

SANAT PERSIAN MABN A

PVC FABRIC DOOR SYSTEMS

**SO  
BIG  
FLEXIBLE  
STRONG**

**SPEED FLEX® HANGAR DOORS**



Shipyards door , flexible hangar door designed to solve all extra ordinary door requirements with no limitations of width or height. Vertical lifting fabric hangar door was initially developed in the 1980 s for the needs of shipyard shipbuilding facilities. Cause of special requirements of ship yard industries doors need extreme properties. Shipyards door is manufactured first doors after increasing ship building business in turkey at 2003. Every year we improve our hangar doors according to clients special requirements. Especially in shipyard industries doors are effected to extreme working conditions. Shipyards door can be served at extreme conditions and hangar doors are being used at Airport,shipyard,and mining industries. Special doors can be manufactured for special requirements like crane doors sound isolated doors etc.

**7/24**

The flexible Giant has excessive durability.Hangar doors can be operated 24\*7 specially by selecting high resistance fabric and gearbox system for continuous operations.

### **Excellent sealing**

Hangar doors have unique side sealing pocket. 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. Ture and doors can be closed even at high windy conditions. It is designed for noiseless operations.

### **Low Maintenance**

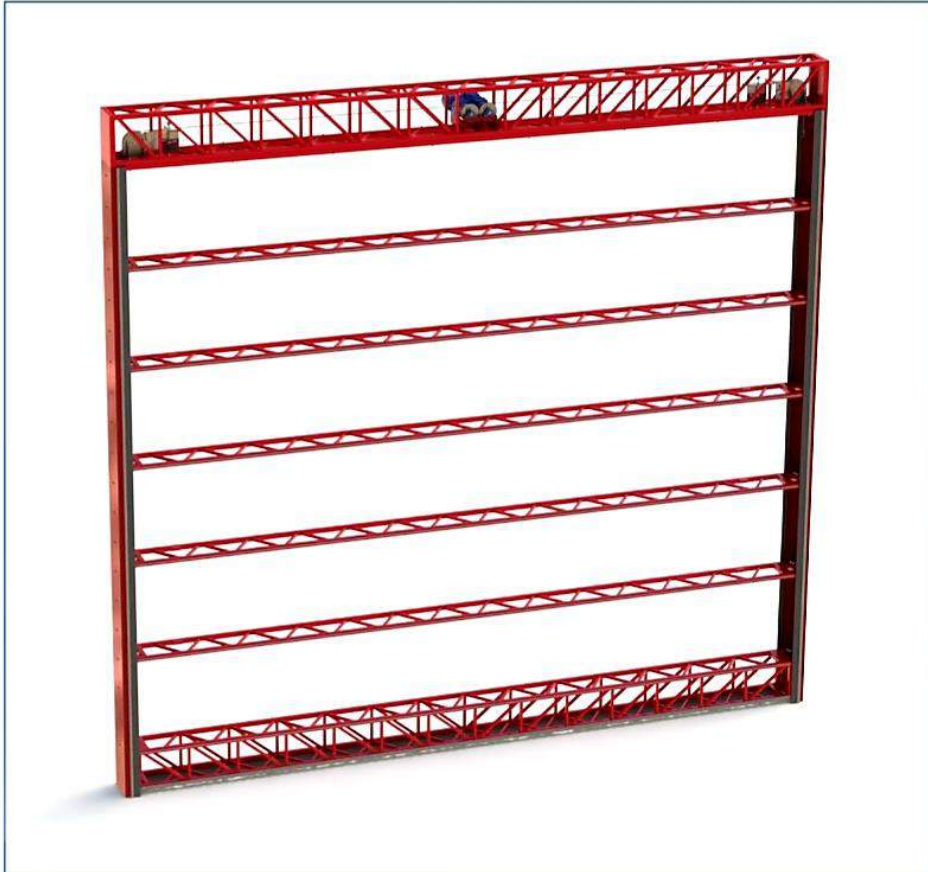
Flexible Giant hangar doors doesn't require special maintenance as parts are carefully selected for low maintenance.

