



# Craftsman STORAGE SYSTEMS -



### **STATIC STORAGE SYSTEMS**

A Division of Craftsman



2200 Crore+ Turnover

3200+ Employees

**35+** Years of Manufacturing Experience

**8+** Manufacturing Facilities



Craftsman Storage Systems, a division of Craftsman Automation offers both Static and ASRS solutions. Our wide range of racking and shelving solutions include Selective Pallet Racking, Mobile Pallet Racking, Double deep Pallet Racking, Cantilever Racking, Multi-Tier Shelving, Mezzanine, etc.



Our state-of-the-art facility manufactures components which are designed and installed according to ISO and FEM standards with no compromise on safety and quality specifications





# PALLET RACKING SYSTEMS



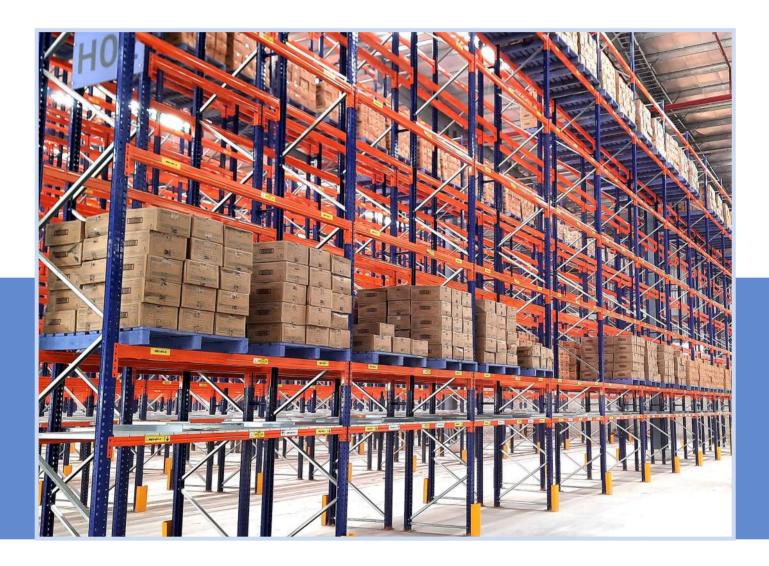




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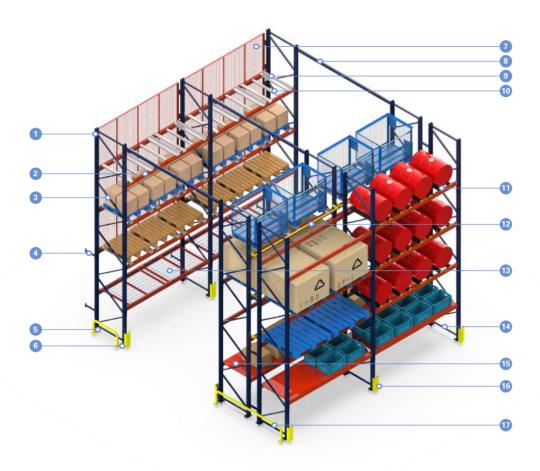
### SFI FCTIVE PALLET RACKING

Selective Pallet Racking is a flexible Industrial Racking system that is ideal for warehouses that have both fixed and variable storage requirements. Our horizontal load beams are held in place by connectors, with the pallets resting on these beams. These beam levels can be easily adjusted to fit the various load and recommended pallet sizes. Working aisles, as well as the height of our racks, are designed based on the Material Handling Equipment's features. pallet sizes, and warehouse height. Our framework ensures that every pallet has convenient and unrestricted access at all times, ensuring maximum accessibility.

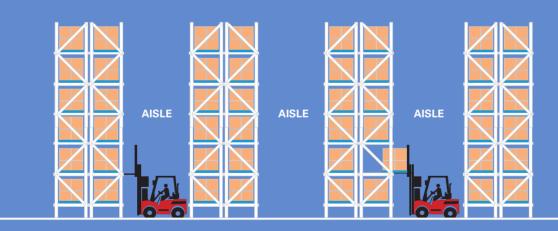


Craftsman Storage offers both longitudinal and lateral transverse Pallet Racks, racks for single or double-deep storage along with narrow-aisle or broad-aisle storage. Heavy Storage Racks with a frame loading capacity of up to 32 tonnes and a transverse loading capacity of up to 4.5 tonnes are included in our product line. All of our pallet racking systems are compatible with a full set of accessories, including gratings, weld mesh panels, decking panels, claddings, pallet support beams, guided type pallet support, collision protection elements, etc.



