



ASTALE
Nature inspiring innovation

VENTILATED FAÇADES



INDEX

04	PRODUCT
06	FINISHES
08	ADVANTAGES
10	SUSTAINABILITY
14	VENTILATED FAÇADES
16	FAÇADE DESIGNS
26	FAÇADE SYSTEMS
38	CLEANING AND MAINTENANCE



01/Product

Why choose Ascale? Because our sintered stone offers optimal technical performance for any work surface, matching—or even surpassing—the aesthetic value of any other material.

Our collections adapt perfectly to the needs of all audiences. Our portfolio includes all types of marbles, cements, stones, woods, metals, and basic colors. Our mission is to create spaces that evoke a sense of comfort in every environment.

Ascale’s sintered stone goes beyond the limitations of traditional materials, making it the ideal choice for all types of coverings and surfaces. It offers a versatile, lightweight design in large formats (162 x 324 cm in 12 and 20 mm thicknesses, 160 x 320 cm / 120 x 280 cm in 6 mm thickness, and 100 x 300 cm in 3 mm thickness).

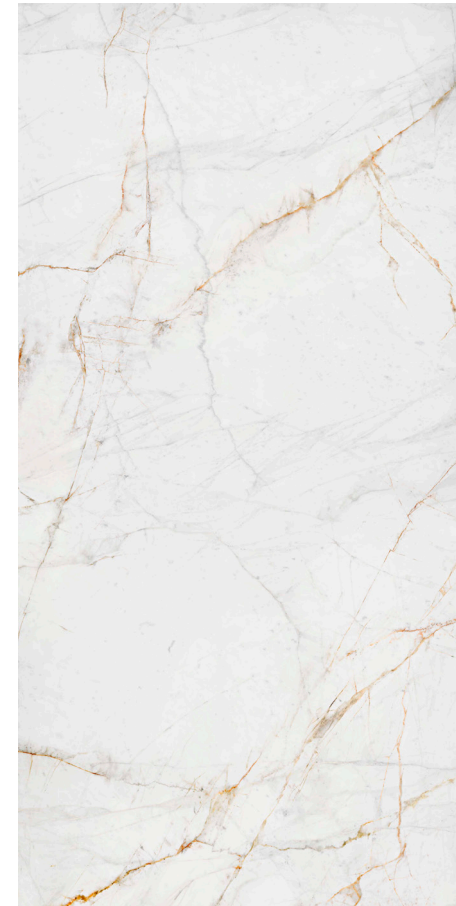


Ascale combines the **aesthetics** of natural stone with the **strength and durability** of sintered stone.



02/ Finishes

324 cm



162 cm

Size

162 x 324 cm / 160 x 320 cm / 120 x 280 cm / 100 x 300 cm

Finish

Polished • Matt • Feel • Velvet | *Vein-touch* & 

Thickness

3 mm / 6 mm / 12 mm / 20 mm



03/ Advantages

	DIMENSIONAL STABILITY
	FLEXURAL STRENGTH
	WATERPROOF
	THERMAL RESISTANCE
	DEEP ABRASION RESISTANCE
	FROST RESISTANCE
	SURFACE ABRASION RESISTANCE
	CRACK RESISTANCE
	CHEMICAL RESISTANCE
	SCRATCH RESISTANCE
	STAIN RESISTANCE
	NON-COMBUSTIBLE

