



Energy Saving Products for Doors & Windows



ALUMINIUM WOOD SYSTEMS

 **DOUBLE B**

A Product Brochure



Aluminium systems with respect to the environment

Welcome to the world of KALCO. We are a 25 year old company into the field of manufacturing aluminium product for architectural designing. Kalco holds a position in the market as the leader in fabrication of aluminium products for mainly architectural purposes. It's purpose is to provide a elegant, heat-proof, noise-proof and water-proof usage by providing better architectural solutions to corporate, residences and multiplexes. The systems are designed in such a way so that their top thermal break properties will secure effective energy saving, reducing the need of heating and cooling systems operation in summer and winter, respectively. In this way, you achieve higher money saving and, at the same time, you contribute to the protection of the environment.



What is alu-wood ?

The term "**Alu Wood**" is used to describe combination of Aluminium and Wood.



What is energy-saving mean ?

Whether room is cool or warm, we use the electric energy to make comfortable. That comfortable room temperature is also known as energy. Save that energy - last at least as long. Or else enjoy nature's fresh air-n-light.



What is this ?

When you cut a window into 4 pieces, it will look like this. We use this cutting piece for demonstrating the product.

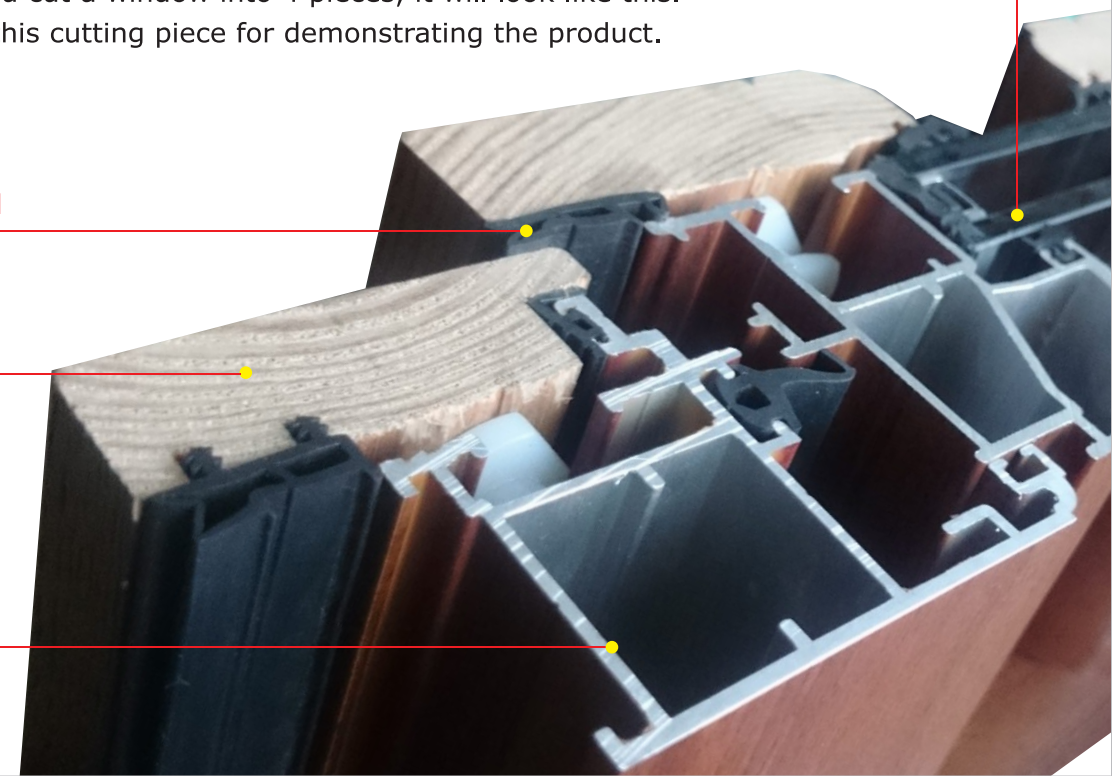
Glazing (Glass) [+]

EPDM Rubber Seal - No points of contact and an insulating air cushion between the aluminium and wood; two, or optionally three, sealed layers ensure optimum sound and thermal insulation.

