

# TMM

## Industrial Shelving Systems



"We, at Technical Metal Industrial Co. L.L.C. take pride in declaring the company's commitment to satisfy our customers by providing high quality products and promptly delivering them as per the agreed contractual requirements".



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# Introduction

## Industrial Shelving Systems

TMI is a privately owned company, established in 1997 in the Emirate of Abu Dhabi, United Arab Emirates and located on approximately 850,000 square feet in the Industrial City of Abu Dhabi (ICAD).

Specializes in metal processing and manufacturing of Expanded Metal & Plastering Accessories, Roll Formed Profiles, Suspended Ceiling Systems, Cable Management Systems, Metal Doors & Frames, Industrial Shelving, Metal Cabinets, Gratings, Metal Ladders and specialized building material products. We are ISO 9001, 14001 & 18001 Certified Company. Our emphasis is on quality products catering to today's competitive and demanding business environment. By introducing the latest, advanced technologies in our production lines, we ensure that our high production targets are achieved.

Furthermore, with deep knowledge in our manufacturing system capabilities, our products have achieved a very high quality standard in this industry. Having earned a reputation as a manufacturer and supplier of quality products, we fully recognize that constant improvement is a vital requirement for our continued success.

TMI Industrial Shelving Systems Division will always endeavor to fully understand the customer's requirements. We will be able to provide clear and detailed proposals, by working closely with you from the initial concept through to defining a detailed specification.

As a free service to its clients, TMI Industrial Shelving offers shelving design, racking design and warehouse layout design services. Our shelving, racking and warehouse layout design service offers our customers several benefits including visualizing how the storage, shelving or racking solution will look before you buy. Testing and changing layouts at design stage to maximize available space and determining the right mix of shelving or racking product, depending on the final design.

TMI manufactures Light Shelving System, Medium Shelving System, Heavy Shelving Systems which includes the Long Span Racking, Pallet Racking or Drive-In Racking System. We also manufacture Cantilever Racks for storage of long bulky material, pipe racks and small shop items, depending on the client's requirement, as well as the Tyre Racking system.

TMI gives you options for the Shelf types which are available in aluminium, steel, wire mesh, pallet support, mesh grating and plywood.





# *TMI*<sup>®</sup> WAREHOUSING SYSTEMS







## System Description

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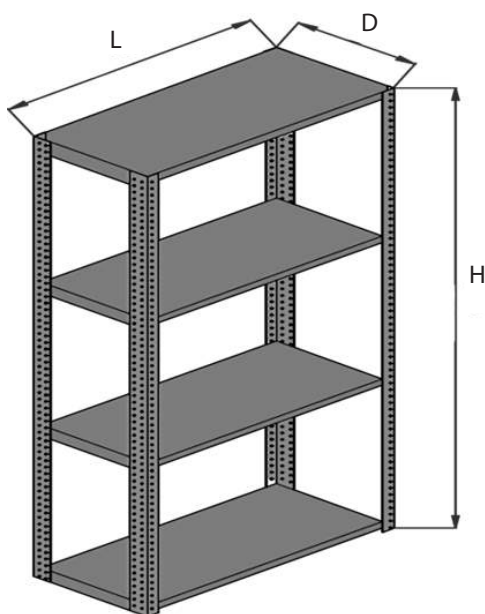


# Light Duty Shelving Systems

Slotted Angle Light Shelving System  
Boltless Light Shelving System

This system is used in conjunction with cold rolled channel, steel frames of stud and track, used for interior non load-bearing walls, which has to be cladded with gypsum board or other cladding sheets. This system is widely used in offices and residential buildings due to easy installations.

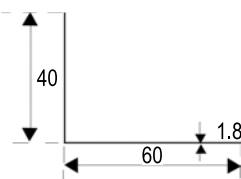
## Slotted Angle Light Shelving System



**Maximum Load Capacity**  
50 - 100 kg

TMI Slotted Angle Light Shelving System offers you the flexibility to design and build your storing system according to your own specifications and requirements assembled with nuts and bolts.

- ✓ Low cost utilization for existing warehouse space.
- ✓ Adapts easily to almost any location.
- ✓ Shelves are height adjustable.
- ✓ Panels (steel or wooden) can be freely assembled.
- ✓ Available in any color, although the standard color is grey powder coated.



