The Evaluate Toolbar

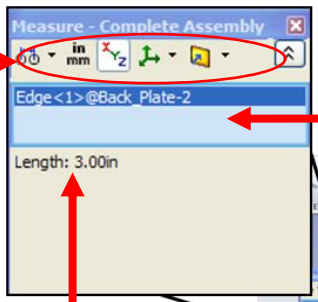
Description: Allows a user to analyze components within an assembly to see if fatigue will occur, if a component is too heavy, or if it meets the proper dimensional constraints. This feature is extremely useful before the production and manufacture of a design since it allows the user to see if a part or component needs to be edited before purchasing and building it.

Note: though there are many useful tools within this toolbar the two most used tools are Measure and Mass Properties. The other tools are either add-ins or can be found within other toolbars.

The Evaluate Toolbar At A Glance

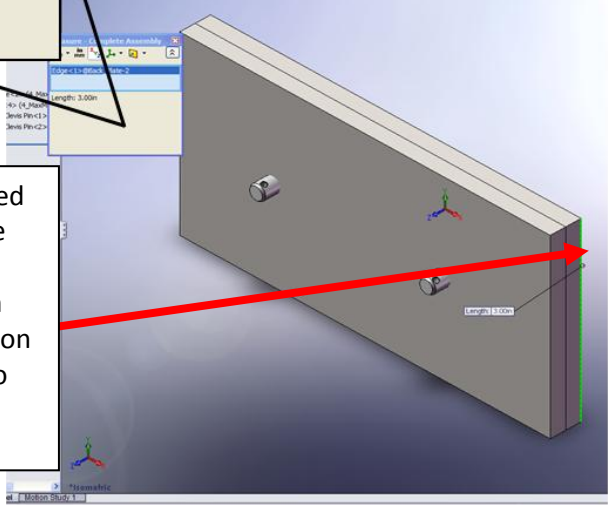
Measure

Customize the measurement settings by specifying the type of measurement (arc), the units, the coordinate measurements, the xyz relation and the projected distance between entities.



The dialogue box displays the selected contour, part face or faces. To deselect all entities, **left click** in the design space or **right click** on the entity in the dialogue box and select **delete** or **clear selections**.

The dimensions of the selected contours on the assembly are shown in both the pop-up window and in a white box in the design space. The selection will be highlighted in green to show the user what is being analyzed



Note: While using the measurement tool the user can toggle between documents in SolidWorks.

Mass Properties

The dialogue box displays the selected part, subassembly, or complete assembly. To deselect the item, **right click** on the entity in the dialogue box and select **delete** or **clear selections**. To select another component **left click** on the component and press **recalculate**.

Assign values to materials not found in the library.

The results box shows the calculated mass, volume, surface area, center of mass, and the moment of inertia.

The results box will also tell the user the primary units used in the calculations. To change units **left click** on the options tab and select **use custom settings**.

The inertia is calculated with the formula: $I_{xx}=\int (y^2+z^2)\, dm$, $Iyy=\int (z^2+x^2)\, dm$, and