

JI ROOF PIR

Insulated panels (PIR core)

MR046 / 0620



JORISIDE
THE STEEL FUTURE



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JI Roof PIR

Insulated panels (PIR core)

The JI Roof PIR is a very diverse user product For not only Industrial, but also residential or Agricultural Application.

Due to its trapezoidal outer sheet It is ideal to take additional loads such as solar panels or even roof tiles.

The Joris Ide group, more than 3 decades of experience, processes 300.000 tonnes of steel per year, has 17 production sites over 8 countries with the help of more than 1000 employees. Joris Ide, your dedicated partner.



JI Roof PIR used in a renovation project.



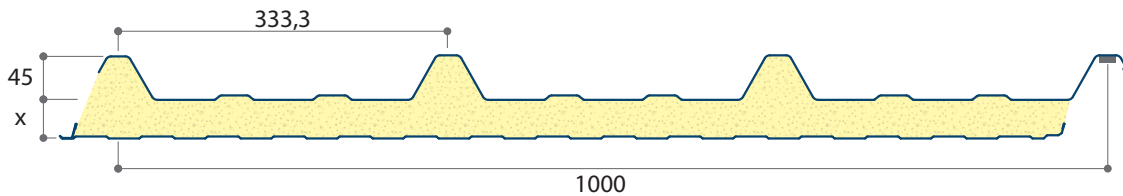
JI Roof PIR in agricultural projects.



The JI Roof PIR can be produced in a multitude of lengths.

Description

The JI Roof PIR LPCB certified Trapezoidal Insulated Roof Panel is used for pitched roofs or horizontal and vertical wall application and an external insulated cladding panel for industrial, commercial and public buildings. Due to its metal inner and outer sheet, it combines thermal resistance with big spans. The minimum pitch to be applied is 4° or more after deflection. (See construction detail p.8)



Weight and thermal performance

Core thickness (mm)	40	60	80	100	120	150
Overall thickness (mm)	85	105	125	145	165	195
U-value (W/m ² K)	0,53	0,36	0,25	0,20	0,17	0,14
Weight (Kg/m ²)	11,71	12,51	13,30	14,10	14,89	16,09
Rw (dB)	24	24	25	26	26	27

Calculated in accordance to European product standard EN 14509.

Maximum recommended span length

	40	60	80	100	120	150
Single span	1,88	2,21	2,50	2,70	2,80	2,92
Double span	1,88	2,21	2,28	2,24	2,29	2,34
Multiple span	1,88	2,21	2,50	2,53	2,58	2,61

recommended span length based on 2,00 KN/m² - assumptions of span/load table must be taken into account.

System key benefits

- Applicable as roof and wall panel for renovations and new buildings.
- Easy handling, mounting and fitting.
- Composite panel allows a faster installation time than standard built-up systems.
- JI Roof PIR is produced according to the EN ISO 9001.
- The JI Roof PIR is CE-marked.
- Approved product by LPCB (Loss Prevention Certification Board) (40 to 150 mm core thickness).
- Wide range of colours and coatings available for top sheet according to your project (please consult our Colorflow).
- Production facility ISO 14001 certified.
- High thermal performance PIR foam.
- Environmental sustainable PIR foam with zero ozone depletion and a low global warming potential.
- Inner sheet comes as standard in 15 µ Polyester with a RAL 9002 colour.
- JI Roof PIR comes standard with a factory applied seal on the side lap.
- JI Roof PIR is available in lengths up to 16 m. The minimum cut back is 50 mm.
- Integrated insulated polycarbonate roof lights are available.
- Matching single skin profiles in metal or polycarbonate are available.

Materials

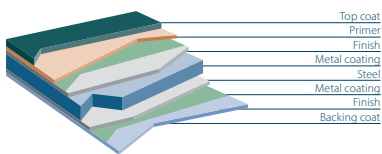
A1. External weather sheet

Joris Ide offers one of the widest ranges in coatings and colours which can be defined per project and building requirements. Please consult our colorflow brochure for detailed information.



