

# Isofrigo Isofrozen

Manufactured in: Italy\*, Germany, Spain, Romania  
\*Only Isofrigo G.I. Version is manufactured in Italy

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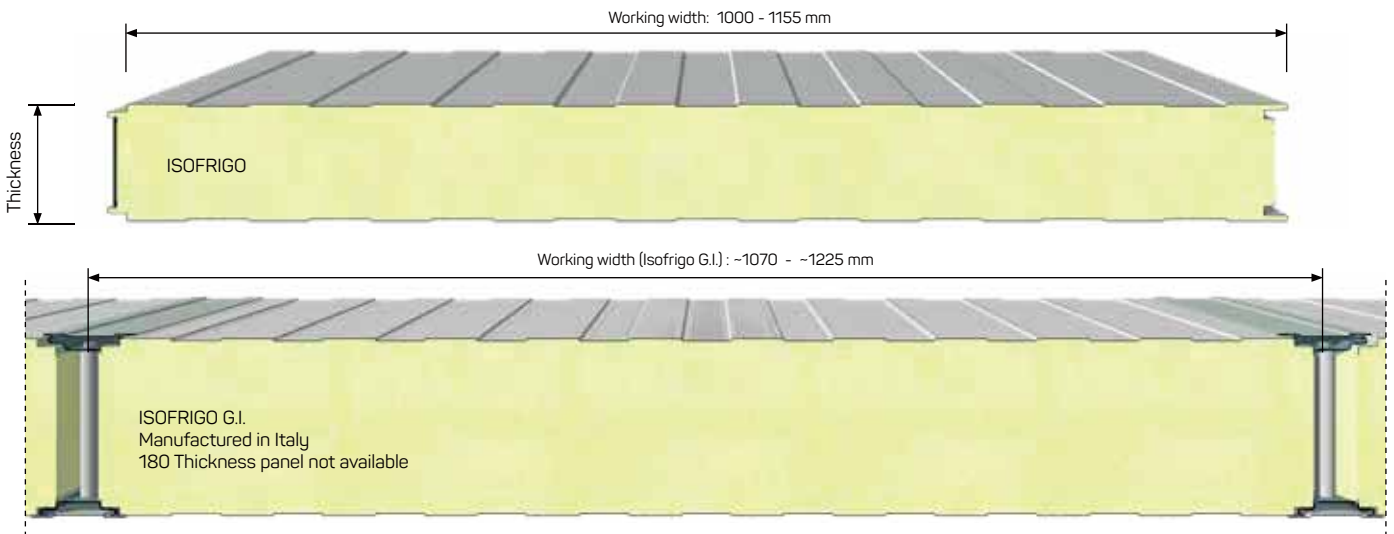


On request,  
Product available with Certification  
**FM APPROVED**

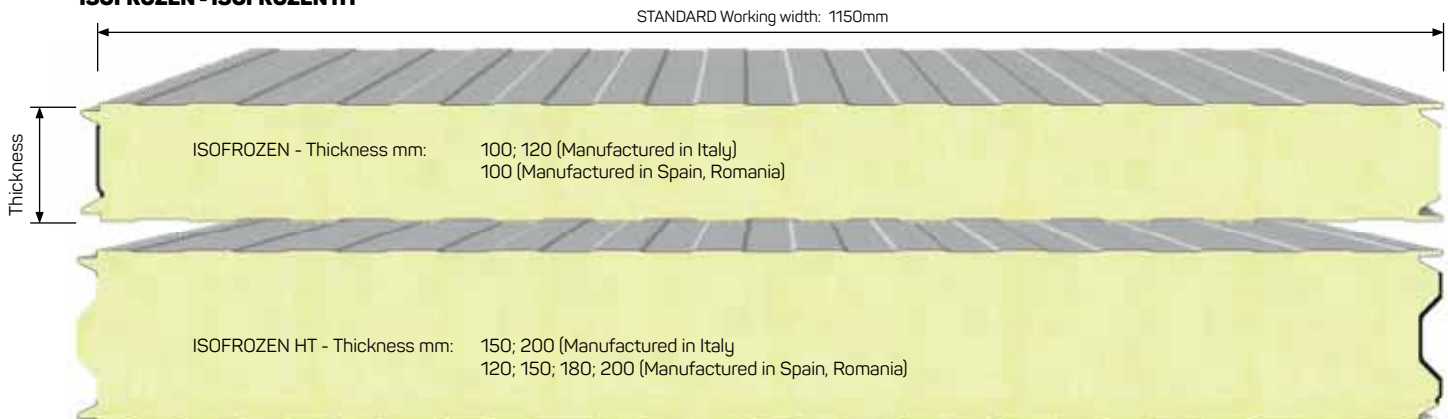
For further informations,  
please contact Isopan

Self-supporting metal faced panels insulated with polyurethane with a tongue-and-groove joint. The very high performances of thermal insulation and the excellent quality of the jointing system make it particularly appropriate for constructions that require a controlled temperature.

