

NEW Non-combustible sandwich panel with insulation core made of sustainable material and with low dead weight

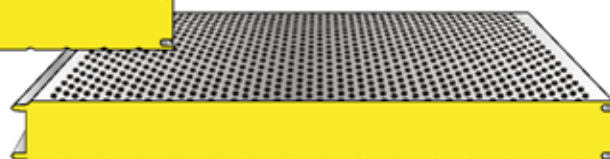


General
Technical
DIBt Approval
Z-10.49-613

This sandwich panel with a **glass wool core** and steel cover sheets meets the requirements of a non-combustible building material. The glass wool, made especially for a continuous production, consists of 80 % recyclable material, saving natural resources. Due to the optimisation of the bulk density of the glass wool core, this sandwich panel has **less deadweight** than sandwich panels with a rock wool core. This makes their installation easier and **reduces cost**, especially with long panels. Since various combinations of our products with a PUR, glass or rock wool core are possible, many different requirements concerning fire protection and sound and heat insulation can be met without visual impact.



METFIBER[®] ECO Wall



METFIBER[®] ECO Wall Sound*



METFIBER[®] ECO HF Wall

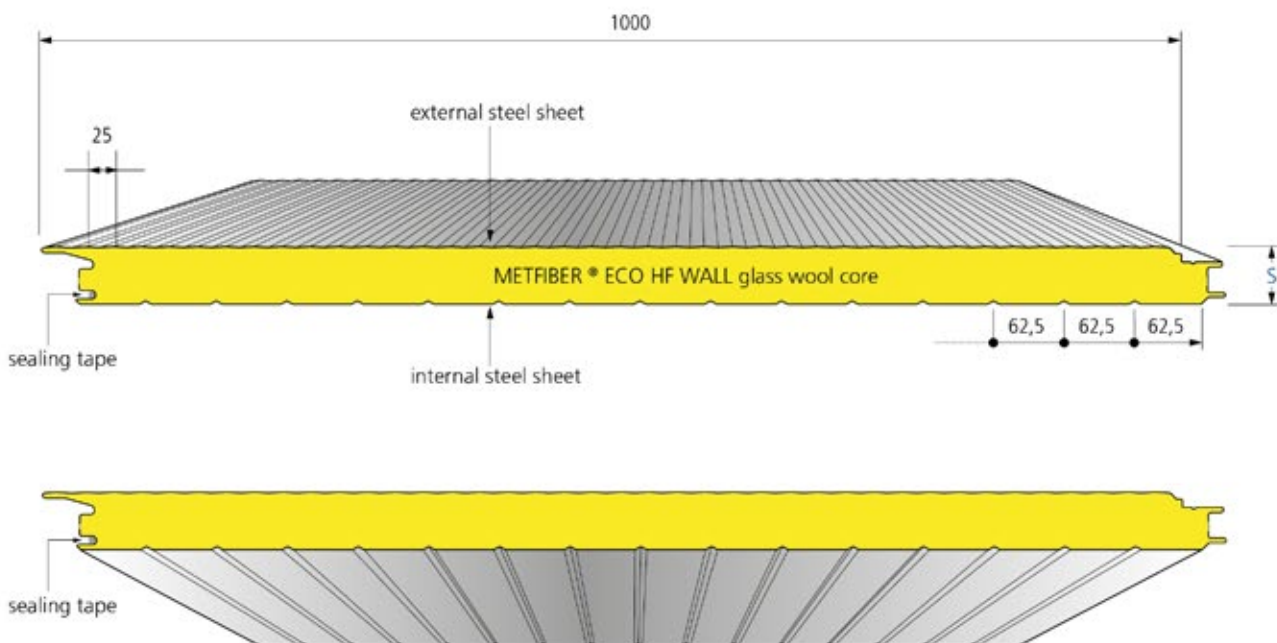
WALL | METFIBER® ECO HF WALL



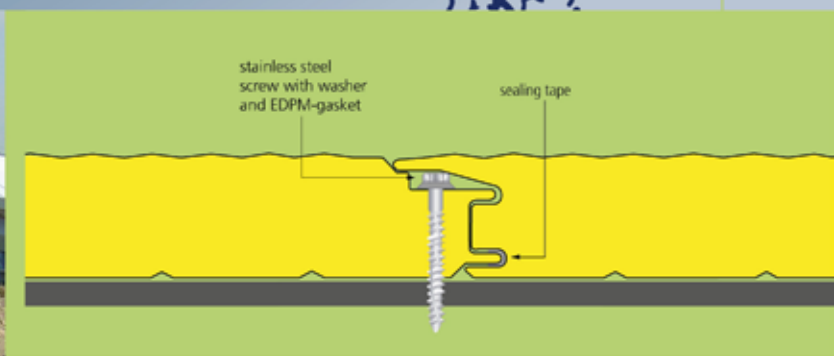
The Metfiber® Eco HF Wall panel with glass wool core and joint geometry for hidden fixing fulfils all the requirements for non-combustible building materials and is excellently suited for both vertical and horizontal installation. The glass wool used in this product consists of 80% recycled material, thus contributing significantly to the saving of natural resources and making the product an ecological building material. The deadweight of the panel is distinctly lower than that of conventional sandwich panels with rock wool insulation core, hence enabling an easier, faster installation and cost reduction, especially for larger panels.

For buildings exposed to high wind suction horizontal single span installation is recommended as well as the use of visible fixing screws covered by pilaster profiles. Due to the large number of combinations with other panels from our portfolio with polyurethane- or rock wool insulation core, it is possible to reach fire, acoustic and thermal requirements at once without any visual impact.

