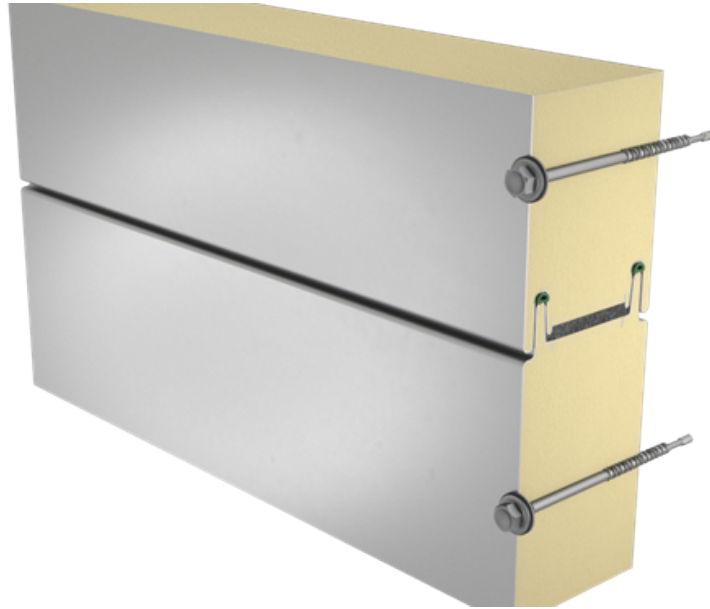


## SANDWICH PANEL SP2B X-PIR ENERGY



Sandwich panel **SP2B X-PIR Energy** is available in thickness 100 mm.

It ensures **excellent air-tightness** and **energy efficiency**. The application of special solutions with structural details and assembly services provided by skilled and certified contractors enable to **decrease energy costs** of the building and its **CO2 emissions** up to **20%**.

Using Ruukki's solutions you can receive more credits in **LEED** and **BREEAM** certification systems. The panel's excellent quality ensures **very good fire resistance properties**, thus increasing fire safety of buildings.

The core of this sandwich panel is made of rigid, HCFC-free, self-extinguishing and sustainable polyisocyanurate foam (PIR). Its **excellent thermal insulation properties** allow for the decrease of panel thickness which transfers directly to lower transportation and assembly costs, as well as **significant savings** of building's life cycle costs.

### Application:

- External walls (standard fix)

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

<b>Model name</b>	Sandwich panel SP2B X-PIR Energy
<b>Standard module width</b>	1100 mm
<b>Minimum length</b>	2000 mm
<b>Maximum Length</b>	18500 mm
<b>External facing thickness</b>	0.50 mm
<b>Internal facing thickness</b>	0.40 mm
<b>Air Tightness n50 (1/h)</b>	0.6 (Premium), 0.9 (Plus)

## PROPERTIES BY PANEL THICKNESS

<b>Thickness D (mm)</b>	<b>100</b>
Weight (kg/m <sup>2</sup> )	12.1
U-value (W/m <sup>2</sup> K)	0.22
Sound insulation Rw (dB)	24
Reaction to fire	B-s1, d0
<b>Wall fire resistance values &amp; max span horizontal / vertical orientation (m):</b>	
EI 15	7.5 / -
EI 15 (stainless steel)	7.5 / -
EI 30	4.0 / -
EI 30 (stainless steel)	4.0 / -
EW30	4.0 / -
EW30 (stainless steel)	6.0 / -
<b>Ceiling fire resistance values &amp; maximum span lengths (m): stitched joint on upper facing</b>	
EI 15 (inside)	4.8

<b>Thickness D (mm)</b>	<b>100</b>
EI 30 (inside)	2.0

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

#### Changes to sandwich panel fire resistance standards (wall applications)

## COATINGS AND COLOURS MATERIALS

Facing	Coating	Corrosivity category	UV resistance	Colours
External	HIARC MAX	C3	Ruv4	RAL7035, RAL9006 (RR40), RAL9007 (RR41)
External	Polyester	C3	Ruv2-3	RAL1015, RAL3013, RAL5005, RAL6011, RAL7015 (RR23), RAL7016 (RR288), RAL7035, RAL9002, RAL9006, RAL9007, RAL9010
Internal	Polyester	C3	-	RAL9002, RAL9010
Internal	PVC laminate *	C4	-	White
Internal	Stainless steel *	C4	-	-

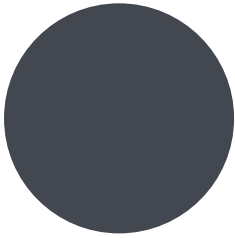
\*) optional material

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.

