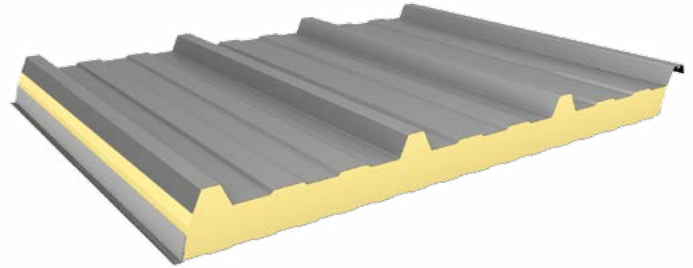


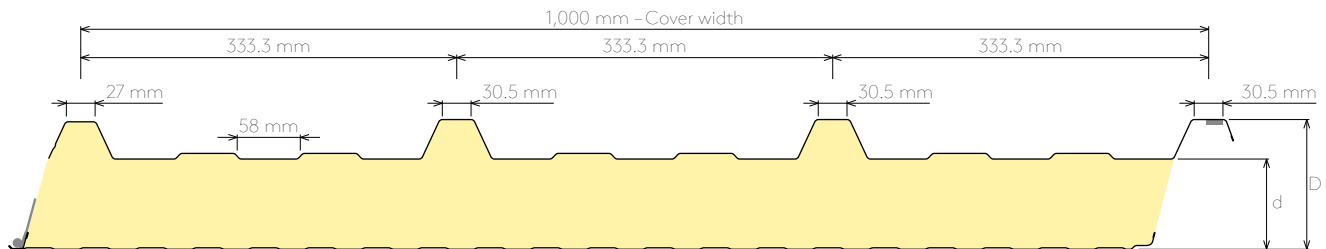
Application

Hoesch® isodach RD is a trapezoidal profile panel system with visible fixing. It can be used for all buildings with a roof pitch of:

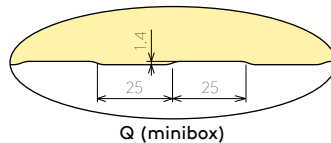
- at least 4° (7%) without the formation of transverse joints
- at least 6° (10%) with the formation of transverse joints



Dimensions & dead load



Internal steel sheet profilings



t _{nom1} [mm]	t _{nom2} [mm]	Core thickness (d) [mm] ¹⁾ :	25	40	60	80	100	120	140	160
0.50	0.40	Dead load [kg/m²]:	9.4	10.0	10.5	11.2	11.9	12.6	13.3	13.9

¹⁾ 50 mm and 70 mm by arrangement

Tolerances²⁾

Parameters	Dimension
Element length (l)	
L ≤ 3 m	±5 mm
L > 3 m	±10 mm
Element width	±2 mm
Element thickness (D)	
D ≤ 100 mm	±2 mm
D > 100 mm	±2 %
Perpendicularity of the cut edge s	≤ 0.6 % of the element width
Lengthways and transverse camber	
Length	2 mm/m, but max. 20 mm
Width for plane profiles: h ≤ 10 mm	8.5 mm/m
Width for other profile depths: h > 10 mm	10 mm/m

²⁾ Other tolerances can be found in DIN EN 14509

Delivery lengths

The standard delivery length is between 3.00 - 13.50 m (without additional costs). The maximum production length is 22.50 m. Other lengths are available upon request.

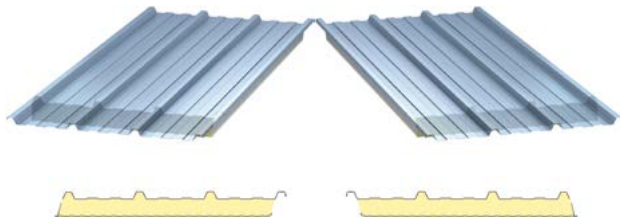
Technical regulations

We have been awarded the EU specific technical approvals (Z-10.49-813) and certifications for insulated sandwich elements (heat protection, bearing capacity, fire protection, sound proofing). For further information, please contact our specialist field service advisers.

Element back-cut*/installation direction

For the transverse seams from panel to panel, or to light module, a back-cut (overlapping) should be provided. For this, a factory-performed back-cut can be provided.

The standard back-cut with foam-free area amounts to 20 mm, and back-cuts up to 300 mm are possible. For manufacturing, it is necessary to specify the installation orientation.