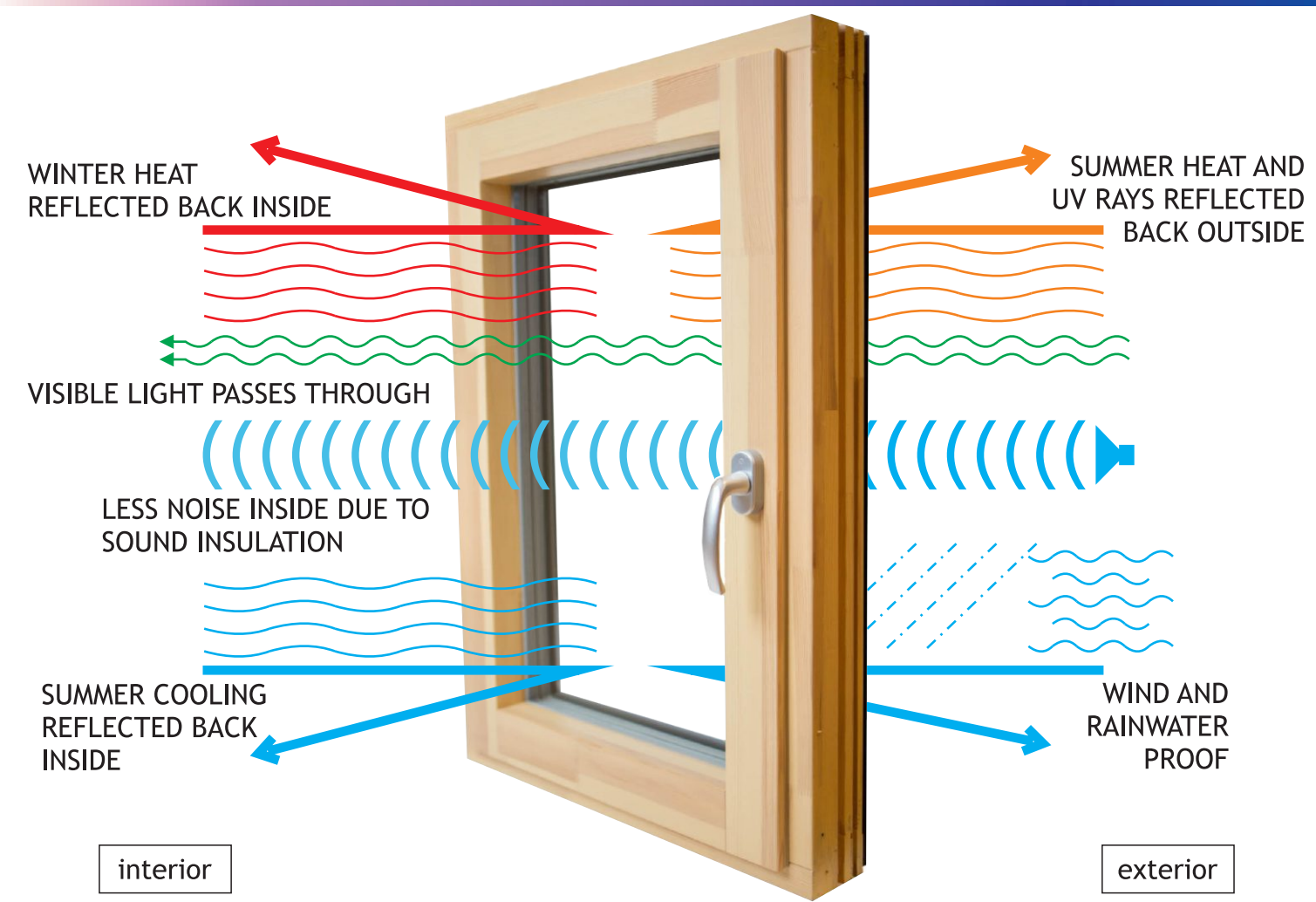
A third sealed layer is available for all systems.

Inside - Wood [+]

Outside - Aluminium [+]



Multi-Functional Solutions



Thermal insulation and cost savings

Good thermal insulation reduces heating costs in winter and acts as a heat shield in summer. Our windows feature modern thermal insulation glazing with high insulation values for the window frames.



Solar and thermal protection

Kalco solar protection glazing is a great way to prevent overheating. The UV rays striking the outer pane is largely absorbed or reflected and will not enter the room.



Sound insulation

Kalco's high-quality window profiles, special sound insulation glazing and solid joints ensure optimum noise protection and less noise inside as compared to outside.



Wind and rainproof

Weather generally has a detrimental effect on the windows and outside doors in form of winds and rains. Our systems are more sustainable to such large heavy winds and rain.



