

## Application

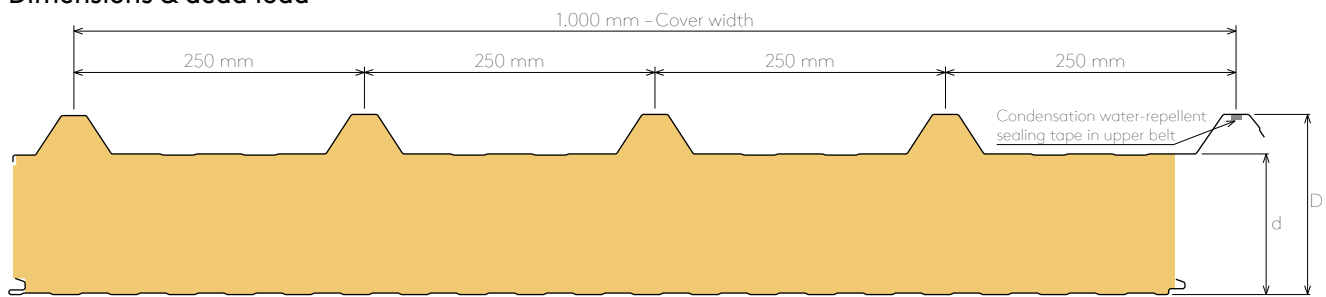
Hoesch® Thermorock Dach is a trapezoidal profile panel system with K-Roc® mineral wool insulation core and visible fixing. It can be used for all buildings with a roof pitch of:

- at least 5° (8.7%) without the formation of transverse joints
- at least 8° (14.1%) without the formation of transverse joints

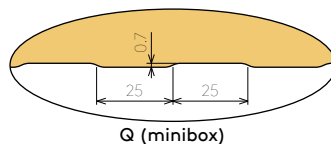
Hoesch® Thermorock Dach is an element with K-Roc® mineral wool insulation core (A2 – non-flammable) that can also be used as a wall element.



## Dimensions & dead load



## Internal steel sheet profilings



| $t_{nom1}$ [mm] | $t_{nom2}$ [mm] | Core thickness (d) [mm]:        | 60 <sup>1)</sup> | 80   | 100  | 120  | 150  | 175  | 200  |
|-----------------|-----------------|---------------------------------|------------------|------|------|------|------|------|------|
| 0.60            | 0.50            | Dead load [kg/m <sup>2</sup> ]: | 18.1             | 20.5 | 21.8 | 24.0 | 27.3 | 30.1 | 32.8 |

<sup>1)</sup> Recommended maximum length up to 7.00 m

## Tolerances<sup>2)</sup>

| 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:<br>h ≤ 10 mm       | 8.5 mm/m                     |
| Width for other profile depths:<br>h > 10 mm | 10 mm/m                      |

<sup>2)</sup> Other tolerances can be found in DIN EN 14509

## Delivery lengths

The standard delivery length is between 3.00 - 13.00 m (without additional costs). The maximum production length is 13,00 m. Other lengths are available upon request.

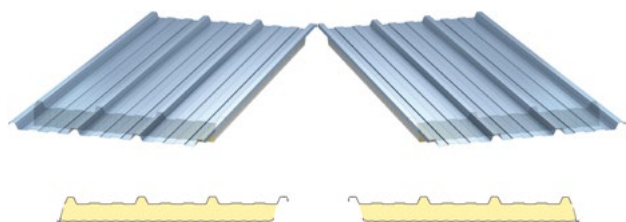
## Technical regulations

We have been awarded the EU specific technical approvals (Z-10.49-706) 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 ( $t_{nom1}$ )<br>[mm] | Internal ( $t_{nom2}$ )<br>[mm] |
|---------------------------------|---------------------------------|
| 0,60*                           | 0,50*                           |

\* Std. steel 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.

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

## Insulation core

K-Roc® mineral wool insulation core with high specific weight, suitable for applications having a fire resistance duration.

