

SHIPYARDDOOR®



PVC FABRIC DOOR SYSTEMS

**SO
NICE
FLEXIBLE
STRONG**

The Aluflex® MEDIUM SIZE HANGAR DOORS



The Alu-Flex Vertical lifting Fabric doors for large opening area

Shipyards door, Alu Flex vertical lifting hangar door designed to solve large opening door requirements that don't have reliable solutions with other standard door.

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. Special door requirements between hangar doors and standard doors Alu-Flex Vertical Lifting Door supply as a options. we improve Alu-Flex lifting fabric doors for Large Opening area. Door is designed for mining ,big warehouse or small hangar applications any type large door requirements with limited wind resistance.

7/24 Operations

The Alu-Flex Vertical lifting Fabric door has excessive durability with flexible properties. Door can be operated 24 X 7 specially by selecting high resistance fabric and gearbox system for continuous operations.

Excellent Sealing

The Alu-Flex Vertical lifting Fabric have unique side sealing-aluminum leaves that also extended fabric supply better isolations. This heavy duty PVC coated fabric has excellent sealing feature and doors can be closed even at high windy conditions. It is designed for noiseless operations.

Low Maintenance

The Alu-Flex Vertical lifting Fabric doesn't require special maintenance as all parts are carefully selected for low maintenance. We avoid to use heavy maintenance parts whole door. There are no springs, ball-bearing or couplings that can be damaged if anything crashed or collides with the door.

Maximum Dimensions

The Alu-Flex Vertical lifting Fabric don't have any limit for dimensions with multiple application. Maximum doors for each parts 120 sq-mt is advised dimensions for 140 km/h wind resistance. Instead of our competitors we are very sensitive about wind loading.

TECHNICAL PROPERTIES

Main Structure

Doors are made of two fabrics folding in opposite directions. Fabric sections are fastened to horizontal beams (T 6063 T6 Aluminum Extrusion). Minimum door thickness is 120 mm increased to 180 mm. Intermediate beams are retractable by 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 intermediate steel beams during door operations. Bottom beam also supply full closing and sealing in heavy wind conditions.



Side guides

The Alu-Flex Vertical lifting Fabric door vertical guides are made of structural steel with a suitable depth and width depending on the size of intermediate beams. Guides are designed to provide weather-sealing between door and door frame. Side guides are designed and manufactured for easy replaceable in case of damage. Aluminum rails are fixed with bolt to steel structure.



Cable System

The Alu-Flex Vertical lifting Fabric door is operated with belt system, maximum of two belt each doors that are running inside the guides. Reinforced belts are installed free of any kinks and sheave diameter is chosen carefully to prevent any occurrence of kinks or abnormal stress while operating cables.

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 aluminum leaf to improve sealing. Specially selected rubber has high resistance against for outdoor conditions extreme cold and hot weather.

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. We also have Arctic Fabric for extreme climatic conditions-Secure and Sound Resistance fabric is available as a options.



Insulation Data

The Alu-Flex Vertical lifting Fabric Door has excellent insulations due to extreme width and sealing properties. Thermal insulation value $U < 1.5 \text{ W/m}^2\text{K}$. Isolated fabric also available Sound attenuation 16 dB A,

Wind Resistance

Shipyardsdoor[®] 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 material being used and type of loading sustained, operationally 120 km/h also at closed positions can be stand up to 180 km/h. According to door dimensions resistance can be change (Class 4-5 EN 12424) Special doors can be manufactured with wind speed bearing capacity up to 190 km/h for hurricane region.