### For Archive Shelving

5 Shelves	H x L x D	H x L x D
Dimensions (mm)	1850 x 1000 x 300	1850 x 1000 x 300
File Storage Capacity	60	120
Shelf Load Capacity (kg)	50	100
6 Shelves	H x L x D	H x L x D
Dimensions (mm)	2200 x 1000 x 300	2200 x 1000 x 600
File Storage Capacity	72	144
Shelf Load Capacity (kg)	50	100
7 Shelves	H x L x D	H x L x D
Dimensions (mm)	2500 x 1000 x 300	2500 x 1000 x 600
File Storage Capacity	84	168
Shelf Load Capacity (kg)	50	100





## Boltless Light Shelving System

TMI boltless light duty shelving system is fast and easy to assemble without nuts and bolts and can be done by anyone as no special skills required. The system allows the addition of extra shelves and bays as needed.

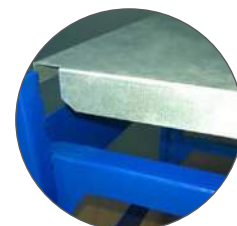
- ✓ Low cost utilization for existing warehouse space.
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Cross Beams are inserted into the column frames without tools



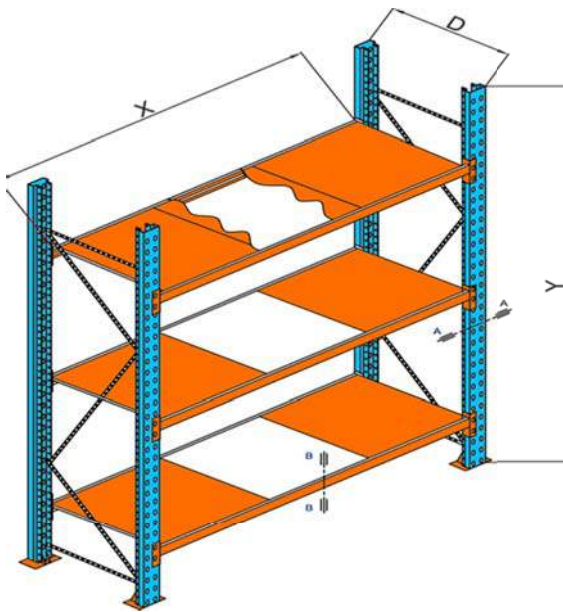
Shelves are simply placed on a pair of cross beams



# Medium Duty Shelving System



## Medium Duty Shelving System



TMI Medium Shelving System is a Boltless Upright System widely used for hand loaded applications. With a wide range of height, depth, length and easy adjustment.

Medium Shelving is a quick and easy storage solution for small stores, workshops, warehouses, etc...

- ✓ Easily assembled and disassembled which can be designed to fit your requirements & the space available.
- ✓ Available in any color, although the standard for the shelf is orange and for the frame blue.
- ✓ Levels can universally be adjusted by 50mm to 75mm pitch.

### Basic Technical Data

Frame Load	up to 5000 kg
Load Level	up to 1000 kg
Clear Entry	3000 mm
Frame Depth	1200 mm
Frame Height	Any - subject to bay load