GRUPO BIa (GL) / GROUP BIa (GL)			
PROPIEDADES FÍSICO -QUÍMICAS PHYSICAL-CHEMICAL PROPERTIES	NORMA DE ENSAYO STANDARD TEST	VALOR REQUERIDO REQUIRED VALUE	VALOR MEDIO AVERAGE VALUE
Espesor Thickness	ISO 10545-3	Cumple/Complies	Cumple/Complies
Absorción de agua Water absorbtion	ISO 10545-3	≤ 0,5%	≤ 0,1%
Fuerza de rotura Breaking strenght	ISO 10545-4	≥ 700 N e<7,5 mm ≥ 1300 N e≥7,5 mm	≥ 1000 N e=6mm ≥ 3000 N e=8mm ≥ 5000 N e=12mm ≥ 11000 N e=20mm
Resistencia a la flexión Modulus of rupture	ISO 10545-4	R ≥ 35 N/mm2	≥ 50 N/mm2
Resistencia al impacto Impact resistance	ISO 10545-5	Valor declarado Declared value	>0,8 sin defectos visibles / no visible defects
Resistencia a la abrasión superficial Resistance to surface abrasion	ISO 10545-7	Valor declarado Declared value	Valor declarado Declared value
Dilatación térmica lineal Linear thermal expansion	ISO 10545-8	Valor declarado Declared value	5,7.10-6°C
Resistencia al choque térmico Thermal shock resistance	ISO 10545-9	Resistente Resistant	Resistente Resistant
Expansión por humedad Moisture expansion	ISO 10545-10	Valor declarado Declared value	<0,1 mm/m
Resistencia al cuarteo Crazing resistance	ISO 10545-11	Resistente Resistant	Resistente Resistant
Resistente a la helada Frost resistance	ISO 10545-12	Resistente Resistant	Resistente Resistant
Resistencia química: productos de limpieza Chemical resistance: Cleaning products	ISO-10545-13	B	A
Resistencia química: Aditivos piscinas Chemical resistance: Swimming pool salts	ISO-10545-13	B	A
Resistencia química: Ácidos de baja concentración Chemical resistance: Low concentration acids	ISO-10545-13	Valor declarado Declared value	LA acabado mate LB acabado pulido
Chemical resistance: Low concentration bases	ISO-10545-13	Valor declarado Declared value	LA acabado mate LB acabado pulido
Resistencia a las manchas Resistance to stains	ISO 10545-14	Min.3	Min. 5 acabado mate Min. 4 acabado pulido
Emisión de plomo y cadmio Determination of lead and cadmium	ISO 10545-15	Valor declarado Declared value	Cadmium < 0,01 mg/l Lead < 0,1 mg/l
Resistencia al calor seco Dry heat resistance	EN 13310	Declared value	Resistente Resistant
Resistencia UV UV Resistance	DIN 51094	Declared value	Sin cambios No change



04/ *Sustainability*

Ascale has an environmental management system to identify and minimize the impact of its operations on atmospheric emissions, wastewater, waste, and noise pollution.

The company has Product Environmental Declarations (PED) for all the product families it commercializes. A declaration granted in 2014 and expanded in 2015 highlights the products that are environmentally friendly.





Green facts

Regulation (EC) 66/2010: is a certification granted to products that respect ecological criteria and performance standards established at a European level concerning: sourcing of raw materials, selection of suppliers, manufacturing processes, packaging, distribution, use, and waste management.

To allow for proper monitoring of a project's sustainability level, the USGBC has developed a certification for the development of sustainable buildings that values and certifies a building's overall sustainability.

Ascale products have even obtained the Greenguard Gold Certification, which, with even stricter requirements, ensures that the use of a specific product is also acceptable in places like schools and healthcare facilities.

The Environmental Product Declaration (EPD) is a document that describes the environmental impacts related to production. Ascale products adhere to the study of the ceramic sector that values the international excellence of the environmental performance achieved.



* Consult the official list for certified models.



05/ Ventilated façades

A ventilated façade is an exterior enclosure construction system comprised by an inner leaf, an insulating layer and an outer leaf. This system creates a vacuum space or air chamber which forces air to circulate through convection, thus causing a ventilation effect and providing the building incredible thermal features.

When properly built, this system also mitigates the effects of thermal bridges and enhances acoustic insulation meaning ASCALE slabs may be used to clad the outside of buildings due to their extraordinary properties, thus creating a second skin for the building combining aesthetic and functional benefits like no other material.

