



**NC-S 150 STH HES**  
Sliding windows and doors

[www.metra.it](http://www.metra.it)



**METRA**  
*Italian Style Emotions*



# METRA. ADDING VALUE TO YOUR HOME



## CHOOSE ALUMINIUM

Aluminium is becoming ever present in our lives: from cans to high-speed trains. Aesthetically pleasing, malleable, extremely resistant and 100% recyclable. Aluminium is the ideal material for the creation of window and door frames.

## QUALITY AND CERTIFICATIONS

The production cycle starts from raw material, from aluminium, its extrusions up to painting or coating. All Metra windows and doors carry the CE mark, they are produced in Europa and certified by the most important certifying bodies in Italy and abroad.

## DESIGN AND STYLE

METRA's window and door frames make up a wide range of aesthetic lines which add value to contemporary living spaces. Our most contemporary creations provide more light to living spaces due to their tapered shapes and the minimum thickness of the profiles.

## DESIGN COMPLEMENTS

METRA's design complements are offered in a range of coordinated lines distinguished by a unique style which are able to satisfy and harmonise the aesthetic requirements of any type of living space.

METRA's accessories ensure high performance to your windows and doors...a long-term investment due to its incomparable durability.

## FINISHES

So many finishes, all extremely sturdy and chromatically surprising!  
From metallic colours to sand effects ... right up to natural wood cladding with an aluminium heart.

## OUR CUSTOMER SERVICE: ALWAYS CLOSE TO YOU

We are at your side during each phase with our pre-sale and follow-up customer service: from choosing to installing your frames, from cleaning advice to the traceability of your frames' history.

## METRA FRANCHISING

People can enter METRA franchises with a dream and make it come true.  
Ask our highly skilled staff able to identify the best solution based on your needs.

## GREEN

METRA operates at a low environmental impact and all its products are Green at the utmost degree.

# NC-S 150 STH HES

Sliding windows and doors

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

METRA's integrated systems have been created in order to provide quality solutions to the most up-to-date architectural and aesthetic needs of the contemporary era, they 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.







NC-S 150 STH HES, the sliding system of the latest generation, designed for the realisation of big dimensioned glazed surfaces, able to give maximum brightness and transparency to your living. Two, three, four, up to six sliding sashes to go beyond any dimensional limits.

NC-S 150 STH HES offers excellent thermal and acoustic insulation, resulting in higher energy savings and improved comfort. It is exactly the energy saving, the "High Energy Saving", the theme behind the development of the new system created through the use of innovative and eco-friendly materials that lead to better environmental sustainability.

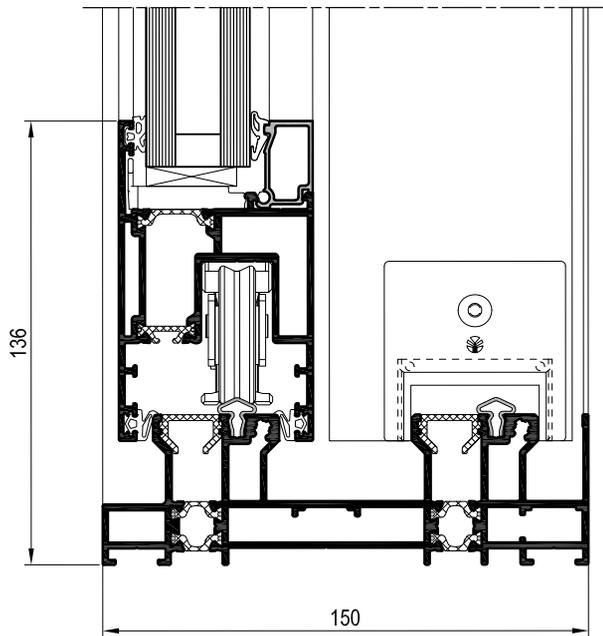
The solution provides the possibility of adopting anti-trip tracks with lowered threshold to experience one's own living in total tranquillity.

The wide range of available finishes makes the system NC-S 150 STH HES a versatile product, able to meet any technical and aesthetic requirements.