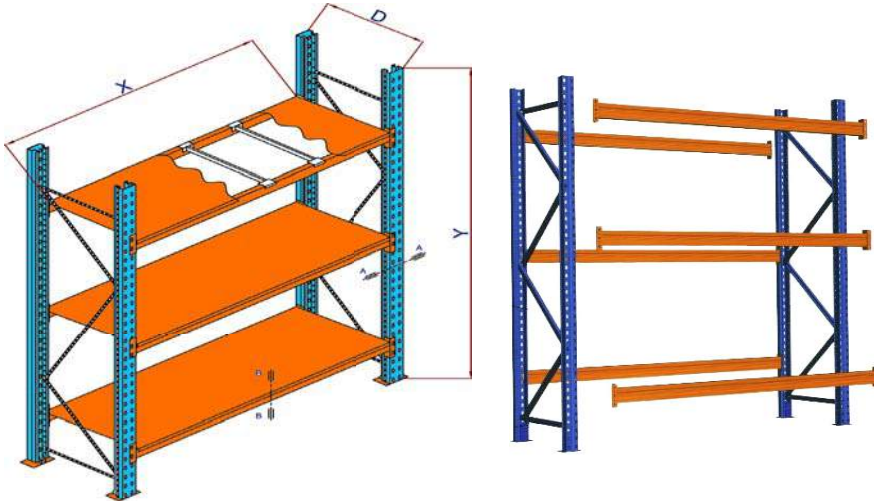
# Heavy Duty Shelving Systems

Long Span Racking System  
Pallet Racking System

Drive-In Racking System  
Platform Heavy Shelving System



## Heavy Duty Shelving Systems



### Basic Technical Data

Frame Load	up to 8000 kg
Load Level	up to 4000 kg
Clear Entry	3000 mm
Frame Depth	1200 mm
Frame Height	Any - subject to bay load

TMI Heavy Shelving Systems are designed to fulfill all your heavy duty requirements. Whether it is the Long Span Racking, Pallet Racking or Drive-In Racking System. All our systems are perfectly designed & cost effective for warehousing solutions.

- ✓ Can easily be utilized without specialized handling equipment.
- ✓ Available in any color, although the standard for the shelf is orange and for the frame blue.
- ✓ Easily assembled and disassembled which can be designed to fit to your requirements & the space available.

## Long Span Racking System

TMI Long Span Racking System is fast and easy to assemble which uses a modular design that provides the maximum storage capacity.



- ✓ Long Span Racking is ideal for the storage of bulky but light and medium sized loads. It is suitable for hand loaded products.
- ✓ Shelf adjustable on 75mm pitch.
- ✓ The system can be expanded into a multi-tier racking.
- ✓ The long Span Racking System allows for easy adjustment of storage heights and configuration as your requirements change.
- ✓ Can be supplied with steel panels, wire-mesh decking, steel grating or timber shelves.



## Pallet Racking System

TMI Pallet Racking System structures are the most commonly used of all pallet rack types. They are the most versatile because every pallet position has aisle access for full pallet or case pick.



- ✓ Pallet Racking System is a cost effective storage system providing direct access to all pallets.
- ✓ It provides high capacity storage and it is easily installed or adjusted.
- ✓ Maximizes space usage in any warehouse configuration while retaining optimum product accessibility.



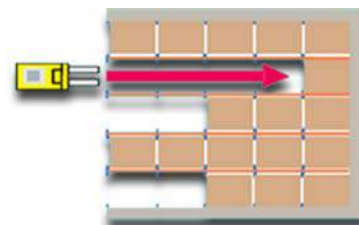
## Drive-In Racking System

TMI Drive-In Racks are designed for high-density storage of similar items. The Racks are designed to allow the forklift to Drive-In the rack from the operating aisle. Since quick rotation of product is desirable, we see Drive-In Racks used typically in cold storage facilities and at grocery distribution centers.

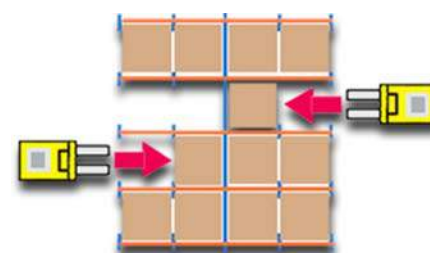
- ✓ Less selectivity but higher density than conventional selective rack.
- ✓ Drive-In Racks require fewer aisles, it provide better cube utilization.



Single Entry Drive-In Racking  
(Entry only from one side)



