

Sandwich panel nSPB WS Energy

Sandwich panel **nSPB WS Energy** is available in thicknesses 150 - 230 mm.

With precise and Ruukki specific manufacturing tolerances, and factory-fitted seals on the panel joints, the Ruukki® Energy panel structure with its seams forms a very airtight solution. Together with Ruukki Airtightness package it's possible to achieve excellent airtightness to the entire building. This can decrease energy costs and CO2 emissions up to 30%. [Read more on airtightness package.](#)

Using Ruukki's solutions you can receive more credits in LEED and BREEAM certification systems. It is a perfect solution for most buildings and structures, combining high quality with very good technical properties. Advanced technology contributing to the improvement of panel strength ensures very good mechanical properties of sandwich panel.

With the filling consisting of non-combustible and environmentally friendly hard mineral wool, this sandwich panel ensures excellent fire resistance. Properly milled core increases air-tightness and contributes to outstanding sound insulation.

Sandwich panel **nSPB WS Energy** is available also with FM Approved certificate granted by the world-biggest insurance company FM Global. The global certificate received based on 4880 and 4881 standards confirms that a building's envelope made of these sandwich panels from Ruukki ensures the highest safety level in case of fire or hurricane.



Application:

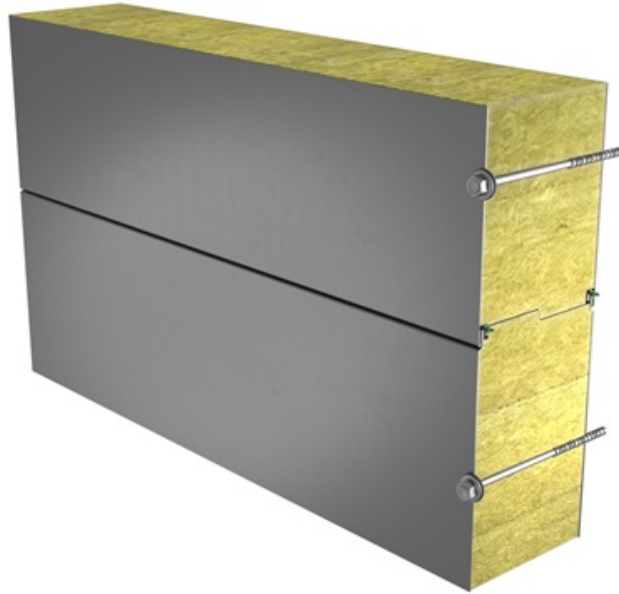
- External walls (standard fix)

This product is optionally available with following sustainable features:

- Steel facings made of recycled steel (SSAB Zero) for significantly lower CO₂ emissions and high

circularity (Ruukki LowCarbon)

- Air tightness package for lower CO₂ emissions during building use



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Properties

Model name	Sandwich panel nSPB WS Energy
Standard module width	1100 mm
Optional module width (B)	1000 mm
Minimum length	2000 mm
Maximum Length	12000 mm
External facing thickness	0,5 mm * 0,6 mm
Internal facing thickness	0.5 mm
External Fire Exposure	NRO
Air Tightness	q50=0,01 m3/hm2 (pressure and suction)

*External facing thickness 0,5 mm is a standard option for the following colors: RAL 9002 (RR1G6), 9010 (RR1G5) (all modular widths) and 7035 (RR2B1) (modular widths: 1100 mm and 1000 mm)

Thickness D (mm)	160	170	180	200	230
Weight (kg/m ²)	29.6	30.8	32	34.4	38
U-value (W/m ² K)	0.27	0.26	0.24	0.22	0.19
Sound insulation Rw (dB)	32	32	32	32	32
Reaction to fire	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0
GWP-total, A1-A3 (kg CO ₂ ◇/m ²)	34.5	35.0	35.5	36.6	38.1
GWP-total, A1-A3 (kg CO ₂ e/m ²) for Ruukki® LowCarbon	19.5	20.0	20.5	21.5	22.9

Wall fire resistance values & max span horizontal / vertical orientation (m):	160	170	180	200	230
EI 30	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8

EI 60	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8
EI 90	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8
EI 120	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 180	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5

Detailed information regarding the application of fire resistance ratings can be obtained from Ruukki Sales.