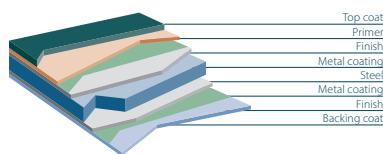
Essential 25 µ

5 microns primer + 20 microns top coat



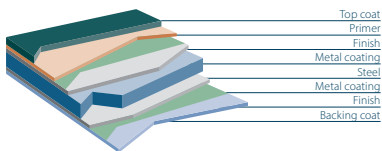
HPS 200 Ultra® 200 µ

5 microns primer + 200 microns PVC coating + Scintilla® embossing



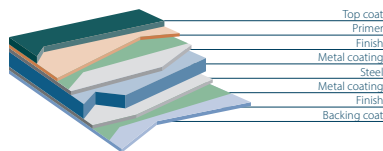
Ultra 60 µ

25 microns primer + 30 microns top coat



C200 leathergrain 200 µ

5 microns primer + 200 microns PVC coating + leathergrain embossing



A2. Internal liner sheet

Internal conditions of a building can vary; Joris Ide can offer a wide range to suit heavy-duty environments such as humidity and ammoniac. Please consult our colorflow brochure for detailed information.

- 15 µ Polyester RAL 9002 (standard)
- 25 µ Polyester
- Colorfarm 35µ
- PVC Foodsafe 150 µ PVC
- HPS 200 µ

A3. Insulation core

Jl Roof PIR insulated panels are made with a high thermal performance and environmental sustainable PIR foam with zero ozone depletion and a low global warming potential.

Confidex® Guarantee by Tata Steel

For over 20 years the Confidex® Guarantee from Tata Steel has remained best in class. Confidex® is the product performance guarantee for Colorcoat HPS200 Ultra®, when used in an external conventional building envelope application namely roof and wall cladding using single skin, built-up or composite panel construction in industrial and commercial buildings. Confidex® offers the longest and most comprehensive guarantee for pre-finished steel in Europe.

Key features include;

- Extended guarantee cover for up to 40 years on Colorcoat HPS200 Ultra®.
- No requirement for annual inspections or maintenance to validate the guarantee.
- Covers cut edges produced under factory controlled conditions for the entire guarantee period.
- Backed by years of worldwide product testing and real world experience.
- Provides cover for roof pitches down to 1° and no distinction between different roof pitches above that.
- Offered directly to the building owner and provides a contractual relationship between Tata Steel and the building owner.
- Fully transferable should building ownership change.
- Helps reduce the level of risk for each part of the supply chain.
- Quick and simple online registration form.

Other warranties

With Confidex® registration



Without Confidex® registration



Whilst Confidex® has always been restricted to the weathering performance of the external cladding, Tata Steel has recognised the growing emergence of demanding internal environment projects, such as energy from waste plants, and may offer a non-Confidex® warranty on a case by case basis for Colorcoat HPS200 Ultra® used internally.

Application specific warranties are also available for non-standard cladding applications; i.e. residential roofs, flashings and sectional roller shutter doors.

Regions covered

by the Confidex® Guarantee



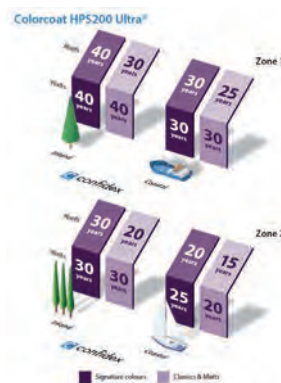
KEY

- Northern Europe – Zone 1
- Southern Europe – Zone 2
- For areas outside of Confidex® zones please contact Tata Steel for more information.

Notes

- Figures under the Coastal heading are for buildings within 1 km of any coast.
- Full terms and conditions of the Confidex® Guarantee are on the online application form, available from www.colorcoat-online.com/registration.
- Confidex® must be registered within 3 months of the building completion date for the guarantee to be valid.
- The Confidex® Guarantee periods on the diagram above are applicable to Zone 1 and Zone 2. For more information visit www.colorcoat-online.com/confidexmap.

