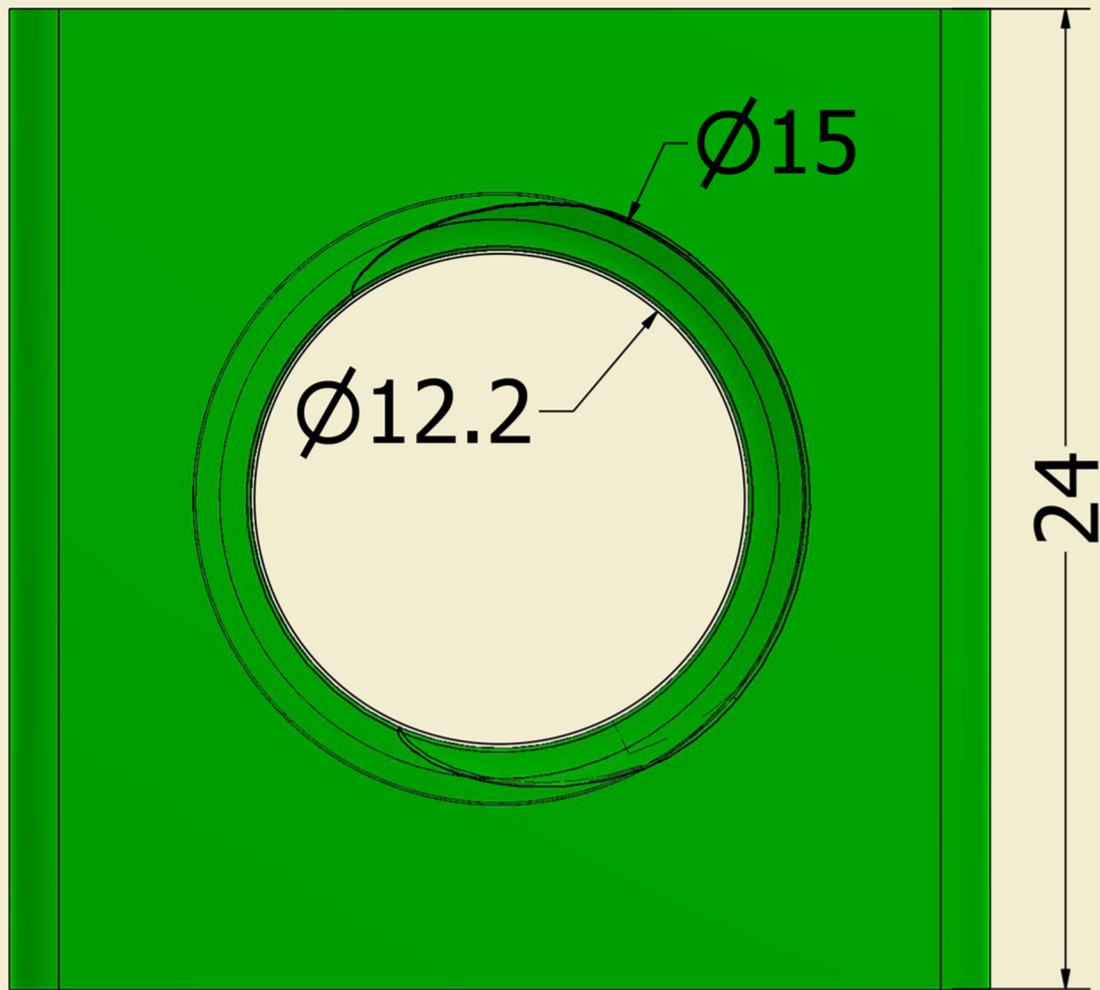
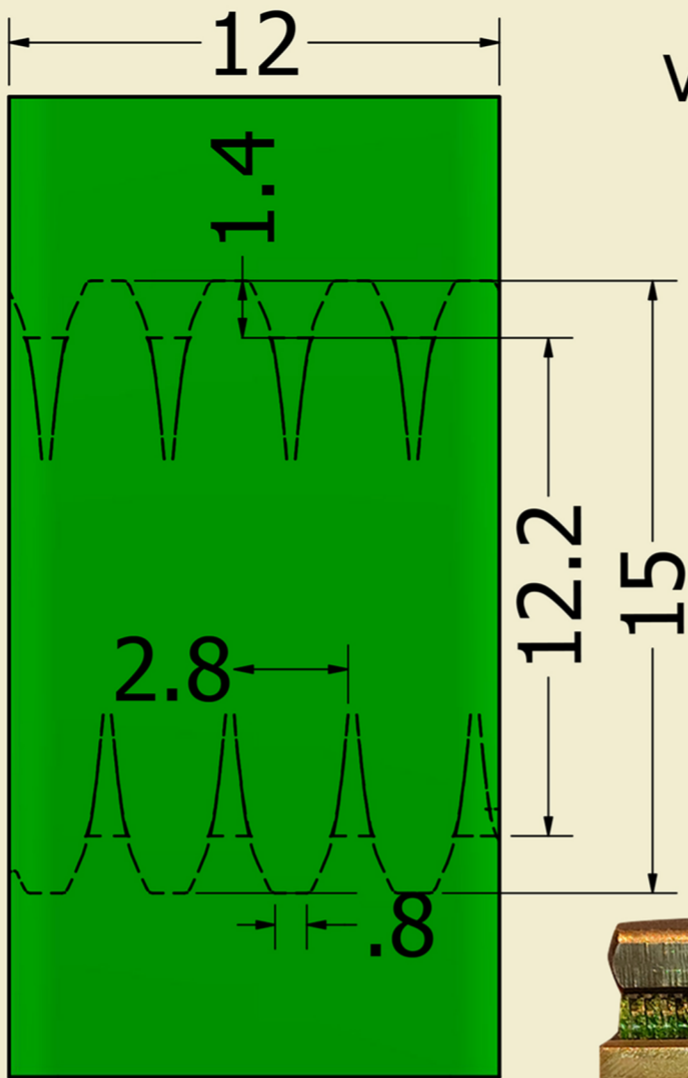


