

Product Catalogue

Storage solutions tailored to your needs









Optimise your storage solution



About us

Constructor is part of Gonvarri Material Handling, a leading European manufacturer and distributor of high quality storage products. Whatever the storage requirement, Constructor can make a genuine contribution to improving your business by providing premium storage products and services.



Our valued distribution partners

For over 50 years, Constructor has meticulously worked to forge a nationwide network of premium distributors – all of whom are fully trained and highly experienced on both product and brand. Each distributor can provide advice on warehouse design and storage solutions and, once installed, they will happily offer an aftercare service of safety inspections, repairs, replacements, system extensions or extra safety accessories. Constructor's trusted network of valued distributors are seen as part of the Constructor family and as such can offer core benefits such as:

- Responsive, local contacts
- Warehouse layout design
- Constructor rack design
- Safe load assessments
- Safety rack inspections
- Replacement parts
- Repairs and alterations
- Safety accessories
- Additional related products

Benefits of being a Constructor customer

- Dedicated local service
- Technical support
- ✓ Aftersales support
- Popular items in stock



Index

	page •
Shelfplan Shelving	4
Maxi Bins, Hooks & Louvered Panels	5
HI280 Shelving System	6
HI280 Medium Span	7
HI280 Mobile Shelving	8
HI280 Multi-Tier Shelving	9
HI280 Tyre Racking	10
HI280 Accessories	11-12
P90 Pallet Racking	13
P90 Wide Aisle Pallet Racking	14
P90 Narrow Aisle & High Bay Racking	15
P90 MOVO - Mobile Pallet Racking	16
P90 Multi-Tier	17
P90 Drive-In Racking	18

	page 🔻
P90 Pallet Shuttle	19
P90 Pallet Flow Racking	20
P90 Push-Back Racking	21
P90 Carton Flow Racking	22
P90 Accessories - Pull-Out Units	23
P90 Accessories - Dividers, Vertical Dividers etc.	24
P90 Accessories - shelf options	25
P90 Rack Protection	26-27
Light Duty Cantilever Racking	28
Heavy Duty Cantilever Racking	29
Mezzanine Floor	30
Storage Machines	31
Rack Inspections	32

Shelfplan Shelving

- ✓ Wide span shelves up to 3000mm
- Riveted frame for strength and reliability
- Quick and easy to assemble
- Ideal for storage of big and bulky items
- Designed for storerooms, archive storage and workshops

Shelfplan consists of beams and frames secured together in a unique way resulting in a smooth faced upright and no visible fixings. Perfect for hand picking operations, the modular design is quick and easy to construct. Whether you are storing boxes, cartons, tubes or wires, the long uninterrupted shelves of up to 3000mm make Shelfspan ideal.



3 Options

Shelves and rails are adjustable in 50mm increments, a hidden pin inserted through the beam bracket and into the upright ensures the operator's safety.



 25mm thick chipboard is recommended for strength



• Available in the full choice of depths, each steel panel is 300mm wide.



Tubular rail adjustable in height



Maxi Bins, Hooks & Louvered Panels

- ✓ Versatile bin storage and small parts handling system
- ✓ Maxi Bins produced from high grade polypropylene
- Stack, use freestanding or hang on a louvered panel
- ✓ Label holders and dividers available
- Hooks and spigots also available for louvered panels

The comprehensive range of Maxi Bins provides a versatile, modern storage and handling solution for all kinds of items. Maxi Bins are extremely durable, resistant to both oil and water, and are designed to stand up to constant use in demanding working environments.



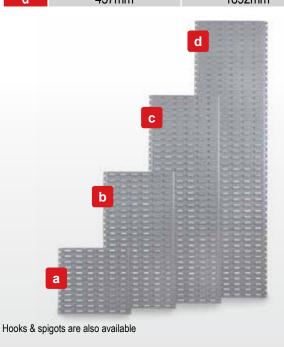
Maxi Bins

no.	Overall Size W x D x H (mm)	Load Capacity	Volume (ltrs.)
1	100 x 125 x 60	2.3 kg	0.40
2	100 x 175 x 85	4.5 kg	0.75
3	135 x 225 x 125	9 kg	2.10
4	185 x 300 x 145	13 kg	4.25
5	185 x 450 x 145	13 kg	7.20
6	370 x 300 x 145	18 kg	10.00
7	410 x 450 x 215	27 kg	21.00



