



FRANGISOLE (Sunblades)

Shading systems

www.metra.it



METRA
Italian Style Emotions



METRA. ADDING VALUE TO YOUR HOME



METRA. Design, Colour, Emotion.
Italian style desired the world over.

METRA's integrated systems have been created in order to provide quality solutions to any architectural and aesthetic need of the contemporary era. METRA's systems supply comfort and security to your dwelling space.

METRA's systems are characterized by:
a vast range of colours, accessories, design complements, anti-break devices, automation and ergonomic design.

Thermic insulation and a certified installation system ('Posa Clima') guarantee long lasting durability and energy saving.

People dreaming of their own house, dream of METRA's window and door frames.



Sunblades



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METRA. THE ONLY COMPANY TO OFFER A COMPLETE RANGE OF PRODUCTS

OUR SERVICE

ALWAYS CLOSER TO CUSTOMERS

METRA's toll free number is always available in order to support your ideas, suggesting new solutions and finally directing you to Metra's point of sale. Metra's pre and after sale service will always help you in each phase: from your frame choice to installation, from cleaning advice to traceability of your frame history.

DESIGN AND STYLE

METRA's window and door frames include a wide range of aesthetic styles, adding thus value to the traditional and contemporary dwelling spaces, preserving in this manner the original features of buildings restored conservatively. The latest creations provide more luminosity to living spaces thanks to the tapered shapes and the reduced thickness of profiles.

DESIGN COMPLEMENTS

METRA's design complements are offered in a wide range of coordinated shapes distinguished by the original style capable of satisfying and harmonising the aesthetic requirements of any kind of dwelling environment.

Metra's accessories guarantee enhanced performances to one's own window and door frames.

FINISHING

A huge variety of finishing, resistant and chromatically surprising! From metallic colours to sand effects, opaque, glossy.....up to natural wood surface cladding the heart of aluminium.

THE CHOICE OF ALUMINIUM

Aluminium is becoming ever more present in our lives: from simple cans to high-speed trains.

Aesthetically agreeable, malleable, extremely resistant and 100% recyclable.

Aluminium is the ideal material for the creation of windows and doors.

GREEN

METRA is engaged in a low environmental impact production and all its products are Eco-friendly to the maximum extent.

METRA'S POINT OF SALE

METRA's point of sale is the place where people enter with a dream and make it come true.



Sunblades



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METRA Sunblades

The contemporary and evolved style that the METRA Sunblades system is capable of offering is truly extraordinary. The new Sunblades series is more than a simple instrument for sun protection: its application goes from the building to the private house and aesthetically improves almost any architectural form.

Any habitat typology becomes rewarding and more liveable given the choice between light, shadow and dark, at any time of the day and with great ease.

The simple insertion of photovoltaic panels onto the blades produces clean energy with a low environmental impact.

The Sunblades can have the same finishings as all METRA systems and the automatism are managed by a domotics system.

Applications

- Private homes and public buildings
- Combination with curtain walls systems

Advantages



Protection from overheating



Protection against nocturnal dispersions



Energy saving



Domotics



Configuration flexibility



Recirculation of air and ventilation



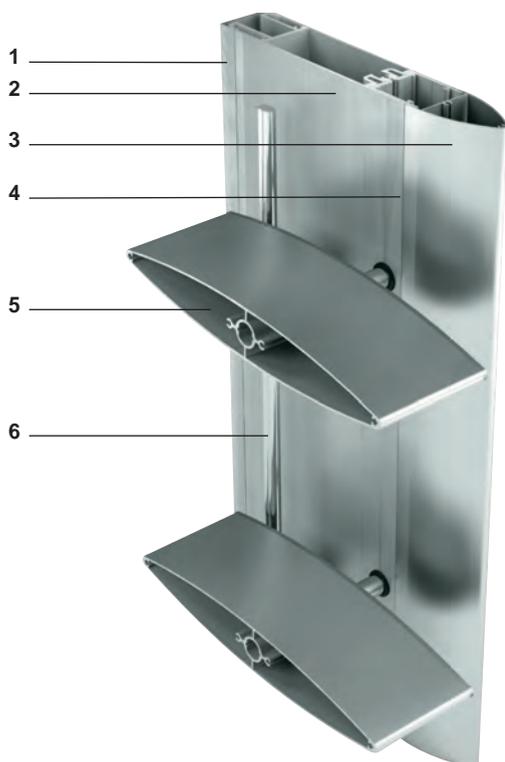
Silent operation
Internal acoustic comfort



