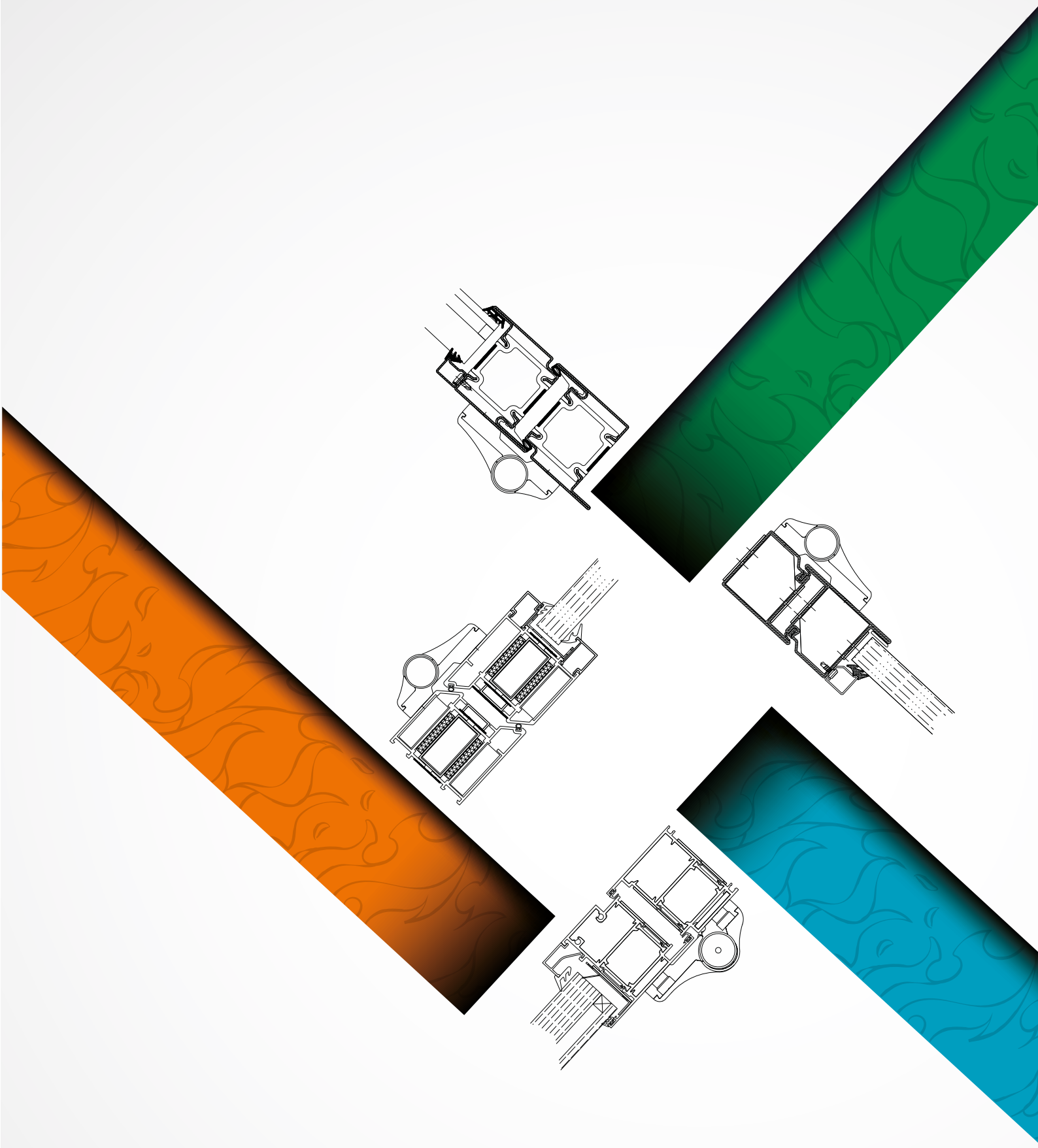
TECHNICAL CATALOGUE

GLASSFIRE®



FIRE-RESISTANT GLAZED UNITS
in steel and aluminium for indoor and outdoor use

TECHNICAL CATALOGUE

GLASSFIRE®

SERRAMENTI TAGLIAFUOCO

ED. 19/10/26

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Quality Certifications
Our window and door systems comply with international standards and the required quality and safety certifications.

Use and Maintenance
Follow the installation and maintenance instructions to ensure the safety and optimal longevity of the products.

Contact Information
For sales inquiries, technical information, or custom requests:
Phone: 0832 260537
Website: www.glassfire.eu

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CUTTING-EDGE SOLUTIONS

Glassfire is a recognized leader in the manufacture of fire-resistant glazed systems, founded with a clear vision: to protect people and spaces through innovative fire-safety solutions without compromising on quality or design. Our mission is to provide certified systems that serve as genuine protective tools, combining safety, aesthetics, and functionality.

Today, as always, Glassfire is dedicated to meeting every client's needs by offering technical expertise and comprehensive support.

Valued for its reliability, competence, and attention to detail, Glassfire is the ideal partner for those seeking high-quality fire-safety solutions born of passion, research, and dedication.

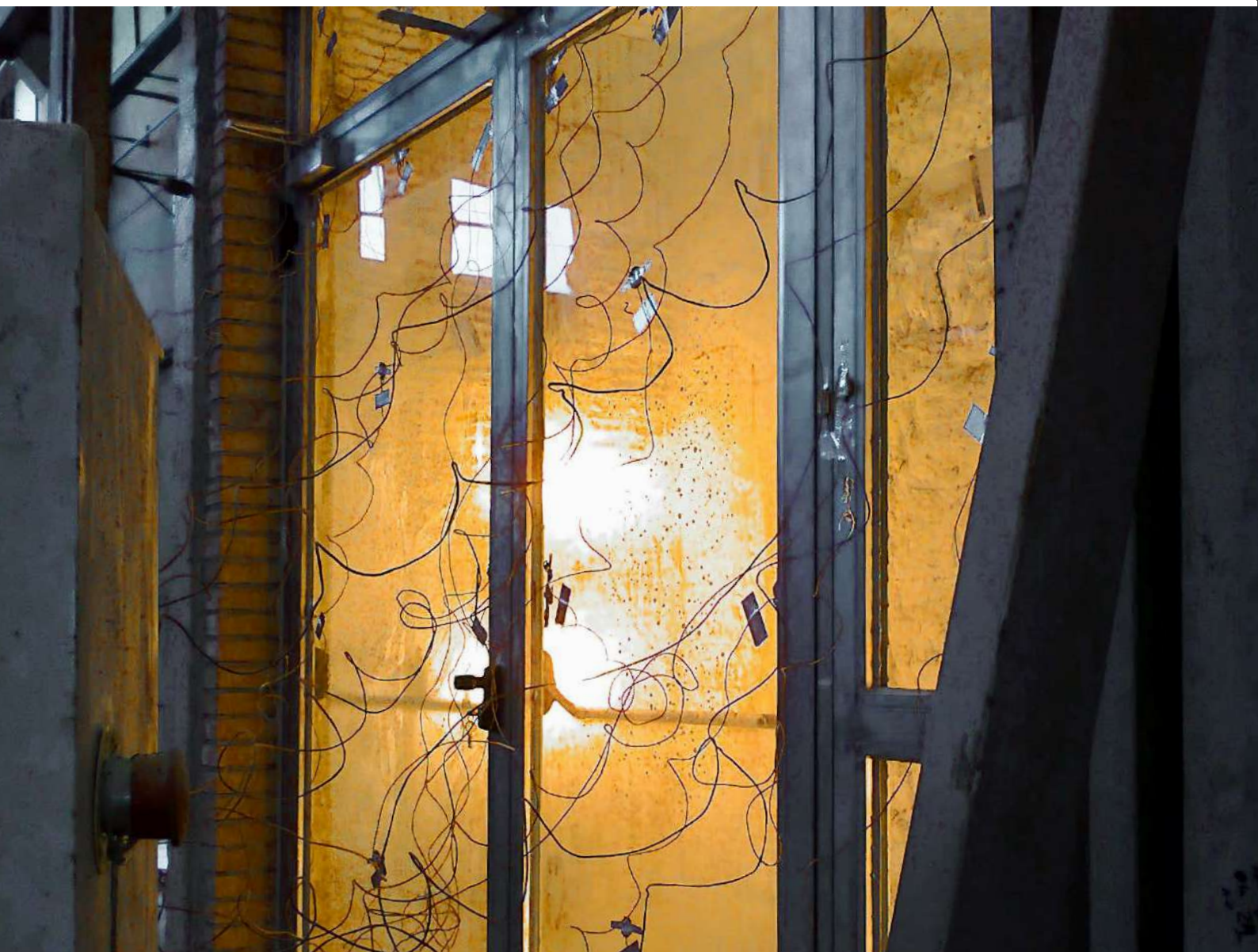
CERTIFIED SAFETY

Glassfire offers a wide range of fire-resistant steel and aluminum fixtures for both interior and outdoor use, designed to ensure safety and meet diverse design requirements.

The fixtures undergo rigorous testing that simulates a "standardized fire" to evaluate two fundamental parameters:

- **Integrity (E):** The fixture must withstand the fire without compromising its seal.
- **Thermal insulation (I):** The temperature difference between the side exposed to the fire and the unexposed side must not exceed critical limits.

Each fixture is classified according to its fire resistance duration, allowing for the selection of the product best suited to specific needs.



COMPREHENSIVE SUPPORT

Glassfire supports designers and architects with services tailored to every stage of the project.

Technical Consultation
Personalized support in selecting the solutions best suited to the project.

Certified Production
Manufacturing of fire-resistant doors and windows with safety certifications.

Customized Cost Estimation
Preparation of detailed quotes based on project specifications.

On-Site Technical Support
Qualified assistance during installation.

Custom Design
Tailor-made design solutions compliant with fire safety regulations.

Shipping and Logistics
Delivery management with dedicated logistics to ensure reliable timelines.

After-Sales Service
Ongoing assistance for maintenance and technical support.

Sales network
Industry-expert agents and consultants providing support in the selection of fire-resistant doors and windows for new construction or renovation projects.

THE PRODUCTS

Fire-resistant glazed units

	STEEL	STEEL WITH THERMAL BREAK	ALUMINUM INDOOR USE	ALUMINUM WITH THERMAL BREAK	ALUMINUM EW120
Single-leaf door	●	●	●	●	●
Double-leaf door	●	●	●	●	●
Complex door	●	●	●		
Single-leaf Plus door	●				
Double-leaf Plus door	●				
Complex Plus door	●				
Single-panel sliding door			●		
Double-panel sliding door			●		
Single-leaf window	●	●	●	●	●
Double-leaf window	●	●	●	●	●
Hopper window				●	
Standard fixed glazing	●	●	●	●	●
Arched fixed glazing	●			●	●
Horizontal glazing	●				
Walkable horizontal glazing	●				
Silicone-jointed glazing			●		
Facade system	●			●	

Legend:

The following legend explains the meaning of each abbreviation, which is useful for understanding the technical specifications regarding the various sizes.

F.M. = Wall Opening
W.O.W. = Wall Opening Width
W.O.H. = Wall Opening Height
L.F.S. = Floor Opening Width
E.F.W. = External Frame Width
P.W. = Passage Width
W1 = Primary Leaf
W2 = Secondary Leaf

CERTIFICATIONS

Our fire-resistant doors and windows are certified by prestigious international bodies, guaranteeing quality, safety, and high performance. These certifications attest that the products comply with current regulations, offering effective solutions for the protection of people and property.

Product testing and compliance

ISTITUTO GIORDANO	It certifies fire safety compliance, material quality, and fire resistance effectiveness.
Applus+	It guarantees that our products offer effective protection against the risks and damage caused by fire.
CE	It ensures compliance with European fire safety standards, certifying the suitability of the fixtures for outdoor installation.
EN	The door and window units are certified according to EN standards, which establish minimum fire resistance requirements, including resistance duration and protection against the spread of flames and toxic gases. Compliance with EN standards ensures that our products meet the safety requirements mandated throughout Europe.

Installation and maintenance

ICIM ACCREDIA Marco Rucco	The company is authorized to carry out installations in compliance with the UNI 11473-3 standard and the requirements set forth in the Ministerial Decree of 1 September 2021.

Sustainability and environmental impact

contributes to MRC3,MRC5,EQC2 EQC7,EQC9 IT16-21073001 greenITop.com	GLASSFIRE window and door systems facilitate LEED certification through the use of low-VOC materials and a design that optimizes natural light and acoustic insulation. In addition to ensuring building energy efficiency, we employ responsible waste management and recyclable packaging, offering integrated solutions for modern green building.
SI CERT UNI PdR 88	Glassfire is the first company in the Italian window and door sector to obtain UNI/PdR 88 certification, guaranteeing full compliance with CAM and European directives on Green Public Procurement.

Quality and business management

TÜV AUSTRIA CERTIFIED COMPANY ACCREDIA	International quality certification for management systems and products, guaranteeing operational standards of excellence.
ORGANISMO DI ATTESTAZIONE N.7424 SOA	SOA OG1, an official certification attesting to our technical and managerial capability to manage and execute complex projects in the civil and industrial construction sectors.

STEEL LINE $EI_2$30/60
FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 12

PLUS GLASS DOOR 18

WINDOW 24

FIXED GLAZING 26

HORIZONTAL WALK-ON GLAZING 28

CURTAIN WALL 30

Steel Line

EI_2 30/60

STEEL LINE EI_2 30/60

Fire-rated glazed door

single-leaf

VITREX F6	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Features	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation boards
Gaskets	Self-expanding perimeter seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Frame sections	Section coupling (T, Z, L) for various installation configurations
Wall opening profiles	T or Z profiles, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Thickness	60 mm
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges
Mounting	Attaches to the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (both width and height)
3rd Hinge	Required for wall opening width > 1100 mm or wall opening height > 2400 mm (upper position)
4th Hinge	Required for wall opening width > 1350 mm or wall opening height > 2550 mm (lower position)

Fire-rated lock

Closure	Single-point locking with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

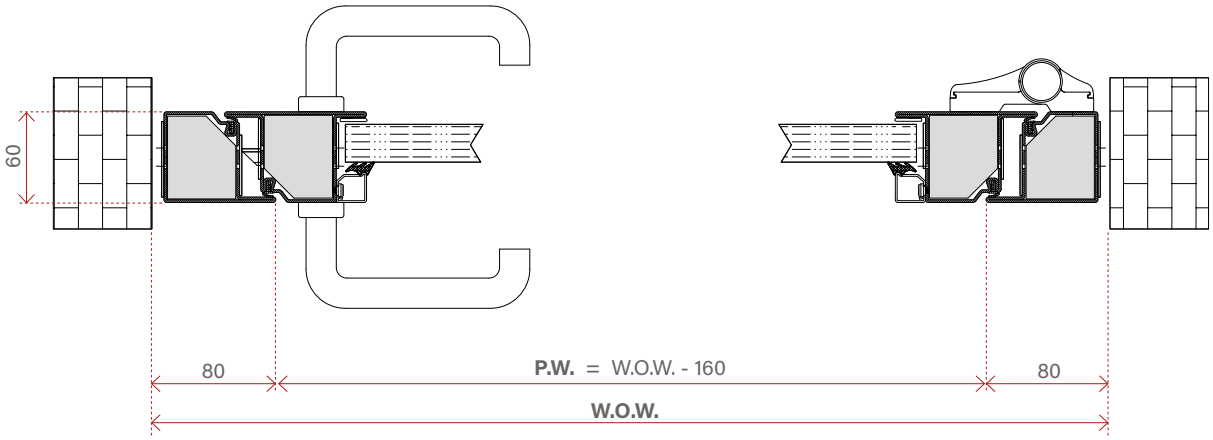
Standard unit finish

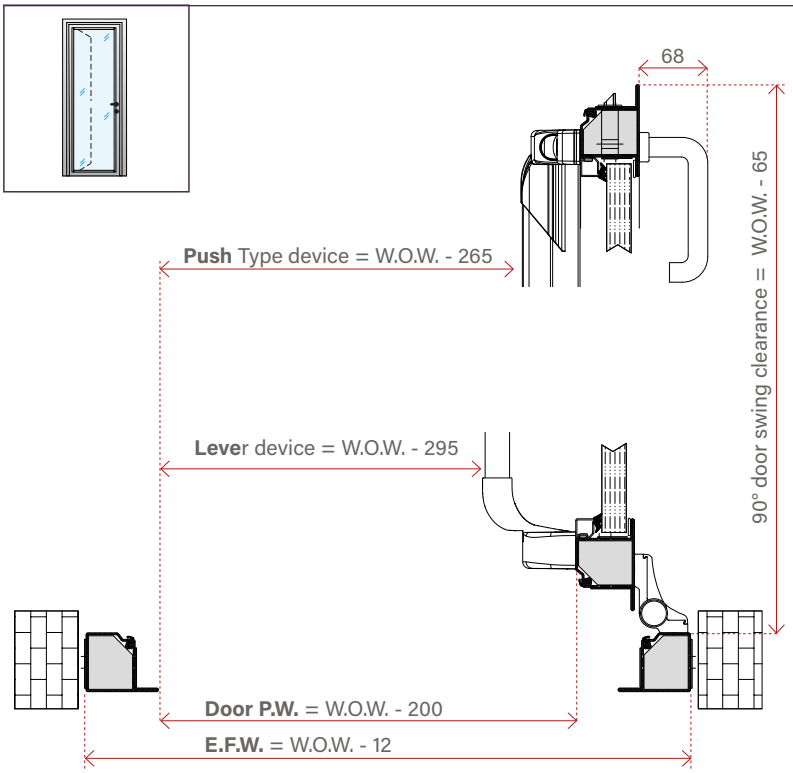
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

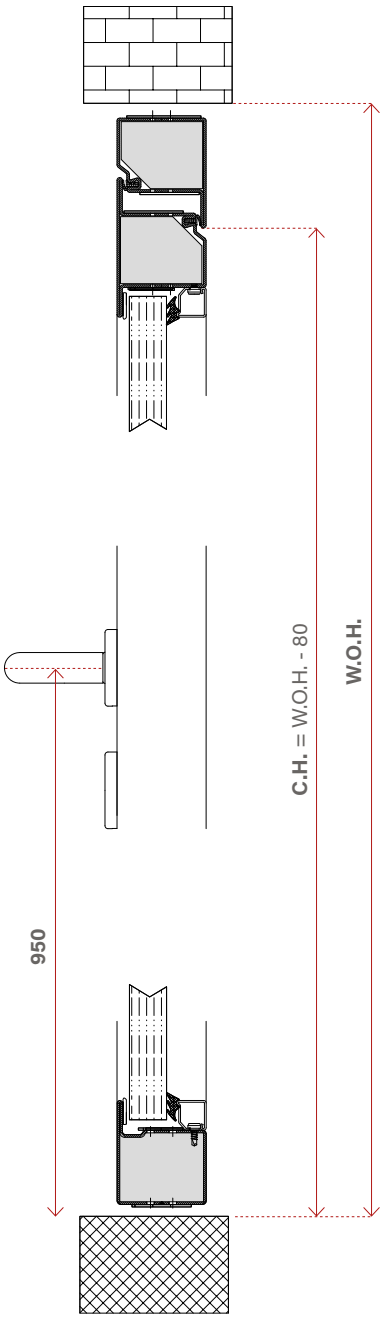
Assembly

Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Minimum width	600 mm
Min. width with panic bar	750 mm
Max. width with or without panic bar	1450 mm
Min. height for escape routes	2080 mm
Max. height with transom	2748 mm
Max. height without transom	2500 mm
Surface area constraint	3,8 m^2

Clear opening width with leaf at 90°	
Lever panic device	- 295 mm
With push type panic device	- 265 mm
Passage to leaves	- 200 mm

Rough Weight	EI$_2$30	EI$_2$60
kg/m^2	65	80

STEEL LINE EI_2 30/60

Fire-rated glass door

double leaf

VITREX F6	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Features	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation panels
Gaskets	Self-expanding perimeter seals (for hot smoke) and rebate seals (for cold smoke) inserted into the profiles
Frame sections	Section coupling (T, Z, L) for various assembly configurations
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	60 mm
Central transom (optional)	Positioned 950 mm above the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges per wall opening
Mounting	Attached to the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (both width and height)
3rd Hinge	Required in the upper position for W.O.W. > 2200 mm, W1 > 1100 mm, or W.O.H. > 2400 mm
4th Hinge	Required in the lower position for W.O.W. > 2500 mm, W1 > 1350 mm, or W.O.H. > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

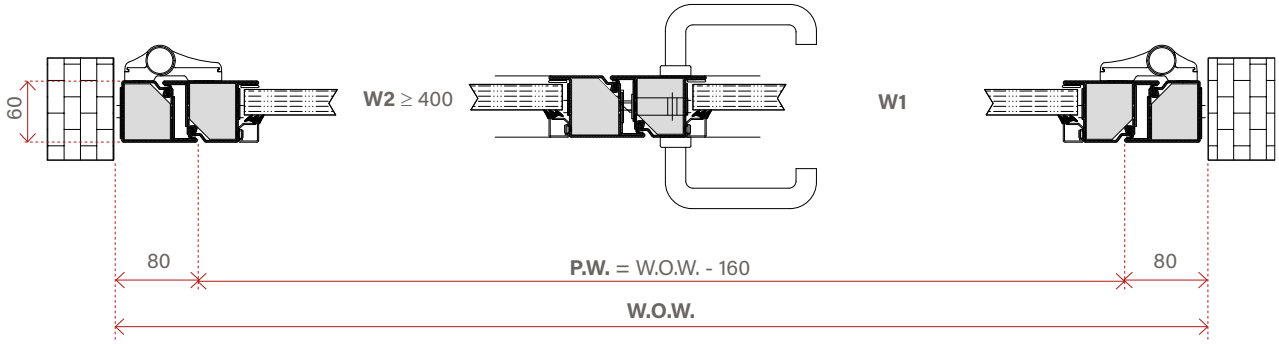
Standard unit finish

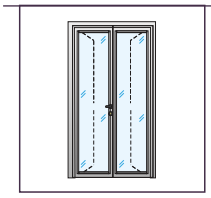
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

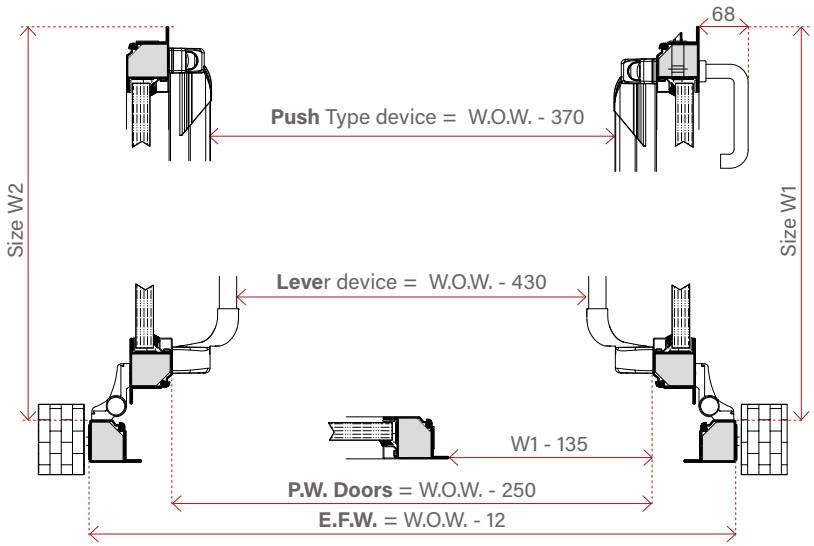
Assembly

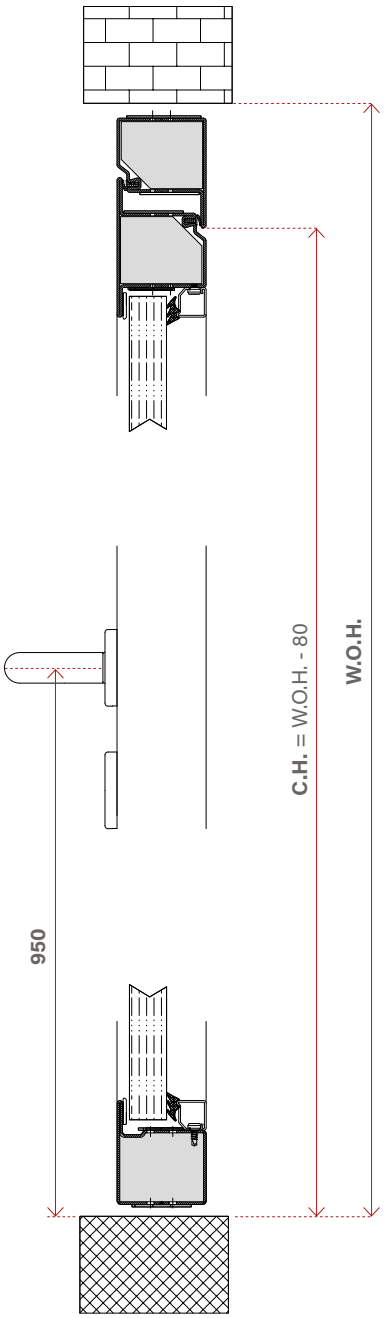
Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width (asymmetric) with handle	980 mm (580+400)
Min. width (symmetric) with handle	1160 mm (580+580)
Min. width (asymmetric) with panic bar	1500 mm* (W2>500)
Min. width (symmetric) with panic bar	1400 mm* (700+700)
Max. width with or without panic bar	2576 mm
Min. height for escape routes	2080 mm
Max. height with transom bar	2748 mm
Max. height without transom bar	2500 mm
Surface area constraint	6,6 m^2

Clear opening width with leaf at 90°	
Lever panic device	- 430 mm
With push type panic device	- 370 mm
Passage to leaves	- 250 mm

Rough Weight	EI$_2$30	EI$_2$60
kg/m^2	60	75

*requirement to mark the main leaf

STEEL LINE EI_2 30/60

Fire-rated glazed door

with Sidelight and transom window

VITREX F6

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Features	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Self-expanding perimeter seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Frame sections	Section coupling (T, Z, L) for various assembly configurations
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Wall opening configuration	Single- or double-leaf version, with options for side panels and fanlights; glazing bead mounted on the push or pull side of the leaf
Thickness	60 mm
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges per door
Mounting	Mounted on the leaf and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the leaf and frame, in both width and height
3rd Hinge	Specifications for 1- or 2-leaf glazed doors follow
4th Hinge	Specifications for 1- or 2-leaf glazed doors follow

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-rail system for synchronized self-closing of door leaves. For 2 leaves: W.O.W. > 1250 mm.
Finish	Silver

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

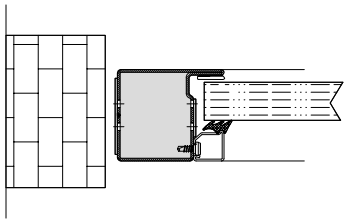
Assembly

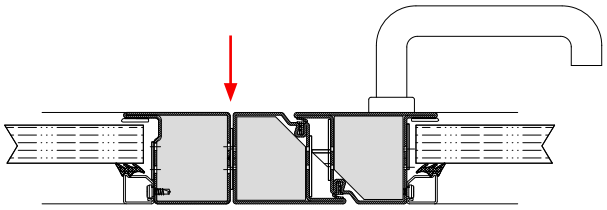
Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

Section example

Sidelight separated from the window unit

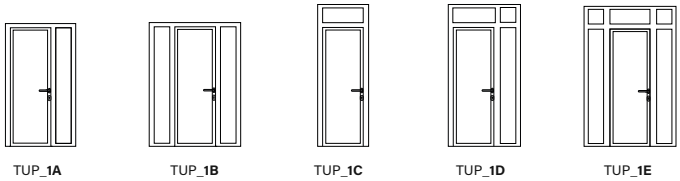


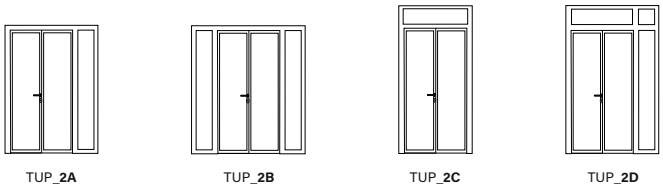


Size limits

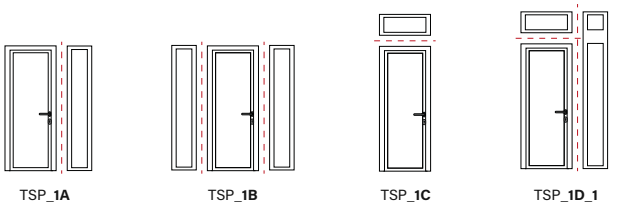
Side panel and transom window ≥ 350 mm

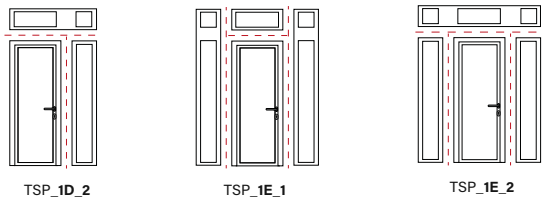
Unique frame can be produced up to 2400 x 3000 mm

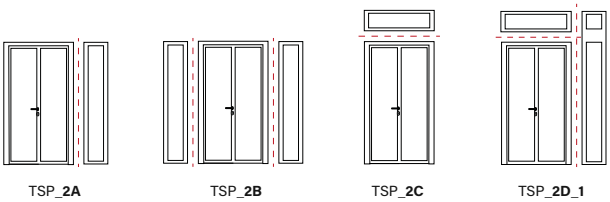


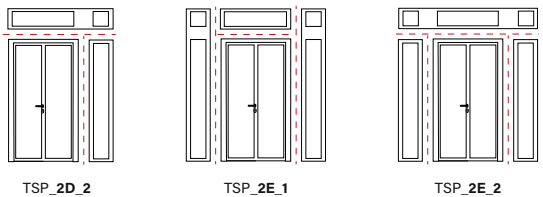


Separate frames if dimensions exceed 2400 x 3000 mm



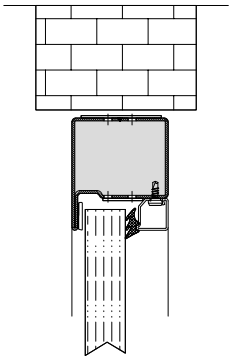


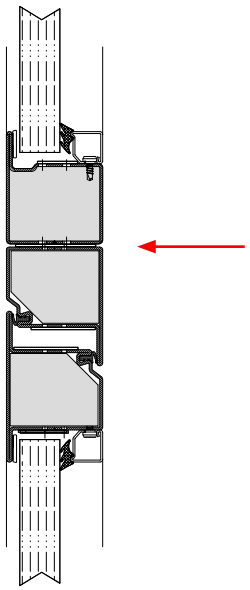




Section example:

transom window separate from the window unit





STEEL LINE EI_2 30/60

PLUS fire-rated glass door

single-leaf

VITREX F6 PLUS

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Features	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation panels
Seals	Self-expanding perimeter seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Frame Sections	Section coupling (Z, L) for various assembly configurations
Door Profiles	T or Z profiles, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Thickness	Leaf: 60 mm | Frame: 80 mm
Central Crosspiece (optional)	Positioned 950 mm from the floor
Door Stop	Mandatory floor-mounted assembly, with a maximum opening angle of 100°

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Sidelight and transom window

Characteristics	Supplied separately and featuring an enlarged 80 mm profile.

Hinges

Number	2 adjustable concealed hinges *
Mounting	Attached to the leaf and frame via threaded pins
Adjustment	Grub screw release for adjusting the clearance gap between the leaf and frame (both width and height)
Maximum opening	100°

Fire-rated lock

Closure	with a single locking point and a cylinder lock (supplied with three keys)

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Recessed slide-arm mechanism for door self-closing *
Finish	Silver
Apertura massima	120°

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

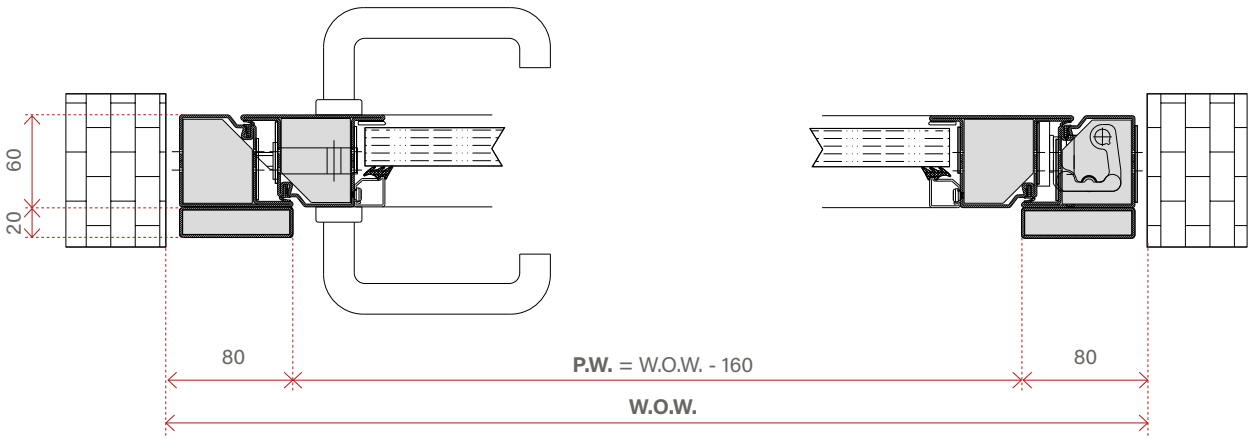
The door can be supplied with concealed hinges, a concealed door closer, or both options.

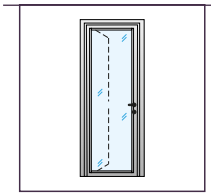
* Note: We recommend installing a floor-mounted door stop to absorb impact and prevent damage to the door.

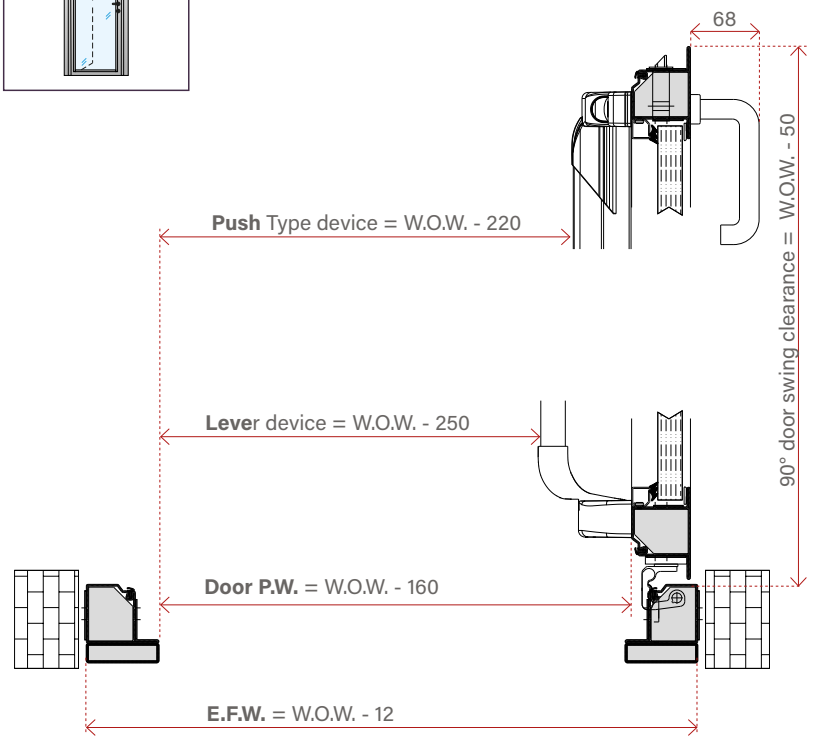
Assembly

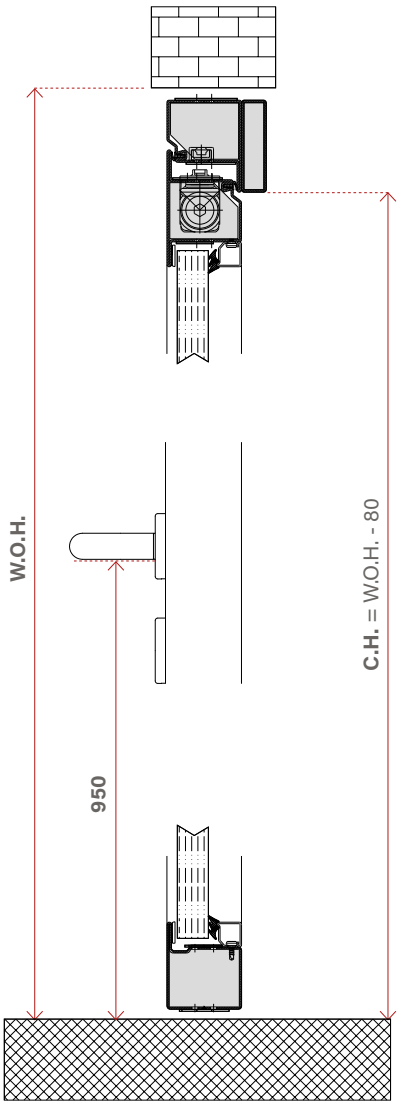
Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width with or without panic bar	800 mm
Max. width with or without panic bar	1200 mm
Min. height for escape routes	2080 mm
Max. height (as built)	2300 mm

Clear opening width with leaf at 90°	
With lever-operated panic bar	- 250 mm
With push-bar	- 220 mm
Transfer to the leaf / frame	- 160 mm

Rough Weight	EI$_2$30	EI$_2$60
kg/m^2	65	80

STEEL LINE EI2 3_0/60

PLUS fire-rated glass door

double-leaf

VITREX F6 PLUS

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Features	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation boards
Gaskets	Self-expanding perimeter seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Frame sections	Section coupling (Z, L) for various assembly configurations
Wall opening profiles	T or Z profiles selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Thickness	Leaf: 60 mm | Frame: 80 mm
Central transom (optional)	Positioned 950 mm from the floor
Fermo anta	Mandatory floor-mounted assembly, with a maximum opening angle of 100°

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Sidelight and transom window

Characteristics	Supplied separately and featuring an enlarged 80 mm profile.

Hinges

Number	2 adjustable concealed hinges per wall opening*
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Grub screw release for adjusting the clearance gap between the wall opening and frame (both width and height)
Maximum opening ante	100°

Fire-rated lock

Closure	with a single locking point and a cylinder lock (supplied with three keys)

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Recessed sliding mechanism for synchronized door self-closing*
Finish	Silver
Apertura massima	120°

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

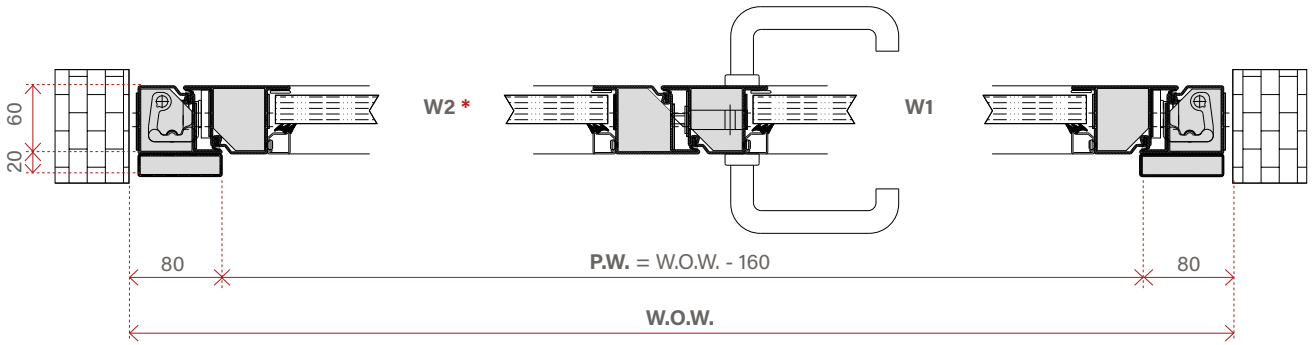
The door can be supplied with concealed hinges, a concealed door closer, or both options.

* Note: We recommend installing a floor-mounted door stop to absorb impact and prevent damage to the door.

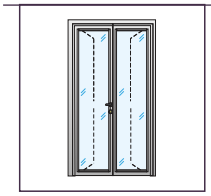
Assembly

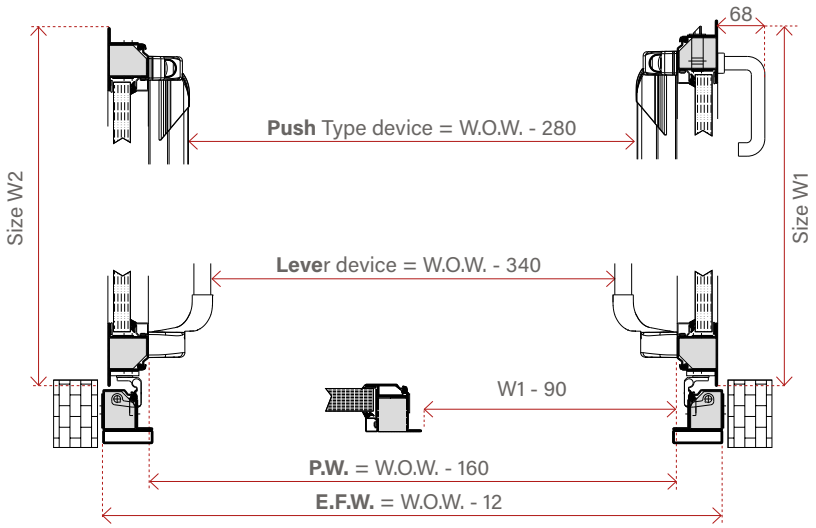
Rigid support
Steel pre-casing 50x15x2 (to be ordered separately)
Walls and structural elements with perimeter protective coating

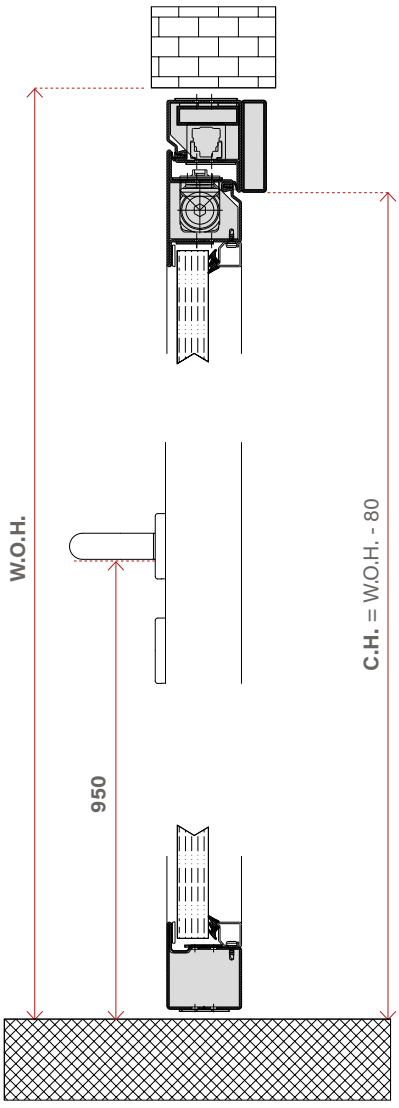
Fire-rated partitions' installation must be carried out by specialized personnel.



*** with surface-mounted door closer ≥ 400 mm**
with concealed door closer ≥ 800 mm







Dimensions	
Min. width with recessed door closer	1600 mm (800+800)
Max. width	2150 mm
Min. height for escape routes	2080 mm
Max. height (as built)	2300 mm

Clear opening width with leaf at 90°	
With lever-operated panic bar	- 340 mm
With push-bar	- 280 mm
Transfer to the leaf / frame	- 160 mm

Rough Weight	EI$_2$30	EI$_2$60
kg/m²	60	75

STEEL LINE EI_2 30/60

PLUS fire-rated glazed door

with Sidelight and transom window

VITREX F6 PLUS

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Characteristics	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interlayer of calcium silicate-based insulation boards
Seals	Perimeter self-expanding hot-smoke seals and cold-smoke rebate seals inserted into the profiles
Frame Sections	Section coupling (Z, L) for various assembly configurations
Door Profiles	T or Z profiles selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Door Configuration	Single or double-leaf version, with options for side panels or fanlights; glazing bead mounted on the push or pull side of the leaf
Thickness	Leaf: 60 mm | Frame: 80 mm
Central Crosspiece (optional)	Positioned 950 mm from the floor
Door Stop	Mandatory floor-mounted assembly, with a maximum opening angle of 100°

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Sidelight and transom window

Characteristics	Supplied separately and featuring an enlarged 80 mm profile.

Hinges

Number	2 adjustable concealed hinges per wall opening*
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Grub screw release for adjusting the clearance gap between the wall opening and frame (both width and height)
Maximum opening ante	100°

Fire-rated lock

Closure	With a single locking point and a cylinder lock (supplied with three keys)

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Recessed slide-arm mechanism for door self-closing*
Finish	Silver

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

The door can be supplied with concealed hinges, a concealed door closer, or both options.

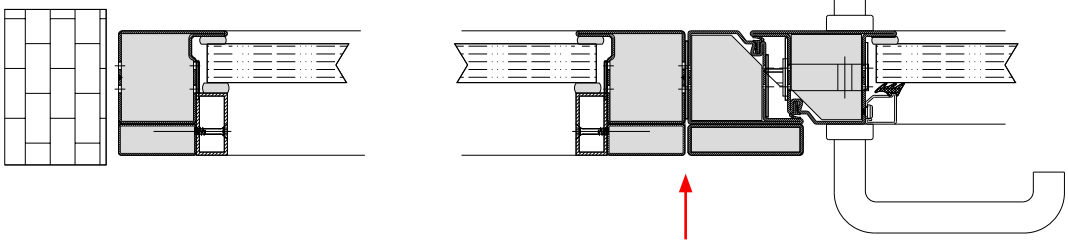
* Note: We recommend installing a floor-mounted door stop to absorb impact and prevent damage to the door.

Assembly

Rigid support
Steel pre-casing 50x15x2 (to be ordered separately)
Walls and structural elements with perimeter protective coating

Fire-rated partitions' installation must be carried out by specialized personnel.

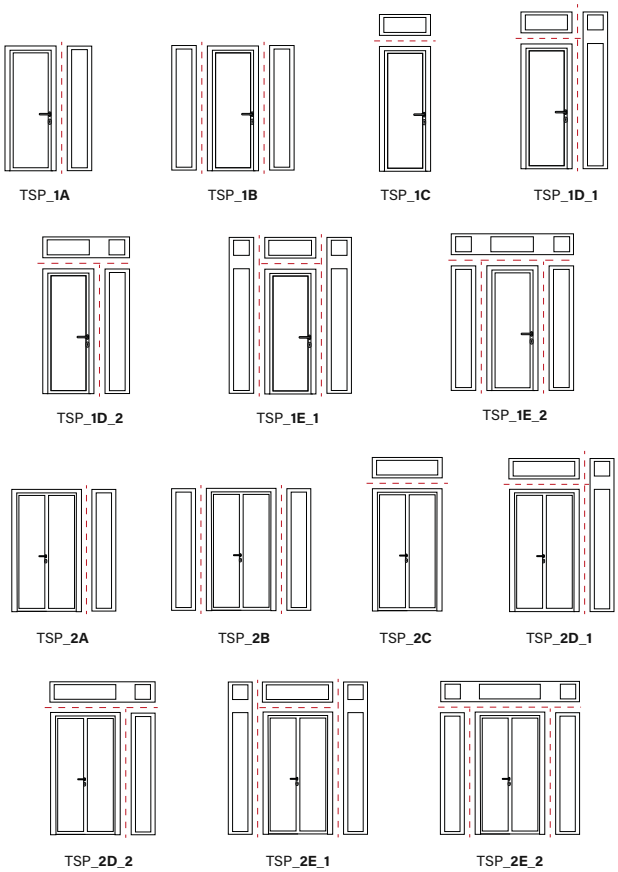
Section example
Sidelight separated from the window unit

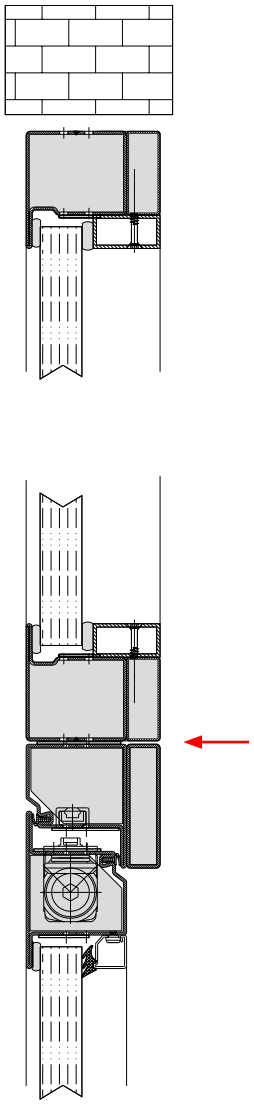


Size limits

Side panel and transom window	≥ 350 mm
Unique frame	not feasible
Separate frames	

Technical note: The "Plus" complex glazing system cannot be supplied as a single unit; instead, it must be assembled by combining different types—openable sections, transom windows, and/or sidelights—all featuring an 80 mm thick frame.





Section example:
transom window separate from the window unit

STEEL LINE EI_2 30/60

Fire-resistant window

Single or double-leaf

VITREX F6	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Made of galvanized steel profiles, slotted on four sides
Characteristics	Rebate flanges, 18/10 gauge, electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation boards
Gaskets	Self-expanding hot-smoke seals (perimeter) and cold-smoke rebate seals inserted into the profiles
Frame sections	Section coupling (Z, L) for various assembly configurations
Wall opening profiles	Z-profiles flush with the frame
Wall opening configuration	Single- or double-leaf version; glazing bead mounted on the pull side of the leaf
Thickness	60 mm
Approximate weight	55 kg/m² EI_2 30 70 kg/m² EI_2 60

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) – 25mm ($EI_2$60)

Hinges

Quantity	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height
3rd Hinge	Required for a wall opening with a rebate width (W.O.W.) > 1200 mm or rebate height (W.O.H.) > 2000 mm

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Self-locking lock

Closure	On the secondary leaf

Half-handle

Finish	Silver

Door closer

Type	Slide-rail closer for self-closing door leaves. For 2 leaves: W.O.W. > 1250 mm.
Finish	Silver

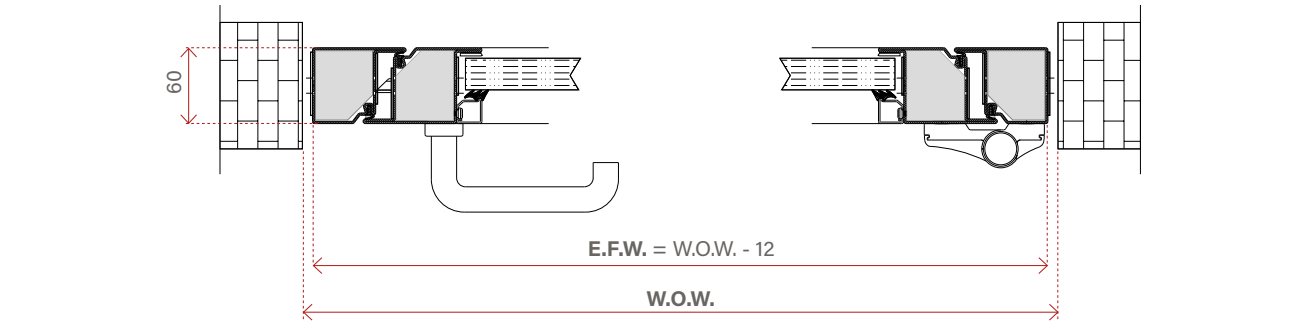
Standard unit finish

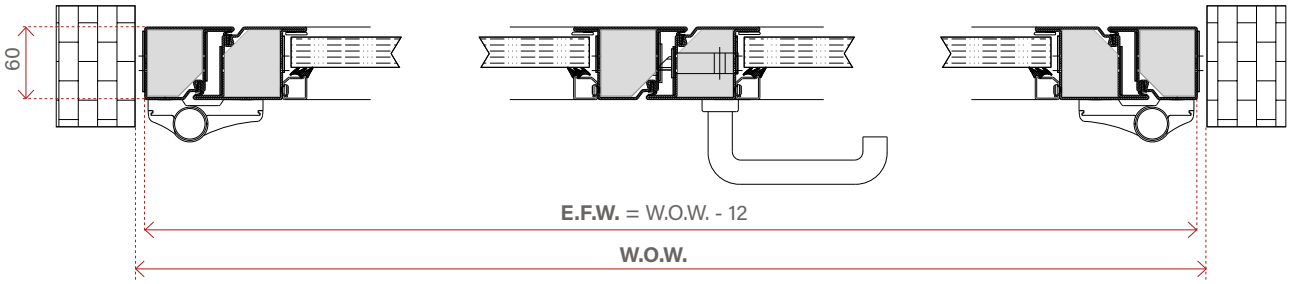
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

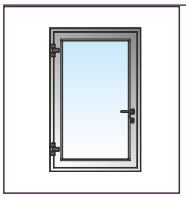
Assembly

Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.





