



## Self Erect Cranes

Used Self Erect Cranes Fairfield - The base of the tower crane is usually 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. The mast of the crane is usually a triangulated lattice structure which measures 0.9m<sup>2</sup> or 10 feet square. Attached to the very top of the mast is the slewing unit. The slewing unit consists of a gear and a motor which allows 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 39,690 pounds with counter weights of 20 tons. Moreover, two limit switches are used in order to make sure that the driver does not overload the crane. There is also one more safety feature known as a load moment switch to make sure that the operator does not exceed the ton meter load rating. Lastly, the maximum reach of a tower crane is seventy meters or 230 feet. There is definitely a science involved with erecting a tower crane, specially due to their extreme heights. At first, the stationary structure needs to be brought to the construction location by using a large tractor-trailer rig setup. Next, a mobile crane is utilized so as to assemble the machinery part of the jib and the crane. These sections are then attached to the mast. The mobile crane then adds counterweights. Crawler cranes and forklifts could be a few of the other industrial machinery 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 can match the building's height. The crane crew uses what is called a climbing frame or a top climber 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. When 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 twenty feet. Then, the driver of the crane uses the crane to insert and bolt into position another mast part piece.