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NEXT GEN AUTOMATION FOR ROBUST OPERATIONS



**RACKS &
ROLLERS**
STORAGE TECHNOLOGIES AND AUTOMATION

ABOUT US

Racks and Rollers is one of the most influential leaders and a coveted name in the Storage, Warehousing and Automation industry. Following our passion for developing state of the art, economically efficient storage systems for the past three decades, our company has gathered a pool of extensive experience, expert staff and valuable knowledge by challenging ourselves with some of the most demanding projects across the world.

QHSE STANDARDS

QUALITY MANAGEMENT



ISO 9001:2015

HEALTH & SAFETY



OHSAS 18001:2007

ENVIRONMENTAL



ISO 14001:2015

DESIGN STANDARDS

OUR DESIGN STANDARDS ARE COMPLIANT WITH EN 15512



RMI
RACK MANUFACTURERS INSTITUTE

sema

Leading consultant in warehousing, shelving, racking, structural works, automation and avant-garde stainless steel works.

Offices setup across India & the Middle East.

Seamless Integration of Sales, Design, Production and Commissioning.

Hard-Set focus on Growth and Development.

Team includes experts specialized in Supply Chain Optimization & Business Performance Development.

Projects Backed by thorough research & comprehensive analysis.

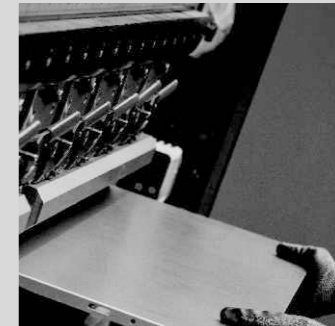
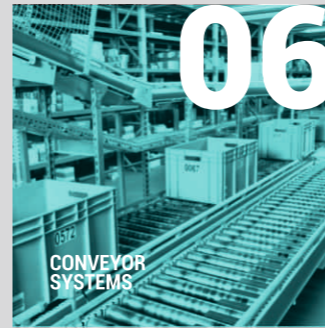
Projects Executed Pan India, Middle East, Turkey, Russia, South East Asia, South Africa and more.

Industries Served: Automotive, Aerospace, Food & Beverage, Cold Storage, Oil & Gas, Chemicals, Pharmaceutical, Fragrance & Incense, Electronics, Retail & E-Commerce, Textile & Apparel, FMCG, Manufacturing, Education.

AUTOMATION SOLUTIONS

Growth in business leads to larger and larger warehouses with vaster number of SKUs. As the consumer market grows so does the need for advancing warehouses with latest automation systems that can convert a warehouse facility into a distribution centre as well as fulfilment centre in case of e-commerce business to make your business future ready.

Integrating automation along with storage facility leads to reduction in labour expenses, higher efficiency, overall intralogistics optimisation and faster operations along with minimized human error. Investing in your business today while having a vision of tomorrow, is what is required to keep up with an ever-changing market.



CONVEYOR SYSTEMS

PROS

- Time saving 0912
- Economical way to move the material
- Negligible human effort
- Versatile use
- Customisable for different loads and conditions

CONS

- Not ideal for extremely heavy loads
- Regular maintenance of belt conveyors

Conveyor system is an efficient way to facilitate continuous and automatic flow of material from point A to point B. It is a type of MHE (Material handling equipment) used to transport, collect or distribute loads in a warehouse. Conveyor systems are designed for light, medium and heavy-duty loads. They reduce manual labour to a great extent and automate the process of transferring materials from one place to another. **A considerable amount of time can be saved by installing a conveyor system that suits your requirements.** In daily operations, this system comes very handy as it is robust & efficient in the proper handling & transportation of material in an organised way.

GRAVITY ROLLERS

Gravity rollers consist of rollers mounted on an inclined plane that let gravity do all the work. Material is either pushed on the bed of rollers or simply placed at the most elevated point of the conveyor. It, then, slides on the bed of rollers under the influence of gravity. Gravity rollers reduce an immense amount of manpower. They are also customisable for different load types and are available in zinc, chrome, rubber, silicon and plastic coating. They also come in stainless steel.

ROLLER TRACKS

Roller tracks are U shaped conveyor systems which consist of a bed of rollers either made from plastic or nylon. These tracks are used to transport totes, bins, boxes, cartons for picking packing & processing purposes. They not only reduce the manual labour involved but also reduce the cost for movement of goods in the warehouse.

