

# Sandwich panel nSPB WS

Sandwich panel **nSPB WS** is available in thicknesses 100 - 230 mm.

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 this sandwich panel.

With the filling consisting of non-combustible and environmentally friendly hard mineral wool, this sandwich panel ensures **excellent fire resistance**.

The gaskets integrated in the joint provide reliable airtightness of the panel as a standard. For maximum performance of the wall as a whole upgrade to the full Ruukki Airtightness package including dedicated details and accessories.

[Read more on airtightness package.](#)

Optionally, on request, **nSPB WS** 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.

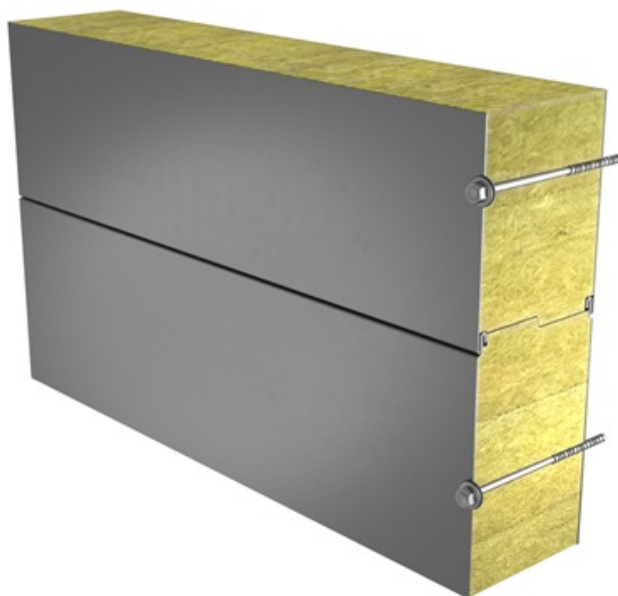


## Application:

- External walls
- Internal walls
- Ceilings

**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 - available as Ruukki LowCarbon
- Ruukki Airtightness package for lower CO2 emissions during the use phase of the building



**SEND CONTACT REQUEST**

The information on our website is accurate to the best of our knowledge and understanding. Although every effort has been made to ensure accuracy, the company cannot accept any responsibility for any direct or indirect damages resulting from possible errors or incorrect application of the information of this publication. We reserve the right to make changes.

# Properties

|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| Model name                | Sandwich panel nSPB WS                                               |
| Standard module width     | 1100 mm                                                              |
| Optional module width (B) | (B) 1000 mm; (A) 1200 mm (D = 100, 120, 150, 180, 200 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) for thicknesses $\geq$ 150 mm |

\*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)                                        | 100       | 110       | 120       | 140       | 150       | 160       | 170       | 180       | 200       | 210       | 230       |
|---------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Weight (kg/m <sup>2</sup> )                             | 22.4      | 23.6      | 24.8      | 27.2      | 28.4      | 29.6      | 30.8      | 32        | 34.4      | 35.3      | 38        |
| U-value (W/m <sup>2</sup> K)                            | 0.43      | 0.40      | 0.36      | 0.31      | 0.29      | 0.27      | 0.26      | 0.24      | 0.22      | 0.21      | 0.19      |
| Sound insulation Rw (dB)                                | 32        | 32        | 32        | 32        | 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 | 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> ) | 31,3      | 31,9      | 32,4      | 33,4      | 33,9      | 34,5      | 35        | 35,5      | 36,6      | 37,1      | 38,1      |

|                                                                                           |   |   |   |   |   |   |   |   |   |   |   |
|-------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|
| GWP-total,<br>A1-A3 (kg<br>CO <sub>2</sub> e/m <sup>2</sup> ) for<br>Ruukki®<br>LowCarbon | - | - | - | - | - | - | - | - | - | - | - |
|-------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|

