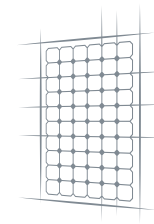




Photonwall

PHOTOVOLTAIC FACADE PANELS



Photonwall

INSPIRED BY **NATURE**, POWERED BY **FUTURE**

Photovoltaic facade panels
2024



PhotonWall – photovoltaic facade panels are product of Polish technological company ML SYSTEM, it enables every architect, designer and every contractor creating aesthetic, practical and unique designs using the requirements of solar energy technology, regardless of whether they are building a new facility or renovating an old one.

The solar architecture is based on materials that produce green and emission-free energy. It is a new reality that combines utility values and business efficiency – with care for the natural environment. The functional, modern, elegant and pro-ecological forms provided by PhotonWall (photovoltaic façade panels) are objects of interest for designers, investors and contractors. Why? First of all, because they are a source of free electricity, an inexhaustible source of architectural inspiration and an effective element in the fight against climate changes.

PhotonWall is a response to the needs of sustainable building that must ensure climate protection and reduce carbon emissions.

Thanks to the use of high-strength laminated glass with an integrated photovoltaic system and design which is inspired by nature, we push the limits of the usefulness of modern façade panels.





**SCRATCH
RESISTANT**

*hardness 8 on the
Mohs scale*



**WIND
RESISTANCE**

up to 250 km/h



**NO
BURNING DROPLETS**

*according to EN
13501 kat. d0*



**NO SMOKE
EMISSIONS**

*according to EN
13501 cat. s1*



**TEMPERATURE
RESISTANCE**

from -50 to +90



**NO ELEMENTS FELL OFF
DURING FIRE**

*examination
par. 225 WT*



**NO SPREAD
OF FIRE**

*NRO
wg PN-B 02867*



**RESISTANCE
TO HAIL**

*75 mm at a speed
of 140 km/h*



Photonwall
PHOTOVOLTAIC FACADE PANELS

Photovoltaic
standards / norms



Building
standards



Electrical
standards



Environmental
standards



PN EN 13501 – Fire classification of construction products and building elements
PN EN 13823 – Reaction to fire tests of construction products
PN B 02867 – Testing and classification of fire spread through walls
PN EN 1990 – Fundamentals of structural design
PN EN 1991 – Impact on structures
PN EN 16612 – Glass in building
PN EN 12150 – Glass in building –Thermal toughened safety glass
PN EN 14449 – Laminated glass and laminated safety glass
PN EN IEC 61730 – Evaluation of the safety of the photovoltaic module (PV)
IEC 61215 – Photovoltaic (PV) Modules for Ground Applications –Design
Qualification and Type Approval
IEC 62716 – Corrosion test in ammonia atmosphere

IEC 61701 – Testing photovoltaic (PV) modules in a corrosive salt fog environment
IEC 62804 – PID resistance
EN 15804 – Sustainability of buildings
ISO 14001 – environmental management
ISO 14064–1:19 GHG Protocol – Specification and guidelines for quantifying and reporting greenhouse gas emissions and removals at the organization level
ISO 14025 –EPD Product Environmental Declaration
LVD 2014/35/UE – (new low voltage directive) Electrical equipment operating within certain voltage limits LVD 2006/95/WE (old directive) Electrical equipment operating within certain voltage limits
2006/95/WE (old directive) Electrical equipment operating within specified voltage limits

Photonwall

Concrete *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	95	9,5
733 x 2219	150	9,5
900 x 2700	210	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

Photonwall

Concrete

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	135	9,5
733 x 2219	220	9,5
900 x 2700	310	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY NATURE, POWERED BY FUTURE

Photonwall

Marble *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	80	9,5
733 x 2219	130	9,5
900 x 2700	180	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY **NATURE**, POWERED BY **FUTURE**

Photonwall

Marble

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	85	9,5
733 x 2219	140	9,5
900 x 2700	195	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY **NATURE**, POWERED BY **FUTURE**



Photonwall

Wood *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	85	11,5
733 x 2219	140	11,5
900 x 2700	195	11,5

Additional option:

