# Sandwich panel nSPB WEE Energy

Sandwich panel **nSPB WEE 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. This product, made with the use of advanced production processes, offers optimal performance of the designed solution.

The filling consisting of non-combustible and environmentally friendly soft mineral wool with low thermal conductivity coefficient ensures very good thermal insulation of this panel. Properly milled core increases air-tightness and provides high sound insulation.

**Applications:**

- External walls

**This product is optionally available with following sustainable features:**

- Steel facings made of recycled steel (SSAB Zero) for significantly lower $CO_2$ emissions and high circularity (Ruukki LowCarbon)
- Optimized insulation for lower $CO_2$ emissions (Ruukki LowCarbon)
- Air tightness package for lower $CO_2$ emissions during building use

**SEND CONTACT REQUEST**

# Properties

| | |
|---|---|
| **Model name** | Sandwich panel nSPB WEE 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 *<br>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)** | **150** | **170** | **180** | **200** | **230** |
|---|---|---|---|---|---|
| Weight (kg/$m^2$) | 20.9 | 22.3 | 23 | 24.4 | 26.5 |
| U-value (W/$m^2$K) | 0.25 | 0.22 | 0.20 | 0.18 | 0.16 |
| Sound insulation Rw (dB) | 29 | 29 | 29 | 29 | 29 |
| Reaction to fire | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 | A2-s1, d0 |
| GWP-total, A1-A3 (kg $CO_2$/$m^2$) | 30.7 | 31.3 | 31.6 | 32.2 | 33.1 |
| GWP-total, A1-A3 (kg $CO_2e/m^2$) for Ruukki® LowCarbon | 16.1 | 16.7 | 17.0 | 17.6 | 18.4 |

| **Wall fire resistance values & max span horizontal / vertical orientation (m):** | **150** | **170** | **180** | **200** | **230** |
|---|---|---|---|---|---|
| EI 30 | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - |

| | | | | | |
|---|---|---|---|---|---|
| EI 60 | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - |
| EI 90 | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - | 7.5 / - |
| EI 120 | 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) |

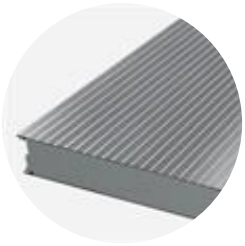
**For optional modular width A = 1200 mm only a polyester coating in the following colors RAL 9002 (RR1G6), RAL 9010 (RR1G5), RAL 7035 (RR2B1), RAL 7016 (RR288), RAL9006 (RR946), RAL 9007 is available.*

*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.*

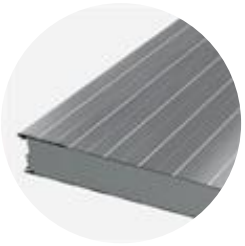
*Corrosivity categories describe the outdoor climate conditions in accordance with EN12944. The higher the category, the more corrosive environment.*

*Read more about UV-resistance and corrosivity categories.*

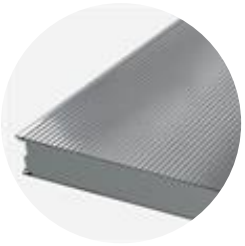
## Profile options



Profile option Rib 28

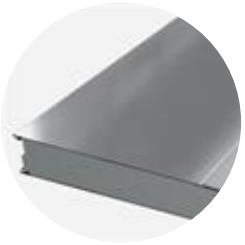


Profile option Linear



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 consistantly 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.

**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