

## Self Erect Cranes

Used Self Erect Cranes Idaho - Generally the base which is bolted into a large concrete pad provides the necessary support for a tower crane. The base is attached to a mast or a tower and stabilizes the crane which is affixed to the inside of the building's structure. Normally, this attachment point is to a concrete lift or to an elevator shaft. The mast of the crane is usually a triangulated lattice structure which measures 10 feet square or 0.9m<sup>2</sup>. Attached to the very top of the mast is the slewing unit. The slewing unit consists of a motor and a gear that 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 pounds with counter weights of 20 tons. Moreover, two limit switches are used to be able to ensure 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. Last of all, the tower crane has a maximum reach of 70 meters or two hundred thirty feet. Because of their extreme heights, there is a science involved to erecting a crane. The stationary structure would first need to be transported to the construction site by utilizing a big tractor-trailer rig setup. After that, a mobile crane is used so as to assemble the machinery portion of the crane and the jib. These sections are then attached to the mast. The mobile crane then adds counterweights. Forklifts and crawler cranes may 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 could match the building's height. The crane crew uses what is referred to as a climbing frame or a top climber which 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 is able to detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an extra 6.1m or twenty feet. Then, the operator of the crane utilizes the crane to insert and bolt into place one more mast part piece.