



Startup Tasks

- Create a new file
- Open an existing file

Recently opened files ...

- ShopbotCut_03_threechairs.dxf
- ShopbotCut_01.dxf
- 0924CUT_05.dxf
- 0924CUT_04.dxf

Video Tutorials

- Tutorial Video Browser...

Online Resources

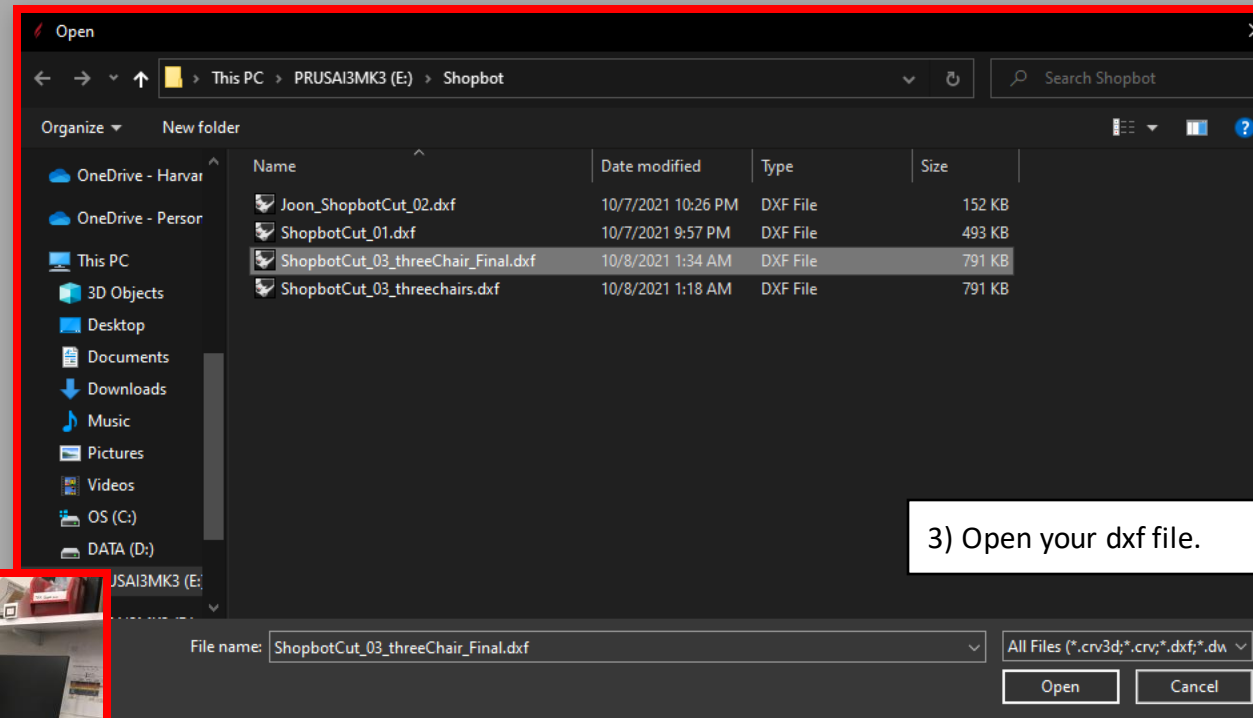
- Vectric Web Site
- Support Web Site
- Vectric Forum
- Vectric on Facebook
- Vectric on Twitter

