Sandwich panel SPA S for external wall and ceiling

Sandwich panel **SPA S** 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.

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.
This panel type is **intruder resistant** in accordance with SSF 1047, class 2 (see Certificates & approvals).

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

SPA S sandwich panels are **FM Approved** products certified by FM Global. All thicknesses comply with FM 4880 fire performance requirements, while thicknesses 100-230 mm are additionally certified according to FM 4881 for fire and hurricane resistance. For exterior applications minimum internal and external facing thickness is 0.6 mm.

Please, view FM approval guide website for detailed information:
www.approvalguide.com

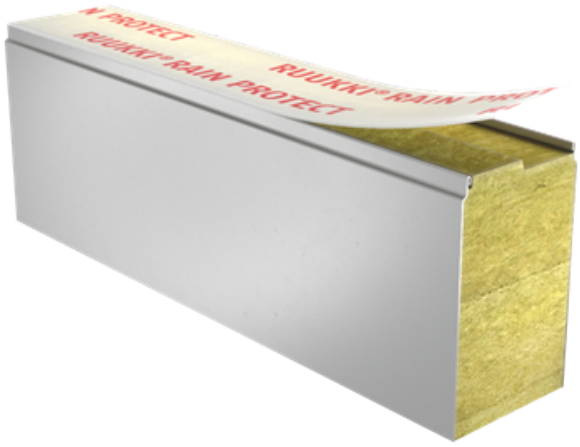
Application:

- External walls
- Ceilings

Ruukki® LowCarbon

Also available as Ruukki® LowCarbon, helping to reduce embodied carbon and made with high recycled content. See the Ruukki® LowCarbon pages and product-specific EPDs for details.

The optional Ruukki Airtightness package improves building airtightness, helping to reduce energy consumption and CO_2 emissions during the use phase.



SEND CONTACT REQUEST

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Properties

Model name	Sandwich panel SPA S for external wall and ceiling
Standard module width	1200 mm
Minimum length	2000 mm
Maximum Length	13500 mm
External facing thickness	0.6 mm
Internal facing thickness	0.5 mm
Air Tightness	q50=0,01 m3/hm2 (pressure and suction) for thicknesses ≥ 150 mm

