

Tower Cranes

Tower Crane Rentals and Sales Georgia - Cranes are a popular kind of industrial equipment commonly used in the materials handling industry. These machines may be outfitted with sheaves, a hoist rope, wire ropes or chains. These components enable cranes to lift and lower items vertically as well as transporting items horizontally. Cranes make transporting cumbersome loads including machinery, shipping containers and crates much easier. Freight Transportation Cranes simplify loading and unloading and moving items. Their lifting capacity varies depending on the model. They provide a huge mechanical advantage and enable people to lift thousands of pounds of freight. 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 the right crane model available for numerous applications. Some cranes can allow access to tight spaces. Floating cranes can be useful for salvaging sunken ships and other marine items. They may also be used on oil rigs.

Tower Cranes This type of crane is fixed on a concrete slab to the ground. It is often seen attached to sides of structures as it provides excellent lifting and height capacity. Popular for building tall commercial buildings and residential structures, the base is mounted to the mast to create even further reach once extended. The mast is connected to the slewing unit of the crane that enables it to rotate. The long horizontal jib, the shorter counter-jib and the operator's cab are all found above the slewing portion. The long horizontal jib is the main crane component responsible for carrying the load. Concrete blocks may be used with the counter-jib to create the counterweight. The jib houses the crane's load to and from the 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. The operator may rely on a radio remote control apparatus from the ground. Electric motors are used to operate the lifting hook and control wire rope cables located within a sheaves system. The long horizontal arm houses the cargo hook and its' motor. Often, the operator works alongside a rigger to accurately coordinate unhooking and hooking 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. This engine has the responsibility of providing power to the undercarriage and the crane. 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. Certain operators prefer the two-engine models due to the turntable leaks that commonly occur in newer design models. You may have witnessed cranes traveling on roads to travel from site to site. This can eliminate the need for industrial transportation requirements unless the crane is of sizeable weight with size restrictions. Local laws may be in place regarding transportation. Typically, larger cranes are outfitted with trailers to help distribute the load over numerous axles. Certain cranes can be taken apart to meet certain requirements. A crane will often be followed by another truck containing the counterweights that are disassembled for travel.

Outriggers & Stability Outriggers horizontally extend from the cranes' chassis to provide stability. These are used vertically to stabilize the machine and keep it level during hoisting and stationary activities. Some truck crane units can travel at slow speeds even while carrying a suspended load. Extra care is taken to make sure the load does not swing side to side from the travel direction. The majority of the anti-tipping aspect is related to the stiffness of the chassis suspension. Moving counterweights are included in a variety of models to amplify stabilization further than what the outriggers offer. 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. These cranes are similar to gantry cranes that are typically found in factory buildings. They attach to rails which run alongside two walls. Overhead cranes may feature single or double beam construction and may use regular steel or complex box girder beams. A control pendant may be used to operate the crane. A double girder bridge can be used in places that require heavy lifting such as 10 tons or more. 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 manufacturing process of the steel industry utilizes cranes frequently. An overhead crane typically handles steel until it exits the factory as a completed item. An overhead crane handles all kinds of steel including raw materials being poured to transporting finished oils and storing hot steel. 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. Paper machines rely on bridge cranes during construction to install massive equipment including cast iron paper drying drums and other heavy apparatus. Loader Crane Electrically powered with an articulated arm attached to a trailer or a truck and specified for unloading and loading, the loader crane consists of many jointed components that enable the machine to be folded into a small space between uses. Telescoping sections are popular. There are models that have the ability to stow or load themselves without any operator instruction. 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.