



# Fire-resistant doors

**manusa**   
intelligent access

# Open to the future

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Keeping a firm commitment to excellence lead us to develop products that are 100% Manusa. We guarantee that they meet the highest quality standards, both in Spain and in our branches in Portugal, Italy, Brazil and China. As well as in the rest of the world, where we work with our exclusive suppliers, trained in our own facilities. Our aim: to be open to the world, always maintaining utmost attention and service demanded by our customers. Wherever that may be.

## Open to leadership

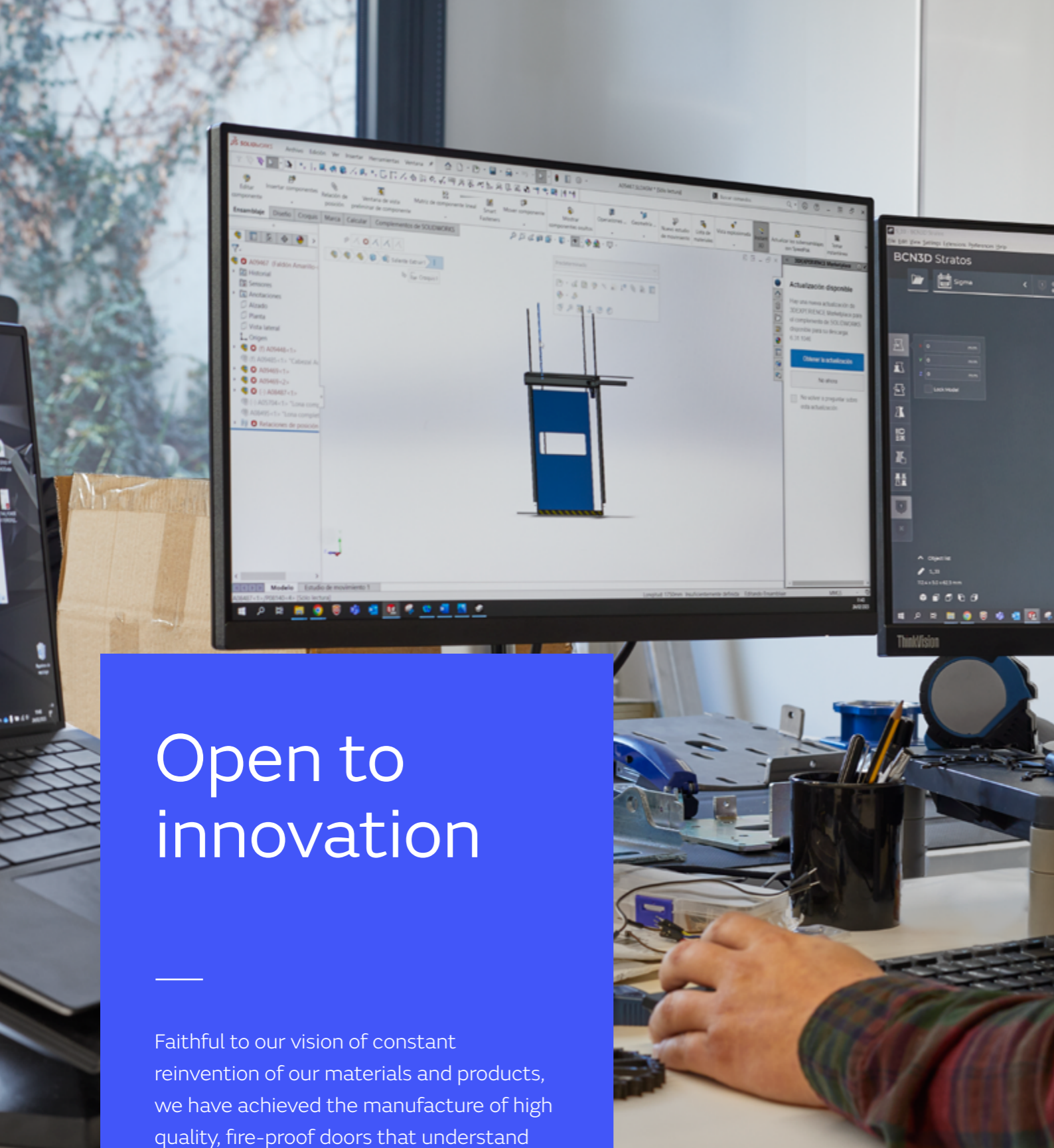
The Manusa Group, created more than 60 years ago, has grown to become a leading company in the creation, design and development of all types of intelligent access. Thanks to our determined commitment to innovation and technology, we put our expertise to work in installations in every corner of the globe. We accommodate the latest market trends and open doors to the future, getting ever closer to you.

## Open to excellence

We maintain the highest level of excellence throughout the development of each project, from its beginnings until its subsequent maintenance. We only use the highest-quality materials during the manufacture of our access points, subjecting them to the highest controls, to guarantee perfect operation and absolute peace of mind for our customers.

## Open to you

More than 20,000 access points designed, manufactured, installed and maintained each year by our experted team of professionals in over 90 countries, guaranteeing convenience for millions of people. Because our guiding principal is the development of access points and services with honesty and integrity, so we can adapt at any moment to changing times and the real needs of people. In order to continue being a trusted partner.



