



METALFORM

METALFORM



Door & Window Opening Solutions

A member of Maani Ventures, MetalForm is specialized in sheet metal fabrication with the capability of delivering a wide range of customized metal products. MetalForm is the leading and reliable choice for manipulating sheet metal: punching, bending and forming. Dedicated to serving A-Z needs of any building application, MetalForm is fast becoming a primary choice in the contracting, engineering and interior design communities.

Engineers and Industrialists trust MetalForm to produce the highest quality products such as durable fire-rated door assemblies and sturdy building facades. Our hollow metal doors and frames are certified by the American Underwriters Laboratories (UL). We stand behind best-in-class finishing. That is why Architects and Designers choose MetalForm for the most convoluted and intricate interior and exterior metal fixtures imaginable.

Located in Amman (Jordan), MetalForm has a region wide reach serving the Middle East, North Africa and the Gulf. Our state-of-the-art machinery and experienced designers and engineers will exceed the expectations for all your metal forming needs. Choose MetalForm.



MetalForm Steel Doors & Frames

Design

MetalForm products are designed by experienced engineers using state-of-the-art computer aided design technology.

Our advanced engineering division provides a full 3D mechanical modeling facility and enables us to produce working drawings and installation details exactly and efficiently.

Fabrication

Our purpose built fabrication plant is one of the most modern of its kind in our industry and fully equipped to produce and finish the widest possible range of architectural metal products.

Our production line techniques combine highly skilled expertise from our workforce with computer controlled manufacturing to ensure consistency in high quality.

Installation

Regardless of project size or geographical location, our installation teams are committed to getting the job done as quickly and as efficiently as possible.

Our installation engineers are highly trained and well experienced in dealing with problems that can arise on-site.

MetalForm Fire Doors



Our doors have been utilized in a wide and diverse range of projects, including:

- * Airports
 - * Industrial / Manufacturing Plants
 - * Utilities
 - * Transportation
 - * Education
 - * Commercial / Office Buildings
- Sports / Entertainment Facilities
 - Shopping Malls
 - Hotels
 - Hospitals
 - Warehousing

MetalForm Fire Doors

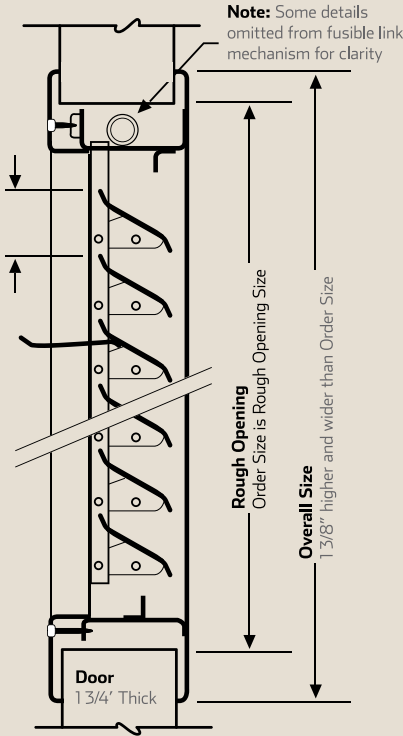
The classifications shown here indicate the common areas of fire rated doors as well as their respective ratings.

Label Classification	Fire Rating	Location
1	3 hour rating	Opening in walls separating buildings divide a single building into fire areas
2	1 - 1/2 & 2 hour rating	Opening in enclosures of vertical communication through buildings
3	3/4 hour rating	Opening in corridors & room partitions

Lites & Louvers

The ratings shown here indicate the permissible area of exposed glass for each door leaf.

Fire Rating	Permissible Glass Area
Up to 3 hour rating	Up to 100 square inches exposed *Firelite Glass
Up to 2 hour rating	Up to 100 square inches exposed
Up to 3/4 hour rating	Up to 1296 square inches exposed



UL listed Fusible Link Louvers are fitted in our grilled sub-frames to offer adequate ventilation through our doors. Upon actuation of the link, the action bar rotates and locks the louver blades in the closed position to offer a fire rating up to 1-1/2 Hours.