Colorcoat HPS200 Ultra and Confidex are trademarks of Tata Steel UK Limited.



Performance

Environmental

The JI Roof PIR corresponds to the BRE Global Green Guide online generic specification Galvanised steel rafters and joists, composite profiled roof cladding (steel inner lining, pentane blown PIR insulation, coated steel outer skin) (ref. 812550001) which achieves a summary rating of A+ within pitched roofs. The production facility is ISO 14001 certified.

Fire

The external and internal faces of the panel are Class 0 in accordance with the Building Regulations when tested to BS476: Parts 6: 1989 and Part 7: 1987. The JI Roof PIR has a LPCB (Loss Prevention Certification Board EXT-B Grade (certificate No : 700a to LPS181 : Part 1 : Issue 1) for 40-150 mm core thickness.

Panel	Application		Gauge (mm)	Fire resistance*		Grade	Core	LPCB
	Roof	Wall		Integrity (min)	Insulation (min)			
JI Roof PIR		●	40-150	-	-	EXT-B	PIR	700a/18
JI Roof PIR	●		40-150	-	-	EXT-B	PIR	700a/19
JI Roof PIR		●**	40-150	65	15	EXT-A15	PIR	700a/20

* Please check redbooklive (www.redbooklive.com) for notes on installation
.. Only vertical

Construction details to obtain the classifications above

Primary fasteners:

- Roof application (Ext-B): Minimum 1 fixing per valley.
- Wall application (Ext-B / Ext-A15): Minimum 1 fixing per valley.

Secondary fasteners:

- Roof application: Side laps and flashings to be stitched at maximum 450 mm.
- Wall application (Ext-B): Side laps to be stitched at maximum 500 mm.
- Wall application (Ext-A15): Side laps to be stitched at maximum 300 mm.

Secondary Supports to obtain the Ext-A15:

- The panels must be limited to a maximum of 4000 mm.
- The secondary support system must be a 'Fire Wall' system, which contains slotted connections and nylon washers to relieve stresses induced by thermal expansion.

Performance

Spantable Downward Load type (kN/m²)