### **Maximum Dimensions**

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

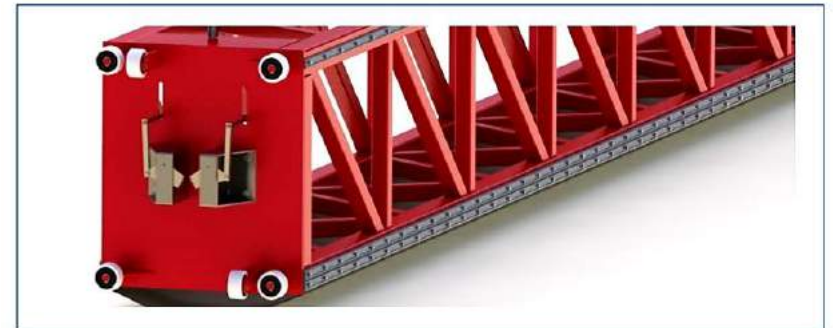
## Steel Structure

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. 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.



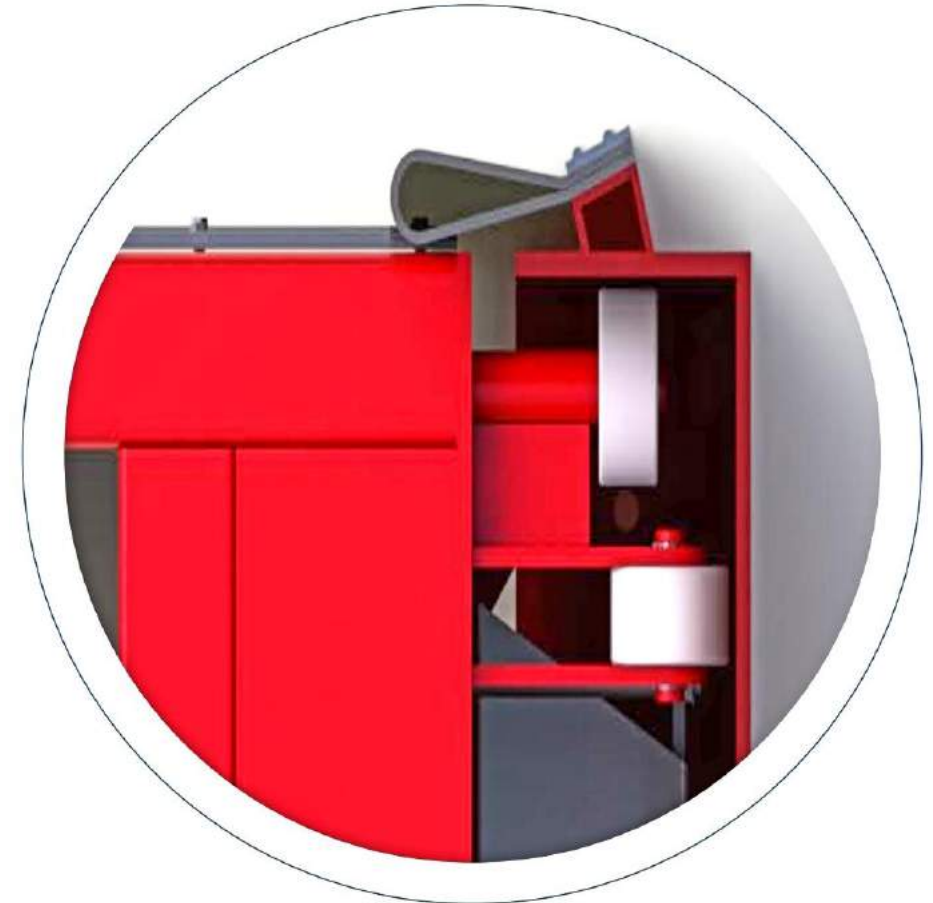
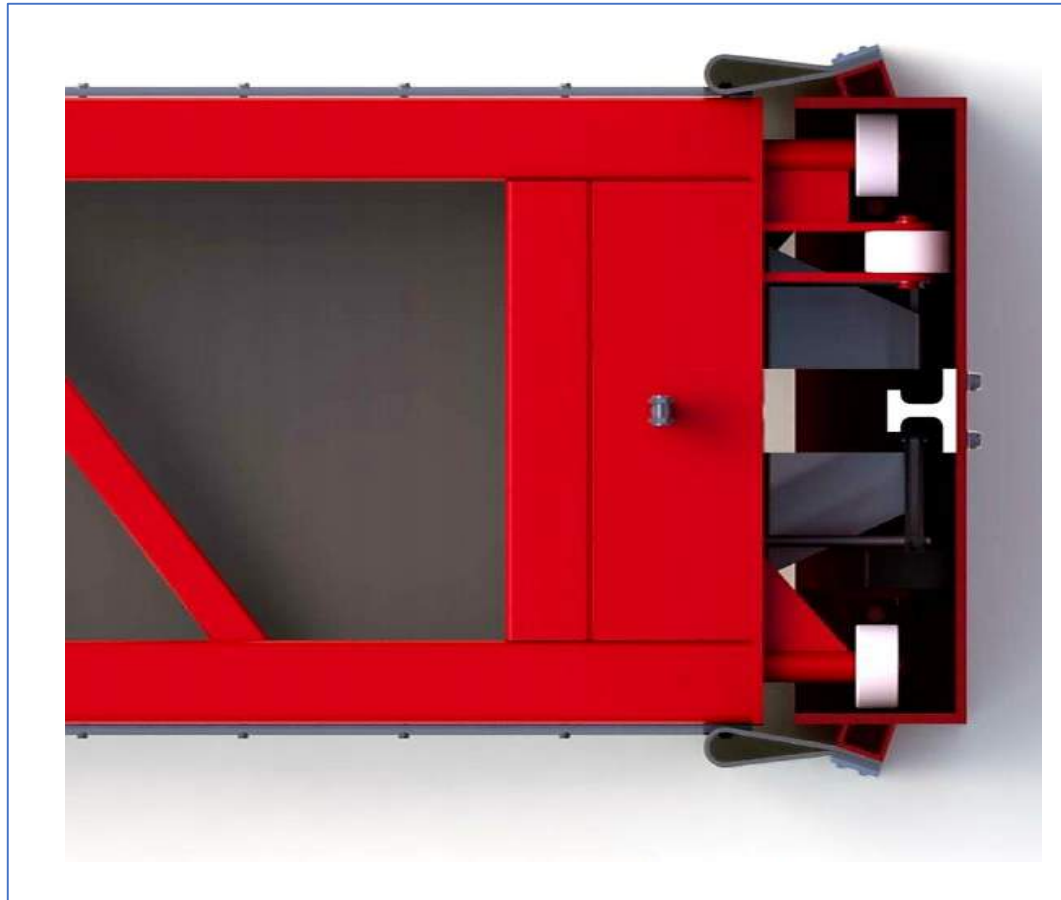
## Bottom Beams

