# SHIPYARDDOOR® CON





PVC FABRIC DOOR SYSTEMS



Shipyard® HANGAR DOORS



Hangar doors for Shipyard and Port applications

Shipyard hangar door a flexible hangar door is designed to solve all extra ordinary door requirements at shipyard and port, Shipyard industries need special requirements cause of their industry type extreme big dimensions, heavy duty working conditions like blasting and painting room, extreme outside conditions like sunlight salt, so our flexible giant hangar door is designed according to special requirements of industries. We have flexibility about dimension 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. Shipyarddoor 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 Shipyarddoor® 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.

# Specifically Developed Blasting and Painting Room

Shipyarddoor® has special design for blasting and painting room, It has excellent thickness for good insulations also steel structure is resistance to outside conditions, Our special designed smoothness surface also supply extra resistance against to filing of dust also damage the structure of the doors, Doors don't have any movement parts can be effected by sandblast materials so it is one of most important issues at blasting and painting room, For paint applications our doors has Ex-proof Equipments as a optional.

## 7/24 Operations

The Flexible giant shipyard door 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**

Ship-building industries need extreme sealing especially environmental concern Shipyard doors must have excellent sealing properties. 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.

## Low Maintenance

One of main problem is maintenance at ship-building industries hangar door Shipyarddoor® hangar doors have no need any special maintenance cause of its enhanced performance and special design, all parts carefully chosen for no maintenance requirements.

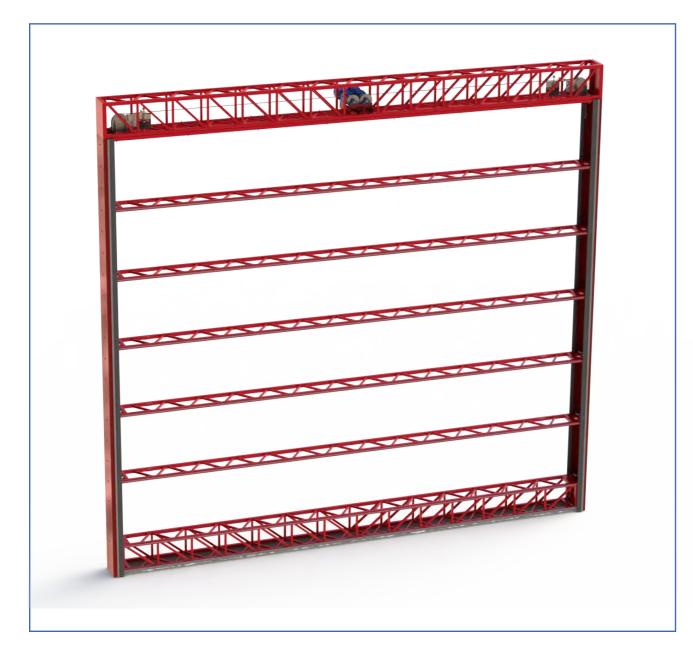
## **Maximum Dimensions**

Shipyard hangar doors don't have any limit for dimensions. We can manufacture 50000 mm X 35000 mm one pieces and unlimited width with mullion system.

## TECHNICAL PROPERTIES

## Steel Structure

Doors are made of two fabrics folding in opposite directions. Fabric sections are fastened to horizontal beams (Steel or aluminum). Minimum door thickness is 600 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 Beams**