Please refer to our detailed technical manual for further information.



different internal profiles on request, dimensions in mm



PRODUCTION AND LABELING

Production according to applicable European Building Product Regulation as per sandwich norm DIN EN 14509 label-marking in accordance with EC certificate of conformity 0769-CPR-VAS-00420-1

APPROVAL

German building compliance certificate DIBt Z-10.49-613, valid until November 4, 2018

REACTION TO FIRE

Building material classified as A2-s1,d0 non-combustible according to DIN EN 13501-1; insulation core made of glass wool

THERMAL CONDUCTIVITY

$\lambda = 0.039 \text{ W / mK}$ according to DIN 4108 and DIN EN 13162
The insulation values are regularly monitored by external bodies and may be applied without any further reduction

STANDARD COATING

External and internal steel sheet: 25 μm polyester
For standard colours and different coating systems please refer to our colour chart

SOUND INSULATION

$R_w \approx 31 \text{ dB}$

STANDARD LENGTHS

> 2.00 m to 25.00 m, greater lengths on request

CORROSION PROTECTION

According to DIN EN 10169:

External and Internal sheets: Class RC3

According to DIN EN ISO 12944-2:

External and internal sheets: corrosivity category C3 corresponding to average duration of protection for urban and industrial environments with moderate exposure to sulphur dioxide

Other coating systems are available for more sophisticated demands such as for buildings near the sea, farm buildings with high ammonia exposure or moist rooms

STANDARD STEEL SHEETS

Hot-dip galvanized steel, grade S 320 GD + Z275 according to DIN EN 10346

TABLE OF SPANS

Please refer to our planning folder or visit our website www.metecno.de

PACKAGING

External sheets provided with removable protective film, panel packages wrapped with banded plastic foil to protect from soiling

