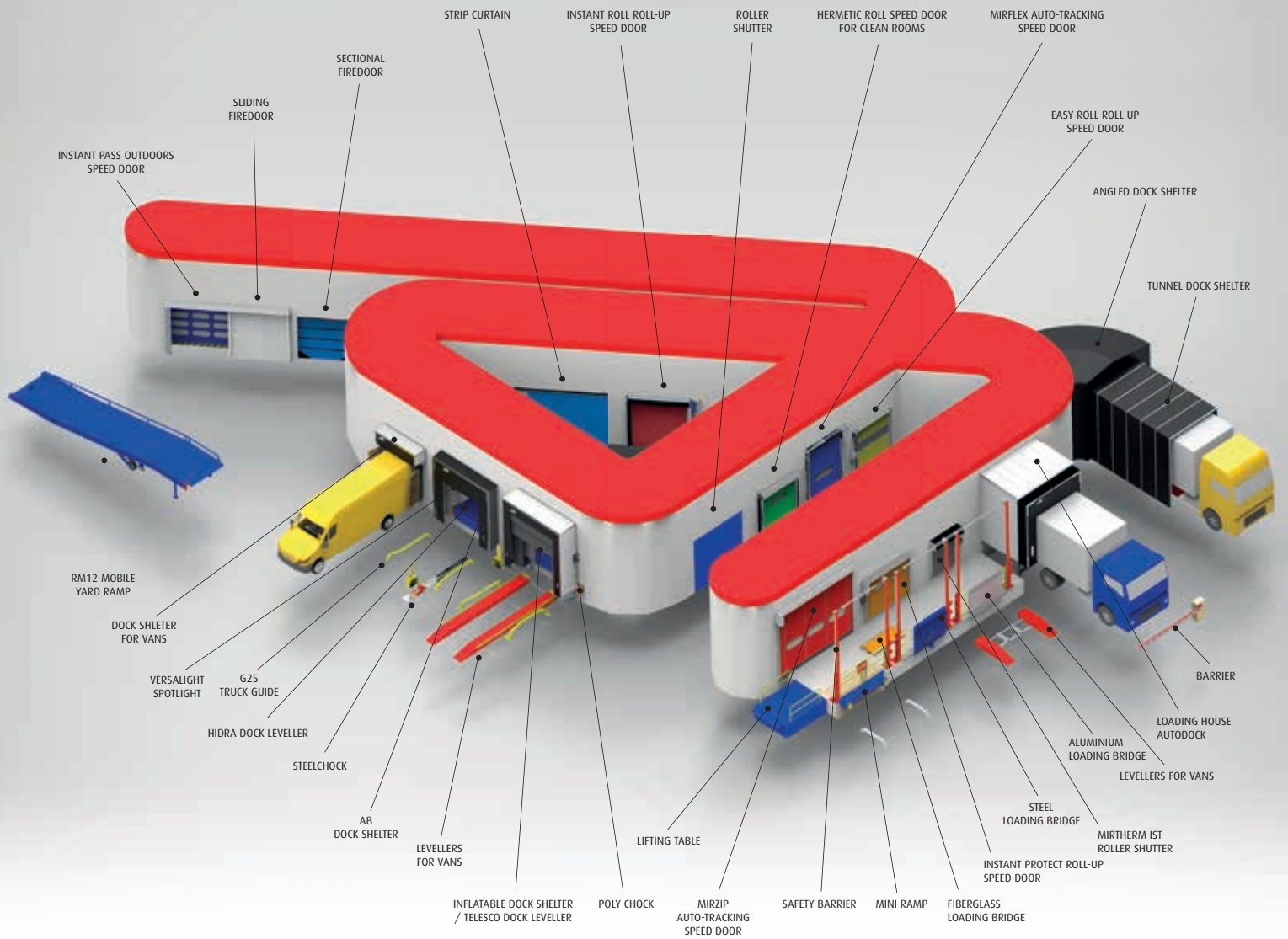




MIRCOM doors
for composting plants



Reliable Doors & Docks



EXPORTING OVER 50 COUNTRIES SINCE 1967

www.angelmir.com

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The passion for the work well done, is the key of the Angel Mir growth.