Minimum maintenance



Technology

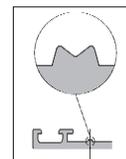


- 1 - Internal cover profile of the mullion
- 2 - Mullion
- 3 - External cover profile of the mullion
- 4 - Rotation axis
- 5 - Elliptical blade
- 6 - Transmission rod for blades control

METRA Quality

Purchasing METRA trademark profiles and accessories gives the security of using materials that guarantee the highest performances and durability. METRA systems have been certified by the most important European test laboratories, reaching results at the highest levels.

Take no substitute, demand original profiles, easily recognizable by mark "M" present on the internal part of the windows and on each accessory.

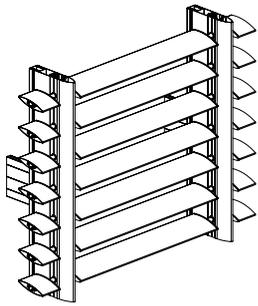


Remember that the accessory is integrating part of the system and only with the original accessories marked METRA you can obtain high performances. Moreover, METRA is one of the first Italian Companies which obtained a trademark on its products in order to recognize them easily and protect its customer.

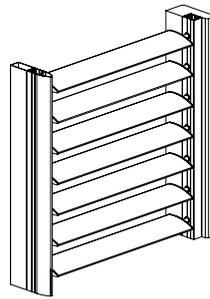
The quality of METRA systems is also guaranteed by the European Trademark certified productive processes and by the Company quality system certified by IGQ-IQNET in conformity with standard ISO 9001:2000.



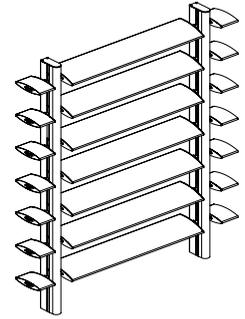
Typologies



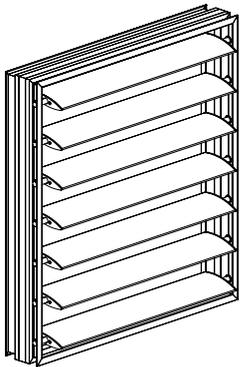
D1 - Horizontal sunblades. Angles are preset and variable. Can be connected to the METRA Poliedra Sky 50 curtain walls and to the wall.



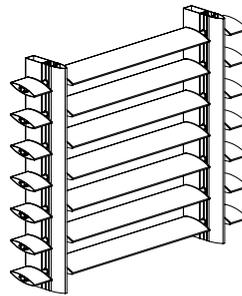
D3 - Horizontal sunblades. Angles are preset and variable. Can be connected frontally and laterally to the wall and to the steel substructure.



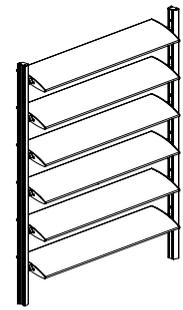
D5 - Horizontal sunblades. Angles are preset and variable. Can be connected frontally and laterally to the wall and to the steel substructure.



