

MIACASA

GROUP



▶ CONTENTS

FIRE RATED PRODUCTS

- FIRE RATED SINGLE SKIN ROLLING SHUTTERS 05
- FIRE RATED DOUBLE SKIN ROLLING SHUTTERS 06
- FIRE CURTAINS AND SMOKE CURTAINS 07
- FIRE RATED STEEL DOORS 08
- FIRE RATED WOODEN DOORS 09
- FIRE RATED FULLY GLAZED DOOR (WITH TOP & SIDE TRANSOM) 10
- FIRE RATED GLAZED PARTITIONS 11

SPECIALIZED DOORS

- BULLET PROOF DOORS , WINDOWS & COUNTERS 12
- BLAST RESISTANT DOORS & WINDOWS 13
- HANGAR DOORS 14

NON- FIRE RATED PRODUCTS

- GI SINGLE SKIN ROLLING SHUTTERS 15
- GI DOUBLE SKIN ROLLING SHUTTERS 16
- ALUMINIUM SINGLE SKIN ROLLING SHUTTERS 17
- ALUMINIUM DOUBLE SKIN ROLLING SHUTTERS 18
- POLYCARBONATE ROLLING SHUTTERS 19
- PERFORATED ROLLING SHUTTERS 20
- VENTILATED SINGLE SKIN ROLLING SHUTTERS 21
- GRILLE ROLLING SHUTTERS 22
- INDUSTRIAL & RESIDENTIAL SECTIONAL OVERHEAD DOORS 23
- INDUSTRIAL & RESIDENTIAL GLAZED SECTIONAL OVERHEAD DOORS 24
- INDUSTRIAL HEAVY DUTY INSULATED SLIDING DOOR 25
- INTERNAL HIGH-SPEED DOORS (PVC ROLL UP DOORS) 26
- EXTERNAL HIGH-SPEED DOORS (PVC FOLD UP DOORS) 27
- INTERNAL HIGH-SPEED INSULATED DOORS (INSULATED PVC ROLL UP DOORS) 28

LOADING SOLUTIONS

- DLHH ELECTROHYDRAULIC DOCK LEVELER WITH HINGED LIP 29
- DLHH ELECTROHYDRAULIC DOCK LEVELER WITH TELESCOPIC LIP 30
- FT-SERIES VERTICAL STORING DOCK LEVELER (STATIONARY , SLIDING) 31
- MDLM MECHANICAL EDGE-OF-DOCK LEVELER 32
- DSHRT RETRACTABLE DOCK SHELTER (COLLAPSIBLE) 33
- INFLATABLE DOCK SHELTER OF DSHINF SERIES 34
- EXTERNAL FRAMES OF FEH (90/60/45/30) AND FET (90/60/45/30) SERIES DOCK HOUSES OF STANDARD SERIES (45/60/90) 35

PRODUCT CERTIFICATIONS

36

OUR MAJOR CLIENTS

39

About Miacasa Group

Miacasa is a world class manufacturing company with expertise in Design, engineering and manufacturing of Fire Rated and Non-Fire Rated Rolling Shutters and Industrial Doors. The Fire rated rolling shutters are manufactured and tested as per UL 10B / NFPA 80 standards.

Apart from fire rated rolling shutters, we are also one stop shop that provides clients a total package Fire rated Steel Doors, Fire Rated wooden Doors, Bullet and blast resistant doors, Fire Rated Glazed partitions, Fire Rated Glazed Doors etc.

The products, manufactured and distributed to customers, are tested as per standards of third party certification from Underwriters Laboratories (UL 10B), Warrington Fire (BS 476 Part 22), ITS Intertek (UL10 C and BS 476 P22 under Warnock Hersey WH Mark scheme).

Our manufacturing is empowered with modern and sophisticated machinery which allows us to provide the best class and quality finish to our customers. Our products are made from high quality raw materials conforming to international standards, undergoing strict quality controls. Our products are well recommended by international consultants, engineers, and contractors due to high quality and aesthetic appearances. We have executed many projects all over the Middle East, Africa, India.

As we look into the future, Miacasa team continuously strives for producing thoughtfully engineered products in its endeavour to enrich consumer lives.



Who We Are

Miacasa Industries is one of the leading manufacturers of UL Classified Fire Rated Rolling Shutters. Our product range also includes Heavy Duty Insulated Rolling Shutters, Sectional Overhead Doors, High Speed Doors, Loading solutions, Fire Rated and Non Fire Rated Steel and Wooden Doors, Bullet and Blast Resistant Doors.

Our motto is to provide high quality product with total customer satisfaction.



MISSION

- To offer innovative and affordable solutions in the entrance and loading industry.
- To make products competing with international standards and beyond.
- To continuously improve our product design and performance to meet the purpose and standards of the customers.

VISION

Miacasa Group's motive is to give the most trustworthy services. Facilitate accurate delivery and timely operations and procedures. Enhancing user satisfaction by Improving the potential and overall growth of the industry.

CORE VALUES

Be Pioneers: We innovate and push for boundless creativity through curiosity.

Pursue Diversity: Different views and experiences are advantages. Our global presence give us perspectives that drive better business.

Act With Integrity: We are honest and forthright in our dealings. Building trust builds a better company.

Take Ownership: We are accountable for ourselves, our colleagues, our clients and our company.

Collaborate: Together we are stronger. We deliver more success through shared goals and mutual support.

Exceed Expectations: We understand our colleagues' and clients' needs and always exceed expectations.

FIRE RATED PRODUCTS

FIRE RATED SINGLE SKIN ROLLING SHUTTERS

MC-777, Miacasa Fire Rated Rolling shutter is the Heavy-Duty Industrial Grade rolling shutter with 3Hours of Fire rating tested to UL 10B /NFPA 80 standard and approved by the UAE Civil Defense Authority.

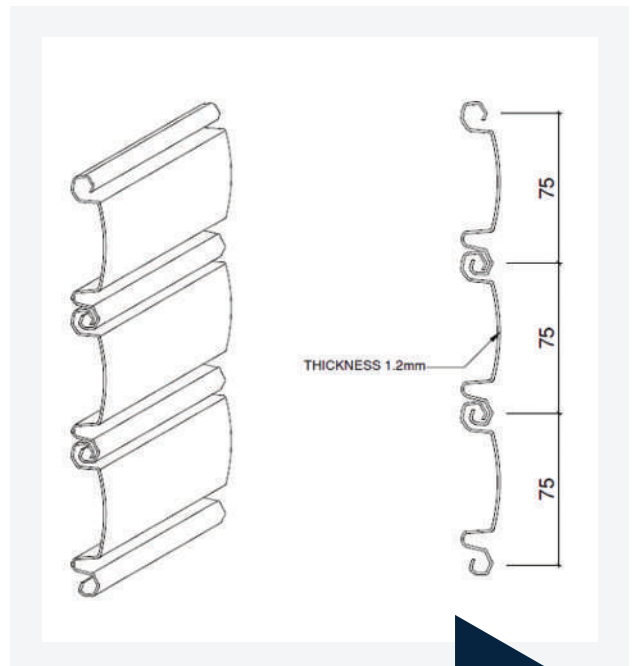
Function ▶

During the event of a fire, the shutter can be activated with the help of the thermal fusible link & Fire alarm Interface panel, When the room temperature increases above 71°C, the fusible link will melt and disengage the gear system which allows the shutter to close with gravity. Apart from the mechanical system shutter can also be connected to the building's fire alarm system and when the fire alarm gets on, this signal sends to the rolling shutter control panel and make the shutter close under control descent.



Specifications ▶

- Slats/Curtain: GI 1.2mm thick, 75mm pitch Height
- Guide Rail: MS 'G' model 105mm width, 3 mm thick
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 6-inch Dia, Min. 6mm thick
- Operation: 3 Way push button control with Lockable SS Key Box
- Thermal Fusible Link
- Fire Alarm Integration
- Electric Solenoid Release
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Pneumatic safety sensor
- Finish: All visible parts are powder coated in Standard RAL



Tested & Certified:

UL 10B/NFPA 80 – Fire Test Assemblies

Approved by UAE Civil Defense and major Fire departments in GCC

FIRE RATED DOUBLE SKIN ROLLING SHUTTERS

Regular fire shutters protect from the fire in terms of integrity by resisting the flame. However, heat flux can be transmitted by radiation too. Here Miacasa comes with a solution. MC 999 Fire-Rated Double Skin Rolling Shutters are constructed to resist both flames also controls the heat transfer.

MC999 are 2Hours of Fire rating tested to UL 10B /NFPA 80 standard and approved by the UAE Civil Defense Authority.

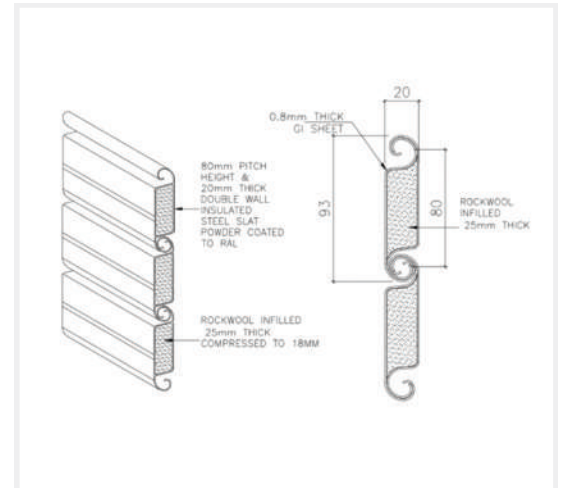


Function ▶

During the event of a fire, the shutter can be activated with the help of the thermal fusible link & Fire alarm Interface panel, When the room temperature increases above 71°C, the fusible link will melt and disengage the gear system which allows the shutter to close with gravity. Apart from the mechanical system shutter can also be connected to the building's fire alarm system and when the fire alarm gets on, this signal sends to the rolling shutter control panel and make the shutter close under control descent.

Specifications ▶

- Slats/Curtain: GI 0.8mm +0.8 mm thick, 80mm pitch Height
- Infill: Rockwool 100kg/m³ density
- U-Value for fully fitted door: 1.47 W/m²k
- Sound Insulation: 26dB
- Guide Rail: MS 'G' model 105mm width, 3 mm thick
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 6-inch Dia, Min. 6mm thick
- Operation: 3 Way push button control with Lockable SS Key Box
- Thermal Fusible Link
- Fire Alarm Integration
- Electric Solenoid Release
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Pneumatic safety sensor
- Finish: All visible parts are powder coated in Standard RAL



Tested & Certified:

UL 10B/NFPA 80 – Fire Test Assemblies
Approved by UAE Civil Defense and major Fire departments in GCC

FIRE CURTAINS

Fire curtains are used to prevent the spread of fire within a building and can be discreetly installed to be hidden from view until deployed. The perfect combination of function and aesthetics the fire-resistant fabric system allows architects the freedom to implement their designs and meeting safety requirements at the same time.

The Fire curtain is for use in applications where up to 180 minutes fire integrity is required.

Tested and approved by Underwriters Laboratories LLC to Standards.

- UL10D: Fire Tests of Fire Protective Curtain Assemblies.
- UL1784: Air Leakage Tests of Door Assemblies and Other Opening Protectives.
- UL864: Control Units and Accessories for Fire Alarm Systems.
- UL723: Test for Surface Burning Characteristics of Building Materials.
- Approved by UAE Civil Defense and major Fire departments in GCC



Specifications ▶

- Headbox 1.2mm galvanized mild steel with 2mm end caps (Powder Coated finish Optional)
- Rollers 76mm coated mild steel tube
- Motors 24V DC, 3100 RPM
- Fabric: Woven glass fibre fabric with stainless steel wireless reinforcement
- Bottom Bar 20mm x 20mm - 20mm x 40mm mild steel (Powder Coated finish Optional)
- Side Guides 100 x 50 X 3mm GI (Powder Coated finish Optional)

SMOKE CURTAINS

Smoke curtains are active curtain barrier that prevents the spread of smoke & control the spread of smoke in the event of a fire. Options are available where smoke control and fire resistance are required protecting the spread of smoke in the building and protect the means of escape and create tenable conditions.