Top



Print Orientation

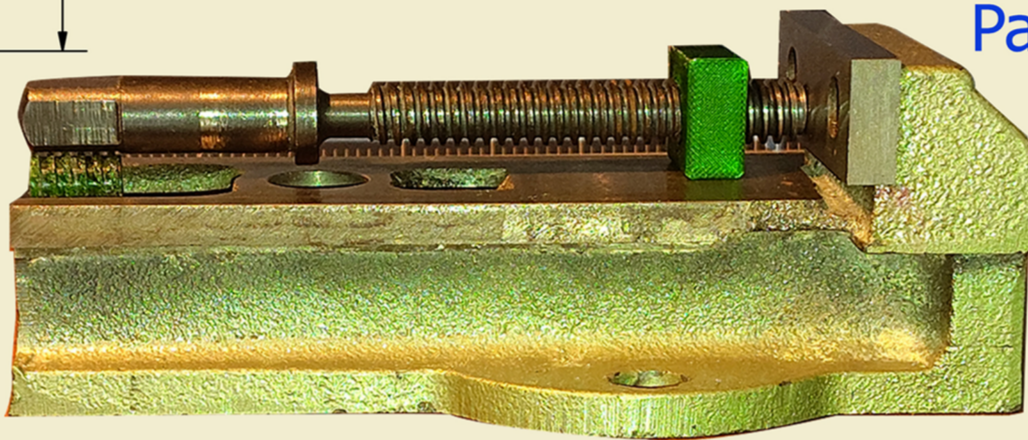


[Same procedure for nut, with cut and attached sketches below]