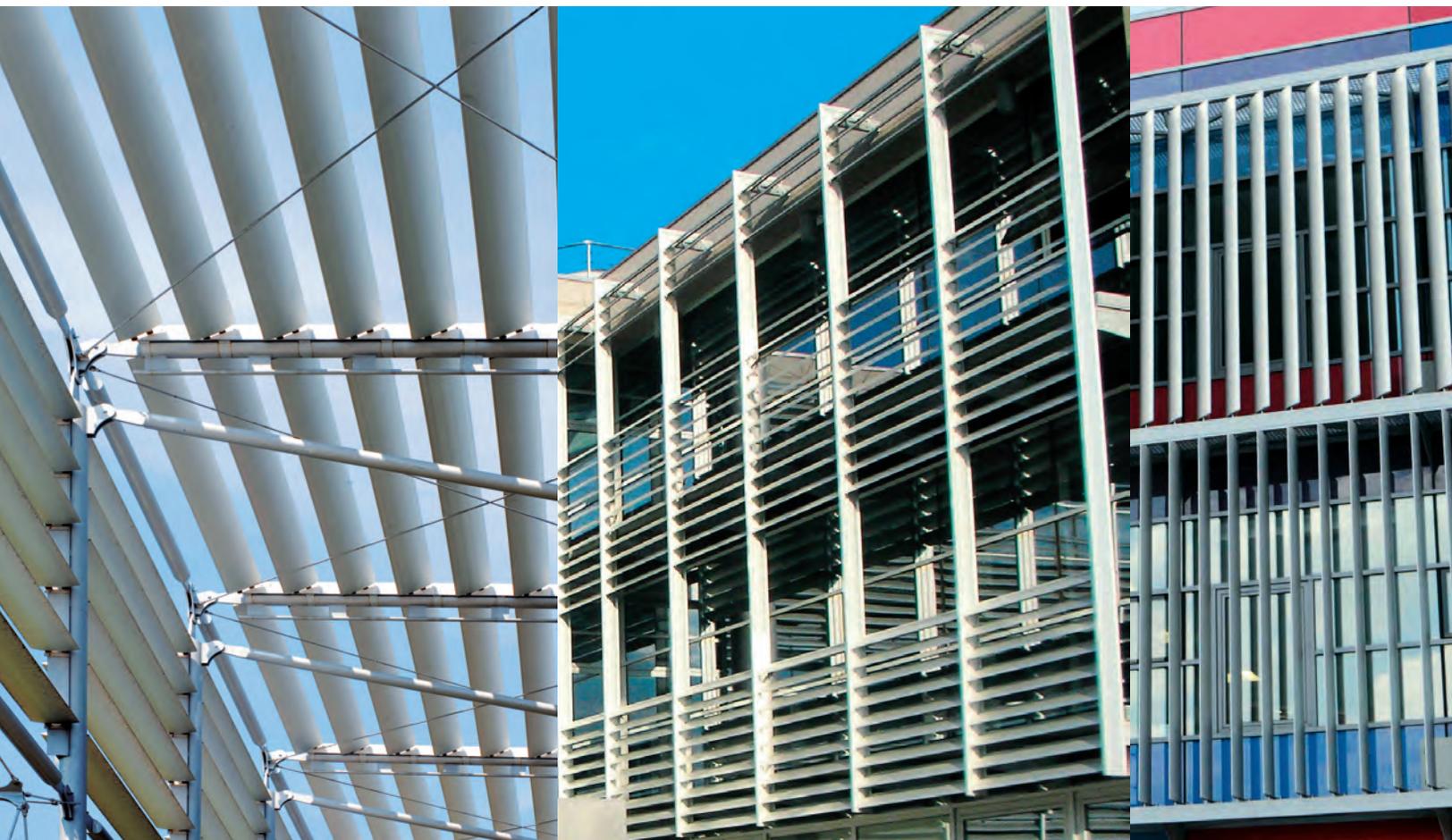
D2 - Horizontal unit sunblades. Angles are present and variable. Can be connected to the METRA curtain walls and to the wall.

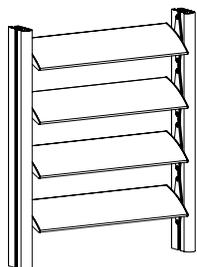


D4 - Horizontal sunblades for substructure. Angles are preset and variable.

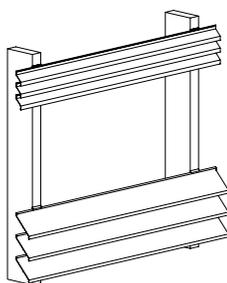


D6 - Horizontal sunblades for substructure. Angles are preset and variable.

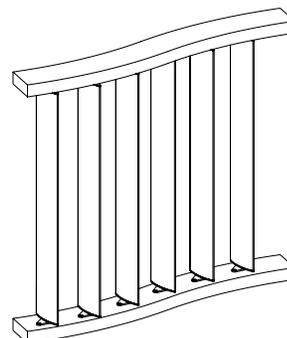




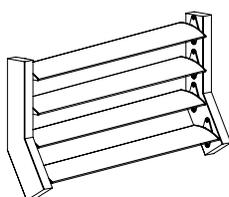
D7 - Horizontal sunblades. Preset angles.



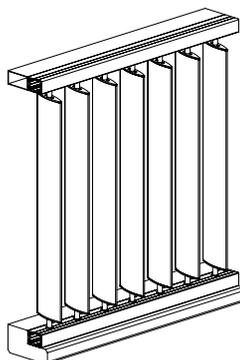
D10 - Fixed horizontal sunblades for substructure.