Clipart & Projects

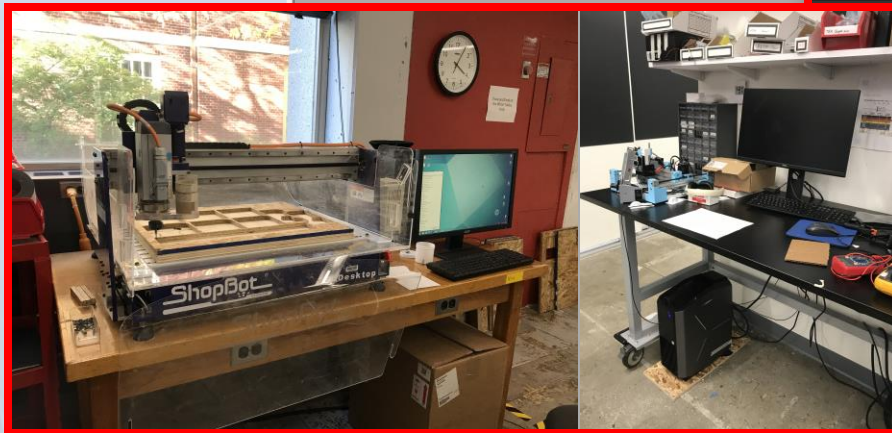
- Design & Make

2) Open an existing file

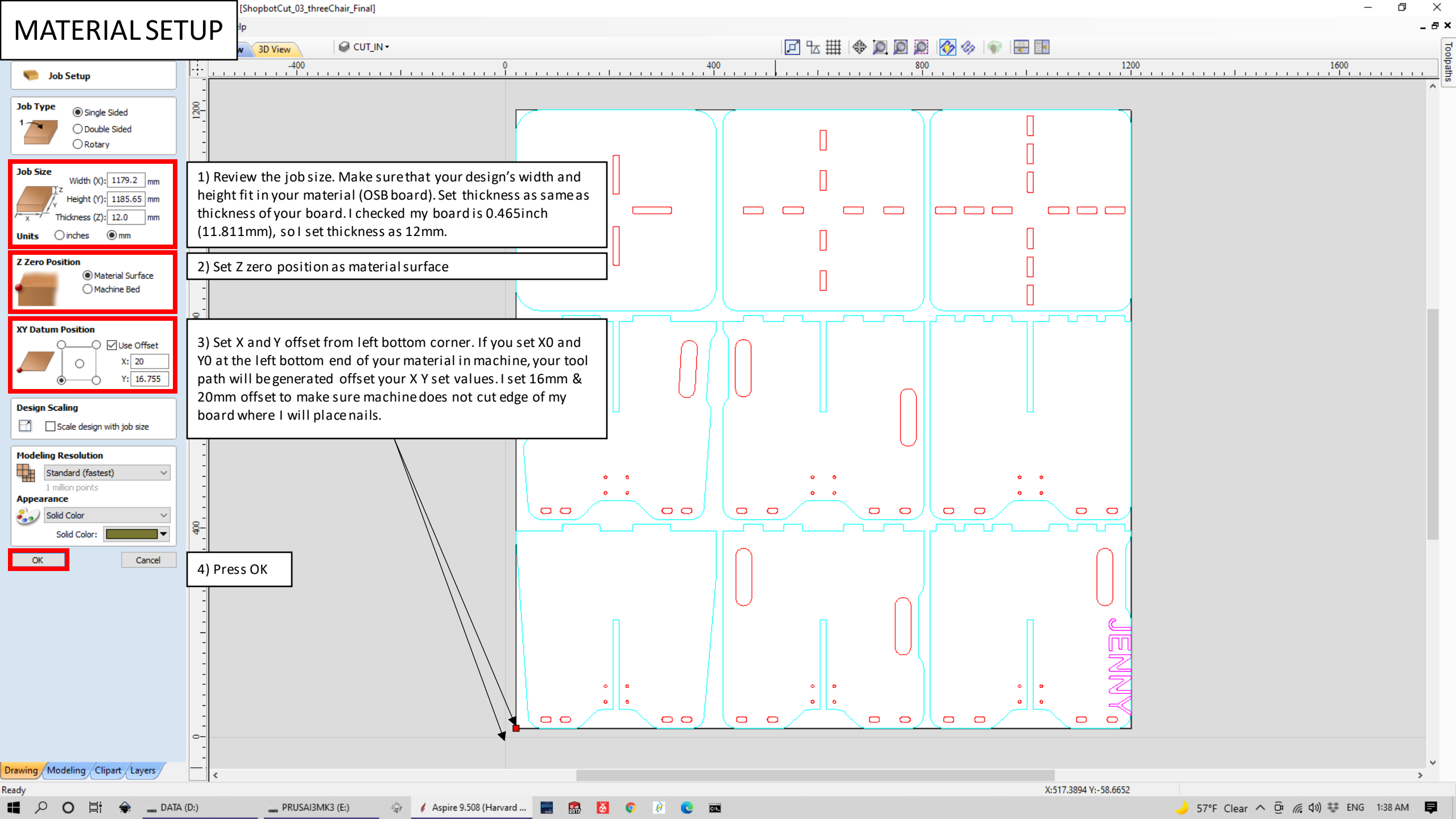
*Note : Before using Aspire, please prepare your cut design file and export in dxf file format. The sample file in this document includes three layers- 1) profile for 2mm depth engraving 2) profile for holes, and 3) profile for outmost edge of each parts.