# Open to innovation

Faithful to our vision of constant reinvention of our materials and products, we have achieved the manufacture of high quality, fire-proof doors that understand the market and constantly adapt to its changing requirements.

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# Glass fire-proof doors

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Functionality, aesthetics and maximum safety meet in glass fire-proof doors.

A way of separating areas that pose a higher fire risk, preventing the propagation of fire outside of those areas, without the need to create unnecessary obstacles and always maintaining the aesthetics of the location.

## Functionality

Automatic sliding, swing and fixed element doors with unique performance provided by Manusa technology.

## Aesthetics

Glass leaves, completely transparent and fully-customisable steel profiles, adaptable to any architectural project.

## Maximum safety

Our glass fire-proof doors are certified according to current standards. The entire door set has fire-proof properties.





# EI automatic door

—  
glass

Automatic fire-proof doors that combine the functionality and aesthetics of an automatic door with flame-retardant and fire-insulating properties.

Manusa fire-proof doors have been designed to section off areas, combining the functionality and the aesthetics of an automatic door with the integrity and insulation properties found in fire doors.

Its function is to protect areas from the effect of flames and prevent the temperature from rising significantly on the opposite side to the fire.

All this for a specific period of 30 or 60 minutes for this product.

It is important to highlight that the complete EI glass automatic door set has been tested and certified, complying with applicable standards relating to fire resistance. All our EI doors are available in bi-parting and side typologies, with or without fixed panels.

## Technical specifications

Our EI doors are designed with attention to detail, to guarantee their effectiveness in the case of fire risks in architectural projects.

### MOTOR GROUP ELECTRICAL SPECIFICATIONS

Standard power supply	220-240V ±6% 50 Hz
Power supply to order	100-120V ±6% 60Hz
Motor	2 x Three-phase AC
Nominal power	265 W
Inverter technology (exclusive Manusa)	VV-VF
Protection fuse	4A
Operating temperature	-15°C to 50°C
Rechargeable fail-safe batteries	2x12V DC 700mAh

### MOTOR GROUP KINEMATIC FEATURES

	E30 door	EI60 door
Leaf-adjustable opening speed	≤ 1 m/s	≤ 0.7 m/s
Leaf-adjustable closing speed	0.15 to 0.6 m/s	0.15 to 0.6 m/s
Adjustable closing force between	40 N to 140 N	40 N to 140 N
Maximum acceleration	2 m/s	2 m/s
Independent regulation of speed/force	YES	YES
Maximum leaf weight	1x160 / 2x120 Kg	1x300 / 2x240 Kg

### AVAILABLE RATINGS

E30 - EI60



**E Classification (Integrity)** when the door withstands fire exposure, on one side only, without fire passage to the other side as flames or hot gases, which may cause ignition on the unexposed side.

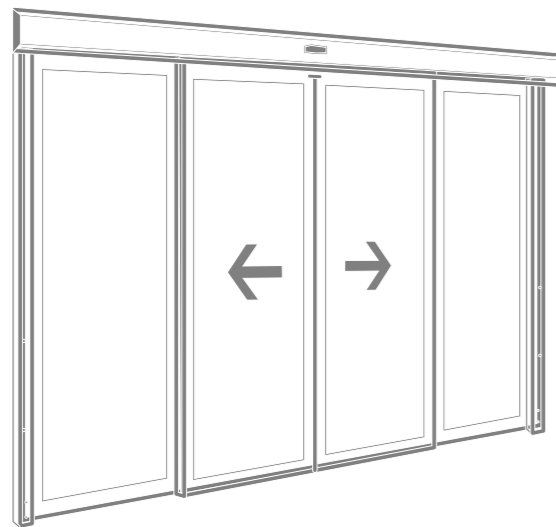
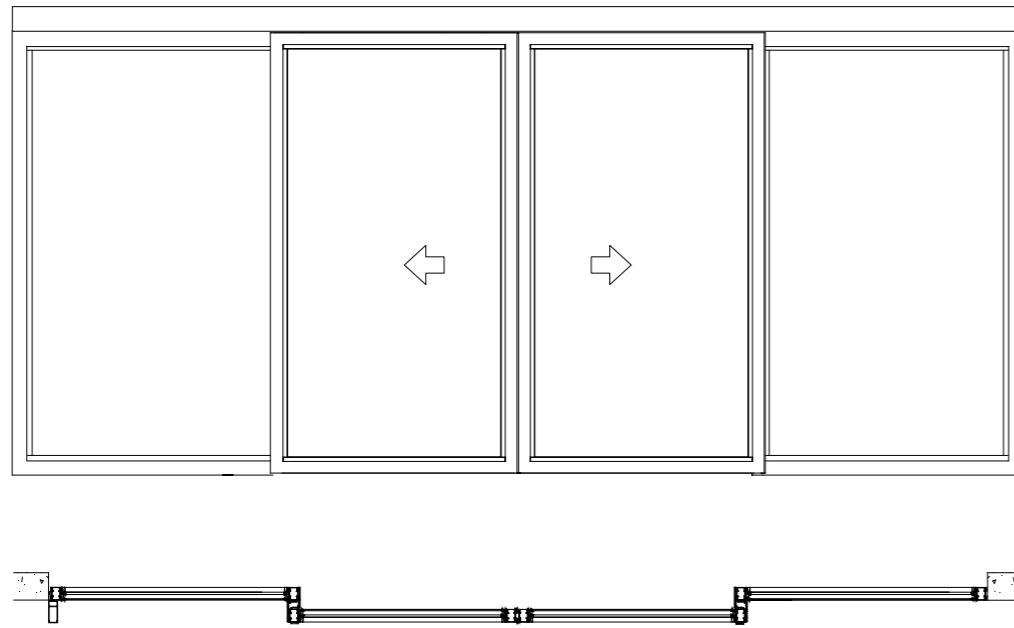


