

# Sandwich panel nSPB WF Energy

Sandwich panel **nSPB WF 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.

Advanced technology contributing to the improvement of panel strength ensures **very good mechanical properties** of this 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**.

Optionally, on request, **nSPB WF Energy** sandwich panel can be delivered as FM Approved product with a 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.

For all needed information about FM Approved panels, please contact Ruukki Sales.



**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 CO<sub>2</sub> emissions and high circularity (Ruukki LowCarbon)
- Air tightness package for lower CO<sub>2</sub> emissions during building use



[SEND CONTACT REQUEST](#)

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# Properties

Model name	Sandwich panel nSPB WF 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
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), RAL9010 (RR1G5) (all modular widths), RAL7035 (RR2B1) and RAL9006 (RR946) (modular widths: 1100 mm and 1000 mm)

Thickness D (mm)	150	160	170	180	200	210	230
Weight (kg/m <sup>2</sup> )	27.7	28.8	30	32	34.4	35.4	38
U-value (W/m <sup>2</sup> K)	0.28	0.26	0.25	0.23	0.21	0.20	0.18
Sound insulation Rw (dB)	32	32	32	32	32	32	32
Reaction to fire	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0
GWP-total, A1-A3 (kg CO <sub>2</sub> ◇/ m <sup>2</sup> )	33.9	34.5	35.0	35.5	36.6	37.1	38.1
GWP-total, A1-A3 (kg CO <sub>2</sub> e/ m <sup>2</sup> ) for Ruukki® LowCarbon	19.0	19.5	20.0	20.5	21.5	21.9	22.9

Wall fire resistance values &	150	160	170	180	200	210	230
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max span horizontal / vertical orientation (m):							
EI 60	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8	10.0 / 8.8	10.0 / 8.8	10.0 / 8.8
EI 90	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8	8.0 / 8.8	8.0 / 8.8	8.0 / 8.8
EI 120	7.5 / 8.5	7.5 / 8.5	7.5 / 8.5	7.5 / 8.5	7.5 / 8.5	7.5 / 8.5	7.5 / 8.5
EI 180	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 240	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0	6.0 / 6.0

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)