Louvered Panels

no.	Width	Height
а	457mm	475mm
b	457mm	904mm
С	457mm	1372mm
Ч	457mm	1892mm



HI280 Industrial Shelving

- Sturdy and durable storage solution
- ✓ Suitable for runs of multiple bays
- ✓ Easy to install and available in a range of sizes
- ✓ Wide range of accessories available
- ✓ Designed for the smallest garage right up to the largest warehouse

Dimensions

Depth: 300, 400, 450, 500, 600, 800, 1000 mm

Length: 900, 1000, 1290, 1500, 1750, 2000, 2250,

2500 mm

Height: 1000, 1600, 2100, 2300, 2500, 3000, 4600 mm

(and in increments of 1000mm up to 9900mm)



Our HI280 system is ideal for storage and distribution companies. It offers immediate yet secure access to all items being stored. Increasing productivity and flexibility, which are key factors in today's competitive market. As





HI280 Medium Span

- ✓ Stores bulky or unwieldy goods efficiently
- ✓ Picking from both sides available
- ✓ Easy to integrate with other HI280 Shelving
- ✓ Spans up to 2500mm
- ✓ Accessories are available





Shelves

High quality metal panel shelves are provided as standard. A range of alternative shelving options are available including chipboard, perforated or mesh shelves or sloping shelves.

Dimensions

HI280 Medium Span frames are available in heights from 1 to 8 metres

Shelf depths are: 300 / 400 / 500 / 600 / 800 / 1000 mm.

Shelf lengths are: 1 / 1.6 / 2.1 / 2.3 / 2.5 / 3.0m

Loading

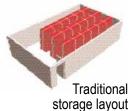
Constructor's HI280 was designed and is manufactured in Germany to high, quality assured standards. All products in this range have been rigidly tested in our in-house testing facility.

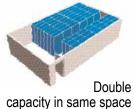
Mobile HI280 Shelving System

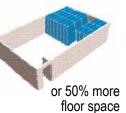
- Utilisation of floor space, doubling capacity
- Secure storage with the ability to lock the entire unit
- Smooth and quiet movement of shelving
- Increased storage capacity in a smaller area
- Ideal for warehouses or workshops where space is limited

Save space

This shelving system provides a security-conscious storage facility. The mobile units can be locked and access given only through an electronic code or key.













HI280 Multi-Tier Shelving

- ✓ Good space utilisation by using multiple levels
- ✓ Increased picking rates
- ✓ Reduce travel time between picks
- ✓ Increased storage capacity
- Sprinklers and lighting easily incorporated into system

Multi-Tier removes the need for an independent mezzanine floor



The shelving works as a support for the mezzanine floor. The heavy duty construction of the uprights are designed to carry the loads from the floors above. Sprinkler systems and lighting can easily be incorporated into the structure.







HI280 Tyre Racking

- Ideal for storage of winter, summer or all season tyres
- Designed to avoid point loads and flat spots on tyres
- Multiple tyre storage options available
- ✓ Spans up to 2000mm and offers good storage capacity
- System made from high quality pre-galvanised steel





More and more car owners are having two sets of tyres, one set for summer and another for winter.



HI280 Tyre Racking can be mounted on mobile bases to provide even denser storage of tyres, while providing access to each individual tyre.

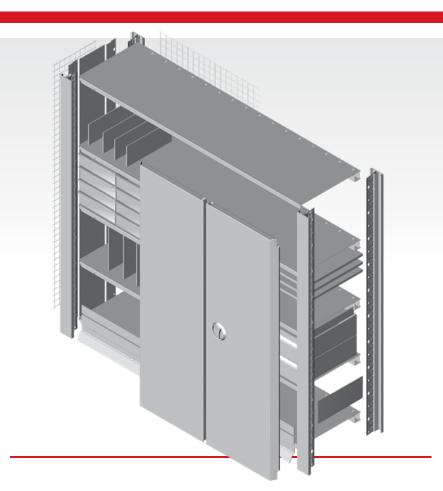


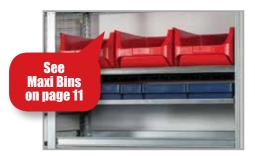
HI280 Accessories

Various accessory parts make individual adaption for stored goods or for difficult spaces easier. There is always a solution for you. Below is a selection of accessories available.



Tool Panels - Ideal for storing smaller items, available in a number of sizes.





Plastic Trays and Bins - Ideal for storing smaller items, available in a number of sizes.