**EI Classification (Integrity and Insulation)** when the door withstands fire exposure, on one side only, without fire passage to the other side as flames or hot gases, and the transmission of fire as a result of significant transfer of heat from the hot side to the cold side.

\* For measurements, consult our commercial department

\*\* The characteristics described in this document are for informational purposes only, and have no contractual nature. The manufacturer reserves the right to make modifications without prior notice.

# Drawings



Certified according to fire-resistance standards.



Glass leaves providing maximum transparency.



Allows high transit of people and products.



Automatic pedestrian door with closing system in case of fire alarm.



## Technical information and finishes

### EI automatic door

Manusa EI doors, completely tested, incorporate a sealing system of highly-resistant and high-quality flame-retardant and/or intumescent materials. They include a complementary system to mechanically close the leaves, that activates when the central alarm is triggered, always ensuring that the leaves close and section off the area.

Their glass is of the highest quality and transparency. Likewise, the VISIO EI motor group provides the door with great agility in the leaves, so it is not perceived as a heavy door.

This is the best automatic-door choice to section off areas, suitable for all types of surfaces where it might be required: hospitals, offices, hotels, restaurants, car parks, etc. They have completely customisable dimensions, adapting to the measurements of the gap, within the testing range and with a wide range of lacquered finishes and a wide range of accessories.



# EI 90 fire rated hermetic door

With a single slide opening and without a fixed leaf, this is the essential fire-protection component in buildings and healthcare environments to safeguard against fire hazards.

The EI 90 (Fireproof with Structural Integrity) fire rated hermetic door is essential in environments where fire resistance and airtightness are a priority, such as hospitals or laboratories.

For the safety of both people and buildings, the doors are equipped with an automatic door lock that activates in the event of a fire.

It has been certified with the UNE-EN 1634-1 standard for fire resistance, based on joint testing of the door leaf and operator. Additionally, it has achieved the highest standard classification for air permeability. The system has also successfully passed both hot and cold smoke tests, as preventing smoke infiltration is critical to maintaining visibility and air quality in escape routes and other safe areas within the building.

## Technical Specifications

The EI 90 fire rated hermetic doors ensure optimum performance in critical situations by combining durability, fire resistance and structural integrity, thus meeting the demanding safety standards required in healthcare environments.

### MOTOR GROUP ELECTRICAL SPECIFICATIONS

Standard power supply	220-240V ± 6% 50-60 Hz
Power source option	100-120V ± 6% 50-60 Hz
Motor	2 x AC Three-phase AC
Nominal Power	250 W
Inverter Technology (exclusive to Manusa)	VV-VF
Protection fuse	3,15A (220V) / 5A (110V)
Operating temperature	-15°C to 50°C
Transport and storage temperature	-15°C to 50°C
Rechargeable antipanic battery	1 x 12 V DC 700 mAh

### KINEMATIC SPECIFICATIONS OF THE MOTOR GROUP

Adjustable leaf opening speed	≤ 1 m/s
Adjustable leaf closing speed	0,15 a 0,6 m/s
Maximum acceleration	2 m/s <sup>2</sup>
Maximum leaf weight	1x200 Kg

