Self Erect Cranes

Used Self Erect Cranes Georgia - The base of the tower crane is generally bolted to a large concrete pad which provides very necessary support. The base is connected to a tower or a mast and stabilizes the crane that is affixed to the inside of the building's structure. Usually, this attachment point is to an elevator shaft or to a concrete lift. Generally, the mast is a triangulated lattice structure measuring 0.9m2 or 10 feet square. The slewing unit is connected to the very top of the mast. The slewing unit consists of a motor and a gear which enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or two hundred sixty five feet. The maximum lifting capacity of a tower crane is sixteen thousand six hundred forty two kilograms or thirty nine thousand six hundred ninety lbs. with counter weights of twenty tons. In addition, two limit switches are used to be able to make sure that the driver does not overload the crane. There is even another safety feature called a load moment switch to make sure that the operator does not exceed the ton meter load rating. Finally, the tower crane has a maximum reach of 230 feet or 70 meters. There is certainly a science involved with erecting a tower crane, especially due to their extreme heights. First, the stationary structure needs to be transported to the construction site by utilizing a large tractor-trailer rig setup. Then, a mobile crane is used in order to assemble the machinery portion of the crane and the jib. These sections are then connected to the mast. After that, the mobile crane adds counterweights. Forklifts and crawler cranes may be a few of the other industrial equipment which is utilized to erect a crane. Mast extensions are added to the crane when the building is erected. This is how the height of the crane could match the building's height. The crane crew uses 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 in order to balance the counterweight. Once 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 additional 6.1m or 20 feet. Then, the crane driver utilizes the crane to insert and bolt into place one more mast section piece.