## ISOFRIGO & ISOFRIGO G.I.



## ISOFROZEN - ISOFROZEN HT





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**OVERLOAD SPANS**

STEEL SHEETS 0,5 / 0,5 mm - Support 120 mm										
UNIFORMLY DISTRIBUTED LOAD kg/m <sup>2</sup>	PANEL NOMINAL THICKNESS mm					PANEL NOMINAL THICKNESS mm				
	100	120	150	180	200	100	120	150	180	200
	MAX SPANS cm					MAX SPANS cm				
50	630	700	850	890	920	740	840	900	930	960
60	580	660	750	780	900	650	770	870	900	920
80	500	580	680	720	840	580	670	790	830	850
100	450	510	610	700	760	510	640	680	710	730
120	410	470	560	640	690	460	590	590	620	630
140	340	430	510	590	640	410	530	530	550	560
160	320	400	480	550	600	380	470	480	490	500
180	320	370	440	510	560	350	430	435	440	445
200	300	350	420	480	520	320	400	400	405	410

STEEL SHEETS 0,6 / 0,6 mm - Support 120 mm										
UNIFORMLY DISTRIBUTED LOAD kg/m <sup>2</sup>	PANEL NOMINAL THICKNESS mm					PANEL NOMINAL THICKNESS mm				
	100	120	150	180	200	100	120	150	180	200
	MAX SPANS cm					MAX SPANS cm				
50	650	760	850	960	980	760	850	920	940	970
60	610	700	820	930	950	660	790	880	900	925
80	530	610	720	820	890	600	660	810	850	860
100	470	540	640	730	800	530	610	710	720	740
120	420	490	580	660	730	470	540	620	650	660
140	390	450	530	620	660	430	500	550	560	560
160	360	410	500	570	620	390	450	490	500	500
180	330	380	460	530	580	350	420	440	450	450
200	310	360	430	500	550	330	390	400	400	400

Calculation for static sizing according to the Annex E of the EN 14509 standard. Deflection limit 1/200 ℓ. Values in load tables don't consider thermal load.

**PANELS WEIGHT (Steel sheets)**

THICKNESS SHEETS mm		PANEL NOMINAL THICKNESS mm				
		100	120	150	180	200
0,5 / 0,5	kg/m <sup>2</sup>	12,2	13,0	14,2	15,4	16,2
0,6 / 0,6	kg/m <sup>2</sup>	13,9	14,7	15,9	17,1	17,9



**FIRE CHARACTERISTICS**

Regarding the specifications related to the fire characteristics, please consult the synthesis available in the catalogue or on the website.



**INSTRUCTIONS OF USE**

For the use of the panels and the related limits, please consult the Technical Manual, General Sales Terms and Annexes.

**DIMENSION TOLERANCE (EN 14509)**

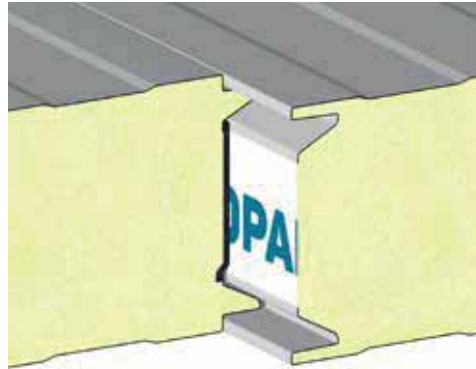
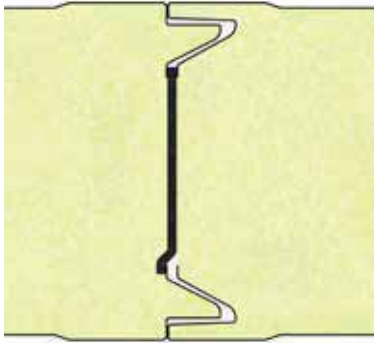
DEVIATION mm		
Length	L ≤ 3 m	± 5 mm
	L > 3 m	± 10 mm 0
Working length	± 2 mm	
Thickness	D ≤ 100 mm	± 2 mm
	D > 100 mm	± 2 %
Deviation from perpendicularity	6 mm	
Misalignment of the internal metal faces	± 3 mm	
Sheets coupling	F = 0 + 3 mm	