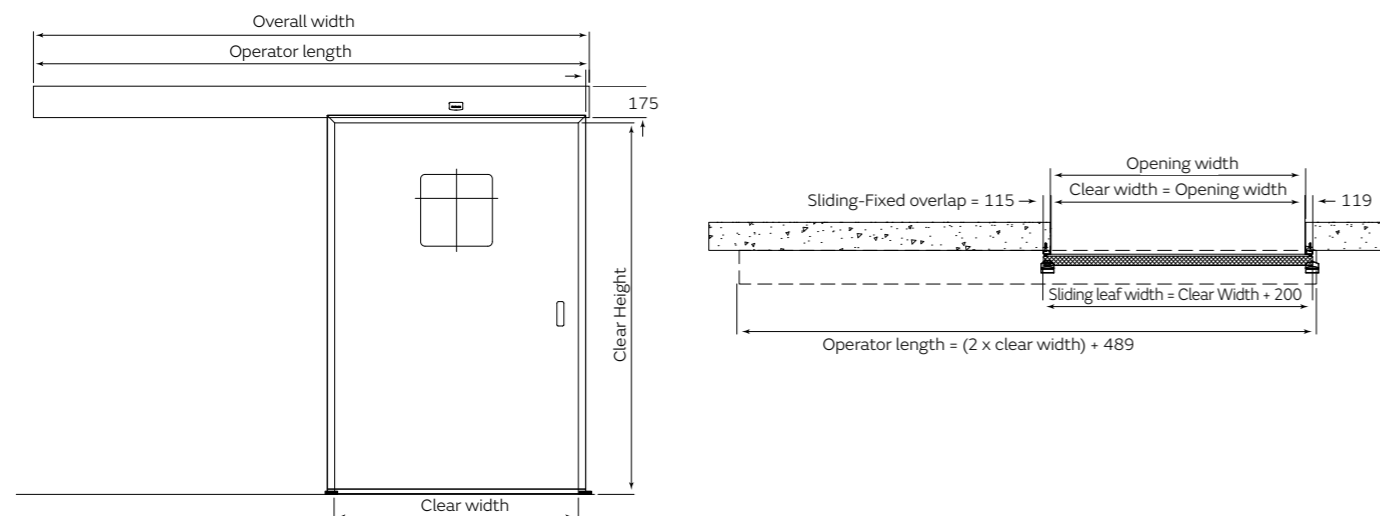
### OPERATOR CHASSIS TECHNICAL SPECIFICATIONS

Operator dimensions (height x depth)	175 x 238 mm
Maximum operator length	5900 mm
Single slide clear width (min./max.)	600 / 1600 mm
Recommended maximum clear height	2400 mm

## REGULATIONS AND TESTING

Fire resistance according to UNE EN 1634-1:2016+A1:2018 (*)	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): EI<sub>1</sub> 60 cat.B / EI<sub>2</sub> 90 cat. A</li> <li>Operator fire side (exposed): EI<sub>1</sub> 45 cat. A / EI<sub>2</sub> 60 cat. B</li> </ul>
Fire resistance according to BS 476-22:1987 (*)	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): Integrity: 93 min. / Insulation: 93 min.</li> <li>Operator fire side (exposed): Integrity 72 min / Insulation: 54 min.</li> </ul>
Smoke control according to UNE EN 13501-2:2023 (*)	<ul style="list-style-type: none"> <li>Extraction and impulsion (sample outside the smoke chamber) at ambient temperature: Sa3 Sa4.</li> <li>Impulsion (sample outside the smoke chamber) at 200 °C: Sa4 S200</li> </ul>
Air permeability according to UNE EN 85170:2016 (*)	<ul style="list-style-type: none"> <li>Positive pressures: Class 4</li> <li>Negative pressures: Class 4</li> </ul>
Air permeability UNE EN 12207: 2017 (*)	<ul style="list-style-type: none"> <li>Class D</li> </ul>

## Drawings



Designed to withstand high temperatures



Smoke control to maintain visibility in escape routes



Highest air permeability rating



Integration of safety systems for people and the building

## Technical information and finishes

### EI 90 Fire Rated Hermetic Door

The EI hermetic leaf and the frame form together an effective solution, offering not only all the guarantees of a hermetic door, but also guaranteeing resistance to the spread of fire and smoke, while protecting the building structure.

The EI hermetic leaf is coated with a high-pressure laminate (HPL) for durability, fire resistance and aesthetic appeal. Its perimeter, made of a combination of aluminium and stainless steel, offers high structural strength and contributes to the integrity of the system. In addition, a vision panel can be incorporated into the leaf, allowing direct observation of the surroundings without compromising fire resistance or structural integrity. This design not only complies with safety standards, but also integrates harmoniously into the architectural environment, adapting to various aesthetics and design requirements. The EI hermetic door is essential in applications where being fireproof is critical, such as in hospitals, laboratories or industrial facilities.

The frame, on the other hand, is composed of stainless steel tubes filled with silicate, creating a strong and durable barrier. Its design allows it to be easily fixed to walls by means of plugs and screws, ensuring a robust and reliable installation. Including intumescent material in the frame provides an additional layer of protection. In the event of a fire, this material expands in a controlled manner, effectively sealing any gaps and helping to prevent the spread of fire. The design behind the frame guarantees structural integrity and the ability to remain fireproof, preserving the safety of people and properties.



\* In conjunction with the Manusa Hermetic Visio+ Operator (Hermetic EI typology) + the necessary accessories for Hermetic EI typology.



# Lead-lined hermetic EI automatic door

Ideal solution for medical and pharmaceutical environments that require comprehensive protection, including fire and X-ray radiation protection, without compromising on airtightness and hygiene.

Single-slide opening and without fixed leaf, this door offers a unique combination of features, integrating fire resistance of up to 60 minutes with radiological shielding of up to 3 mm of lead, thus ensuring maximum safety in critical areas such as radiology rooms, pharmaceutical laboratories or sensitive industrial facilities.

For specific applications in medical environments, the EI airtight leaf can be

manufactured with up to 3 mm of lead reinforcement, acting as a highly effective barrier against ionising radiation without compromising the airtightness of the system or its fire compartmentalisation capacity.

This design not only ensures tightness against smoke, gases and differential pressure, but also meets regulatory requirements for hospital safety and radiation protection.

## Technical Specifications

Combining fire resistance with X-ray shielding has been a technological challenge, as the door uses the most advanced materials to protect the lead layer from fire, enabling us to offer such an advanced yet compact solution.

