

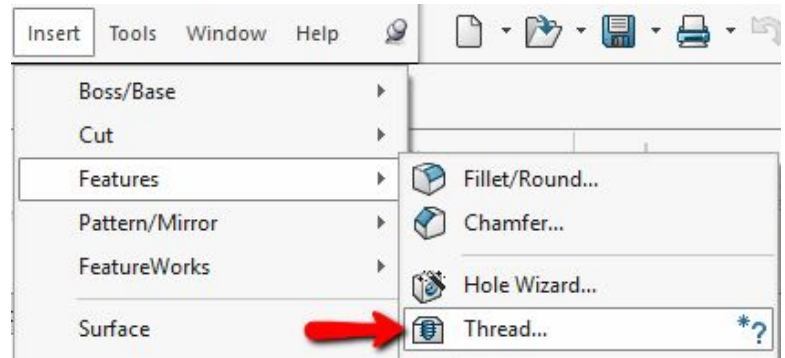
Custom Threads

The times are gone for needing to look through a Machinist Handbook or Google to create a thread profile as well as a helix feature to model a thread feature onto a cylindrical object. With SOLIDWORKS 2016 we now have a new *Custom Thread* feature. This new feature will recognize the round profile and apply a standard thread profile, as well as pitch and distance.

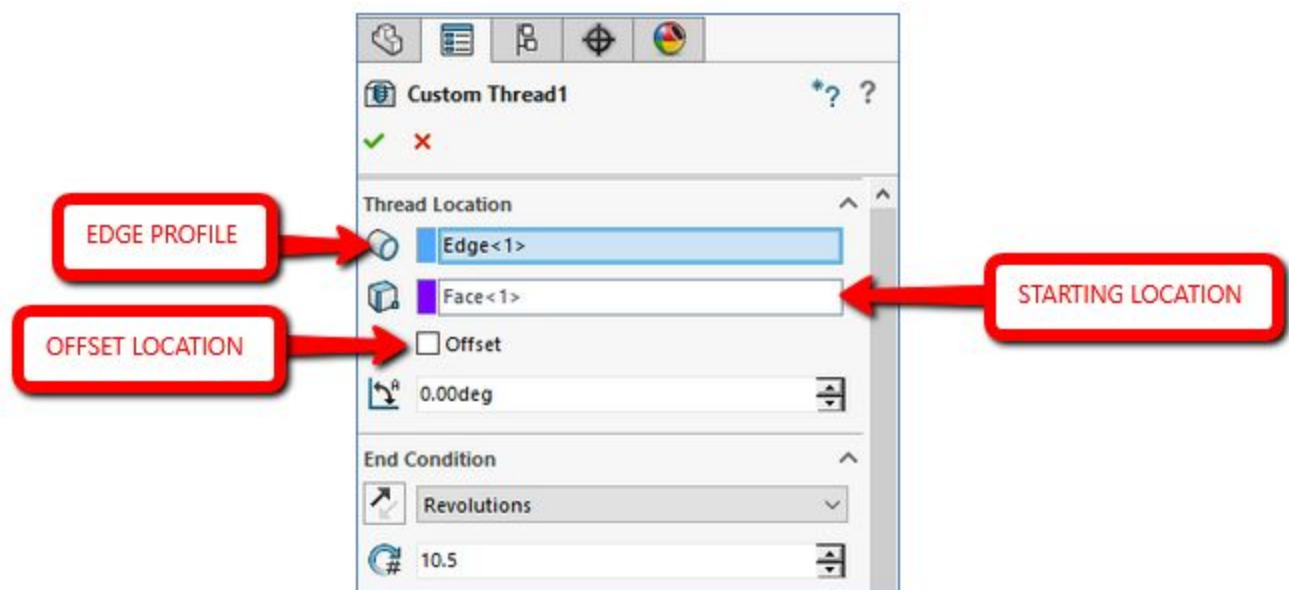
The *Custom Thread* feature is located under **Insert > Features > Thread**.

Once the *Custom Thread* feature is created you will be prompted for a set of parameters:

- Reference Edge
- Starting Location
- Offset from Starting Location
- Start Angle
- End Condition



The End Condition parameters allows you to specify if you want the thread distance to be driven by *Number of Revolutions*, *Blind (specified value)* or *Up to Section*. The Offset option allows you to specify how much of an offset to create, as well as another function with *End Condition to Maintain Thread Length*.



Custom Threads

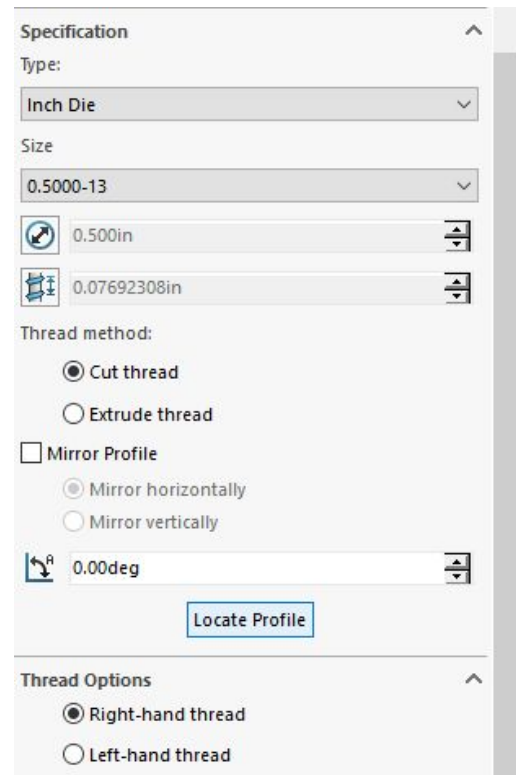
After defining the thread location parameters you can detail what type of Thread you are making under the Specification. These parameters allow you to specify **Die (Inch, Metric)**, **Tap (Inch, Metric)**, or even a **SP4xx Bottle**.

After you specify the type of thread you desire you will then specify the size of the thread, ranging from #0-80 to 4.00-4 Inches or M1.2X.025 to M90x6.0 Metric. There are also different sizes for the SP4xx Bottle.

NOTE: The size of thread is not related to the diameter of the target thread location geometry.

When you specify your Type and Size you can then specify if this is going to be a Cut Thread or Extrude Thread feature. Other options for the Custom Thread feature include:

- Mirroring it either Vertically or Horizontally
- Change the angle of the thread profile
- Right-hand or Left-hand threads



The image shows the 'Specification' dialog box for the Custom Thread feature. It includes the following sections:

- Specification**
 - Type: Inch Die
 - Size: 0.5000-13
 - 0.500in
 - 0.07692308in
 - Thread method:
 - ☒ Cut thread
 - ☐ Extrude thread
 - ☐ Mirror Profile
 - ☒ Mirror horizontally
 - ☐ Mirror vertically
 - 0.00deg
 - Locate Profile
- Thread Options**
 - ☒ Right-hand thread
 - ☐ Left-hand thread

