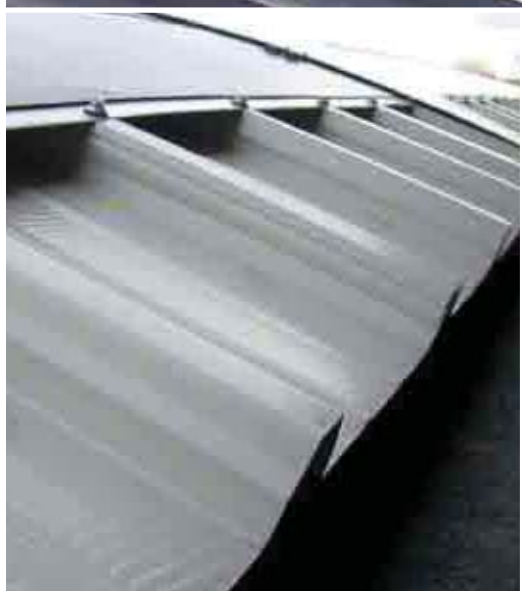


Isoray 3.3 - Isoray 6



Industrial roof on a prefabricated concrete building



Detail of the roof with photovoltaic modules



→ Legend pag. 18

Isoray is a precurved thermo-insulated roof panel. It is designed for roofs that are principally placed on prefabricated structures made of prestressed concrete: it guarantees waterproofness, high thermal insulation and high load resistance. The 5 ribs of the profile show excellent robustness and resistance. Made with 3.3 m or 6 m radius of curvature, Isoray is the ideal solution for the prefabricator because it represents a good alternative to fibre concrete curved plates or arched plates.



APPLICATION

The Isoray panel is appropriate for industrial buildings with traditional roofs made of asbestos-cement sheet of variable lengths. The panel is an insulated solution to substitute it. Appropriate also for industrial buildings with tiles roofs, made of prefabricated supporting beams in armoured concrete or precompressed cement joined by curved elements.

CHARACTERISTICS

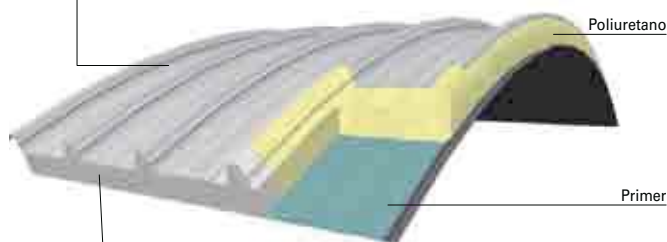
The panel allows you to create curved roofs with a radius of 3.3 m to 6 m, even if it is curved, with the 5 ribs sheet, it shows a high load resistance. The fixing is made at the end of the support structure thanks to special steel elements.

ADVANTAGES

It shows high results of thermal insulation even with a flat roof that is appropriate also for prefabricated elements in prestressed concrete. Isoray is a monolithic solution with a high mechanical resistance and a high thermal insulation power.



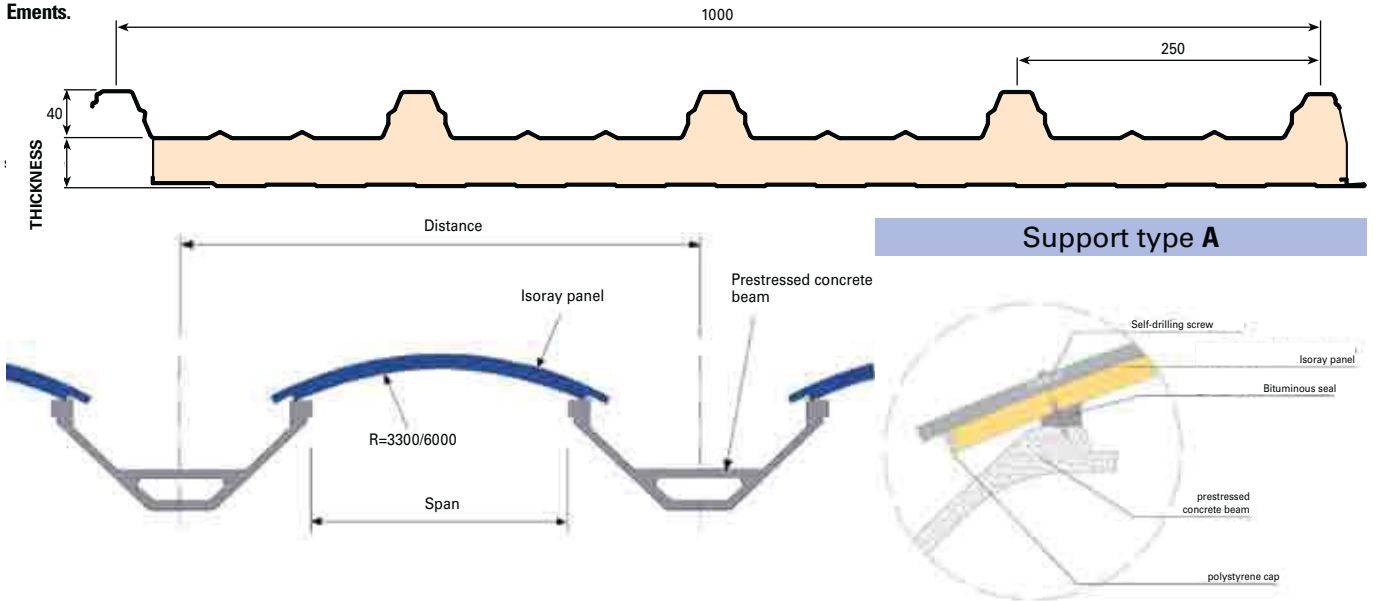
Lamiera grecata in alluminio/
acciaio zincato e preverniciato