Protection against water

It provides a barrier against rain and ice with the resulting reduction in inner façade degradation.

Imperturbable design

UV resistance and non-absorption mean ASCALE ventilated façades maintain their look over time without absorbing any impurities and with low maintenance.

Perfect for renovation

Being able to install a second skin on a façade without destroying the existing enclosure makes this system ideal for renovation projects.

Energy saving

It guarantees good thermal insulation with less heat dispersion in cold periods and less heat absorption during warm months.

Lightness

Along with a substructure (normally aluminium), Ascale slabs provide a light and resistant façade cladding solution.

Healthier

It ventilates, disperses inner moisture and offers better acoustic insulation which leads to better health and comfort.





06/ Façades design

For the design of façades with Ascale surfaces, it is recommended to use patterns that optimize the standard formats included in the price list, minimizing material waste and thus reducing the final installation cost.

It is advisable to avoid “L”-shaped cuts, as they are more sensitive to movements or settlements of the structural support, which may lead to cracks in the slab—a situation that would not be considered a manufacturing defect.

Ascale slabs can be supplied in full size and processed directly by the client or by a designated supplier, depending on the project requirements. They can also be adjusted to the different design methodologies previously explained.

➞ MODULAR FAÇADES DESIGN

The modular approach in façade design is directly reflected in the architectural project, allowing the main formats to be defined in advance and the number of pieces required for execution to be calculated. This avoids the need to wait for detailed measurements and significantly speeds up planning and execution times.

Ascale can also be supplied in additional regular formats, provided that minimum orders of 100 m² per reference and finish are respected.

Smaller or non-standard formats required as adjustment pieces—for example, near openings, terminations, or cornices—can be cut directly from the standard formats, either in the workshop or on site. For this type of on-site handling, we recommend consulting the “Processing” section in the Technical Guide for floors and wall coverings.

