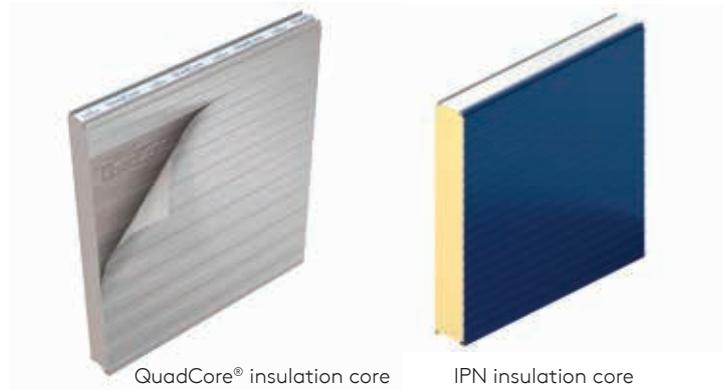


Application

KS1150 NF is a wall system with visible fixing, which can be used for all building types, arranged both horizontally and vertically. The KS1150 NF is ideal for use in cold rooms and air-conditioned environments. With the QuadCore® insulation core, it offers excellent insulation properties.

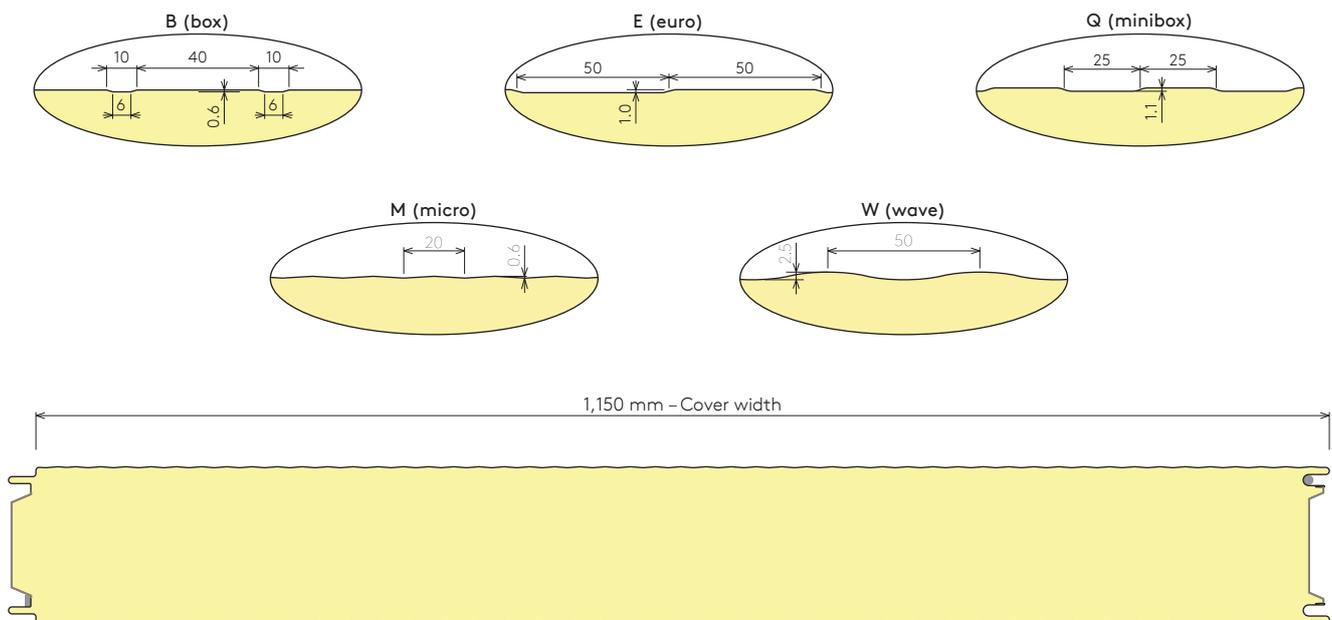


QuadCore® insulation core

IPN insulation core

Dimensions & dead load

External steel sheet profiling



Internal steel sheet profiling



t_{nom1} [mm]	t_{nom2} [mm]	Element thickness (D) [mm]:	40	60	80	100	120	150	170	200
0.60	0.40	Dead load [kg/m ²]:	10.2	10.9	11.7	12.5	13.2	14.4	15.1	16.3

Tolerances

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

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 bow	
Length	2 mm/m, but not more than 20 mm
Width for level profiles – h ≤ 10 mm	8.5 mm/m
Width for other profile depths – h > 10 mm	10 mm/m

Delivery lengths

The standard delivered length is between 3.00 - 13.50 m (without additional costs). The maximum production length is 18.00m. 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).

Materials

Substrate

- For the Polyester, Spectrum™, PVDF and Foodsafe coating systems, surface-treated steel with a Z275 zinc layer as per DIN EN 10346.

Steel steel thicknesses

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

* Std. steel thickness

Organic coating systems – external steel sheets

1. Standard polyester – PES (standard)

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

Spectrum™ (standard)

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

The system offers outstanding ageing and weathering resistance, excellent corrosion protection and UV resistance, as well as a high level of colour and gloss retention.

The high degree of formability and outstanding resistance to mechanical damage round out the range of qualities. Spectrum is free of chlorine, phthalates and softeners and 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 is grey-white (similar to RAL 9002).

2. Standard polyester – PES

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

3. Foodsafe

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

The standard colour is grey-white.

