

# Smart solutions for doors in tough environments

 MEGADOOR

ASSA ABLOY

 NIHVA

Megadoor solutions for mining, steel mills,  
waste and recycling, and other heavy industries

# Megadoor is designed for demanding conditions



External doors of heavy industrial workplaces need to withstand demanding conditions, such as mud, dirt, dust, moisture, corrosive and abrasive materials, high wind loads and a wide range of temperatures, often extreme. This puts great demands on the design, operation and materials of industrial doors – demands that have been convincingly met by Megadoor solutions for heavy industry since 1971.

## **Virtually no configuration limits**

The flexible design of Megadoor vertical lifting fabric doors means that there are no practical limits to their size and configuration. Although the door is large, it has a compact design and low weight, as well as practically no footprint. It is quick and easy to install and integrates effortlessly with your building, whether as a new installation or a retrofit. We can design the door around an existing crane and crane rails to provide rapid and reliable operation.

## **Tough reliable doors**

Long-term reliability of Megadoor is assured through numerous features – the door is designed for over one million cycles! Very few moving parts, with no springs or counterweights enable simple operation, minimize maintenance and maximize availability. As no ground tracks are needed, no door malfunction results from snow, ice or drifting sand.

The vertical lifting fabric door is constructed of highly durable materials that easily cope with temperatures from  $-35^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  ( $-31^{\circ}\text{F}$  to  $+158^{\circ}\text{F}$ ) (special fabrics are available for higher or lower temperatures). Moreover, the reinforced, UV-resistant and flame resistant door fabric is protected against mildew, rot and corrosion. Megadoor systems can be designed for extreme wind loads by using heavy-duty extruded aluminum intermediate beams, the size and quantity of which are determined by the door size and the required pressure.

## **Safe operation**

To reduce the risk of injuries, a Megadoor opens smoothly with no sudden stops and starts, and the door is designed with patented safety arrestors which

prevent a “free-fall” condition in the event of failure of lifting mechanisms. We can supply sophisticated controls and sensors which protect the door and continuously monitor the envelope of the opening.

## **Designed for durability**

Megadoor systems are built for tough environments. The use of double-layer reinforced material and aluminum intermediate beams enables the door to absorb shocks and, in most cases, to still function even when damaged.

## **A comfortable working environment**

The door is one solid structure with no gaps or hinge points. In addition, the door leaf envelopes the guide rails to provide an extremely tight seal and form an excellent insulator. Megadoor systems are particularly suited to installations such as clean rooms, where dust or dirt control is a concern. They are also very suitable for extreme climates and areas where corrosion would otherwise be a problem. Translucent fabric door allows daylight illumination.

## **Optimal life cycle economy**

As a Megadoor requires very little maintenance, it offers a low total cost and high uptime. Holes in the fabric are easily repaired and if an invisible mend is required, one can attach a whole sheet over the existing one to cover the damaged area. If an intermediate section is badly damaged, it can either be straightened on site or completely replaced. It is extremely rare for a complete Megadoor leaf to need replacing.

These benefits, combined with the long lifetime and high reliability of Megadoor, ensure you gain optimal lifecycle economy.



