

Tower Cranes

Tower Crane Rentals and Sales Simi Valley - 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 items allow cranes to lower and lift items vertically while transporting 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. Their lifting capacity varies depending on the model. Cranes deliver a major mechanical advantage, allowing people to lift tremendous amounts of freight. Cranes are found in many industries and often seen on construction sites. Specified Use Small jib cranes are ideal for cramped environments such as workshops. Giant tower cranes are a different breed that is useful for high-rise construction. There is a crane perfectly suited for a variety of applications. Some cranes can allow access to tight spaces. Floating crane models may be employed to salvage sunken marine items including ships or used in oil rigs. Tower Cranes A tower crane is a model that is fixed on a concrete slab to the ground. This model is commonly attached to the sides of structures. It offers precise height and lifting reliability. 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 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. Operators can use a radio remote control unit 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. The operator commonly works together with a rigger to safely hook and unhook 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 feature two parts known as the carrier and the boom. These two pieces rely on a turntable to attach them and allow the upper portion 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. Earlier hydraulic crane trucks commonly had two 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. Transportation falls under local laws. Generally, bigger cranes have trailers to help the load become distributed over many axles. Some models can be disassembled to meet specific requirements. A crane will often be followed by another truck containing the counterweights that are disassembled for travel. Outriggers & Stability Stability is achieved by horizontal outriggers extending from the chassis of the crane. The outriggers help to vertically stabilize the machine and keep it level during stationary and hoisting jobs. Specific crane truck models can slowly travel with a suspended load. Care is given to ensure the load doesn't swing during travel. The stiffness of the chassis suspension delivers most of the anti-tipping aspect. 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. Safeguards are in place electronically to monitor the maximum safe loads for traveling

speeds and stationary work. Overhead and Bridge Cranes A bridge crane is a type of overhead crane. This concept features a hook-and-line mechanism and a crane with a horizontal beam that is made to run along rails. These cranes are similar to gantry cranes that are typically found in factory buildings. They attach to rails which run alongside two walls. Cranes can be made with single or double beam construction and may rely on complex box girders or regular steel beams. Certain overhead cranes have the ability to use a control pendant for operation. 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 is another item that is utilized to lift the cargo, the bridge spanning the portion covered by the crane and a trolley to move 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 is transformed into a finished piece and leaves the factory. All steel is handled by an overhead crane from raw materials being poured to storing hot steel for cooling and transporting finished coils. Steel items are moved onto trucks via overhead cranes. Metal fabricators and stampers and the automobile industry rely on these machines. Pulp & Paper Mills Pulp mill maintenance commonly relies on bridge cranes. They are responsible for removing items including 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. Telescopic sections are common. Certain models are equipped to stow themselves or load themselves without any instruction from the operator To complete viewing access of the load, the operator must move around the vehicle. 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 has a hoist in a fixed machinery house or on a trolley that runs horizontally along rails, usually fitted on a single beam or two beams. 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. These cranes are available in many sizes and capable of moving heavy and cumbersome loads for industrial applications and in shipyards.