## Sealing tapes

In the factory, a high-quality sealing tape has been applied in the overlapping upper belt. For buildings with high temperatures or high relative air humidities, an impermeable sealing tape should be installed longitudinally by the customer.

## Technical specifications

### Insulation performance as per EN 14509 incl. joint

| Core thickness (d) [mm] | $\lambda_D = 0.044$ [W/mK] | $\lambda_D = 0.043$ [W/mK] |
|-------------------------|----------------------------|----------------------------|
|                         | U [W/m²K]                  | U [W/m²K]                  |
| 60                      | 0,70                       | -                          |
| 80                      | 0,53                       | -                          |
| 100                     | -                          | 0,42                       |
| 120                     | -                          | 0,35                       |
| 150                     | -                          | 0,28                       |
| 175                     | -                          | 0,24                       |
| 200                     | -                          | 0,21                       |

U – thermal transition coefficient W/m²K

$\lambda_D$  – thermal conductivity (after ageing) W/mK

### Environmental sustainability

The elements provide no breeding grounds whatsoever for mould and rot. The insulation core has been made water-repellent.

### Fire protection

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

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

- d = ≥ 100 mm: A2-s1,d0 (all end applications)

The insulation core does not contribute to fire transfer and is 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](http://www.kingspan.de).

### Sound insulation

| Core thickness (d) [mm] | Assessed sound dampening dimension $R_w$ [dB] |
|-------------------------|-----------------------------------------------|
| 60                      |                                               |
| 80                      |                                               |
| 100                     |                                               |
| 120                     | 32                                            |
| 150                     |                                               |
| 175                     |                                               |
| 200                     | 33                                            |

## Technical regulations

Hoesch® Thermorock Dach fulfils the requirements of the European sandwich standard EN 14509:2013 Self-supporting double-skin metal-faced insulating panels - Factory made products - Specifications, and is generally approved in terms of construction supervision. The system bears the CE-marking and has general building inspectorate approval.

### 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 ISO 14001:2015.

### Warranty

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

### 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.

| Core thickness (d) [mm]        | 60 | 80 | 100 | 120 | 150 | 175 | 200 |
|--------------------------------|----|----|-----|-----|-----|-----|-----|
| Number of elements per package | 14 | 10 | 8   | 8   | 6   | 5   | 4   |