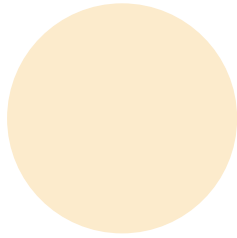
Corrosivity categories describe the outdoor climate conditions in accordance with EN12944. The higher the category, the more corrosive environment.

Read more about UV-resistance and corrosivity categories.

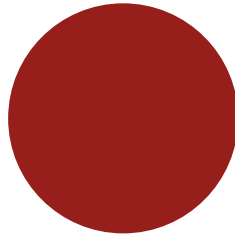
## COLOURS



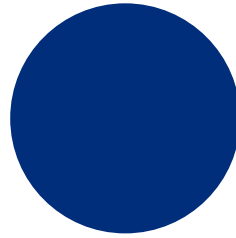
RAL 7015 SLATE GREY



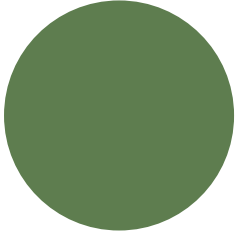
RAL1015 LIGHT IVORY



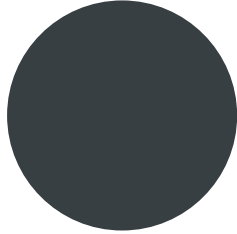
RAL3013 TOMATO RED



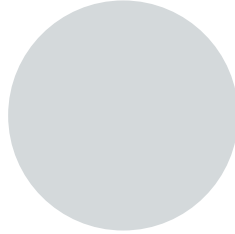
RAL5005 SIGNAL BLUE



RAL6011 RESEDA GREEN



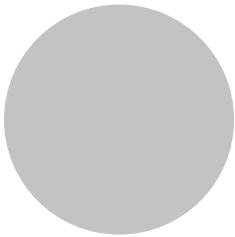
RAL7016 ANTHRACITE  
GREY



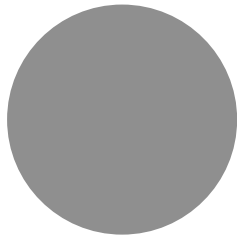
RAL7035 LIGHT GREY



RAL9002 GREY WHITE



RAL9006 WHITE  
ALUMINIUM

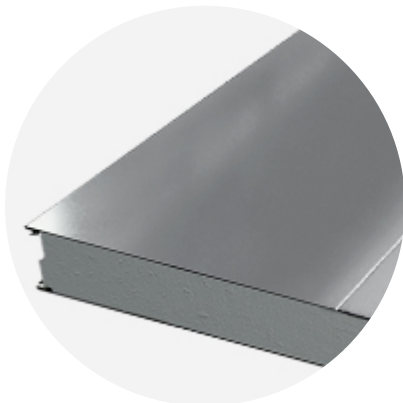


RAL9007 GREY  
ALUMINIUM

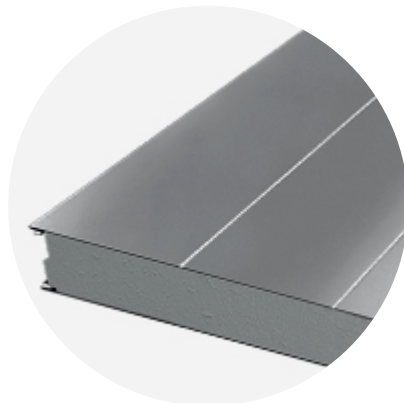


RAL9010 WHITE

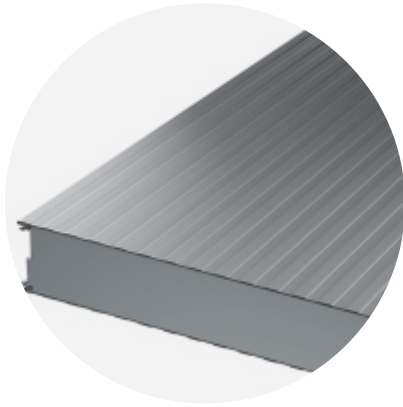