Element TYPE R

Element TYPE L

* For more information on length and type of backcut please contact our specialist field service advisers.

Materials

Substrate

- Surface-treated steel with a Z275 zinc layer as per DIN EN 10346 for the Polyester, Spectrum™, PVDF coating systems.

Steel sheet thicknesses

External (t_{nom1}) [mm]	Internal (t_{nom2}) [mm]
0,50*	0,40*
0,60	0,50

* Std. sheet thicknesses

Organic coating systems – external steel sheets

1. Standard polyester – PES (standard)

Polyester is a universal, economical coating system characterised by good colour stability. The standard coating thickness is 25 µm.

2. Spectrum™ (standard)

Spectrum has a coating thickness of 50 µm and a slightly granular surface structure.

The system provides outstanding ageing and weathering resistance, excellent corrosion protection and UV-resistance as well as high colour and gloss stability.

High formability and outstanding resistance to mechanical damage round out the characteristics. Spectrum is free of chlorine, phthalates and softeners. It is 100% recyclable.

Organic coating systems – internal steel sheets

1. DU (KiD)

Polyester coating with a nominal layer thickness of approx. 15 µm. The standard colour shade is grey-white (similar to RAL 9002).

2. Standard polyester – PES

Polyester is a universal, economical coating system characterised by good colour stability. The standard coating thickness is 25 µm.

3. Foodsafe

150 µm thick, chemically inert polymer film coating for internal use in cold stores, food processing operations and buildings with heightened hygienic requirements.

The standard colour shade is grey-white (similar to RAL 9002).

Additional coating systems for the internal steel sheets are available upon request. For further information, please contact our specialist field service advisers.

Insulation core

Hoesch® isodach RD is available with PIR insulation core.

The insulation core does not present any health risk and has zero ozone depletion potential. The insulation core is free of CFCs/HCFCs.

Sealing tapes

Longitudinally and in the overlapping upper belt, the element is fitted in the factory with a high-quality sealing tape that seals against convection and condensation water.

Technical specifications

Insulation performance as per EN 14509 incl. joint

Core thickness (d) [mm]	IPN	IPN 1
	$\lambda_p = 0,024$ [W/mK]	$\lambda_p = 0,022$ [W/mK]
	U [W/m²K]	U [W/m²K]
25	0,78	-
40	0,52	-
60	-	0,33
80	-	0,25
100	-	0,21
120	-	0,17
140	-	0,15
160	-	0,13

U – thermal transition coefficient W/m²K
 λ_p – thermal conductivity (after ageing) W/mK

Environmental sustainability

Hoesch sandwich elements with an PIR insulation core react neutrally chemically and provide no breeding grounds whatsoever for mould and rot.

Fire protection

In terms of fire behaviour and resistance, Hoesch® isodach RD has been tested according to national technical regulations and standards.

Fire behaviour:

Fire resistance of the PIR insulation core as per EN 13501-1:

- d = 25 and 40 mm: B-s1,d0 (all end applications)
- d = 60 – 160 mm: B-s2,d0 (all end applications)

The insulation core does not contribute to fire transfer and is self-extinguishing.

Fire resistance:

Core thickness (d) [mm] ¹⁾	Fire resistance class DIN EN 13501-2 roof application
25, 40, 60, 80	-
100	
120	
140	REI 30 ²⁾
160	

¹⁾ with Factory-applied sealing tape

²⁾ for thickness >100 mm please check No. 6.2. in the certificate

Sound insulation

Core thickness (d) [mm]	Assessed sound dampening dimension Rw [dB]
25 – 160	26

Technical regulations

Hoesch® isodach RD fulfils the requirements of the European sandwich standard EN 14509:2013 Self-supporting double-skin metal-faced insulating panels - Factory made products - Specifications.

Quality

Our insulated roof and wall systems are manufactured from high-quality primary materials in state-of-the-art production facilities, under permanent quality control. They fulfil the requirements of ISO 9001:2015 and of EN ISO 50001:2012.

Warranty

On the basis of the actual application, we offer a project-related warranty on the organic coating of the external steel facing.

Packaging & transport

In our production facilities, the elements are packed in such a way that they are undamaged after extended transport. The outsides are protected with polystyrene strips or scantlings, and the package is covered using wrapping film. The number of elements per package depends on the thickness and total length of the elements.

The values listed in the table are to be taken as guideline. The values are reduced for exceptionally long delivery lengths. The maximum package height is 1,100 mm. The values in the table relate to element lengths of 8 m.