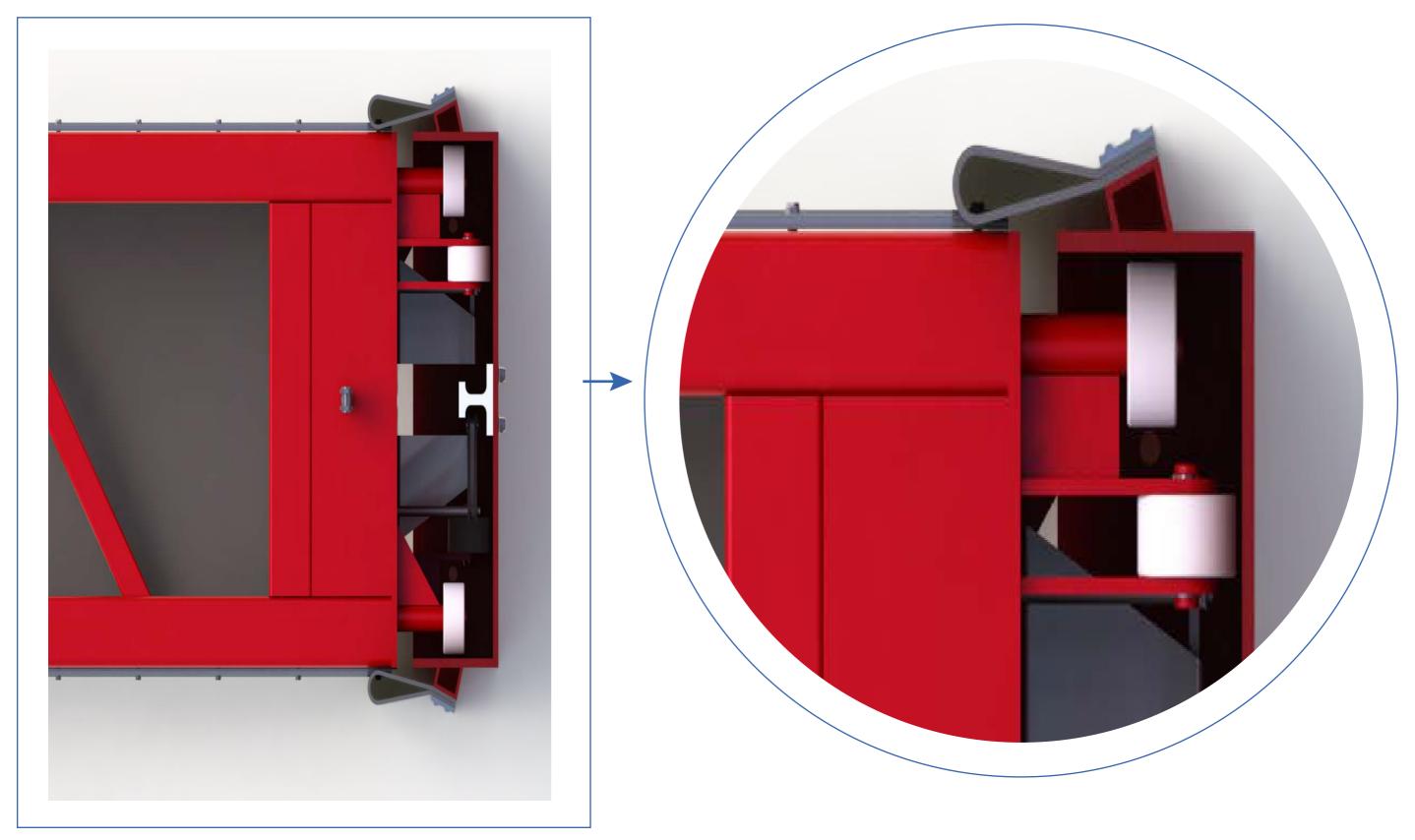
Bottom beam is designed according to wind resistance, dimension of the doors and, to carry load of the intermediate steel beams during door operations. Bottom beam also supply full closing and sealing in heavy wind conditions.





# Side guides

Shipyarddoor Flexible Giant® vertical guides are made of structural steel with a suitable depth and width dependent on the size of the intermediate beams. Guides is designed to provide weather-sealing between the door and door frame. Opposite our competitors Shipyarddoor® supply side guide rails with steel support parts, side guides are designed and manufactured easily replaceable in case of damage. Aluminum rails fixed with bolt to steel structure



## Cable System

Shipyarddoors are operated with steel cable,maximum of two cable each doors that running inside of the door guides. Cables are installed free of any kinks and the system design and sheave diameter is choosed carefully such to prevent the occurrence of any kinks or abnormal stress in the operating cables. Sheaves can be inspected easly by technicans.

