

# SHIPYARDDOOR<sup>®</sup>

AUSTRALIAN PARTNER



PVC FABRIC DOOR SYSTEMS

**SO  
BIG  
FLEXIBLE  
STRONG**



The Flexible Giant<sup>®</sup> AIRCRAFT HANGAR DOORS



SHIPYARDDOOR®

Shipyards door a flexible hangar door is designed to solve all extra ordinary door requirements that doors don't have any limit for width or height. Any dimensions door requirements can be solved easily.

First vertical lifting fabric hangar door was initially developed in the 1980s for the needs of shipyards' shipbuilding facilities. Cause of special requirements of shipyard industries doors need extreme properties. Shipyards door is manufactured first doors after increasing ship building business in Turkey at 2003. Every year we improved our hangar doors according to clients' special requirements. Especially in shipyard industries doors are effected extreme working conditions. Cause of this Shipyards door® can be served extreme conditions, our hangar doors have been using at Airport, Shipyard, and Mining Industries. Also we can supply special doors for special requirements like crane doors sound isolated doors etc.

Aircraft Hangar door is a special area of door business. As improvement of this doors started with steel sliding door system, many weakness and trouble of sliding hangar doors like bottom guide heavy door, extreme maintenance requirements also some operational problem client used it only for a obligations. After discover of fabric doors for large dimensions old sliding doors is changed rapidly.

Aircraft hangar door with mullion system doesn't has any weakness like traditional sliding door system come with many advantage.

## 7/24 Operations

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The Flexible giant has excessive durability although it is not expected cause of big body our hangar doors can be operated 7/24 specially choose high resistance fabric and gearbox system supply continuously operation at required.

## Excellent Sealing

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Only our doors have side sealing pocket instead of all other fold up doors. This heavy duty PVC coated fabric supplies excellent sealing when doors is closed even high windy conditions. This design also supplies noiseless operations.

## Main Advantage

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Doors are manufactured according to CE Standard. Applicable Directives 89/106/EC-99/93/E Applicable Standards:- EN 13241-1:2003+A1:2011-EN 12978:2008 and Load Arrestors ,wind lock , thermic resistance, buzzer and warning light is served as a standard  
Optionally: Bottom safety edge and pneumatic safety edge system is available.

## Low Maintenance

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Flexible Giant hangar doors have no need any special maintenance all parts is carefully chosen for no maintenance requirements. There are no springs, ball-bearing, or couplings that can be damaged if anything crashed or collides with the door.