Standard Leaf Construction

- Two skins of 1.2mm (18ga.) thick steel; cold rolled, galvanized or stainless
- 44mm thick door leaf
- Doors are either insulated with medium-to-high density mineral Rockwool / Fiberglass (stiffened) or alternatively insulated by pre-expanded, small cell honeycomb core material, to suit classification
- 1.5mm (16ga.) steel end channels projection welded to the top and bottom of the door
- Doors are mortised, reinforced, drilled and tapped for three template hinges
- On double doors, an astragal is folded into the leading edge of one leaf to ensure a totally sealed unit

Standard Frame Construction

- Manufactured from 1.5mm (16ga.) thick steel; cold rolled, galvanized or stainless
- Supplied in either knock down (wraparound profile) or fully welded smooth finish (single / double rabbit profile)
- Frames are mortised, reinforced, drilled and tapped for hinges and strikes
- Frames are provided with four fixings per jamb, built-in adjustment and complete with cover caps



MetalForm Acoustic Doors

Noise is an ever-present by-product of modern living, both in the external and internal environments, affecting our health and well-being.

Even low level noise can have significant effects. In the commercial environment, poor sound reduction between manufacturing and office environments can significantly affect productivity in terms of interference with speech and telephone use and even staff morale. Noise is ‘unwanted sound’, so the solution to noise is to change the sound environment, principally by reducing the level of sound produced.

Both sound absorption and sound insulation (the opposite of sound transmission) are used in controlling the propagation of noise within and through buildings.

Assessing Noise

The solution to a noise problem begins with assessing the noise impact. Sound can be described by its frequency (Hertz/Hz) and sound pressure level (Decibels/db).

Sound Level dB(A)	Type of Noise	Noise Level
0	Threshold of hearing	Inaudible
20	Rural environment	Extremely quiet
30	Quiet home	Distant sounds barely audible
40	Quiet office	Distant sounds audible
50	Background conversation	Moderate
60	Radio / Television	Loud
70	Motorway noise	Moderately loud
90	Factory noise	Very loud
105	Discotheque	Deafening
130	Jet aircraft @ 30 meters	Physical pain



There are multiple solutions to noise reduction, but all rely mainly on two principles.

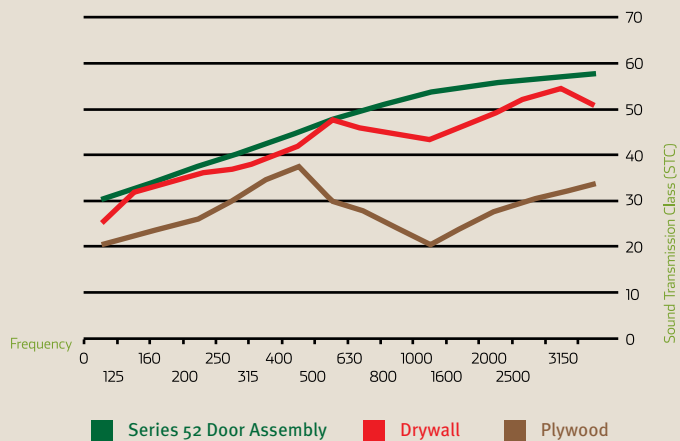
- Sound Absorption; the process by which sound energy striking a surface is absorbed within the material and converted to heat energy.
- Sound Transmission; which allows the transmission of sound energy from one point or space to another, via an intervening structure or passageway.

Rating Sound Insulation

Sound insulation performance can be described over a range of frequencies as the Sound Transmission Class, or STC. MetalForm has developed a range of acoustic doors providing a variety of sound reduction capabilities.

MetalForm Acoustic Doors are manufactured from steel providing greater mass than other raw materials. Through extensive research our core materials and combinations have been developed to improve both insulation and stiffness.

MetalForm Door	STC	Performance	Description
Series 38	30-38	Average	Loud speech audible but not intelligible
Series 45	39-45	Good	Loud speech just detectable
Series 52	46-52	Excellent	Loud speech barely audible



Standard Leaf Construction

- Two skins of 1.5mm (16ga.) thick steel; cold rolled, galvanized or stainless
- 44mm thick door leaf
- Doors are either insulated with high density acoustic cores (stiffened) or alternatively insulated with polyurethane injected foam to suit classification
- 1.5mm (16ga.) steel end channels projection welded to the top of the door
- Acoustic rubber fitted in the door bottom channel
- Doors are mortised, reinforced, drilled and tapped for three template hinges
- On double doors, an astragal is folded into the leading edge of one leaf to ensure a totally sealed unit
- Vision panels can be accommodated

Standard Frame Construction

- Manufactured from 2mm (14ga.) thick steel; cold rolled, galvanized or stainless
- Supplied in either knock down (wraparound profile) or fully welded smooth finish (single / double rabbit profile)
- Frames are mortised, reinforced, drilled and tapped for hinges and strikes
- Frames are provided with four fixings per jamb, built-in adjustment and complete with cover caps
- Acoustic rubber sealants fitted to suit classification



MetalForm Ballistic Doors

MetalForm offers a comprehensive range of pre-engineered bulletproof doorsets manufactured to suit your requirements.