## **Fabric**

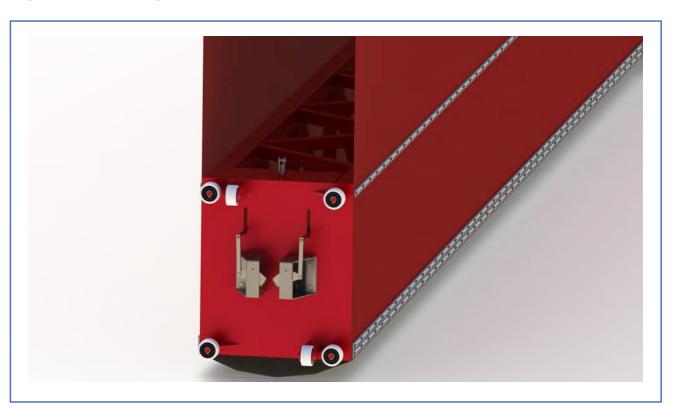
Specially choose fabric is suitable for long life. It have very high resistance against to UV damage, VALMEX POLYMAR ® industrial Fire resist 900-1500 gr/m2 2 mm 1100 Dtx B 6000. Tensile Straight 4300/4000 N/50 mm DIN 53354. Tear Strength 500/500 N DIN 53363.

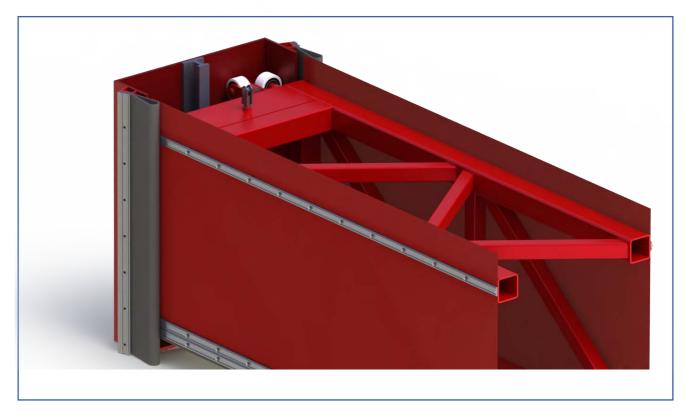
#### Fire Resistance

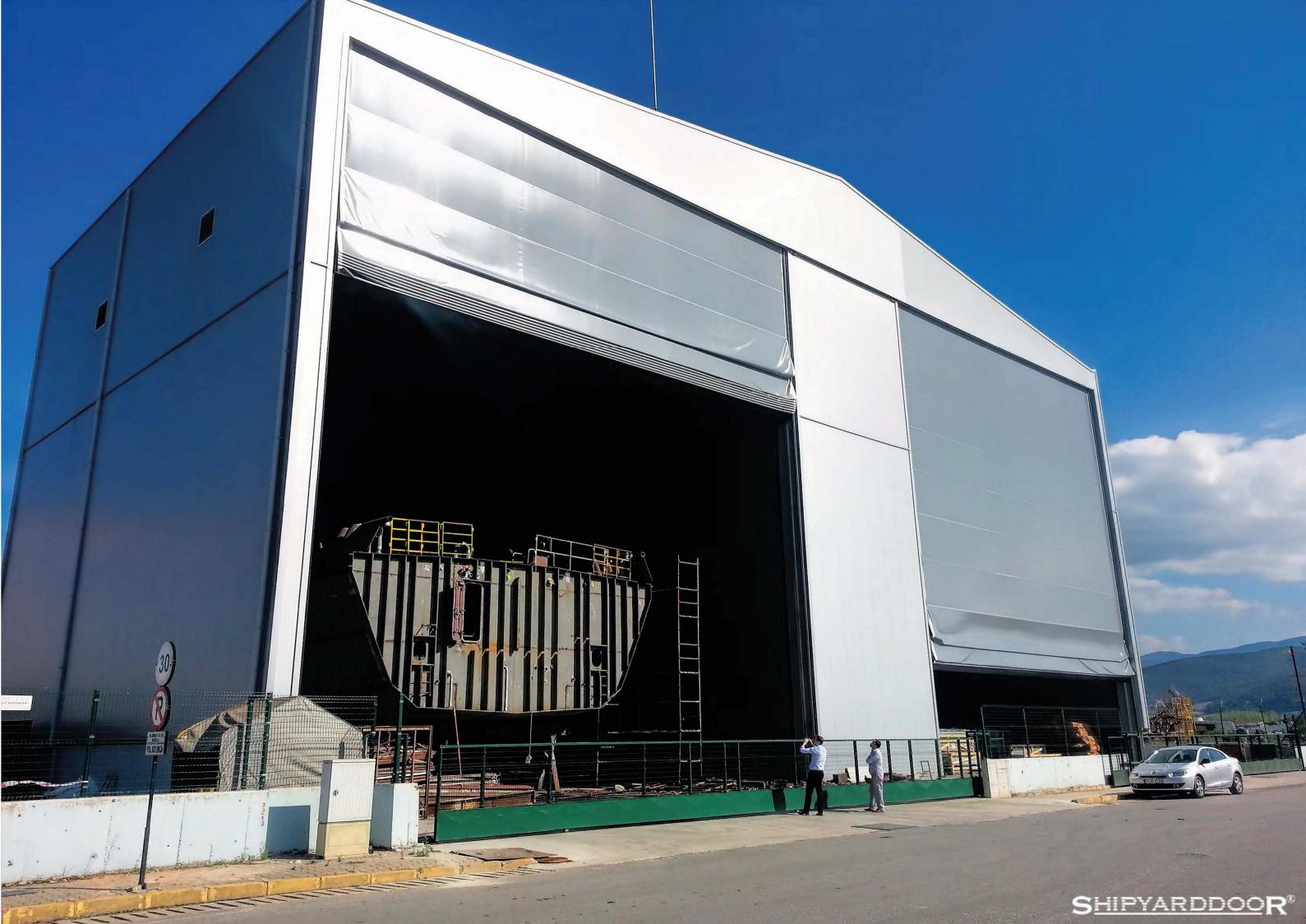
Fire resistance of the fabric is suitable for any fire safety regulations. Relative Standard is DIN 4102-B1. These materials are difficult to ignite. They include materials such as wood treated with a fire retardant and rigid foam plastics. A fire must extinguish itself when the source of the fire is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