Shelf Drawers - Ideal for storing smaller items. The nest of shelf drawers sits directly on a shelf.



Pull Out Drawers - Supported on expansion slides, ideal for lean production areas.



Full Height Dividers - Used to create compartments between shelves allowing segregated storage of items.



Bin Front - Fitted to the front of the shelf to prevent goods from falling off.



Part Height Dividers - Used to subdivide products, where full height separation is not required.



Base Plinth - Placed at the bottom of the shelving unit. Prevents items from going under the shelving.



Tube Rail - Used as a storage rail for hanging garments.



Lockable Doors - Full and part height lockable doors offer secure storage.



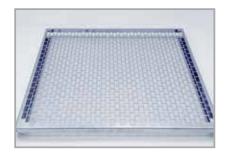
Bay Divider - Used to segregate long goods when stored vertically. Allows fast and direct access.



Tyre Bracket - Allows tyres to rest on larger surface avoiding point loads and flat spots.



Sign Holder - Clipped to the upright providing easier aisle identification.



Perforated Shelf - Ideal for storing liquids, car batteries. Use in conjunction with a drip tray to collect spills.



Sloping Shelf - Two panels form a complete shelf. Used to display products and make picking easier.



U Support - Used to support vertically stored long goods, e.g. timber, plastic pipes.



'S' & Twisted Hooks - Used with a hanging rail. Ideal for exhausts, fan belts or any item that can be hung.



Exhaust Support - Front to back bar suspended between two shelf beams. Used in conjunction with 'S' or twisted hooks.



Vertical Loop Divider - Ideal for separating wide items stored vertically e.g. windscreen or doors.



P90 Pallet Racking System

- Available in a range of various lengths
- Structures can be created in excess of 30 metres high
- ✓ 16 beam lengths with 30 different section sizes available
- ✓ Galvanised steel
- ✓ Also available with a painted finish
- ✓ Suitable for all pallet types including Euro, CHEP, disposable etc.
- ✓ Bespoke items manufactured to suit







Quality Assured

Our products meet all relevant design codes including FEM, EN and SEMA. Our highly trained technical engineers ensure that storage solutions meet the required legislation and exceed our own internal high standards.

We are holders of ISO 9001, ISO 14001 and ISO 18001



P90 Wide Aisle Pallet Racking

- the classic solution

- ✓ Large range of sizes and lengths available
- ✓ Wide aisles allow the use of standard counter-balance fork lift trucks
- ✓ Suitable for all pallet types
- Available in galvanised finish to optimise warehouse lighting
- Bespoke items manufactured to suit









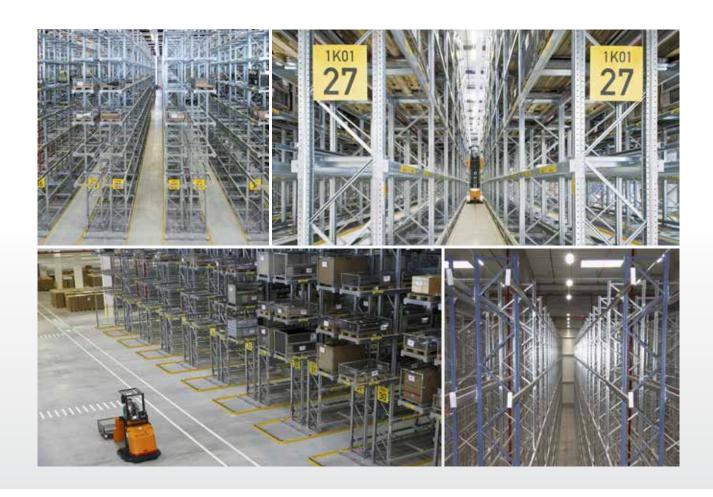


P90 Narrow Aisle and High Bay Racking

- for faster order picking

- ✓ Narrow Aisles allow for better floor utilisation
- Used in conjunction with special forklift trucks
- ✓ Suitable for all pallet types
- Available in galvanised finish to optimise warehouse lighting
- ✓ Pallet handling and picking on all levels with combination truck





P90 Movo

- Mobile Pallet Racking

- High density storage saves on floor space
- ✓ Full access to all pallets via electronically controlled racking
- ✓ Meets FIFO requirements
- ✓ Suitable for cold stores
- Can be integrated with WMS



The electronically controlled heavy duty Mobile Pallet Racking system runs on embedded rails and can carry bay loads of up to 24 tonnes at heights of up to 12 metres, with runs up to 90m possible.