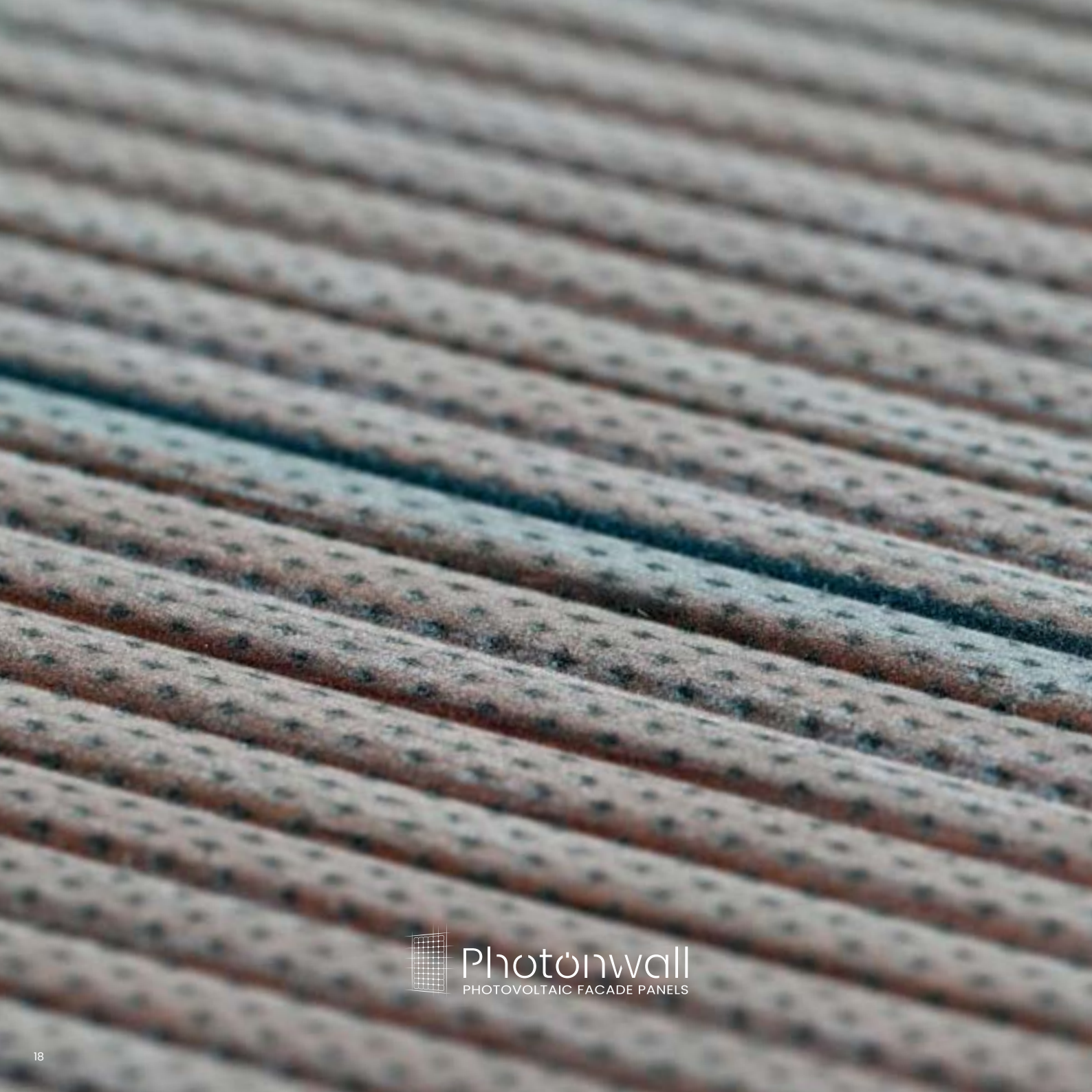
- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY **NATURE**, POWERED BY **FUTURE**





Photonwall

Wood

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	135	11,5
733 x 2219	215	11,5
900 x 2700	305	11,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY **NATURE**, POWERED BY **FUTURE**



Photonwall
Rust *premium*
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	55	9,5
733 x 2219	85	9,5
900 x 2700	120	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm



Photonwall

Rust

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	80	9,5
733 x 2219	125	9,5
900 x 2700	175	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

INSPIRED BY **NATURE**, POWERED BY **FUTURE**



Photonwall
RedBrick *premium*
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	115	9,5
733 x 2219	185	9,5
900 x 2700	260	9,5

Additional option:

- Custom-made panel**
- Backrail
- Grinding in glass
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm





Photonwall
RedBrick

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	125	9,5
733 x 2219	195	9,5
900 x 2700	275	9,5

Additional option:

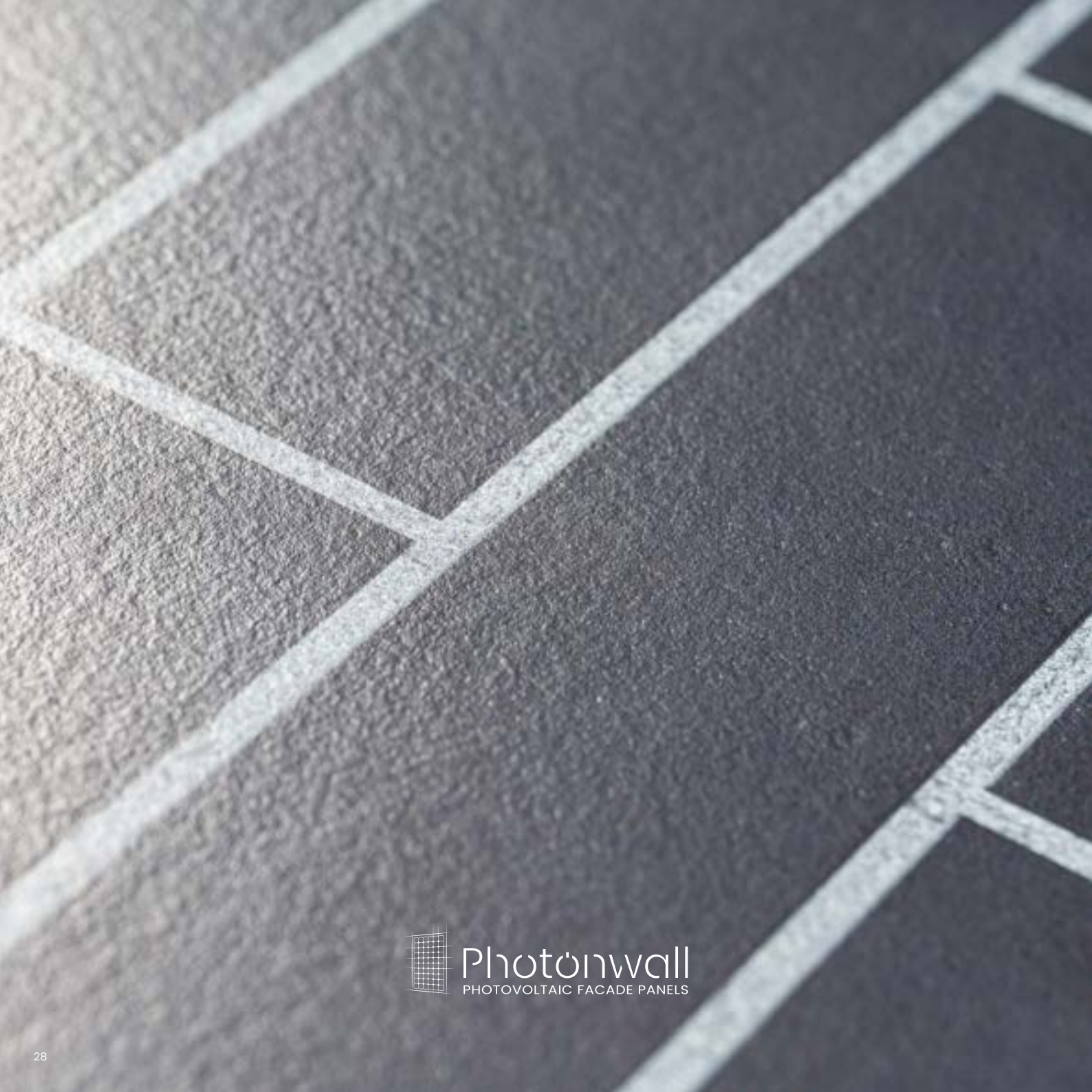
- Custom-made panel**
- Backrail
- Grinding in glass
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