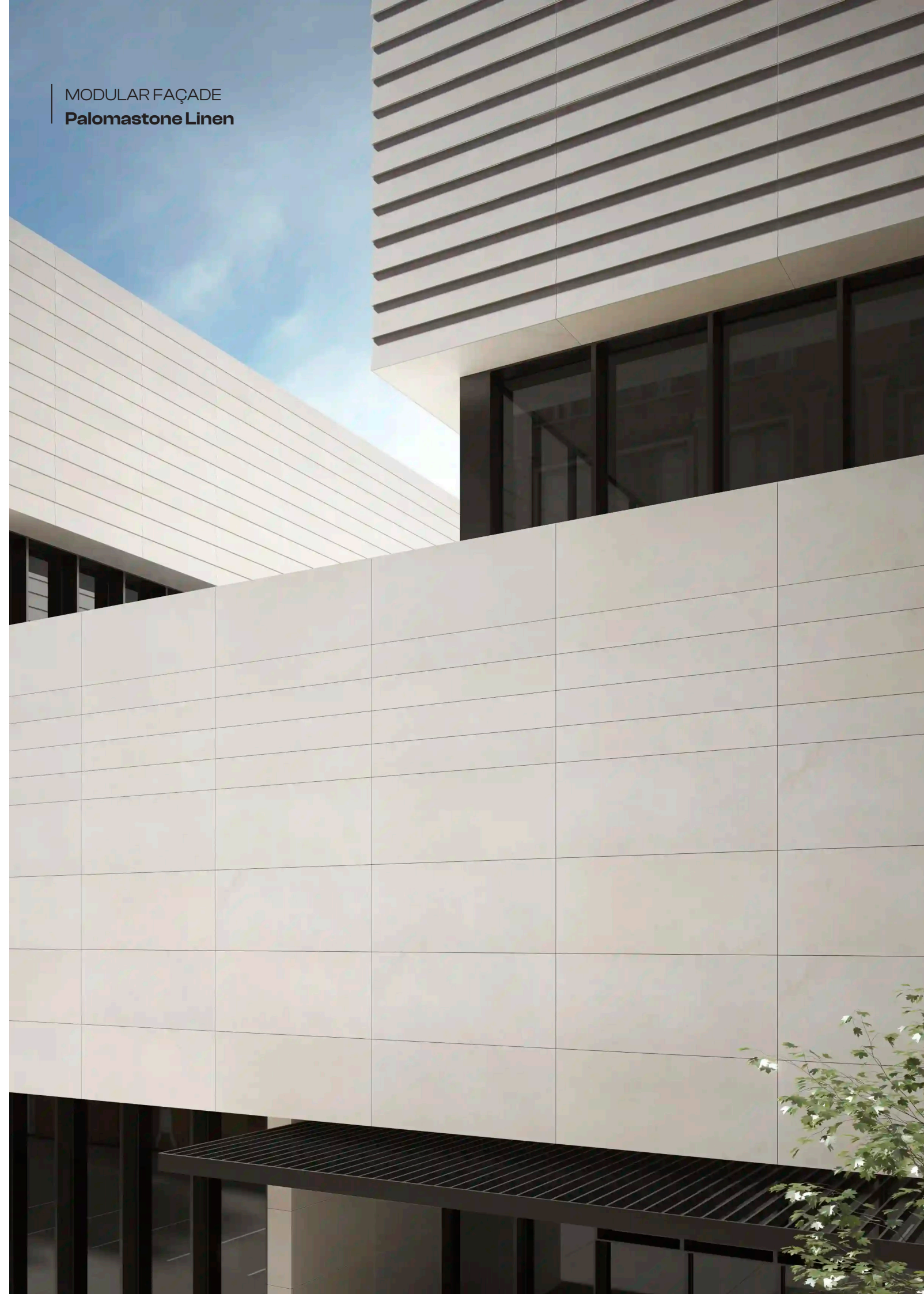
This design methodology allows for greater flexibility, facilitates on-site adaptations, and enables precise scheduling of material procurement. Moreover, it is usually the most cost-effective option, as it reduces the need for customized machining. It is the most common system for solutions using Ascale products in thin thicknesses, except in applications with rivet fastening.



MODULAR FAÇADE
Arizona Sand



MODULAR FAÇADE
Cosmopolita Silver



MODULAR FAÇADE
Palomastone Linen



MODULAR FAÇADE
Tivoli White



Building smart is energy efficiency, durability, and contemporary design.



- 1 Porcelain material
- 2 Laminated gypsum board for exterior
- 3 Aluminum structural frame
- 4 Joint sealing gaskets
- 5 Structure for dry façade system
- 6 Insulation
- 7 Laminated gypsum board or galvanized steel sheet
- 8 Anchor plates



➞ CUBE-TYPE FAÇADE DESIGN

In the case of façades divided by customised modules (“cube” type), the slabs must be manufactured to measure, following the sizes specified in the detailed design, once the building measurements have been finalised.

The client or design team must provide a complete list of dimensions, and both the production and the processing of the material will begin once this information is received. This approach, which requires more precise planning, may involve longer execution times compared to a modular solution.

This type of design is often used in construction systems that integrate Ascale slabs in thicknesses of 12 mm or 20 mm, as well as on façades with mechanical anchoring systems, curtain walls, modular panels, or “window” type solutions.



➞ SHADES

In the case of façades divided by customised modules (“cube” type), the slabs must be manufactured to measure, following the sizes specified in the detailed design, once the building measurements have been finalised.

The client or design team must provide a complete list of dimensions, and both the production and the processing of the material will begin once this information is received.

This approach, which requires more precise planning, may involve longer execution times compared to a modular solution.

This type of design is often used in construction systems that integrate Ascale slabs in thicknesses of 12 mm or 20 mm, as well as on façades with mechanical anchoring systems, curtain walls, modular panels, or “window” type solutions.

