

isowelle®

The fluent transition for modern
architecture!



A company
of ThyssenKrupp
Steel

ThyssenKrupp Hoesch Bausysteme



ThyssenKrupp

The fluent transition for modern architecture

The isowelle® facade element is supplied in ready-to-mount form and - thanks to its characteristic geometry - makes possible the creation of modern, homogeneous wall surfaces. The construction width is 1000 mm while it can be supplied in lengths up to 20 m; in practical terms this means fewer transverse joints and brings about in this way cost savings through short mounting times.

isowelle® can be laid both horizontally and vertically and -

in combination with the concealed fixing facility - offers great scope in design terms whereby this can be extended still further when use is made of the opportunity to combine isowelle® with isowand vario® .

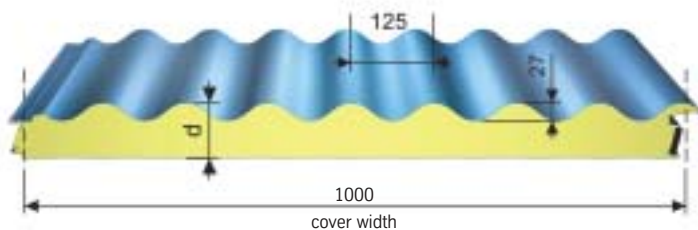
With the aid of ThyssenKrupp Hoesch Bausysteme's wide range of colours, architecturally attractive colours can be realized presenting a real opportunity for buildings to be designed and produced that are not only functionally mature but also extraordinarily attractive.



Data and facts

Area of application: facades

- Optically sophisticated design, individual character, attractive eye-catcher
- Excellent thermal insulation, energy cost savings
- Vapourtight metal facings, low heat losses
- Supplied ready-to-mount, short mounting times, low mounting costs
- Direct groove-and-tongue link with isowand vario®, optical highlighting of particular areas of a building, breaking-up / relieving of large wall areas
- Low weight, easy and quick to mount,
- Able to be laid horizontally or vertically, opportunities for individual designs
- Large effective spans, cost savings for substructure
- Metal facings of strip-galvanized and coated steel, excellent corrosion protection, long service life, opportunity for coloured designs



Designation of building element	Element thickness	Material thickness outer sheet	Material thickness inner sheet	Weight	Max. length supplied	Thermal resistance R*	Heat transfer coefficient U*	Thermal resistance R _D **	Heat transfer coefficient U**
isowelle®	mm	mm	mm	kg/m ²	m	m ² K/W	W/m ² K	m ² K/W	W/m ² K
WL-64-v	64			13.5	20	1.95	0.47	1.90	0.55
				14.8					
WL-84-v	84	0.60 0.60	0.60 0.75 ¹⁾	14.4	20	2.74	0.34	2.70	0.39
				15.7					
WL-104-v	104			15.3	20	3.54	0.27	3.50	0.29
				16.6					

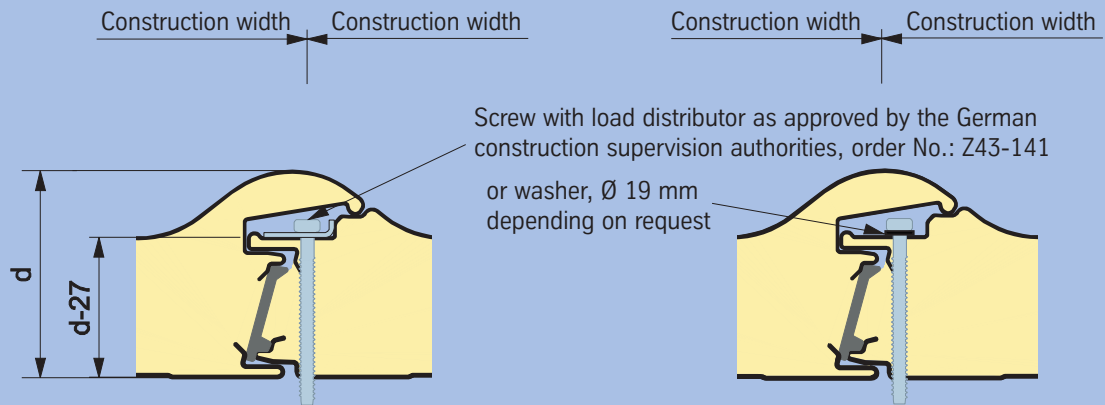
¹⁾ Standard strip thickness
 * calculating acc. to EN ISO 6946
 ** calculating acc. to EN 13 165 taking account of the joints acc. to prEN 14 509