Protection against break-ins

Security is a good feeling. Safe should mean safe. Even the standard versions of Kalco windows are difficult to prise open. The standard security fitting can if necessary be upgraded to provide even stronger protection against break-ins.



Maintenance free design

Kalco windows and doors are made-to-use in terms of form and function. These require no maintenance over the years and sustain every climatic conditions.



RUBINO

Casement Windows



Alu-Wood doors and windows, represent the greatest expression of aesthetic research applied to door and window frames, from KALCO. These Alu-Wood windows and doors have always stood out from the indian market due to their soft joint design (wooden parts are anchored to the aluminium with fixing blocks) which has rendered them truly unmistakable.

Rubino windows and doors offers the Alu-Wood casement range with a wide range of opening possibilities. Rubino Alu-Wood windows and doors comes with a possibility of opening inside or tilt inside. Rubino Tilt and Turn alu-wood windows have been the standard in countries for over several years. Tilt and Turn windows combines functionality with security. All functions are one-handed, one move operated. It's smooth, it's easy and it's safe. Unlike traditional window, our alu-wood tilt and turn hardware allows the window to open completely for a clear exit in an emergency.

Raw Materials :

- Extruded 6060 aluminium alloy.
- TA16 supply status.
- UNI 3879 thickness and dimensional tolerances.

Types of Wood :

- First grade solid wood with FAS Certification.
- Various types of wood and finishes available.
- Double protective treatment.

Accessories :

- Customized accessories supplied by the best companies in the market.
- Fixing to the bearing part of the same.
- EPDM - Dutral and co-extruded seals.



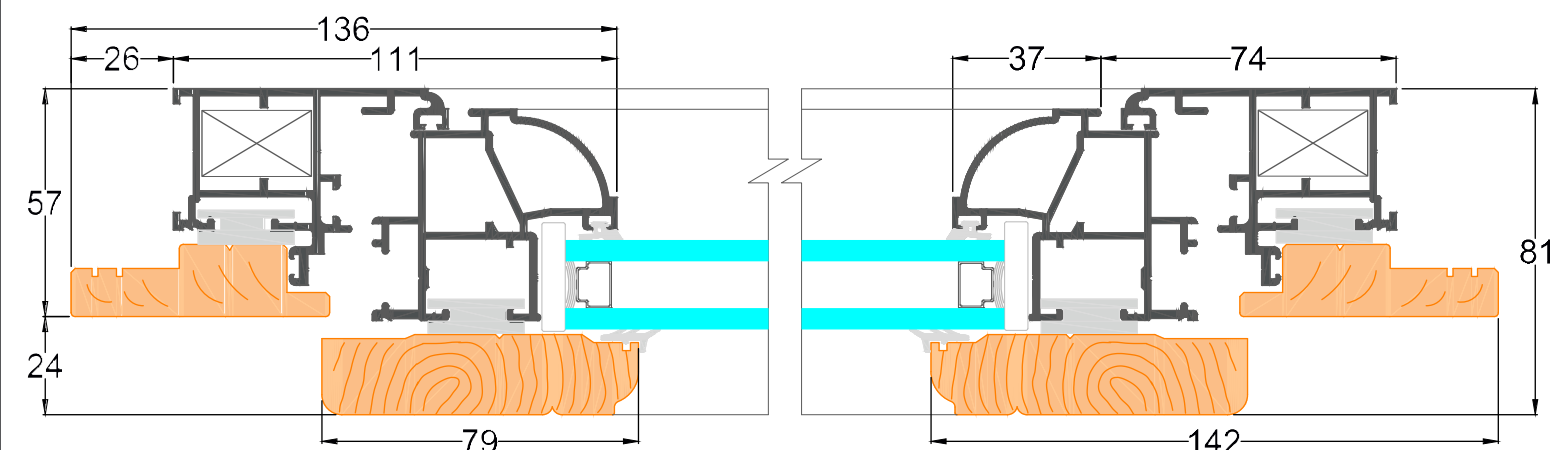
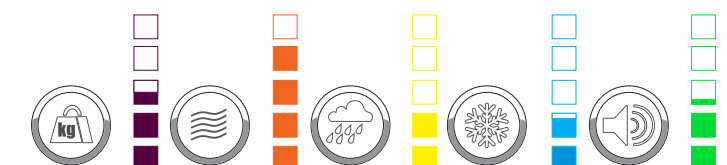
Technical Characteristics :

