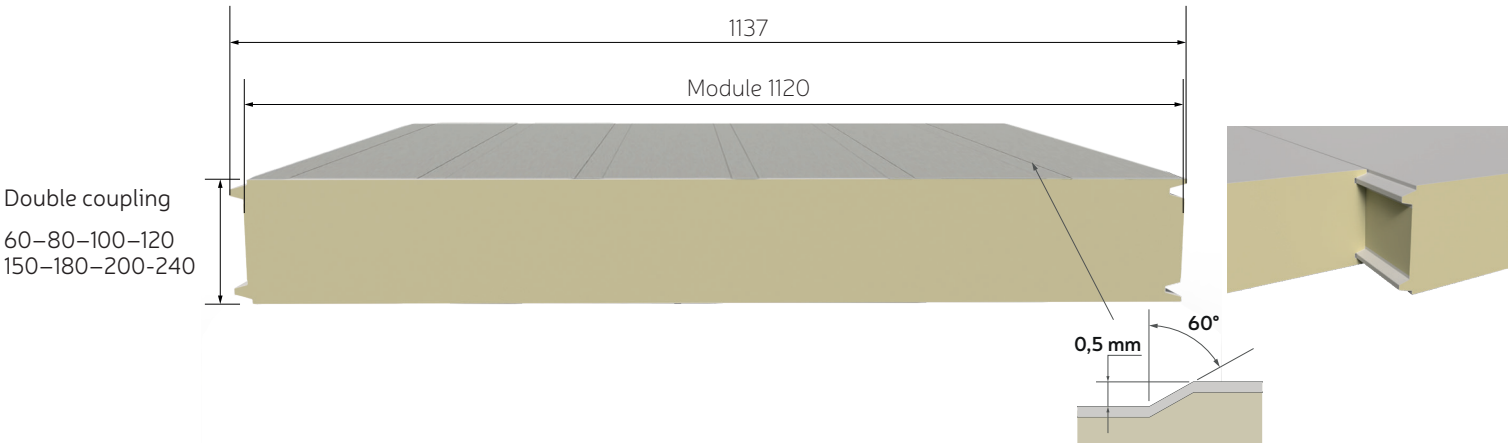


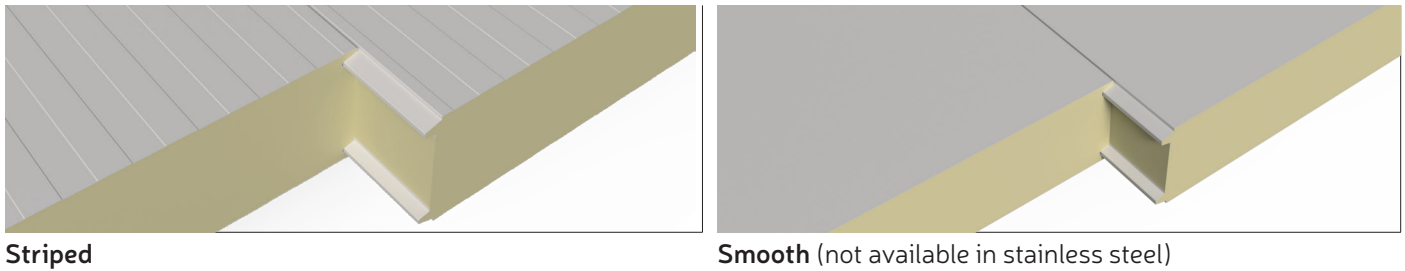


POLAR: interlocking sandwich panels, produced in compliance with European regulation EN 14509, appropriate for the realization of cold rooms at both positive and negative temperatures. The panels are created to provide high thermal isolation performance, as well as mechanical strength, a pleasing appearance and hygiene. The new design of the double joint is specially studied to ensure fast assembly and thermal sealing according to the highest international standards.

Thicknesses, dimensions and coupling joints



Alternative surfaces on request



Panel dimensions and features

Module	Useful width = mm 1120.
Dimensions	Length: minimum mm 2000, maximum mm 16000.
Models	POLAR_N: Micro-ribbing on two sides
	POLAR_S: Striped
	POLAR_L: Smooth on two sides
Compliance	Labelling CE in compliance with EN regulation 14509
Coating	PR: Sendzimir hot-dip galvanised S 250 GD steel plate, pre-painted with 25 µ polyester paint, Ral 9010 white.
Optional Coating	PL: Sendzimir hot-dip galvanised S 250 GD steel plate, plasticised with 110 µ PVC film, applied hot, Ral 9010 white.
	PT: Sendzimir hot-dip galvanised S 250 GD steel plate, pre-painted and laminated with PET film, Ral 9010 white, total covering 45 µ.
	IX: Stainless steel panel, EN 1.4301-2B (AISI 304).
	PX: Stainless steel panel EN 1.4301-2B (AISI 304) hot plasticised with 110 µ PVC film, Ral 9010 white.
	VX: Stainless steel panel EN 1.4301-2B (AISI 304) pre-painted with 25 µ polyester paint, Ral 9010 white.

