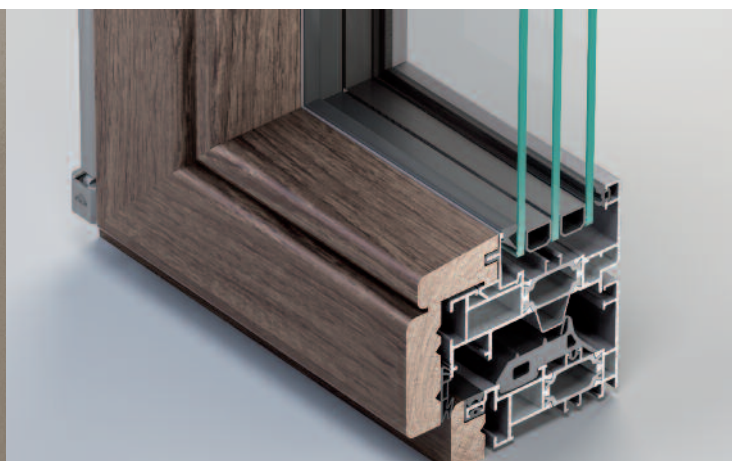


Aluminium-wood windows and doors



Aluminium-wood windows and French windows

Features

If you don't want to give up a material as resistant as aluminium and, at the same time, you like the naturalness of wood, METRA offers you the best solution: the Aluminium-Wood system. This system enables the realization of windows by means of composed frames: the external part is made of aluminium profiles, the internal one is made of natural heartwood. The heartwood in all its types and colours inside give warmth and naturalness to the interior, concealing an aluminium heart and structure which reduce the maintenance operations and keep their performances in the time. Ask a METRA authorized fabricator about the combinations among the different METRA series, aesthetic lines and opening typologies.

Applications

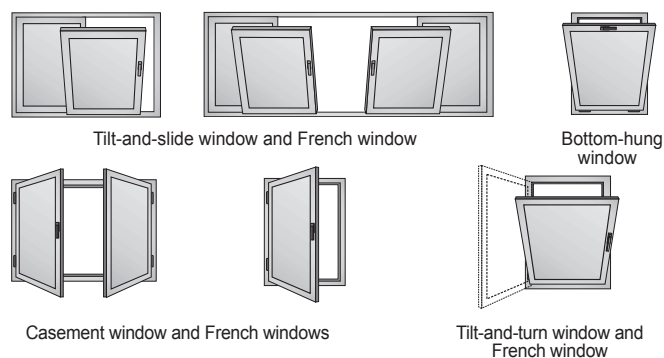
- Windows and French windows with one or more vents, bottom-hung, tilt-and-turn, tilt-and-slide
- Entrance doors opening inwards and fixed frames

Advantages

- Wide range of finishing and aesthetic lines
- Maximum thermal and acoustic insulation
- Resistance and structural stability
- Easy maintenance
- Possibility to combine different opening typologies
- Water drainage on frames visible or hidden (without caps)
- Hardware with anticorrosion treatment

Aesthetic lines

Opening typologies



Finishes and colours

The surface finishes are made of natural pigments, without environmental impact, with great aesthetics and ensuring an excellent durability.

Contemporary colours such as anodised, matt, gloss, extra-gloss, wood-effect or sandblasted effect paints.

Design complements

Handles and hinges. The complements and accessories are suitable for all METRA systems.

Contemporary forms with unique and exclusive styles are designed to enhance every last detail in all types of living space, bringing together aesthetics and function.

The wide range of finishes ensures a vast assortment of aesthetic solutions and combinations in line with individual style.

