

Application

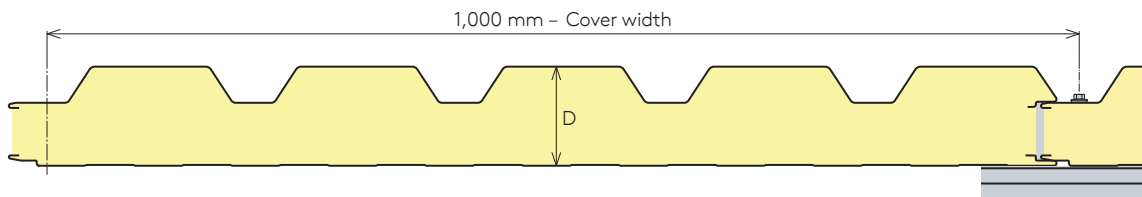
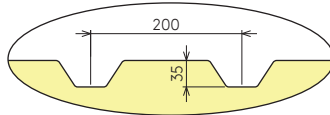
Hoesch® Thermowand TL, the proven sandwich element with trapezoidal profile appearance of the external skin, is extremely installation-friendly and is designed for large support widths. The wall element with visible fixing is suitable for both vertical and horizontal laying and provides a secure basis for the best financial results combined with maximum functionality.



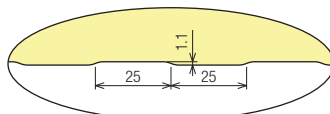
Dimensions & dead load

External steel sheet profiling

T (Hoesch Thermowand TL)



Internal steel sheet profiling



Q (minibox)

t_{nom1} [mm]	t_{nom2} [mm]	Element thickness (D) [mm]:	96	130
0.60	0.40	Dead load [kg/m ²]:	12.6	13.9

Tolerances

All materials used comply with the technical regulations and standards. Tolerances comply with the tolerance specifications of DIN EN 14509 – annex D.

Parameters	Dimension
Element length (L)	
$L \leq 3 \text{ m}$	$\pm 5 \text{ mm}$
$L > 3 \text{ m}$	$\pm 10 \text{ mm}$
Element width	$\pm 2 \text{ mm}$
Element thickness (D)	
$D \leq 100 \text{ mm}$	$\pm 2 \text{ mm}$
$D > 100 \text{ mm}$	$\pm 2 \%$
Perpendicularity of the cut edge s	$\leq 0.6 \%$ of the element width
Lengthways and transverse camber	
Length	2 mm/m, but not more than 20 mm
Width for flat profiles – $h \leq 10 \text{ mm}$	8.5 mm/m
Width for other profile depths – $h > 10 \text{ mm}$	10 mm/m

Delivery lengths

The standard delivery length is between 3.00 - 13.50 m (without additional costs). The maximum production length is 18.00 m. Other lengths are available upon request.

Technical regulations

We have been awarded the EU specific technical approvals and certifications for insulated sandwich elements (heat protection, bearing capacity, fire protection, sound proofing). For further information, 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 and Foodsafe coating systems.

Steel sheet thicknesses

External (t_{nom1}) [mm]	Internal (t_{nom2}) [mm]
0.50	0.40
0.50	0.50
0.60*	0.40*
0.60	0.50

* Standard steel sheet thickness

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 coating 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.

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

Insulation core

Hoesch® Thermowand TL is available with IPN3 insulation core.

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

Sealing tapes

Factory-applied sealing tape

Longitudinally, Hoesch® Thermowand TL is fitted in the factory with a high-quality sealing tape which repels convection and condensation water.

Technical specifications

Insulation performance (as per EN ISO 10211-2)

Element thickness (D) [mm]	IPN3
	$\lambda_D = 0.021$ [W/mK] U [W/m²K]
96	0.34
130	0.22

U – thermal transition coefficient W/m²K

λ_D – thermal conductivity (after ageing) W/mK

Environmental sustainability

Hoesch sandwich elements with an IPN3 insulation core react chemically neutral and provide no breeding grounds whatsoever for mould and rot.

Fire protection

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

Fire behaviour:

Fire behaviour of insulation core type IPN3 was classified as per EN 13501-1 into class B-s1,d0 (all end applications).

