Self Erect Cranes

Used Self Erect Cranes Colorado - The base of the tower crane is usually bolted to a large concrete pad which provides very necessary support. The base is attached to a tower or a mast and stabilizes the crane that is connected to the inside of the structure of the building. Often, this attachment point is to a concrete lift or to an elevator shaft. Typically, the mast is a triangulated lattice structure measuring 10 feet square or 0.9m2. The slewing unit is connected to the very top of the mast. The slewing unit is made 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 265 feet. The maximum lifting capacity of a tower crane is 16,642 kg or thirty nine thousand six hundred ninety lbs. with counter weights of 20 tons. Additionally, two limit switches are used in order to ensure the operator does not overload the crane. There is also one more safety feature called a load moment switch to make certain that the operator does not surpass the ton meter load rating. Lastly, the maximum reach of a tower crane is two hundred thirty feet or seventy meters. There is certainly a science involved with erecting a tower crane, especially because of their extreme heights. At first, the stationary structure needs to be brought to the construction location by utilizing a big tractor-trailer rig setup. After that, a mobile crane is utilized so as to assemble the equipment part of the jib and the crane. These sections are then attached to the mast. The mobile crane next adds counterweights. Forklifts and crawler cranes can be some of the other industrial equipment which is used to erect a crane. Mast extensions are added to the crane as the building is erected. This is how the height of the crane is able to match the building's height. The crane crew uses what is called a top climber or a climbing frame that 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 is able to 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. Next, the crane driver utilizes the crane to insert and bolt into place one more mast section piece.