➞ INSTALLATION DIRECTION

Tone uniformity is only achieved if the pieces are installed following the same grain orientation—whether horizontal or vertical—. This is especially relevant even for finishes with a uniform appearance. When using special or non-standard formats, it is essential that the same installation directions as the main pieces are respected.

If slabs with different orientations are placed on the same wall, even if they belong to the same batch or finish, the incidence of light will generate perceptible differences in the tone. Therefore, any change of direction must be previously studied by the design team, assessing its aesthetic impact on the final result.





07/ Façade systems

→ CONCEALED, MECHANICAL, AND CHEMICAL LONGITUDINAL FIXING

A concealed, mechanical, and chemical longitudinal fixing system that stands out for its versatility, aesthetics, speed of installation, and adjustability. This system is a mix of concealed, mechanical, and chemical longitudinal fixing, and it is notable for its speed of installation and adjustability.

The pieces are mechanically grooved industrially on the back with double grooves in the upper and lower sides where complementary aluminium profiles with flexible adhesive tape M5 or a porcelain adhesive are inserted. These metal profiles form the hanging mechanism of the slabs to the metal structure, allowing for a very simple replacement.

The design of the mechanical and grooved fixing guarantees a single and indivisible union, eliminating the risk of the porcelain pieces detaching in case of breakage. This is considered the safest system available on the market. Furthermore, the way the pieces are hung on the horizontal structure ensures a perfect alignment and an impeccable aesthetic finish.

It accepts thicknesses of 8.5 mm or 14 mm.

This system is the version adapted for thin-thickness pieces. This system has been developed by our R&D department with the aim of achieving façades that are lighter and have better performance. This not only facilitates the installation and replacement but also achieves significant savings in construction timelines.

It accepts thicknesses of 6 mm.

A simple ventilated façade system that consists of an aluminium substructure of “T” or “L” section supports anchored to the building’s structure by means of brackets, to which the Ascale slabs are fixed using adhesive cords. The distribution of the vertical supports will depend on the size of the slabs designed in the project and the loads they must support.

This adhesive has been tested and resists cycles of extreme temperature changes. In addition, the fixing is helped by an adhesive primer that keeps the slabs in their place while the adhesive reaches its final resistance and ensures that the thickness of this adhesive is correct between the profile and the back of the slab.

With this system, a concealed and reliable fixing is achieved, with no limits on format size and a perfect finish.





→ VISIBLE FIXING SYSTEM USING CLIPS

Es un sistema de fijación para fachadas ventiladas, que trabaja por la sustentación y retención mediante grapas vistas, evitando cualquier tipo de vibraciones indeseadas de la estructura y las piezas, aportando la máxima seguridad en tu fachada.

Las grapas de anclaje están fabricadas según los criterios y valoraciones del departamento técnico y pueden ser lacadas del mismo color que la pieza de revestimiento de la fachada, camufladas. quedando completamente Estas grapas sustentan la pieza en sus bordes, y se fijan a la estructura vertical mediante tornillos autotaladrantes.



Además dispone un cordón de masilla elastomérica tipo MS entre toda la superficie de contacto entre la placa y el perfil vertical que aporta una mayor seguridad en caso de rotura y para absorber vibraciones del viento y dilataciones.

Admite espesores de 6 mm y 12 mm.

→ SISTEMA DE FIJACIÓN OCULTO MEDIANTE GRAPAS OCULTAS

Es una variante que emplea una fijación mecánica oculta y longitudinal química para fachadas ventiladas mediante grapa oculta. Estas grapas se insertan en las ranuras previamente realizadas en los bordes de la pieza cerámica quedando invisibles.

La fijación mecánica oculta se realiza mediante la utilización de grapas que introducen sus pestañas en unas ranuras en el canto de la pieza, y van atornilladas a la subestructura vertical.

En cuanto a la fijación química también se utiliza masilla adhesiva elástica tipo MS entre la cerámica y la subestructura para mayor seguridad y absorción de vibraciones. Admite espesores de 12 mm.