Tested and approved by Underwriters Laboratories LLC to Standards.

- UL1784: Air Leakage Tests of Door Assemblies and Other Opening Protectives.
- UL864: Control Units and Accessories for Fire Alarm Systems.
- UL723: Test for Surface Burning Characteristics of Building Materials.
- Approved by UAE Civil Defense and major Fire departments in GCC

Specifications ▶

- Headbox 1.2mm galvanized mild steel with 2mm end caps (Powder Coated finish Optional)
- Rollers 76mm coated mild steel tube
- Motors 24V DC, 3100 RPM
- Fabric: Woven glass fibre fabric with stainless steel wireless reinforcement
- Bottom Bar 20mm x 20mm - 20mm x 40mm mild steel (Powder Coated finish Optional)

FIRE RATED STEEL DOORS (BRAND: VULCAN)

Fire rated steel doors are designed for all the residential, commercial and industrial applications. Fire rated Steel Doors are made out of Double skinned galvanized steel with honeycomb or Rockwool Infill which provides insulation. Available in both Single and Paired Configurations. Fire rated steel doors provides a contractor friendly and cost-effective means of Fire Protection. Fire Rating up to 180 Mins as per UL Standards & up to 240 Mins in BS Standards.

Specifications ►

FRAME PROFILE

- Materials - 1.5 to 3 mm thick G.I. Steel
- Profiles - SRF, DRF, DASRF, SASRF, DADRF, RGSRF, RGDRF
- Jamb Depth - 150-330 mm
- Corner Construction - Welded Joint, Knock down
- Structural Opening - Frame Size - 10mm more in Width & 5mm more in Height
- Ironmongery - Frame reinforced to receive hinges, lock strike plate with protective steel mortar guard welded within frame
- Finish Polyester Powder coat (any RAL except metallic/ Matt) Smooth-up to 60-90 microns

DOOR LEAF CONSTRUCTION

- Material - 1.2 to 3 mm thick G.I. Steel
- Construction - Seamless Faces, Interlocking Edges
- Leaf Thickness - 46 mm thick
- Infill - Honey Comb/Rockwool Infill(100kg/m³)
- Vision Panel - 5mm Thick Keralite Glass
- Finish - Polyester Powder coat (any RAL except Metallic/ Matt) Smooth-up to 60-90 microns

HARDWARES

Fire Rated/Tested Hardware complying to UL/ANSI, BS/CE.



Tested & Certified:

- ANSI/UL 10B – Fire Test Assemblies
- ANSI/UL10C – Positive Fire Test for Assemblies
- BS 476 P22 1987-Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction.
- Approved by UAE Civil Defense and major Fire departments in GCC

FIRE RATED WOODEN DOORS (BRAND: VULCAN)

Fire Rated Wooden Doors are designed for use in residential & commercial Applications. Wooden Doors are applicable in both single & Paired Configurations. Wooden Doors are mainly used in the interiors. Different species of Hardwoods, Veneers are used to provide unique finishes to the doors. Other means of finishes such as Laminate and paint also can be used. Our Wooden Doors can achieve acoustic rating upto 35dB. Fire Rated are available from 30 Mins to 120 Mins Fire rating as per BS Standards & up to 90 Mins in UL Standards.

Specifications ▶

FRAME PROFILE

- Material - Hardwood
- Profile - Double Architrave Single Rabbet Frame
- Jamb Depth - 200-325mm
- Finish - PU Polish / PU Paint
- Frame Joint Construction - Miter Joint/Mortise -Tenon Joint,
- Structural Opening Frame Size - 10mm more in Width & 5mm more in Height
- Fixing Screwing on to the Sub frame/Wall, then filled with PU foam
- Ironmongery Factory Cutouts for Ironmongeries
- Architrave Size 12mm x 60mm

DOOR LEAF CONSTRUCTION

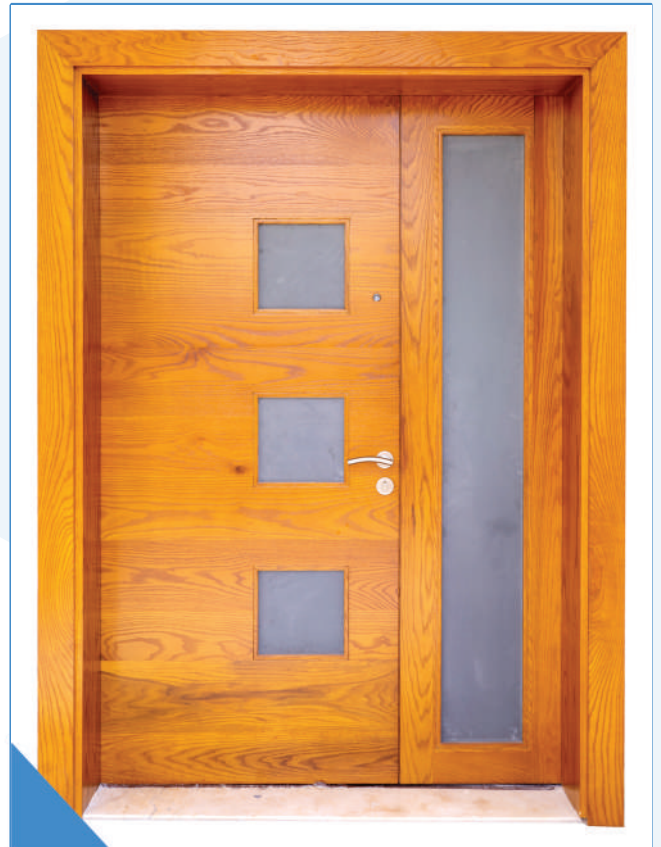
- Construction - Solid Fire Core lipped with Hardwood
- Leaf Thickness - 54mm - 64mm
- Lipping Thickness - 10mm
- Finish - Paint/Laminate
- Door Swing - Single Swing

HARDWARES

Fire Rated/Tested Hardware complying to UL/ANSI, BS/CE can be accommodated.

Tested & Certified:

- BS 476 P22 1987-Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction.
- CAN4 S104 (1985): NFPA 252 (2008): UL 10© (2001): UL 10© (2009): CAN / ULC S104 (2010): NFPA 252 (2012)
- Approved by UAE Civil Defense and major Fire departments in GCC



FIRE RATED FULLY GLAZED DOOR WITH TOP & SIDE TRANSOM (BRAND: VULCAN)

Fire rated Fully Glazed Doors are designed for use in both Commercial and residential areas. Glazed Doors provide appropriate lighting as well as fire safety and security. The use of fire-resistant glazed doors in modern buildings allows light and vision, improving the user experience while protecting against the threat of fire. Fire rating up to 120 Mins.

Specifications ▶

FRAME PROFILE

- Materials - 1.5 to 3 mm thick G.I. Steel
- Profiles - SRF, DRF, DASRF, SASRF, DADRF, RGSRF, RGDRF
- Jamb Depth - 150-330 mm
- Corner Construction - Welded Joint, Knock down
- Structural Opening - Frame Size - 10mm more in Width & 5mm more in Height
- Ironmongery - Frame reinforced to receive hinges, lock strike plate with protective steel mortar guard welded within frame
- Finish Polyester Powder coat (any RAL except metallic/ Matt) Smooth-up to 60-90 microns

Glazing System: 14mm to 32mm Tested & Certified Fire Rated Glasses with appropriate glazing system is used for Glazed Doors

Hardwares: Fire Rated/ Tested Hardware complying to UL/ANSI, BS/CE.

Tested & Certified:

- BS 476 P22 1987 - Fire tests on building materials and
- EN 1364-1:2015, Fire Resistance Tests for non-load bearing elements-Part 1: walls
- Approved by UAE Civil Defense and major Fire departments in GCC



FIRE RATED GLAZED PARTITIONS (BRAND: VULCAN)

Fire rated glazed partitions are designed for use in both Commercial and residential areas. Glazed Partitions provide appropriate lighting as well as fire safety and security. The use of fire resistant glazing in modern buildings allows light and vision, improving the user experience while protecting against the threat of fire.



Specifications ▶

FRAME PROFILE

- Materials - 1.5 to 2 mm thick G.I. Steel
- Finish Polyester Powder coat (any RAL except metallic/ Matt) Smooth-up to 60-90 microns

GLAZING SYSTEM:

14mm to 32mm Tested & Certified Fire Rated Glasses with appropriate glazing system is used for Glazed Doors

Tested & Certified:

- BS 476 P22 1987-Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction.
- Approved by UAE Civil Defense and major Fire departments in GCC

SPECIALIZED DOORS

BULLET PROOF DOORS, WINDOWS & COUNTERS (BRAND: VULCAN)

We are the only own manufactured and own tested bullet proof door manufacturer in UAE, produce high security and quality bullet proof doors. Miacasa steel Industries had been making high-security metal bullet proof doors for secure entryways to corporate and private customers. Bullet Proof doors are exceptionally strong, enabling them to withstand heavy impact, by bullets. The doors look like regular doors, can be installed in an hour and they have a unique locking mechanism. Bullet proof doors are reliable and will stop a high capacity round and will stop an assault weapon. We offer solutions to customers who are looking to integrate bullet proof doors into existing architectures.

Specifications ▶

FRAME PROFILE

- Materials - 3.8 mm thick GI
- Profiles - Double Rebate Frame- DRF
- Jamb Depth - 200-330 mm
- Corner Construction - Welded Joint
- Structural Opening - Frame Size - 10mm more in Width & 5mm more in Height
- Ironmongery - Frame reinforced to receive hinges, lock strike plate with protective steel mortar guard welded within frame
- Finish Polyester Powder coat (any RAL except metallic/ Matt) Textured/Smooth-up to 60-90 microns

DOOR LEAF CONSTRUCTION

- Leaf Thickness - 54 mm thick
- Material - 3.8 mm thick G.I. Steel
- Construction - Proprietary / Armored construction
- Finish - Polyester Powder coat (any RAL except metallic/ Matt) Textured/ Smooth-up to 60-90 microns

Tested & Certified:

- Intertek, York, Pennsylvania as per UL 752, Level 3, 5, 8-7.62mm Rifle Lead Core Metal Copper Jacket Military Ball (.308 Calibre)
- Comply to NIJ 3, US DOS SD-STD-02.01 Rifle AP.308 NATO M61, ASTM F 1233 7.21 M80 NATO, HPW TP 0500.02 Level D, DIN EN 1063 BR6, BS5051 BSI R2, AS/NZ 2343 R2, DIN 52-290 C5 SF and C5 SA.
- UL752 (Level 1 to 8)
- NIJ 018.01
- SD-STD-02.01 (SD-Rifle, .30, 7.62 NATO)
- Other Ratings as Upgrade:
- Forced Entry ASTM F3038
- Fire Rating UL 10 C for 180 minutes
- Approved by UAE Civil Defense and major Fire departments in GCC



BLAST RESISTANT DOORS & WINDOWS (BRAND: VULCAN)

Miacasa's Blast Resistance doors can prevent the propagation of explosions or mass detonation to protect personnel and valuable equipment. It is more resistant to expansion, as it bends into the building to absorb the pressure. Our Blast Resistance doors range from 2 psi to 1015.26 psi (up to 70 bar)

Specifications ▶

- Dimensions Depending on dock leveller dimensions Other upon request
 - Materials Universal I-Beams
 - Jamb Depth Varies, based on site requirement & Calculation
 - Corner Construction Welded Joint
 - Connection of frame to structure High Yield Rebars
 - Hinges Custom Made Normal Hinges & Ball Bearing Hinges
 - Finish Paint Finish

