Rainscreen Facade

School campus Ezinge, Meppel, Netherlands © Sorba

Invisible fastening

EJOT PEARLOCK® system meets ALPOLIC™ aluminum composite panels

EJOT. Bringing it together.

Keyhole fastening reimagined

A combined system

Anyone who has ever installed components using keyhole slots knows the challenges all too well: the fastener, which is already positioned in the sub-structure, is concealed when the panel is offered up—making precise alignment a real test of patience. Especially in applications with several fastening points, installation effort increases significantly, the risk of errors rises and assembly time becomes noticeably longer.

With the new, patented PEARLOCK® system, EJOT now presents an innovative solution for the invisible fastening of ALPOLIC™ aluminium composite panels in rainscreen facades (RVF). It opens up new design possibilities and enables high-quality, architecturally sophisticated facades—completely free of visually disruptive fastening points.

PEARLOCK® significantly optimizes the interaction between the fastener and the keyhole shape. The cone head allows the fastening point to be found much more easily and quickly—even when visibility is restricted during installation. The result: greater efficiency, fewer installation errors and a consistently more comfortable workflow. PEARLOCK® combines setting tool and mounting element in one system: set, locate and hang.

Detail view of PEARLOCK® system F (fixed point) with ALPOLIC™ aluminum composite panel

Detail view of PEARLOCK® system S (sliding point) with ALPOLIC™ aluminum composite panel

EJOT®

Fastening technology for expert applications at the construction site

The EJOT Construction Division caters to selected segments of the building industry. This includes professional applications on building facades and installation solutions for technical facilities inside the building. The main products are drilling and sealing screws, anchors, mounting elements and profiles for External Thermal Insulation Composite Systems (ETICS), chemical and mechanical anchors as well as fasteners for flat roofs and solar applications.

Whether it is the construction of the highest tower, the most spectacular nuclear reactor protective cover or the southernmost polar station in the world—EJOT customers rely on many years of experience in the building industry.

EJOT—that is more than 4,000 employees in 51 locations, more than 24,000 products and one hundred years of company history.

ALPOLIC™ Aluminium composite panels

Facade design without limits.

ALPOLIC™ is a brand of the Mitsubishi Chemical Group and one of the world's leading manufacturers of aluminium composite panels for sophisticated building architecture. With over 50 years of experience in development and production, we stand for innovative materials, the highest product quality and uncompromising safety.

BE.SAFE. is more than just a slogan: it represents ALPOLIC™'s commitment. Excellent fire protection, sustainable materials and reliable performance make ALPOLIC™ the global choice for durable, safe and high-quality facade solutions in new construction and renovation projects.

Ideal for concealed cassette fastenings on VHF

ALPOLIC™ aluminium composite panels are specially designed for rear-ventilated facades (VHF) and are ideal for concealed fastening systems such as EJOT PEARLOCK®.

The result is an optimally coordinated system consisting of facade panels and fastening technology for maximum safety, efficiency and architectural quality.

High rigidity combined with low weight enables large-format, dimensionally stable cassettes with excellent flatness – an essential prerequisite for precise keyhole suspensions and low-stress installation. The homogeneous material structure allows for efficient, dimensionally accurate processing, while high-quality coatings ensure lasting weather and corrosion resistance.

PEARLOCK® system

Set, locate and hang

PEARLOCK® is a combination of the well-known EJOT LT-TD screws and plastic components that allow the creation of fixed and sliding points. Thanks to the integrated stop collar at the upper edge of the screw's clamping zone, a fixed stop at a 90° angle to the substructure is guaranteed. The perfectly plumb alignment ensures a defined clamping length on aluminium and steel substructures.

With the JT4-LT-XT-2/6-6.0×50 screw, ALPOLIC™ aluminium composite panels can be fastened to timber substructures.

EJOT sets with PEARLOCK® a new standard for innovative keyhole fastening of ALPOLIC™ aluminium composite panels on aluminium, steel and timber substructures. The system guides the panel almost automatically into its final position—quickly, precisely and without time-consuming readjustment.

The system also impresses in terms of sustainability: facades can be dismantled without difficulty and individual ALPOLIC™ aluminium composite panels can be replaced, further increasing the overall efficiency of the system.