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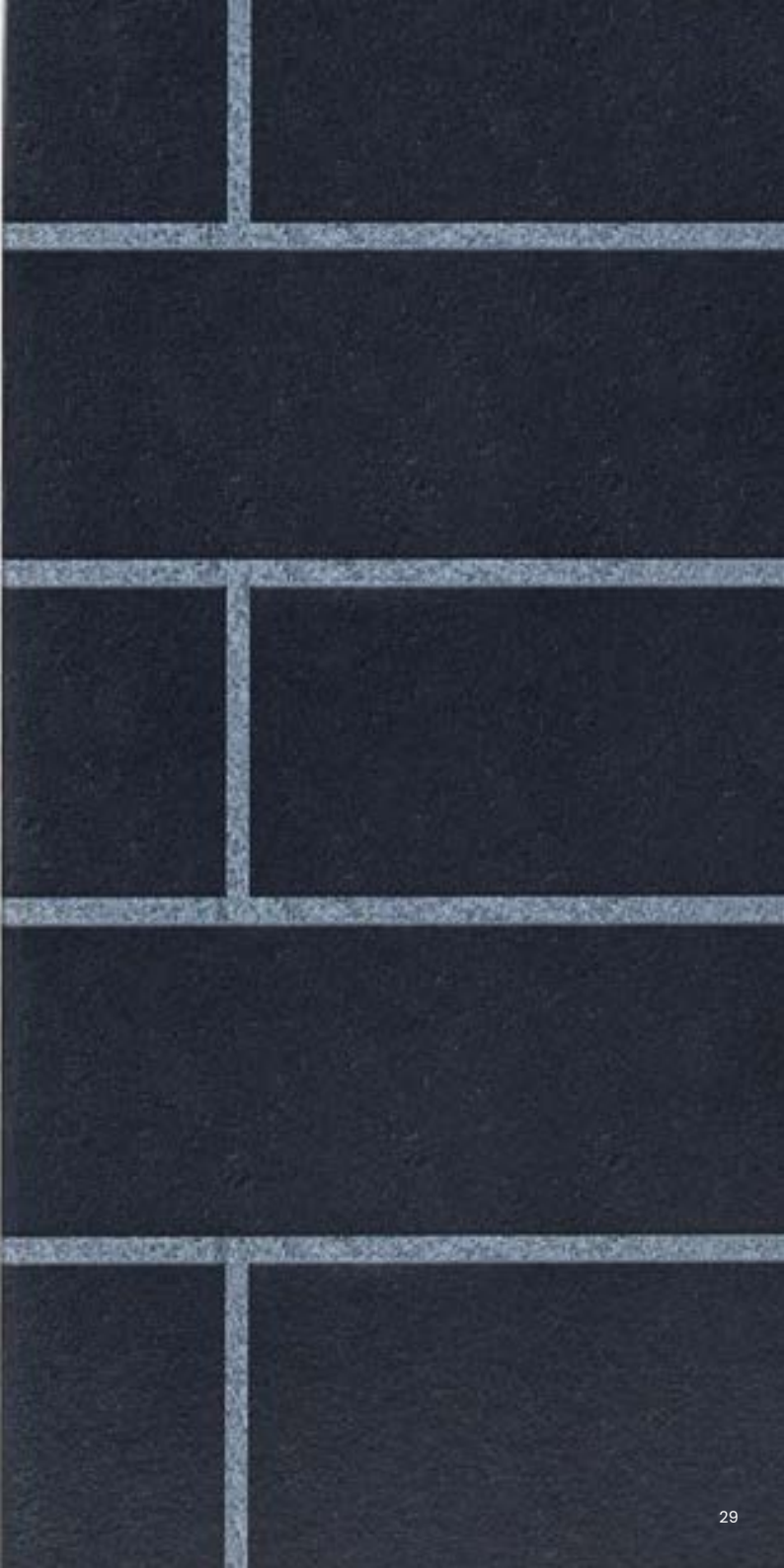


