

# Pirrouet<sup>®</sup>

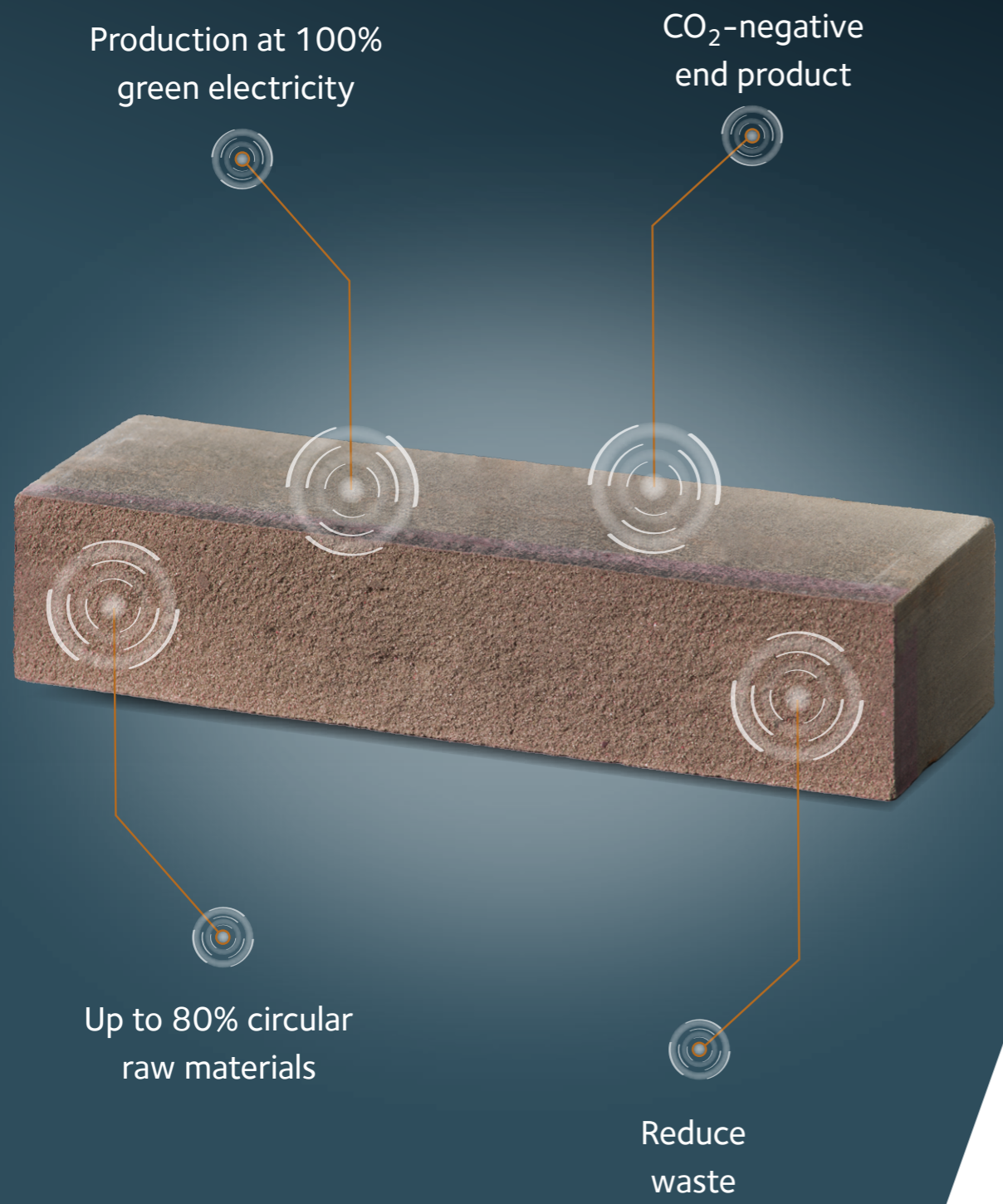
CO<sub>2</sub>-negative facing bricks



*Let's make the perfect turn. Together!*



**VANDERSANDEN**  
TOGETHER WE BUILD GREATNESS



## Pirrouet®: CO<sub>2</sub>-negative facing bricks

Our most revolutionary new development is our **Pirrouet® CO<sub>2</sub>-negative facing bricks**. During the production process as much as **60 kg CO<sub>2</sub>** is absorbed per tonne of material. During curing, the CO<sub>2</sub> establishes a permanent bond with the Ca-containing materials in the bricks. With Pirrouet® we are not only taking the next step in making our production process more sustainable as part of our sustainability pledge Together to Zero, but we are offering a facade with a **distinctive aesthetic**. With various colour choices and formats providing each facade with a unique and attractive appearance.



