

Tower Cranes

Tower Crane Rentals and Sales Fremont - A popular machine within the materials handling family is the crane. 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. Shipping containers, giant crates, heavy machinery and other items can be transported efficiently. Freight Transportation Cranes are utilized to move items in terms of making loading and unloading easier and safer. Their lifting capacity varies depending on the model. Cranes offer a great job site support and the mechanical advantage of an extended lifting capacity. Cranes are found in many industries and often seen on construction sites. 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 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. Commonly used for building residential and commercial tall buildings, the base is attached to the mast which may extend for further reach. The crane is capable of rotating thanks to the mast that connects to the slewing unit. Above the slewing component, the operator cab is situated, along with the long horizontal jib and the counter jib. 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 handles the load to and from the center of the crane. 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 cargo hook, along with its motor is found in the long horizontal arm. Often, the operator works alongside a rigger to accurately coordinate unhooking and hooking loads. Hand signals are a huge safety component used daily. 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 feature two parts known as the carrier and the boom. The carrier and the boom have an attached turntable to enable the upper component to swing from side to side. Typically, modern hydraulic truck cranes feature single engines. This engine has the responsibility of providing power to the undercarriage and the crane. Hydraulics are responsible for providing power to the upper via the turntable from the pump mounted on the lower portion. Earlier hydraulic crane trucks commonly had two engines. The first engine enabled the crane to travel down the road while the second engine controlled the hydraulic pump for the outriggers and jacks. Some operators prefer the older dual-engine models since there are often turntable leaks many newer units. 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 transportation laws are in place. Larger machines may have trailers to distribute the load over a variety of axles. There are some crane models that can be taken apart to accommodate particular requirements. Typically, another truck with the disassembled counterweights will follow the crane.

Outriggers & Stability Outriggers are extended horizontally from the chassis of the crane. These are used vertically to stabilize the machine and keep it level during hoisting and stationary activities. 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. 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. Suspended loads are among the most stable due to the majority of the crane's weight acting as a counterweight. Electronic safeguards are in place to monitor the maximum safe

loads for stationary work and traveling speeds. Overhead and Bridge Cranes A bridge crane is a type of overhead crane. This mechanism features a crane with a hook-and-line mechanism and horizontal beam that is designed to run along rails that are spaced widely. 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. Some overhead cranes have the capacity to be operated with a control pendant. 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 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. An overhead crane handles all kinds of steel including raw materials being pored 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. Bridge cranes are used in the construction of paper machines as they facilitate the installation of giant equipment and apparatus including the cast iron paper drying drums and other massive items. Loader Crane Powered with an electric articulated arm attached to a trailer or truck for loading and unloading, the loader crane is complete with many joints to facilitate folding the machine into a small space between jobs. These telescoping abilities are useful. Some models can even load or stow themselves on their own without any operator intervention. The operator can move around the machine in order to view the load. Current models often feature a portable cabled control system or radio-linked system that works beside hydraulic controls that are mounted on the crane. Gantry Crane There is a hoist on the gantry crane found in a fixed machinery house or a horizontal trolley that runs along rails often fitted between two beams or a single beam. The gantry system supports the crane frame with equalized beams. Wheels are running along the gantry rail, typically perpendicular to the direction the trolley travels. The gantry cranes are available in numerous sizes. Some models can move extremely heavy loads for industrial and shipyard applications.