## Maximum Dimensions

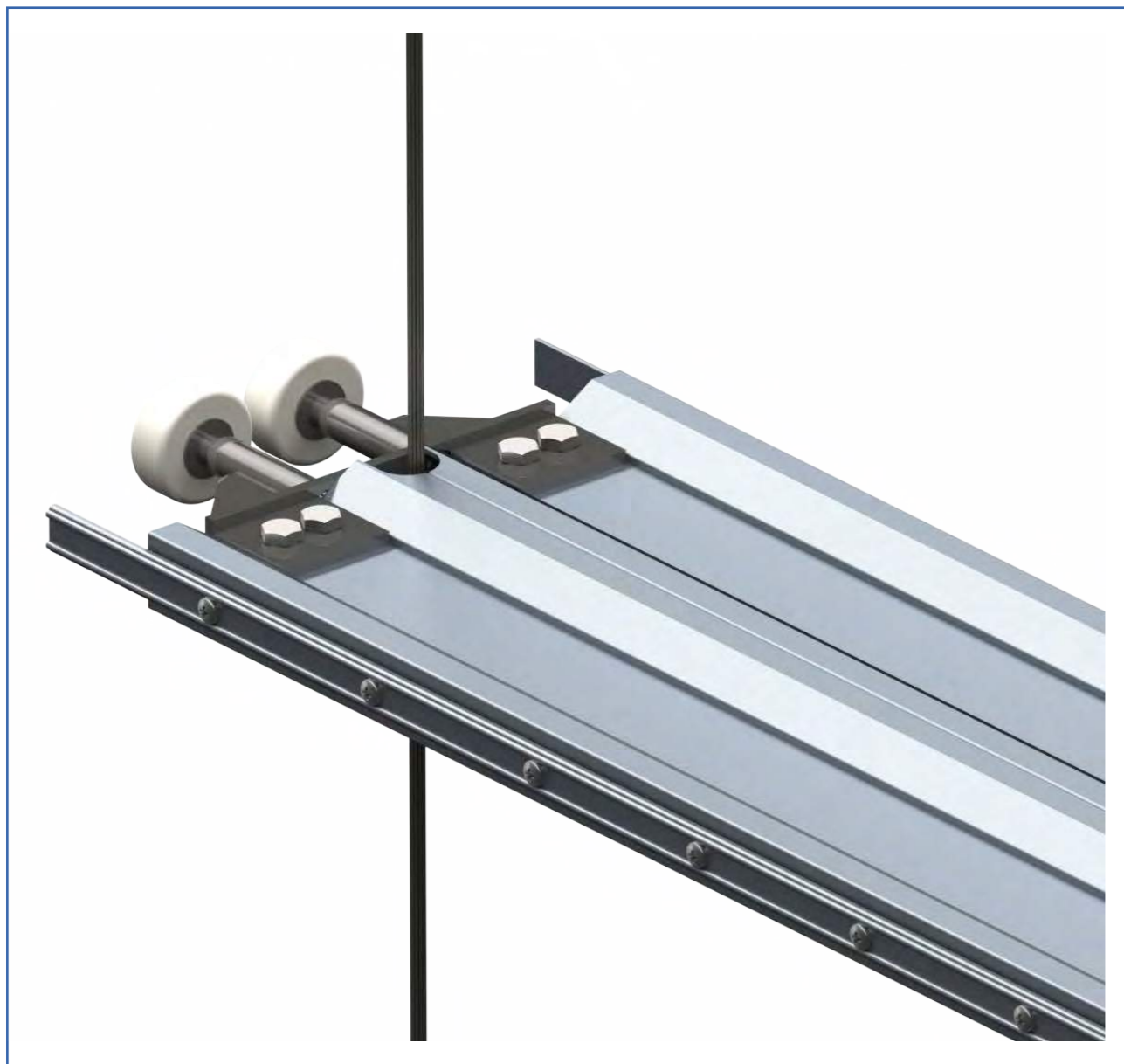
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Shipyards hangar doors don't have any limit for dimensions for aircraft hangar applications with mullion parts it can be manufactured according to clients specific requirements.

# TECHNICAL PROPERTIES

## Main Body

Doors are made of two fabrics folding in opposite directions. Fabric sections are fastened to horizontal beams (extruded aluminum T 6063-T6 series). Minimum door thickness is 380 mm that is our special properties. Intermediate beams are retractable by means of an electric motor. The beams have tires for easy operations at windy conditions. The intermediate beams when retracted don't impede the clear opening dimensions.



## Bottom Beam

Bottom beam is designed according to wind resistance, dimension of the doors and, to carry load of the intermediate steel beams during door operations. Bottom beam also supply full closing and sealing in heavy wind conditions.



# Side guides

Shipyardsdoor Flexible Giant® The vertical guides shall be an integral part of the door, made of extruded aluminum with a suitable depth and width dependent on the size of the intermediate beams. The guides shall be designed to provide weather-sealing on the inside and the outside faces. The guides shall be designed to provide sufficient strength to transfer the wind load and safety arrestor forces from the door beams, at maximum wind load, to the jamb steel support system. The guides shall be easily replaceable in case of damage. The installer shall furnish jamb structural steel fasteners of size and type required for attachment of the guide rails as shown on the approved shop drawings.



# Cable System

Shipyards doors are operated with steel cable, maximum of two cable each doors that running inside of the door guides. Similarly, the quantity of sheaves used to guide the belts/cables shall be minimized to reduce maintenance requirements and spare parts inventories. Belts/cables shall be installed free of any kinks and the system design and sheave diameter shall be such to prevent the occurrence of any kinks or abnormal stress in the operating belts/cables. Where belts/cables pass through openings in the building structure the openings shall be constructed so as to prevent abrasion, wear, or damage to the belts/cables. Sheave units shall be installed in accessible locations which allow inspection and preventive maintenance. Sheaves shall not be located in enclosed locations which are not readily accessible for visual inspection.

# Fabric

Specially choose fabric is suitable for long life. It have very high resistance against to UV damage, We choose specially extreme strong fabric. We also have Arctic Fabric for extreme climatic conditions-Secure and Sound Resistance fabric is available as a options.