### What makes Pirrouet® unique:

- **CO<sub>2</sub>-negative product:** during the production process as much as 60 kg of CO<sub>2</sub> is absorbed per tonne of Pirrouet® facing bricks. During curing, the CO<sub>2</sub> permanently connects to the calcium-containing materials in the bricks.
- **CO<sub>2</sub>-neutral production:** to ensure sustainable solutions are used in the process, we largely generate our own green electricity through solar panels and wind turbines.
- **Reduced use of primary raw materials:** up to 80% of raw materials come from residual flows from the steel industry.
- **Reduce waste:** by recycling residual products and reusing, we reduce waste.
- **High dimensional stability:** Pirrouet® facing bricks are extremely dimensionally stable.
- **Very high quality standards:** this durable Facing bricks complies with strict European ceramic standards.
- Available in **different colours and formats** each with a unique aesthetic.

# Impact with Pirrouet® facing bricks

The Pirrouet® range includes facing bricks in **various colours and sizes** with a **unique surface texture and a transparent protective coating**.

## Pirrouet® in traditional facing brick form

When creating Pirrouet® in the traditional facing brick form we change the aesthetics, but keep a high standard by retaining processing methods, and maintaining the benefits of a durable and modern facing brick. Pirrouet® offers a perfect balance between tradition and innovation, giving each facade a unique character.

To produce Pirrouet® as sustainably as possible, we only pigment about one centimetre of the top layer. 25% of the bricks are fully coloured with 1 textured face, making them suitable for corners and special applications.



## Environmental Profile (EP) of Pirrouet®

Due to the innovative nature of Pirrouet®, the Environmental Product Declaration (EPD) is not yet available. An SPD is created based on an LCA using production data of a minimum of one year and is expected to be completed by 2025. For Pirrouet®, an Environmental Profile (EP) is available. Although it is similarly established as an SPD, the results are based on calculated values rather than production data.

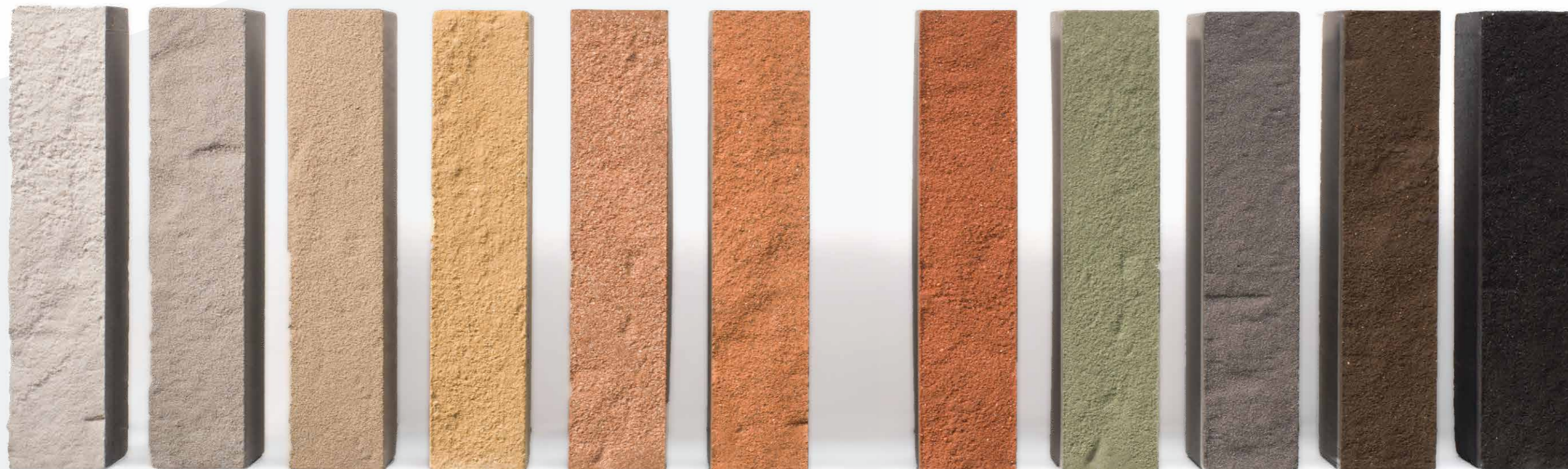
This provides a good insight into its sustainability and the low environmental impact of Pirrouet®. The EP is similar to an SPD drawn up by an independent expert agency.