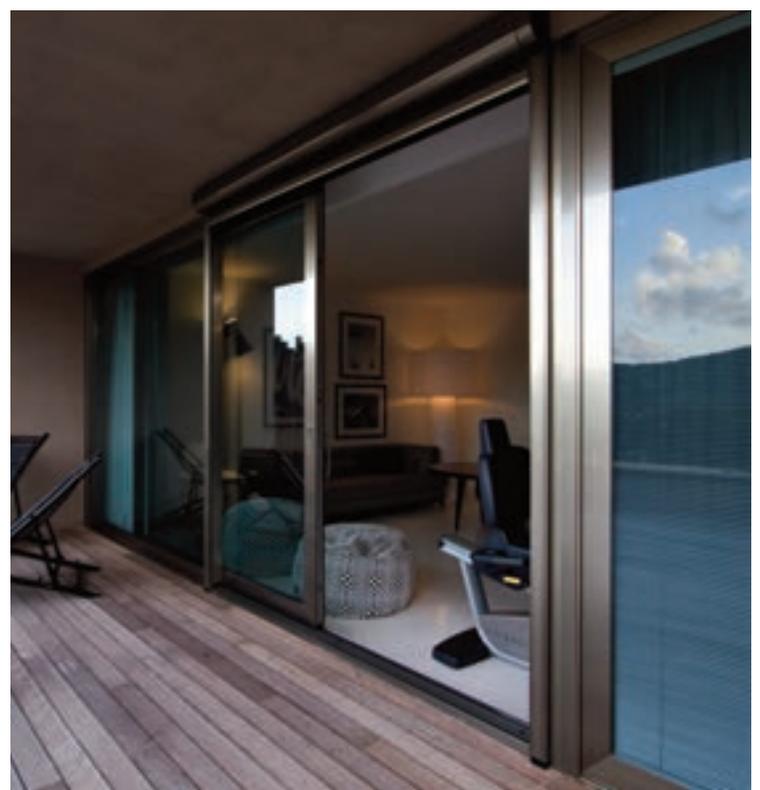
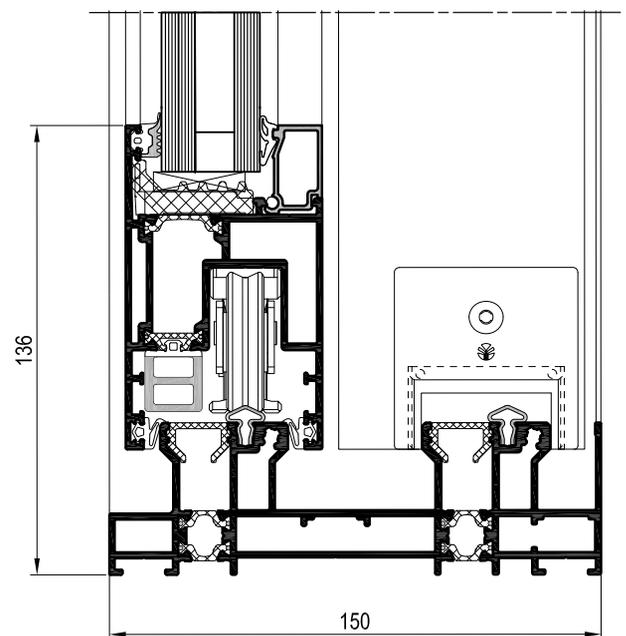
# NC-S 150 STH HES