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

Insulation core

KS1150 NF is optionally available with IPN insulation core or with our high-performance QuadCore® insulation core in FireSafe quality.

The insulation core is harmless in terms of health, has zero ozone depletion potential and is free of CFCs/HCFCs.

Sealing tapes

Factory-applied sealing tape

On its longitudinal joint and its external tongue and internal groove joint, KS1150 NF has a factory-applied, condensate-repellent high-quality sealing tape.

Technical specifications

Insulation performance as per EN ISO 10211-2

Element thickness (D) [mm]	IPN3	QuadCore®
	$\lambda_p = 0.022$ [W/mK]	$\lambda_p = 0.018$ [W/mK]
U [W/m²K]		
40	0.59	-
60	0.36	-
80	0.27	0.23
100	0.22	0.18
120	0.18	0.15
150	0.15	-
170	0.13	-
200	0.11	-

U – thermal transition coefficient [W/m²K]

λ_p – thermal conductivity (after ageing) [W/mK]

Environmental sustainability

Our sandwich elements with an PIR or QuadCore® insulation core react chemically neutrally and provide no growth medium whatsoever for mould and rot.

Fire protection

The fire behaviour of the IPN and QuadCore® insulation core as per DIN EN 13501-1:

D = 40 mm: B-s2,d0 (all end applications)

D = 60 – 200 mm: B-s1,d0 (all end applications)

The insulation cores do not contribute to the spread of fire and are self-extinguishing.

Element thickness (D) [mm]	Fire-resistance period as per DIN EN 13501-2	
	External wall	Internal wall
40		
60		
80		
100		
120	-	-
150		
170		
200		

Sound proofing

Element thickness (D) [mm]	Rated sound dampening dimension R_w [dB]
40	24
60, 80	25
100, 120	26
150, 170, 200	27

Technical regulations

KS1150 NF fulfils the requirements of the European standard EN 14509:2013. Self-supporting double skin metal faced sandwich elements – Factory made products – Specifications.

Quality

Our insulated roof & wall systems are manufactured from high-quality primary materials subject to permanent quality control in state-of-the art production facilities. They fulfil the requirements of ISO 9001:2015 and EN ISO 14001:2015.

Warranty

We provide a project-related guarantee for the organic coating of the external steel top cover, depending on the relevant application.

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.

Element thickness (D) [mm]	40	60	80	100	120	150	170	200
Number of elements per package	27	23	14	11	9	7	6	5

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.

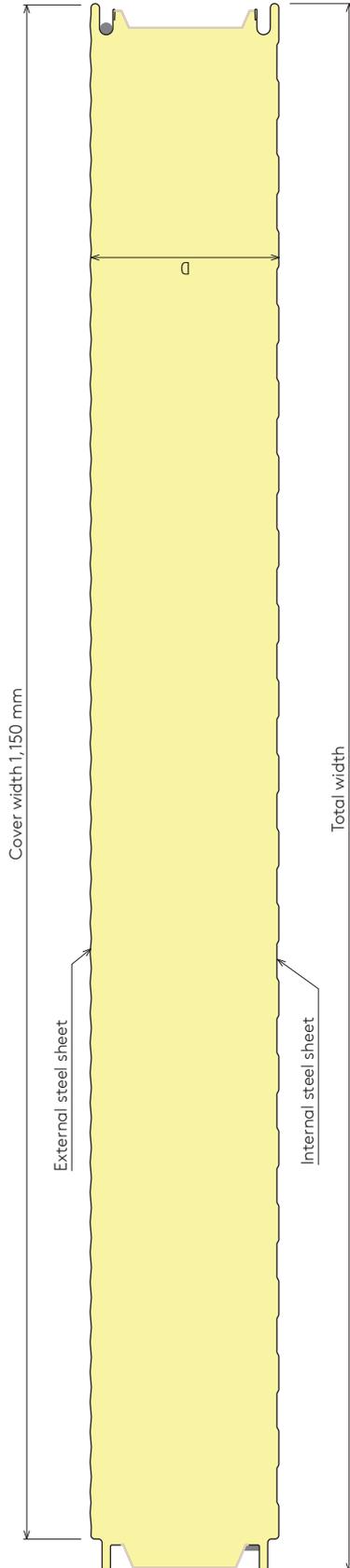
Installation

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.

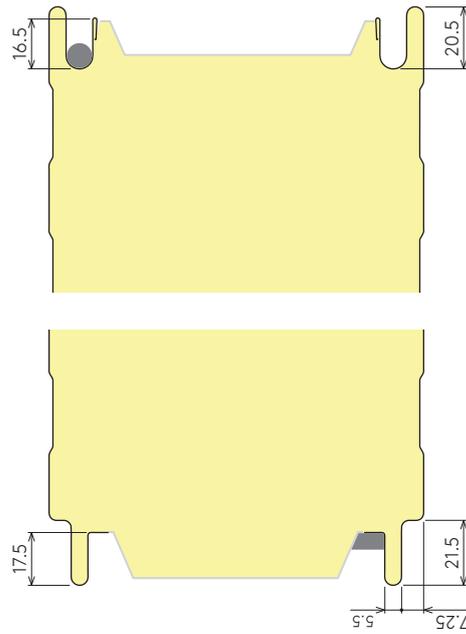
WALL SYSTEM KS1150 NF



ELEMENT DIMENSION



Joint detail



Available element thicknesses

Element thickness (D) [mm]	Total width [mm]
40	
60	
80	
100	
120	1,171
150	
170	
200	

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.