BELT CONVEYOR

Belt conveyor is a PVC, rubber, cotton or nylon belt that is wrapped around powered drum rollers. As the drum rolls, the belt moves and so does the material loaded on the belt. Belt conveyor usually moves in a straight line and can easily help to change the direction or height of the movement of material. It is a versatile and inexpensive way to convey inconsistently shaped products from one place to another.

MAIN FEATURES

- **AUTOMATED MOVEMENT OF MATERIAL**
The conveyor system comes in form of rollers, belts, etc. that allow for automated movement of all types & weights of loads.
- **EASY SUPERVISION**
While the systems do all the transporting work, the staff can supervise the operations easily.
- **SAFE AND SECURE**
Efficient and safe movement of goods ensured by high standard quality of materials used.
- **EASY TO CHANGE ELEVATION**
Gravity or electricity takes control of changing the elevation of goods without the need of human effort.

BEST SUITED FOR

✓ Frequent and large volumes of material transportation that would otherwise be costly and labour intensive.

NOT RECOMMENDED FOR

✗ Heavy duty loads.

MERGE & SORT SYSTEMS

PROS

- Not labor intensive
- Highly accurate
- Versatile and wide use
- Better and faster distribution

CONS

- Frequent maintenance required
- Not suitable for extremely heavy loads

Conveyor & Sortation Systems are a great way to sort, divert, route, merge, collect, consolidate and distribute products precisely and continuously with maximum efficiency. They require almost minimal human effort and are thus extremely cost efficient. **The automated systems ensure high accuracy as well as the least damage to goods carried by them.** It is also a tremendously time saving method of sorting & collecting products flowing from different in-feed conveyors and channelling them into sortation conveyors for further accurate distribution. This combination of collection and sortation conveyor systems is process driven and can be easily customized to suit the different product specs and distribution needs.

Collection conveyors put products coming from different streams into a single stream in a neatly organised and orderly way. It is a fast, precise & efficient technique of ensuring the proper flow of products from production units to further processing units, palletizing operations, picking stations, dispatching lanes & shipping stations. With ample gap between products and good speed, the collection conveyor system is highly productive with negligible room for errors. The huge amount of manpower that the sortation system saves can instead be put to better use for supervision of assembly line.

Our collection and sortation systems being highly productive and versatile, help in quick & precise distribution of products. They enable quick and error free separation of products coming from collection conveyors in order to take them further to their respective distribution lanes. **With speed and space between the products, this system is a highly preferred automated method to double your efficiency.**

MAIN FEATURES

- **EXCELLENT DISTRIBUTION**
Automated collection and sortation of products results in better and accurate distribution.
- **HIGHER PRODUCTIVITY**
Automation and minimal human effort leads to faster and efficient operations thus increasing productivity.
- **ACCOMODABLE**
Wide range of product sizes and weights can be accommodated.
- **ORGANISED PRODUCT FLOW**
Collection and sortation systems provide an efficient way to organise the flow of products.

BEST SUITED FOR

Warehouses with high quantity of products that need to be sorted.

NOT RECOMMENDED FOR

Warehouses with less quantity of heavy-duty loads.

ASRS WITH STACKER CRANE

PROS

- Greater productivity
- Least errors
- Space efficient
- Accurate and safe

CONS

- More investment
- Regular maintenance required

Automated Storage Systems are far more popular & efficient than traditional systems. **They are fast, accurate & have literally no scope for human errors.** ASRS with Stacker Crane is a highly efficient system for loading or unloading of goods, like pallets & containers.

Stacker Crane is a machine that runs in the aisles between the racks/shelves and performs the loading/unloading operations just like a forklift. The crane runs smoothly on rails that are mounted on the floor that results in a quiet and steady movement of goods. It enters an aisle, positions itself in front of the respective location and carefully extracts/places the load from/at the desired spot. The whole system is controlled by a Warehouse Management System. Since the crane can reach as high as 40 metres easily with the press of a button, you can store materials at unused heights and save up extensively on expensive floor area.

This storage system is adaptable to different load requirements and can be installed anywhere. Since these systems are operated by WMS (Warehouse management software) which is programmed for the precise location of the loads, huge amount of time is saved on manually locating where the desired loads are placed.

It can extract material from heights with complete accuracy and safety. **The speed and accuracy of the system is what makes it a great choice for warehouses with high intensity operations.** A Stacker Crane can handle up to 3000 kgs of load with absolute grace. Using this system can decrease manual errors in all your operations and thus result in increased overall productivity.