The high performance is coupled with exceptional aesthetic and long-lasting appeal by maintaining the visual appearance of the standard MetalForm range.

MetalForm Ballistic Doors have earned a reputation for quality and high performance throughout the commercial, public sector and industrial construction market.

Assessing Threat

The table shown indicates several levels of ballistic threats.

Level	Ballistic Data
1	9MM 124 Gr., 1175 Ft. Sec., FMJ
2	.357 Mag. 158 Gr., 1250 Ft. Sec., LSP
3	.44 Mag. 240 Gr., 1350 Ft. Sec., SWC
4	.30 Cal. 180 Gr., 2540 Ft. Sec., JSP
5	7.62MM 150 Gr., 2750 Ft. Sec., FMJ
6	9MM 124 Gr., 1175 Ft. Sec. (5 SHOT)
7	5.56MM 55 Gr., 3080 Ft. Sec., FMJ
8	7.62MM 150 Gr., 2750 Ft. Sec. (5 SHOT)



Listed below are common applications of ballistic doors:

- Banks
 - Federal Agencies
 - Airports
 - Military Installations
 - Retail Operations
- Police Stations
 - Courtrooms
 - Aerospace
 - Jails & Prisons
 - Government Facilities

Standard Leaf Construction

- Two skins of 1.5mm (16ga.) thick steel; cold rolled, galvanized, or stainless
- 44mm thick door leaf
- Doors are insulated with internal ballistic armored plating & medium density rockwool (stiffened) to suit classification
- 1.5mm (16ga.) steel end channels projection welded to the top of the door
- Doors are mortised, reinforced, drilled and tapped for continuous heavy duty hinges
- Doors are mortised, reinforced, drilled and tapped for continuous heavy duty hinges
- Vision panels can be accommodated

Standard Frame Construction

- Manufactured from 2mm (14ga.) thick steel; cold rolled, galvanized or stainless
- Supplied in either knock down (wraparound profile) or fully welded smooth finish (single / double rabbit profile)
- Frames are mortised, reinforced, drilled and tapped for hinges and strikes
- Frames are provided with four fixings per jamb, built in adjustment and complete with cover caps

MetalForm Stainless Steel Doors



Whether you are specifying or supplying stainless steel for corrosion resistance or for its aesthetic beauty, MetalForm Stainless Steel Doorsets are designed to meet your needs.

Stainless Steel can be used for openings that require special corrosion resistance or high hygienic standards such as pools, chemical storage areas, food processing

Standard Leaf Construction

- Two skins of 1.2mm (18ga.) thick stainless steel; grade 304 / 316
- Doors are either insulated with medium-to-high density mineral Rockwool / Fiberglass (stiffened) or alternatively insulated by pre-expanded, small cell honeycomb core material, to suit classification
- 1.5mm (16ga.) steel end channels projection welded to the top and bottom of the door
- Doors are mortised, reinforced, drilled and tapped for three template hinges
- On double doors, an astragal is folded into the leading edge of one leaf to ensure a totally sealed unit
- Vision Panels can be accommodated

plants, hospitals, laboratories, pharmaceutical facilities and the list goes on and on. Other openings require the modern, neat look of stainless steel; mostly used in executive offices, airports and high-end residential complexes.