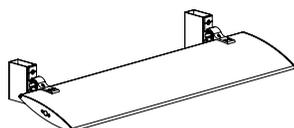
D12 - Vertical sunblades for substructure. Preset angles.



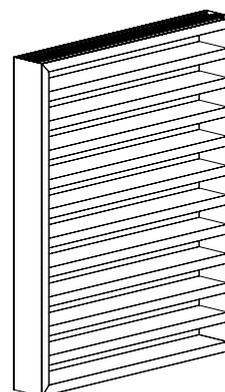
D8 - Horizontal sunblades for substructure. Preset angles.



D11 - Vertical sunblades. Preset and variable angles. Can be connection frontally and laterally to the wall and to the steel substructure.



D9 - Horizontal sunblades for substructure. Preset angles.



D13 - Horizontal sliding sunblades.



Characteristics

The METRA solution is characterised by a unique constructive principle, which gives birth to 13 typologies, covering all construction possibilities:

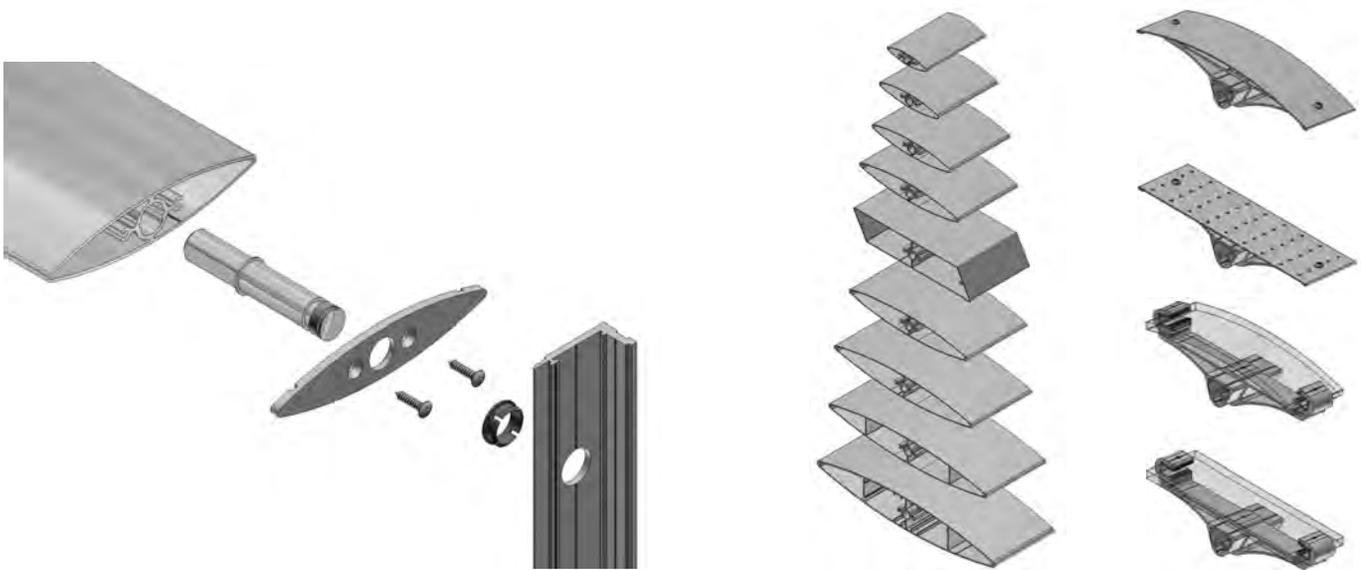
an extruded aluminium blade, two stainless steel pivots inserted into the central part of the blade and fixed into place by the aluminium side caps, in order to take advantage of all available finishings.

Blades

1 - Made of extruded aluminium, of elliptical section and different widths: 100, 150, 200, 250, 300, 350, 400 and 450 mm, supplied in rods of 6500 mm length.

2 - Aluminium or steel sheet with flat or curved section, different thicknesses available depending on the required aesthetics (blades not supplied by METRA).

3 - Tempered glass sheets with flat or curved section of variable thickness, from 10 to 14 mm according to structural requirements and possibility of housing photovoltaic cells (sheets not supplied by METRA).

