

RUUKKI FORMA™ – DESIGN YOUR ENERGY-EFFICIENT FACADE

RUUKKI® FAÇADE SYSTEMS – RUUKKI FORMA™

RUUKKI
Building your tomorrow.

Energy-efficiency combined with unlimited architectural freedom



IT'S TIME TO DEMAND MORE. Ruukki® Facade systems – Ready for you.

Ruukki® Facade systems offer a wide range of complete wall systems for industrial and commercial buildings.

Ruukki offers a new design facade system that combines high architectural standard with excellent energy-efficiency.

Be inspired!

RUUKKI FORMA™ – Shapes and colours. All ready to go.

Ruukki Forma™ is a complete facade system, combining Ruukki's facade cladding products with the Ruukki® energy panel system. Ruukki Forma™ provides a wide range of aesthetic shapes, materials and colour options.

Available in a wide range of finishes and you can select from one of the Ruukki® Facade systems including:

- Facade Cladding – Liberta™ Rainscreen, Cladding Lamellas or Design Profiles.
- Ruukki® emotion
- Ruukki® solar

Discover the wide variety of Ruukki Forma™ cladding options with our online tools to visualise facades:

www.ruukki.com/forma

– Only limited by your imagination.





Facade cladding for Steel, Cor-Ten and Aluminium

Liberta™ rainscreen panels offer a versatile way of creating an elegant and unified surface for your facade. Change the rhythm and expression of the facade surface by using rainscreen panels in different sizes and joint widths.

Cladding lamellas provide various ways of creating a harmonic, impressive and modern image for facades. The wide variety of shapes enables visually interesting vertical and horizontal surfaces and highlights for facades.

Design Profiles offer minimalist diversity and rhythm to facades. A wide selection of design shapes, extensive set of high quality colours with flexible deliveries and materials as well as various assembly possibilities create endless design opportunities.

To provide more possibilities for facade architecture, cladding is available in an extensive set of high quality colours with flexible deliveries. Different facade materials, such as steel, aluminium and weather-resistant Cor-Ten, expand the alternatives available.

www.ruukki.com/facade-claddings



Ruukki® emotion – Playing with dimensions

Ruukki® emotion is a complete facade system that consists of perforated cladding products and a support structure with a smartly integrated backlighting system.

A wide range of perforation options combined with either plain white or a programmable coloured backlighting is available bringing your facade to life!