For 50 years, we have manufactured industrial doors and solutions for logistics. We are present in more than 50 countries, developing doors for specific applications that are a reference in the international market.

Our exclusive and original patented systems are originated in our commitment to meet the needs of our customers to the smallest detail. Our equipment is designed to solve functional, safety, technical and aesthetic circumstances.

At Angel Mir, our range of equipment is unique because our goal is customer satisfaction; therefore, we advise and design each product according to the needs of each application and we take care of its installation. We also offer an after-sales service for maintenance and repair throughout the product's lifetime.

Ángel Mir
President

La Bisbal
BARCELONA



Angel Mir factories with 39.000 m²



Energy efficiency

Some products of **Angel Mir**® have been designed to provide significant energy efficiency and reducing consumption of resources.

With our experience, we support and help our customers to carry out the projects with maximum energy savings through the most appropriate choice of our products. Also, depending on the sector, we recommend the most durable and suitable equipment for each application.

Raw Materials

For almost 50 years, **Angel Mir**® has always counted on local and European suppliers that provide the best raw materials, in order to achieve the best performance of its loading bay equipment and durability.

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DOORS FOR COMPOSTING PLANTS, WASTE TREATMENT, RECYCLING AND WOOD DRYERS

The design and development processes of a composting or waste treatment plant are very demanding in terms of compliance with the regulations of the sector. Specific requirements which the door must support and meet, for which **Angel Mir®** offers different options.

In this type of facility, an optimal seal is essential to reduce the output of odours and facilitate access to deposit, storage or composting and recycling treatment areas. Doors and closures must guarantee reliability and operation in all working conditions.

Angel Mir® has gathered a long experience developing hermetic, sectional, speed doors and other specific closures for recycling plants, waste treatment, collection and composting centres and wood dryers. For this reason, the client can count on the advice of our experts from the initial planning stage of the project to its installation and maintenance.

Projects carried out in composting and waste treatment plants

- Waste integral plant - Sant Cugat (Barcelona-Spain)
- Ecopark Plant - Barcelona (Spain)
- Composting plant Mas Barberans - Tarragona (Spain)
- Waste Plant Garraf II - Barcelona (Spain)
- Composting plant - Linares (Jaén-Spain)
- Waste Plant - Motril (Granada-Spain)
- Recycling plant - Loeches (Madrid-Spain)
- Composting plant - Presles-en-Brie (France)
- Purine treatment plant - Almazan (Soria-Spain)
- Waste recovery plant - Salindres (France)
- Waste treatment centre - Aranda del Duero (Burgos-Spain)
- Recycling plant - Alfortville (France)
- UTE Arazuri Plant - Pamplona (Spain)
- Urban waste plant - Vitoria (Spain)
- Waste treatment centre - Almagro (Ciudad Real-Spain)
- Composting plant Gomecello - Salamanca (Spain)
- Composting plant - Mirandela (Portugal)
- Composting plant - Vila-Seca/Salou (Spain)
- Composting plant - Gesamb - Évora (Portugal)
- Waste treatment plant - Zaragoza (Spain)
- Waste treatment plant - Sta. Clara de Louredo (Portugal)
- Waste treatment plant - Blanes (Spain)
- Biological mechanical treatment plant Gipuzkoa - Zubieta (Spain)
- Multipurpose plant of waste treatment - Fos-sur-Mer (France)
- Composting plant - Tarragona (Spain)
- Recycling plant - Tel Aviv (Israel)
- Biomethanisation plant Urbaser - Pinto (Spain)
- Composting plant - Malveira Marfra (Portugal)
- UTE Ca na Putxa Plant - Eivissa (Spain)
- UTE Onda Plant - Castellón (Spain)
- Composting plant - Ilias (Greece)
- Recycling plant Dudaiim - Beer Sheva (Israel)



MIRCOM DOORS

DOORS
FOR THE SECTOR

**HERMETIC
DOORS**

SECTIONAL
DOORS

HIGH SPEED
DOORS

CLOSURES

SOLUTIONS



Hermetic door
MIRCOM



Sectional door
FIBERSECC



High speed door
SANDWICH INOX



High speed door
INSTANT PASS



High speed door
GRAND PASS



High speed door
MIRZIP



Vertical door
AVANTGATES



Sliding door
CANTILEVER



Full height turnstiles
TORN-ACR

For more information consult our detailed catalogues by product

HERMETIC DOORS

MIRCOM®

The **doors MIRCOM** are designed to guarantee the high sealing required in places such as composting tunnels, dryers, recycling plants, etc. They are built with materials resistant to oxidation and designed so that dirt does not accumulate.