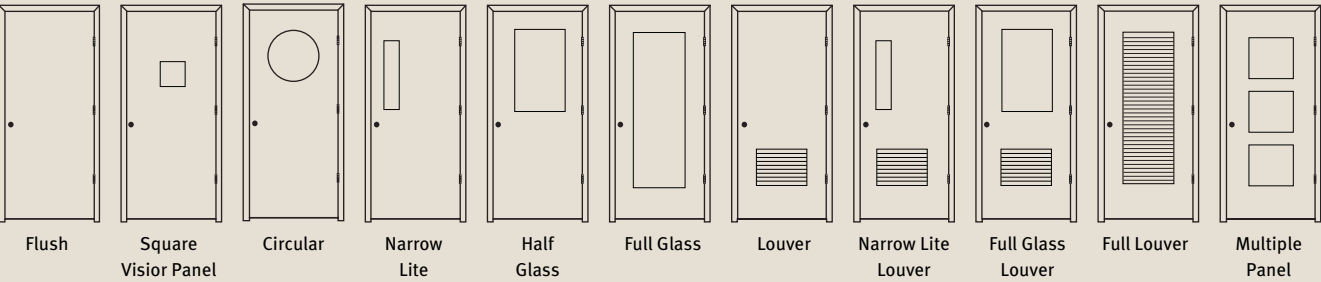
Both types of stainless steel are available in the #4 brushed finish as well as the #8 mirror finish.

Standard Frame Construction

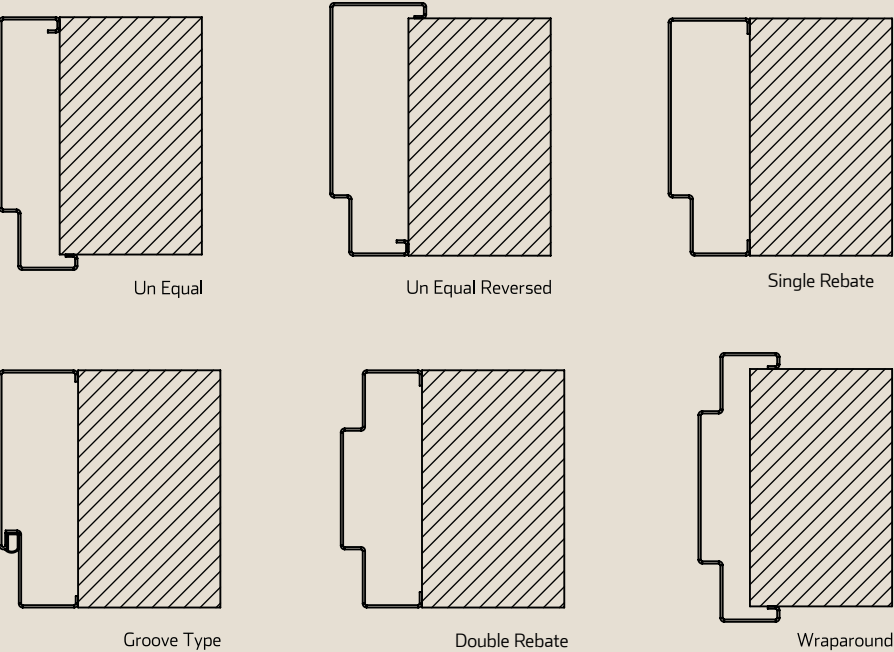
- Manufactured from 1.5mm (16ga.) thick stainless steel; grade 304 / 316
- Supplied in either knock down (wraparound profile) or fully welded smooth finish Frames are mortised, reinforced, drilled and tapped for hinges and strikes
- Frames are provided with four fixings per jamb, built-in adjustment and complete with cover caps



