SPEC·DOR™

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High-Performance Fabric Hangar Doors

fabrichangardoors.com

Spec-Dor’s Vertical Lifting Hangar Door

No size limitation
Engineered without width or height constraints – suitable for virtually any dimension.

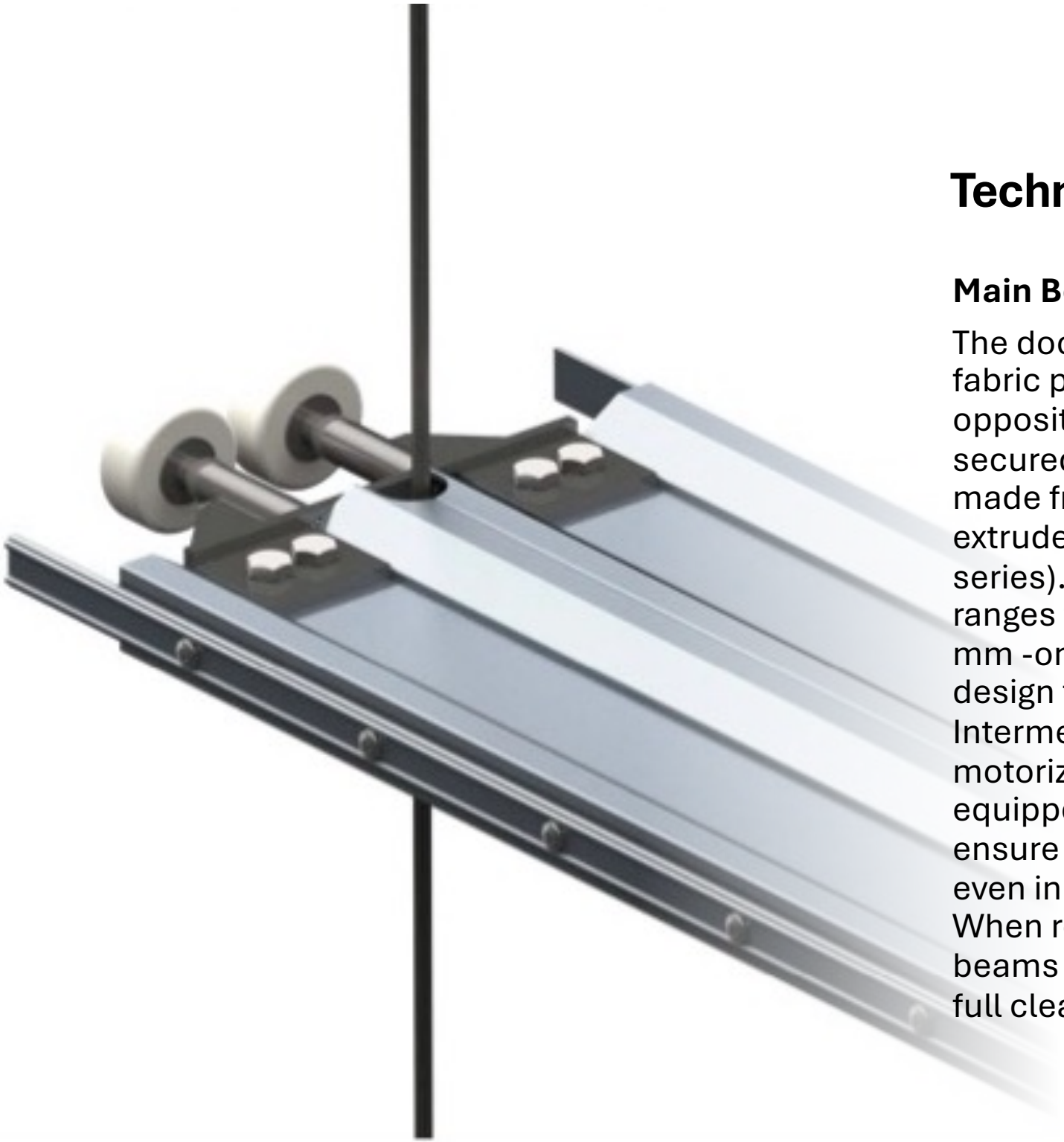
7/24 Operation
Despite their massive size, our vertical lifting hangar doors deliver exceptional durability and are built for continuous 24/7 operation, thanks to a high-resistance fabric and robust gearbox system.

Excellent Sealing
Unlike typical fold-up doors, only Spec-Dor doors feature side sealing with heavy-duty PVC-coated fabric - ensuring a tight seal even in high winds and enabling quiet, smooth operation.

Low Maintenance
Spec-Dor vertical lifting hangar doors are engineered for low maintenance - every component is carefully selected for long-lasting, trouble-free performance.