www.ruukki.com/emotion

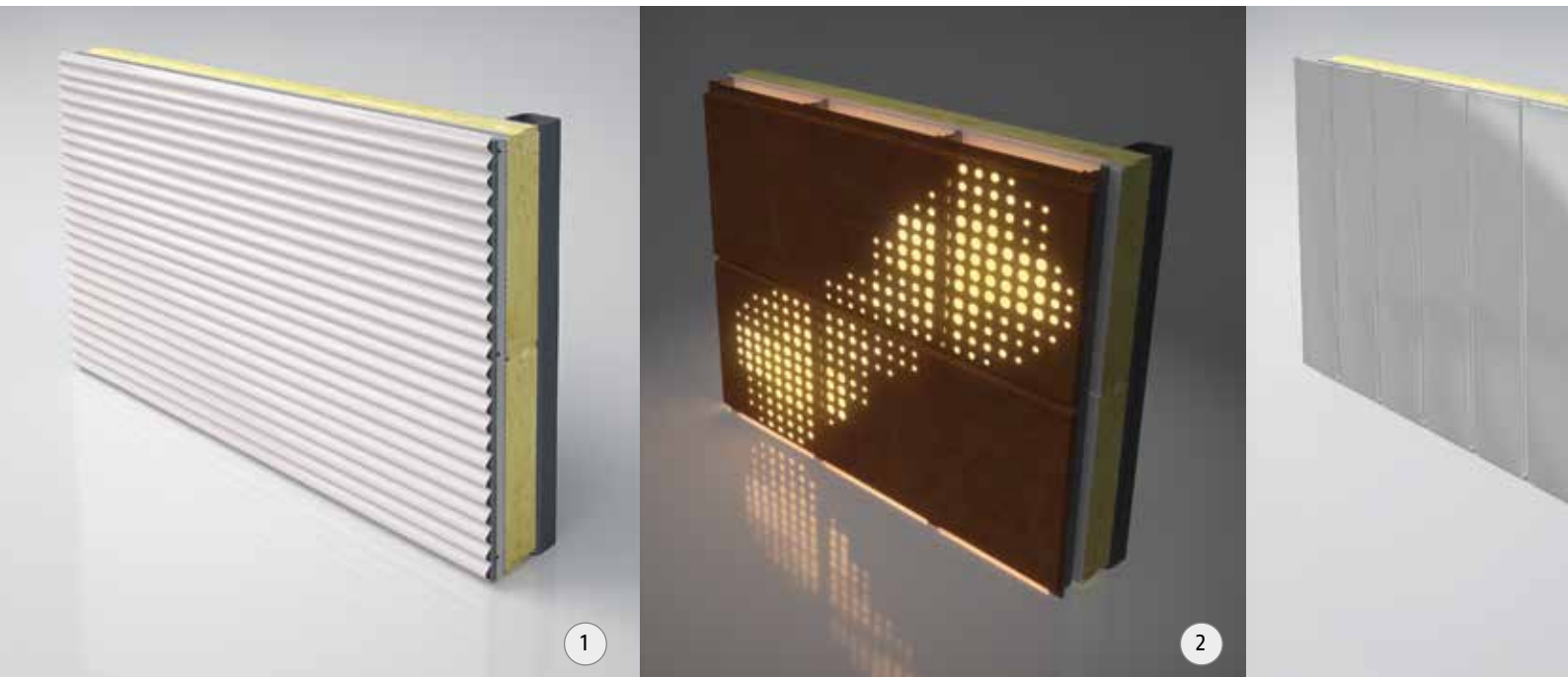
Architecturally attractive Solar Systems for Walls

Ruukki® on-wall solar and Liberta™ Solar are architecturally attractive solar systems for generating renewable electricity. Both have detailed features, enable freedom of design, combined with a complete delivery package and easy installation with low ongoing maintenance. Features which ensure easy project realisation for new and existing buildings.

The two different systems are suitable for different types of building projects, to assure a balance between the building and the solution. Liberta™ Solar, a rainscreen panel which provides a solid glass surface and Ruukki® on-wall solar, a cost-effective add-on system.

www.ruukki.com/solar-systems-for-walls

RUUKKI FORMA™ BENEFITS



Advantages of Ruukki Forma™ – FREEDOM and SAVINGS

Freedom

Forma™ provides the freedom for architects to turn their vision into reality. The flexibility of the materials available allows the architect to use a variety of shapes, materials and colours to complete the look and feel of the external facade whilst achieving the specified building requirements and energy performance. In addition the use of Ruukki® emotion allows creativity with perforation and light. The possibilities are endless.

Forma™ provides the freedom for structural designers as the installation does not require any secondary steel work. This allows for increased design opportunities and allows designers to move the boundaries even further without compromising the building aesthetics.

Forma™ is available with a choice of mineral wool or PIR insulation.

Savings

Forma™ creates a highly air-tight envelope. It enables you to significantly reduce heating and cooling energy consumption and can generate up to 20% savings in a building's energy costs. The good air tightness improves the building's energy class and helps in meeting the ever increasing energy-efficiency requirements set by national building regulations.

Forma™ saves installation time and cost due to the reduced need for additional steel structures, the combination of components, accessories and materials delivered on site ready to go.

Forma™ includes an all inclusive delivery package and technical support comprising of:

- All essential products & accessories
- Available with system windows
- Full design service
- Energy simulation service
- Air tightness test
- Installation by approved partner



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1. Ruukki Forma™ - Design profile Venice
2. Ruukki® emotion with perforated Liberta500 Cor-Ten and light
3. Ruukki Forma™ - Lamella Vertical 70
4. Ruukki Forma™ - Liberta™ Cor-Ten 600
5. Ruukki Forma™ - Liberta™ Solar
6. Ruukki Forma™ - Liberta™ 500
7. Ruukki Forma™ - Lamella Cor-Ten 30



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Example technical properties of Ruukki Forma™