## Configuration

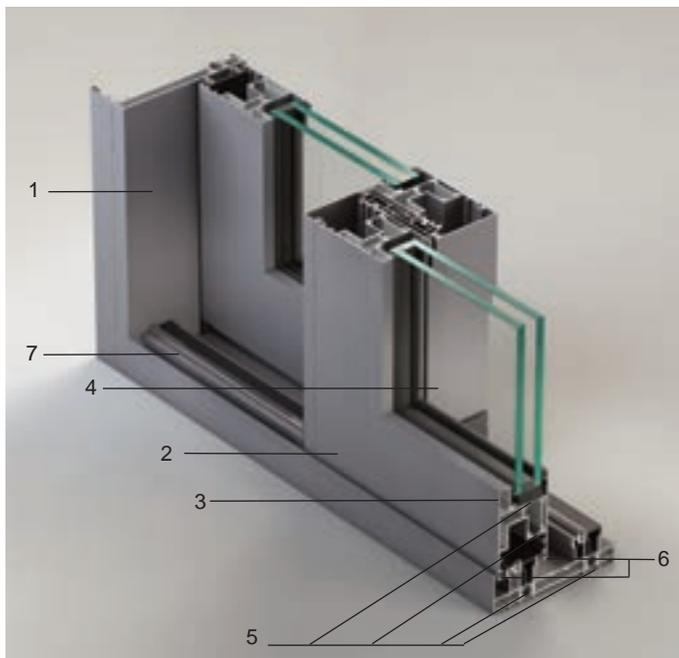
Standard



Plus



## Technology



- 1 - Frame
- 2 - Sash
- 3 - Glazing bead available in different sizes depending on glass thickness
- 4 - Insulating glass with one air space (double glazing) or two air spaces (triple glazing)
- 5 - Insulating bars made of polyamide 6.6 reinforced with 25% fibreglass
- 6 - Tightness gasket
- 7 - Wear-resistant sliding tracks

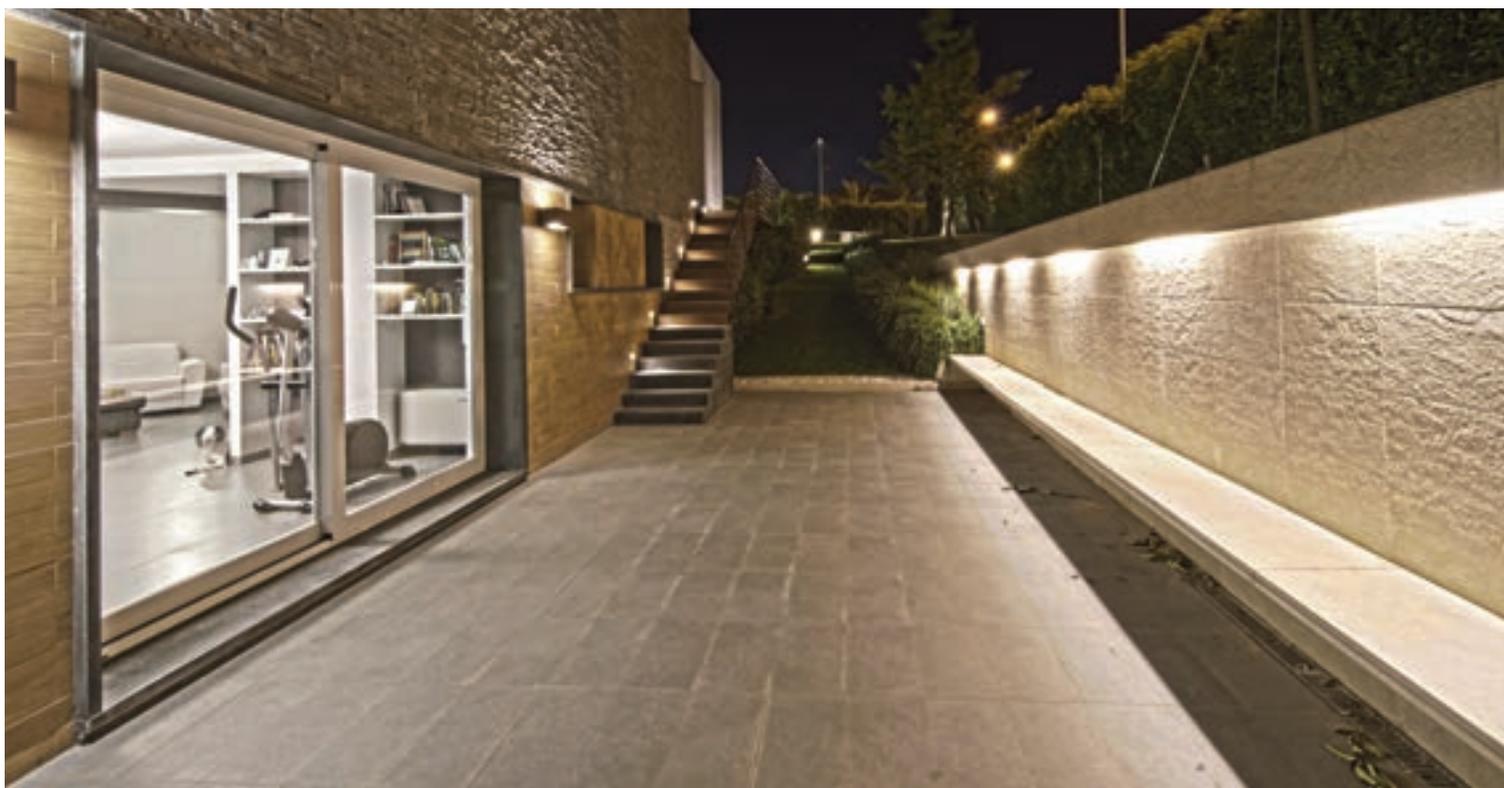
## METRA Quality

Metra's brand guarantees the products and accessories you are using assuring long lasting performances and durability.