VALMEX POLYMAR<sup>®</sup> industrial Fire resist 900-1500 gr/m<sup>2</sup> 2 mm 1100 Dtx B 6000

Tensile Straight 4300/4000 N/50 mm DIN 53354. Tear Strength 500/500 N DIN 53363

# Fire Resistance

Fire resistance of the fabric is suitable for any fire safety regulations. Relative Standard is DIN 4102-B1. These materials are difficult to ignite. They include materials such as wood treated with a fire retardant and rigid foam plastics. A fire must extinguish itself when the source of the fire is removed.

# Sealing

The bottom beam is furnished with cellular rubber seal (U-Shaped). The side guides on frame structures or mullions have either cellular rubber seals or integral brush seals depending on door type. Specially choosed rubber has high resistance against to outdoor conditions extreme cold and hot weather.





SHARDOR®



## Insulation Data

Standard Shipyarddoor Flexible Giant fold-up hangar Doors has excellent insulations cause of its extreme width and sealing properties. Thermal insulation value  $U < 0.9 \text{ W/m}^2\text{K}$ . Isolated fabric also available. Sound attenuation 12 dB A.

## Wind Resistance

Shipyarddoor<sup>®</sup> hangar door is designed as a unitary system to withstand wind load specified. Fiber stresses due to combined dead load and wind load will not exceed factors for the material being used and type of loading sustained, operationally 140 km/h also at closed positions can be stand up to 180 km/h. Special conditions can be manufactured up to 230 km/h hurricane standard.

## Structural Loading

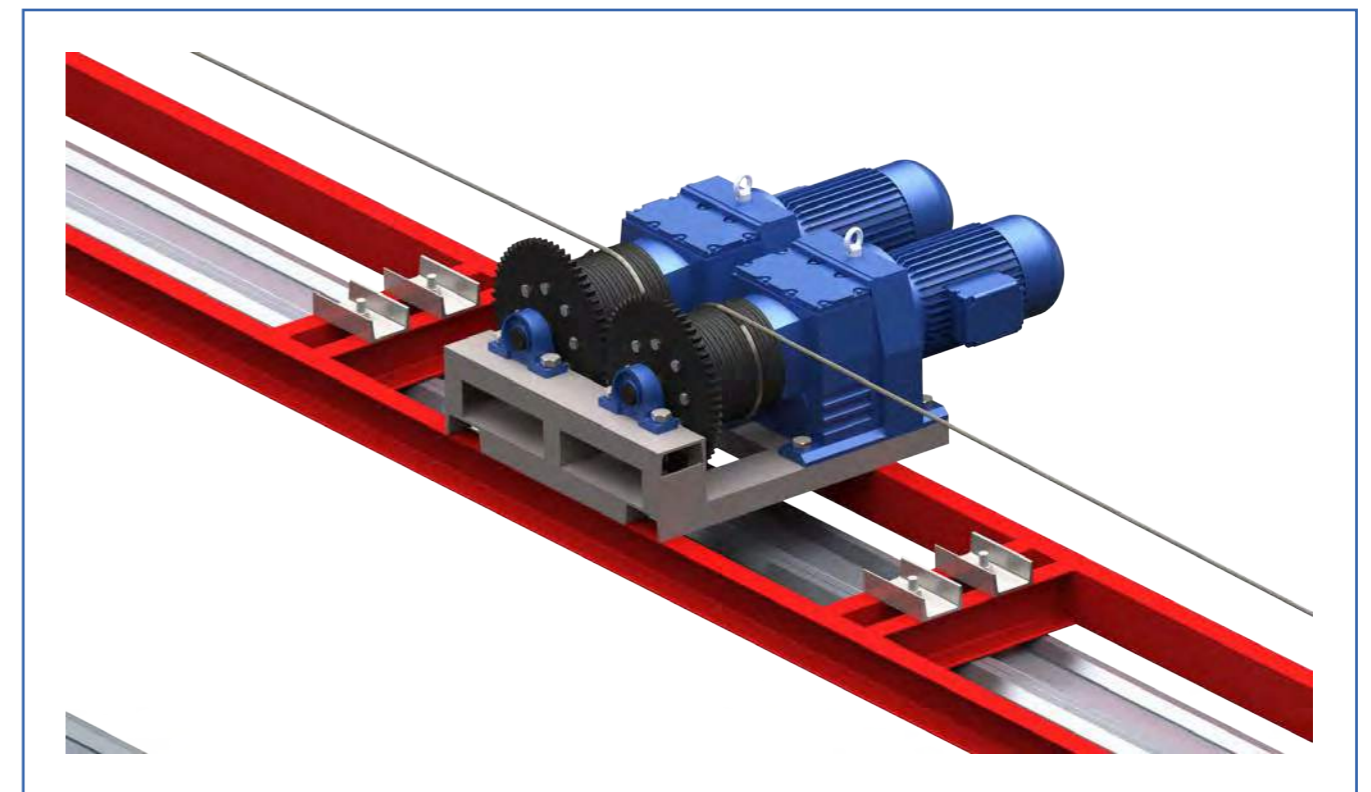
Shipyarddoor<sup>®</sup> hangar door is designed to withstand dead load, seismic forces and design loads due to pressure and suction of wind calculated in accordance to environmental and building ambient.