*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.*

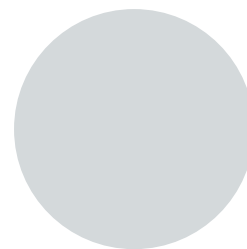
## Primary colors



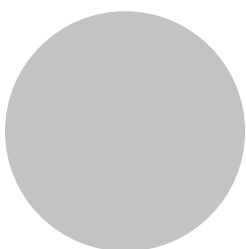
RAL9010 Pure white RR1G5



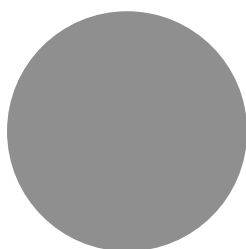
RAL9002 Grey white RR1G6



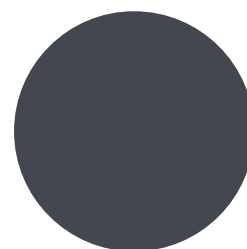
RAL7035 Light grey RR2B1



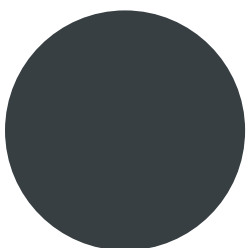
RAL9006 White aluminium RR946



RAL9007 Grey aluminium



RAL7015 Slate grey RR23

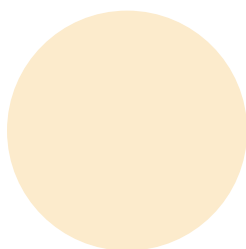


RAL7016 Anthracite grey RR288

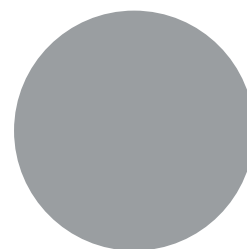
## Complementary colors



RAL9003 Signal white RR106



RAL1015 Light ivory RR807



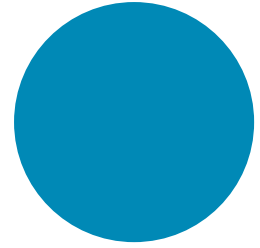
RAL7040 Window grey RR287



RAL5005 Signal blue



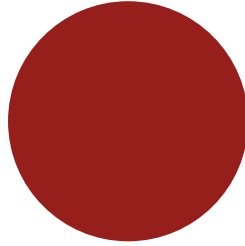
RAL5003 Sapphire blue RR4F8



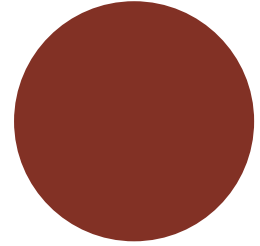
RAL 5012 Light blue RR408



RAL3000 Flame Red RR770



RAL3013 Tomato red RR774



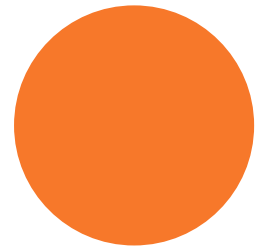
RAL3009 Oxide red RR29



RAL6011 Reseda green RR526



RAL 6018 Yellow green RR5G8



RAL2003 Pastel orange

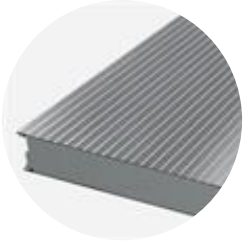


RAL1021 Colza yellow



Golden oak

## Profile options



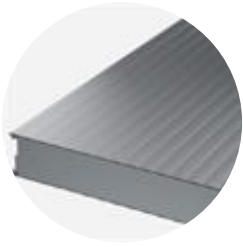
Ribbed R28



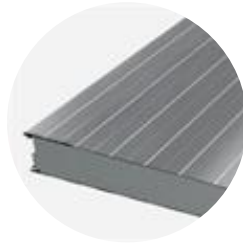
Ribbed R500



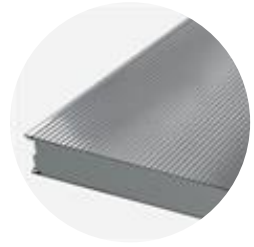
Ribbed R250



Linear L25



Linear L



Micro M



Ribbed R275



Ribbed R550



Flat F

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

## 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®](#)



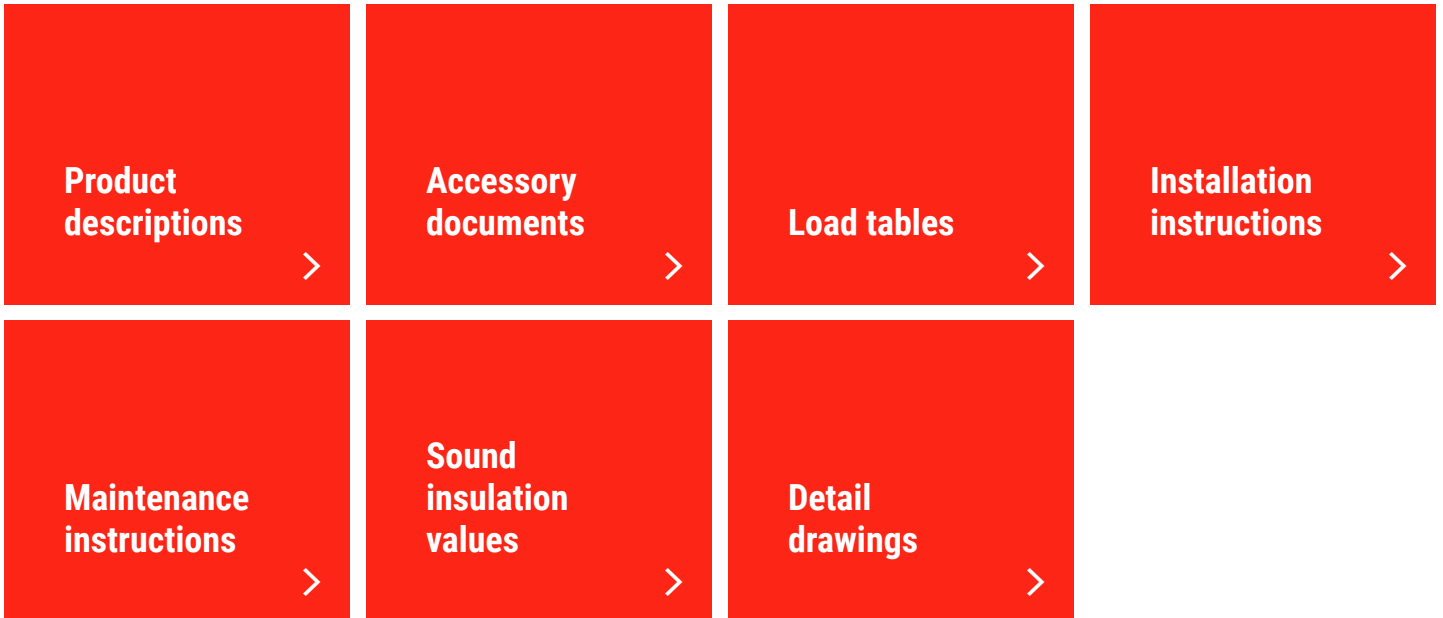
### Download BIM objects to your desktop

ProdLib 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 constantly up to date. ProdLib can also be used as a standalone desktop application.

[Go to BIM library](#)

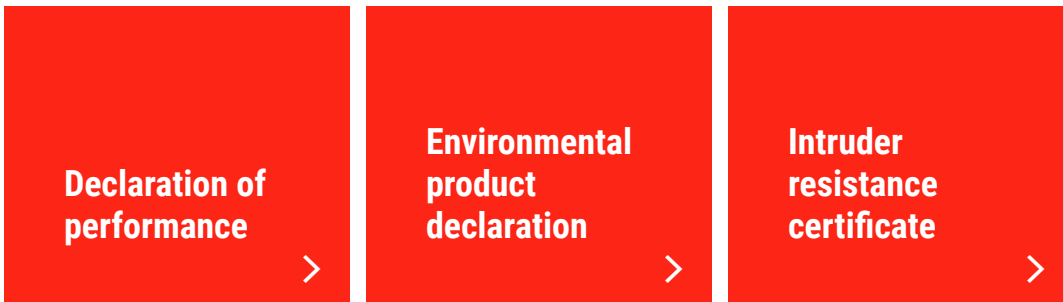
## Technical documents

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



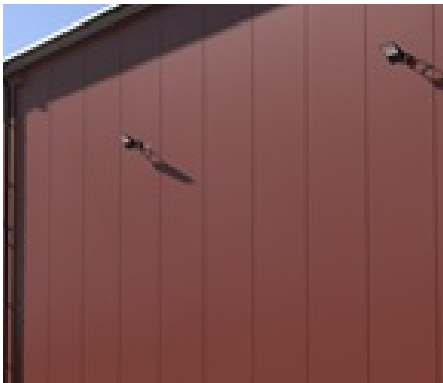
## Certificates and approvals

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.



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## Visualization tool



### Get inspired with our Sandwich Panel visualization tool

With our interactive Visualization tool for Ruukki sandwich panels, you can easily explore and customize the perfect combination for your building project.

[Go to visualization tool](#)