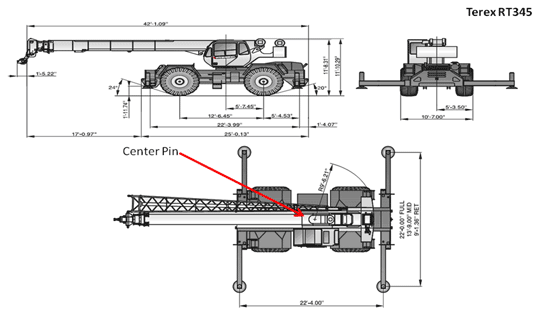
**How to Read a Load Chart**

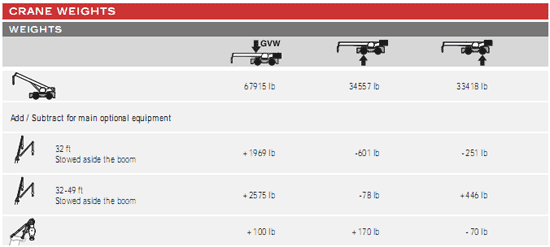
Each crane has a load chart that, in short, specifies the crane's capabilities - detailing its features and how its lift capacity varies when considering distance and angle. Just like the old saying 'if you fail to plan, you plan to fail', failing to consult a crane load chart before renting or employing a crane for a specific job could leave you with too much or too little capacity for your job.

Before a crane is rented, transported, employed or purchased, the crane chart must be consulted. Everyone from the crane operator, to the job supervisors, to even the sales guys have to know how to read a crane chart. Here's how.

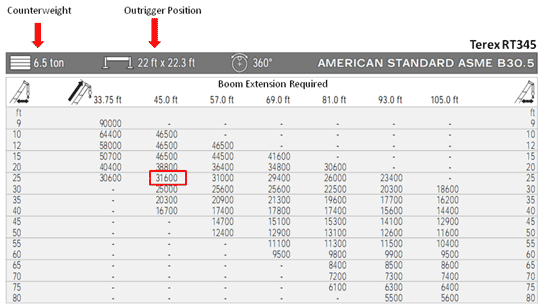
To illustrate how to read a crane chart, we've chosen the chart for the [Terex RT345XL](http://www.bigge.com/crane-charts/crane-charts/rough-terrain-crane-charts/RT345-LC.pdf), a rough terrain crane with a maximum lift capacity of 45 tons.



**1. DIMENSIONS and WEIGHT** - The chart shows the crane dimensions. It includes data for operation with the outriggers extended, transport weight, and steering dimensions. Knowledge of this information is especially critical if the crane will be working in a confined space, as the lifting capacity varies depending on whether the outriggers are extended. The transport weight (below) determines the trailer to be used, how to load the crane on the trailer, the route to take, and what permits are required to get it to the job site



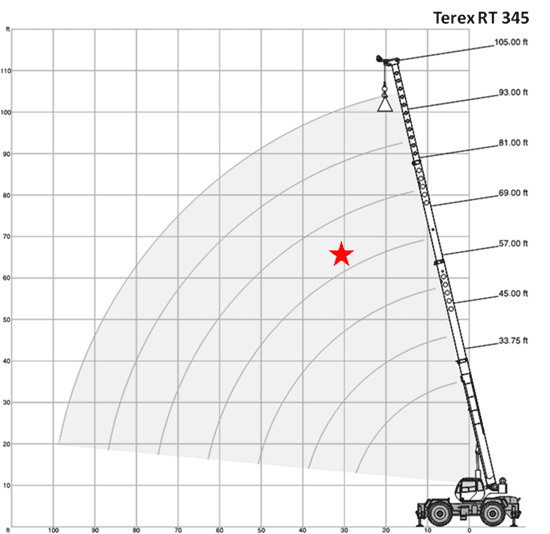
Along the top axis, the first number is the gross vehicle weight. In the other two columns, the arrows indicate the weight load for each axle depending on what additional accessories are loaded.



**2. LIFT CAPACITY** - This is where the magic happens. In the legend at the top of the chart, you can see these ratings apply when using 6.5 tons of counterweight, with the outriggers extended to 22 x 22.3 feet. Here, you'd graph out the specific lift the crane is needed for. The 'ft.' indicator on the left axis represents the radius, the distance from the center pin to the center of the load. The top row column headings define the boom extension required in feet.

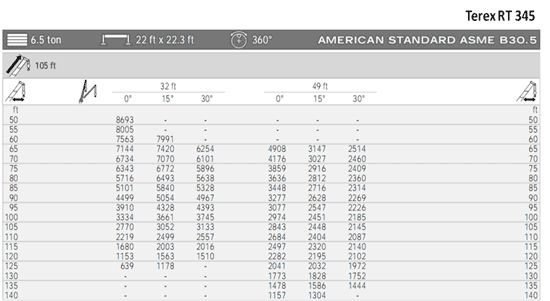
**EXAMPLE:** You need to lift a load of 15 tons (30,000 pounds) at a distance of 25 feet. The distance is measured from the center pin of the crane to the center of the load. With the radius determined, look to find the largest lift capacity at that radius; the column that number is in will reveal how many feet of boom must be extended. In this case, 31600 pounds is the largest capacity for lifts at a radius of 25 feet. It is in the column representing a boom extension of 45 feet. Therefore, 45 feet of boom must be extended to make the lift.

It's important to note that the maximum capacity is always measured by the shortest lift, usually over the rear of the crane, and with the outriggers fully extended. While the Terex RT345 has a maximum capacity of 45 tons, lifts at an extended distance drops the maximum capacity dramatically.

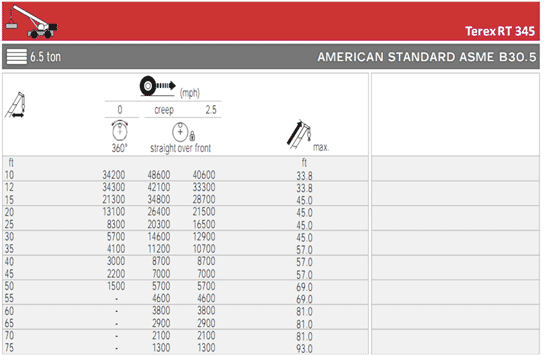


**3. LIFT RANGE** - Just as important as lift capacity is lift range. For that, a range diagram is usually included in every chart which illustrates how much boom length is needed to pick up and lift a load both at a distance and at height.

**EXAMPLE:** You need to pick up a load at 25 feet and lift it to the top of a five story, 65 foot building. Consulting the range diagram, 69 feet of boom is required to make the lift.



**4. LIFT ANGLE** - This chart illustrates the maximum lift if a luffing or fixed jib is used. Lifts with jib lengths of 32 and 49 feet (in addition to boom extension of 105 feet) are illustrated. With higher angles of lift, the maximum load capacity decreases. With a luffing jib, the angle can be automatically adjusted from the operators cab. With a fixed jib, of course, the angle is fixed.



**5. CRANE IN MOTION** - This illustrates the lift capacity for a pick and carry. Here, the chart illustrates the total weight able to be picked at a 360 degree angle while stationary on wheels, the total weight being able to be supported both while slowly rolling with the load at a zero degree angle (creep), and the total weight able to be supported while moving at 2.5 miles per hour. The ‘ft’ column on the left axis, as previously defined, indicates the radius of the lift, the ‘ft’ column to the far right, describes the maximum boom length each weight can be carried at.