Just to be sure, choose original profiles, easily recognizable through the brand M which can be found in the internal of the fastening and on each accessory Metra's systems have been certified by the most important test laboratories in Europe, obtaining the highest performance results.

Metra is, furthermore, among the first Italian companies to have obtained the trade mark on its own products thus to favour the recognisability for and protect the consumer.

The quality of Metra's systems is furthermore guaranteed by the certified production processes "European trademark" and by the Company Quality System which has been certified by RINA according to ISO 9001:2008 norms.



# NC-S 150 STH HES

## Advantages

- Innovative and eco-friendly materials
- Maximum thermal and acoustic insulation
- Ideal for big dimensioned glazed surfaces
- Extremely smooth sliding action
- Easy installation and maintenance
- High-level design
- Wide range of finishes.

## Technical features

**Base dimensions:** 150 mm

**Air-water tightness:** by means of EPDM gasket

**Glass thickness:** up to 46 mm

**Max. sash weight:** 330 - 440 kg (lift and slide)

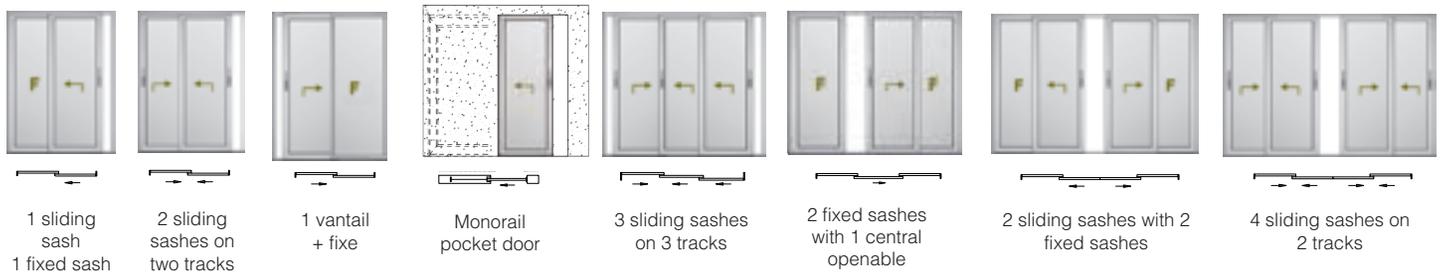
**Frame profiles:** cutting at 45° or 90°