#### **Insulation Data**

Standard Shipyarddoor Flexible Giant fold-up hangar Doors has excelent insulations cause of its extreme width and sealing properties. termal insulation value U<0.9 W/m2.K Isolated fabric also availble Sound attenuation 12 dB A,

#### Wind Resistance

Shipyarddoor ® 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 260 km/h hurricane standard

## Structural Loading

Shipyarddoor® hangar door is designed withstand dead load, seismic forces and design loads due to pressure and suction of wind calculated in accordance to envorimental and bulding ambient.

## Speed

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

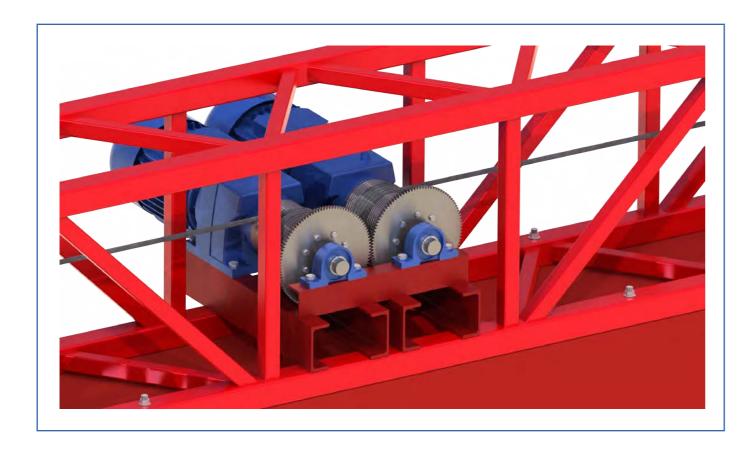
#### Load Arrestors + Wind Locks

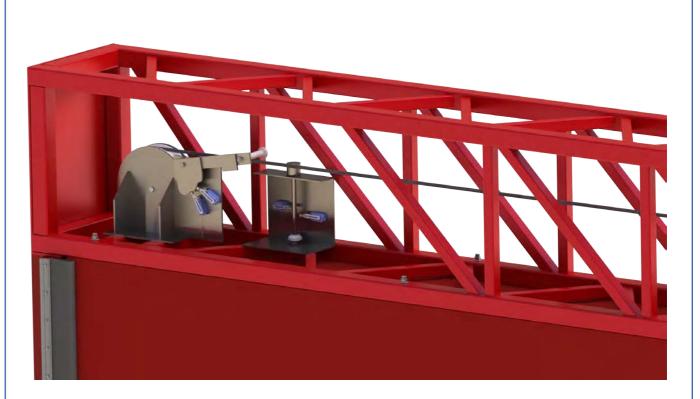
Shipyarddoor Flexible Giant® (with steel trusses) are equipped with load arrestors attached to bottom part of door.(Patent Protections) Load arrestors will prevent the door from falling down in case of motor or lifting strap or rope failure. Wind locks will prevent the door rising up from its close position 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.