Structural Loading

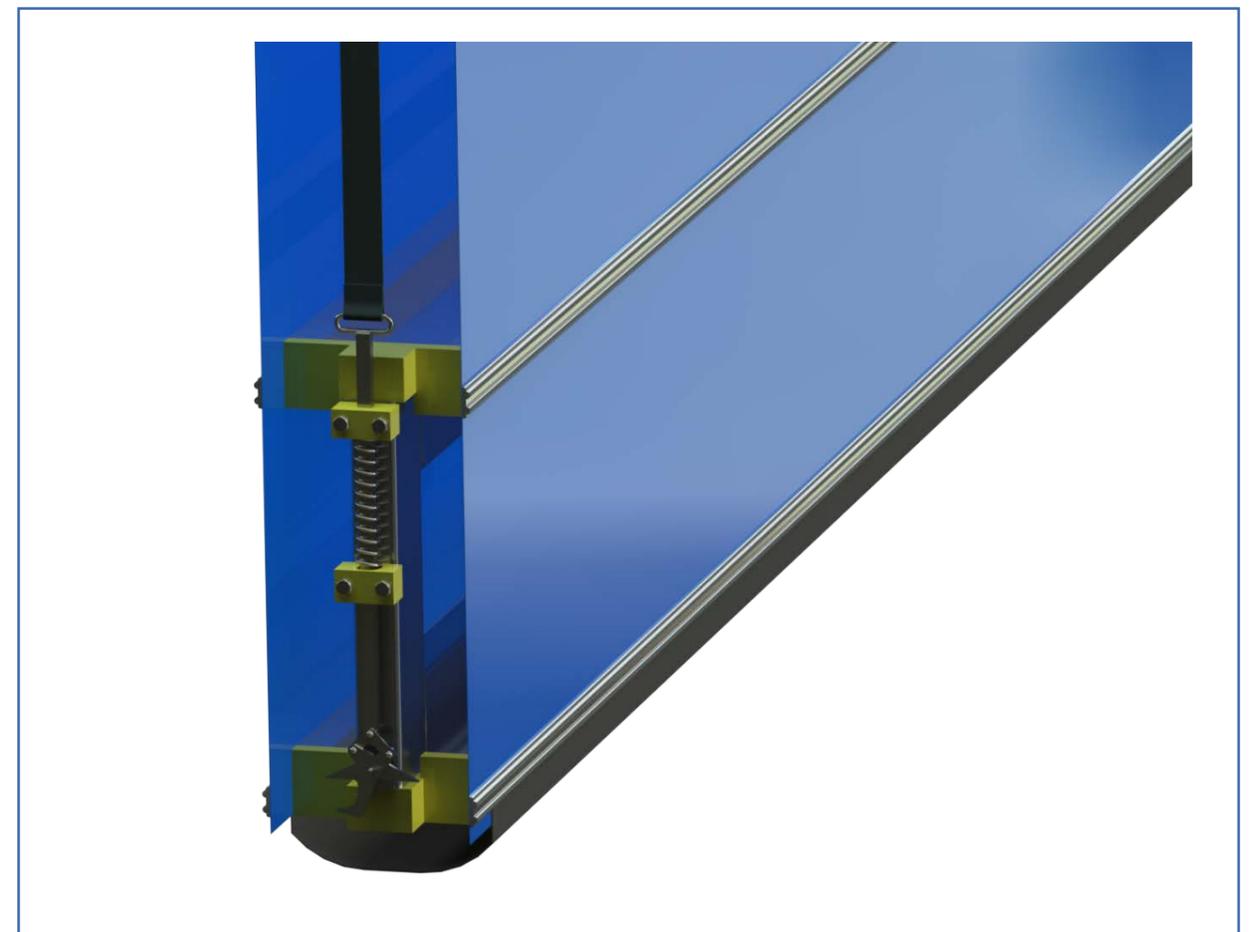
The Alu-Flex Vertical lifting Fabric door is designed to withstand dead load, seismic forces and design loads due to pressure and suction of wind calculated in accordance to environmental and building ambient.

Speed

Hangar Doors are operated at a standard 20 cm/sec opening and closing speed and can be increased up to 40 cm/sec.