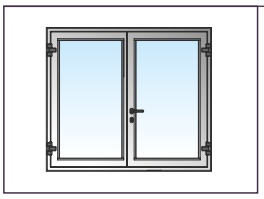


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	480 x 610 mm
Maximum W.O. (W x H)	1220 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 2000 mm



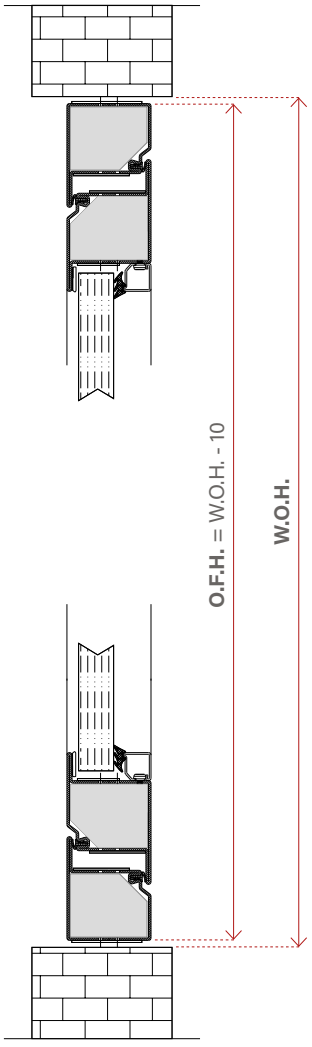
ATTENTION:

The opening width must be less than or equal to twice the height.

For W.O.W. dimensions from 1000 to 1240 mm, the use of scissor-arm door closers and an external door coordinator is mandatory.

Double-leaf dimensions

Minimum W.O. (W x H)	1000 (500 + 500) x 610 mm
Maximum W.O. (W x H)	2000 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 2000 mm



STEEL LINE EI_2 30/60

Bidirectional fire-resistant fixed glazing

with rectangular or arched panes

VITREX F5

CE UNI EN 1364-1

Fire-resistant unit

Material	Cold-formed profiled steel tubing	
Characteristics	Cold-formed stop profiles, 18/10 gauge (T, Z, L shapes)	
Insulation	Calcium silicate-based insulation panels	
Gaskets	Perimeter hot-smoke intumescent seals	
Configurations	Any intermediate rails positioned according to our A, B, C criteria	
Thickness	60 mm	
Approximate weight	50 kg/m² ($EI_2$30)	65 kg/m² ($EI_2$60)

Fire-resistant glass

Supply	Unassembled
Composition	Laminated, tempered glass with an intumescent interlayer
Class	1B1
Thickness	16 mm ($EI_2$30) – 25 mm ($EI_2$60)

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

Assembly

Rigid support	wall plugs or turbo screws
Steel pre-casing 50x15x2 (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

PLEASE NOTE:

When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.

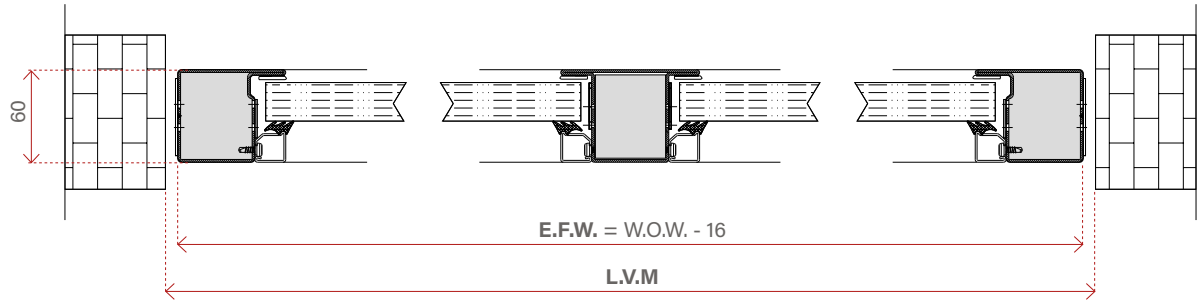
For irregular arches, a technical drawing or architectural template must be provided.

For large-scale arched frames, we recommend a 3D laser scan survey.

Casing/trim is not included; we recommend using silicone or filler for the finish.

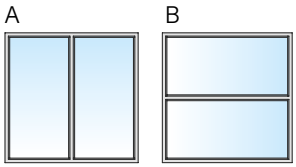
For larger dimensions, please contact our sales department.

Fire-rated partitions' installation must be carried out by specialized personnel.

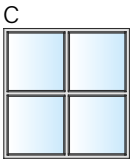


WITH CROSSBAR

Vertical or Horizontal



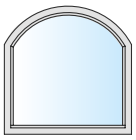
Double



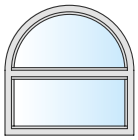
Dimensions

W.O.W.minimum	350 mm
W.O.H. maximum	3200 mm
W.O.W. maximum	no limits
L X h max of the glass (recommended)	1600 x 2800 mm

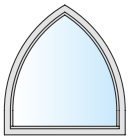
ARCHED: Can only be produced using L-shaped Slim profiles.
Cover profiles are excluded.



Depressed arch



Semicircular (arch)
It is recommended to traverse at the beginning of the arched portion

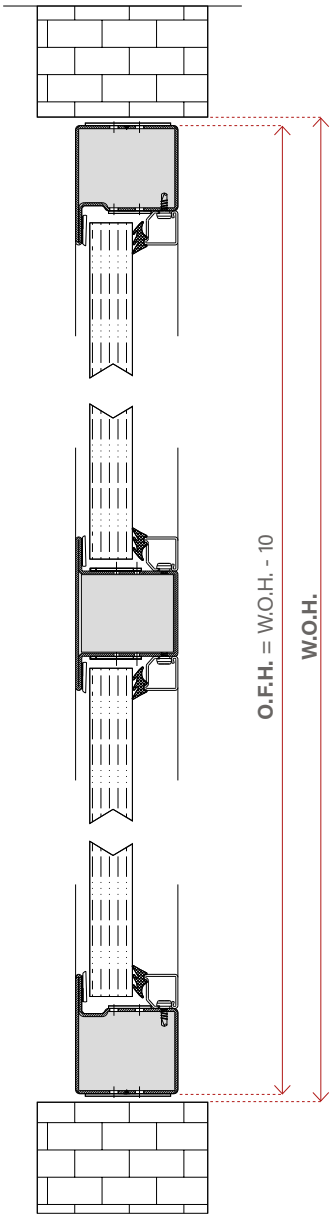


Gothic

Size limits for Semicircular arch (arch)

Minimum radius – slim profile	≥ 370 mm
Diameter – slim profile	≥ 740 mm

For information regarding size limits for Gothic and depressed arches, please contact the Technical Department.



STEEL LINE EI_2 30/60

Fixed fire-resistant glazing

Horizontal

VITREX F9
Floor System
CE UNI EN 1365-2

Fire-resistant unit

Material	Load-bearing steel tubular sections
Insulation	Core of inorganic silicate-based material
Gaskets	Intumescent material along the entire outer and inner perimeter
Configurations	Any crossbars positioned according to our specifications
Thickness	80 mm
Approximate weight (including glass)	65 kg/m²

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	27 mm
Approximate weight	60 kg/m²

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

Assembly	Resting on a ledge	dowels or turbo screws

STEEL LINE EI_2 30/60

Fixed fire-resistant glazing

Horizontal walkable

VITREX F9
Floor System walkable
CE UNI EN 1365-2

Fire-resistant unit

Material	Load-bearing steel tubular sections
Insulation	Core of inorganic silicate-based material
Gaskets	Intumescent material along the entire outer and inner perimeter
Configurations	Any crossbars positioned according to our specifications
Thickness	110 mm
Approximate weight (including glass)	155 kg/m²

Fire-resistant glass incamerato con vetro walkable

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	78 mm (27 mm EI 60 + 14 mm air gap + 37 mm laminated)
Weight	150 kg/m² (EI glass 60 kg/m² + walkable glass 90 kg/m²)

Standard unit finish

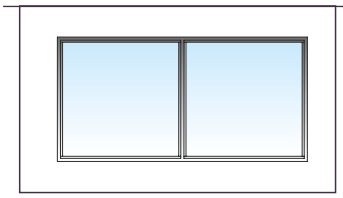
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

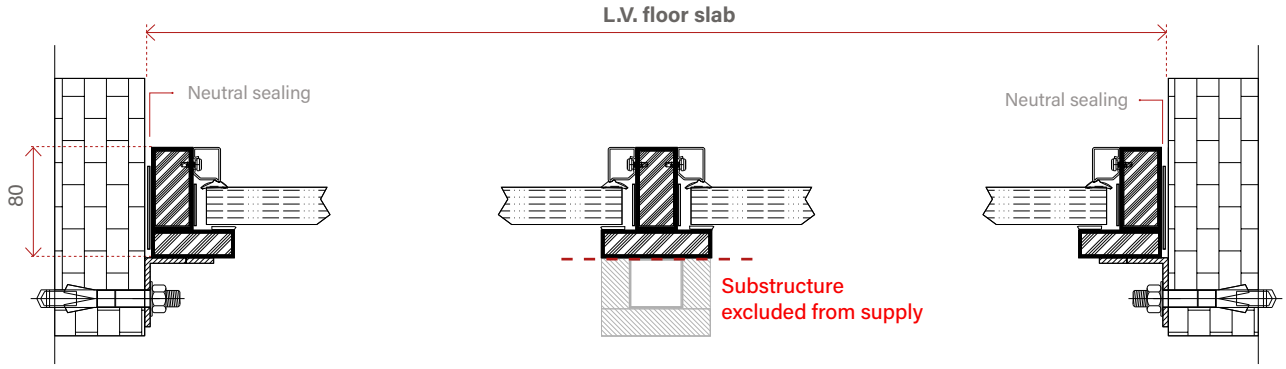
Flow rate calculations

Proved calculation	supplied complete with thermal rating based on experimental testing performed on a sample.
Nominal calculation	is not included in the scope of supply. The verifications must be carried out by the responsible designer in accordance with the "Technical Standards for Construction" (Ministerial Decree of 17 January 2018) and applicable regulations.

Assembly	Resting on a ledge	dowels or turbo screws

Fire-rated partitions' installation must be carried out by specialized personnel.



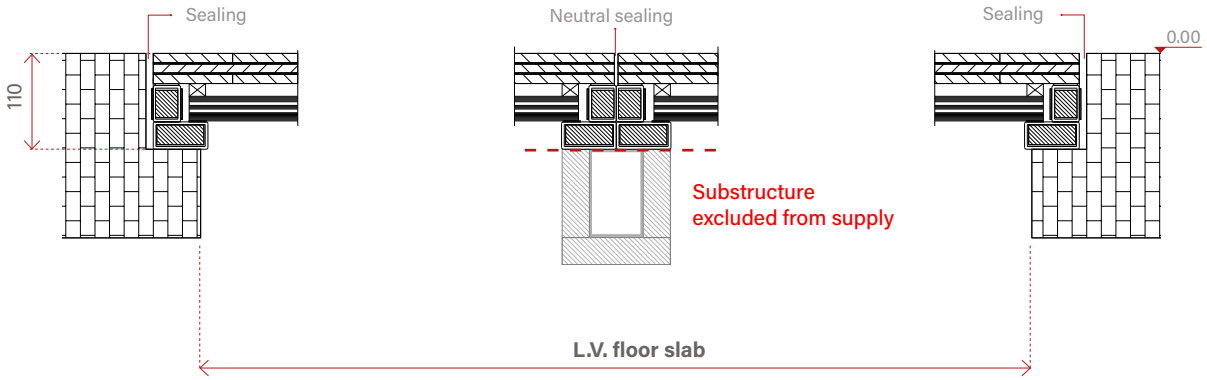


Size limits

Max. sheet size	W 1200 mm x H 2300 mm
Glass thickness	27 mm

PLEASE NOTE:

For window units with multiple sections, the minimum glazing area must not be less than 0.80 m². If it is smaller, the cost of the transom will be added.



Size limits

Max. sheet size	W 1200 mm x H 2300 mm
Glass thickness	78 mm (27 mm EI260 + 14 mm cavity + 37 mm laminated)

CERTIFIED SLIP RESISTANCE

R10 according to DIN EN 16165 Annex B

SURFACE ABRASION RESISTANCE

in accordance with UNI EN ISO 10545-7:2000

ATTENTION:

In windows with multiple partitions, the minimum size of the mirror must not be less than 0.80 m2. If it is lower, the cost of the crossing will be entered.

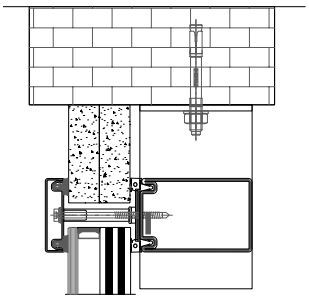
STEEL LINE EI_2 30/60

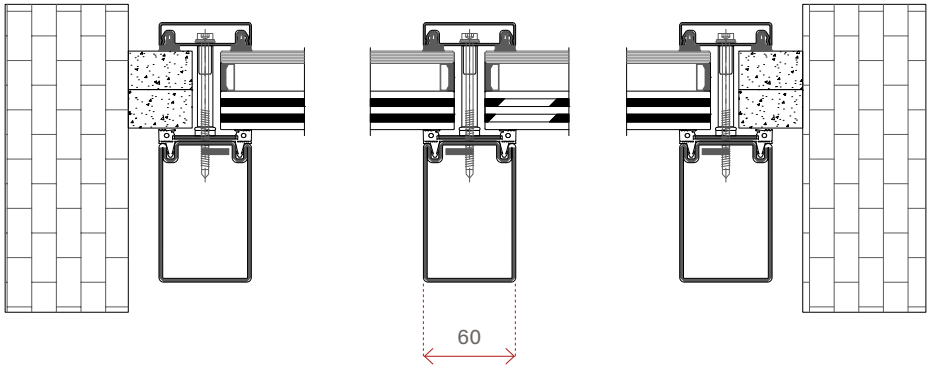
Fire-resistant curtain wall

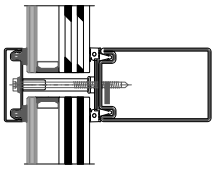
SILVIFIRE	
CE	UNI EN 13830

Certified by Istituto Giordano S.p.A., the “Silvifire” curtain wall system is designed for the construction of modular facades and glazed walls, significantly simplifying installation.

The system is capable of supporting heavy glazing units without the need for special measures.

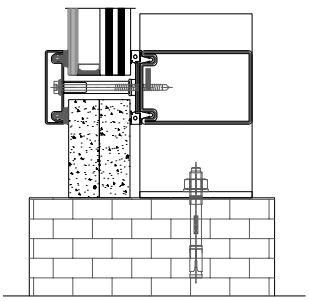






Characteristics

Stress resistance	High
Steel elasticity	Modulus of 210,000 N/mm²
Accommodation capacity	Heavy glazed panels
Construction	Single 60 mm steel frame
Pressure pads	Steel
Covers	Aluminum
Design	Refined aesthetic appeal
Finish	Matte PTFE-enriched powder coatings



Fire-rated partitions' installation must be carried out by specialized personnel.

NOTES

STEEL LINE $EI_2$90/120
FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 34

WINDOW 40

FIXED GLASS 42

Steel Line

EI_2 90/120

STEEL LINE EI_2 90/120

Fire-resistant glazed door

Single-leaf

VITREX F7

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Characteristics	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation panels
Gaskets	Self-expanding perimeter seals (for hot smoke) and rebate seals (for cold smoke) inserted into the profiles
Frame sections	Section coupling (T, Z, L) for various assembly configurations
Wall opening profiles	T or Z profiles flush with the frame, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Thickness	80 mm
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90) 50 mm (EI_2 120)

Hinges

Number	3 adjustable three-wing hinges
Mounting	Attaches to the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (both width and height)
3rd Hinge	Standard (upper position)
4th Hinge EI_2 90	Required for wall opening width > 1100 mm or wall opening height > 2400 mm (lower position)
4th Hinge EI_2 120	Required for wall opening width > 1000 mm or wall opening height > 2300 mm (lower position)

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

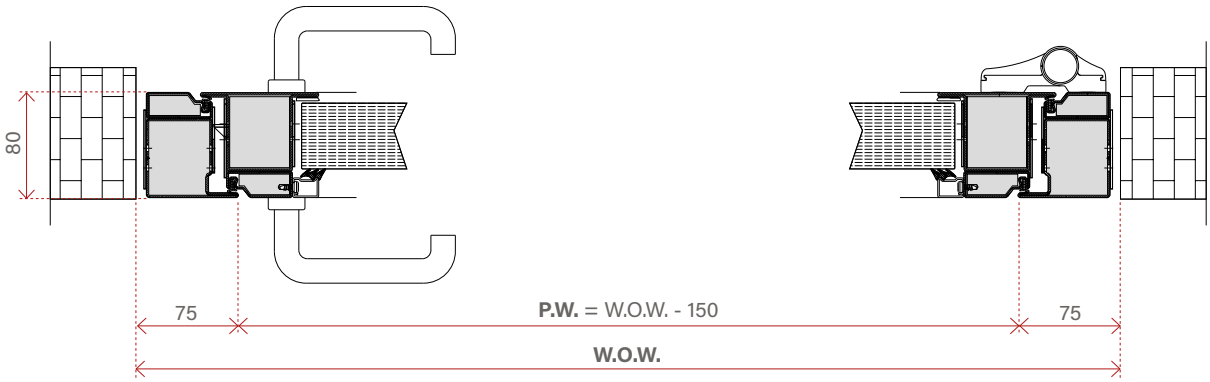
Standard unit finish

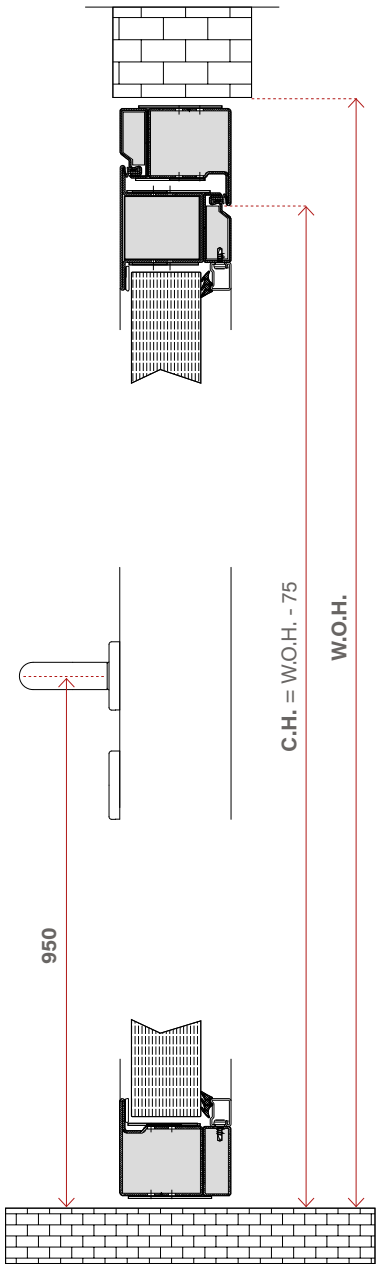
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.





Dimensions	
Minimum width	650 mm
Min. width with panic bar	800 mm
Max. width with or without panic bar	1410 mm
Min. height for escape routes	2080 mm
Max. height with transom	2510 mm
Max. height without transom	2510 mm
Surface area constraint	3,8 m²

Clear opening width with leaf at 90°	
With lever panic bar	- 310 mm
With push-bar	- 280 mm
Passage through the leaf	- 215 mm

Door weight	$EI_2$90	$EI_2$120
kg/m²	105	130

STEEL LINE EI_2 90/120

Fire-resistant glazed door

double leaf

VITREX F7	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Characteristics	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation panels
Gaskets	Self-expanding perimeter seals (for hot smoke) and rebate seals (for cold smoke) inserted into the profiles
Frame sections	Section coupling (T, Z, L) for various assembly configurations
Wall opening profiles	T or Z profiles flush with the frame, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf)
Thickness	80 mm
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90) 50 mm ($EI_2$120)

Hinges

Number	3 adjustable three-wing hinges per wall opening
Mounting	Attaches to wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (both width and height)
3rd Hinge	Standard feature (upper position)
4th Hinge EI_2 90	Required in lower position if W.O.W. > 2200 mm, W1 > 1100 mm, or W.O.H. > 2400 mm
4th Hinge EI_2 120	Required in lower position if W.O.W. > 2000 mm, W1 > 1000 mm, or W.O.H. > 2300 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

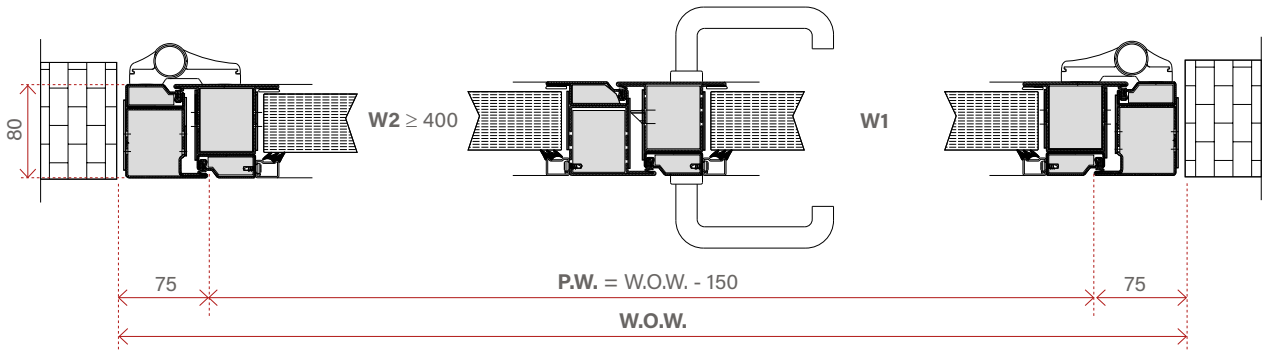
Standard unit finish

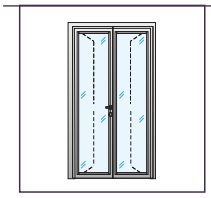
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

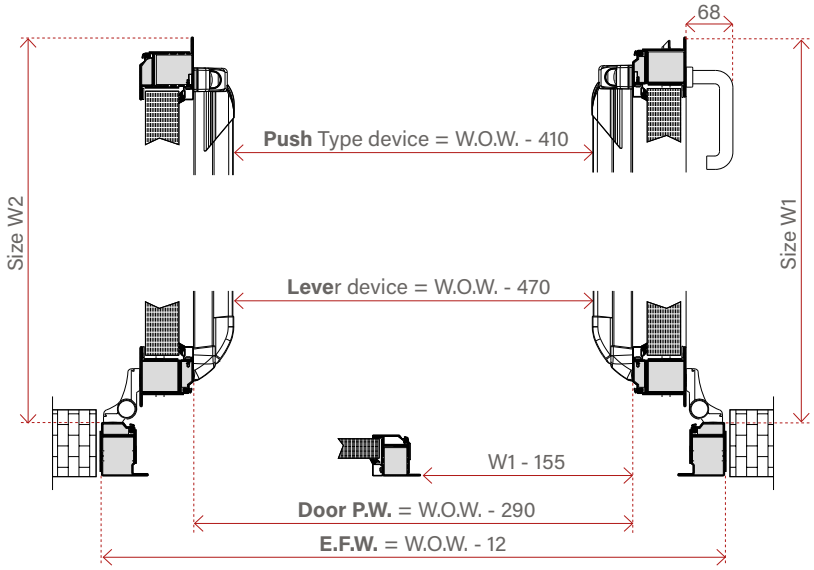
Assembly

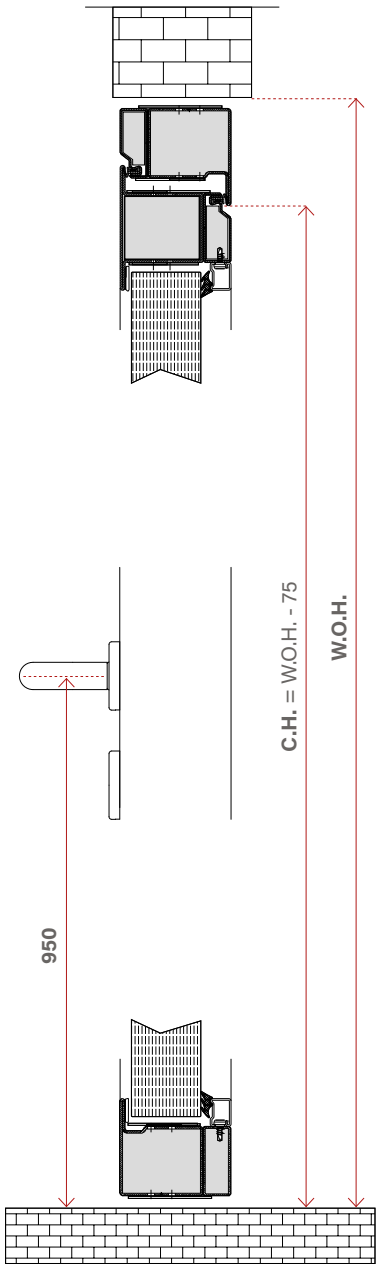
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width (asymmetric) with handle	1100 mm (700+400)
Min. width (symmetric) with handle	1200 mm (600+600)
Min. width (asymmetric) with panic bar	1700 mm* (W2>700)
Min. width (symmetric) with panic bar	1600 mm* (800+800)
Max. width with or without panic bar	2400 mm
Min. height for escape routes	2080 mm
Max. height with transom bar	2510 mm
Max. height without transom bar	2510 mm
Surface area constraint	5,6 m^2

Clear opening width with leaf at 90°	$EI_2$120
Lever panic device	- 470 mm
With push type panic device	- 410 mm
Passage to leaves	- 290 mm

Door weight	$EI_2$90	$EI_2$120
kg/m^2	100	125

*requirement to mark the main leaf

STEEL LINE EI_2 90/120

Fire-resistant glazed door

with sidelight and transom window

VITREX F7

CE UNI EN 1634-1

Fire-resistant unit

Material	Galvanized, slotted, profiled steel tubing
Characteristics	Rebate flanges (18/10 gauge), electric-welded at the corners
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Self-expanding perimeter seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Sections	Section coupling (T, Z, L) for various assembly configurations
Profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Wall opening configuration	Single- or double-leaf version, with options for side panels and fanlights; glazing bead mounted on the push or pull side of the leaf
Thickness	80 mm
Central mullion (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90) 50 mm ($EI_2$120)

Hinges

Number	3 adjustable three-wing hinges per wall opening
Mounting	Attaches to the leaf and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the leaf and frame, in both width and height
3rd Hinge	Specifications for single or double-leaf glazed doors follow
4th Hinge	Specifications for single or double-leaf glazed doors follow

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-rail system for synchronized self-closing of door leaves. For 2 leaves: W.O.W. > 1250 mm.
Finish	Silver

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

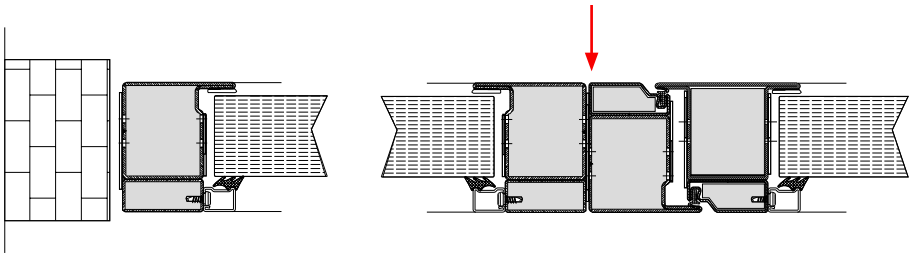
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

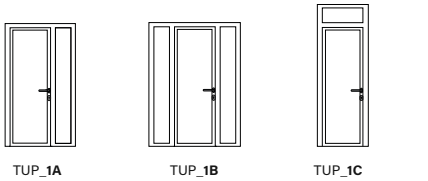
Section example

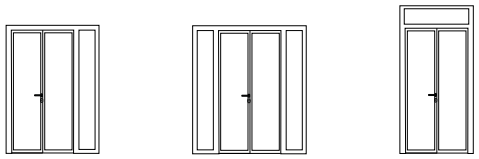
Sidelight separated from the window unit



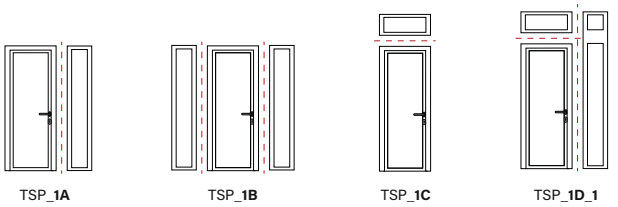
Size limits

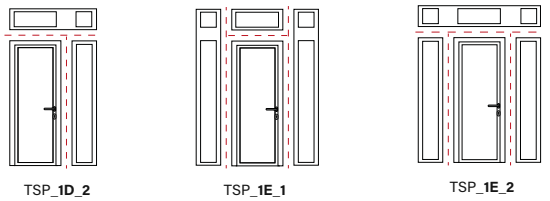
Side panel and transom window	≥ 350 mm
Unique frame	can be manufactured up to 2300 x 2800 mm

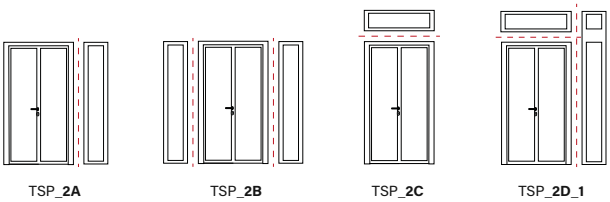


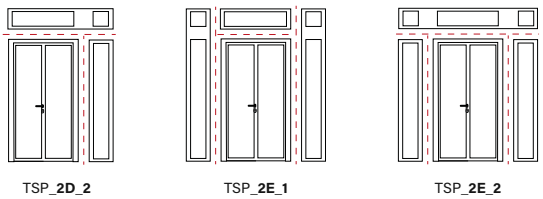


Separate frames	if dimensions exceed 2300 x 2800 mm



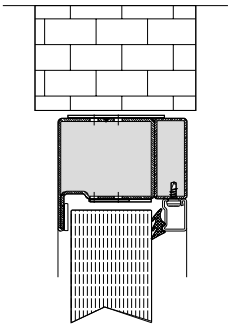


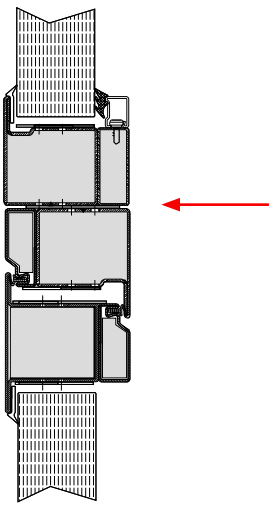




Section example:

transom window separate from the window unit





Fire-resistant window

Single or double-leaf

VITREX F7	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Four-sided frame made of slotted, galvanized, profiled steel tubing
Characteristics	Integral rebate stops (18/10 gauge), electro-welded at the corners
Insulation	Interlayer of calcium-silicate-based insulation boards
Gaskets	Perimeter intumescent seals (hot smoke) and rebate seals (cold smoke) inserted into the profiles
Frame sections	Section coupling (Z, L) for various assembly configurations
Wall opening profiles	Z-profiles flush with the frame
Wall opening configuration	Single- or double-leaf version; glazing bead mounted on the pull side of the leaf
Thickness	80 mm
Approximate weight	95 kg/m² ($EI_2$90) 120 kg/m² (EI_2 20)

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90) 50 mm ($EI_2$120)

Hinges

Quantity	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height
3rd Hinge	Required for a wall opening with a rebate width (W.O.W.) > 1000 mm or rebate height (W.O.H.) > 1800 mm

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Self-locking lock

Closure	On the secondary leaf

Half-handle

Finish	Silver

Door closer

Type	Slide-rail system for synchronized self-closing of door leaves. For 2 leaves: W.O.W. > 1250 mm.
Finish	Silver

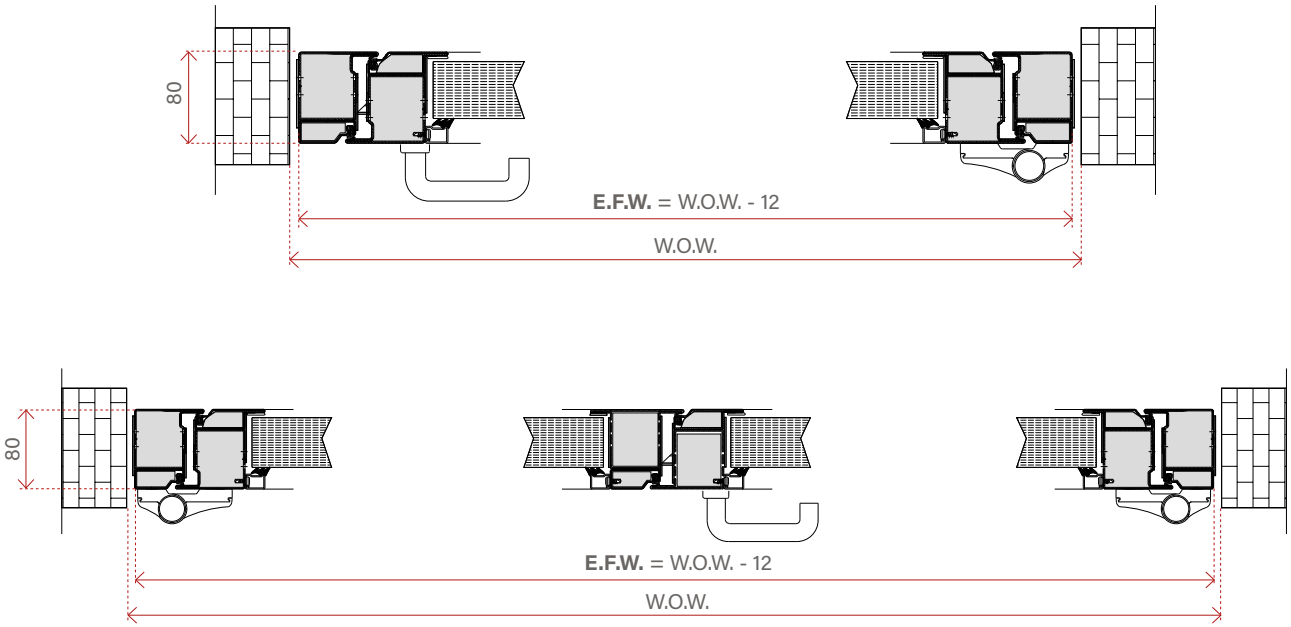
Standard unit finish

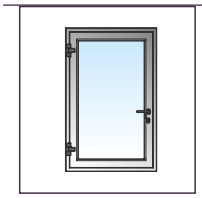
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.



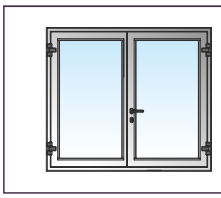


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	600 x 610 mm
Maximum W.O. (W x H)	1220 x 1800 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 1800 mm



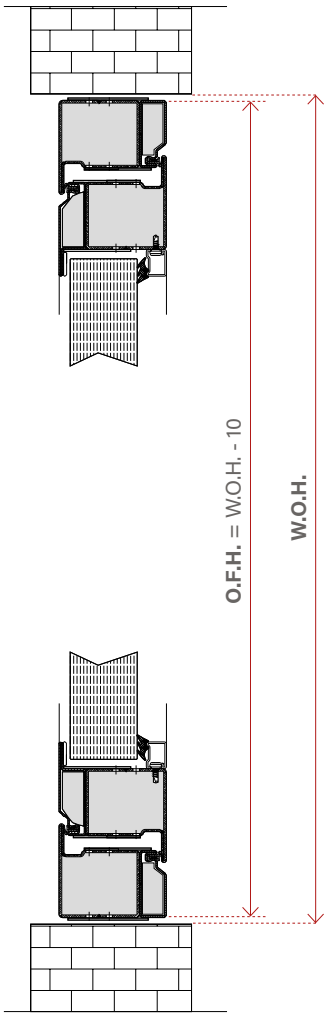
ATTENTION:

The opening width must be less than or equal to twice the height.

For clear opening widths (W.O.W.) from 1100 mm to 1240 mm, the use of scissor-arm door closers and an external door coordinator is mandatory.

Double-leaf dimensions

Minimum W.O. (W x H)	1100 (550 + 550) x 610 mm
Maximum W.O. (W x H)	1800 x 1800 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 2000 mm



STEEL LINE EI2 9_0/120

Bidirectional fire-resistant fixed glazing

with rectangular or arched panes

VITREX F1.1

CE UNI EN 1364-1

Fire-resistant unit

Material	Cold-formed tubular steel profiles	
Characteristics	Cold-formed stop profiles, 18/10 gauge (T, Z, L shapes)	
Insulation	Calcium silicate-based insulating panels	
Gaskets	Perimeter hot-smoke seals (self-expanding)	
Configurations	Any transoms positioned according to our criteria A, B, C	
Thickness	80 mm	
Approximate weight	90 kg/m² (EI_2 90)	115 kg/m² (EI_2 120)

Fire-resistant glass

Supply	Unassembled
Composition	Laminated, tempered glass with an intumescent interlayer
Class	1B1
Thickness	38 mm (EI_2 90) – 50 mm (EI_2 120)

Standard unit finish

Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

PLEASE NOTE:

When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.

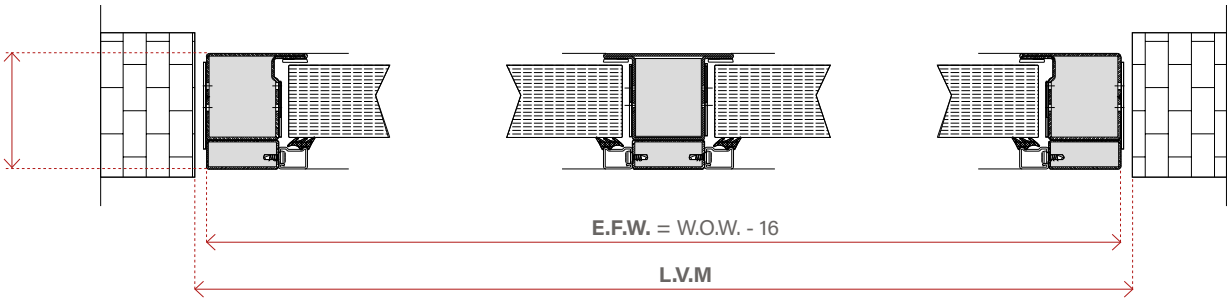
For irregular arches, a technical drawing or architectural template must be provided.

For large-scale arched frames, we recommend a 3D laser scan survey.

Casing/trim is not included; we recommend using silicone or filler for the finish.

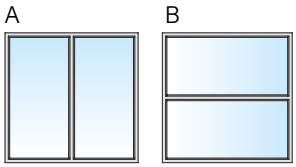
For larger dimensions, please contact our sales department.

Fire-rated partitions' installation must be carried out by specialized personnel.

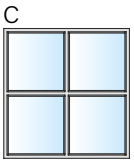


WITH CROSSBAR

Vertical or Horizontal



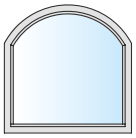
Double



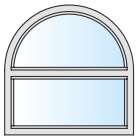
Dimensions

Minimum W.O.W.	350 mm
Maximum W.O.H.	3000 mm
Maximum W.O.W.	no limits
Recommended max. glass W x H	1300 x 2500 mm

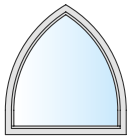
ARCHED: **Can only be produced using L-shaped Slim profiles.**
Cover profiles are excluded.



Depressed arch



Semicircular (arch)
It is recommended to traverse at the beginning of the arched portion

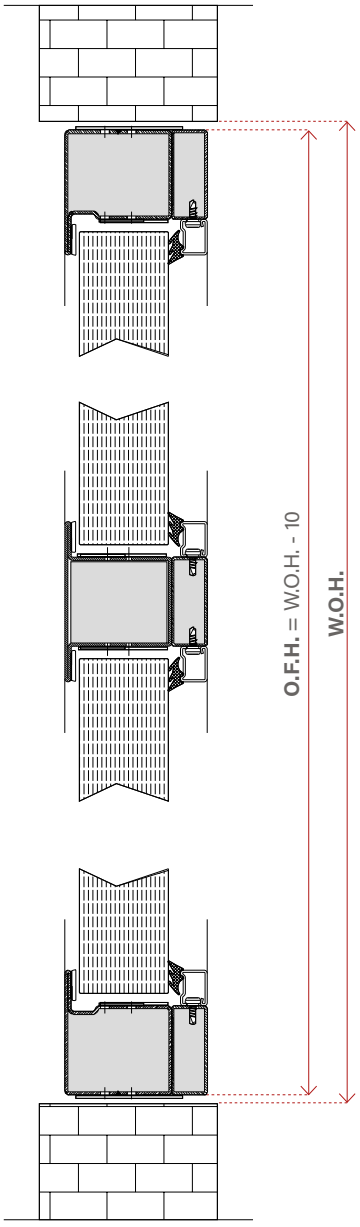


Gothic

Size limits for Semicircular arch (arch)

Minimum radius – slim profile	
Diameter – slim profile	

For information regarding size limits for Gothic and depressed arches, please contact the Technical Department.



Thermal Break Steel line $EI_2$30/60/90

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 46

WINDOW 50

FIXED GLASS 52

Linea

Thermal Break Steel

$EI_2$30/60/90

THERMAL BREAK STEEL LINE $EI_2$30/60

Thermally broken fire-rated glazed door

single-leaf

ATF2	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Steel profiles, 1.5 mm thick, grade 1.0242 (S250GD+ZM130-BO) compliant with EN 10346 and EN 10143, continuously hot-dip galvanized.
Features	Thermal break consisting of glass-fiber reinforced polyamide insulation.
Insulation	Interposed calcium silicate insulation boards.
Gaskets	Perimeter self-expanding hot-smoke seals and rebate cold-smoke seals inserted into the profiles.
Frame sections	Section coupling (T, Z, L) for various installation configurations.
Wall opening profiles	T or Z profiles, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf).
Thickness	70 mm
Central transom (optional)	Positioned 950 mm above the floor.
Fixed rebate	Floor-mounted.

Vetro Tagliafuoco Isolante

Supply	Unassembled
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	36 mm ($EI_2$30) 43 mm ($EI_2$60)
Profile compatibility	Rebate for insulating glazing units from 24 mm to 47 mm (including fire-resistant pane thickness)

Cerniere

Number	2 adjustable three-wing hinges
Mounting	Attaches to the wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (both width and height)
3rd Hinge	Required for wall opening width > 1000 mm or wall opening height > 2400 mm (upper position)
4th Hinge	Required for wall opening width > 1250 mm or wall opening height > 2550 mm (lower position)

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

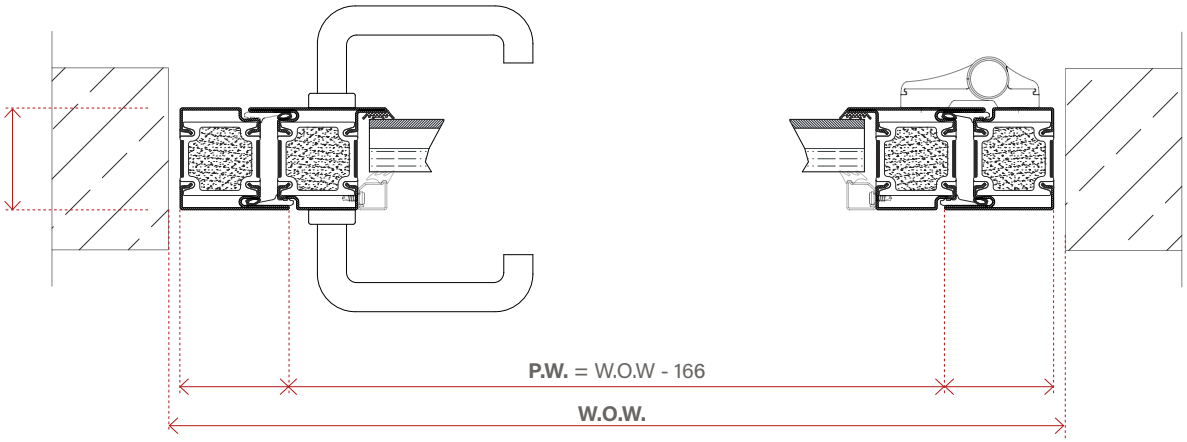
Standard unit finish

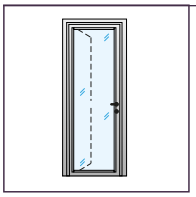
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

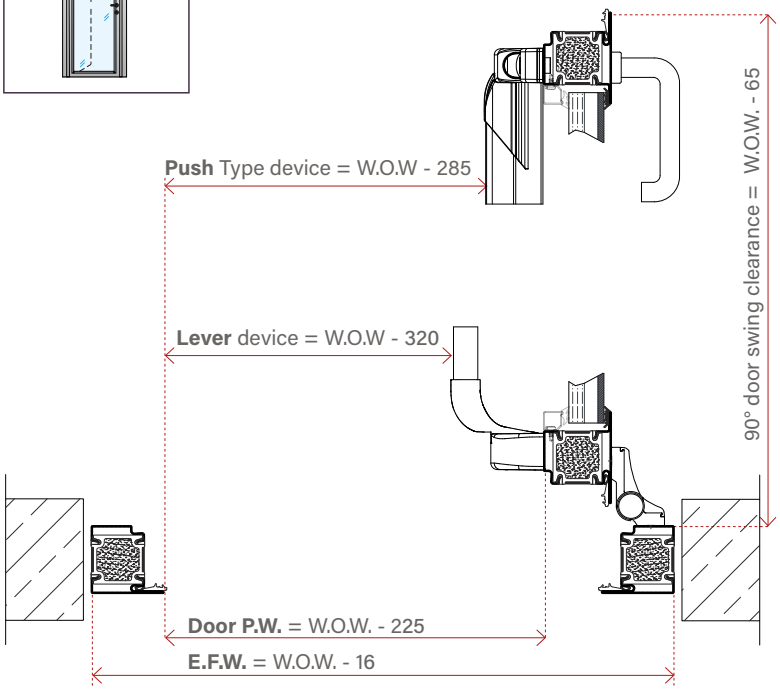
Assembly

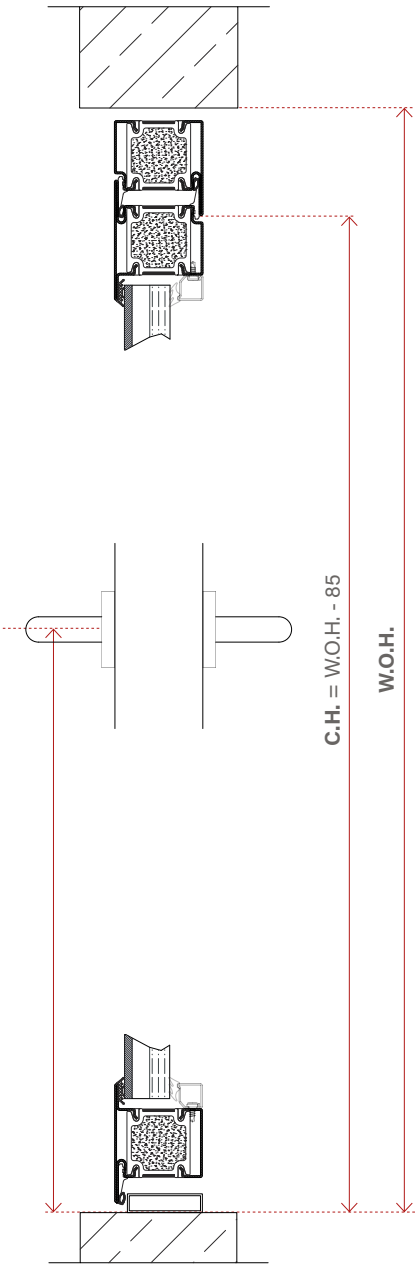
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions
Minimum width
Min. width with panic bar
Max. width with or without panic bar
Min. height for escape routes
Max. height with transom
Max. height without transom

Clear opening width with leaf at 90°
With lever panic bar
With push-bar
Passage through the leaf

Rough Weight
kg/m²

THERMAL BREAK STEEL LINE $EI_2$30/60

Thermally broken fire-rated glazed door

double-leaf

ATF2	
CE	UNI EN 1634-1

Fire-resistant unit

Materiale	Steel profiles, 1.5 mm thick, grade 1.0242 (S250GD+ZM130-BO) compliant with EN 10346 and EN 10143, continuously hot-dip galvanized.
Caratteristiche	Thermal break consisting of glass-fiber reinforced polyamide insulation.
Isolamento	Interposed calcium silicate insulation boards.
Guarnizioni	Perimeter self-expanding hot-smoke seals and rebate cold-smoke seals inserted into the profiles.
Sezioni telaio	Section coupling (T, Z, L) for various installation configurations.
Profili ante	T or Z profiles, selected based on the position of the glazing bead (mounted on the push or pull side of the leaf).
Spessore	70 mm
Traverso Centrale (opzionale)	Positioned 950 mm above the floor.
Battuta fissa	Floor-mounted.

Fire-resistant glass

Fornitura	Unassembled
Composizione	Laminated and tempered panes with an intumescent interlayer
Classe	1B1
Spessore	36 mm ($EI_2$30) 43 mm ($EI_2$60)
Compatibilità profili	Rebate for insulating glazing units from 24 mm to 47 mm (including fire-resistant pane thickness)

Hinges

Number	2 adjustable three-wing hinges
Mounting	Attaches to wall opening and frame using pins and threaded inserts
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (both width and height)
3rd Hinge	Required in upper position if W.O.W. > 2000 mm, W1 > 1000 mm, or W.O.H. > 2400 mm
4th Hinge	Required in lower position if W.O.W. > 2400 mm, W1 > 1250 mm, or W.O.H. > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	In the profile with a floor-mounted recess for the up/down rod control

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

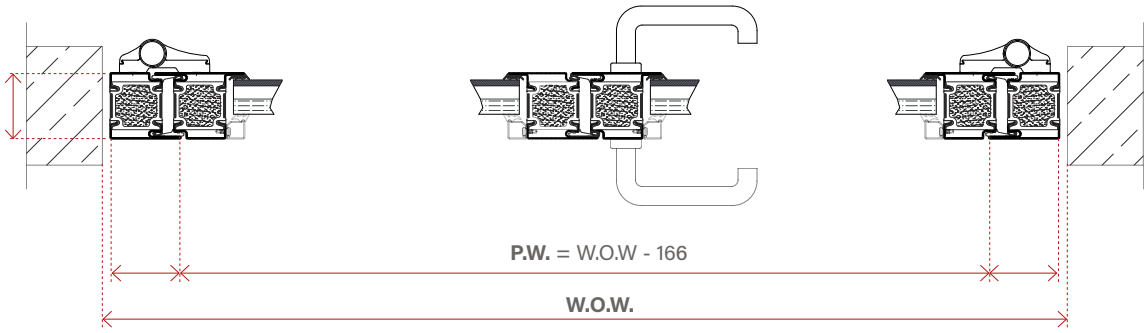
Standard unit finish

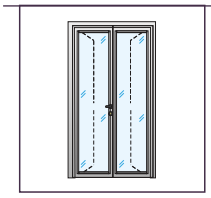
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

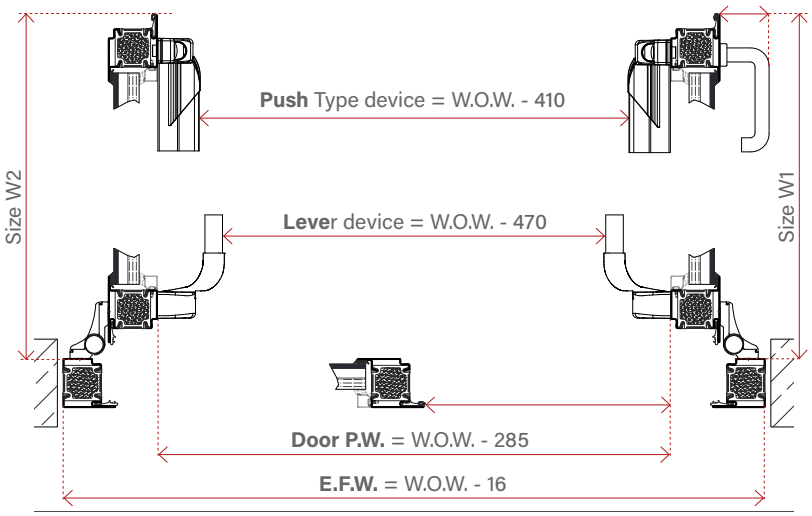
Assembly

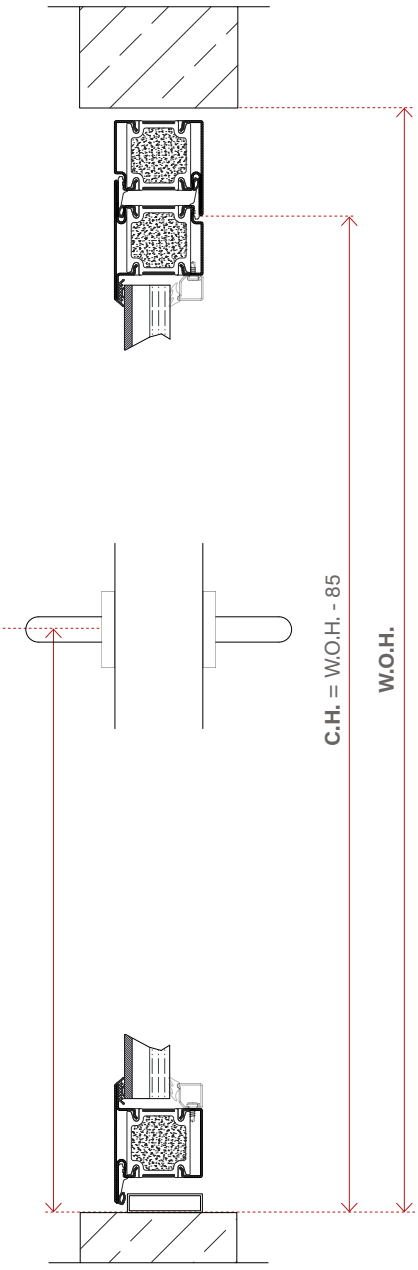
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions
Min. width (asymmetric) with handle
Min. width (symmetric) with handle
Min. width (asymmetric) with panic bar
Min. width (symmetric) with panic bar
Max. width with or without panic bar
Min. height for escape routes
Max. height with transom bar
Max. height without transom bar

Clear opening width with leaf at 90°
With lever panic bar
With push-bar
Passage through the leaf

Rough Weight
kg/m²

*requirement to mark the main leaf

THERMAL BREAK STEEL LINE $EI_2$30/60

Fire-resistant thermal-break window

single, double-leaf

ATF2	
CE	UNI EN 1634-1

Fire-resistant unit

Material	Made of galvanized profiled steel, slotted on four sides
Features	Rebate flanges, 18/10 gauge, electric-welded at the corners
Insulation	Interposed calcium-silicate-based insulation boards
Gaskets	Self-expanding hot-smoke seals (perimeter) and cold-smoke seals (rebate) inserted into the profiles
Frame sections	Section coupling (Z, L) for various mounting configurations
Sash profiles	Z-profiles flush with the frame
Sash configuration	Single- or double-leaf version. Glazing bead mounted on the pull side of the leaf
Thickness	70 mm
Rough weight	80 kg/m² (EI_2 30) 97 kg/m² (EI_2 60)

Vetro Tagliafuoco Isolato

Supply	Unassembled
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	36 mm ($EI_2$30) 43 mm ($EI_2$60)
Profile compatibility	Rebate for insulating glazing units from 24 mm to 47 mm (including fire-resistant pane thickness)

Cerniere

Quantity	2 adjustable three-wing hinges per wall opening
Mounting	Attached to the leaf and frame using pins and threaded inserts
Adjustment	Grub screws allow for adjustment of the clearance gap between the leaf and frame, in both width and height
3rd Hinge	Required for a single leaf with a clear opening width > 1200 mm or clear opening height > 2000 mm

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only upon request. **Note:** The half-cylinder cannot be installed or supplied if the following condition applies: H.F.M. ≤ H.F.M. min + 100 mm.

