ACECO American CRANE & EQUIPMENT CORPORATION

The Ultimate Cheat Sheet for Overhead Equipment

Introduction

There are many ways to move material in an industrial or manufacturing facility.

From hand trucks to forklifts and other ride-on movers, the possibilities are almost endless. When choosing a material moving solution, there are various overhead equipment systems available with benefits that include improving efficiency, productivity and safety.

Material movers can be divided into two categories, on-floor and overhead. On-floor movers include industrial trucks and conveyors, while overhead movers include cranes, hoists and monorails.

On Floor Movers

Industrial Trucks

Industrial trucks include hand trucks, walk-behind forklifts (commonly known as “walkies” or “walkers”), forklifts and other ride-on movers.

Industrial trucks are relatively inexpensive and because they are not fixed, they can move materials along any number of variable paths. However, there are several drawbacks as well. Walkies and forklifts require a great deal of space for maneuvering and storage. Also, the load capabilities of hand trucks are extremely limited.

Conveyors

Powered conveyor belts and gravity conveyors, such as skates, rollers and slides, are ideal for scenarios where a large volume of uniform material must be moved over a single fixed path. The primary drawback of conveyors is that they occupy a large amount of floor space. They require so much space that they can even interrupt the flow of employees, materials and other processes throughout your facility.

If you are concerned about either the load of the materials that you must move or the space constraints of your facility, you may want to consider overhead lifting systems.

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Overhead Lifting Systems

There are three primary types of overhead lifting systems: cranes, hoists and monorails. Each method has individual operational capabilities and offers unique benefits to your business.

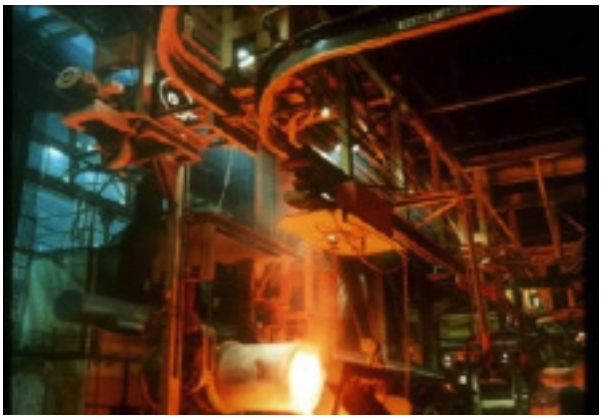
Cranes

Overhead cranes use hooks, hoists, magnets or other devices to lift, move and place loads within their operational range.

Bridge cranes and gantry cranes can move on three axes, two perpendicular axes and one vertical, for a versatile operational range. This range can span a narrow corridor and be used for one particular process, or it can span your entire facility and be used for any material moving requirements for any process. Traditional jib cranes can operate with 360-degree rotation around a central locus.

Hoists

Hoists are simple yet versatile pieces of machinery similar to cranes. They are designed to lift and move freely suspended, or unguided, loads. In addition to manufacturing facilities, overhead hoists are commonly found in construction and warehousing environments. Hoists use wire, rope or chain to lift materials and can be operated manually, electrically or with air power.



Monorails

Monorails are a unique overhead lifting solution. Monorail tracks, either a single circuit or a network of routes, are installed directly into the roof structure of a facility. One or more carriers traverse the tracks.

Unlike gantry cranes, bridge cranes and hoists, where the lifting mechanism has a wide range of movement; the lifting mechanism of a monorail system, is restricted to where track has been placed. In this way, they are analogous to on-floor conveyors.

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Monorails *(Continued)*

Like conveyors, monorails are ideal for use in scenarios where materials must be moved over a fixed path repeatedly. Because tracks are fixed, human error is largely eliminated from carrier movement control, which makes monorail systems excellent for use in dangerous and hard-to-reach areas.

Though fixed, monorails can be quite versatile. If they are used as part of a crane system, tracks can be repositioned periodically, as required.

Benefits

Overhead lifting systems carry a number of benefits compared to on-floor material movers.

Primary Benefits

As discussed previously, on-floor material movers require a great deal of floor space in a facility. Walkies, forklifts, and other ride-on movers are large, bulky machines that can be unwieldy to operate and require a lot of open space to turn and maneuver. Even when they are not being used, these machines take up space in storage. Stationary conveyors take a lot of space as well, often stretching long distances and blocking the movement of employees, materials and other processes.

Overhead lifting systems ease those space concerns. Though cranes and hoists often require floor-based support structures, their footprint is much smaller than the wide pathways and intersections required by ride-on movers. Additionally, they can usually be placed along the edges of a facility, further minimizing their effect on the space. Monorails, for which tracks are installed directly into the roof structure of the facility, do not have any floor space footprint at all.

Overhead lifting systems also tend to be stronger, with higher load capabilities than on-floor movers. Additionally, with a number of different lifting mechanisms available, they can lift a wider variety of materials and containers.

Additional Benefits

Aside from load capacity and reduced floor space footprint, overhead moving systems offer your business numerous additional benefits.

The National Institute for Occupational Safety and Health estimates that back injuries alone cost industrial manufacturers up to 100 million work days and $14 billion in workers compensation per year. These numbers do not include other forms of injury, such as those caused by dangerous processes and forklift accidents.

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Additional Benefits *(Continued)*

By minimizing the physical labor of employees, keeping them physically removed from potential sources of danger and reducing or eliminating the need for forklifts; overhead lifting systems can improve the health and safety of your workforce while saving the company money.

By increasing direct-path transportation over obstacles such as machinery, as opposed to moving around such obstacles with on-floor movers, overhead moving systems can increase the productivity and efficiency of your manufacturing processes. With reduced room for human error, overhead moving systems can also reduce product loss for your business.

There are even more benefits to introducing overhead moving systems to your enterprise. American Crane and Equipment Corporation has been providing dozens of industries with world-class overhead lifting systems since our founding in 1972.

For more information on American Crane and how our wide range of overhead lifting systems can help your business thrive, **submit a request for quote** or call us at **1-877-877-6778**.

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