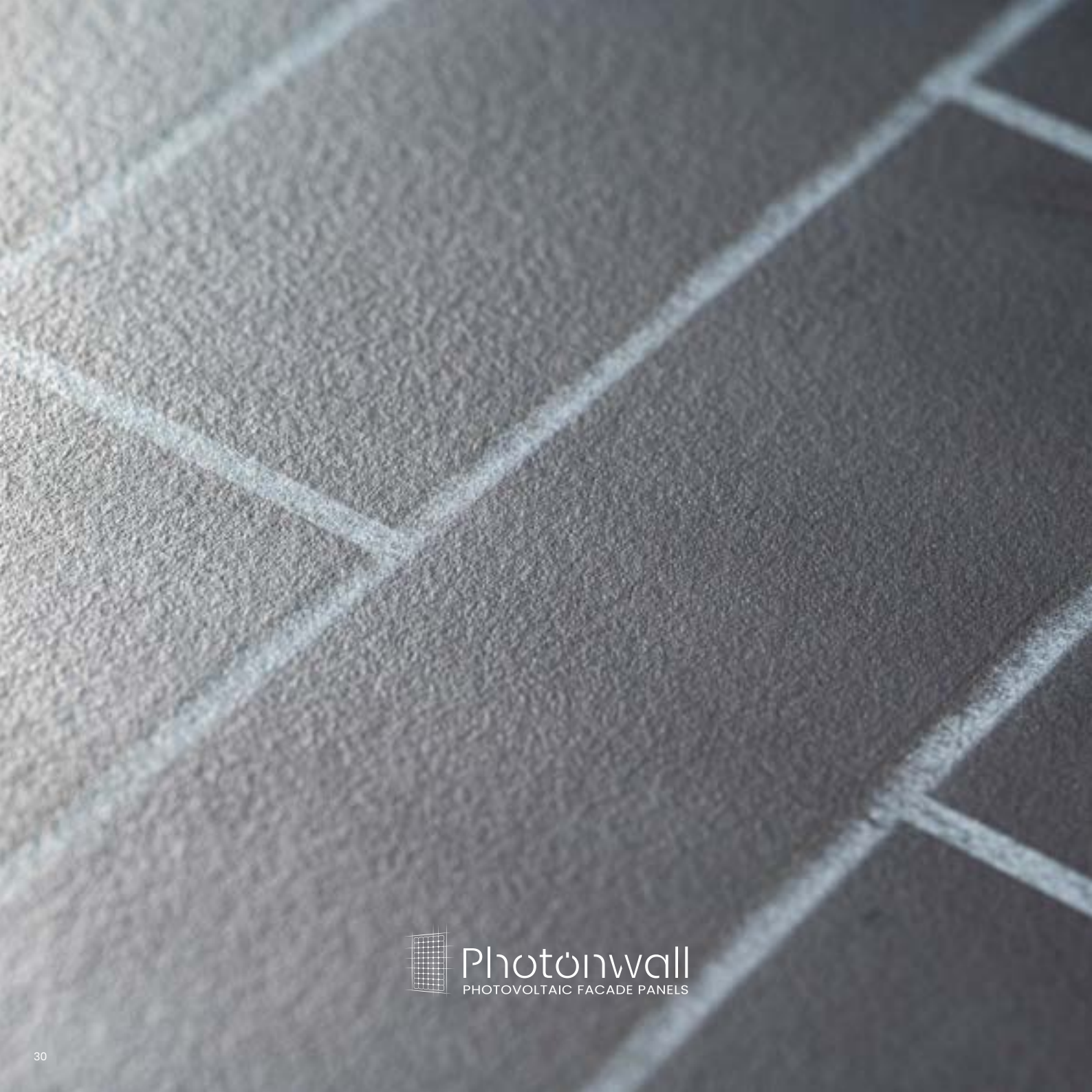
Photonwall
AnthraciteBrick *premium*
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	45	9,5
733 x 2219	70	9,5
900 x 2700	100	9,5

- Additional option:**
- Custom-made panel**
 - Backrail
 - Grinding in glass
 - Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm





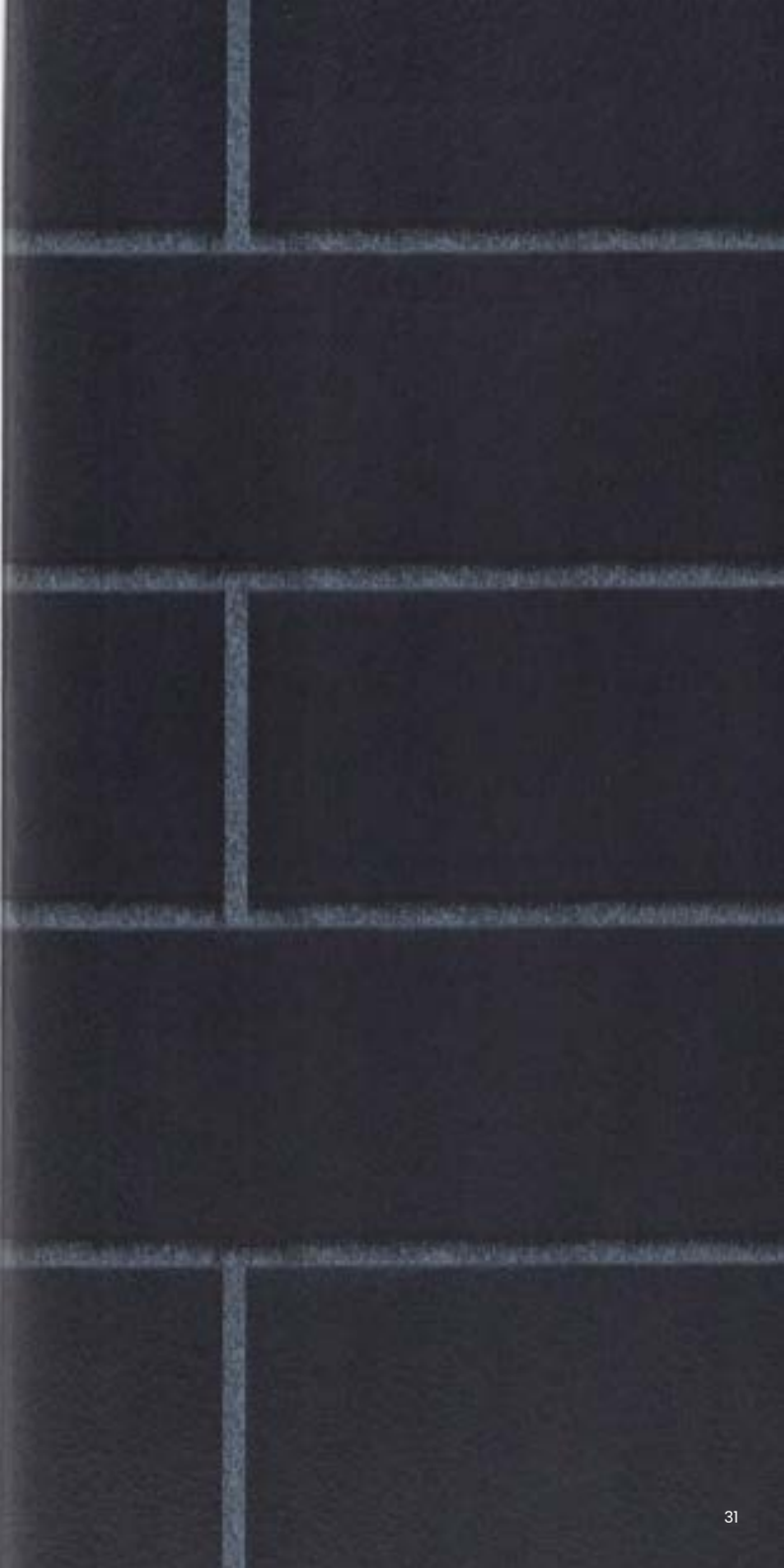
Photonwall
AnthraciteBrick
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	95	9,5
733 x 2219	155	9,5
900 x 2700	220	9,5