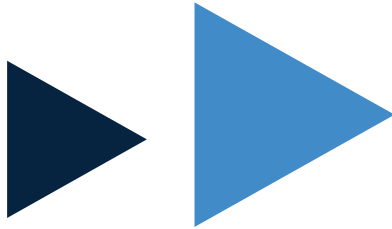
- Door Leaf Construction
 - Material Mild Steel
 - Leaf Thickness Will be based upon PSI requirement & Structural calculation
 - Stiffeners Universal I-Beams/C Channels will be chosen based on Calculation
 - Construction Plug Welds all sides
 - Infill Optional: Based on Structural/Design calculation
 - Finish Paint Finish

- Operation
 - Manual & Hydraulic



SHIPYARD HANGAR DOOR

- The flexible Giant hangar door is customised for Ship-building industries and port. Blasting and painting hangar must be closed by door cause of environmental concern and energy saving reasons. Heavy duty operation cycle, extreme inside and outside conditions, special risk of the industries.
- During design of the Shipyard hangar door all this requirement is specially observed and door performance enhanced according to industry requirements.
- Large size opening and not required free space side and bottom reduce cost of the door investment, extreme insulation properties, flexible design, light structure and low maintenance requirements



AIRCRAFT HANGAR DOOR

- Aircraft hangar door is customised versions of our flexible giant hangar door. Hangar doors are an one of the important part of every aviation operation's. Time is one of most important of operations. Aviation hangar is typically having wide openings type. Shape of the opening is dominated by aircraft and the height of the building. It is sensitive job with high level requirements.
- First Aircraft hangar doors made from sliding panels with many problems, bottom rails is always filled, heavy maintenance requirements spent money, something always delay and lose the time, to carry extreme weight door is required heavy structure, and extra big building for side pocket
- Vertical fold up hangar doors for aviation industries changed everything and is manufactured for perfect solutions for aviation. We can manufacture 50 mt one pieces hangar doors so some aircraft no need mullion system of course for required area we have mullion doors.

CRANE HANGAR DOOR

- Crane Hangar door a flexible hangar door is designed to solve all extra ordinary crane way insulation door requirements that doors don't have any limit for width or height. Any dimensions door requirements can be solved easily.
- This door also called T Shape doors. It is composed 2 different part of the doors and available all type crane door.
- If you have crane and need to extreme insulations and efficient solutions, crane hangar door one of best solutions for your industries.
- The doors can be used at Shipyard Industries, Mining Industries, Waste Management, and Water treatments, Steel and all type other mechanical Industries.

SLIDING HANGAR DOORS

- Sliding Hangar doors are used for larger openings where the door panels will be slide through horizontal tracks. Door panels are moved either a bottom-rolling or top-hung system, sliding on one or multiple tracks, manual or power operated. each door is designed and manufactured to meet project-specific requirements such as the size of the opening, climatic conditions, wind pressure loadings, architectural features, and so on. Sliding Hangar Doors are mainly used in Airport Hangars.

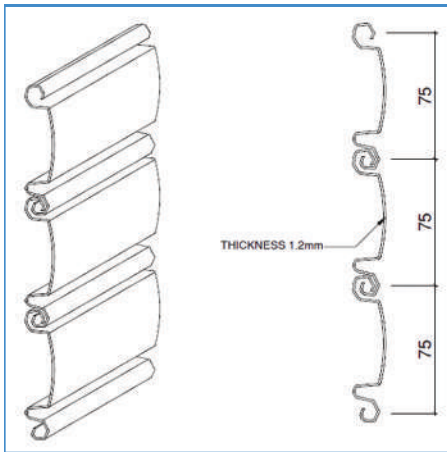
NON FIRE RATED PRODUCTS

GI SINGLE SKIN ROLLING SHUTTERS

Galvanized steel Rolling shutters are the most popular and classic type of rolling shutter. In Miacasa we call it Heavy Duty Industrial Grade rolling shutter. These types of shutters are mainly used for factories, warehouses, industries, and commercial buildings.

Function ►

Non-Fire rated GI Single skin roller Shutters are mainly used for the purpose of safety in larger openings, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.



Specifications ►

- Slats/Curtain: GI 1 - 1.2 mm Thick, 75mm pitch Height
- Guide Rail: GI 'G' model 80mm width, 3 mm thick, with EPDM rubber seal
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
- Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz / 3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor (optional) , Windlock
- Finish: All visible parts are powder coated in Standard RAL

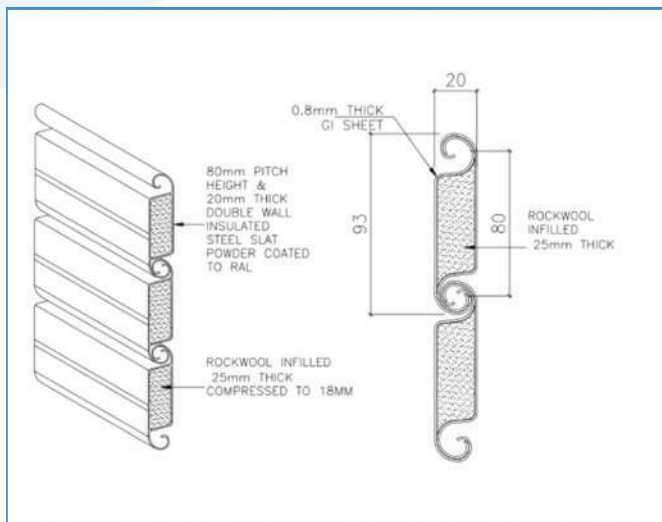
GI DOUBLE SKIN ROLLING SHUTTERS



Miacasa MC 888 insulated rolling shutter presents an ideal solution where the environment of your building needs to be consistent & at the same time it should enhance the look of any modern architecture. Insulated rolling shutter minimizes energy loss, both with heat 'flow-through' and round the curtain. They are suitable for loading bays, factories, warehouses, and any applications where security is required together with thermal insulation.

Function ▶

MC 888 Insulated rolling shutter is custom designed to suit your specification as the shutter strips are individually insulated with PUF/ Rockwool and provide an improved insulation value to that stipulated by standard building regulations, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.



Specifications ▶

- Slats/Curtain: GI 0.8mm +0.8 mm thick, 80mm pitch Height
- Infill: Rockwool/PUR
- U-Value for fully fitted door: 1.47 W/m²k
- Sound Insulation: 26dB
- Guide Rail: GI 'G' model 80mm width, 3 mm thick
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box, Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz / 3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor (optional), Windlock
- Finish: All visible parts are powder coated in Standard RAL

ALUMINIUM SINGLE SKIN ROLLING SHUTTERS

Aluminium Single skin Rolling shutters are the is an extremely versatile with a number of advantages, it is recognized for being both lightweight and flexible, the main advantage is it can be operated manually also.

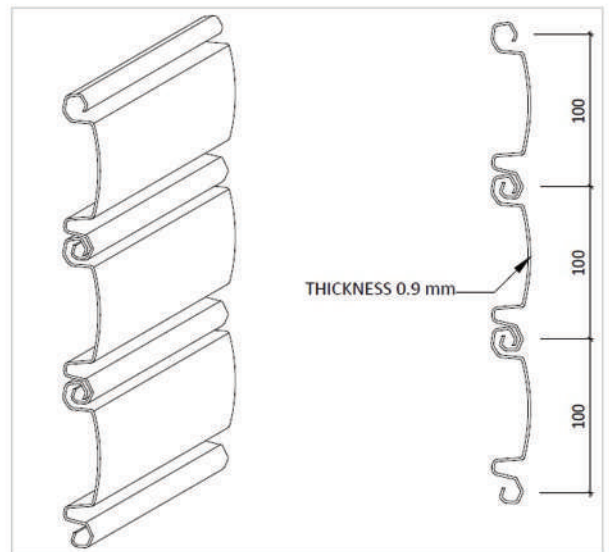
In Miacasa we call it Light Duty Industrial Grade rolling shutter. These types of shutters are mainly known for Light Weight, Corrosion Resistance, Electrical and Thermal Conductivity, Reflectivity and Ductility, Odourless and Recyclability

Function ▶

Miacasa Aluminium Single skin Rolling shutters are mainly used for the purpose of safety in moisture-maintained openings, the shutter can be activated Manually & If Electrically: 3-way Push buttons & Remote controls can be used. For the pedestrian and vehicle safety Photocells are provided.

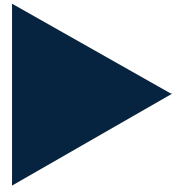
Specifications ▶

- Slats/Curtain: Aluminium 0.9 to 1mm thick, 100mm pitch Height
 - Guide Rail: Aluminium 'C' model 60mm width, 2.5 mm thick, with EPDM rubber seal
 - Bottom Rail: Aluminium, Inverted T type, 3mm thick, with EPDM rubber seal
 - Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation:
- For Motorized shutter:
 - 3 Way push button control with Lockable SS Key Box,
 - Remote control with receiver 2 sets
 - Manual Chain in case of power failure
 - Control panel for linking to BMS (Optional)
 - Motor: 1 Phase 230V, 50-60Hz / 3 Phase 380V, 50-60Hz
 - Safety Equipment: Photocell, Pneumatic safety sensor (optional), Windlock
 - For Manual Shutter:
 - Operation: Handle / Manual Hand Crank
- Finish: All visible parts are powder coated in Standard RAL



ALUMINIUM DOUBLE SKIN ROLLING SHUTTERS

Miacasa's bespoke aluminium roller shutters are the ideal solution for your modernization or new-build project. Designed with interlocking aluminium plank with an integrated bottom rail makes the shutters look great and provide hassle free operations. Insulated rolling shutter minimizes energy loss, both with heat 'flow-through' and round the curtain.



Function ▶

MC 888 Insulated rolling shutter is custom designed to suit your specification as the shutter strips are individually insulated with PUF/ Rockwool and provide an improved insulation value to that stipulated by standard building regulations, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.



Specifications ▶

- Slats/Curtain: Aluminium Double skin 77mm pitch Height
- Infill: PUR
- Sound Insulation: 24dB
- Guide Rail: Aluminium 'C' model 60mm width, 2.5 mm thick, with EPDM rubber seal
- Bottom Rail: Aluminium, Inverted T type, 3mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
- Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz / 3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor (optional), Windlock
- Finish: All visible parts are powder coated in Standard RAL



POLYCARBONATE ROLLING SHUTTERS

MC333 MODEL

Miacasa MC 333 transparent polycarbonate rolling shutters are constructed from interlocking High-Quality polycarbonate slats 3mm thick and 4.8mm side thickness. These slats are provided with a 304-grade stainless steel rod of 1.2 mm thick, which gives strength to the shutter. Bottom Rail is manufactured with a specially Designed Heavy-duty Extruded Aluminium/GI profile.

The MC333 roller shutters can be constructed in 2 modes

- Vertical type
- Horizontal type



MC GRAND VISION MODEL

Miacasa MC Grand Vision transparent polycarbonate rolling shutters are constructed from interlocking High-Quality polycarbonate slats 3mm thick and 4.8mm side thickness. Includes Hinges with Plastic end clips. Bottom Rail is manufactured with a specially Designed Heavy-duty Extruded Aluminium/GI profile.

Function ►

If you are looking for polycarbonate rolling shutters, it is likely that you own a business that is frequented by customers because your requirements include aesthetic appeal doubled by security features, such as in a shopping outlet. Our products are personalized and double checked for quality and our rolling shutters possess the transparency that the polycarbonate provides, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.

