

How do I calculate the capacity of a Forklift?

Consult the data plate attached to the forklift to determine the standard load capacity available. Each model of forklift will be rated to a certain capacity; the average sit-down model can safely transport 4000lbs. The data plate is the resource for all calculations regarding lift capacities and should never be tampered with or removed or replaced. This information plate is usually located in a very visible position on the machine for easy access by the operator.

Determine the center of gravity or COG, of the load that is to be handled. Standard forklifts base the COG on a load center of 48 inches tall and 48 inches long which places the COG 24 inches from the backrest and 24 inches above the forks. When the load is raised, the center of gravity moves forwards and when the mast is tilted back, the COG will move toward the forklift. The load capacity will be altered as the COG moves. For example, the 4000lbs standard capacity may be reduced by as much as fifty percent when the load is raised and slightly tilted forward. There is a chart located on the data plate showing the decreasing load capacity as the load is raised.

In order to calculate the load capacity, determine the weight of the load, the conditions involved in the transport and the height the load will need to be raised. Consider if the load will need to be shifted to one side or tilted, as all of these have a direct relationship to the forklift's load capacity equation. Using the data plate, correspond the COG of the load and follow the line up to the height at which you plan to place the load. The load capacity is the weight listed where the height and the cargo COG intersect. Never attempt to add additional counter weight to the forklift in order to increase its' load capacity. This violates OSHA standards and is a very dangerous thing to attempt.