MAIN FEATURES

- **AUTOMATED SYSTEM**
Automated storage/retrieval of goods lead to greater productivity
- **HIGH DENSITY STORAGE**
Stacker cranes can reach good heights thus making use of earlier unused space.
- **BETTER SPEED**
The whole system is smooth and carries heavy loads at a great speed and efficiency.
- **ADAPTABLE**
Can be easily adapted to different load requirements.

BEST SUITED FOR

Warehouses with high intensity inventory operations.

NOT RECOMMENDED FOR

Warehouses with low intensity of store/pick operations.

ASRS WITH SHUTTLE FRS



PROS

- Great support for loads with longer sizes.
- Quick to adjust
- Accessible stock
- Customizable as per load requirements
- Stable and safe
- Easy to install

CONS

- Costlier than normal racking
- Not suitable for pallets



Shuttle based FRS (Fast Rotation Systems) is a fully automated solution for storage of goods. Like radio shuttle racking system, this system also uses a shuttle (a platform that carries load) or a fleet of shuttles that run on tracks in between the racking system. These shuttles are perfectly capable of storing goods deep into the racks which is why they are highly suited for warehouses with ultra-compact storage. Shuttle starts from one end of the rack, picks up/drops the load & returns to the same end.

A shuttle can either run on a single level or shift between multiple levels with the help of a lift located at the end of a row. Shuttle system is a highly efficient technique of operating in dense storage setups. The shuttles operate on batteries and are smart enough to recharge themselves when needed. There are even buffer shuttles which automatically take place of those that are facing downtime, and hence make the entire system redundant. By eliminating the need of aisles for forklifts and humans, a huge amount of space is saved and optimised for better use, thus making it a cost-effective solution as well.

FRS with Shuttles is a risk free and fast storage solution for warehouses where high density with automation is required. FRS is also a preferred choice where efficiency and time are the most important factors in warehouse operation and organisations do not mind making huge investments for increased efficiency and higher throughput. **FRS Shuttles are quite flexible and adaptable. They are capable of carrying loads of varying sizes and weights.** They are scalable to multiple levels as well. No matter what type of space you have, shuttles can fit anywhere and carry out your loading/unloading operations with maximum speed and minimum risk.

MAIN FEATURES

- **AUTOMATED SYSTEM**
Automated storage/retrieval of goods lead to greater productivity
- **HIGH DENSITY STORAGE**
Shuttle systems can be configured multi deep to achieve highest storage capacities.
- **BETTER SPEED**
Increases the throughput with the use of high speed shuttles.
- **ADAPTABLE**
Can be easily adapted to different load requirements.

BEST SUITED FOR

Warehouses with less number of SKU's and higher throughput.



NOT RECOMMENDED FOR

Warehouses which require selective access of inventory.



VERTICAL GOODS LIFT



PROS

- Productivity
- Safe and easy
- Ergonomic
- Flexible
- Fastest ROI

CONS

- Batch processing
- Multi tasking incapable



A multi-tier storage structure creates an inevitable demand for a smooth, safe and consistent flow of goods between different levels. For this purpose, a vertical goods lift is what comes to the rescue. It is a strong, sturdy and safe material handling equipment that aids in the seamless movement of loads from one level to another. Equipped with an astonishing **weight bearing capacity that ranges from 500 kgs to 5000 kgs**, the vertical goods lift is perfectly adept at fluently transporting men & material between all levels of a multi-tier structure.

There are many types of goods lift:

- Hydraulic Goods
- Mechanical Pulley
- Vertical Reciprocating Conveyor

Vertical goods lift or hydraulic freight elevator as it is known in technical terms is an infrastructural facility primarily used for the ease of material handling. Our vertical goods lift provide complete ease of movement of goods in and around the warehouse or storage facility. The system can automatically pick or put a piece of a good or product just at a push of a button and move around areas with ease. The well-designed pickup window allows for workers access goods easily too.

This system reduces the human walk time for moving goods in the warehouse. **Our clients in general experience a 25% productivity boost by the installation of this system.** Our vertical goods lift is available in various heights and platform sizes and can be constructed and deployed depending upon the exact requirement of the client. This system also ensures maximum product density is maintained in the storage area without any wastage resulting in higher productivity.

MAIN FEATURES

- **FLEXIBLE**
Can be customised for all types of operations
- **BATCH PROCESSING**
Can be used to move inventory across the levels
- **SPEED**
They increase the pace of movement of inventory.
- **PRODUCTIVITY**
Increases Productivity

BEST SUITED FOR

Low and medium throughput multi floor operations



NOT RECOMMENDED FOR

High throughput and continuous operations warehouse



RADIO SHUTTLE



PROS

- Greater productivity
- High Speed
- Economical
- Accurate and safe
- Minimum human intervention.
- Can be upgraded to full automation.