When individual aisles open, stateof-the-art sensor technology and variable control options ensure ease of operation and absolute safety.







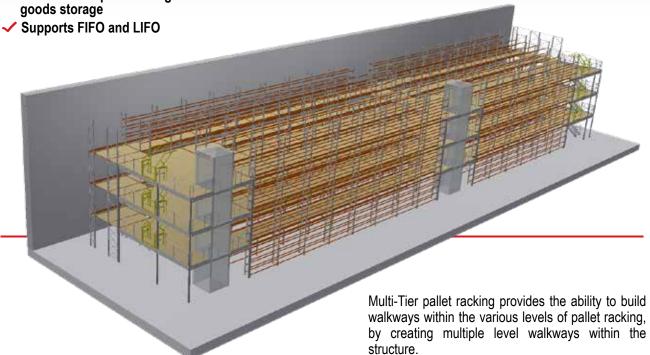


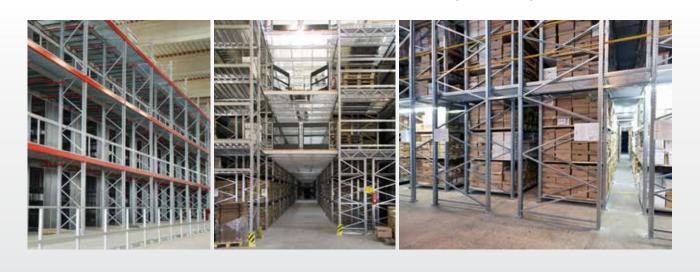
P90 Multi-Tier

- utilising the full height of your warehouse

- ✓ Utilises the full height of the building
- ✓ Optimises floor space
- ✓ Allows order picking on multiple levels

✓ Can combine pallet storage and small





This type of structure can be more economical and offers a better utilisation of space than other mezzanine floor arrangements. Ideal for cartons,

boxes and garment storage.

P90 Drive-In Racking

- compact storage solution

- ✓ Perfect for storing large quantities of similar sized items
- Often used in a cold store environment
- ✓ Suitable for FILO operations
- Can be operated with a reach truck or counter-balanced fork lift truck
- ✓ Ideal for bulk storage



Drive-In Racking is the perfect solution when storing large quantities of similar products. This high density solution is often used in cold store environments.



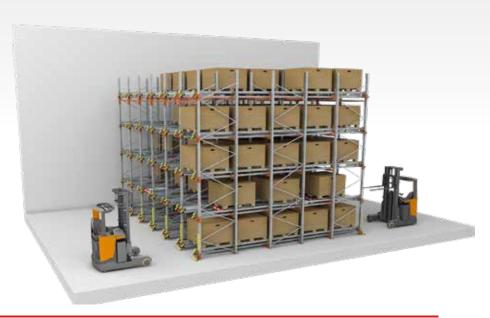




P90 Pallet Shuttle System

- cost effective automation

- ✓ Semi-automated warehouse system
- ✓ Pallets placed into and retrieved from the system via automated shuttle
- Can be used for both LIFO and FIFO operations
- Can dramatically reduce the number of forklift trucks required
- Suitable for use in both ambient and frozen environments



Pallet Shuttle System combines the advantages of Drive-In Racking with a semi-automated platform which manages the movements of pallets, offering better flexibility and faster handling.



P90 Pallet Flow Racking

- controlled roller movement

- Pallet racking used in conjunction with rollers
- ✓ Ideal for FIFO operations
- ✓ Pallet speed can be controlled by brakes within the system
- Can be operated by reach truck or counter-balance forklift truck
- Allows for high density storage of pallets



Pallet Flow is a compact storage system where pallets are transferred automatically from the entrance to the exit of the racking, this offers improved internal logistics as well as high density storage.









P90 Push-Back Racking

- gravity ensures access

- High density storage up to 6 pallets in depth
- ✓ Ideal for LIFO operations
- Can store pallets on either short or long side
- Loading and unloading of pallets on the same side of the racking
- Can be operated by reach truck or counter-balance forklift truck



Push-Back Racking is a high density application up to 6 pallets in depth where pallets are delivered and picked at the front of the racking. Gravity transports the next pallet, to be picked, to the front of the racking.