Joints

The precise-fit joints offer the following advantages:

- Sealing strip inserted in our works, high air-tightness, low ventilation heat losses (German Thermal Protection Order)
- Optionally with concealed fixing facility, no disruption of lines, with defined stop and screwing auxiliary slot, problemfree mounting

Securing with concealed fixing system



Hot-dip enhancing

The corrosion protection of the elements is carried out in accordance with DIN 55928-8 as follows:

The metal facings are given a metallic alloy protective layer consisting of 95 % zinc and

5 % aluminium. This hot-dip enhanced steel strip with the designation **GALFAN®** provides unambiguously better corrosion protection than the conventional hot-dip galvanized steel strip.

The brief designation of **GALFAN®** is: ZA 2559. On the exposed side this corresponds to layer group 255. Thanks to the special alloy composition, not only the shaping properties of the material

but also the adhesion of the succeeding plastic coatings are improved.

Coating systems

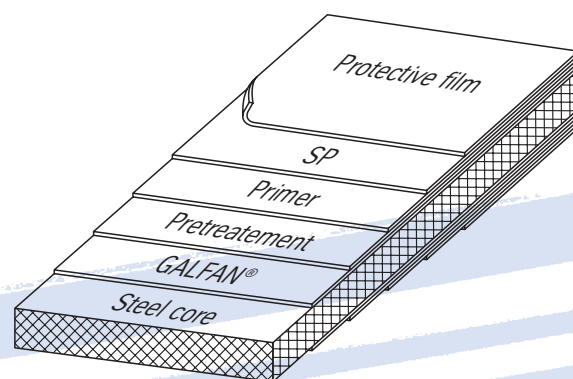
To match the corrosion protection to particular requirements and also to permit coloured designs, the hot-dip enhanced steel strip for the metal facings is given an additional coating.

To permit rapid delivery times, we hold the steel strip coated with the high-quality coating system **PLADUR® SP** at a layer thickness of 25 µm in stock in the popular colours for the outer metal facing.

Similarly the steel strip for the outer metal facing coated with the **PLADUR® PVDF** coating system is also held in stock in the most popular colours. Further colours from the **PLADUR® PVDF** and **SP** coating systems can also be supplied on request.

The inner metal facing is given the **PLADUR® DU** coating system in the SP (polyester) paint system (layer thickness 15 µm).

B SP



Protective film

In order to ensure that the high quality standard of the isowelle® elements is safeguarded, they are always supplied with protective film on the outer metal facing.

This protects the element during production, shipment and storage as well as during mounting from dirt and damage.

Important:
Components with protective film should be mounted without delay.

The protective film should be removed completely in the course of the mounting work but in any case not later than 6 weeks after the production date.

Mounting

Regulations / guide-lines

Amongst others, the following regulations / guide-lines are to be observed:

- German general construction supervision authority approval Z - 10.4 - 345, sandwich elements
- This isowelle® prospectus
- Accident protection regulations of the employer's liability insurance associations
- Guide-line for the mounting of section steel panels for roof, wall and floor structures, publisher: IFBS, Info 8.01
- References in the project statistics and order-related laying plans
- Mounting recommendations of ThyssenKrupp Hoesch Bausysteme

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