## Speed

Hangar Doors is operated as a standard 20 cm/sec opening and closing speed also it can be increased up to 40 cm/sec.

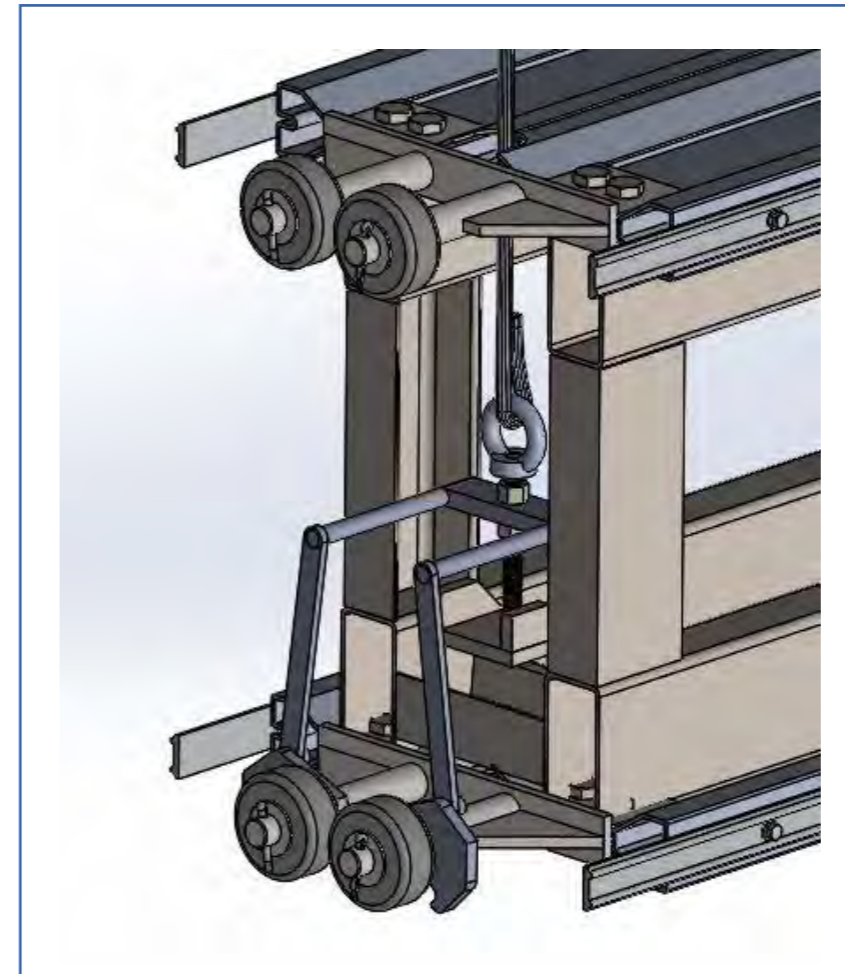
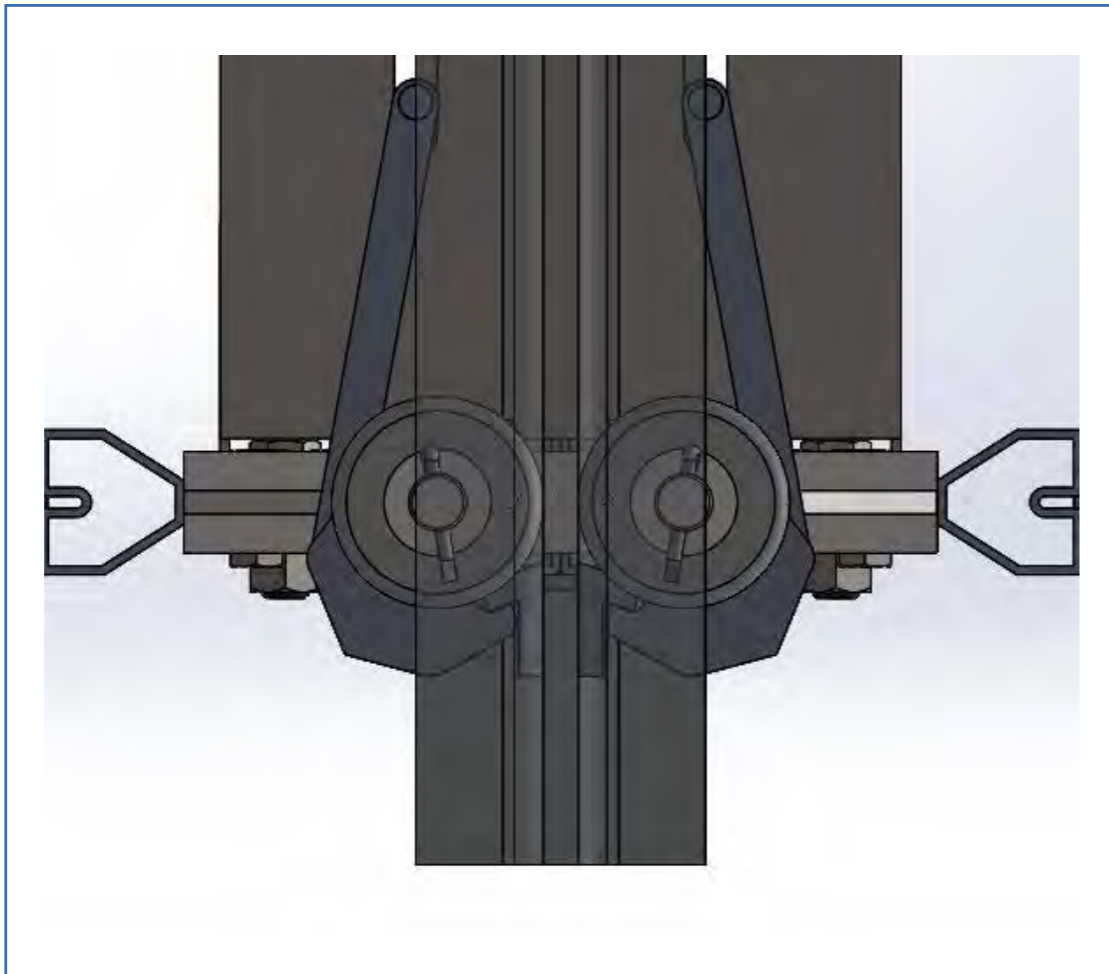
## Driving Unit and limit switches