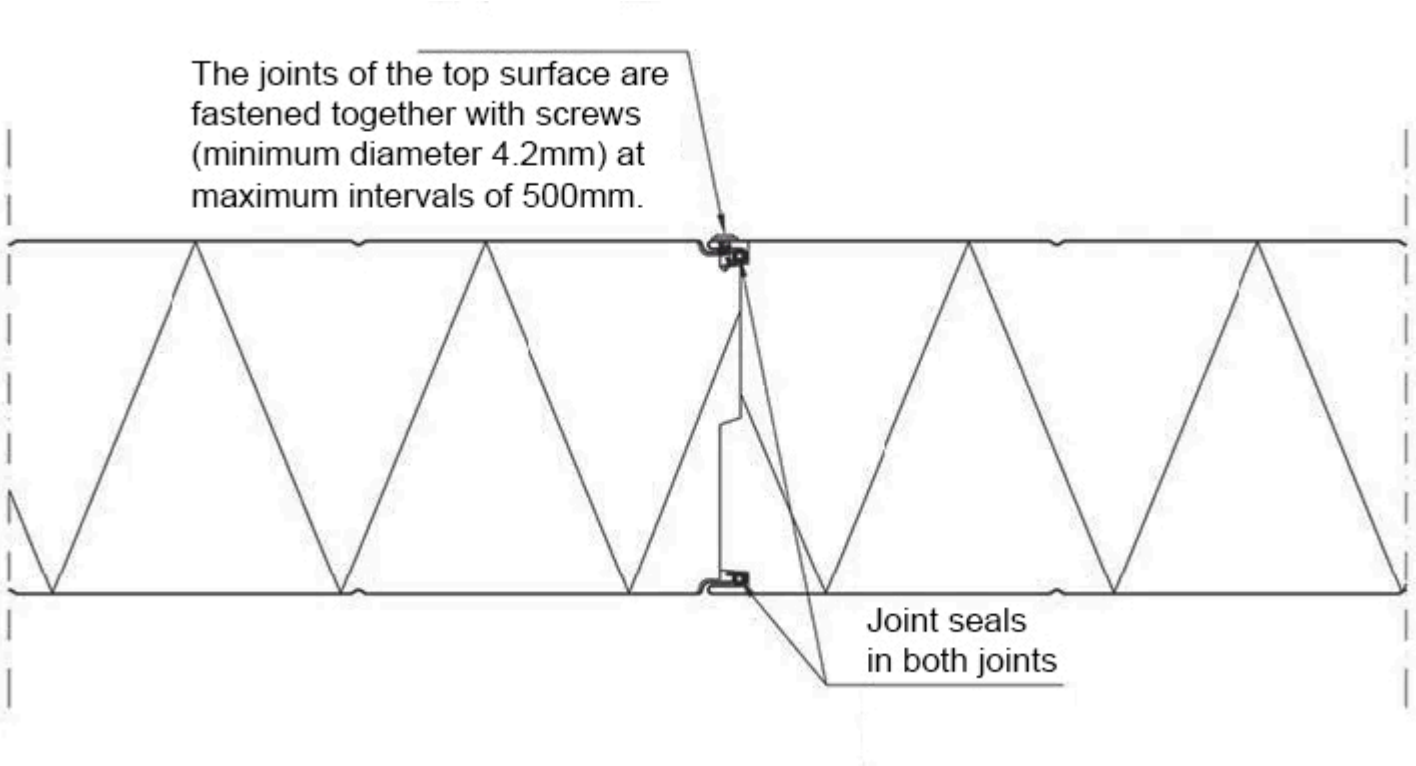
Thickness D (mm)	**100**	**125**	**150**	**200**	**230**
Weight (kg/m^2)	21.8	25.3	28.7	34.5	38.7
U-value (W/m^2K)	0.45	0.35	0.29	0.22	0.19
Sound insulation Rw (dB)	30	31	31	31	31
Reaction to fire	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0	A2-s1, d0
GWP-total, A1-A3 (kg CO_2/m²)	30,9	32,2	33,5	35,7	37,4
GWP-total, A1-A3 (kg CO_2e/m²) for Ruukki® LowCarbon	-	-	-	~21,5	22,8

Wall fire resistance values & max span horizontal / vertical orientation (m):	**100**	**125**	**150**	**200**	**230**
EI 30	7.5 / 7.5	7.5 / 7.5	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8
EI 30 (stainless steel)	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	9.0 / 8.8	9.0 / 8.8	9.0 / 8.8
EI 60 (stainless steel)	4.0 / -	4.0 / -	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 90	7.5 / 7.5	7.5 / 7.5	7.5 / 8.8	7.5 / 8.8	7.5 / 8.8
EI 90 (stainless steel)	-	-	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 120	6.0 / 4.0	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5

EI 120 (stainless steel)	-	-	6.0 / 7.5	6.0 / 7.5	6.0 / 7.5
EI 180	-	6.0 / -	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

Ceiling fire resistance values & maximum span lengths (m):	**100**	**125**	**150**	**200**	**230**
EI 60 (fire from below)	6.3	6.3	6.3	6.3	6.3
EI 90 (fire from below)	6	6	6	6	6
EI 120 (fire from below)	6	6	6	6	6

Please note: The fire resistances of an SPA S compartment ceiling panel structure apply to panels treated with Hiarc and polyester coatings.



Tests have been performed to determine the fire resistance, related maximum span length and other relevant properties of the panels. The fire reaction class of the panels is A2-s1,d0 (surface: Hiarc, polyester and uncoated stainless steel).

In the event of a fire, the panels act as a rope (catenary) structure. Details, fastenings and their

appropriate fire protection must be designed in such a way that the fastenings at the upper or lower surface of the panel can withstand the entire load caused by the panel structure in the event of a fire. The fastenings, dimensioning and the implementation of details must comply with the instructions.

