Sandwich panel SP2E X-PIR Energy

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

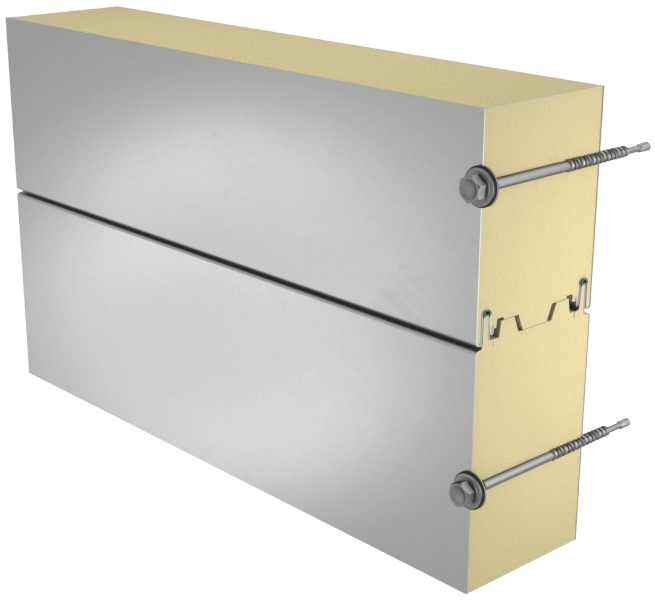
With precise and Ruukki specific manufacturing tolerances, and factory-fitted seals on the panel joints, the Ruukki® Energy panel structure with its seams forms a very airtight solution. Together with Ruukki Airtightness package it's possible to achieve excellent airtightness to the entire building. 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 panel's excellent quality ensures **very good fire resistance properties**, thus increasing fire safety of 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)



Properties

Model name	Sandwich panel SP2E X-PIR Energy
Standard module width	1100 mm
Optional module width (B)	1000 (D = 120 mm)
Minimum length	2000 mm
Maximum Length	18500 mm
External facing thickness	0.5 mm
Internal facing thickness	0.5 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)	13.1	13.9	14.6	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-s1, d0	B-s1, d0	B-s1, d0	B-s1, d0	B-s1, d0

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 15 (stainless steel)	7.5 / -	-	7.5 / -	7.5 / -	7.5 / -
EI 30	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0
EW 30	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0	4.0 / 4.0

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	Corrosivity category	UV resistance	Colours
External	GreenCoat HIARC MAX	C4	Ruv4	RAL7035, RAL9006 (RR40), RAL9007 (RR41)
External	Polyester	C3	Ruv2-3	RAL1015, RAL3009 (RR29), RAL7015 (RR23), RAL7016 (RR288), RAL7035, RAL9002, RAL9006, RAL9007, RAL9010
Internal	Polyester	C3	-	RAL9002, RAL9010
Internal	PVC laminate *	C4	-	White

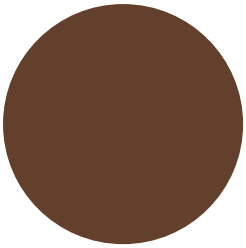
Facing		Corrosivity category
External	Stainless steel*	C5-I
Internal	Stainless steel*	C5-I

*) optional material

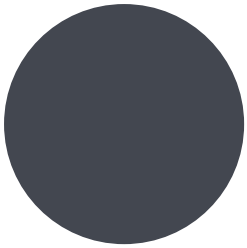
UV resistance describes how well the coating is able to keep its original colour and gloss levels in accordance with EN10169. The higher the class, the better the resistance.

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

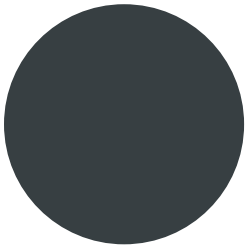
RAL1015 Light ivory



RAL 3009 Oxide red



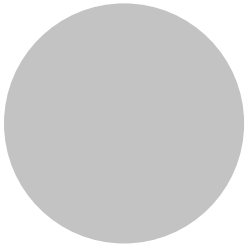
RAL 7015 Slate grey



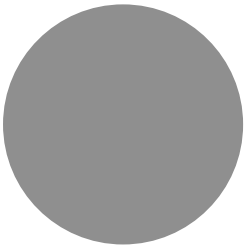
RAL7016 Anthracite grey

RAL7035 Light grey

RAL9002 Grey white



RAL9006 White aluminium

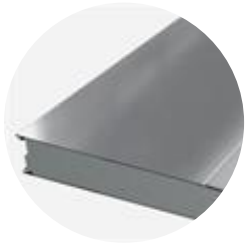


RAL9007 Grey aluminium

RAL9010 White

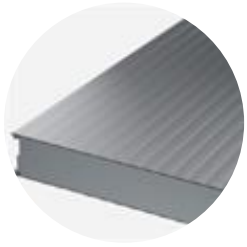
For external facings of 1000 mm module width only the following colors are available: RAL1015, RAL5005, RAL7015 (RR23), RAL7035, RAL9002, RAL9006, RAL9007, RAL9010.

Profile options

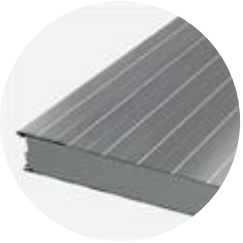


Ribbed R550

Ribbed R275



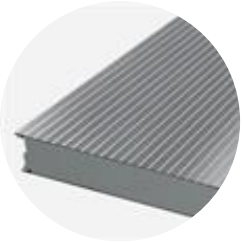
Linear L25



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
	Internal	L, L25

L25 available only for panel thicknesses 120,140,160 mm.
For stainless steel only L profiling is available.

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

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