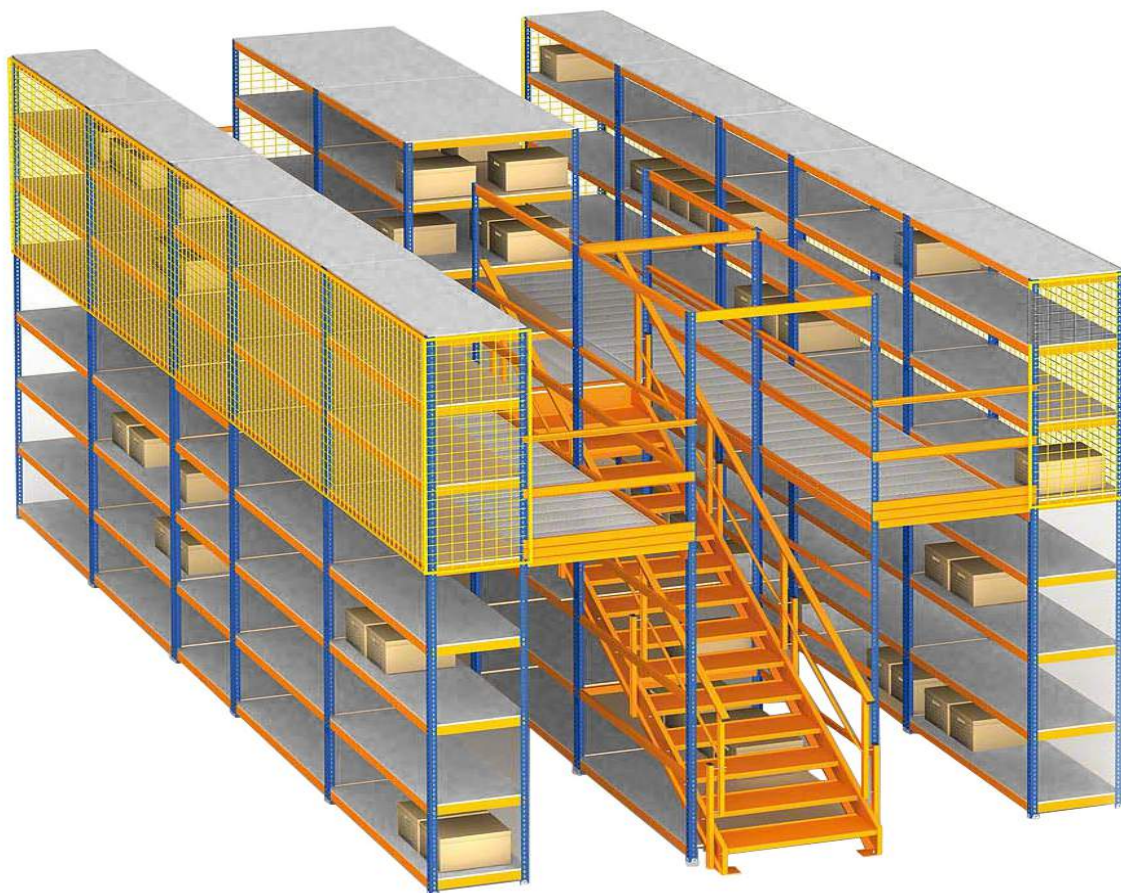
Double Entry Drive-In Racking  
(This is a LAST-IN, FIRST-OUT Storage System)





## Platform Racking System

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You can install this system in two types. In the first method you can install walk ways between the existing racking systems. In the second way you can install a new racking system with carrier frames on your existing platforms.

At the project phase, the walk ways and the platform surfaces may be covered with plywood, wire grill, mdf, chipboard, metal, etc... According to the need.

These are the walk ways or platforms on which manual loading/unloading is performed in order to make best use of height and increase the working space at high warehouses.

Since the heights in the area are used with maximum capacity, maximum storage is possible in the system. It's frequently preferred in warehouses having wide range of consumption products.

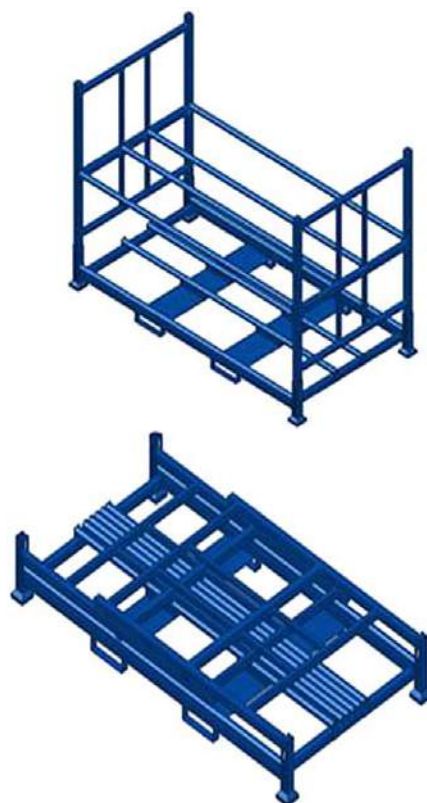
# Tyre Racking Systems

Foldable tyre Racking System  
Heavy Duty Tyre Racking System



## Foldable Tyre Racking System

Foldable Tyre Racking is the most efficient, cost effective and safe way of storing tyres. It maximizes floor space and creates a neat and tidy solution to all of your tyre storage needs.