## Driving Unit and limit switches

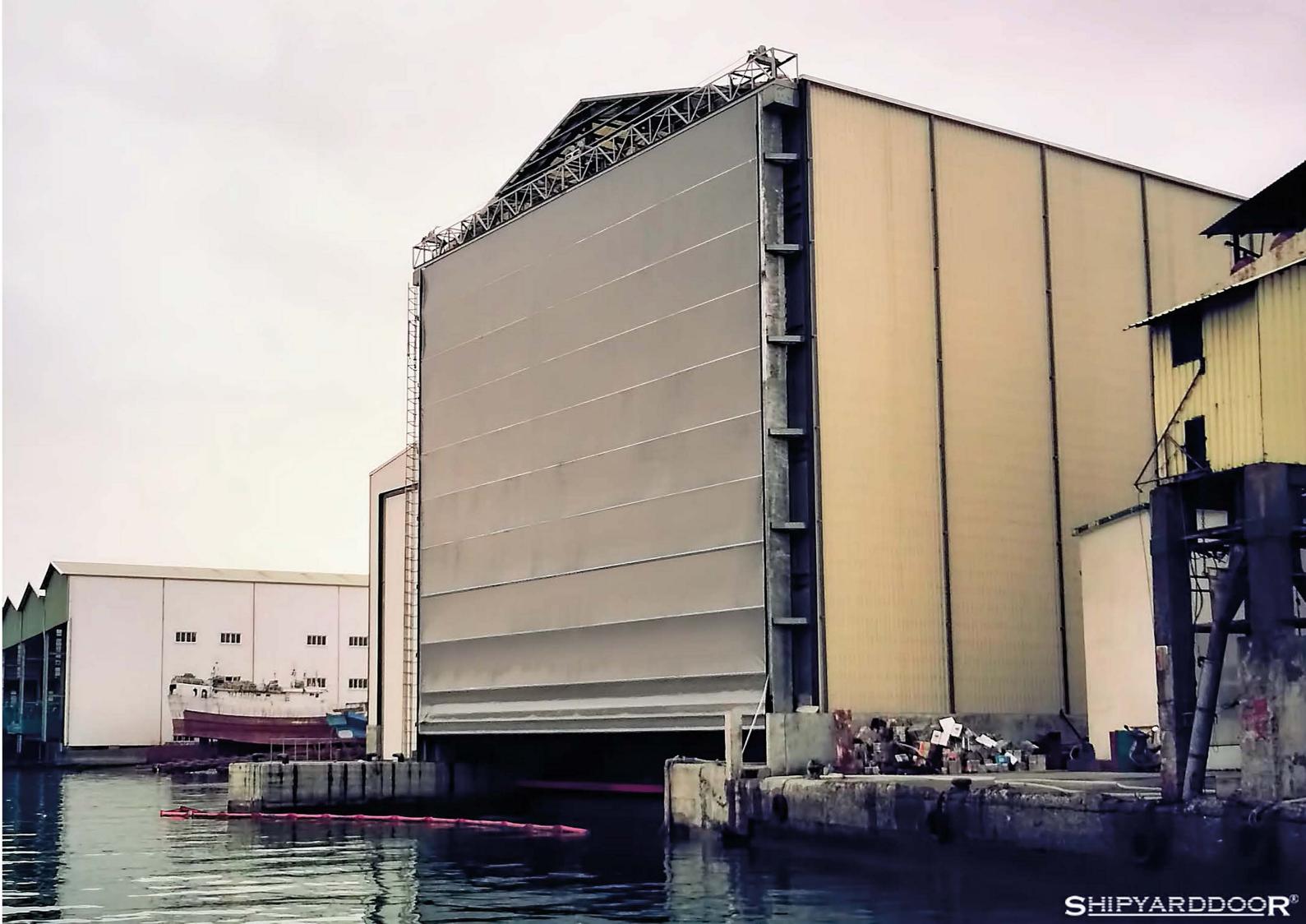
The lifting motors are normally located above the door opening. All Shipyarddoor hangar door system is equipped double motor to supply balanced rising also even 1 motor damaged other can be operated the system The limit switches are also located above the door opening. Shipyarddoor swich system no way to miss or damage all swich have both of side with safety swich. 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.





