Self Erect Cranes

Used Self Erect Cranes PEI - The base of the tower crane is typically bolted to a huge concrete pad which provides really crucial support. The base is attached to a tower or a mast and stabilizes the crane that is connected to the inside of the building's structure. Usually, this attachment point is to a concrete lift or to an elevator shaft. Usually, the mast is a triangulated lattice structure measuring 0.9m2 or 10 feet square. The slewing unit is attached to the very top of the mast. The slewing unit consists of a motor and a gear 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 sixteen thousand six hundred forty two kg or thirty nine thousand six hundred ninety pounds with counter weights of 20 tons. In addition, two limit switches are used to be able to ensure the driver does not overload the crane. There is also another safety feature known as a load moment switch to make sure that the operator does not exceed the ton meter load rating. Lastly, the tower crane has a maximum reach of seventy meters or 230 feet. There is definitely a science involved with erecting a tower crane, especially because of their extreme heights. First, the stationary structure has to be brought to the construction site by using a big 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. The mobile crane then adds counterweights. Forklifts and crawler cranes can be a few of the other industrial machinery that is commonly utilized to erect a crane. As 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 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 so as 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 additional 6.1m or 20 feet. Next, the operator of the crane uses the crane to insert and bolt into place one more mast part piece.