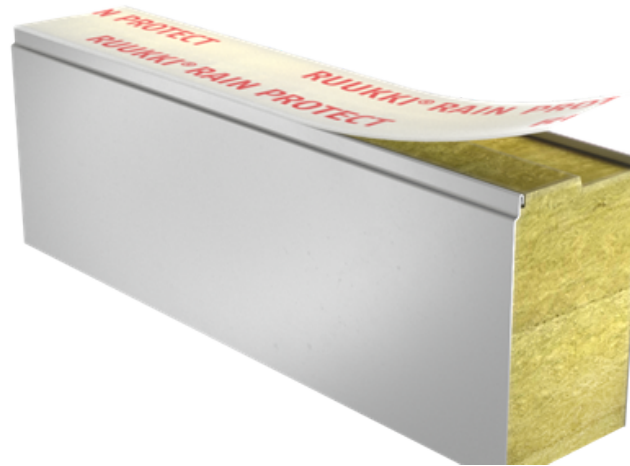


# SANDWICH PANEL SPA F ENERGY



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

<b>Model name</b>	Sandwich panel SPA F energy
<b>Standard module width</b>	1200 mm
<b>Minimum length</b>	2000 mm
<b>Maximum Length</b>	13500 mm
<b>External facing thickness</b>	0.60 mm
<b>Internal facing thickness</b>	0.50 mm
<b>Air Tightness n50 (1/h)</b>	q50 = 1,0 m3/(m2*h) for Ruukki Energy system, entire building

## PROPERTIES BY PANEL THICKNESS

<b>Thickness D (mm)</b>	<b>150</b>	<b>200</b>	<b>230</b>
Weight (kg/m <sup>2</sup> )	28.2	33.5	37.4
U-value (W/m <sup>2</sup> 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
<b>Wall fire resistance values &amp; max span horizontal / vertical orientation (m):</b>			
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.*

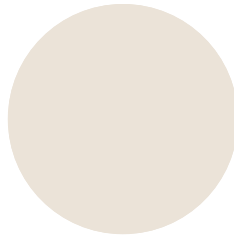
*Corrosivity categories describe the outdoor climate conditions in accordance with EN12944. The higher the category, the more corrosive environment.*