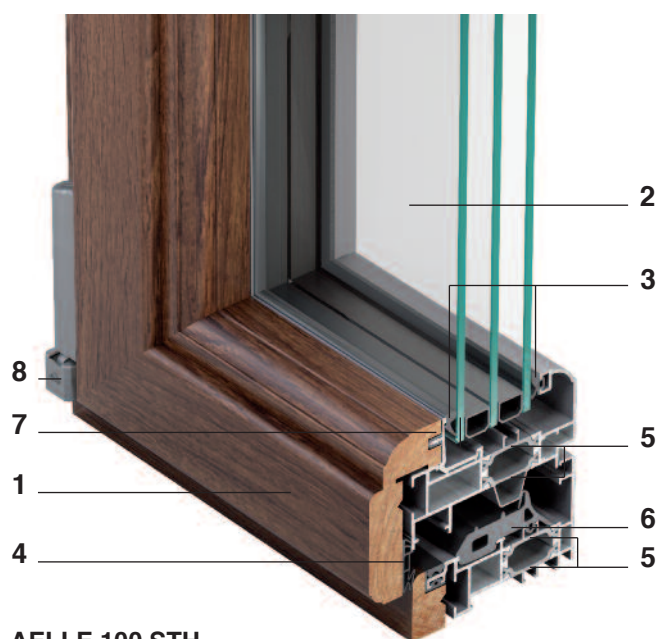
Piana



Sagomata



Technology



AELLE 100 STH

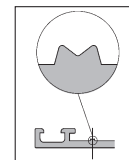
- 1 - Solid wood
- 2 - Insulating triple glazing
- 3 - EPDM gaskets for glazing
- 4 - Sound-proof rabbit basket
- 5 - Energy saving insulating bars
- 6 - Central gasket: EPDM open joint
- 7 - Burglar-proof glazing beads
- 8 - Adjustable hinges

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 RINA in conformity with standard ISO 9001:2008.



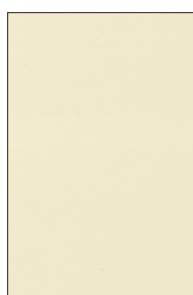
Wood colours



ROL
White Lacquered
Toulipier



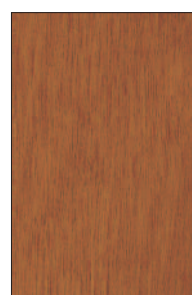
FSB
Whitenened
Ashwood



RAL
1013 Lacquered
Toulipier



FVE
Green
Ashwood



CIL
Cherry-wood



FAM
Reddish Purple
Ashwood



RON
Natural Oak



FCL
Cherry-wood
Painted Ashwood



RCA
Walnut-painted
Oak



FWH
Wengé
Ashwood



ROC
Walnut-painted
Oak



FTA
Tobacco
Ashwood

AELLE 65 I

Caratteristiche

Non-insulated series for windows and doors

Glass thickness: 20 to 24 mm

Windows series:

64 mm frame basic profiles, 76.5 mm sash profile with 21 mm internal overlap

74 mm frame basic profiles, 85 mm sash profile with 21 mm internal overlap (Sagomata line)

Air-water-wind tightness: open joint central gasket

Aluminium aesthetic lines: Classica, Sagomata

Wood aesthetic lines: Piana, Sagomata

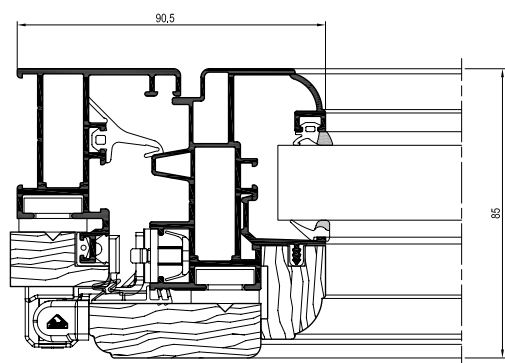
Doors series:

74 mm frame basic profile, 74 mm sash profile with 10 mm internal overlap or 80 mm sash profile with 16 mm internal overlap (Sagomata line)

