

Self Erect Cranes

Used Self Erect Cranes Massachusetts - The base of the tower crane is usually bolted to a big concrete pad that provides really crucial support. The base is attached to a mast or a tower and stabilizes the crane which is affixed to the inside of the structure of the building. Often, this attachment point is to an elevator shaft or to a concrete lift. The mast of the crane is usually a triangulated lattice structure which measures 0.9m² or 10 feet square. Attached to the very top of the mast is the slewing unit. The slewing unit consists of a gear and a motor which 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 lbs. with counter weights of twenty tons. Moreover, two limit switches are utilized in order to make sure that the operator does not overload the crane. There is also one more safety feature referred to as a load moment switch to ensure that the driver does not surpass the ton meter load rating. Lastly, the tower crane has a maximum reach of 230 feet or seventy meters. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure will first need to be transported to the construction site by using a huge tractor-trailer rig setup. Then, a mobile crane is used so as to assemble the machinery part of the crane and the jib. These sections are then attached to the mast. Next, the mobile crane adds counterweights. Forklifts and crawler cranes may be some of the other industrial machines that is utilized to erect a crane. Mast extensions are added to the crane as the building is erected. This is how the height of the crane can 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. When complete, the slewing unit could detach from the top of the mast. In the top climber, hydraulic rams are utilized to adjust the slewing unit up an extra 20 feet or 6.1m. Then, the driver of the crane utilizes the crane to insert and bolt into position another mast section piece.