شركة مصنع الصفوف الوطنية ذ.م.م AL-SOFOUF AL WATANIYA FACTORY CO.



www.rfufco.com.sa Head Office: Riyadh - Second Industrial City P.O.Box 147 - Riyadh 11383 K.S.A. Tel: + 966 11 2651444 Fax: + 966 11 2652416

الـــركـزالـريسي.الريـاض - الـمدينة الـمنـاعية الثـانية ص.ب: 147 - السريساض 11383 المملكة المعربية السعردية هــاتف: 966 11 2651444 فاكس: 966 11 2651444 +





National industry ... international standards

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National industry ... international standards



Founded Plant

The National shelves factory "RFUFCO COMPANY" was founded in 2000. Its activity is based on metal shelves that provided that needs of processing by shelves with its different commercial and govermental with global quality.

Since the Establishment of the company our aim is the sincerity and honestly in dealing with our respected customers, this what always makes us an the best choice to provide your request. This the ideal choice, which we got it from the big companies and goverment department excited us to develop of production lines through our factory which is located in the Second Industrial City - Riyadh. Our factory is equiped with the latest technologies through adopting on the automation of the machines (Roll Forming) and robotic machines. These machines ensure not to include any manufacturing flaw in the product.

Things that makes us pioneers in processing warehouse and shops that we provide professioal team, all equipment and the accessories for installation the work in a way that we can provide the different needs our valued customers.



Showroom 1 - Alkazan street, Riyadh Branch



Showroom 3 - Jeddah Branch



Showroom 2 - Exit 16, Riyadh Branch



Showroom 4 - Al Qasim, Buraidah Branch

Our Factory

Our Vision:

To be the pioneers in finding the best solutions for storage and display system in warehouse and shops around the arabic world.

Values:

Quality: producing with high precision and proffesionalism without any production flaw.. Credebility: We fulfill our promisses in applying for our valued. Customers: Focusing on customers, our clients are our pertners in the success

Innovation: Continuous developing for our products and motivate our emloyees to be creative.

Our Mission:

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Rfufco Company creates the best solutions for storage and display system in warehouse and shops for our valued partners in the success of the goverment and private companies and institutions in Saudi Arabia and the Arab market based on our experience and our proffesional, qualified and trained staff using the latest machinery production lines.

According to the highest quality and the requirements of the global storage standards to provide the aspiration of our valued customers.

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Contents



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PALLET STORAGE SOLUTIONS



Double Deep Pallet Rack



Selective Pallet Rack



Narrow Aisle Rack (VNA)



Drive-In Pallet Rack



Radio-Shuttle Pallet Rack



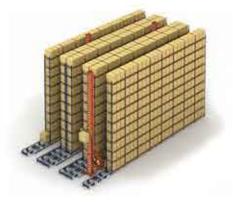
AS / RS Pallet Storage

رفوفکو 🛸 RFUFCO =

BUSSINESS STORAGE SOLUTIONS







Mezzanine Storage

Light Duty Rack Storage

High Rise Archive Storage



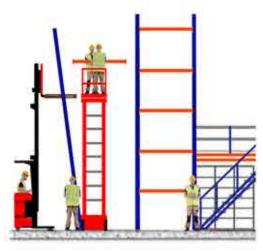
Office Archive Box Storage



Mobile Archive Storage



Open File Archive Storage



Accredited Installation



Audits, Service and Repairs

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High quality products by our new advance machine technology dedicated to modern market. Strictly control in inspection.

Quality assurance system is divided into every single detail, with control being performed. all the way. Strictly control in raw material.

Raw material for all products are of good quality and advanced perfomance, and those for main parts must pass quality inspection before use, so as to lay a solid foundation for protect quality assurance. Strictly control in production process.

Strict inspection on product quality is throughout the whole process, with each process step requiring self-check and every two sequential process steps requiring mutual-check, to achieve an overall control on new products.

موفکو 🗱 RFUFCO Some of Our Rerferences

		الجليل المقدار		
جيثيدا Othaim	ساكر SACO	\bigcirc		НУШПОЯІ
		جامصة اليمامة Al Yomanich University		
OFFICE & HARA	الفيناد alfanar	العربية للعود Arobian Oud	للجنوب دريان Abdul Latif Jameei	
ARER BOOKSTORE	مجموعة القفاري محموعة القفاري	Riyadh Food		یه-مارك سیوی u-mark sport
LaDychi de gocho Alikhorayet Group	زين	gadalam 🗿 pituriy careadrate ye olar		
	الرائدة	A REAL PROPERTY OF	مجلات و اخوانه مامه ا مرانه	
	المروكالمدينة المروكالمدينة Bernard Latter Re	الطالحية الطبية SALEHIYA MEDICAL	سمنان SAMNAN	
	الذرف السعودي Saudi Ceramics	DAVIE DATES	مستانه 🛞 وهدم	BACS TYNNAM METRO PROJECT
اليوم	Scotch	الفظيم. مج Al-futtoim	مجموعة الحطير al hokoir group	
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Quality Certificate (TUV)



Quality Products Certificate

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Beam Actual Testing



Upright Actual Testing



Powder Coating Certificate

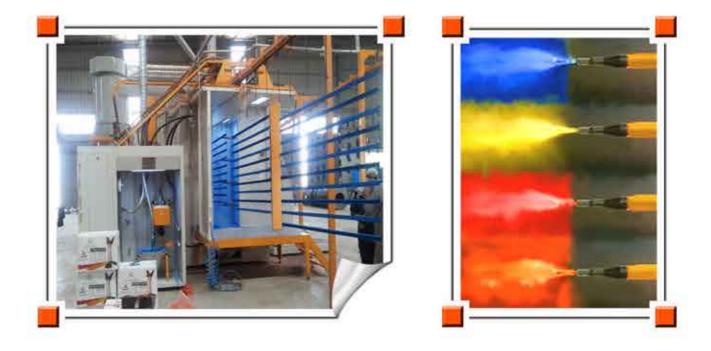








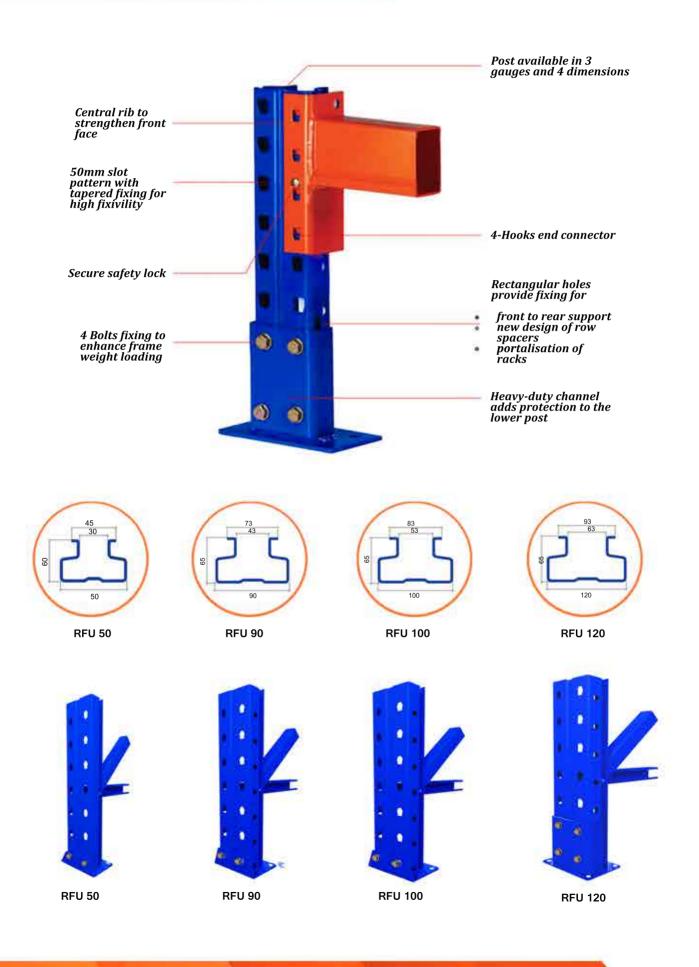
Powder Coating machine





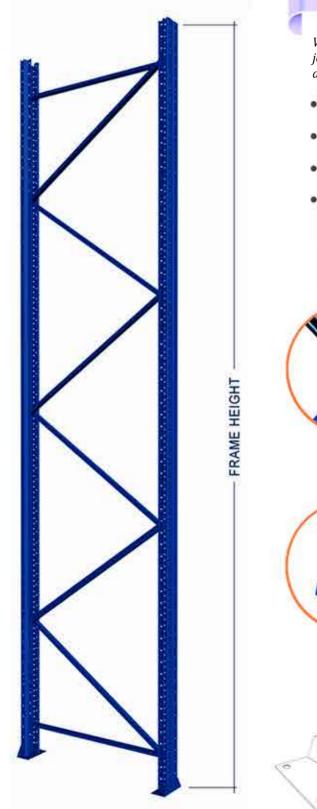


Upright Specification





Upright Specification



Frame (Upright)

Vertical elements created by two uprights joined together with cross ties. Side panels of set cross ties and diagonal providing the necessary rigidity.