All properties are declared in accordance with EN 14509 and related standards.

Coatings and colors

Materials

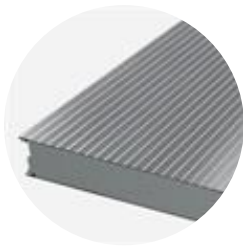
Facing	Coating	Gloss level (GU)	Corrosion class	UV resistance	Colours
External	GreenCoat Pural BT Satin	20	C4	Ruv4-5	RAL7035 (RR292), RAL9010 (RR126)
External	GreenCoat Pural BT Metallic	40	C4	Ruv4	RAL9006 (RR40), RAL9007 (RR41)
External*	Polyester	35	C3	Ruv2-3	RAL1015 (RR807), RAL1021, RAL2003, RAL3000 (RR770), RAL3009 (RR29), RAL3013 (RR774), RAL5003 (RR4F8), RAL5005 (RR4A8), RAL5012 (RR408), RAL6011 (RR526), RAL6018 (RR5G8), RAL7015 (RR23), RAL7016 (RR288), RAL7035 (RR2B1), RAL7040 (RR287), RAL9002 (RR1G6), RAL9003 (RR106), RAL9006 (RR946), RAL9007, RAL9010 (RR1G5), Golden Oak
Internal	Polyester	35	C3	-	RAL9002 (RR1G6), RAL9010 (RR1G5)

**For optional modular width A = 1200 mm only a polyester coating in the following colors RAL 9002 (RR1G6), RAL 9010 (RR1G5), RAL 7035 (RR2B1), RAL 7016 (RR288), RAL9006 (RR946), RAL 9007 is available.*

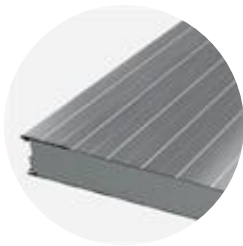
UV resistance describes how well the coating is able to keep its original colour and gloss levels in accordance with EN10169. The higher the class, the better the resistance.

Corrosivity categories describe the outdoor climate conditions in accordance with EN12944. The higher the category, the more corrosive environment.

Profile options



Profile option Rib 28



Profile option Linear



Profile option Micro



Profile option Rib 275



Profile option Rib 550



Profile option Flat

Modular width	Facing	Profile options
1100 mm	External	L, L25, M, R28, R275, R550, F
	Internal	L, L25, F
1000 mm (B)	External	L, L25, M, R28, R250, R500, F
	Internal	L, L25, F
1200 mm (A)	External	L, M
	Internal	L

Design tools



Traypan® software for designing sandwich panels

With TrayPan®, you can design metal faced sandwich panels made by Ruukki. A panel structure can be designed as a single- or multi-span construction. You can easily give, with a few parameters, both suction and pressure loads caused by the wind. The application also calculates the necessary fasteners.

[Go to Traypan®](#)



Download BIM objects to your desktop

ProLib brings Ruukki products as BIM models directly to your desktop in 3D form for design programs AutoCad, Autodesk Revit, Archicad and Tekla Structures. Product libraries compile all necessary design models and detailed drawings in one place. Library updates are automatically notified, so as a user you can be sure that your product information is consistently up to date. ProdLib can also be used as a standalone desktop application.

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Technical documents

Here you can find all technical documents related to Ruukki's sandwich panels. Documents are organised by document type. Click to enter document library.

**Product
descriptions**



**Accessory
documents**



Load tables



**Installation
instructions**



**Maintenance
instructions**



**Sound insulation
values**



Certificates and approvals

Here you can find all certificates and approvals related to Ruukki's sandwich panels. Documents are organised by document type. Click to enter document library.

**Declaration of
performance**



**Environmental
product declaration**



**Intruder resistance
certificate**