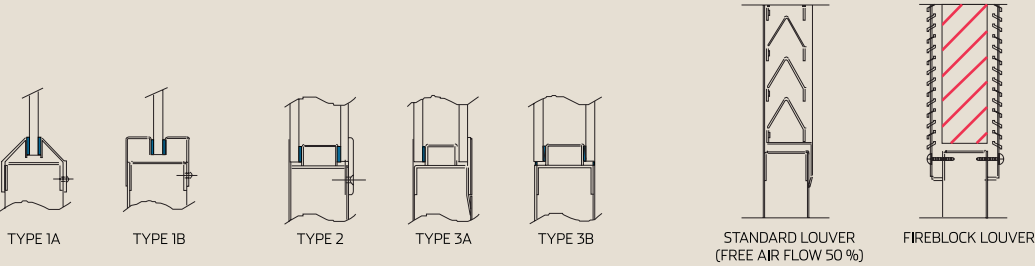
Standard Door Designs



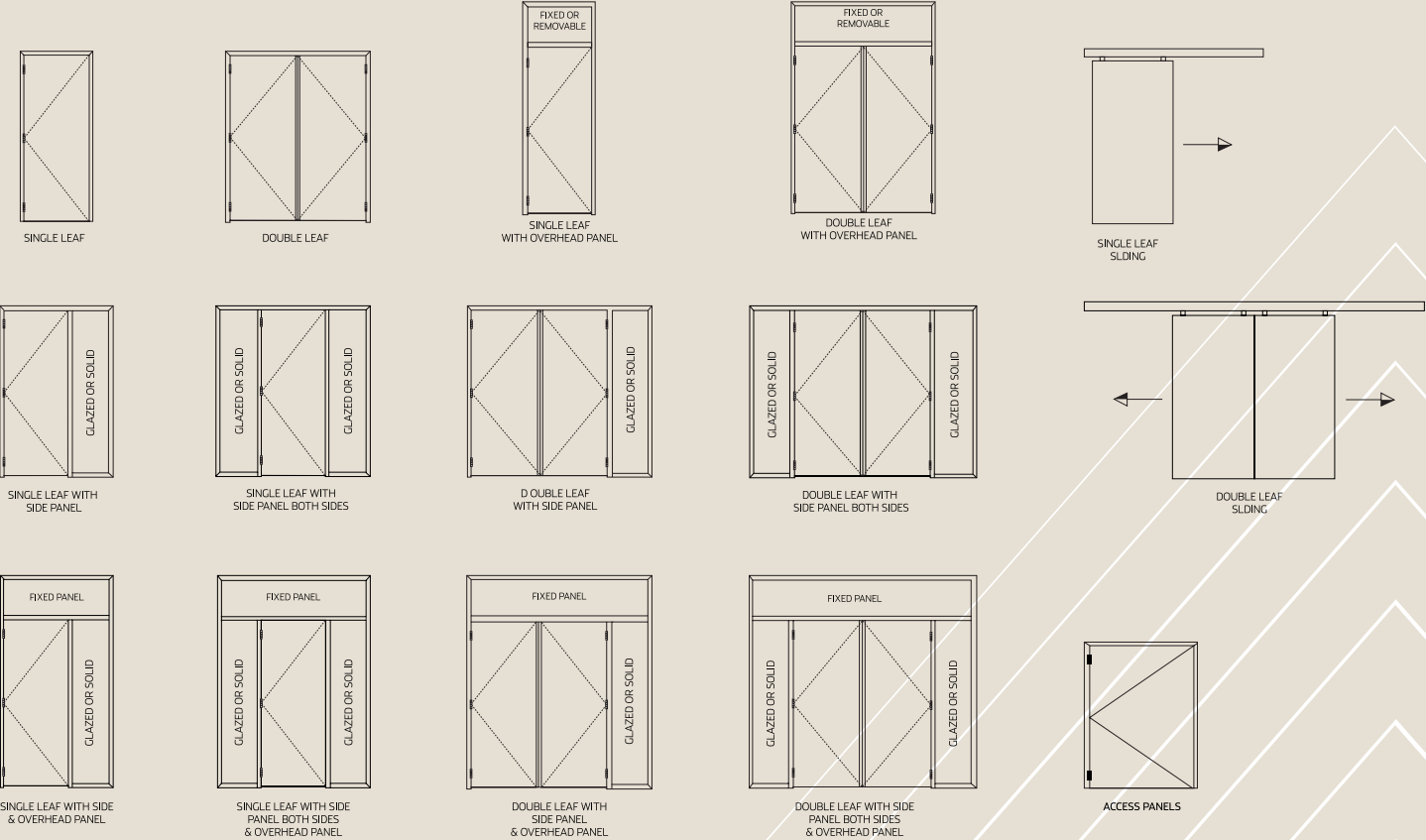
Frame Profiles



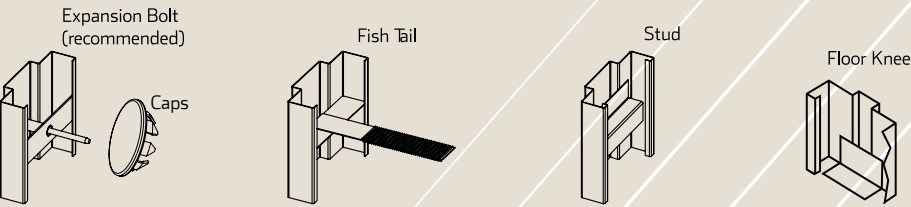
Standard Lite & Louver Profiles



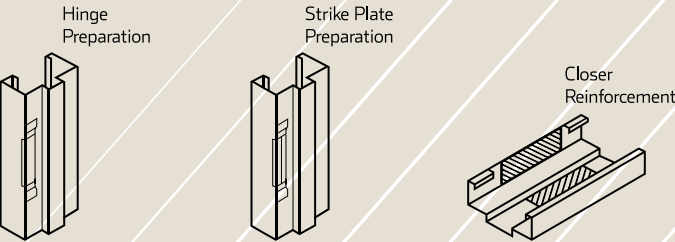
Door Configurations



Anchoring

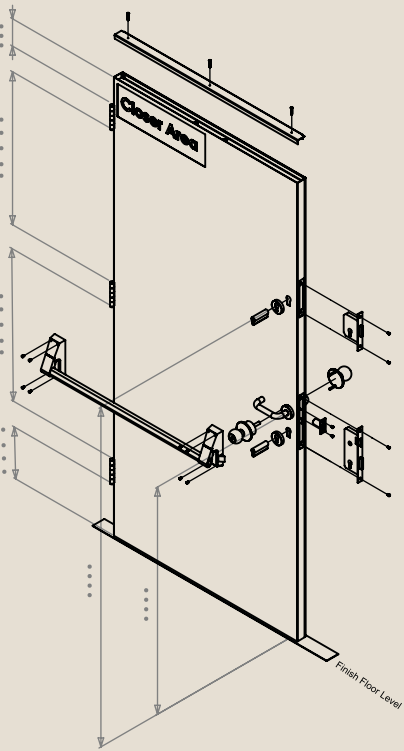


Hardware Preparation



Hardware Location

In accordance with HMMA 831
“Recommended Hardware Location for
Custom Hollow Metal Doors & Frames“

