

Tower Cranes

Tower Crane Rentals and Sales Moreno Valley - Cranes are a popular kind of industrial equipment commonly used in the materials handling industry. Depending on the application, cranes may have wire ropes, sheaves, chains or a hoist rope. 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. Different models have various lifting capacities. Cranes deliver a major mechanical advantage, allowing people to lift tremendous amounts of freight. Cranes are commonly found on construction sites and a variety of industries. Specified Use There are different cranes for many applications. Jib cranes can be used for tighter environments including workshops. Extensive tower cranes can be seen in construction. There is the right crane model available for numerous 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 The type of crane that is fixed on a concrete slab is a tower crane. 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 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 long horizontal jib is the main crane component responsible for carrying the load. 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. Typically, the operator is found inside of a cab located on top of the tower that is attached to the turntable; however, it can be mounted on the jib alternatively. The operator may rely on a radio remote control apparatus from the ground. The crane operator uses electric motors to operate the lifting hook and control wire rope cables within a system of sheaves. 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 dictates the lifting schedule for the crane and is responsible to ensure all loads and subsequent rigging is safe and reliable.

Truck-Mounted Cranes Truck mounted cranes consist of two parts including the boom and the carrier. These two items have a turntable to attach them, allowing the higher portion the ability to swing from side-to-side. Typically, modern hydraulic truck cranes feature single engines. The same engine is responsible for providing power to the crane and the undercarriage. Hydraulics are responsible for providing power to the upper via the turntable from the pump mounted on the lower portion. 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. 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. There are some crane models that can be taken apart to accommodate particular requirements. A crane will often be followed by another truck containing the counterweights that are disassembled for travel. Outriggers & Stability Outriggers are extended horizontally from the chassis of the crane. 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. 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. Counterweights can be moved and adjusted on certain models to enhance stabilization even more than what

the outriggers deliver. Suspended loads are among the most stable due to the majority of the crane's weight acting 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 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. These cranes are similar to gantry cranes that are typically found in factory buildings. They attach to rails which run alongside two walls. Double beam or single beam construction model crane designs are available for overhead cranes, which may rely on complex box girder beam or regular steel beams. A control pendant may be used to operate the crane. Locations requiring heavy lifting from ten tons and higher may use a double girder bridge. The box girder style produces a system with a lower deadweight but offers higher system integrity. Cargo can be lifted with a hoist and the trolley that can travel along the bridge along with the bridge component covered by the crane. The manufacturing process of the steel industry utilizes cranes frequently. 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. Steel items are moved onto trucks via overhead cranes. Metal fabricators and stampers and the automobile industry rely on these machines.

Pulp & Paper Mills Bridge cranes are commonly used in pulp mill maintenance. They are responsible for removing equipment including 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 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. 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. 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.