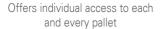


- 1. Upright
- 2. Cross Beam
- 3. Diagonal Bracing
- 4. Row Connector
- 5. Anchor Bolts
- 6. Base Plate
- 7. Rear Mesh Cladding
- 8. Top tie
- 9. Guided W- Pallet Support
- 10. Pallet Support Bar
- 11. Drum Support Bar
- 12. Back Stopper
- 13. Mesh Decking
- 14. Horizontal Bracing
- 15. Decking Panel
- 16. Column Guard
- 17. Row Guard











High Stock Rotation



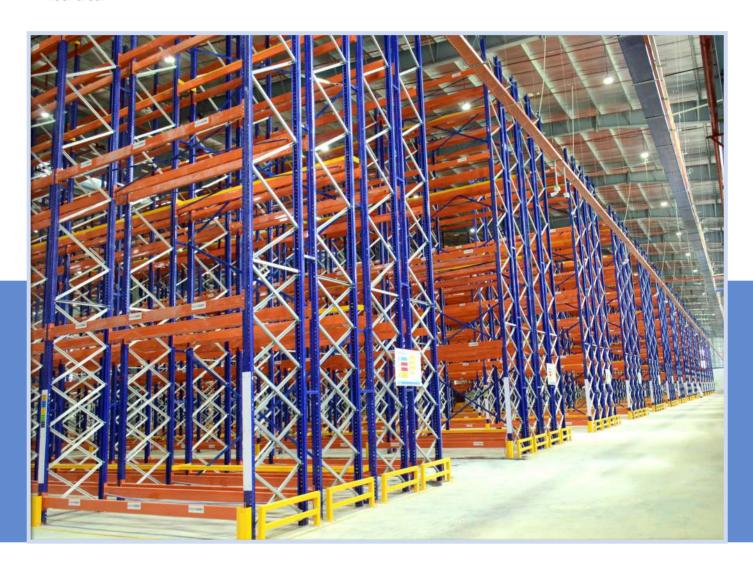
Compatible with various MHEs



Economical use of floor space with low investment

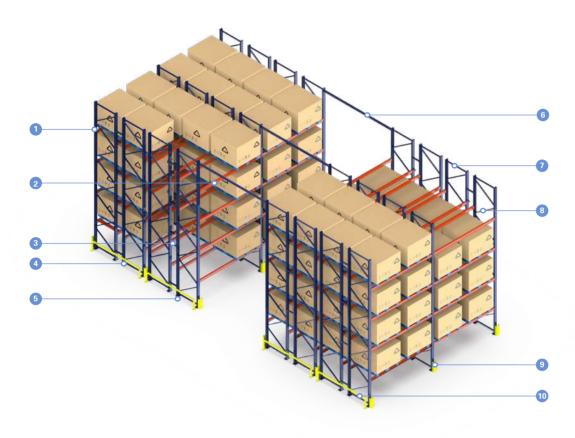
# **DOUBLE DEEP PALLET RACKING**

When compared to Single Deep Selective Pallet Racking, Double Deep Pallet Racking enhances warehouse density by up to 40% by allowing two pallets to be placed i.e., One behind the other to offer 50% selectivity. It is a versatile and efficient racking solution with a good balance between pallet selectivity and pallet storage density. Pallets are placed two rows deep instead of one in double deep racking systems, similar to selective racking, thus resulting in a higher storage density. The pallets are still accessible simply and rapidly. By default, our framework is designed to be installed against a wall or in conjunction with another double deep-section behind it, resulting in a 65% increase in floor area.

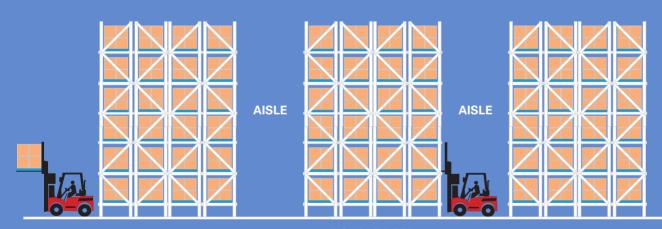


Double Deep Pallet Racking systems are ideal for warehouses with high volume and limited space that use the FIFO (First In First Out) at two pallet batch levels and LIFO (Last In First Out) at individual pallet level inventory rotation. Pallets are loaded and unloaded from our system using double reach or deep reach lift trucks. Our Pallet Racks are ideal for keeping products that are identical or have a high rotation rate and require more than one pallet per reference.



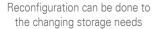


- 1. Upright
- 2. Beam
- 3. Row connector
- 4. Anchor bolts
- 5. Baseplate
- 6. Top tie
- 7. Horizontal bracing
- 8. Diagonal bracing
- 9. Row guard
- 10. Column guard











Enables more efficiency, eliminates unnecessary aisles, and maximizes the use of available space



Can also be established in automated warehouses through stacker cranes with telescopic forks



Ideal for homogeneous or identical product warehouses

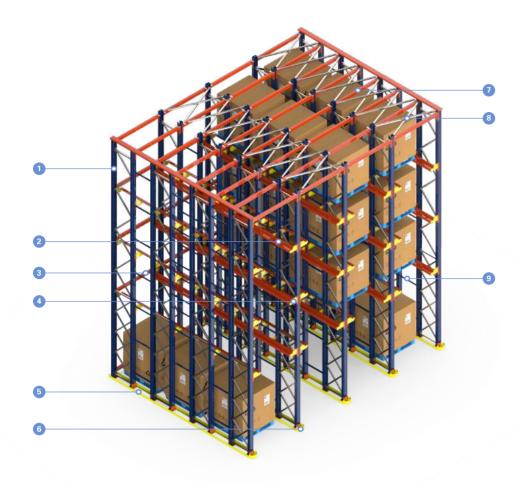
# **DRIVE - IN RACKING**

Craftsman's drive-in racking is constructed using the same frames as our existing pallet racking system and is equally capable of supporting high loads. Material Handling Equipment drives into the aisle to store & retrieve pallets. Pallets are typically loaded and unloaded from the same side in drive-in racking, which follows the LIFO (Last In, First Out) principle. Our framework also allows for FIFO (First In, First Out) principle when pallets are loaded on one side and unloaded from the other.