### MOTOR GROUP ELECTRICAL SPECIFICATIONS

Standard power supply	220-240V ± 6% 50 Hz
Power source option	100-120V ± 6% 60 Hz
Motor	2 x AC Three-phase AC
Nominal Power	250 W
Inverter Technology (exclusive to Manusa)	VV-VF
Protection fuse	3,15A (220V) / 5A (115V)
Operating temperature	-15°C to 50°C
Transport and storage temperature	-15°C to 50°C
Rechargeable antipanic battery	1 x 12 V DC 700 mAh

### KINEMATIC SPECIFICATIONS OF THE MOTOR GROUP

Adjustable leaf opening speed	≤ 1 m/s
Adjustable leaf closing speed	0,15 a 0,6 m/s
Maximum acceleration	2 m/s <sup>2</sup>
Maximum leaf weight	150 Kg (with Visio+ Herm. HD operator) / 250 Kg (with Visio+ Herm. HD operator with reducer)

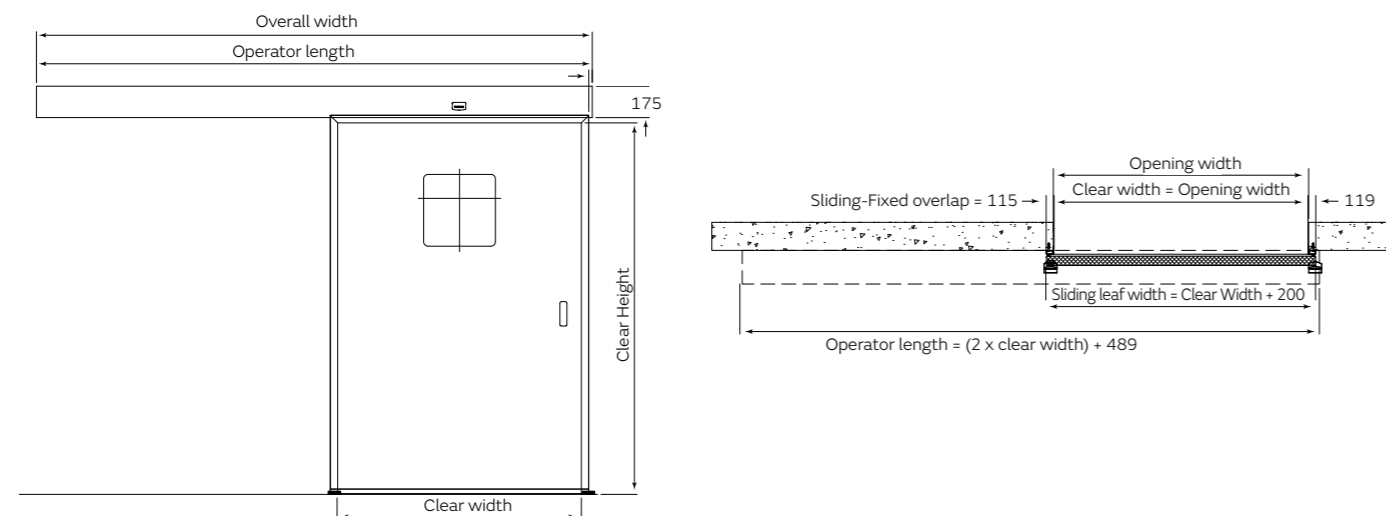
### OPERATOR CHASSIS TECHNICAL SPECIFICATIONS

Operator dimensions (height x depth)	175 x 218 mm
Maximum operator length	5810 mm
Single slide clear width (min./max.)	600 / 1600 mm
Recommended maximum clear height	2400 mm

## REGULATIONS AND TESTING

Fire resistance according to UNE EN 1634-1:2016+A1:2018 <sup>2</sup>	NON-LEADED VERSION
	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): EI<sub>1</sub> 60 cat. B / EI<sub>2</sub> 90 cat. A</li> <li>Operator fire side (exposed): EI<sub>1</sub> 45 cat. A / EI<sub>2</sub> 60 cat. B</li> </ul>
Fire resistance according to BS 476-22:1987 <sup>2</sup>	LEADED VERSION
	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): EI<sub>1</sub> 60 cat. B / EI<sub>2</sub> 60 cat. B</li> <li>Operator fire side (exposed): EI<sub>1</sub> 30 cat. A / EI<sub>2</sub> 30 cat. B</li> </ul>
Fire resistance according to BS 476-22:1987 <sup>2</sup>	NON-LEADED VERSION
	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): Integrity: 93 min. / Insulation: 93 min.</li> <li>Operator fire side (exposed): Integrity: 72 min. / Insulation: 54 min.</li> </ul>
Smoke control according to UNE EN 13501-2:2023 <sup>2</sup>	LEADED VERSION
	<ul style="list-style-type: none"> <li>Operator opposite side to fire (not exposed): Integrity: 83 min. / Insulation: 83 min.</li> <li>Operator fire side (exposed): Integrity: 45 min. / Insulation: 34 min.</li> </ul>
Smoke control according to UNE EN 13501-2:2023 <sup>2</sup>	NON-LEADED VERSION
	<ul style="list-style-type: none"> <li>Extraction and impulsion (sample outside the smoke chamber) at ambient temperature: Sa3 Sa4</li> <li>Impulsion (sample outside the smoke chamber) at 200°C: Sa4 S200</li> </ul>

## Drawings



Designed to withstand high temperatures



Smoke control to maintain visibility in escape routes



Highest air permeability rating



Isolation thanks to the lead lining on the leaf

## Technical information and finishes

### Lead-lined hermetic EI automatic door



The leaves of lead-lined hermetic EI doors are available in HPL, the frame, on the other hand, is composed of stainless steel tubes filled with silicate, creating a strong and durable barrier.