Span	Thickness (mm)	1,30	1,40	1,50	1,60	1,70	1,80	1,90	2,00	2,10	2,20	2,30	2,40	2,50	2,60	2,70	2,80	2,90	3,00	3,10	3,20
Single	40	3,41	3,15	2,88	2,58	2,34	2,14	1,97	1,80	1,66	1,54	1,43	1,33	1,23	1,16	1,08	1,00	0,95	0,89	0,84	0,78
	60	3,81	3,54	3,30	3,10	2,89	2,67	2,48	2,32	2,16	2,01	1,89	1,77	1,67	1,57	1,48	1,40	1,32	1,24	1,18	1,13
	80	4,00	3,72	3,47	3,25	3,06	2,89	2,74	2,61	2,47	2,35	2,23	2,11	2,00	1,90	1,80	1,71	1,63	1,54	1,47	1,40
	100	4,16	3,86	3,60	3,38	3,18	3,00	2,85	2,70	2,58	2,46	2,35	2,25	2,17	2,08	2,00	1,91	1,83	1,74	1,67	1,60
	120	4,32	4,01	3,74	3,51	3,30	3,12	2,96	2,81	2,68	2,55	2,44	2,34	2,24	2,16	2,08	2,00	1,94	1,88	1,82	1,75
Double	40	3,41	3,15	2,88	2,58	2,34	2,14	1,97	1,80	1,66	1,54	1,43	1,33	1,23	1,16	1,08	1,00	0,95	0,89	0,84	0,79
	60	3,81	3,54	3,30	3,10	2,89	2,67	2,48	2,32	2,16	2,01	1,89	1,77	1,67	1,57	1,48	1,40	1,32	1,24	1,18	1,13
	80	4,00	3,72	3,47	3,25	3,06	2,89	2,74	2,61	2,47	2,35	2,22	2,09	1,96	1,85	1,73	1,63	1,53	1,45	1,37	1,30
	100	4,16	3,86	3,60	3,38	3,18	3,00	2,85	2,70	2,58	2,46	2,35	2,25	2,12	1,99	1,87	1,75	1,66	1,56	1,48	1,41
	120	4,32	4,01	3,74	3,51	3,30	3,12	2,96	2,81	2,68	2,55	2,44	2,34	2,24	2,12	2,00	1,89	1,78	1,69	1,60	1,52
Multiple	40	3,41	3,15	2,88	2,58	2,34	2,14	1,97	1,80	1,66	1,54	1,43	1,33	1,23	1,16	1,08	1,00	0,95	0,89	0,84	0,79
	60	3,81	3,54	3,30	3,10	2,89	2,67	2,48	2,32	2,16	2,01	1,89	1,77	1,67	1,57	1,48	1,40	1,32	1,24	1,18	1,13
	80	4,00	3,72	3,47	3,25	3,06	2,89	2,74	2,61	2,47	2,35	2,23	2,11	2,00	1,90	1,80	1,71	1,63	1,54	1,47	1,40
	100	4,16	3,86	3,60	3,38	3,18	3,00	2,85	2,70	2,58	2,46	2,35	2,25	2,17	2,08	2,00	1,91	1,83	1,74	1,67	1,60
	120	4,32	4,01	3,74	3,51	3,30	3,12	2,96	2,81	2,68	2,55	2,44	2,34	2,24	2,16	2,08	2,00	1,94	1,88	1,82	1,75
150	4,50	4,18	3,90	3,66	3,44	3,25	3,08	2,93	2,79	2,66	2,55	2,44	2,35	2,25	2,17	2,10	2,02	1,95	1,89	1,83	

cases where the load exceeds 5 kN/m² are not represented
for other cases that doesn't fit within the assumptions presented above, please contact the technical assistance department of Joris Ide

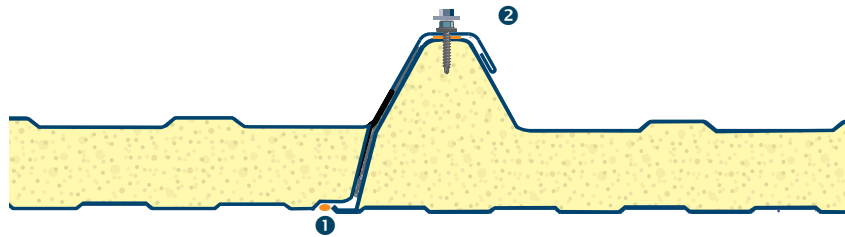
Spantable Suction Load type (kN/m²)