→ HIDDEN FIXING SYSTEM: MECHANICAL, CHEMICAL WITH GROOVES AND ADHESIVES

This system offers a completely innovative approach compared to traditional systems, achieving a scaled façade finish that breaks with conventional flatness.

This system uses both mechanical and chemical fixing. It is based on two longitudinal grooves on the upper and lower back of the panel, along with an MS polymer adhesive of the latest generation. These elements allow the attachment of hanger profiles and clips that hang on a horizontal structure.

One of the key advantages of this system is its ability to reposition a single piece if necessary and adjust each panel individually in case of misalignment, making it a registerable system.

It supports thicknesses of 12 mm.

The system also has a version adapted for thinner panels, developed by our R&D Department. This registerable system provides lighter façades and improved technical performance that speed up construction timelines and facilitate installation.

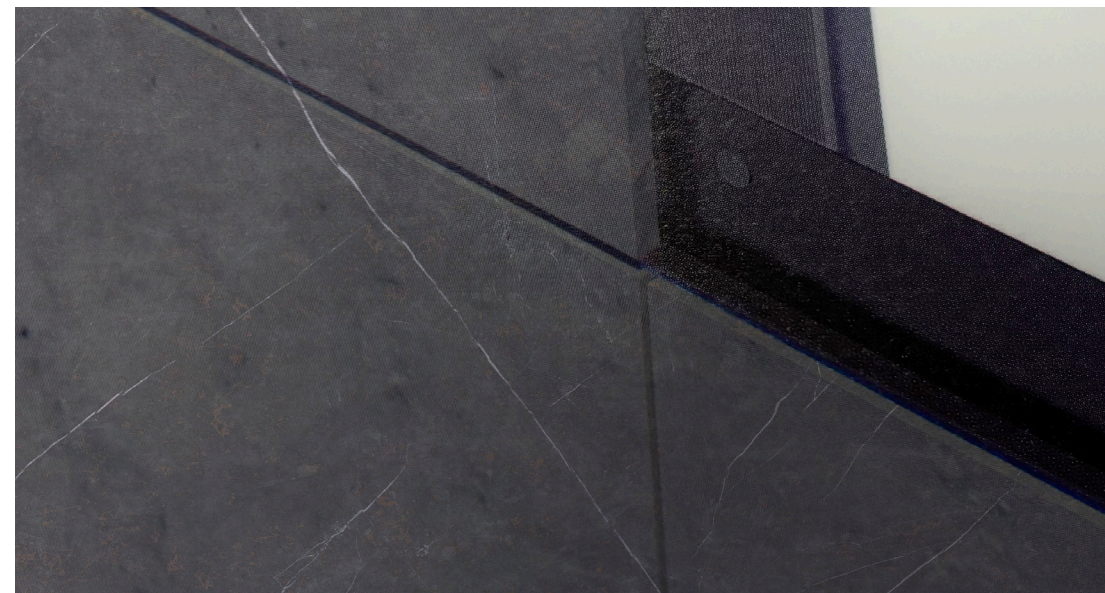
It supports thicknesses of 6 mm.

→ HIDDEN CHEMICAL FIXING SYSTEM

Developed especially to achieve maximum mechanical performance, superior aesthetic finish, and unmatched safety without the need to machine the panel.

Designed for mechanical cladding of 6 mm, this system uses a longitudinal chemical fixing with MS-type elastic adhesive between the back of the porcelain cladding and the perimeter of the vertical profile. It also includes a mechanical support that holds the weight of the ceramic panel. The applied adhesive not only reinforces the piece but also absorbs impacts and vibrations, providing additional protection against accidental impacts and detachments.

All the chemical elements of the system have been exhaustively tested in approved laboratories, guaranteeing the highest level of mechanical performance and safety according to the standards of the Technical Building Code (CTE).