Direct drive door operates without springs or counterweights



Self-adjusting limit switches are made for extremely dirty environments

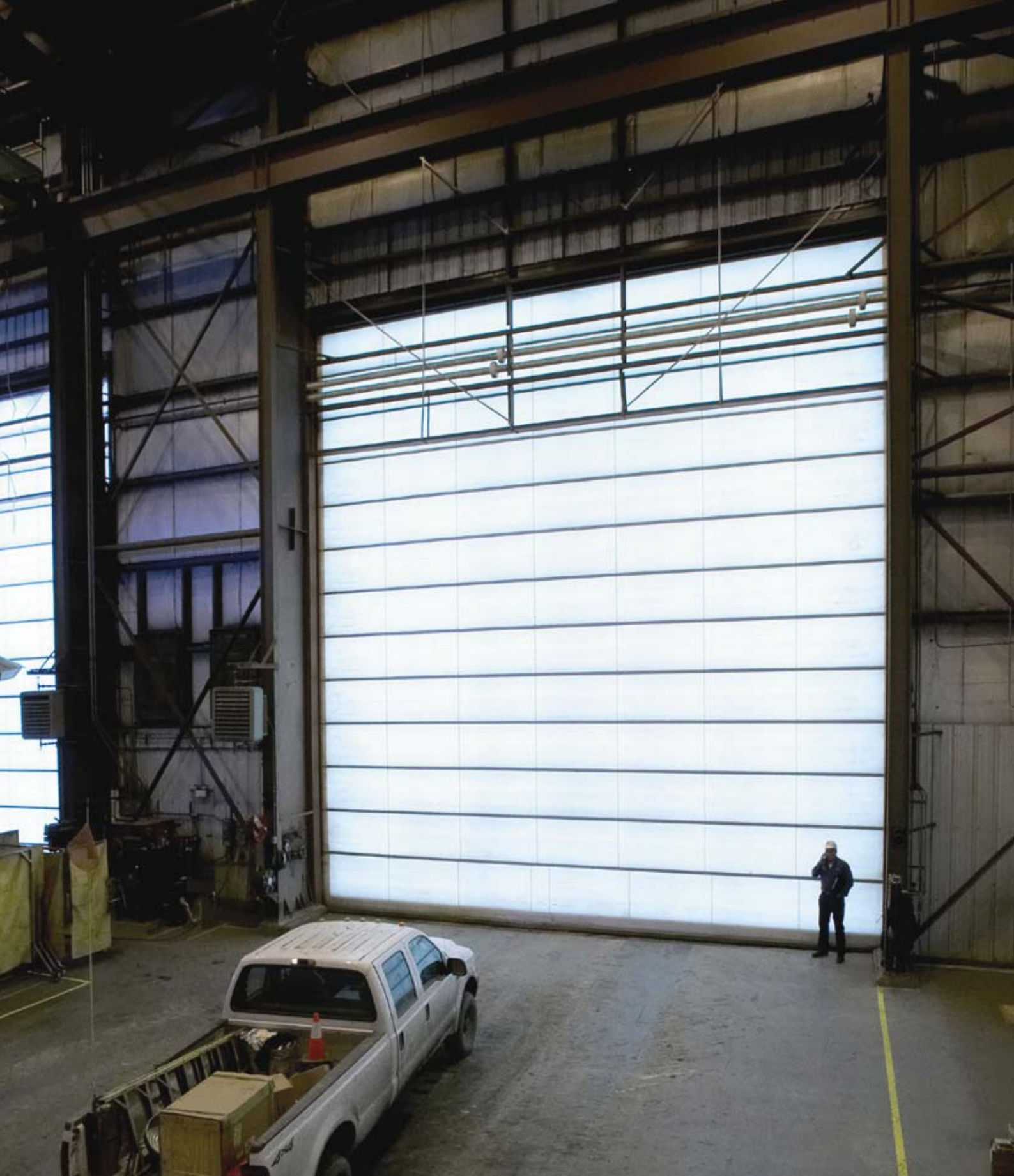
Self-lubricating guide blocks



Extra large U-shaped bottom rubber seal is perfect for uneven surfaces







## The Megadoor vertical lifting fabric door offers:

- Translucent fabric door - natural lighting and a better working environment.
- Excellent air tightness and resistance to high winds.
- Minimal maintenance requirements. Easy repair.
- High safety level and easy operation.

# Meeting the needs of metal works and mines

Megadoor systems have been installed in steel mills, mining locations and other heavy industrial plants for over 30 years and have proven extremely successful thanks to their extra-ordinary durability and reliability. The systems are installed and maintained by Megadoor-certified installation crews who specialize in servicing heavy industrial applications.

## Versatile application

Megadoor offers building designers the flexibility of multiple doors and their many advantages, including lower energy consumption, reduction in building size and function-specific features. All door types are of versatile design that can be tailored to meet particular applications.

No additional area is required to accommodate the door opening. If they are to be used in extreme environments, doors can be supplied with special fabrics, for example, heat-resistant, sound-damping, extra corrosion protection and translucent fabric.