CONS

- Requires skillful supervision.
- Regular maintenance required



A dynamic, swift and semi-automated machine handling equipment, Radio Shuttle is utilized to store and retrieve items in areas with high intensity palletized storage. These shuttles are powerful robotic devices that transport all types of loads (small, medium and heavy) all the way to the deep ends of racks. **Powered by batteries and operated by a remote control**, these shuttles are smart, self-chargeable, quick and secure enough to fill/empty an entire channel of goods in a single command.

Radio Shuttles are specially designed to bear and move loads as heavy as 1500 kgs with a quick yet controlled motion to ensure that the load reaches its desired position without any disruptions. Once they store/pick the load in/from their appropriate location, they automatically come back to the end of the rack for further operations. These small robotic machines are unmistakably precise & outstandingly convenient to maintain a compact storage system with least amount of risk, structural damage and human effort.

Armed with excellent safety features like safety tops, rail end stops and pallet centring, all Radio Shuttles are controlled by an integrated networked device that requires the authentication of an authorized person to operate the shuttles. This feature further curtails the risk of illegal operations, misconduct and operational blunders in the warehouse. **The use of Radio Shuttle has been known to have a directly proportional relation with lesser operational costs, higher productivity, faster loading/unloading operations and smooth storage cycles.**

MAIN FEATURES

- **SEMI-AUTOMATED SYSTEM**
Economical System with minimum human intervention.
- **HIGH DENSITY STORAGE**
Multi-Deep storage to achieve highest material density.
- **BETTER SPEED**
The whole system is smooth and carries heavy loads at a great speed and efficiency.
- **ADAPTABLE**
Can be configured to operate as both LIFO / FIFO

BEST SUITED FOR

Warehouses with less number of SKU's and high Volume per SKU.



NOT RECOMMENDED FOR

Warehouses which require selective access of material.



PUSH BACK PALLET RACKING

PROS

- Saves time
- Minimizes human error
- Optimisation of picking processes
- Reduces logistics cost

CONS

- Requires some investment

Put to Light and Pick by Light are semi-automated systems specially designed to increase the speed and efficiency of your warehouse picking systems. **For storage, Put to Light system is used and for retrieval, pick by light system is used.** They consist of a light or lamp mounted at the face of every storage location. No matter what kind of racks/shelves you have installed in your warehouse, the PTL system seamlessly fits with any storage arrangement.

There is a control unit and a display unit in this system. The control unit is managed by a software with integrated network. The software manages all the SKUs and lights up the respective rack compartments to be picked. The LED display shows how many items need to be picked up. The system features two buttons through which the user can change the number of items to be picked according to their availability. One of the advantages of this PTL system is the acknowledgement button that, when pressed, confirms that the items have been picked up successfully. The Pick by Light system is similar to PTL system but instead of signalling about the storing of goods, it signals about the picking of goods.

Both these systems are completely paperless and thus a must-have in today's time. They optimise your picking/storing operations and hardly leave any room for errors that would otherwise be inevitable. PTL system also saves time and energy which are crucial resources. These semi-automated & high-quality systems come with multiple configuration settings customized to best suit your business operations. **All in all, these systems are highly productive, and they speed up the entire storage/retrieval process considerably.**

MAIN FEATURES

- **PAPERLESS SYSTEM**
The use of electrical signals for 'picking' and 'putting' instructions eliminate the need of paperwork.
- **SEMI-AUTOMATED**
The semi-automated system includes signal lamps, display screens and acknowledgement button.
- **AMAZINGLY ADAPTABLE**
Fits all types of storage systems with ease.
- **FAST AND EFFICIENT**
The automated system speeds up the process and allows lesser room for human errors.

BEST SUITED FOR

Warehouses with high intensity of store/pick operations.

NOT RECOMMENDED FOR

Warehouses with low intensity of store/pick operations.

PRE-SALES SERVICE

At **Racks and Rollers**, we begin with an in depth understanding of our client's requirements right from the root level, overseen by a proficient team that holds an expertise in designing excellent storage solutions.