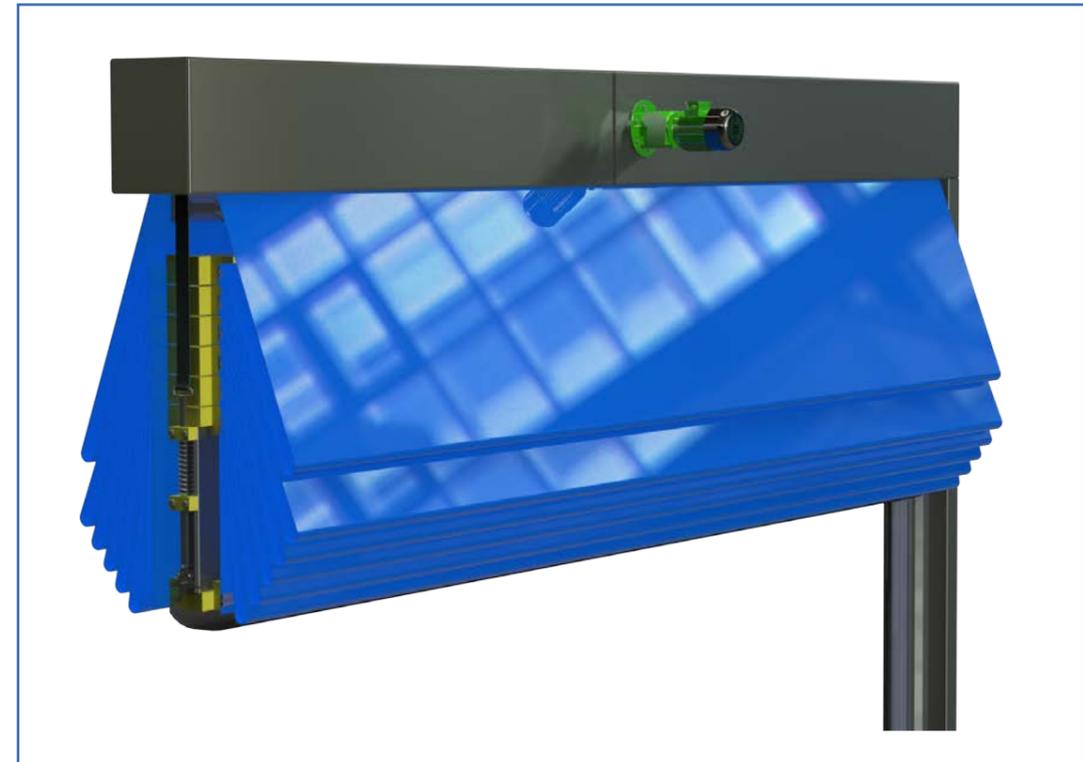
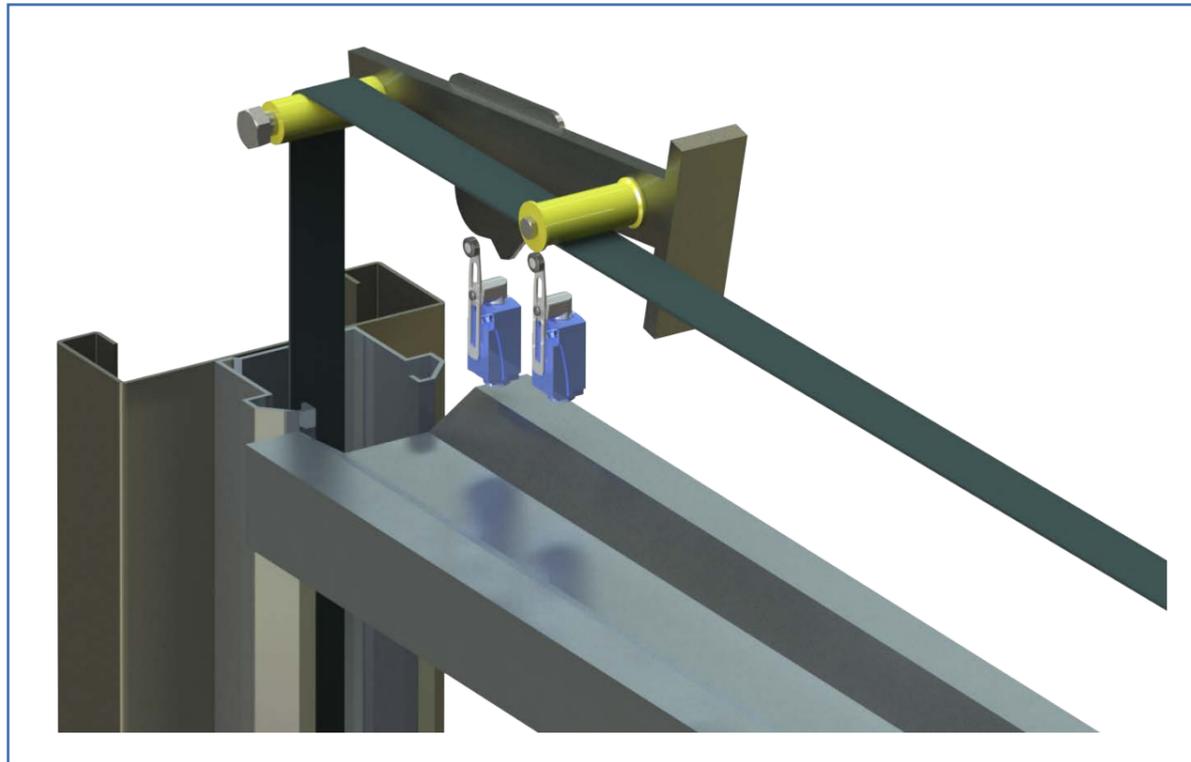
Load Arrestors + Wind Locks