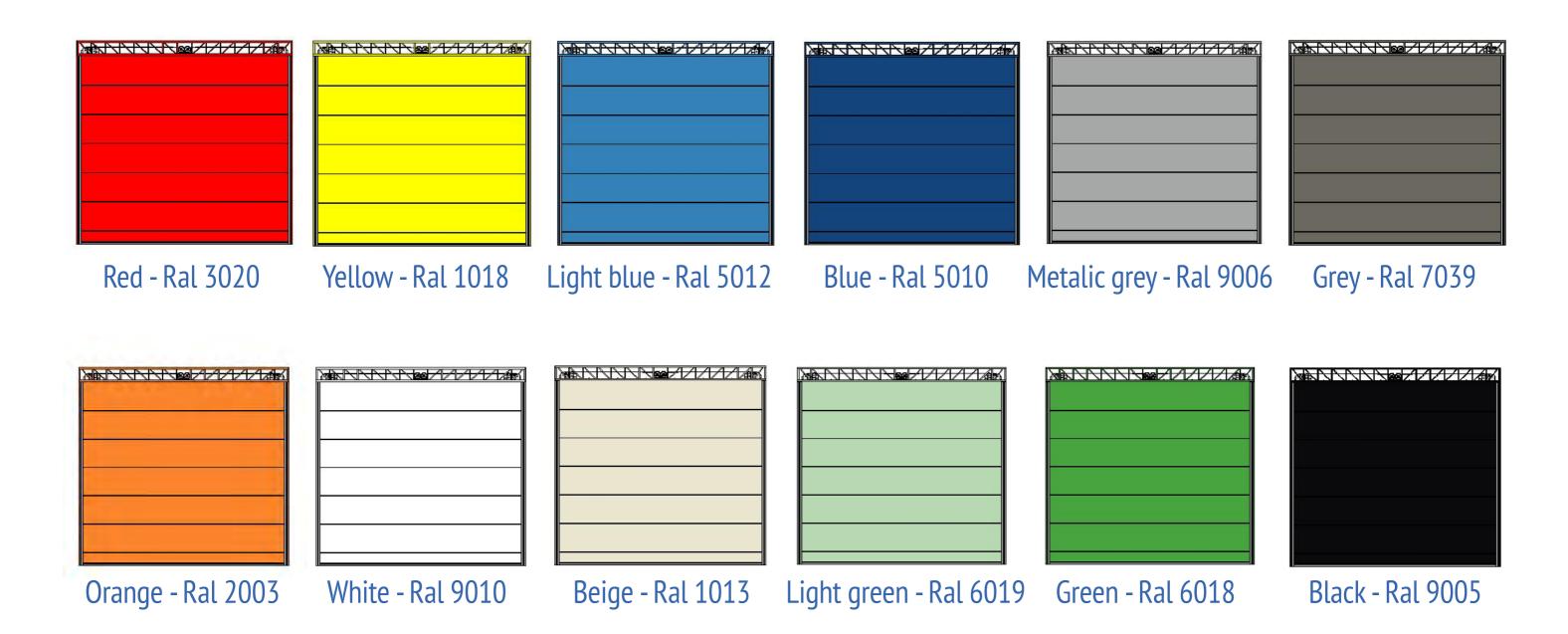
## Safety

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 Optionally: Bottom safety edge and pneumatic safety edge system is available.



## 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)



<sup>\*</sup>Some color is out of stock can be extend delivering time.



## **Operations**

Shipyarddoor® Flexible Giant fold up fabric hangar door is guide up and down with weather sealing vertical guides attached to the structure. Door is controlled by three buttons marked "Open," "Closed," and "Stop." 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 output shaft of the motor is available for manual operation. In cases of very large doors, this is not a feasible way of opening.
- Connecting the door to a power generator would eliminate the problem in case of a power failure.

#### **Optionally**

Control panel also contain -Frequency converters, Safety Edge System. PLC Controller with touchless button in special case.

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

#### Control panel

Control board is designed according to CE 2006/95 EC and to NEMA ICS 6, Standard. It is specially designed for simple and high durability.

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