Both components, the hermetic leaf and the frame, are essential in environments where fire resistance and airtightness are a priority, such as hospitals or laboratories. Their robust construction and ability to withstand high temperatures make them a key element in safeguarding against fire hazards, providing peace of mind and meeting demanding safety standard.



The possibility of incorporating lead protection in the leaf expands its application to environments requiring radiological shielding, ensuring a versatile and safe solution for various architectural and functional needs.

Double glazing vision panel and lead-lined glass to allow viewing whilst protecting against X-rays. For correct operation, it is important to know the variables of the rooms, such as the workload, the distance from the radiology equipment to the door, the use of the area on the other side of the door, the characteristics of the X-ray equipment, etc.

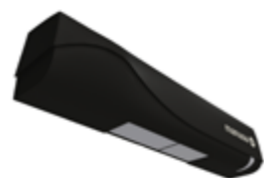
# Accessories for glass fire doors



Interface



Program switch Optima+



DDS - A sensor



DDS - B sensor



Smart Prox detector



Planar Radar



Handsfree system



Push buttons

CONTROL

OPERATION



Buzzer



Lock



DDS - S sensor



Numeric keypad



Outside key switch

SAFETY

APPLICABLE ACCESSORIES	Program switch Optima+	Interface	DDS-A	DDS-B	Smart Prox	Planar Radar	Handsfree system	Push buttons	Buzzer	Lock	DDS-S	Numeric keypad	Outside key switch
Glass fire-proof automatic door	●	●	●	●	●	●	●	●	●	●	●	●	●
EI fire rated hermetic door	●	●		●	●	●	●	●	●		●	●	●
Lead-lined hermetic EI automatic door	●	●		●	●	●	●	●	●		●	●	●

CONTROL

OPERATION

SAFETY

\* Refer to the technical data sheets.

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The manufacturer reserves the right to make modifications without prior notice.

# Industrial fire-proof doors

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Quality, durability and safety in all our metal fire doors. We offer a wide range of fire-resistant doors and solutions that provide the perfect answer to suit any requirement.

The wide variety of finishes and styles available allows us to compartmentalise any type of area.

Constant development and innovation enable us to improve our end product day by day, ensuring full compliance with European standards for industrial doors and windows.





# Industrial sliding door

metallic

Industrial sliding fire doors are designed to sectorize areas in case of fire, and prevent the fire from spreading to other areas.

This fire door model has been designed to offer maximum safety. For fire alarm situations, it incorporates a spring-rope pulley closing system, thus insulating the fire-affected area. It has homologation EI260, EI290, EI2120, and complies with fire regulation UNE EN1634-1.

The panels that comprise the door are filled with basaltic rock wool, an incombustible material that increases fire resistance for up to 180 minutes.

Industrial sliding metallic fire doors can be combined with high-speed doors to offer higher functionality, and are available in single leaf, several leaves like telescopic, thus offering the possibility to adapt to different hollow widths.

Furthermore, they are fully customisable, with electronic or automatic closing mechanisms, and passing gate of 800mm x 2060mm.

## Technical specifications

Industrial sliding metallic doors are available as manual or automatic, and offer customisable options both in their closing systems and their movement mechanism.

### STRUCTURAL SPECIFICATIONS

Site	Exterior and interior hollows
Handle opening unlock force	Fop<70N EN UNE_EN 179
Push button opening unlock force	Fop<150N EN UNE_EN 179
Available models	Manual / Automatic

### INSULATING PANEL SPECIFICATIONS

Exterior material	Lacquered galvanised steel
Interior material	Rock wool
Thickness	100 mm
Heat transfer coefficient [W/m²C]	0.38