Cordolo di chiusura testata
in materiale autoestinguente

INSTRUCTIONS OF USE

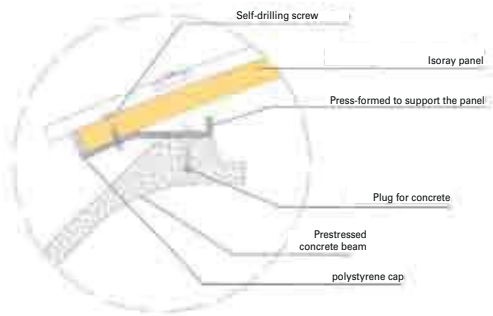
For the use of the panels and the related limits, please consult the technical data sheet available on www.isopan.it under the section "technical data sheet" and the "recommendations for the assembly of ribbed sheets and metal faced insulating panels" defined by AIPPEG Association of Italian Producers of Panels and Ribbed Elements.



Support type A



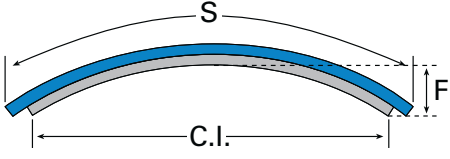
Support type B



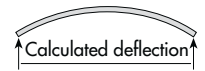
For more information on assembly and fixing systems, please contact Isopan

DEVELOPMENT – CHORD - DEFLECTION

ISORAY 3.3 (measures in cm)			ISORAY 3.3 (measures in cm)		
Internal chord C.I.	Development S	Deflection F	Internal chord C.I.	Development S	Deflection F
107	120	4	150	162	5
137	151	7	200	214	8
158	173	10	250	265	13
177	194	12	300	317	19
196	214	15	350	370	26
216	235	18	400	423	34
236	257	22	450	477	44
255	278	26	500	533	55
260	284	27	550	589	67
275	300	30	558	598	69



The measures refer to a 40 mm thick panel.



ACCEPTABLE LOADS (LOAD BEARING SCHEME (kg/m²))

ISORAY 3.3 PANEL with 0.5 mm thick steel faces						
CORE THICKNESS mm	CALCULATED DEFLECTION m					
	1	1,5	2	2,5	2,75	3
40	410	370	290	250	230	210
50	490	425	340	280	260	240
60	590	490	380	300	220	260

ISORAY 3.3 PANEL with 0.6 mm thick external aluminium face and 0.5 mm thick internal steel face						
CORE THICKNESS mm	CALCULATED DEFLECTION m					
	1	1,5	2	2,5	2,75	3
40	400	250	210	180	165	150
50	480	315	260	210	185	170
60	580	380	290	230	195	180

ISORAY 6 PANEL with 0.5 mm thick steel faces												
CORE THICKNESS mm	CALCULATED DEFLECTION m											
	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	5,7	
40	390	256	190	190	170	150	110	85	75	62	58	
50	490	323	240	220	200	170	130	100	83	67	62	
60	590	390	280	240	220	190	150	120	90	73	68	
80	800	520	348	283	264	234	198	173	117	91	85	
100	913	588	383	305	282	255	224	200				

ISORAY 6 PANEL with 0.6 mm thick external aluminium face and 0.5 mm thick internal steel face												
CORE THICKNESS mm	CALCULATED DEFLECTION m											
	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	5,7	
40	390	256	190	182	150	130	80	70	60	50	48	
50	490	323	240	210	170	150	100	85	65	52	50	
60	590	390	270	230	180	160	110	105	70	55	50	
80	787	511	342	271	218	197	145	127	82	65	61	
100	889	573	372	292	233	215	164	140				

Note : the red values indicate the acceptable loads for a panel anchored to the support.
The data's reported in the tables are only indicative. The designer has to check them according to the specific application.
Deflection limit 1/200 ℓ

PANEL THICKNESS mm	COEFFICIENT OF THERMAL TRANSMISSION -K-		PANELS WEIGHT WITH 0.5 mm THICK STEEL SHEETS
	Kcal/m ² h °C	Watt/m ² K	
40	0,38	0,45	10,25
50	0,32	0,38	10,65
60	0,27	0,32	11,05
80	0,22	0,25	11,85
100	0,18	0,20	12,65

DIMENSIONAL TOLERANCES

DEVIATIONS mm	
Length of curvature	± 5 mm - L ≤ 3000 / ± 10 mm - L > 3000
width	± 2
thickness	± 2
chord	± 3 %
radius of curvature	± 2 %
coupling (Sv. < 3000mm)	± 4 mm
coupling (Sv. ≥ 3000mm)	± 5 mm

AVAILABLE COLOURS (the colour should be chosen according to the final-use, the installation area and the standard thicknesses in stock)

bianco grigio	bianco G9010	grigio antracite G7016	blu genziana G5010
			
silver G9006	verde muschio G6005	rosso ossido G3009	testa di moro
			

To improve the aesthetic quality of the internal coupling we recommend to apply the Isopan PVC cover strip.