According to the calculated EP, the CO<sub>2</sub> emissions of Pirrouet® are negative: per tonne of facing bricks, 60 kg CO<sub>2</sub> is permanently bound. For Pirrouet®, the EPs for different countries are present.

Discover Pirrouet® facing bricks



Learn more about the difference between EP/EPD and LCA



Pirrouet®

# Innovative production process of Pirrouet®

To produce Pirrouet®, we mix **mineral by-products from the steel industry** with **sand, dyes and water**, and then press them in brick mould. In a conditioned room – with high CO<sub>2</sub> concentration – we let the brick harden. The CO<sub>2</sub> reacts with calcium-containing materials creating **carbonates**. This permanent bond creates a **hard limestone-like brick**.

Watch the animation video



1 / 2 days production time  
no additional energy  
zero waste

ZERO WASTE

The infographic features a dark blue background with white icons: a crossed-out power symbol, a leaf in a circle, and a clock. A white cable connects the icons to a grey brick-like shape containing the text.

## Processing & yard support

Processing instructions are available for the Pirrouet® facing brick which contains specific details and points of attention for processing this facing brick. The processing instructions are available on request. Our site support team is at your disposal for any questions you may have while using Pirrouet®. Together we are striving for a greener and more sustainable building sector. Ask via your contact person or fill in a contact form.

Get in touch with your contact person or fill in a contact form



## Projects in the spotlight



### Building project Green Nobelhorst (Almere) builds future with Pirrouet® CO<sub>2</sub>-negative facing bricks

Discover Green Nobelhorst, a groundbreaking project in Almere, the Netherlands, where 60 sustainable homes are currently being built. These homes embody a combination of sustainability, care for people and the environment, and innovation. As pioneers, Heutink Groep and Heren5 Architects have chosen to build with our CO<sub>2</sub>-negative Pirrouet® facing brick for the first time in the Netherlands.