3) Open your dxf file.




1) Launch Aspire software, the program is installed in a computer besides ShopBot and an Alienware besides electronics.




MATERIAL SETUP

Job Setup

Job Type


1  ☒ Single Sided
☐ Double Sided
☐ Rotary

Job Size


 Width (X): 1179.2 mm
Height (Y): 1185.65 mm
Thickness (Z): 12.0 mm

Units ☐ inches ☒ mm

Z Zero Position

 ☒ Material Surface
☐ Machine Bed


XY Datum Position

 ☒ Use Offset
X: 20
Y: 16.755



Design Scaling

☐ Scale design with job size

Modeling Resolution

 Standard (fastest)
1 million points

Appearance

 Solid Color
Solid Color: 

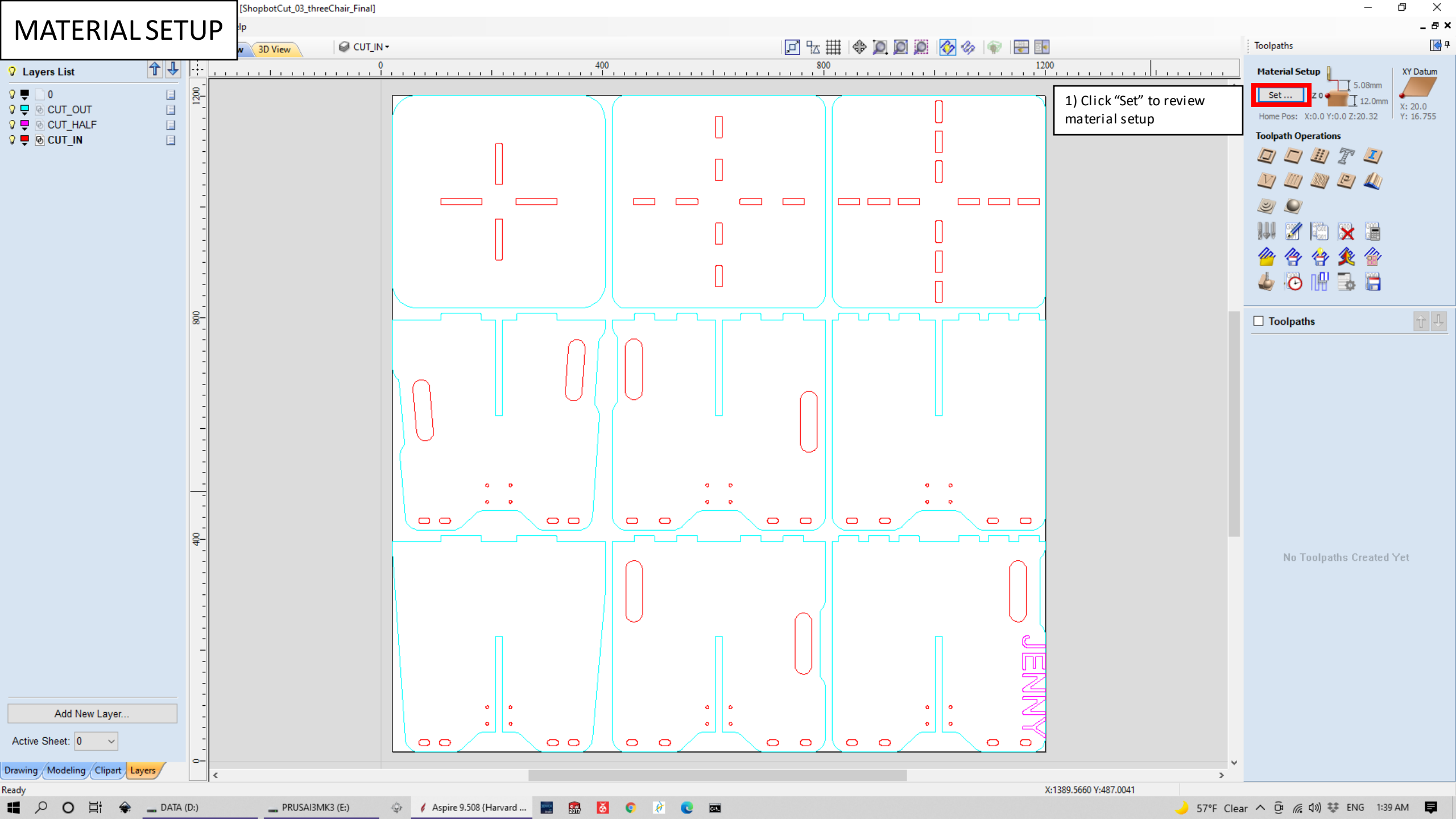
OK **Cancel**

1) Review the job size. Make sure that your design's width and height fit in your material (OSB board). Set thickness as same as thickness of your board. I checked my board is 0.465inch (11.811mm), so I set thickness as 12mm.

2) Set Z zero position as material surface

3) Set X and Y offset from left bottom corner. If you set X0 and Y0 at the left bottom end of your material in machine, your tool path will be generated offset your X Y set values. I set 16mm & 20mm offset to make sure machine does not cut edge of my board where I will place nails.

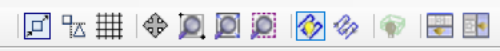
4) Press OK



MATERIAL SETUP

[ShopbotCut_03_threeChair_Final]

3D View CUT_IN



- Layers List
- 0
 - CUT_OUT
 - CUT_HALF
 - CUT_IN

Add New Layer...

Active Sheet: 0

Drawing Modeling Clipart Layers

1) Click "Set" to review material setup

Toolpaths

Material Setup

Set ...