**Sash profiles:** cutting at 45°

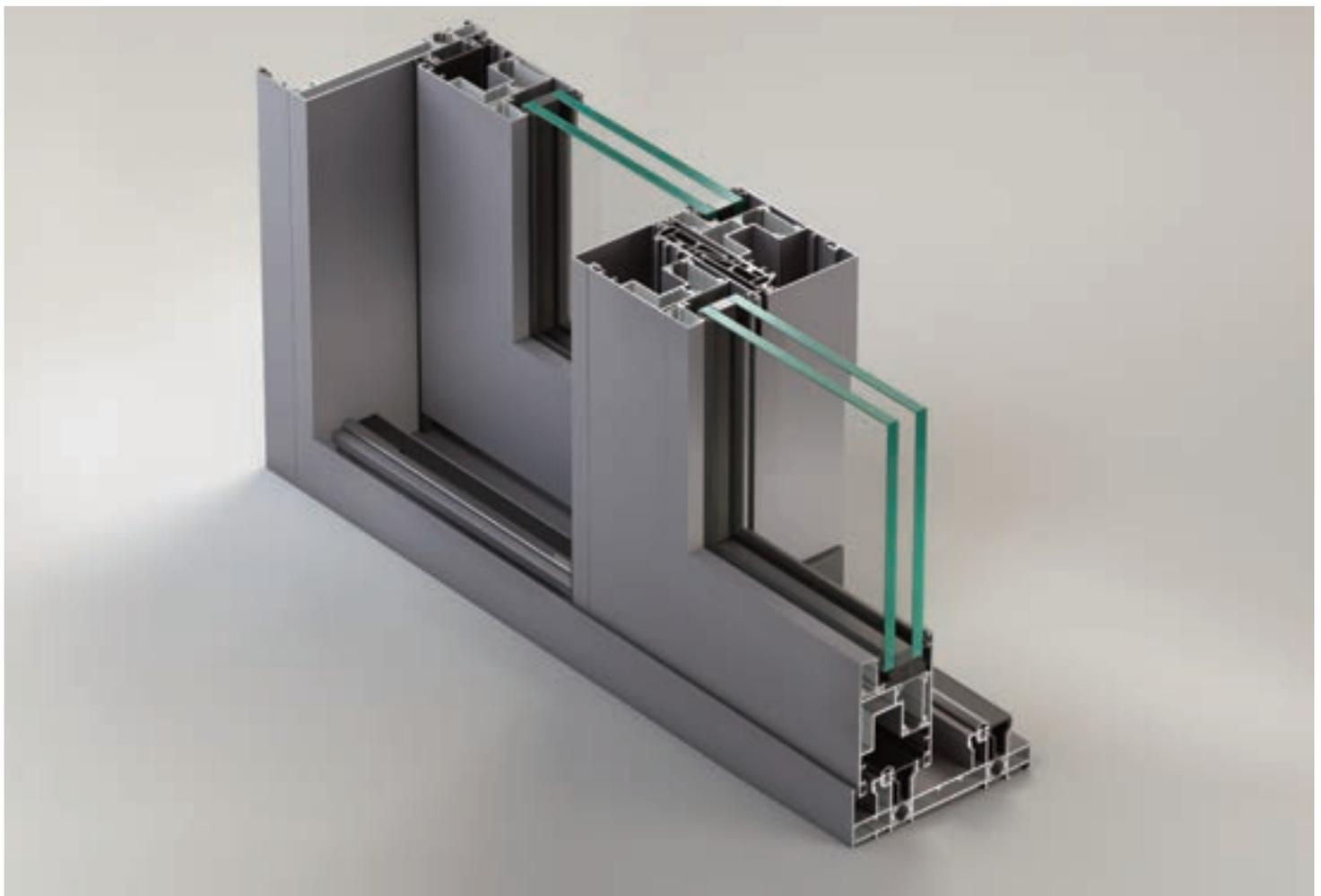
**Locking systems:** multipoint locking. Handles with or without cylinder and key

**Lower sliding track:** sliding rails made of stainless steel.

## Opening typologies



## Aesthetic line



# NC-S 150 STH HES - Performances

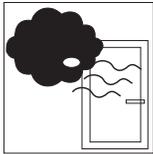


## Water tightness EN 1027 - EN 12208

The METRA window or door has not had any seepage of water even with a wind pressure equal to a speed of 111,54 km/h (600Pa).

Air pressure applied	(0Pa)	(50Pa)	(100Pa)	(150Pa)	(200Pa)	(250Pa)	(300Pa)	(450Pa)	<b>(600Pa)</b>	(900Pa)
km/h	0	32,2	45,53	55,77	64,39	72	78,87	96,59	<b>111,54</b>	136,6
<b>Class achieved</b>	1A	2A	3A	4A	5A	6A	7A	8A	<b>9A</b>	E900

Capacity of the window or door to block seepage of water when it is struck by a water flow and there is a pressure difference between the internal and external side.

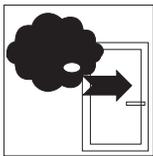


## Air permeability EN 1026 - EN 12207

The METRA window or door was subjected to a wind pressure equal to a speed of 111,54 km/h (600Pa) and passed the test with positive results.

<b>Class achieved</b>	1	2	3	<b>4</b>
Air pressure applied	(150Pa)	(300Pa)	(600Pa)	<b>(600Pa)</b>

Characteristic of a closed vent to let air pass through when the internal and external pressures are mutually different; the smaller the volume dispersed, the greater the window or door quality.



## Resistance to wind load EN 12211 - EN 12210

The METRA window or door was subjected to a wind pressure equal to a speed of 157,7 km/h (1200Pa) and passed the test with positive results.

Air pressure applied	(400Pa)	(800Pa)	<b>(1200Pa)</b>	(1600Pa)	(2000Pa)	(>2000Pa)
With deflection	A ( 1/150)	<b>B ( 1/200)</b>		C ( 1/300)		
<b>Class achieved</b>	1	2	<b>3</b>	4	5	Exxx

Capacity of a window or door subjected to high pressure and/or suction, such as those caused by wind, to remain within admissible deformation limits and to conserve its initial properties so as to ensure protection and safety to the users.

