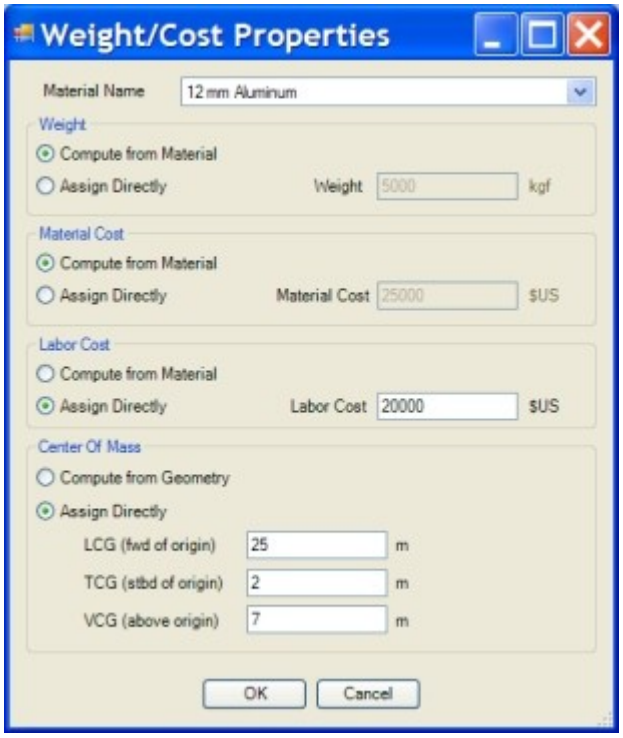
A Plug-in for Rhinoceros®

Orca3D
Weight/Cost Tracking

Weight/Cost Tracking

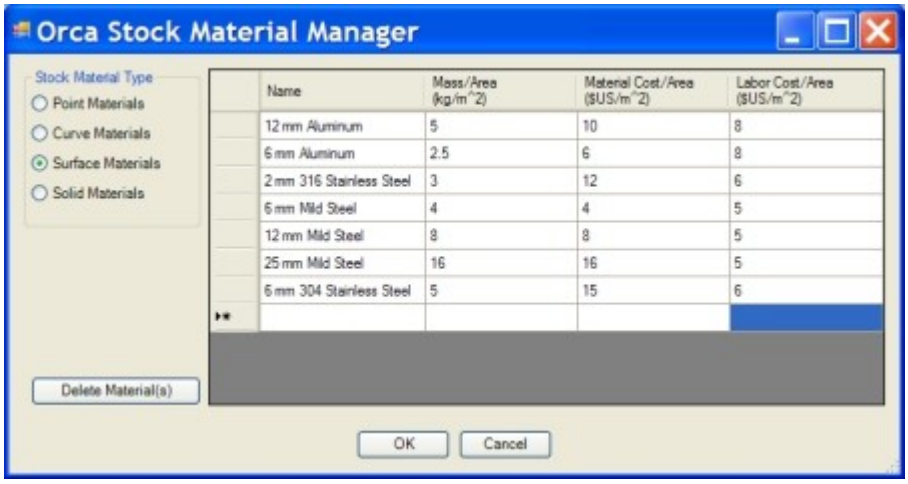
The success of any design hinges on its weight and center of gravity. These parameters are fundamental to stability, speed, capacity to carry cargo (whether it be passengers, containers, or weapons), seakeeping performance, etc. Weight and CG tracking therefore must be a fundamental part of any design process.

Cost is another critical factor in the success of a design, and good engineering practice calls for cost considerations to be closely tied to the design process.



Orca3D's Weight/Cost Tracking module adds value to your Rhino model by assigning weight and cost parameters to the objects in the model, and summarizing and presenting the data.

For example, a surface that represents a portion of the hull can be assigned a weight per unit area, and as that surface is modified, the total weight and center of gravity updates automatically. The cost parameter is broken down into material cost and labor cost, and can also be assigned on a per unit area basis. Similarly, curves can be assigned values on a per unit length basis, and solids can have either per unit area or per unit volume values. Also, curves, surfaces, and solids, as well as point objects, can be assigned an absolute value for weight and/or cost, that will not change as the object is modified.



To simplify the process of assigning weight and cost values to your objects, Orca3D includes the ability to create a library of stock materials, and you can assign a stock material to the objects in your model. For example, you might create "5 mm steel plate," with a unit weight per square meter, a material cost per square meter, and a labor/fabrication cost per square meter.