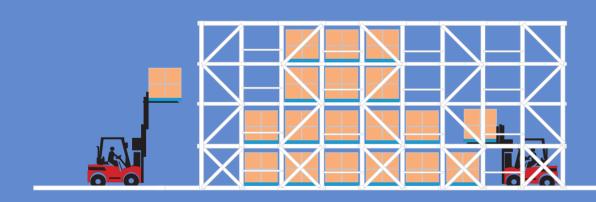


The Drive-in Rack with the help of MHE maximizes surface area and storage space by driving into the aisle and placing pallets from back to front on storage rails that extend entirely from one side of the rack to the other. Drive-in Racks allow you to store a large number of similar SKUs in a small space. Drive-in racking from Craftsman is an ideal dense storage solution for homogeneous products with a large number of pallets per SKU. Our Drive-in Rack is equipped with guide rails and column protection guards for safe operations.





- Upright
   Rail beam
- 3. Back stopper beam
- 4. Arm
- 5. Guide rail
- 6. Column guard
- Top stability beam
- Top bracing
- Gap frame



**SIDE VIEW** 







Cost-effective solution for Storing identical products with large amount.



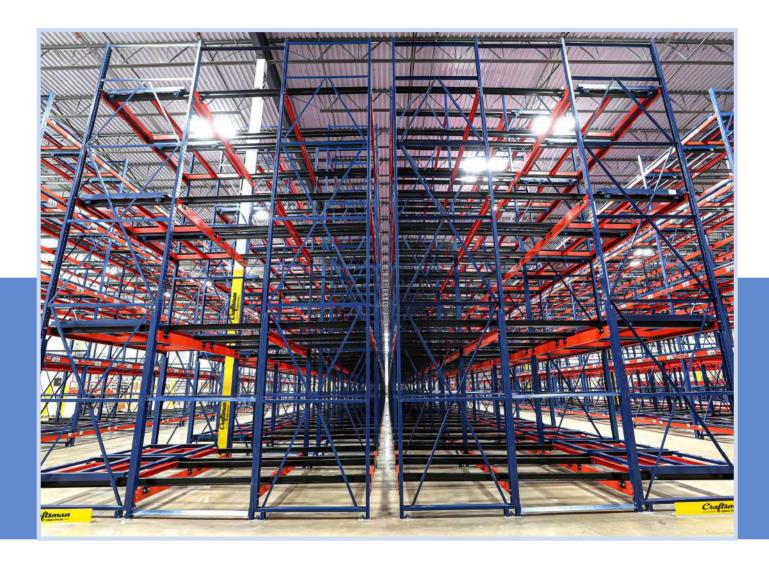
Galvanized rolled rails offer superior resistance towards torsion and abrasion

Increases storage density by eliminating aisle space

Allows configuration for both FIFO and LIFO making it a versatile type of racking solution

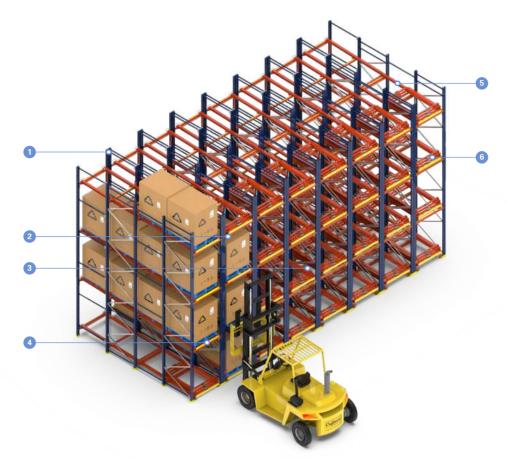
# **PUSH BACK RACKING**

When it comes to storing the same SKU at pallet level with medium density, push-back racking is one of the preferred options. Last-In-First-Out (LIFO) is used with push-back pallet racking, which saves space. Also, push-back pallet racking systems are appropriate for holding several pallets of the same SKU.

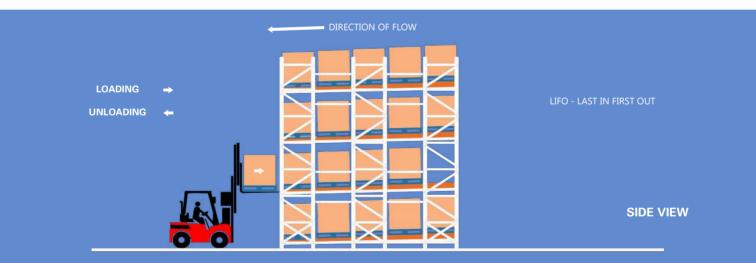


All our pallet lanes operate independently, thereby offering a flexible and dense pallet storage option. Once a pallet is unloaded on our systems, the remaining inventory replaces the position of the front pallet by a sliding cart that utilizes gravity, ensuring the uninterrupted availability of a pallet in picking faces. Our push-back pallet racking system can be accessed with all major types of forklifts, including counterbalance, narrow-aisle, and swing reach lifts. Also, they are compatible with an extensive range of accessories such as collision protection, MHE stopper, etc.