Due to structural tightness requirements, seals must be installed in the panel joints on both upper and lower facings of the panel.

Due to fire resistance, the tongues and grooves at the upper facings of panel ceiling must be fastened to each other with small screws (Ø min. 4.2 mm), spacing max. 500 mm.

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

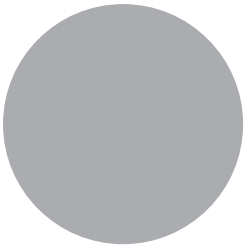
Facing	Coating	Gloss level (GU)	Corrosivity category	UV resistance	Colours
External	GreenCoat Pural BT Satin	20	C4	Ruv4-5	RR20, RR21, RR22, RR23, RR29, RR33, RR35
External	GreenCoat Pural BT Metallic	40	C4	Ruv4	RR40, RR41, RR45
External	Polyester	35	C3	Ruv2-3	RR20, RR21, RR23, RR946
Internal	Polyester	35	C3	-	RR20
Internal	PVC laminate *		C4	-	White
Internal	Stainless steel *		C4	-	-

**) optional material*

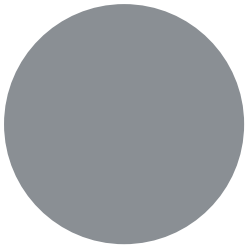
UV resistance describes how well the coating is able to keep its original colour and gloss levels in accordance with EN10169. The higher the class, the better the resistance.

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

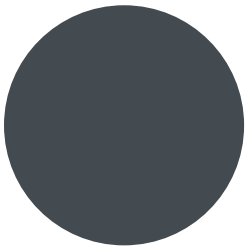
RR20 Winter White



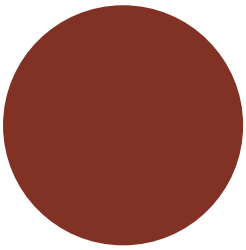
RR21 Pebble Grey



RR22 Stone Grey



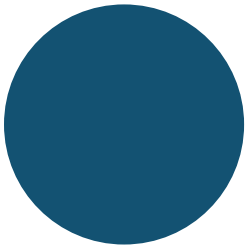
RR23 Mountain Grey



RR29 Cottage Red



RR33 Nordic Night Black



RR35 Lake Blue



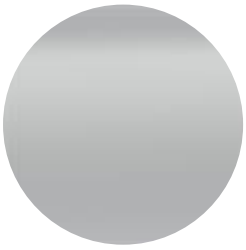
RR40 Metallic Silver



RR41 Metallic Dark Silver



RR45 Metallic Titanium

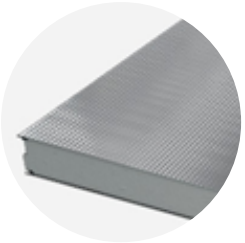


RR946 Metallic Silver

Profile options



Micro 15



Grid 15*



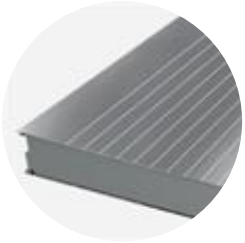
Rib 150



Rib 200



Rib 600



Linear 50



Flat F

* Grid 15 is available for SPA external wall panels with a thickness of 150 mm or more and 0.6 mm colour-coated steel.

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.

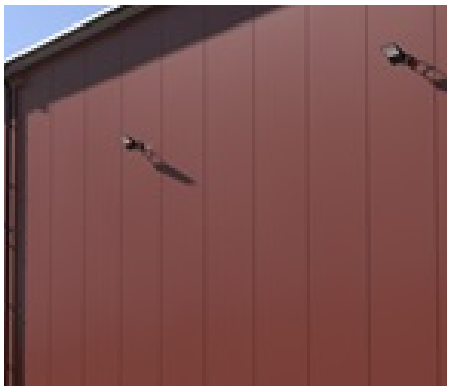
Declaration of performance

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