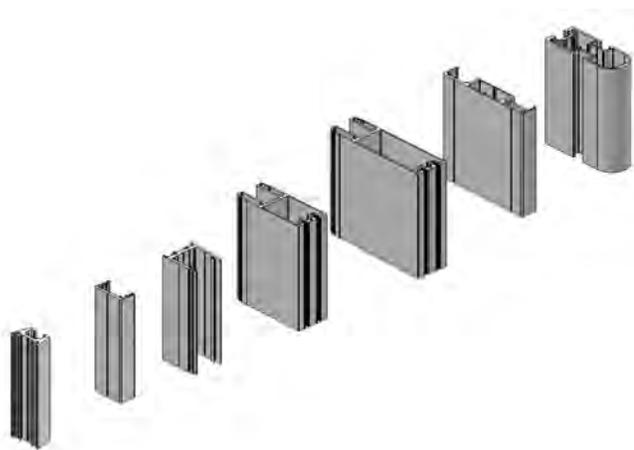


Mullions

Made of extruded aluminium, supplied in rods of 6500 mm length.

Solutions:

- For substructure, mullions with reduced section.
- For curtain walls, mullions with variable section for high static performance.
- For unit structure, mullions able to be coupled.

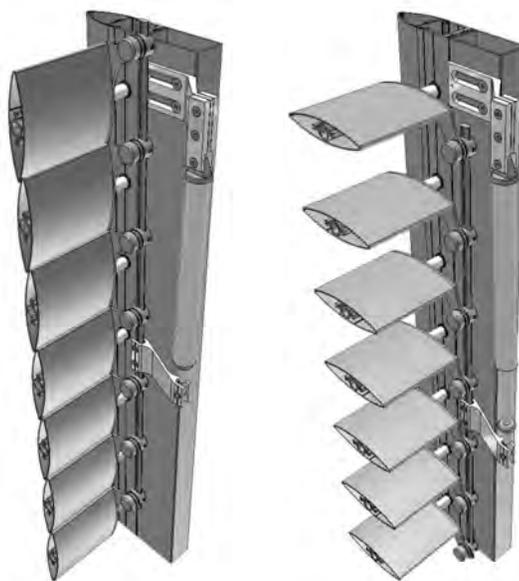


Transmission

In designing a building, it is fundamentally important to determine the level of natural light. The transmission system is capable of piloting the blades with variable inclinations and has been designed to be compact and effective.

An optimal level of comfort inside the building it is thus guaranteed.

Undoubtedly the advantages from an energy point of view are also significant, both in terms of the use of natural light and in terms of climatic thermoregulation.



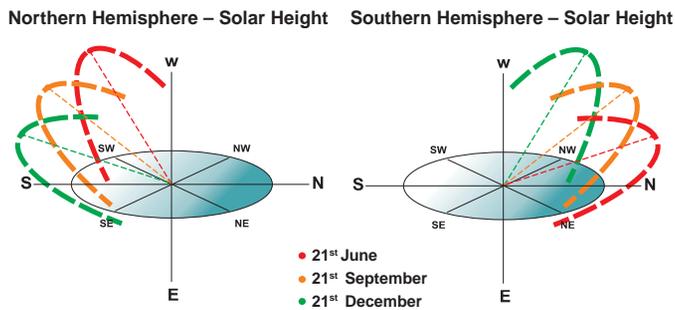
Orientation

In order to move from a traditional system of sun protection to an ideal one, it is not enough simply to incorporate a sunblades system into the building wall. It is also necessary to consider an important parameter:

- the orientation of the building and, as a result
- the orientation of the sunblades blades.

Solar radiation strikes the Earth principally in two different ways: in the Northern hemisphere it reaches to Southern, Eastern and Western fronts of the building, whereas in the Southern hemisphere, it directly strikes the Northern, Eastern and Western fronts.

The choice of sunblades typology and thus its exact orientation will ensure the total efficiency of the system, bringing with it the benefits of using solar protection.



Solar protection

Solar protection plays an ever more important role in designing living and work spaces.

The final objective is to use the available resources in an optimal and intelligent way, guaranteeing a higher level of internal comfort, optimising the use of solar energy so as to reduce energy consumption as far as possible, at the same time satisfying the requirements of daylight and of visual contact with the outside world.

The principle parameters for solar protection are:

- The heat that reaches the inside part of the building.
- The efficiency of sunlight filtering through the glazing.
- Protection from dazzling caused by the light.
- Visibility to the outside world.