INTERLOCKING JOINT COMPATIBILITY WITH SUPERWALL® ML & SUPERWALL® HF

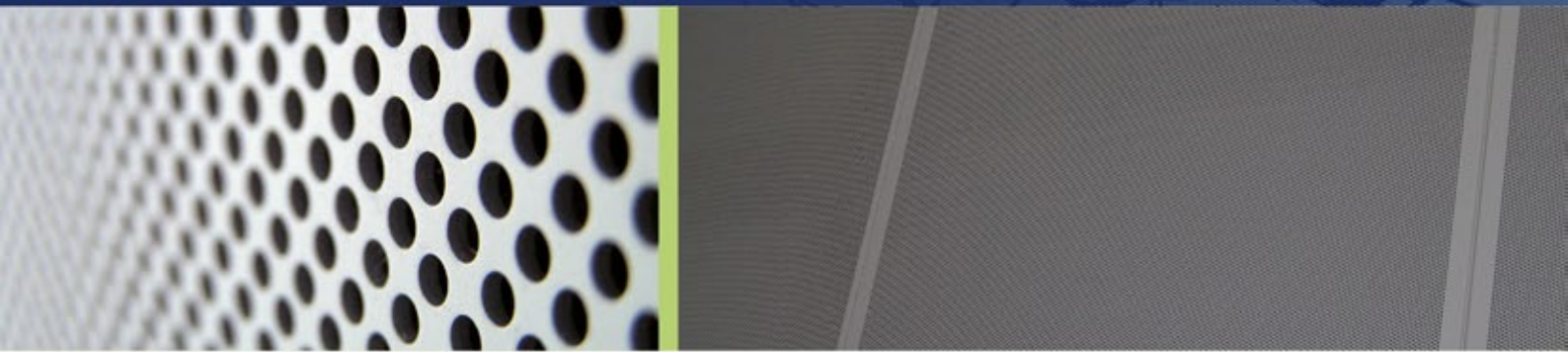
type of element

	core thickn. s	external steel sheet tN	internal steel sheet tN	weight	thermal resistance R	thermal conductivity [ψ – joint effect]	
						U w/o ψ	U with ψ
	mm	mm	mm	kg / m ²	m ² K / W	W / m ² K	W / m ² K
METFIBER® ECO HF WALL	100	0,60	0,60	17,16	2,54	0,385	0,400
	120	0,60	0,60	18,46	3,05	0,322	0,331
	150	0,60	0,60	20,14	3,82	0,258	0,264
	200	0,60	0,60	23,66	5,10	0,194	0,197
	240*	0,60	0,60	26,26	6,12	0,162	0,164

* no approval / on request

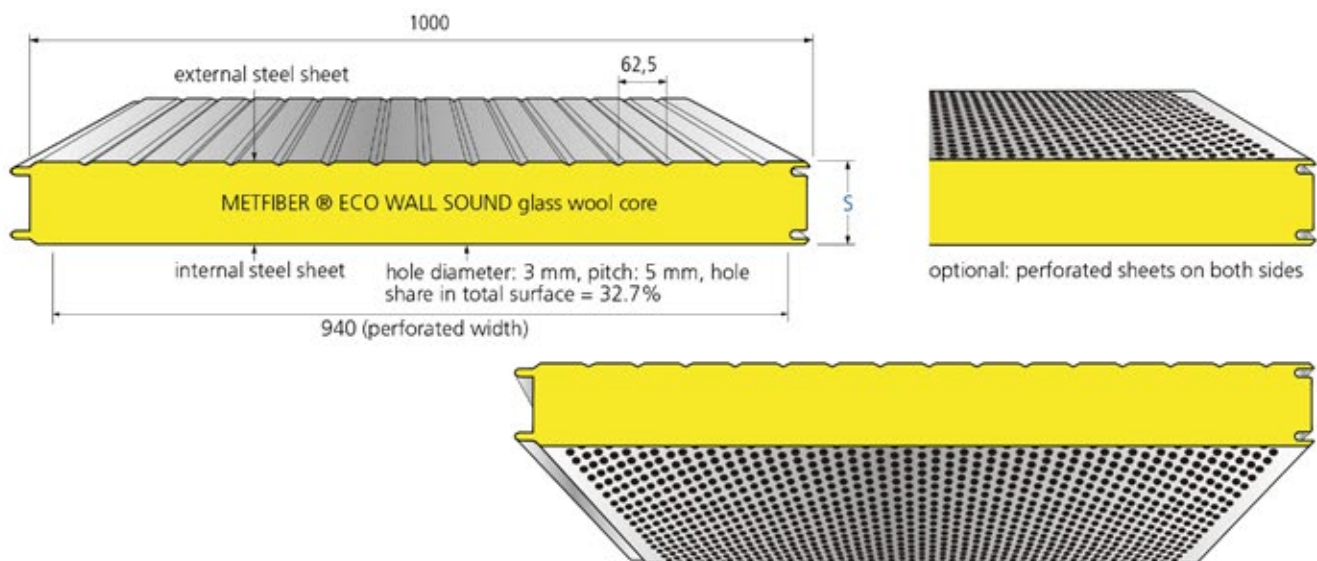


WALL | METFIBER® ECO WALL SOUND



Metfiber® Eco Wall Sound is a sandwich panel with an insulation core of glass wool and steel cover sheets. It's THE solution for buildings with high requirements for noise insulation and sound absorption. The design of the perforated internal sheet improves room acoustics substantially. This system patented by Metecno applies a special fleece material as trickle protection between the internal sheet and the glass wool core. In addition to its outstanding acoustic properties, the glass

