FGMT - 002

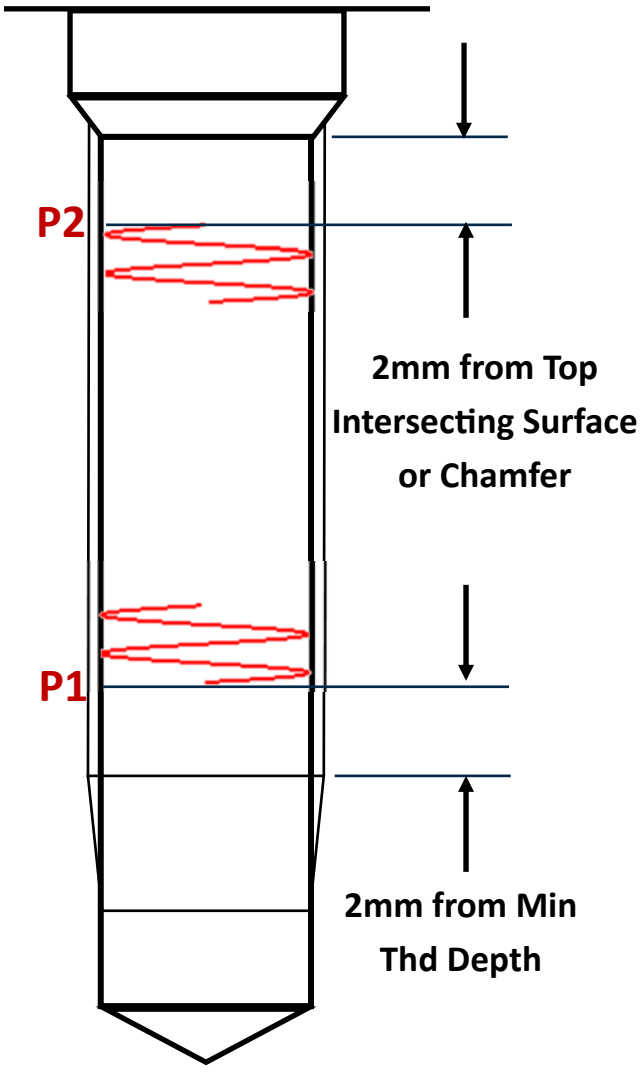
TAPPED HOLES

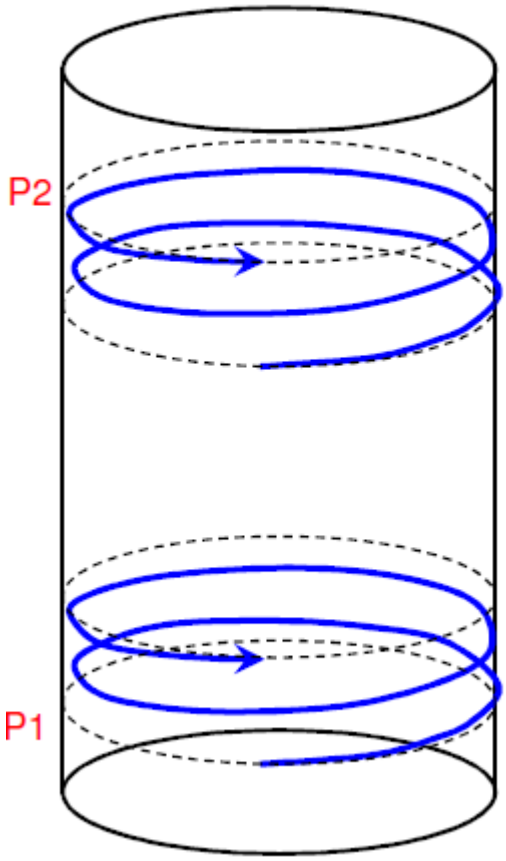
3/29/2020

(True Position)

Method A: Helical Scan Circle (Standard)

Helically scan the thread at an axial feed rate per revolution equal to the thread pitch for a distance of 2 thread pitches. Scans are to be done at designated positions based on hole depth to diameter ratio. See Design Rules to the right.	**Design Rules:** **Helical Scans:** For hole depth to diameter **ratio** of : - 1:1 only one single helical scan for position required at "P1". - Greater than 1:1 to 1:20, two helical scans are required (@ Position "P1" and "P2") **True Position:** Distance of scans at "P1" and "P2" must be 2 full thread pitches For every 1:20 drill to diameter increase add another scan level. For example a 1:40 would have 3 levels and a 1:60 would have 4 levels and so on
Set the scanning speed to 30% of the featured diameter, rounding is permissible.	
"Step Width", not 'number of points'. Step width should be 0.01 of scan speed.	