Combinations for different substructures

Type JT4-LT-TD-3-5.5x28/8 with drill point made of A2 stainless steel for aluminium substructures

Type JT3-LT-TD-3-5.5x32/8 with hardened steel drill point for steel or aluminium substructures

Type JT4-LT-XT-2/6-6.0x50 with drill point made of A2 stainless steel for timber substructures

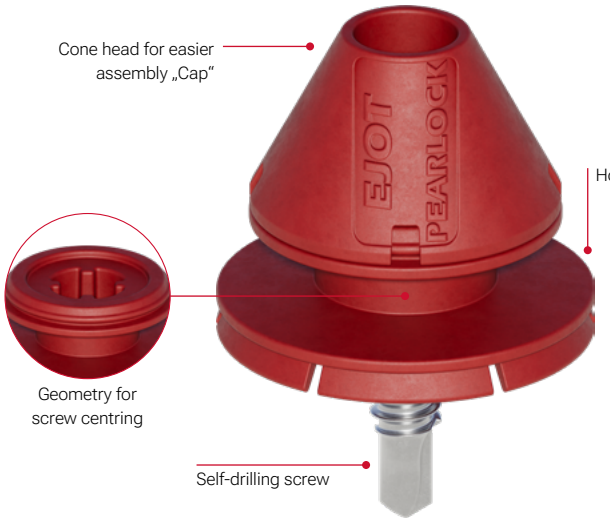
In detail

PEARLOCK® with fixed and sliding point

The moulded plastic parts for the fixed and sliding points of the system differ only in their colour and the geometry within the retaining part.

The fixed point variant (red) encloses the screw directly at the stop collar. The complete enclosure prevents any relative movement within the PEARLOCK® system, ensuring that the attachment is held permanently and precisely in the ideal, centred position.

The sliding point variant (black) also encompasses the screw's stop collar and centres it with the aid of a ring held in place by four fine connecting bars. Under transverse loading—such as thermal expansion—these bars break off in a controlled manner, allowing for controlled dilatation (relative displacement) of up to 3 mm in any direction. This is ideal when cladding and substructures need to compensate for stress without losing their structural integrity.



PEARLOCK® F (fixed point)

PEARLOCK® S (sliding point)

System advantages

- Facade stays perfectly smooth and harmonious
- Combined system: set, locate and hang
- Compatible with ALPOLIC™ keyhole drilling
- Efficient installation
- Facades can be dismantled and replaced without difficulty
- Can be combined with three screws JT3-LT-TD-3-5.5x32/8 and JT4-LT-TD-3-5.5x28/8 as well as with the JT4-LT-XT-2/6-6.0x50
- Depending on the screw selected for aluminum, steel, or wood substructures
- LT-TD screws: stop collar for vertical alignment, strip-proof by non-threaded part

More Informationen on PEARLOCK® system

A new system for the invisible fastening of facade cladding

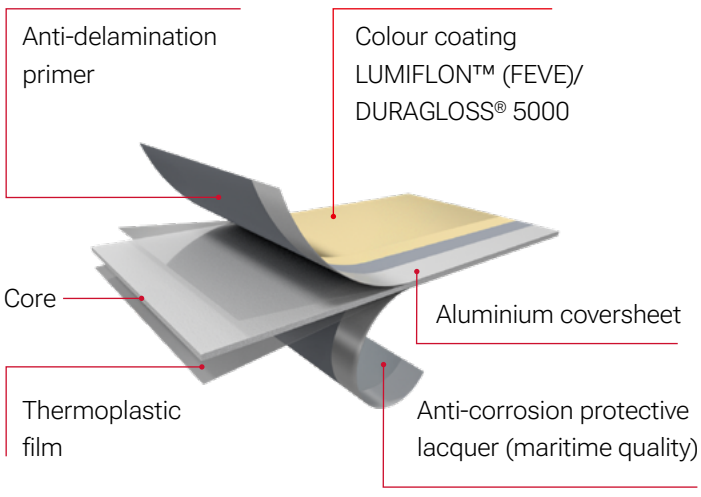
ALPOLIC™ – Performance that is stronger

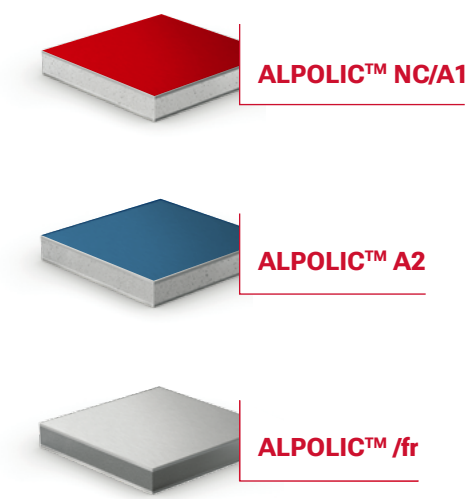
Unique product stability sets standards in the market.