## PROFILE OPTIONS



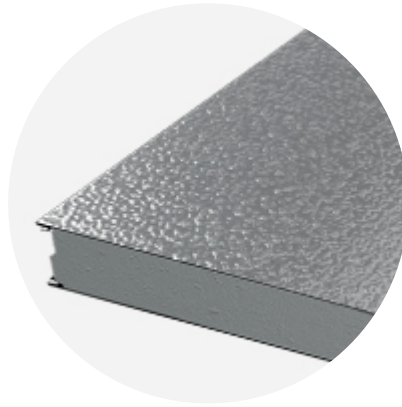
RIB 550



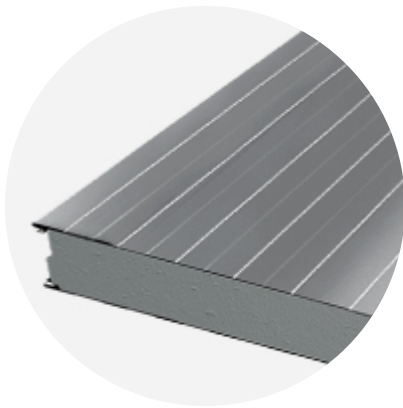
RIB 275



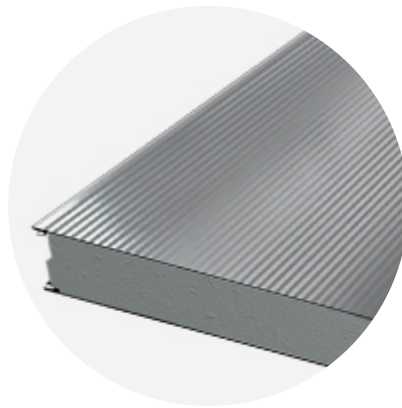
L25



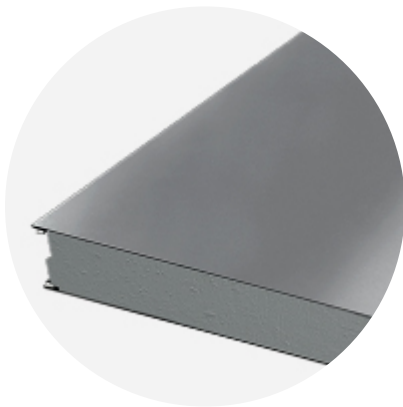
EMBOSSSED



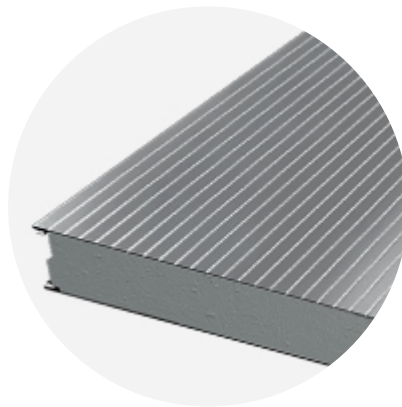
LINEAR



MICRO



FLAT



RIB 28

Notes:

1) For internal facings, only L, L25 and F profiling options are available.

## DESIGN TOOLS

To make both architectural and structural design work easier, with accurate product information in 3D form, we offer a selection of CAD / BIM -objects and software tools, which can be downloaded from the Software Toolbox portal.

## READY MODELLED BIM OBJECTS

[Download objects for ArchiCAD](#)

[Download objects for Revit](#)

## SOFTWARE TOOL TRAYPAN FOR CHOOSING THE OPTIMAL PANEL TYPE

User-friendly TrayPan software takes into account load, temperature, span, U-value, fire resistance and acoustics.