The door is opened by means of a lifting and hydraulic dragging mechanism using two displacement trolleys. The mechanism raises the door from its anchoring to the wall and leaves it loaded on the trolley itself with which it can move along the rail-guide.

Usual measurements 5,000 x 5,000. For other measurements, to enquire.

Characteristics

Sheet

- Sandwich panels 60 mm thick.
- Inside and outside sides of galvanized sheet coated with Granite HDX of 55 microns.
- Panel insulation with injection polyurethane foam of 40 Kgs/ m3 density.
- Options: Finishing in stainless steel 304 on both sides or stainless steel 304 on one side and Granite HDX on the other one.

Perimeter structure

- U-shaped aluminium profile that covers the entire perimeter, specially designed for this door with internal reinforcements to hold the anchor catches, housings for the sealing joints and concealment of the panel support rivets. White lacquered finishing.



Detail of side and bottom sealing joints.



Detail of the displacement trolley.

Advantages

Cleaning

Being built on a single sheet and without mobile elements, they do not have as many clearances or gaps where dirt could lodge. Cleaning is quite simple and fast using pressurized water.

Sealing

Due to their particular design and because they are equipped with rubber joints in the lower part, they rest perfectly on the ground. The side catches, having the shape of an inclined plane, force the sheet to approach the wall, compressing the lateral rubber joints against it.

Ease of operation

The lifting and dragging mechanisms are easy for one person to use. In addition, the door can be moved laterally in a practical and

safe way, leaving the gap completely clear without risking blows caused by the handling machinery of the tunnel.

Durability

The inner part of the sheet is coated with Granite HDX of 55 microns, very suitable for contact with liquids or corrosive atmospheres. The materials used are resistant to oxidation or have treatments to protect them from it. Lacquered aluminium, stainless steel, etc. The displacement rail is an IPN beam treated with bichromated zinc-plated. Hot dip galvanized option.