Specifications ►

- MC333 Slats/Curtain: PC300: 300mm*115mm Polycarbonate clear glass
 - external hole diameter:16.3mm &21.3mm side & middle thickness:4.8mm & 3.0mm
- MC Grand Vision Slats/Curtain: Grand Vision: 480mm*100mm :4.8mm & 3.7mm
 - Polycarbonate clear glass Aluminium top & Bottom Hinges with Plastic end clips
- Guide Rail: Aluminium 'C' model 60mm width, 2.5 mm thick, with EPDM rubber seal
- Bottom Rail: Aluminium, Box type, 106x20x1.4mm, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
 - Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor(optional)
- Finish: All visible parts are powder coated in Standard RAL

PERFORATED ROLLING SHUTTERS



Micro Perforated Galvanized Rolling shutters are the combination of high visibility with exceptional strength Perforated transparent roller shutter doors ideal for shops that want to keep valuable goods on display, such as jewelers. Also, these shutters are a good choice for premises that require a higher level of security, for Malls & Garage area.

Function ►

Non-Fire rated Perforated GI Single skin roller Shutters are suitable for a wide variety of applications that require good ventilation and/or visibility, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.

Specifications ►

- Slats/Curtain: Microperforated GI 1 to 1.2mm thick, 75mm & 100mm pitch Height
- Guide Rail: GI 'G' model 80mm width, 3 mm thick, with EPDM rubber seal
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
 - Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor (optional), Windlock
- Finish: All visible parts are powder coated in Standard RAL



VENTILATED SINGLE SKIN ROLLING SHUTTERS

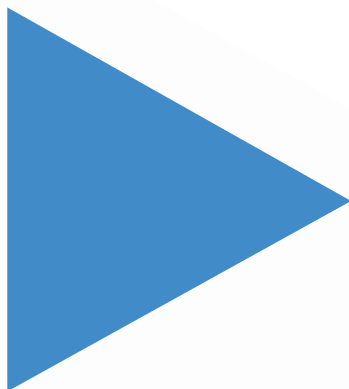
Miacasa's ventilated roller shutter is designed to suit situations where good looks are equally as important as security and ventilation and is ideal for carpark entrances, shopping arcades, etc.

Function ▶

Non-Fire rated Ventilated GI Single skin roller Shutters are having Airflow up to 50.6% overall, but can combine with solid slats for control of airflow and vision More secure than conventional slotted shutters as it screens out potential thieves, inquisitive fingers, even birds and insects, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.

Specifications ▶

- Slats/Curtain: Rectangular Ventilated GI 1 to 1.2mm thick, 75mm pitch Height
- Guide Rail: GI 'G' model 80mm width, 3 mm thick, with EPDM rubber seal
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
 - Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor(optional), Windlock
- Finish: All visible parts are powder coated in Standard RAL



GRILLE ROLLING SHUTTERS

Miacasa 's grilles are the perfect solution when you need good ventilation and theft protection. These type of rolling shutter as known as security shutters in market.

Function ►

Roller grilles offer excellent security when closed but display can still be viewed, the shutter can be activated with the 3-way Push buttons & Remote controls. For the pedestrian and vehicle safety Photocells are provided.

Specifications ►

- Slats/Curtain: 304 stainless steel pipes: outside is 19 mm diameter, inside is 16mm diameter.
- Guide Rail: GI 'G' model 80mm width, 3 mm thick, with EPDM rubber seal
- Bottom Rail: MS, Inverted T type, 4mm thick, with EPDM rubber seal
- Barrel: MS Prime painted Min. 5-inch Dia, Min. 4mm thick
- Operation: 3 Way push button control with Lockable SS Key Box,
 - Remote control with receiver 2 sets
- Control panel for linking to BMS (Optional)
- Motor: 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz
- Safety Equipment: Photocell, Pneumatic safety sensor (optional), Windlock
- Finish: All visible parts are powder coated in Standard RAL



INDUSTRIAL & RESIDENTIAL SECTIONAL OVERHEAD DOORS

ISD01 industrial sectional doors are designed for industrial buildings, warehouses, production workshops, transport terminals and a variety of industrial premises, where they have to meet stricter requirements if compared with garage sectional doors. The door leaf is balanced with a torsion spring mechanism fitted with a Quick Fix system which significantly reduces installation time.

RSD01 residential sectional doors are designed for garages and technical rooms with small-sized door openings with width from 2 000 to 3 500 mm, and height from 1 800 to 3 000 mm. Low lift construction allows installation in premises with minimum headroom and side room clearance of 100 mm.



Specifications ▶

- Panels: GI 0.45 + 0.45 Double skin CFC Free PUR infill – 40mm Total Thickness.
- Guide Rail: GI 'C' model 100mm width, 2 mm thick, with EPDM rubber seal
- Bottom Panel equipped with EPDM rubber seal
- U-Value for fully fitted door: 1.2 W/m²k
- Sound Insulation: 24dB
- Spring with shaft Barrel
- Operation: Controller IP54 Rated
 - Remote control (Optional)
- Control panel can be linked to BMS & Fire control rooms
- Motor: Shaft motor 1 Phase 230V, 50-60Hz / 3 Phase 380V, 50-60Hz (Industrial use)
- Motor: Trolley motor 1 Phase 230V, 50-60Hz (Residential use)
- Safety Equipment: Pneumatic safety sensor edge, Cable break safety, Spring Break safety, Wind bar
- Pass door/Pedestrian door (Optional)
- Finish: Standard Ribs, white Panel with stucco finish RAL 9010 – Other colors upon request



Tested & Certified:

- EN 12424 for Wind load class 5
- EN 12426 for Air Permeability class 3
- EN 12425 for Water Permeability class 3
- EN 12604 for Life span 20000 cycles
- CSN 730540-2 FOR Thermal Transmittance

INDUSTRIAL & RESIDENTIAL GLAZED SECTIONAL OVERHEAD DOORS

ISD02 full-vision commercial sectional doors can be a combination of sandwich panels and a variety of full-vision acrylic-glass panels, so they are perfect for buildings with glazed facades like automotive showrooms and exhibition halls. Acrylic-glass panels made of durable aluminium profiles make ISD02 full-vision doors as strong as ISD01 industrial sectional doors.



Specifications ▶

- Panoramic panels are made of Double glazed section polycarbonate
- Aluminium Frame Profile
- RAL 9006 for Frame Profile
- Thickness of glazing unit 22 mm
- Hardware - Standard Lift
Spring with shaft Barrel
- Operation: Controller IP54 Rated , IP65 Rated Optional
 - Remote control (Optional)
- Control panel can be linked to BMS & Fire control rooms
- Motor: Shaft motor 1 Phase 230V, 50-60Hz /3 Phase 380V, 50-60Hz (Industrial & Residential use)
- Safety Equipment: Pneumatic safety sensor edge, Cable break safety, Spring Break safety, Wind bar
- Pass door/Pedestrian door (Optional)

INDUSTRIAL HEAVY DUTY INSULATED SLIDING DOOR



Miacasa Industrial Sliding doors that are fitted with composite gaskets offer optimal thermal insulation – effectively acting as a weather and sound barrier, and keep dust, drafts and rain out of the Building. Sliding doors have a few functionalities. Space constraints are usually the reason behind placement of these doors but aesthetic appeal also plays a major role at times. Miacasa sliding doors are widely used in larger opening buildings.

Specifications ▶

- 145mm Thick PIR infill Aluminium Panels (0.7mm sheet thickness)
- 100x50x2mm Steel Frames
- 25x25x2mm Steel sub frame
- GI Top wheels.
- GI Bottom wheels
- GI Bottom Stoppers
- GI Top Stoppers
- GI Locks
- GI Top Tracks
- GI Bottom Tracks
- GI Top Bracket Support
- Motorised/Manual Operation
- Finish: All visible parts are powder coated to standard RAL

INTERNAL HIGH-SPEED DOORS (PVC ROLLUP DOORS)

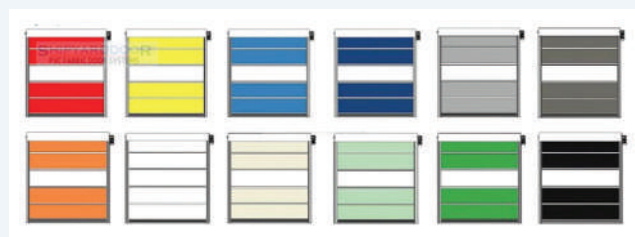
The PVC High-speed doors are mainly used in departmental stores, supermarkets, storage, healthcare facilities, etc. High-speed doors allow fast transit of goods from one area to another without wasting energy. Miacasa High-speed doors are designed for being used very frequently. The doors are made with high-quality PVC material.



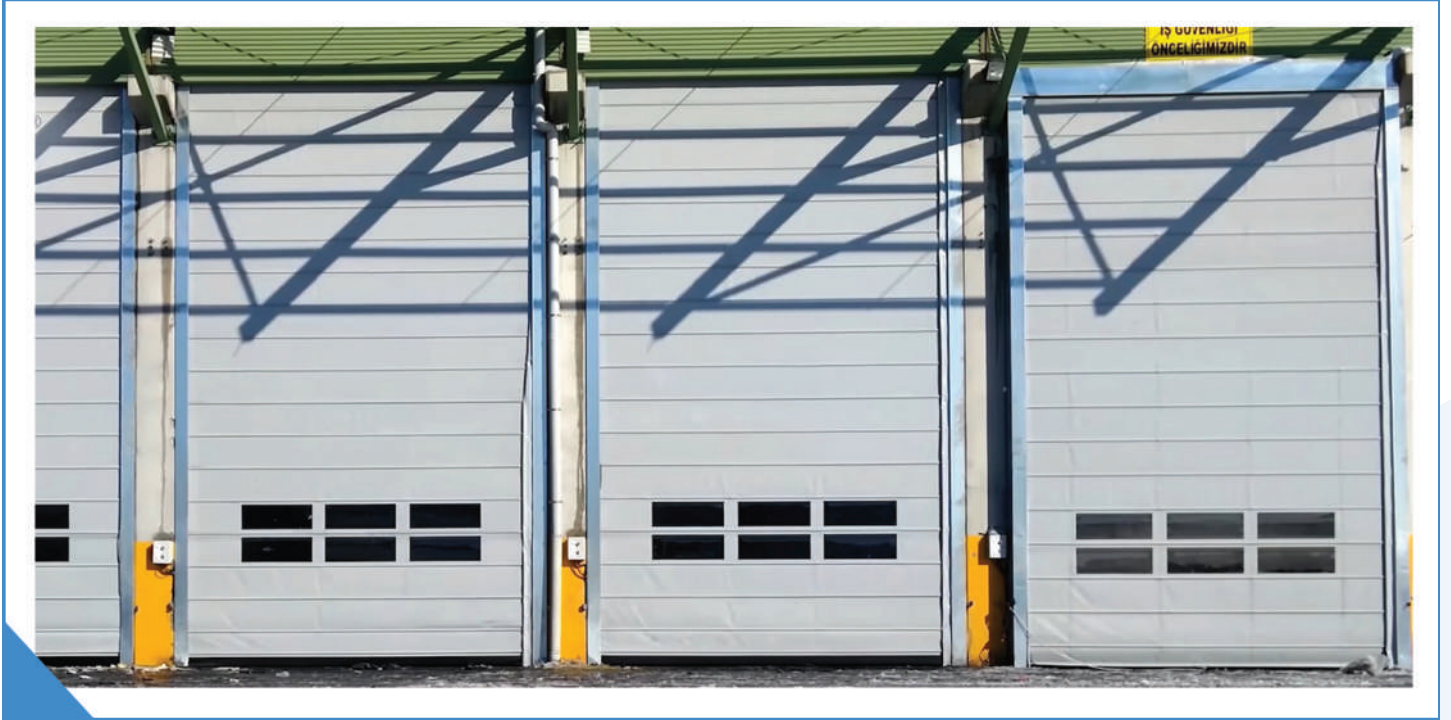
Specifications ▶

- Fabric: PVC Fire resist 900 gr/m² 1-2 mm 1100 Dtx B 6000 Panama SIO - LINE + DIN EN ISO 2286 - 2 -CE.
- Clear Vision Fabric: PVC Fire resist 900 gr/m² 2 mm thickness
- Speed: 100 cm /sec also can be increased 150 cm/sec with frequency converter (optional)
- Guide Rail: GI 'C' model 150mm width, 2 mm thick
- Bottom equipped with EPDM rubber seal
- Spring with Barrel
- Operation: 3Way Push Button Controller; Loop detectors; Infrared Radar; Remote Controller; Manual Operations;
- Motor: Shaft motor 3 Phase 380V, 50-60Hz
- Safety Equipment: Pneumatic safety sensor edge, Wind bar, Photocell
- Self-Repairable type available (Optional)

Color :



EXTERNAL HIGH-SPEED DOORS (PVC FOLD UP DOORS)



High-Speed Fold-up Door is designed for heavy-duty applications. Reinforced Aluminium or steel supports bar high-density PVC fabric materials, special designate drum system serve to you every condition. This type of door is suited mainly for external and larger size openings.

