

Self Erect Cranes

Used Self Erect Cranes Glendale - The tower crane's base is usually bolted to a big concrete pad that provides very crucial support. The base is connected 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 a concrete lift or to an elevator shaft. The mast of the crane is often a triangulated lattice structure which measures 10 feet square or 0.9m². Connected to the very top of the mast is the slewing unit. The slewing unit is made of a gear and a motor which enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or 265 feet. The tower crane's maximum lifting capacity is sixteen thousand six hundred forty two kilograms or 39,690 lbs. with counter weights of twenty tons. Moreover, two limit switches are utilized in order to make certain that the operator does not overload the crane. There is also another safety feature referred to as a load moment switch to ensure that the operator does not exceed the ton meter load rating. Finally, the tower crane has a maximum reach of 70 meters or 230 feet. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure would first need to be transported to the construction location by using a large tractor-trailer rig setup. After that, a mobile crane is used so as to assemble the equipment portion of the jib and the crane. These sections are then connected to the mast. The mobile crane then adds counterweights. Crawler cranes and forklifts may be some of the other industrial machinery which is utilized to erect a crane. When the building is erected, mast extensions are added to the crane. This is how the crane's height can match the building's height. The crane crew utilizes what is called a top climber or a climbing frame that fits between the slewing unit and the top of the mast. A weight is hung on the jib by the work crew so as to balance the counterweight. Once complete, the slewing unit can detach from the top of the mast. In the top climber, hydraulic rams are utilized to adjust the slewing unit up an additional 6.1m or 20 feet. Next, the driver of the crane utilizes the crane to insert and bolt into position one more mast part piece.