

Material Handling Solutions: Back to Basics

Warehouses don't have to be chaotic places or labor-intensive. When proper systems are in place, this can be achieved. With properly organized material handling solutions and specialized equipment, warehouses can increase their productivity and efficiency while also keeping the employees safe from potential accidents and streamlining the movement of goods. In this post, we will see what material handling is, what it includes, and why it is important.

Material handling is the movement of goods and materials from one location to another, and it includes storing, protecting, and controlling the materials from the manufacturing stage to the distribution. It is used across industries and warehouses. [Material handling solutions](#) utilize manual, semi-automatic, and automated equipment to assist in the movement and storage of materials within the warehouse.

Types of Material Handling Equipment

Material handling equipment can be classified into four main categories, i.e., bulk material, storage and handling, engineered systems, and industrial trucks.

Storage and handling equipment: This type of equipment secures the goods while they are waiting for the next stage in the supply chain or being used. This equipment keeps the materials for short or long periods of time, depending on the needs. This equipment includes shelves, bins, drawers, pallet racks, mezzanines, and stacking frames.

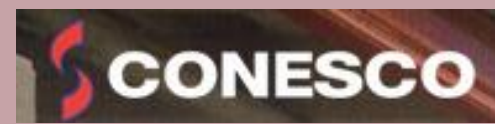
Bulk handling material equipment: This equipment stores, transports, and controls loose-form materials like liquids, food, minerals and metal items like bolts and nails in large quantities. This type of equipment includes stackers, conveyor belts, reclaimers, bucket elevators, and hoppers.

Industrial trucks: These are vehicles that transport materials and goods within the premises. They are used to load or unload heavy objects. Industrial trucks are of many types; some have forks or flat surfaces to lift products, while others need additional equipment for lifting. Industrial trucks can be small, hand-operated machines or large and drivable equipment. It includes equipment like hand trucks, forklifts, side loaders, pallet trucks, and order pickers.

Engineered systems: These systems use technology that is incorporated into the supply chain systems and supported by computers and robots for storing and transporting goods. Automated systems are generally made out of several units and are controlled by management software applications. These engineered systems include autonomous mobile robots (AMR), automated guided vehicles (AGVs) and automated storage and retrieval systems (AS/RS).

Benefits of Integrating Material Handling Solutions

The right material handling solution can allow businesses to have the necessary stock in smaller spaces, reduce the time spent on internal operations, reduce operational costs, control inventory in real-time, and optimize the overall flow of goods in your facility.



Prevents Workplace Accidents: Material handling systems prevent employees from lifting heavy items and reaching high storage areas in the workplace.

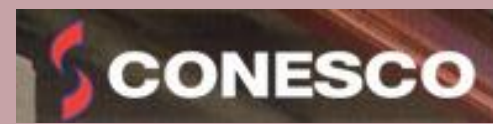
Improve employee satisfaction: job discomfort can cause low morale, loss of motivation, and frustration among employees. But using the right materials handling systems releases the employees from labor-intensive and monotonous tasks that can help them reduce stress levels and achieve overall satisfaction with work.

Increase productivity and efficiency: If you want your employees to focus on more pressing tasks like quality control assurance, a material handling solution can help them transport, pick, and locate inventory, thus allowing them to be more competent and productive with other tasks.

Saves you money: Investing in the right materials handling solutions and educating your employees on the proper maintenance of the equipment can result in huge savings.

How to Implement Materials Handling System in Your Supply Chain?

Materials handling solutions are key to ensuring that your materials and goods are safely transported from one stage of the supply chain to the next. So this is how you implement handling solutions in your supply chain:



Manufacturing: Material handling systems can be used to move and manage inbound shipments within storage areas or warehouses.

Transportation: The solutions can be used to place goods on pallets for easier transportation to storage areas.

Storage: Material handling systems can be used to safely offload goods to designated storage areas and shelves while they wait for distribution.

Distribution: Material handling solutions can be used to load goods onto trucks, which will be delivered to wholesalers, retailers, and customers.

Material Handling Principles to Streamline Your Operations

Planning: Develop a clear plan for your material handling system. Make sure it identifies which materials will be transported, what equipment will be used, and where the materials will be stored.

Standardization: This will help you achieve predictable results while considering flexibility.

Work: You can reduce unnecessary work by using equipment that will minimize repetitive tasks.

Unit load: Utilize unit loads to reduce effort and walking time in the warehouse.

Ergonomics: Ensure that you consider your employees' restrictions and capabilities by investing in ergonomic equipment.

Space utilization: Organize your warehouse by clearing the aisles of clutter, utilizing vertical height, and grouping products in the same category to maximize the available space.

System: Make sure you integrate tracking tools to identify materials quickly at every stage.

Automation: Automate processes like picking and retrieval to lower costs and boost productivity.

Final Thoughts

Material handling is more than just the movement of goods. It is a crucial element in warehouse operations as it provides a comprehensive process for handling and transporting materials and products.

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