The Alu-Flex Vertical lifting Fabric door 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 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. The limit switches are also located above door opening. The Alu-Flex Vertical lifting Fabric door switch system doesn't miss or damage, all switches are located both sides 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 in both directions. In upward direction the limit switches are located above door. At each end of door and topmost moving horizontal door beam will activate them. In downward direction limit switches are located above door opening on 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 , Photocell safety,thermic resistance, buzzer and warning light is served as a standard Optionally _ Bottom safety edge and pneumatic safety edge system is available.



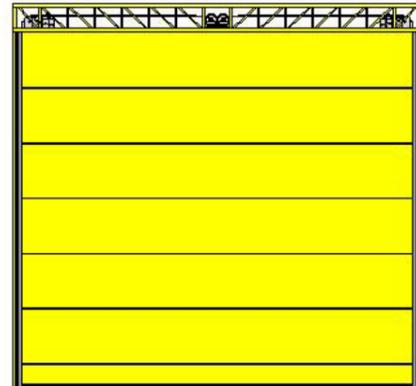
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Color

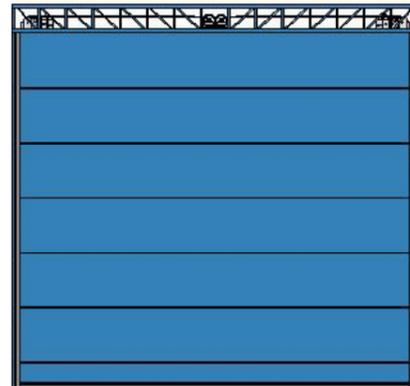
Wide range fabric color is available ,All main color at our stock (RAL 9002-9006-1001 -3001 – 5007-6001-7071) (some color is out of stock can be extend delivering time)