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

shipyarddoor Flexible Giant 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

Shipyards door is operated with steel cable maximum of two cable each doors that are running inside the guides. Cables are installed free of any kinks and sheave diameter is chosen carefully to prevent any occurrence of kinks or abnormal stress while operating cables.

## Fabric

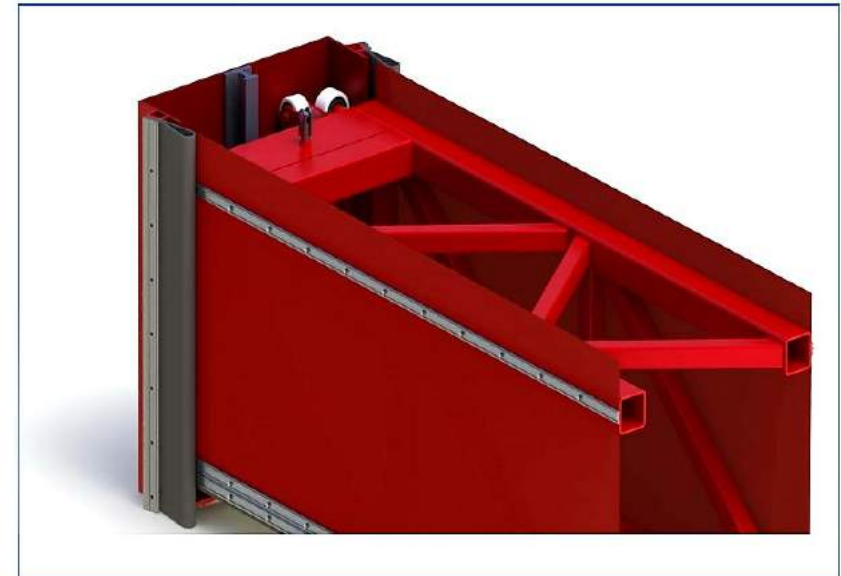
Specially choose fabric is suitable for long life . It have high resistance against to UV damage VALMEX POLYMAR industrial fire 900-1500 gr/m<sup>2</sup> 2mm 1100 Dtx B 6000. tensile straight 4300/4000 N/50 mm DIN 53354. tear Strength 500/500 N DIN 53363.

## 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 selected rubber has high resistance against for outdoor conditions extreme cold and hot weather.