| Wall fire resistance<br>values & max span<br>horizontal / vertical<br>orientation (m): | 100          | 110          | 120          | 140          | 150          | 160          | 170          | 180          | 200          | 210          | 230          |
|----------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| EI 30                                                                                  | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 |
| EI 60                                                                                  | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 | 9.0 /<br>8.8 |
| EI 90                                                                                  | 7.5 /<br>4.0 | 7.5 /<br>4.0 | 7.5 /<br>4.0 | 7.5 /<br>7.5 | 7.5 /<br>8.8 | 7.5 /<br>8.8 | 7.5 /<br>8.8 | 7.5 /<br>8.8 | 7.5 /<br>8.8 | 7.5 /<br>8.8 | 7.5 /<br>8.8 |
| EI 120                                                                                 | -            | -            | -            | -            | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 |
| EI 180                                                                                 | -            | -            | -            | -            | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 | 7.5 /<br>7.5 |

| Ceiling fire resistance values &<br>maximum span lengths (m): | 100 | 110 | 120 | 140 | 150 | 160 | 170 | 180 | 200 | 210 | 230 |
|---------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| EI 30 (fire from below)                                       | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| EI 60 (fire from below)                                       | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |

Stitched joint on upper facing is required.

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) | Corrosivity category | UV resistance | Colours                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------------------------|------------------|----------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| External  | GreenCoat Pural BT Satin    | 20               | C4                   | Ruv4-5        | 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.*