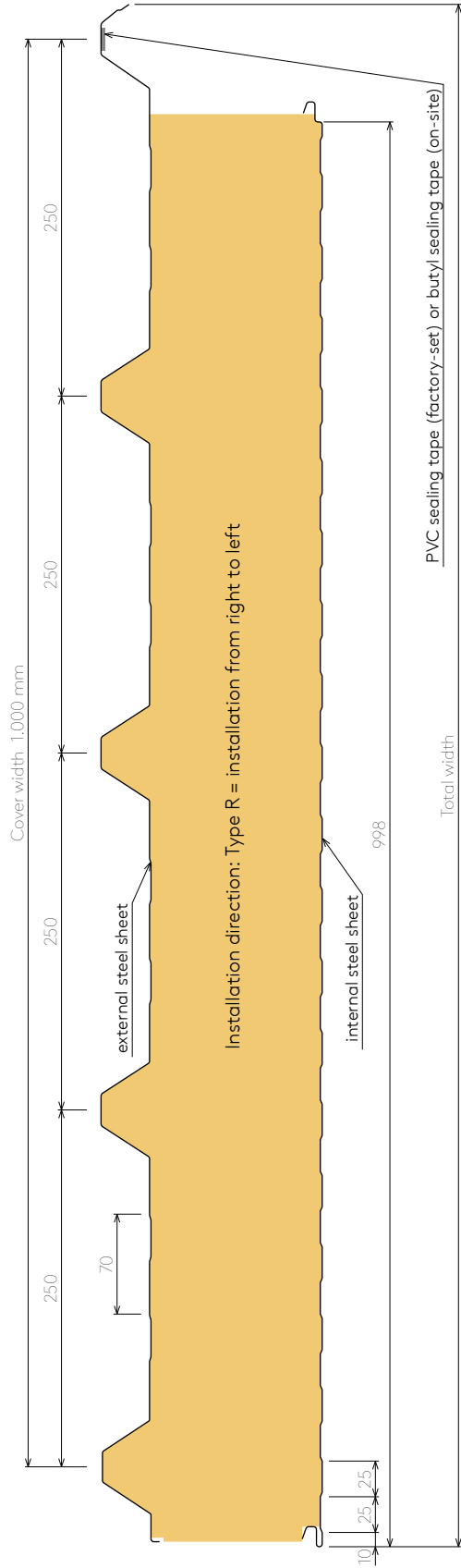
### Delivery

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

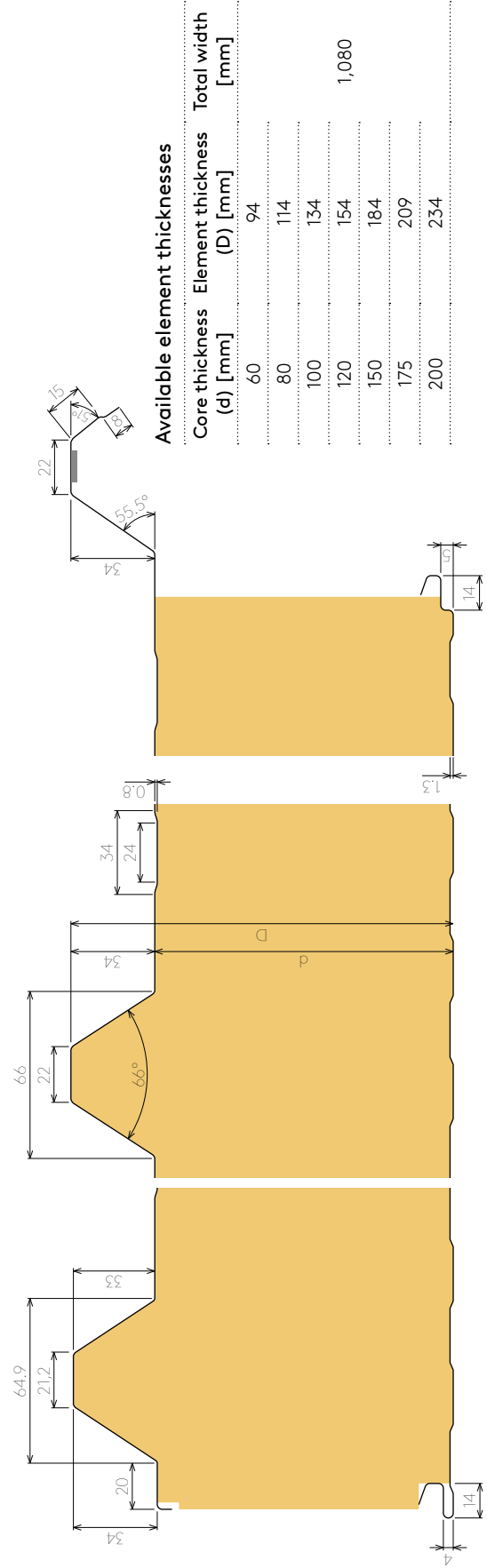
When laying the elements, the "Guideline for planning and implementing roof, wall, and ceiling constructions made from metal profiled sheeting" of the IFBS must be complied with.

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.



PVC sealing tape (factory-set) or butyl sealing tape (on-site)

Total width



**Available element thicknesses**

| Core thickness (d) [mm] | Element thickness (D) [mm] | Total width [mm] |
|-------------------------|----------------------------|------------------|
| 60                      | 94                         | 1,080            |
| 80                      | 114                        |                  |
| 100                     | 134                        |                  |
| 120                     | 154                        |                  |
| 150                     | 184                        |                  |
| 175                     | 209                        |                  |
| 200                     | 234                        |                  |