- 1. Upright frame
- 2. Beam
- 3. Pallet guide
- 4. Pallet stopper
- 5. Rail for trolley
- 6. Trolley









Low maintenance cost



Designed for safe operation



Allows for quicker and easier loading/unloading of pallets

# **PALLET FLOW RACKING**

Pallet flow racks, also known as Live Pallet Racking, are a hybrid of gravity flow conveyors and racks. Live Pallet Storage Racks are the ideal option for high-density, FIFO pallet storage, particularly for batch storage of high-volume goods. Flow Rack employs elevated rails in conjunction with dynamic components such as rollers, conveyors, and brakes, all within a rack-supported structure. Pallets are therefore placed onto the raised end of the flow system, thereby transforming the pallet to the other end.

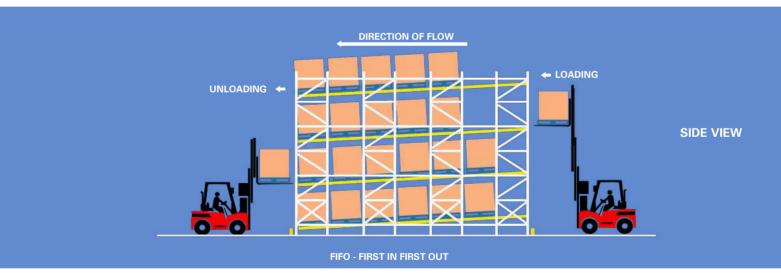


Our Pallet Flow Racks can be customized to meet your specific storage requirements to adapt to your needs by delivering the pallets at the front. The roller conveyor, for example, can be customized with brake rollers and a variety of roller spacing to match your unit load. Our Pallet Flow Rack comes with a range of safety accessories such as pallet guides, MHE stopper, column guards, row guards, etc.

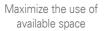




- 1. Upright frame
- 2. Beam
- 3. Pallet stopper
- 4. Roller
- 5. Brake roller
- 6. Roller fix channel
- 7. Pallet guide
- 8. MHE stopper









Reconfiguration can be done



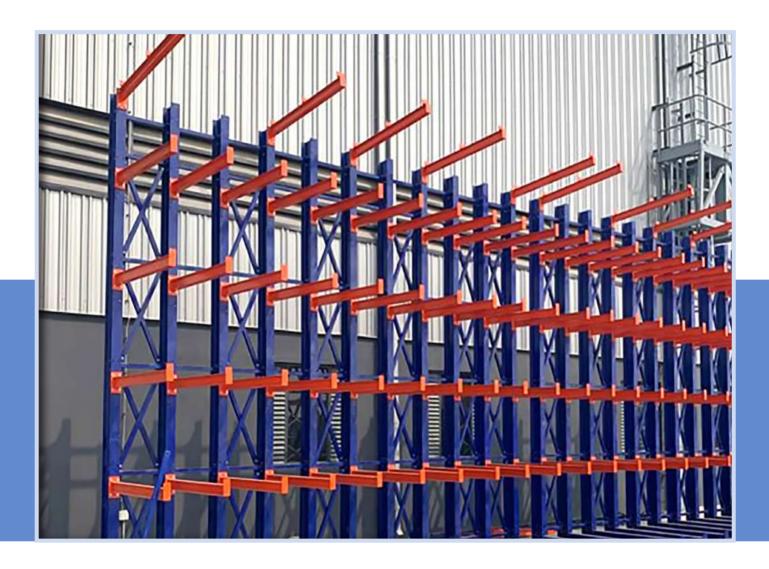
Zero power consumption



Ideal for homogeneous or identical product warehouse

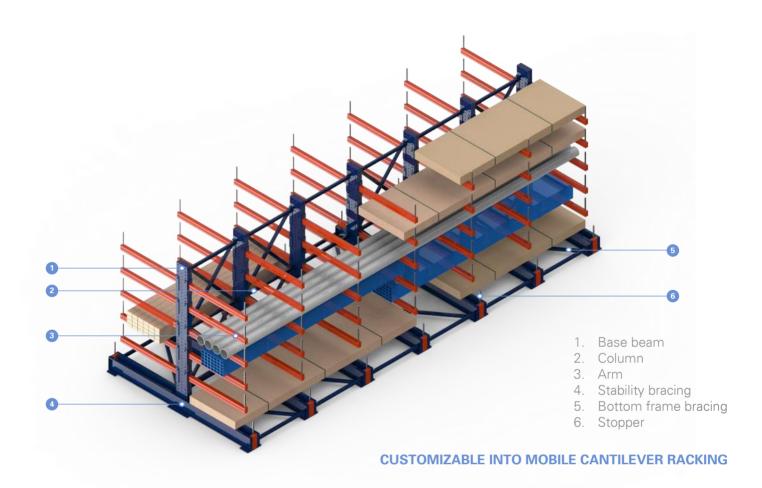
# **CANTILEVER RACKING**

Craftsman's Cantilever Racking System is a versatile racking system that is ideal for storing long or varying length objects such as metal beams, pipes, moldings, and wooden boxes, as well as flat items such as wood, steel plates and other bulky construction components.

