

5.3 MATERIAL HANDLING CRANES

Material handling equipment are mechanical equipment designed for the movement, storage, protection, and control of materials throughout the manufacturing process. It is critical for reliable distribution, consumption, and disposal processes. American Crane & Equipment Corporation is proud to provide a full range of material handling solutions for a wide range of industries and applications.

Material handling equipment falls into three major categories:

1. Transport Equipment
2. Positioning Equipment
3. Storage Equipment

Transport Equipment: Transporting loads over variable paths is pivotal to workflow and operational efficiency. Overhead solutions such as free standing and ceiling mounted overhead bridge cranes as well as workstation bridge cranes — available in both single and double girder builds and top running and underhung bridge configurations — are versatile. These systems can be crafted to fit almost any transport need.

Positioning Equipment: Feeding, loading, unloading, and orienting materials properly is essential to a manufacturing shop's workflow. Monorails offer a unique overhead lifting solution, running on tracks in a complete route network format or single circuits. Installed directly into a facility's ceiling, monorails travel at high speeds from point to point, based on preset counts or positions. Highly accurate devices, these tools eliminate the risk of human error thanks to their fixed track systems.

Storage Equipment: Similar to the popular bridge crane, stacker cranes provide an overhead solution with lifting forks or platforms instead of a hoist. This design

allows for efficient handling of unit loads, creating an optimal solution for storage and retrieval in shelving systems and high-rise racks.

Horizontal vs. Vertical Movement Control in Material Handling

Most cranes are designed to use trolley-and-bridge systems for horizontal movement and hoist systems for vertical load handling.

Gantry cranes, jib cranes, and bridge cranes are all vertical movers. These are equipped with hoists for responsible load handling at a wide range of heights. The most common type of hoist, electric, uses efficient motor systems to lift capacities ranging from 250 pounds to hundreds of tons.

Overhead Material Handling Equipment from American Crane

The team at American Crane is proud to offer custom design and fabrication of material handling equipment for a wide range of applications. From custom overhead bridge crane systems to compact jib cranes, our equipment is fully assembled and completely quality tested in house.

We bring a comprehensive quality assurance program, a proven track record of reliable service, and over 45 years of crane experience to every project we handle. We offer a wide range of solutions, from double girder top running cranes and overhead crane positioning systems to top running bridge girder electric overhead traveling cranes and bridge travellers.