Vice's Tr14x3 Threaded Rod & Nut

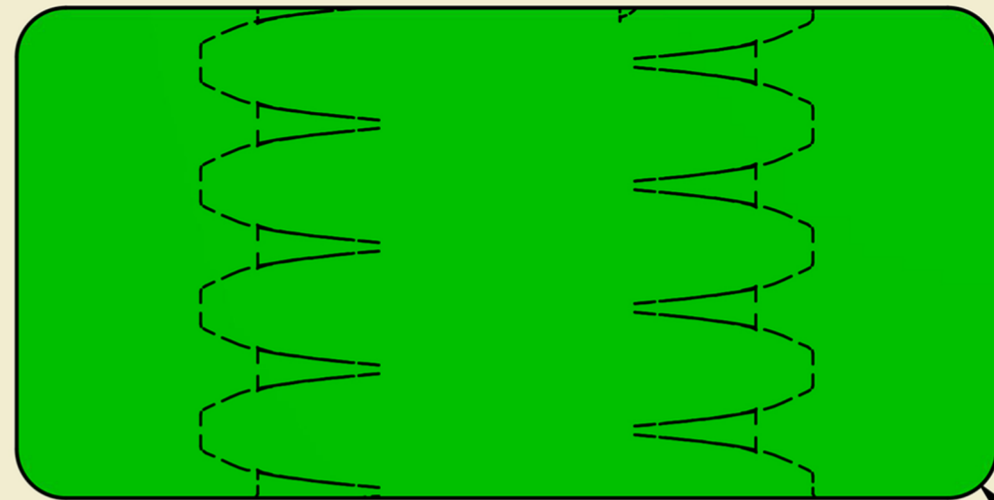


Tr14x3 Die & Tap



# PETG Tr14 x 3 Nut & Bolt

Preface: eBay Vice's Nut was not too precise. After fabricating, improvements were descent. Research into Additive Threads was compelling. So the Journey began.



Step 7: Print  
.4mm Nozzle  
.2 Layer Height  
Bowden Titan|V6  
Single Outline  
100% Infill  
S3D V4.1

## Parting Ponders

Slop is markedly better with PETG  
Manual threading is smooth. 12.4-.6 for Nut final  
Splitting procedure is intended for experimentation  
Lofting might be necessary at the beginning and end of threads

Replicating Vice Nut & experimenting with motors is a go!

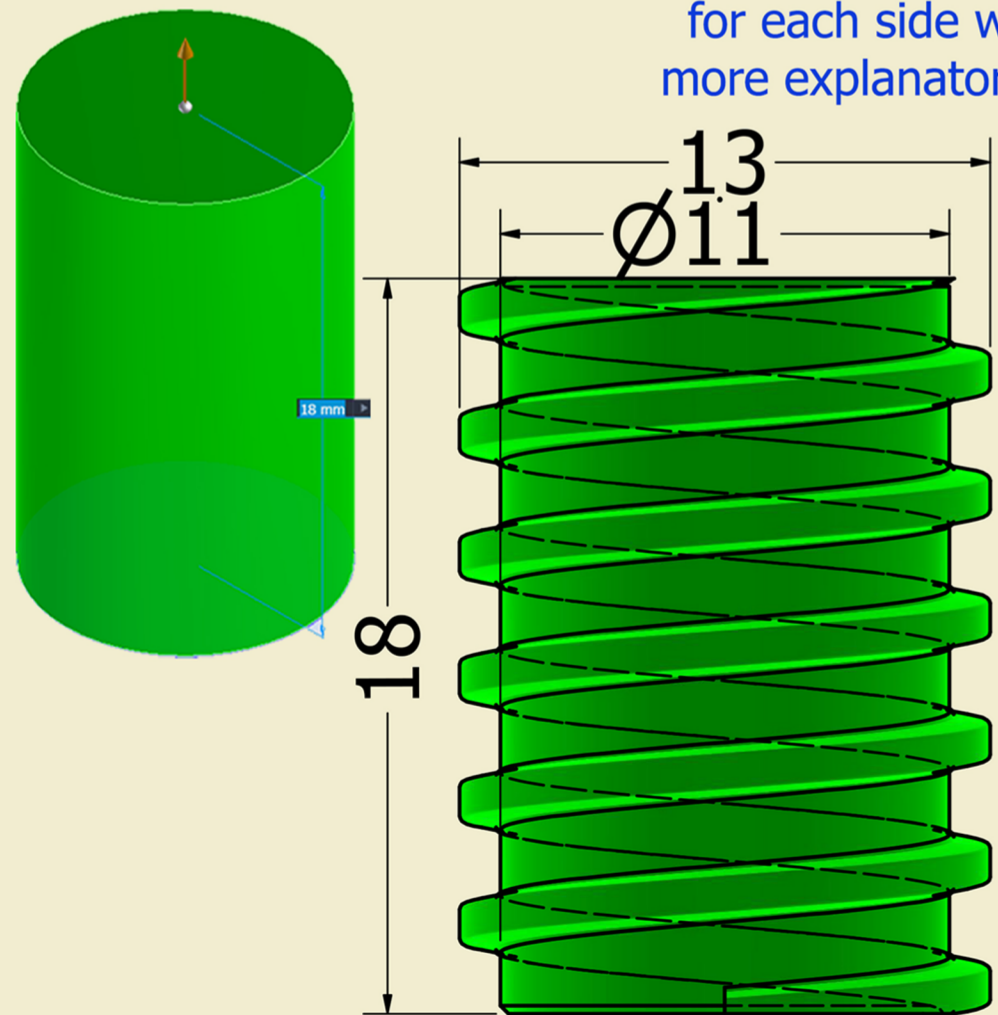
## Bolt Creation Step 1: Find Thread Specs