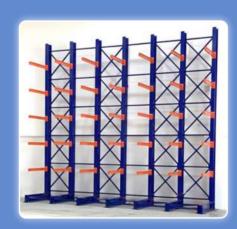


Depending on the length and weight of the items, Craftsman can provide either light or heavy-duty cantilever storage solutions. Consisting of columns and cantilever arms, our racks can be configured for either single or double-sided use. We at Craftsman can customize and tailor our racking depending on the size and weight of the goods stored within the available space to fulfill your storage requirements. All our racking systems are compatible with an extensive range of accessories.

















Simple to install and adjust



Highly versatile



No front upright translates to optimum utilization of space and unobstructed approach

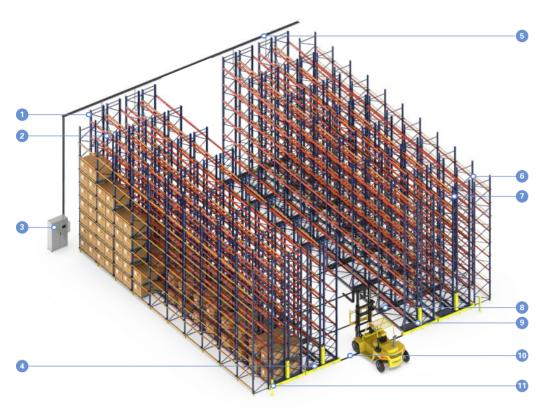
# **MOBILE PALLET RACKING**

Mobile Pallet Racking (MPR) Systems increase storage density by eliminating aisle space and is a high-density pallet storage solution with 100% accessibility to each pallet, unlike other high-density storage solutions. MPR systems are a viable solution where high space utilization and individual pallet selectivity are important.

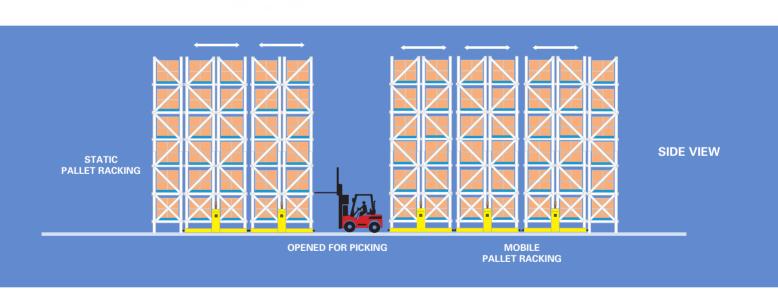


Craftsman Mobile Pallet Racking System is equipped with emergency stop and manual release buttons and a modern control system that controls, electric drive units for mobility, and various sensors for access and safety to ensure trouble-free operations, thus creating a safe operational environment in your warehouse. The system can be operated by the push buttons on the racks and/or with remotes. Mobile pallet racking systems are ideal for cold storage applications.





- 1. Upright frame
- 2. Cross beam
- 3. Control panel
- 4. Mobile base frame
- 5. Cable feed
- 6. Single face fixed unit
- 7. Double face movable unit
- 8. Drive motor
- 9. Operating panel
- 10. Rail installed
- 11. Safety light curtain sensor











Maximum storage density

100% access to pallets

Cuts operating costs through excellent surface area utilization

Ideal for cold storage

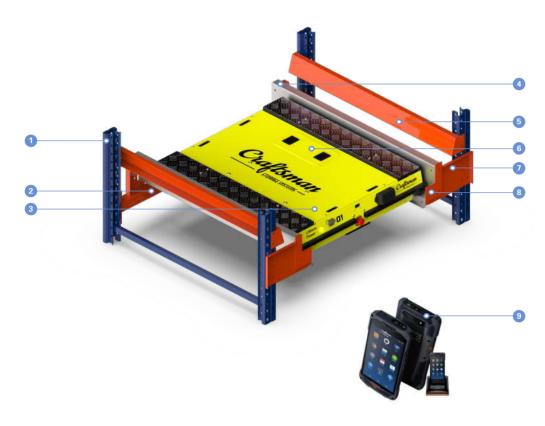
# RADIO SHUTTLE RACKING SYSTEM

Craftsman Radio shuttle is a semi-automatic storage solution for handling goods inside rack bays, similar to Drive-In systems. The radio shuttle eliminates the need for forklift entry within the racking system thereby achieving deeper racking systems, hence offering safe, fast, cost-effective & time-saving solution. Craftsman's Shuttle Racking system uses powered shuttles to automatically carry loads into the rack, making it a high-density compact storage solution, it can work in both FIFO (First In, First Out) and LIFO (Last In, First Out) modes where the material handling operator places the load on support rails at the loading area, which prompts the shuttle to store the pallet at the next available free space.



Our Radio shuttle racking system is compatible with all major types of forklifts, including counterbalance, narrow-aisle, and swing reach lifts. Furthermore, the safety of the racking structure is ensured as lift trucks never actually enter the racking system like Drive-In.





