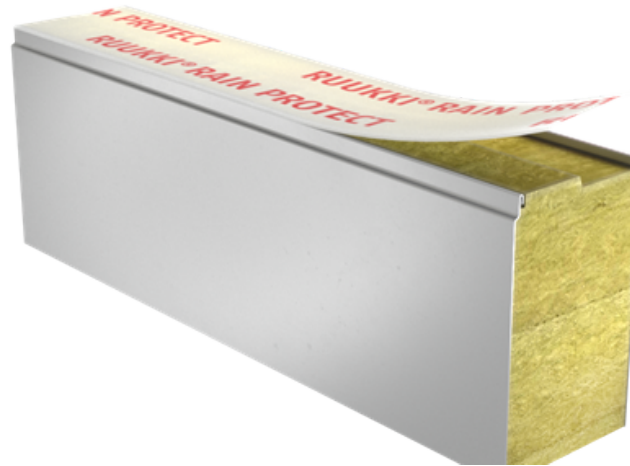


SANDWICH PANEL SPA F ENERGY



Sandwich panel **SPA F Energy** is available in thicknesses 150 - 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. This panel type is **intruder resistant** in accordance with SSF 1047, classes 2 & 3 (see Certificates & approvals).

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**.

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

Model name	Sandwich panel SPA F energy
Standard module width	1200 mm
Minimum length	2000 mm
Maximum Length	13500 mm
External facing thickness	0.60 mm
Internal facing thickness	0.50 mm
Air Tightness n50 (1/h)	q50 (m3/h, m2): 1.0 n50 (1/h): 0.3

PROPERTIES BY PANEL THICKNESS

Thickness D (mm)	150	200	230
Weight (kg/m ²)	28.2	33.5	37.4
U-value (W/m ² K)	0.29	0.22	0.19
Sound insulation Rw (dB)	31	31	31
Reaction to fire	A2-s1, d0	A2-s1, d0	A2-s1, d0
Wall fire resistance values & max span horizontal / vertical orientation (m):			
EI 30	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8
EI 60	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8
EI 90	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8
EI 120	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 180	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

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

COATINGS AND COLOURS MATERIALS

Facing	Coating	Corrosivity category	UV resistance	Colours
External	Energy coating	C3	Ruv4	RR23, RR41
External	GreenCoat HIARC MAX	C4	Ruv4	RR20, RR21, RR22, RR23, RR29, RR33, RR35, RR40, RR41, RR45
External	GreenCoat HIARC	C3	Ruv4	RR20, RR21, RR22, RR23, RR29, RR33, RR35, RR40, RR41, RR45
External	GreenCoat HIARC matt	C3	Ruv4	RR33, RR40, RR41
External	Polyester	C3	Ruv2-3	RR20, RR21, RR23, RR946
Internal	Polyester	C3	-	RR20
Internal	Foodsafe 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.

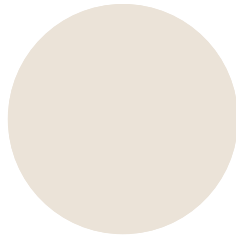
Corrosivity categories describe the outdoor climate conditions in accordance with EN12944. The higher the category, the more corrosive environment.

Read more about UV-resistance and corrosivity categories.