- Internal overlap: Coplanar system.
- Fixed Frame: 56.7 mm section
- Openable wing: 76.2 mm section
- Glass pane installation: 23 mm max.
- Depth of glass pane cavity: 22 mm
- Open Joint seal with 5.5 cm² pre-cavity

Performances:

- Thermal Insulation EN ISO 10077-2 $U_w = 1.8 \text{ W/(m}^2\text{k)}$
- Air Permeability EN 12207 Class A3
- Water Tightness EN 12208 Class 4A
- Resistance to Windload EN 12210 Class V3

System Properties



* in technical association with Buonanno S.p.a., Italy



ZAFFIRO

Sliding Windows

Alu-Wood doors and windows, represent the greatest expression of aesthetic research applied to door and window frames, from KALCO. These Alu-Wood windows and doors have always stood out from the indian market due to their soft joint design (wooden parts are anchored to the aluminium with fixing blocks) which has rendered them truly unmistakable.

Zaffiro sliding doors are especially designed with different ways of parallel slides on steel hardened pulleys and textile brush sealing strip. These have systems with two or three tracks in order to achieve designs up to six sliding panels. These doors are perfect for spaces that have noise, energy and space restrictions. This system uses weather seals to block out any unwanted noise use of thicker noise insulated glass, improving acoustic performance. Variety of shades in wood like beach, oak and ash - different stains in each color. Number of finish in aluminum makes it even more elegant.

Raw Materials :

- Extruded 6060 aluminium alloy.
- TA16 supply status.
- UNI 3879 thickness and dimensional tolerances.

Types of Wood :

- First grade solid wood with FAS Certification.
- Various types of wood and finishes available.
- Double protective treatment.

Accessories :

- Customized accessories supplied by the best companies in the market.
- Fixing to the bearing part of the same.
- EPDM - Dutral and co-extruded seals.



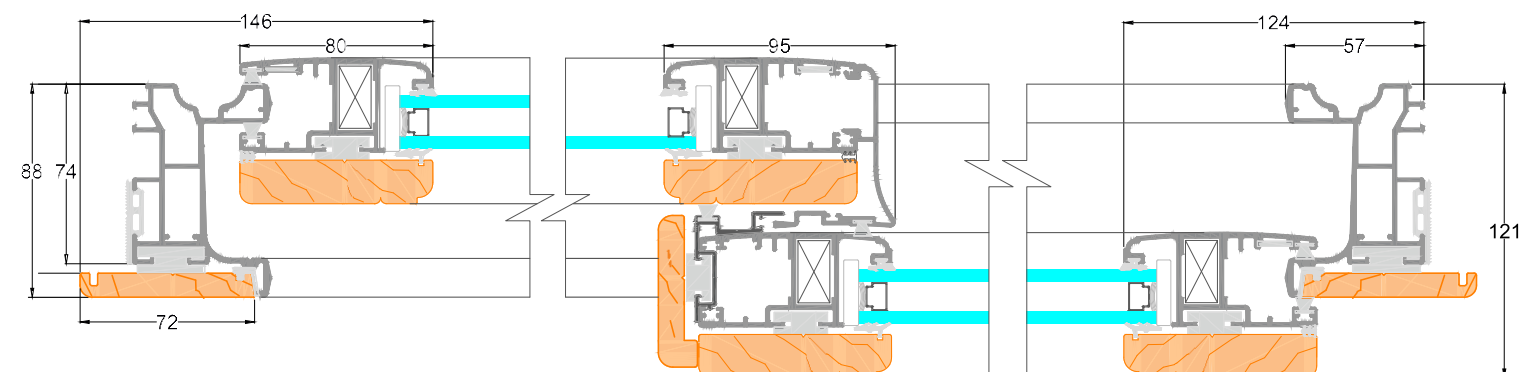
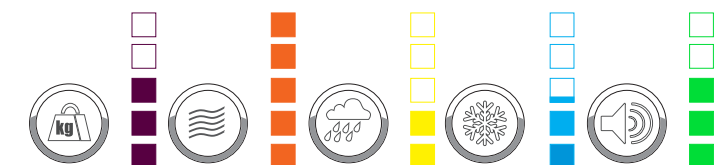
Technical Characteristics :


- | | |
|------------------------------|---|
| • Internal overlap | 58 mm |
| • Fixed Frame | 96.5 mm section for 2 way
168.0 mm for 3 way |
| • Sliding wing | 61.0 mm section |
| • Glass pane installation | 26 mm max. |
| • Depth of glass pane cavity | 22 mm |