Home Pos: X:0.0 Y:0.0 Z:20.32

XY Datum

Z 0

5.08mm

12.0mm

X: 20.0

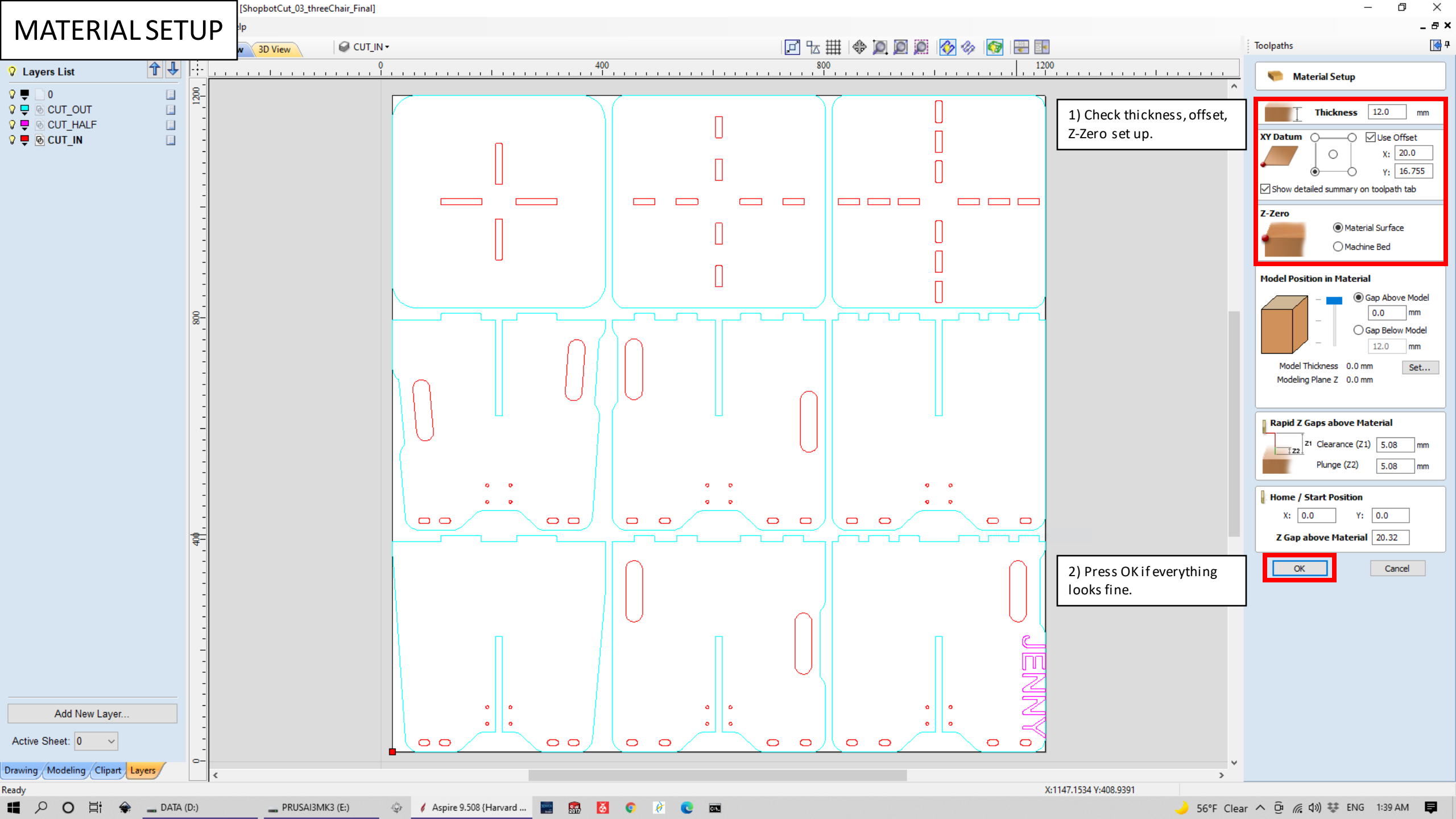
Y: 16.755

Toolpath Operations

Icons for various toolpath operations: drilling, milling, turning, etc.

☐ Toolpaths

No Toolpaths Created Yet



MATERIAL SETUP

- Layers List
- 0
 - CUT_OUT
 - CUT_HALF
 - CUT_IN

1) Check thickness, offset, Z-Zero set up.

Material Setup

Thickness 12.0 mm

XY Datum ☒ Use Offset
X: 20.0
Y: 16.755

☒ Show detailed summary on toolpath tab

Z-Zero
☒ Material Surface
☐ Machine Bed

Model Position in Material

☒ Gap Above Model
0.0 mm

☐ Gap Below Model
12.0 mm

Model Thickness 0.0 mm
Modeling Plane Z 0.0 mm

Set...

Rapid Z Gaps above Material

Z1 Clearance (Z1) 5.08 mm

Plunge (Z2) 5.08 mm

Home / Start Position

X: 0.0 Y: 0.0

Z Gap above Material 20.32

OK

Cancel

2) Press OK if everything looks fine.

POCKET CUT

[ShopbotCut_03_threeChair_Final]

3D View CUT_HALF



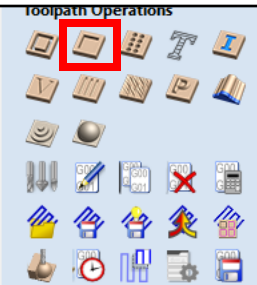
Toolpaths

Layers List

- 0
- CUT_OUT
- CUT_HALF**
- CUT_IN

2) Right click on the first layer you want to cut or make a pocket. Select all vector.

4) Click Pocket Cut
In this case, I do not want to cut all the way through the material. I want to cut certain depth all area inside.



Toolpaths

No Toolpaths Created Yet

1) Click Layer

3) You will see selected vector highlighted as dashed line.