Specifications ▶

- Fabric: PVC Fire resist 900 gr/m² 1-2 mm 1100 Dtx B 6000 Panama SIO – LINE + DIN EN ISO 2286 – 2 –CE. Standard high speed fold up Door thermal insulation value is $U < 4.5 \text{ W/m}^2\text{K}$.
- Clear Vision Fabric: PVC Fire resist 900 gr/m² 2 mm thickness
- Speed: 100 cm /sec also can be increased 150 cm/sec with frequency converter (optional)
- Guide Rail: GI 'C' model 200mm width, 2 mm thick
- Bottom equipped with EPDM rubber seal
- Spring with Barrel
- Operation: 3Way Push Button Controller; Loop detectors; Infrared Radar; Remote Controller; Manual Operations;
- Motor: Shaft motor 3 Phase 380V, 50-60Hz
- Safety Equipment: Pneumatic safety sensor edge, Wind bar, Photocell

Color :



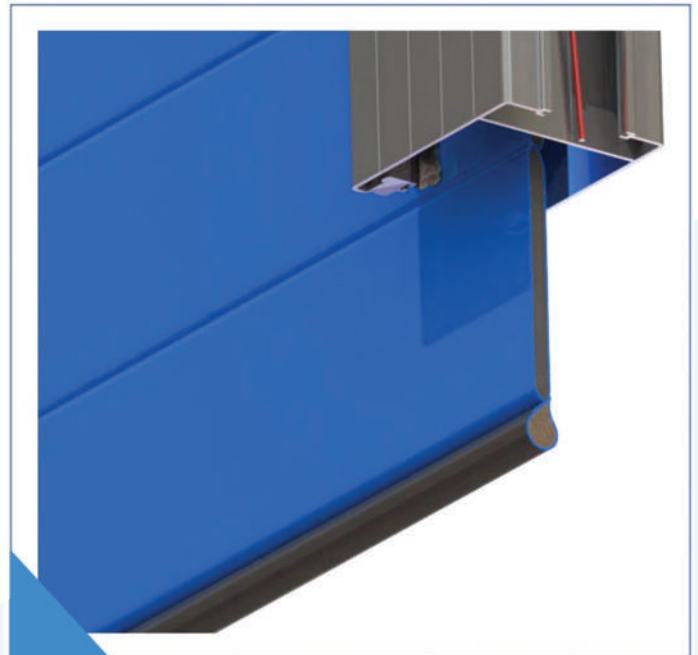
INTERNAL HIGH-SPEED INSULATED DOORS (INSULATED PVC ROLLUP DOORS)

Miacasa Insulated high speed roll up door is designed to reduce your energy consumptions; insulated doors help to minimize temperature losses and to accelerate process. A better heat insulation than ever before is from now on guaranteed by special filled xps materials, door insulation is improved to provide excellent and horizontal and vertical sealing. System is also equipped with heater at side rails also bottom to eliminated humidity problem that is main problem at conventional doors.

Specifications ▶

- Fabric: PVC Fire resist 900 gr/m² 1-2 mm 1100 Dtx B 6000 Panama SIO - LINE + DIN EN ISO 2286 - 2 -CE.
- Insulation: Extruded polystyrene foam (XPS) 45 kg/m³
- U Value: < 1.5 W/m². K
- Sound Insulation: 18 dB A
- Speed: 120 cm /sec also can be increased 150 cm/sec with frequency converter (optional)
- Guide Rail: GI 'C' model 150mm width, 2 mm thick
- Bottom equipped with EPDM rubber seal
- Spring with Barrel
- Operation: 3Way Push Button Controller; Loop detectors; Infrared Radar; Remote Controller; Manual Operations;
- Motor: Shaft motor 3 Phase 380V, 50-60Hz
- Safety Equipment: Pneumatic safety sensor edge, Wind bar, Photocell

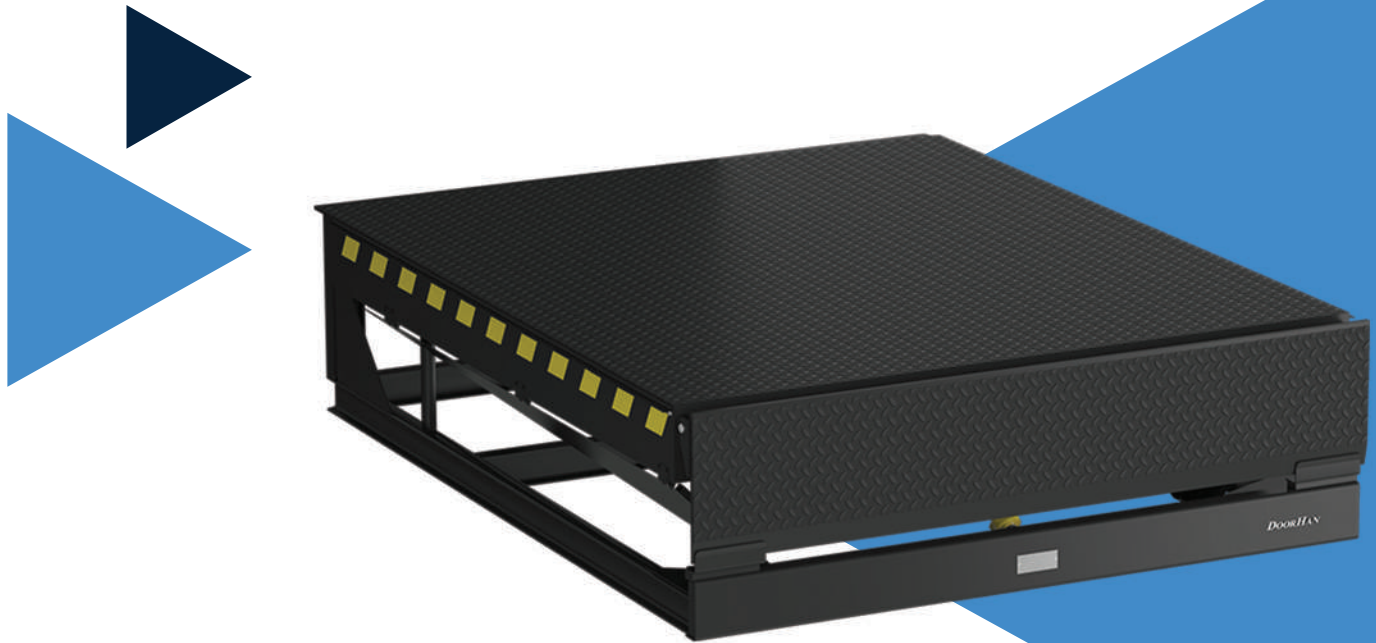
Color :



LOADING SOLUTIONS

DLHH ELECTROHYDRAULIC DOCK LEVELER WITH HINGED LIP

Electrohydraulic dock leveler with hinged lip of DLHH series is an optimal solution for warehouses and logistics facilities where it's necessary to provide fast and secure loading and unloading at the dock. When activated, the leveler lifts and the lip opens turning into a horizontal position. Then the platform lowers until it reaches the vehicle load bed. Once all work is completed the leveler lifts, the lip lowers and the platform returns to its original stored position. Both embedded and suspended installation of the leveler are possible.



Specifications ▶

- Dimensions
 - Length, mm 2,000 2,500 3,000 3,500 4,000 4,500
 - Width, mm 1,800 2,000 2,200
- Working range
 - Above dock, mm 0-635 mm
 - Below dock, mm 0-315 mm
- Thickness of upper sheet
 - standard, mm 6/(0.6-1.8)*
 - upon request, mm 8/(0.8-2.4)*
- Colour: Signal blue (RAL 5005), Jet Black (RAL 9005)
- Amount of lift cylinders
 - standard 1
 - upon request 2
- Powder coating with preliminary shot blasting.
- Performance
 - Load capacity 6,000 kg (60kN)/10,000 kg (10kN)
 - Maximal point load (upper sheet – 6 mm) 1.3 N/mm²
 - Maximal point load (upper sheet – 8 mm) 6.5 N/mm²
 - Motor hydraulic unit 0.75 kW
 - Power supply 380V, 3 phases
 - Control voltage 24V
 - Control unit protection class IP54
 - Working fluid Mobil DTE10 EXCEL
 - Class of surface cleaning before painting Sa 2
 - Thickness of painted layer 60-90 micron
 - Operation temperature range from -30 to +50°C

DLHH ELECTROHYDRAULIC DOCK LEVELER WITH TELESCOPIC LIP

Electrohydraulic dock leveler with telescopic lip of DS series is an optimal solution for warehouse complexes and other facilities with loading docks. It offers time saving flexibility for handling all loading situations including side loads. The telescopic lip can be extended onto the vehicle bed with the utmost precision. Lip segments allow handling vehicles whose bed is narrower than the overall leveler width. When activated, the leveler lifts and the lip slides out. Then the platform lowers until it reaches the vehicle load bed. Once all work is completed the leveler lifts, the lip slides back in and the platform returns to its original stored position. Both embedded and suspended installation of the leveler are possible.

Specifications ▶

- Dimensions
 - Length, mm 2,500 3,000 3,500 4,000
 - Width, mm 2,000 2,200 2,400
- Working range
 - Above the dock, mm 0–480 mm
 - Below the dock, mm 0–430 mm
- Thickness of upper sheet, mm* 8/(0.8–2.4)
- Colour: Signal blue (RAL 5005), Jet Black (RAL 9005)
- Amount of lift cylinders 2

Tested & Certified for Dock Levelers:

This conformity certificate confirms the conformity of the product with essential safety requirements of the following EC New Approach Directives as amended:

2006/42/EC Machinery Directive
2006/95/EC Low Voltage Directive
2004/108/EC Electromagnetic compatibility

European harmonized standards used for conformity assessment:

EN ISO 12100:2010, EN 1398:2009, EN 60204-1:2006/A1:2009/AC:2010, EN 61000-6-4:2007/A1:2011, EN 61000-6-2:2005/AC:2005



FT-SERIES VERTICAL STORING DOCK LEVELER (STATIONARY, SLIDING)

Stationary and sliding vertical storing dock levelers provide a smooth transition between the warehouse floor and the trailer bed bridging differences in height of up to 360 mm. These dock levelers are designed for trailers having approximately the same height difference from the ramp level. The structure is welded directly onto a steel profile that is mounted on the edge of the dock. The rail is used to allow the platform to slide to serve several loading points.