The maximum weight is approx. 3,000 kg.

Insulation core thickness (d) [mm]	25	40	60	80	100	120	140	160
Number of elements per package	24	18	14	10	8	7	6	6

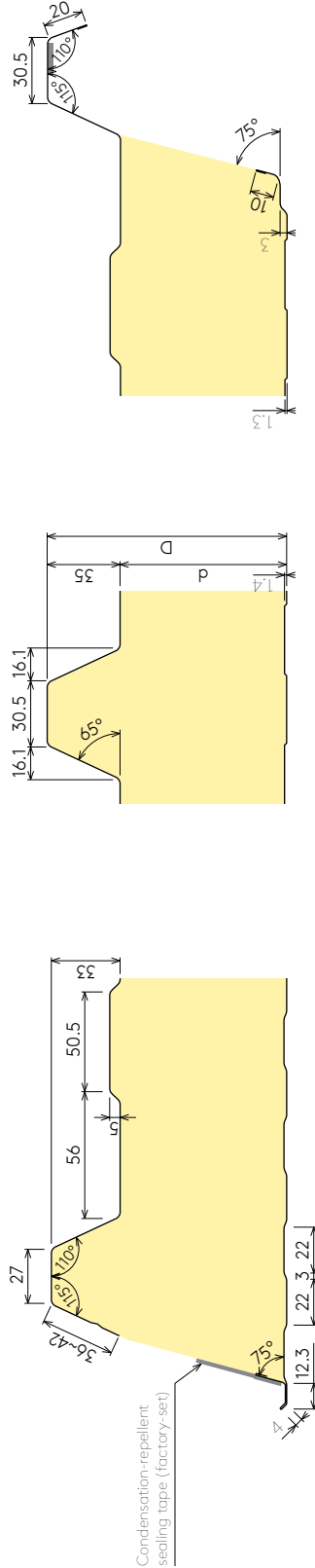
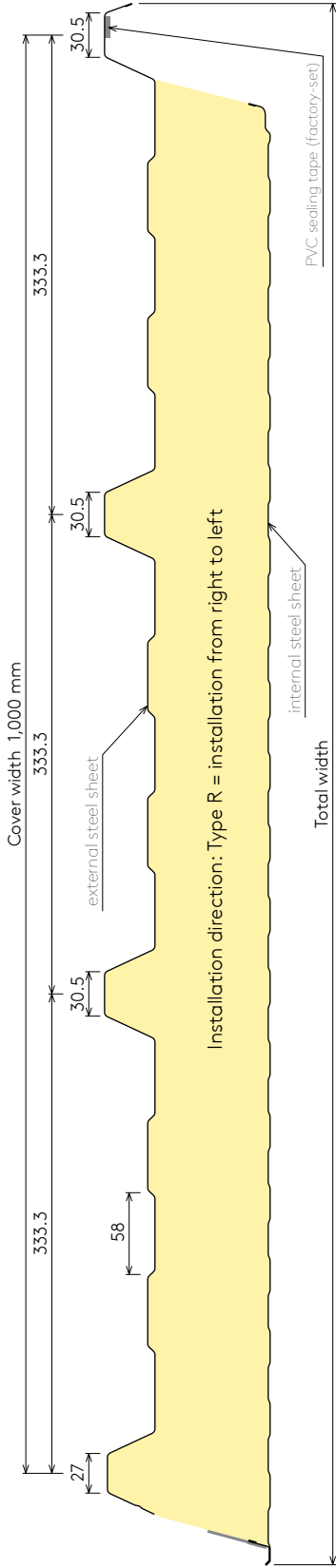
Delivery

Elements are delivered directly to the construction site using HGVs, unless something different is agreed. The customer or installer is responsible for unloading, and this must be ensured by the customer.

Installation

When laying the elements, the “Guideline for planning and implementing roof, wall, and ceiling constructions made from metal profiled sheeting” of the IFBS must be complied with. For mounting large format panels, we recommend vacuum lifters from Viavac and from Wirth.

The individual specifications in this datasheet are guaranteed properties only if they are expressly confirmed as such in writing in each specific case. Subject to technical changes.



Available element thicknesses

Core thickness (d) [mm]	Element thickness (D) [mm]	Total width [mm]
25	60	1,067
40	75	1,069
60	95	1,079
80	115	1,088
100	135	1,097
120	155	1,107
140	175	1,116
160	195	1,125