## Insulation Data

Standard shipyard door flexible Giant fold-up hangar Door has excellent insulations due to extreme width and sealing properties. Thermal insulation value  $U < 0.9 \text{ W/m}^2 \cdot \text{K}$  Isolated fabric also available Sound attenuation 12 Db A.

## Wind Resistance

Shipyard door 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 140 km/h also at closed positions can be stand up to 180 km/h . Special doors can be manufactured with wind speed bearing capacity up to 230km/h for hurricane region.

## Structural loading

Shipyard door hangar door is designed to withstand dead load , seismic forces and design loads 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 40cm/sec.

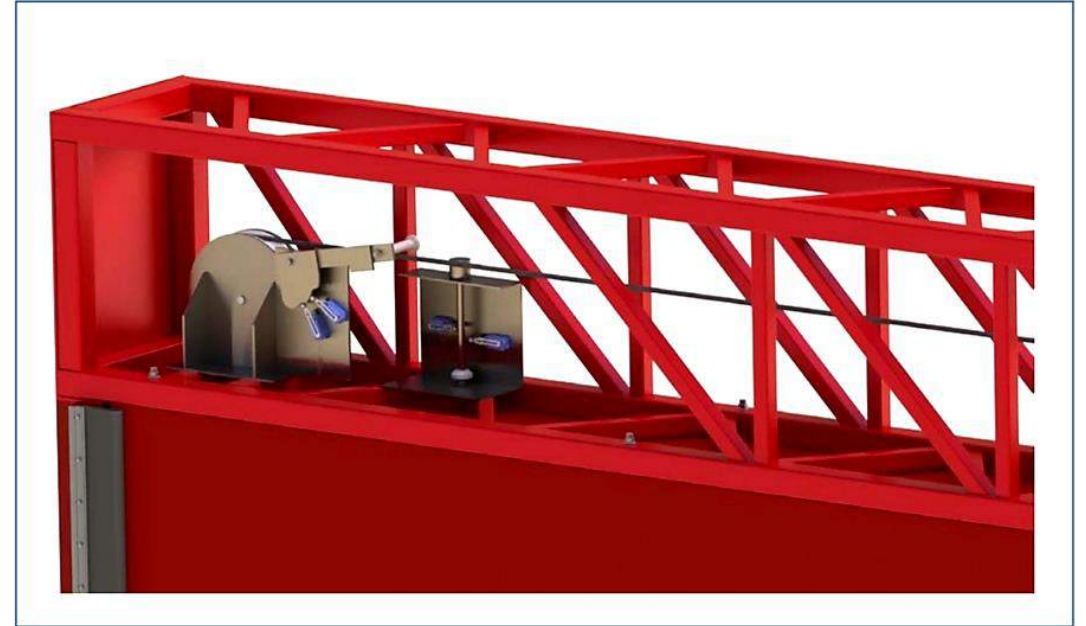
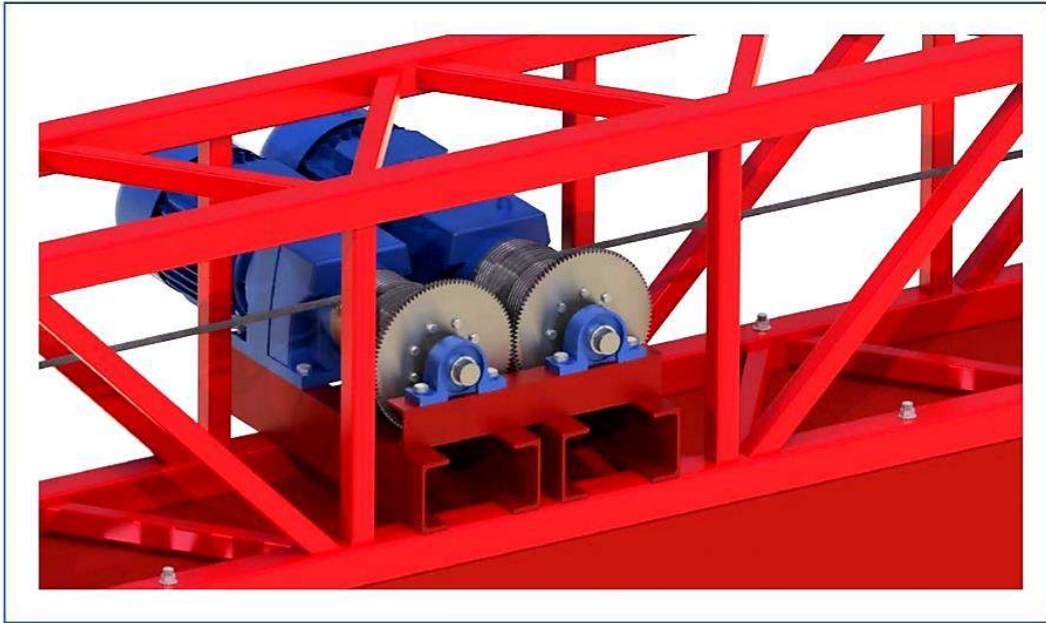
## Load Arrestors + Wind locks