### CERTIFICATION RATING

EI260 - EI290 - EI2120 Cat. L

### REACTION TEST RATING

UNE EN 13501-2

### FIRE RESISTANCE IN INSTALLATIONS

UNE EN 1366-2

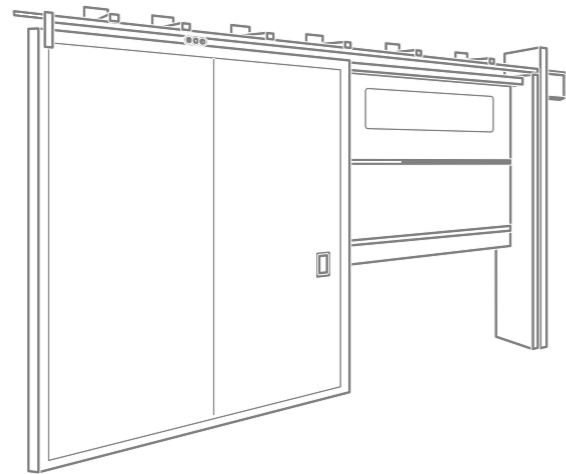
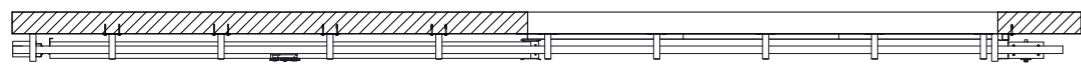
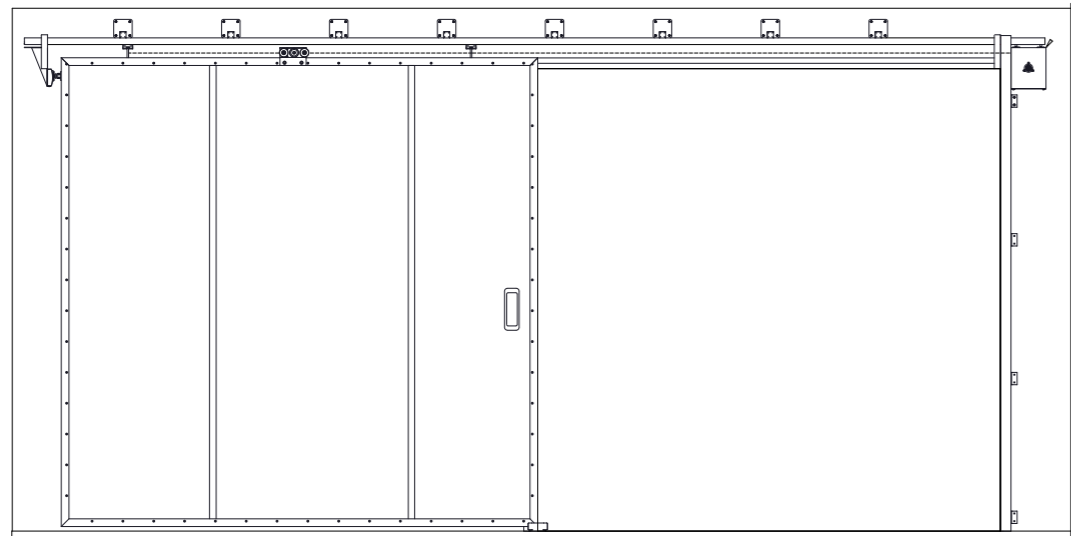
### FIRE RESISTANCE IN DOORS AND ELEMENTS

UNE EN 1634-1

### FIRE RESISTANCE IN STEEL DOORS

UNE 15269-7

# Drawings



Sliding door with the possibility of horizontal opening.



Possibility to combine it with high-speed doors.



On prelacquered panel, pulley closing.



Available in 1 or 2 leaves or telescopic (depending on model).



## Technical information and finishes

### Industrial sliding door

All of Manusa's EI industrial sliding doors have been designed and tested under the quality and compliance standards set forth in fire regulations. The wide range of optional accessories offered, together with the quality and variety of finishes, make it the best option for space sectioning, especially industrial areas.

- High-density rock wool finish, framed with a U-shaped perimeter in galvanised sheet.
- Sliding rollers.
- Intumescent sealing band, side and upper anti-smoke.
- Electromagnet activation system.
- Speed regulator, to prevent excessive speed.
- Possibility to include an electronic mechanism for automatic closing.



# High-speed door with EI120 fire curtain

The EI120 high-speed door with fire curtain, an innovation in industrial, fire-safe accesses.

A new solution which combines a self-repairing high-speed door with a non-irrigated fire curtain in the same structure, forming a single unit.

It consists of two parallel fabrics, one for operation as a high-speed door and the other as an EI120 fire curtain. Both fabrics are rolled up inside a header.

Each of them has its own independent drive system to optimise the operating features.

This door also stands out for its space optimisation. Compared to a single-slide opening industrial fire door, the entire system is housed in a single structure, freeing up the space on either side of the door and maximising storage space.

In terms of safety, it connects to the fire alarm and detection system for automatic activation in emergency situations.

## Standard equipment

The curtain's EI120 rating provides up to 120 minutes of fire resistance, protecting people and property. The door connects to the fire detection and alarm system, which is automatically activated in the event of an emergency.

### MAIN FEATURES

Opening	Vertical
Maximum dimensions	2500 x 3000 mm
Use	Indoors
Fire curtain	EI120
Structure	Lacquered steel
Adjustable opening and closing speeds	Adjustable from 0.8 m/s to 2 m/s