Self-locking lock

Closure	On the secondary leaf

Half-handle

Finish	Silver

Door closer

Type	Slide-arm closer for the automatic closing of door leaves. For 2 leaves: clear opening width > 1250 mm.
Finish	Silver

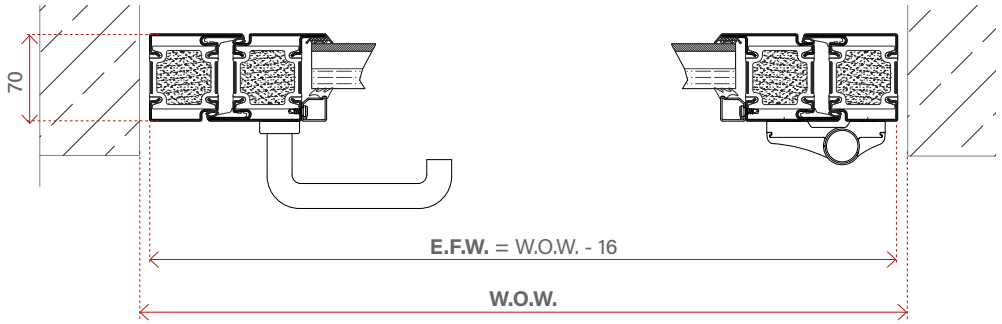
Standard window/door finish

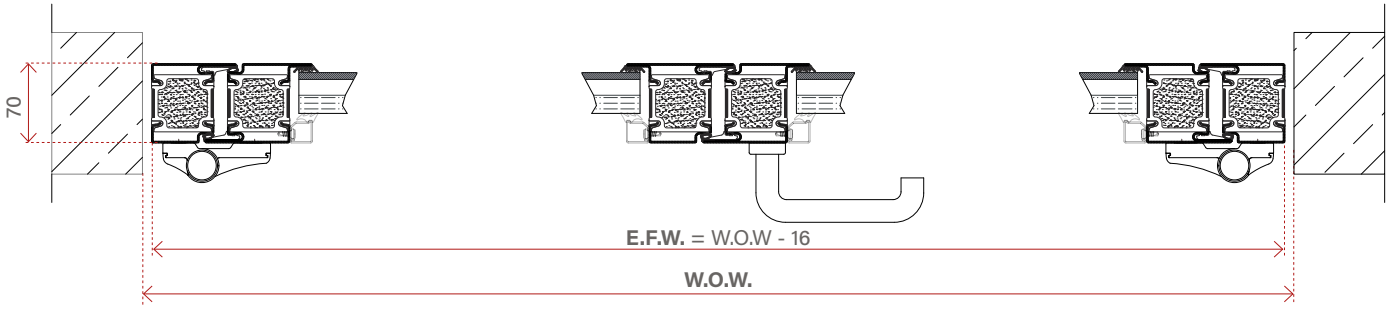
Matte Wrinkle-Finish PTFE-Coated	RAL 1013, 7010, 7013, 7016, 7022, 7035, 7042, 8019, 9001, 9003, 9005, 9006

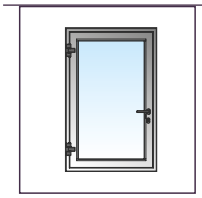
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.





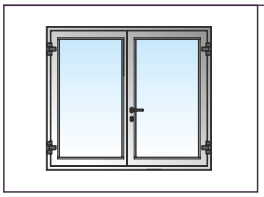


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	600 x 610 mm
Maximum W.O. (W x H)	1220 x 2000 mm
Central handle height	H.F.M.≤ 1300 mm
Handle height 650 mm	H.F.M.> 1300 mm
2-point locking mechanism	H.F.M.> 1800 mm



ATTENTION:

The opening width must be less than or equal to twice the height.

For clear opening widths (W.O.W.) from 1100 mm to 1240 mm, the use of a scissor-arm door closer and an external door coordinator is mandatory.

Double-leaf dimensions

Minimum W.O. (W x H)	1100 (550 + 550) x 610 mm
Maximum W.O. (W x H)	1800 x 2000 mm
Central handle height	H.F.M.≤ 1300 mm
Handle height 650 mm	H.F.M.> 1300 mm
2-point locking mechanism	H.F.M.> 2000 mm

THERMAL BREAK STEEL LINE $EI_2$30/60/90

Bidirectional fire-rated fixed glazing with thermal break

with regular panels

ATF1
CE UNI EN 1364-1

Fire-resistant unit

Material	1.5 mm thick steel profiles (grade 1.0242, S250GD+ZM130-BO compliant with EN 10346 and 10143), continuously hot-dip galvanized.		
Features	Thermal break consisting of glass-fiber reinforced polyamide insulation.		
Insulation	Interposed calcium silicate-based insulation boards.		
Gaskets	Perimeter self-expanding intumescent seals.		
Configurations	Any transoms positioned according to our specifications.		
Thickness	70 mm		
Rough Weight	80 kg/m² $EI_2$30	97 kg/m² $EI_2$60	115 kg/m² $EI_2$90

Fire-resistant glass

Supply	Unassembled		
Composition	Laminated and tempered panes with an intumescent interlayer		
Class	1B1		
Thickness	36 mm ($EI_2$30)	43 mm ($EI_2$60)	47 mm ($EI_2$90)
Profile compatibility	Rebate for insulating glazing units from 24 mm to 47 mm (including fire-resistant pane thickness)		

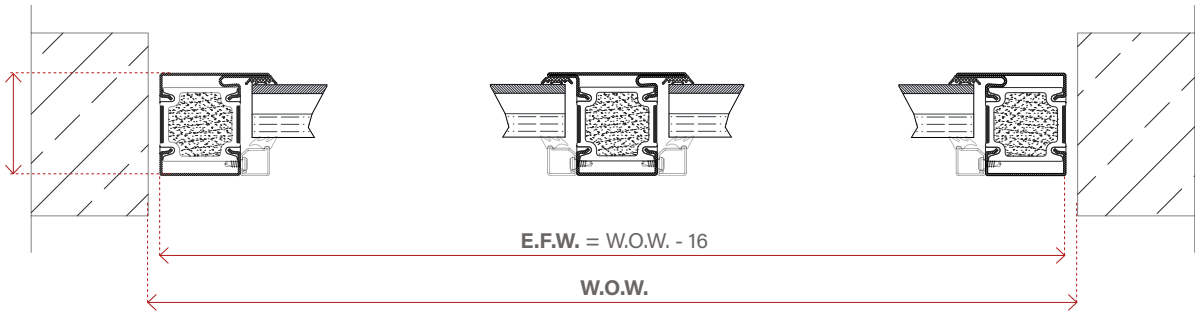
Window/Door Finish

Matte Wrinkle-Finish PTFE-Coated	RAL 9003, 7035, 9001, 1013, 7016, 7022, 7010, 7013, 7042, 8019, 9006, 9005

Assembly

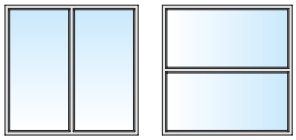
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

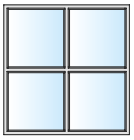


WITH CROSSBAR

Vertical or Horizontal



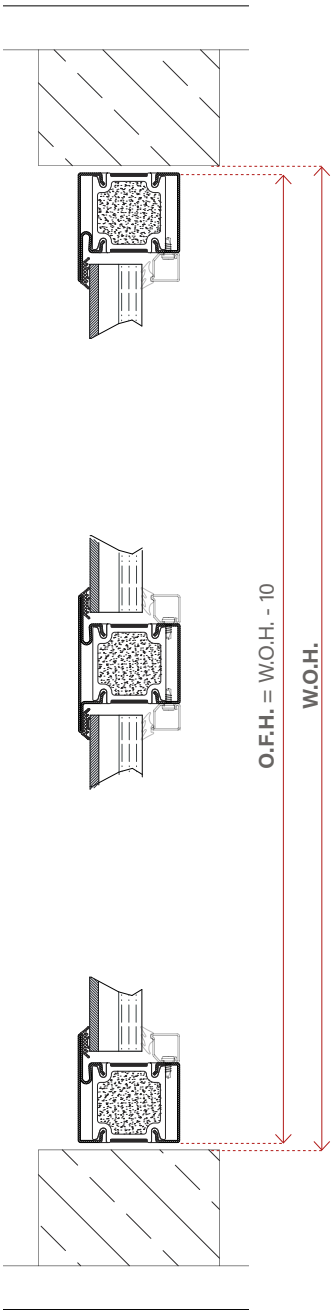
Double



Dimensions		
Minimum W.O.W.		350 mm
Maximum W.O.H.	3600 mm (EI$_2$30/60)	3000 mm (EI$_2$90)
Maximum W.O.W.		no limits
Recommended max. glass W x H		1300 x 2500 mm

PLEASE NOTE:

When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.



INDOOR ALUMINUM LINE $EI_2$30/60

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 56

SLIDING DOOR 62

WINDOW 66

FIXED GLASS PANEL 68

SILICONE-JOINTED GLASS PANEL 70

Fire-rated partitions' installation must be carried out by specialized personnel.

Indoor aluminum line

EI_2 30/60

INDOOR ALUMINUM LINE EI_2 30/60

Fire-rated glazed door

single-leaf

VITREX F8

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation core, and extruded aluminum facing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated grooves
Frame sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	79 mm ($EI_2$30 - $EI_2$60)
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges
Mounting	Mounted on the wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (both width and height)
3rd Hinge	Required for wall opening width > 1100 mm or wall opening height > 2400 mm
4th Hinge	Required for wall opening width > 1350 mm or wall opening height > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Silver Sled Plane
Finish	Silver

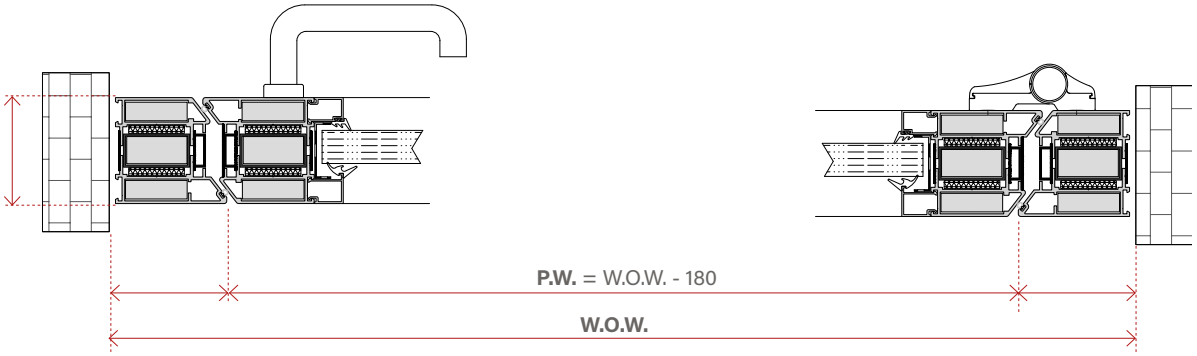
Standard unit finish

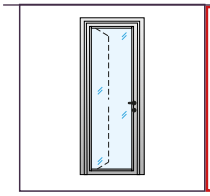
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

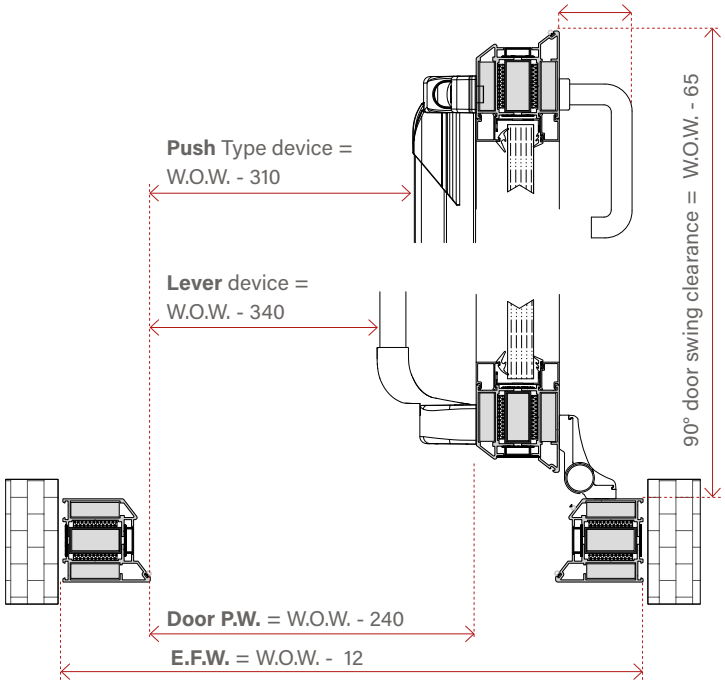
Fire-rated partitions' installation must be carried out by specialized personnel.

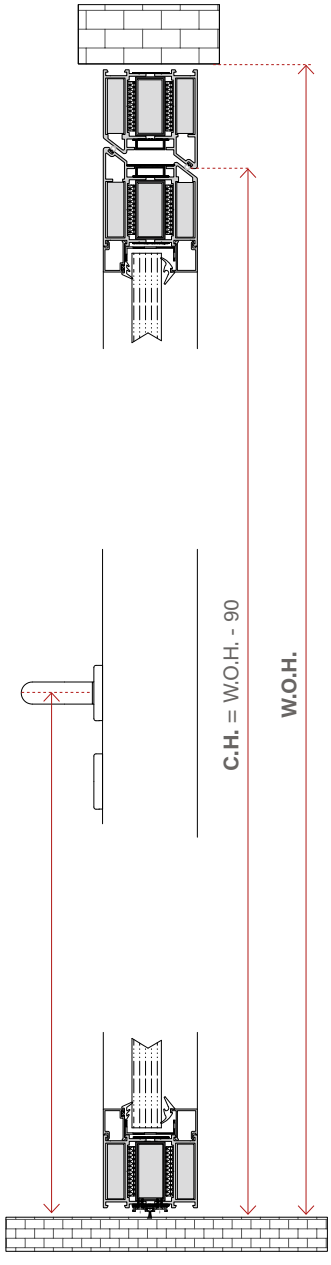




TEST SAMPLE - RC4 BURGLARY RESISTANCE PERFORMANCE

UNI EN 1627:2011 / 1628:2016 / 1629:2016 / 1630:2016
Profile thickness: 104 mm
W x H: 1400 x 2400 mm
Push side: panic bar and 3-point locking system
Pull side: fixed pull handle and security cylinder.





Dimensions
Minimum width
Min. width with panic bar
Max. width with or without panic bar
Min. height for escape routes
Max. height with transom
Max. height without transom
Surface area constraint

Clear opening width with leaf at 90°
With lever panic bar
With push-bar
Passage through the leaf

Door weight
kg/m²

INDOOR ALUMINUM LINE EI_2 30/60

Fire-rated glass door

double leaf

VITREX F8
UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation core, and extruded aluminum facing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated grooves
Frame sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	79 mm ($EI_2$30 - $EI_2$60)
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height
3rd Hinge	Necessary for W.O.W. > 2200 mm or W1 > 1100 mm or W.O.H.> 2400 mm
4th Hinge	Necessary for W.O.W. > 2500 mm or W1 > 1350 mm or W.O.H.> 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

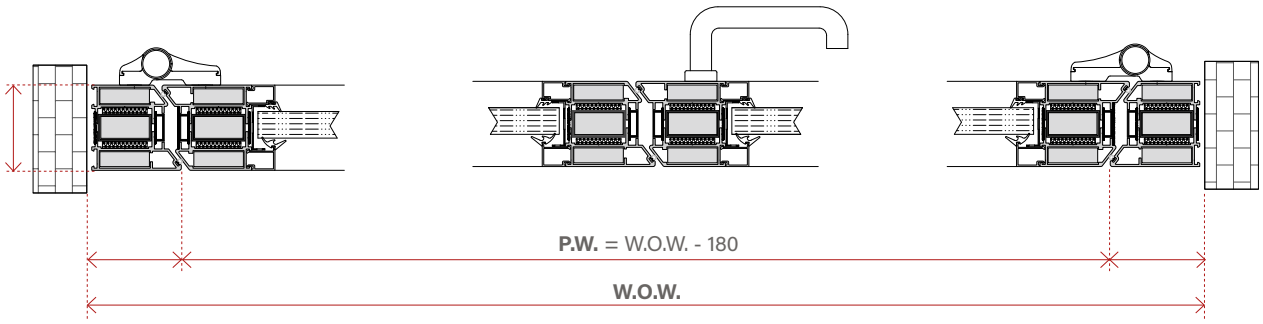
Standard unit finish

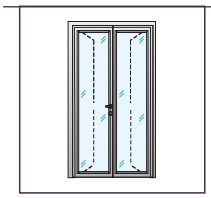
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

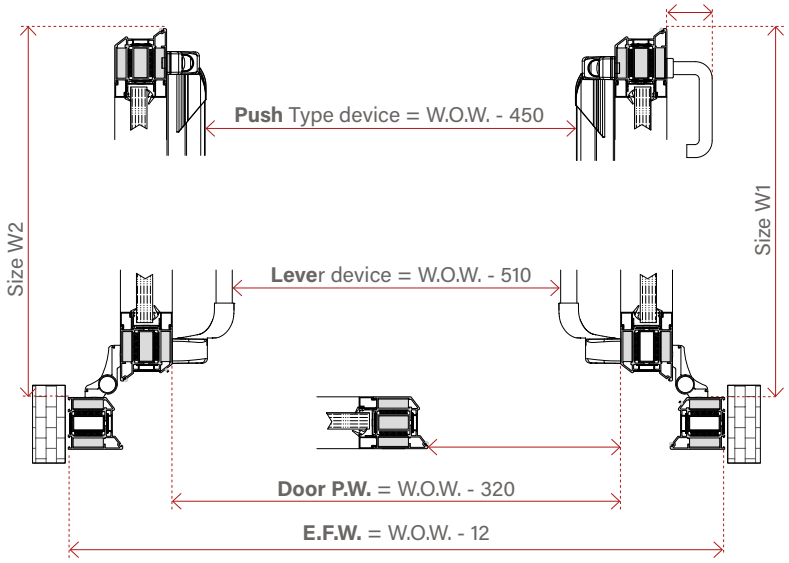
Assembly

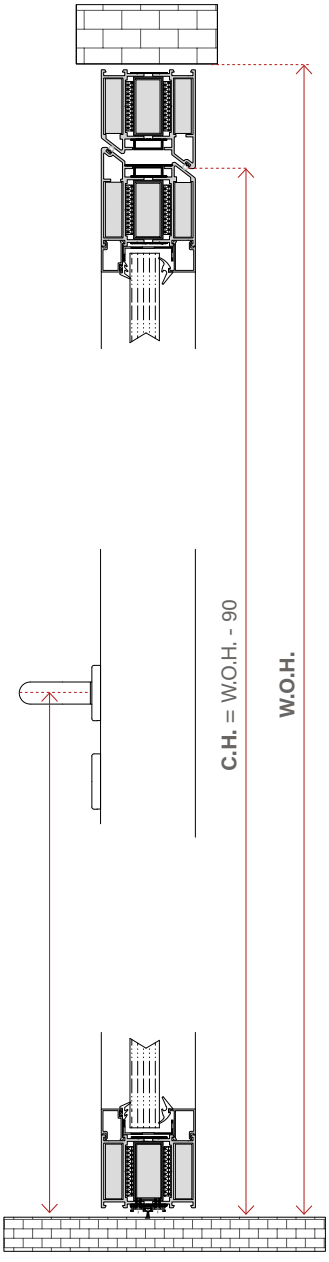
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions
Min. width (asymmetric) with handle
Min. width (symmetric) with handle
Min. width (asymmetric) with panic bar
Min. width (symmetric) with panic bar
Max. width with or without panic bar
Min. height for escape routes
Max. height with transom bar
Max. height without transom bar
Surface area constraint

Clear opening width with leaf at 90°
Lever panic device
With push type panic device
Passage to leaves

Door weight
kg/m²

*requirement to mark the main leaf

INDOOR ALUMINUM LINE EI_2 30/60

Fire-rated glazed door

with Sidelight and transom window

VITREX F8

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation core, and extruded aluminum facing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated grooves
Frame sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	79 mm ($EI_2$30 - $EI_2$60)
Central transom (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Hinges

Number	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height
3rd Hinge	Instructions for single- or double-leaf glass doors follow.
4th Hinge	Instructions for single- or double-leaf glass doors follow.

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

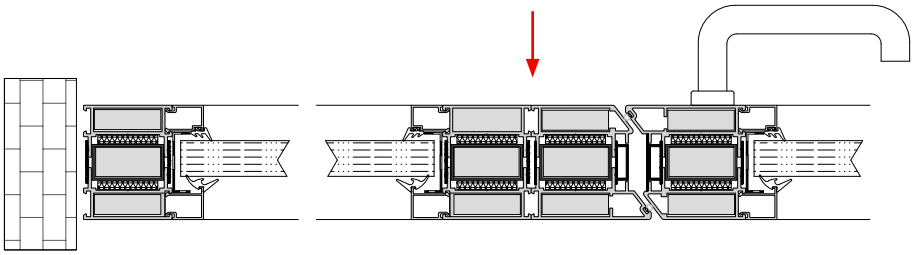
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

Section example

Sidelight separated from the window unit

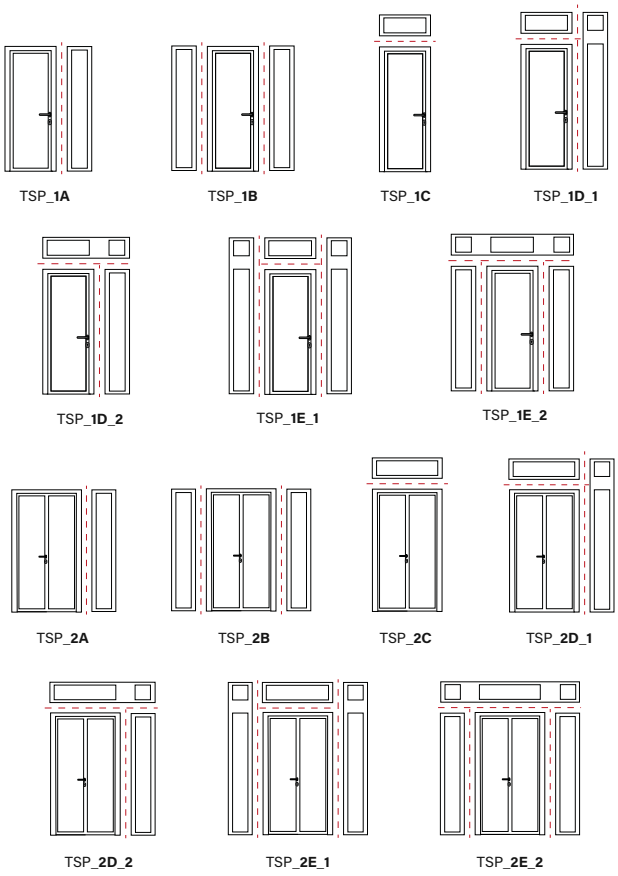


Size limits

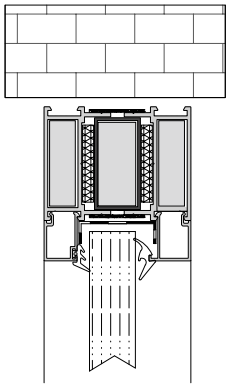
Side panel and transom window

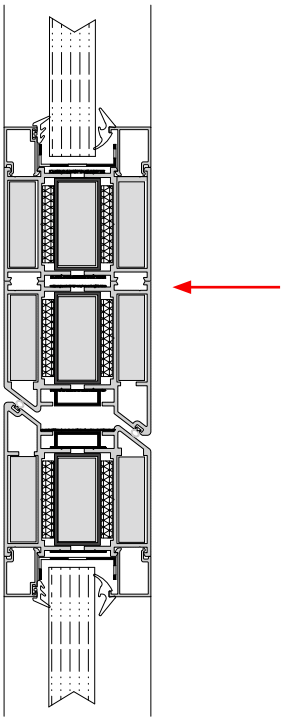
Unique frame	not feasible

Separate frames



Section example:
transom window separate from the window unit





INDOOR ALUMINUM LINE EI_2 30/60

Fire-rated sliding glass door

single-leaf without panic hardware

VITREX F13

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge, dual insulation layers, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter hot-smoke intumescent seals
Door thickness	79 mm ($EI_2$30 - $EI_2$60)

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Gaskets

Characteristics	Self-expanding perimeter labyrinth seals for hot smoke

Standard Finish

Door panel	Ral 9010 soft or Ral 7035
Motorized guide rail	Satin OX Silver

Installation

Not suitable for installation on escape routes/emergency exits.

Door Operation

The selector switch allows for two operating modes: automatic or closed. In the event of an alarm and/or power failure (220V), the door—regardless of the mode previously set (open or automatic)—will immediately close, overriding any connected accessories (whether for opening commands or safety functions). The door will remain closed during the alarm state. Normal operation will resume only after the alarm condition has cleared.

WARNING: Installation, configuration, and maintenance of automation systems for sliding fire doors must be performed **exclusively by highly qualified and specialized personnel**.

Carrying out such work using unauthorized personnel will compromise safety, impair the system's proper functioning, and void any warranties.

Automation specifications compliant with the EN 16005 standard and the Machinery Directive 2006/42/EC.

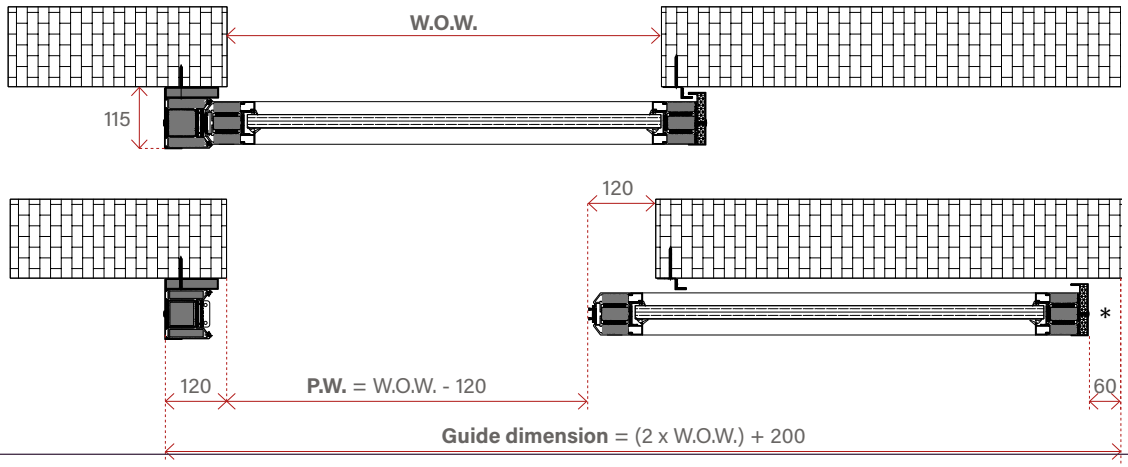
TECHNICAL DATA	
Transformer	toroidal core with safety device and main switch
Voltage	230 V
Frequency	50 – 60 Hz
Rated power	200 W
Electric lock	toothed belt locking mechanism, electroMagnetsc, bistable
Carriage	
Vertical wall opening adjustment	12 mm
Horizontal wall opening adjustment	40 mm
Anti-tilt protection	standard
Self-cleaning	√
Control unit	DCU1-2M NT
Error log and statistical data – Software update – Optional bus interface – Fire detection system connection – Power supply for peripherals	
Programmable inputs	3
Programmable outputs	2
Battery	NiCd, 24 V, 700 mA
Motor	dual gear motor
Torque	400 Ncm

Product Characteristics	
Height	150 / 200 mm
Depth	185 mm
Single-leaf solution: Maximum leaf weight	200 kg
Double-leaf solution: Maximum leaf weight	200 kg
Protection class	IP 20
Mains disconnection	Main switch on the automation unit
Opening speed (max.)	0.8 m/s
Closing speed (max.)	0.8 m/s
Opening time	0 – 60 s
Adjustable opening and closing force	150 N max.

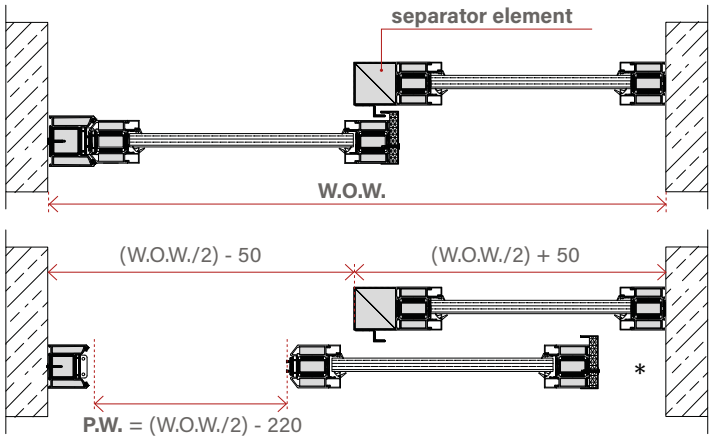
Assembly

Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	to fasten the guide rail, use 6.3x45 mm self-tapping screws with hexagonal heads

Fire-rated partitions' installation must be carried out by specialized personnel.



with side light

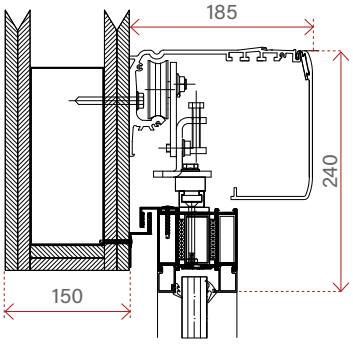


NOTE:

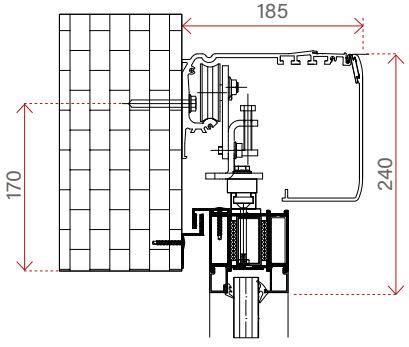
* Safety sensor mandatory for leaf-to-wall distance < 200 mm

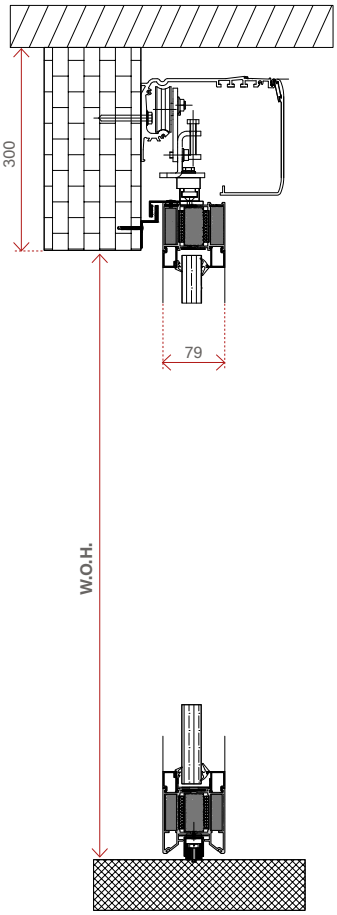
ANCHORING SYSTEM

on a 100 x 200 beam



on masonry





Dimensions	
W.O.W. minimal	700 mm
W.O.W.maximum	1320 mm
W.O.H. minimal	2000 mm
W.O.H.maximum	2600 mm
Size motorized guide	(2 x W.O.W.) + 200 mm

INDOOR ALUMINUM LINE EI_2 30/60

Fire-rated sliding glass door

double-leaf without panic hardware

VITREX F13

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge, dual insulation layers, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter hot-smoke intumescent seals
Door thickness	79 mm ($EI_2$30 - $EI_2$60)

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Gaskets

Characteristics	Self-expanding perimeter labyrinth seals for hot smoke

Standard Finish

Door panel	Ral 9010 soft or Ral 7035
Motorized guide rail	Satin OX Silver

Installation

Not suitable for installation on escape routes/emergency exits.

Door Operation

The selector switch allows for two operating modes: automatic or closed. In the event of an alarm and/or power failure (220V), the door—regardless of the mode previously set (open or automatic)—will immediately close, overriding any connected accessories (whether for opening commands or safety functions). The door will remain closed during the alarm state. Normal operation will resume only after the alarm condition has cleared.

WARNING: Installation, configuration, and maintenance of automation systems for sliding fire doors must be performed **exclusively by highly qualified and specialized personnel**.

Carrying out such work using unauthorized personnel will compromise safety, impair the system's proper functioning, and void any warranties.

Automation specifications compliant with the EN 16005 standard and the Machinery Directive 2006/42/EC.

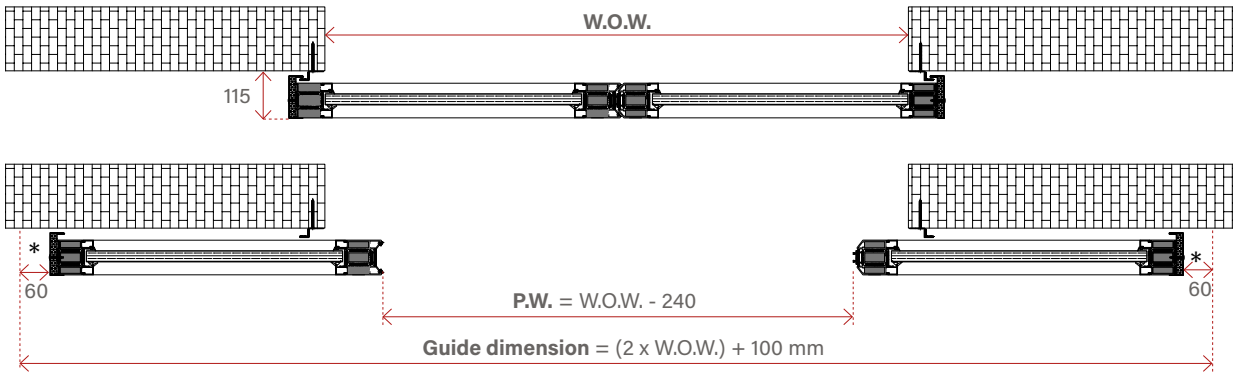
TECHNICAL DATA	
Transformer	toroidal core with safety device and main switch
Voltage	230 V
Frequency	50 – 60 Hz
Rated power	200 W
Electric lock	toothed belt locking mechanism, electroMagnetsc, bistable
Carriage	
Vertical wall opening adjustment	12 mm
Horizontal wall opening adjustment	40 mm
Anti-tilt protection	standard
Self-cleaning	√
Control unit	DCU1-2M NT
Error log and statistical data – Software update – Optional bus interface – Fire detection system connection – Power supply for peripherals	
Programmable inputs	3
Programmable outputs	2
Battery	NiCd, 24 V, 700 mA
Motor	dual gear motor
Torque	400 Ncm

Product Characteristics	
Height	150 / 200 mm
Depth	185 mm
Single-leaf solution: Maximum leaf weight	200 kg
Double-leaf solution: Maximum leaf weight	200 kg
Protection class	IP 20
Mains disconnection	Main switch on the automation unit
Opening speed (max.)	0.8 m/s
Closing speed (max.)	0.8 m/s
Opening time	0 – 60 s
Adjustable opening and closing force	150 N max.

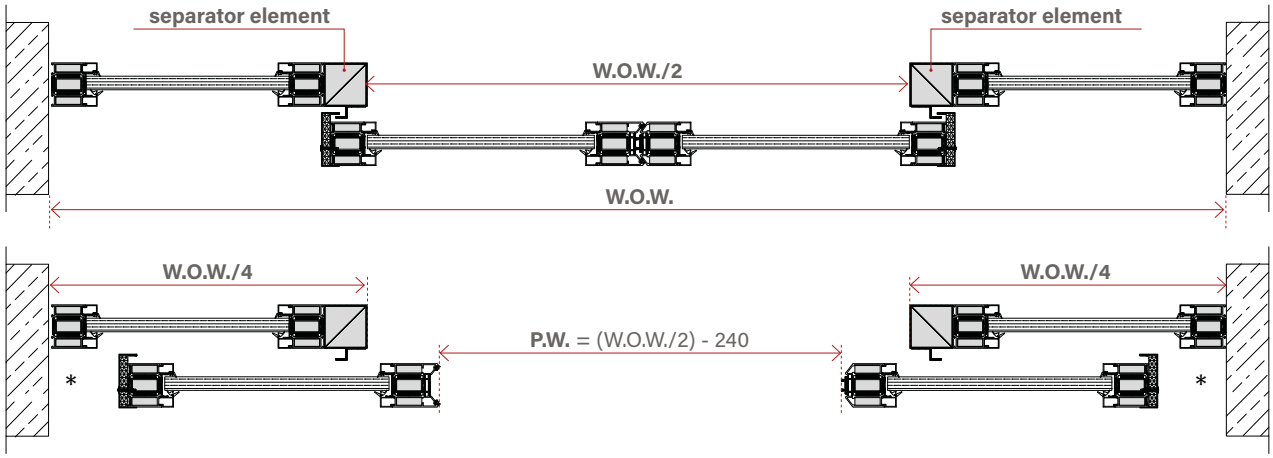
Assembly

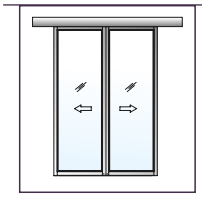
Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	to fasten the guide rail, use 6.3x45 mm self-tapping screws with hexagonal heads

Fire-rated partitions' installation must be carried out by specialized personnel.



with side light



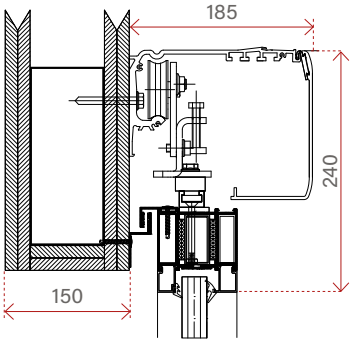


NOTE:

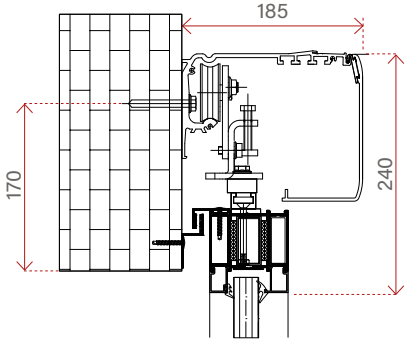
* Safety sensor mandatory for leaf-to-wall distance < 200 mm

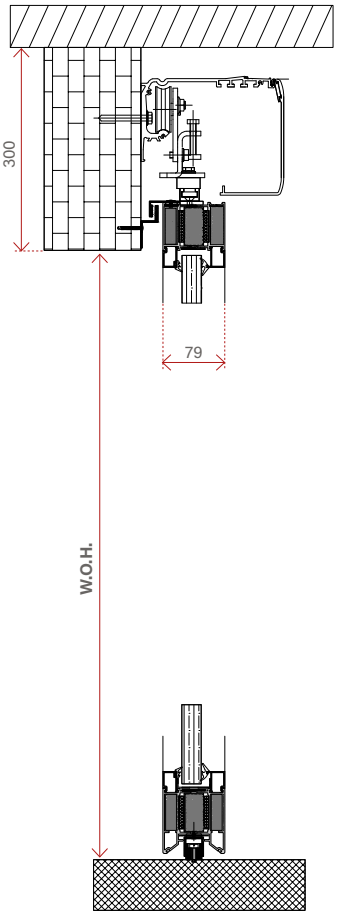
ANCHORING SYSTEM

on a 100 x 200 beam



on masonry





Dimensions	
W.O.W. minimal	1200 (600 + 600) mm
W.O.W.maximum	2400 (1200 + 1200) mm
W.O.H. minimal	2000 mm
W.O.H.maximum	2600 mm
Size motorized guide	(2 x W.O.W.) + 100 mm

INDOOR ALUMINUM LINE EI_2 30/60

Fire-resistant window

single or double-leaf

VITREX F8

UNI EN 1634-1

Fire-resistant unit

Material	Four-sided load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge; extruded aluminum alloy (UNI 6060) casing
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Perimeter self-expanding seals (for hot smoke) and rebate seals (for cold smoke) fitted in dedicated channels
Configurations	Interlocking profile sections (Z, L shapes) allowing for various assembly configurations
Thickness	79 mm ($EI_2$30 - $EI_2$60)
Approximate weight	55 Kg/m² ($EI_2$30) / 70 kg/m² ($EI_2$60)

Fire-resistant glass

Supply	Unframed
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	16mm ($EI_2$30) 25mm ($EI_2$60)

Hinges

Quantity	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height
3rd Hinge	Necessaria per 1 LEAF con W.O.W.> 1200 mm o W.O.H.> 2000 mm

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Self-locking lock

Closure	On the secondary leaf

Half-handle

Finish	Silver

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

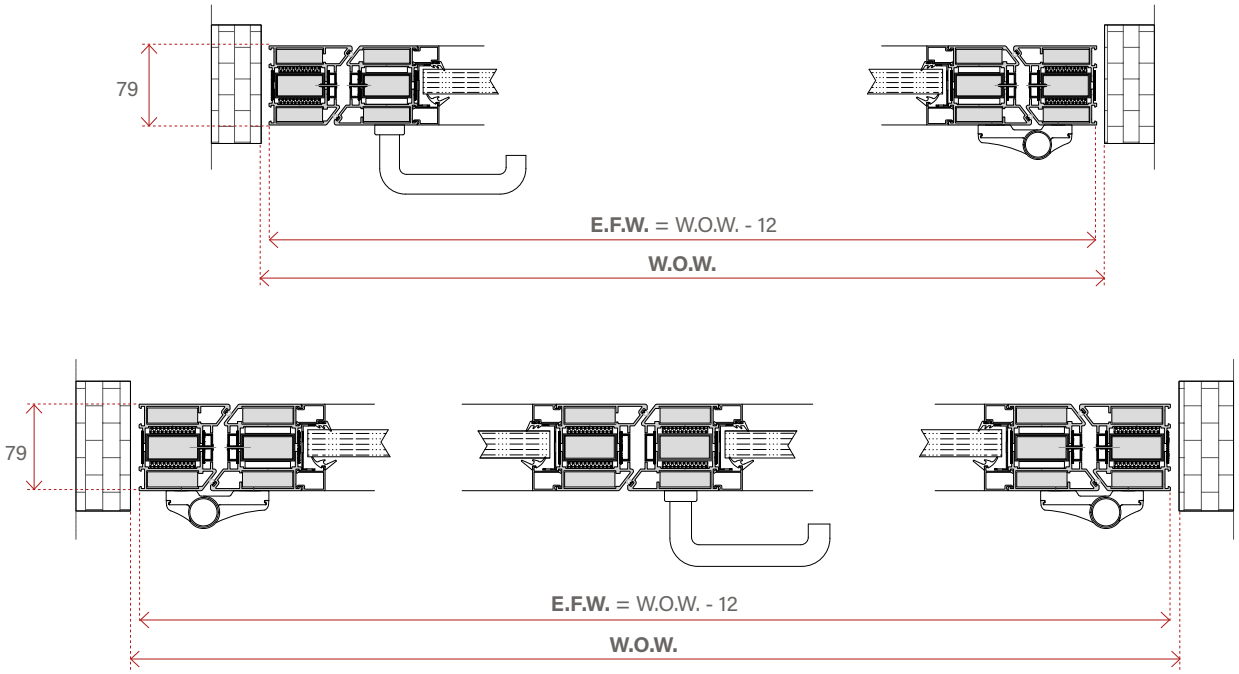
Standard unit finish

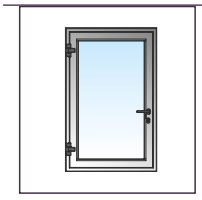
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.



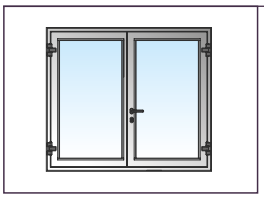


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	540 x 610 mm
Maximum W.O. (W x H)	1300 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 2000 mm

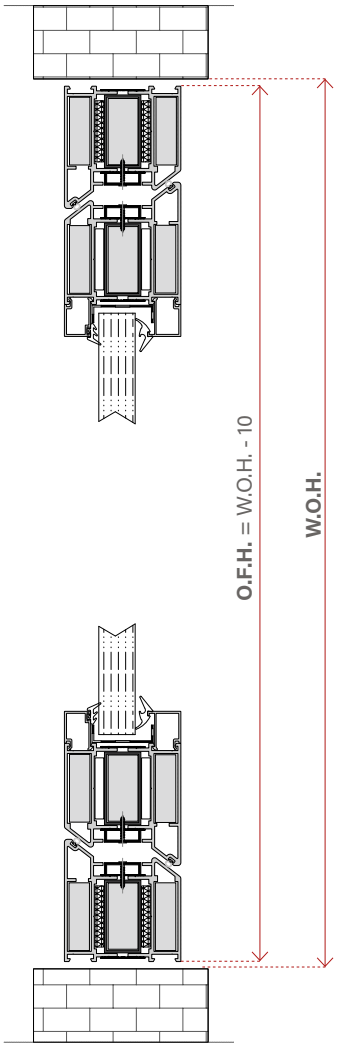


ATTENTION:

The width of the opening must be less than or equal to twice the height.

Double-leaf dimensions

Minimum W.O. (W x H)	1280 (640 + 640) x 640 mm
Maximum W.O. (W x H)	2000 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 2000 mm



INDOOR ALUMINUM LINE EI_2 30/60

Bidirectional fire-rated fixed glazing

with regular panels

VITREX F2
UNI EN 1364-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel (15/10 gauge);
Characteristics	extruded aluminum casing (UNI 6060 alloy)
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Perimeter self-expanding seals for hot smoke
Configurations	Profile sections (T, Z, L) for various assembly configurations
Thickness	79 mm ($EI_2$30 - $EI_2$60)
Approximate weight	50 kg/m² ($EI_2$30) 65 kg/m² ($EI_2$60)

Fire-resistant glass

Supply	Unassembled
Composition	Laminated, tempered glass panes with an intumescent interlayer
Class	1B1
Thickness	16 mm ($EI_2$30) 25 mm ($EI_2$60)

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

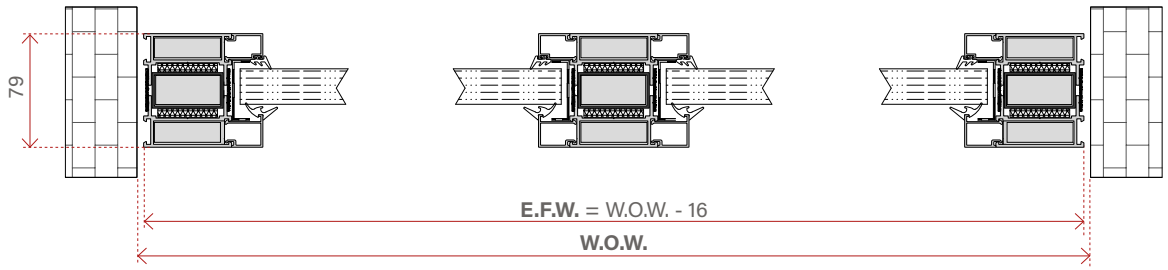
Assembly

Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	con viti 4,8x32 mm

PLEASE NOTE:

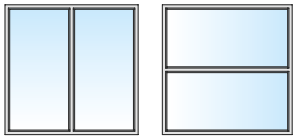
If a rough opening frame is used: FRAME EXTERIOR = Finished Wall Opening - 10 mm

For larger dimensions, please contact our sales department.

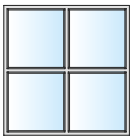


WITH CROSSBAR

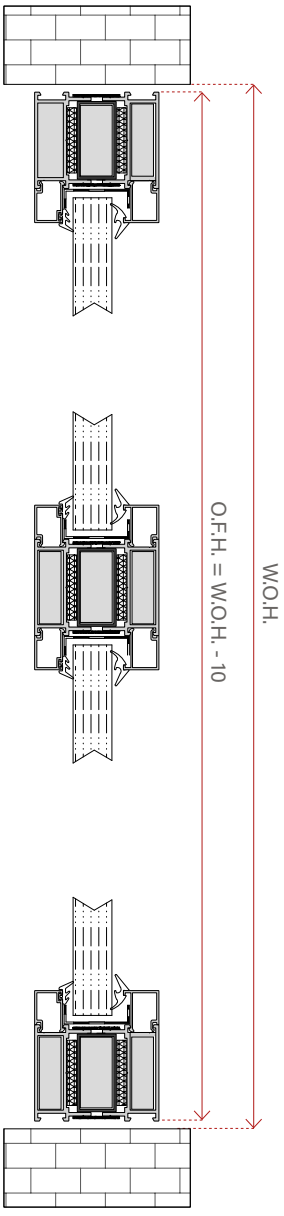
Vertical or Horizontal



Double



Size limits	
Minimum W.O.W.	350 mm
Maximum W.O.H.	3000 mm
Maximum W.O.W.	no limits
Recommended max. glass W x H	1600 x 2800 mm



INDOOR ALUMINUM LINE EI_2 30/60

Bidirectional fire-rated fixed glazing with silicone joint

VITREX JOINT

UNI EN 1364-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized profiled steel tubing		
Characteristics	15/10 gauge; cover made of extruded aluminum (UNI 6060 alloy)		
Insulation	Interlayer of calcium-silicate-based insulation boards		
Gaskets	Perimeter self-expanding seals for hot smoke		
Configurations	Profile sections (T, Z, L) for various configurations		
Thickness	79 mm ($EI_2$30)	79 mm ($EI_2$30 with transparent edge)	84 mm ($EI_2$60)
Approximate weight	50 kg/m² ($EI_2$30)	65 kg/m² ($EI_2$60)	

Fire-resistant glass

Supply	Unassembled		
Composition	Panels with an intumescent interlayer; vertical jointing without the use of metal profiles or connecting strips		
Class	1B1		
Thickness	With black edge	20 mm ($EI_2$30)	32 mm ($EI_2$60)
	With transparent edge	19 mm ($EI_2$30)	27 mm ($EI_2$60)

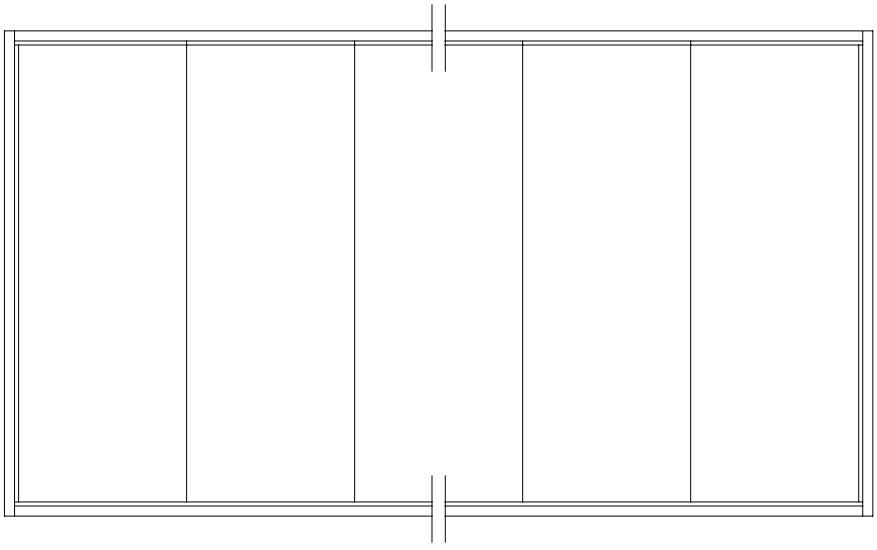
Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

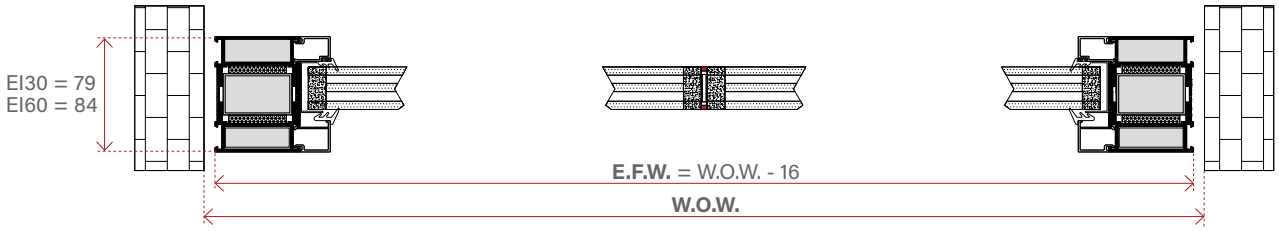
Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	con viti 4,8x32 mm

NOTE:
The window unit can also be manufactured using "interlocking" solutions to facilitate handling, transport, and positioning at the delivery and installation sites.