Additional option:

- Custom-made panel**
- Backrail
- Grinding in glass
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm



Photonwall

Anthracite *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	75	9,5
733 x 2219	120	9,5
900 x 2700	170	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm

Photonwall

Anthracite

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	135	9,5
733 x 2219	220	9,5
900 x 2700	310	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm

Photonwall
FullBlack *premium*
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	80	9,5
733 x 2219	125	9,5
900 x 2700	175	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

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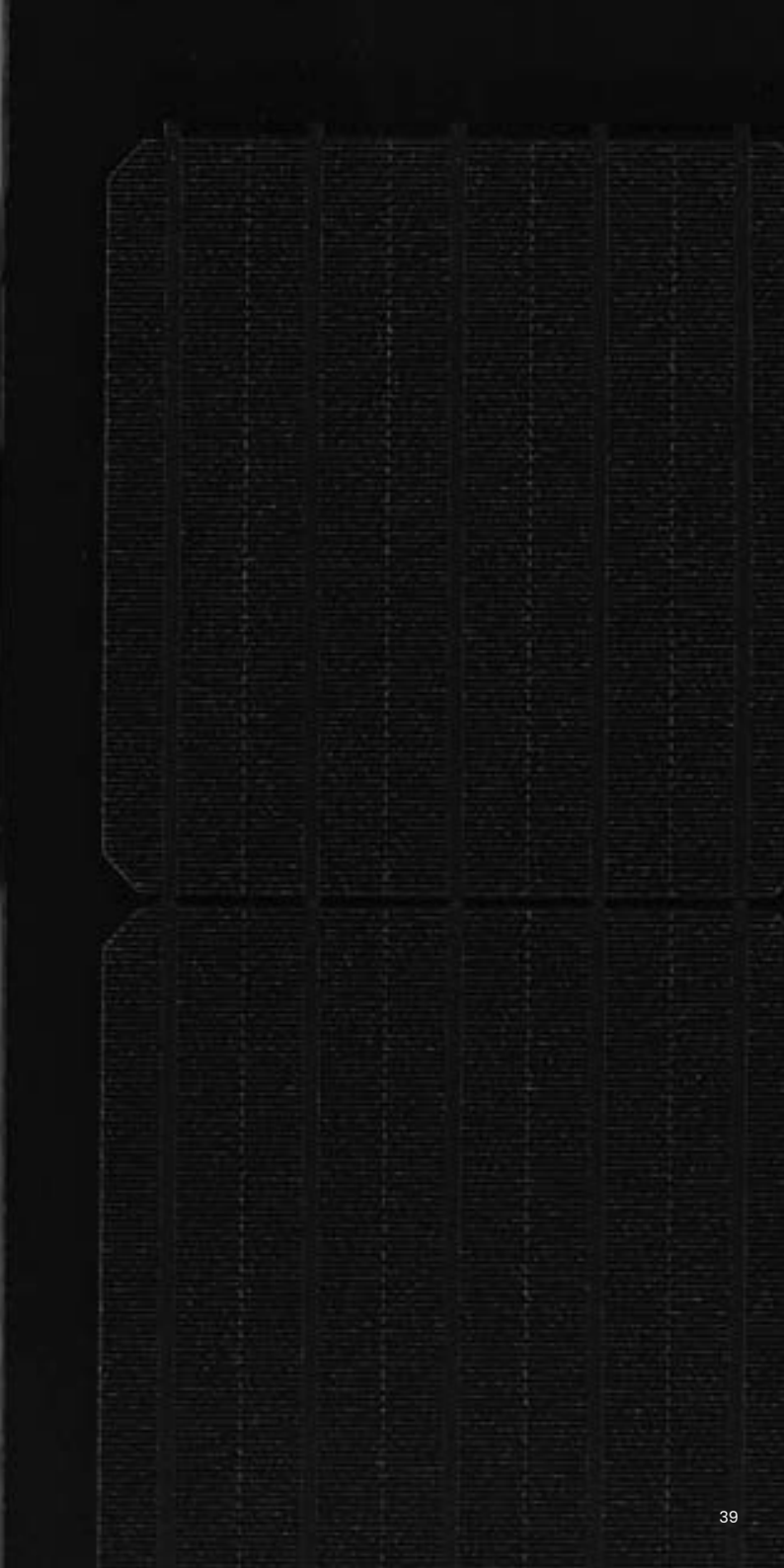