- The basic frame made up of two uprights cross ties and footplates
- The number of cross ties depends basically on the height of frame.
- The minimum number used is two
- The most common frame height are:
 1.5 m, 2 m, 3m and 4m they can manufactured up to 10m



Frame cross ties

the cross ties slid down inside the upright until the fixing points is reached, making the set extremely rigid. at least two are fitted, depending on the height of the frame. The uprights can be manufactured in the heights of up to 10m.

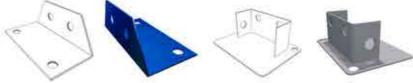


Foot plates

Suitable for heavy load, as they distribute the weight over the floor.

L-Type Footing

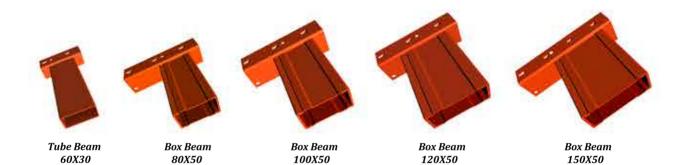
U-Type Footing





Beams are available designs, These Roll Forming beams come in varying sizes and gauges to accommodate different weight load requirements.Interlock beams are supplied in a standard 'Alert' Orange. Other non-standard ' house ' colours can be offered, subject to volume and colour availability

BEAM SECTION	-60x30x1.2 -60x30x1.5 -2 or 3hooks connector	-80x50x1.2 -3 hooks connector	-100x50x1.2 -3 hooks connector	-120x50x1.2 -3 hooks connector	-150x50x1.2 -4 hooks connector



BEAM LOADING CAPACITY								
BEAM	1500mm	1800mm	2000mm	2300mm	2500mm	2700mm	3000mm	3300mm
60x30x1.5	700kg	600kg	500kg	450kg	400kg			
80x50x1.5	3290kg	2410kg	2030kg	1630kg	1450kg	1300kg	1050kg	950kg
100x50x1.5	5280kg	3740kg	3080kg	2380kg	2050kg	1800kg	1450kg	1350kg
120x50x1.5	5256kg	5700kg	4640kg	3510kg	2970kg	2550kg	2060kg	1960kg
150x50x1.5	9648kg	6700kg	5430kg	4100kg	3470kg	2980kg	2410kg	2310kg

BEAM SECTION





Automation Racking AS/RS

Automated warehouse racking storage system that integrate shelving. machinery and warehouse management software all in one. It is made up of a central aisle, along which a stacker crane travels, and two racks built at either side used to store boxes or trays. the picking and handling area is formed by conveyors and is positioned at one end or at the side of the racking. Here, the stacker crane deposits the load extracted from the rack. The conveyors then take the box to the operator and once he/she has finished the job, it is returned to the stacker crane which then places it back in the racking The whole system is controlled by a management software package which registers the location of all the materials in the warehouse and keeps a real time inventory.

Advantage:

- Applies " product to operator " principle.
 Automation of the entry and exit operation
- of the products.
- 3. Permanent inventory.
- 4. Eliminating the errors arising from the manual management.
- 5. Optimal use of available space.
- 6. Maximum comport and easy access to the stored boxes.







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Automated storage and retrieval systems. usally referred to as AS/RS system are computer controlled systekms for storing and retrieving products in warehouses. These AS/RS system required the use of virtually no manual labor.

Unit-load AS/RS are bigger system that typically store pallet loads. Smaller systems which are commonly called mini-load AS/RS allow selection of items in totes, trays, or cartoons. AS/RS system are comfigured with pallet rack laid out with narrow aisles between. A crane with a tall mast travels through the aisle and moves vertically and horizontally to storage picking positions. When the AS/RS system crane reaches the storage location a carriage travels up the mast to the picking spot. An automatic mechanism then reaches into the storage location to retrieve or return in the pallet load.

The unit load AS/RS systems are designed for larger loads which are pallets or pallet-sized loads. system are over 100 feet tall. Whatever the application. RFUFCO COMPANY system engineering can an AS/RS application to maximized pallet storage.

The benefits of a fixed aisle system such as AS/RS are decreased space required and the reduced labor needed to store and retrieve materials efficiently. AS/RS system can also installed in harsh inviroments that can create hazrdous conditions for workers such as freezers. Because of the computer involved AS/RS can create a very accurate form of inventory control with only a few employees on site.

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Automation Racking AS/RS

Automatic trilateral stacker cranes make it very easy to automate warehouses with conventional racks where a man operated elevator truck is used, both in pre-existing warehouses and new facilities.

The stacker cranes moves pallets to the extremes of passageway leaving the load on the rack or automatic transport system. this is possible since it has the rotating head enabling you to pick-up and leave pallets in three positions: one frontal and two lateral.



Conveyor System





Automated transport of boxes follows very similar criteria to those for pallets and is developed to work with plastic and cardboard boxes. the most common tranfort modules is the order conveyor, in all its different variations straight, curved, diversion and injection modules, etc. complemented by band and belt conveyors, as well as lifts and inclined conveyors to overcome changes in height.





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Conveyor System



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A conveyor system is a common piece of mechanical handling equipment that moves materials from one location to another. According to sclater, conveyor system can be divided into two classes: those that are part of a machine for processing product, and those that move products in various stages of fabrication.





Conveyor System



Selective Pallet Rack



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Selective Pallet Rack



Facts about Selective Interlock System

- Good Stock Rotation
- Good Order picking; 100% selectivity
- Average Picking rate
- Good product protection
- Low Floor area utilization -30% net pallet area usage of overall warehouse area.
- Limited pallet redudancy as the system can run at 95+% capacity with a competent
- Warehouse Management System (WMS)
- Popular application in most industries requiring instant accessibility of all pallets.
- Mechanical Handling Equipment

 Walk behind or ride on stackers
 Counter Balance / Reach Trucks
 Reach Truck offers up to 30% improved use of floor space and operates to height in excess of 11+m high









Rfufco selective pallet racking system offers that best solution for warehouses where a wide range of references need to be stored on pallets



- A selective pallet racking warehouse is generally laid out with single-entry racks either side and double entry-racks in the middle. The width of the working aisle between each rack and the height of the racks depends on the characteristics of the forklifts or handling equipments. The size of the pallets and the height of the warehouse itself

- Goods can be easily retrieved as each pallet can be accessed without the needs to shift other pallets.
- Total stock control: each storage space is taken up by a single pallet.
- Maximum adaptability to any load type both in terms of weight and volume.



Selective Pallet Rack



The above image shows a pallet racking warehouse with pallets which are handled by the side measuring 1200mm.











Selective Pallet Rack

Double deep conventional racking

In order to store greater number of pallet (depending on their weight or number of pallets per reference) double-deep racks can be installed, enabling one pallet to be stored in front of another on each side of the aisle.

Since direct access is only available for the front pallets, this system is recommended for products with more than one pallet per refference

This system requires suitable lifting machinery fitted with double-depth telescopic forks.





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Selective Pallet Rack

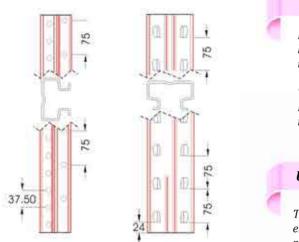




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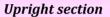
Selective Pallet Upright



Upright

Frames are made up of two uprights with the corresponding horizontal and diagonal bracing. Footplates and accessories. they are slotted every 50mm in order to fit the beams.

The depth of the frame is determined by the size of the pallet For a europallet measuring 1,200 mm deep, a 1,100mm from is normally.



The different models, sections and thicknesses of upright enable them to be adapted to a wide range of loading requirements

Upright 50	Upright 90	Upright 100	Upright 120	Upright Support
25	73 10 90	83 5g 100	93 V3 120	8
Section : 50X60 Thickness: 1.5, 1.8mm	Section : 90X65 Thickness: 1.5, 1.8, 2.0mm	Section : 100X65 Thickness: 1.5, 1.8, 2.0mm	Section : 120X65 Thickness: 1.5, 1.8, 2.0mm	Section : 30X30 Thickness: 1.5,2.0mm



Upright 50



Upright 90



Upright 100

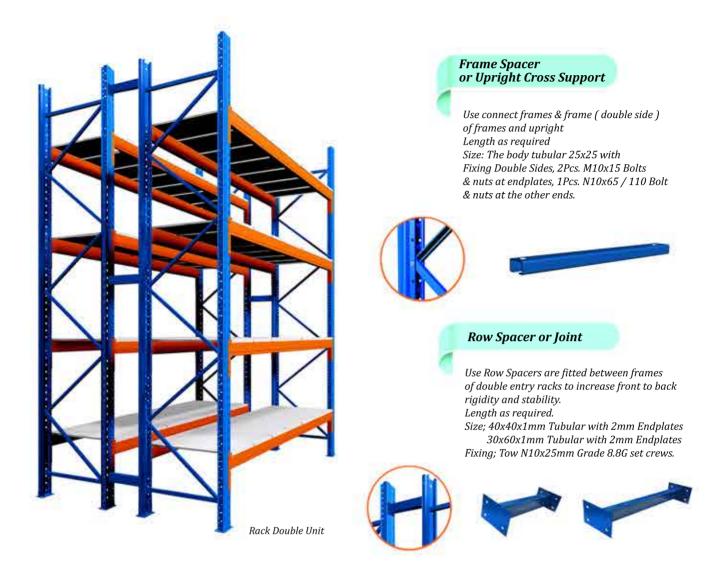




Upright Support



Selective Pallet Support



Footplates

Frame are erected on the floor using footplates which are fitted to the base of the upright. There is a range different frame footplates whose used defends on the load to be supported and on the upright model used. they are anchored to the floor using one or two anchor bolts.