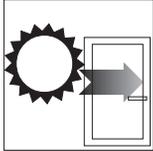


## Soundproofing power EN ISO 140-3, EN ISO 717-1

METRA windows and doors are able to cut out airborne noise from the outside up to 42dB.

**Up to 42 dB**

Capacity of a window and door to attenuate external noise.

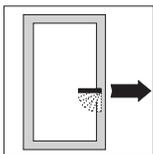


## Thermal transmittance

METRA's windows and doors comply with the energy saving standards

Standard	Uf W/m <sup>2</sup> K	3.2 ↓	
	Uw W/m <sup>2</sup> K*	1.2 ↓	
* Door 2 sashes 3000 x 2500 mm; glass: Ug=0.6 W/m <sup>2</sup> K, psi=0.031 W/m K			
Plus	Uf W/m <sup>2</sup> K	2.6 ↓	
	Uw W/m <sup>2</sup> K*	1.1 ↓	
* Door 2 sashes 3000 x 2500 mm; glass: Ug=0.6 W/m <sup>2</sup> K, psi=0.031 W/m K			

The heat transmission rate U is the heat flow which goes through the window or door according to m<sup>2</sup> of surface and for each degree of difference in temperature between exterior and interior. The unit of thermic transmission measurement is W/m<sup>2</sup>K.

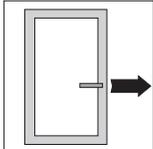


## Operating forces EN 13115

METRA windows and doors enable easy opening with minimum effort

Class achieved	Classe 0	<b>Classe 1</b>	Classe 2
		<b>100 N</b>	30 N

Capacity of a window and door to enable easy opening with minimum effort.

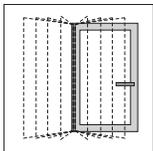


## Mechanical resistance EN 12046 - EN 13115

METRA windows and doors resist applied loads without permanent deformation or breakage.

Class achieved	Classe 0	Classe 1	Classe 2	Classe 3	<b>Classe 4</b>
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Capacity of a window and door to resist applied loads without breaking, with no permanent deformation or twisting that could impair their correct functioning.

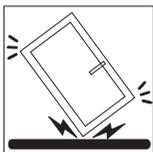


## Resistance to repeated opening and closing cycles EN1191 - EN 12400

METRA windows and doors effectively resist repeated opening and closing cycles over time (110,000 openings).

Class achieved	Finestre e porte				Solo porte				
	0	1	<b>2</b>	3	4	5	6	7	8
No.cycles	-	5000	<b>10000</b>	20000	50000	100000	200000	500000	1000000

Capacity of a window and door to resist repeated opening and closing cycles over time.



## Impact resistance (TEST METHOD WITH A HARD BODY) EN 13049

METRA windows and doors effectively resist impact.

Class achieved	1	2	3	4	<b>5</b>
Drop height	200 mm	300 mm	450 mm	700 mm	<b>950 mm</b>

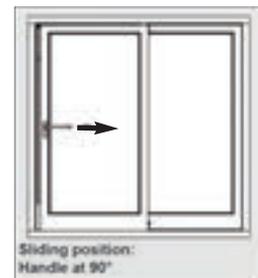
Capacity of a window and door to withstand involuntary or accidental impact.

## LIFT AND SLIDE HARDWARE

The lift and slide windows and doors create bright living spaces offering a particular pleasant atmosphere. The hardware distinguishes itself by the utilisation comfort, protection, burglar-security and variable ventilation.

### Advantages:

- Lock with high load capacity and durability
- Maximum load 330 - 440 kg
- Sliding entrusted to a group of bogies for an easy and silent use
- Ventilation and security by means of a kit that permits the natural air change in order to obtain a healthy internal climate and to prevent the formation of mould.



## NEW LOCK

Clean, uniform and safer...only some of the features of the new METRA lock.

No particular that sticks out, nor on the frame or on the sash, which allows obtaining a solution aesthetically more linear in complete safety, preventing accidental contact.



### Anti-burglary- system:

It is possible to fabricate lift and slide windows and doors with sash weight 300-400 kg with burglar-proof security according to the resistance class RC2 (European standard EN 1627).