The lifting motors are normally located above the door opening. All Shipyard-door hangar door system is equipped double motor to supply balanced rising also even 1 motor damaged other can be operated the system. The limit switches are also located above the door opening. Shipyarddoor switch system no way to miss or damage all switch have both of side with safety switch. The door stops on the limit switch when the door is completely opened or completely closed. Should the doors by-pass these limit switches there are also safety limit switches for both directions. In direction upwards the limit switches are located above the door at each end of the door and the topmost moving horizontal door beam will activate them. In direction downwards the limit switches are located above the door opening on the slack strap/rope switches.



# Load Arrestors + Wind Locks

Shipyardsdoor Flexible Giant® Aircraft Hangar Doors are equipped with load arrestors attached to bottom part of door.(Patent Protections) Load arrestors will prevent the door from falling down in case of motor or lifting strap or rope failure. Wind locks will prevent the door rising up from its close position even in very windy conditions. Load arrestors safety device is sense a slack cable condition and cut power to appropriate (it is combined with switch system. Drive unit to prevent an unsafe condition.



## Safety

Doors are manufactured according to CE Standard. Applicable Directives 89/106/EC-99/93/E Applicable Standards:- EN 13241-1:2003+A1:2011-EN 12978:2008 and Load Arrestors ,wind lock , thermic resistance, buzzer and warning light is served as a standard  
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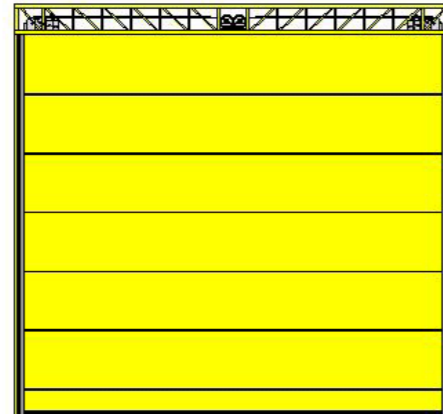
SHIPYARDDOOR®

# Color

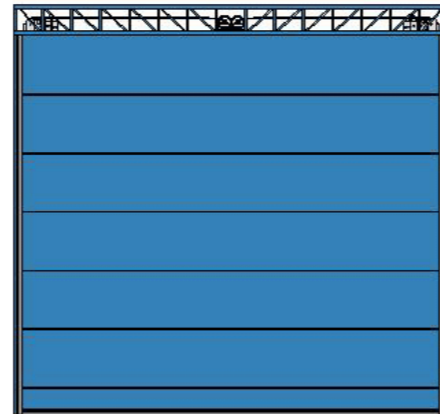
Wide range fabric color is available ,All main color at our stock (RAL 9002-9006-1001 -3001 – 5007-6001-7071) (some color is out of stock can be extend delivering time)