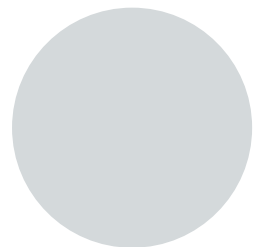
### Primary colors



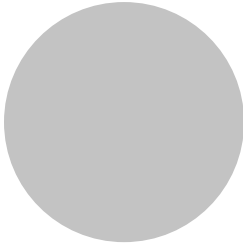
RAL9010 Pure white RR1G5



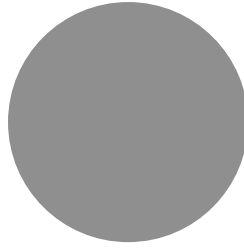
RAL9002 Grey white RR1G6



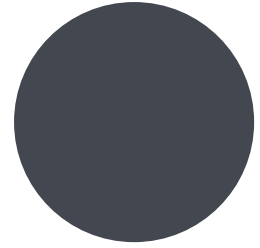
RAL7035 Light grey RR2B1



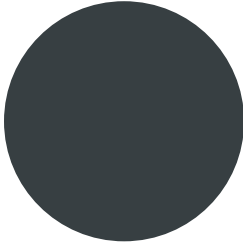
RAL9006 White aluminium RR946



RAL9007 Grey aluminium



RAL7015 Slate grey RR23

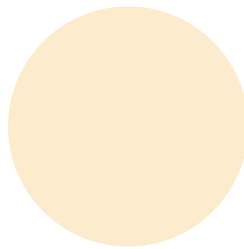


RAL7016 Anthracite grey RR288

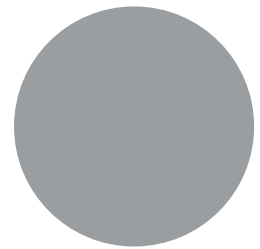
### Complementary colors



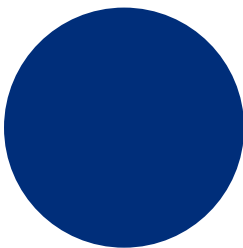
RAL9003 Signal white RR106



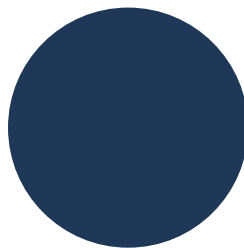
RAL1015 Light ivory RR807



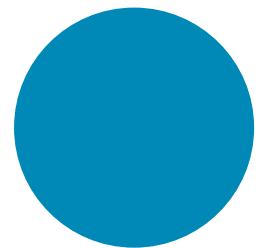
RAL7040 Window grey RR287



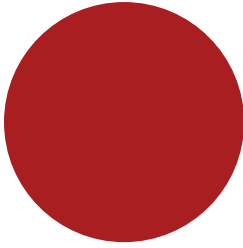
RAL5005 Signal blue



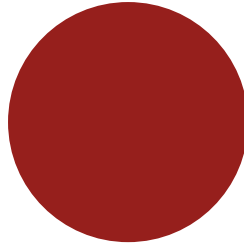
RAL5003 Sapphire blue RR4F8



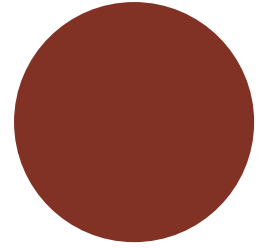
RAL 5012 Light blue RR408



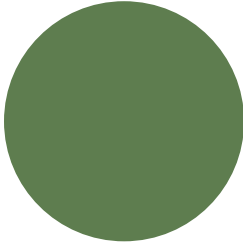
RAL3000 Flame Red RR770



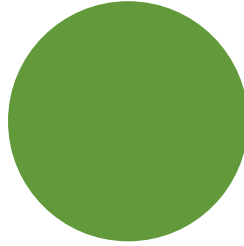
RAL3013 Tomato red RR774



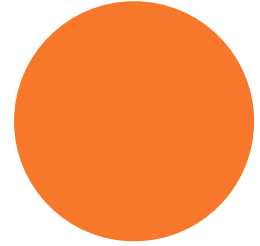
RAL3009 Oxide red RR29



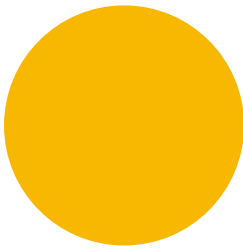
RAL6011 Reseda green RR526



RAL 6018 Yellow green RR5G8



RAL2003 Pastel orange

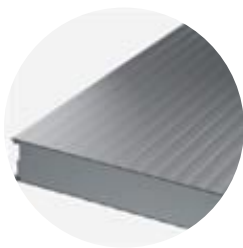


RAL1021 Colza yellow



Golden oak

## Profile options



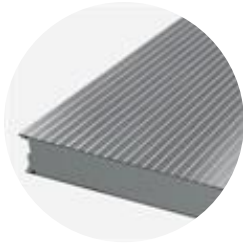
Linear L25



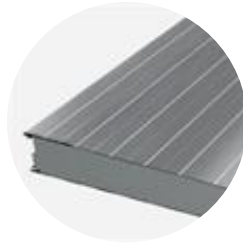
Ribbed R500



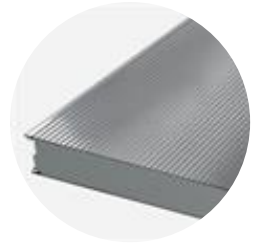
Ribbed R250



**Ribbed R28**



**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                     |
| 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

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.

**Product  
descriptions**



**Accessory  
documents**



**Load tables**



**Installation  
instructions**



**Maintenance  
instructions**



**Sound  
insulation  
values**



**Detail  
drawings**



## 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**

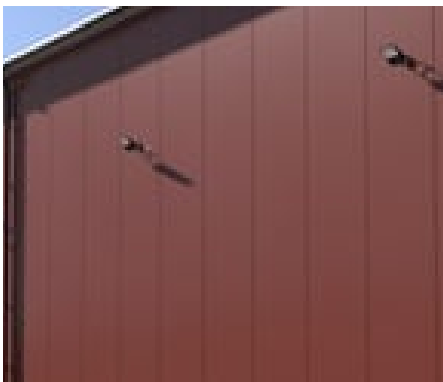


**M1 Emission  
Classification**



---

## 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](#)