## Heavy Duty Tyre Racking System

Heavy Duty Tyre Racking is a tyre storage directly on pallet systems, for car or truck tyres. The system are fully adjustable and can be supplied in various heights and lengths to suit customer's individual requirements.

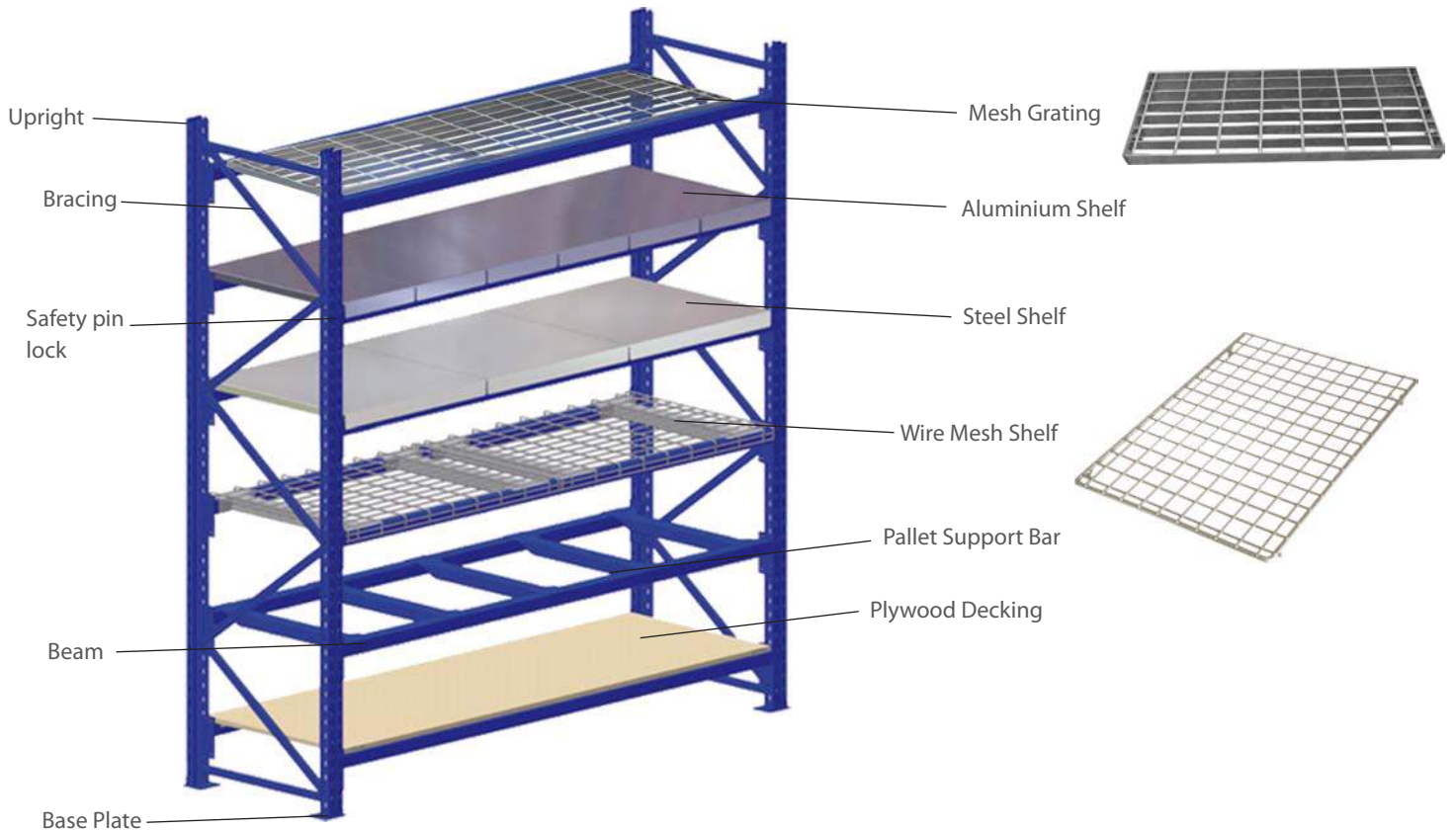




# Shelf Types

Aluminium Shelf  
Steel Shelf

Wire Mesh Shelf  
Mesh Grating



## Aluminium Shelf

Wash-down capable, with smooth easy-to-clean surfaces, aluminum shelf makes an ideal storage choice for food handling environments. Lightweight to move compared to steel, strong and resilient, it resists rust and corrosion even in moist conditions.