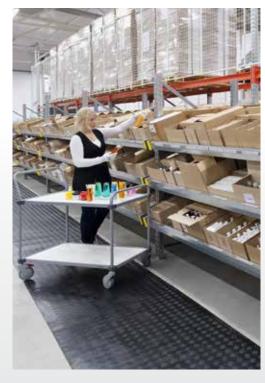
P90 Carton Flow

- efficient and ergonomic low level picking

- Allows efficient picking of small goods at low levels
- Can be used with a variety of carton sizes
- ✓ Supports FIFO operations
- Can be used with both cardboard and plastic containers
- ✓ Ideal for retail customers



Carton Flow allows efficient picking of small goods on lower levels in a pallet racking system. A picking station is constructed from a rack fitted with sloping roller tracks used to transport the components, loading on one side and unloading on the opposite.



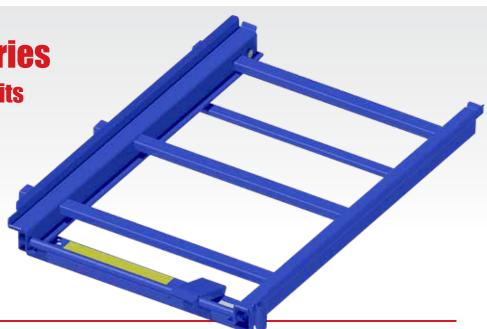




P90 Accessories

- Pallet Pull-Out Units

- ✓ Floor or beam mounted
 Pull-Out Units
- Universal units that can be mounted onto beams
- Special dimension pallets can be catered for
- All loads are based on uniformly distributed pallet loads



For convenience these universal units can be mounted onto beams or directly to the floor, preventing the operator having to continually bend down. Ideal for lean manufacturing or lineside production environments.

Optimised picking

Goods or pallets stored on Pull-Out Units can be picked directly from the racking. Releasing the safety catch and pulling on the unit's handle brings the Pull-Out Unit forward, making the stored goods fully accessible.

Load capacities of up to 1000kg and a pallet pull out distance of between 55% and 100% are possible depending upon the exact specification of the unit.

Options available:

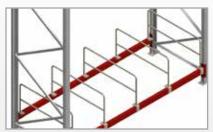
- Floor or beam mounted
- Euro or CHEP pallets in both orientations
- · Bases for pallets or loose boxes
- · Custom designs on request
- Finished in blue RAL 5010 as standard, other colours available on request.







Divider Bars - Used to segregate long goods when stored vertically. Allows fast and direct access.



Horizontal Standing Divider - Designed for the safe vertical storage of long flat goods. Allows for fast and direct access.



Vertical Loop Divider - Used to support long products which store vertically. Allows fast and direct access.



Horizontal Hanging Divider - Suspended below front and back beams to store vertical goods. Allows easy access.



P90 Accessories

- shelf options



Chipboard - Placed between two P90 beams, a chipboard shelf allows a lower beam level to be used as a manual picking shelf.



Timber Decking - Fixed wooden plank shelving available open or closed, rough or planed depending on use.



Mesh Grating - A strong mesh shelf ideal for storing liquids allowing spills to pass through the shelf to be caught in a drip tray.



Fork Spacer - Allows forks to pass under the load when not on a pallet.



Coil/Drum Cradle - Full support front to back for cable reels and large drums or canisters.



Drum Holder - Placed on the racking beams to allow the storage of barrels or cable reels to prevent them rolling. (**Options available:** • 900mm long • 1100mm long)



Pallet Support Bars - Placed in pairs on racking beams to allow storage of undersized pallets. (Options available: • 900mm long • 1100mm long)



Half Pallet Support - Placed on the racking beams to allow storage of undersized pallets.

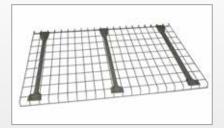
(Options available: • 900mm long • 1100mm long)



Vertical & Horizontal Pallet Stops - A useful safety feature which prevents pallets from falling from the back of the rack.