- 1. Upright
- 2. Beam
- 3. Radio shuttle
- 4. Rail
- 5. Pallet centralizer
- 6. Battery
- 7. External rail support
- 8. Rail end stopper
- 9. Remote control



or go

A forklift places a Pallet Shuttle on the level where goods are going to be stored.

### STEP 2

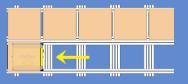


### STEP 3

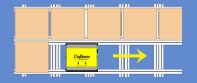
The shuttle raises one pallet slightly and then roll horizontally until reaching the first open location where it then sets the pallet down.

### STEP 4

The shuttle returns to the lane entrance to repeat the procedure until the lane is full. Once the last location is filled, the shuttle is extracted, ready to work on another level.



**TOP VIEW** 









Reduced handling time



Increased storage capacity



Safe Collision-free storage





**SHELVING SYSTEMS** 







# **SLOTTED ANGLE SHELVING**

Slotted Angle Shelves are the most basic and cost-effective technique for meeting all storage requirements. They are used for manual restocking as well as quick order pickup. Child parts, fasteners, documents, books, etc. can be stored directly and this is an ideal solution for locations with limited storage space, height and where the item to be stored is small.



Our slotted angle shelving systems are ideal for manual storage of light to medium weights, with loading capacities ranging from 50 to 250 kg. This is a simple and cost-effective solution for all storage requirements and is available in standard heights up to 3000mm, spans up to 1200 mm, and depths up to 600mm.





- 1. Langle
- 2. Shelf panel
- Base plate
- 4. Corner plate
- 5. Rear mesh cladding
- 6. Side mesh cladding
- 7. Sheet partition / PP dividers
- 8. Side sheet cladding















Quick order pickup

Best suited for storing small parts

Easy to assemble

# **BOLTLESS SHELVING**

From modest backrooms to multilevel archives, the boltless shelving system meets all your storage needs. Boltless Shelving is designed for easy assembly. One can adjust and reconfigure boltless shelving quickly and easily, making it a versatile option for any warehouse or storage space.



Craftsman Boltless shelving can also be configured for multi tier storage with possible options for scalability to meet the demand for future shelving expansion in your storage space. This system is appropriate for lightweight load storage. Our boltless shelving systems are ideal for manual storage of light to medium weights, with loading capacities ranging from 50 to 250 kg. While the heights could be configured based on storage space and requirements this is available in spans up to 1800 mm and depths up to 800mm.





- Upright
   Shelf panel
   Base plate
   Rear sheet cladding
- 5. Side sheet cladding
- 6. Rear x bracing
- 7. Turnbuckle
- 8. Sheet partition/ PP dividers
- 9. Rear mesh cladding
- 10. Side mesh cladding















Economical system

### LONG SPAN SHELVING

Long-span shelving systems are intended for manual selection and storage of a wide range of materials, bins, loose objects, cartons, and so on. This type of shelving is the most common and can be easily customized for a variety of weight and height configurations by providing direct access to the SKUs in both single faced shelving and back to back shelvings.



Designed for warehouses where goods are manually placed and removed from shelves, our system is modular—that is, shelves may be simply rearranged and expanded depending on the products to be stored. Shelf height can be adjusted to a pitch of 50mm. These Shelving solutions also make the best use of warehouse height by making higher levels mechanically accessible.

Craftsman's Long Span Shelving Racks are built similarly to our light pallet racking but are intended to hold non-palletized goods. This enables a transitional application between mild and heavy-duty operations.







- 1. Upright
- Loading level beam
- Bracing
  Base plate
- Decking panel
- End connector
- Safety pin













Potential in terms of filling level, throughput, and diversity of items and space utilization



Adjustable Load Level beams



Compact storage for warehouse

# **CARTON LIVE STORAGE**

Craftsman's Carton Live Storage systems are best used as supply racks for the assembly process as well as storage and picking racks, they can also be used in a variety of situations to allow compact, well-organized storage of items. It is perfect for warehouses that have a high volume of unique items that are picked in small quantities.

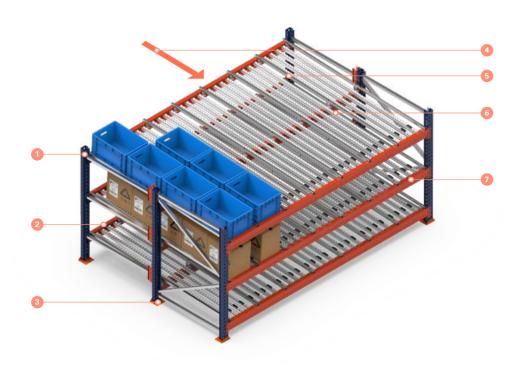


By default, it operates on the FIFO (First-In, First-Out) principle, with all goods gravitationally loaded at the back of a storage system. Later, the inclined roller brings the SKU to the front and allows the goods to be chosen according to the requirements. Our Carton Live Storage systems can be paired with our Pallet Storage systems to store cartons on the bottom level while pallets are stored on the top level. This decreases the time and distance required for in-feeding.

Our Carton Live Storage racks are a space-effective storage system that can be adjusted to match specific demands. They are flexible and quick to install.







- Upright frame
   Rear support beam
- Baseplate
   Material flow direction
- 5. Bin guide
- 6. Nylon roller
- 7. Front stopper













Reduced picking time



There is no need for power to move or control the speed of the Bins or cartons.