## Steel Shelf

The ideal for a number of industrial, shop, or office storage applications.

## Wire Mesh Shelf

A versatile, durable, easily-adjustable storage choice. Due to its wire construction, it doesn't collect dust or block sprinkler systems. Wire Mesh Shelf also eliminates risk of pallet slippage, improved lightning penetration from top-down ceiling lights and no fixing and fastening (quick and easy to install).

## Mesh Grating

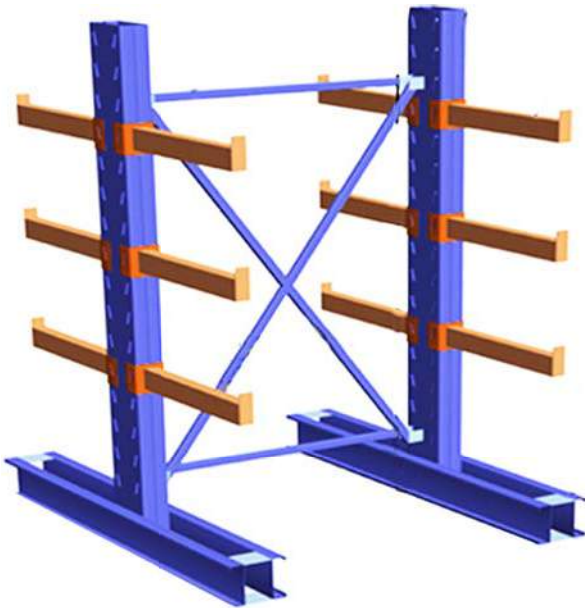
Utilizing steel bearing bars and cross bars to support pallet load of up to 1500kg (Uniformly Distributed Load-UDL). Allows for quick sprinkler activation. Mesh Grating is more heavy duty than wire mesh shelf.

# Cantilever Shelving System



## Cantilever Shelving System

TMI Cantilever Shelving System is a system also known as furniture rack, pipe rack or lumber rack. A great solution for storage of long, bulky materials such as: steel bars, pipes, tubes, packs of timber and furniture.



- ✓ Products are stored horizontally on the arms and handled either manually or by using forklift or cranes.
- ✓ Racks can be used single or double sided. The double sided rack provides maximum storage capacity on a single central column, while the single sided rack is designed to fit flush against the wall.
- ✓ The length of the shelf and the distance between the profile can be adjusted depending on the load.
- ✓ Available in any color, although the standard for the arm is orange and for the frame blue.





# Warehousing Solution



## Trolleys

Different types and sizes of trolleys for transportation. Serving, lifting and stacking used by factories, warehouses, workshops, hospitals and laboratories.