Steel Shelf Panels (Options available: • 900W x 455W mm (140kg UDL per panel) • 900W x 530W mm (140kg UDL per panel) • 1100W x 455W mm (140kg UDL per panel) • 1100W x 530W mm (140kg UDL per panel))



Wire Mesh Shelving - Placed on the beams to support undersized pallets or boxes. Often used in warehouses with a sprinkler system to allow flow of water in the event of a fire. (Options available: • 900W x 864W mm (1089kg UDL) • 900W x 1320W mm (1134kg UDL) • 1100W x 864W mm (1134kg UDL) • 1100W x 1320W mm (1000kg UDL))





Frame Protector Kit - Up to 400mm high with a solid panel, available in a variety of lengths to suit your frame size. (Options available:

- 500 x 900 500 x 1100 500 x 2000
- 500 x 2400)



Metal Safety Bollard - Available in either painted or galvanised finish they offer sturdy protection for vulnerable areas such as doorways. (**Options available:** • 850 x 168 • 1000 x 168 • 1200 x 168)



E-Rail Barriers - Designed as collision and impact protection and made from 3mm thick material. (Options available: • 400 x 900 • 400 x 1100 • 400 x 2000 • 400 x 2400)



C-Rail Barriers - Designed to protect end of racks as well as pedestrian walkways and made from 5mm thick material to offer sturdy protection. (Options available - Width: 460mm or 760mm Depth options: • 900 • 1100 • 2000 • 2400)



Tubular Barriers - These tubular barriers are 500mm high and made from tough steel, are built to withstand the challenges of everyday activities. (**Options available:** • 500 x 900 • 500 x 1100 • 500 x 2000 • 500 x 2400)



Anti Collapse Mesh - prevents any risk of spillage from pallets, offering protection for a variety of scenarios.







Metal Column Guard - Protects pallet racking uprights from low level fork and truck impact. Available 400mm high to meet FEM regulations.



Metal Corner Column Guard - Protects pallet racking uprights from low level fork and truck impact. Available 400mm high to meet FEM regulations. Ideal corner protection for the pallet racking uprights.



Upright Column Guard - Bolted to the front of the racking upright, the metal guard offers protection with shock absorbing foam inside.



Protect-It Plastic Guard - Absorbs heavy impacts, simple to attach allows for regular inspection and costs effective to change when damaged.



Sacrificial Legs (incl. upright section) - A non-load bearing, removable section of upright, replaceable if damaged, without the need to unload a complete bay.



Shock Absorbing Guard - Specifically designed for protection of uprights placed on corners in a warehouse. A roller at the base helps deflect impacts.

Light Duty Cantilever Racking

- Easy to assemble with a quality galvanised finish
- ✓ Arms adjustable on 100mm pitch
- ✓ Ideal for storing long, light-weight lengths
- ✓ Can take loads up to 400kg per arm*
- Available in both single and double sided configurations
- ✓ Can be extended with additional uprights

Whether you need to store long lengths of timber, plastic pipes, mouldings or other light-weight long goods horizontally and safely, Constructor's Light Duty Cantilever Racking system is ideal. Made from sturdy galvanised steel, the Light Duty Cantilever Racking is offered as either single sided racks to go against a wall or as a double sided rack for access from both sides. This racking is fully modular, enabling additional sections to be added.

Height: 2000mm or 2500mm

Arm length: 300 / 400 / 500 / 600mm

Distance between uprights: 1000 / 1250 / 1500 /

1750 / 2000mm

 $^{\star}\text{The loads}$ are calculated in accordance with the relevant FEM standard and EN 1993-1-3, design of steel structure.

If you predict higher loads on the racking, please use our Heavy Duty Cantilever System.





Arm height adjustment in 100mm increments.



Safety end stoppers are available as an extra option.



Braced for maximum rigidity in widths of 1000 / 1250 / 1500 / 1750 / 2000mm.



The racking is fixed to the floor using M10 x 90mm anchor bolts.





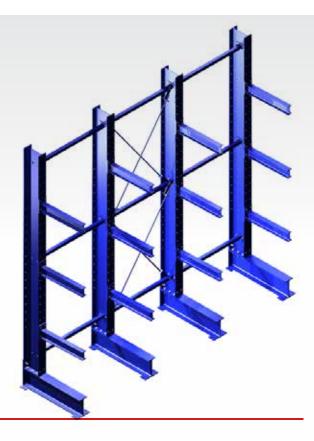
Heavy Duty Cantilever Racking

- ✓ Ideal for storage of long lengths and heavy loads*
- Utilises the full height of the warehouse when required
- External paint or hot-dip galvanised finish for outdoor installation
- Available in single or double sided configurations
- ✓ A range of arm stops and label holders available

The load capacity is dependent on design and customer requirements.

Contact us to discuss your design.

*The loads are calculated in accordance with the relevant FEM standard and EN 1993-1-3 design of steel structure.

