

SolidWorks Toolbox Tutorial

SolidWorks offers various pre-designed templates that are helpful for creating complicated machined parts including bolts and screws, gears, bearings, and more. To access this feature:

1. Open SolidWorks by selecting **Start**→**All Apps**→**A**→**SOLIDWORKS 2016**→**SOLIDWORKS 2016 x64 Edition**.
2. From the top left tool bar, select **File**→**New**→**Part**→**ok**.
3. To change the units system from metric to English (if you have not already been prompted to do so), again navigate to the top left toolbar, and select **Tools**→**Options**.

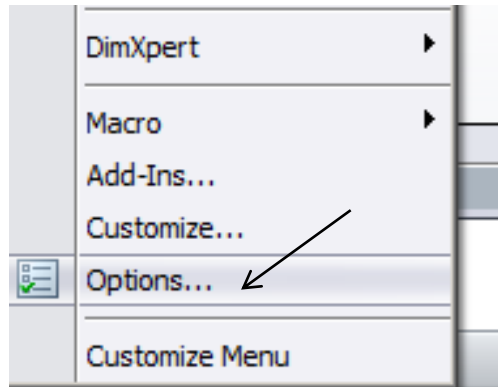


Figure 1. Tools→ options dropdown menu

4. Click the “**Document Properties**” tab and left click “**Units**” on the vertical left list of options. Select IPS units and click “**ok**”. The precision can also be adjusted here by clicking the intersection of “**Length**” and “**Decimals.**” Change the precision to **.123** for this example, and click “**ok**”.

Type	Unit	Decimals	Fractions	More
Basic Units				
Length	inches	.123		...
Dual Dimension Length	inches	.123		...
Angle	degrees	.12		
Mass/Section Properties				

Figure 4. Precision adjustment

5. Locate the icons on the right hand side of the screen. The books icon (3rd down on the vertical list of icons) is the **Design Library**. Select **Design Library**→**Toolbox** and click **“Add in now”**.



Figure 3. Design Library icon

6. Select the desired units folder (**ANSI Inch** for English units).
7. Navigate to the desired part. Gears, sprockets and timing belts are listed under the “Power Transmission” folder. The “Structural Members” folder contains a comprehensive selection of aluminum and steel beams and parts that can be used to quickly build a complex assembly. Explore the subfolders of the Toolbox to get a better idea of what part templates already exist to help speed the drafting process.

How to make an editable gear:

1. Don't forget to save the part! If the part is to be used in an assembly (search “assembly” in the “SolidWorks Help” bar for more information), it must be saved in the same folder as all other parts to be used in the assembly.
2. Gears are listed in the “**Power Transmission**” folder. Open this folder and open the “**Gears**” folder.
3. Navigate and *Right click* “**Spur Gear**” from the listed options and left click “**Create Part.**” The part should appear in the main editing window.

4. Change the options in the left hand column (titled “**Configure Component**”) to create the desired gear. Try varying the dimensions and options from the various drop-down menus in “configure component” panel to understand how the part can be edited.



Figure 5. Finished gear from toolbox