Sandwich panel SP2E E-PIR Energy

Sandwich panel **SP2E E-PIR Energy** is available in thicknesses 120 - 200 mm.

With precise and Ruukki specific manufacturing tolerances, and factory-fitted seals on the panel joints, the Ruukki® Energy panel structure with its seams forms a very airtight solution. Together with Ruukki Airtightness package it's possible to achieve excellent airtightness to the entire building. This can decrease energy costs and CO2 emissions up to 30%. Read more on airtightness package.

Using Ruukki's solutions you can receive more credits in **LEED** and **BREEAM** certification systems.

Low U-value and proper joint design together with wide thickness range make this sandwich panel an ideal solution for **cold storage** buildings.

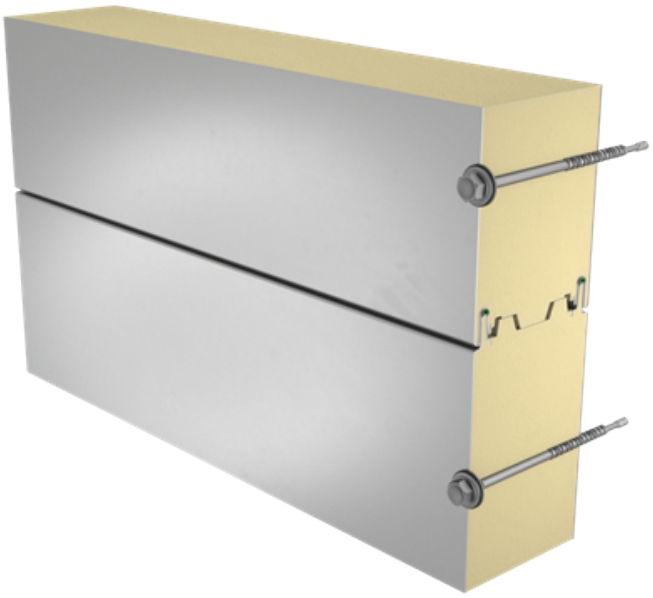
The core of this sandwich panel is made of rigid, HCFC-free, self-extinguishing and sustainable polyisocyanurate foam (PIR). Its **excellent thermal insulation properties** allow for the decrease of panel thickness which transfers directly to lower transportation and assembly costs, as well as **significant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

Application:

- External walls (standard fix)

This product is optionally available with following sustainable features:

- Steel facings made of recycled steel (SSAB Zero) for significantly lower CO_2 emissions and high circularity (Ruukki LowCarbon)
- Optimized insulation for lower CO_2 emissions (Ruukki LowCarbon)
- Air tightness package for lower CO_2 emissions during building use



SEND CONTACT REQUEST

Properties

Model name	Sandwich panel SP2E E-PIR Energy
Standard module width	1100 mm
Optional module width (B)	1000 (D = 120 mm, 140 mm)
Minimum length	2000 mm
Maximum Length	18500 mm
External facing thickness	0.5 mm
Internal facing thickness	0.4 mm
External Fire Exposure	NRO
Air Tightness	q50=0,01 m3/hm2 (pressure) and q50=0,07 m3/hm2 (suction)

Thickness D (mm)	**120**	**140**	**160**	**180**	**200**
Weight (kg/m^2)	13	13.7	14.5	15.4	16.2
U-value (W/m^2K)	0.18	0.15	0.14	0.12	0.11
Sound insulation Rw (dB)	24	24	24	25	25
Reaction to fire	B-s2, d0	B-s2, d0	B-s2, d0	B-s2, d0	B-s2, d0
GWP-total, A1-A3 (kg CO_2/m²)	32.6	34.2	35.8	37.3	38.9
GWP-total, A1-A3 (kg CO_2e/m²) for Ruukki® LowCarbon	19.9	21.5	23.1	24.8	26.4

Wall fire resistance values & max span horizontal / vertical orientation (m):	**120**	**140**	**160**	**180**	**200**
EI 15	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5
EI 30	4.0 / 3.0	4.0 / 3.0	4.0 / 3.0	4.0 / 3.0	4.0 / 3.0
EW 30	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5	7.5 / 7.5

EW 45	- / 3.0	- / 3.0	- / 3.0	- / 3.0	- / 3.0

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	RAL7035 (RR292), RAL9010 (RR126)
External	GreenCoat Pural BT Metallic	40	C4	Ruv4	RAL9006 (RR40), RAL9007 (RR41)
External	Polyester	35	C3	Ruv2-3	RAL1015 (RR807), RAL1021, RAL2003, RAL3000 (RR770), RAL3009 (RR29), RAL3013 (RR774), RAL5003 (RR4F8), RAL5005 (RR4A8), RAL5012 (RR408), RAL6011 (RR526), RAL6018 (RR5G8), RAL7015 (RR23), RAL7016 (RR288), RAL7035 (RR2B1), RAL7040 (RR287), RAL9002 (RR1G6), RAL9003 (RR106), RAL9006 (RR946), RAL9007, RAL9010 (RR1G5), Golden Oak
Internal	Polyester	35	C3	-	RAL9002 (RR1G6), RAL9010 (RR1G5)
Internal	PVC laminate *		C4	-	White

**) no standard colours available, please contact Ruukki for more information.*

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

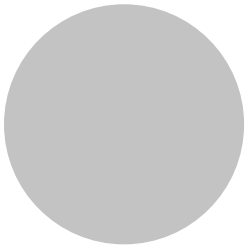
higher the category, the more corrosive environment.

