

Outside of the material handling industry, the perception many people have may begin and end with forklifts in a warehouse. While they play an important role, material handling covers a far broader range than just simply forklifts. A wide breadth of equipment is available that can help warehouses, manufacturing facilities, and other industrial settings achieve the highest levels of safety and operational efficiency. Whether a company requires storage, movement, protection, distribution, or the most efficient manufacture of goods, the proper material handling equipment can provide an expedient solution that ensures the highest level of worker protection and ergonomics.

## The Most Well Known Uses

The most common perception of material handling involves moving materials and goods from the shipping dock to the manufacturing floor. The best known pieces of equipment in this regard are pallet jacks and forklifts. Pallet jacks are used to lift and move pallets, and are available in manual and powered models. While manual models are operated by hand (and foot), powered pallet jacks are motorized, allowing personnel to lift and move heavier and stacked pallets in the most ergonomic way possible.

The forklift, first popularized during World War I, still ranks among the most widely used industrial vehicles today. They are ubiquitous in construction sites, warehouses, and storerooms. Forklifts come in a huge variety of design types and numerous specialty trucks. A wide array of attachments is also available to expand the capabilities of this machine. However, in spite of its wide exposure, the forklift is not the only device that is essential for material handling. There are a vast number of additional machines that not only lift effectively, but can enhance the efficiency of entire workflow systems.



A pallet jack, also known as a pallet truck, allows users to lift and move materials ergonomically.

## A Wide Range of Options

A vast array of additional options for material handling purposes is available. Manually and electrically powered skid lifts provide excellent lifting of large amounts, some with load capacities up to 2200 lbs. **Skid lifts** cannot be used with pallets with bottom boards, but only with open-bottomed skids. These products allow for the ergonomic positioning of goods for loading and unloading. They can be raised manually with a foot pump, or with an electric control such as a lever. Designs are available with outriggers and wheels, which enable the transport of loads with the forks of the skid lifts raised.



One of the most useful and popular models is the **hydraulic lift table**. These tables employ a scissors mechanism to raise or lower heavy goods and workpieces. They serve primarily as work positioners. They can lift thousands of pounds in weight, bringing workpieces to an ergonomic height for multiple jobs, including conveyor lines, unloading, and assembly. Lift tables are also often used to position workpieces for CNC machining. Their ability to re-position work at a suitable height helps avoid injuries to workers, as well as increases the speed and efficiency of operations as a whole.



Bishamon's lift tables was designed and engineered with ergonomics and workplace safety in mind.

## Pallet positioners

**P**allet positioners are also highly valuable for many work processes.

Some of the most advanced of these devices use an air spring to lift heavy loads. They look similar to hydraulic lift tables, but many models feature totally different operational capabilities. Hydraulic lift tables respond to the operator's command to go up and down, but many pallet positioners automatically respond to their load weight. Automatic adjustments are made to keep the most ergonomic working height without operator input. This saves time in loading and unloading, and also helps workers in a number of ways. For example, air spring operated pallet positioners allow employees to work off a pallet at the most ergonomic height, without having to bend, strain, or walk around the pallet to complete the job. Rotating rings, featured on a number of select models, further enhance the ergonomics of these devices. These provide near-side loading, and eliminate the need for stretching or reaching during the work process. When the loading of the pallet is complete, a forklift can easily take it away and the positioner will rise again, ready for the next job.



Bishamon's UniLift is a pallet transporter and positioner, that allows users to lift and move standard pallets without needing to straddle them.

## Used Widely in a Variety of Industrial Settings

**M**aterial handling products are used wherever work positioning is needed. Their most common settings include plants, warehouses, factories, and assembly lines. One of the largest users of material handling products is the manufacturing industry. Warehouses are also major users of material handling units for their ergonomic handling of goods and the overall increases in efficiency that result. However, material handling products can be useful in a number of additional settings, with the ability to add safety and efficiency to many diverse applications.

Any situation where something is heavy and causes discomfort when lifted can benefit from advanced material handling equipment. It is all too common for employees in all different areas to use non-ergonomic lifting and carrying to handle and move materials. Not only does this provide an increased risk for personal injury, it also decreases the efficiency of the operation. Lifting often requires the use of multiple personnel. By engaging equipment such as the above, employees can be safer and labor costs can be saved. These benefits have been enjoyed by industries far beyond traditional manufacturing and warehousing. For example, the pharmaceutical and food industries rely heavily on material handling.

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Employees are at risk for personal injury when they are tasked with lifting and carrying materials without the use of proper material handling equipment.

## Solutions for Unique Challenges

Some industries rely on this equipment because they work with toxic materials that must avoid human contact. Material handling equipment allows for these materials to be raised and lowered remotely, without manual contact or lifting, making these devices an excellent solution for lifting hazardous materials. Certain other processes engage materials that are coming from hot ovens. Using material handling equipment makes it much safer to move goods at high levels of heat. Whenever industries use materials that can't be handled by workers alone, whether hazardous, hot, or just too heavy, material handling equipment offers the perfect solution. These devices are also used to handle frozen goods that must remain frozen. These examples demonstrate how this equipment not only gives ergonomic assistance to workers, but provides methods of manufacturing goods that simply cannot be handled with human hands alone.

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Material handling equipment has also been used for some fairly unique industrial challenges. A company used lift tables to bring a workpiece to a specific height—not for loading, unloading, or assembly, but for the purpose of welding it. A large industrial oven was lifted using similar equipment for employees to work on the underside of it, and then lowered for further work on top of the oven. Another company uses material handling equipment for work on oversized plumbing applications. A lift table was used to lift piping units that were up to 36" in diameter, which were then assembled by being guided into a pipe threader. All of these applications demonstrate the strength and diversity of material handling equipment; it is being used to provide solutions in multiple areas across the spectrum.

## Safer Work Conditions & Higher Efficiency

While forklifts and pallet jacks play an important role in warehousing, manufacturing, and other areas, the role of material handling equipment stretches far beyond. Positioning equipment can help ensure that employees are working in the most ergonomic way possible, contributing to their overall safety and well-being. These devices also go a long way toward enhancing productivity and efficiency. While best known in warehousing and manufacturing, they excel in difficult applications that involve oversized, hot, frozen, or hazardous materials. When determining the best method of lifting and working with materials of all types, it is advantageous to factor in all the handling options available. Skid lifts, lift tables, and pallet positioners can do much to enhance a system's workflow, ultimately saving time and costs.