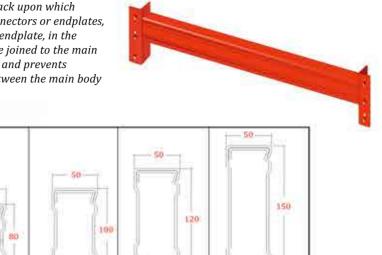


L-Type Footing



Selective Pallet Beams

Beams are the horizontal and robust component of the rack upon which load arfe deposited. they are joined to the upright via connectors or endplates, which fit into the slots of the upright. The hooks on these endplate, in the connecting system designed and patented by **RFUFCO**, are joined to the main body of both end. the considerably increase load capacity and prevents deformation that typically occur when the connection between the main body and the hooks or endplate is not sturdy enough.



BEAM SECTION -60x30x1.2 -80x30x1.2 -150x50x1.2 -100x50x1.2 -120x50x1.2 -60x30x1.5 -3 Lips -3 hooks -3 hooks -4 Lips connector -2 Lips connector connector connector connector



BEAM SECTION



80x50



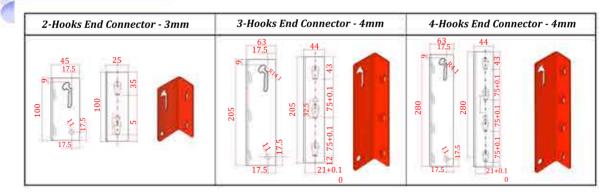






150x50

End Connector Types



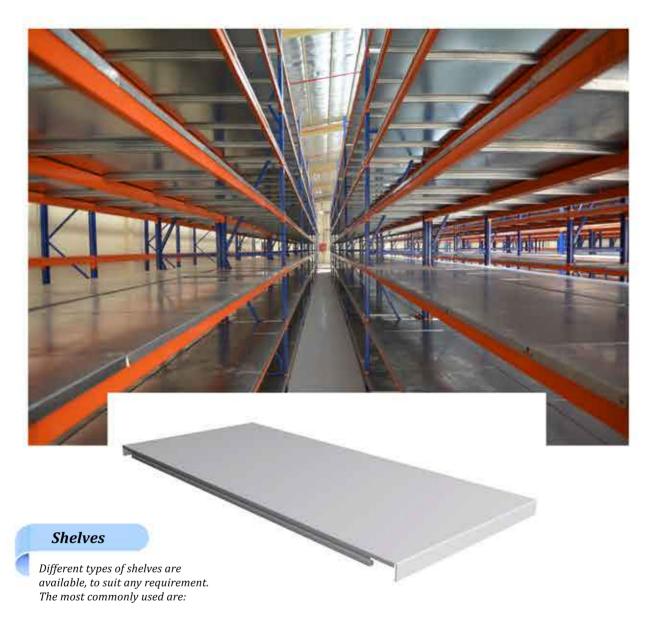
Safety Locking Pin

The end plate that joins the beam and upright include the built-in safety locking mechanism developed in order to make the structure even safer.



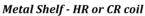


Selective Pallet Shelves



Galvanized Shelf







Metal shelves which, depending on the storage requirements, can be placed on tubular or beams they fit directly on top of the beams.



Selective Pallet Protectors







These protect racks from light impacts that may occur at floor level preventing damage to the vertical elements.

Upright Frame Protectors

ech type of upright has its own type of protector. they are 400mm high and come with 4 anchor bolts to fix them to the floor. they are used to protect uprights from impact and possible damage in facilities where forklift truck operate.



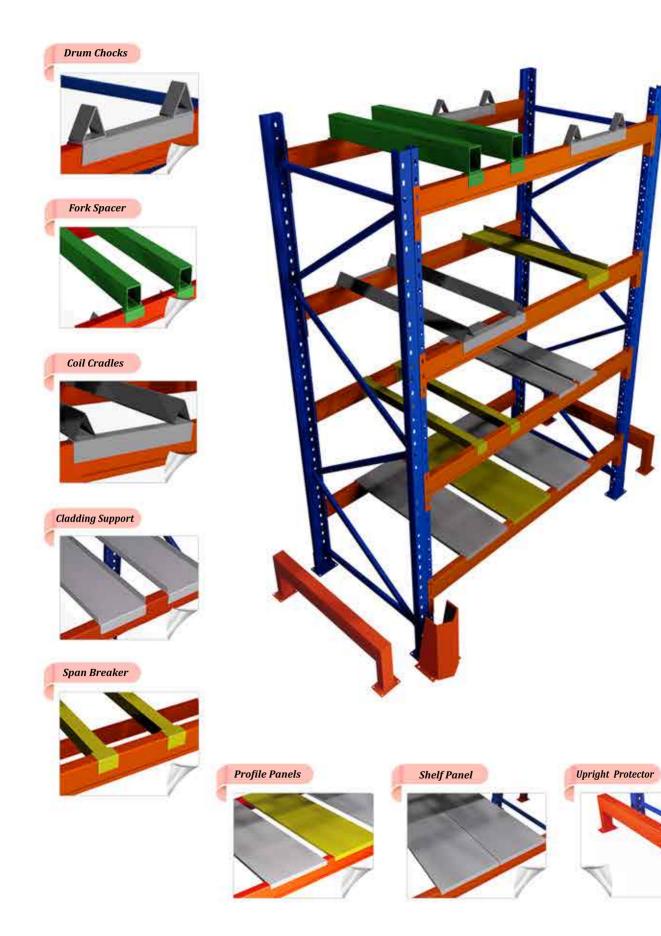
Frame Protectors

These protect the side of the rack at the bottom. they are normally fitted to end frames and passageways between frames where impact are most likely. Each upright type has its own protector. In order to protect the entire side of a frame.



Selective Pallet Rack Accessories

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Drive-In Pallet Rack





Drieve - In Pallet Rack



Drive-in Pallet Racking System provide maximum storage capacity using the minimum amount of space. It is particularly suited to store very large quantities of homogeneous products. Drive-In or Double Access System consist of continuos lanes of racking with only a single load and retrieval aisle. loading and unloading is undertaken be means of counter balance or reach trucks that drive down each lane into the racks. Drive-In racking operates on the basis First-In Last-Out (FILO). therefore it only suits products. which is stored in sufficient volume to require multiple lanes to ensure stock rotation.



Drive-In Pallet Rack

Drive-thru is used to stored many pallets of a similar products.Lift trucks drive into the rack to extrack the first pallet they come to. Pallets in the center of the rack system are not accessed as frequently as those edges.







Drive-In Pallet Rack

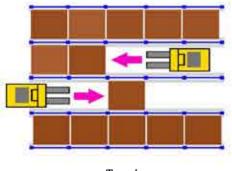
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Drive-thru

Drive-thru ,rack allow a lift truck to enter the from either side to pick up or full out pallets. Loads are supported by rails attached to upright frames, and lift trucks are driven between uprights to reach pallets. This is done because pallets can slide backwards on a continuos rail. It's open at both ends, allowing first-in, first out storage.

Drive-Thru rack offer the ability to store a large amount of similar loads in a smaller area. Selectivity is sacrificed, but storage density is enhanced since many pallets are stored and are available through a single pallet position.



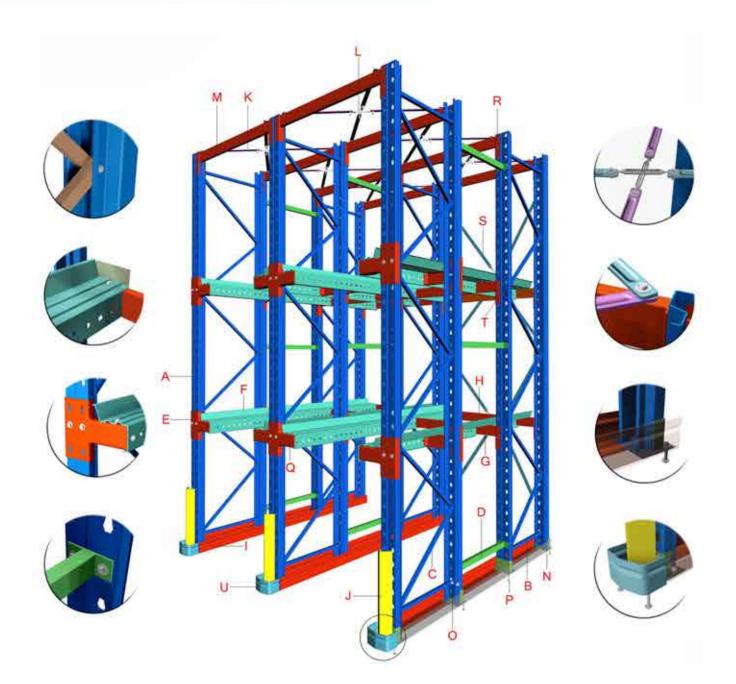


Top view





Drive-In Components



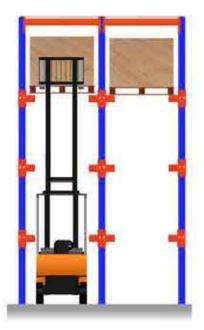
- A: Upright
- B: Horizontal Brace
- C: Diagonal Brace
- D: Cant Arm Single
- E: Guided Pallet Support
- G: Portal Beam with Guided Rail
- H: Portal Beam with Stopper
- I: Floor Guided Rail
- J: Column Guards
- U: End Curve