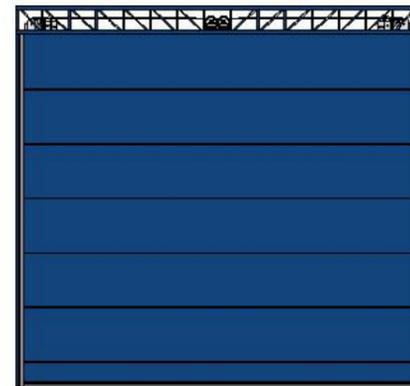
Red - Ral 3020



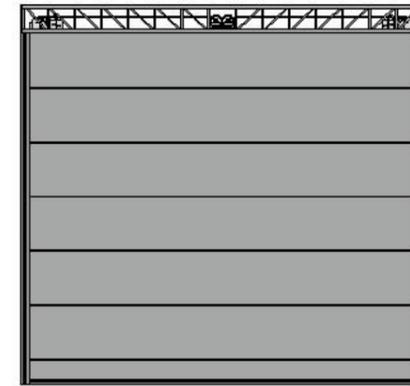
Yellow - Ral 1018



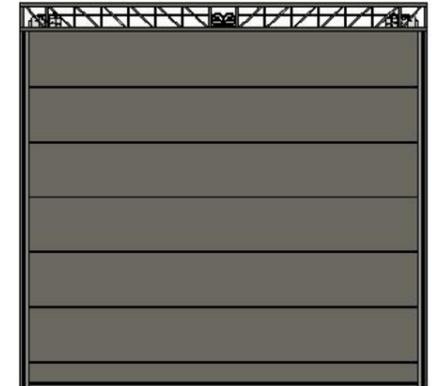
Light blue - Ral 5012



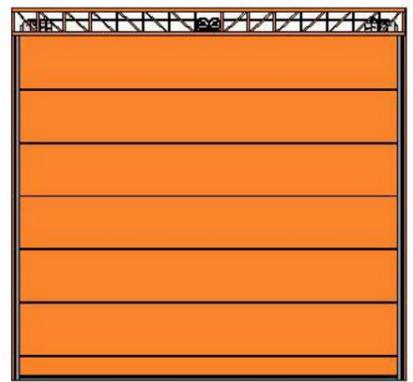
Blue - Ral 5010



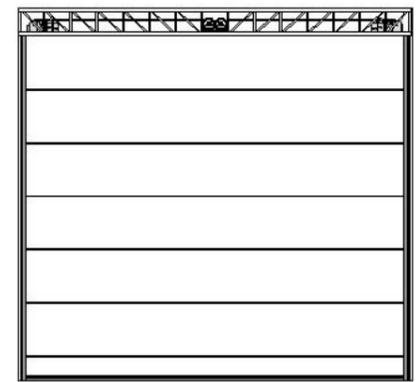
Metalic grey - Ral 9006



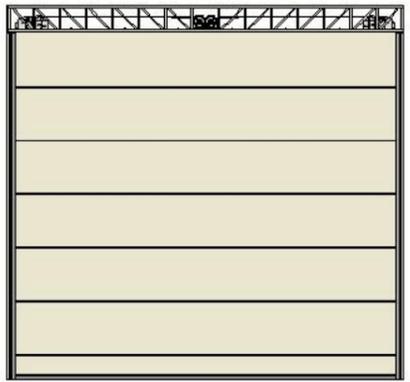
Grey - Ral 7039



