

Self Erect Cranes

Used Self Erect Cranes Corona - The base of the tower crane is generally bolted to a large concrete pad which provides very necessary support. The base is connected to a mast or a tower and stabilizes the crane that is attached to the inside of the building's structure. Usually, this attachment point is to an elevator shaft or to a concrete lift. The crane's mast is usually a triangulated lattice structure which measures 10 feet square or 0.9m². 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 may have a max unsupported height of 80m or 265 feet, while the minimum lifting capacity of a tower crane is 16,642 kilograms or 39,690 lbs. with counter weights of twenty tons. In addition, two limit switches are utilized to be able to ensure the driver does not overload the crane. There is also one more safety feature called a load moment switch to ensure that the driver does not exceed the ton meter load rating. Last of all, the maximum reach of a tower crane is two hundred thirty feet or seventy meters. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure would first need to be transported to the construction location by using a huge tractor-trailer rig setup. Then, a mobile crane is used in order to assemble the machinery part of the crane and the jib. Then, these parts are connected to the mast. The mobile crane next adds counterweights. Forklifts and crawler cranes can be some of the other industrial machinery which is utilized to erect a crane. Mast extensions are added to the crane when the building is erected. This is how the height of the crane is able to match the building's height. The crane crew uses what is known as a top climber or a climbing frame 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. 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 extra 6.1m or 20 feet. After that, the operator of the crane utilizes the crane to insert and bolt into place one more mast section piece.