Shipyard door 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 door rising up from its close position even in very windy conditions. Load arretors 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 shipyard door hangar doors are equipped with double motor to supply balanced uplift and even though if 1 motor damaged other can operate the system . The limit switches are also located above door opening shipyard 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 swithes.



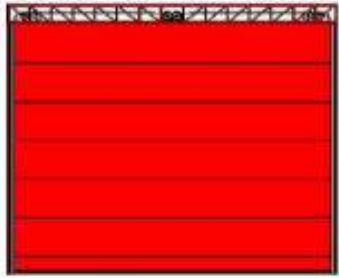
## Safety

Doors are manufactured according to CE standard . Applicable Directives 89/106/EC-99/93/E Applicable standarfs: EN13241-1:2003+A1:2011-EN 12978:2008 and load Arrestors , wind lock , thermic resistance , buzzer and warning light is served as a standard opetionally: Bottom safety edge and pneumatic safety edge system is available.



## Color

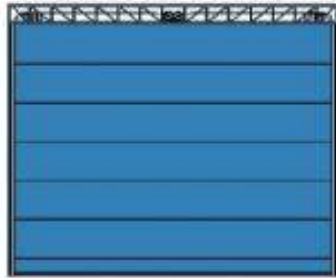
wide range fabric color is available ,All main color at our stock (ral 9002-9006-1001-3001-5007-6001-7071)(some color is out of stock can be extend delivering time)



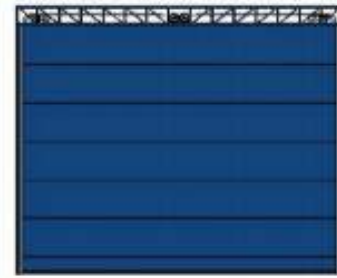
Red - Ral 3020



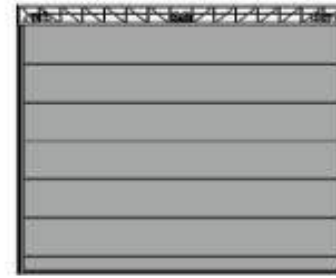
Yellow - Ral 1018



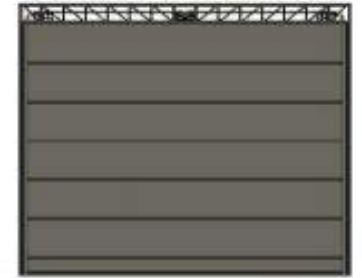
Light blue - Ral 5012



Blue - Ral 5010



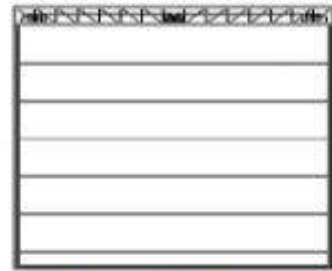
Metalic grey - Ral 9006



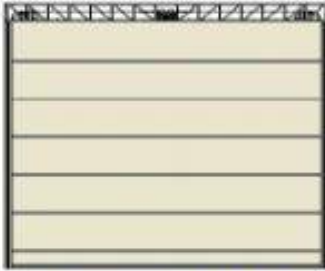
Grey - Ral 7039



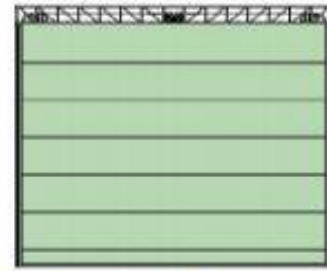
Orange - Ral 2003



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

shipyard door flexible Giant fold up fabric hangar door is guide up and down weather sealing vertical guides attached to the structure .Door is controlled by three buttons marked open ,closed , and stop . Audible and visual warning device 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 power generator would eliminate the problem in case of 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 will supply emergency power to the door system in case of power failure.

## Control panel

Control board is designed according to CE 2006/95 EC and 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.





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