Maximum Dimensions
Spec-Dor fabric hangar doors are built without dimensional limits and can be custom-engineered with mullion sections to meet each client's specific aircraft hangar requirements.

Main Advantage
Unlike conventional doors, our hangar doors require no bottom rails, extra clearance, heavy maintenance, or structural reinforcements - saving you time, money, and environmental impact.



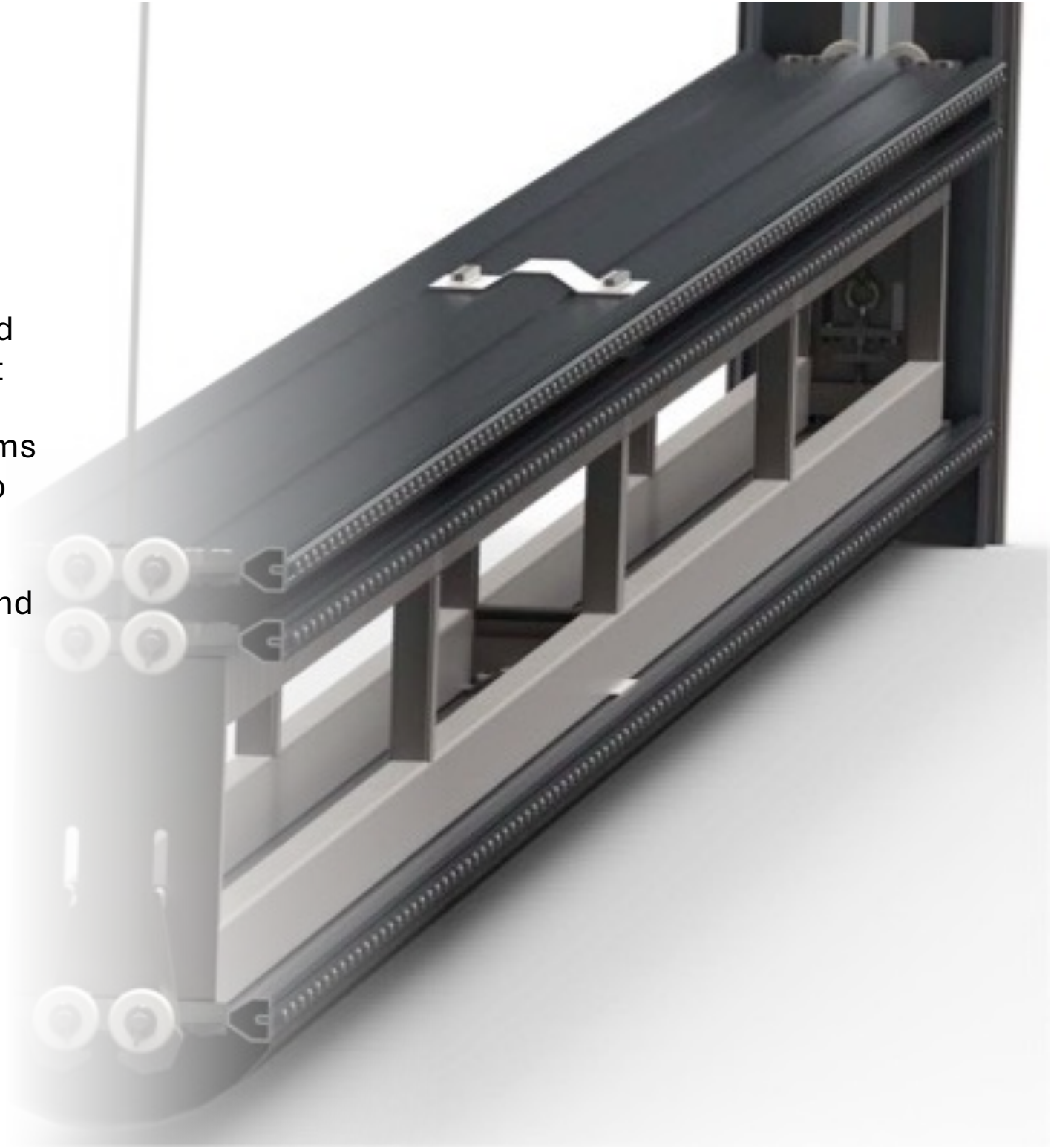
Technical Properties

Main Body

The door consists of two fabric panels folding in opposite directions, each secured to horizontal beams made from high-strength extruded aluminum (6063-T6 series). Door thickness ranges from 380 mm to 900 mm -one of our unique design features. Intermediate beams are motorized and retractable, equipped with wheels to ensure smooth operation even in windy conditions. When retracted, these beams do not obstruct the full clear opening.

Bottom Beam

The bottom beam is engineered to withstand wind loads and support the weight of intermediate steel beams during operation. It also ensures complete closure and reliable sealing, even in high wind conditions.