## Ladders

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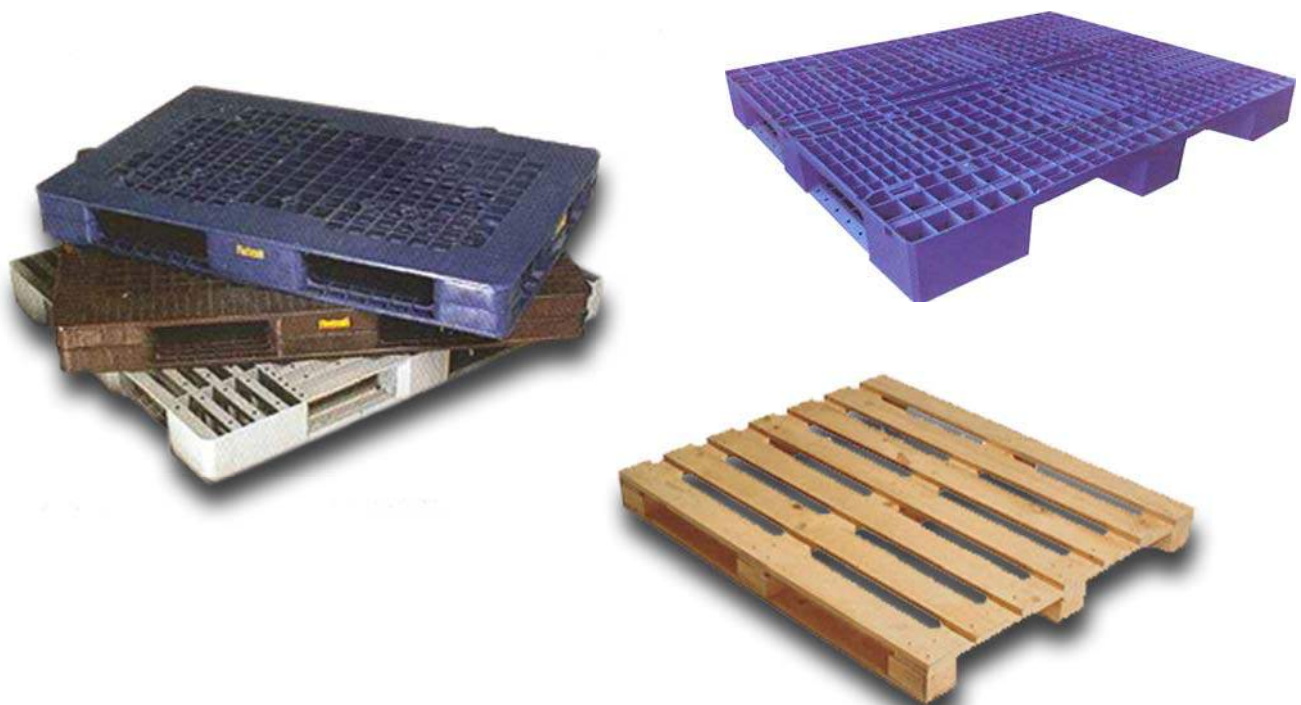
Safety Mobile Ladders up to 4 meters height.



## Pallets

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Wooden & Plastic pallets. Standard Size: 1200 mm x 1000 mm





# Manufacture of Racking Components



All beams and uprights are roll formed to ensure slenderness and strength. The state-of-the-art roll former is capable of roll forming more than 12 meters. Rollers are designed to accommodate wider range of upright and beam profiles to suit applications.

TMI's priority in the design of heavy duty racking system is the safe usage and operation of its storage systems by our customers. The system design includes the use of high tensile steel for its main racking components - uprights, braces and beams.

## Frames

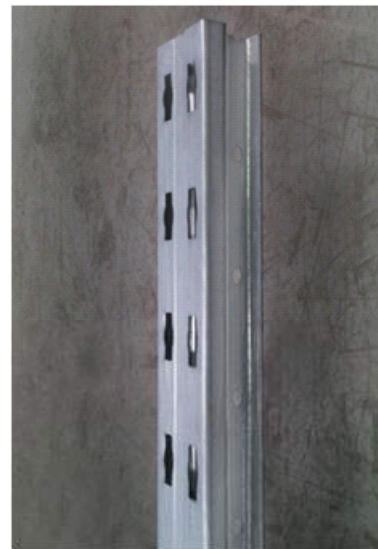
The process of Hot Roll forming of the upright and the cross sectional dimensions of the profile make results in a higher upright stiffness and rigidity.

Punched with lug holes at 50 to 75mm pitch for easy clearance calculation and adjustability, and hot roll-formed into a C-section with center rib and return flanges for stronger load capacity.

Steel braces of C-section profiles of 40 x 20 x 1.5mm thick are bolted to the uprights in a constant zigzag pattern using M10 c 65 high tensile grade 8.8 bolts and nuts.

Various designs of base are available for different frame load capacity and application. They include standard base plate of 150 x 150 x 3mm thick.

The rollers for uprights are designed to accommodate wider profiles for special applications.



84mm Post  
**Heavy Duty**



83.5mm Post  
**Standard, Medium Duty**



## Beams



TMI beams are welded to 3 & 5 lug end connectors for ease in hooking on to uprights.

The end connectors are welded using a welding machine which guarantees consistent welding properties and according to international standards.

Special safety locks complete the beam design to prevent accidental beam removal.

These special safety locks does not deform easily when pulled out for repositioning of beams.

The wide ranges of beam profiles are designed for different load capacity and applications.