Performances:

- | | |
|-------------------------------------|-------------------------------------|
| • Thermal Insulation EN ISO 10077-2 | $U_w = 2.1 \text{ W/(m}^2\text{k)}$ |
| • Air Permeability EN 12207 | Class A4 |
| • Water Tightness EN 12208 | Class 4A |
| • Resistance to Windload EN 12210 | Class A5 |

System Properties



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TOPAZIO

Lift and Slide Windows

Alu-Wood doors and windows, represent the greatest expression of aesthetic research applied to door and window frames, from KALCO. These Alu-Wood windows and doors have always stood out from the indian market due to their soft joint design (wooden parts are anchored to the aluminium with fixing blocks) which has rendered them truly unmistakable.

Topazio windows and doors offers Lift and slide doors which are usually used for larger panel widths to cope with heavier weights due to its thicker frame. Thanks to the ironmongery anchored on to the aluminium bearing profiles, system can achieve a carrying capacity of 250 Kg per wing. This alu-wood sliding door is the ideal solution for extensions, balconies, sunrooms, conservatories and even pool areas. As multi-tracked systems, our sliding doors are designed to open up large elevations quickly and easily.

Raw Materials :

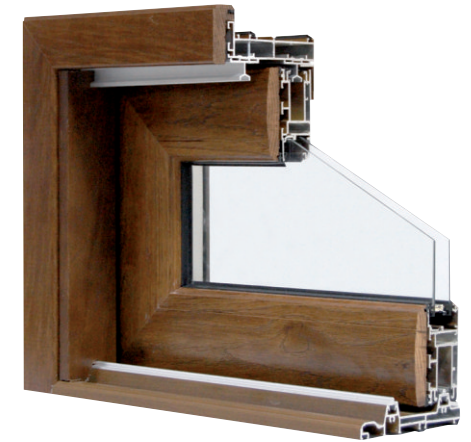
- Extruded 6060 aluminium alloy.
- TA16 supply status.
- UNI 3879 thickness and dimensional tolerances.

Types of Wood :

- First grade solid wood with FAS Certification.
- Various types of wood and finishes available.
- Double protective treatment.

Accessories :

- Customized accessories supplied by the best companies in the market.
- Fixing to the bearing part of the same.
- EPDM - Dutral and co-extruded seals.



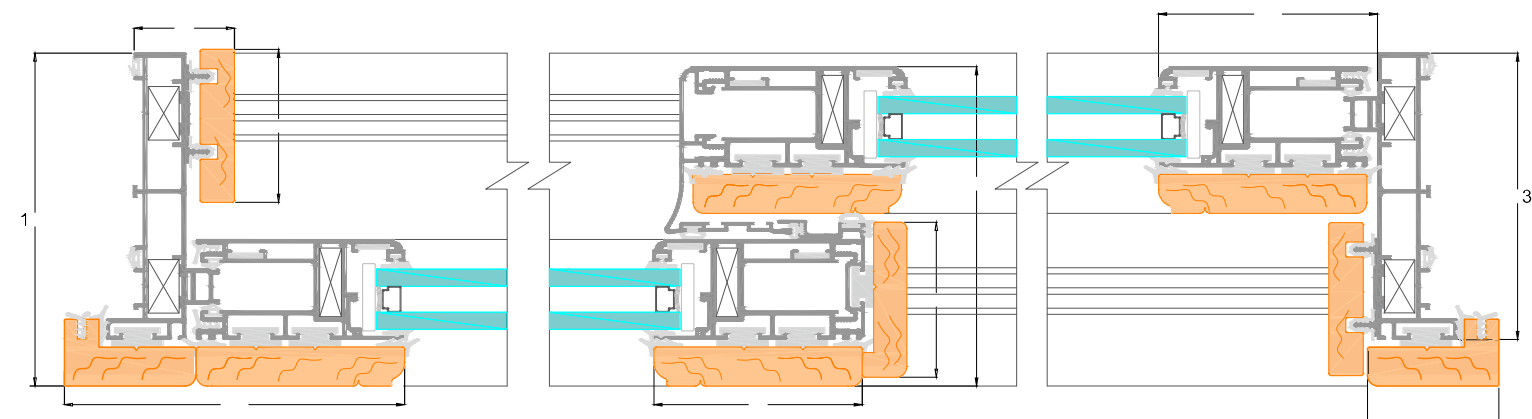
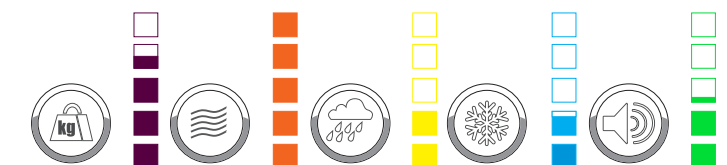
Technical Characteristics :