Primary colors

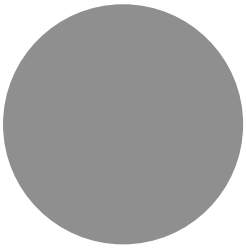
RAL9010 Pure white RR1G5

RAL9002 Grey white RR1G6

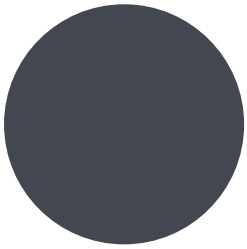
RAL7035 Light grey RR2B1



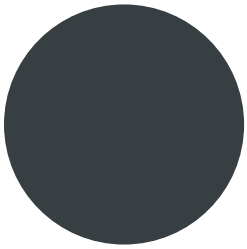
RAL9006 White aluminium RR946



RAL9007 Grey aluminium



RAL7015 Slate grey RR23

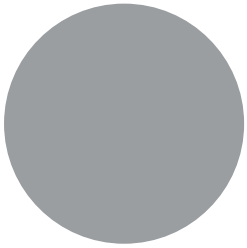


RAL7016 Anthracite grey RR288

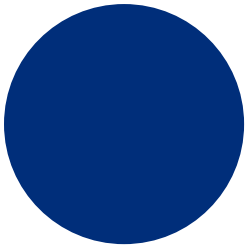
Complementary colors

RAL9003 Signal white RR106

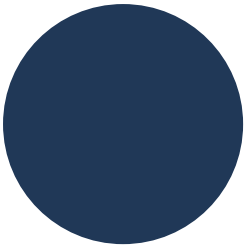
RAL1015 Light ivory RR807



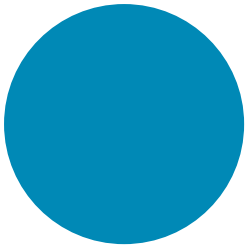
RAL7040 Window grey RR287



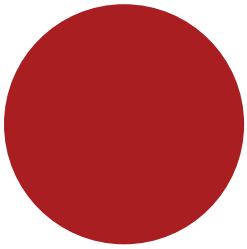
RAL5005 Signal blue



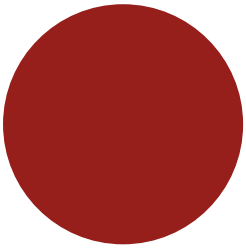
RAL5003 Sapphire blue RR4F8



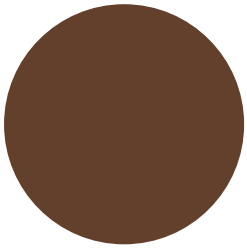
RAL 5012 Light blue RR408



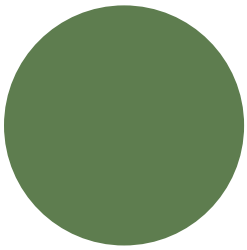
RAL3000 Flame Red RR770



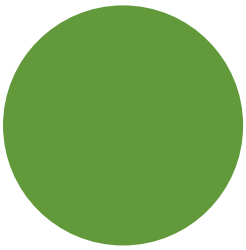
RAL3013 Tomato red RR774



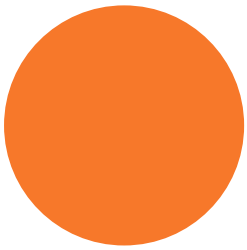
RAL3009 Oxide red RR29



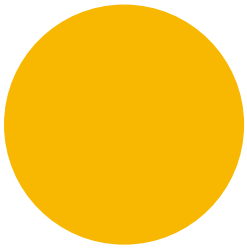
RAL6011 Reseda green RR526



RAL 6018 Yellow green RR5G8



RAL2003 Pastel orange



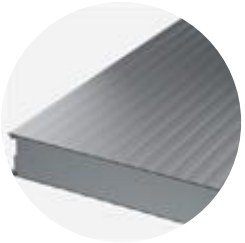
RAL1021 Colza yellow

Golden oak

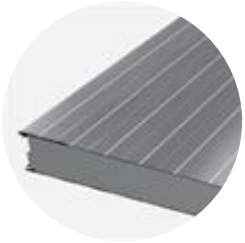
Profile options

Ribbed R550

Ribbed R275



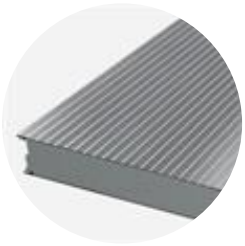
Linear L25



Linear L

Micro M

Flat F



Ribbed R28

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

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

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