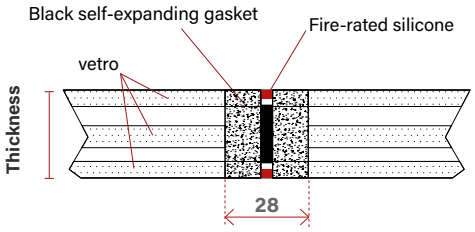


For dimensions exceeding 1400x2800, the glass pane can be analyzed using the Enhanced Effective Thickness (EET) model; if the deflection exceeds the maximum limit, the installation of handrails and vertical supports behind the joint is recommended.

Fire-rated partitions' installation must be carried out by specialized personnel.

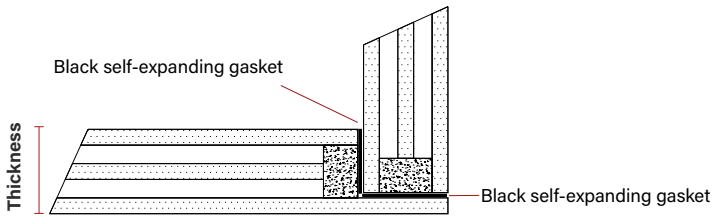


Linear joint with black edge



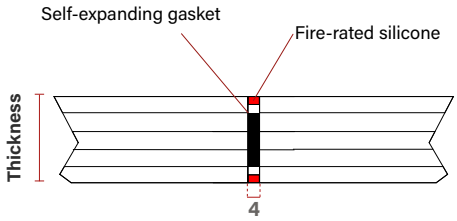
	Thickness	Weight	Max producible slab size
$EI_2$30	20 mm	50 Kg/m²	1800 x 3500 mm
$EI_2$60	32 mm	70 Kg/m²	1800 x 3500 mm

Corner joint with black edge

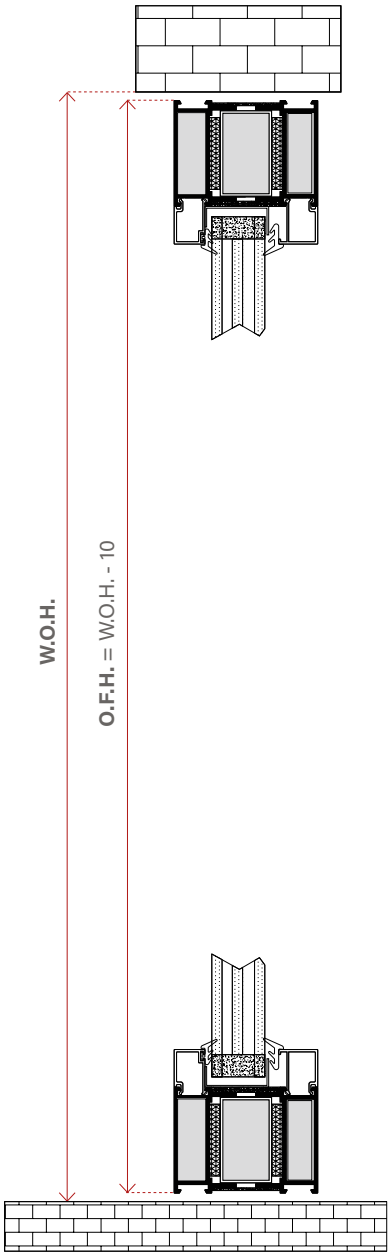


	Thickness	Weight	Max producible slab size
$EI_2$30	20 mm	50 Kg/m²	1800 x 3500 mm
$EI_2$60	32 mm	70 Kg/m²	1800 x 3500 mm

Linear joint with transparent edge



	Thickness	Weight	Max producible slab size
$EI_2$30	19 mm	48 Kg/m²	1800 x 3100 mm
$EI_2$60	27 mm	61 Kg/m²	1800 x 3100 mm



INDOOR ALUMINUM LINE $EI_2$90/120

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 74

SLIDING DOOR 80

WINDOW 84

FIXED GLASS PANEL 86

SILICONE-JOINTED GLASS PANEL 88

Indoor aluminum line

EI_2 90/120

INDOOR ALUMINUM LINE EI_2 90/120

Fire-rated glazed door

single-leaf

VITREX F4

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation layers, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated slots
Cross-sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	94 mm (EI_2 90) 104 mm (EI_2 120)
Central mullion (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm (EI_2 90) 50 mm (EI_2 120)

Hinges

Number	3 adjustable three-wing hinges
Mounting	Attaches to wall opening and frame via pins and threaded plates
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (both width and height)
3rd Hinge	Standard (upper position)
4th Hinge EI_2 90	Required for wall opening width > 1100 mm or wall opening height > 2400 mm (lower position)
4th Hinge EI_2 120	Required for wall opening width > 1000 mm or wall opening height > 2300 mm (lower position)

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm mechanism for synchronized leaf closing
Finish	Silver

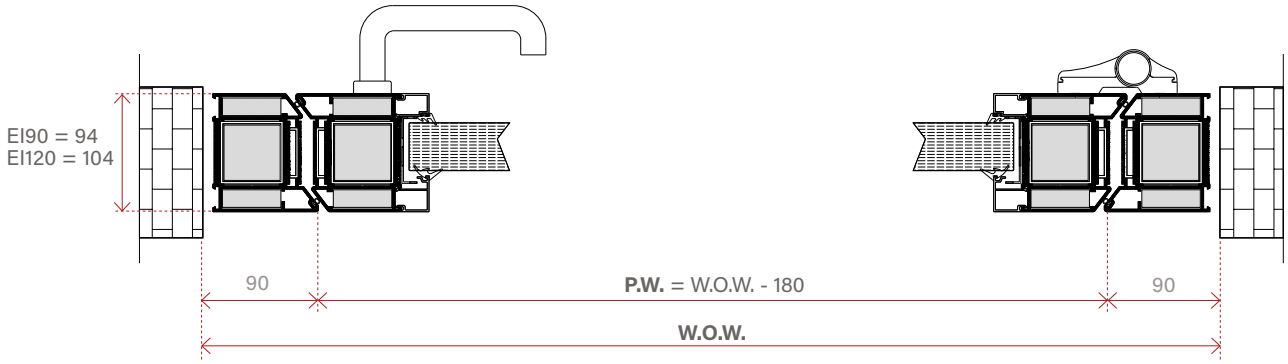
Standard unit finish

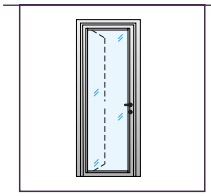
Options	Satin OX Silver or RAL 9010 Soft

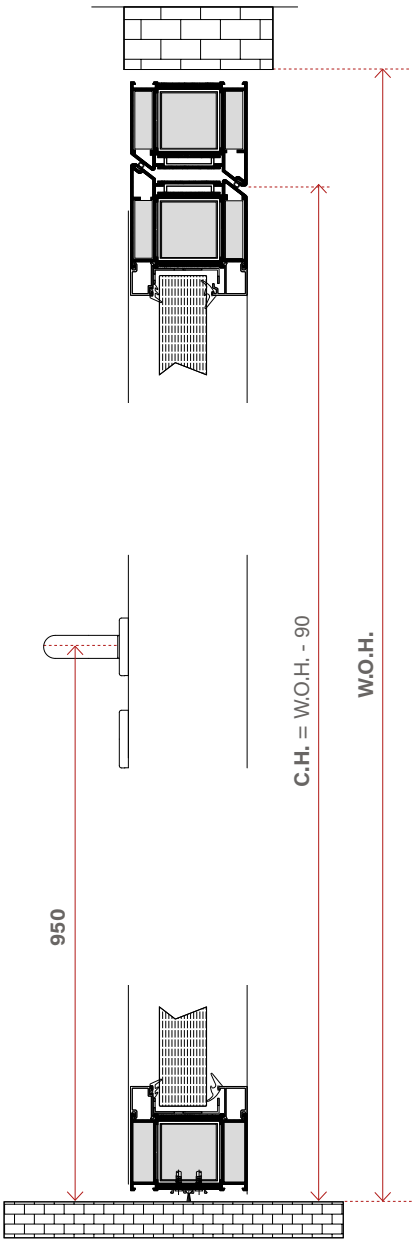
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Minimum width	800 mm
Min. width with panic bar	900 mm
Max. width with or without panic bar	1450 mm
Min. height for escape routes	2090 mm
Max. height with transom	2740 mm
Max. height without transom	2500 mm
Surface area constraint	3,2 m^2

Clear opening width with leaf at 90°	
With lever panic bar	- 360 mm
With push-bar	- 330 mm
Passage through the leaf	- 260 mm

Door weight	$EI_2$90	$EI_2$120
kg/m^2	105	130

IINDOOR ALUMINUM LINE EI_2 90/120

Fire-rated glass door

double leaf

VITREX F4
UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation layers, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated slots
Cross-sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	94 mm (EI_2 90) 104 mm (EI_2 120)
Central mullion (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm (EI_2 90) 50 mm (EI_2 120)

Hinges

Number	3 adjustable three-wing hinges per wall opening
Mounting	Attaches to wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (both width and height)
3rd Hinge	Standard feature, positioned at the top
4th Hinge EI_2 90	Required for W.O.W. > 2200 mm, W1 > 1100 mm, or W.O.H. > 2400 mm
4th Hinge EI_2 120	Required for W.O.W. > 2000 mm, W1 > 1000 mm, or W.O.H. > 2300 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

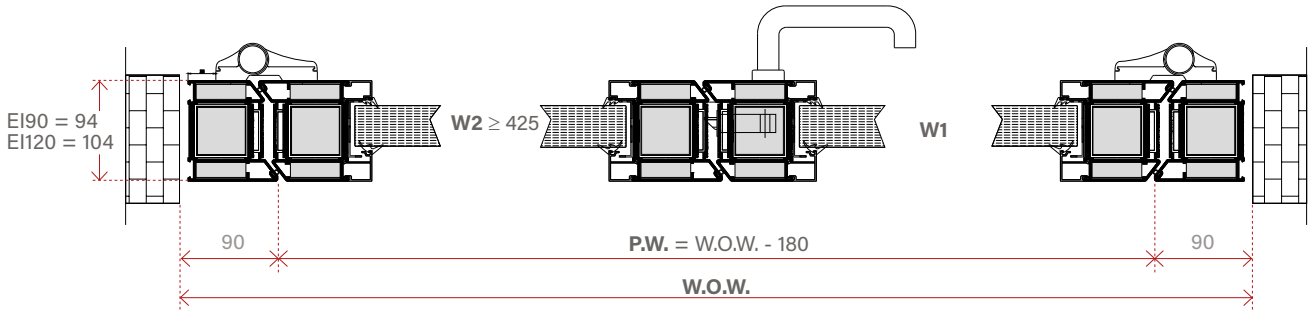
Standard unit finish

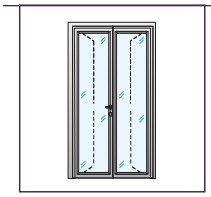
Options	Satin OX Silver or RAL 9010 Soft

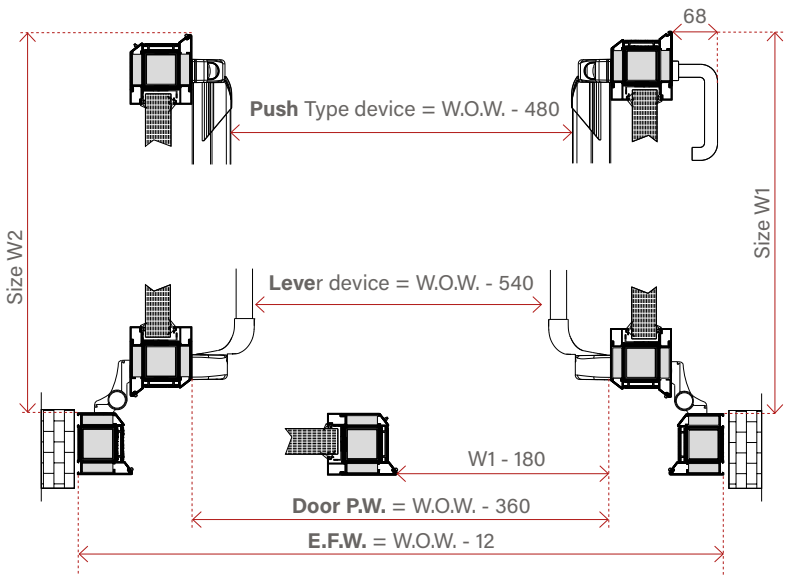
Assembly

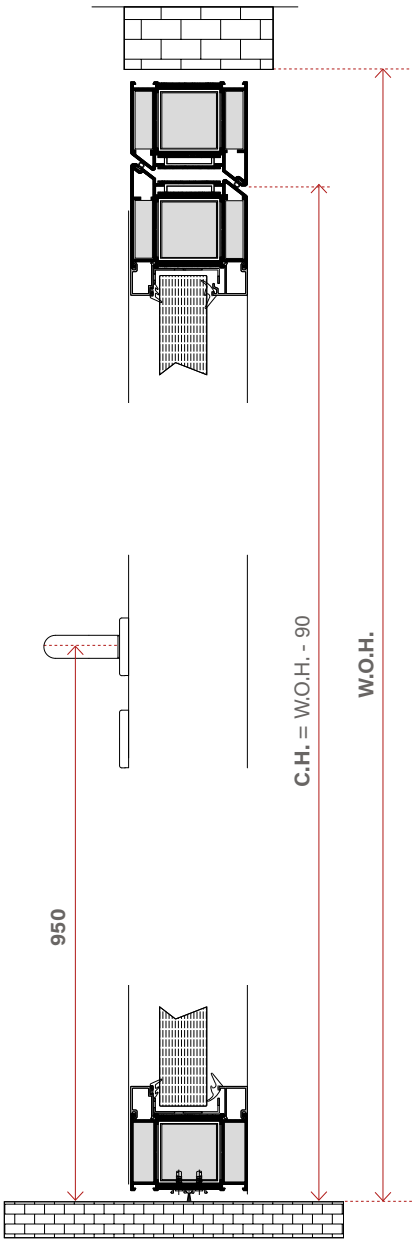
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width (asymmetric) with handle	1420 mm (995+425)
Min. width (symmetric) with handle	1420 mm (710+710)
Min. width (asymmetric) with panic bar	1700 mm* (W2>700)
Min. width (symmetric) with panic bar	1600 mm* (800+800)
Max. width with or without panic bar	2400 mm
Min. height for escape routes	2090 mm
Max. height with transom bar	2740 mm
Max. height without transom bar	2500 mm
Surface area constraint	5,6 m^2

Clear opening width with leaf at 90°	$EI_2$90	$EI_2$120
Lever panic device	- 520 mm	- 540 mm
With push type panic device	- 460 mm	- 480 mm
Passage to leaves	- 340 mm	- 360 mm

Door weight	$EI_2$90	$EI_2$120
kg/m^2	100	125

*requirement to mark the main leaf

INDOOR ALUMINUM LINE EI_2 90/120

Fire-rated glazed door

with side light or transom light

VITREX F4
UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	15/10 gauge thickness, dual insulation layers, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke and rebate seals
Gaskets	Cold smoke seals fitted into dedicated slots
Cross-sections	T, Z, or L profiles mechanically fixed to the structure
Wall opening profiles	T or Z profiles flush with the frame, selected based on the glazing bead position
Thickness	94 mm (EI_2 90) 104 mm (EI_2 120)
Central mullion (optional)	Positioned 950 mm from the floor

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm (EI_2 90) 50 mm (EI_2 120)

Hinges

Number	3 adjustable three-wing hinges per wall opening
Mounting	Attaches to wall opening and frame via pins and threaded plates
Adjustment	Standard high-positioned adjustment point (using grub screws) for the clearance gap between wall opening and frame (both width and height)
3rd Hinge	Follows specifications for single or double-wall opening configurations
4th Hinge	Follows specifications for single or double-wall opening configurations

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

Standard unit finish

Options	Satin OX Silver or RAL 9010 Soft

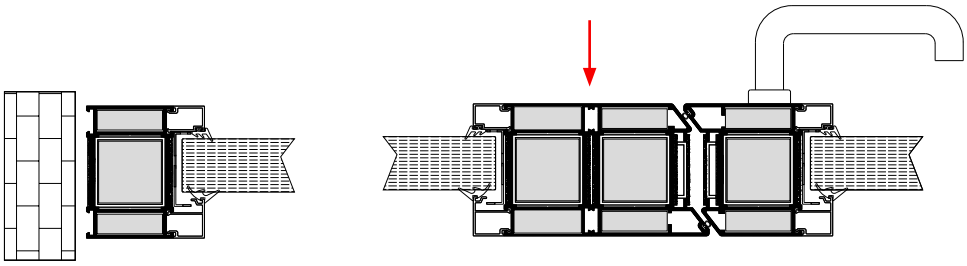
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

Section example

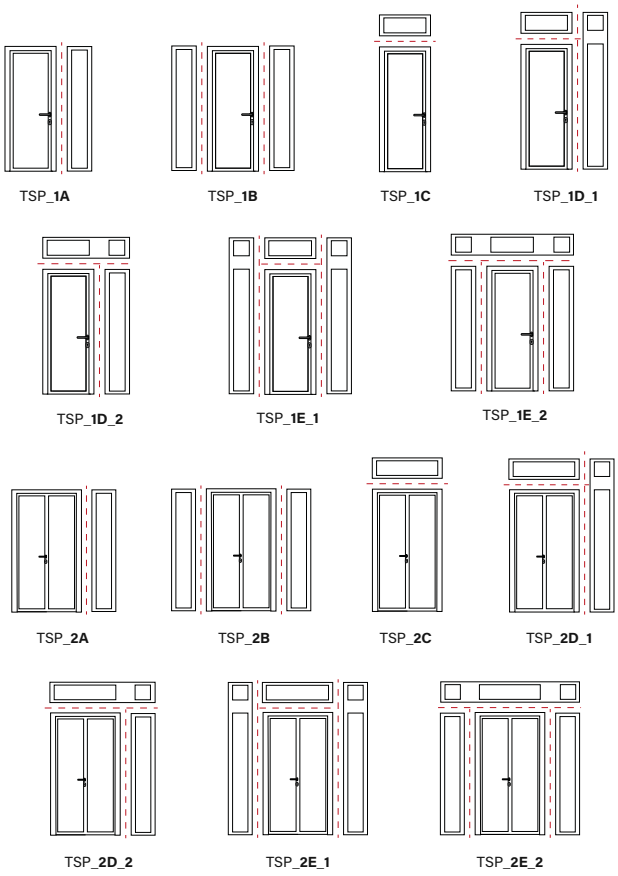
Sidelight separated from the window unit



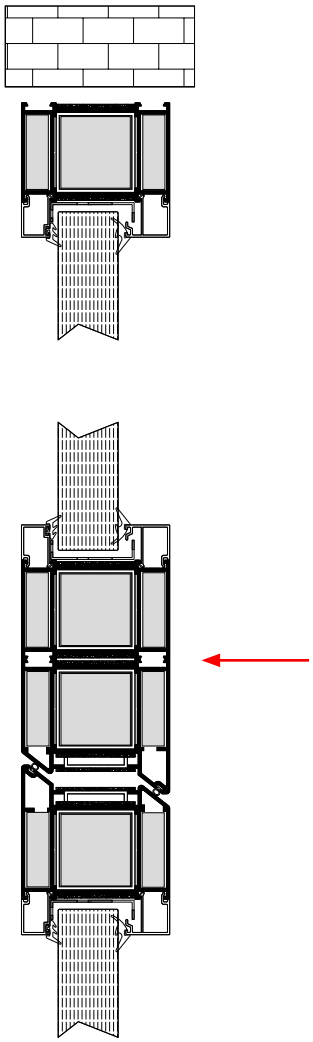
Size limits

Side panel and transom window	≥ 350 mm
Unique frame	not feasible

Separate frames



Section example:
transom window separate from the window unit



INDOOR ALUMINUM LINE EI_2 90

Fire-rated sliding glass door

single-leaf without panic hardware

VITREX F13

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Features	15/10 gauge, double insulation layer, and extruded aluminum casing (UNI 6060)
Insulation	Perimeter self-expanding seals for hot smoke
Door thickness	94 mm (EI_2 90)

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90)

Gaskets

Characteristics	Self-expanding perimeter labyrinth seals for hot smoke

Standard Finish

Door panel	Ral 9010 soft or Ral 7035
Motorized guide rail	Satin OX Silver

Installation

Not suitable for installation on escape routes/emergency exits.

Door Operation

The selector switch allows for two operating modes: automatic or closed. In the event of an alarm and/or power failure (220V), the door—regardless of the mode previously set (open or automatic)—will immediately close, overriding any connected accessories (whether for opening commands or safety functions). The door will remain closed during the alarm state. Normal operation will resume only after the alarm condition has cleared.

WARNING: Installation, configuration, and maintenance of automation systems for sliding fire doors must be performed **exclusively by highly qualified and specialized personnel**.

Carrying out such work using unauthorized personnel will compromise safety, impair the system's proper functioning, and void any warranties.

Automation specifications compliant with the EN 16005 standard and the Machinery Directive 2006/42/EC.

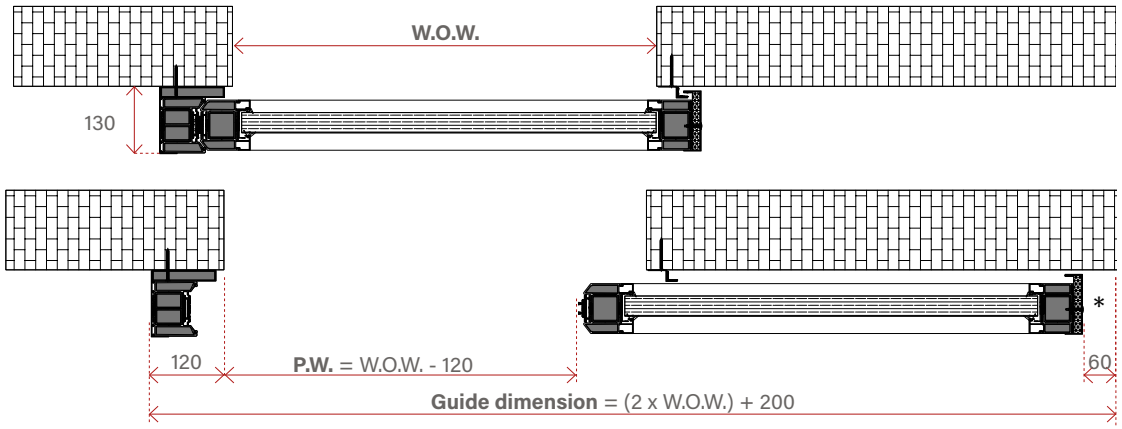
TECHNICAL DATA	
Transformer	toroidal core with safety device and main switch
Voltage	230 V
Frequency	50 – 60 Hz
Rated power	200 W
Electric lock	toothed belt locking mechanism, electroMagnetsc, bistable
Carriage	
Vertical wall opening adjustment	12 mm
Horizontal wall opening adjustment	40 mm
Anti-tilt protection	standard
Self-cleaning	√
Control unit	DCU1-2M NT
Error log and statistical data – Software update – Optional bus interface – Fire detection system connection – Power supply for peripherals	
Programmable inputs	3
Programmable outputs	2
Battery	NiCd, 24 V, 700 mA
Motor	dual gear motor
Torque	400 Ncm

Product Characteristics	
Height	150 / 200 mm
Depth	185 mm
Single-leaf solution: Maximum leaf weight	200 kg
Double-leaf solution: Maximum leaf weight	200 kg
Protection class	IP 20
Mains disconnection	Main switch on the automation unit
Opening speed (max.)	0.8 m/s
Closing speed (max.)	0.8 m/s
Opening time	0 – 60 s
Adjustable opening and closing force	150 N max.

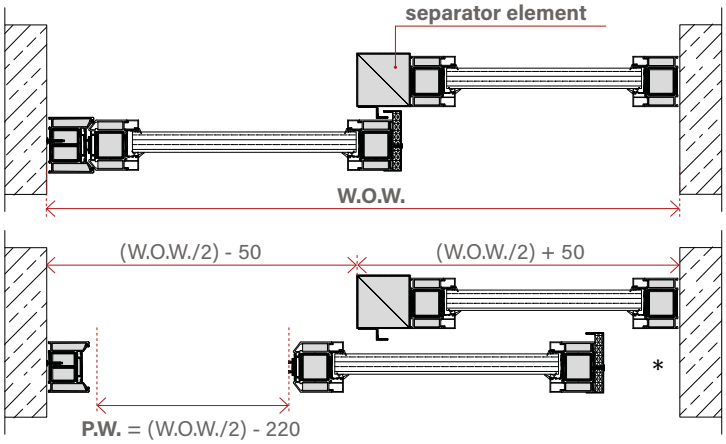
Assembly

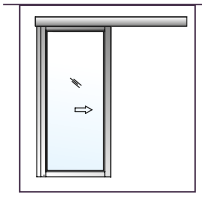
Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	to fasten the guide rail, use 6.3x45 mm self-tapping screws with hexagonal heads

Fire-rated partitions' installation must be carried out by specialized personnel.



with side light



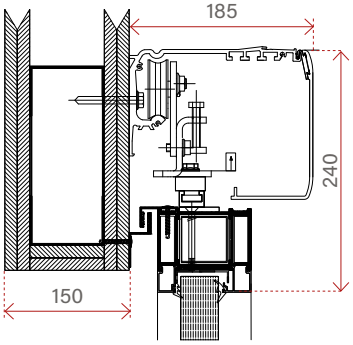


NOTE:

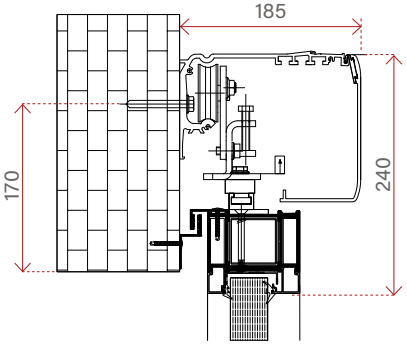
* Safety sensor mandatory for leaf-to-wall distance < 200 mm

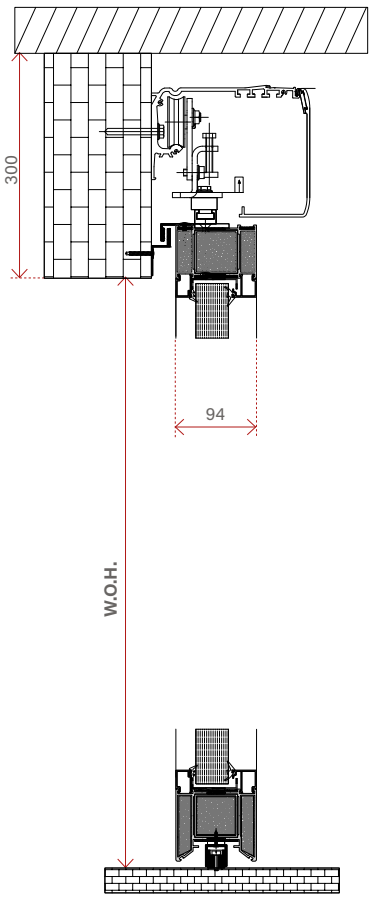
ANCHORING SYSTEM

on a 100 x 200 beam



on masonry





Dimensions	
W.O.W. minimal	700 mm
W.O.W.maximum	1200 mm
W.O.H. minimal	2000 mm
W.O.H.maximum	2400 mm
Size motorized guide	(2 x W.O.W.) + 200

INDOOR ALUMINUM LINE EI_2 90

Fire-rated sliding glass door

double-leaf without panic hardware

VITREX F13

UNI EN 1634-1

Fire-resistant unit

Material	Galvanized profiled tubular steel load-bearing frame
Features	15/10 gauge, dual insulation layer, and extruded aluminum casing (UNI 6060)
Insulation	Mechanically fastened to the structure
Door thickness	Self-expanding perimeter seals for hot smoke
	94 mm (EI_2 90)

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90)

Gaskets

Characteristics	Self-expanding perimeter smoke seals

Standard Finish

Door panel	Ral 9010 soft or Ral 7035
Motorized guide rail	Satin OX Silver

Installation

Not suitable for installation on escape routes/emergency exits.

Door Operation

The selector switch allows for two operating modes: automatic or closed. In the event of an alarm and/or power failure (220V), the door—regardless of the mode previously set (open or automatic)—will immediately close, overriding any connected accessories (whether for opening commands or safety functions). The door will remain closed during the alarm state. Normal operation will resume only after the alarm condition has cleared.

WARNING: Installation, configuration, and maintenance of automation systems for sliding fire doors must be performed **exclusively by highly qualified and specialized personnel**.

Carrying out such work using unauthorized personnel will compromise safety, impair the system's proper functioning, and void any warranties.

Automation specifications compliant with the EN 16005 standard and the Machinery Directive 2006/42/EC.

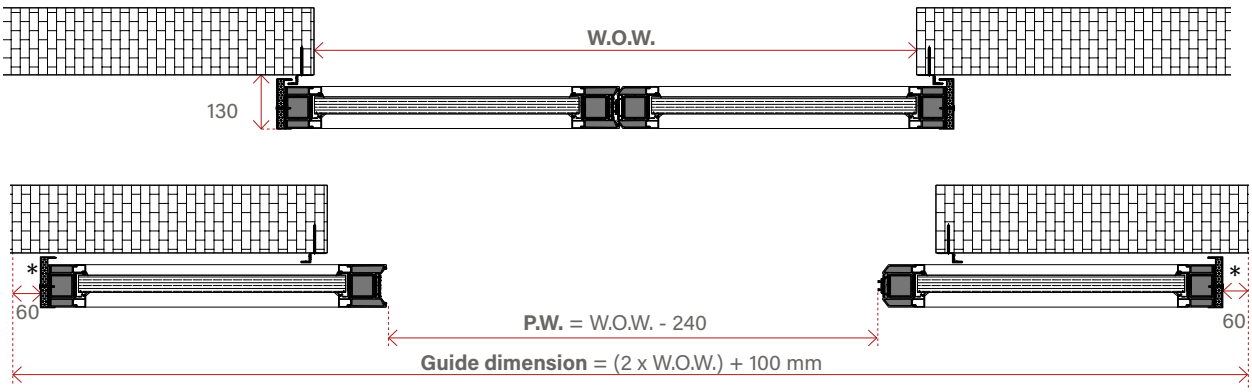
TECHNICAL DATA	
Transformer	toroidal core with safety device and main switch
Voltage	230 V
Frequency	50 – 60 Hz
Rated power	200 W
Electric lock	toothed belt locking mechanism, electroMagnetsc, bistable
Carriage	
Vertical wall opening adjustment	12 mm
Horizontal wall opening adjustment	40 mm
Anti-tilt protection	standard
Self-cleaning	√
Control unit	DCU1-2M NT
Error log and statistical data – Software update – Optional bus interface – Fire detection system connection – Power supply for peripherals	
Programmable inputs	3
Programmable outputs	2
Battery	NiCd, 24 V, 700 mA
Motor	dual gear motor
Torque	400 Ncm

Product Characteristics	
Height	150 / 200 mm
Depth	185 mm
Single-leaf solution: Maximum leaf weight	200 kg
Double-leaf solution: Maximum leaf weight	200 kg
Protection class	IP 20
Mains disconnection	Main switch on the automation unit
Opening speed (max.)	0.8 m/s
Closing speed (max.)	0.8 m/s
Opening time	0 – 60 s
Adjustable opening and closing force	150 N max.

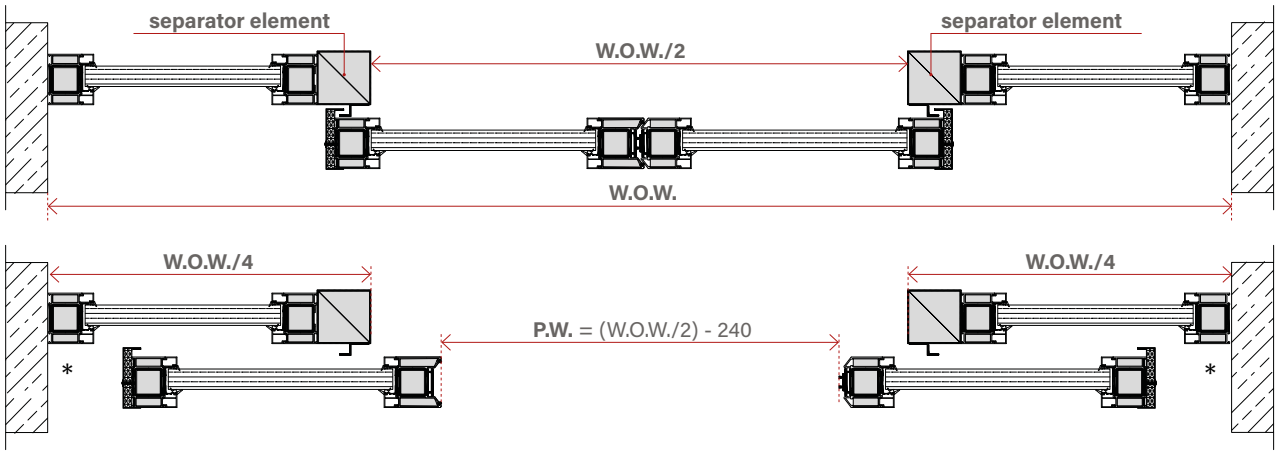
Assembly

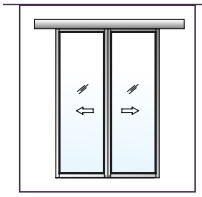
Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	to fasten the guide rail, use 6.3x45 mm self-tapping screws with hexagonal heads

Fire-rated partitions' installation must be carried out by specialized personnel.



with side light



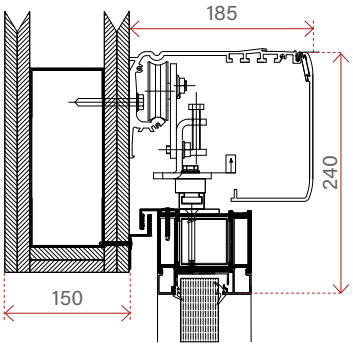


NOTE:

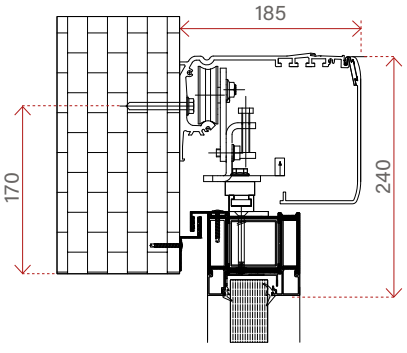
* Safety sensor mandatory for leaf-to-wall distance < 200 mm

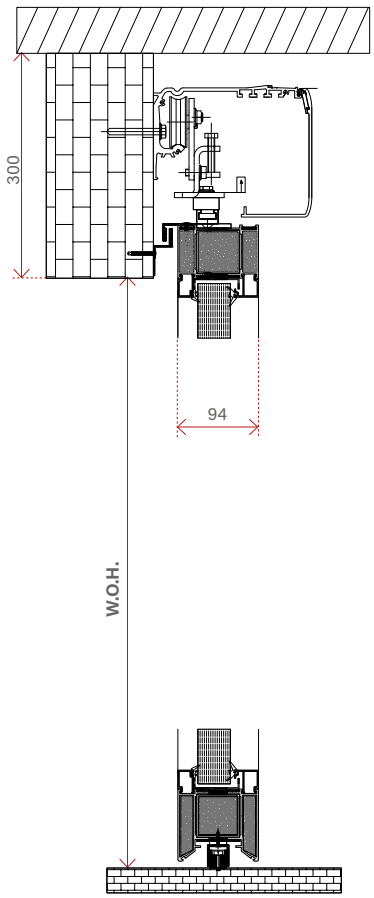
ANCHORING SYSTEM

on a 100 x 200 beam



on masonry





Dimensions	
W.O.W. minimal	1200 (600 + 600) mm
W.O.W.maximum	2200 (1100 + 1100) mm
W.O.H. minimal	2000 mm
W.O.H.maximum	2400 mm
Size motorized guide	(2 x W.O.W.) + 100 mm

INDOOR ALUMINUM LINE EI_2 90/120

Fire-resistant window

single or double-leaf

VITREX F4

UNI EN 1634-1

Fire-resistant unit

Material	Load-bearing structure on four sides made of galvanized profiled steel tubing.
Characteristics	15/10 gauge; cover made of extruded aluminum (UNI 6060 alloy)
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Perimeter self-expanding seals (for hot smoke) and rebate seals (for cold smoke) fitted in dedicated channels
Configurations	Interlocking profile sections (Z, L shapes) allowing for various assembly configurations
Thickness	94 mm (EI_2 90) 104 mm (EI_2 120)
Approximate weight	95 kg/m² (EI_2 90) 120 kg/m² (EI_2 120)

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm ($EI_2$90) 50 mm ($EI_2$120)

Hinges

Quantity	2 adjustable three-wing hinges per wall opening
Mounting	Mounted on the wall opening and frame using pins and threaded plates
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame, in both width and height di serie, posizionata alta
3rd Hinge	Necessaria per 1 LEAF con W.O.W.> 1000 mm o W.O.H.> 1800 mm in posizione alta

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Self-locking lock

Closure	On the secondary leaf

Half-handle

Finish	Silver

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

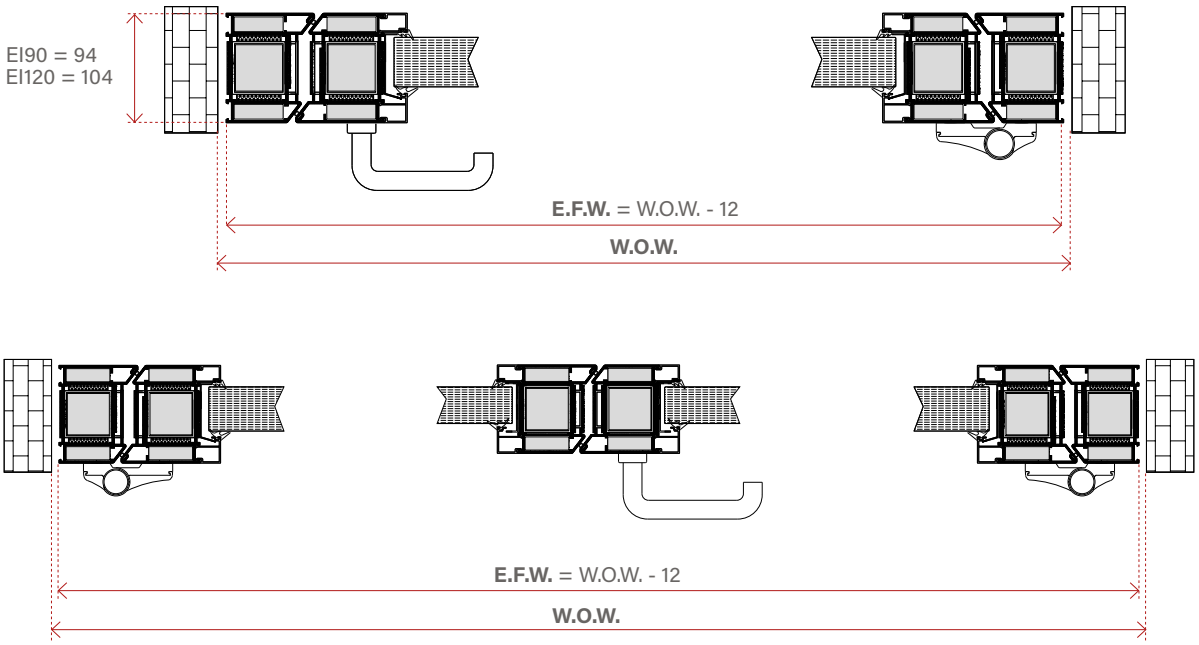
Standard unit finish

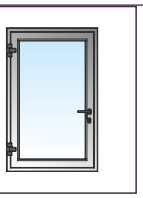
Options	Satin OX Silver or RAL 9010 Soft

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	with 4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.



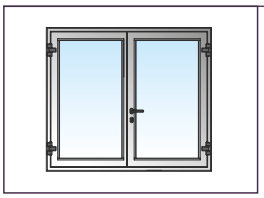


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	700 x 610 mm
Maximum W.O. (W x H)	1220 x 1800 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 1800 mm



ATTENTION:

The width of the opening must be less than or equal to twice the height.

Double-leaf dimensions

Minimum W.O. (W x H)	1420 (710 + 710) x 710 mm
Maximum W.O. (W x H)	1800 x 1800 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 1800 mm

INDOOR ALUMINUM LINE EI_2 90/120

Bidirectional fire-rated fixed glazing

with regular panels

VITREX F3
UNI EN 1364-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized tubular steel profiles
Characteristics	Thickness 15/10; covering made of extruded aluminum (UNI 6060 alloy)
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Perimeter self-expanding seals for hot smoke
Configurations	Profile sections (T, Z, L) for various assembly configurations
Thickness	94 mm (EI_2 90) 104 mm (EI_2 120)
Approximate weight	90 kg/m² (EI_2 90) 115 kg/m² (EI_2 120)

Fire-resistant glass

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness	38 mm (EI_2 90) 50 mm (EI_2 120)

Standard unit finish

Options	Satin OX Silver or RAL 9010 Soft

Assembly

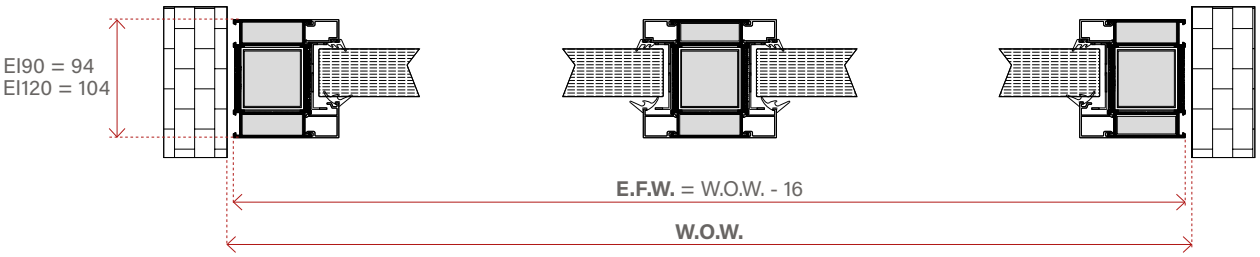
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

PLEASE NOTE:

If a rough opening frame is used: FRAME EXTERIOR = Finished Wall Opening - 10 mm

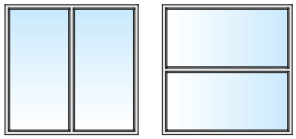
For larger dimensions, please contact our sales department.

Fire-rated partitions' installation must be carried out by specialized personnel.

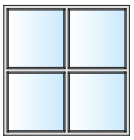


WITH CROSSBAR

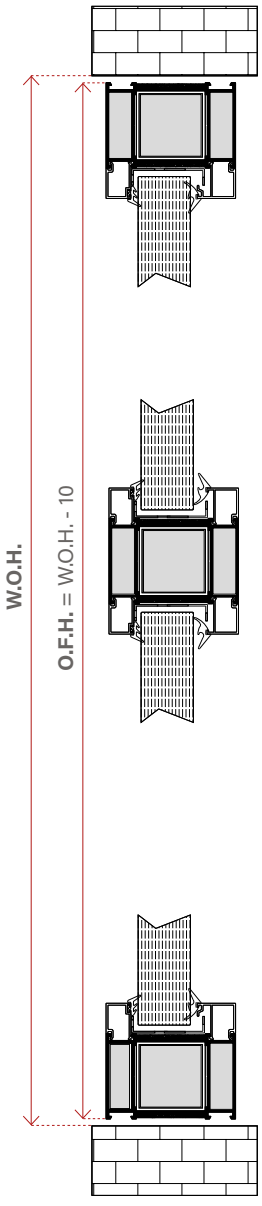
Vertical or Horizontal



Double



Size limits	
Minimum W.O.W.	350 mm
Maximum W.O.H.	3000 mm
Maximum W.O.W.	no limits
Recommended max. glass W x H	1300 x 2500 mm



INDOOR ALUMINUM LINE EI_2 90/120

Bidirectional fire-rated fixed glazing with silicone joint

VITREX JOINT

UNI EN 1364-1

Fire-resistant unit

Material	Load-bearing structure made of galvanized profiled steel tubing
Characteristics	15/10 gauge; cover made of extruded aluminum (UNI 6060 alloy)
Insulation	Interlayer of calcium silicate-based insulation boards
Gaskets	Perimeter self-expanding seals for hot smoke
Configurations	Shaped profile sections (T, Z, L) for various configurations

Characteristics JOINT lineare

Frame thickness	94 mm ($EI_2$90)	104 mm ($EI_2$120)	
Approximate weight including glass	90 Kg/m² $EI_2$90	115 Kg/m² $EI_2$120	
Fire-resistant glass Supply	Supplied unassembled		
Composition	Panels with intumescent interlayer; vertical jointing without the use of metal profiles or connecting strips		
Class	1B1		
Thickness	With black edge	33 mm (EI_2 90)	54 mm (EI_2 120)
	With transparent edge	37 mm (EI_2 90)	/ (EI_2 120)

Characteristics JOINT angolare

Frame thickness	94 mm ($EI_2$90)	114 mm ($EI_2$120)	
Approximate weight including glass	110 Kg/m² $EI_2$90	125 Kg/m² $EI_2$120	
Fire-resistant glass Supply	Unmounted		
Composition	Panels with an intumescent interlayer, vertically joined without the use of metal profiles or jointing strips		
Class	1B1		
Thickness	with black edge	43 mm (EI_2 90)	54 mm (EI_2 120)

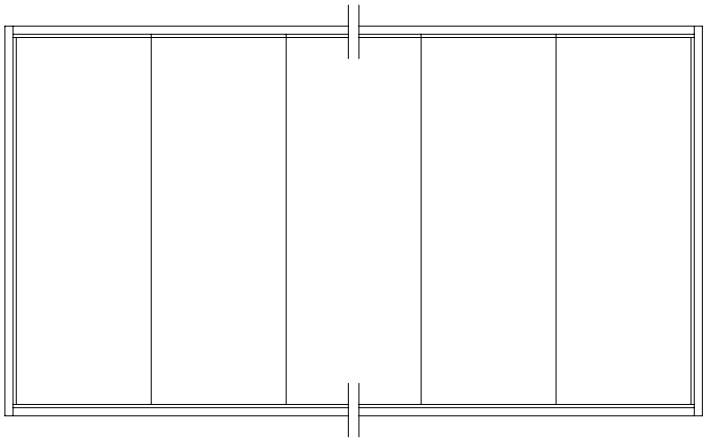
Standard unit finish

Options	Satin OX Silver or RAL 9010 Soft

Assembly

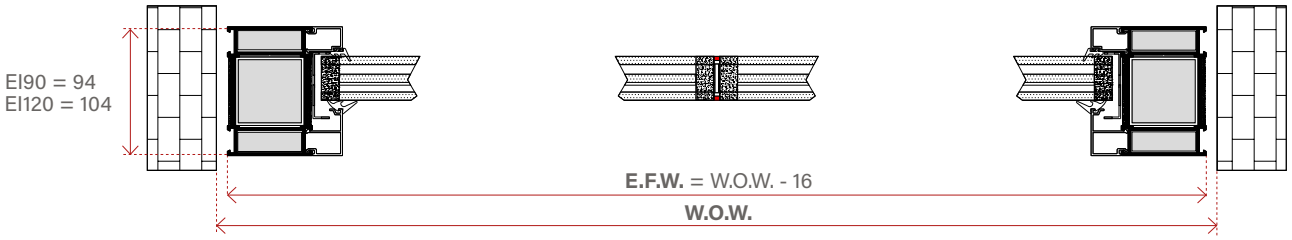
Rigid support	dowels or turbo screws
Walls and structural elements with perimeter protection	con viti 4,8x32 mm

NOTE:
The window unit can also be manufactured using "interlocking" solutions to facilitate handling, transport, and positioning at the delivery and installation sites.

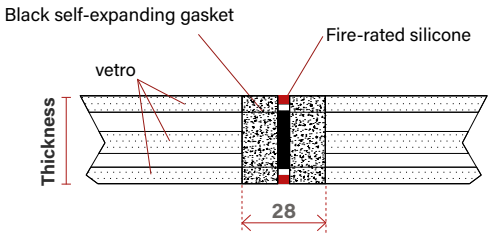


For dimensions exceeding 1400x2800, the glass pane can be analyzed using the Enhanced Effective Thickness (EET) model; if the deflection exceeds the maximum limit, the installation of handrails and vertical supports behind the joint is recommended.

Fire-rated partitions' installation must be carried out by specialized personnel.