For more options, please ask Ruukki or visit www.ruukki.com

Ruukki Forma™ SPA 230 E LIFE Liberta 500

Insulation:	Mineral Wool
Insulation Thickness:	230mm
Total Thickness of Facade System:	275mm
U Value (W/m²K):	0.16
Sound Reduction (dB):	37
Fire Resistance:	EI 60
Reaction to fire:	A2-s1,d0

Ruukki Forma™ SPA 230 F Design Venice S10

Insulation:	Mineral Wool
Insulation Thickness:	230mm
Total Thickness of Facade System:	260mm
U Value (W/m²K):	0.19
Sound Reduction (dB):	39
Fire Resistance:	EI 240
Reaction to fire:	A2-s1,d0

Ruukki Forma™ SPB 160 WE Lamella Cor-Ten 30

Insulation:	Mineral Wool
Insulation Thickness:	160mm
Total Thickness of Facade System:	220mm
U Value (W/m²K):	0.24
Sound Reduction (dB):	37
Fire Resistance:	EI 120
Reaction to fire:	A2-s1,d0

Ruukki Forma™ SP2E 120 X-PIR Liberta Solar

Insulation:	PIR
Insulation Thickness:	120mm
Total Thickness of Facade System:	180mm
U Value (W/m²K):	0.18
Sound Reduction (dB):	31
Fire Resistance:	EI 30
Reaction to fire:	B-s1,d0

Ruukki Forma™ SP2E 200 X-PIR Liberta Grande

Insulation:	PIR
Insulation Thickness:	200mm
Total Thickness of Facade System:	245mm
U Value (W/m²K):	0.11
Sound Reduction (dB):	31
Fire Resistance:	EI 60
Reaction to fire:	B-s1,d0

Ruukki Forma™ SP2B 100 E-PIR Lamella Groove 20

Insulation:	PIR
Insulation Thickness:	100mm
Total Thickness of Facade System:	260mm
U Value (W/m²K):	0.22
Sound Reduction (dB):	30
Fire Resistance:	EI 15
Reaction to fire:	B-s2,d0

Installation



Ruukki Forma™ includes all the necessary components for complete installation. Everything from supporting structures and facade claddings to accessories, such as fixings, sealants, studs and flashings, is included in the delivery.

Quick installation provides a protective cover

The base structure – Ruukki® energy panel system – is rapid to install and provides a quick weather cover for the building. The cladding materials can be installed later, when the construction site starts to settle down and there is no longer a risk of surface damages.

Elegant energy-efficient Bory Mall shopping centre, Bratislava, Slovakia

Bory Mall is the latest and one of the largest shopping centres in the Slovakian capital of Bratislava. The investor, Penta Invest, a Central European investment group, had clear criteria regarding the type of shopping centre to be built.

The shopping centre consists of three storeys and covers an area of 54,000 square metres, equivalent to the size of almost seven football pitches. The design of the shopping centre has especially taken into account families with children. The centre is home to a large play area and children's centre.



Energy-efficiency and architectural added value

In the future, Bory Mall will form the centre of an entire city area. Naturally, one of the requirements was that the centre would excellently meet this purpose. In addition, Penta's criteria included a high standard of architecture and energy-efficiency.

Good looks and savings with Ruukki Forma™

Air-tight structures in the walls and roof reduce the energy required for heating and cooling, which in turn results in cost savings. Bory Mall is applying for BREEAM environmental certification. Façade system Ruukki Forma™ was used to create an air-tight wall structure:

"Wall structures from rival manufacturers were also considered in the early stage of the project. Ruukki Forma combines the advantages of air-tightness and architectonic suitability. Another advantage is the 2cm gap for cables and leads between the wall panel and Liberta Grande rainscreen panel. Ruukki Forma improves the appearance of the façade," says architect **Dusan Sevela** from Penta Invest.

The combined wall structure and façade also has other advantages. The building was protected from the weather much sooner and the façade was installed at the final stage, to avoid possible surface damage caused by worksite machinery.

Making architectural choices a reality

An architect is always looking for design solutions. Often manufacturers of building components keep to their own products without any alternative solutions.

"Ruukki was an active partner in the project and wanted to find alternative solutions to meet the architectonic requirements. Another benefit was that Ruukki came to the construction site to seek solutions. The best end result is obtained by acting openly and in a good team spirit," notes Sevela.