Air-water-wind tightness: double rabbet gasket

Aluminium aesthetic line: Sagomata

Wood aesthetic line: Piana



Horizontal section





Aluminium-wood windows and doors



AELLE 80 STH

Features

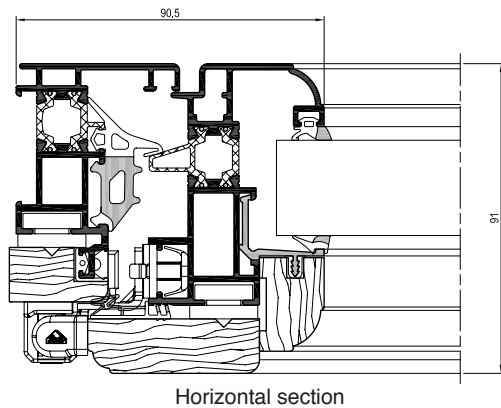
Thermal-break series for windows and doors
Glass thickness: 20 to 38 mm

Windows series:

70 mm frame basic profiles, 91 mm sash profile with 21 mm internal overlap (Piana line)
80 mm frame basic profiles, 91 mm sash profile with 21 mm internal overlap (Sagomata line)
Air-water-wind tightness: open joint central gasket.
Aluminium aesthetic lines: Piana, Sagomata
Wood aesthetic lines: Piana, Sagomata

Doors series:

74 mm coplanar frame and sash profiles (Piana line)
80 mm frame basic profile, 80 mm sash profile with 10 mm internal overlap or 86 mm sash profile with 16 mm internal overlap (Sagomata line)
Air-water-wind tightness: double rabbet gasket
Aluminium aesthetic lines: Piana, Sagomata
Wood aesthetic line: Piana



Performances

Water tightness EN 1027 - EN 12208	1A (0Pa)	2A (50Pa)	3A (100Pa)	4A (150Pa)	5A (200Pa)	6A (250Pa)	7A (300Pa)	8A (450Pa)	9A (600Pa)	Exxxx (xxxxPa)
Air permeability EN 1026 - EN 12207	1 (150Pa)	2 (300Pa)	3 (600Pa)	4 (600Pa)						
Wind load resistance EN 12211 - EN 12210	max pressure with deflection	1 (400Pa)	2 (800Pa)	3 (1200Pa)	4 (1600Pa)	5 (2000Pa)	Exxxx (>2000Pa)			
		A (≤ 1/150)		B (≤ 1/200)		C (≤ 1/300)				
Sound insulation EN ISO 140-3 - EN ISO 717-1	up to 44 dB									
Thermal transmittance Uf W/m² K	2.76									
Uw W/m² K*	1.3									

* 1 vent window 1230 x 1480 mm; Ug=0.6 W/m²K, psi=0.05 W/m K





Aluminium-wood windows and doors



AELLE 100 STH

Features

Thermal-break series for windows and doors

Glass thickness: 26 to 49 mm

Windows series:

79 mm frame basic profiles, 100 mm sash profile with 21 mm internal overlap (Piana line)

89 mm frame basic profiles, 100 mm sash profile with 21 mm internal overlap (Sagomata line)

Air-water-wind tightness: open joint central gasket

Aluminium aesthetic lines: Piana, Sagomata

Wood aesthetic lines: Piana, Sagomata

Doors series:

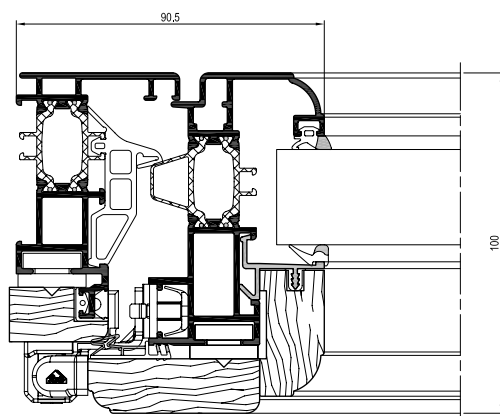
79 mm coplanar frame and sash profiles

79 mm sash profile

Air-water-wind tightness: double rabbet gasket

Aluminium aesthetic lines: Piana

Wood aesthetic lines: Piana



Horizontal section

Performances

Water tightness

EN 1027 - EN 12208

1A (0Pa)	2A (50Pa)	3A (100Pa)	4A (150Pa)	5A (200Pa)	6A (250Pa)	7A (300Pa)	8A (450Pa)	9A (600Pa)	Exxxx (xxxxPa)
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Air permeability