Easier rearrangement and expansion of shelves

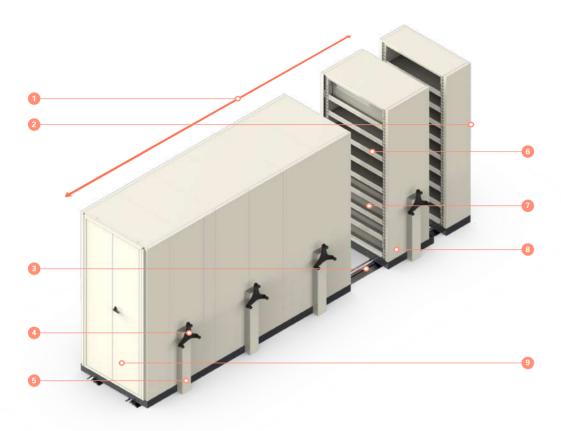
# **MOBILE SHELVING**

Craftsman's Mobile shelving systems are a compact, space-saving solution that can be easily customized to meet your specific needs. They are used for manual restocking as well as quick order pickup. Small parts, fasteners, documents, and books can be stored directly and are ideal in locations with limited storage space and height and when the item to be stored is small. A push Lock is provided in order to avoid the movement of shelves while accessing. Safety of SKU is ensured by providing doors with locks.



Unlike traditional shelving systems with fixed aisles, our mobile shelving systems allow you to close off aisles when not in use, allowing you to recover 50% of your floor space or double your storage capacity with a common aisle to access the racks. Our fully modular transportable shelving systems provide an unrivaled combination of convenience, versatility, and safety.





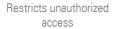
- 1. Movable unit
- 2. Fixed unit
- 3. Rail
- 4. Handle
- 5. Drive unit
- 6. Panels
- 7. Middle partitions
- 8. Side box cladding
- 9. Door with lock













Provides high degree of both operational and cost benefits



Single operating aisle is required



Reduced dust entry

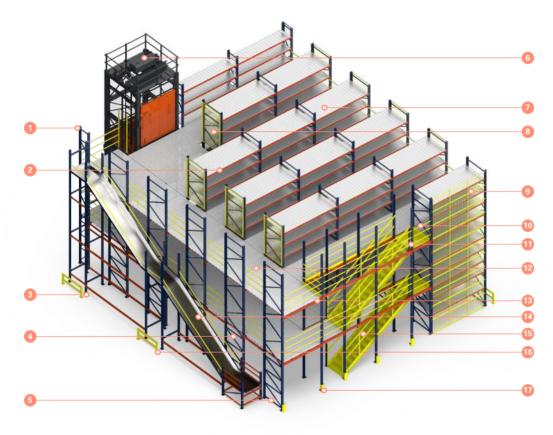
### **MULTI TIER SHELVING**

Optimized for storing and picking non-palletized items, a wide range of materials, bins, loose objects, cartons, and so on. Craftsman's Multi-Tier Shelving solution is very beneficial when floor space is limited. Our shelving solutions can be customized and tailored to meet your specific needs. Depending on the floor loading need and trolley/hand pallet truck movement, we offer a variety of perforated, embossed catwalk panels, welded gratings, and other solutions.



The height of our multi-tier shelving racks may be adjusted to match the height of your warehouse, maximizing the utilization of vertical space. Depending on your needs, each level of shelving racks can be accessed through staircases, walkway mezzanine floors, main aisles or cross aisles, and so on. Thus, the shelving solutions allow us to easily access all SKUs. For the movement of goods between the levels, a Vertical Reciprocating Conveyor (VRC) commonly known as Goods Lift can be integrated with the system. Provisions suited for: fire safety systems, lighting system and for power supply systems are offered.





- Upright
   Loading level beam
- 3. Baseplate
- 4. Diagonal bracing
- 5. Horizontal bracing
- 6. VRC
- 7. Decking panel
- 8. Side mesh cladding
- 9. Rear mesh cladding
- 10. Handrail
- 11. Clamp
- 12. Catwalk panel
- 13. Catwalk beam
- 14. Chute
- 15. Staircase
- 16. Row guard
- 17. Column guard















# **MULTI TIER SHELVING ACCESSORIES**







**JOIST BEAM** 



**FLANGE BEAM** 



CROSS AISLE CATWALK BOX BEAM



CATWALK BEAM WITH RUNNER ANGLE



**FLANGE CATWALK BOX BEAM** 









BASE PLATE C- TYPE



BASE PLATE UP80



BASE PLATE UP80













CHUTE



VRC - VERTICAL RECIPROCATING CONVEYOR



**KICK PLATE** 



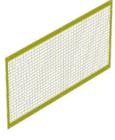
HANDRAIL











**MESH CLADDING** 



**COLUMN GUARD** 



**ROW GUARD** 

### FRAME BASED MEZZANINE

Craftsman's Frame-Based Mezzanine serves the primary objective of optimizing floor space with an elevated platform. Rack-supported mezzanine levels improve the effectiveness of storage space provision in warehouses, distribution centers, offices, and a variety of sectors. Multi purpose storing can be enabled by adding shelving racks with the mezzanine floor. Goods Lift (VRC) or Loading gate provisions can be incorporated for the movement of goods.