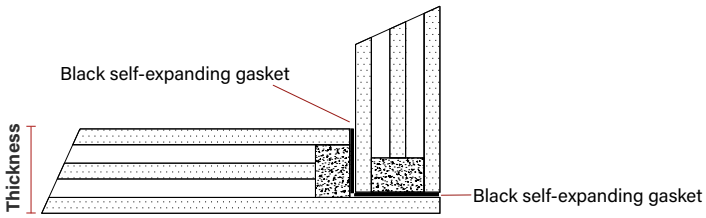


Linear joint with black edge



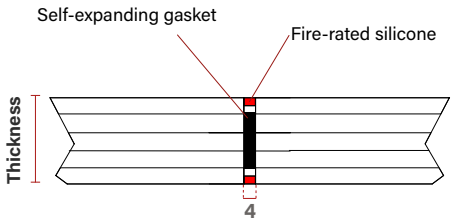
	Thickness	Weight	Max producible slab size
$EI_2$90	33 mm	75 Kg/m²	1500 x 3100 mm
$EI_2$120	54 mm	115 Kg/m²	1200 x 3100 mm

Corner joint with black edge

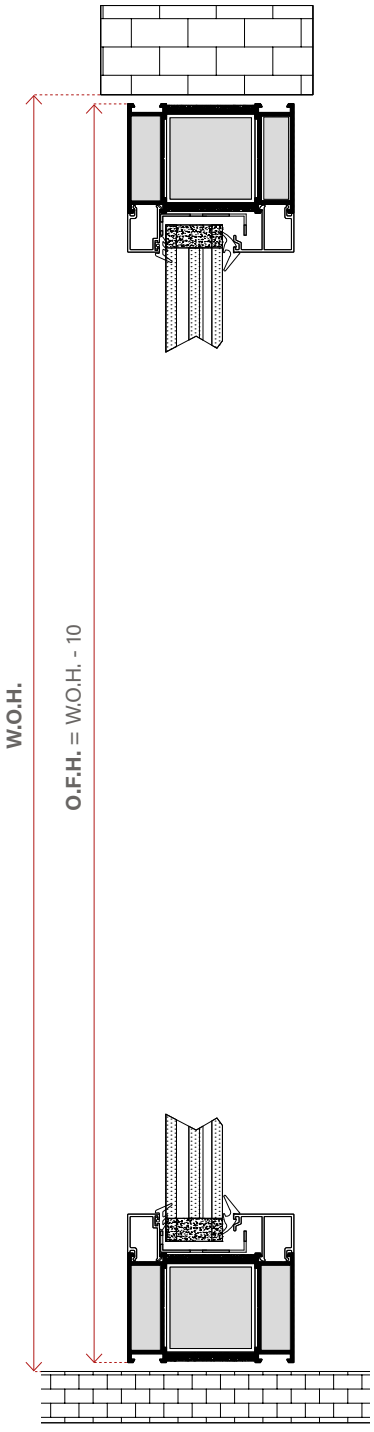


	Thickness	Weight	Max producible slab size
$EI_2$90	43 mm	98 Kg/m²	1500 x 3100 mm
$EI_2$120	54 mm	125 Kg/m²	1200 x 3100 mm

Linear joint with transparent edge



	Thickness	Weight	Max producible slab size
$EI_2$90	37 mm	80 Kg/m²	1500 x 3100 mm



OUTDOOR ALUMINUM LINE EI$_2$30/60

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 92

WINDOW 96

FIXED GLASS 98

HOPPER WINDOW 100

FACADE SYSTEM 102

Outdoor aluminum line

EI_2 30/60

OUTDOOR ALUMINUM LINE $EI_2$30/60

Thermally broken fire-rated glazed door

single-leaf

ALU GLASS R1	
CE	UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	72 mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Hinges

Number	2 adjustable three-wing hinges
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Standard high-positioned adjustment point for setting the clearance between the wall opening and frame (both width and height)
3rd Hinge	Required in the high position for wall opening width > 1000 mm or wall opening height > 2400 mm
4th Hinge	Required in the low position for wall opening width > 1250 mm or wall opening height > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

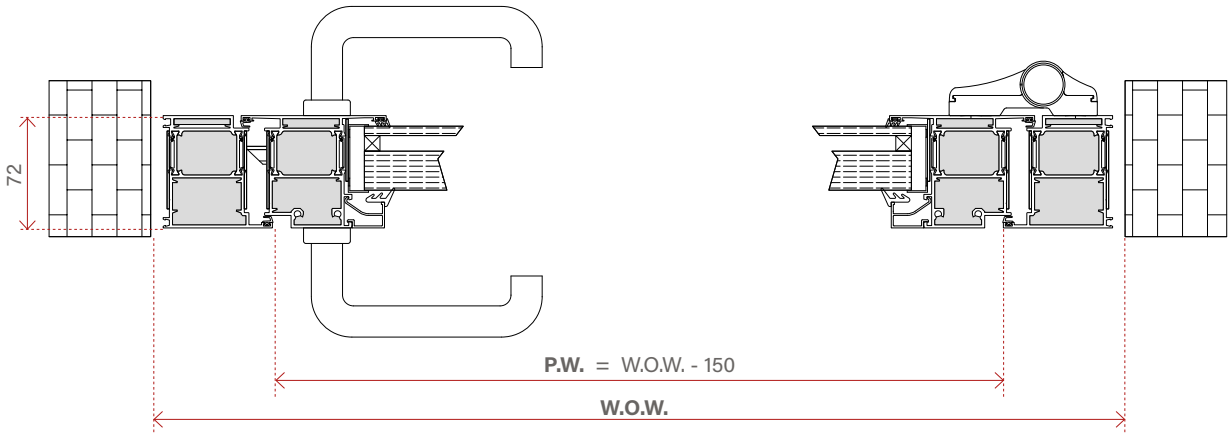
Standard unit finish

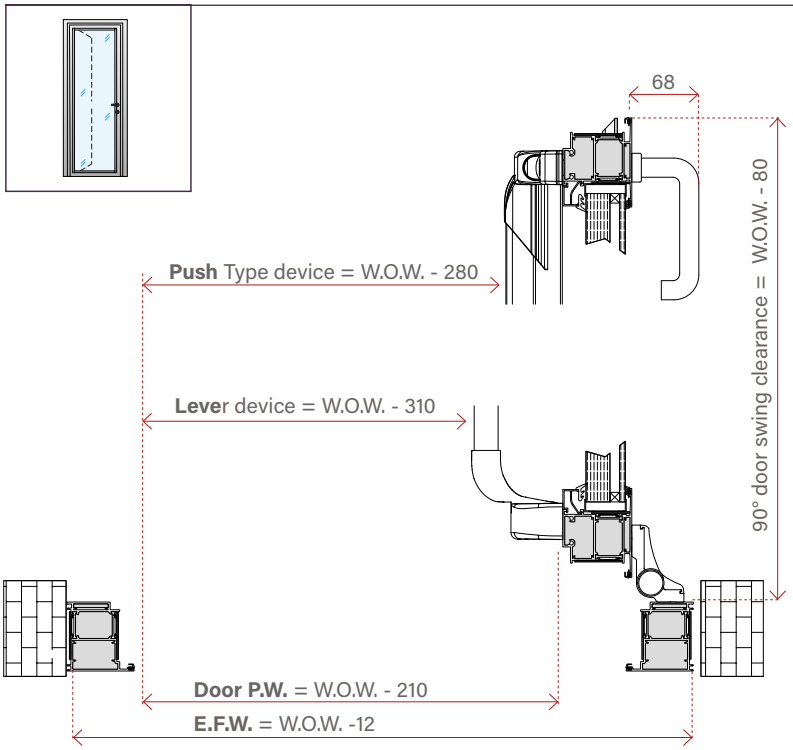
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

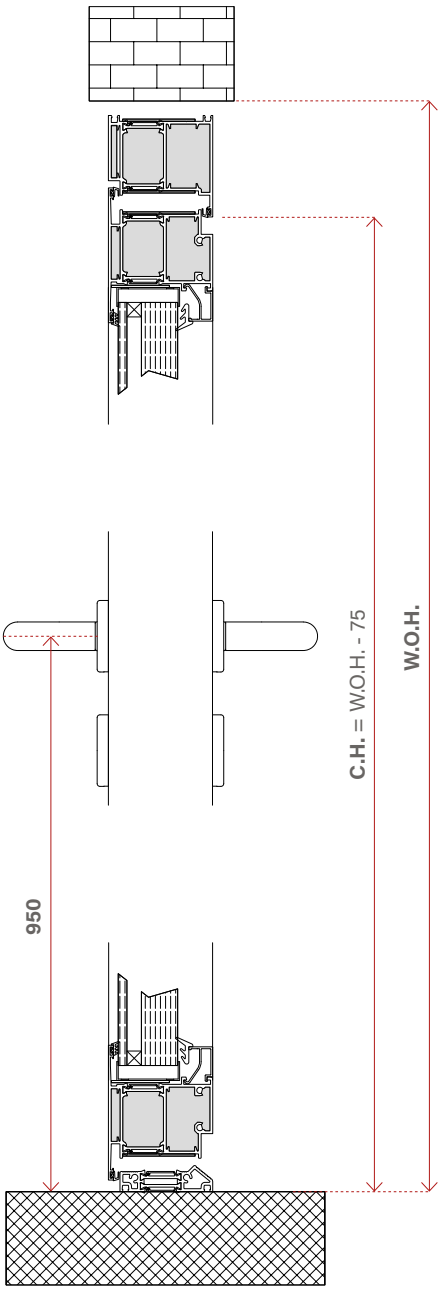
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Minimum width	700 mm
Min. width with panic bar	800 mm
Max. width with or without panic bar	1450 mm
Min. height for escape routes	2080 mm
Max. height with transom	2750 mm
Max. height without transom	2500 mm
Surface area constraint	3,5 m^2

Clear opening width with leaf at 90°	
With lever panic bar	- 310 mm
With push-bar	- 280 mm
Passage through the leaf	- 210 mm

Door weight	$EI_2$30	$EI_2$60
kg/m^2	63	80

OUTDOOR ALUMINUM LINE $EI_2$30/60

Thermally broken fire-rated glazed door

double-leaf

ALU GLASS R2

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	72 mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Hinges

Number	2 adjustable three-wing hinges per wall opening
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (width and height)
3rd Hinge	Required for upper position if: Wall opening Width > 2000 mm, or W1 > 1000 mm, or Wall opening Height > 2400 mm
4th Hinge	Required for lower position if: Wall opening Width > 2400 mm, or W1 > 1250 mm, or Wall opening Height > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	For the profile with a floor-mounted recess, for top/bottom rod operation.

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

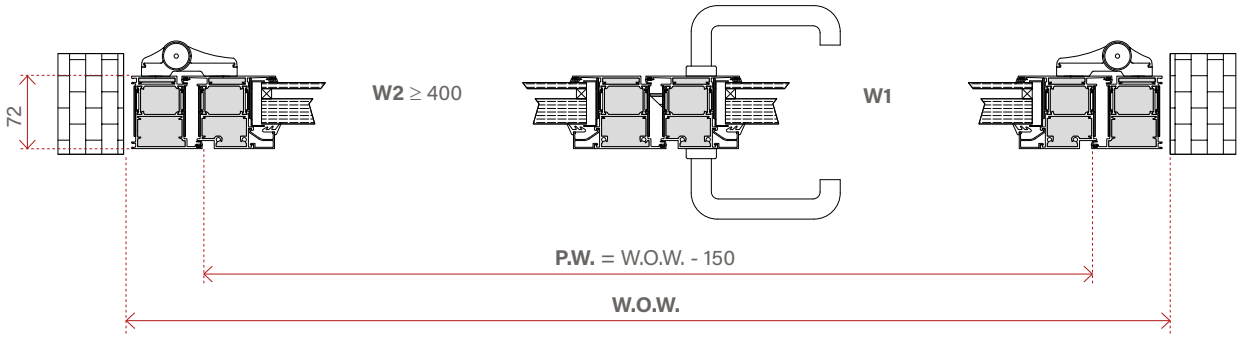
Standard unit finish

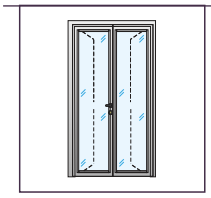
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

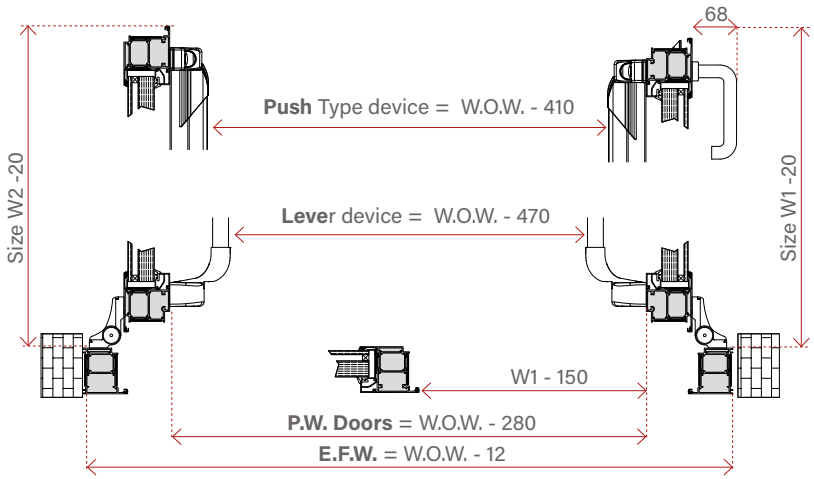
Assembly

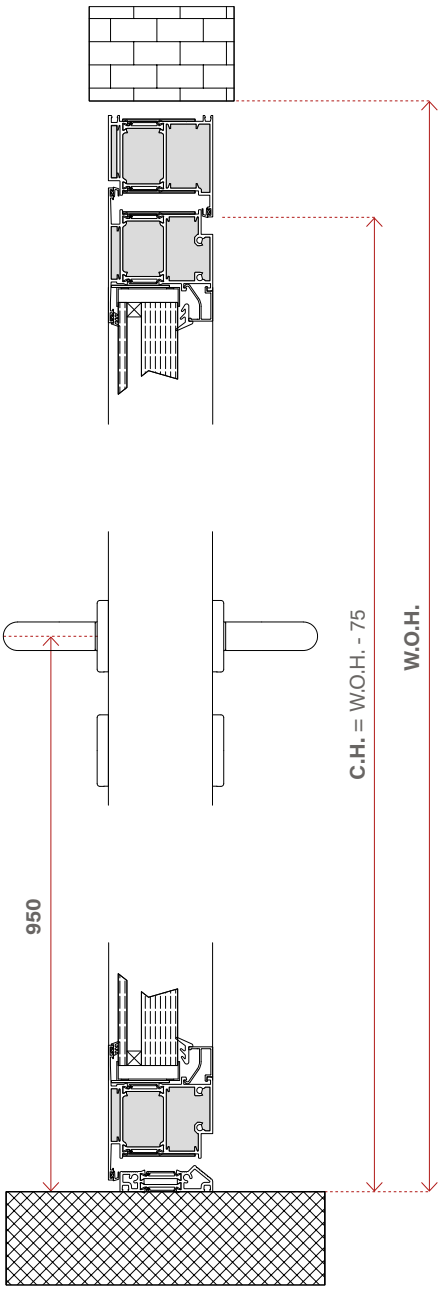
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width (asymmetric) with handle	1220 mm (820+400)
Min. width (symmetric) with handle	1220 mm (610+610)
Min. width (asymmetric) with panic bar	1500 mm* (W2>500)
Min. width (symmetric) with panic bar	1400 mm* (700+700)
Max. width with or without panic bar	2400 mm
Min. height for escape routes	2080 mm
Max. height with transom bar	2750 mm
Max. height without transom bar	2500 mm
Surface area constraint	6,0 m^2

Clear opening width with leaf at 90°	
Lever panic device	- 470 mm
With push type panic device	- 410 mm
Passage to leaves	- 280 mm

Door weight	EI$_2$30	EI$_2$60
kg/m^2	58	75

*requirement to mark the main leaf

OUTDOOR ALUMINUM LINE $EI_2$30/60

Thermally broken fire-rated glazed door

con Sidelight and transom window

ALU GLASS R1 / R2

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	72 mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Hinges

Number	2 adjustable three-wing hinges per wall opening
Mounting	Attached to the leaf and frame via threaded pins
Adjustment	Grub screws allow adjustment of the clearance gap between the leaf and frame (width and height)
3rd Hinge	Follows specifications for single or double leaves
4th Hinge	Follows specifications for single or double leaves

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	For the profile with a floor-mounted recess, for top/bottom rod operation.

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

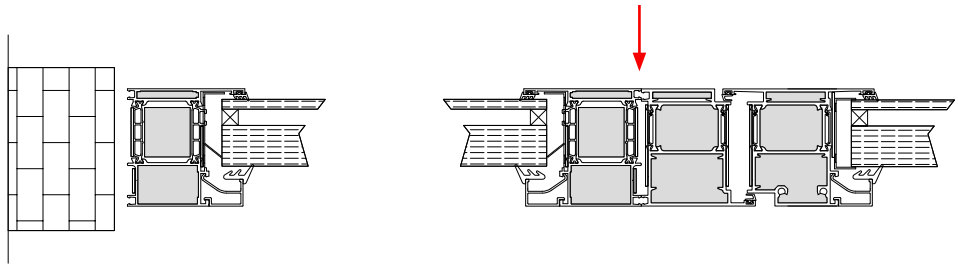
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

Section example

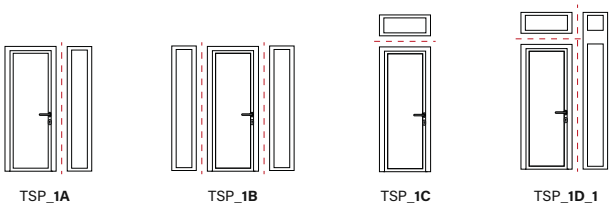
Sidelight separated from the window unit

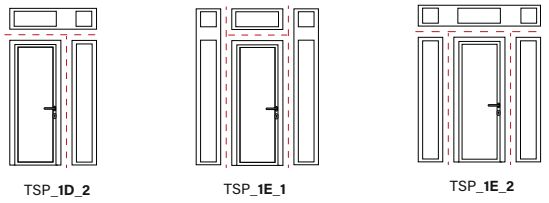


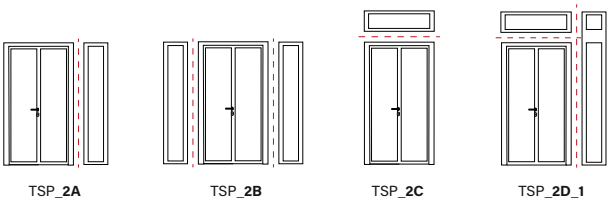
Size limits

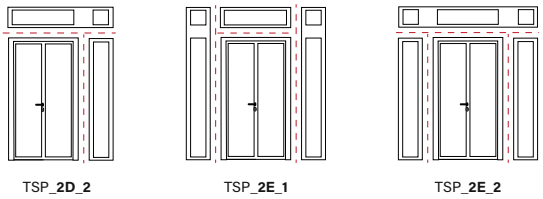
Side panel and transom window	≥ 350 mm
Unique frame	not feasible

Separate frames

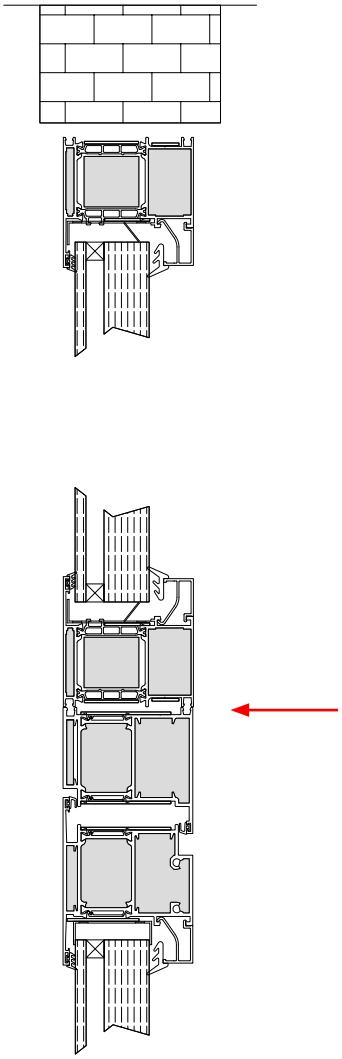








Section example:
transom window separate from the window unit



OUTDOOR ALUMINUM LINE $EI_2$30/60

Fire-resistant thermal-break window

single, double, or double-leaf

ALU GLASS R1/R2	
CE	UNI EN 1634-1

In accordance with the Ministerial Decree of June 21, 2024 (Annex C – Permitted variations), test results obtained on door samples may be extended to the four-sided configuration (window), allowing for greater design flexibility in interior applications.
For exterior applications subject to CE marking, the four-sided configuration may be used only if supported by a specific test on a four-sided window—a test that Glassfire has already successfully conducted.

Fire-resistant unit

Material	EN AW 6060 extruded aluminium
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Sections (Z, L) for different Assembly configurations
Wall opening profiles	Z overlay and glass bead mounted on the pull side of the door
Thickness	72 mm with open joint
Approximate weight	48 Kg/m² $EI_2$30 - 65 Kg/m² $EI_2$60

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Hinges

Number	2 slimline wall opening hinges
Mounting	Attaches to wall opening and frame using threaded plates
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (width and height)
3rd Hinge	Required for single-wall opening units with W.O.W > 1000 mm or W.O.E > 1800 mm (upper position)
	Required for double-wall opening units with W.O.W > 2000 mm or W.O.E > 1800 mm
4th Hinge	Required for single-wall opening units with W.O.W > 1200 mm or W.O.E > 2000 mm (lower position)

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Half-handle

Finish	Silver

Gaskets

Type	Cold-smoke and self-expanding perimeter rebate seals

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

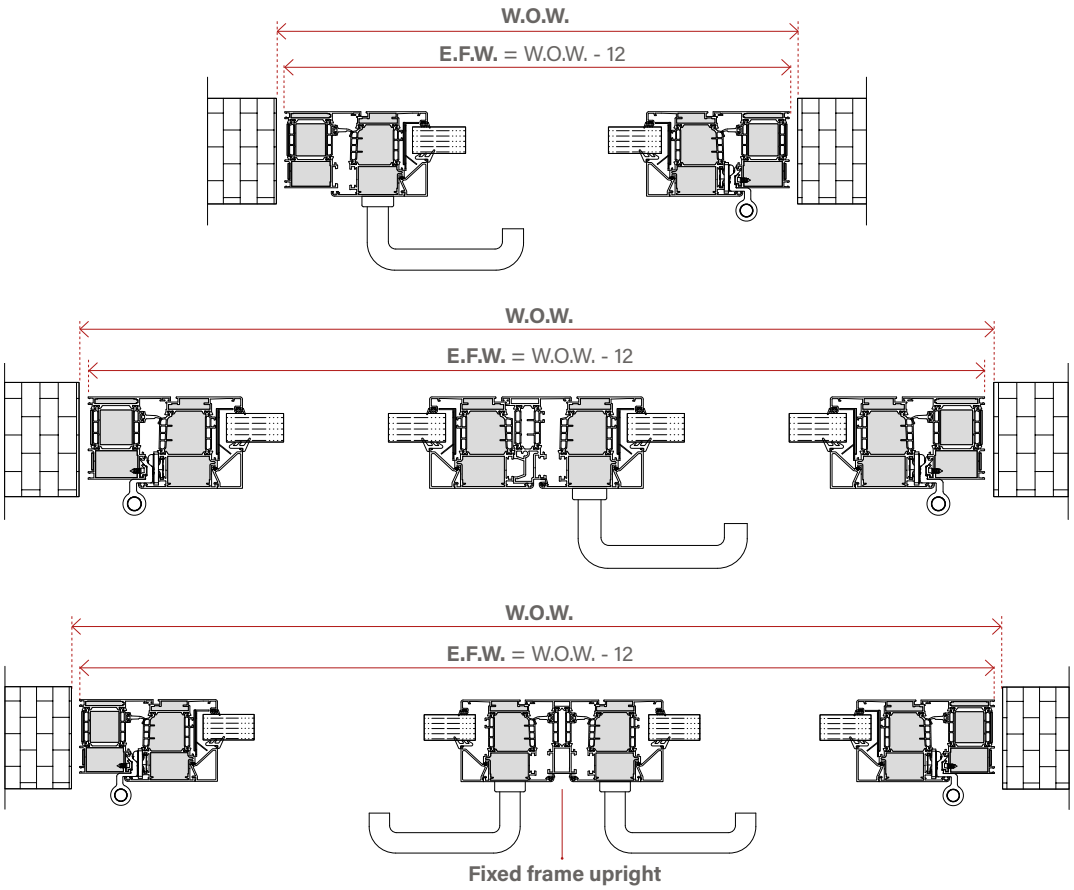
Standard unit finish

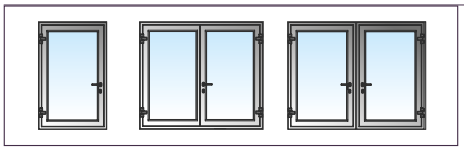
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.





Single-leaf dimensions

Minimum FM (W x H)	540 x 610 mm
Maximum FM (W x H)	1300 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm

ATTENTION: The width of the opening must be less than or equal to the height.

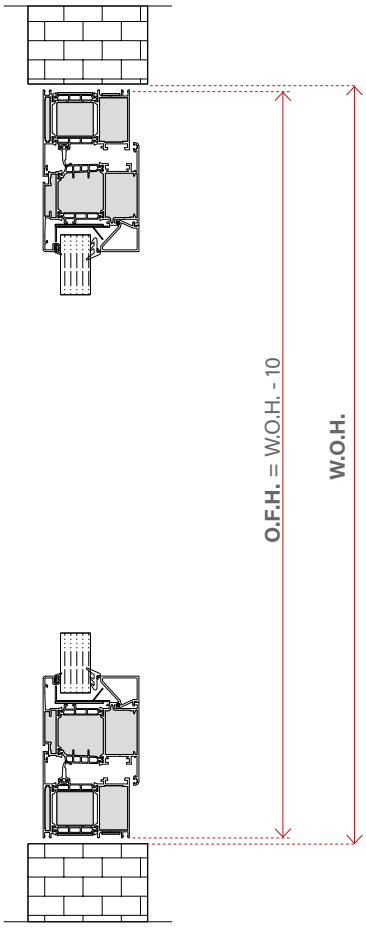
Double-leaf dimensions

Minimum FM (W x H)	1240 (620 + 620) x 640 mm
Maximum FM (W x H)	2200 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm

ATTENTION: The width of the opening must be less than or equal to twice the height.

Dimensions: Double-leaf (independent leaves)

Minimum FM (W x H)	1000 (500 + 500) x 610 mm
Maximum FM (W x H)	2200 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm



OUTDOOR ALUMINUM LINE $EI_2$30/60

Bidirectional fire-rated fixed glazing with thermal break

with regular or arched panels

ALU GLASS R7/R4

CE UNI EN 1364-1

Fire-resistant unit

Material	EN AW 6060 flush-mounted aluminum extrusion	
Characteristics	Complete with drainage hole covers	
Insulation	Interposed calcium silicate-based insulation boards	
Gaskets	Self-expanding perimeter seals for hot smoke	
Configurations	Any crossbars will be positioned according to our criteria A, B, and C	
Thickness	72 mm	
Approximate weight	50 kg/m² $EI_2$30	68 kg/m² $EI_2$60

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

PLEASE NOTE:

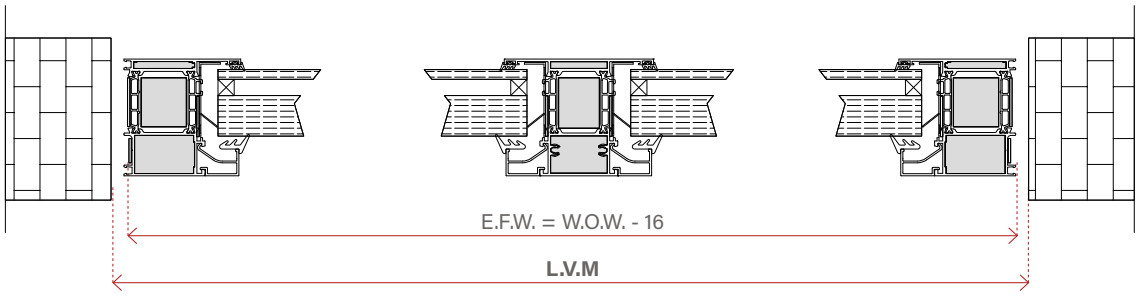
When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.

For irregular arches, a technical drawing or architectural template must be provided.

For large-scale arched frames, we recommend a 3D laser scan survey.

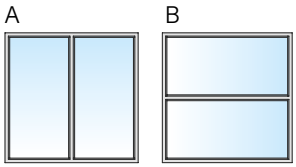
Casing/trim is not included; we recommend using silicone or filler for the finish.

For larger dimensions, please contact our sales department.

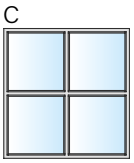


WITH CROSSBAR

Vertical or Horizontal



Double

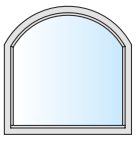


Dimensions

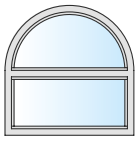
W.O.W.minimum	350 x 350 mm
W.O.H. maximum	3000 mm
W.O.W. maximum	no limits
L X h max of the glass (recommended)	1400 x 2600 mm

ARCHED

Can only be produced using L-shaped profiles. Trim profiles are excluded.

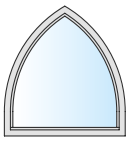


Depressed arch



Semicircular (arch)

It is recommended to traverse at the beginning of the arched portion

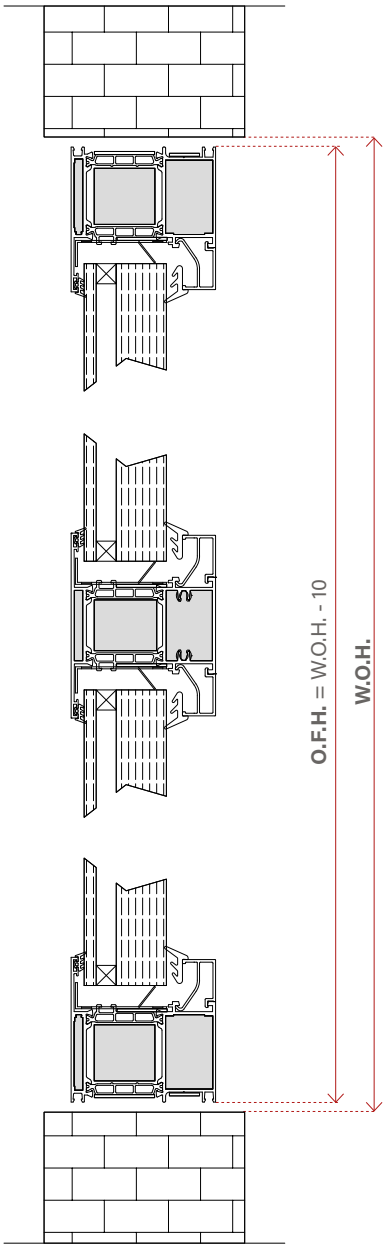


Gothic

Size limits for Semicircular arch (arch)

Minimum radius – standard profile	≥ 700 mm
Diameter – standard profile	≥ 1400 mm
Minimum radius – slim profile	≥ 300 mm
Diameter – slim profile	≥ 600 mm

For information regarding size limits for Gothic and depressed arches, please contact the Technical Department.



OUTDOOR ALUMINUM LINE $EI_2$30/60

Fire-resistant hopper window with thermal break

ALU GLASS R3

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 extruded aluminum
Characteristics	Drainage hole covers
Insulation	Self-expanding perimeter seals for hot smoke
Gaskets	Rebate seals for cold smoke
Frame Sections	Sections (Z, L) for various assembly configurations
Wall opening Profiles	Overlapping Z-profile and glazing bead mounted on the pull side of the hopper window
Thickness	72 mm open-joint system

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness $EI_2$30	36 mm (6 ESG TF/14 ARG/EI 30 16 mm)
Thickness $EI_2$60	43 mm (6 ESG TF/12 ARG/EI 60 25 mm)

Hinges

Number	2 adjustable pin-type hinges
Fixing	Mounted to the leaf and frame using threaded plates
Adjustment	Grub screws for adjusting the clearance between the leaf and frame
Rostra	Pair of upper thermal security pins

Apertura con attuatore

Features	Motorization, with Type A mounting brackets
Finish	Silver / White / Black
Adjustment	Standard power cable on the right
Tension	24V DC
Mechanical devices	Pair of opening limiter arms

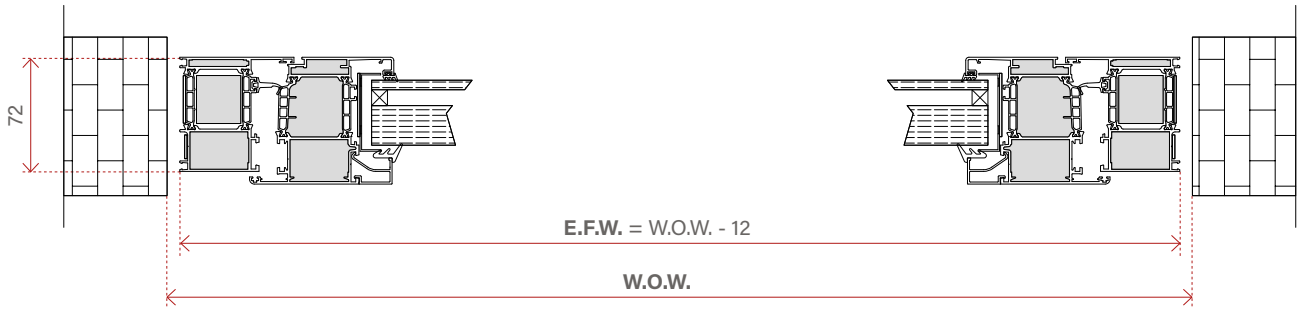
Standard unit finish

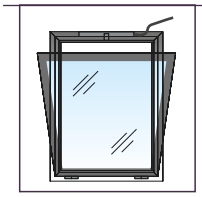
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

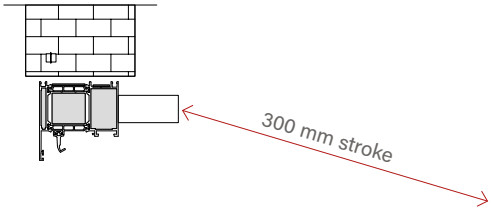
Assembly

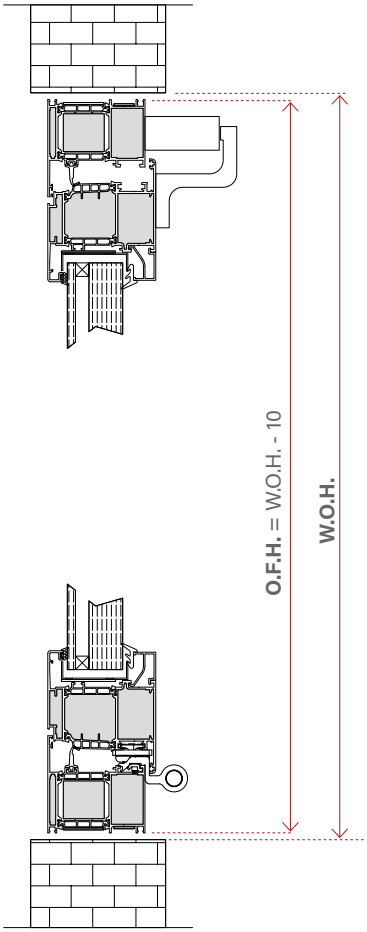
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	self-tapping screws 4.8x19 mm

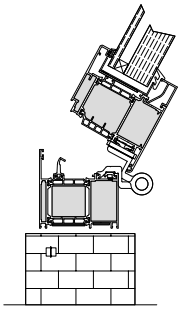
Fire-rated partitions' installation must be carried out by specialized personnel.

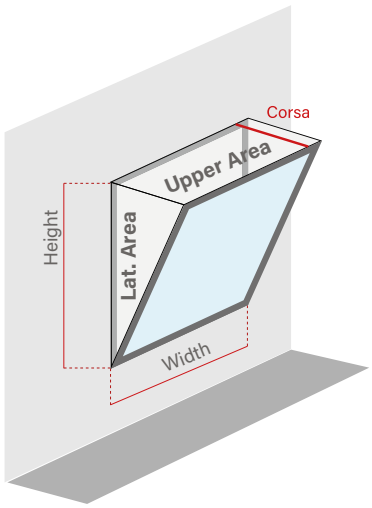












Dimensions	
Minimum W.O. (W x H)	500 x 460 mm
Maximum W.O. (W x H)	2300 x 1150 mm
1 Actuator	W.O.W. up 500 to 1400 mm
2 Actuators	W.O.W. up 1400 to 2300 mm

Door weight	$EI_2$30	$EI_2$60
kg/m²	48	60

Parameters for calculating the air-to-light ratio (RAI)

In accordance with the Ministerial Decree of July 5, 1975, the minimum values to be guaranteed are:

- **Daylight Ratio (RI)**: > 0.02 = 2/100
- **Ventilation Ratio (RA)**: > 0.125 = 1/8

Calculation of Daylight Surface Area [m²]

S.ill = (L - 0.150) x (H - 0.150)

Calculation of Ventilation Surface Area [m²]

Upper Area = (C - 0.10) x (L - 0.10) [m²]

Lateral Triangle Area = (C - 0.10) x (H - 0.25) [m²]

Total Ventilation Area = A.sup + A.T.lat1 + A.T.lat2

OUTDOOR ALUMINUM LINE $EI_2$30/60

Fire rated facade system thermal break

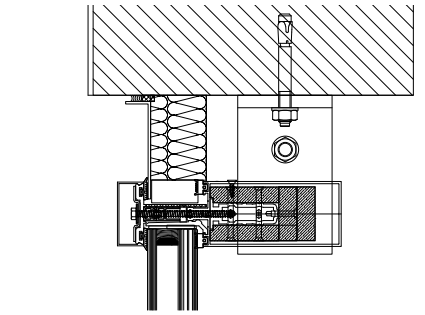
ALU SYSTEM R5	
CE	UNI EN 13830

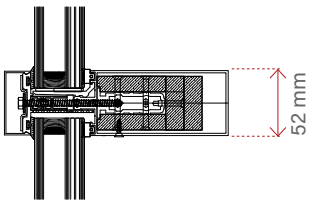
The ALU SYSTEM R5 fire-resistant façade is designed to integrate all hinged opening systems manufactured by Glassfire. It consists of aluminum mullions and transoms (52 mm thick)—reinforced and suitably insulated with calcium-silicate-based intumescent materials—and features stainless steel components, intumescent gaskets, and insulating glass units with an EI 30 / EI 60 fire resistance rating.

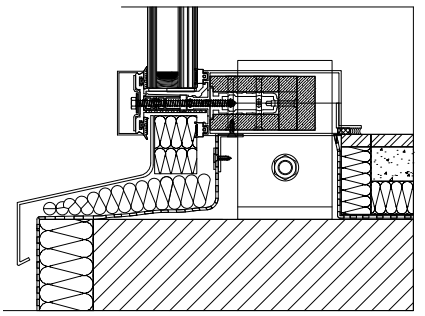
The curtain wall is available in all our anodized and painted finishes.

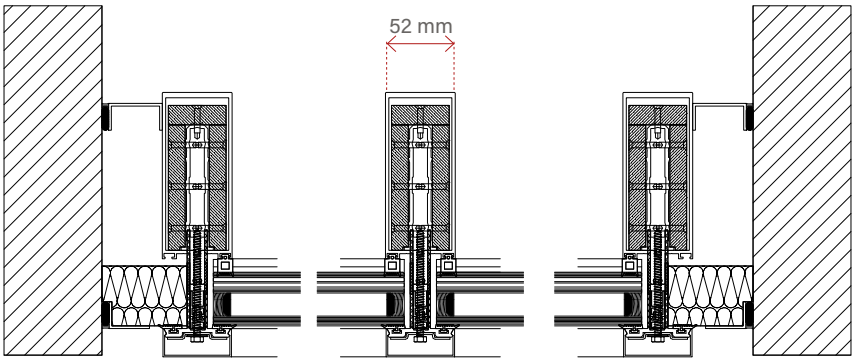
The openable glazed units—models ALU GLASS R1 and ALU GLASS R2—have been tested not only on standard mounting frames but also within the ALU SYSTEM R5 facade system in accordance with European standard EN 1634-1, achieving an EI 60 classification.

Characteristics	Test standard	Classification standard requirements	Assigned class
Air permeability	EN 12153:2004	EN 12152:2004	AE1200
Watertightness	EN 12155:2004	EN 12154:2004	RE1200
Wind load resistance	EN 12179:2004	EN 13116:2004	Design wind load: 160,000 Pa Increased wind load: 2,400 Pa
Impact resistance	EN 12600:2002	14019:2006	E5 and I5
Acoustic insulation measurement	EN ISO 717	**	Rw (C;Ctr) = 43 (-2;-6) dB
Thermal transmittance calculations	EN 10077-2	**	Uf -> 2 ÷ 2.7 W/(m² X K)









Fire-rated partitions' installation must be carried out by specialized personnel.

NOTES

OUTDOOR ALUMINUM LINE $EI_2$90/120

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 106

WINDOW 114

FIXED GLASS 116

VASISTAS 118

Outdoor aluminum line

EI_2 90/120

OUTDOOR ALUMINUM LINE EI$_2$90/120

Thermally broken fire-rated glazed door

single-leaf

ALU GLASS R6 / VITREX F4

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	89mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness EI$_2$90	53 mm (6 ESG TF/12 ARG/EI 90 35 mm)
Thickness EI$_2$120	61 mm (6 ESG TF/8 ARG/EI 120 47 mm)

Hinges

Number	3 adjustable three-wing hinges
Mounting	Attaches to the wall opening and frame via threaded pins
Adjustment	Grub screws allow adjustment of the clearance gap between the wall opening and frame (width and height)
3rd Hinge	Standard (upper position)
4th Hinge EI$_2$ 90	Required in the lower position for W.O.W > 1000 mm or W.O.E. > 2400 mm
4th Hinge EI$_2$ 120	Required in the lower position for W.O.W > 1000 mm or W.O.E. > 2250 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

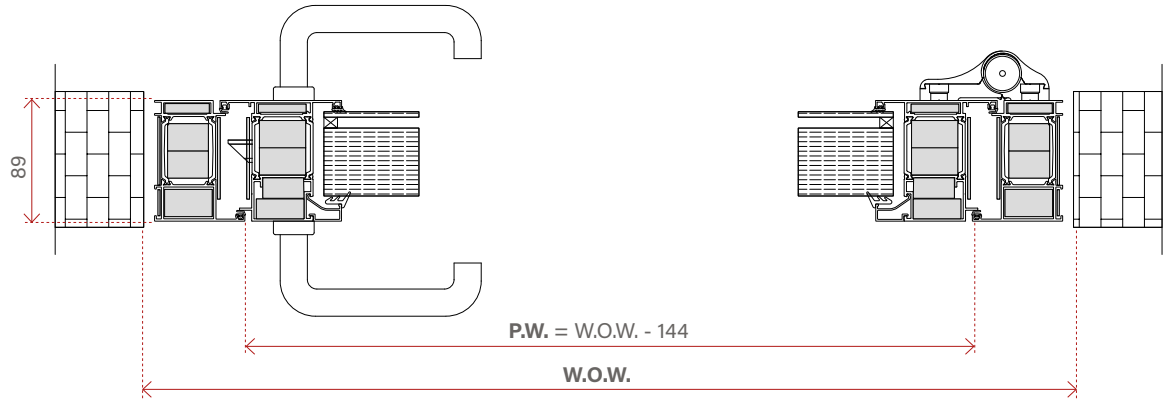
Standard unit finish

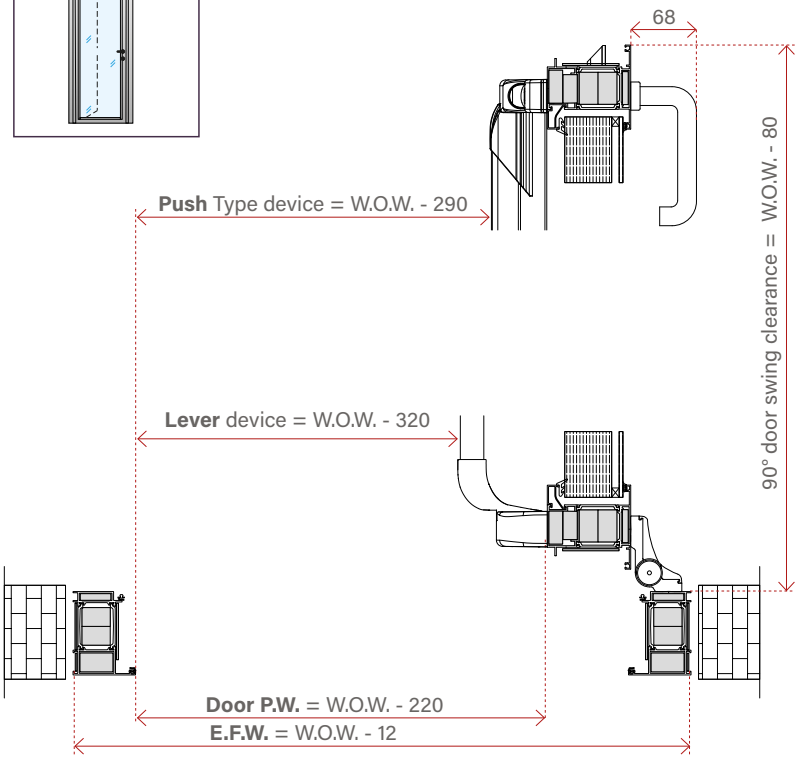
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

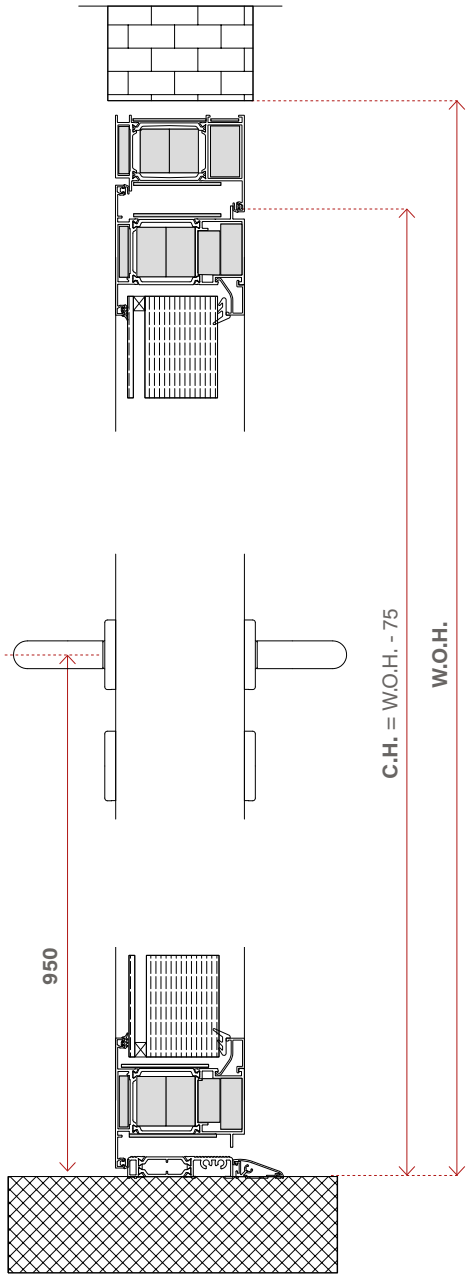
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Minimum width	750 mm
Min. width with panic bar	900 mm
Max. width with or without panic bar	1450 mm
Min. height for escape routes	2080 mm
Max. manufacturing height	2500 mm
Surface area constraint	3,0 m^2

Clear opening width with leaf at 90°	
With lever panic bar	- 320 mm
With push-bar	- 290 mm
Passage through the leaf	- 220 mm

Door weight	$EI_2$90	$EI_2$120
kg/m^2	95	120

OUTDOOR ALUMINUM LINE EI$_2$90/120

Thermally broken fire-rated glazed door

double-leaf

ALU GLASS R6 / VITREX F4

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	89mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness EI$_2$90	53 mm (6 ESG TF/12 ARG/EI 90 35 mm)
Thickness EI$_2$120	61 mm (6 ESG TF/8 ARG/EI 120 47 mm)

Hinges

Number	3 adjustable three-wing hinges
Mounting	Attached to the leaf and frame via threaded pins
Adjustment	Grub screws for adjusting the clearance (gap) between the leaf and frame (width and height)
3rd Hinge	Standard (upper position)
4th Hinge EI$_2$ 90	Required (lower position) if W.O.W. > 2000 mm, W1 > 1000 mm, or W.O.H. > 2400 mm
4th Hinge EI$_2$ 120	Required (lower position) if W.O.W. > 2000 mm, W1 > 1000 mm, or W.O.H. > 2250 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

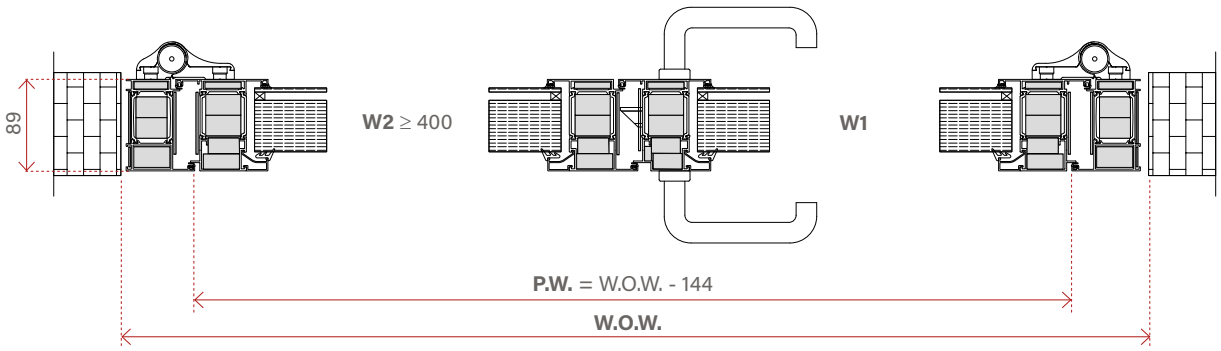
Standard unit finish

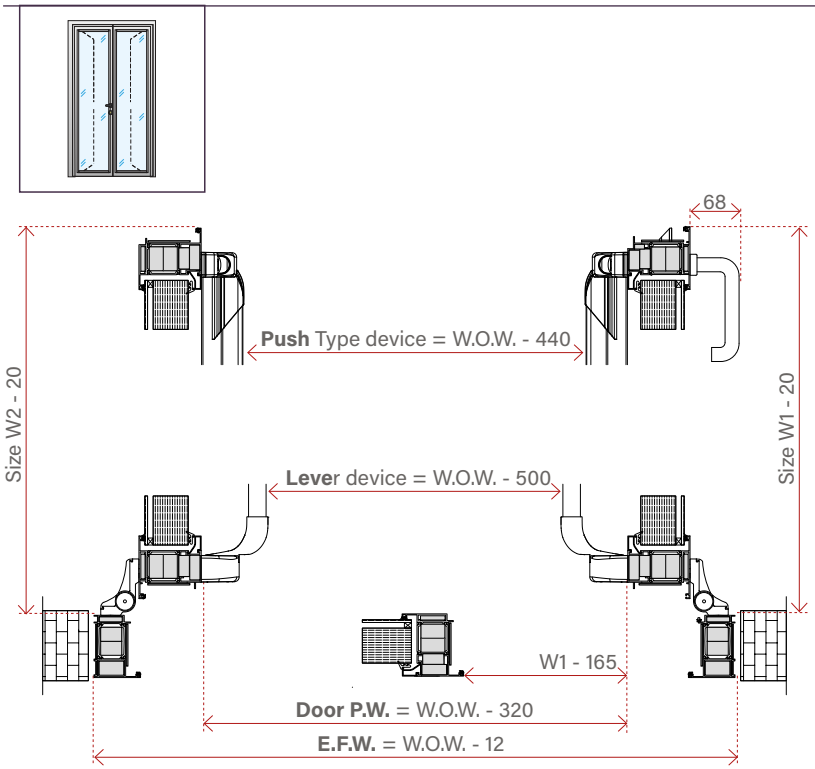
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

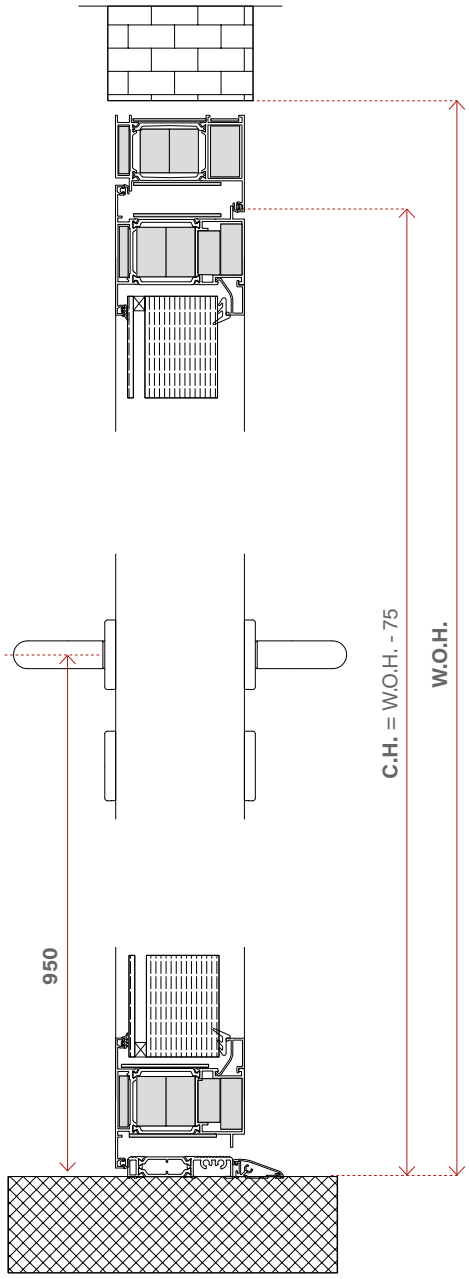
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Min. width (asymmetric) with handle	1220 mm (820+400)
Min. width (symmetric) with handle	1280 mm (640+640)
Min. width (asymmetric) with panic bar	1600 mm* (W2>600)
Min. width (symmetric) with panic bar	1500 mm* (750+750)
Max. width with or without panic bar	2300 mm
Min. height for escape routes	2080 mm
Max. height (production limit)	2500 mm
Surface area constraint	5,3 m²

Clear opening width with leaf at 90°	
Lever panic device	- 500 mm
With push type panic device	- 440 mm
Passage to leaves	- 320 mm

Door weight	$EI_2$90	$EI_2$120
kg/m²	90	115

*requirement to mark the main leaf

OUTDOOR ALUMINUM LINE EI$_2$90/120

Thermally broken fire-rated glazed door

with Sidelight and transom window

ALU GLASS R6 / VITREX F4

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	89mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness EI$_2$90	53 mm (6 ESG TF/12 ARG/EI 90 35 mm)
Thickness EI$_2$120	61 mm (6 ESG TF/8 ARG/EI 120 47 mm)

Hinges

Number	3-wing adjustable hinges
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (width and height)
3rd Hinge	Standard feature, positioned at the top
4th Hinge EI$_2$90	Follows specifications for single or double wall openinges
4th Hinge EI$_2$120	Follows specifications for single or double wall openinges

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

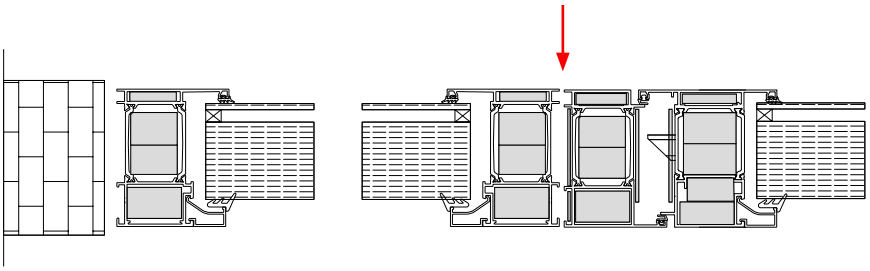
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.