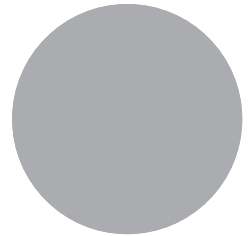
COLOURS



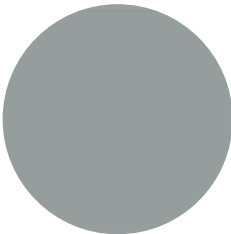
RR45 METALLIC GRAPHITE



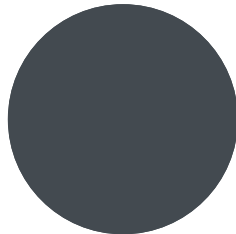
RR20 WHITE



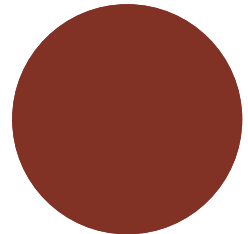
RR21 LIGHT GREY



RR22 GREY



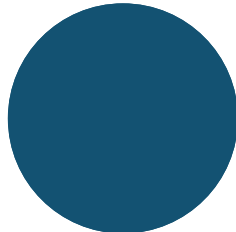
RR23 DARK GREY



RR29 RED



RR33 BLACK



RR35 BLUE

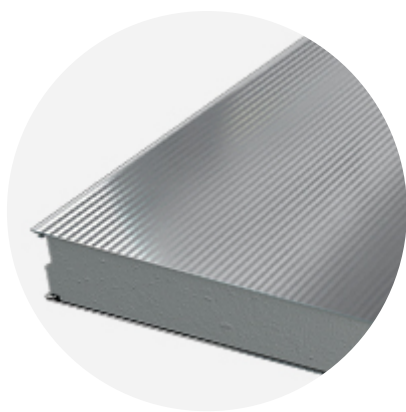


RR40 SILVER MATT

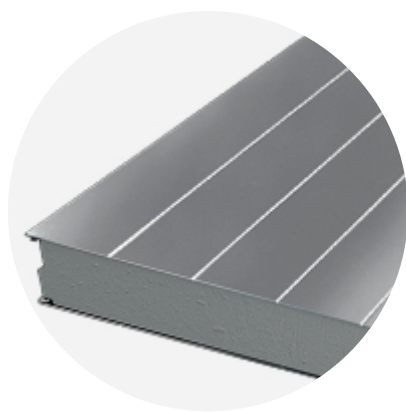


RR41 DARK SILVER MATT

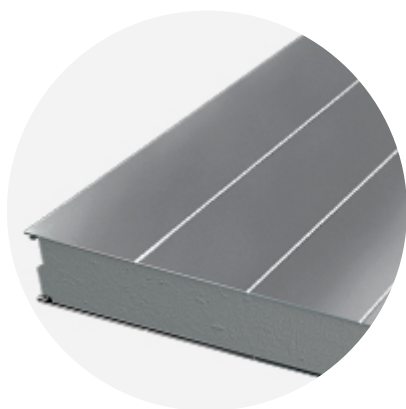
PROFILE OPTIONS



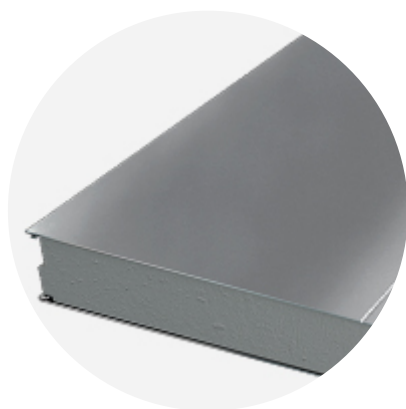
MICRO 15



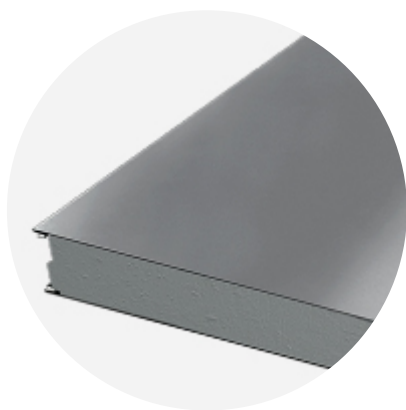
RIB 150



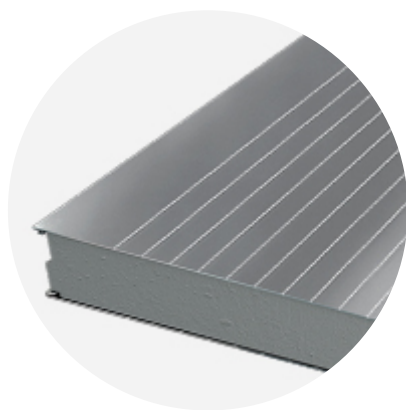
RIB 200



RIB 600



FLAT



LINEAR 50

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-SPA-ENERGY_external_walls_details_EN
DWG, 2.38 MB



05 MAY, 2016

SPA_compartment_details_wall_en_16052016
DWG, 464.41 KB



05 MAY, 2016

SPA_compartment_details_ceiling_en_16052016
DWG, 291.63 KB



05 MAY, 2016

SPA external wall details EN
DWG, 2.46 MB

DETAIL DRAWING (.PDF)



05 MAY, 2016

Ruukki-SPA-ENERGY_external_walls_details_EN
PDF, 1.54 MB



05 MAY, 2016

SPA external wall details EN
PDF, 1.53 MB



05 MAY, 2016

SPA_compartment_details_wall_en_16052016
PDF, 203.33 KB



05 MAY, 2016

SPA_compartment_details_ceiling_en_16052016
PDF, 135.57 KB

LOAD & SPAN TABLES FOR DIMENSIONING PANELS AGAINST LOADS



05 MAY, 2016

Sandwich panel SPA Product description 09_2019
PDF, 1.39 MB

SOUND INSULATION VALUES



15 DEC, 2016

EN_Sandwich_panel_SPA_Sound_insulation_values_12_2016
PDF, 3.60 MB

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 projects of various sizes at any destination.



05 MAY, 2016

Accessories for SPA sandwich panels
PDF, 6.09 MB

INSTRUCTIONS

ASSEMBLY INSTRUCTIONS

Assembly instructions document includes information about:

- Packing
- Transportation and unloading
- Storing
- Assembling



05 MAY, 2016

Assembly-instructions-for-sandwich-panels-SPA
PDF, 2.16 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

PRODUCT DESCRIPTIONS

Product description includes information about:

- Panel structure
- Structural dimensioning
- Panel packaging
- Windows and corner panels
- Panel fastening



05 MAY, 2016

Sandwich panel SPA Product description 09_2019
PDF, 1.39 MB

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



16 OCT, 2017

Declaration of Performance 32/MW/ALA - Alajärvi panels with MW core (SPA panels with stainless steel facings)
PDF, 338.45 KB



05 MAY, 2016

Declaration of Performance 1/MW/ALA - Alajärvi panels with MW core (SPA panels)
PDF, 418.75 KB

ENVIROMENTAL PRODUCT DECLARATION



05 MAY, 2016

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

INTRUDER RESISTANCE CERTIFICATES



24 SEP, 2019

Certificate on Burglary Protection Class2-3 SPA F, S, E LIFE and E LIFE FORMA
PDF, 129.58 KB



25 JUL, 2016

Intruder resistance walls Class2 SPA F and SPA S
PDF, 11.97 KB



25 JUL, 2016

Intruder resistance walls Class3 SPA F
PDF, 12.58 KB



25 JUL, 2016

Intruder resistance walls Class2 SPA E LIFE and SPA E LIFE FORMA
PDF, 12.52 KB