ISO Metric Trapezoidal Threads DIN 103 & ISO 2904 exerpts						
Size [mm]	Thread Designation	Pitch [mm]	Class	Major Dia Max   Min	Pitch Dia Max   Min	Minor Dia Max   Min
14	TR14 x 3	3	7e	14.000   13.764	12.415   12.191	10.500   10.135

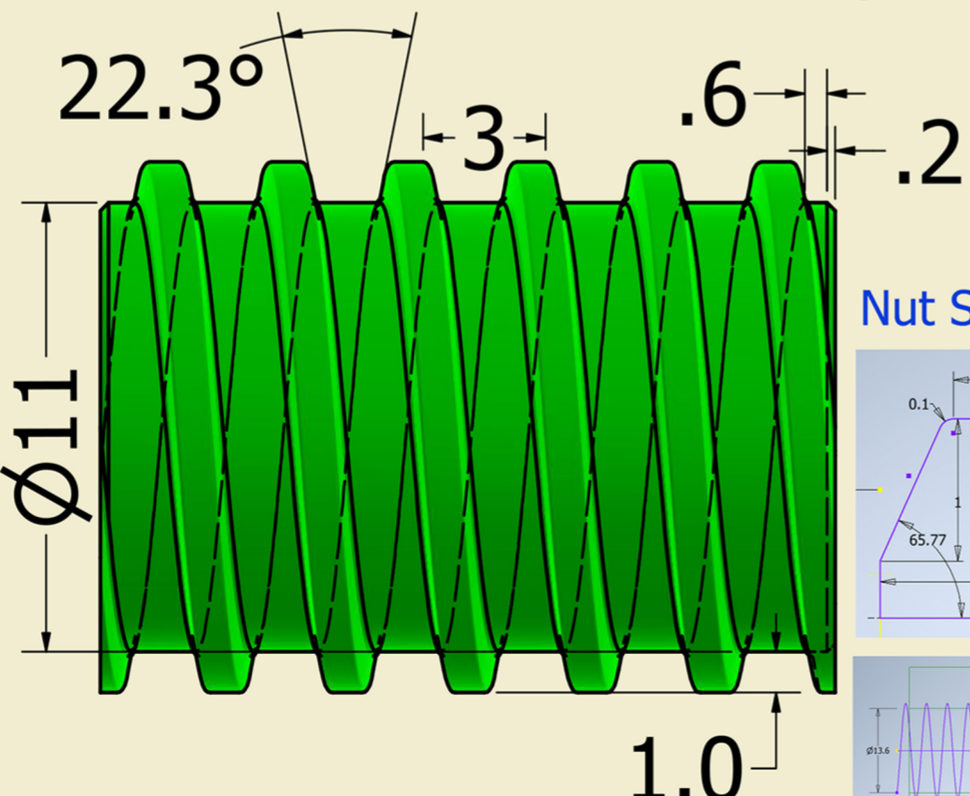
## Step 2: Extrude ID

2+ Pitches More than desired final length  
Ex:[2x3=6mm]

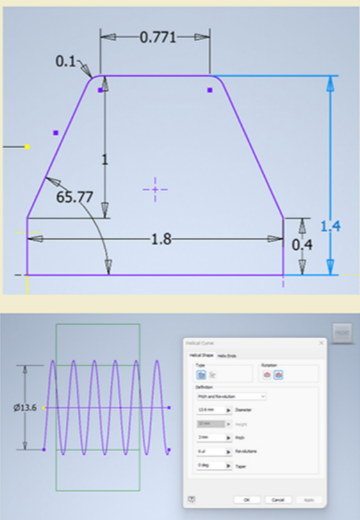
[Leaving at least one extra pitch for each side will become more explanatory by Step 6]