Span	Thickness (mm)	1,30	1,40	1,50	1,60	1,70	1,80	1,90	2,00	2,10	2,20	2,30	2,40	2,50	2,60	2,70	2,80	2,90	3,00	3,10	3,20
Single	40	4,25	3,79	3,41	3,09	2,83	2,59	2,38	2,20	2,05	1,91	1,79	1,68	1,58	1,48	1,41	1,33	1,25	1,19	1,14	1,08
	60	5,00	4,85	4,43	4,09	3,78	3,53	3,30	3,08	2,89	2,72	2,56	2,42	2,29	2,17	2,07	1,96	1,87	1,78	1,70	1,62
	80	5,00	5,00	5,00	4,97	4,67	4,39	4,13	3,90	3,69	3,50	3,32	3,16	3,00	2,86	2,73	2,61	2,49	2,39	2,28	2,19
	100	5,00	5,00	5,00	5,00	5,00	5,00	4,88	4,64	4,42	4,21	4,02	3,85	3,68	3,52	3,38	3,24	3,11	2,98	2,86	2,75
	120	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	4,94	4,75	4,56	4,38	4,20	4,03	3,88	3,74	3,59	3,42
Double	40	4,25	3,79	3,41	3,09	2,83	2,59	2,38	2,20	2,05	1,91	1,79	1,68	1,58	1,48	1,41	1,33	1,25	1,19	1,14	1,08
	60	5,00	4,40	3,92	3,50	3,19	2,90	2,66	2,45	2,27	2,11	1,96	1,85	1,73	1,64	1,55	1,47	1,41	1,34	1,27	1,22
	80	4,88	4,31	3,85	3,46	3,14	2,88	2,65	2,45	2,27	2,12	1,98	1,86	1,74	1,66	1,57	1,49	1,42	1,36	1,29	1,23
	100	4,69	4,15	3,71	3,36	3,03	2,78	2,56	2,38	2,21	2,06	1,93	1,81	1,71	1,62	1,53	1,46	1,39	1,33	1,26	1,22
	120	4,75	4,25	3,79	3,44	3,14	2,88	2,65	2,45	2,28	2,13	1,99	1,88	1,77	1,68	1,59	1,51	1,45	1,38	1,32	1,26
Multiple	40	4,25	3,79	3,41	3,09	2,83	2,59	2,38	2,20	2,05	1,91	1,79	1,68	1,58	1,48	1,41	1,33	1,25	1,19	1,14	1,08
	60	5,00	4,85	4,43	4,09	3,78	3,50	3,23	2,98	2,77	2,59	2,42	2,27	2,14	2,01	1,91	1,82	1,73	1,65	1,58	1,50
	80	5,00	5,00	4,55	4,13	3,75	3,42	3,15	2,92	2,71	2,54	2,38	2,24	2,12	2,00	1,91	1,81	1,73	1,66	1,59	1,51
	100	5,00	4,85	4,33	3,92	3,56	3,25	3,00	2,79	2,61	2,44	2,28	2,15	2,04	1,94	1,84	1,75	1,68	1,61	1,54	1,47
	120	5,00	4,88	4,38	3,96	3,61	3,31	3,05	2,83	2,65	2,49	2,34	2,20	2,09	1,98	1,89	1,80	1,72	1,66	1,59	1,52
150	5,00	4,88	4,38	3,96	3,63	3,33	3,09	2,88	2,68	2,50	2,36	2,23	2,12	2,01	1,92	1,84	1,75	1,68	1,62	1,55	

cases where the load exceeds 5 kN/m² are not represented
for other cases that doesn't fit within the assumptions presented above, please contact the technical assistance department of Joris Ide

Dimensions and tolerances

Minimum cutback : 50 mm – maximum cutback : 350 mm (no cutback: not possible) Cutback 25 mm for wall application (on demand) Panels can be manufactured for placing left to right and right to left as per your requirements.