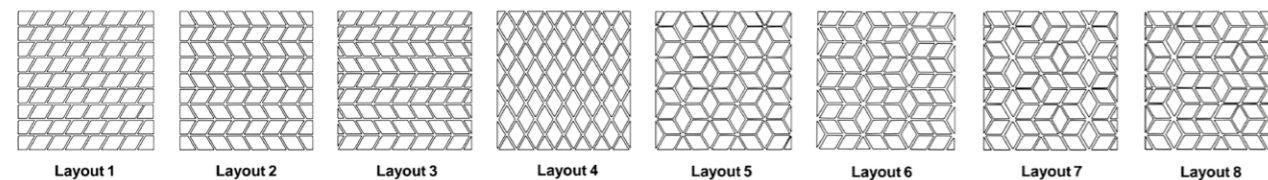
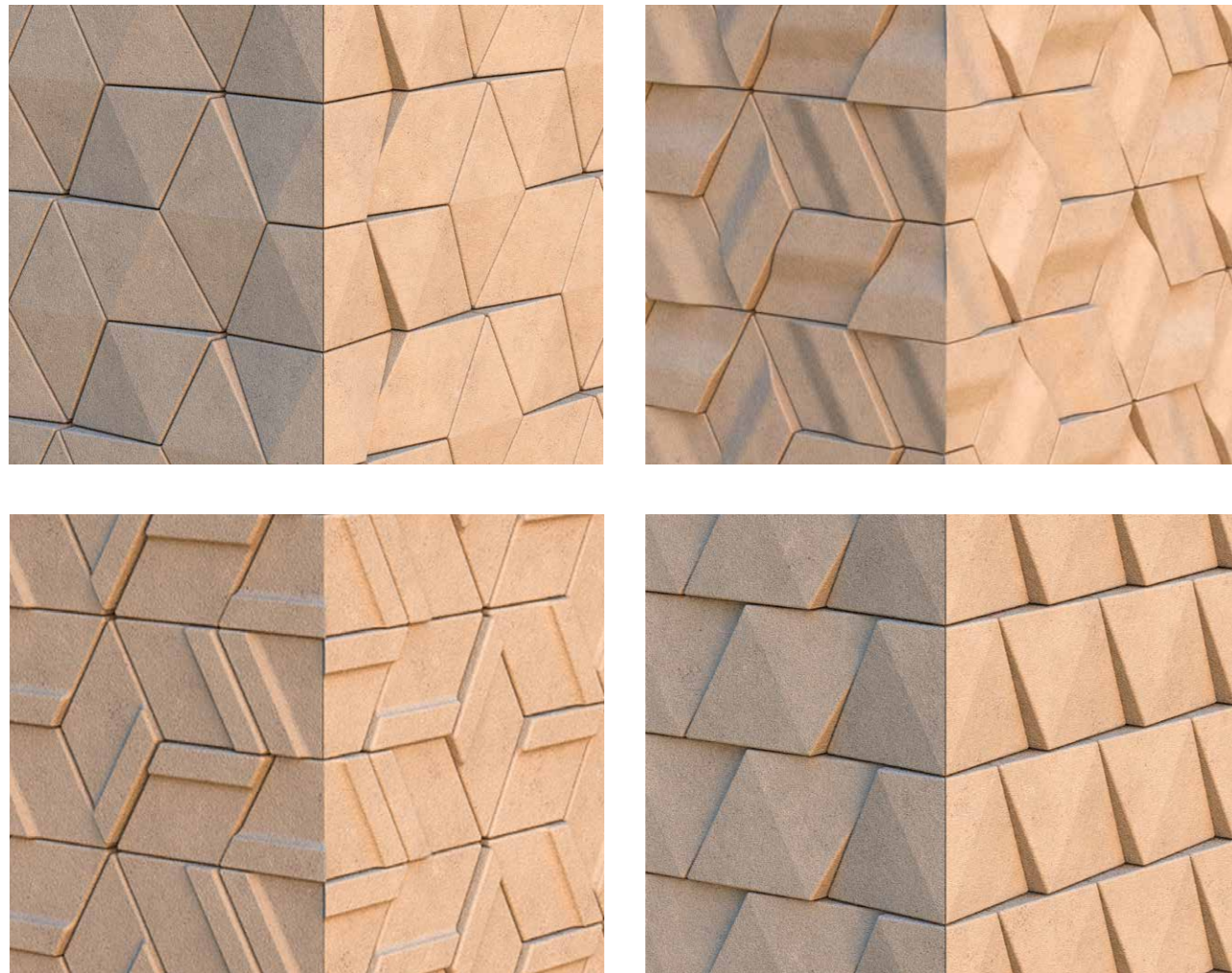


More on this project



# Pirrouet® Prisma: creative freedom in architecture

Our diamond-shaped Pirrouet® Prisma facing brick offers architects unprecedented **creative freedom**. A single geometric shape can be used to create various facade patterns. The architect is given complete freedom to personalise their choice with the colour, the stacking pattern and texture on the front surface. Pirrouet® Prisma opens the door to a new world of design and expression, giving facades a **unique dimension**.