Photonwall
FullBlack
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	180	9,5
733 x 2219	285	9,5
900 x 2700	400	9,5

- Additional option:**
- Custom-made panel**
 - Backrail
 - Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm



Photonwall

White *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	105	9,5
733 x 2219	165	9,5
900 x 2700	230	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm



Photonwall

White

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	140	9,5
733 x 2219	220	9,5
900 x 2700	315	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm

Photonwall

Grey *premium*

600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	140	9,5
733 x 2219	220	9,5
900 x 2700	310	9,5

Additional option:

- Custom-made panel**
- Backrail
- Passive panel without PV

* For conditions STC

** Maximum panel size 2200 x 3500 mm



Photonwall
Grey
600x1800 | 733x2219 | 900x2700

Dimension [mm]	Power* [Wp/piece]	Thickness [mm]
600 x 1800	150	9,5
733 x 2219	235	9,5
900 x 2700	335	9,5

- Additional option:**
- Custom-made panel**
 - Backrail
 - Passive panel without PV

* For conditions STC
** Maximum panel size 2200 x 3500 mm

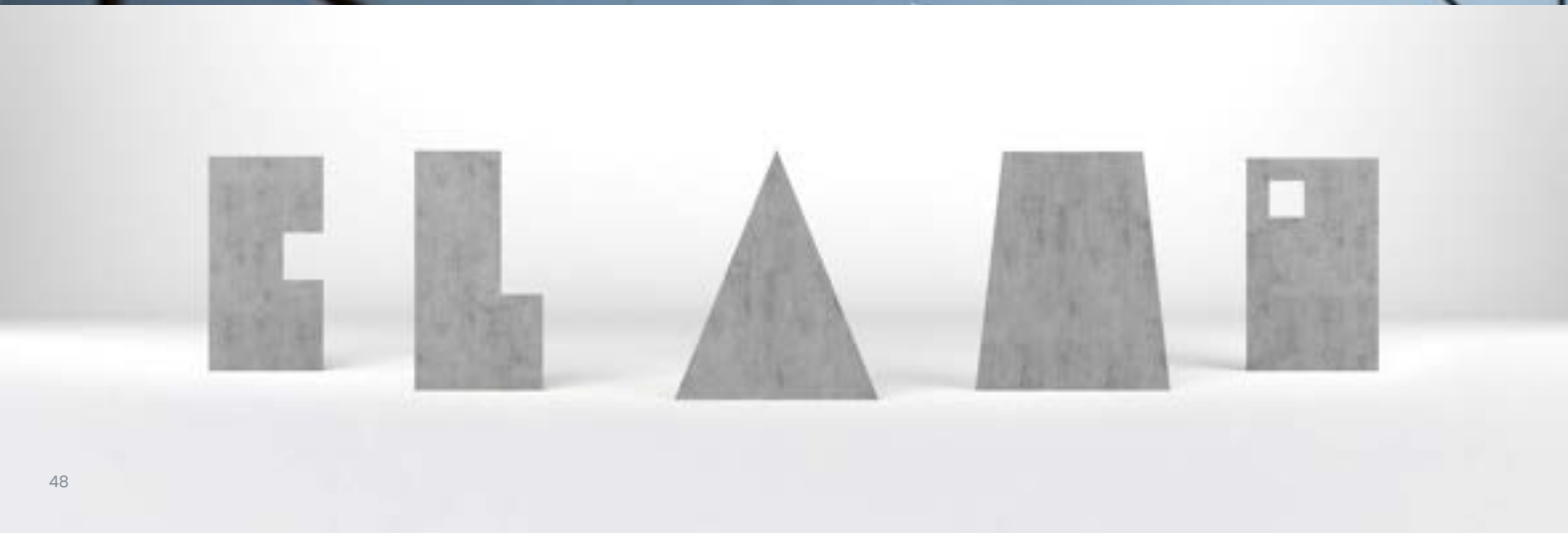
customized PhotonWall
Custom-made panel



Backrail

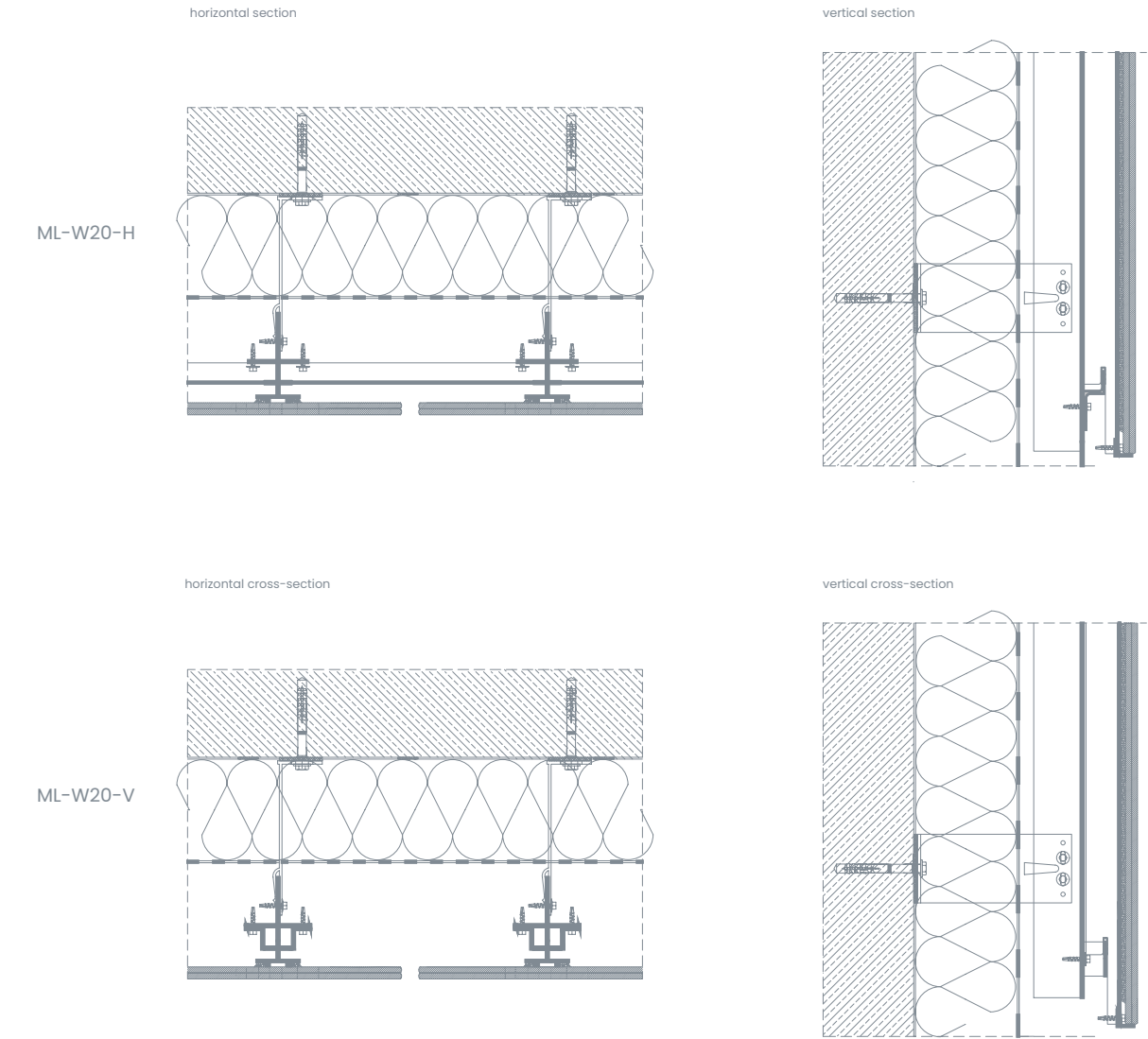


Grinding in glass

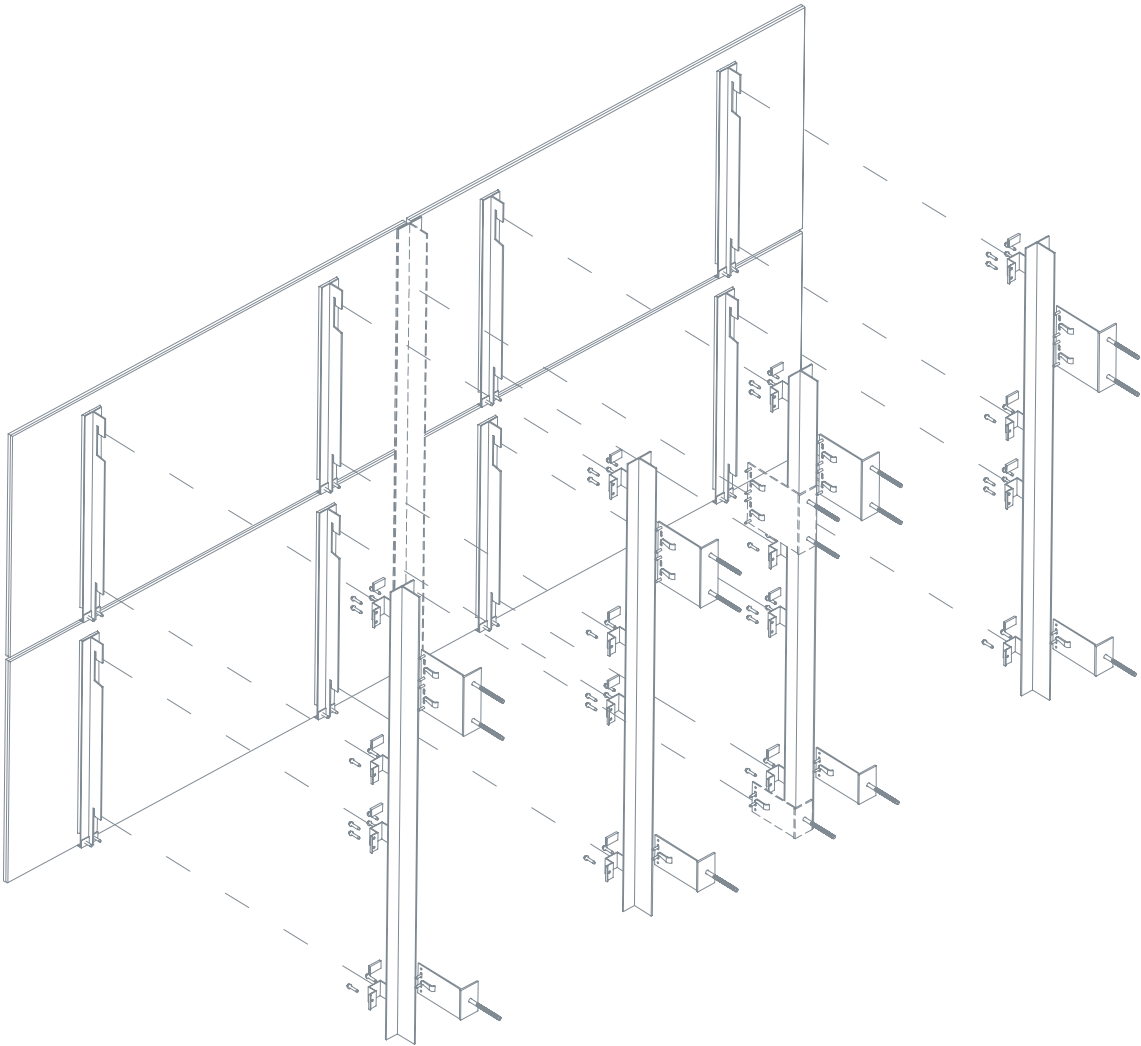


mounting detail