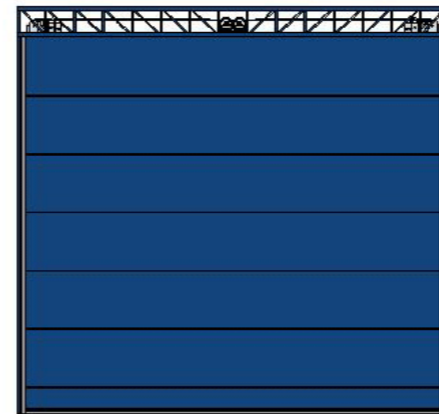
Red - Ral 3020



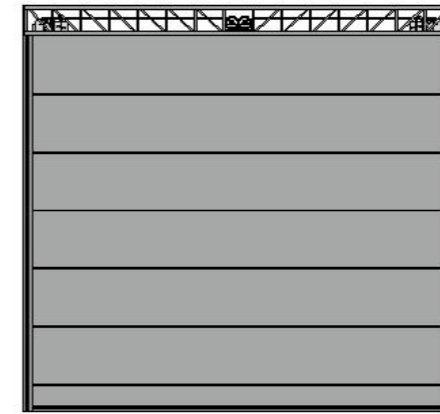
Yellow - Ral 1018



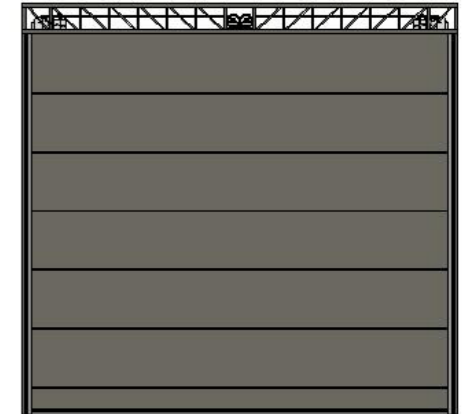
Light blue - Ral 5012



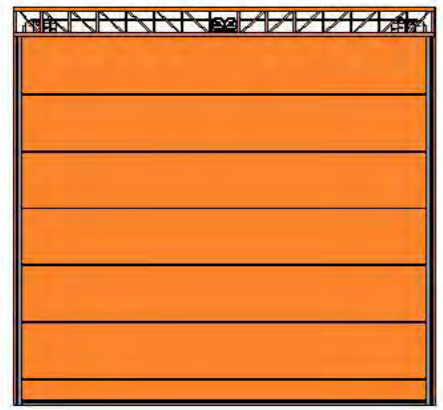
Blue - Ral 5010



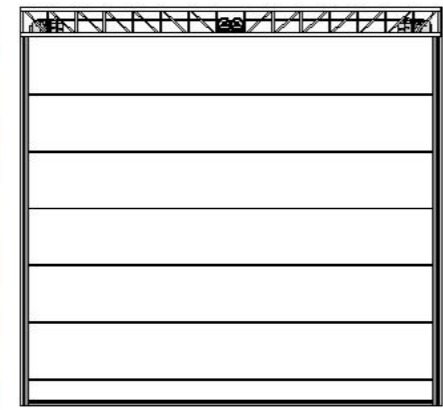
Metalic grey - Ral 9006



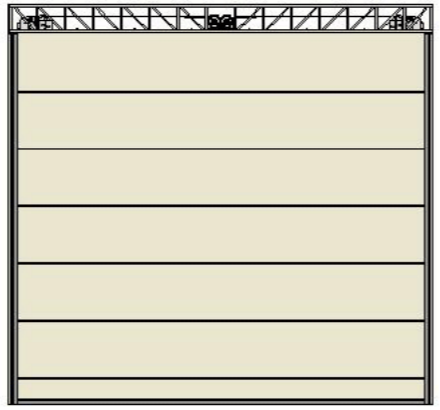
Grey - Ral 7039



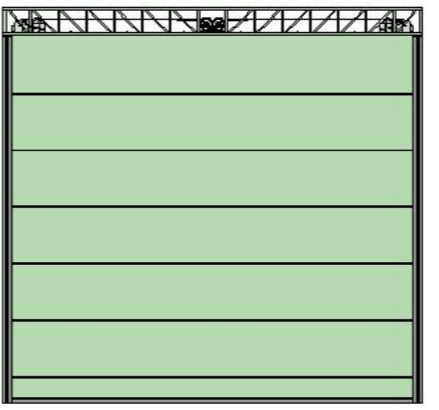
Orange - Ral 2003



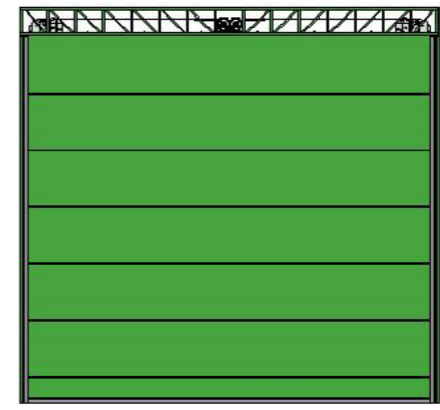
White - Ral 9010



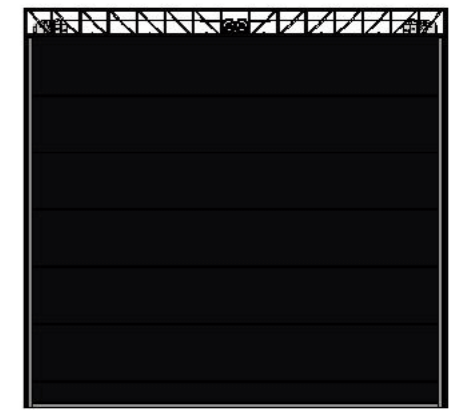
Beige - Ral 1013



Light green - Ral 6019



Green - Ral 6018



Black - Ral 9005

\*Some color is out of stock can be extend delivering time.

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LINKS



# Safety Arrestors For Foldable Mullion

Spring balancer is used special Equipments for multi mullion door system. When door guide is folded horizontally spring balancer supply safety operations any crain chain problem.

## Operations

Shipyardsdoor® Flexible Giant aircraft fabric hangar door is guide up and down in the weather sealing vertical guides attached to the structure. Door is controlled by PLC with fully automatic touchable screen system all doors and mullion system is controlled from PLC Screen with animations. Control board also has mechanical “Stop.” “Key lock” and Power Indicators. Audible and visual warning devices is started automatically signal for a few seconds before any door section movement, remain continuously on while the door is in motion and reset immediately after movement stops.

## Manual Operations;

- There are a few ways the emergency operation could be accomplished.
- A hand crank that attaches to the output shaft of the motor is available for manual operation. In cases of very large doors, this is not a feasible way of opening the door. (Is available)
  - Connecting the door to a power generator would eliminate the problem in case of a power failure.

## Optionally

Control panel can be also contain -Frequency converters, Safety Edge System

## Control panel

Control board is designed according to CE 2006/95 EC and to NEMA ICS 6, Standard. It is specially desing for mullion hangar doors with PLC and touch-less screen

As a part of safety regulations Control panel is also contain interlocks to preclude personnel injury, key lock for autorised personal operations and including an interlock between the power supply system and use of the hand crank for manual operation of door unit. It is controlled by momentary pressure to open and constant pressure to close, also Dead-Man mode fully automatic mode is available.

Control panel can be fed from an automatic transfer switch which will supply emergency power to the door systems in case of a power failure.





IAS 14-015  
swissport

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SPEED FLEX<sup>®</sup> HANGAR DOORS