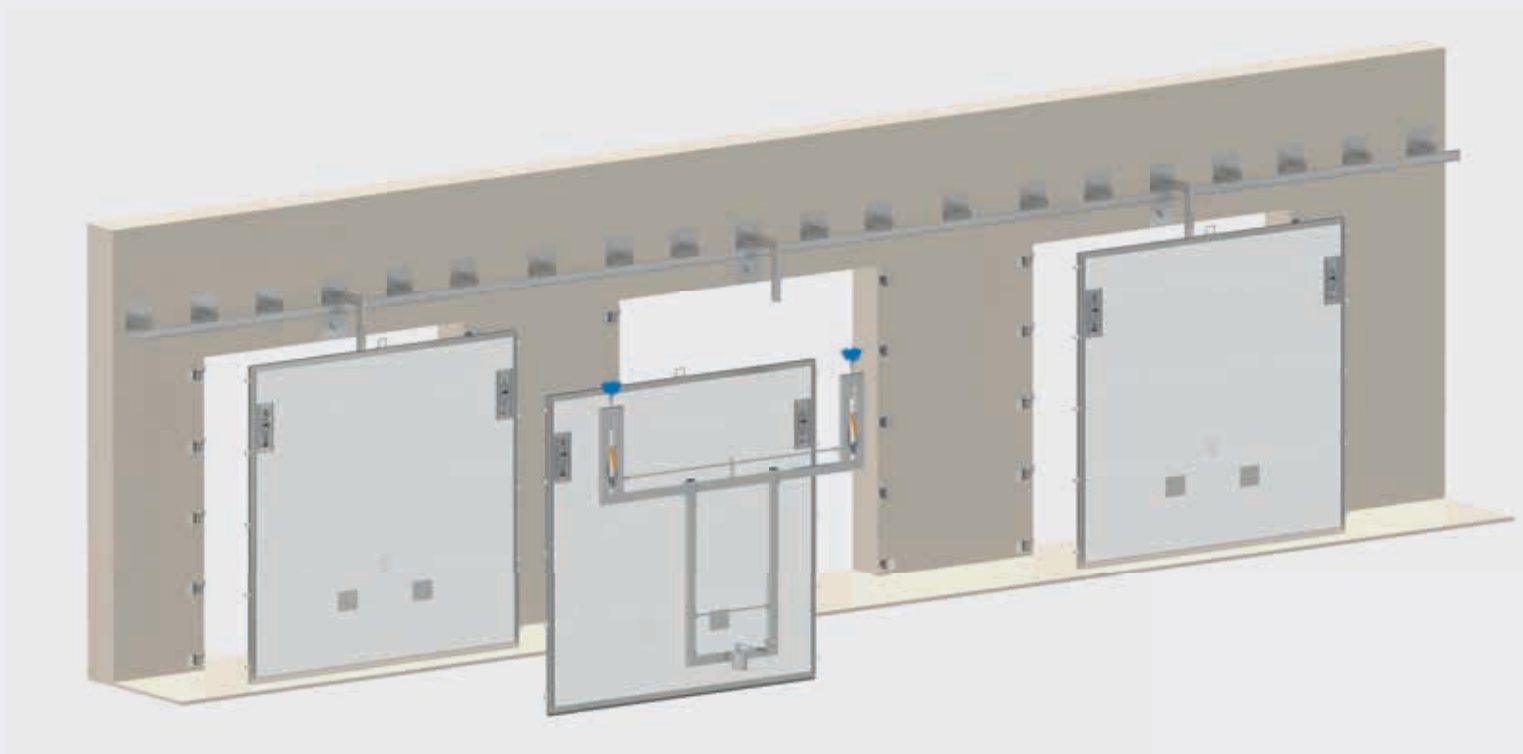
Lifting and dragging mechanism

The lifting and dragging mechanism is a support frame made of aluminium tubular profiles. It moves along a rail beam located above the door's lintel thanks to two displacement trolleys, with metal wheels, located at the top.

It has two lateral hydraulic cylinders driven by a manual pump. These cylinders, attached to stainless steel shafts, swing two lever-arms, which form the lifting hook also made of stainless steel, and are inserted into two existing housings in the doors.

When the pump is activated, a rotation movement is transmitted to the levers, which makes the door rise and move away from the wall, releasing the pivots from their anchors in the wall. Once in the raised position, the door can be moved along the rail beam

There is a safety bar in the centre of the door and behind the lifting mechanism. In case of failure of the mechanism, the sheet would rest on the bars.