Sevela values an active spirit when introducing alternatives: *"Ruukki always provided information about the possibilities, and focused on how the customer's choices could be made reality. A good example of the service received was creating the round corners of the shopping centre in accordance with the plans, even though Ruukki had no suitable products in its portfolio. Ruukki helped us to achieve what we set out to achieve."*



Bory Mall

Ruukki Forma™ SPB140 WE Liberta 500 Grande

Ruukki Forma™ references



**Kaubamajakas Shopping Centre,
Pärnu, Estonia**

Ruukki Forma™ SPB140WE Lamella 60 / Design Oulu /
Design Rome



**Er-Jill Byggnads Plåt AB,
Mölnlycke, Sweden**

Ruukki Forma™ SP2E160 X-PIR Liberta 500



Production Hall and Office Klasov, Slovakia

Ruukki Forma™ SP2B100 X-PIR Liberta Grande



Production Hall ADS, Vetrkovice, Czech Republic

Ruukki Forma™ SPB160WE Liberta 500

Ruukki Forma™ references



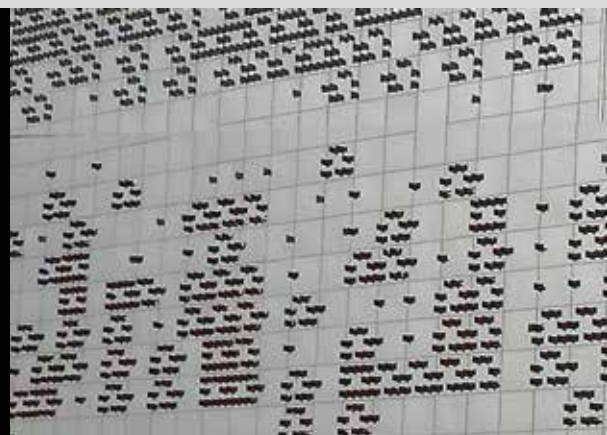
**Shopping Centre Mytishchi Fair,
Moscow, Russia**

Ruukki Forma™ SPB160WE Liberta 500



**Production Hall and Office
Kežmarok, Slovakia**

Ruukki Forma™ SPB100W Liberta 500



Shopping Centre Europe, Kursk, Russia

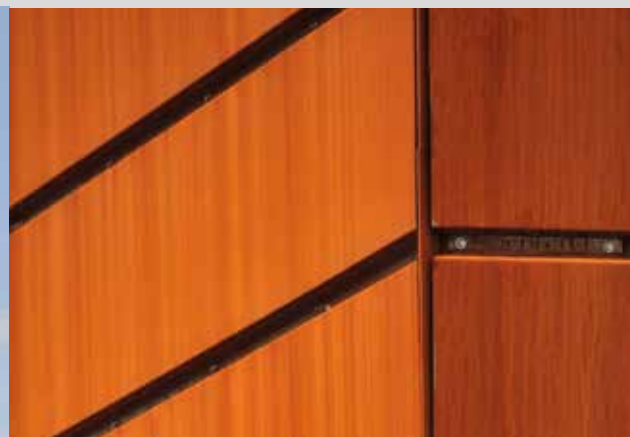
Ruukki Forma™ SPB120WE Liberta 500 Perforated /
Design Paris / Design Venice



Shopping Centre Frýda, Frýdek Místek, Czech Republic,

Ruukki Forma™ SP2E120 X-PIR Liberta Grande

Ruukki Forma™ references



**Struers, Rooper Ostrava,
Czech Republic**

Ruukki Forma™ SPB100 E-PIR Lamella Cor-Ten 30



EDM, Nizna, Slovakia

Ruukki Forma™ SP2B100 E-PIR Liberta 500



**Production hall and office,
Swoboda Stamping, Jihlava,
Czech Republic**

Ruukki Forma™ SPB160WE Liberta Grande



**Office Building, Allcon, Gdańsk,
Poland**

Ruukki Forma™ SPB160WE Liberta Grande

We work with investors and developers who see opportunities. We exist for designers and builders to fulfil their dreams. We are here for people who bring buildings and homes to life.

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