

What are some of the different options available for Cranes?

The simplest form of the modern crane is the mobile crane with a telescopic boom mounted on its movable platform. The boom is made from steel truss and known as "arm" in industry parlance. The arm can be raised or lowered with the help of pulleys or levers. A hook generally suspends from the boom to lift weights.

The platform of a mobile crane is in turn mounted on wheels. The wheels may be traditional, or the ones that are designed for railroad tracks, or even a caterpillar track. Depending on the application the crane is aimed to serve, the wheels are designed to negotiate paved or unpaved surfaces. A mobile crane may be used to demolish existing structures by hooking a wrecking ball to the hook. It may also be used to move earth, by hooking a bucket to the hook.

Cranes may be mounted on trucks or other vehicles and made mobile. Such devices have out-riggers to increase their stability. Rough-terrain cranes are usually fitted with a base that resembles the bottom of a vehicle with four-wheel drive.

Another form of the crane is called the "loader crane". This equipment has hydraulic-powered booms which are installed on trailers. These cranes load material on and off the trailer bed. When not in use, the jointed sections of the boom are simply folded down and made compact. In some designs, the boom is capable of telescoping too.

A stacker crane is best deployed in warehouses with a high degree of automation. Because of the electronic controls embedded in the system, these cranes can be operated remotely, and without the need for any human operator to be physically present on the site. The crane, invariably fitted with forklift machinery, perform the lifting, transporting and stacking operations automatically, once programmed. Such cranes are quite useful in environments which are considered hazardous for human beings.

Yet another type of crane is the "gantry crane" which is deployed in ports and railroads, where the load is very heavy, and in the form of huge containers. These cranes usually run on rails, and their base is made of huge crossbeams that can sustain the weight of the containers.

In the case of ships, a specialized gantry crane known as "portainer" is deployed. The shipping industry also has another variant, known as floating cranes. These are mounted on barges and pontoons. Such cranes are quite useful in the construction of ports, bridges and also to salvage ships. A floating crane can also be used to unload material from ships, just like the portainer. Because of their design, a floating container can also handle containers of irregular or awkward shape.

A "tower crane" is different from the others in that it does not have a moveable base. True to name, a tower crane has a big height, and therefore has to be assembled piece after piece, and usually on the site of construction itself. Their place of work is the construction site of tall buildings and skyscrapers. Once the work at the site is over, the tower crane is disassembled and carted away. The base of the crane resembles a long ladder. The boom is usually perpendicular to the base.