The insulation cores do not contribute to fire transfer and are self-extinguishing.

Fire resistance:

You can find the current overview of fire resistance as per EN 13501-2 on the Internet at: www.kingspan.de.

Sound insulation

Element thickness (D) [mm]	Assessed sound dampening dimension R_w [dB]
96	26
130	

Technical regulations

Hoesch® Thermowand TL fulfils the requirements of the European 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 steel sheet.

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 1,200 mm. The values in the table relate to element lengths of 8 m.

The maximum weight is approx. 3,000 kg.

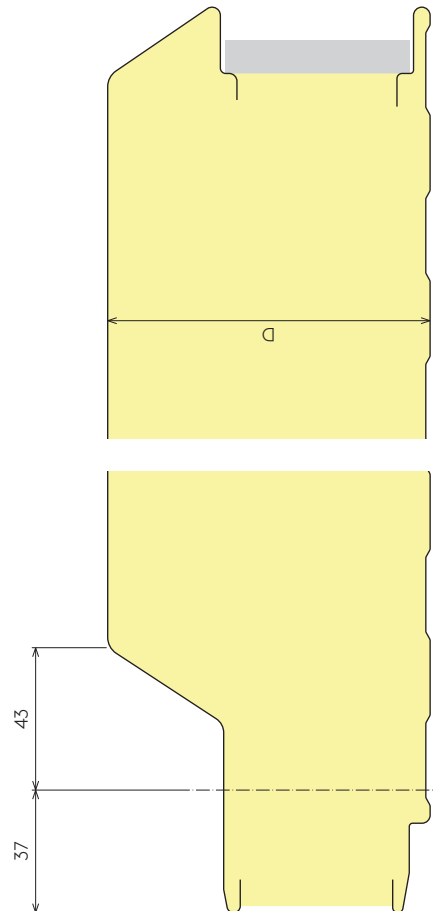
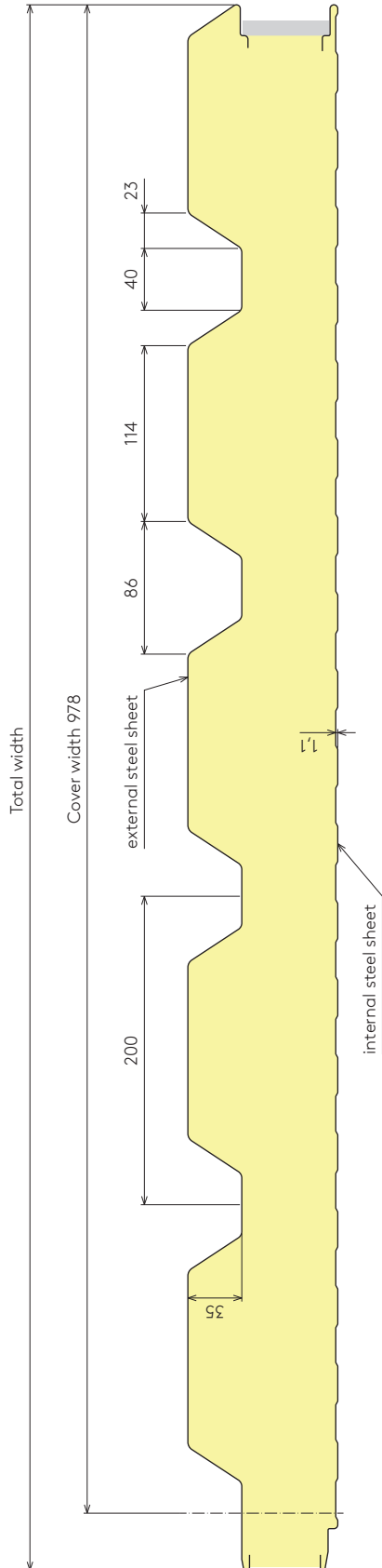
Element thickness [mm]	96	130
Number of elements per package	11	8

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.



Available element thicknesses

Element thickness (D) [mm]	Total width [mm]
96	1,015
130	

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.