Specifications ▶

- Working range
 - Length, mm 1,000 1,500
 - Width, mm 1,200 1,500 1,800 2,000
- Thickness of upper sheet
 - Above the dock, mm 120–180
 - Below the dock, mm 120–180
- Thickness of track's upper sheet, mm 5
- Colour: Signal blue (RAL 5005), Jet Black (RAL 9005)

MDLM MECHANICAL EDGE-OF-DOCK LEVELER

MDLM mechanical edge-of-dock leveler is designed as a simple and economical equipment ideal for servicing trucks with minimal height differences with the dock. The leveler is used in warehouses and logistics facilities docks where it's necessary to provide fast and secure loading and unloading. It works without electrical supply and can be used in case of backout or if pit leveler installation is not feasible. The leveler is lifted with operating handle by one operator. While lifting the lip opens. Next the platform lowers until it reaches the vehicle load bed. Once all work is completed the leveler lifts, the lip lowers and the platform return to its original stored position. Installation of the EOD leveler is performed on a special ramp or in the pit

Specifications ▶

- Dimensions
 - Length, mm 500
 - Width, mm 1,600/1,800/2,000/2,200
- Working range
 - Above the dock, mm 0-100
 - Below the dock, mm 0-100
- Thickness of upper sheet, mm* 6/ (0.6-1.8) *
- Colour: Signal blue (RAL 5005), Jet Black (RAL 9005)

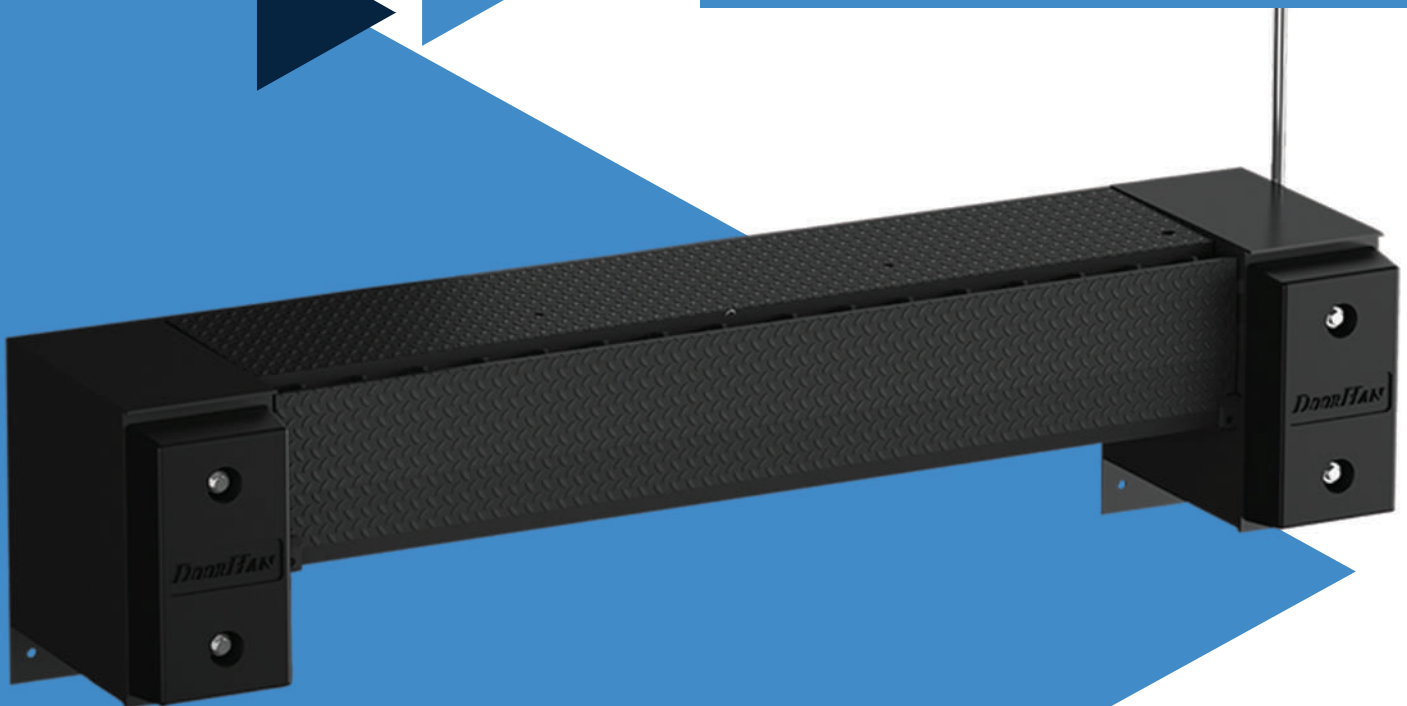
Tested & Certified for Dock Levelers:

This conformity certificate confirms the conformity of the product with essential safety requirements of the following EC New Approach Directives as amended:

2006/42/EC Machinery Directive
2006/95/EC Low Voltage Directive
2004/108/EC Electromagnetic compatibility

European harmonized standards used for conformity assessment:

EN ISO 12100:2010, EN 1398:2009, EN 60204-1:2006/A1:2009/AC:2010, EN 61000-6-4:2007/A1:2011, EN 61000-6-2:2005/AC:2005



DSHRT RETRACTABLE DOCK SHELTER (COLLAPSIBLE)

Retractable shelters of DSHRT and DSHRTM series are designed to perfectly suit warehouses, logistics centres and other premises with medium cargo traffic. PVC fabric used for front curtains is highly elastic and wear and tear resistant. Trailers back into the shelter during loading/unloading operations while head and side curtains create a tight seal against the truck top and rear body. In case of off-center parking the collapsible frame retracts upon impact and automatically returns to its original position after truck departure. The shelter is mounted using the suspended method of installation.

Specifications ▶

- Dimensions
 - Width, mm 3000 3200 3400
 - Height, mm 3000 3200 3400 4400
 - Dock shelter depth 600 mm & 900 mm optional
- Upper sheet
 - Standard Single
 - Upon request Double
- Colour of profiles White aluminium (RAL 9006)
- Front PVC sheet
 - Lengthwise tear resistance More than 550 N
 - Width wise tear resistance More than 900 N
 - Ultimate tensile strength 250 N/mm
 - Metal friction coefficient 0.3
 - PVC friction coefficient 0.4
 - Thickness 3 mm
 - Specific weight 3.6 kg/m
 - Operation temperature from -30 to +90 °C
- Side PVC sheet
 - Tear resistance 250 N
 - Thickness 0.5 mm
 - Specific weight 0.7 kg/m
 - Working temperature from -30 to +70 °C
- Aluminium frame
 - Rear frame profiles 50 x 44 mm
 - Front frame profiles 45 x 44 mm
 - Brace 50 x 25 x 2.5 mm
 - Front clamping bar 34 x 4.8 mm

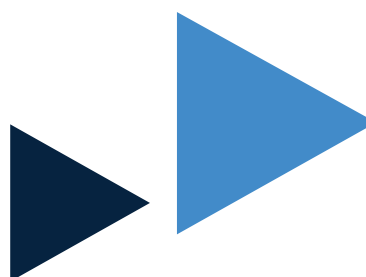


INFLATABLE DOCK SHELTER OF DSHINF SERIES

DSHINF inflatable dock shelters provide the best sealing of temperature-controlled premises during loading/unloading operations. Inflatable cushions cover the truck body around in a way that the optimal sealing is obtained. The cushions are made of high elastic, wear and tear resistant material Cordura. During loading/unloading operations a part of the truck body is positioned inside the dock shelters. The upper and side cushions inflate to ensure high sealing between the truck body and the building. After loading/unloading is completed, the cushions deflate. The inflatable dock shelters are controlled by switch or the control unit of the dock leveler (if special control unit with function for inflatable dock shelter is used).

Specifications ▶

- Dimensions
 - Width, mm 3410 3610
 - Height, mm 3300 3800 4900
 - Upper cushion extension, mm 900/1200
 - Side cushion extension, mm 600
 - Upper decorative curtain, mm 500
 - Side decorative curtain, mm 250
- Profile colour White aluminium (RAL 9006) ;
Wall panel colour Signal white (RAL 9003)
- Control Switch /dock leveller control unit
- Performance
 - Control system
 - Power supply 1 or 3 phase 380 V, 50 Hz
 - Motor 0.55kW
 - Control unit External
 - Protection class of control unit IP54
 - Average time of cushion inflation 40 sec
 - Working temperature From -35 to +50 °C
 - Decorative PVC curtain
 - Thickness 3 mm
 - Specific weight 3.6 kg/m
- Inflatable cushions
 - Material Cordura 1000
 - Thickness 0.5 mm
 - Specific weight 0.4 kg/m
 - Ultimate tensile strength More than 290N/mm
 - Sandwich panel
 - Thickness 40 mm



EXTERNAL FRAMES OF FEH (90/60/45/30) AND FET (90/60/45/30) SERIES

FEH, FET (90/60/45/30) external frames are installed in the dock or in front of the opening as a stand-alone unit, including a dock leveler. One of the main advantages of external frames is a possibility to modernize them without changing design of the main building. External frames can be used in places, where trucks cannot be parked transversely to the building. All types of dock levelers can be used with external frames. External frames are available with 4 angular adjustments – 90°, 60°, 45°, 30°. Since the external frames are preassembled the installation time is quite short.

Specifications ►

- Dimensions Depending on Docking area dimension Other upon request
- Angle 90°, 60°, 45°, 30° or 30° Other upon request
- Colour Black (RAL 9005) Other upon request
- Powder coating with preliminary shot blasting.

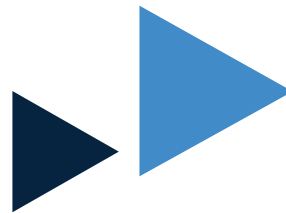


DOCK HOUSES OF STANDARD SERIES (45/60/90)

Dock house is a complex solution for installation of dock leveler and dock shelter where the yard space is limited. Dock houses allow keeping microclimate, saving storage space and protecting goods from climatic factors since it is installed outside the building. One of the main advantages of dock houses is a possibility to be upgraded without any major modifications of the building. DoorHan produces dock houses with 4 angles: 90°, 60°, 45°, 30°. Dock houses are installed at an angle of 30°, 45°, or 60° to the building in areas where it is impossible to park trucks perpendicular to the dock wall. Dock houses of standard and light series are available.

Specifications ►

- Dock house
 - Maximal wind load 0.65 KN/m²
 - Working temperature From -35 to +50 °C
- Roof
 - Maximal snow load 3 KN/m²
- Walls
 - Sandwich panel thickness 40 mm
 - Corrugated sheet thickness 0.4 – 0.8 mm
- Frame
 - Class of surface cleaning before painting Sa 2



Configuration and design ►

- Dimensions Depend on dimensions of dock shelter and dock leveller Other upon request
- Angle 90/60/45/30/30° Other upon request
- Sandwich panel wall outside/inside colour Signal white (RAL 9003) Other upon request
- Corrugated sheet wall outside/inside colour Signal white (RAL 9003)
- Colour of frame Black (RAL 9005) Other upon request
- Wall edging profile colour White aluminium (RAL 9006) Other upon request
- Roof Galvanized sheet C44

PRODUCT CERTIFICATIONS

CERTIFICATE OF COMPLIANCE

Certificate Number: 20180925-R39285
 Report Reference: R39285-20180912
 Issue Date: 2018-SEPTEMBER-25

Issued to: MIACASA STEEL INDUSTRIES LLC
 PLOT NO.0283, WAREHOUSE NO 4
 P.O. BOX 14934
 NEW INDUSTRIAL AREA-1
 AJMAN UNITED ARAB EMIRATES

This is to certify that representative samples of ROLLING STEEL FIRE DOORS Model MC-777, Oversized Single Skin Slat Rolling Steel Fire door, surface mounted to masonry wall type constructions.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: NFPA 80, Fire Doors and Other Opening Protectives; UL 10B, Fire Tests Of Door Assemblies; UL Subject 10, Rolling Steel Doors Designed for Openings Oversize for Standard Fire Protection

Additional Information: See the UL Online Certifications Directory at www.ul.com/ulabase for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Samling
 Head of Marketing and Sales - Middle East Region



Page 1 of 1

CERTIFICATE OF COMPLIANCE

Certificate Number: R39285
 Report Reference: R39285-20211026
 Date: 2021-NOVEMBER-03

Issued to: MIACASA STEEL INDUSTRIES LLC
 PLOT NO.0283, WAREHOUSE NO 4
 P.O. BOX 14934
 NEW INDUSTRIAL AREA-1
 AJMAN AE

This is to certify that representative samples of ROLLING STEEL FIRE DOORS See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: NFPA 80 Standard for Fire Doors and Other Opening Protectives
 UL 10B STANDARD FOR FIRE TESTS OF DOOR ASSEMBLIES
 UL Subject 10 Rolling Steel Doors Designed for Openings Oversize for Standard Fire Protection

Additional Information: See the UL Online Certifications Directory at <https://ul.com/ulabase> for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Service Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Samling
 Head of Marketing and Sales - Middle East Region



Page 1 of 1

CERTIFICATE OF COMPLIANCE

Certificate Number: R39285
 Report Reference: R39285-20211026
 Date: 2021-NOVEMBER-03

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model MC-009, Oversized Insulated Skin Slat Rolling Steel Type Fire door, surface mounted to masonry wall type constructions.