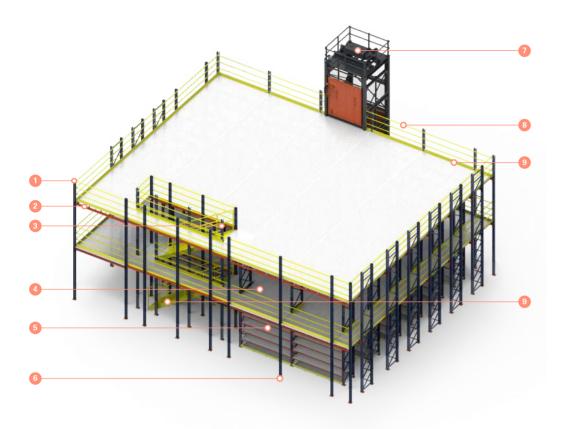


A mezzanine floor is completely independent of the building and is supported by uprights used for racking. Frame-based Mezzanine floors, also known as "Rack supported Mezzanine floors," serve the dual purpose of shelving and providing floor space on top. Our modular design allows for future expansion through the simple addition of beams and columns, with no on-site welding. Our system can be configured and tailored to fit the warehouse layout. This economical solution is best suited for storing lighter floor loads up to 500kg/sq m and medium spans up to 3 meters.

Loading and unloading zones, staircases, and openings can all be placed in handy and essential locations.







- Upright Beam
- 2.
- 3. Railing upright Catwalk panel
- Decking panels Baseplate 5.
- 6.
- 7. VRC
- Hand rail
- 9. Kick plate
- 10. Staircase















# **COLUMN BASED MEZZANINE**

Craftsman's column-based mezzanine system offers the extra storage demand by utilizing the building's vertical space. The mezzanine floor provides flexible operations with greater warehouse area optimization. Craftsman provides customized flooring options to complement various operations and load capacities.

Our column-based mezzanine floor solutions are an excellent method to expand a warehouse's storage capacity and workspace. It converts unused overhead space into useful floor space, resulting in a floor area that is 2 to 3 times larger than before.



Loading and unloading zones, staircases, and openings can all be placed in handy and essential locations. Craftsman provides storage at a sufficient height from the ground by utilizing a lightweight steel flooring structure. Our decking panels are installed on horizontal beams, from which vertical columns are grouted to support the grid. Our system can be modified and tailored to meet the warehouse layout by considering the positions of the pillars, doors, and so on. Our framework can accommodate storage loads ranging from UDL 300 kg/sq m to UDL1500 kg/sq m (UDL -Uniformly Distributed Load) and a maximum grid size about 5 meters.





- Column
- Main beam
- Floor beam
- Bracing
- Baseplate 5.
- 6. VRC
- Railing pillar
   Catwalk panel
   Hand rail
- 10. Staircase















Cost efficient method

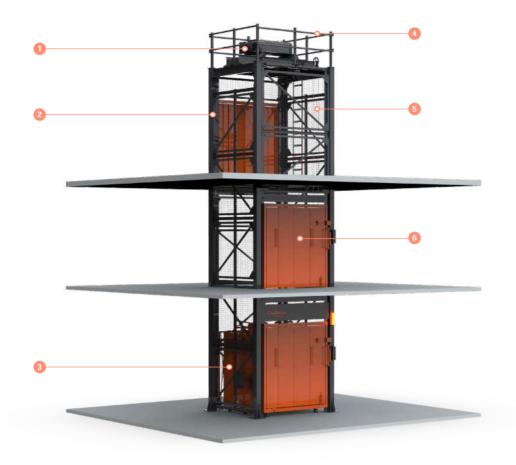
# **VRC - VERTICAL RECIPROCATING CONVEYOR**

Vertical Reciprocating Conveyors (VRCs), also known as "Goods Lift" are a vital element of any multi-tier or multi-level Shelving Storage system. Our Vertical Reciprocating Conveyors allow you to transfer items in warehouses, factories, industrial plants, institutions, or any other establishment where products or supplies need to move from one level to another.



Drawn upon Craftsman Automation's decades of experience and expertise in manufacturing high-quality wire rope hoists and cranes, our VRCs are designed with the utmost emphasis on safety. We at Craftsman do not compromise on quality; we use only the best components - top quality European spec geared motors equipped with AC brakes, rigid structural design, high safety wire rope, along with multiple fail-safe systems with contact-less sensors ensuring decades of trouble-free and safe operation.





- 1. Motor and drive assembly
- Structure
- 3. Carriage
- 4. Safety handrail5. Safety mesh
- 6. Outer gate















### **CONTACT US**

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### **KOLKATA**

Mr. Partha Ghosh General Manager 6384404094 parthaghosh@craftsmanautomation.com



### "EFFICIENT STORAGE SOLUTIONS"

### **FACTORY LOCATIONS**

### **COIMBATORE**

CRAFTSMAN AUTOMATION LIMITED 123/4, Sangothipalayam Road, Arasur Post, Coimbatore - 641 407, Tamilnadu, India.

Email: storage@craftsmanautomation.com

### **PUNE**

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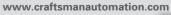
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