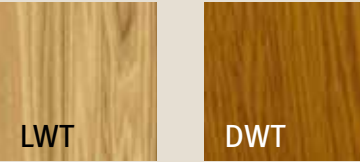


Finishes

Standard Colors

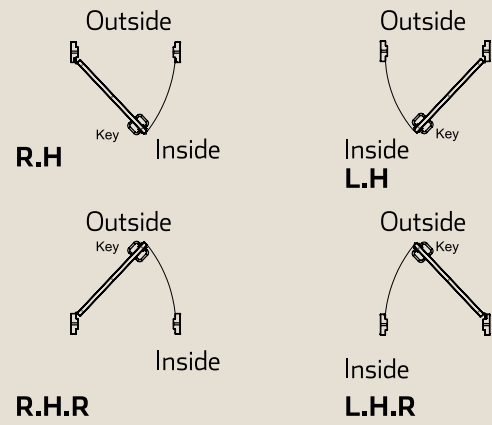


Wood Texture

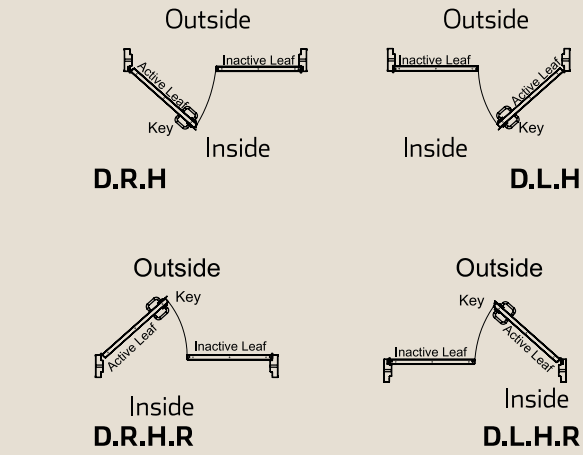


Handings

Single Door



Double Door



MetalForm Standard Hardware

Mortise Locksets



Flush Bolts



Panic Exit Device



Lever Handles



Push Plates



Hinges



Pull Handles



Door Closers



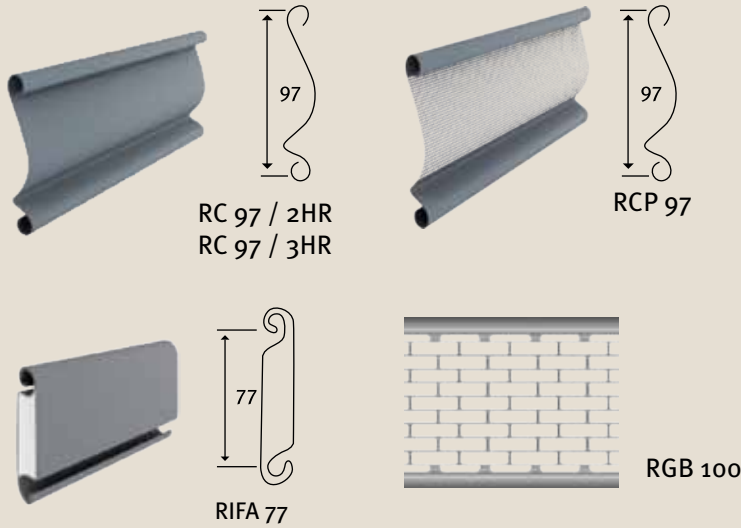
Rolling Shutters



Our rolling shutters are provided exclusively by ROLLC covering a variety of building applications & models.

Curtain

Curtains are constructed of interlocking slats model RC97 FR2/3, curved or straight, 1-1.2mm. thick, ASTM A 366 cold rolled steel with galvanizing standard ASTM A 653 steel zinc coating 2-3 Hours fire rated shutter. Insulated model RIFA77 also available, with curtains equipped with a bottom bar consisting of two structural steel angles (75 mm. x 75 mm. x 8 mm.) of equal weight, one on each side, securely fastened to the bottom of the curtain for reinforcement to provide contact against the ridge when closed .



Barrel Shaft Assembly

Steel pipe barrel, size capable of carrying curtain load with maximum deflection of 0.01” per ft. of door width.

Brackets

6mm thick brackets are recommended.

Guides

Fabricated with minimum 5mm. thick structural steel angles (ASTM A 123, Grade 85 zinc coating, hot-dip galvanized after fabrication). Top of inner and outer guide angles are flared outwards to form bellmouth for smooth entry of curtain into the guides.

Operation

GFA Elektromaten Motor, horsepower as recommended by manufacturer, 230/280, 3 phase service. Open drip-proof motors are provided, removable without affecting setting of limit switches; thermal overload protection; solenoid brake; planetary reduction gearing and rotary limit switches; transformer with 24v control secondary; and all integral electrical components prewired to terminal blocks. Automatic closure are activated by a fusible link [or a local smoke/fire detector or a central smoke/fire alarm system]. When automatic closure is activated, electric sensing edge and push button are inoperable. Doors are fail-safe and will close upon power failure.

Ref. Code	Description	Thickness (mm)	Weight (Kg/m2)	Max. Width (Mtrs)	Max. High (Mtrs)
RC 97/2H	Fire Shutter Steel Curved Plain Slat 2 hour fire rated	1.0	14.57	11	6
RC 97/3H	Fire Shutter Steel Curved Plain Slat 3 hour fire rated	1.2	17.47	14	6
RIFA 77	Fire Shutter Steel Insulated Flat Slat 2-3 hour fire rated	21 mm	22	8	6
RCP 97	Galvanized Steel Curved Perforated Slats	0.8 1.2	9.91 13.6	8 14	6
RGB 100	Grill Brick Type- 100	1.2	7	6	5

Curtain Wall, Door & Partition Systems

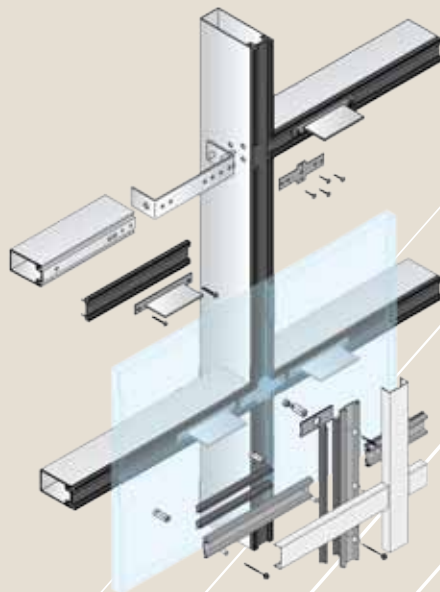
By providing a superior alternative to aluminum systems, Metalform can provide curtain walls, partitions and door systems in different kinds of steel; cold-rolled, galvanized & grade 304 or 316 stainless. Finishes vary from painted to bright or satin polished. Such systems can provide thermal or non-thermal break in addition to smoke & fire-rated characteristics.

