

Self Erect Cranes

Used Self Erect Cranes Simi Valley - Generally the base which is bolted into a big concrete pad provides the necessary support for a tower crane. The base is connected to a tower or a mast and stabilizes the crane that is connected to the inside of the building's structure. Normally, this attachment point is to an elevator shaft or to a concrete lift. The mast of the crane is usually a triangulated lattice structure that measures 10 feet square or 0.9m². Connected to the very top of the mast is the slewing unit. The slewing unit consists of a gear and a motor that allows the crane to rotate. Tower cranes are able to have a maximum unsupported height of eighty meters or 265 feet. The maximum lifting capacity of a tower crane is 16,642 kilograms or 39,690 pounds with counter weights of twenty tons. Furthermore, two limit switches are used to be able to make certain that the operator does not overload the crane. There is even one more safety feature called a load moment switch to ensure that the driver does not exceed the ton meter load rating. Last of all, the tower crane has a maximum reach of seventy meters or two hundred thirty feet. Because of their extreme heights, there is a science involved to erecting a crane. The stationary structure would first have to be transported to the construction location by utilizing a large tractor-trailer rig setup. Then, a mobile crane is used in order to assemble the machine part of the jib and the crane. Afterwards, these sections are attached to the mast. Next, the mobile crane adds counterweights. Crawler cranes and forklifts may be some of the other industrial machines that is utilized to erect a crane. As the building is erected, mast extensions are added to the crane. This is how the crane's height is able to match the building's height. The crane crew uses what is referred to as a top climber or a climbing frame which fits between the top of the mast and the slewing unit. A weight is hung on the jib by the work crew in order to balance the counterweight. Once complete, the slewing unit can detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an additional 20 feet or 6.1m. Then, the operator of the crane utilizes the crane to insert and bolt into position another mast section piece.