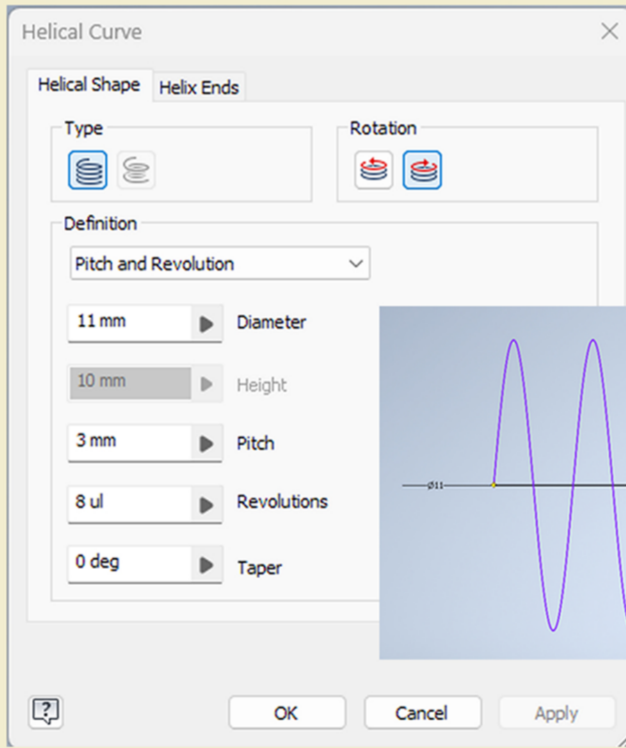
Print Orientation



## Nut Sketches



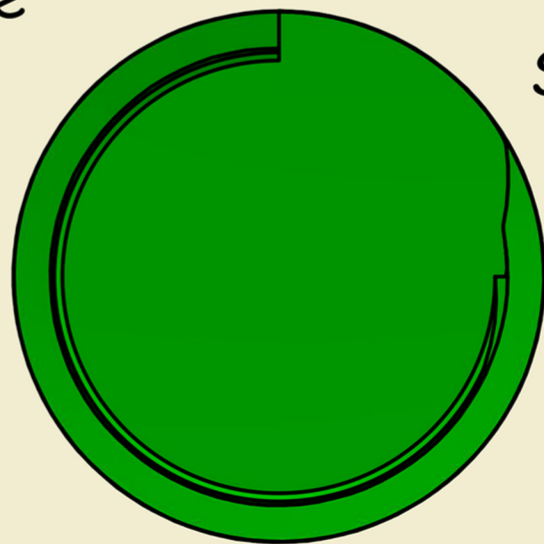
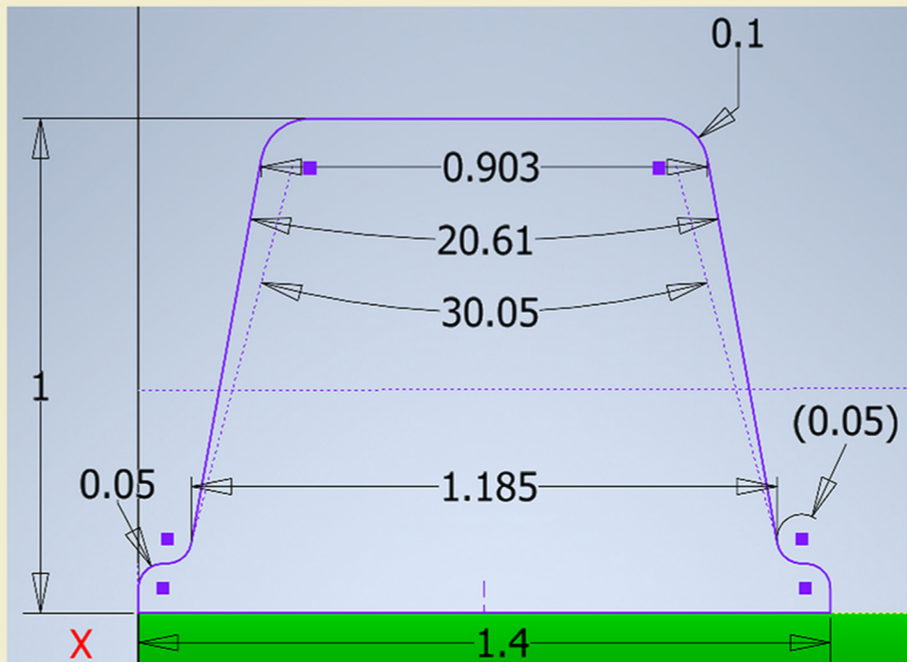
## Step 3: Create 3D Sketch [Helical Curve]



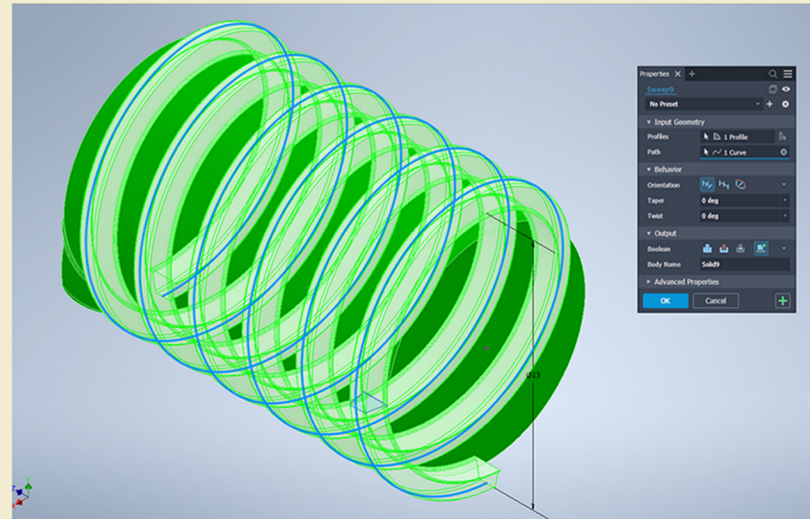
Pitch & Revolution  
Diameter: 11mm  
Pitch: 3mm  
Revolutions: 8ul

Tooth Angle is reported at 30°  
Figuring the right dimensions considering ooze and each printer might take some tweaking

## Step 4: Sketch Thread's Profile



## Step 5: Sweep Thread Profile around Helical Curve



## Step 6: Create Plane(s) & Split

Position where buildplate and thread are ideal to begin printing.  
Use Split to Slice.  
Repeat for Top if needed.