TrayPan contains two user interfaces:

- Optimisation tool for quick and easy pre-selection
- Designer version for detailed structural analysis.

[Download Traypan](#)

## DETAIL DRAWING (.DWG)



**05 MAY, 2016**

Ruukki-Detail-drawings-SP2E-PIR\_dwg\_en  
ZIP, 3.78 MB



**05 MAY, 2016**

Ruukki-Detail\_drawings\_SP2B\_SP2C\_SP2D\_PIR\_en  
ZIP, 1.06 MB



**05 MAY, 2016**

Ruukki-Detail\_drawings\_SPB\_SPC\_SP2D\_W\_en  
ZIP, 875.03 KB

## LOAD & SPAN TABLES FOR DIMENSIONING PANELS AGAINST LOADS



**05 MAY, 2016**

Ruukki-load-tables-PU-core  
PDF, 391.11 KB



**05 MAY, 2016**

Ruukki-sandwich-panels-span-tables-agripro-panels  
PDF, 387.17 KB



**05 MAY, 2016**

Ruukki-load-tables-WE-ENG3  
PDF, 295.41 KB



**05 MAY, 2016**

Ruukki-load-tables-W-ENG3  
PDF, 315.97 KB



**05 MAY, 2016**

Ruukki-Sandwich-panels-Span\_tables\_SPF  
PDF, 19.13 KB



**05 MAY, 2016**  
Ruukki-load-tables-PIR-ENG5  
PDF, 385.87 KB

## ACCESSORIES

Accessories for sandwich panels include flashings, fasteners, gaskets, and sealing flanges.

These accessories ensure fast assembly, fastening reliability, joint tightness, and aesthetic improvement. They are suitable for external and internal wall surface construction, as well as roofs - for construction works of various sizes at any destination.



**05 JUL, 2016**  
Ruukki accessories for sandwich panels 09.07.2015B  
PDF, 3.46 MB

## INSTRUCTIONS

### ASSEMBLY INSTRUCTIONS

Assembly instructions document includes information about:

- Packing
- Transportation and unloading
- Storing
- Assembling



**14 JUL, 2016**  
Ruukki-INOX-guidelines-for-PIR-sandwich-panels  
PDF, 315.45 KB



**05 MAY, 2016**  
Ruukki-Sandwich-panels-General\_instructions\_for\_cold\_storage\_facilities  
PDF, 1.58 MB



**05 MAY, 2016**  
Ruukki-Assembly-instruction-for-sandwich-panels-CEE  
PDF, 1.10 MB

### MAINTENANCE INSTRUCTIONS

Maintenance instructions document contains information about:

- Washing
- Painting



**06 MAY, 2016**

Ruukki colour coated steel - Maintenance instructions  
PDF, 600.37 KB



**06 MAY, 2016**

Ruukki powder coated facade claddings - Maintenance instructions  
PDF, 602.18 KB

## FACADE CLADDING INSTRUCTIONS

Ruukki Forma design instructions explain how to design façade cladding systems on top of Ruukki sandwich panels.



**01 JUN, 2016**

Ruukki Forma design instructions  
PDF, 984.06 KB

## CERTIFICATES & APPROVALS

### DECLARATION OF PERFORMANCE



**19 JUL, 2018**

Declaration of Performance 42/PIR/OBO - Oborniki panels with PIR core (E-PIR, X-PIR, AgriPro)  
PDF, 620.37 KB



**18 JUL, 2018**

Declaration of Performance 41/MW/OBO - Oborniki mineral wool cored panels  
PDF, 209.45 KB



**07 DEC, 2017**

Declaration of Performance 37/X-PIR/OBO - SP2B X-PIR and SP2E X-PIR sandwich panels in stainless steel facing  
PDF, 86.79 KB

### ENVIRONMENTAL PRODUCT DECLARATION



**05 MAY, 2016**

Ruukki-Light-weight-sandwich-element-system  
PDF, 5.97 MB