wool used in this product consists of 80% recycled material, thus contributing significantly to the saving of natural resources and making the product an ecological building material. Generally used as ceiling or partition wall Metfiber® Eco Wall Sound may also be used as external wall in specific cases, though it is generally not recommended to apply this panel in heated buildings or buildings with high moisture. For additional information please refer to our detailed technical manual.

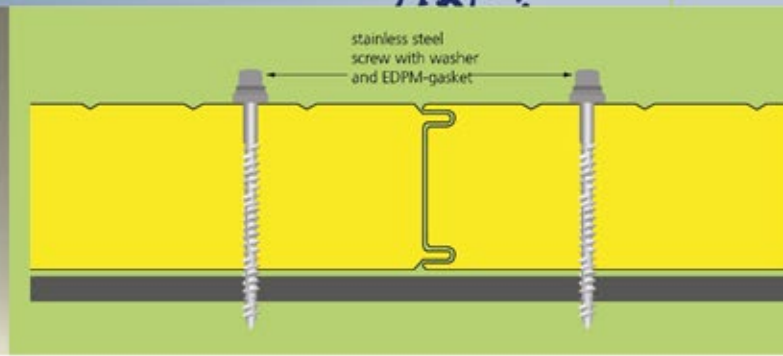


type of element	core thickn. s	external steel sheet t_N	internal steel sheet t_N	weight	thermal resistance	thermal conductivity (Ψ - joint effect)	
						U w/o Ψ	U with Ψ
	mm	mm	mm	kg / m ²	m ² K / W	W / m ² K	W / m ² K
METFIBER® ECO WALL SOUND	100	0,60	0,60	14,7	2,54	0,37	0,38
	120	0,60	0,60	15,9	3,05	0,31	0,32
	150	0,60	0,60	17,7	3,82	0,25	0,26
	200	0,60	0,60	20,7	5,10	0,19	0,20
	240	0,60	0,60	23,1	6,12	0,161	0,162



dimensions in mm

sandwich wall panel with non-combustible glass wool core and sound absorbing internal sheet



THERMAL CONDUCTIVITY

$\lambda = 0.039 \text{ W / mK}$ according to DIN 4108 and DIN EN 13162
The insulation values are regularly monitored by external bodies and may be applied without any further reduction

STANDARD LENGTHS

> 2,00 m to 25,00 m, greater lengths on request

STANDARD COATING

External and internal steel sheet: 25 μm polyester

SOUND INSULATION

$R_w \approx 34 \text{ dB}$

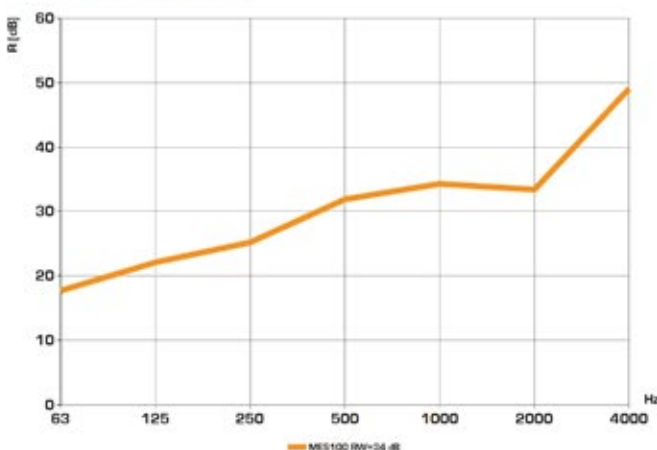
CORROSION PROTECTION

Tested according to DIN EN 10169: External sheet: Class RC3
According to DIN EN ISO 12944-2: External sheet: corrosivity category C3 corresponding to average protection duration for urban and industrial environments with moderate exposure to sulphur dioxide