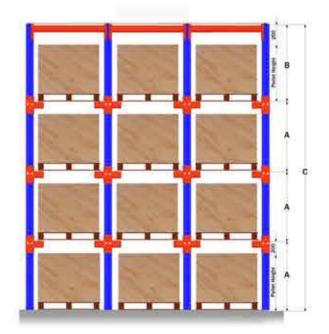
- K: Top Brace
- L: Turn Buckled
- M: Top Portal Beam
- N: Foot Plate
- O: Small Spacer
- P: Anchor Bolt
- Q: Cant Arm Double
- R: 2 Lip Connector
- S: Back Brace
- T: 3 Lip Connector



Drive - In Pallet Rack







Height

The minimum height measurements required are as follows: A = Height of the lower and intermidiate Level = Height of the pallets + 150mm. B = Height of the upper Level = Height of the pallets + 200mm C = Total height = at least the sum of all the levels. Dimensions F, G and H must always be multiples of 50mm

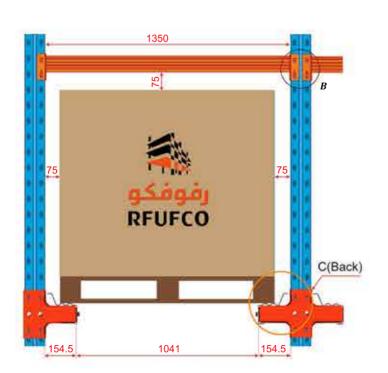
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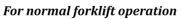


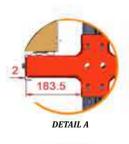
Drive-In Pallet Rack



Standard Dimensions:





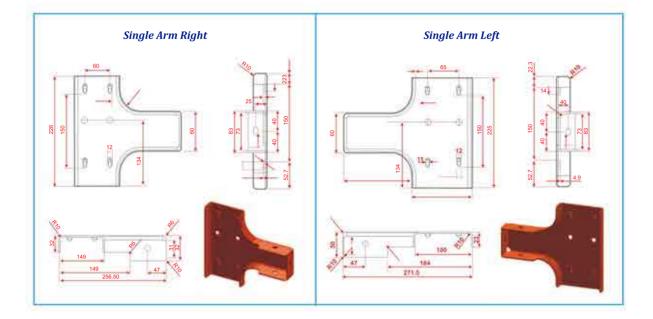


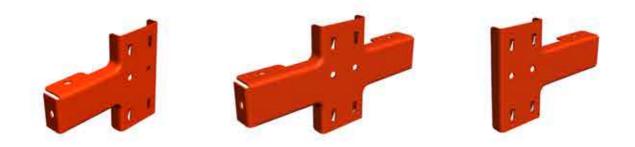


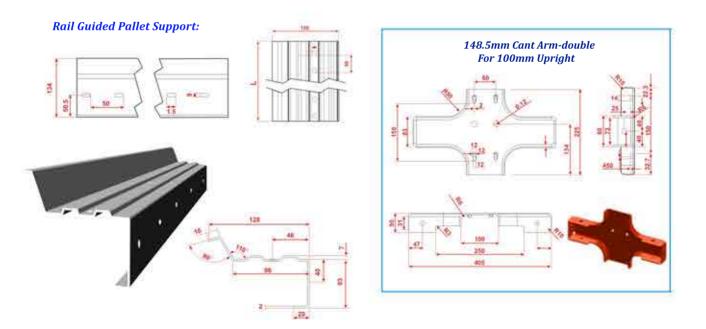


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Drive - In Pallet Rack









Drive-In Pallet Rack

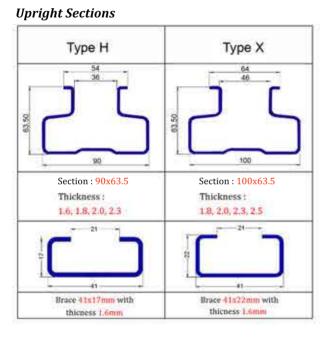
Upright:

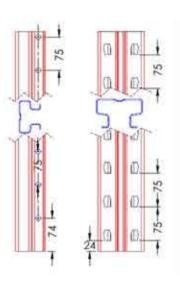
Omega section with returned flange and central groove Hexagonal shaped hole at 75mm pitch for Beam levels Circular shaped hole at 75mm pitch for bracing 12 Bends upright Made of hot rolled steel Length can be produced with multiplier of 150mm



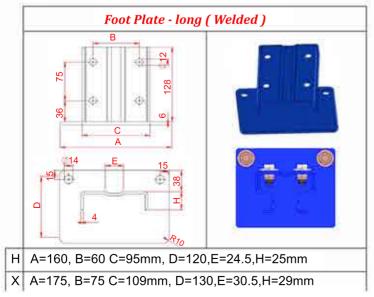
UPRIGHT 100

UPRIGHT 115





Foot Plate:





Bolts Free Shelving Storage







Bolts Free shelvings

M3 Shelvings is ideal for offices, bussiness and places that need a more professional looking system. The different components are painted in blue ral 5005 (Frame upright) and gray Ral 7047 (other components)

The most common combination are shown in the following illustration





Suspension filing set

Basic components

- 1. Suspension filing set
- 2. Shelvings
- 3. Vertical divider
- 4. Side support 5. Back support
- 6. Base



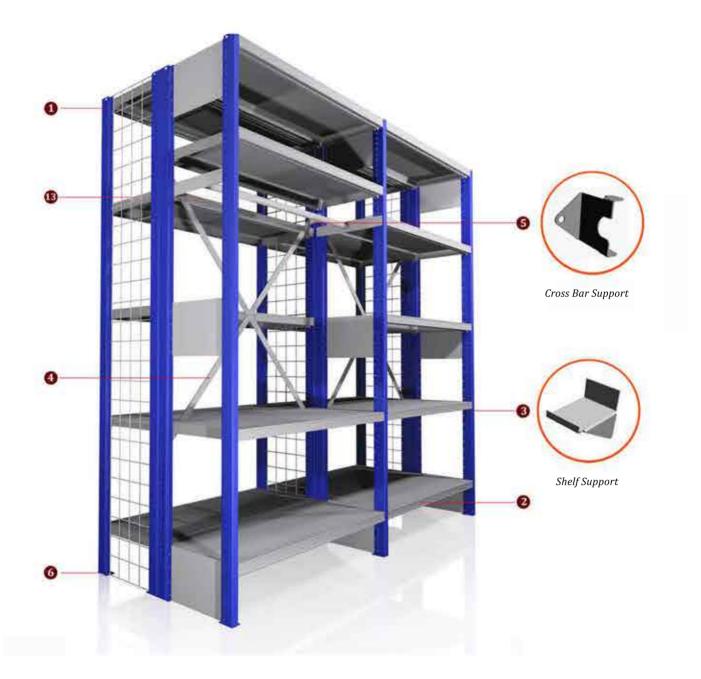


Book dividers, Lateral retainers, and Vertical dividers Section of the space, Creating of the components for book or files





Bolts Free shelvings



Basic components

- 1. Frame 2. Shelf 3. Shelf support 4. Crossing bracing 5. Cross support
- 6. Foot plate









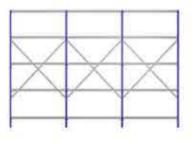
Cross Bracing set

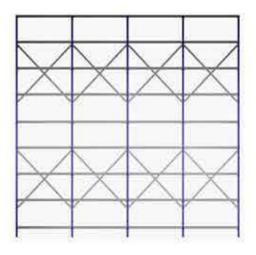
Cross bracing set are vital for the stability and longitudinal rigidity of the shelving They are attached to side slots at back of the uprights to tighten and stabised the units



Number of cross bracing

The number of cross braces used is variable, depending of the height, the number of shelvings unit and the stored loads. For shelves with light loads, one cross braced unit in ten is sufficient







Bolts Free Shelvings

Frames with cross ties and diagonal

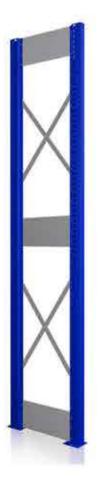
These are basic frames which, in addition to cross ties, include crossed diagonals to increase the level of rigidity in frames in considerable height.