Hidden chemical fixing system



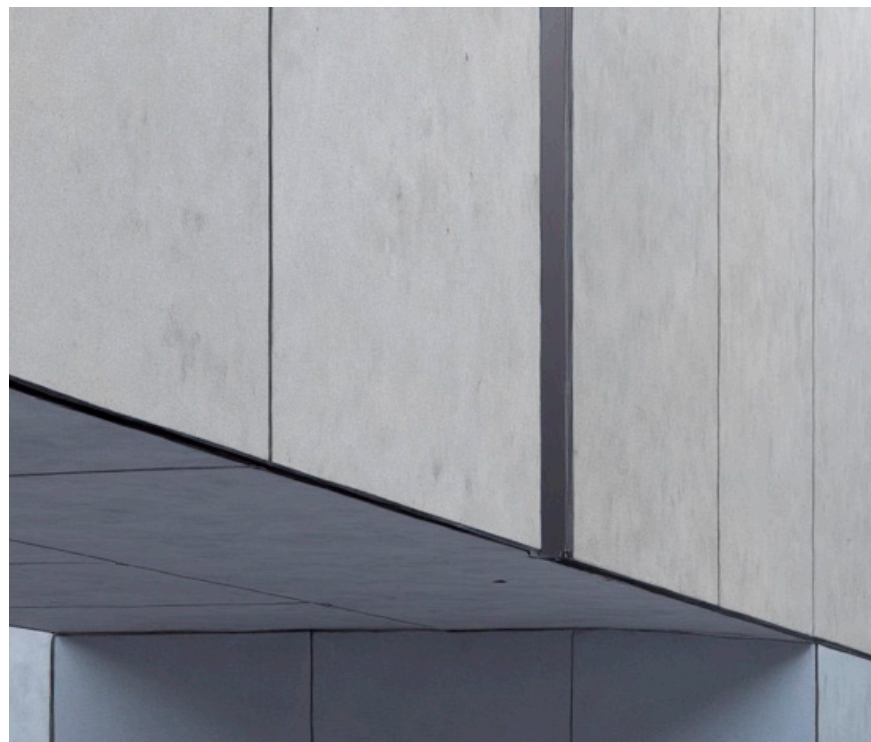
08/ Bonded façades systems

This is a façade system with a 2 mm horizontal joint, using mechanical anchors designed exclusively by Ascale to provide maximum safety and aesthetics.

This system is fundamentally based on two aspects: the grooving of porcelain pieces on the edges and the use of stainless steel AISI 304 clips along with screws.

The mechanical anchors use stainless steel clamps, which are fixed to the wall with plugs and screws, securing the ceramic piece by inserting their tabs into the pre-cut grooves on the upper and lower edges of the ceramic tiles. The combination of these mechanical anchors with cement adhesive provides greater safety compared to traditional bonded façades with 12 mm porcelain cladding.

The mechanical fixing prevents the detachment of pieces in case atmospheric agents affect the chemical properties of the cement adhesive. Once installed, these safety anchors remain hidden behind the grouting, resulting in a more attractive and aesthetically pleasing façade.