MIRCOM DOORS

DOORS
FOR THE SECTOR

HERMETIC
DOORS

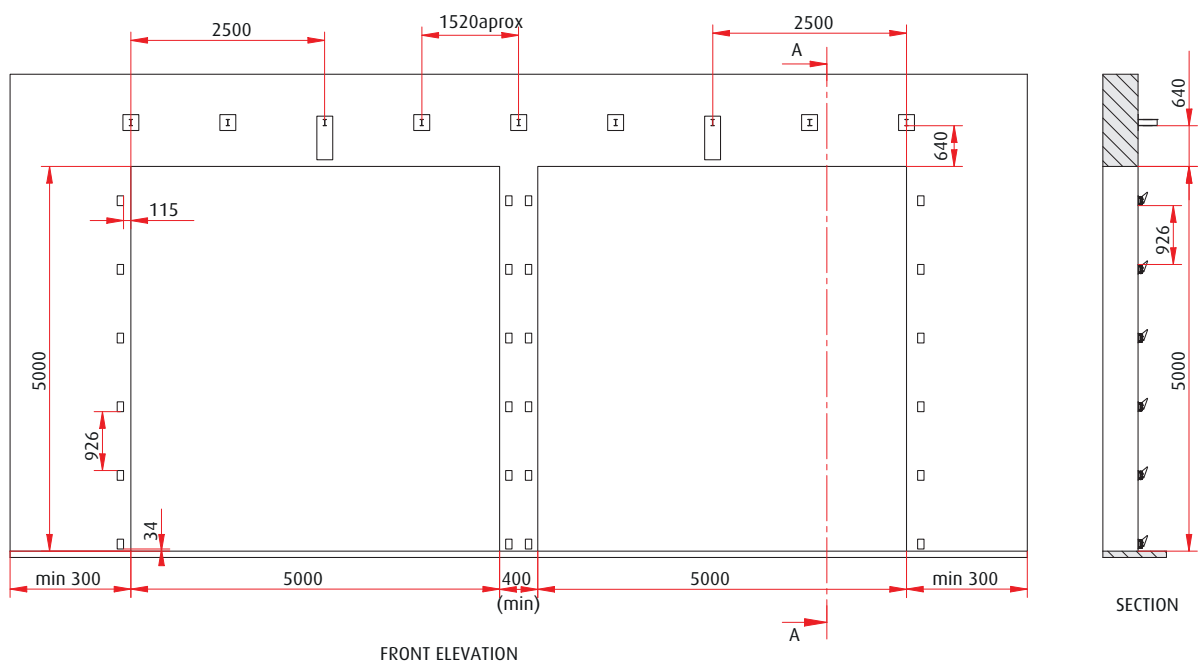
SECTIONAL
DOORS

HIGH SPEED
DOORS

CLOSURES



Requirements for the installation of Mircom doors. Dimensions (in mm.)



System of metal plates inserted in walls

SECTIONAL DOORS

FIBERSECC®

¡Unique in the market!

The **sectional door FiberSecc Inox 316** from **Angel Mir®** is the perfect door to be used outdoors and in corrosive and marine environments.

It is light, very resistant to impacts and corrosion and easy to clean. It is manufactured with insulating panels type of polyester and fiberglass sandwich. The interior finishing consists of a white Gel Coat and the exterior finishing of Gel Coat in different standard colours.

The guides and ironwork are made with stainless steel 316 and the torque springs comply with the quality requirements imposed by the standard DIN 17223-C. The option of the springless weight compensation systems guarantees a longer service life with much less maintenance.

Max. Dimensions: 4,500 x 5,500 mm.

For other measurements, to enquire.

Wind resistance in standard configuration: Class 2.



SANDWICH INOX®

The **sectional door Sandwich Inox** is made of sandwich panels of galvanized and pre-lacquered steel with high resistance to oxidation. High-density polyurethane foam is injected into the chamber between them, thus achieving a high thermal insulation factor and great mechanical resistance.

Door structure, guides and accessories are in stainless steel 304 or 316, which increases its resistance to corrosion, being particularly effective in acid environments and stronger to high temperatures.

Sandwich panels can be manufactured in 40 and 80 mm thicknesses, depending on the insulation requirements. The sealing between panels is achieved by elastic joints of polyurethane. The standard finishing of the outside of the door is lacquered in different RAL colours and the interior is lacquered in white 9002.

The door is equipped with different security systems to guarantee proper and reliable use.

Optionally, peepholes, ventilation grills or different parts can be incorporated, as well to include a pedestrian door or a side door only on doors with 40 mm panels. Also, as a more economical option, it is possible to manufacture the door with aluminium panels.