Section example

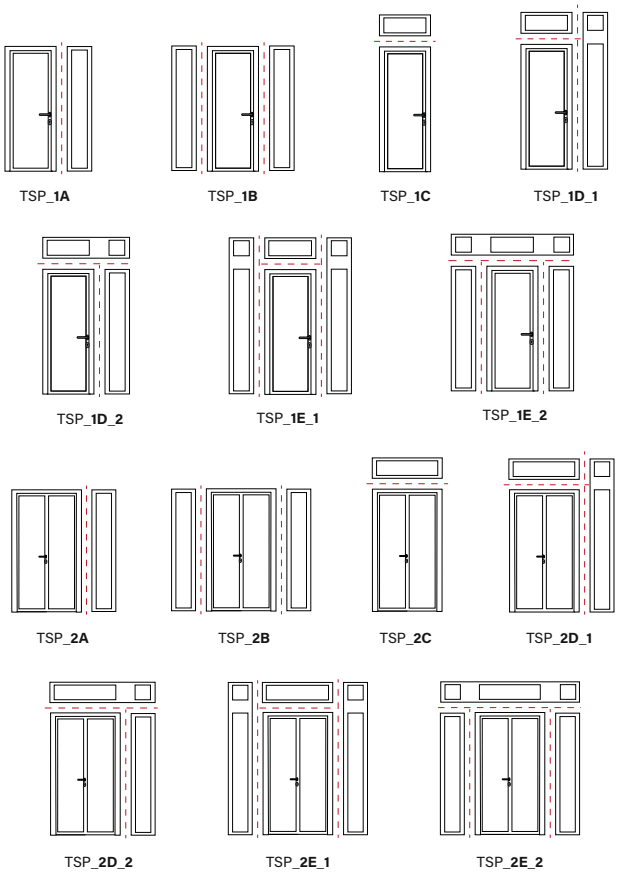
Sidelight separated from the window unit



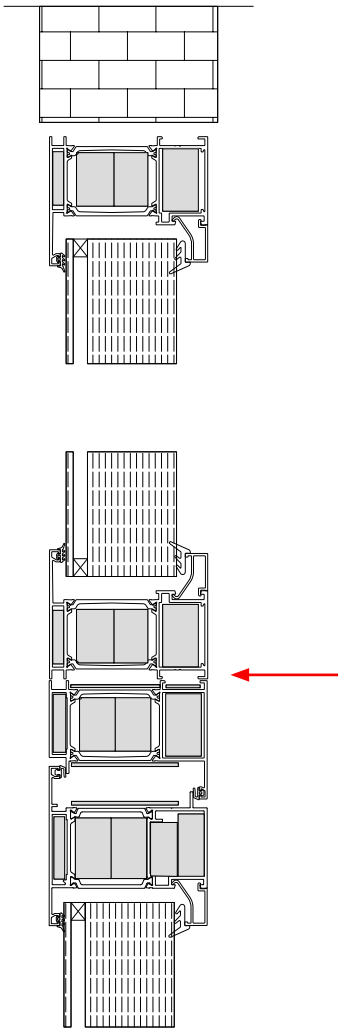
Size limits

Side panel and transom window	≥ 350 mm
Unique frame	not feasible

Separate frames



Section example:
transom window separate from the window unit



OUTDOOR ALUMINUM LINE $EI_2$90/120

Fire-resistant thermal-break window

single or double-leaf

ALU GLASS R6 / VITREX F4

CE UNI EN 1634-1

In accordance with the Ministerial Decree of June 21, 2024 (Annex C – Permitted variations), test results obtained on door samples may be extended to the four-sided configuration (window), allowing for greater design flexibility in interior applications.
For exterior applications subject to CE marking, the four-sided configuration may be used only if supported by a specific test on a four-sided window—a test that Glassfire has already successfully conducted.

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Complete with hole covers for water drainage
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame Sections	Coupling of Z or L sections
Wall opening Profiles	Z coplanar to the frame and glazing bead mounted on the pull side of the door
Thickness	89mm
Rough Weight	90 Kg/m2 EI290 115 Kg/m2 EI2¹20

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness EI90	53 mm (6 ESG TF/12 ARG/EI 90 35 mm)
Thickness EI120	61 mm (6 ESG TF/8 ARG/EI 120 47 mm)

Hinges

Quantity	2 adjustable three-wing hinges
Mounting	Attached to the leaf and frame via threaded pins
Adjustment	Grub screws allow for adjustment of the clearance gap between the leaf and frame (width and height)
3rd Hinge	Required in the upper position for a single leaf with W.O.W. > 1000 or W.O.H. > 1800
	Required for double leaves with W.O.H. > 1800

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only **upon request.** Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Half-handle

Finish	Silver

Gaskets

Type	Cold-smoke and self-expanding perimeter rebate seals

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

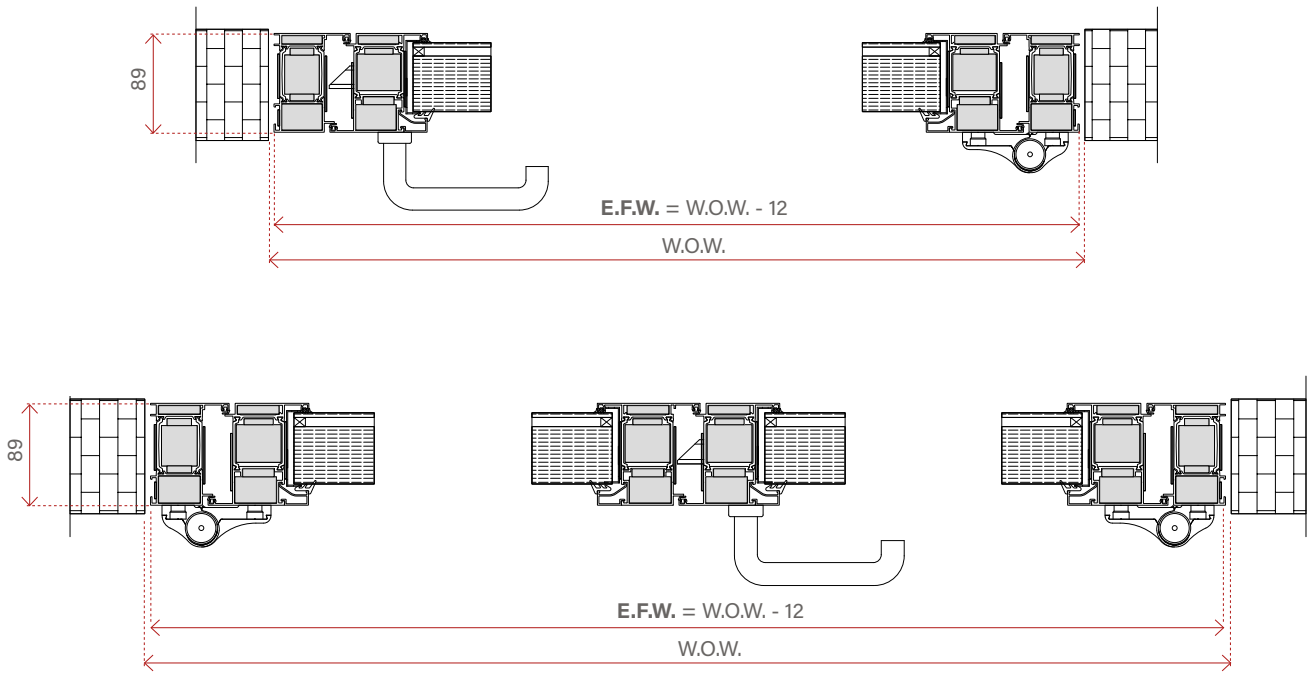
Standard unit finish

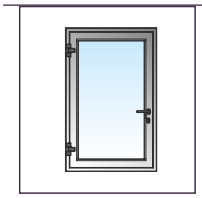
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.



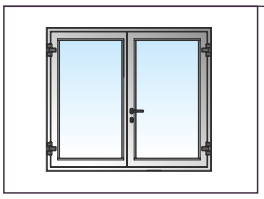


ATTENTION:

The width of the opening must be less than or equal to the height.

Single-leaf dimensions

Minimum W.O. (W x H)	600 x 610 mm
Maximum W.O. (W x H)	1220 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 1800 mm

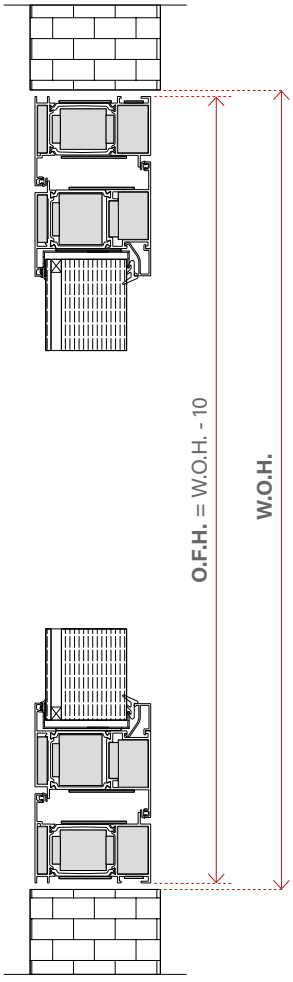


ATTENTION:

The width of the opening must be less than or equal to twice the height.

Double-leaf dimensions

Minimum W.O. (W x H)	1240 (620 + 620) x 710 mm
Maximum W.O. (W x H)	2000 x 2000 mm
Central handle height	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
2-point locking mechanism	W.O.H.> 1800 mm



OUTDOOR ALUMINUM LINE $EI_2$90/120

Bidirectional fire-rated fixed glazing with thermal break

with regular or arched panels

ALU GLASS R4/R8

CE UNI EN 1364-1

Fire-resistant unit

Material	Flush-mounted EN AW 6060 extruded aluminum profile	
Characteristics	Complete with drainage hole covers	
Insulation	Interposed calcium silicate-based insulation panels	
Gaskets	Self-expanding perimeter seals for hot smoke	
Configurations	Any crossbars to be positioned according to our criteria A, B, C	
Thickness	89 mm	
Approximate weight	89 kg/m² EI_2 90	113 kg/m² EI_2 120

Fire-resistant glass isolante

Supply	Not mounted
Composition	Laminated and tempered panes with an interlayer of intumescent material
Class	1B1
Thickness EI90	53 mm (6 ESG TF / 12 ARG / EI 90 35 mm)
Thickness EI120	61 mm (6 ESG TF / 8 ARG / EI 120 47 mm)

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

PLEASE NOTE:

When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.

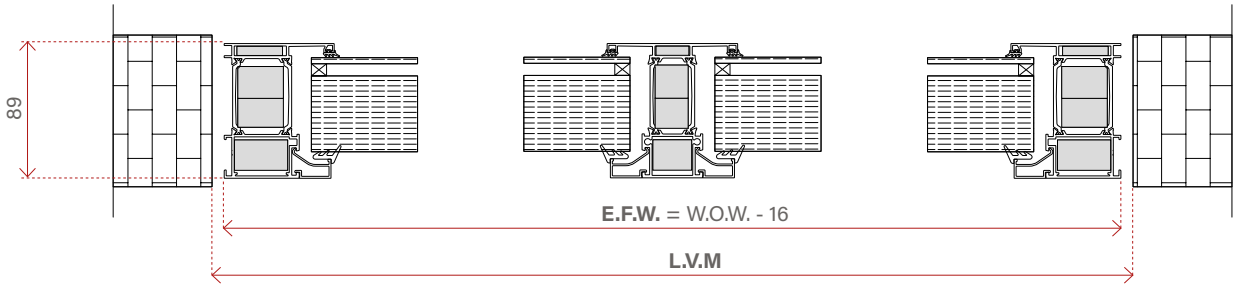
For irregular arches, a technical drawing or architectural template must be provided.

For large-scale arched frames, we recommend a 3D laser scan survey.

Casing/trim is not included; we recommend using silicone or filler for the finish.

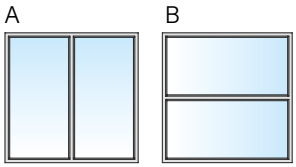
For larger dimensions, please contact our sales department.

Fire-rated partitions' installation must be carried out by specialized personnel.

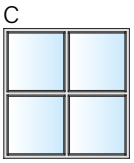


WITH CROSSBAR

Vertical or Horizontal



Double

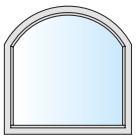


Dimensions

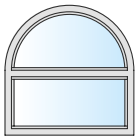
W.O.W.minimum	350 x 350 mm
W.O.H. maximum	3000 mm
W.O.W. maximum	no limits
L X h max of the glass (recommended)	1200 x 2400 mm

ARCHED

Can only be produced using L-shaped profiles. Trim profiles are excluded.

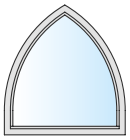


Depressed arch



Semicircular (arch)

It is recommended to traverse at the beginning of the arched portion

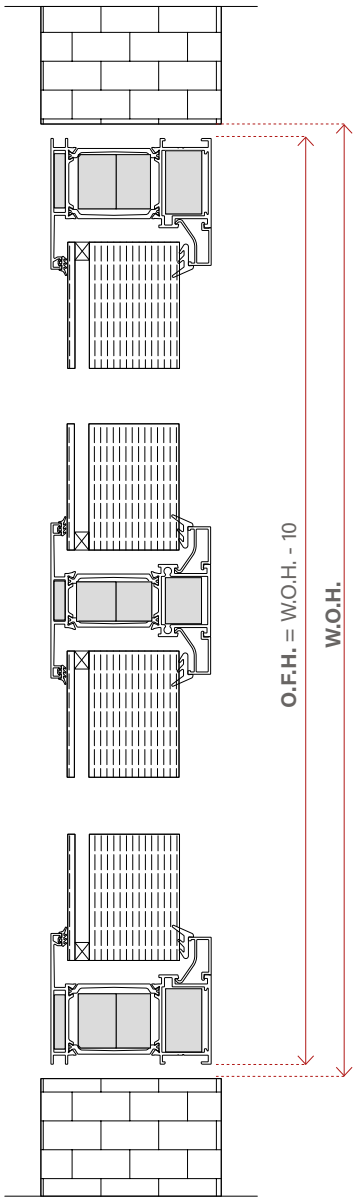


Gothic

Size limits for Semicircular arch (arch)

Minimum radius - standard profile	≥ 700 mm
Diameter - standard profile	≥ 1400 mm

For information regarding size limits for Gothic and depressed arches, please contact the Technical Department.



OUTDOOR ALUMINUM LINE $EI_2$90

Fire-resistant hopper window with thermal break

ALU GLASS R3

CE UNI EN 1634-1

Fire-resistant unit

Material	EN AW 6060 extruded aluminum
Characteristics	Drainage hole covers
Insulation	Self-expanding perimeter seals for hot smoke
Gaskets	Cold smoke rebate seals
Frame Sections	Section coupling (Z, L) for various assembly configurations
Wall opening Profiles	Overlapping Z-profile and glazing bead mounted on the pull side of the hopper window
Thickness	75/81 mm open-joint system
Rough Weight	80 kg/m² EI_2 90

Fire-resistant glass isolante

Supply	Not mounted
Composition	Layered and tempered sheets with interposed intumescent material
Class	1B1
Thickness	47mm ($EI_2$90)

Hinges

Number	2 adjustable pin-type hinges
Fixing	Mounted to the leaf and frame using threaded plates
Adjustment	Grub screws for adjusting the clearance between the leaf and frame
Rostra	Pair of upper thermal security pins

Apertura con attuatore

Features	Motorization, with Type A mounting brackets
Finish	Silver / White / Black
Adjustment	Standard power cable on the right
Tension	24V DC
Mechanical devices	Pair of opening limiter arms

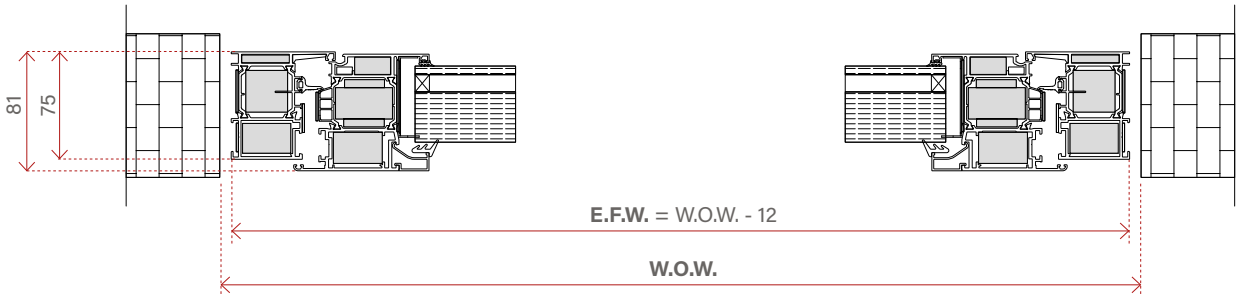
Standard unit finish

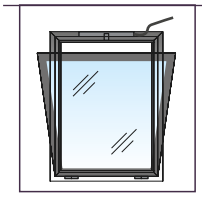
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

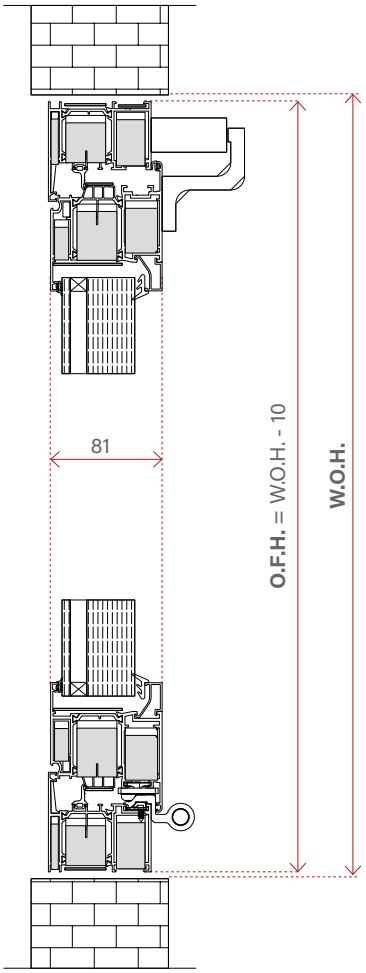
Assembly

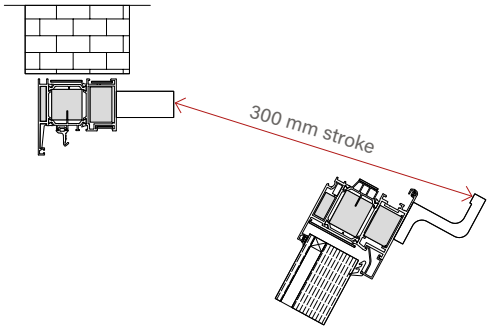
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	self-tapping screws 4.8x19 mm

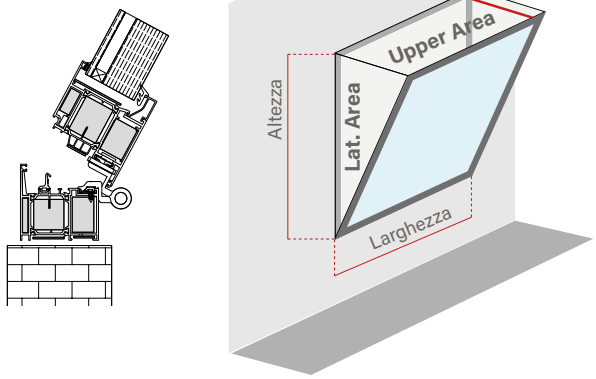
Fire-rated partitions' installation must be carried out by specialized personnel.











Dimensions	
Minimum W.O. (W x H)	500 x 460 mm
Maximum W.O. (W x H)	2000 x 1000 mm
1 Actuator	W.O.W. up 500 to 1400 mm
2 Actuators	W.O.W. up 1400 to 2000 mm

Unit Weight	EI$_2$90
kg/m^2	75

Parameters for calculating the air-to-light ratio (RAI)

In accordance with the Ministerial Decree of July 5, 1975, the minimum values to be guaranteed are:

- **Daylight Ratio (RI)**: > 0.02 = 2/100
- **Ventilation Ratio (RA)**: > 0.125 = 1/8

Calculation of Daylight Surface Area

S.ill = (L - 0.150) x (H - 0.150) [m^2]

Calculation of Ventilation Surface Area

Upper Area = (C - 0.10) x (L - 0.10) [m^2]
Lateral Triangle Area = (C - 0.10) x (H - 0.25) [m^2]
Total Ventilation Area = A.sup + A.T.lat1 + A.T.lat2 [m^2]

EW 120 ALUMINIUM LINE

FIRE-RESISTANT GLAZED SYSTEMS

GLASS DOOR 122

WINDOW 126

FIXED GLASS 128

Indoor and outdoor aluminum EW 120 Line

EW 120 ALUMINIUM LINE

Fire-rated glazed door

single-leaf

VITREX F10

CE EN 16034:2014

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	72 mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness EW 120 indoor	13 mm
Thickness EW 120 Outdoor	31 mm (6 ESG TF/12 ARG/EW 120 13 mm)

Hinges

Number	2 adjustable three-wing hinges
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Standard high-positioned adjustment point for setting the clearance between the wall opening and frame (both width and height)
3rd Hinge	Required in the high position for W.O.W. > 1000 mm or W.O.E. > 2400 mm
4th Hinge	Required in the low position for W.O.W. > 1250 mm or W.O.E. > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Slide-arm for door leaf self-closing
Finish	Silver

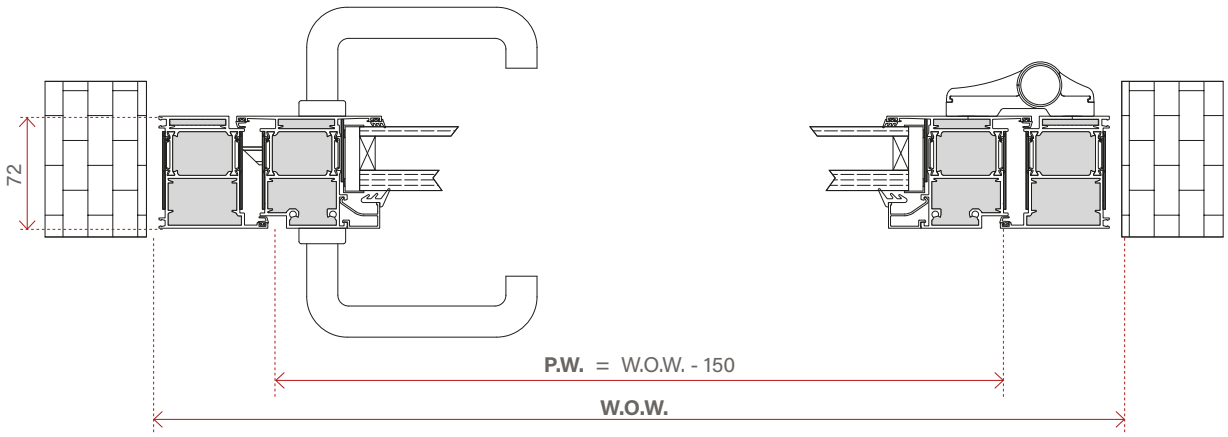
Standard unit finish

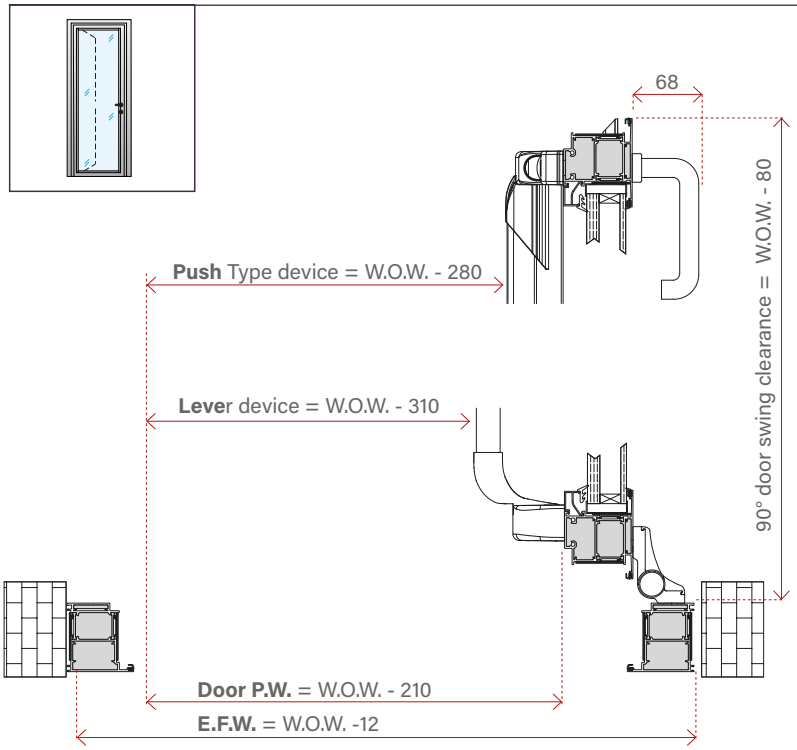
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

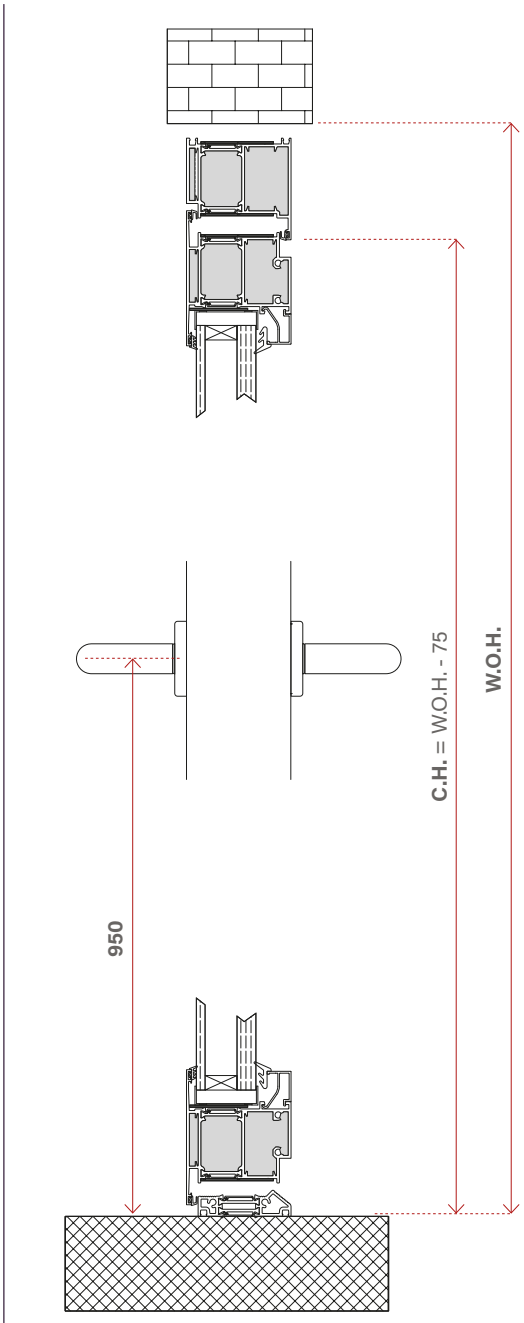
Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.







Dimensions	
Minimum width	700 mm
Min. width with panic bar	800 mm
Max. width with or without panic bar	1450 mm
Min. height for escape routes	2080 mm
Max. height (with crossbar)	2750 mm
Max. height (without crossbar)	2500 mm
Surface area constraint	3,5 m²

Clear opening width with leaf at 90°	
With lever panic bar	- 310 mm
With push-bar	- 280 mm
Passage through the leaf	- 210 mm

Door weight	EW 120 indoor	EW 120 Outdoor
kg/m²	29	44

EW 120 ALUMINIUM LINE

Fire-rated glass door

double leaf

VITREX F10

CE EN 16034:2014

Fire-resistant unit

Material	EN AW 6060 coplanar aluminum extrusion
Characteristics	Filling with fire-resistant calcium silicate and sulphate based materials
Insulation	Self-expanding perimeter panels for hot smokes
Gaskets	Cold Smokes joke
Frame sections	Section coupling (T, Z, L) for different Assembly configurations
Wall opening profiles	T or Z coplanar to the frame, chosen based on the position of the glazing bead mounted on the push or pull side of the door
Thickness	72 mm
Central transom (optional)	Positioned 950 mm from the floor
Fixed rebate	Floor anti-stumbling block

Fire-resistant glass isolante

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness EW 120 indoor	13 mm
Thickness EW 120 Outdoor	31 mm (6 ESG TF/12 ARG/EW 120 13 mm)

Hinges

Number	2 adjustable three-wing wall opening hinges
Mounting	Attached to the wall opening and frame via threaded pins
Adjustment	Grub screws allow for adjustment of the clearance gap between the wall opening and frame (width and height)
3rd Hinge	Required in the upper position for: Wall opening rebate width (W.O.W.) > 2000 mm, or W1 > 1000 mm, or Wall opening rebate height (W.O.H.) > 2400 mm
4th Hinge	Required in the lower position for: Wall opening rebate width (W.O.W.) > 2500 mm, or W1 > 1250 mm, or Wall opening rebate height (W.O.H.) > 2550 mm

Fire-rated lock

Closure	Single-point closure with three-key cylinder

Fire-rated lock for the secondary leaf

Closure	For the profile with a floor-mounted recess, for top/bottom rod operation.

Fire-rated handle

Features	Safety feature at 950 mm from the floor
Finish	Satin-finish stainless steel

Door closer

Type	Sliding arm for synchronized door leaf closing. Required for clear opening widths > 1250 mm.
Finish	Silver

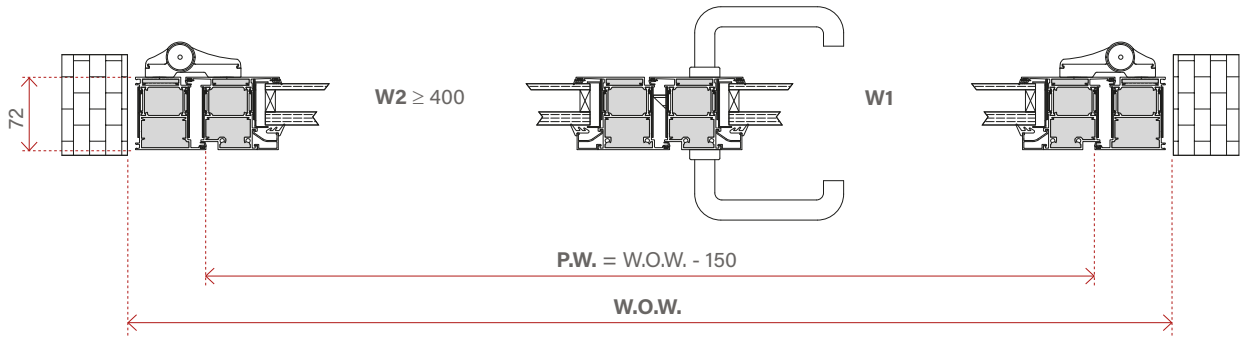
Standard unit finish

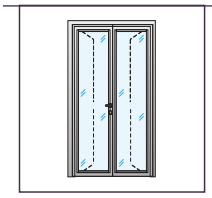
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

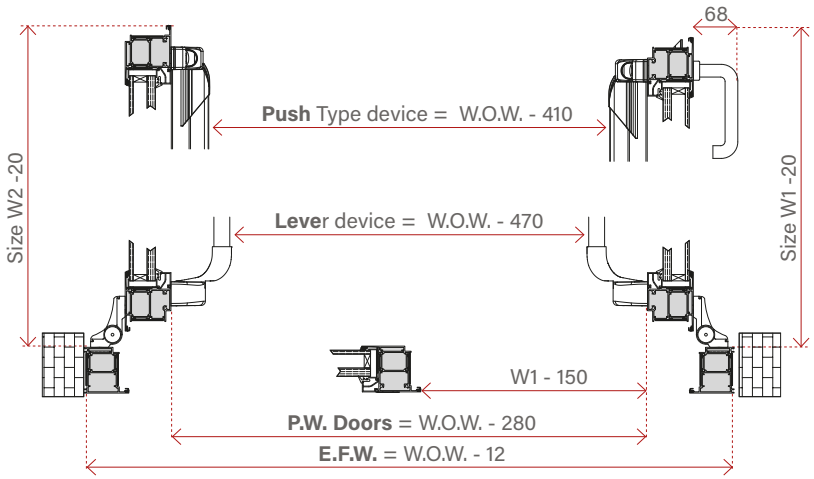
Assembly

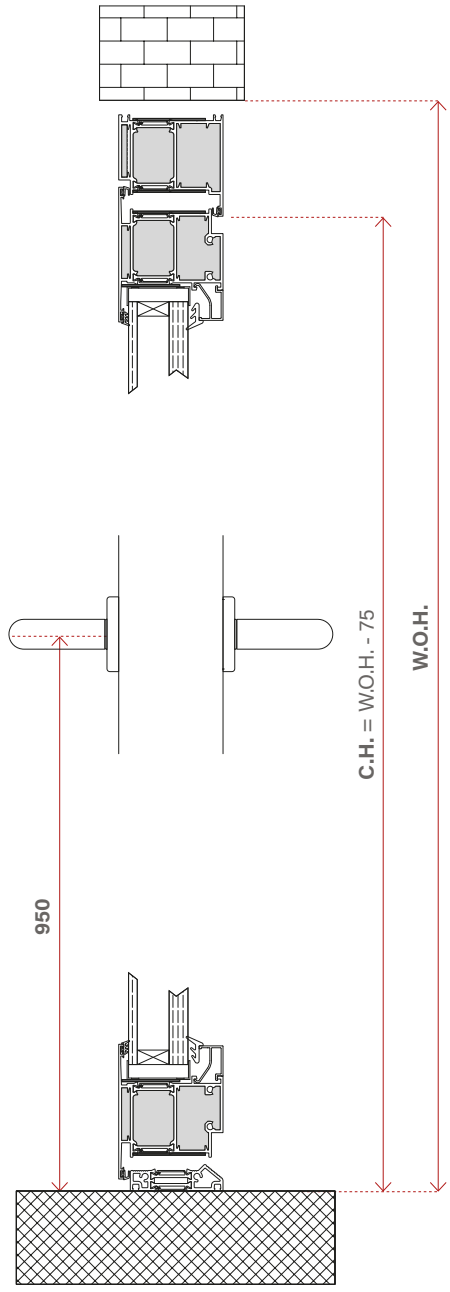
Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.









Dimensions	
Min. width (asymmetric) with handle	1220 mm (820+400)
Min. width (symmetric) with handle	1220 mm (610+610)
Min. width (asymmetric) with panic bar	1500 mm* (W2>500)
Min. width (symmetric) with panic bar	1400 mm* (700+700)
Max. width with or without panic bar	2400 mm
Min. height for escape routes	2080 mm
Max. height with transom bar	2750 mm
Max. height without transom bar	2500 mm
Surface area constraint	6,0 m^2

Clear opening width with leaf at 90°	
Lever panic device	- 470 mm
With push type panic device	- 410 mm
Passage to leaves	- 280 mm

Door weight	EW 120 indoor	EW 120 Outdoor
kg/m^2	29	44

*requirement to mark the main leaf

EW120 ALUMINIUM LINE

Fire-resistant window

single, double, or double-leaf

VITREX F10

CE EN 16034:2014

Fire-resistant unit

Material	EN AW 6060 extruded aluminum
Characteristics	Infill with fire-resistant calcium silicate and calcium sulfate-based materials
Insulation	Self-expanding perimeter seals for hot smoke
Gaskets	Rebate seals for cold smoke
Frame sections	Sections (Z, L) for various assembly configurations
Wall opening profiles	Overlapping Z-profile and glazing bead mounted on the pull side of the leaf
Thickness	72 mm open-joint system
Approximate weight	44 kg/m^2

Fire-resistant glass isolante

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness EW 120 Outdoor	31 mm (6 ESG TF/12 ARG/EW 120 13 mm)

Hinges

Number	2 slimline hinges per wall opening
Mounting	Attaches to wall opening and frame using threaded plates
Adjustment	Grub screws allow adjustment of the clearance gap between wall opening and frame (width and height)
3rd Hinge	Required in the upper position for W.O.W. > 1000 mm or W.O.E. > 1800 mm
4th Hinge	Required in the lower position for W.O.W. > 1200 mm or W.O.E > 2000 mm

Fire-rated lock

Closure	Single-point version
Half-cylinder	Available only upon request. Note: The half-cylinder cannot be installed or supplied if the following condition applies: W.O.H. ≤ W.O.H. min + 100 mm.

Half-handle

Finish	Silver

Gaskets

Type	Cold-smoke and self-expanding perimeter rebate seals

Door closer

Type	Slide-arm assembly for synchronized self-closing of the door leaves.
Finish	Silver

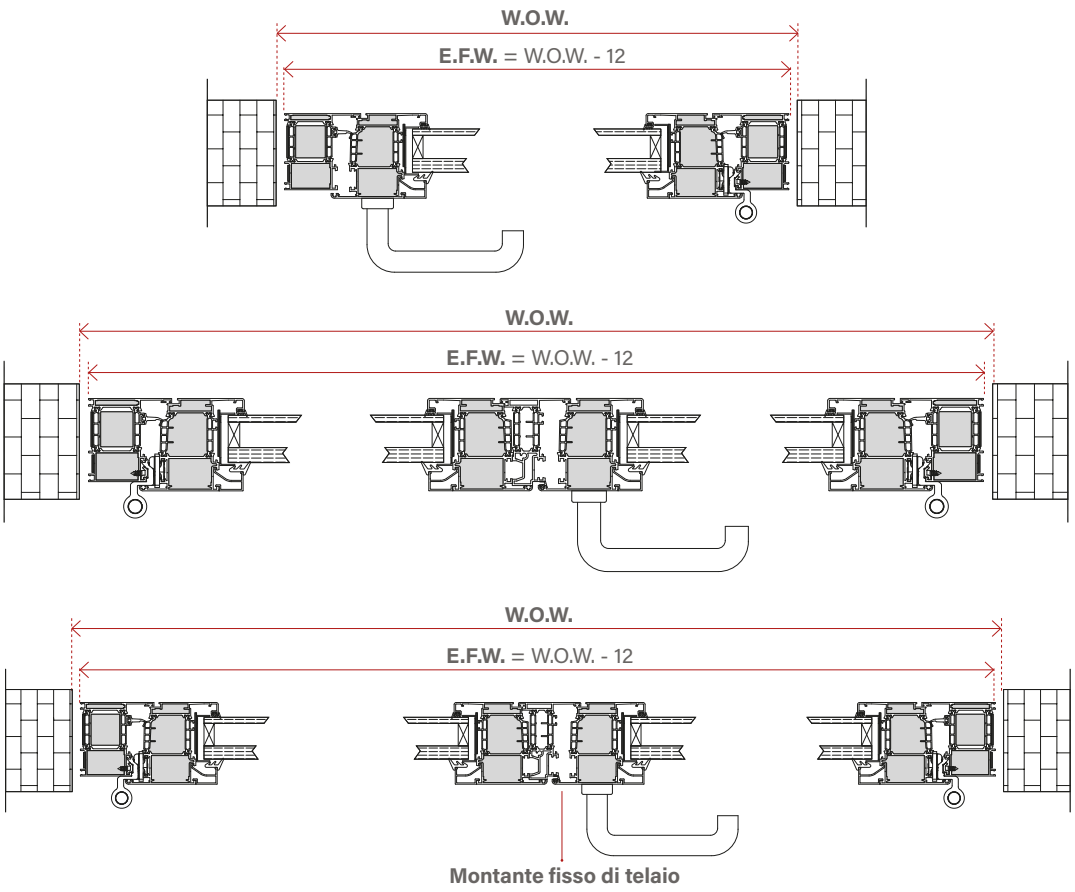
Standard unit finish

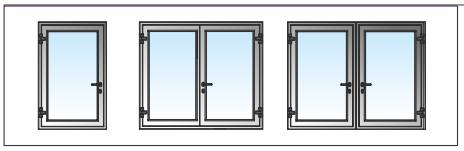
Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

Fire-rated partitions' installation must be carried out by specialized personnel.





Dimensions

Minimum FM (W x H)	540 x 610 mm
Maximum FM (W x H)	1300 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm

ATTENTION: The width of the opening must be less than or equal to the height.

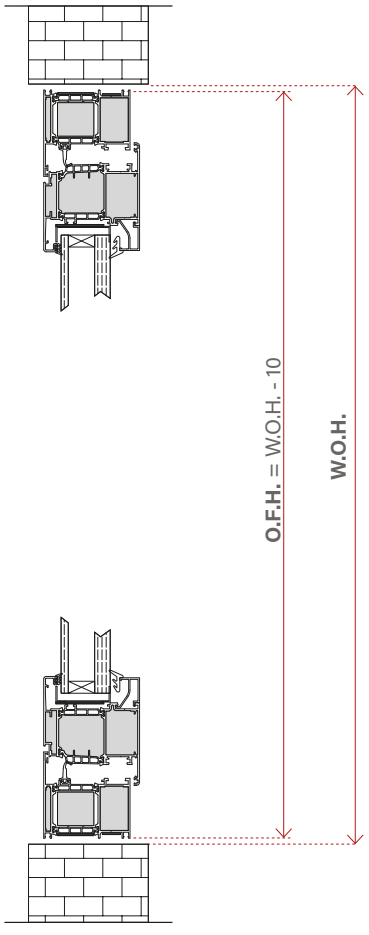
Double-leaf dimensions

Minimum FM (W x H)	1240 (620 + 620) x 640 mm
Maximum FM (W x H)	2200 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm

ATTENTION: The width of the opening must be less than or equal to twice the height.

Dimensions Double leaf

Minimum FM (W x H)	1000 (500 + 500) x 610 mm
Maximum FM (W x H)	2200 x 2300 mm
H central handle	W.O.H.≤ 1300 mm
Handle height 650 mm	W.O.H.> 1300 mm
Two-point lock	W.O.H.> 2000 mm



EW120 ALUMINIUM LINE

Bidirectional fire-resistant fixed glazing

with rectangular or arched panes

VITREX F10
EN 1364

Fire-resistant unit

Material	Flush-mounted EN AW 6060 extruded aluminum profile	
Characteristics	Complete with caps for water drainage holes	
Insulation	Interposed calcium silicate-based insulation boards	
Gaskets	Self-expanding perimeter seals for hot smoke	
Configurations	Any transoms will be positioned according to our criteria A, B, and C	
Thickness	72 mm	
Approximate weight	29 kg/m² EW 120 (internal)	44 kg/m² EW 120 (external)

Fire-resistant glass isolante

Supply	Unmounted
Composition	Laminated and tempered panes with an intumescent interlayer
Class	1B1
Thickness EW 120 indoor	13 mm
Thickness EW 120 Outdoor	31 mm (6 ESG TF/12 ARG/EW 120 13 mm)

Standard unit finish

Smooth matte	RAL 1013, 1015, 1019, 3003, 3005, 5010, 5024, 6005, 6009, 6021, 6029, 7001, 7006, 7016, 7035, 7039, 7040, 8003, 8014, 8017, 8019, 9002, 9005, 9010

Assembly

Rigid support	wall plugs or turbo screws
60x15x2 steel pre-casing (to be ordered separately)	4.8x19 mm self-tapping screws
Walls and structural elements with perimeter protective coating	4.8x32 mm screws

PLEASE NOTE:

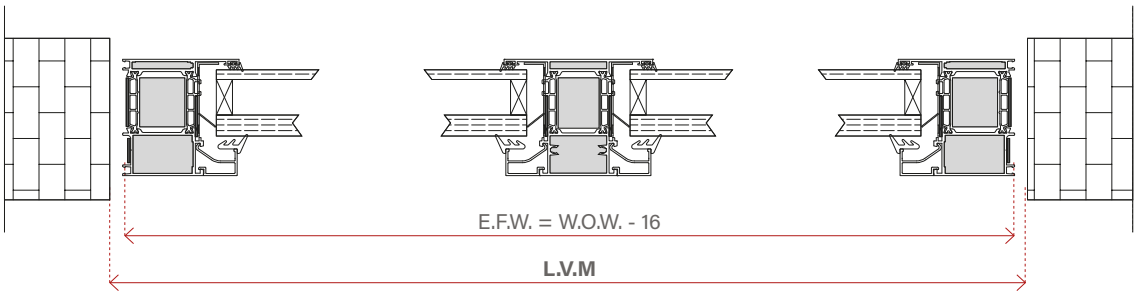
When a sub-frame is present, the outer W.O. must be the rough opening size minus 10 mm.

For irregular arches, a technical drawing or architectural template must be provided.

For large-scale arched frames, we recommend a 3D laser scan survey.

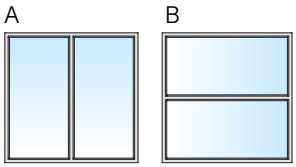
Casing/trim is not included; we recommend using silicone or filler for the finish.

For larger dimensions, please contact our sales department.

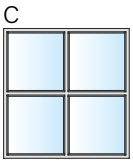


WITH CROSSBAR

Vertical or Horizontal



Double

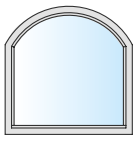


Dimensions

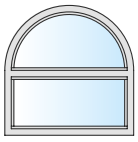
W.O.W.minimum	350 x 350 mm
W.O.H. maximum	3000 mm
W.O.W. maximum	no limits
L X h max of the glass (recommended)	1400 x 2600 mm

ARCHED

Can only be produced using L-shaped profiles. Trim profiles are excluded.

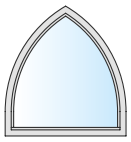


Depressed arch



Semicircular (arch)

It is recommended to traverse at the beginning of the arched portion

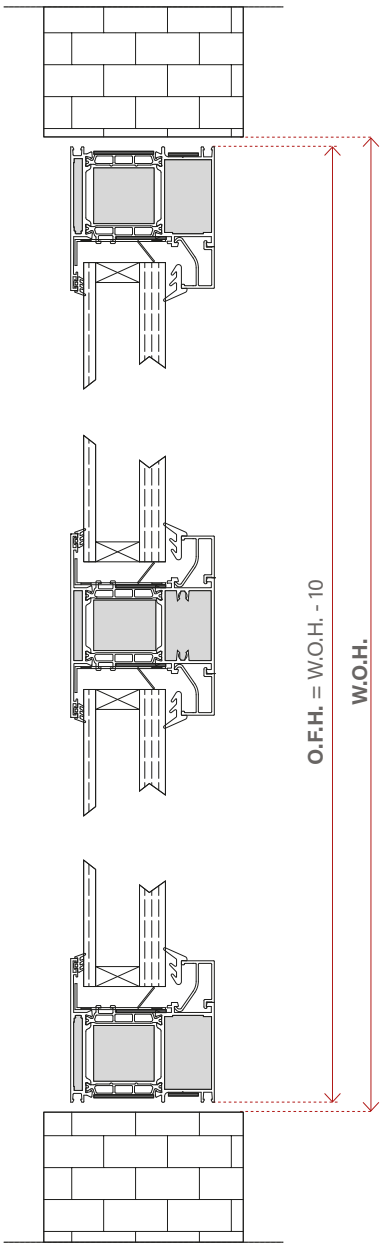


Gothic

Size limits for Semicircular arch (arch)

Minimum radius – standard profile	≥ 700 mm
Diameter – standard profile	≥ 1400 mm
Minimum radius – slim profile	≥ 300 mm
Diameter – slim profile	≥ 600 mm

For information regarding size limits for Gothic and depressed arches, please contact the Technical Department.



