

First, it is recommended that a test is completed to establish the removal depth of the current hatch pattern setup by producing 100 passes of the pattern (can increase the number to 100 in the "Total" value near the bottom, and reset using the "R" button as necessary—return to 0 when complete). We would recommend a 10mm patch of the same material to run the 100 passes of the hatch pattern, then measure the material removal depth, and divide by 100. This will be the "slice thickness" placed into a value later in the process.

1. Open LaserMark3 software and click the "3D" button within the view toolbar

Laser Mark 3.0 254FL-Untitled					-	o ×
File Edit Draw Modify View Laser Help		\frown				
C C C C C C C C C C C C C C C C C C C	10	월월월 [] [] [] () () () () () () () () () () () () () () () () () () ()				
STL & 🖉 🖉 🛪 🕂 &		\smile				
	1 🗇					
		/♪ ≪퇡ळ��~~ !!? ?, 의효공22월				
Object list 👻 🛡 🗙	^	Penbox		▼ # ×		
! Name Type		+¥ .		Pe Nat		^
		***		🔆 0 Def		
	1			🔆 1 Def		
				¥ 2 Def		
				¥ 3 Def		
	\sim			¥ 4 Def		
				★ 5 Def. ★ 6 Def.		
	3			7 Def.		
		+7		* /		~
	0					í
	0				it pen parameter	^
				Pen No		0
	4				fault param	True
Object property = # X	O			Param		Default
				Loop C	ig parameter	1
Position Size[INCH]	Т				INCH/Second)	30
x				E Laser p		30
		H () H Layert	×		ncy(KHz)	30
z				Power(70
A Count	-	Mark	→ ậ X	Continu	ue mode	False
Apply	Ð	Continuous ort 0 00:00:00.001 T () () () () () () () () () () () () ()		Wave		Wave0
	\bigcirc			🗉 Delay F	Param	
		Mutlayer Show contour Red(F1) Mark(F2) Para(F3)		Start TC		200
	6				Off TC(US)	300
	FH			_		
		Split Param. No split				
~				Advance.	Param library	
Start		2.400.7.116	F7Grid:Off	F8Guildline:0	Off F9Object:Off	

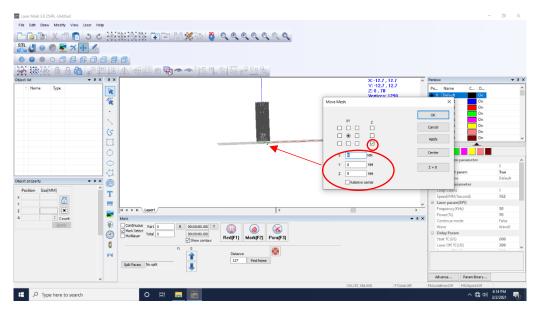
2. Select the STL file to import (will center as placed in the STL, and will not be modifiable in size)

Laser Mark 3.0 254FL-Untitled							_		×
Elle Edit Draw Modify View	Laser Help								
		Excitizing a manual fill of the last							
		청장장 IFF H % 장	$\mathbf{\hat{o}} = \mathbf{\hat{o}} = \hat{$						
🔼 🔰 🔍 🖉 🛪 🖪	₽ <i>№</i>								
	900g								
	* 0 × 0 ×					-			¥ 3
Object list	• 0 × 0 ×			X: -12.7 , 12 Y: -12.7 , 12		Penbox			
: Name Type	1			Z: -78 , 0		Pe Name	C O On		1
	1			Vertices: 12 Faces: 430	30	+ 1 Default	Qn		
						2 Default	On		
						★ 3 Default ★ 4 Default	On		
	1					★ 4 Default ★ 5 Default	On		
	5					6 Default	On		
						🌞 7 Default	On		
			1.1						
	0							1	
	0					Pen No.	parameter	0	
			177.			Use default	param	True	
Object property	• # × 🔘		diala .			Param name		Default	t.
Position Size[MM]	~		_			Marking pa Loop Count		1	
	Т					Speed(MM/		762	
Y 6					~	😑 Laser param			
z 📄 💌		H + + H Layer1	[] <		>	Frequency() Power(%)	3Hz)	30	
A Count		Mark			+ a ×	Continue m	ode	False	
Apply	*	Continuous Part 0 R 00:00:00.00				Wave		Wave0	
		Multiaver Total 0 00:00:00.00				Delay Paran Start TC(US)		200	
		Show cont				Laser Off TC		300	
	PI	Y: 0	Distance						
		Spilt Param. No spit	127 Find home						
		•							
	~					Advance	Param library		
				-118.636,149.661	F7Grid:Off	F8Guildline:Off	F9Object:Off		
Type here to search		o 🛱 🥅 📷					^ 🛱 🕸	4:13 PM 3/2/2021	5