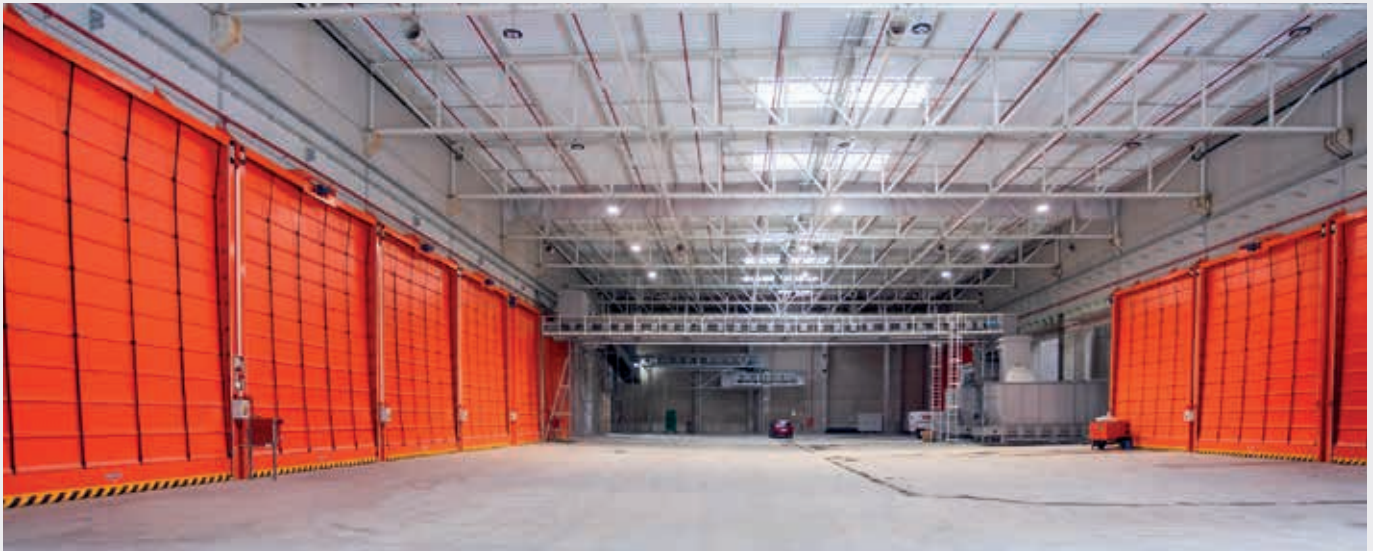
Max. Dimensions: 8,500 x 7,500 mm.
For other measurements, to enquire.

Wind resistance in standard configuration: Class 2.



HIGH SPEED DOORS

INSTANT PASS®



Instant Pass is a speed door especially suitable for accesses facing outwards; it can withstand relevant pressures or depressions of air or winds without suffering wear or tear, remaining unalterable for years.

For facilities that have very specific characteristics as composting plants, it is manufactured with a structure in stainless steel AISI 304L and 316L. Bent sheet reinforcements have been placed inside the guides and the platform to withstand, without deforming, the significant strains to which it will be subjected.

The canvas is equipped with a series of transversal reinforcements manufactured according to the requirements of the work, in galvanized steel of different diameters and thicknesses or in "composite" material of fiberglass and polyester manufactured by pultrusion.

This material has an extraordinary resistance to breakage (even by violent impacts produced by moving vehicles) and great flexibility,

so it can be bent strongly without permanent deformation. At their ends, they have rubber caps that prevent wear caused by friction and reduce noise. The lower socle is a canvas bag, achieving a perfect fit even with uneven floors. The bag is screen-printed with the safety symbol of diagonal black and yellow stripes, which indicate danger in the transit area of industrial vehicles transporting materials.

Security system by means of a wireless contact band on the main edge and an infrared barrier at 500 mm from the ground. Optionally it can include an infrared curtain up to 2.5 m high.

Max. Dimensions: 9,000 x 7,000 mm.
For other measurements, to enquire.

Wind resistance in standard configuration standard: Class 4.



GRAND PASS®

The model **GRAND PASS** from **Angel Mir®** is a fold up speed door suitable for large accesses facing outwardly and having to withstand significant wind loads.

The vertically moving sheet is made up of a series of panels with double-walled canvas of PVC-impregnated Trevira fabric with tubular or reticular aluminium reinforcements calculated according to sizes and wind resistance.

All the mechanisms are anchored to the guides or to the platform, which in turn must be fixed to a structure or support walls withstanding the necessary loads.

The guides are built to withstand the pressure applied by the door and the wind load on them and the upper platform has the motor-

ization system, the shaft and the coiling boxes to collect the lifting cables. Made of galvanized steel sheet of different thicknesses depending on the forces to withstand (wind). Painted with polyurethane antioxidant paint of two grey colour components.

As each door is built and designed to measure, it meets customer requirements, adapts to the characteristics of the work and offers maximum performance in durability, reliability and energy efficiency.

Max. Dimensions to enquire.

Wind resistance in standard configuration: Clase 4.