EN 1026 - EN 12207

1 (150Pa)	2 (300Pa)	3 (600Pa)	4 (800Pa)
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Wind load resistance

EN 12211 - EN 12210

max pressure	1 (400Pa)	2 (800Pa)	3 (1200Pa)	4 (1600Pa)	5 (2000Pa)	Exxx (>2000Pa)
with deflection	A (≤ 1/150)	B (≤ 1/200)	C (≤ 1/300)			

Sound insulation

EN ISO 140-3 - EN ISO 717-1

up to 44 dB

Thermal transmittance

Uf W/m² K



Uw W/m² K*



* 1 vent window 1230 x 1480 mm; Ug=0.6 W/m²K, psi=0.05 W/m K





Aluminium-wood windows and doors



AELLE- S 190 STH

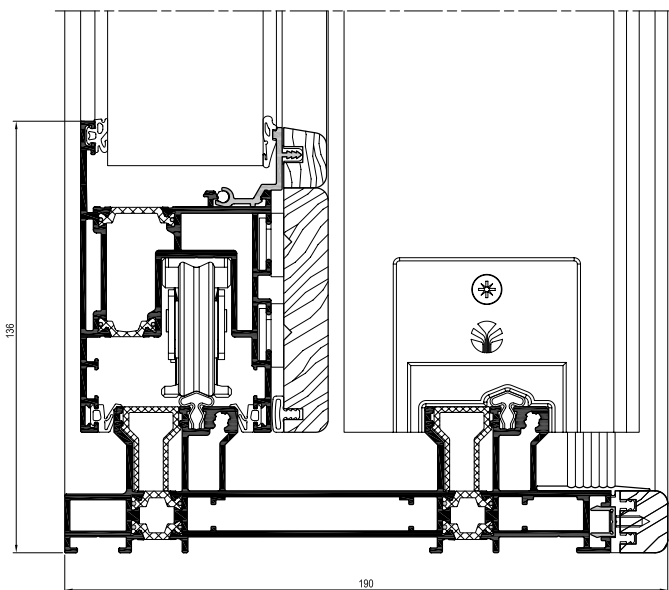
Features

Thermal-break series for windows and doors
Glass thickness: 26 to 44 mm

Windows series:

190 mm frame basic profiles
78 mm sash basic profiles
Air-water-wind tightness: EPDM gaskets

Hardware: lift-and-slide hardware
Max load 300/400 kg



Horizontal section

Performances

Water tightness
EN 1027 - EN 12208

1A (0Pa)	2A (50Pa)	3A (100Pa)	4A (150Pa)	5A (200Pa)	6A (250Pa)	7A (300Pa)	8A (450Pa)	9A (600Pa)	E900 (900Pa)
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Air permeability
EN 1026 - EN 12207

1 (150Pa)	2 (300Pa)	3 (600Pa)	4 (800Pa)
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Wind load resistance
EN 12211 - EN 12210

max pressure	1 (400Pa)	2 (800Pa)	3 (1200Pa)	4 (1600Pa)	5 (2000Pa)	Exxx (>2000Pa)
with deflection	A (≤ 1/150)	B (≤ 1/200)		C (≤ 1/300)		