	POLAR panel	INFOTEC N° B - 010
		REV. 01

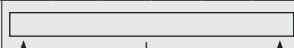
Application: Bigisopanel

Insulation	Rigid polyisocyanurate foam (PIR), density 40 Kg/m ³ ± 10%. Initial thermal conductivity λ=0.021 W/mK, CFC and HCFC-free, range of application -40°C ÷ 60°C. Constant density and insulation characteristics, also by the joint. <i>Option:</i> Rigid polyurethane foam (PUR), density 40 Kg/m ³ ± 10%. Initial thermal conductivity λ = 0.021 W/m K, CFC and HCFC-free, range of application -40°C ÷ 60°C.
Reaction to fire Certification	<u>PIR</u> : Euroclasse B s2 d0 according to EN 13501-1, obtained through polyisocyanurate (PIR) foam insulation <u>PUR</u> : Thicknesses 60÷120 mm euroclass D s3 d0 and thicknesses 150÷240 mm euroclass C s3 d0 according to EN 13501-1, obtained through PUR foam insulation with flame retardants. <i>Nota: Reaction to fire performance is constant throughout the exposed surface, including the junctions, the certification is therefore valid for the finished product (finished cold room).</i>
Panel Reuse	The panels are easy and quick to assemble and disassemble, this makes it easy to adjust warehouse cold rooms to changes in layout requirements or if a move to another location is required.
Compatibilità ambientale	Global warming potential index GWP ≤ 11 Ozone depletion potential ODP = 0
Tolerances	Panel thickness and flatness according to UNI - EN 10143. Difference in coating colour ΔE < 1 Insulation density ± 10% - Panel thickness ± 2 % - PUR/metal non-adhesion max 0.5%. Panel corrugation and panel planarity 0.6 ÷ 1.5 mm. Panel length: L ≤ 3000 ± 5 mm; L ≥ 3000 ± 10 mm. Panel width: ± 2 mm. Curve along panel length: 2 mm/m, max 10 mm.

Thermal transmission ratio

Thickness [mm]	Initial value				Aged value (25 years)			
	EN ISO 6946 U _{init} = W/m ² K	EN ISO 6946 R _{init} = 1/U _{init}	EN 13165 - EN 14509 U _{init} = W/m ² K	EN 13165 - EN 14509 R _{init} = 1/U _{init}	EN ISO 6946 U _{age} = W/m ² K	EN ISO 6946 R _{age} = 1/U _{age}	EN 13165 - EN 14509 U _{age} = W/m ² K	EN 13165 - EN 14509 R _{age} = 1/U _{age}
60	0,342	2,927	0,344	2,907	0,438	2,281	0,441	2,266
80	0,256	3,902	0,256	3,912	0,316	3,162	0,315	3,170
100	0,205	4,878	0,204	4,899	0,253	3,953	0,252	3,970
120	0,171	5,854	0,170	5,884	0,203	4,938	0,201	4,964
150	0,137	7,317	0,137	7,322	0,162	6,173	0,162	6,177
180	0,114	8,780	0,114	8,787	0,135	7,407	0,135	7,413
200	0,103	9,756	0,102	9,849	0,122	8,230	0,120	8,309
240	0,085	11,707	0,085	11,707	0,101	9,877	0,101	9,877

Loads allowed in compliance with EN regulation 14509:2013 for steel panels, thickness: 0.5 + 0.5

Thickness [mm]	Weight [Kg/m ²]	H* [m]	ΔT** Temperature gradient [°C]	Admissible loads Kg/m ² net of own weight of panels										F ≤ 1/200 L						
									L= Distance between supports in metres											
				3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10	10,5	11
60	10,5	5,5	Ext.T= 30 °C Int. T = 0 °C Gradient 30 °C	160	115	85	60													
80	11,3	6,6		230	170	125	95	75	60											
100	12,1	7,5		285	215	165	130	105	80	65	50									
120	12,9	8,5			250	200	160	125	105	85	70	55								
150	14,1	9,5	Ext. T= 30 °C Int. T = -20 °C Gradient 50 °C			275	225	190	155	130	110	95	80	70	60	50				
180	15,3	10,5					260	225	190	160	140	120	100	85	75	65	55	50		
200	16,1	11,5					270	245	210	180	155	135	115	100	85	75	65	55	50	
240	17,7	12					280	250	225	205	180	155	135	120	105	95	80	70	65	55

* Admissible height in internal environments, without attaching to cross beams.

** With ΔT 30 °C (cold room TN) consider a residual vacuum overload of 10 Kg/m². With ΔT 50 °C (cold room BT) consider a residual vacuum overload of 30 Kg/m².