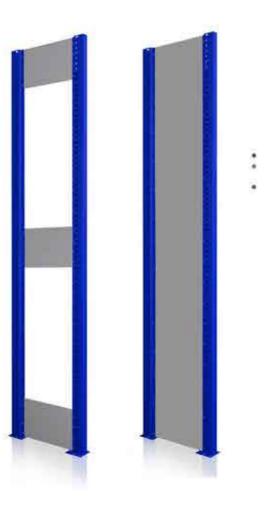
Frames with central metal panelling

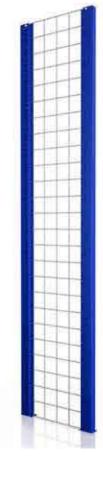
These are closed framed that stop products stored on adjacent levels from getting mixed together, the metal panels are made in sections and joined together using panel splice.

Frames with metal wiremesh

These prevents goods from falling off the side as well allowing a lateral view of the products and providing better ventilation.









Frames (Upright)

Vertical elements created by two upright joined together with cross ties. Side panels of set of cross ties and diagonal providing the necessary rigidity. The basic frame made up of two uprights cross ties and footplates. The number of cross ties depends basically on the heightof the frame The minimum number used is two. The most common frame height are: 1500, 2,000, 3,000, 4,000mm . They can manufactured up 8,000 long.

Footplates

Suitable for heavy load, as they distribute the weight over the floor.





Bolts Free shelvings



The various folds on the front and back of the Heavy-duty shelves create a rounded edge, which increases the load capacity. These shelves can be supplied in the slotted option, allowing usage of vertical dividers and accessories.



Shelf reinforcer

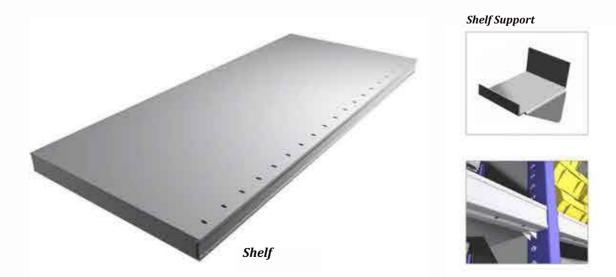
Heavy-duty shelves can be fitted with the central reinforcer along their length to increase their load capacity.



The channel of the front can be used to attach magnetic holders or sticker for identification label.

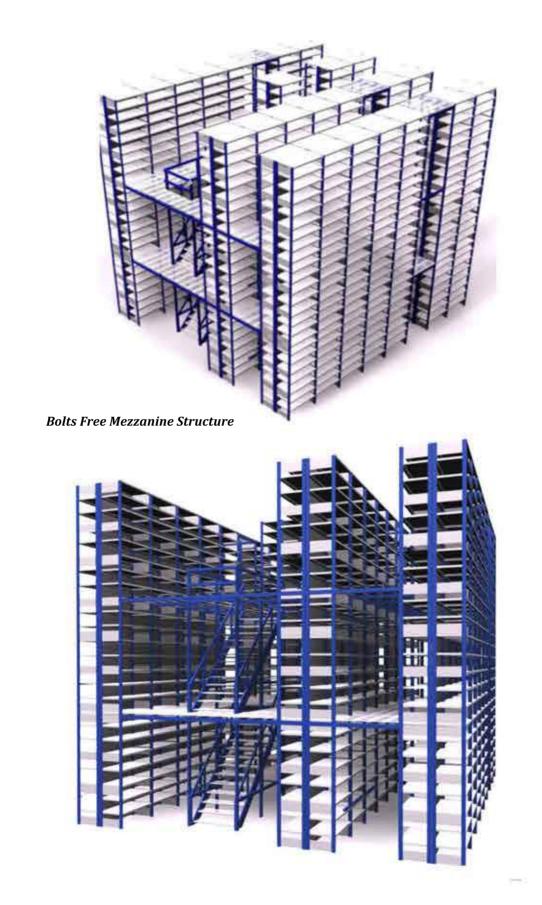


Shelves for light or medium loads, depending in the load copacity





Bolts Free Shelvings



Mobile Shelvings



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Mobile Shelvings Storage



Mobile shelving system enables workable storage system even in a small space. Modifying stationary shelves into mobile shelves you can have up to two times more using meters.

Structure of closed end upright makes it possible to use every inch of the shelf and neither is there no space for material dropping from the end of the shelf. A welded wagon guarantees solid and durable structure.

Crank and electricity driven mobiles always have drive in both ends and the longer wagons also have drive in the middle. This guarantees smooth movement and there will not be any stability problems. Ball bearing drives mechanism and o 130mm ball bearing wheel are made of steel.

Shelf thickness 30mm

Adjustment in height 25mm

Max load 80kg / shelf, even load (up to 150kg / shelf for special order)

Horizontal ang diagonal bracing (diagonal bracing attach shelves to wagon)

It is possible to order decoration plate in any color from the RAL color map.

It is possible to cover the mobile shelves with veneered plates.







Driven System

Mobile Shelving offer maximum filling and storage capacity in the available space without compromising access. Precision built to a high standard of quality, the units provide optimum filing capacity for the modern office or the heavy demands of storerooms. It consists of a secured enclosed shelving unit on a track at one end and a series of enclosed lockable shelving units that slide to allow access to contents within them and isle space.\

Mobile shelving consists of bese, frame, driven system, safety device. Frame includes upright, shelf, panel, hanging panel, roof panel, etc. It is dismountable, spare parts could be final assembled in site. The parts are Bolted & rivet joint, combine easy installation and stable frame.

Aceally Compactus provides high capacity in-office storage together with speed of access. Create additional workspace with this economical solution providing high volume storage of items that need to be closed at hand

Unlike older style Base Mounted Systems, Compactus is far more flexible, Not restricted by track length you can tailor a system to suit your available space. Simply cut tracks to required length.





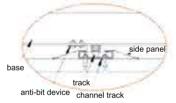
Mobile Shelvings Storage



Components of mobile shelvings



Design of track



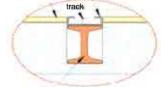
section drawing of side panel cover model

base

anti-bit device channel track

section drawing of embedded track

smooth the floor channel track



insert both ends of H profile steel into load wall

section drawing of enhanced support





It is a set of shelving units mounted upon mobile bases which move along rail. Thereby guaranteing optimal order and distribution of the archive and warehouse, as well as a better used of space.

Advantages

- Great use of space as it is a compact storage system.
- Can be adapted to any available space.
- Total safety of filed materials.
- Ideal for the storage of all types of book and documents.
- 🔹 When the shelves reach a high height, ways fitted half-way up enabling the upper
- levels to be accessed can be installed.





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Mezzanine Storage System

Mezzanine storage are essential to most modern warehouse, factories, and other industrial facilities. Used to storage goods or create additional work or areas, they incorporate features such as cat ladders for access, parcel chutes, and pallet gates.





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Mezzanine Storage System



Mezzanine Storage allows you to utilize overhead space for additional offices, record archival or general storage. The key benefit of it is the ability to create new space fast and efficiently.





Mezzanine Floor Storage



A basic manual storage and archive system for light and medium loads. Combining the different components offer a whole range of features.

The main advantage are:

Endless Storage Possibilities from plain folder to all kinds of parts, boxes, clothes, bulk goods, etc

Multiple Components that adapt to suit even the most demanding needs

Easy to assemble Level adjustments in multiples way

Increased capacity due to the fact the minimal space is used for uprights and shelf panels. It is possible to install **one or more** walkways to gain accesss to upper levels.

Mobile shelvings can be made for archives and warehouses.

Functional and attractive, for the office version, the units can be finished to suit your decor

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Mezzanine Floor Storage



Mezzanine storage are suspended or supported floors erected within a building. A mezzanine floor provides additional work or storage space without adding to the building's original footprint something for nothing almost! This storage contains imformation on industrial and commercial/ retail mezzanine floor, and the options available. There is a mezzanine floor application library, featuring installations in many industry sectors and geographical regions. You will see who is buying red floor and what they think of it You can also find details of relevant building regulations and safety standards, a mezzanine floor gallery, and various downloadable brochures.