Doors & Windows with Thermal Break

Thermally insulated profile systems with fittings and accessories for single and double-leaf doors, windows, as well as for exterior glazed units.

Curtain Walls & Glazed Roofs

Our system offers an enormous variety of possible structural applications for constructions using glazed curtain walling. The static properties of profiled steel tubular section also make these the optimal structural elements for curtain walling. The slender visible widths of only 45 or 60 mm allow the construction of large-surface transparent façades in steel and stainless steel.

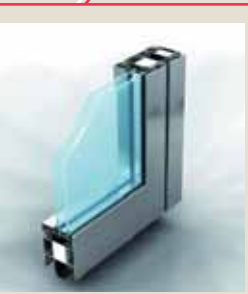


Doors & Windows without Thermal Break

This complete profile system with fittings and accessories for flush-fitting single- and double-leaved doors, glazed walls, porches and windows which do not require thermal break.

Fire - & smoke - Proof Systems El30-El 120/ E30-E 120 / EW30-EW60 / R30 / RS

When it comes to fire and smoke proofing assemblies, MetalForm occupies a leading position. By continuously updating & upgrading our accreditations, we will combine the latest tested solutions of glass & steel to meet your precise requirement.



Reference Projects

Abdali Mall	Jadara University
Al Baraka Mall	Jordan India Fertilizer Company
Al Qatrana Power Plant	Jordan Ahli Bank
Al-Keena & Al-Snobar Hygienic Paper Mills	Jordan River Foundation Headquarters
Arab Bank	Karma Investment Headquarters
Arab German Insurance Company Headquarters	Kempinski Royal Towers Hotel
Arab German University	King’s Academy
Arab Open University	MABCO Headquarters
ASEZA Headquarters	Madaba Private University
Audi Bank	Manarat Al Saadiyat
Basra Sport City	Mcdonalds
Boulevard Amman	Public Security Administration (PSD) Headquarters
British Embassy	Queen Alia International Airport
Carrefour	Royal Jordanian Headquarters
Central Bank of Jordan	Sahara Mall
Dammam University	Samara Dead Sea Mall
Dar Al Dawa Group	Samara Dead Sea Resort – by Emaar Properties
Days inn Hotel	Taj Mall
Doha Bank Headquarters	The Farah Hospital
Embassy of the Netherlands	The Gate - Qatar
Ernst & Young Head Regional Office Bldg	Total Gas Stations
Fitness One Gym	United Insurance Company Headquarters
Galleria Mall	USAID Schools
Hikma Pharmaceuticals	Warwick Winter Valley Dead Sea Resort
I. Khatib Commercial & Residential Buildings	
Invest Bank	
Islamic Arab Bank	



Maani Ventures has developed and expanded its businesses since its establishment in the early seventies, splitting into two main entities, Construction and Furniture, the core divisions of Maani Ventures. Construction in Maani Ventures includes four divisions; **Maani Prefab**, the primary company that specializes in prefabricated structures such as portable buildings and communication shelters thus expanding into the second division; **Maani Steel**, specializing in the generation and development of steel structures. **Maani Metalform**, specializes in producing UL approved fire rated steel doors and architectural sheet metal works and cladding; and last but not least in construction **maani LGS** light steel gauge building solutions empowers clients to profitably achieve fast, reliable, and automated production & construction capabilities without the need for skilled labor, resulting in fast project completion, improved product quality.

In a strategic business decision, by venturing into the specialized furniture divisions, **Maani Office Concepts** specializes in the production and not limited to the supply of high quality office furniture solutions. Moving into the functional and durable; **Maani Learning & Community** provide a wide range of educational and community institutional furniture including classrooms, lecture halls, auditoriums, libraries and others. The **Maani Labs** division focuses on finding solutions for all kinds of laboratory furniture including learning, industrial and research laboratories . Expanding into the manufacturing of bentwood products, **Maani Components** specializes in the production of bent wood components increasing the wood furniture portfolio for diverse options and solutions. **Maani Contract Furniture** is the latest division of the group that offers turnkey contract furniture solutions; which produces (UL approved) steel and wood doors as well as operating in the luxury fit-out industry.

Sister company Ittihad Glass, specializes in producing tampered glass, processed double & insulated glass units for the construction industry.





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