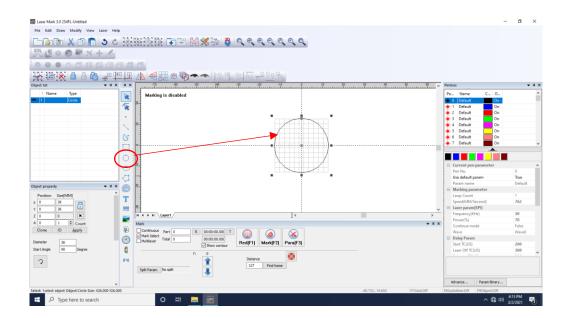
1101 W. Sanilac Rd., Caro, Michigan 48723 U.S.A. Phone: 866-799-0199



3. Place the STL in the position relative to the part on the fixturing (0= top of the 5"x5" docking plate). Click "OK"



4. Draw a shape around the STL to create an area to fill in between the SLT solid and the removal solid of the part (should exceed or match the outside diameter in this case)



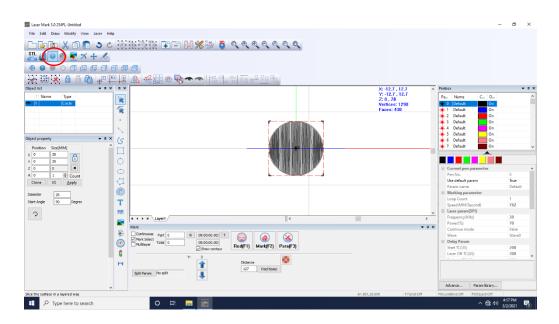


- Laser Mark 3.0 254FL-Untitled σ ile Edit Draw Modify V
 File Ext Date: Modely very user mey

 Image: State Date: Modely very user mey

 Image: State Date: State STL 🖉 🔍 🛒 🛪 🕂 🦶 . . . * Marking is disabled × ing pa T H + + H Layert 30 70 False 1 < 00:00:00.00t T 00:00:00.00t Show cont ¥) Ø Red[F1] Mark[F2] Para[F3] Wave Delay Param Start TC(US) Laser Off TC(US) Total 200 300 26 90 Start Angle 6 0 \$ FM Distance 127 Find home Split Advance... Param library 🛨 🔎 Type here to search
- 5. Return to "3D" view to slice the STL

6. Click the "Surface Delamination" button to slice the STL

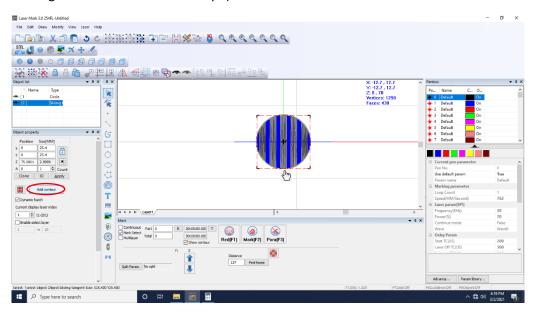




 Insert the thickness of the layer removal that had been previously established in testing the hatch pattern thickness removal per pass, and set the height of the removal zone (top 3mm in this case). Click "OK"

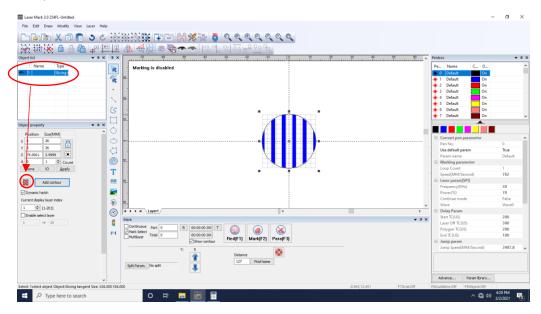


8. Click the "Add Contour" button to combine the slice and circle outline for removal of material outside of the STL. Place the cursor over the outside shape—when the cursor becomes a hand, click to create one sliced entity (skip if engraving the STL shape into the material instead of relieving material to reveal the shape)

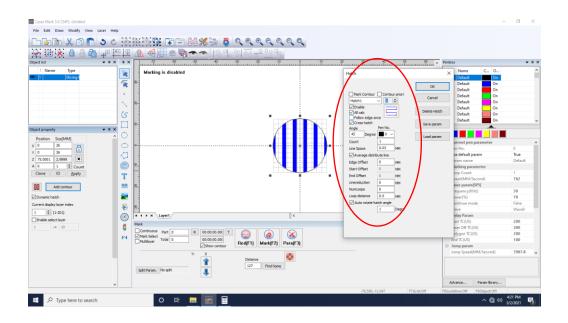




9. With the sliced entity selected, click the "Hatch" button to fill using the same that depth testing was produced with



10. Populate the Hatch menu with the same hatch utilized to established the depth/slice value





11. Layers can be inspected visually by choosing a layer from the index and clicking "Apply", and begin engraving when ready. It is important to ensure the part is monitored, does not get exceedingly hot, and adequate fume extraction is supplied (an air knife can also provide assistance in some cases)