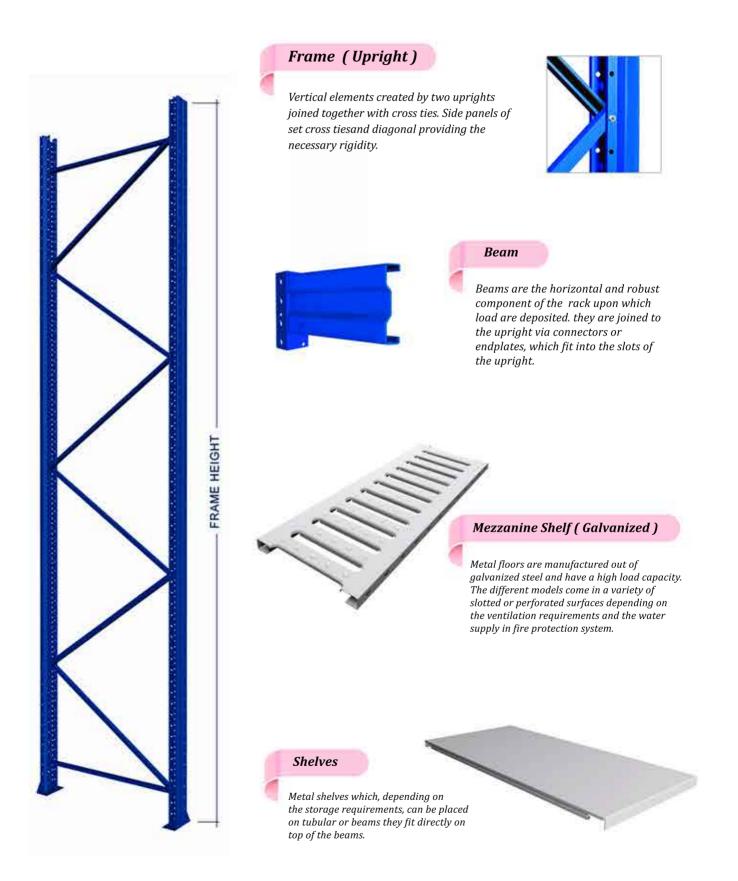








Mezzanine Floor Components







Mezzanine Platform Storage



Installation of a mezzanine or elevated platform is one most economical ways to create additional storage space in a ware-house, distribution center or industrial or manufacturing facility where high ceiling exist. Storage mezzanine and elevated platforms allow storing uniform or odd-size parts, machinery, equipments, supplies or other bulk items at floor levels as well as above, nearly doubling the storage capacity of the available floor storage.





Mezzanine Platform Storage



Mezzanine are steel structure made out of main beams and columns. They create new elavated surfaces on warehouse or premises floors, enabling extra space for storage, work areas, offices, in a quick and in expensive way.

In order to offer the ideal solution in each individual case. Has three mezzanine constructive system to choose from based on the load, the distances between columns and the use for which they are intended. When designing a mezzanine floor with any of the mentioned constructive system, the constraining factors within each case are taken into account. These include factors such as accesses. The work system, the product the loading and unloading area.





Mezzanine Platform Storage





Zigma Post



Zigma Beam

Zigma System

This type of mezzanine are composed of cold-profiled elements both the columns and the beams with zigma profiles are manufacture in various heights, length, thicknesses drill hole diameter. zigma cold-formed, steel profiles can act as main beams, and as secondary beams that rest on the main beams. its standardised length is between 1,000 and 12,000 in 250mm section, with a height ranging 240 to 400 mm and width of between 100 and 120.

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Mezzanine Platform Storage



Mezzanine Galvanized Metal Floor

Metal floors are manufactured out of galvanized steel and have a high load capacity. The different models come in a variety of slotted or perforated surfaces depending on the ventilation requirements and the water supply in fire protection system.





Light Duty Storage

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Light Duty Pallet Rack



Light duty rack is the most popular series and best selling product, it has found wide application in industrial, institutional commercial and many fields.









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Light Duty Storage





Level composed of beams and shelves

Eeach level has minimum of two beams fitted with shelves or panel

This is the ideal system to store:

- Boxes, pockets, loose material
- Heavy load in medium-sized storage spaces
- Medium -sized loads in large storage spaces
- Bulky products.

The rigidity resulting from fitting the beams to the frame is usually sufficient to guarantee the stability of the shelving, and therefor a basic rack only requires frames, beams and shelves. The latter may be made of metal, chipboard mesh.



Light Duty Storage



Storage system for manual picking of products following the "man to goods " principle.

Main Benefits are:

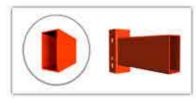
- Possibility of storing medium to heavy loads
- Adjusting between multiple level of 25 or 50mm, depending on the construction system used.
- Racks up to 20m high can be built.
- Possibility of installing one or several gangways to gain access to upper levels
- Easy assembly
- Excelent mobility

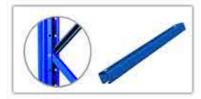


Light Duty Rack Companents

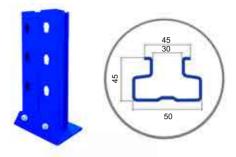
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Upright

Composed of two uprights with the corresponding bracings, footplates and accessories. The different depth enables the shelvings to be adapted to sizes of the product to be stored. Diverse upright models, and thickness easily adjust to a variety of loads.

Shelves

Metal shelves which, depending on the storage requirements, can be placed on tubular or beams they fit directly on top of the beams.

Galvanized

Metal Coil - HR or CR





Beam

The beams are horizontal components where loads are deposited or where shelves are placed to store small-sized products. They are joined to the upright by means of connectors which fit into their slots.

Upright Support

Use connect frames & frame (double side) of frames and upright Length as required

Footplate

The frame are fixed to the floor by means of footplates which are placed at the base of the upright. Different footplates are available depending on the upright model anchor bolts can be fitted to the shelving when required.

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Very Narrow Aisle (VNA)

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Very Narrow Aisle (VNA)

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Facts about Very Narrow Aisle (VNA) Pallet Racking System

- Good Stock Rotation
- Good Order picking; 100% selectivity
- Fast Picking rate
- Good product protection
- Average Floor area utilization
 50% net pallet area usage of overall warehouse area
- By increased operational height, can increase warehouse capacity by an additional 40% compared with selective racking systems
- Requires super flat floor
- Limited pallet redundancy as system can run at 95%+ capacity RF controls on the MH equipment will ensure maximum pallet cycles per hours Commonly used with Pick Up and Despatch (P&D) stations at end of each aisle
- A smaller reach or counterbalance truck is generally used in conjuction with the operation of the VNA MH machine, to maximize operation when within the aisle
- Mechanical Handling Equipment
 1. Specialist VNA machine requires super-flat floor surface
- 2. Operates within guide rails, standard or l ow profile, or using a wire induction guidance system which operates to a maximum height of 15m







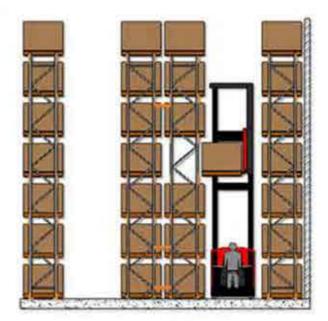


Very Narrow Aisle (VNA)





Standard Pallet Rack Configuration



Very Narrow Aisle Rack Configuration



Very Narrow Aisle (VNA)











Facts about Double Deep Pallet Racking System

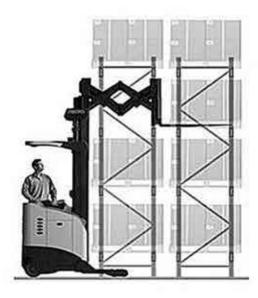
- Lower beam level required for some types of equipments
- Operates up to height of 10m
- Average stock rotation
- Average order picking, 50% selectivity
- Average Floor area utilization
 40% net pallet area usage of overall warehouse area
- Redundancy rates can run between 10-20% dependant on the quality of the WMS programme
- Popular against Drive-in Racking, as a lower cost alternative which increase capacity over selective by up 30%
- Recommend the use of pallet rails or pallet support bars above 4m. to increase MH productivity and improve safety of the operation.
- Recommend to use colum protectors when using MH equipment that requires the straddle leg to go below bottom beam or between pallets and upright
- Mechanical Handling Equipment
 1. Specialist machine with either pantograph or telescopic forks, or using a purpose designed attachment, which can be fitted to standard reach truck.



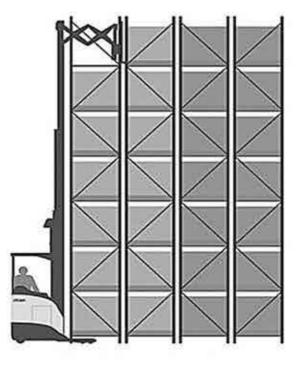
TOP 5 Benefits of double deep racking

- 1) Efficient use of floor space with a good aisle/shelving ratio
- 2) Increase storage density by around 30-40% with good selectivity
- 3) Keep product lines together by storing two pallets deep
- 4) Easily reconfigured to adjust shelf levels or convert to selective racking
- 5) A cost-effective racking configuration





Double -Deep A gainst wall



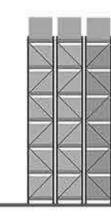
Double -Deep Back-to-back

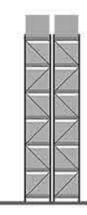


The Double-deep racking system is designed to increase storage capacity, double-deep racking system is capable to store two pallets deep into the single-entry rack or four pallet deeps in a double entry rack. Back-to-back racks are four pallets deep, reducing both the aisle-to-rack ratioand selectivity.

This system is particularly beneficial when the throughput is low while fast movement of pallet is not critical. A special reaching truck with double-pantograph or extendable fork is used in this racking system.







Side Elevation





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Automatic Shuttle able to transform into an automatic warehouse all the Drive-in racking system, assuring the maximum use of the warehousing, making the facility more productive and efficient, AUTOSAT, powered by an innovative Lithium Ion battery easy to recharge and managed by an inte ractive radio transmitter, moves goods on pallets into the drive-in channels. AUTOSAT can be placed.

in the appropriate channel by means of a standard fork lift.

STANDARD EQUIPMENT

- Battery on board
- Lithium battery charging station
- Remote Controller
- Remote controller battery charger
- User manuals
- Wooden Box as packaging.