Side Guides

The vertical guides are integral to the door system and constructed from extruded aluminum, with dimensions tailored to the size of the intermediate beams. Designed for dual weather sealing on both interior and exterior faces, the guides also provide the structural strength needed to transfer wind and safety arrestor loads from the door beams to the jamb support system under maximum wind conditions. For ease of maintenance, the guides are designed to be easily replaceable if damaged. The installer is responsible for supplying the appropriate jamb fasteners, as specified in the approved shop drawings.

Cable System

Spec-Dor fabric doors operate using a maximum of two steel cables per door, routed within the vertical guides. The number of sheaves used to direct these cables is intentionally minimized to reduce maintenance needs and spare parts inventory. All cables must be installed without kinks, and both the system design and sheave diameter are engineered to prevent undue stress or deformation. Any building openings through which cables pass must be designed to prevent abrasion or damage. Sheave assemblies must be positioned in easily accessible locations for routine inspection and maintenance and shall not be placed in concealed areas that hinder visual access.

Fabric

Our specially selected fabric is engineered for long life and exceptional performance, offering outstanding resistance to UV degradation. For demanding environments, we use an ultra-durable, high-strength fabric, with optional Arctic-grade material available for extreme climatic conditions. Additional options include Secure & Sound Resistance fabric for enhanced protection.

We primarily use VALMEX POLYMAR® industrial-grade fire-resistant fabric, available in weights ranging from 900 to 1500 g/m^2 with a thickness of 2 mm and yarn strength of 1100 Dtex B 6000.

Tensile strength: 4300/4000 N/50 mm (DIN 53354)
Tear strength: 500/500 N (DIN 53363)

Sealing
The bottom beam is equipped with a durable U-shaped cellular rubber seal, while the side guides—whether on frame structures or mullions—feature either cellular rubber or integrated brush seals, depending on the door type. The selected sealing materials are specially formulated for exceptional resistance to harsh outdoor conditions, including extreme heat and cold.

Insulation Data

Standard vertical lifting hangar doors offer excellent insulation performance, thanks to their large surface area and advanced sealing features. Thermal efficiency can be further enhanced with insulated fabric incorporating special felt layers.

Thermal insulation: U-value < 0.7 $W/m^2 \cdot K$
Sound attenuation: Up to 12 dB(A)

Wind Resistance

Spec-Dor fabric hangar doors are built to withstand high wind loads, operating safely up to 140 km/h and resisting winds up to 180 km/h when closed. Custom models can be engineered for hurricane conditions up to 240 km/h.

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Structural Loading
Spec-Dor hangar doors are engineered to withstand dead loads, seismic forces, and wind pressures - both positive and negative - calculated based on site-specific environmental and structural conditions.

Speed
Spec-Dor hangar doors operate at a standard speed of 20 cm/sec, with optional upgrades available for speeds up to 40 cm/sec.

Driving Unit and limit switches
Spec-Dor hangar doors are powered by dual lifting motors, typically mounted above the door opening. This twin-motor system ensures balanced lifting and continued operation even if one motor fails. Limit switches, also located above the opening, control the door's upper and lower travel, stopping it precisely when fully open or closed. To ensure maximum safety, redundant safety limit switches are integrated for both directions of movement. Upward travel is monitored by switches at each end of the door, triggered by the topmost horizontal beam. Downward travel is secured by slack strap/rope switches positioned above the opening. The Spec-Dor switch system is designed for durability, with protected switches on both sides to prevent damage or misalignment.