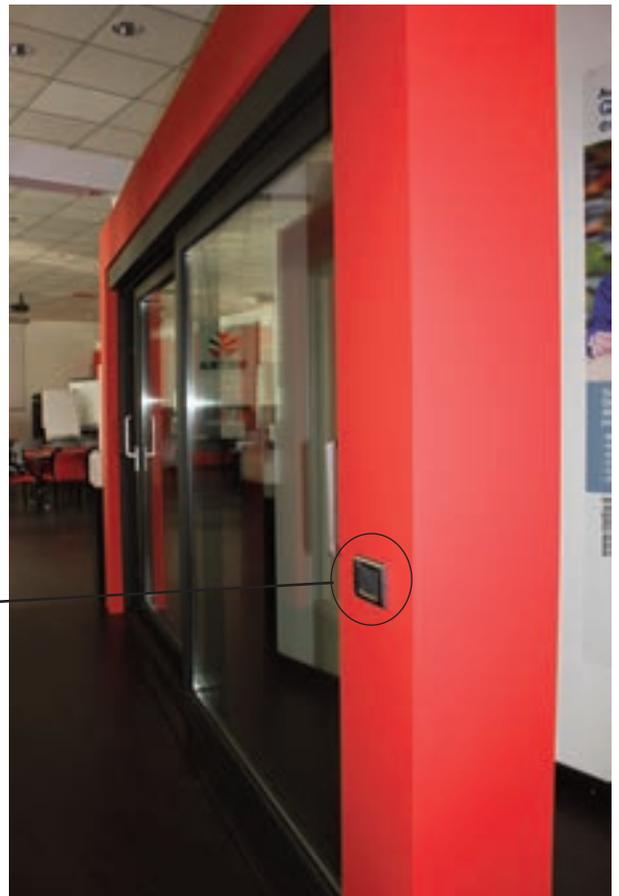
## APPLICATIONS

### Automazione

It is possible to fabricate lift-slide windows and doors combined with a modern drive technology. In this case, all lifting, moving, opening and closing operations are carried out by a motor, but without cables and electric connections on the sash.

This system is activated by:

- wall switch/key switch
- remote actuating
- push and go function
- handle.



## APPLICATIONS

### Comfort close

Automatic sash retraction system for a gentle and silent door closing. The sash is decelerated towards the closing edge which ensures a controlled sash closing avoiding dangerous situations.

This system decelerates light weighted as well as heavy sashes up to 300 kg before it reaches the locked position.

The sash retraction system is concealed in an aluminium housing fitted on the side of the frame and therefore invisible from outside.

This solution ensures minor strain on the window elements and their increased durability.



### Soft lift

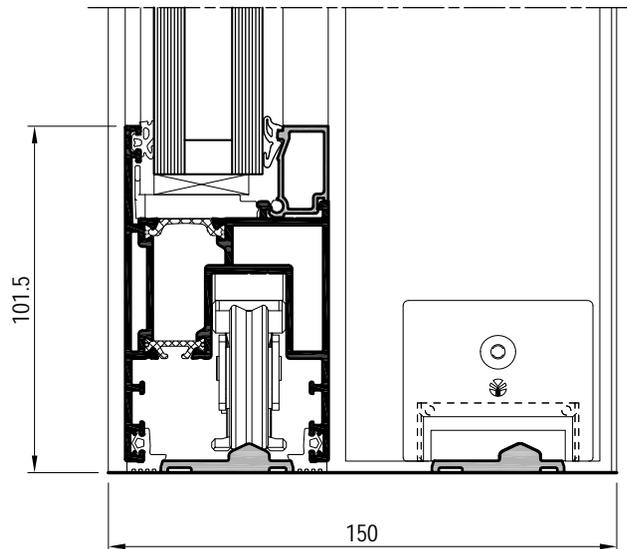
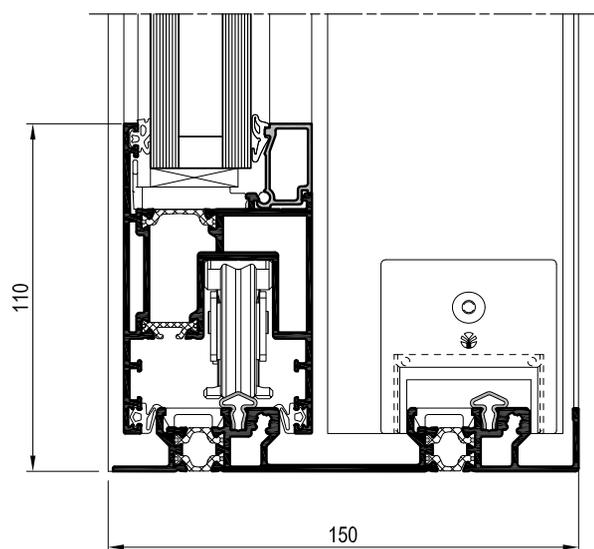
Gear damper system that regulates the handle operation so that the handle smoothly slides precisely back towards its locked position in a controlled way.