STANDARD FUNCTIONS

- Loading
- Unloading
- Continuous
- Distance between pallets 40 mm up to 150 mm
- AUTOSAT Manual mode

STANDARD FUNCTIONS

- Pallets rearrange " compacting push "
- Pallets rearange " compacting pull "
- Un-Collision between AUTOSAT in the same channel
- Stock list: counting pallets
- Multiple Pallets: different depth pallets management in the same channel
- Continuous unloading " plus "

TECHNICAL INFORMATION

- Speed with load on board : 30-33m/min Speed without on board : 63-66m/min
- Working range : 10-12-16 H
- Working temperature ST : From + 5 C up to + 45 C / BZ: from + 4 C up to 30 C
- Colors : chassis RAL lid RAL 7035













Radio-Shuttle

A Radio-controlled, battery operated independent shuttle cart units travel along rails that support pallets above. The shuttle cart travels bellow the pallet, then elevates a pick-up table that lifts the pallet from the rails and carries it to the front of the racks. From the front of the rack, a conventional forklift truck can select the shuttle cart from its rail and move it to another location.

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Operation

in semi-automated installation, operator only need to drive the forklifts that carry the pallets and initiate the motorized shuttles activity. the movement of the shuttles inside the racks is automated.



A forklift places the pallet shuttle in the channel where work is to be done.



Using the tablet, The operator sends the command to the shuttle to start the loading operation. Once the location of the pallet has been identified, the pallet shuttle lifts the pallet slightly, and moves horizontally until it reaches the first available location, Whereit deposits the pallet Different sensors accurately control the movements of the load being stored.

Step 2



Next, The forklift is used to position pallet one by one inthe channel entrance, resting them on the load-bearing beams.





The pallet shuttle returns to the top of the lane in order the repeat the operation with the next pallet, and the next, as many times as neccessary until the channel is filled. Before the last position is filled, the shuttled is removed is the sequence is repeated in the next channel where work is required







Components

Safety and control: the foundations of which the system is built

In addition to the contro tablet the communicate orders to the shuttle via Wi-Fi the system consists of two basic components.



Radio-Shuttle Pallet Rack Components

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Upright

They are the vertical components can be adapted to a wide range of the load requirements.

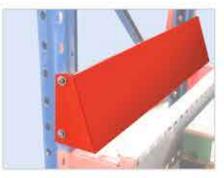


External Rail support These are used to fix and anchor the rail at each load level to the entry/exit frames outer upright.



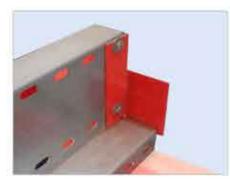
Rail

The pallet shuttle runs on rails inside the storagechannel. Its design facilitates the loading and shuttle centred.

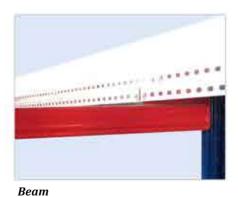


Pallet Centraliser

These are fitted to the entry/exit points in the storage channels to aid in the placement of the unit load in the channel, ensuring it has been centred



Rail-end stop Made of folded sheet metal, in 8mm thick L-shape, these are used as a detection element to slow and stop the shuttle in normal working conditions.

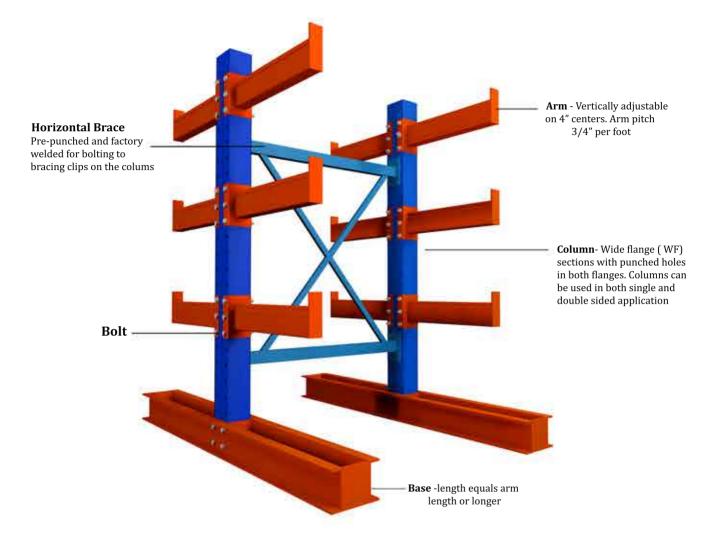


They are the the horizontal , Robust racking components where loads are deposited



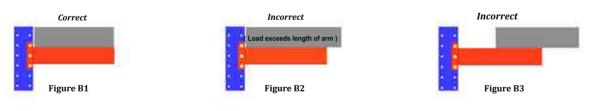


Cantilever Specification

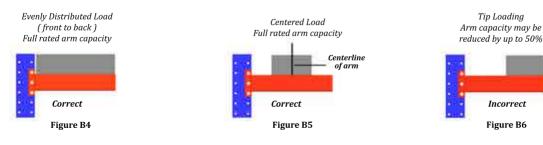


Determine the Length of the arms

The depth of the load should never exceed the length of the arm. A 48" wide bundle of plywood requires a 48" long arm, bundles of steel 24" wide requires a 24" arm and so on Rated arm capacities may be seriously diminished if proper loading techniques are not observed. Figures B1, B2 and B3 Illustrate incorrect arm loading.



NOTE: All arm capacities are based on an evenly distributed load as in figures B4 and B5 below





Cantilever Rack Storage

Cantilever Rack

Easy to build and reconfigure Quickly gets your storage organized

Frames capacities up to 1750kgs Arms carry loads up to 185kgs

Single or double sided configuration Frames available in 3 heights 2 depths

Optional end stops available Secure any loose items from falling off

Strong powder coating finish

Blue RAL5010 coordinates with our shelvings systems





Cantilever for dram tank



Cantilever for cable roll



Cantilever for lumber

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Cantilever Rack Storage



Cantilever racking is specially designed to store long loads such as beams, profiles, pipes and timber

Cantilever Storage is widely used in many industries for storing materials such as tubing, pipe lumber and other items with long length, irregular shape or configurations. They are also used extensively in the lumber and building materials business for outdoor yard storage structures such as T-sheds, and rack supported drive-thru buildings.





Supermarket Shelvings

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Supermarket Shelvings





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Car Accessories section



Supermarket section



Book & Toys Section



Hardware tools Section



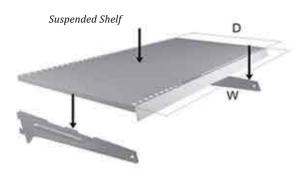
Supermarket Shelvings

Standard Dimensions of the Shelving

The Diagram shown below refer to the standard dimensions of the suspended shelves and base shelves



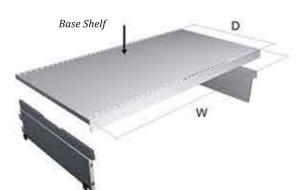




	WIDTH (mm)	D Depth (mm)	Number of reinforce- ment
	1000	300	1R
륲	1000	400	2R
8	1000	500	2R







	WIDTH (mm)	D Depth (mm)	Number of reinforce- ment
3	1000	300	2R
E SHELJ	1000	400	2R
BASE	1000	500	3R

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Supermarket Shelvings



STANDARD DIMENSIONS FOR WALL GONDOLA SHELVINGS

Height (over)	WIDTH (mm)	Base Depth (mm)	Thickness (mm)	Shell Depth (mm)
1700	500	300	80	300
1950	750	400	100	400
2200	1000	500	140	500
2450	1250	600		600
3200	Leophie 2	(integral)	10022	



STANDARD DIMENSIONS FOR ISLAND GONDOLA SHELVINGS

Height (mm)	WIDTH [mm]	Base Depth (mitt)	Thickness (mm)	Shelf DepD (mm.)
950	500	300	80	300
1200	750	400	100	400
3450	1000	500	140	500
1700	1250	600	10000	600
1950	, teree -	0.0000	1000	(interaction)
2200				14444
2450.				