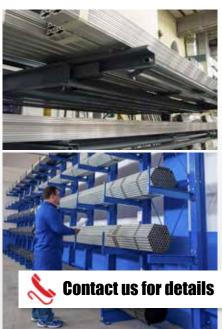


Cantilever racking allows you to use your warehouse space more efficiently – space is not wasted as horizontally stored goods can be stacked above each other while still allowing access to each item or bundle.

Each system is fully customised to suit your specific requirements. This bespoke manufactured solution is so versatile that different component combinations can be used in various situations. The cantilever arms can be easily adjusted in height. The system comes in blue as standard, but other colours are available on request.

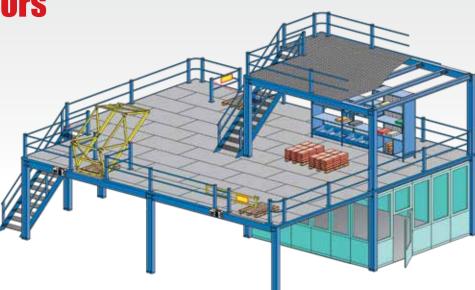
For outside installations, external paint is available or a hot-dip galvanised can be provided where a corrosive environment is present.





Mezzanine Floors

- ✓ Ideal solution when floor space is limited
- Can be used in conjunction with Constructor racking or shelving to maximise storage
- Hand rail and Pallet Gates available to offer protection
- ✓ Timber or steel grating floor finishes available to suit your needs
- Can be fitted with lighting and sprinklers where required









Hand Rails



Stairs

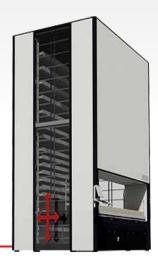




Storage Machines

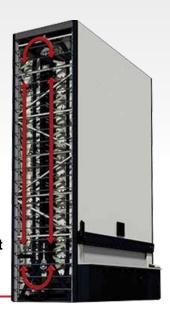
Tornado

- Ergonomic brings the tray to operator's optimum height.
- ✓ Saves up to 70% floor space
- Up to 65% reduction in picking times
- Rapid and efficient support with Constructor remote assistance via internet
- Suitable for storage of products of various sizes or weights



Paternoster

- Semi-automated shelf carousel
- Machine heights up to 15 metres
- Reduces picking errors by up to two thirds
- Particularly suited to batch picking, average 15 seconds per row pick time
- Safe and ergonomic work environment with goods presented at optimum height



Constructor's Tornado machine facilitates modern picking techniques when storing various sized products. The Tornado is a swift, energy saving and quiet automated storage system. Utilising the lift principle for storage, it brings the required tray of products to the operator. Each machine is tailored to individual storage requirements.

The Constructor Paternoster is a safe and secure storage system that utilises the goods-to-person principle, by reducing the walking distance of a picker. Introducing batch picking can reduce these times further. This carousel system saves floor space and keeps products away from dust and light.







- By spotting the details that cause damage early

Accidents happen in any warehouse, but regular inspections could minimize the number and effect of them. Constructor's rack inspectors offer a convenient, comprehensive and cost effective way to keep your warehouse safe.

Small changes throughout the year – caused by moving of goods, fitting and refitting of the racks and general knocks through the daily use – can in the end seriously change the capacity of the racks. This can lead to incidents in a warehouse, potentially causing damage to both man and material. The challenge is to spot the changes early enough to avoid additional future costs, which requires the experience of a trained expert who knows what to look for.

Constructor's rack inspectors are fully certified, and highly experienced to conduct yearly inspections to ensure your facilities are kept safe. Following every inspection a detailed report is provided, offering advice and indicating areas that require immediate action or future attention by using a simple traffic light indicator. Each visit is certified and documentation provided that can be clearly displayed on the racks to confirm our inspection.

Our inspections strictly comply with all government guidelines and legislation and any rectification work is fully guaranteed.

Keep your warehouse safe. Let us identify the early signs before it's too late.

- No interruption to operations
- Prevention of damage to people or goods
- Early risk identification minimises future repair costs
- Repair work can be completed quickly and professionally



Constructor Asia SDN BHD

Lot 17A, Level 17, Top Glove Tower, No.16, Persiaran Setia Dagang, 40170 Shah Alam, Selangor Darul Ehsan, Malaysia.

Tel. +603 3362 5000 Fax +603 3362 6060

info.constructorasia@gmail.com www.constructor-group.com

