

Self Erect Cranes

Used Self Erect Cranes Fontana - Typically 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 connected to the inside of the building's structure. Often, this attachment point is to an elevator shaft or to a concrete lift. The mast of the crane is usually a triangulated lattice structure that measures 10 feet square or 0.9m². Connected to the very top of the mast is the slewing unit. The slewing unit is made 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 tower crane's maximum lifting capacity is sixteen thousand six hundred forty two kilograms or thirty nine thousand six hundred ninety pounds with counter weights of 20 tons. In addition, two limit switches are used in order to ensure the driver does not overload the crane. There is also one more safety feature referred to as a load moment switch to make certain that the operator does not surpass the ton meter load rating. Last of all, the maximum reach of a tower crane is 230 feet or seventy meters. Because of their extreme heights, there is a science involved to erecting a crane. The stationary structure would at first have to be brought to the construction site by using a huge tractor-trailer rig setup. After that, a mobile crane is used in order to assemble the equipment part of the crane and the jib. These sections are then attached to the mast. The mobile crane next adds counterweights. Crawler cranes and forklifts may be some of the other industrial machinery that is used to erect a crane. As 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 utilizes 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 20 feet or 6.1m. After that, the operator of the crane uses the crane to insert and bolt into place one more mast section piece.