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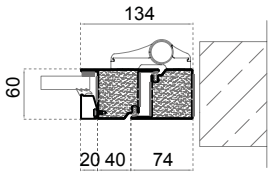
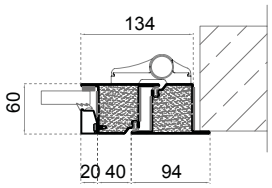
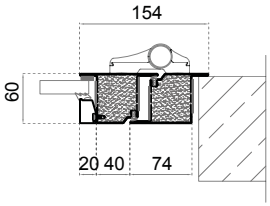
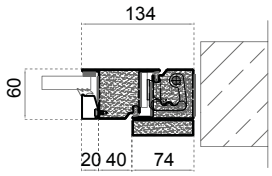
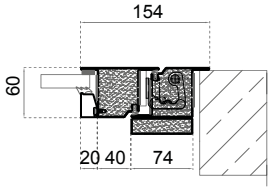
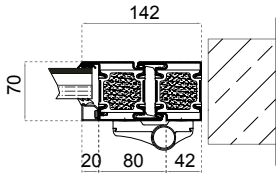
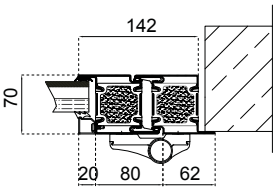
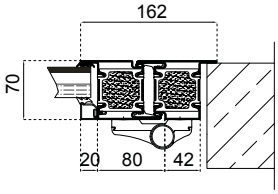
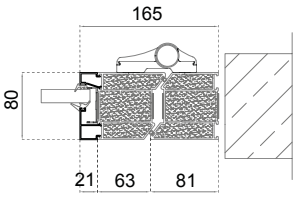
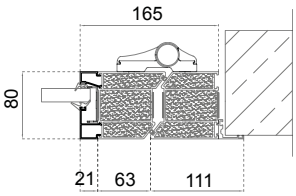
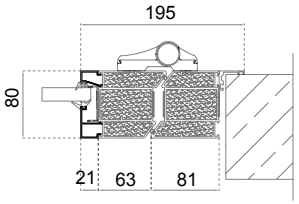
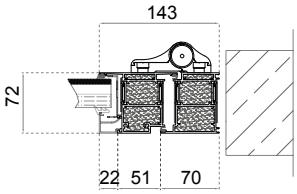
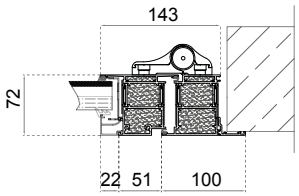
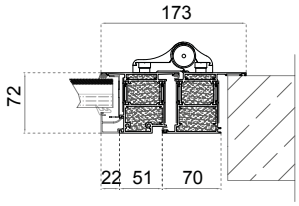
Door EI 30/60	L-shaped profile	Z-shaped profile	T-shaped profile
Steel			
Steel Plus		not available for this configuration	
Thermal-Break Steel			
Indoor aluminium			
Outdoor aluminum			

French door EI 30/60	TO PULL	PUSH OUTWARDS	
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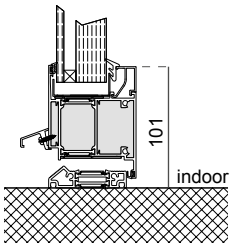
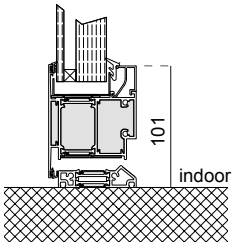
Outdoor aluminum			not available for this configuration

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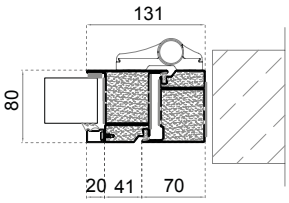
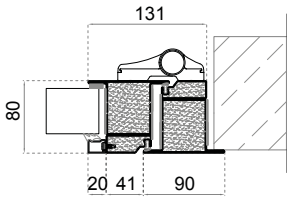
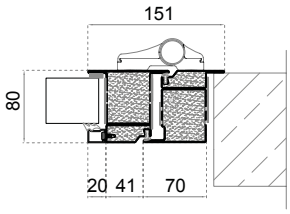
Steel			
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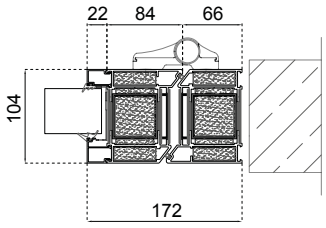
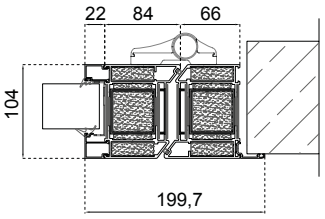
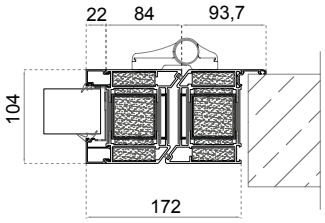
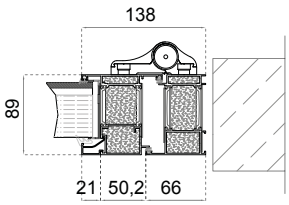
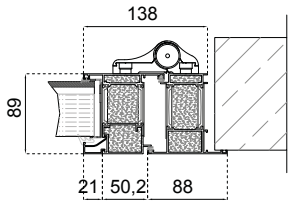
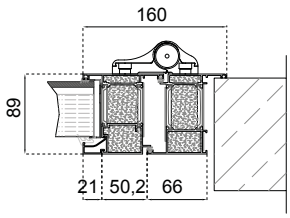
Indoor aluminium			
Outdoor aluminum			

French door EI 90/120	TO PULL	A SPINGERE VERSO L'ESTERNO	
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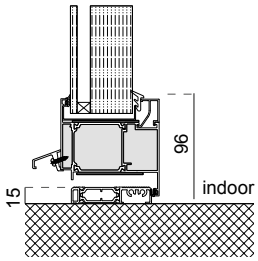
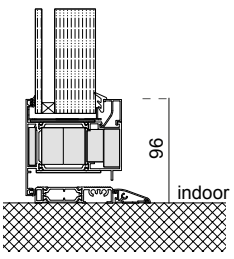
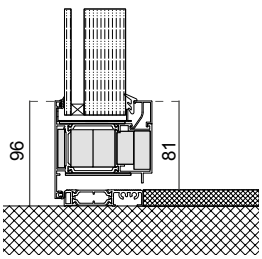
Outdoor aluminum			

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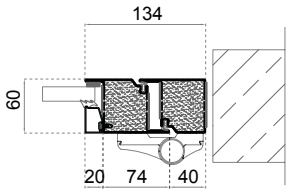
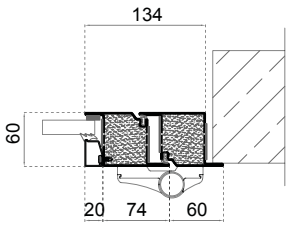
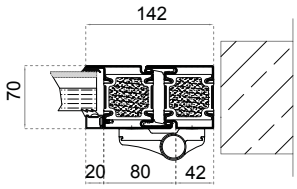
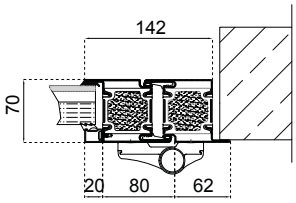
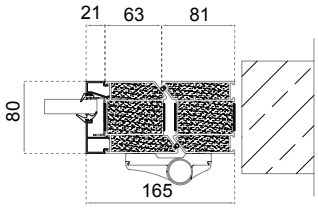
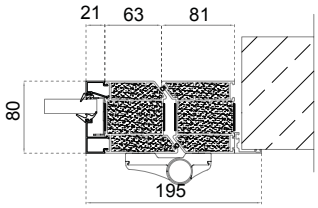
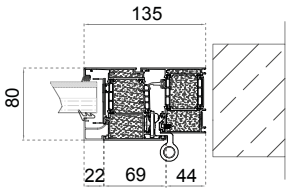
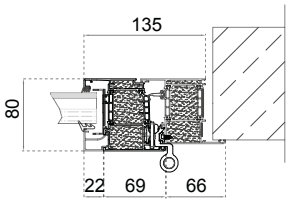
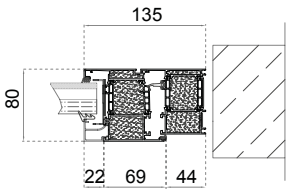
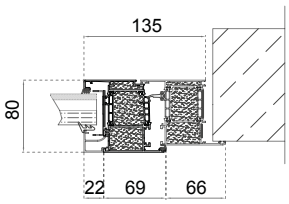
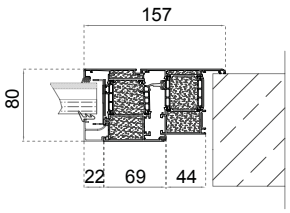
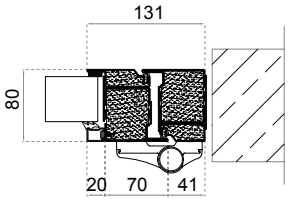
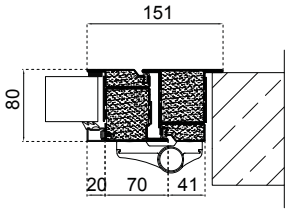
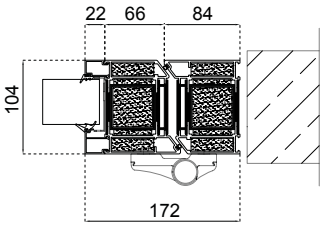
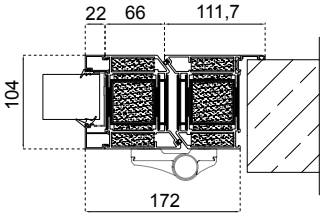
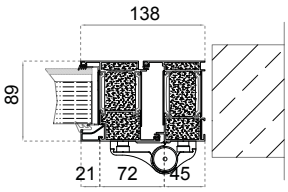
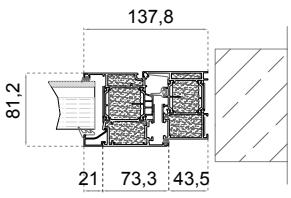
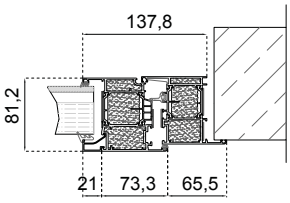
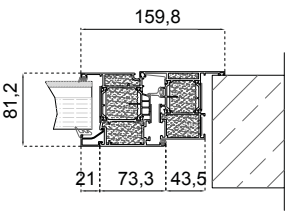
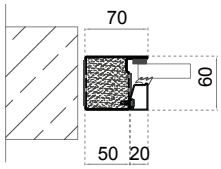
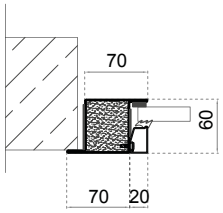
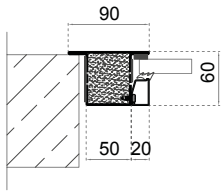
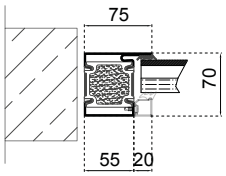
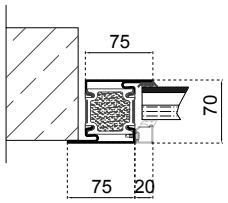
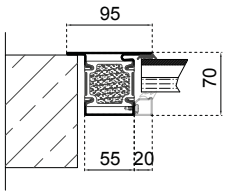
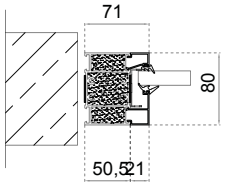
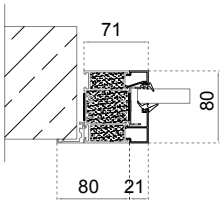
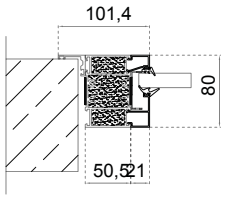
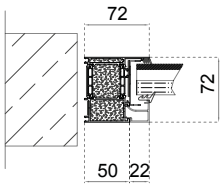
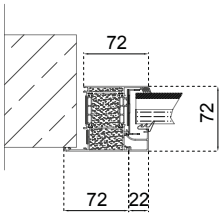
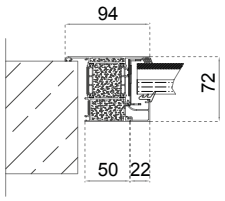
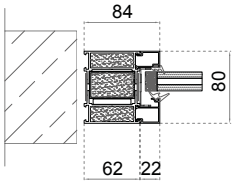
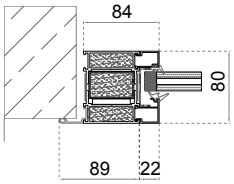
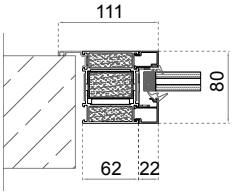
Steel			not available for this configuration
Thermal-Break Steel			not available for this configuration
Indoor aluminium			not available for this configuration
Outdoor aluminum			not available for this configuration

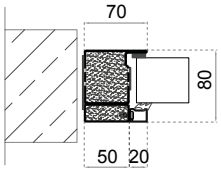
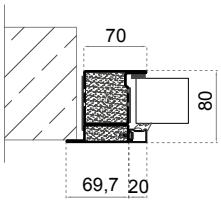
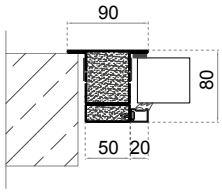
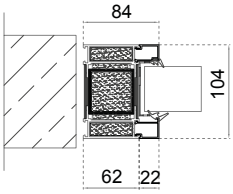
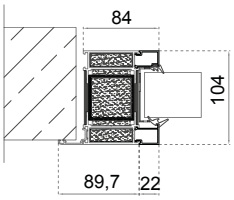
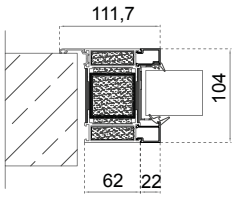
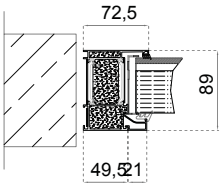
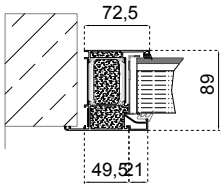
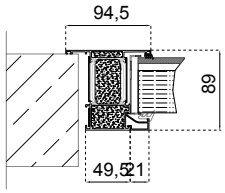
Hopper window EI 30/60	L-shaped profile	Z-shaped profile	T-shaped profile
Indtdoor aluminum			

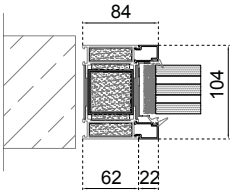
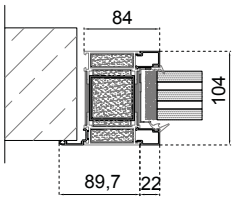
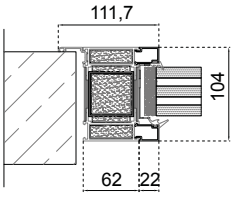
Window EI 90/120	L-shaped profile	Z-shaped profile	T-shaped profile
Steel		not available for this configuration	
Thermal-Break Steel	not available for this configuration	not available for this configuration	not available for this configuration
Indoor aluminium		not available for this configuration	
Outdoor aluminum		not available for this configuration	not available for this configuration

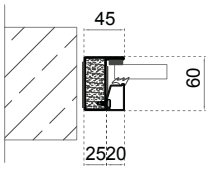
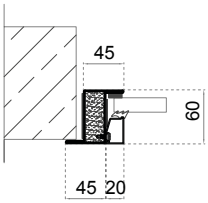
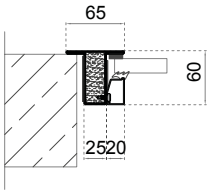
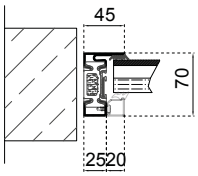
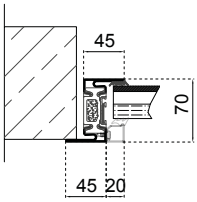
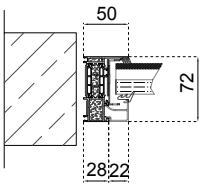
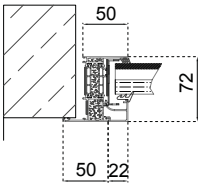
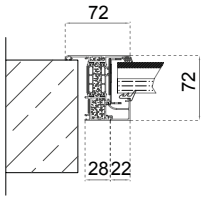
Hopper window EI 90	L-shaped profile	Z-shaped profile	T-shaped profile
Outdoor aluminum			

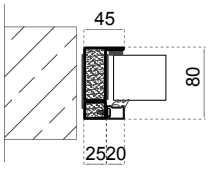
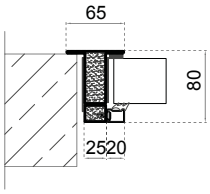
Fixed glazing EI 30/60	L-shaped profile	Z-shaped profile	T-shaped profile
Steel			
Thermal-Break Steel			
Indoor aluminium			
Outdoor aluminum			

Fixed Glazing With Silicone Joint EI 30/60	L-shaped profile	Z-shaped profile	T-shaped profile
Indoor aluminum			

Fixed glazing EI 90/120	L-shaped profile	Z-shaped profile	T-shaped profile
Steel			
Thermal-Break Steel	not available for this configuration	not available for this configuration	not available for this configuration
Indoor aluminium			
Outdoor aluminum			

Fixed Glazing With Silicone Joint EI 120	L-shaped profile	Z-shaped profile	T-shaped profile
Indoor aluminum			

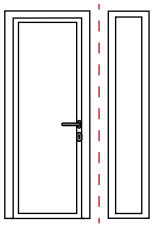
Fixed window with slim frame EI 30/60	L-shaped profile	Z-shaped profile	T-shaped profile
Steel			
Thermal-Break Steel			not available for this configuration
Outdoor aluminum			

Fixed window with slim frame EI 90/120	L-shaped profile	Z-shaped profile	T-shaped profile
Steel		not available for this configuration	

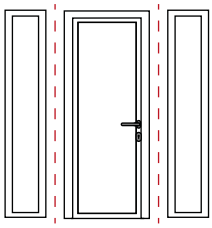
Fire-rated partitions' installation must be carried out by specialized personnel.

SEPARATE FRAMES

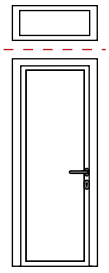
VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☑ Indoor Aluminium EI 30/60 ☑ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☑ Outdoor Aluminium EI 90/120



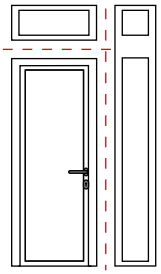
TSP_**1A**



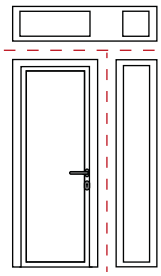
TSP_**1B**



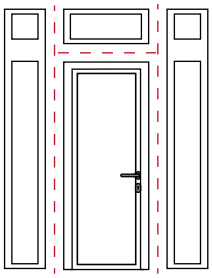
TSP_**1C**



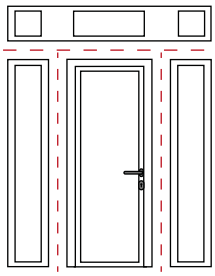
TSP_**1D_1**



TSP_**1D_2**



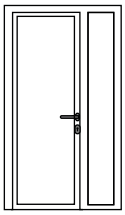
TSP_**1E_1**



TSP_**1E_2**

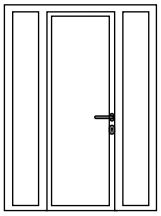
UNIQUE FRAME* (EI 30/60: max 2400 x 3000 mm; EI 90/120: max 2300 x 2800 mm)

VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☐ Indoor Aluminium EI 30/60 ☐ Indoor Aluminium EI 90/120 ☐ Outdoor Aluminium EI 30/60 ☐ Outdoor Aluminium EI 90/120



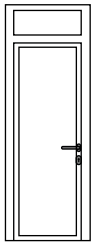
TUP_**1A**

V62 EI 30/60
V1F EI 90/120



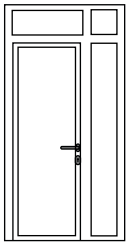
TUP_**1B**

V61 EI 30/60
V1A EI 90/120



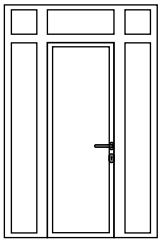
TUP_**1C**

V58 EI 30/60
V1B EI 90/120



TUP_**1D**

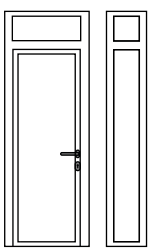
V59 EI 30/60



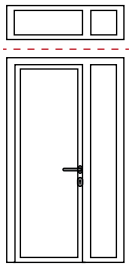
TUP_**1E**

V57 EI 30/60

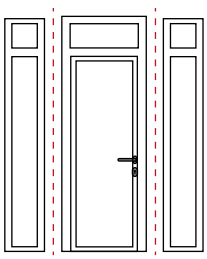
MIXED SYSTE (UNIQUE FRAME* + SEPARATE MODULE)



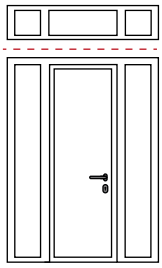
TUP_**1D_1**
EI 90/120



TUP_**1D_2**
EI 90/120



TUP_**1E_1**
EI 90/120

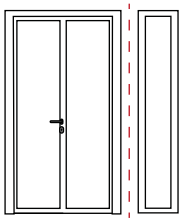


TUP_**1E_2**
EI 90/120

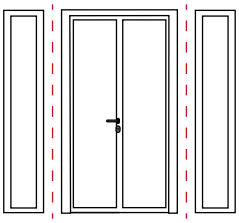
COMPLEX DOOR CONFIGURATIONS – 2 LEAVES

SEPARATE FRAMES

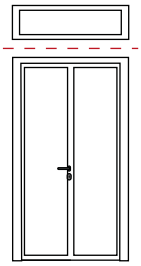
VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☑ Indoor Aluminium EI 30/60 ☑ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☑ Outdoor Aluminium EI 90/120



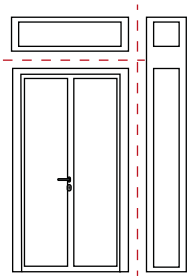
TSP_**2A**



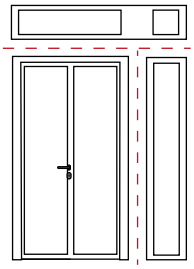
TSP_**2B**



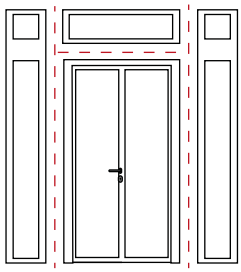
TSP_**2C**



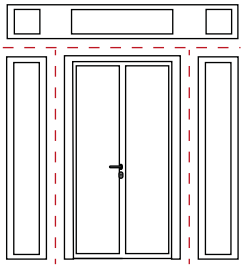
TSP_**2D_1**



TSP_**2D_2**



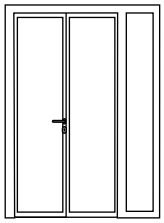
TSP_**2E_1**



TSP_**2E_2**

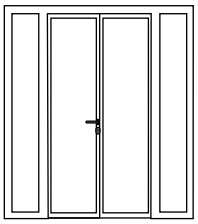
UNIQUE FRAME* (EI 30/60: max 2400 x 3000 mm; EI 90/120: max 2300 x 2800 mm)

VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☐ Indoor Aluminium EI 30/60 ☐ Indoor Aluminium EI 90/120 ☐ Outdoor Aluminium EI 30/60 ☐ Outdoor Aluminium EI 90/120



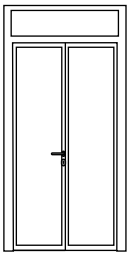
TUP_**2A**

V55 EI 30/60
EV1M EI 90/120



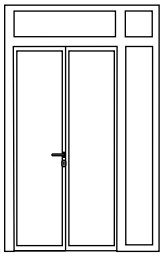
TUP_**2B**

V54 EI 30/60
EV1L EI 90/120



TUP_**2C**

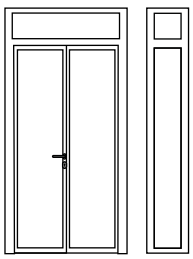
V51 EI 30/60
EV1i EI 90/120



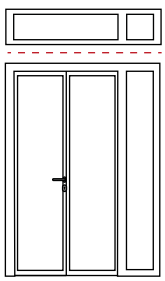
TUP_**2D**

V52 EI 30/60

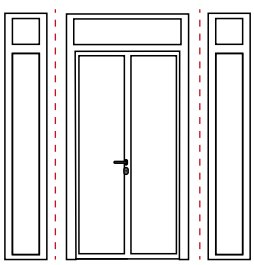
MIXED SYSTE (UNIQUE FRAME* + SEPARATE MODULE)



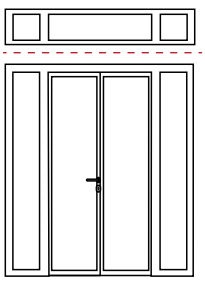
TUP_**2D_1**
EI 90/120



TUP_**2D_2**
EI 90/120



TUP_**2E_1**
EI 30/60/90/120

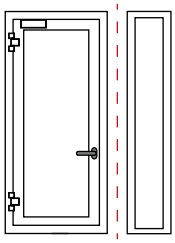


TUP_**2E_2**
EI 30/60/90/120

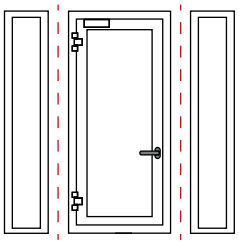
Fire-rated partitions' installation must be carried out by specialized personnel.

SEPARATE FRAMES

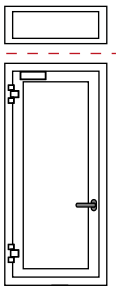
VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☑ Indoor Aluminium EI 30/60 ☑ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☑ Outdoor Aluminium EI 90/120



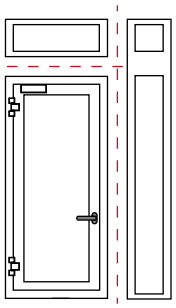
TSF_**1A**



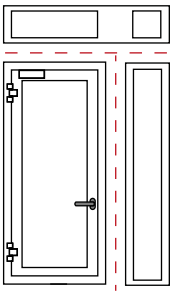
TSF_**1B**



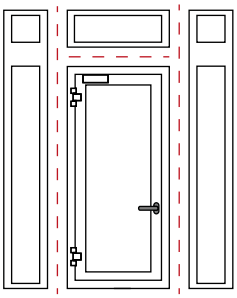
TSF_**1C**



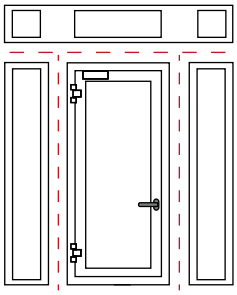
TSF_**1D_1**



TSF_**1D_2**



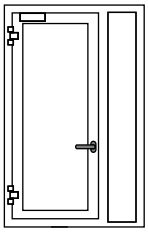
TSF_**1E_1**



TSF_**1E_2**

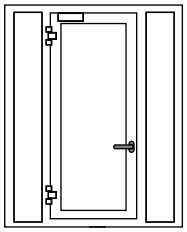
UNIQUE FRAME **(max 2600 x 2000 mm)**

VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☐ Indoor Aluminium EI 30/60 ☐ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☐ Outdoor Aluminium EI 90/120



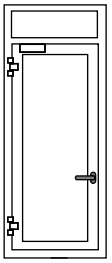
TUF_**1A**

Steel EI 30/60 V62
Steel EI 90/120 V1F
Outdoor Aluminium
EI 30/60 V62/All E



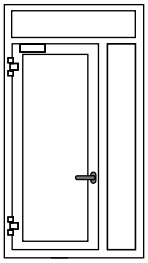
TUF_**1B**

Steel EI 30/60 V61
Steel EI 90/120 V1E
Outdoor Aluminium
EI 30/60 V61/All E



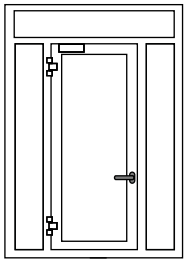
TUF_**1C**

Steel EI 30/60 V58
Steel EI 90/120 V1B
Outdoor Aluminium
EI 30/60 V58/All E



TUF_**1D**

Steel EI 30/60 V59
Steel EI 90/120 V1C
Outdoor Aluminium
EI 30/60 V59/All E

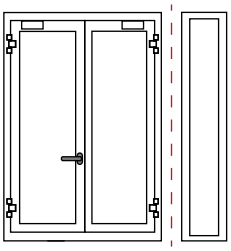


TUF_**1E**

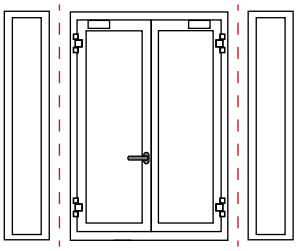
Steel EI 30/60 V57
Steel EI 90/120 V1A
Outdoor Aluminium
EI 30/60 V57/All E

SEPARATE FRAMES

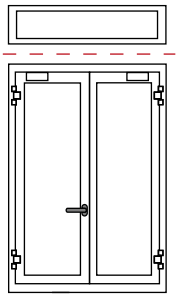
VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☑ Indoor Aluminium EI 30/60 ☑ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☑ Outdoor Aluminium EI 90/120



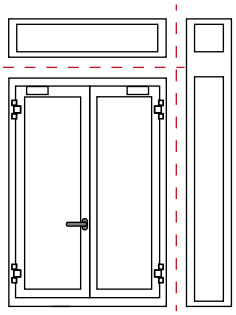
TSF_**1A**



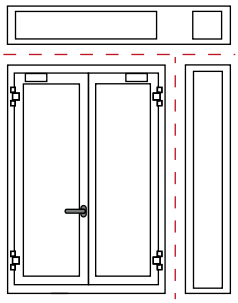
TSF_**1B**



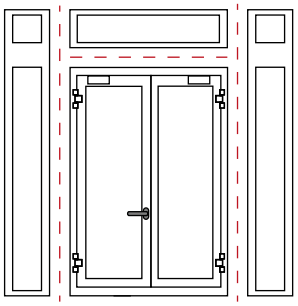
TSF_**1C**



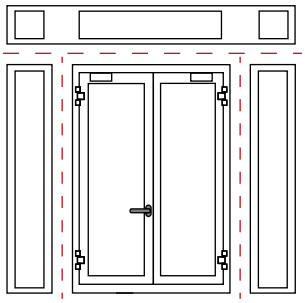
TSF_**1D_1**



TSF_**1D_2**



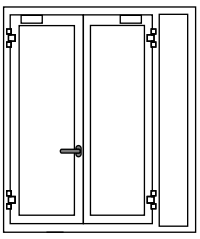
TSF_**1E_1**



TSF_**1E_2**

UNIQUE FRAME (**max 2600 x 2000 mm**)

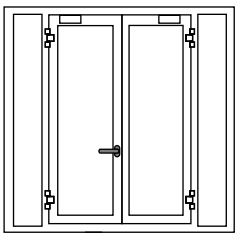
VALIDITY: ☑ Steel EI 30/60 ☑ Steel EI 90/120 ☐ Indoor Aluminium EI 30/60 ☐ Indoor Aluminium EI 90/120 ☑ Outdoor Aluminium EI 30/60 ☐ Outdoor Aluminium EI 90/120



TUF_**2A**

Steel EI 30/60 V55
Steel EI 90/120 EV1M

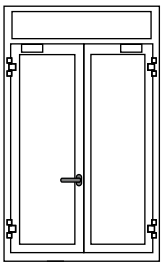
Outdoor Aluminium
EI 30/60 V55/All



TUF_**2B**

Steel EI 30/60 V54
Steel EI 90/120 EV1L

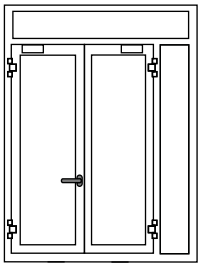
Outdoor Aluminium
EI 30/60 V54/All



TUF_**2C**

Steel EI 30/60 V51
Steel EI 90/120 EV1i

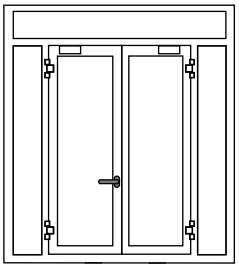
Outdoor Aluminium
EI 30/60 V51/All



TUF_**2D**

Steel EI 30/60 V52
Steel EI 90/120 EV1J

Outdoor Aluminium
EI 30/60 V52/All



TUF_**2E**

Steel EI 30/60 V50
Steel EI 90/120 EV1H

Outdoor Aluminium
EI 30/60 V50/All

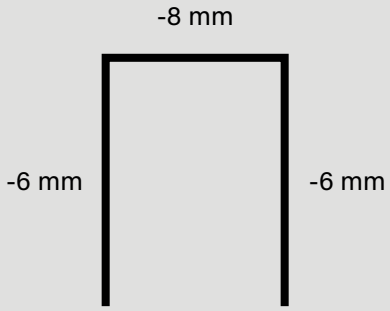
CALCULATION OF EXTERNAL FRAME DIMENSIONS

excluding the stop flages

3-sided frame

Application on:
- Masonry
- Sub-frame
- Substructure

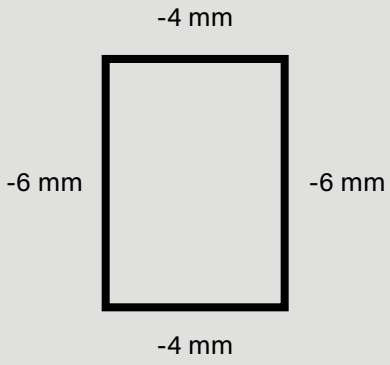
W.O.W. -12 (-6 mm left and -6 mm right)
W.O.H.. -8



4-sided frame

- Application on:
- Masonry
- Sub-frame
- Substructure

W.O.W. -12 (-6 mm on the left and -6 mm on the right)
W.O.H. -8 (-4 mm on the top side and -4 mm on the bottom side)



Outdoor Use Performance

Thermal Break Steel

EN 14351-1

WATERTIGHTNESS EN 1027 - EN 12208

The ability of a window or door unit to prevent water infiltration when exposed to a flow of water and a pressure difference between the interior and exterior**.**

4A Porta 1 o 2 ante | $EI_2$60 | Con battuta a pavimento

AIR PERMEABILITY EN 1026 - EN 12207

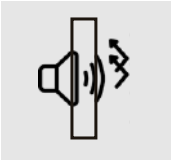
The characteristic of a closed window or door unit regarding air leakage when a pressure difference exists between the interior and exterior; the lower the volume of air lost, the higher the quality of the unit.

Classe 4 Porta 1 o 2 ante | $EI_2$60 | Con battuta a pavimento

WIND RESISTANCE EN 12211 - EN 12210

The ability of a window or door unit—when subjected to high positive or negative pressures (such as those caused by wind)—to maintain an acceptable level of deformation and retain its original properties, thereby ensuring user safety**.**

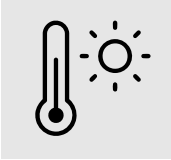
C5 Porta 1 o 2 ante | $EI_2$60 | Con battuta a pavimento



SOUND INSULATION EN ISO 140-3, EN ISO 717-1

The ability of a window or door unit to reduce airborne noise coming from outside.

37 db Porta 1 o 2 ante | $EI_2$60 | Con battuta a pavimento



THERMAL TRANSMITTANCE

The window or door unit complies with energy-saving regulations.

Thermal transmittance (U-value) represents the heat flow passing through the unit per square meter of surface area for every degree of temperature difference between the interior and exterior. The unit of measurement for thermal transmittance is W/m²K.

UW/m²K 1.2 p Porta 1 o 2 ante | $EI_2$60 | Con battuta a pavimento

* Evaluation based on a significant sample, designed to reflect real-world applications in the construction sector.

Fire-rated partitions' installation must be carried out by specialized personnel.

Outdoor Use Performance

Thermal Break Aluminum

EN 14351-1

WATERTIGHTNESS EN 1027 - EN 12208

The ability of a window or door unit to prevent water infiltration when exposed to a flow of water and a pressure difference between the interior and exterior**.**

1A	Double-leaf door | $_{E}$I2 60/120 | Without floor rebate
2A	2-door unit | EI$_2$60/120 | With floor rebate
9A	Window | EI$_2$60 | 72 mm profile
2A	Window | EI$_2$120 | 89 mm profile

AIR PERMEABILITY EN 1026 - EN 12207

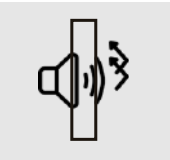
The characteristic of a closed window or door unit regarding air leakage when a pressure difference exists between the interior and exterior; the lower the volume of air lost, the higher the quality of the unit.

Class 3	1 or 2-leaf door | EI$_2$60/120 | With and without floor stop
Class 4	Window | EI$_2$60 | 72 mm profile
Class 3	Window | EI$_2$120 | 89 mm profile

WIND RESISTANCE EN 12211 - EN 12210

The ability of a window or door unit—when subjected to high positive or negative pressures (such as those caused by wind)—to maintain an acceptable level of deformation and retain its original properties, thereby ensuring user safety**.**

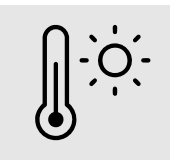
C2	1 or 2-leaf door | 72 mm profile | EI$_2$60/120 | Without floor stop
C3	1 or 2-leaf door | 72 mm profile | EI$_2$60/120 | With floor rebate
C3	Window | EI$_2$60/120 | 72 mm profile/89 mm



SOUND INSULATION EN ISO 140-3, EN ISO 717-1

The ability of a window or door unit to reduce airborne noise coming from outside.

vetro	infisso	
48 db	**52 db**	Single-door unit | EI$_2$60/120 | With floor rebate
41/46 db	**40/42 db**	1 or 2-leaf door | EI$_2$60/120 | With floor rebate
41/46/50 db	**43/45/46 db**	Window | EI$_2$60 | 72 mm profile
41/46 db	**40/42 db**	Window | EI$_2$120 | 72 mm profile



THERMAL TRANSMITTANCE

The window or door unit complies with energy-saving regulations.

Thermal transmittance (U-value) represents the heat flow passing through the unit per square meter of surface area for every degree of temperature difference between the interior and exterior. The unit of measurement for thermal transmittance is W/m²K.

Uf W/m²K	2.2	1 or 2-leaf door | 72 mm profile | EI$_2$60/120
Ud W/m²K w/panel	1.1 p	Single-door unit 1480x2180 with Up=0.5 W/m2K panel
Ud W/m2K ʷ/glass	1.6 p	Single-door unit 1480x2180 with glass Ug=1.0 W/ᵐ2K, psi=0.05W/mK

INSULATED SUPPORT STRUCTURE

TYPOLOGICAL SCHEME

The need to install fire-resistant systems on various types of supporting structures led GlassFire S.r.l. to develop modular structural solutions, ideally suited to meet on-site requirements.

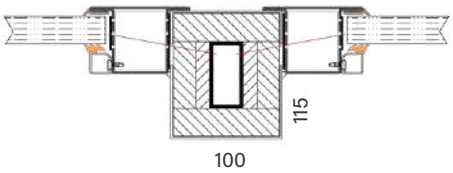
In compliance with the EN 1090-1 standard, our company certifies the execution of all steel and aluminum structures as Class EXC3 structural components.

The structures are constructed using steel hollow sections that are appropriately sized and insulated with calcium silicate and calcium sulfate-based boards, classified as Class A1 according to the Decree of February 16, 2007, and UNI EN 13501-1.

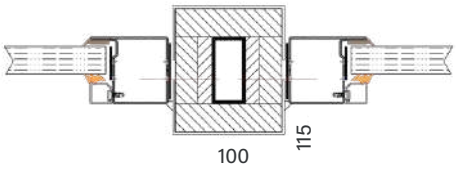
DESCRIPTION

EI 30/60

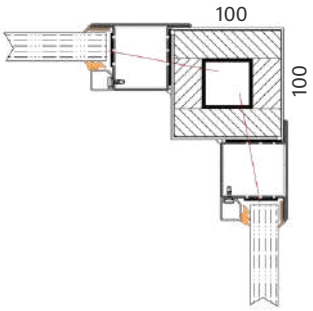
linear glazing



aligned windows



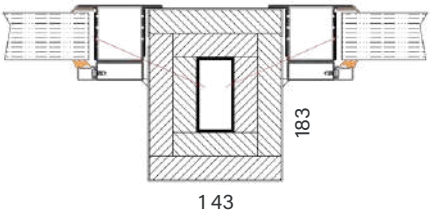
corner windows



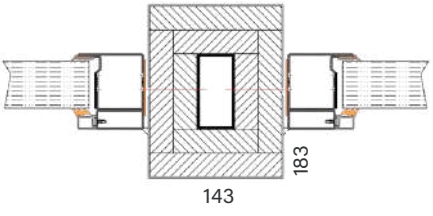
Central reinforcement	60x30x5 or 45x45x5
Perimeter protection for $EI_2$30	≥ 15 mm per side
Perimeter protection for $EI_2$60	≥ 25 mm per side
External dimensions	100x115 or 100x100
Ral	aluminum profile finish

EI 90/120

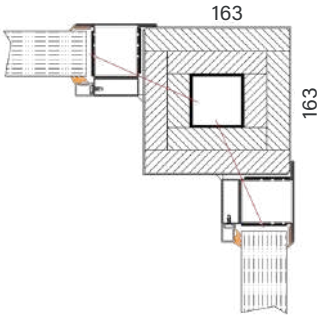
linear glazing



aligned windows



corner windows



Central reinforcement	80x40x5 or 60x60x5
Perimeter protection for EI2 90	≥ 35 mm per side
Perimeter protection for $_E$I2 120	≥ 50 mm per side
External dimensions	143x183 or 163x163
Finish	folded aluminum (RAL)

Fire-rated partitions' installation must be carried out by specialized personnel.

CERTIFICATION AND INSTALLATION METHODS

SUPPORTS AND REGULATORY REQUIREMENTS

All our fire-resistant glazed units are certified based on fire resistance tests conducted on **rigid supports**.

In cases where installation involves flexible supports, structural suitability is guaranteed through a specific technical assessment prepared by a qualified professional (in accordance with **Law 818/84**), acting in full compliance with **Ministerial Decree (DM) 16/02/2007** regarding fire resistance classification and **DM 17/01/2018** regarding technical standards for construction.

All documentation relating to such applications is available upon request.

STEEL SUPPORT SUBSTRUCTURES

Installing Glassfire glazing systems with the steel substructures described below ensures fire resistance in accordance with DM 16/02/2007.

Finally, please note that these construction solutions remain valid for dimensions smaller than those specified in the relevant technical reports.

EI 30/60

Evaluated structural characteristics:

- **Material:** S275 steel.
- **Uprights:** 50x50x5 mm tubular columns (max. height 3200 mm).
- **Crossbar:** 50x50x5 mm tubular section welded to the uprights (axis height 2400 mm from ground level).
- **Protection:** Cladding with **Fireguard 13** boards (nominal thickness: EI30 12.7 mm / EI60 25.4 mm).

MINIMUM REQUIREMENTS FOR ALTERNATIVE PROFILES

The use of different tubular profiles is permitted, provided they possess geometric characteristics equal to or greater than the following minimum values:

- **Area**: A = 8.73 cm^2
- **Section moduli**: Wx = Wy = 11.6 cm^2;
- **Moments of inertia (EI 30)**: Jx = Jy = 28.9 cm^2 (with x-axis perpendicular to the plane of the door)
- **Moments of inertia (EI 60)**: Jx = Jy = 28.9 cm^2

EI 90/120

Evaluated structural characteristics:

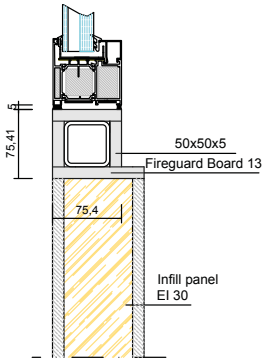
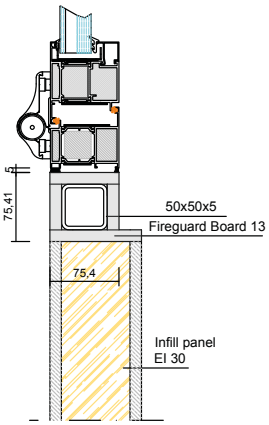
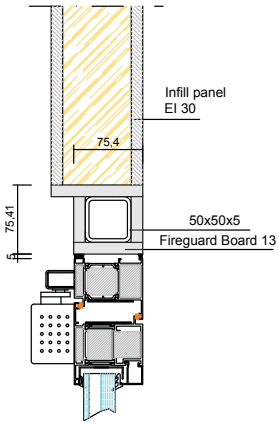
- **Material:** S275 steel.
- **Uprights**: 40x80x5 mm tubular columns (max. height 3200 mm).
- **Crossbar**: 80x40x5 mm tubular section welded to the uprights (axis height 2400 mm from ground level).
- **EI 90 protection:** Cladding with **Fireguard 25** + **Fireguard 13** boards (nominal thickness 38.1 mm).
- **EI 120 protection**: Cladding with **Fireguard 25.4** boards (nominal thickness 50.8 mm).

MINIMUM REQUIREMENTS FOR ALTERNATIVE PROFILES

The use of different tubular profiles is permitted, provided they exhibit geometric characteristics equal to or greater than the following minimum values:

- **Area**: A = 10.4 cm^2
- **Section moduli:** Wx = 18.8 cm^2; Wy = 12.3 cm^2
- **Moments of inertia (EI 90)**: Jx = 75.1 cm^2; Jy = 24.6 cm^2 (with x-axis perpendicular to the door plane)
- **Moments of inertia (EI 120)**: Jx = 75.1 cm^2; Jy = 24.6 cm^2

EI 30 APPLICATIONS

TALL UNITS WITH/WITHOUT HINGES horizontal section		CROSSBAR vertical section
OUTDOOR ALUMINIUM		
		
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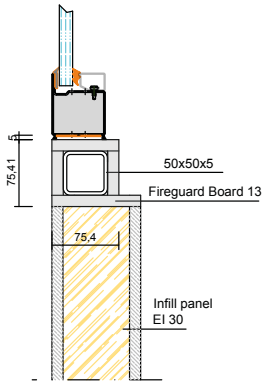
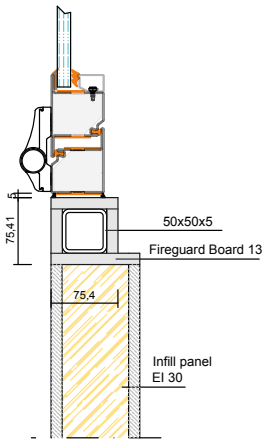
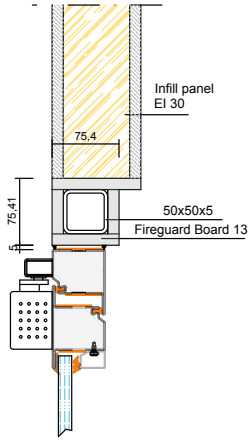
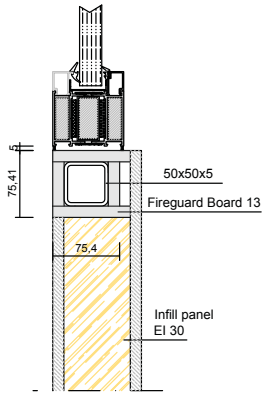
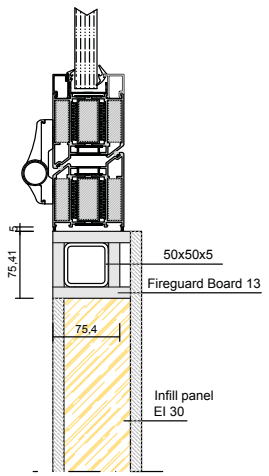
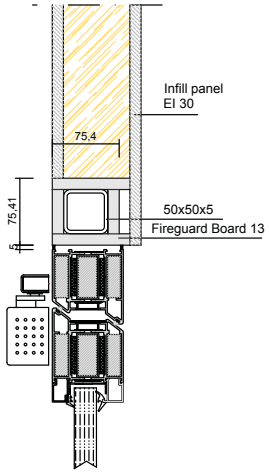
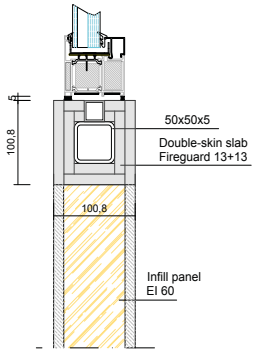
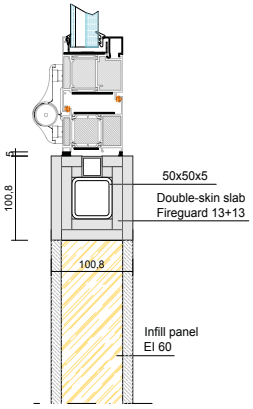
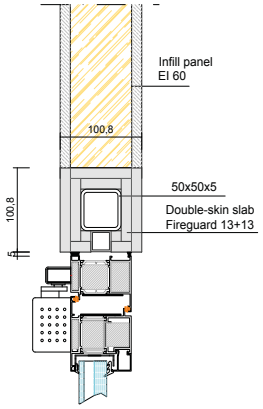
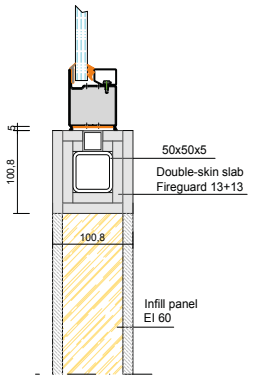
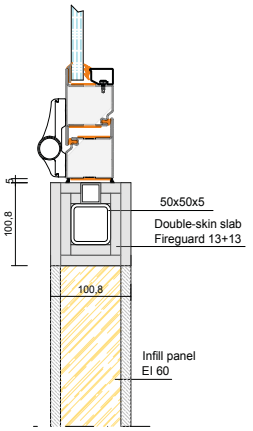
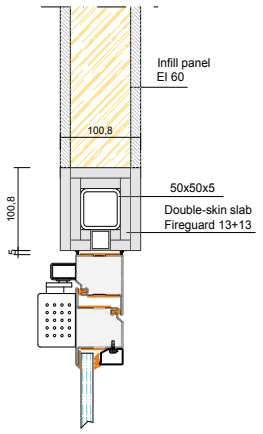
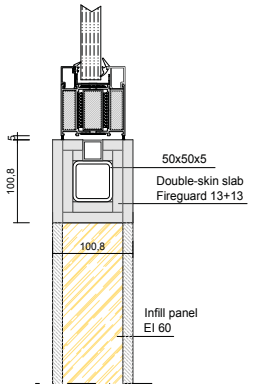
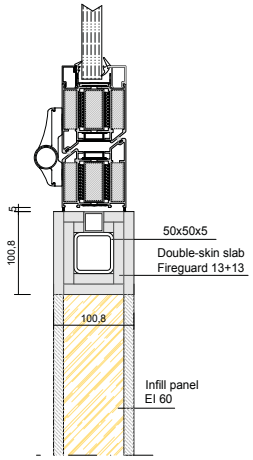
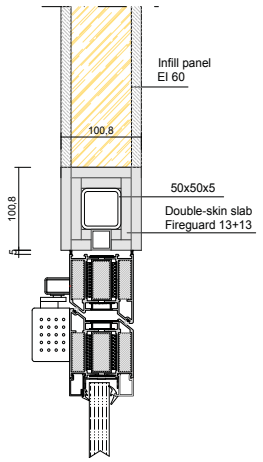
		
INDOOR ALUMINIUM		
		

Fire-rated partitions' installation must be carried out by specialized personnel.

EI 60 APPLICATIONS

	TALL UNITS WITH/WITHOUT HINGES horizontal section		CROSSBAR vertical section
OUTDOOR ALUMINIUM			
STEEL			
INDOOR ALUMINIUM			

EI 90 APPLICATIONS

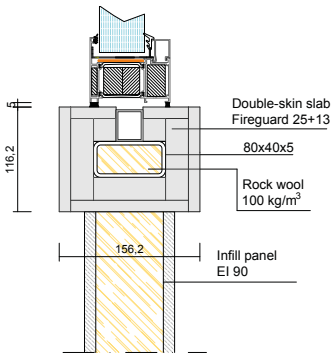
TALL UNITS WITH/WITHOUT HINGES

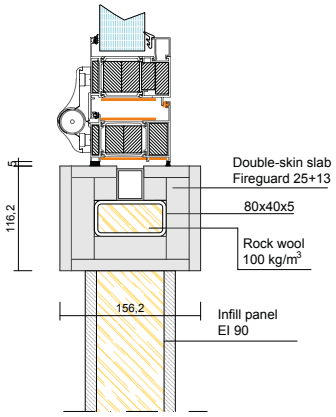
horizontal section

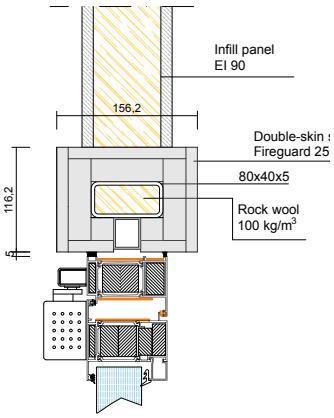
CROSSBAR

vertical section

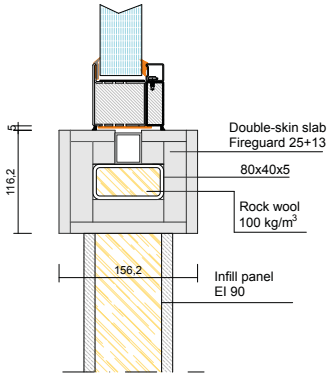
OUTDOOR ALUMINIUM

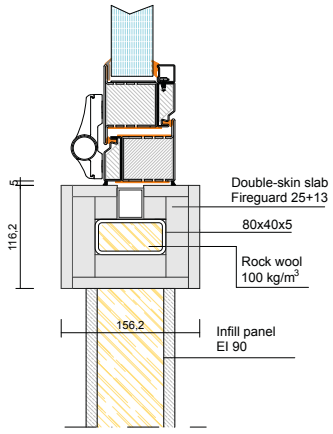


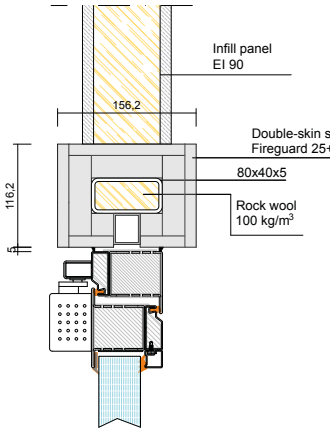




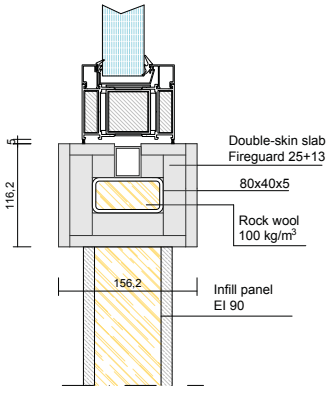
STEEL

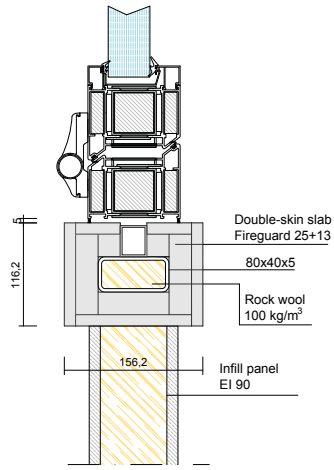


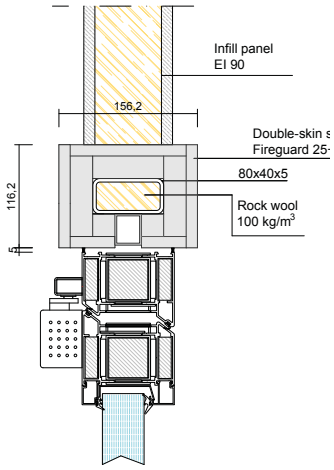




INDOOR ALUMINIUM







Fire-rated partitions' installation must be carried out by specialized personnel.