Sound insulation
EN ISO 140-3 - EN ISO 717-1

up to 42 dB

Thermal transmittance
Uf W/m² K

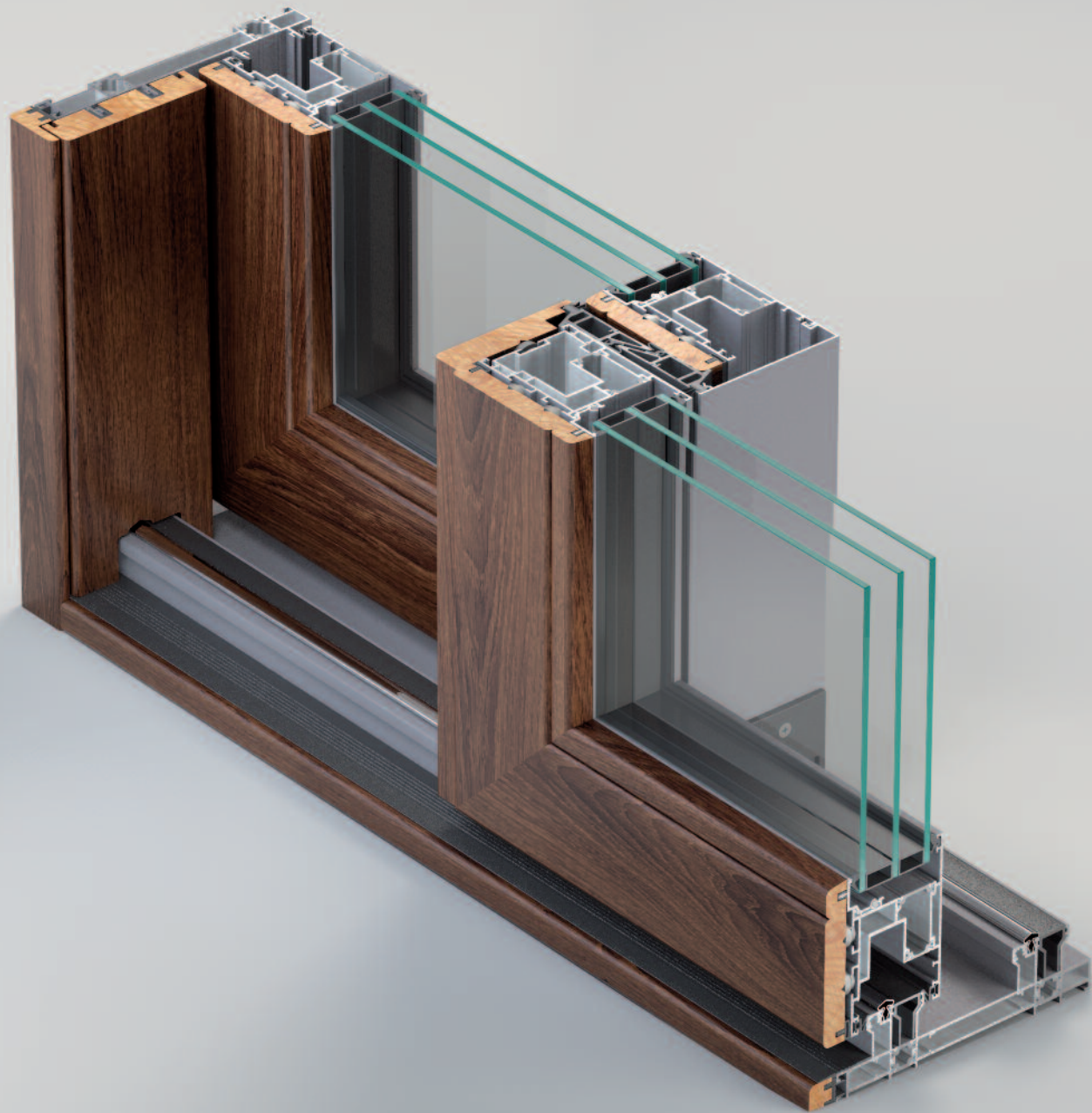


Uw W/m² K*



* 2 vents French window 2500 x 2500 mm; glass: Ug=0.6 W/m²K,
psi=0.05 W/m K





Aluminium-wood windows and doors



Curtain walls

Casement windows and doors

Aluminium-wood windows and doors

Sliding windows and doors

Internal doors and partition walls

Systems for Handrails

Verandas

Shading systems

Photovoltaic applications

Accessories and design complements

Finishing and colours



METRA

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Documentazione METRA
Brochure
Finestre e porte in Alluminio-Legno - Inglese

Data di edizione: 09/2012