Samling
 Head of Marketing and Sales - Middle East Region



Page 1 of 1



Certificate of Compliance

You have been awarded:
Intertek WH US Mark for Category A - Doors - No Additional Edge-sealing System Required

Standard: UL 1001 (2016), UL 1002 (2016), NFPA 210 (2017)

Certificate number: WH20-18150155

Organization: Vulcan Industries LLC
 New Industrial Area
 P.O. Box 15007
 Ajman
 United Arab Emirates

Product: Vulcan Industries - Hollow Metal Fire Door - 180 Minutes - UL 10C
 Door: 60 Min PP Category A Door - 3 Hour PP Category A Door - 2 Hour PP Category A Door - 90 Min PP Category A Door - 45 Min PP Category A Door
 Listing Information: See following pages

Certification body: Intertek Testing Services NA, Inc.
 Initial registration: August 30, 2020
 Date of expiry: December 31, 2021
 Issue status: 2

Authorized By:
 John P. Rippey, Regt. Director of Certification
 Intertek Testing Services NA, Inc.
 647 F. Highway Road, Ste 1, College Heights, IL 60016, USA
 Phone: 647-478-5867 Fax: 647-478-7532

www.intertek.com

Vulcan Industries LLC | 57872 | Rev: Feb 19 2021 12:12PM | Uncontrolled Copy

Page 1 of 2

CERTIFICATE OF COMPLIANCE

Certificate Number: R39285
 Report Reference: R39285-20211026
 Date: 2021-NOVEMBER-03

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Model MC-009, Oversized Insulated Skin Slat Rolling Steel Type Fire door, surface mounted to masonry wall type constructions.

Samling
 Head of Marketing and Sales - Middle East Region



Page 1 of 1

LISTING INFORMATION

Product Covered: Vulcan Industries - Hollow Metal Fire Door - 180 Minutes - UL 10C
 Category A Doors - No additional edge-sealing system required

Product Description: Latched Single Acting Single or Double Leaf Steel Fire Door (Category A) to be installed in listed Category C - Steel frames.

Door Leaf is constructed with 1.2mm thick Galvanized Steel and is infilled with Honeycomb (43mm thickness).

Maximum Allowed Sizes:
 Single Leaf Door: 960mm x 2152mm x 46mm (w x h x door thickness)
 Double Leaf Door: 1925mm x 2152mm x 46mm (w x h x door thickness), (width of each leaf is 960mm)

Limitations:
 Minimum latch throw - 1/2 inch, minimum standard 3-point latching for door pairs - center latching active leaf, top and bottom latching on the inactive leaf. Double doors must be provided with one integral steel astragal.
 Listed steel vision kits may be installed (Vulcan Vision Kit Model - DVP-B or equivalent).
 Listed steel louvers may be installed.

Double Egress doors: Not allowed

Fire Rating: The product listed above has been evaluated according to the requirements of the standard UL 10C and has qualified for up to 180 minutes (3 hours) positive pressure rating.

Also meets the requirements of UL 10B (Neutral Pressure Fire Rating) and NFPA 252 (Positive Pressure Fire Rating).

Vulcan Industries LLC | 57872 | Rev: Feb 19 2021 12:12PM | Uncontrolled Copy

Page 2 of 2



Certificate of Compliance

You have been awarded:
Intertek WH US Mark for Category A - Doors - No Additional Edge-sealing System Required

Standard: UL 1001 (2016), UL 1002 (2016), NFPA 210 (2017)

Certificate number: WH20-18150155

Organization: Vulcan Industries LLC
 New Industrial Area
 P.O. Box 15007
 Ajman
 United Arab Emirates

Product: Vulcan Industries - Hollow Metal Fire Door - 180 Minutes - UL 10C
 Door: 60 Min PP Category A Door - 3 Hour PP Category A Door - 2 Hour PP Category A Door - 90 Min PP Category A Door - 45 Min PP Category A Door
 Listing Information: See following pages

Certification body: Intertek Testing Services NA, Inc.
 Initial registration: August 30, 2020
 Date of expiry: December 31, 2022
 Issue status: 3

Authorized By:
 John P. Rippey, Regt. Director of Certification
 Intertek Testing Services NA, Inc.
 647 F. Highway Road, Ste 1, College Heights, IL 60016, USA
 Phone: 647-478-5867 Fax: 647-478-7532

www.intertek.com

Vulcan Industries LLC | 57872 | Rev: Jan 28 2022 1:58AM | Uncontrolled Copy

Page 1 of 2

LISTING INFORMATION

Product Covered
 Vulcan Industries - Hollow Metal Fire Door - 180 Minutes - UL 10C

Category A Doors - No additional edges-sealing system required.

Product Description
 Latched Single Acting Single or Double Leaf Steel Fire Door (Category A) to be installed in listed Category C - Steel frames.

Door Leaf is constructed with 1.2mm thick Galvanized Steel and is infilled with Honeycomb (43mm thickness).

Maximum Allowed Sizes:
 Single Leaf Door: 960mm x 2150mm x 46mm (w x h x door thickness)
 Double Leaf Door: 1925mm x 2150mm x 46mm (w x h x door thickness), (width of each leaf is 960mm)

Limitations:
 Minimum latch throw - 12 inch, minimum standard 3-point latching for door pairs - center latching active leaf, top and bottom latching on the inactive leaf. Double doors must be provided with one integral steel astragal. Listed steel vision kits may be installed (Vulcan Vision Kit Model - QVP-B or equivalent).
 Listed steel louvers may be installed.

Double Egress doors: Not allowed

Fire Rating
 The product noted above has been evaluated according to the requirements of the standard UL 10C and has qualified for up to **180 minutes (3 hours)** positive pressure fire rating.

Also meets the requirements of UL 10B (Neutral Pressure Fire Rating) and NFPA 252 (Positive Pressure Fire Rating).

Certificate of Compliance

You have been awarded:
WH Service Mark 2014 for Category D - Door/frame Assemblies
 Standards: BS 476 Part 22 (1987), BS 476 Part 22 (1987)
 Certificate number: WH118-18150152

Organization: Vulcan Industries LLC
 New Industrial Area
 P.O. Box 15007
 Ajman
 United Arab Emirates

Product: Vulcan Industries - Steel Door & Frame Assembly (Honeycomb Infill) - 240 Minutes - BS 476 Part 22
 (Rev. 01-2017)
 Fire Rating: 4 Hour Fire Rating
 Listing information: See following page(s)

Certification body: Intertek Testing Services NA, Inc.
 Initial registration: October 15, 2018
 Date of expiry: December 31, 2022
 Issue status: 5

Authorized By:

 Jack Philippe Ray, Director of Certification
 Intertek Testing Services NA, Inc.
 1421 F. Algonquin Road, Suite 1, Skokie, Illinois, 60076 U.S.A.
 Phone: 630-439-8587 Fax: 630-439-7326

PRODUCT CERTIFICATIONS

LISTING INFORMATION

PRODUCT COVERED
 Vulcan Industries - Steel Door & Frame Assembly (Honeycomb Infill) - 240 Minutes - BS 476 Part 22

PRODUCT DESCRIPTION
 Single swinging, double leaf, hollow metal type, honeycomb infill fire door assembly in grouted steel frames intended for use in masonry constructions.

Limitations:
 Double door design - 3mm x 40mm welded on active and inactive leaves
 Minimum 3-point latch in door pairs - top and bottom on inactive leaf & centre latch on active leaf (latch throw - 12mm)

Maximum allowed sizes for 240 minutes rating:
 Double door frame - 2390mm x 2395mm x 150mm (w x h x jamb depth)
 Double door leaf - 1190mm x 2356mm x 46mm (w x h x thickness)

Vision Panel Glass - 225mm x 625mm x 5mm (w x h x thickness) (Keralite R, 5mm thick)

Single door: Not allowed
 Allowed Extended Sizes for the vision panel for 60, 90, 120 & 180 minutes fire rating:

Width (mm)	Height (mm)	Area (sq. m)
258 (at 650mm height)	719 (at 235mm width)	0.17

Allowed Extended Sizes for the door assembly for 60, 90 & 120 minutes fire rating:

Width (mm)	Height (mm)	Area (sq. m)
3107 (at 2487mm height)	3114 (at 2482mm width)	7.73
1508 (at 2447mm height)	3063 (at 1205mm width)	3.69

Allowed Extended Sizes for the door assembly for 180 minutes fire rating:

Width (mm)	Height (mm)	Area (sq. m)
2668 (at 2495mm height)	2674 (at 2490mm width)	7.16
1392 (at 2454mm height)	2627 (at 1208mm width)	3.42

RATINGS
 The double leaf door and frame assembly has been evaluated in accordance with BS 476 Part 20 & 22 standards and achieved the following ratings:

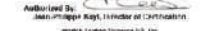
Certificate of Compliance

You have been awarded:
WH Service Mark 2014 for Category D - Door/frame Assemblies
 Standards: BS 476 Part 22 (1987), BS 476 Part 22 (1987)
 Certificate number: WH118-18150151

Organization: Vulcan Industries LLC
 New Industrial Area
 P.O. Box 15007
 Ajman
 United Arab Emirates

Product: Vulcan Industries - Fully Glazed Double Leaf Door with Side & Top Lights - 120 minutes - BS 476 Part 22
 (Rev. 01-2017)
 Fire Rating: 2 Hour Fire Rating
 Listing information: See following page(s)

Certification body: Intertek Testing Services NA, Inc.
 Initial registration: October 15, 2018
 Date of expiry: December 31, 2022
 Issue status: 5

Authorized By:

 Jack Philippe Ray, Director of Certification
 Intertek Testing Services NA, Inc.
 1421 F. Algonquin Road, Suite 1, Skokie, Illinois, 60076 U.S.A.
 Phone: 630-439-8587 Fax: 630-439-7326

LISTING INFORMATION

PRODUCT COVERED
 Vulcan Industries - Fully Glazed Double Leaf Door with Side & Top Lights - 120 minutes - BS 476 Part 22

PRODUCT DESCRIPTION
 Double leaf doorset -

Door & Side/Top Lights Frame - Double rebate, 150mm jamb depth frame constructed with 1.5mm thick Galvanized Steel.

Door Leaf - 80mm wide, 46mm thick Hollow Metal stiles & rails constructed with 1.2mm thick Galvanized Steel.

The door leaves are glazed with fire rated glass ref: Contralite Lite 120, 14mm thick from Vetrotech Saint-Gobain International AG.