MIRZIP®

Mirzip is the self-repairing speed door designed for both medium-sized interior and exterior entrances and moderate wind loads. Designed for intensive use and long service life.

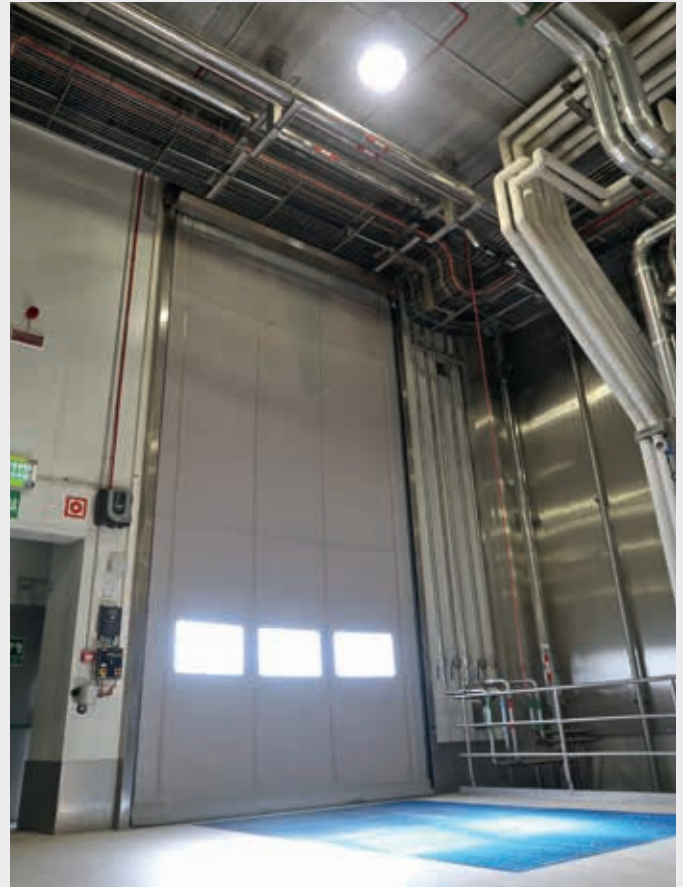
The canvas includes at its ends a zip made of plastic that runs through polyethylene guides meaning a continuous guide system without rigid elements. When an impact happens, the zip goes out of the guide and it puts back on the rails when descending.

Mirzip is optionally manufactured with a AISI 304 or 3016 stainless steel structure to apply in waste and composting treatment plants. In addition, it includes a mechanism with a frequency variator that allows to regulate the opening and closing speeds and acceleration and deceleration ramps, and a photocell curtain that protects the passage width up to a maximum height of 2500 mm.

Optionally, the finishing can be painted in RAL colour according to the customer's choice, and incorporate transparent PVC peepholes, a motor protector and an emergency opening system by means of UPS or mechanical system.

Max. Dimensions: 5,000 x 5,000 mm.
For other measurements, to enquire.

Wind resistance in standard configuration: Class 2 (self-repairing type) Class 3 (no self-repairing type)



CLOSURES

AVANTGATES® VERTICAL DOOR

These innovative doors without bottom guide operate as an exterior barrier that offers swift access to vehicles and restricts the intrusion of people or animals.

Suitable for continuous use, it can be of one or two vertical sheets. It practically does not need civil works and the maintenance required is minimal. The door structure is made of galvanized steel and the vertical slats of aluminium.

Its design is perfect for complicated or reduced spaces since it does not occupy lateral space. It can also be installed in areas

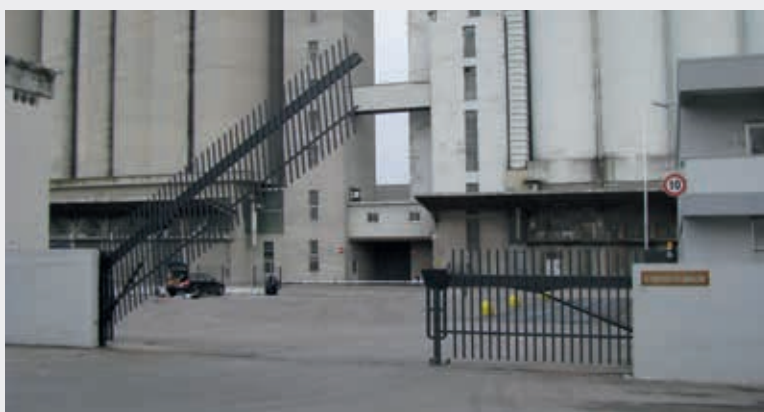
with steep slopes or ramps, and at angle shape without any special structure. It is resistant to extreme climates and environments with snow or ice.