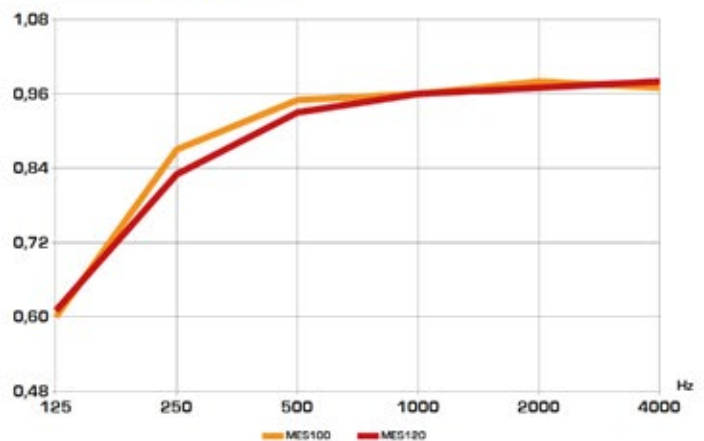
PACKAGING

External and internal sheets provided with removable protective film, panel packages wrapped with banded plastic foil to protect from soiling

SOUND INSULATION



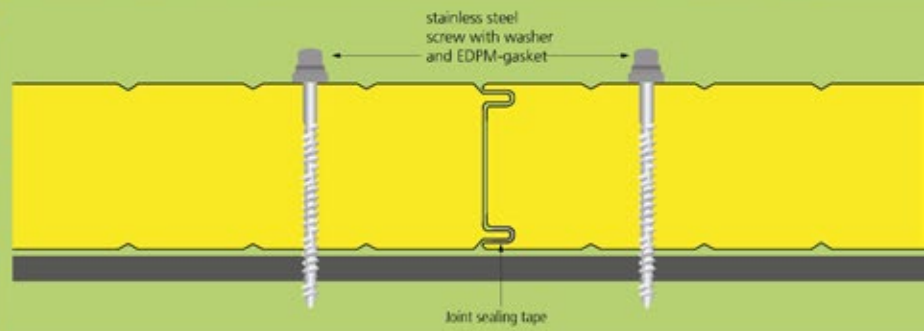
SOUND ABSORPTION



frequency Hz	thickness mm	63		125		250		500		1000		2000		4000	
		R	α_s	R	α_s	R	α_s	R	α_s	R	α_s	R	α_s	R	α_s
100		17,7		22,1	0,6	25,2	0,87	31,9	0,96	34,3	0,96	33,4	0,98	49,1	0,97
120					0,61		0,83		0,96		0,96		0,97		0,98