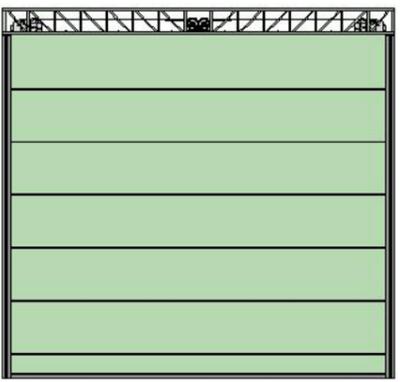
Orange - Ral 2003



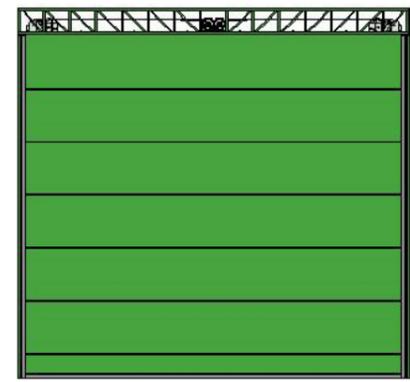
White - Ral 9010



Beige - Ral 1013



Light green - Ral 6019

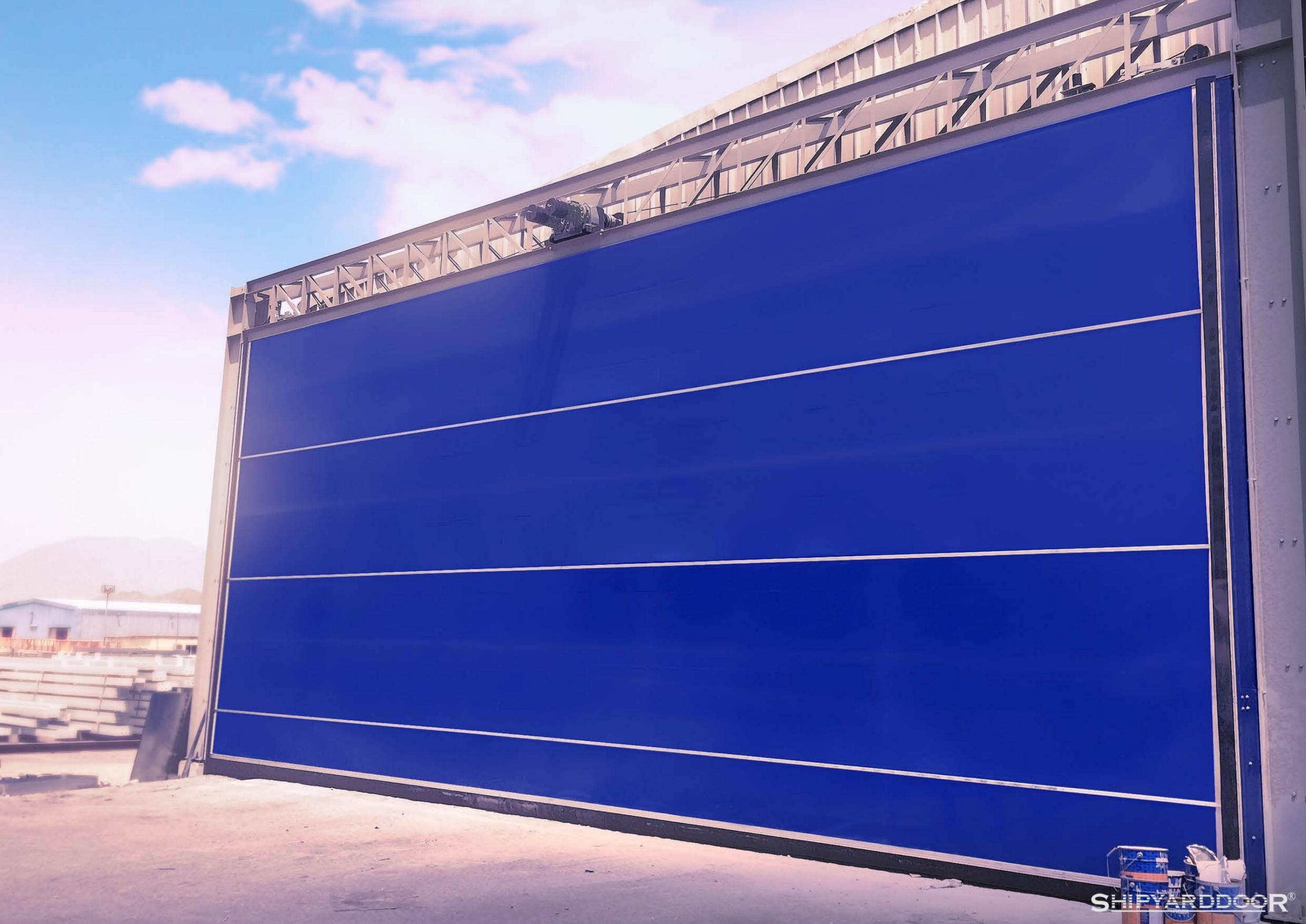


Green - Ral 6018



Black - Ral 9005

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



Operations

The Alu-Flex Vertical lifting Fabric 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