Diligent scrutiny of all the crucial factors **for example**,

- layout of the area available,
- number of Stock Keeping Units,
- required storage capacity,
- material handling equipment,
- throughput of the warehouse,
- required optimisation of operation time in order to minimise storage and retrieval time,
- contraction of labour

A viable and fitting solution is recommended to the client based on all the factors that play a decisive role

These system solutions emerge from a vision to help each business grow as a whole on a macro level and a process that includes rigorous study of the client's business, the product in question, and all the aforementioned warehouse factors.

Every solution recommended by us comes from the collaborative effort of members of a highly dedicated team who are united by a passion for making innovative economical storage solutions available to everyone in the world.

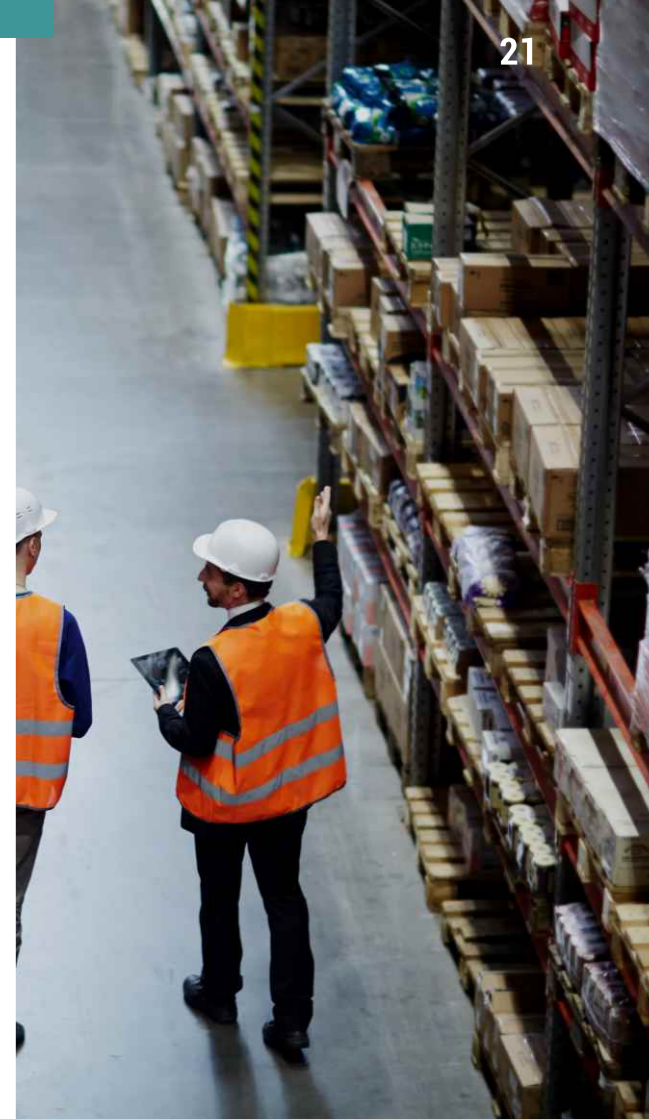
AFTER-SALES SERVICE

Our after sales services stem from the core mission that is at the heart of our organisation- **the mission of delivering value in the form of service**. These after sales services are a precursor to forging long lasting relationships with our clients based on a strong foundation of trust and goodwill. .

Another key factor for the timely completion of a project is its smooth execution. Throughout the project, right from the beginning of work to its completion, we grab every opportunity to vest our clients with absolute transparency of what is happening, be it the delivery of materials, merchandising, after sales safety audits, or system installation, by exceptionally qualified personnel.

