

Tower Cranes

Tower Crane Rentals and Sales BC - Cranes are a globally recognized form of industrial equipment that is commonly used in the materials handling industry. These machines may be outfitted with sheaves, a hoist rope, wire ropes or chains. These items allow cranes to lower and lift items vertically while transporting them horizontally. Shipping containers, giant crates, heavy machinery and other items can be transported efficiently. Freight Transportation Cranes simplify loading and unloading and moving items. 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 are numerous cranes suited for many different jobs. They can help provide access to tight spaces. Floating crane models may be employed to salvage sunken marine items including ships or used in 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. These cranes are used in residential and commercial construction. The base is mounted to the mast which can create further reach by extension. 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 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. 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. There is a radio remote control feature that operators can access from the ground. The operator relies on electric motors to control wire rope cables in a system of sheaves and control the lifting hook. The long horizontal arm houses the cargo hook and its' motor. The operator often works with a rigger to coordinate hooking and unhooking loads. Hand signals are an important part of daily safety. 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 items have a turntable to attach them, allowing the higher portion the ability 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. 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. The first engine enabled the crane to travel down the road while the second engine controlled the hydraulic pump for the outriggers and jacks. 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. Cranes often need to travel on roads to different locations, eliminating the need for industrial transportation unless there are size and weight 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. Often an additional truck will follow the crane. The truck has the counterweights that have been disassembled for travel. Outriggers & Stability Stability is achieved by horizontal outriggers extending from the chassis of the crane. These are used vertically to stabilize the machine and keep it level during hoisting and stationary activities. Specific crane truck models can slowly travel with 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. Many models include moving counterweights to be adjusted to enhance stabilization farther than what the outriggers provide. 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 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. This type of crane resembles a gantry crane. They are common within factory buildings and attach to rails that run down 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. 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. The box girder design creates a system featuring higher system integrity with a lower deadweight. 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 is familiar with overhead cranes throughout the manufacturing process. An overhead crane typically handles steel until it exits the factory as a completed item. From raw materials to pouring hot steel and moving finished product, overhead cranes handle steel at every stage. Steel components are loaded by overhead crane and lifted onto trucks. Metal stampers and fabricators rely on this equipment daily as does the automobile industry to handle raw materials.

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 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. The operator needs to move around the vehicle for viewing access to 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 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 come in all sizes, and some can move very heavy loads, particularly the extremely large examples used in shipyards or industrial installations.