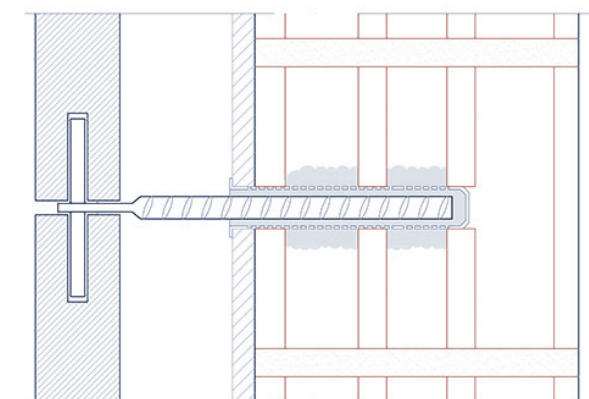


➞ DIFFERENCES BETWEEN VENTILATED FAÇADE AND BONDED FAÇADE

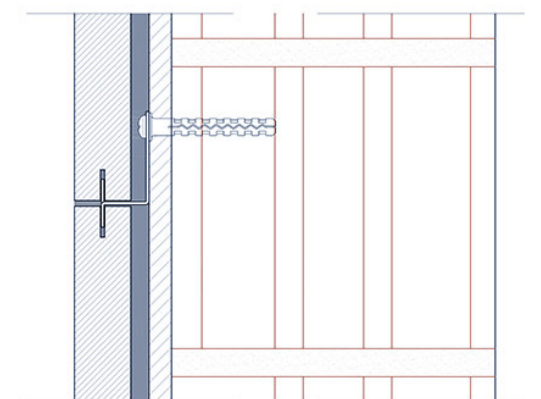
A ventilated façade is one whose construction system consists of a supporting wall, a ventilated cavity, thermal insulation, and a layer of cladding supported by anchors. In contrast, bonded façades do not have an air cavity. This is one of the main differences between a ventilated and a bonded façade.

The bonded or adhered façade is one of the most popular cladding systems. It is based on bonding tiles directly to the existing wall of the building, whether it is made of brick, block, or concrete.

The cladding can be made of ceramic tiles, natural stone, or even artificial materials. As with ventilated façades, it includes anchors, but in this case, they serve only as safety supports to prevent tile detachment over time.



Ventilated façade



Bonded façade



Discover more of
this project





Discover more of
this project





09 / Cleaning and maintenance

→ CLEANING AFTER INSTALLATION

Once the installation of Ascale panels has been completed, it is essential to carry out a thorough cleaning to completely remove any residues from the products used during cutting and installation.

Since façades may require lifting systems, it is recommended to coordinate cleaning immediately after installation work is completed, taking advantage of the fact that this equipment is still on site. Cleaning should be performed from top to bottom to ensure even distribution.

It is particularly important to remove adhesive residues such as silicone, MS polymers, or polyurethanes used in ventilated façade systems, curtain walls, or window-wall joints. Cement-based or silicone adhesives must also be removed in more traditional installation systems, as well as any accumulation of dust generated during construction.

The cleaning process should be applied uniformly across the entire installed surface, avoiding tonal differences caused by dirt accumulation or variations in cleaning intensity.

Regular Cleaning

The frequency of cleaning for an Ascale façade may vary depending on environmental conditions, surface finish type, building design, and exposure to pollution. In general, surfaces can be easily cleaned using hot water combined with neutral detergents.

Occasional or Deep Cleaning

In the case of more persistent stains, a deeper cleaning may be required using specific products depending on the type of residue. The use of abrasive detergents or scouring pads on polished or special finishes should be avoided, as these could cause damage.

Ascale panels are characterized by their ease of cleaning and low maintenance requirements. Their manufacturing process uses top-quality raw materials and high firing temperatures, resulting in practically non-porous surfaces with very low absorption. This limits dirt penetration, making cleaning and long-term maintenance easier.

Recomendaciones generales de limpieza según tipo de mancha:

Type of Stain	Recommended Product
Cement residues	Acid
Metal marks / rust	Acid
Lime residues	Acid
Epoxy grouts	Alkaline
Graffiti	Alkaline
Silicones	Solvent
Inks	Solvent
General dirt	Hot water + neutral detergent

Para todos los materiales empleados en sistemas de fachada, se debe seguir siempre la recomendación del proveedor respecto al producto y método de limpieza más adecuado, así como los tiempos de aplicación para lograr resultados eficaces.

La no aplicación de estas indicaciones podría dejar residuos en la superficie. En el caso de haber utilizado materiales cementosos para fijación o sellado, podrían aparecer eflorescencias salinas tras la evaporación de la humedad, un fenómeno normal y no considerado defecto del material.

Este tipo de limpieza forma parte del mantenimiento ordinario esperado en fachadas cerámicas.