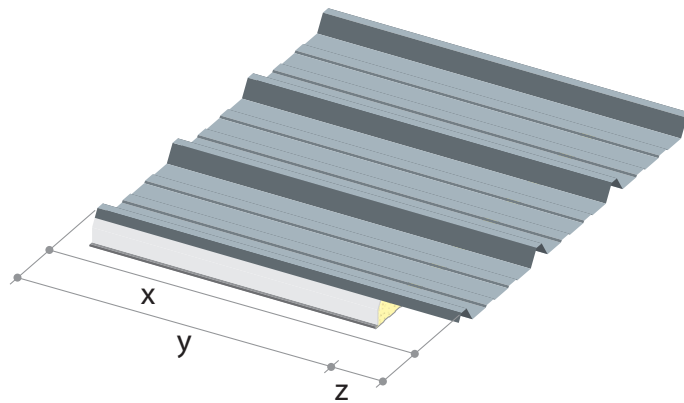


1. Seal in the side lap.
2. Seal under the crown of the overlap.

Minimum insulation length of panels

40 mm	2000
60 mm	1900
80 mm	1800
100 mm	1800
120 mm	1800
150 mm	1800

Cut-back system



- x. Panel length
- y. Insulation length
- z. Cut-back

Product tolerance

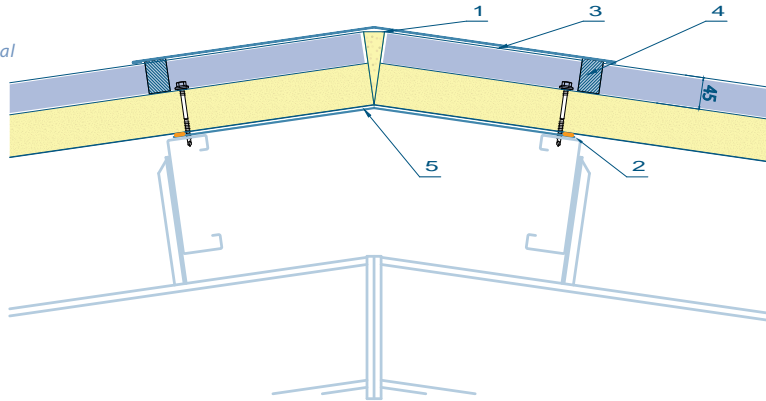
Length < 3000 mm	± 5 mm
Length > 3000 mm	± 10 mm
Width (mm)	± 2 mm
Gauge (mm)	± 2 mm

Product tolerances [According to EN 14509]

Construction details

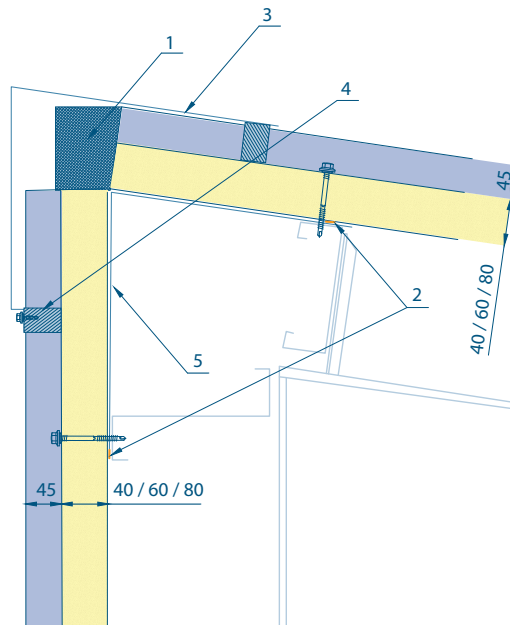
Ridge detail

1. Canister applied foam insulation
2. 9 mm x 3 mm butyl seal
3. External flashing
4. Profiled filler
5. Internal flashing with 150 mm overlap sealed with air seal



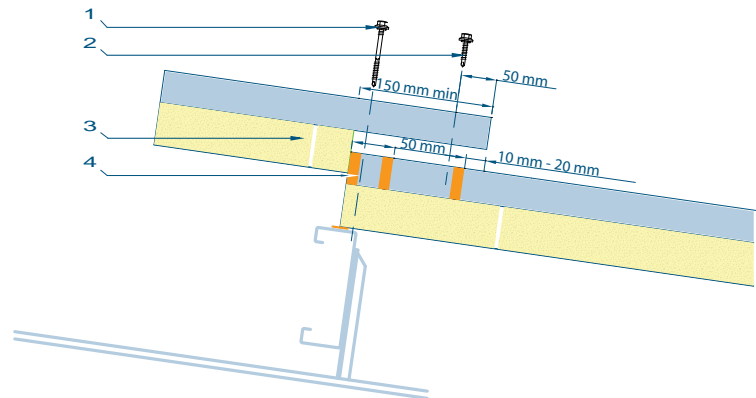
External monoridge

1. PIR board insulation
2. Minimum $\text{\O} 6$ mm butyl sealant
3. External flashing
4. Profiled filler with gun grade sealant
5. Internal flashing with 150 mm overlap sealed with air seal