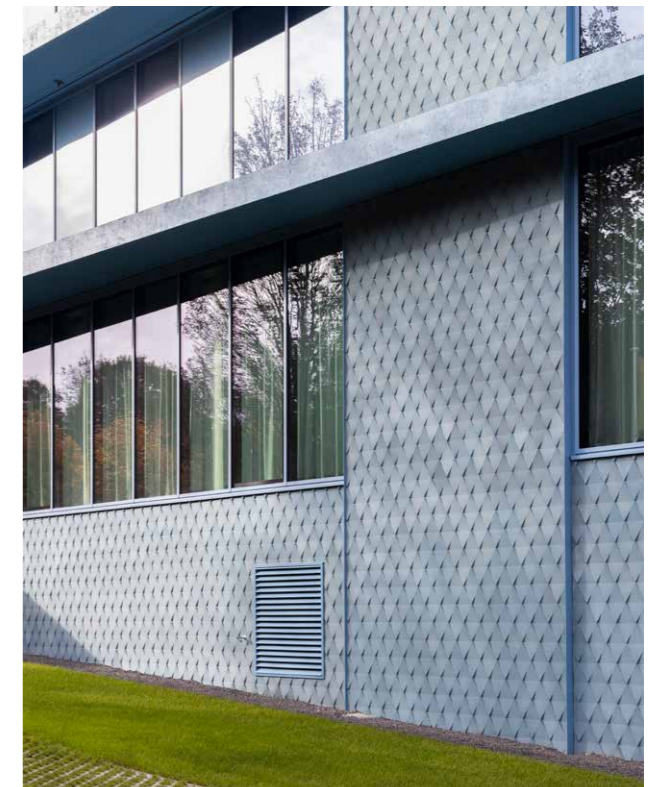


# Projects in the spotlight



## Innovation Campus Living Tomorrow (Brussels) unites sustainability, circularity and aesthetics

With the new Living Tomorrow Innovation Campus, the construction sector has a striking example of progressive architecture. Vandersanden participated as one of the partners in building the facade of the iconic building. The CO<sub>2</sub>-negative Pirrouet® Prisma facing brick highlights the possibilities of modern technologies, with sustainability going hand in hand with new design possibilities.



# Frequently asked questions

**How are the 'residual products' of which Pirrouet® made is obtained?**

Calcium and magnesium oxide (minerals) in excess liquid steel is thrown to remove impurities (metallic fraction) from the steel. Afterwards, this metallic fraction is separated from the mineral fraction and used again in the steelworks. For the carbonation process in our bricks we use the **mineral fraction**.



**How definitive is CO<sub>2</sub> storage in Pirrouet® facing bricks?**

In the production of Pirrouet®, CO<sub>2</sub> involves a chemical compound with calcium-containing materials. As a result, carbonates are formed. This binding is used for limestone bricks. The binding of CO<sub>2</sub> is permanent.

**Are Pirrouet® facing bricks completely coloured throughout?**

Because we appreciate the sustainable nature of this revolutionary product across the board, we only colour the top layer (approx. 1 cm). The corner bricks – which make up 25% of our production – are fully coloured as they are used above windows, claustras etc..

**What is the warranty for Pirrouet® facing bricks?**

We provide a 10-year guarantee on our Pirrouet® bricks, as we do with all of our bricks.

**How many Pirrouet® facing bricks do I need, per m<sup>2</sup>?**

Depending on the format you choose, you will require the following quantities per m<sup>2</sup>:

- LF50-S (240 x 72 x 50 mm): 65 pcs/m<sup>2</sup>
- WF (210 x 100 x 50mm): 72 pcs/m<sup>2</sup>
- DF (215 x 100 x 65mm): 58 pcs/m<sup>2</sup>
- XXL44-S (440 x 72 x 44 mm): 40 pcs/m<sup>2</sup>

The above quantities are guide values and assume that the bricks are laid with a joint of 12 mm. If the bricks are glued together you will need more bricks per m<sup>2</sup>.

**Are processing instructions available for Pirrouet® facing bricks?**

Processing instructions are available **on request**.

**Which standards do Pirrouet® facing bricks meet?**

Pirrouet® facing bricks meet the strict European standards applicable to ceramic bricks. Feel free to contact us for more information.

**Are Pirrouet® facing bricks impregnated?**

On the facing sides of the bricks, we provide a water-repellent coating for long-lasting facades.

**Can Pirrouet® facing bricks be used in circular processing?**

Pirrouet® facing bricks have a very high dimensional stability and therefore lend themselves perfectly to circular processing. A dry stacking system is currently under development. The mortar industry is also working on a special lime mortar, which will allow the Pirrouet® facing bricks to be recuperated. Feel free to contact us for more information.

