Self Erect Cranes

Used Self Erect Cranes Seattle - The base of the tower crane is usually bolted to a big concrete pad that provides very crucial support. The base is attached to a tower or a mast and stabilizes the crane which is affixed to the inside of the structure of the building. Usually, this attachment point is to an elevator shaft or to a concrete lift. Typically, the mast is a triangulated lattice structure measuring 10 feet square or 0.9m2. The slewing unit is attached to the very top of the mast. The slewing unit consists of a motor and a gear that allows the crane to rotate. Tower cranes are able to have a maximum unsupported height of eighty meters or two hundred sixty five feet. The tower crane's maximum lifting capacity is sixteen thousand six hundred forty two kg or 39,690 pounds with counter weights of 20 tons. Moreover, two limit switches are used in order to ensure the operator does not overload the crane. There is even another safety feature referred to as a load moment switch to make sure that the driver does not exceed the ton meter load rating. Lastly, the maximum reach of a tower crane is two hundred thirty feet or 70 meters. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure will at first need to be brought to the construction location by utilizing a large tractor-trailer rig setup. Then, a mobile crane is utilized in order to assemble the machinery portion of the crane and the jib. After that, these parts are attached to the mast. Next, the mobile crane adds counterweights. Crawler cranes and forklifts may be some of the other industrial machines which is used to erect a crane. When the building is erected, mast extensions are added to the crane. This is how the crane's height could match the building's height. The crane crew uses what is called a climbing frame or a top climber 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 used to adjust the slewing unit up an additional twenty feet or 6.1m. Then, the driver of the crane uses the crane to insert and bolt into position one more mast section piece.