Overlap detail

1. Main panel fastener in each valley
2. Stitcher screw in each crown
3. Ji Roof PIR pir lpcb approved trapezoidal roof panel
4. Butyl rubber sealants

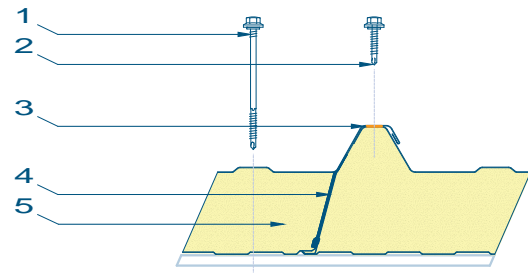


	Pitch (°)	Minimum end lap (mm) *	Butyl side lap	Stitches (mm)	Number of butyl cords end lap
4	$\leq p <$	200	Yes	450	3
6	$\leq p <$	150	Yes	450	2
11	$\leq p <$	150	Yes	450	2
21	$\leq p$	100	Yes	450	2

* In case of an overlap of two sheets

Side lap detail

1. Main panel fastener in each valley
2. Stitcher screw in each crown (max. 450 mm centers)
3. Butyl rubber sealant (site-applied) and compressible factory applied seal
4. Compressible factory applied seal
5. Ji Roof PIR pir LPCB approved trapezoidal roof panel



Fixings

Light section fasteners

Panel thickness (mm)	Main panel fastener (PMJ 7571 range)	Stitcher screw (PMJ 7550 range)	Main panel fastener (PMJ 7362 range)	Stitcher screw (PMJ 7340 range)
	A2 Stainless steel fasteners		Carbon steel fasteners	
40	SH LS HT 5.5 x 70 S19	SH ST 5.5 x 22 S16	CH LS HT 5.5 x 60 S19	CH ST 6.3 x 22 S16
60	SH LS HT 5.5 x 85 S19		CH LS HT 5.5 x 100 S19	
80	SH LS HT 5.5 x 110 S19		CH LS HT 5.5 x 115 S19	
100	SH LS HT 5.5 x 145 S19		CH LS HT 5.5 x 130 S19	
120	SH LS HT 5.5 x 175 S19		CH LS HT 5.5 x 150 S19	
150	SH LS HT 5.5 x 195 S19		CH LS HT 5.5 x 190 S19	

Heavy section fasteners

Panel thickness (mm)	Main panel fastener (PMJ 7575 range)	Stitcher screw (PMJ 7550 range)	Main panel fastener (PMJ 7370 range)	Stitcher screw (PMJ 7340 range)
	A2 Stainless steel fasteners		Carbon steel fasteners	
40	SH HS HT 5.5 x 80 S19	SH ST 5.5 x 22 S16	CH HS HT 5.5 x 76 S19	CH ST 6.3 x 22 S16
60	SH HS HT 5.5 x 115 S19		CH HS HT 5.5 x 102 S19	
80	SH HS HT 5.5 x 135 S19		CH HS HT 5.5 x 120 S19	
100	SH HS HT 5.5 x 155 S19		CH HS HT 5.5 x 140 S19	
120	SH HS HT 5.5 x 175 S19		CH HS HT 5.5 x 175 S19	
150	SH HS HT 5.5 x 195 S19		CH HS HT 5.5 x 190 S19	

Certifications, quality and durability

The JI Roof PIR is manufactured according to the ISO 9001 and is assembled from high-quality raw materials which are selected by a detailed supply chain management and in-house laboratory controls. The Joris Ide plant in Zwevezele is ISO 14001 certified. The product is produced to the highest quality standards such as EN 14509. The JI Roof PIR carries the product conformity according to the European legislation and therefore all packs are CE-marked and carry the Declaration of Performance.



Assessed to ISO 9001:2015



Assessed to ISO 14001:2015



Assessed to OHSAS 18001:2007



LPS 1181: Cert/LPCB 700a



Accessories

Joris Ide can supply accessories such as foam fillers, flashings, matching outer single skin sheets and integrated polycarbonate roof lights.