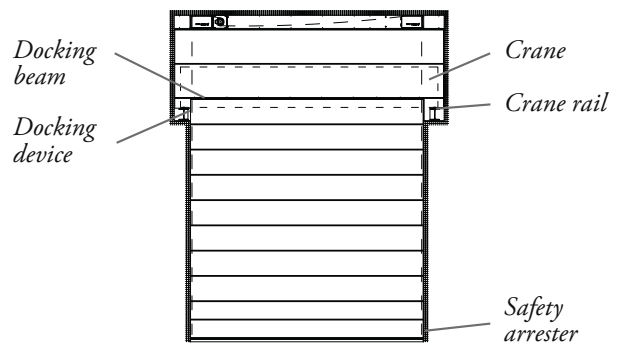
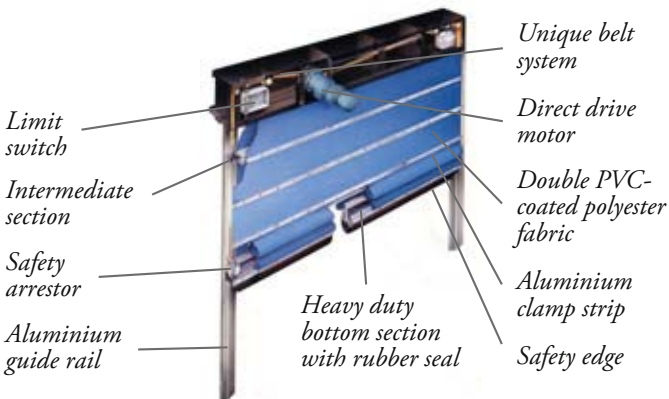
## Tolerating Wash Bay conditions

Few environments are more demanding than a mine wash bay, where corrosive elements and harsh, persistent dirt are constantly present. To answer such

challenges, we have developed our standard "Wash Bay Package", which features sealed limit boxes, motor covers, NEMA 4X corrosion-resistant control panels, and corrosion-resistant materials. (NEMA 4X corresponds to the European Standard IP56.)

## Customized crane doors

A complete Megadoor solution is available for heavy industrial facilities that need large doors through which a crane can pass. Depending on the opening shape and the placement of the crane rail, various door designs can be created with or without swing-up mullions. The Megadoor advantage comes from using tight seals and from requiring no additional space on either side of the door opening. Depending on door size, high-speed operation is also available.





# Ideal solutions for waste handling and recycling



As with the metalworking industry, the industrial doors of these facilities must withstand the aggressive conditions they are subject to, particularly the adverse effects of diverse organic and inorganic material, much of which cannot be readily identified. Megadoor solutions are ideal for installation in waste handling facilities because of their resilient construction, smooth operation and contribution to a good working environment.

## **Corrosion-resistant components**

Megadoor has proved to be the right choice in demanding environments and is the superior solution for waste handling and recycling. This has enabled us to consistently offer solutions that exceed our customers' expectations of functionality, product lifetime and maintenance costs.

## **An extensive application area**

Typical areas where Megadoor solutions are operating successfully within waste handling and recycling include:

- Municipal waste recycling
- Food industry waste
- Sewage treatment
- Bio-energy plants
- Composting/fermentation
- Slaughterhouses
- Fisheries
- Paint manufacturers

## **Protecting working conditions**

Waste management involves dirty and hazardous working conditions. When the Megadoor is closed, tight seals along all edges minimize the infiltration of external particulate waste. This reduces the contact of those working inside a facility with dirt and dust from outside. The doors also serve as a good barrier against bad odors.

As waste treatment facilities are often located in exposed locations, they are frequently subjected to windy conditions. Fortunately, the Megadoor withstands wind loads up to 400 - 600 kg/m<sup>2</sup> (82 - 123 PSF) to provide good weather protection. And typically there is a demand for high traffic flow, high reliability, and safety. The Megadoor can meet all of these demands and is designed for extreme cycles.

## **Tolerates settlement and deformation**

An important advantage of Megadoor when a waste handling facility is built, perhaps on a former landfill, is that the vertical lifting fabric door is stable, light and flexible. The doors place comparatively little load strain on buildings, and can easily accommodate a certain degree of building settlement and deformation.



## The Megadoor vertical lifting fabric door offers:

- Fast, reliable operation under any conditions.
- Strong components, with high corrosion resistance.
- No floor tracks to ice or jam.
- Long operating lifetime. Low operating cost.
- Project management - design, installation and service.





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