Proposed installation in the form of a ventilated façade – possible installation of panels vertically or horizontally



Ventilated facade
ML-W20-V





Stavanger Norway

ARCHITECT:
Erik Thesen

School Voldsløkka, Oslo

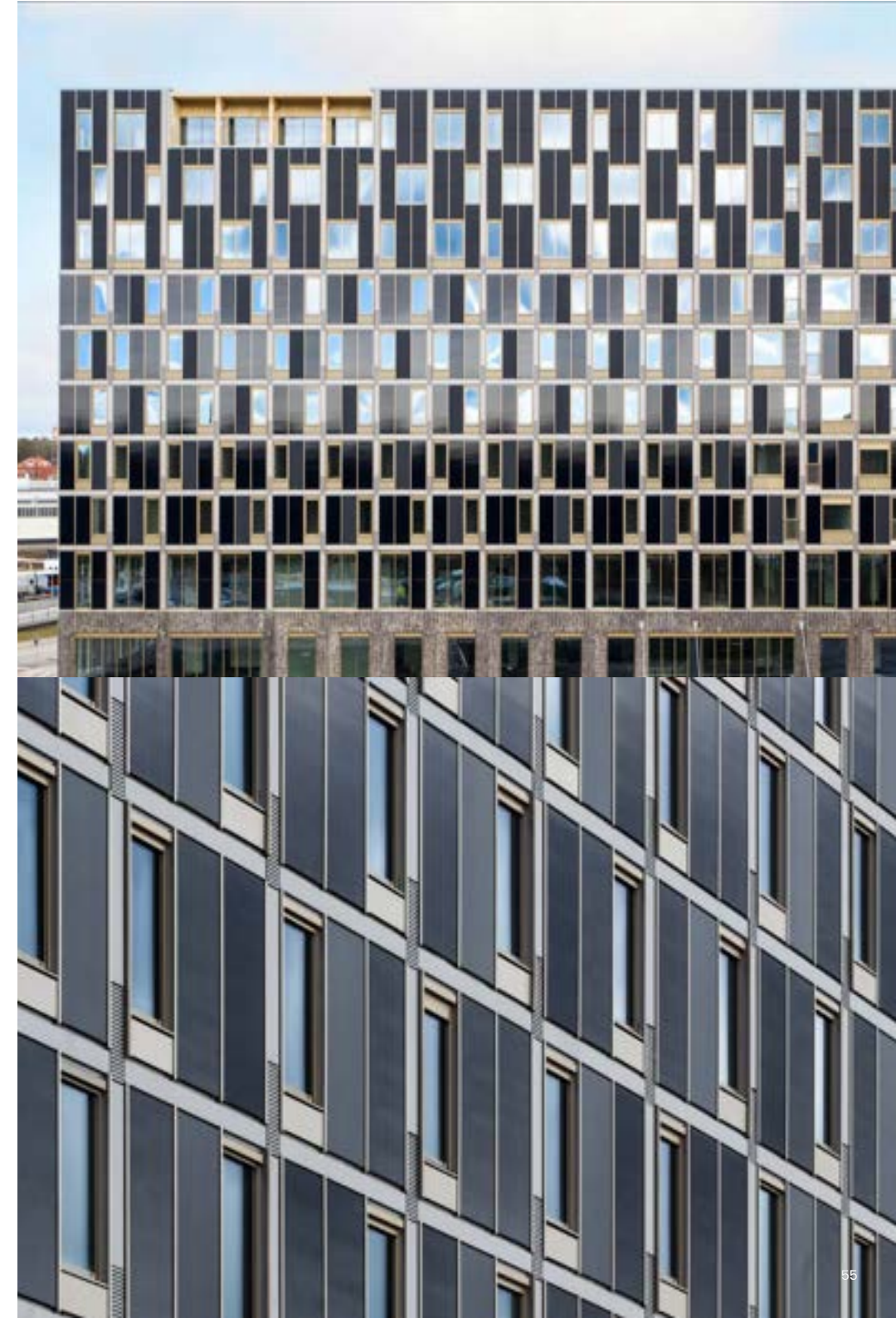
ARCHITECT:
Kontor Arkitekter





Office building in Krakow

ARCHITECT:
arch. Arkadiusz Hołda
arch. Marek Skwara
arch. Mirosław Polak
arch. Grzegorz Grys



Hotel Natinalarenan 3, Sweden

ARCHITECT:
White Arkitekter



Friskvaderstorger, Goteborg, Sweden

ARCHITEKT:
AFRY



Library Orkanen, Malmo, Sweden

ARCHITEKT:
Diener & Diener





HAUT, Amsterdam, Holandia

ARCHITECT:
V Architecture



ML System Hall 6, Zaczernie, Polska

ARCHITECT:
ML Team





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