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

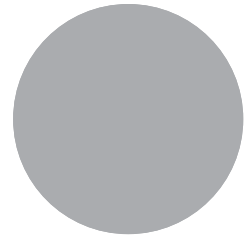
## COLOURS



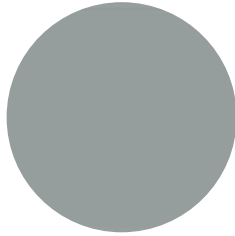
RR45 METALLIC GRAPHITE



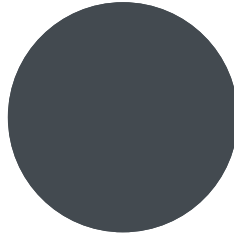
RR20 WHITE



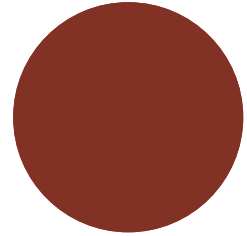
RR21 LIGHT GREY



RR22 GREY



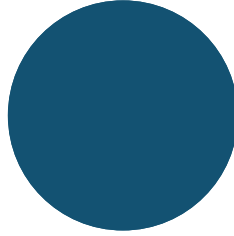
RR23 DARK GREY



RR29 RED



RR33 BLACK



RR35 BLUE

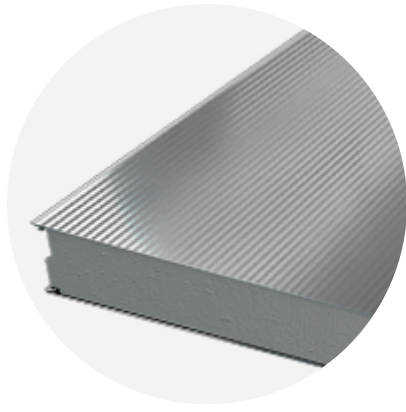


RR40 SILVER MATT

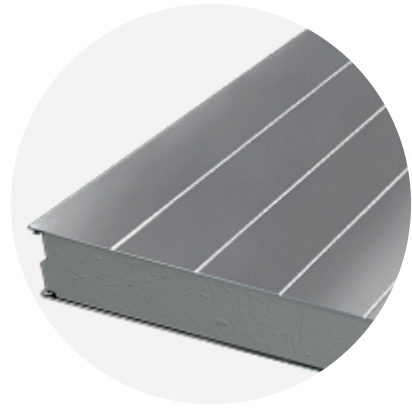


RR41 DARK SILVER MATT

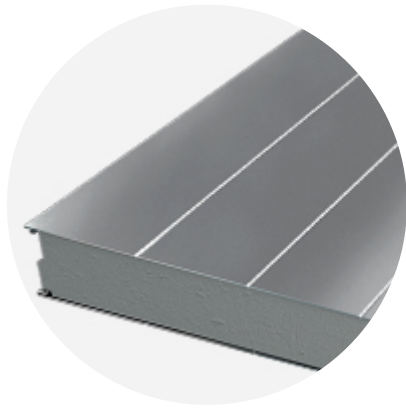
## PROFILE OPTIONS



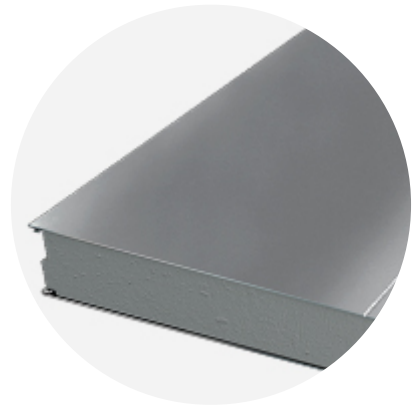
MICRO 15



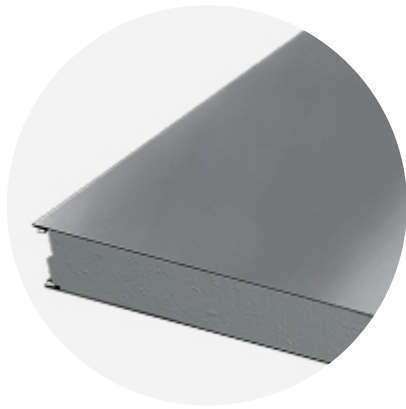
RIB 150



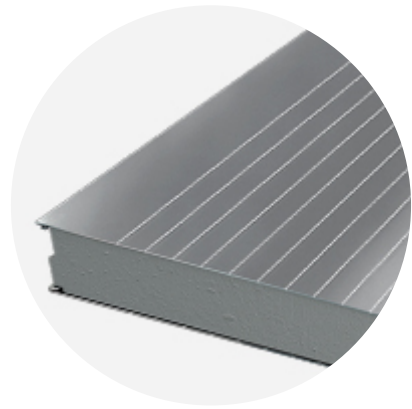
RIB 200



RIB 600



FLAT F



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 03\_2020  
PDF, 1.28 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 03\_2020  
PDF, 5.77 MB

## INSTRUCTIONS

### ASSEMBLY INSTRUCTIONS

Assembly instructions document includes information about:

- Packing
- Transportation and unloading
- Storing
- Assembling



**05 OCT, 2016**

Product declaration for Ruukki sandwich panel SPA 80-230 gripping device RPT-2003 Rev.D  
PDF, 2.38 MB



**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 03\_2020

PDF, 1.28 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, 148.58 KB



## ENVIROMENTAL PRODUCT DECLARATION



**05 MAY, 2016**

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

## INTRUDER RESISTANCE CERTIFICATES



**15 APR, 2020**

SBSC Certificate Burglar protective walls SPA230E LIFE, grade 2  
PDF, 244.16 KB



**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