Available in different finishing and with the possibility to turn the barrier into a billboard using a sticker

Max. Dimensions:

One sheet up to: 10 m.

Two sheets up to: 20 m.



CANTILEVER® SLIDING DOOR

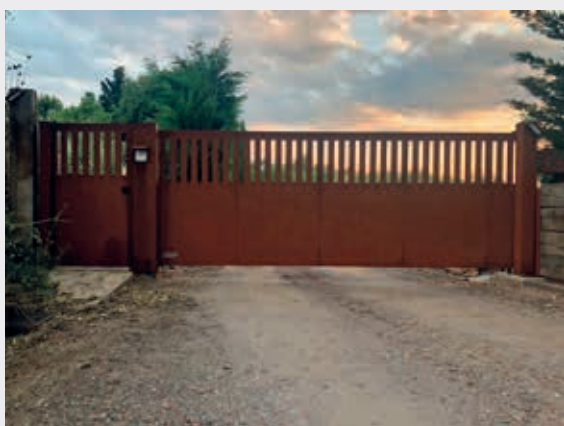
The cantilever sliding door of one or two sheets do not have guides on the ground but is mounted on the door socle. The sheets slide on a system of rollers mounted on the ground from the back and are balanced thanks to rollers at the top fixed to the wall or to a support pillar.

This model allows to manufacture large sizes and in different aesthetic compositions, both in terms of design (panel, bars, perfora-

tions, etc.) and of finishing (steel, sheet, aluminium, sandwich).

The lateral movement of the door sheet can be manual or automatic and with a silent and reliable mechanism that offers maximum safety. It can be manufactured for intensive use.

Max. Dimension: One sheet up to: 12 m.



FULL HEIGHT TURNSTILES

The **full height turnstiles** are an easy way to control the passage of people, preventing therefore possible intrusions through jumping or passing in an unauthorized way. They can be installed indoors or outdoors and their system with connections of nine horizontal bars allow an easy and comfortable passage even pulling luggage or packages. They are ideal for areas of passage control that have little surveillance; and comply with the most demanding European quality certifications.

The upper receptacle houses mechanical rotor, control's electronics and courtesy light. It includes light and audible pass indicators and, in the pass area, it has a courtesy pilot light.

It includes a controller plate with multiple configurations, so that the turnstile works with controlled entry and exit, or controlled in one direction and free in the other. A motorized option is available, in which the turnstile performs the pass rotation by means of a gentle push of the arm. In emergency situations, the access turnstile enters into free rotation phase in both directions.

The finishings can be chosen in different painted colours and materials depending on whether the use is indoors or outdoors, for which stainless steel is recommended. It can incorporate any type of reader depending on the model, as well as a heating module that allows the turnstile to work in extremely low temperatures (-50°C).

The combination of both closures results on a dual system of access control ideal for industries; the most complete closure for the exterior that allows both to have control and the maximum security of entry and exit without the need of surveillance.



For further information, please consult our detailed product catalogues:



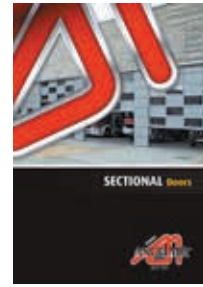
GENERAL CATALOGUE



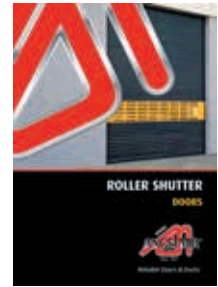
LOADING BAY
EQUIPMENT



HIGH SPEED DOORS



SECTIONAL DOORS



ROLLER SHUTTER
DOORS

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