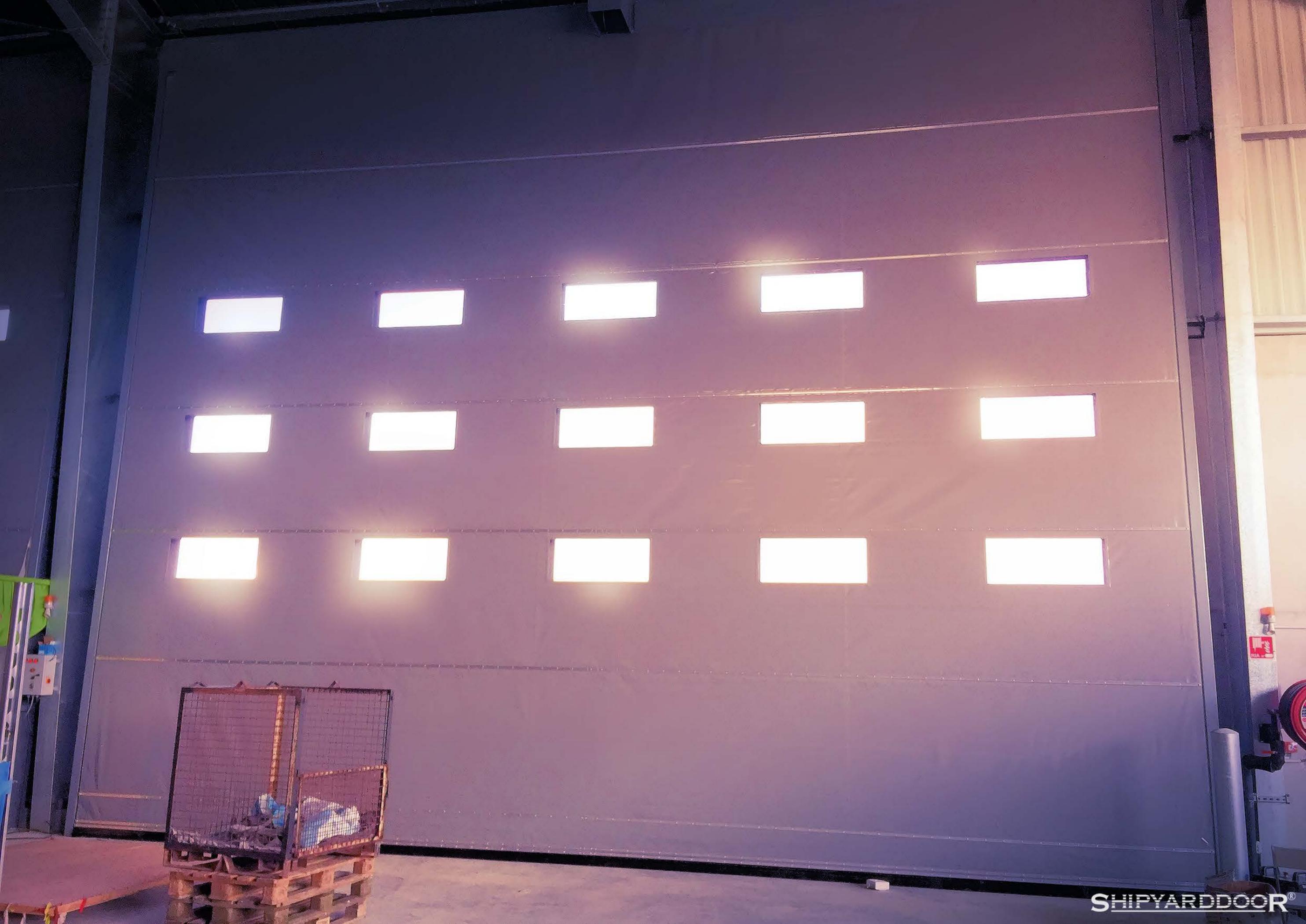
Control board is designed according to CE 2006/95 EC and to NEMA ICS 6, Standard. It is specially designed for simple and high durability.

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.

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.





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Discover
the potential

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SPEED FLEX[®] HANGAR DOORS