Boxed Sections Beams		Opened Section Beams	
70/40 x 1.5mm thick		65/45 x 1.5mm thick	
85/50 x 1.8mm thick		80/45 x 1.5mm thick	
95/50 x 1.8mm thick		95/50 x 2.0mm thick	
105/50 x 1.8mm thick			
120/50 x 1.8mm thick			

All beams are designed with a guaranteed safety factor of **1:1.65** and beam deflection ratio is limited to **span/200**.

## Paint Finishing

TMI Storage System epoxy powder-coating line is capable of painting up to 12meters in length. All its racking and shelving components are subject tp anti-rust pre-phosphate treatment before epoxy powder is oven backed and coated hard on the steel surface.

During a multi-stage pre treatment process, the surface of the racking components is chemically coated with an adherent layer of iron phosphate crystals.

This phosphate crystalline layer provides an excellent base for the epoxy paint finish as well as preventing galvanic corrosion should the finish coat be scratched and peeled.

The racking components are then automatically conveyed to the heating oven and the temperature of these components are raised to 150 degrees Celsius ensuring all moisture trapped in grooves and bends is completely evaporated before the application of the epoxy powder coat.

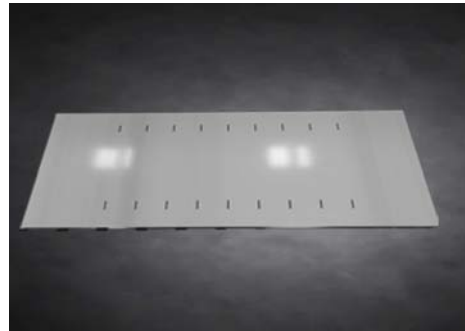
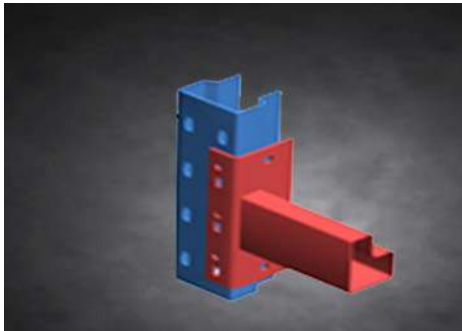
Moving on to the paint booth, noozle guns mounted from both sides to conveyor automatically apply the epoxy powder electro statically on to the surface of the anti-rust treated steel components.

Over a period of ten minutes, the powder coated racking components are subjected to a steel temperature of 190 to 200 degrees Celsius. These racking components then go through a process of cooling before it is finally packed for storage and delivery. The finish coating is a maximum thickness of 80 microns, average being 65 microns.

The above powder coating process gives the produc a hard tough and glossy paint finish.



# Accessories





# Technical Specifications

## Standard Specifications

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Steel Used:	Hot rolled high tensile steel JIS G3 101 SS400/SS490
Design Conformation:	British Standard 5950 Pt.5 1980 Code of practice for the design of cold rolled sections in steel
Welding Quality:	All welds conform to high quality electrode shielded with CO2 gas.
Degreasing Process:	All components undergo a degreasing and anti-rust iron phosphate coating process before powder coating.
Powder Coating:	All components are powder coated to an average of 65 microns and oven baked dry at a maximum temperature of 200 degrees for not less than 10 minutes.
Suitability:	Pallet Racking and Light Shelving are designed to use within a building and exposed to ambient environment and cold room of temperature of 30 degrees.
Powder Lead Content Level:	Below minimum ASTM safety levels of 0.6



## Ordering Information

For inquiry, please provide us the below listed informations for quick quotation.

- A. Size of warehouse?
- B. Height, Width & Depth of Shelving?
- C. How many bays?
- D. How many layers?
- E. Loading capacity of each layer?
- F. RAL Color?

Please send your inquiry to [tmi@tmico.ae](mailto:tmi@tmico.ae)

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### Manufacturers of:

- Ceiling Suspension Systems & Partitions
- Expanded Mesh & Metal Products
- Cable Management Systems
- Industrial Gratings
- Stone Fixtures
- Metal Doors & Frames
- Industrial & IT Cabinets
- Highway Guardrail
- Fencing & Barriers
- Industrial Shelving Systems
- Aluminium Ladders

### In House Services:

- Steel Fabrication
- Powder Coating
- Hot Dip Galvanizing
- Industrial Painting





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