Island Gondola w/ Hole Back Panel





Island Gondola

End Gondola

National Industry...international standard

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Supermarket Trolley and Basket





Supermarket Trolley and Basket



Promotional Display Stand





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Promotional Display Stands



















Promotional Display Stands

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Promotional Display Stands























Gun Racking Storage





Gun Racking Storage





Single Sided Stand





Single Sided Wall Stand

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Plastic Stacking Bin







Plastic Stacking Bin



CODE - 2258 Metal Cabinet with Bins



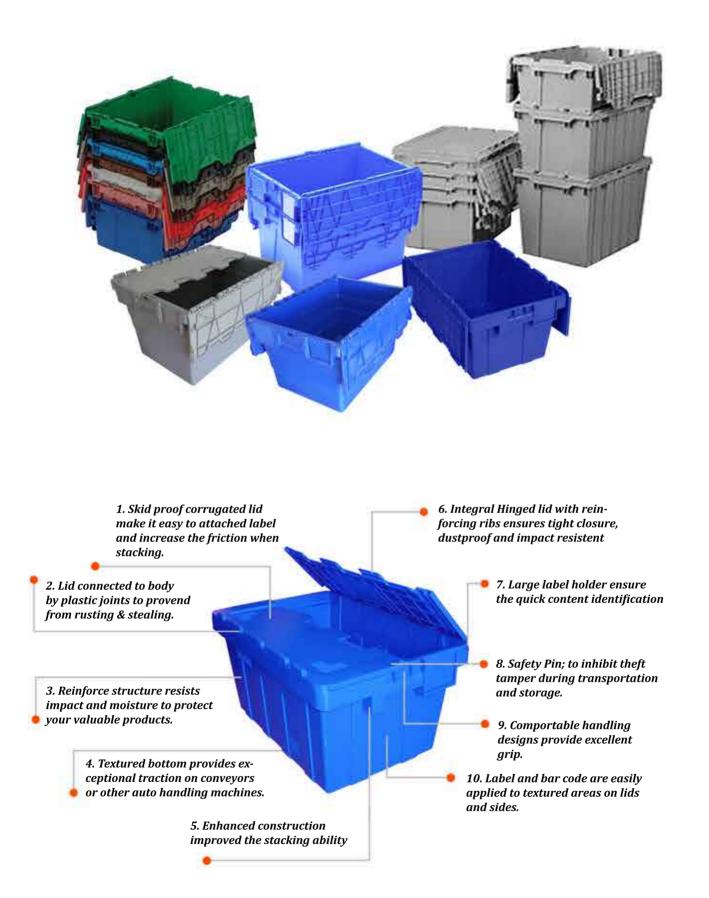
CODE - Stand 2261 size -1050 x 860 x 1800



Usefull in warehouse that handle multiple and small sized such as parts. warehouse workshop and manufacturing plants, They can be used as independent units for classification and storage, or they can be joined by a union clip to form a compact drawer system, when placed in shelving. the ease and the speed of locating products is significantly improved. They are made of polysterene, which makes them long-lasting and highly cost effective.

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Plastic Box Bin Container







Size - 400mm x 600mm x 230mm



Size - 400mm x 600mm x 416mm



Size -300mm x 400mm x 220mm



Size - 400mm x 600mm x 355mm



Size - 400mm x 600mm x 410mm



Industrial Metal Cabinet & Trolley

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Hobby Stand



Metal Trolley with Drawers



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Industrial Metal Cabinet & Trolley



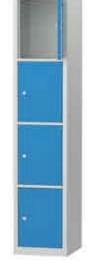








Code - 2263 Material Cabinet



Code - 2264 Locker Cabinet



Code - 2269 File Cabinet

National Industry...international standard







Plastic Pallet



Dynamic Load



Racking Load



Stat<mark>ic Load</mark>





Plastic Pallet



Dimensions	Standard color	Weight (kg)	Truck load	Static load (kg)	Dynamic (kg)
120cmX100cmx15cm	Green, Gray, Blue, Red, Yellow	22	Pcs 408	7000	2000
120cmX80cmx15cm	Green, Gray, Blue, Red, Yellow	12.5	Pcs 600	3000	900

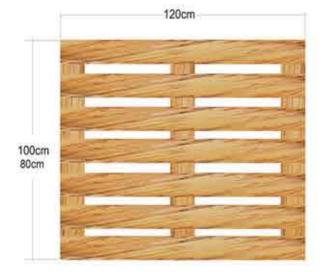


Wooden Pallets

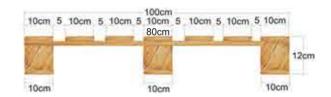


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Wooden Pallets



ý,



120cm								
121		100						
10cm	45cm	10cm	45cm	10cm				



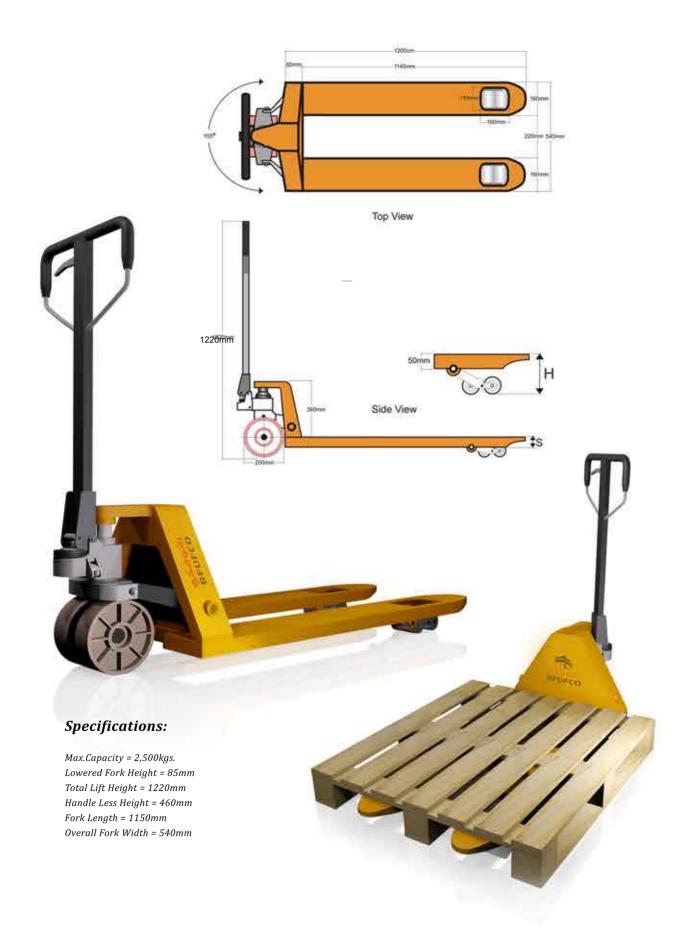






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Hand Pallet Specification



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Folding Steel Pallet Container





Step 2











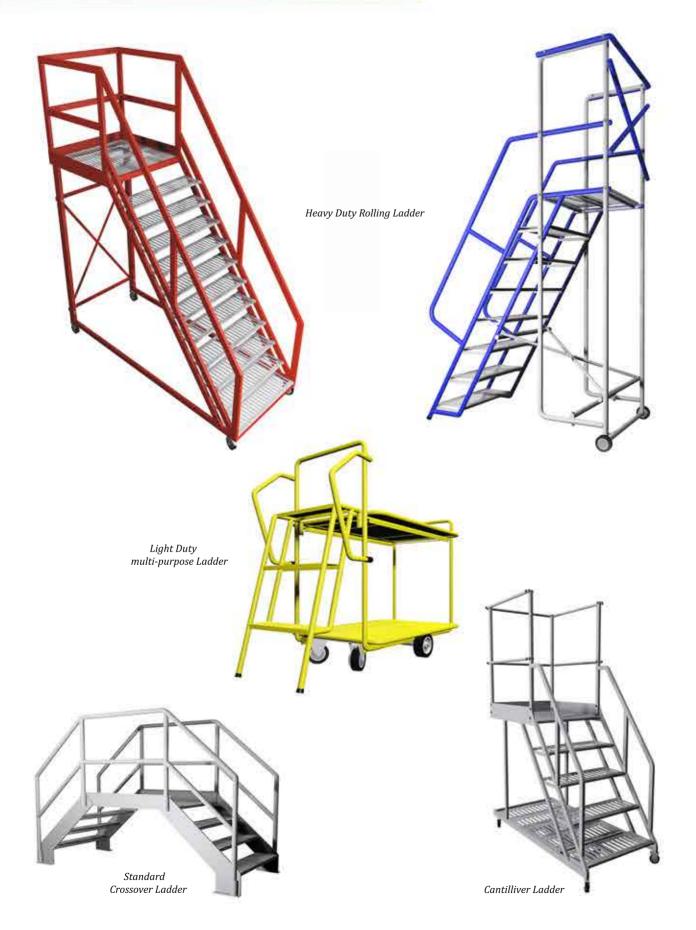
Steel Pallet







Industrial Steel Ladder



Industrial Steel Pallet Container

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Push Cart Roll Container





Industrial Push Cart







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Chrome Hanging & shelving system







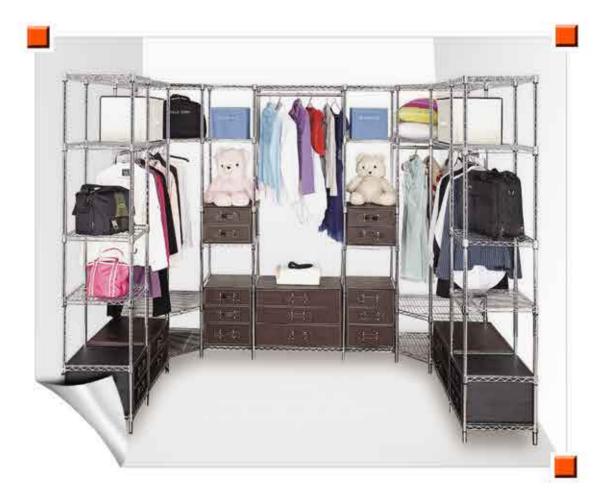








Chrome Hanging & Shelvings System









Chrome Hanging & Shelving System









































































































Interlock Racking Load Notice