Load Arrestors + Wind Locks

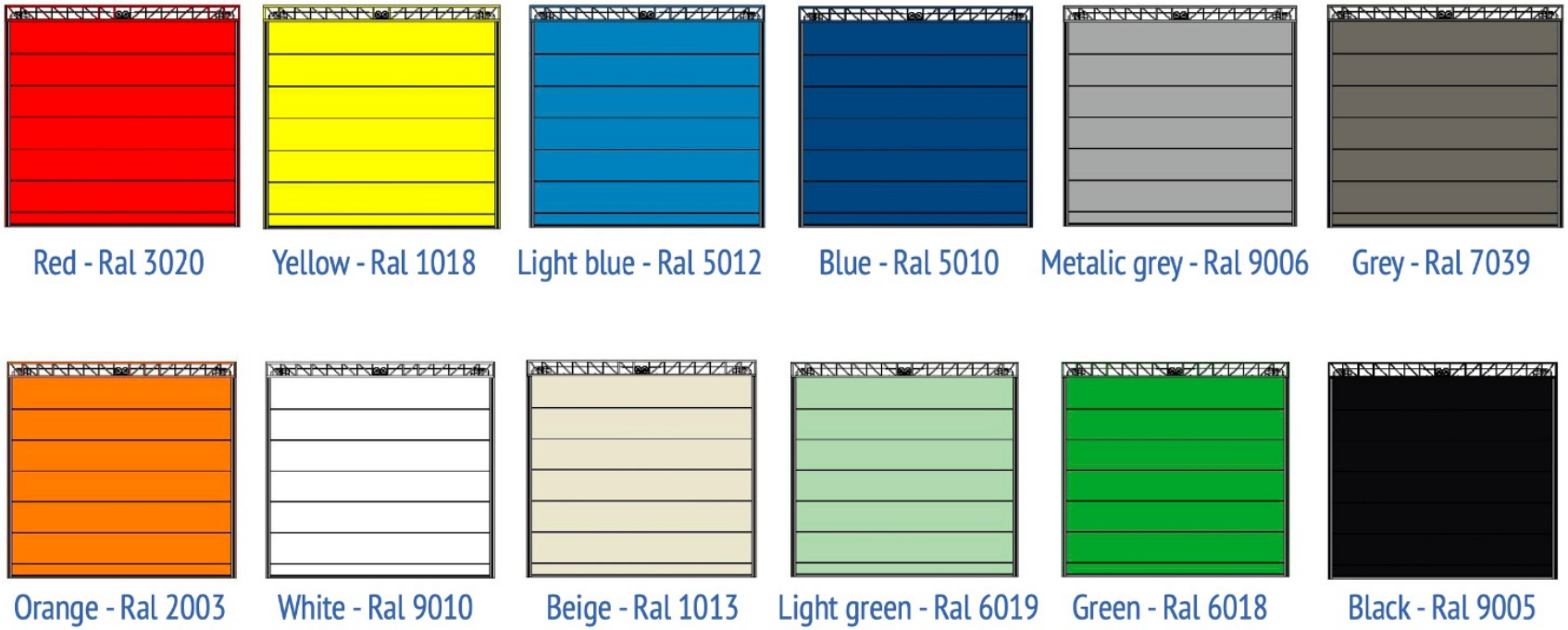
Spec-Dor aircraft hangar doors are equipped with patented load arrestors mounted at the bottom of the door. In the event of a motor, lifting strap, or cable failure, these devices prevent the door from falling. Wind locks secure the door in the closed position, preventing uplift even in high wind conditions. The load arrestor system is integrated with a safety switch that detects slack in the cables and immediately cuts power to the drive unit, ensuring safe and reliable operation at all times.

Safety

All Spec-Dor hangar doors are manufactured in compliance with CE standards and applicable directives 89/106/EEC and 99/93/EC. They conform to EN 13241-1:2003+A1:2011 and EN 12978:2008. Standard safety features include load arrestors, wind locks, thermal resistance, buzzer, and warning lights. Optional safety enhancements such as bottom safety edges and pneumatic safety edge systems are also available.

Color

A wide range of fabric colors is available, with all standard RAL shades (9002, 9006, 1001, 3001, 5007, 6001, 7071) kept in stock. Please note that non-stock colors may require extended delivery times.



*Certain colors may be out of stock and could result in extended delivery times.

Operations

Spec-Dor vertical lifting fabric hangar doors move smoothly within weather-sealed vertical guides fixed to the building structure. The entire door and mullion system is operated via a PLC-controlled, fully automated, touchless interface, featuring animated visualizations on the control screen for intuitive management. The control panel includes mechanical stop controls, a key lock, and power indicators for added security. Audible and visual warning signals activate automatically several seconds before any door movement begins, remain active throughout operation, and reset immediately once the door stops.

Manual Operations

Spec-Dor hangar doors offer multiple solutions for emergency operation:

- Manual Hand Crank: A hand crank can be attached to the motor's output shaft for manual operation. However, this method is not practical for very large doors.
- Backup Power Supply: Connecting the door system to a power generator ensures continued functionality in the event of a power outage.

Safety Arrestors For Foldable Mullion

The specially designed mullion crane ensures the safe and secure folding of the mullion system. This unique crane features an integrated fall arrestor and can also be operated manually for added safety and reliability.

Control panel

The control panel is engineered in compliance with CE Directive 2006/95/EC and NEMA ICS 6 standards. Specifically designed for Spec-Dor mullion hangar doors, it features a PLC-based system with a touchless interface for intuitive operation. As part of its safety architecture, the control board includes interlocks to prevent accidental injury, a key lock for authorized personnel, and an optional interlock between the power system and manual hand crank operation. The door operates with momentary pressure for opening and constant pressure for closing, with both Dead-Man and fully automatic modes available. For added reliability, the control panel can be connected to an automatic transfer switch, ensuring uninterrupted operation via emergency power during outages.

Optionally

The control panel can also be equipped with frequency converters and a safety edge system, enhancing both performance and operational safety.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