

## Tower Cranes

Tower Crane Rentals and Sales Yukon - Cranes are a popular kind of industrial equipment 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. Shipping containers, giant crates, heavy machinery and other items can be transported efficiently. Freight Transportation Cranes can lift difficult loads to make unloading and loading safer and more efficient. Different models have various lifting capacities. 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 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. 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. On top of the slewing portion are three parts known as the operator's cab, the shorter counter-jib and the long horizontal 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 houses the crane's load to and from the 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. 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 sizeable horizontal arm contains the cargo hook along with its' motor. The operator often works with a rigger to coordinate hooking and unhooking loads. Hand signals are a huge safety component used daily. The rigger has an important job dictating the crane's lifting schedule. They are responsible for making sure all rigging 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. Modern hydraulic truck cranes are generally single-engine machines. The engine supplies power to both 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. Back in the day, older models of hydraulic crane trucks often had two engines. One engine controlled the hydraulic pump for the outriggers and the jacks while the other engine was responsible for the crane's travel. Some operators prefer the older dual-engine models since there are often turntable leaks many newer units. Cranes commonly have to travel via roads to get to different jobs. This can eliminate industrial transportation requirements unless the crane is sizeable with certain weight 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. 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. Extra care is taken to make sure the load does not swing side to side from the travel direction. Most of the anti-tipping capability is related to how stiff the chassis suspension is. Moving counterweights are included in a variety of models to amplify stabilization further than what the outriggers offer. Suspended loads are some of the most stable with most of the crane's weight functioning like 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 a kind of crane commonly called a bridge 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 a gantry crane and are often found in long factory buildings and attach to rails that run down two long walls. Overhead cranes may feature single or double beam construction and may use regular steel or complex box girder beams. Some overhead cranes have the capacity to be operated with a control pendant. Locations requiring heavy lifting from ten tons and higher may use 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 is familiar with overhead cranes throughout the manufacturing process. Steel is typically handled by an overhead crane until it leaves the factory as a finished piece. 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. 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** 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. These telescoping abilities are useful. Some models can even load or stow themselves on their own without any operator intervention. To complete viewing access of the load, the operator must move around the vehicle. 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** 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 via beams and wheels on a gantry system and runs on the gantry rail which is generally perpendicular to the trolley direction of travel. These cranes are available in many sizes and capable of moving heavy and cumbersome loads for industrial applications and in shipyards.