Maintenance composite panels

Joris Ide advises to do an annual inspection of the panels and to carry out any remedial work identified during inspection.

The maintenance & cleaning frequency is dependant on the application environment and actual pollution conditions of the composite panel. Exterior used panels need to be cleaned once per year. For interior used panels, the cleaning is dependant on the actual pollution conditions.

The cleaning of building walls should be made from up to down manually or by suitable cleaning facilities. Please notice that any cleaner which includes corrosive material is forbidden to be used for the cleaning. Specific cleaning processes as follow:

- Use plenty of clean water to wash the panel's surface;
- Use soft cloth with diluted detergent to wipe the panel's surface softly;
- Use clean water again to wash the stains off;
- Check the panel's surface and special cleaning with detergent is needed, if some parts are still not clean;
- Use clear water to wash the panels' surface till all stains have been washed out.

Notice:

Please don't clean if the panel's surface is hot (over 40 °C) because too fast volatility of the water will do harm to the coating. Please notice especially that suitable detergent should be chosen. Generally neutral detergent is OK. Please don't use strong alkaline detergent, such as potassium hydroxide, sodium hydroxide and also please don't use strong acid detergent, abrasive detergent and paint soluble detergent. We would suggest to clean a small part as an experiment before carrying out thorough cleaning of the whole project.



Jl Roof PIR for agricultural applications.



Jl Roof PIR industrial roof application.



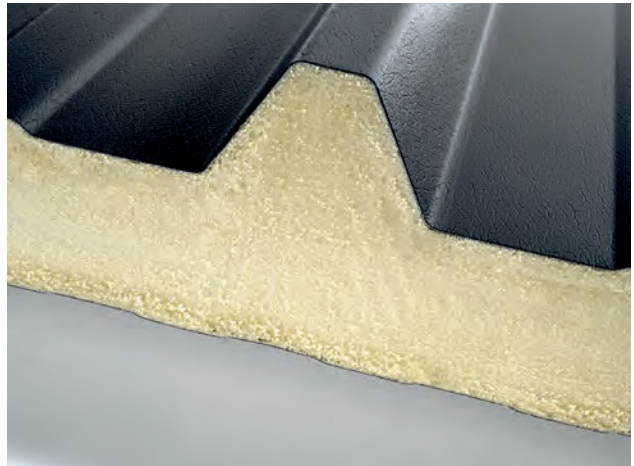
Vineyard storage building made in Jl Roof PIR



Insulated panels in an agricultural application.



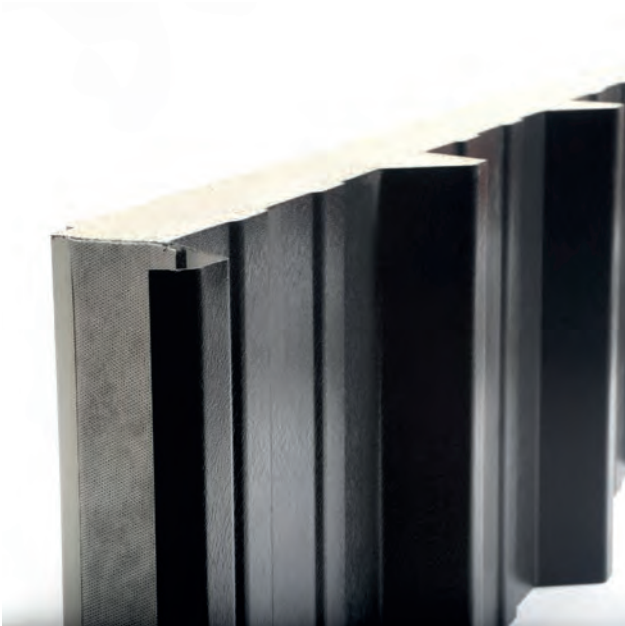
Jl Roof PIR used in a residential project.



Detail view of the insulation.



The Jl Roof PIR in an industrial environment.



Jl Roof PIR, detail view.



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