- Internal overlap 69 mm
- Fixed Frame 155.0 mm section
- Sliding wing 68.5 mm section
- Glass pane installation 29 mm max.
- Depth of glass pane cavity 22 mm
- Double seal on track and matching labyrinth

Performances:

- Thermal Insulation EN ISO 10077-2 $U_w = 1.8 \text{ W/(m}^2\text{k)}$
- Air Permeability EN 12207 Class A4
- Water Tightness EN 12208 Class 4A
- Resistance to Windload EN 12210 Class A5

System Properties





DIAMENTE

Casement Windows

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Diamente windows and doors offers the Alu-Wood casement range with a possibility of opening outside. Diamente Alu-Wood windows and doors can also be incorporated with mosquito mesh. Easy maintenance from inside, cleaning both glasses is also an added advantage.

Diamente also feature's a variety of options including various colors, several hardware finishes and high-quality multi-point locking system for security. Glass is available as per customers need. Combination windows with other variety is also available.

Raw Materials :

- Extruded 6060 aluminium alloy.
- TA16 supply status.
- UNI 3879 thickness and dimensional tolerances.

Types of Wood :

- First grade solid wood with FAS Certification.
- Various types of wood and finishes available.
- Double protective treatment.

Accessories :

- Customized accessories supplied by the best companies in the market.
- Fixing to the bearing part of the same.
- EPDM - Dutral and co-extruded seals.



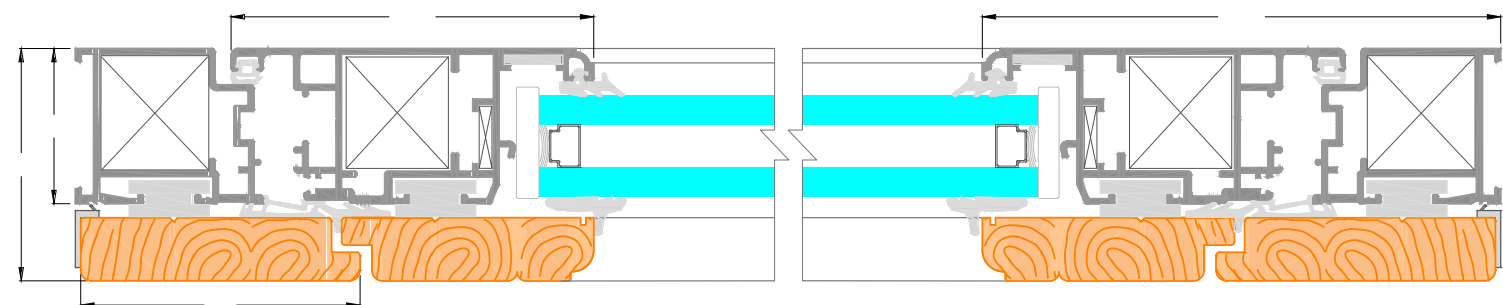
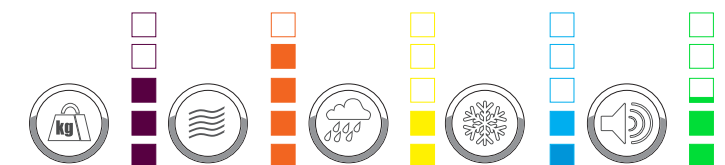
Technical Characteristics :

- Internal overlap: Coplanar system.
- Fixed Frame: 56.7 mm section
- Openable wing: 76.2 mm section
- Glass pane installation: 40 mm max.
- Depth of glass pane cavity: 22 mm
- Open Joint seal with 5.5 cm² pre-cavity

Performances:

- Thermal Insulation EN ISO 10077-2 $U_w = 2.0 \text{ W/(m}^2\text{k)}$
- Air Permeability EN 12207 Class A3
- Water Tightness EN 12208 Class E4
- Resistance to Windload EN 12210 Class V3

