

Tower Cranes

Tower Crane Rentals and Sales Downey - Cranes are a globally recognized form of industrial equipment that is commonly used in the materials handling industry. Oftentimes, they are equipped with chains, wire ropes, a hoist rope or sheaves. These products allow cranes to hoist materials vertically and transport them horizontally. Heavy crates, shipping containers, machinery and similar items can be efficiently moved thanks to a variety of crane models. Freight Transportation Cranes simplify loading and unloading and moving items. Different models have various lifting capacities. Cranes offer a great job site support and the mechanical advantage of an extended lifting capacity. Cranes are popular in a variety of industries and found in many locations. Specified Use Jib cranes can be tiny and are suited for cramped and smaller environments including workshops while giant tower cranes can be employed to construct high-rises. There is a crane perfectly suited for a variety of applications. Tight spaces may be more accessible with the use of cranes. Floating cranes can be utilized for maritime applications such as salvaging sunken items or on oil rigs.

Tower Cranes The type of crane that is fixed on a concrete slab is a tower crane. This unit is often seen mounted to sides of structures to provide superior lifting and height. Popular for building tall commercial buildings and residential structures, the base is mounted to the mast to create even further reach once extended. The crane is capable of rotating thanks to the mast that connects to the slewing unit. The long horizontal jib, the shorter counter-jib and the operator's cab are all found above the slewing portion. The main component responsible for carrying the load is the long horizontal jib. The counterweight is created by the counter-jib that may utilize concrete blocks. The jib contains the load to and from the crane's center. Usually, the operator of the crane resides in a cab situated on top of the tower, attached to the turntable; however, it may be capable of being mounted on the jib. There is a radio remote control feature that operators can access from the ground. The operator relies on electric motors to control wire rope cables in a system of sheaves and control the lifting hook. The cargo hook, along with its motor is found in the long horizontal arm. The operator commonly works together with a rigger to safely hook and unhook loads. Hand signals are an important part of daily safety. The rigger determines the crane's lifting schedule and is responsible to make sure everything load and rigging wise is reliable and safe.

Truck-Mounted Cranes Truck mounted cranes consist of two parts including the boom and the carrier. The carrier and the boom have an attached turntable to enable the upper component to swing from side to side. Updated hydraulic truck cranes are typically single-engine units. The same engine is responsible for providing power to the crane and the undercarriage. The pump mounted on the lower area of the crane supplies power to the upper part of the crane via hydraulics and a turntable. Original, older hydraulic crane truck models commonly featured dual engines. One engine allowed the crane to be pulled down the road while the other engine controlled the hydraulic pump for the jacks and outriggers. There are operators who would rather run the older two-engine models due to the frequent turntable leaks that often occur in some of the newer designs. Cranes often need to travel on roads to different locations, eliminating the need for industrial transportation unless there are size and weight restrictions. Transportation falls under local laws. Generally, bigger cranes have trailers to help the load become distributed over many axles. Certain cranes can be taken apart to meet certain requirements. Often an additional truck will follow the crane. The truck has the counterweights that have been disassembled for travel.

Outriggers & Stability Outriggers horizontally extend from the cranes' chassis to provide stability. The outriggers help to vertically stabilize the machine and keep it level during stationary and hoisting jobs. Certain truck crane models have the capacity to travel slowly while maintaining a suspended load. Care is taken to ensure the load doesn't swing sideways from the direction of travel. Most of the anti-tipping capability is related to how stiff the chassis suspension is. Counterweights can be moved and adjusted on certain models to enhance stabilization even more than what the outriggers deliver. Some of the most stable loads are suspended loads since the weight of the crane serves as a counterweight. There are electronic safeguards in place to regulate the

maximum safe loads for traveling speeds and stationary work.

Overhead and Bridge Cranes

An overhead crane is often referred to as a bridge crane. This apparatus consists of a crane with a horizontal beam and a hook-and-line mechanism that is designed to run along widely spaced rails. This type of crane resembles a gantry crane. They are common within factory buildings and attach to rails that run down two walls. Cranes can be made with single or double beam construction and may rely on complex box girders or regular steel beams. A control pendant may be used to operate the crane. Areas that need heavy lifting around ten tons or more can rely on a double girder bridge. Higher system integrity and a lower deadweight may be delivered via the box girder style. The hoist can lift the cargo along with the bridge portion covered by the crane and the trolley that can travel along the bridge. The steel industry relies on overhead cranes for much of the manufacturing. Steel is typically handled by an overhead crane until it leaves the factory as a finished piece. From raw materials to pouring hot steel and moving finished product, overhead cranes handle steel at every stage. Overhead cranes lift steel components onto trucks. Metal fabricators and stampers use this equipment every day including the auto industry to transport raw materials.

Pulp & Paper Mills

Bridge cranes are often relied on for regular pulp mill maintenance including removing equipment such as heavy press rolls. Bridge cranes utilized in paper machine construction help to install large apparatus' and equipment including huge components such as cast-iron paper drying drums and similar items.

Loader Crane

Powered electrically with an articulated arm attached to a truck or trailer, specific for loading and unloading, the loader crane has numerous joints to allow the machine to be folded into a small space between uses. Telescopic sections are common. Certain models are equipped to stow themselves or load themselves without any instruction from the operator. The operator can move around the machine in order to view the load. Modern models may rely on a radio-linked system or a portable cabled control system that works alongside hydraulic controls that are mounted on the crane.

Gantry Crane

A gantry crane features a hoist located on a trolley running horizontally along rails, often fitted on two beams or a single beam or in a fixed machinery house. The crane frame is supported on a gantry system with equalized beams and wheels that run on the gantry rail, usually perpendicular to the trolley travel direction. The gantry cranes are available in numerous sizes. Some models can move extremely heavy loads for industrial and shipyard applications.