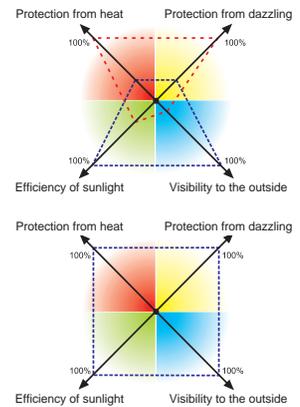
Ideal solar protection protects from heat and dazzling, but does not block visibility to the outside nor sunlight.

Traditional solar protection

- Blades open
- Blades closed

Ideal solar protection

- Blades in any position



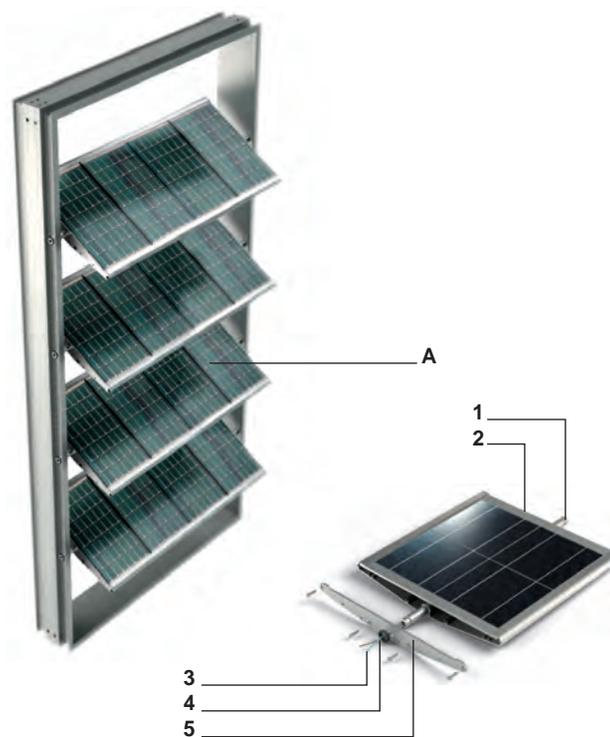
Solar protection and yield

The integration of photovoltaic panels into the screening elements enables the screening function of the sunblades into energy production.

The correct design of photovoltaic sun screening enables the best use of solar contributions when they involve advantages and helps to eliminate or minimise them when they may be damaging, avoiding overheating during the summer and guaranteeing the efficient use of natural light in winter.

The METRA profile for photovoltaic sunblades enables the application of unframed, laminated photovoltaic panels with a thickness of up to 8 mm, 350 mm width and variable length according to the project characteristics.

The three application typologies (D1, D3 and D4) make the METRA sunblades adaptable to all architectural requirements.



A - Blade with photovoltaic panel

- 1 - Rotation pivot for power cable passage
- 2 - Panel with photovoltaic cells
- 3 - Power cable
- 4 - Bush for rotation pivot
- 5 - Blade plugging cap

For those who love natural wood applied to contemporary forms, aluminium-wood is the perfect choice. Great resistance, security and air-tightness with an aluminium core... as well as the stunningly stylish shades and look of various types of wood.

Alluminio-Legno

Natural oxidized effects, matt, gloss, and even extra-gloss, produce a cool and trendy effect. The Evolution line was inspired by architects to enhance modern lifestyles. Evolution is highly sought after for all types of living spaces because of its strong aesthetic and durability in any type of climate.

Evolution

The Sablé finishes have a multi-sensorial effect. They are fantastic to look at and rough or satin to the touch. The sandblasted effect is quite versatile, trendy and easy to use in renovations and innovative living.

Sablé

The Natur-Plus line combines the sturdiness and reliability of aluminium windows and doors with the colours of the wood. Two layers of powder reproduce the typical grain and hues of the various types of wood



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The Raffaello line was developed in collaboration with important design boards and offers two different finishes: smooth and hammered. Thanks to the specific use of the "pointillist" method - obtained by a controlled mix of several different shades of colour - both finishes have an original and exclusive feel and look.