The glass is supported on setting blocks- ref: Flamm 12, nominal 5mm thick, and held in position with steel glazing beads - 12mm x 46mm (w x h) through screwed with M5 screws of size 4 x 46mm (dia x l) on both sides of the door leaves. 26mm x 25mm (w x h) steel glazing beads are used on the side & top lights frame.

Self adhesive - Keralite 2000, 5mm x 20mm glazing tape is used between the glass and the steel glazing beads/steel frame.

Limitations
 Double Astragal Design - 3mm x 50mm on inactive leaf & 1.5mm x 50mm on active leaf.

Minimum 3-point latching for door pairs - top & bottom on the inactive leaf & center latching on active leaf (latch throw - 12mm).

Maximum sizes:
 Door leaf size: 1080 x 2352 x 46mm (w x h x t)
 Glass size: 890 x 2182 x 14mm (w x h x t)
 Maximum clear view of glass: 630 x 2150mm (w x h)

RATINGS
 The double leaf door tested opening away from the fire side qualifies for the following ratings according BS 476 Part 22:

Integrity	120 Minutes
-----------	-------------

Note: Single leaf door assembly not allowed.

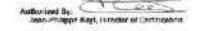
Certificate of Compliance

You have been awarded:
WH Service Mark 2014 for Fire Window Frames
 Standards: BS 476 Part 22 (1987), BS 1363-1 (2015)
 Certificate number: WH115-18150101

Organization: Vulcan Industries LLC
 New Industrial Area
 P.O. Box 15007
 Ajman
 United Arab Emirates

Product: Vulcan Industries - Non-Loadbearing Fully Glazed Partition
 (Rev. 01-2015)
 Listing information: See following page(s)

Certification body: Intertek Testing Services NA, Inc.
 Initial registration: December 30, 2015
 Date of expiry: December 31, 2022
 Issue status: 5

Authorized By:

 Jack Philippe Ray, Director of Certification
 Intertek Testing Services NA, Inc.
 1421 F. Algonquin Road, Suite 1, Skokie, Illinois, 60076 U.S.A.
 Phone: 630-439-8587 Fax: 630-439-7326

PRODUCT CERTIFICATIONS

LISTING INFORMATION

PRODUCT COVERED
Vulcan Industries - Non-Loadbearing Fully Glazed Partition

PRODUCT DESCRIPTION
Non-load Bearing Fully Glazed Partition.

Overall Size: 3000 X 3000 x 100 mm (w x h x thk) consisting of six glazing panels of 14mm thickness fixed on a 2mm thick galvanized steel tubular framing system. Glazing was secured on steel framing system along the Mullions and Transoms using glazing beads.

Limitations: Maximum Panel Size, 1409 X 2884 mm (w x h)

No Extension in height is allowed above that tested, 3000mm. No Limitation on the width.

This Non-load Bearing Fully Glazed Partition has been qualified for the following ratings per EN 1364-1, Paragraph A.3.1 & BS 476 Part 22 for integrity. The ratings are applicable to both directions of fire.

Insulation Rating	13 Minutes
Integrity Rating	90 Minutes
Fire Heat - 24 Minutes	
Heat Radiation	7.23 Kw/m ² - 90 Minutes

No Insulation rating for this product has been established.
Product should be installed as per the Installation Instruction from the Manufacturer.



Certificate of Compliance



You have been awarded:
Intertek WH US + C Mark for Category A - Doors - No Additional Edge-sealing System Required

Certificate number: WH21-18150166

Organization: Vulcan Industries LLC
New Industrial Area,
P.O. Box 15007
Ajman
United Arab Emirates

Product: BAN FOUR DWC-LLC - DANSHBAN - 90 minutes Composite Wooden Door with Mineral Core
See us here:
Fire Rating: 90 mins PP Category B Door
(Rating information: See following page(s))

Certification body: Intertek Testing Services NA, Inc.
Initial registration: February 16, 2021
Date of expiry: December 31, 2022
Issue status: 2

Authorized By:
[Signature]
NORIS FLEISCHER, Key Account Manager
1411 F. Spring Road, Ste 1, Chicago, Illinois, 60631-1411
Phone: 646-453-3000 Fax: 646-536-7328

LISTING INFORMATION

FIRE RESISTANT PRODUCTS & COMPONENTS
CATEGORY A - DOORS - NO ADDITIONAL EDGE SEALING SYSTEM REQUIRED

PRODUCT COVERED
DANSHBAN - 90 minutes Composite Wooden Door
Model: DANSHBAN FRD09090UL

PRODUCT DESCRIPTION
Hardware Limitations:
Listed Cylindrical Lock with minimum latch bolt throw of 1/2".
Minimum 3-point latching required (top and bottom latching on inactive leaf and standard single point latching on the active leaf).

Configuration Size
Single Swing - 950mm wide x 2400mm high x 45mm thick

Standard Panel:
950mm wide x 2400mm high x 45mm thick (Active leaf)
950mm wide x 2400mm high x 45mm thick (Inactive leaf)

Double Egress - Not allowed

This door is eligible for use with DANSHBAN - 90 minutes Steel Door Frame (Model DANSHBAN FRD09090UL) only.

The door noted above is eligible to bear the "S" (for Smoke & Draft Control assemblies) if a listed "Category H - Smoke & Draft Control Gasket" has been applied to the assembly. Please refer to Category H for individual gasket manufacturer's listings.

Steel Frame is cement mortar grouted and fastened to aerated concrete or masonry wall by anchor. The maximum clearance between the wall and the frame is 10mm and the clearance is filled with cement mortar.

FIRE RATINGS
The product noted above has been tested and qualified per UL 10B, UL10C, NFPA252 and CAN / ULC S104 for a 90 minutes Positive Pressure Fire Rating.



TEST REPORT FOR VULCAN INDUSTRIES LLC

Report No.: 88782.03-119-12-80
Date: 11/09/18

REPORT ISSUED TO
VULCAN INDUSTRIES LLC
P.O. Box 15007
Ajman, U.A.E.

SECTION 1 SCOPE

Intertek Building & Construction (B&C) was contracted by Vulcan Industries LLC to perform ballistic resistance testing in accordance with UL 752 on double door (Vulcan FE8R DD) assembly. Results obtained are tested values and were secured by using the designated test methods. This report is in conjunction with Intertek Project Number G865597, which includes product sampling information. Testing was conducted at the Intertek B&C Test Facility in York, Pennsylvania. Intertek B&C in York, Pennsylvania has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-144) by International Accreditation Service, Inc. (IAS). Intertek B&C is accredited to perform all testing reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2 SUMMARY OF TEST RESULTS

Product Type: Vulcan FE8R DD

TEST	RESULT
Ballistic Resistance Level/Class	Level 6
Ballistic Resistance Test Result	Pass

For INTERTEK B&C
COMPLETED BY: Cory Straub
TITLE: Technician II
SIGNATURE: [Signature]
DATE: 11/09/18
CIS/ha/ase

REVIEWED BY: Travis A. Hoover
TITLE: Program Manager
SIGNATURE: [Signature]
DATE: 11/09/18

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited by the terms and conditions of the agreement. Intertek assumes no liability to any party, other than the Client as set forth in the agreement. For any loss, expense or damage occasioned by the use of this report, only the Client is authorized to permit copying or distribution of this report and thereafter to its website. Any use of the report herein or any of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The photographs and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service to be tested has ever been under an Intertek certification program.



TEST REPORT FOR VULCAN INDUSTRIES LLC

Report No.: 88782.03-119-12-80
Date: 11/09/18

REPORT ISSUED TO
VULCAN INDUSTRIES LLC
P.O. Box 15007
Ajman, U.A.E.

SECTION 1 SCOPE

Intertek Building & Construction (B&C) was contracted by Vulcan Industries LLC to perform forced entry testing in accordance with ASTM F3038 on double door (Vulcan FE8R DD) assembly. Results obtained are tested values and were secured by using the designated test methods. This report is in conjunction with Intertek Project Number G865597, which includes product sampling information. Testing was conducted at the Intertek B&C Test Facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2 SUMMARY OF TEST RESULTS

Specimen No. 3
Product Type: Vulcan FE8R DD

TEST	RESULT
Forced Entry Resistance Test No. 3 (Hinge Side)	30 minute - Pass
Forced Entry Resistance Test No. 4 (Astragal/Latch/Locking Hardware)	30 minute - Pass

For INTERTEK B&C
COMPLETED BY: Cory Straub
TITLE: Technician II
SIGNATURE: [Signature]
DATE: 11/09/18
CIS/ha/ase

REVIEWED BY: Travis A. Hoover
TITLE: Program Manager
SIGNATURE: [Signature]
DATE: 11/09/18

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited by the terms and conditions of the agreement. Intertek assumes no liability to any party, other than the Client as set forth in the agreement. For any loss, expense or damage occasioned by the use of this report, only the Client is authorized to permit copying or distribution of this report and thereafter to its website. Any use of the report herein or any of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The photographs and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service to be tested has ever been under an Intertek certification program.

DESIGN VERIFICATION REPORT

DNV-GL
DNV-A130489
Rev. 1.0

Particulars of Design

Designer / Manufacturer: Vulcan Industries LLC
Location: Ajman, United Arab Emirates
Order No./Project Reference: A589489
Installation: Not known
Equipment Description: Design Review of Blast Proof Door (Double Leaf)
(Maximum Dynamic peak overpressure of 10 psig for 300 milliseconds)

This is to verify that the design of:
Blast Proof Door - Double Leaf (H - 3.020m x W-3.020m) (Maximum Dynamic peak overpressure of 10 psig for 300 milliseconds)

has been reviewed and found to comply with:
Applicable requirements of ASCE guidelines - Design of Blast Resistant Buildings in petrochemical facilities, Section 6.00 and ASCE - "P" Edition (as applicable). The design review is performed based on drawings and design analysis report submitted for design review.

Scope of Verification:
The scope of verification is limited to the review of mechanical adequacy blast proof doors with regards to local in-place strength against conventional installation as referenced in the report.
No other codes / standards have been referred to and it is concluded that client should satisfy themselves that requirements of other relevant codes / standards / national regulations e.g. those mentioned in reference to design calculations submitted etc., are complied with fully.
DNV-GL review is limited to the door leaf and frame only. This review does not cover any aspect regarding design of concrete supports, anchor bolts, fire rating, impact certification, installation of door and any other arrangements around the door.

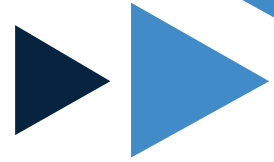
A. Table 1 - Operational Limitations

Below summarized data are considered from design calculation and drawings:

Parameter	Value	Design/Notes
Dynamic peak overpressure	10 psig (maximum)	Design/Notes
Duration of pressure	300 milliseconds (maximum)	Design/Notes
Residual overpressure	2 psig (10% of peak)	Design/Notes
Reflected overpressure	20 psig (maximum)	Design/Notes
Ground Cover Shock (maximum)	2 psig (200 mm radius and 3.020 m height)	Design/Notes
Force per frame bar	40.5 kN (per frame bar)	Design/Notes
Door weight	1.100 kN	Design/Notes
Number of hinges	3 nos. (mechanical hinges per leaf)	Design/Notes
Door lock	Overview 200mm - 2 Nos per door leaf Intertek 3035 J8	Design/Notes
Door hinge	Hinge 200 mm x 200 mm - 3 nos. hinge bolts per door leaf, Material: ASTM A222 J8	Design/Notes
Design temperature	Normal would not be suitable for the maximum design temperature.	Design/Notes
Fire rating design	Excluded from the scope of design verification.	Design/Notes
Door leaf construction	3 nos. 100mm thick glass, reinforced with	Design/Notes



OUR MAJOR CLIENTS





Miacasa Steel Industries LLC
New Industrial Area, Ajman, UAE

✉ info@miacasagroup.com

☎ +971 65 592035

📞 +971 50 9973542 | +971 50 2950300