The performance of ALPOLIC™ aluminum composite panels is based on the mineral core and a unique fusion process for the aluminum cover layers. This core material technology gives the panels their exceptional rigidity and creates the basis for precisely manufactured cassettes and high-performance, concealed fastening systems.

Independent tests confirm up to 40% greater stability compared to similar aluminum composite panels. This increased bending stiffness ensures permanently flat facade surfaces, minimizes deformation, and creates optimal conditions for safe, low-stress installation—especially in combination with fastening systems such as EJOT PEARLOCK®.

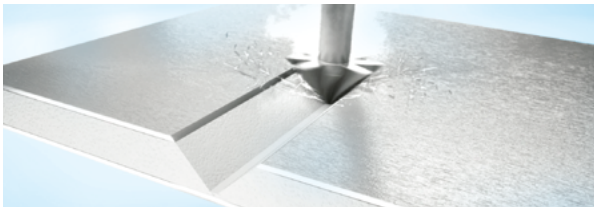
Easy processing. Cost-effective installation. Long service life.





Easy processing. Cost-effective installation. Long service life.

ALPOLIC™ aluminium composite panels impress with their high rigidity, excellent surface quality and particularly easy processing. They can be precisely milled, bent, edged or cut directly on site using standard tools – dimensionally accurate and time-saving.



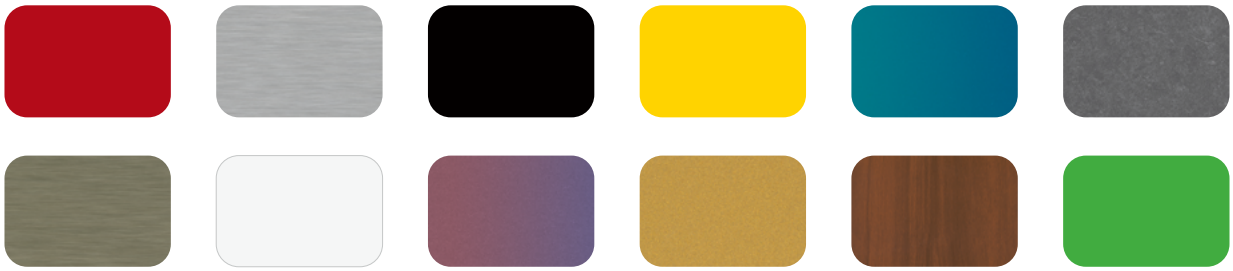
Your advantages:

- Even large panel formats can be folded by just one person.
- Maximum rigidity, even during transport – no damage to prefabricated cassettes, even with large dimensions.
- High flatness and dimensional stability: Ideal for precise facade grids and large-format elements.
- Easy to process: Milling, edging, bending and cutting with high dimensional accuracy – even directly on the construction site.

Design freedom in perfection.

Give your building a distinctive character – with ALPOLIC™, you can choose from over 200 colours and surface designs. Whether extravagant, decorative, natural or elegant, our range offers almost unlimited design possibilities. You can choose between plain colours, metallic tones, glitter effects, prismatic nuances and individual decors in different degrees of gloss.

- High-quality colour coatings with DURAGLOSS® 5000 or LUMIFLON™
- Exceptional durability, colour brilliance and weather resistance
- Quality guarantee of up to 20 years
- Anti-corrosion paint ensures corrosion protection even in maritime environments
- Low maintenance costs
- Colour consistency across all product variants



Maximum sustainability. Minimal footprint.

ALPOLIC™ aluminium composite panels impress with a service life of up to 70 years and particularly low maintenance requirements, making them significantly superior to many other facade materials. At the same time, they generate the lowest CO_2 emissions among aluminium composite panels. The recycling rate is already up to 85%, which has reduced CO_2 emissions in production by 40%.

All production waste is consistently fed into the recycling cycle: aluminium and core material are separated, processed and reused for the production of new ALPOLIC™ panels.

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