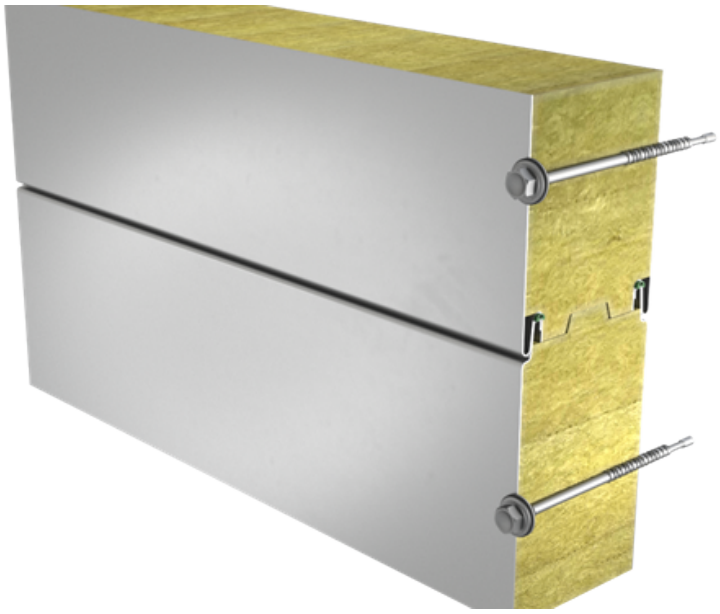
SANDWICH PANEL SPB WEF ENERGY (FM APPROVED)



Sandwich panel **SPB WEF Energy** is available in thicknesses 160 - 230 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 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**.

SPB WEF Energy sandwich panel, in thicknesses 160, 170, 180, 200 and 230 mm, 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)

PROPERTIES

Model name	Sandwich panel SPB WEF energy (FM Approved)
Standard module width	1100 mm
Optional module width (B)	1000 mm
Minimum length	2000 mm
Maximum Length	12000 mm
External facing thickness	0.60 mm
Internal facing thickness	0.50 mm
Air Tightness n50 (1/h)	q50 = 1,0 m3/(m2*h) for Ruukki Energy system, entire building

PROPERTIES BY PANEL THICKNESS

Thickness D (mm)	**160**	**170**	**180**	**200**	**230**
Weight (kg/m^2)	24.8	25.7	26.6	28.4	31.1
U-value (W/m^2K)	0.24	0.23	0.22	0.20	0.17
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
Wall fire resistance values & max span horizontal / vertical orientation (m):					
EI 30	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 60	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 90	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 120	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's sales representatives.

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

COATINGS AND COLOURS

MATERIALS

Facing	Coating	Corrosion class	UV resistance	Colours
External	GreenCoat HIARC MAX	C4	Ruv4	RAL7035, RAL9006, RAL9007
External	Polyester	C3	Ruv2-3	RAL1015, RAL5005, RAL7015, RAL7016, RAL7035, RAL9002, RAL9006, RAL9007, RAL9010
Internal	Polyester	C3	-	RAL9002, RAL9010

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

RAL7016 ANTHRACITE GREY

RAL 7015 SLATE GREY

RAL5005 SIGNAL BLUE

RAL7035 LIGHT GREY

RAL1015 LIGHT IVORY

RAL9002 GREY WHITE

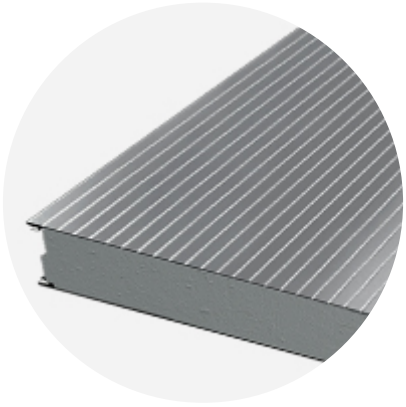
RAL9007 GREY ALUMINIUM

RAL9006 WHITE ALUMINIUM

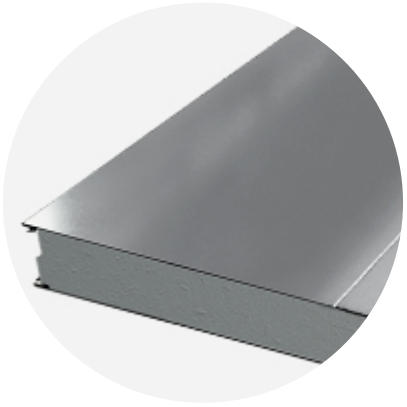
RAL9010 WHITE

For external facings of 1000 mm module width only the following colors are available: RAL 9010, RAL 9002, RAL 9006, RAL 9007.