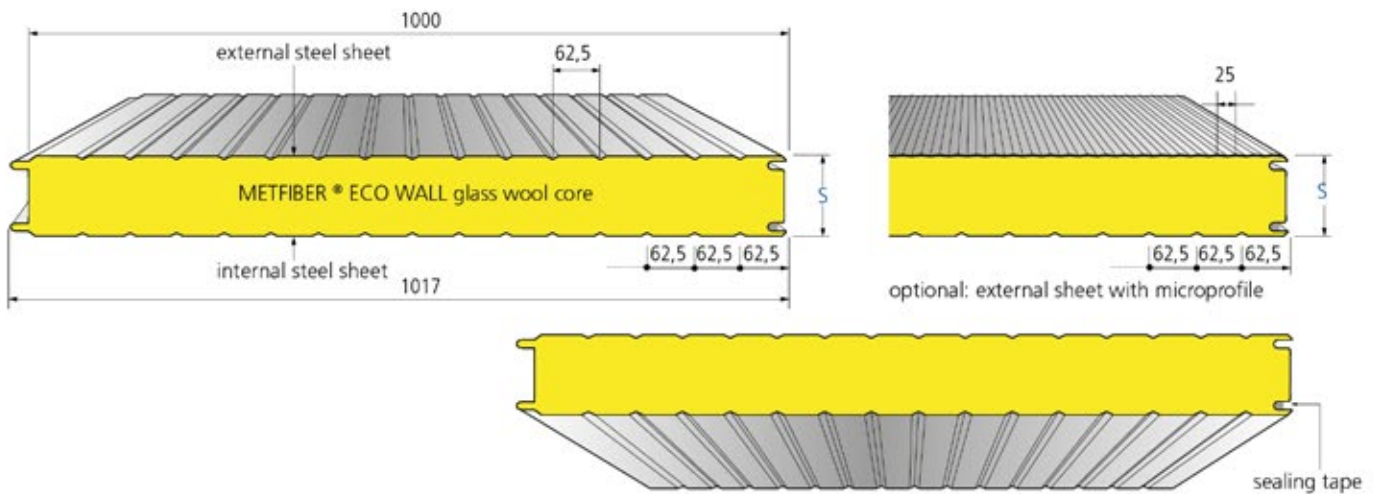
WALL | METFIBER® ECO WALL



The Metfiber® Eco Wall panel with glass wool core fulfils all the requirements for non-combustible building materials. The glass wool used in this product consists of 80% recycled material, contributing significantly to the saving of natural resources and making the product an ecological building material. The deadweight of the panel is distinctly lower than that of conventional sandwich panels with rock wool insulation core, hence enabling an easier, faster

installation and cost reduction, especially for larger panels. Due to the large number of combinations with other panels from our portfolio with polyurethane or rock wool insulation core, it is possible to reach fire, acoustic and thermal requirements at once without any visual impact.

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different internal profiles on request, dimensions in mm

type of element	core thickn. s	external steel sheet t_n	internal steel sheet t_n	weight	thermal resistance	thermal conductivity (ψ – joint effect)	
						R	U w/o ψ
	mm	mm	mm	kg / m ²	m ² K / W	W / m ² K	W / m ² K
METFIBER® ECO WALL	100	0,50	0,50	15,14	2,54	0,384	0,390
	120	0,50	0,50	16,44	3,05	0,321	0,325
	150	0,50	0,50	18,39	3,82	0,257	0,260
	200	0,50	0,50	21,64	5,10	0,194	0,195
	240*	0,50	0,50	24,24	6,12	0,161	0,162

* no approval / on request





PRODUCTION AND LABELING

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APPROVAL

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REACTION TO FIRE

Building material classified as A2-s1,d0 non-combustible according to DIN EN 13501-1; insulation core made of glass wool

FIRE RESISTANCE

EI 45 vertical installation (100mm core thickness)
EI 60 horizontal installation (100mm core thickness)

THERMAL CONDUCTIVITY

$\lambda = 0.039 \text{ W / mK}$ according to DIN 4108 and DIN EN 13162
The insulation values are regularly monitored by external bodies and may be applied without any further reduction.

SOUND INSULATION

$R_w \approx 31 \text{ dB}$

STANDARD LENGTHS

> 2.00 m to 25.00 m, greater lengths on request

STANDARD COATING

External and internal steel sheet: 25 μm polyester
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CORROSION PROTECTION

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Internal sheet: Class RC3
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TABLE OF SPANS

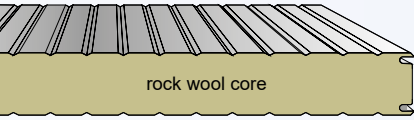
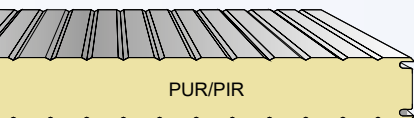
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PACKAGING