L = working length, D = panels thickness, F = sheets coupling

**THERMAL INSULATION (In accordance with EN 14509 Annex 10)**

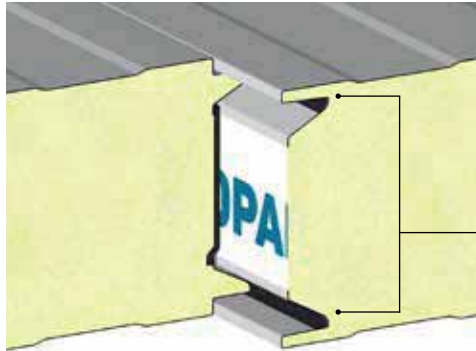
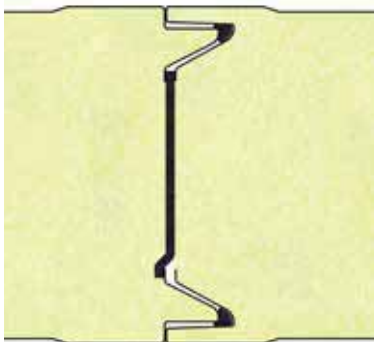
U	PANEL NOMINAL THICKNESS mm				
	100	120	150	180	200
W/m <sup>2</sup> K	0,22	0,18	0,15	0,12	0,11
kcal/m <sup>2</sup> h °C	0,19	0,16	0,13	0,11	0,09

# Cold storage solutions



## DRY JOINT

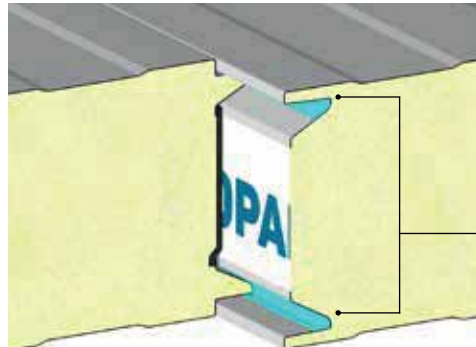
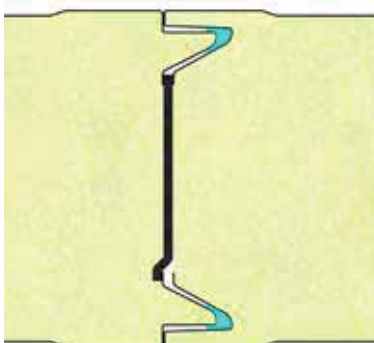
Standard solution. The dry joint is designed for use at positive temperature, with low thermal gradient.



## EXPANDING TAPE

The joint with bituminous expanding tape offers a good airtightness. Thanks to the two thermo-expanding tapes, the capacity to prevent air flow between the inner and outer wall is increased.

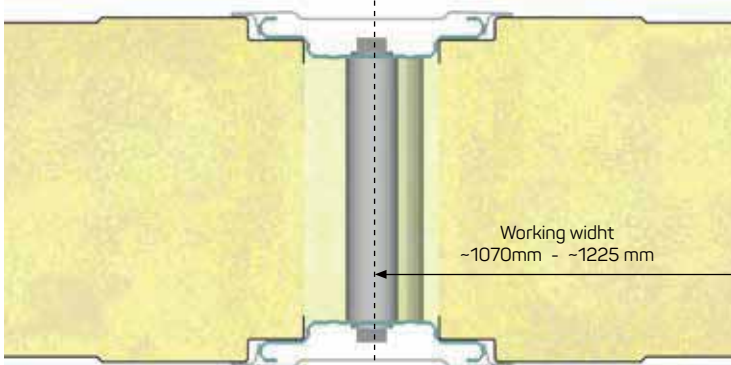
Expanding tape  
(siting and installation operations)



## TIXOTROPIC SEALANT

The airtightness is excellent, thanks to the lack of cracks guaranteed by the sealant, whose thixotropic characteristic offers an excellent airtightness without impacting on the assembly easiness.

TIXOTROPIC SEALANT  
(siting and installation operations)



## FOAMED JOINT (ISOFRIGO G.I.)

Thanks to the lack of cracks and the use of PVC gaskets under the plates, an optimal airtightness is obtained and consequently all thermal bridges caused by the joints are eliminated.



# Cold storages: application

The cold rooms and rooms for conservation and storage of foods can be so called positive and negative. Generally the first ones with temperatures till  $-1^{\circ}\text{C}$  and the second ones till  $-25^{\circ}\text{C}$ .



Rooms for the conservation of foods where a major temperature change does not require an adequate airtightness.



Rooms where foods are processed, where a medium temperature change does require an adequate airtightness.



Rooms where finished products are stored. These rooms must be well insulated and a greater airtightness is required, thanks to an adequate joint.



Rooms where frozen products are stored and rooms that impose constraining requirements in terms of minimisation of thermal bridges and air permeability.

## NOTE

These indications are just a suggestion for use. The designer has to choose the joint, the panel thickness and the other parameters of the Isopan commercial offer, depending on the performances required by the cold room.