EI 120 APPLICATIONS

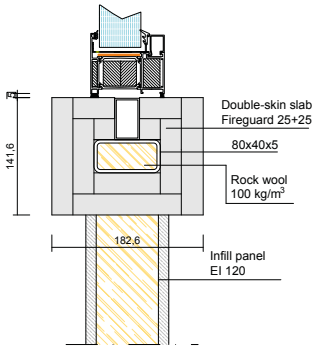
TALL UNITS WITH/WITHOUT HINGES

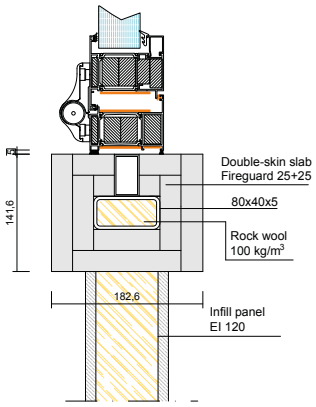
horizontal section

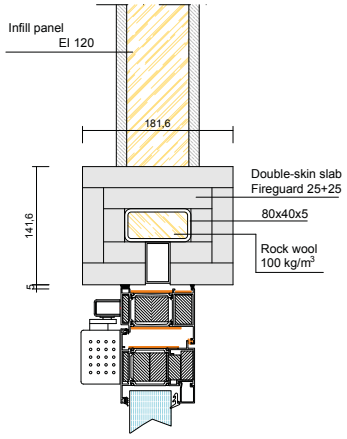
CROSSBAR

vertical section

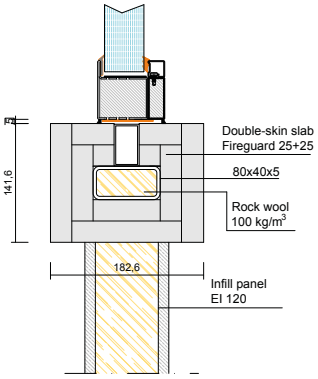
OUTDOOR ALUMINIUM

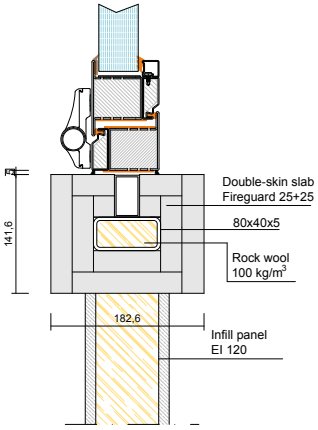


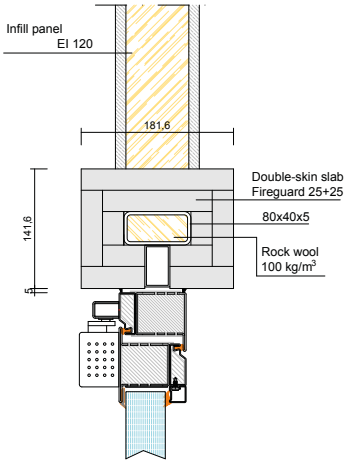




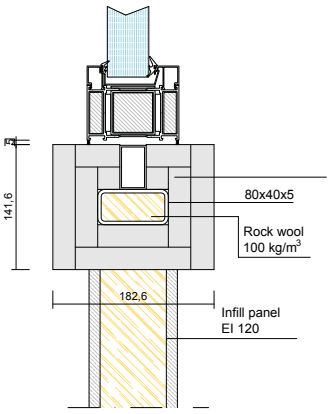
STEEL

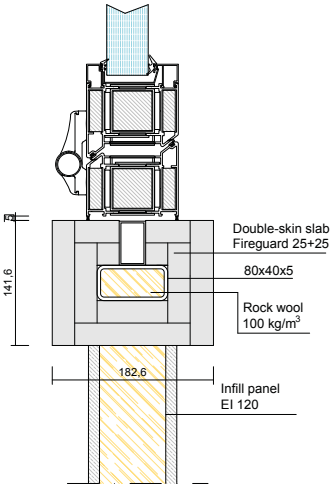


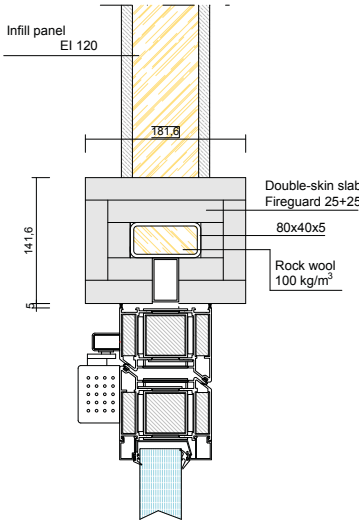




INDOOR ALUMINIUM







THERMALLY BROKEN STEEL APPLICATIONS

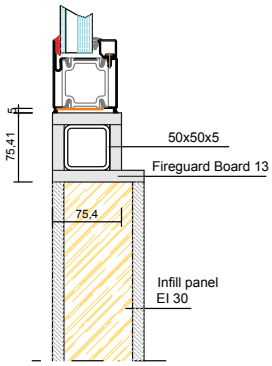
TALL UNITS WITH/WITHOUT HINGES

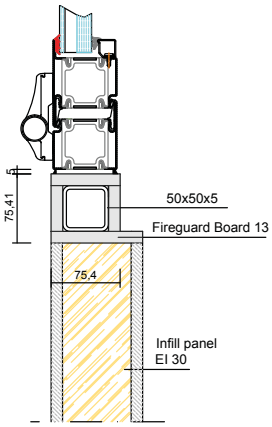
horizontal section

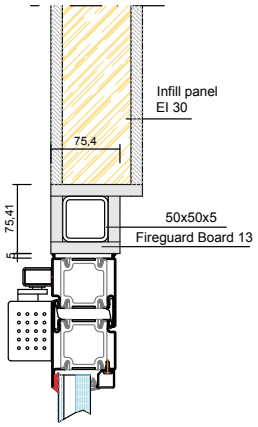
CROSSBAR

vertical section

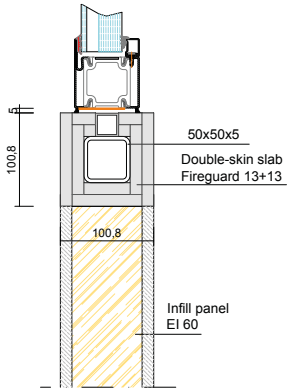
EI30

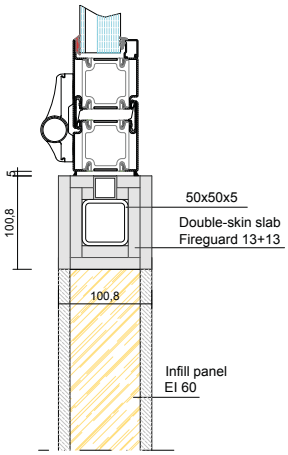


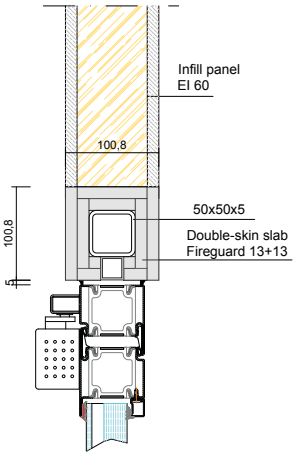




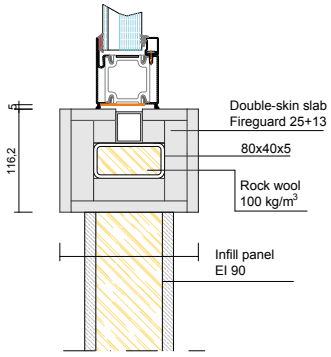
EI60







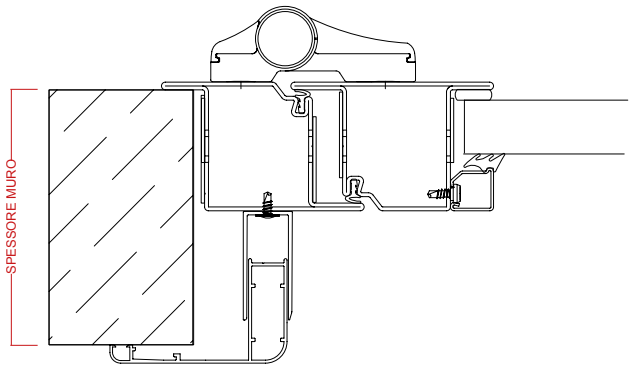
EI90



Fire-rated partitions' installation must be carried out by specialized personnel.

Reveal

INSTALLATION EXAMPLES FOR THE STEEL LINE

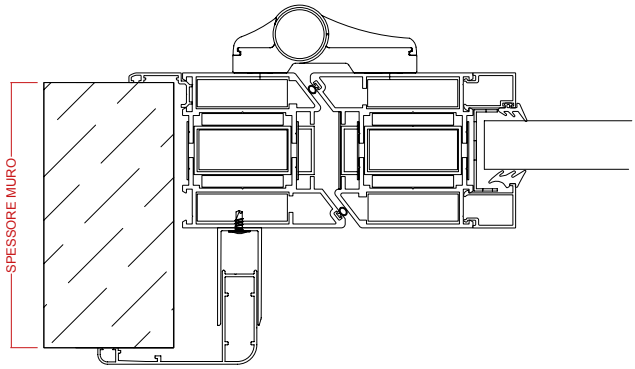


Minimum wall thickness:

EI 60 Thickness ≥ 110 mm

EI 120 Thickness ≥ 130 mm

INSTALLATION EXAMPLES FOR THE INDOOR ALUMINUM LINE

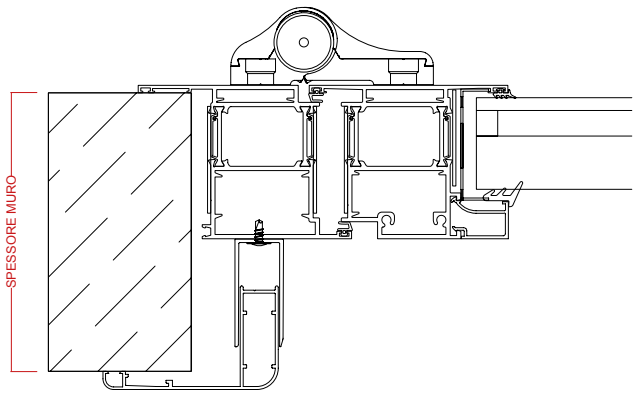


Minimum wall thickness:

EI 60 Thickness ≥ 125 mm

EI 120 Thickness ≥ 150 mm

INSTALLATION EXAMPLES FOR THE OUTDOOR ALUMINUM LINE



Minimum wall thickness:

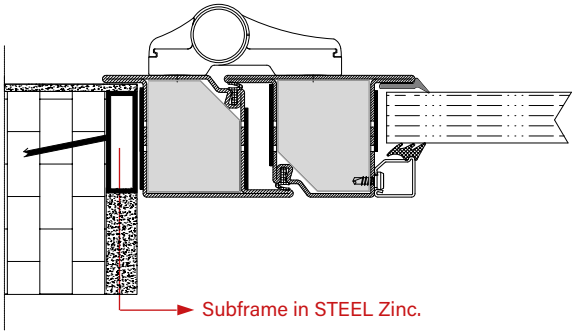
EI 60 Thickness ≥ 120 mm

EI 120 Thickness ≥ 140 mm

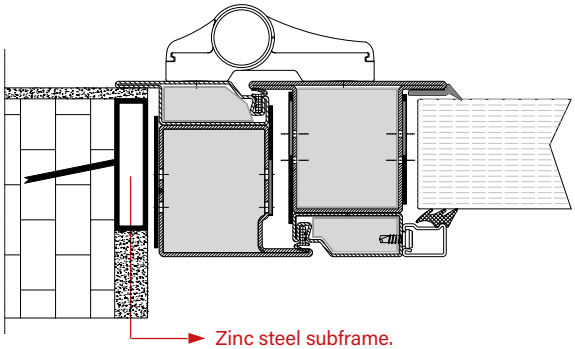
Sub-frame

STEEL LINE

EI 60

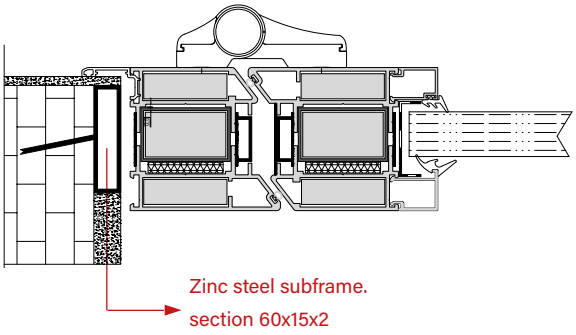


EI 120

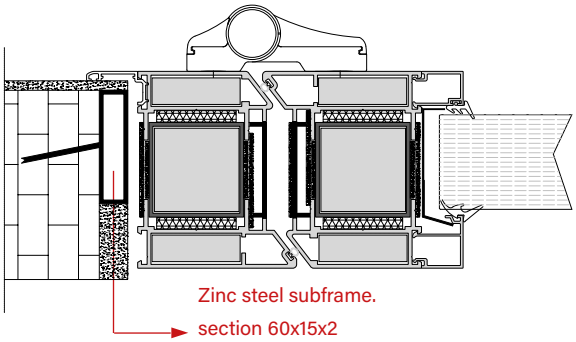


ALUMINUM LINE FOR INDOOR

EI 60

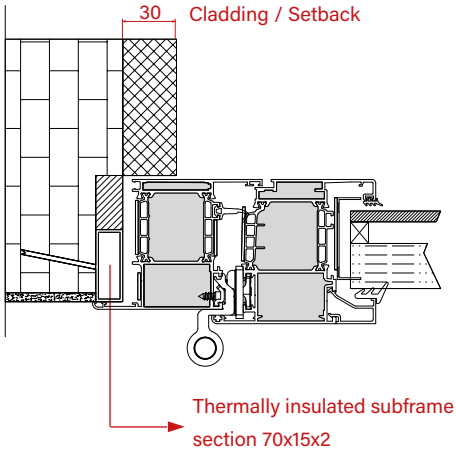


EI 120

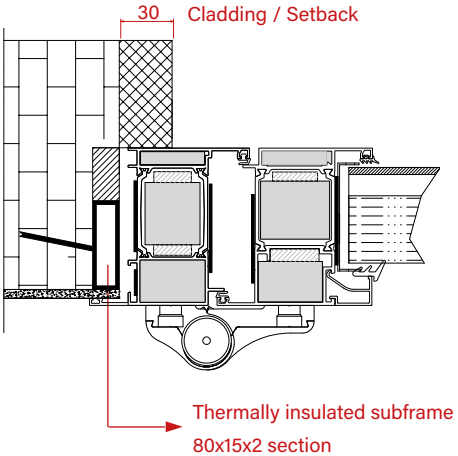


ALUMINUM LINE FOR OUTDOOR USE (WINDOWS)

EI 60



EI 120



Fire-rated partitions' installation must be carried out by specialized personnel.

Fire-resistant glass
for indoor use

PERFORMANCE	EW 30-120	EI 30	EI 60 Vert/Horiz	EI 90	EI 120
Thickness (mm)	13	16	25/27	35/38	47/50
Weight (kg/m²)	29	36	52/60	74/80	100/105
Ug value (W/m² K)	5,1	4,8	4,3/4,2	3,9	3,3
Sound insulation (Rw-dB)	38	39	41	45	46
Light transmission (%)	87	85	81	77	71
Reaction to fire (EN 13501-1)	A2	A2	A2	A2	A2
Temperature range	-10°/+45°	-10°/+45°	-10°/+45°	-10°/+45°	-10°/+45°
Impact resistance (EN 12600)	1/B/1	1/B/1	1/B/1	1/B/1	1/B/1
Minimum dimensions (mm)	200	200	200	200	200
Maximum dimensions (mm)	2400x3600	2400x3600	2400x3600 1200x2300	2400x3600	2000x3000
Thickness and dimension tolerances	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543
UV stability	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4

Reference density of materials
ρ glass : 2.5 Kg/mm3
ρ intumescent material gel: 1.5 Kg/mm3

Fire-resistant silicone-jointed glazing

Black Joint

PERFORMANCE	EI 30	EI 60	EI 90	EI 120
Thickness (mm)	21	31	32	54
Weight (kg/m²)	45	70	75	115
Ug value (W/m²K)	4,7	4,1	4	3,3
Sound insulation (Rw-dB) / Light	40	40	46	49
transmission (%)	83	79	86	70
Reaction to fire (EN 13501-1)	A2	A2	A2	A2
Temperature range	-10°/+45°	-10°/+45°	-10°/+45°	-10°/+45°
Impact resistance (EN 12600)	1/B/1	1/B/1	1/B/1	1/B/1
Minimum dimensions (mm)	300	300	300	300
Maximum dimensions (mm)	1800 x 3500	1800 x 3500	1500 x 3100	1200 x 3100
Thickness and dimension tolerances	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543
UV stability	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4

Transparent Joint

PERFORMANCE	EI 30	EI 60	EI 90
Thickness (mm)	19	27	37
Weight (kg/m²)	48	61	80
Ug value (W/m²K)	5,1	5,1	4,2
Sound insulation (Rw-dB) / Light	42	44	44
transmission (%)	84	81	84
Reaction to fire (EN 13501-1)	A2	A2	A2
Temperature range	-10°/+45°	-10°/+45°	-10°/+45°
Impact resistance (EN 12600)	1/B/1	1/B/1	1/B/1
Minimum dimensions (mm)	300	300	300
Maximum dimensions (mm)	1800 x 3100	1800 x 3100	1500 x 3100
Thickness and dimension tolerances	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543
UV stability	in accordance with EN12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4

Fire-resistant glass
for outdoor use

Outdoor glass (tempered low emissivity: 6 eSG TF + chamber (Argon 90%) + EI glass

PERFORMANCE	EW 30-120	EI 30	EI 60	EI 90		EI 120
Thickness (mm)	31	36	43	47	53	61
Weight (kg/m²)	44	50	67	83	90	115
Ug value (W/m²k)	1,1	1,1	1,2	1,5	1,2	1,5
Noise reduction (Rw-dB) Light	39	40	41	47		49
transmission (%)	78	77	73	70		66
Reaction to fire (EN 13501-1)	A2	A2	A2	A2		A2
Temperature range	-10°/+45°	-10°/+45°	-10°/+45°	-10°/+45°		-10°/+45°
Impact resistance (EN 12600) indoor side only	1/B/1	1/B/1	1/B/1	1/B/1		1/B/1
Minimum dimensions (mm)	200	200	200	200		300
Thickness and Dimensions tolerances	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543	in accordance with EN 12543		in accordance with EN 12543
UV Stability	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4	in accordance with EN 12543-4		in accordance with EN 12543-4

DISTORTION EFFECT

In extremely hot climate zones—where operating temperatures exceed the standard range (-10°C to +45°C), and particularly under intense direct sunlight—the use of low-emissivity (low-E) coated glass is not recommended.

This is to prevent excessive heat absorption, which could lead to optical distortion or other structural issues.

Instead, the use of a specific solar control coating, such as the SNX60 type, is recommended; this ensures that the glass surface temperature remains at or below 45°C, even under the most adverse conditions.

INSULATING GLASS UNIT PRESSURE-EQUALIZATION VALVE

Under normal pressure conditions, the valve remains closed, preventing air from entering or escaping and keeping the insulating glass unit perfectly sealed. When the pressure difference between the interior and exterior exceeds approximately 80 millibars, the valve opens to allow the pressures to equalize. Once the pressure differential drops to approximately ± 25 millibars, the valve automatically closes, restoring the seal of the insulating glass unit.

The valve is mandatory for all insulating glass units installed at altitudes exceeding **1,000 meters above** sea level.

For glass unit dimensions, please refer to the catalogue section regarding the specific window or door system.

TECHNICAL DATA

Glass within a profile can break for various reasons, but the crucial factor is that it does not become dangerous upon breakage.

Safety glass is designed so that it does not produce sharp edges when broken. There are two main types of safety glass: laminated (Type B breakage) and tempered (Type C breakage).

Laminated glass: Lamination involves bonding two or more sheets of glass together using one or more invisible plastic interlayers. If the glass breaks, the plastic holds the fragments together, preventing them from scattering and reducing the risk of injury.

Tempered glass: The glass is heated and then rapidly cooled in a special furnace. This process creates internal stress that causes the glass to shatter into small, non-sharp fragments, thereby reducing the risk of injury compared to standard glass.

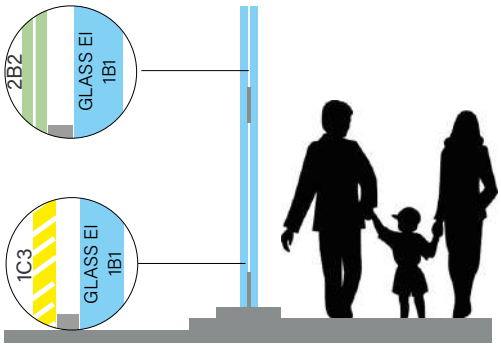
The UNI 7697:2021 standard establishes criteria for selecting glass for both exterior and interior applications, ensuring that the glass's performance meets the minimum safety requirements designed to protect users.

The types described below represent just a few possible interpretations of the principles set out in UNI 7697.

LEGEND: Laminated safety glass Tempered safety glass

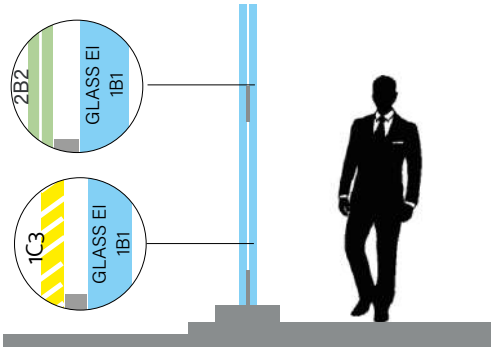
RESIDENTIAL APPLICATIONS

French doors accessible from both sides must be fitted with laminated or tempered safety glass.



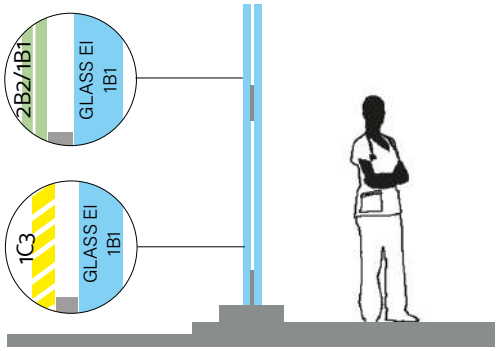
WORKPLACE APPLICATIONS

Windows intended for offices must have the same safety characteristics as residential glazing—namely, laminated or tempered glass.



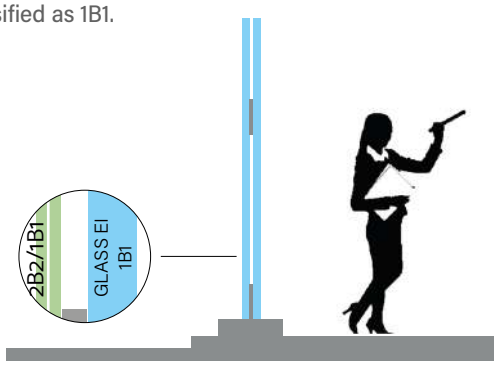
APPLICATIONS IN HIGH-TRAFFIC BUILDINGS

In hospitals, shopping centers, sports facilities, cinemas, and gyms, exterior glass must be laminated and tempered to ensure maximum safety.



APPLICATIONS IN SCHOOLS

The use of laminated glass is mandatory in kindergartens and schools. Furthermore, for applications where the bottom edge of the glass is at a height of 1 meter or less, it is necessary to use glass classified as 1B1.



Slide door closer

for single-leaf door

CE certified according to standard UNI EN 1154.

*Note: for corri*dor installations, the door closer size allows the door leaves to open to 90°.

ON REQUEST: with electromechanical hold-open in the slide rail and a maximum door opening angle of 130°.

Maximum opening angle	175°
Overhead door closer	with slide arm
Closing speed	adjustable from 180° to 15° and from 15° to 0°
Closing force	EN 2-4 / EN 2-5
Latching action	adjustable
Backcheck	optional

for double-leaf doors / “twin”

CE certified according to standard UNI EN 1158.

Can be installed (W.O.W. ≥ 1280) ONLY on the pull side.

Note: for corridor installations, the door closer size allows the leaves to open to 90°.

ON REQUEST: with electromechanical hold-open in the slide rail and maximum opening of 130° for the active leaf and 120° for the passive leaf.

Maximum opening angle	170° per LFM < 1500 175° per LFM ≥ 1500
Overhead door closer	con braccio a slitta, EN 2-4 / EN 2-5
Closing speed	regolabile da 180° a 15° e da 15° a 0°
Closing sequence selector	incorporato
Latching action	regolabile
Opening	morbida (camme)
Backcheck	opzionale

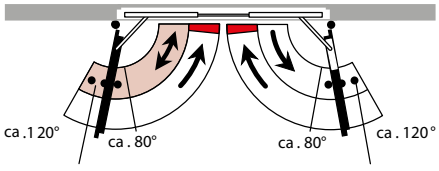
Concealed door closer

CE certified according to the reference standard UNI EN 1154.

Pair the opening limiter with a floor-mounted door stop to absorb impacts and prevent damage to the door.

Type	Campo di applicabilità
single-leaf glazed doors	800 ≤ W.O.W. ≤ 1200
double-leaf glazed doors	1600 ≤ W.O.W.≤ 2200 W1 ≥ 800mm o W2 ≥ 800mm

Max opening angle	120°
Closing speed	adjustable from 120° to 15° and from 15° to 0°
Closing force	EN 2-4
Latching action	adjustable



3-knuckle hinge

Made of Zamak, steel, and extruded aluminum, the 3-leaf hinges offer enhanced sturdiness and ensure optimal fire resistance.

Compliant with the EN 1935:2004/AC:2003 standard, these hinges support a load of up to 200 kg, achieving a performance grade of 14. The hinge class encapsulates key characteristics—such as durability, load-bearing capacity, test resistance, and overall resistance—into a single numerical value.

Fire-rated accident prevention handle

The safety handle—available in stainless steel or a black finish—features a trim set with a rose and an oval escutcheon. This product is certified to the DIN EN 1906:37-0140U standard, ensuring its quality and safety.

It is important to note that when the half-handle is used in conjunction with a panic bar, an additional half-turn of the key is required to activate its operation. Furthermore, the latch bolt retracts solely by depressing the handle, thereby ensuring safe and intuitive opening.

Applications: Lever device and Lever device; half-set and panic bar.

Finishes:

- Stainless Steel
- Black

1/2 Window handle

Features an ergonomic design with a secure opening mechanism that prevents accidental opening.

Easy to install and compliant with safety regulations. Available in Silver or black finishes.

Half-cylinder to be ordered separately.

Finishes:

- Silver
- Black

Panic bars

Basic mortise lever device

For **Primary (W1) and Secondary (W2) Leaves** with push bar or Lever device

Finishes:
- Metallic Grey
- Endurance

- Size: 90 mm
- Half-cylinder: for the pull side only
- CE certified according to the relevant standard EN 1125

Mortise push-bar

For **Primary (W1) and Secondary (W2) leaves.**
Bar can be cut to size on site.
Installation permitted only with a secondary leaf (W2) division dimension of 420 mm.

Finishes:
- Metallic Grey
- Endurance

- Size: 62 mm
- Half-cylinder: provided only on the pull side
- CE certified according to the relevant standard EN 1125

Mortise touch panic bar

For **primary (W1) and secondary (W2) leaves.**
Bar can be cut to size on-site.
Installation permitted only with a secondary leaf (W2) division dimension of 600 mm.

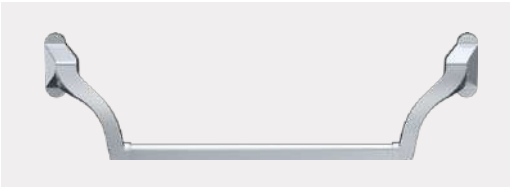
Finishes:
- Entirely made of stainless steel

- Size: 80 mm
- *CE certified according to the relevant standard* EN 1125

Mortise Lever device

For **Primary Leaf (W1) and Secondary Leaf (W2).**

Finishes:
- Entirely made of stainless steel



- Size: 100 mm
- CE certified according to the reference standard EN 1125

Concealed hinges

Concealed hinges are ideal for aluminum and steel EI30/60 doors. When the door is closed, these hinges are completely invisible, ensuring a clean, streamlined design. They are tested and compliant with the EN 1935 standard, ensuring high performance and long-term durability.
Despite their discreet nature, the door allows for a **wide opening angle of up to 100°**, ensuring easy access. It is important to install an **opening restrictor combined with a floor-mounted door stop** to absorb impact and prevent damage to the door.

This is mandatory to ensure the door's safety and proper operation. One of the distinctive features is the ability to adjust the door in three dimensions:

- Lateral adjustment (+/- 3 mm) for precise door alignment.
- Height adjustment (-2 / +3 mm) to adapt the door to installation requirements.
- Compression adjustment (+/- 1 mm) to ensure a perfect, secure closure.

Magnets

Door status contact

Insert-type magnetic sensor for door alignment verification (leaf/ frame)

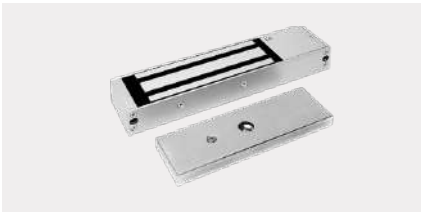
Threaded body	brass
Mounting dimensions	50 x 20 x 3 mm
Internal depth dimension	28 mm
Sensor and magnet	extendable
Connection	2-wire
Contact output	N.O. (N.C. with magnet)
Maximum rating	200 VDC/500 mA (10 VA max) resistive load
Operating temperature	-5/+50°C
Operating distance	12 mm

Heavy-duty door lock for controlled opening

A high-security device designed for locking hinged doors.

It is ideal for industrial and commercial applications where security is crucial.

Holding capacity	up to 300 kg
Power supply	24 V DC



Wall-mounted electromagnet

.with a release button and an articulated mount, designed to offer maximum fire safety. It features an anti-residual magnetism pin on the magnet body and a connection connector with an interference-suppressing varistor to ensure reliable, interference-free operation.

Holding capacity	up to 50 kg
Power supply	24 V DC

Fire-rated partitions' installation must be carried out by specialized personnel.

Free-swing door closer

For single-leaf door

TS 99 FL EN 2–5: features a slide channel compliant with EN 1154 and CE marking. It supports leaf widths up to 1250 mm, is equipped with an electro-hydraulic hold-open mechanism (tested to EN 1155), and offers a free-swing function starting from an opening angle > 0°. Operating voltage is 24 V DC. Suitable for indoor glass doors and direct leaf mounting.

TS 9**9 FLR–K: versi**on with slide channel, integrated power supply, smoke detector, and operation/maintenance indicator. Suitable for indoor glass doors; installed on the hinge side.

Note:

If the door unit is installed in a corridor, the size of the door closer may limit the opening angle of the leaves to 90°.

For 2-leaf door (main leaf only)

TS 99 FL GSR EN 2–5: features a slide rail on the primary leaf, complies with EN 1154, and bears the CE mark. Suitable for leaf widths up to 1250 mm, it is equipped with an electro-hydraulic hold-open mechanism (tested to EN 1155) and a free-swing function that activates at an opening angle > 0°. Operating voltage is 24 V DC.

The door closer is equipped with a slide rail and an integrated mechanical door coordinator, tested to EN 1158. The closing sequence is regulated via a push-type closing system—independent of the door closer's hydraulics—featuring overload protection.

Suitable for interior glass doors; installed on the hinge side.

Note:

If the door unit is installed in a corridor, the size of the door closer may limit the opening angle of the leaves to 90°.

Anti-panic security lock

with 3 locking points for single-leaf glass doors

Mechanical security lock with 3 latches and 3 deadbolts for single-leaf glass doors. Gear-driven mechanism with central, top, and bottom latches; 3 locking points; 92 mm center-to-center distance; 24 mm faceplate.

Bringing the door leaf close to the fixed frame automatically engages the three latches and three deadbolts. The system ensures emergency egress, even when the door is securely locked.

The three latches remain constantly engaged to ensure a tight seal, while the deadbolts slide freely.

If motorized, the lock allows for remote opening. The system operates on 12 V DC power with a current draw of 2 Amps.

Compliant with Security Grade 6 under European standards prEN 15685:19 and EN12209:16.

- **INSTALLATION:**
- **Steel series:** not suitable for installation.
- **Aluminum series:** suitable for installation on aluminum doors for indoor and outdoor use.

For proper operation, when paired **with push-bar or lever-operated panic bars**, the latter must feature a **spindle rotation of 40° or 45°.**

Fixed grab bars

to be combined with single-leaf doors with access control system

Georgia Q.

Finishes: Satin stainless steel

Matte black RAL 9005

Material	Stainless steel
Mounting system	Concealed
Fixing centers	300
Pull handle section	25x25 mm
Supports	Square, straight
Fixture opening	Pull side (key-operated)

Nevada Q.

Finishes: Satin stainless steel

Matte black RAL 9005

Material	Stainless steel
Center-to-center distance	350 mm
Supports	Square
Mounting system	Concealed
Fixture opening	Push side (key-operated)
Push-bar section	25x25 mm

Fire-rated partitions' installation must be carried out by specialized personnel.

Smoke seal kit

for single- and double-leaf glazed units

The ability of a closure element to limit or reduce the passage of gas or smoke under standardized test conditions (UNI EN 1634-3). This requirement is divided into two categories. Performance S and its associated accessories are described below:

Smoke tightness SA (Cold smoke)

It ensures resistance to the passage of gas and smoke at ambient temperature.

The maximum leakage rate measured at ambient temperature and a pressure of 25 Pascals does not exceed 3 m^3/h per meter of the gap between the door leaf and the frame, excluding leakage through the floor threshold.

Cold smoke seals (wall opening/frame)

for the STEEL series

for outdoor aluminum series

Smoke tightness SM/ S200 (Hot Smoke)

In addition to performance at ambient temperature, containment of hot gases and smokes at 200°C is guaranteed.

This applies to the maximum leakage rate measured at ambient temperature and at 200°C, up to a pressure of 50 Pascals.

Valid only for single-leaf doors.

Automatic threshold

c UL us LISTED

UL 10C
File nr.R39141

SIL

Hot-smoke seals (wall opening/frame)

for the STEEL series

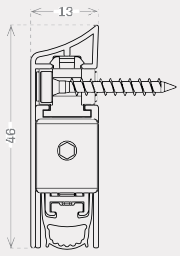
for outdoor aluminum series

Acoustic reduction kit

Sound insulation (acoustic insulation)

A model designed for indoor and outdoor applications on new and existing doors. It offers high sound insulation and is available in various colors. It comes complete with an activation kit for use with a push-button on the pull side.

Drop-down seal, 50 dB Rw



Access control
for single- and double-leaf doors

Fire-resistant glazed doors are units with an EI fire rating, tested and certified by institutes accredited by the Ministry of the Interior. Every element of the tested unit must be faithfully replicated during production; no modifications, additions, or substitutions with components not expressly approved in the test certificate are permitted.

Consequently, access control for fire-resistant glazed doors relies exclusively on **certified supplementary accessories**. These devices interact directly with the standard-issue panic hardware, enabling access management without compromising the unit's integrity or fire safety compliance.

2. Overview of Approved Devices

To meet diverse site requirements and accommodate various profile types, four main categories of devices are available:

- **Electric Handle:** Enables opening via the handle only upon receipt of a timed electrical signal (e.g., from a badge reader). When unpowered, the handle remains disengaged (idle).
- **Electric Strike:** An alternative to the electric handle for single-leaf doors (subject to application constraints based on the profile). Paired with a fixed pull bar.
- **Motorized Lock:** Ensures motorized opening (approx. 3–4 seconds) directly at the locking mechanism. Paired with a fixed pull bar.
- **Motorized Panic Bar (e-Fast):** A specialized solution for access control on glazed doors located along escape routes and emergency exits; opening reaction time is approximately 3–4 seconds. Paired with a fixed pull bar.

3. Compatibility Matrix

Refer to the **summary table below** to verify device suitability based on the number of leaves, opening direction, and profile type used (Steel, Thermal Break Steel, Indoor/Outdoor Aluminum).

Detailed specifications, dimensions, wiring diagrams, and installation procedures for the individual components are provided in the product data sheets on the following pages.

Device	Line	1 leaf	2 leaves	Internal door opening	Controlled side Push side	External door opening	Controlled side Tension side
Electric handle	All series	✓	✓	✓	✓	✓	✓
Electric Encounter	Steel (non-thermal break)	✓	*NO*	✓	✓	✓	✓
	Outdoor Aluminium	✓	*NO*	*NO*	*NO*	✓	✓
Motorized lock*	Outdoor Aluminium	✓	*NO*	✓	✓	*NO*	*NO*
	Thermal-break steel and Indoor Aluminium	✓	*NO*	✓	✓	✓	✓
Motorized push-bar (e-Fast)*	All series	✓	✓	*NO*	*NO*	✓	✓

Electronic handle

Standard electric handle with fail-secure operation: Supplied with a 4m cable (2x0.22). When unpowered, it is disabled (handle disengaged). When powered, a green LED indicates that opening is possible. For outdoor applications, electrical circuit protection and neoprene gaskets are recommended. A timer should be installed.

Optional electric handle with fail-safe operation: Retains the same features as the standard version. In the event of a power failure, it enables the handle to open the door.

Body and handle	satin-finish metal
Internal mechanisms	case-hardened steel
Cylinder-to-handle center distance	92 mm
Handle spindle	9 mm
Handing	ambidextrous
Flame-retardant shielded cable	CEI-UNEL 36762 C-4-2x0.22
Handle spindle rotation	45°
Current draw	inrush current 1 A
Holding current	500 mA
Day latch	electronic
Power supply	24 V DC (recommended) / 12 V AC-DC

Finishes: Grey

Black

Electric Strike

Electric strike designed for fire-rated single-leaf doors, used in conjunction with a fixed pull handle and cylinder. If a panic bar is not installed, specify the controlled side (push or pull). Include a tim**er.**

TECHNICAL DATA	
Burglary resistance	9000 N
Operating temperature	from -15°C to +40°C

CHARACTERISTICS	
Bipolar diode	▪
Normally open contact	▪

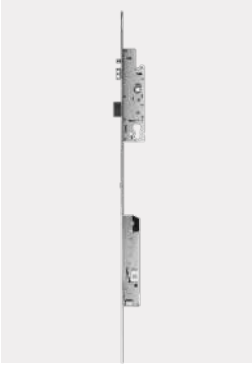
ELECTRICAL DATa	10-24V AC/DC
DC resistance	11-13 V DC
Nominal resistance	43 Ω
AC current consumption	250mA (12V) 500mA (24V)
DC current consumption (stabilized)	280mA (12V) 560mA (24V)

Motorized single-point locking mechanism

Automatic locking system for single-leaf doors, combined with a fixed pull handle and a cylinder. If a panic bar is not used, specify the controlled side (push or pull). The latch and deadbolt engage automatically when the door leaf is brought against the fixed frame. In an emergency, exit is guaranteed even when the door is locked.

OPERATION: The motor retracts the latch bolt and the deadbolt. Opening reaction time is approximately 3–4 seconds.

Center-to-center distance	92 mm
Adjustable, self-locking latch bolt	10 to 16 mm
Adjustable "automatic reset" sensor	9 to 15 mm
Voltage	12V DC
Current draw	2A
Included accessories	power cable (4 m)
Strength class	Wk/RC3



Motorized panic bar

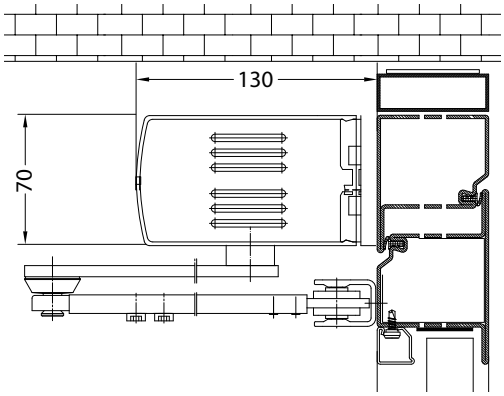
See page 169

Swing door automation

Single-leaf doors: The single leaf is automated using an ED 250 drive.

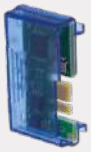
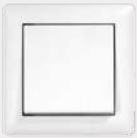
Double-leaf doors: Fully automated. Both leaves (active and passive) use an ED 250 drive (with an identical range of functions), and their closing sequence is managed by the control unit or a dedicated controller. The use of a closing sequence Coordinator is mandatory.

Additional frame profile for motor mounting (see adjacent figure). Push-side installation using a V-arm. Optimizes space requirements and movement geometry.



Set Swing door automation			1 door	2 doors
ED 250 motor		For doors up to 1400 mm wide and weighing up to 400 kg.	●	●
Basic Roller Shutter Box		Drive cover.	●	●
Varied Roller Shutter Box		Continuous, seamless cover for double-leaf systems. It can be supplied in lengths ranging from 1400 mm to 3200 mm.		●
Coordinating closure set		Minimum hinge-to-hinge width: 1450 mm W.O.W. ≥ 1600 mm		●
Boom		*Type A* **Push-side scissor arm:** for lintel depths of 6–225 mm (EN 2–6), 0–125 mm (EN 7).	●	●
		Type B **Pulling slide arm:** for lintel depth +/- 30 mm, including sliding guide, lever, arm rotation pin 12.5/25 mm.	●	●
Radar		Motion sensor for push and pull sides, offering simple options to adjust the detection field: field shape and dimensions, direction detection, and cross-traffic optimization.	●	●
8-wire digital programmer		Up to 5 different functions: off, automatic operation, exit, partial opening, permanent opening. Electronic operation via push-buttons. Lockable using a numeric code or an additional key switch.	●	●

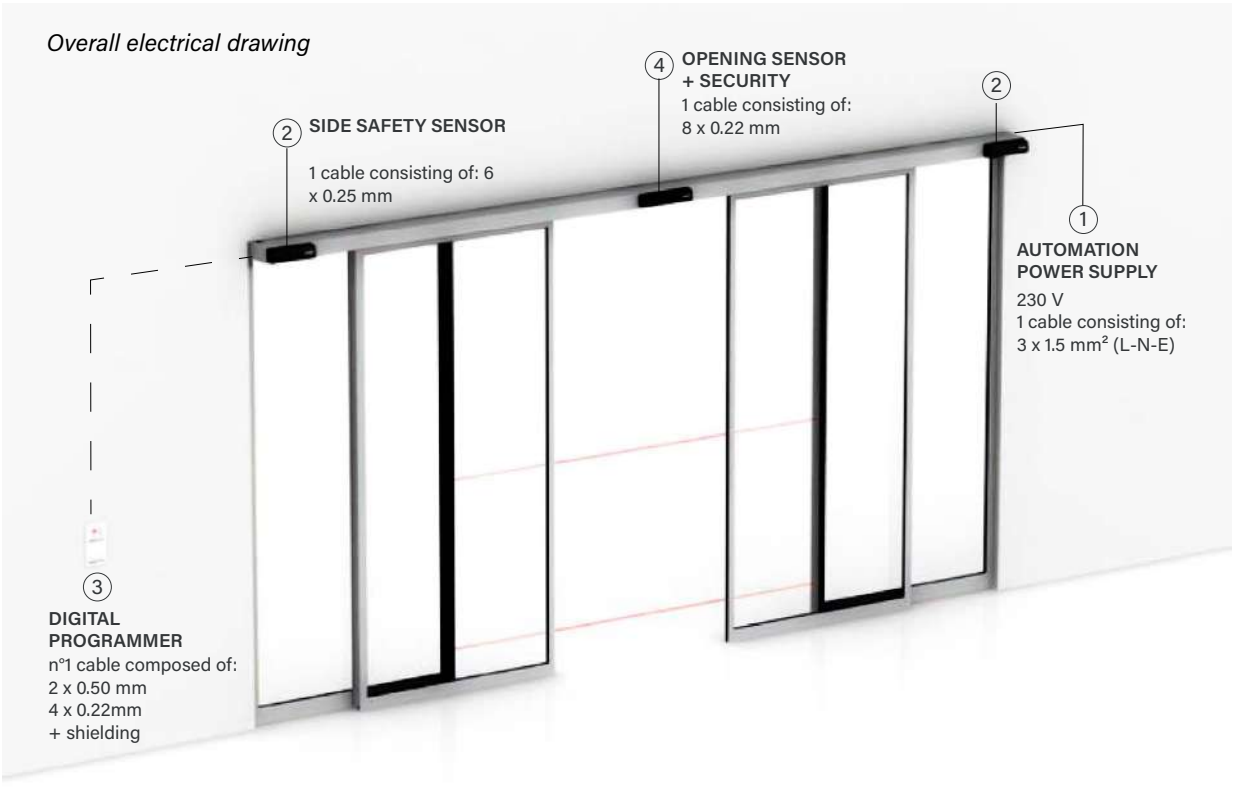
Fire-rated partitions' installation must be carried out by specialized personnel.

Extra components Swing door automation			1 door	2 doors
Upgrade Card Full Energy		With the use of the Full-Energy Upgrade board, the full range of settings for opening and closing speeds, as well as opening and closing forces, becomes available. It can be used in 2-leaf systems. **It must be paired with the laser safety sensor kit.**	●	●
Flush-mounted push-button		Single-pole, changeover contact (two-way switch). Flush-mounting version, for concealed installation on a single faceplate (or single mounting frame).	●	●
Electric Encounter		Electric strike for fire-rated single-leaf doors, designed for use with a fixed pull handle and cylinder. **INSTALLATION:** ▪ **Steel series:** can be installed on doors opening either outwards or inwards. ▪ **Aluminum series for outdoor use:** can be installed exclusively on outward-opening doors. For inward-opening doors, the use of a motorized single-point locking mechanism is recommended. ▪ **Aluminum series for indoor use:** not suitable for installation; use a motorized single-point locking mechanism.	●	
Motorized mortise panic bar		The CE-marked mortise panic bar is designed for installation on single or double-leaf doors, in conjunction with a main lock and a secondary lock. It is reversible—suitable for right- or left-hand opening doors—and can be used with a half-cylinder lock on the pull side. Designed for use with a fixed pull handle and cylinder. Note: Use only UL/CSA-approved power supplies (LPS/SELV). It can be easily integrated into an existing access control system	●	●

Sliding door automation

With a construction height of just seven centimeters, it integrates seamlessly into any architectural setting and can be used to meet a wide range of requirements. The automation system delivers high operational performance, handling large, heavy doors.

Overall electrical drawing



Set sliding door automation			1 door	2 door
(2) **No.2 Radar GC363R**		Combined microwave and infrared sensor. For false ceiling installation, order the flush-mounting box. ***Dimensions: 270 x 58 x 58 mm***	●	●
(3) **No. 1 Digital programmer with DPS display - GZ151524**		Control unit managing the door's interaction with the environment and users ***Dimensions: 80 x 80 x 11 mm***	●	●

Additional components			1 door	2 door
(4) **GC339 safety sensor**		Device for user protection, preventing collisions or entrapment between the panels. 1 per side if safety clearances are < 200 mm. ***Dimensions: 209 x 58 x 47 mm***	●	●

WARNING:

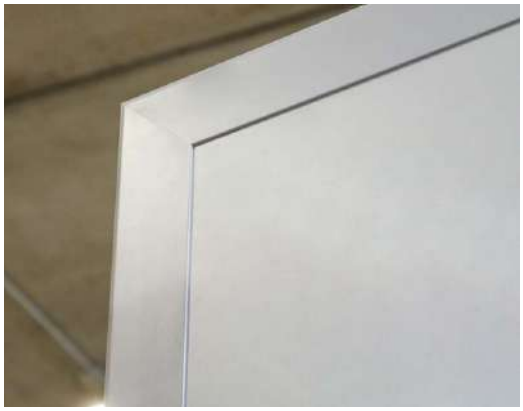
It is essential that the **installation, configuration and maintenance operations** of automations for fire-rated sliding doors are carried out exclusively **by highly qualified and specialized personnel.**

The execution of such interventions by unauthorized personnel will result in compromising safety, altering the correct functioning of the system and voiding any guarantees.

Blank panels

Indoor Use: Self-supporting structural panel with a high-density insulating core. Facing in laminate or steel/aluminum sheet.

Outdoor Use: Insulated sandwich panel with high thermal performance. Facing in steel or aluminum with a weather-resistant finish, designed for integration into thermal-break systems.



RESISTANCE CLASS	PROTECTIVE THICKNESS (Weight/Kg)	Total thickness	Weight	Ug
EI 30	15 (12 Kg/m²)	18 mm/19 mm	24,5 Kg/m²	> 3
EI 60	25 (17 Kg/m²)	28 mm/29 mm	34,5 Kg/m²	> 3
EI 90	20+15 (28 Kg/m²)	38 mm/39 mm	40,5 Kg/m²	> 3
EI 120	25+20 (36 Kg/m²)	48 mm/49 mm	48,5 Kg/m²	> 3

Standard finish

Accessories	standard RAL	RAL upon request	Wood effect
Hinges	Black / White / Ox Silver	RAL Glassfire	Black
Door closer	Black / Silver	RAL 9016 White	Black
Door handle	Black / Stainless Steel	RAL 9016 White	Black
Window handle	Black / Silver	RAL 9016 White	Black
Electric handle	Black / Silver	White	Black
Fixed vertical pull handle	Black / Stainless Steel	RAL 9016 White	Black
Lever/push bar	Metallic Grey	Endurance (Stainless Steel Look)	
Actuator (hopper window)	Silver	Black / RAL 9016 White	Black
Motorization	Silver	Black	
Motorized push bar and fast - Cisa	Similar to 9006-97 Black + red bar	Stainless Steel Look: C2	
Drop-down threshold seal	Silver	RAL Glassfire	Black

RAL COLOR CHART

1000 Brownish-Beige	1001 Beige	1002 Sand Yellow	1003 Signal Yellow	1004 Golden Yellow	1005 Honey Yellow	1006 Polenta Yellow	1007 Nardi Yellow
1011 Lemon Yellow	1012 Beige-Brown	1013 Pearl White	1014 Ivory	1015 Light ivory	1016 Sulfur Yellow	1017 Saffron Yellow	1018 Zinc Yellow
1019 Greyish-Beige	1020 Olive-Yellow	1021 Swede Yellow	1023 Traffic mystery	1024 Ochre Yellow	1027 Curry Yellow	1028 Melon Yellow	1032 Yellow broom
1033 Dahlia Yellow	1034 Pastel Yellow	2000 Yellowish-Orange	2001 Reddish-Orange	2002 Blood Orange	2003 Pastel Orange	2004 Pure Orange	2008 Light Orange-Red
2009 Traffic Orange	2010 Signal Orange	2011 Deep Orange	2012 Salmon Orange	3000 Fiery Red	3001 Signal Red	3002 Carmine Red	3003 Ruby Red
3004 Crimson Red	3005 Wine Red	3007 Blackish-Red	3009 Oxide Red	3011 Reddish-Brown	3012 Reddish-Beige	3013 Tomato Red	3014 Antique rose
3015 Light pink	3016 Coral Red	3017 Rosé	3018 Strawberry Red	3020 Traffic Red	3022 Salmon Red	3027 Raspberry Red	3031 Oriental Red
4001 Reddish lilac	4002 Reddish-Purple	4003 Heather Purple	4004 Bordeaux Purple	4005 Bluish lilac	4006 Traffic Purple	4007 Violet-Purple	4008 Violet signal
4009 Pastel Violet	5000 Bluish-Purple	5001 Brownish-Blue	5002 Ultramarine Blue	5003 Sapphire Blue	5004 Blackish-Blue	5005 Signal Blue	5007 Bright Blue
5008 Greyish-Blue	5009 Sky Blue	5010 Gentian Blue	5011 Steel Blue	5012 Blue light	5013 Cobalt Blue	5014 Dove-Blue	5015 Sky Blue
5017 Traffic Blue	5018 Turquoise Blue	5019 Capri Blue	5020 Ocean Blue	5021 Aqua Blue	5022 Midnight Blue	5023 Distant Blue	5024 Pastel Blue
6000 Brown patina	6001 Emerald Brown	6002 Leaf Brown	6003 Olive Brown	6004 Bluish-Brown	6005 Moss Brown	6006 Greyish-olive	6007 Bottle Brown
6008 Brownish-Brown	6009 Fir Brown	6010 Grass Brown	6011 Reseda Brown	6012 Blackish-Brown	6013 Reed Brown	6014 Yellowish-olive	6015 Blackish-olive
6016 Turquoise Brown	6017 Brown May	6018 Yellowish-Brown	6019 Whitish-Brown	6020 Chrome Brown	6021 Pale Brown	6022 Brownish-olive	6024 Traffic Brown
6025 Fern Brown	6026 Opal Brown	6027 Light Brown	6028 Pine Brown	6029 Mint Brown	6032 Brown signal	6033 Mint Turquoise	6034 Pastel Turquoise
7000 Vair Grey	7001 Silver-Grey	7002 Olive-Grey	7003 Moss Grey	7004 Signal Grey	7005 Mouse Grey	7006 Grey-Beige	7008 Khaki-Grey
7009 Brownish-Grey	7010 Greyish-Beige	7011 Iron Grey	7012 Basalt Grey	7013 Brownish-Grey	7015 Slate Grey	7016 Anthracite Grey	7021 Blackish-Grey
7022 Shadow Grey	7023 Concrete Grey	7024 Graphite Grey	7026 Granite Grey	7030 Stone Grey	7031 Bluish-Grey	7032 Gravel Grey	7033 Concrete Grey
7034 Yellowish-Grey	7035 Light Grey	7036 Platinum Grey	7037 Dusty Grey	7038 Agate Grey	7039 Quartz Grey	7040 Window Grey	7042 Traffic Grey A
7043 Traffic Grey B	7044 Silk Grey	8000 Brownish-Brown	8001 Ochre Brown	8002 Brown signal	8003 Mud Brown	8004 Copper Brown	8007 Roe deer Brown
8008 Olive Brown	8011 Walnut Brown	8012 Reddish-Brown	8014 Sepia Brown	8015 Chestnut Brown	8016 Mahogany Brown	8017 Chocolate Brown	8019 Greyish-Brown
8022 Blackish-Brown	8023 Orange-Brown	8024 Beige-Brown	8025 Pale Brown	8028 Earth Brown	9001 Cream White	9002 Greyish-White	9003 White signal
9004 Black signal	9005 Deep Black	9006 Bright aluminum	9010 Pure White	9011 Graphite Black	9016 Traffic White	9017 Illicit trafficking	9018 Papyrus White

RAL colors displayed on screen or in print should be consideRed purely approximate. For accurate color reproduction, please consult an original RAL color chart.

WOOD-EFFECT FINISHES

for outdoor-use aluminum (EI_2 30/60/90/120) and indoor (EI_2 30/60)

UBRN11
Renolit
Matt 11

UBLR11
Larch
Matte 11

UBWE11
Wenge

UBRN21
Renolit
Matt 21

UBVE24
Wood
Green 24

UBCI31
Cherry
Matte 31

UBPI31
Pine
Matte 31

UBOM41
Elm
Matte 41

UBIR41
Iroko
Matte 41

UBCS41
Chestnut
Matte 41

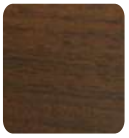
UBNC41
Walnut
Matte 41

UBCI42
Cherry tree
Opaque 42

UBNC43
Walnut
Matte 43

UBNC44
Walnut
Matte 44

UBRV44
Oak
Matte 44



UBNC45
Walnut
Matte 45

HDOM15
Elm 15

USRV15
Oak 15

HDRN15
Renolit 15

HDQR15
Oak 15

HDUV15
Olive Tree 15

HDNC25
Walnut 25

HDPP35
Poplar 35

HDTU35
Thuja 35

USRVU25
Oak 25

HDRN35
Renolit 35

HDCS35
Chestnut 35

HDSP35
Sipo 35

HDNC35
Noce 35

HDBH35
Bahia 35

USCI45
Ciliegio 45

USRV35
Rovere 35

HDEB35
Ebano 35

HDPL35
Platano 35

VXCR13
Corten 13

VXCR14
Corten 14

VXCR16
Corten 16

Always Close, Always Ready.

Our sales ***network covering*** the entire c***ountry***

We operate throughout Italy with a qualified sales network ready to meet our customers' needs.

Our experts assist in selecting the ideal fire-resistant doors and windows for new builds and renovation projects, ensuring prompt responses, timely deliveries, and tailored solutions.

Our commitment to quality and customer satisfaction makes us the ideal partner for safe and reliable solutions.

CENTRAL-SOUTHERN AREA

Abruzzo, Basilicata, Campania, Calabria, Marche, Molise, Lazio, Puglia, Sicily, Sardinia, Tuscany, Umbria.

Central-Southern Area Manager

Alfonso Pappalardo

pappalardo.al@gmail.com

NORTHERN REGION

Emilia-Romagna, Friuli Venezia Giulia, Liguria, Lombardy, Piedmont, Trentino-Alto Adige, Aosta Valley, Veneto, Malta

Northern Area Manager

Donato Colucci (Surveyor)

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GLASSFIRE®
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