System Properties

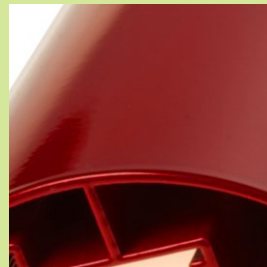




Product Series	RUBINO	ZAFFIRO	TOPAZIO	DIAMENTE
Operational type options	Openable, Tilt-n-Turn, Fixed	Sliding - 2 /3 Track	Lift & Sliding	Openable, Tilt-n-Turn
Internal Overlap	Coplanar System	58 mm	69 mm	Coplanar System
Fixed Frame	56.7 mm section	96.5 mm for 2 Track and 168 mm for 3 Track	155.0 mm section	56.7 mm section
Openable Wing	76.2 mm section	61.0 mm section	68.5 mm section	76.2 mm section
Glass pane installation	23 mm max	26 mm max	29 mm max	40 mm max
Depth of glass pane cavity	22 mm	22 mm	22 mm	22 mm
Sealing	Open Joint seal with 5.5 cm ² pre-cavity	Textile brush sealing strip	Double seal on track and matching labyrinth	Open Joint seal with 5.5 cm ² pre-cavity
Material (Aluminium, Wood)	Alloy 6060, FSC Cert. Wood	Alloy 6060, FSC Cert. Wood	Alloy 6060, FSC Cert. Wood	Alloy 6060, FSC Cert. Wood
Powder Coating (Option)	RAL color / Wood finish	RAL color / Wood finish	RAL color / Wood finish	RAL color / Wood finish
Anodizing (Option)	Natural / Electro color	Natural / Electro color	Natural / Electro color	Natural / Electro color
Indian Standard (IS-1868)	✓	✓	✓	✓
Water Tightness Test Class	Class E4	Class 4A	Class 4A	Class E4
Air Permeability Test Class	Class A3	Class A4	Class A4	Class A3
Wind Resistance Test Class	Class V3	Class A5	Class A5	Class V3
Thermal Insulation (U _w up to)	1.8 W/m ² k	2.1 W/m ² k	1.8 W/m ² k	2.0 W/m ² k
Sound Insulation (R _w up to)	32dB - 38dB	40dB - 44dB	32dB - 38dB	32dB - 36dB

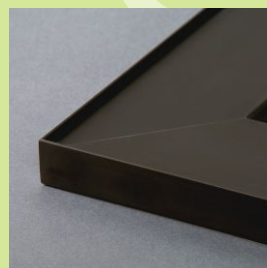
Powder Coated

- Powder coating is a highly versatile aluminium surface treatment.
- Powder coating is available in a huge range of colours from simple matt, satin and gloss finishes to super matt, super gloss, and textured finishes.
- Consistency in finish is assured with finish looking the same at the start and end of a project.
- Dents and scuffs are easily repaired using liquid coating that accurately matches original colours.
- Powder coating has better colour uniformity between batches. Offers excellent chemical resistance to mortar, acids and alkaline cleaners.
- Powder coatings do not produce air pollution.



Anodized

- Anodizing is a electrochemical process used to increase the thickness of the colour layer on the surface of aluminium..
- Anodized aluminium can be cleaned periodically with water and a mild detergent to restore its original lustre.
- Anodic coating will not peel or flake and also imparts a translucent metallic appearance.
- Anodizing is unaffected by sunlight preventing fading, and does not emit VOCs.
- Little maintenance. Longer lasting.
- Anodised finishes have a limited range of options and are normally only available in a matt and polished finish.



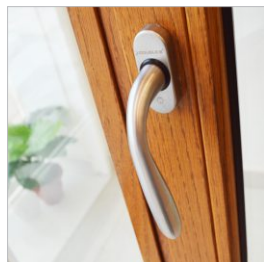
Accessories  colors and more... next



Hardware - Accessories

essential background

Hardware has a wide range of functions. It connects the window casement with the sash and a handle provides turns allowing the movement of the sash. Accessories give the window better sealing and protection. For this reason, we would like to present you some interesting facts about the Hardware/Accessories in windows that will help you with your decision making:



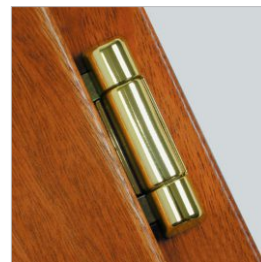
TURNING HANDLE

The essential operating control of a window fitting is the turning handle. Only a turn of the handle can open, close, tilt or fold the window or door.