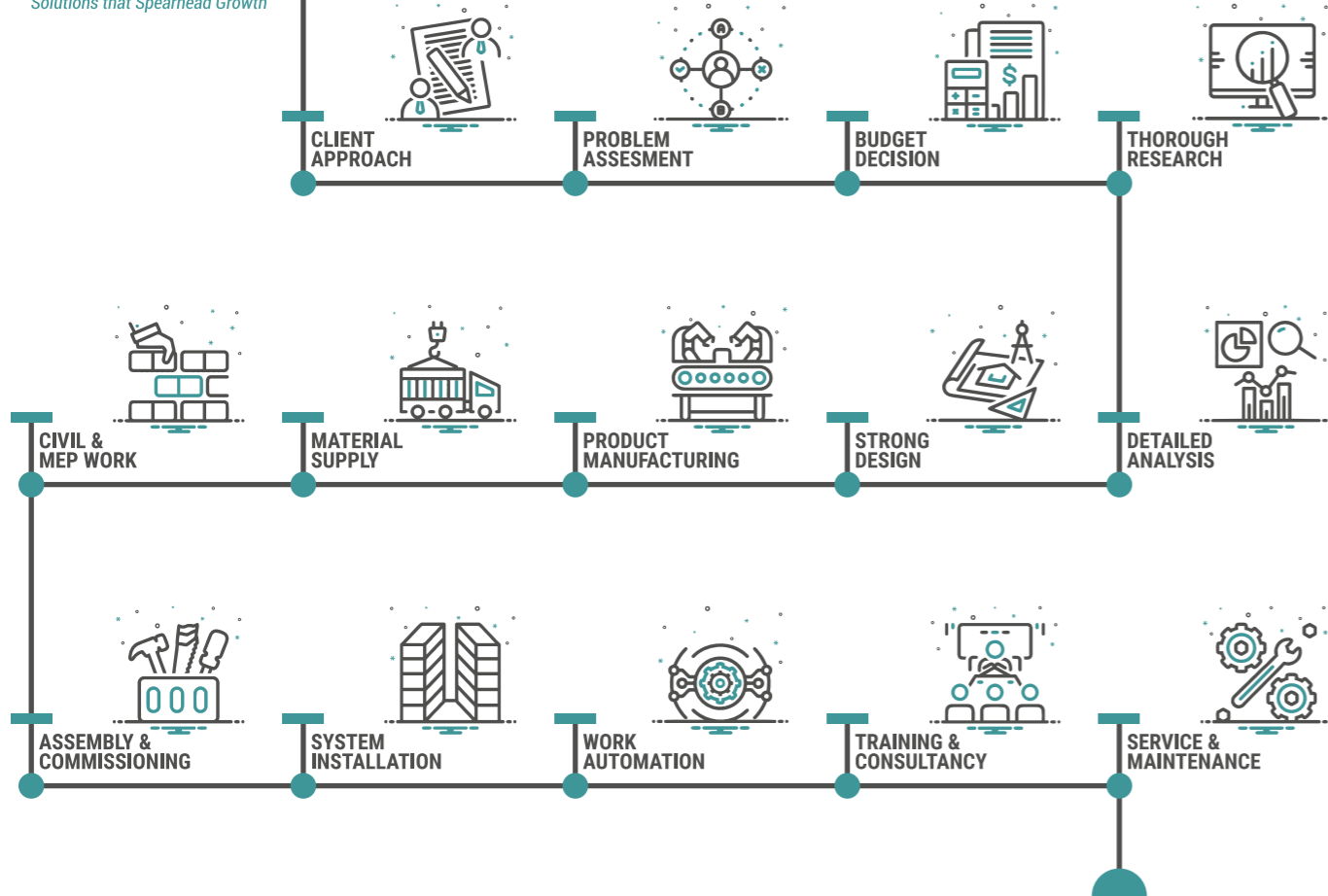
In conjunction with the above, **Racks and Rollers** also offers exclusive training to the labours who are going to work day in and day out with our storage systems, explaining them the right methods of storing and retrieving goods in the warehouse.

Taking the safety of our clients as an organisational responsibility, we provide constant support, regular awareness of safety rules, and reminders of safety precautions to be taken care of while utilising the system in order to ensure safe and sound operation, least damage of life, and property and zero accidents on site.







SEAMLESS INTEGRATION

Solutions that Spearhead Growth



OTHER RANGE OF SOLUTIONS

RACKING SOLUTIONS	SHELVING SOLUTIONS	STRUCTURAL SOLUTIONS	CONSULTING SOLUTIONS
 <ul style="list-style-type: none"> ■ Selective Pallet Racking ■ Drive-In Pallet Racking ■ Radio Shuttle Racking System ■ Cantilever Racking ■ Pallet Flow Racking ■ Mobile Pallet Racking ■ Push Back Pallet Racking 	 <ul style="list-style-type: none"> ■ Slotted Angle Shelving ■ Long Span Shelving ■ Bolts Free Shelving ■ Multi Tier Shelving ■ Heavy Duty Shelving ■ Garment on Hangers ■ Live Shelving ■ Supermarket Shelving 	 <ul style="list-style-type: none"> ■ Mezzanine ■ Stackable Pallets ■ Rack Supported Warehouses ■ Pre-Engineered Buildings ■ Temperature Controlled Warehouses 	 <ul style="list-style-type: none"> ■ Turn Key Solutions ■ Intra-Logistics Design ■ Warehouse Management Systems ■ Simulation ■ Rack Inspections ■ Project Commissioning