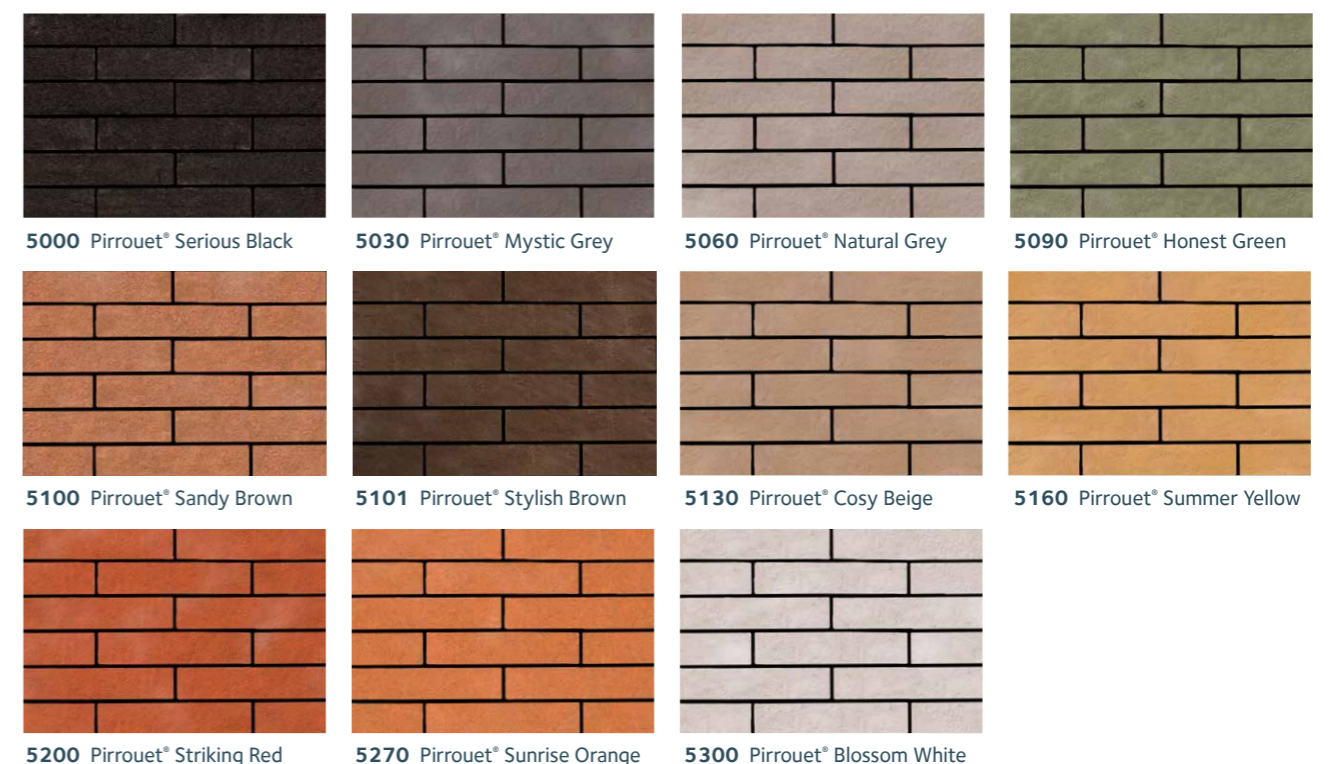


# Packing details



Colour Range	
5000 Pirrouet® Serious Black	5130 Pirrouet® Cosy Beige
5030 Pirrouet® Mystic Grey	5160 Pirrouet® Summer Yellow
5060 Pirrouet® Natural Grey	5200 Pirrouet® Striking Red
5090 Pirrouet® Honest Green	5270 Pirrouet® Sunrise Orange
5100 Pirrouet® Sandy Brown	5300 Pirrouet® Blossom White
5101 Pirrouet® Stylish Brown	

	Sizes											
	LF50-S			WF			DF			XXL44-S		
	240 x 72 x 50 mm			210 x 100 x 50 mm			215 x 100 x 65 mm			440 x 72 x 44 mm		
	joint 12 mm	joint 6 mm	joint 4 mm	joint 12 mm	joint 6 mm	joint 4 mm	joint 12 mm	joint 6 mm	joint 4 mm	joint 12 mm	joint 6 mm	joint 4 mm
Number of bricks per m <sup>2</sup>	65	73	76	72	83	87	58	64	66	40	45	47
Brick weight in kg per piece	± 1,80			± 2,20			± 2,90			± 3,00		
Number of bricks per pallet	860			672			512			510		
Pallet weight in kg	± 1.550			± 1.480			± 1.500			± 1.530		
	Length	Width	Height	Length	Width	Height	Length	Width	Height	Length	Width	Height
Dimensions of pallet of bricks	1.125	975	820	1.100	855	900	1.105	875	900	1.144	895	820





## Together to Zero

Pirrouet® brings us closer to our promise for a carbon-neutral future, laid out in our sustainability programme 'Together to Zero'. This facing brick is a milestone for our industry, where we as a manufacturer contribute to more circularity and a reduction in the carbon footprint of the construction industry.

## Any further questions? Feel free to contact us!

For more info on Pirrouet®, please refer to the website or your contact within Vandersanden.

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[www.vandersanden.com](http://www.vandersanden.com)

Find your local sales office on

[www.vandersanden.com](http://www.vandersanden.com)

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