Natur-Plus



Raffaello



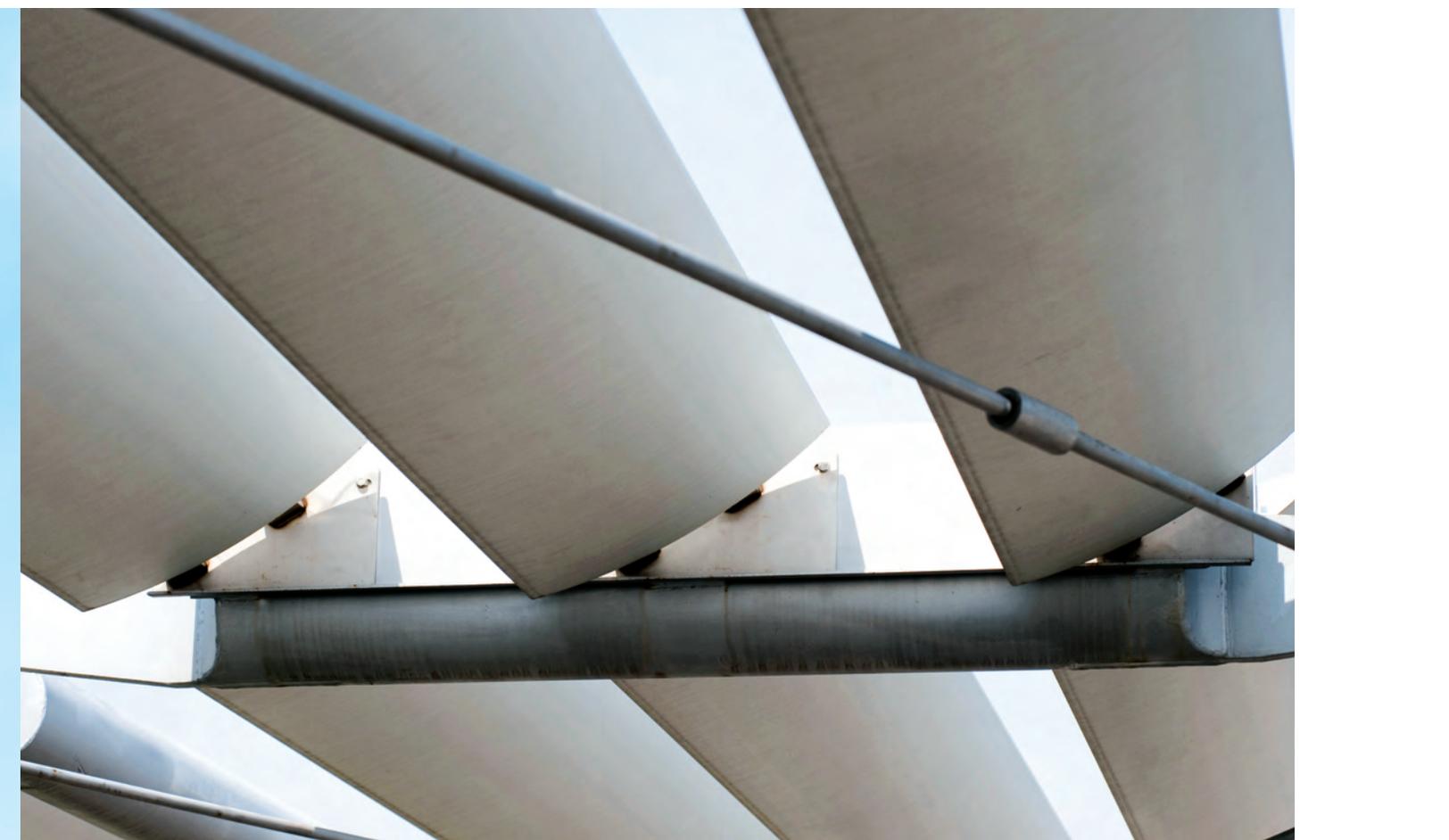
Decor combines the strength of aluminium with the aesthetics of wood. This line faithfully reproduces the grain of traditional types of wood thanks to the sublimation process carried out on the painted layer.

Decor



The AL line represents the range of the most classic colours. Beside the traditional gloss finishes, the matt colours ensure great scratch-proof features.

AL



Curtain walls

Casement windows and doors

Aluminium-wood windows and doors

Sliding windows and doors

Internal doors and partition walls

Systems for balconies

Verandas

Shading systems

Photovoltaic applications

Accessories and design complements

Finishes and coatings



METRA

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METRA uses ecological paper for its documentation
and low environmental impact printing products.



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