MULTIPOINT LOCKING

Provide protection against intruders with high-quality locks and also help protect against excessive noise and energy wastage due to tight locking with seal.



HEAVY HINGES

These carry the total weight of the sash in the door or window. Specially designed heavy concealed hinges are used to tackle the problem of door tangling.



SASH LIFTER

Tilt-and-turn hardware lifts the sash into the correct position with minimal effort and guarantees a long service life for sash and other hardware.



GASKET & SEALING

We give EPDM DUTRAL Rubber gaskets for better insulation. Textile brush sealing strip offers a strong flexible shield against mist & dust.



WINDOW ROLLERS

Rollers can carry the load capacity of up-to 300 kg per leaf. Ideally designed for smooth sliding of heavy shutters without even pushing hard.

Glazing – a visible part of the window

The importance of window glass has also been integrated in your window choice. Many solutions are available:

TINTED GLASS

Colorants added to the basic glass that gives the glass colour and reduces the transmission of light through it. The colour extends through the thickness of the glass.

TEMPERED GLASS

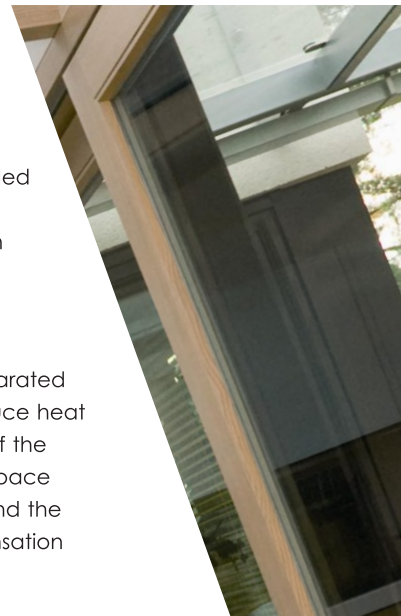
A type of safety glass processed by controlled thermal or chemical treatments to increase its strength compared with normal glass. Fully toughened glass is approximately 4 to 5 times stronger than heat treated glass of the same thickness when exposed to uniform static pressure loads.

LAMINATED GLASS

Two or more panels of glass permanently bonded together with one or more interlayers. It offers good acoustic insulation and a high protection factor against burglary

DOUBLE GLAZING

Double or even triple glass window panels separated by an air or other gas space like Argon to reduce heat transfer or sound transmittance across a part of the building envelope. In insulated glass units the space between the glass panes is thoroughly dried and the edges are sealed to eliminate possible condensation and provide superior insulation properties.



Colors Does Matter

full of possibilities

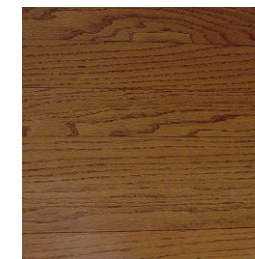
In today's world, Color is vital to the visual impression of your doors and windows. An individual choice of color as a design element is becoming increasingly important and forms an essential component of every door/window. The KALCO world of colors offers a broad color range for both wood and aluminium. Choose your favorite and color your life.

Wood Texture (for inside)

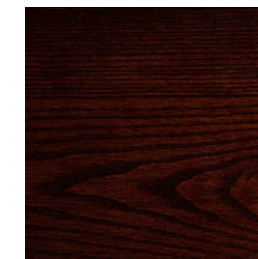
We use wooden profiles of first grade and does not damage the environment (Forest Stewardship Council) that surround us. The oak wood is the standard for our product. It is used with that natural essence in different textures.



Wenge
Oak



Chestnut Stained
Oak



Nut Stained
Oak



Natural
Oak



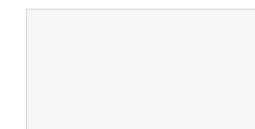
Cherry

Aluminium Color (for outside)

A wide range of powder coating and anodic color are available to choose from. Apart from RAL colors, you can also get a variety of wooden finishes to apply. All colors offers maximum weather resistance regarding climatic influences.



Glossy White
RAL 9010



Semi Glossy White
RAL 9016



Semi Glossy Aluminium
RAL 9006



Matt Brown
RAL 8016



Matt Grey
RAL 7043



Semi Glossy Grey
RAL 7006



Light Grey
RAL 7035



Bronze
(Anodic)



Light Champagne
(Anodic)



Champagne
(Anodic)

25
YEARS
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हमें भारत का ब्रांड बनाने के लिए धन्यवाद।
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