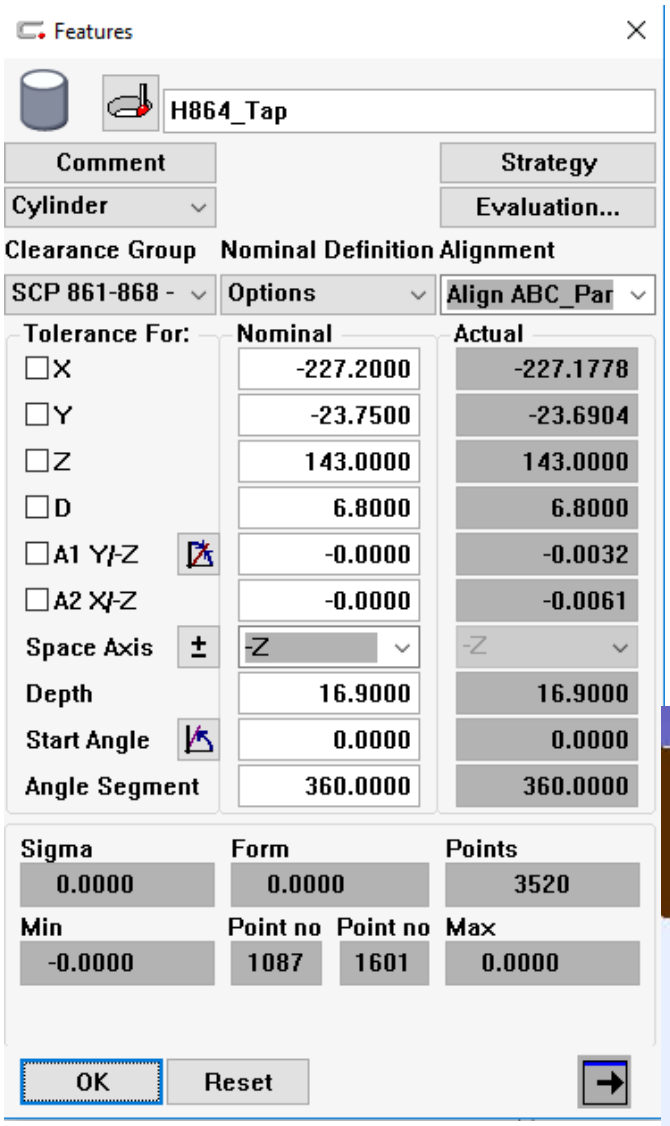


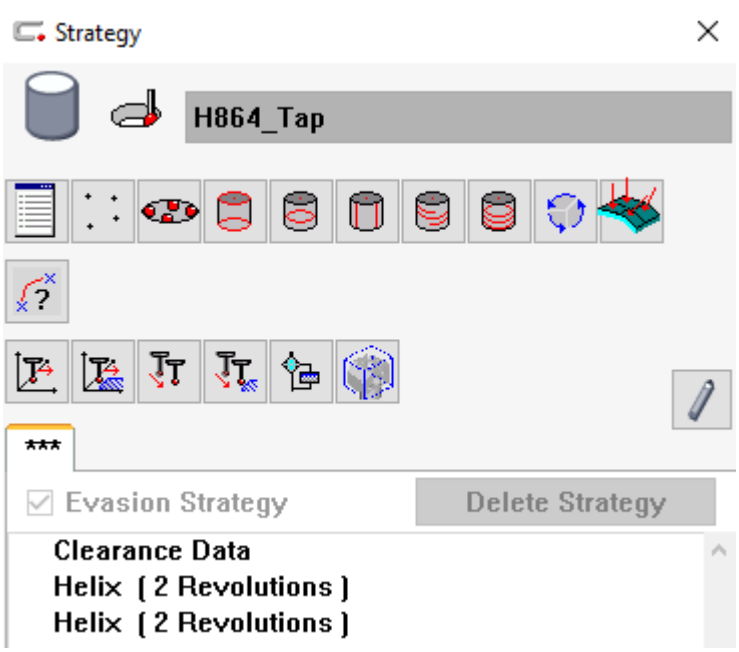


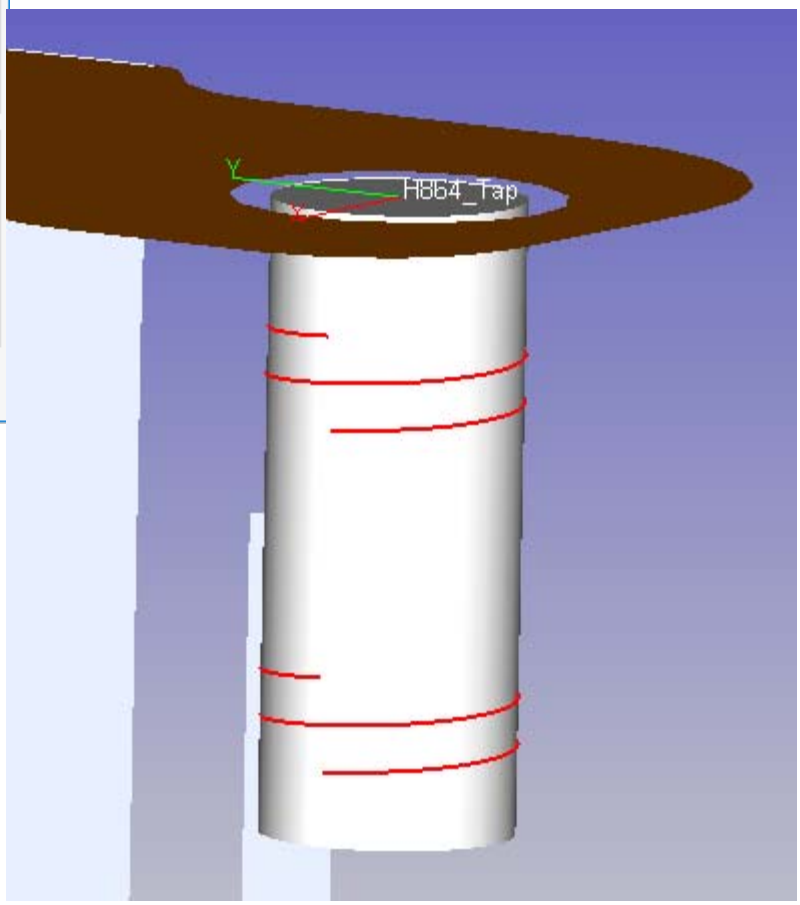
Application: M8 x 1.25 Internal Thread - Min Thd Depth of 16.9mm

-Measured in the XY Plane, Anchored at Top of Boss [143.000]

Note: Hole has is Counter bored 1.3mm Deep







Helix

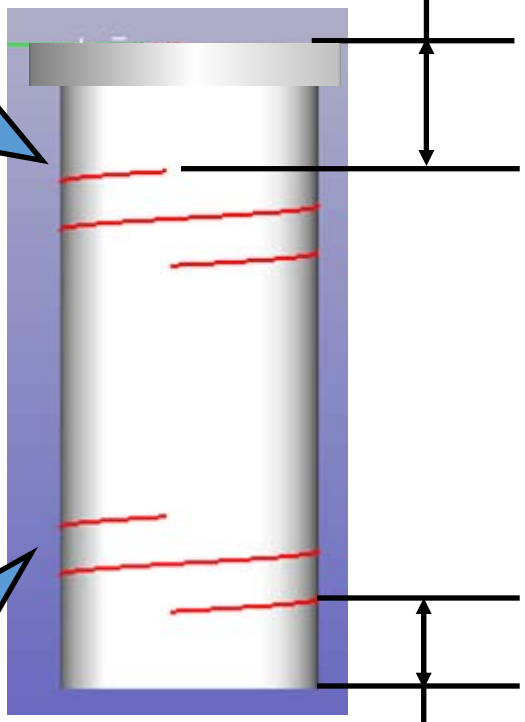
H864_Tap

Presettings | Calculate | Datum Features

Speed	2.4000
Step Width	0.0240
Number of Points	1784
Stylus	#2 2
Single points	☐

Basic options | Special Settings

Start height	3.3000
Target height	5.8000
Number of rotations	2.00
Gradient/Slope	1.2500
Number of circles	0
Start Angle	0.0000
Rotation direction	☑ Right



Helix

H864_Tap

Presettings | Calculate | Datum Features

Speed	2.4000
Step Width	0.0240
Number of Points	1784
Stylus	#2 2
Single points	☐

Basic options | Special Settings

Start height	12.4000
Target height	14.9000
Number of rotations	2.00
Gradient/Slope	1.2500
Number of circles	0
Start Angle	0.0000
Rotation direction	☑ Right

On the Feature Tab, Create (2) Circles and “Recall Feature Points” from the path [1] scan into one circle and the path [2] into the other circle. The circles will then be used for the True Position callouts on the Characteristics Tab