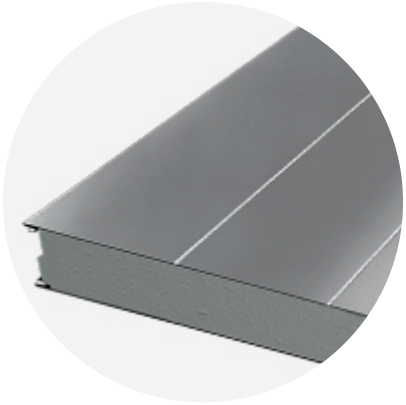
PROFILE OPTIONS



RIBBED R28



RIBBED R500



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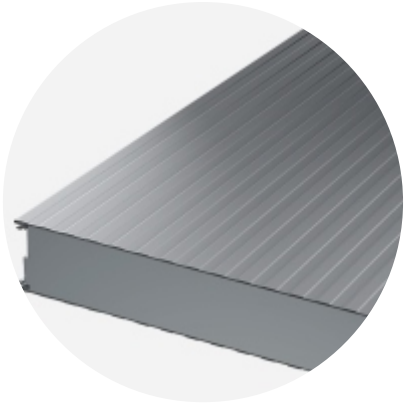
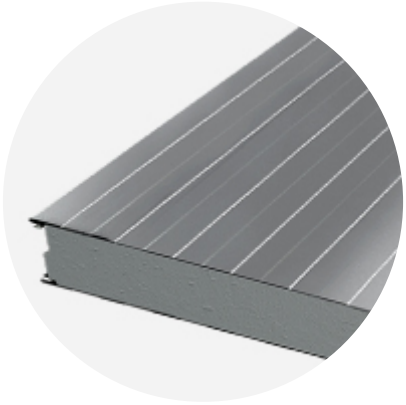
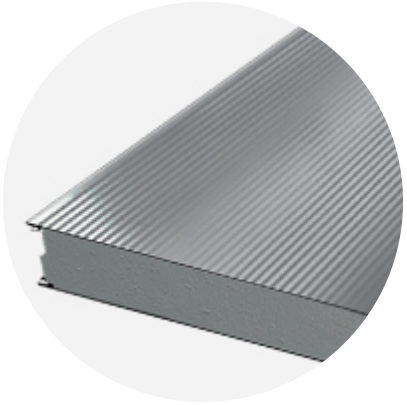


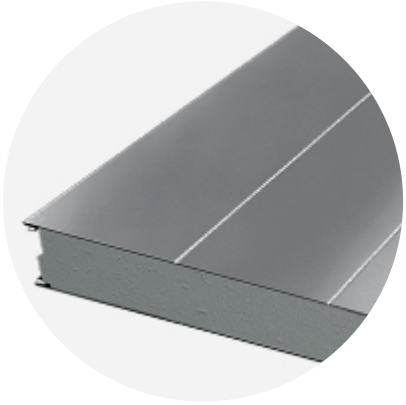
LINEAR L25



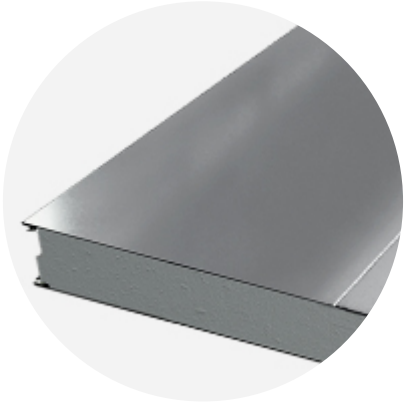
LINEAR L



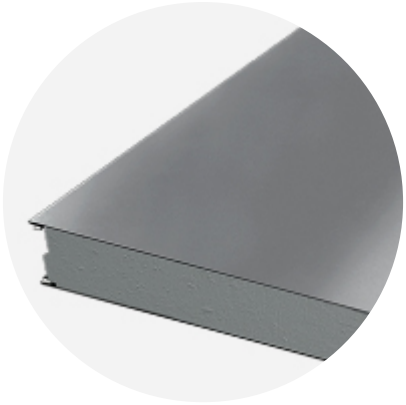
MICRO M



RIBBED R275



RIBBED R550



FLAT F

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

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-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-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, 1012.64 KB

CERTIFICATES & APPROVALS

DECLARATION OF PERFORMANCE

13 JAN, 2020
Declaration of Performance 54/MW/OBO - Oborniki mineral wool cored panels (W, WF, WS)
PDF, 175.13 KB

13 JAN, 2020
Declaration of Performance 53/MW/OBO - Oborniki mineral wool cored panels (WEE, WE, WEF)
PDF, 336.94 KB

06 JUN, 2019
Declaration of Performance 29/E-PIR/OBO - Oborniki panels with PIR core (E-PIR, AgriPro)
PDF, 1.10 MB

06 JUN, 2019
Declaration of Performance 30/X-PIR/OBO - Oborniki panels with PIR core (X-PIR)
PDF, 903.75 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