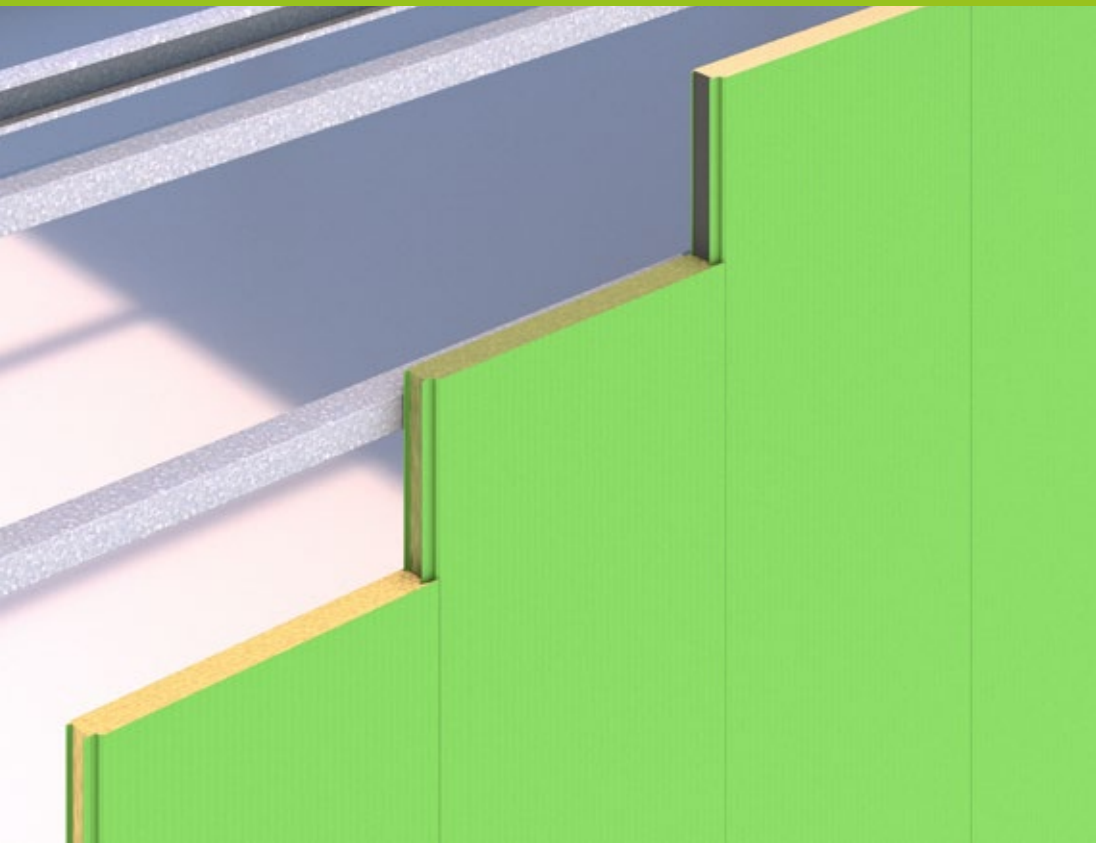
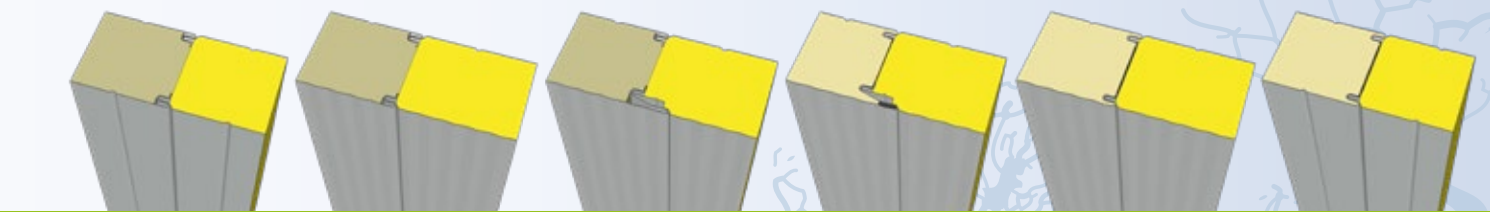
External sheets provided with removable protective film, panel packages wrapped with banded plastic foil to protect from soiling

INTERLOCKING JOINT COMPATIBILITY WITH THERMOWALL
KOMBI® & HIPERTEC® WALL



	dead weight panel thickness 100 mm	dead weight panel thickness 200 mm	supporting width* panel thickness 100 mm	U-value* panel thickness 100 mm
HIPERTEC WALL  <p>rock wool core</p>	21,4 kg/m ³	32,4 kg/m ³	5,86 m	0,438 W/m ² K
METFIBER ECO WALL  <p>glass wool core</p>	15,1 kg/m ³	21,6 kg/m ³	6,22 m	0,380 W/m ² K
THERMOWALL KOMBI  <p>PUR/PIR</p>	13,1 kg/m ³	17,1 kg/m ³	6,12 m	0,244 W/m ² K

*generic excerpt – detailed information concerning our products at www.en.metecno.de/products



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