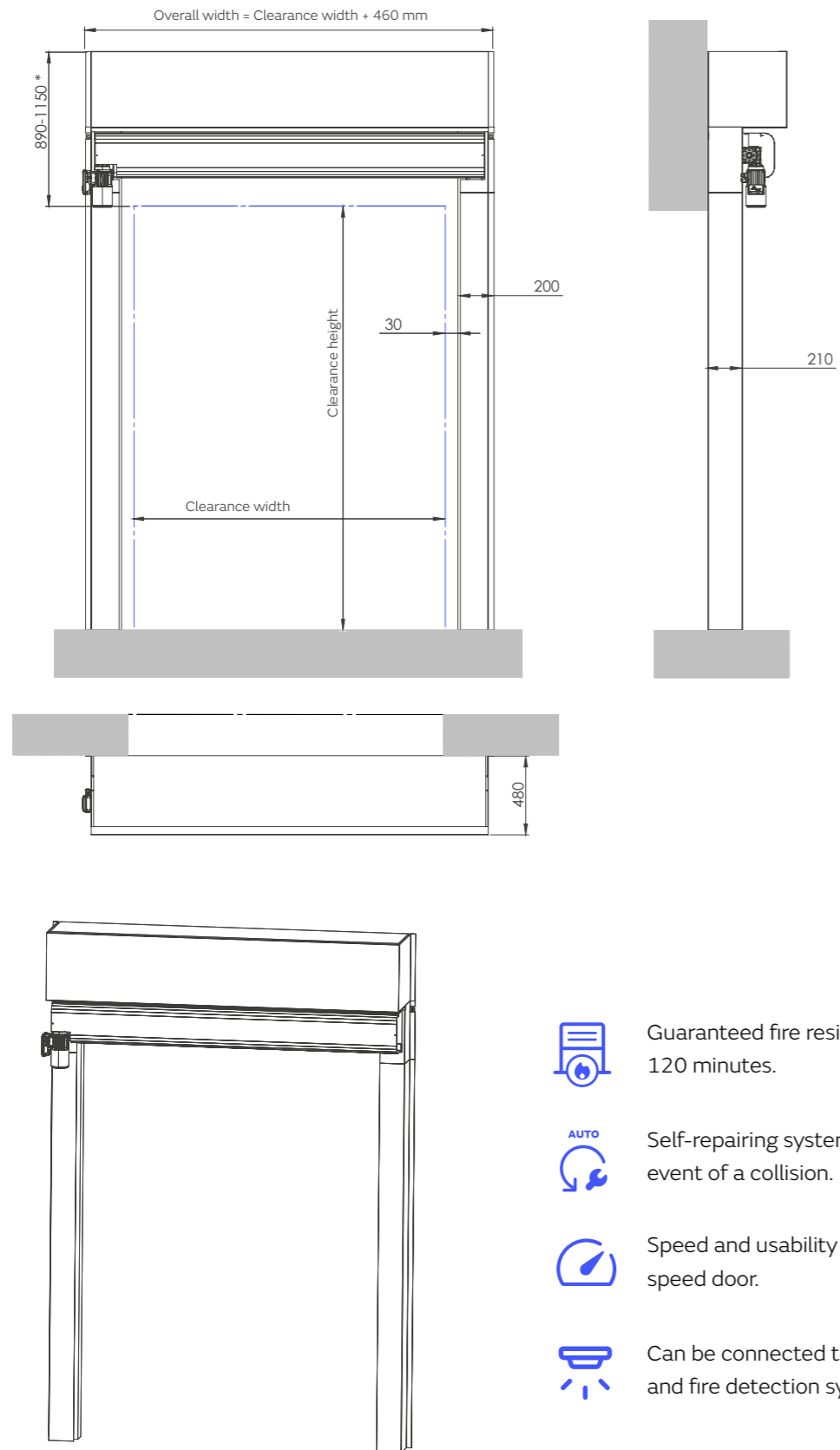
### FABRIC SPECIFICATIONS

Material	AT 1100 dtex polyester
Covering	PVC 2 sides
Weight	900 g/m <sup>2</sup>
Finish	Lacquered 2 sides
Tensile strength	4000N/5cm UNE EN ISO 1421
Tear resistance	800N/5cm EN ISO 13937-2
Adherence	100 N/5 cm
Operating temperature	-30° + 70°
Burning behaviour	ISO 3795-89
Light fastness	6 - 8
Surface electrical resistance	<5x10e90 OHMs
Noise reduction	12%
Zip	Self-lubricating POM 230V III ±10% 50Hz

### CHARACTERISTICS FIRE CURTAIN

Class	EI120
Regulation	UNE EN 13501-2
Materials	4 layers of fibreglass, polyurethane coated steel, fire retardant aluminium and fibre blanket.

# Drawings



\* Illustrative measurements in drawings. Manusa reserves the right to make changes or modifications to the design.

# Optional equipment

High-speed damage-resistant door with EI120 fire curtain

## FEATURES

- Double-height stop program switch
- Auxiliary button panel
- Ceiling handle
- Remote control
- External push button
- Motion sensor
- Presence and motion sensor
- Magnetic field
- Vision panels: square and rectangular Horizontal and vertical



## FABRIC COLOURS

RAL 9016		RAL5005	
RAL 1014		RAL7038	
RAL 5002		RAL9005	
RAL 7037		RAL2004	
RAL 8014		RAL6026	
RAL 1003		RAL 5010	
RAL 3002		RAL7016	

# Accessories for industrial fire-proof doors



Doorknob



Keyed door handle



Passage door handle



Antipanic bar towel-holder type



Antipanic bar Push type



Nylon handle\*

OPENING OPTIONS



Lacquered vision panel



INOX vision panel



Door closer



Intumescent seal



Impact dampers

VISION PANELS OPTIONS

LOCKING DEVICE

SAFETY

\* Stainless steel handle upon request

Refer to the technical data sheets.  
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### **HEADQUARTERS**

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