## APPLICATIONS

### Lowered sill

It is possible to fabricate a solution with low or ultra-low sill to meet the needs of any type of users according to D.M.LL.PP. from 14/06/89 n. 236, maintaining the same performance of thermal insulation and water and air tightness



## ACCESSORIES AND DESIGN COMPLEMENTS - Essence Handle

Comfort, design and security for your living space! This innovative range of ergonomic handles designed as a complement to the METRA systems provides a distinctive and unique style to modern rooms.

### Advantages:

- Secustik: By means of this system the window cannot be opened from the outside and so your house is totally protected.
- Match with other handles in the home
- Miscellaneous solutions:
  - with internal handle and external concave handle
  - with cylinder inside and outside or inside only.

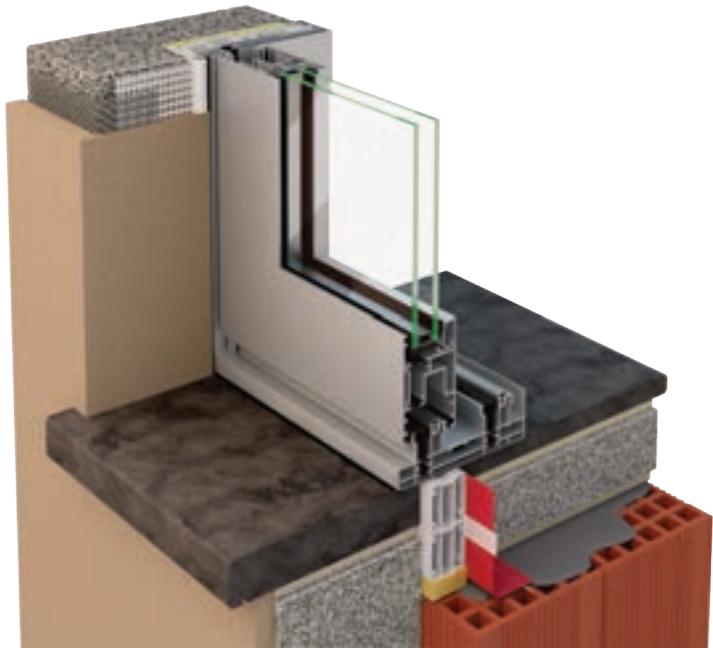


## LAYING SYSTEM

Posa Clima METRA is an innovative laying system for windows and doors that ensures a high thermal and acoustic comfort of the building and high energy savings. (The laying system can be applied to all METRA systems).

### Advantages:

- Higher thermal and acoustic insulation of the windows or doors
- Riciclabile e già esente da stabilizzanti al piombo e altri metalli pesanti
- Excellent resistance to weather effects and long-lasting even with sun exposure, salty air and the most common chemicals
- Fireproof and self-extinguishing
- Easy to paint.



## FINISHES AND COATINGS



### Lively and long-lasting colours

The most gratifying and creative part of purchasing METRA windows and doors is definitely choosing the surface finishing or coating. The surface finishing is made using natural pigments with zero environmental impact thus ensuring exceptional aesthetic results and durability such as mat, gloss and extra gloss anodised or sandeffect paint, fantastic to be seen and touched. Within the range METRA are available polyester powders in class 2 in order to ensure a high quality product without long-lasting colours.



## FINISHES AND COATINGS

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 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.

### 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.

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

Earth line, versatile finishes that meet the most different needs on the market. The seven types reproduce the typical colours of nature.

Luce line, composed of solutions with different finishes: smooth, rough and Pointillist finish. Fifteen solutions to meet any kind of request, classic or innovative.

**Decor**



**AL**



**Earth**



**Luce**



**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**



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