Ready

Drawing Modeling Clipart Layers

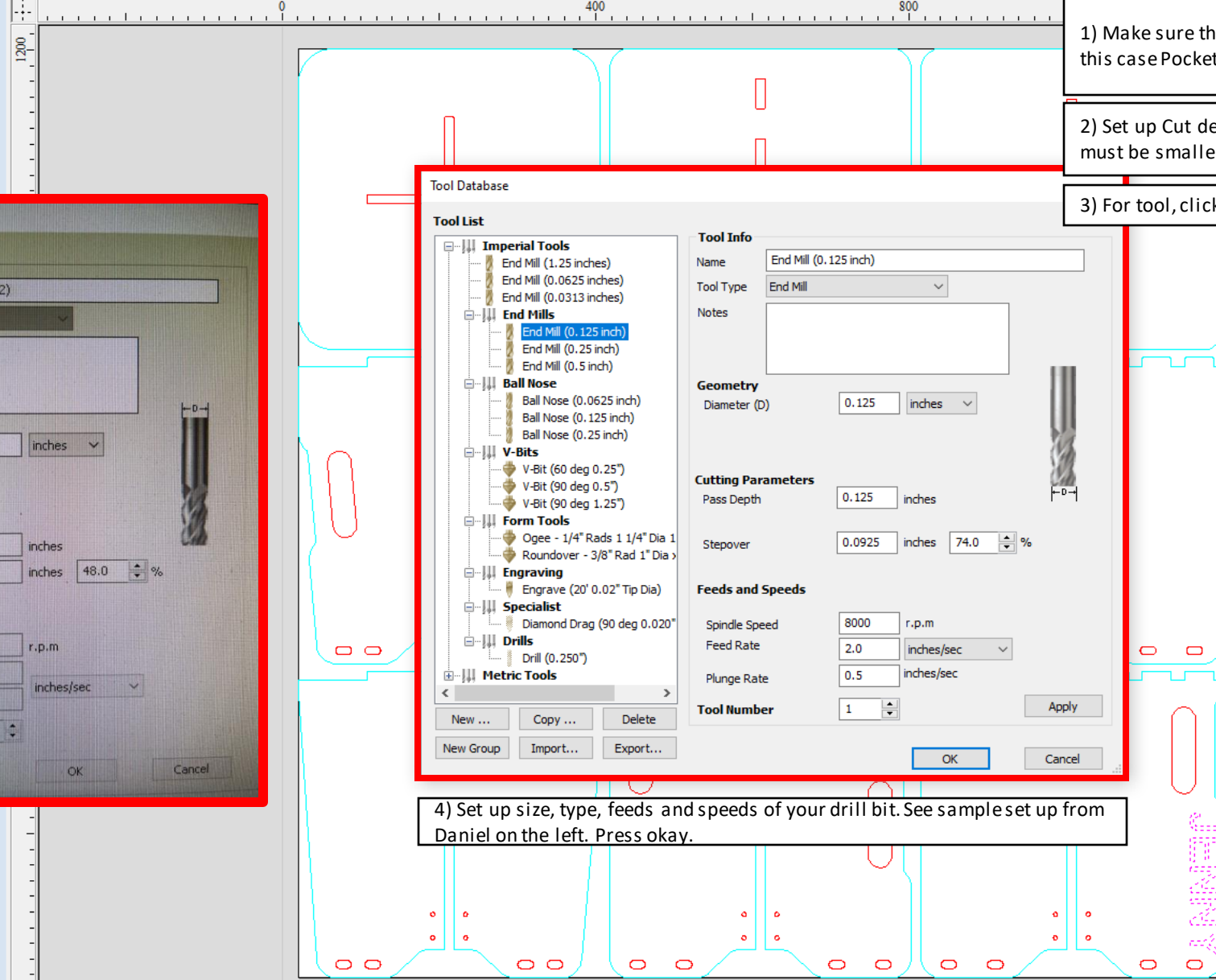
X:1174.5446 Y: -0.5602

W:41.578 H:185.066 S:5

56°F Clear 1:41 AM

POCKET CUT

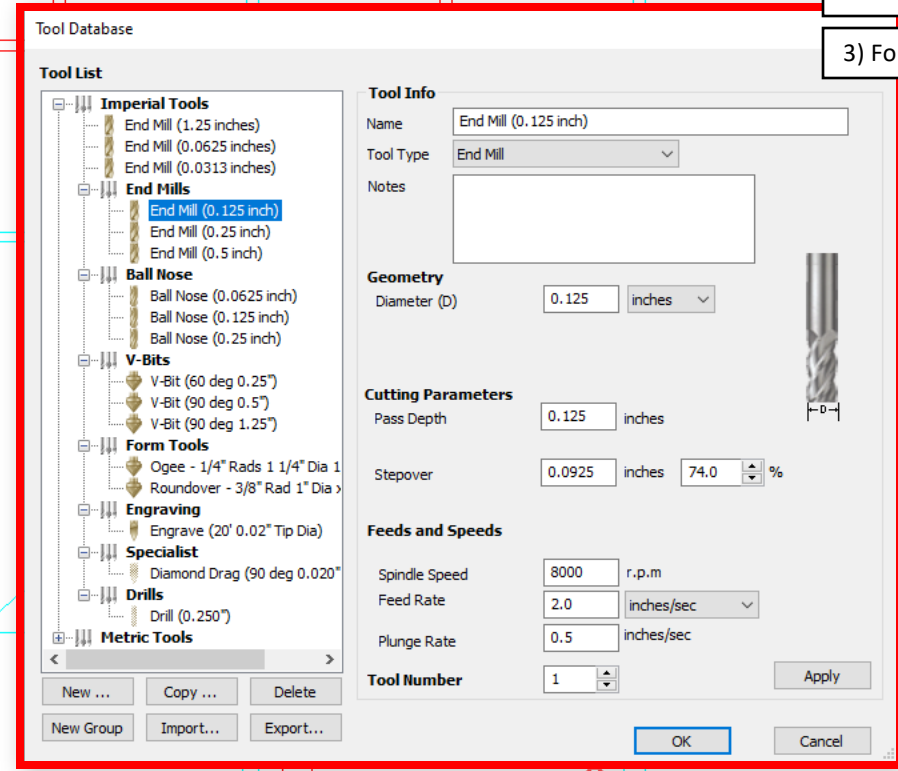
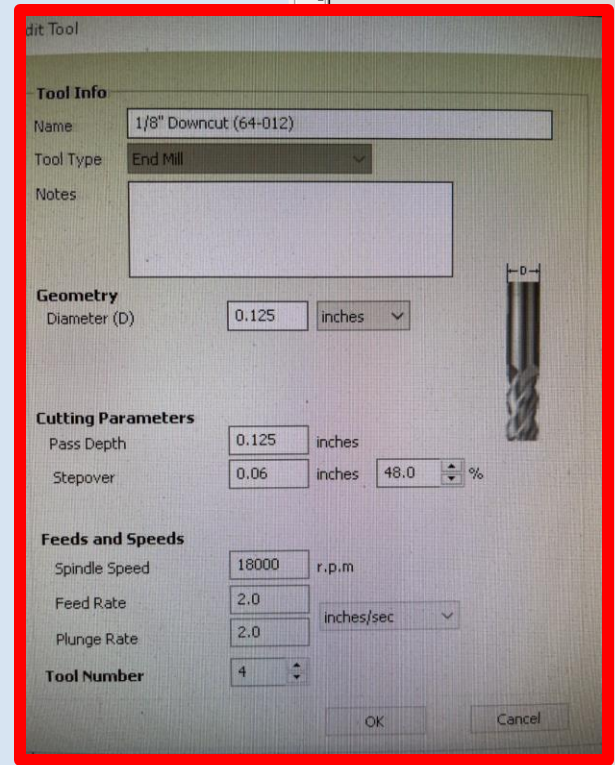
- Layers List
- 0
 - CUT_OUT
 - CUT_HALF
 - CUT_IN



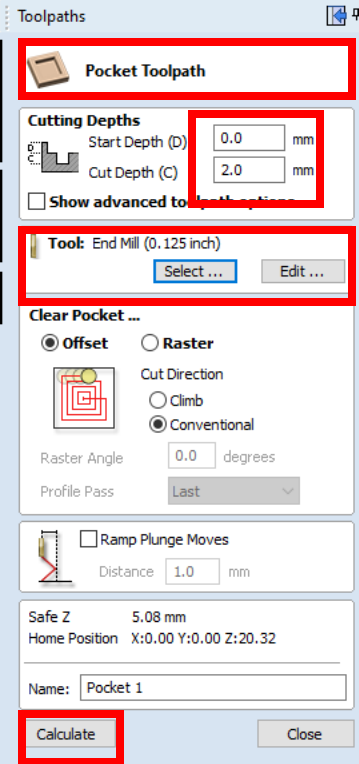
1) Make sure that you are in right function, in this case Pocket Toolpath.

2) Set up Cut depth as you wish. The number must be smaller than your material thickness.

3) For tool, click select



4) Set up size, type, feeds and speeds of your drill bit. See sample set up from Daniel on the left. Press okay.



5) Press calculate

POCKET CUT

3D View

CUT_HALF

1) Automatically you will see output in 3D view. You can always change view during tool path creation

Toolpaths

Preview Toolpaths

Cherry

Solid Material Color

Machined Area Color ...

☒ Material Color

☐ Global Fill Color

☐ Toolpath Color

☐ Animate preview ☒ Draw tool

Preview Selected Toolpath

▶ || ▶▶ ▶▶

Speed

Preview All Sides

Preview All Toolpaths

Preview Visible Toolpaths

Reset Preview

Undo Last

Save Preview Image

Double click on waste areas in 3D view to remove them.

Close

☒ Toolpaths

☒ Pocket 1

2) Check your tool path placed in Toolpaths and in right order. Since this is first tool path, you will see only one tool path. Press close.

Add New Layer...

Active Sheet: 0

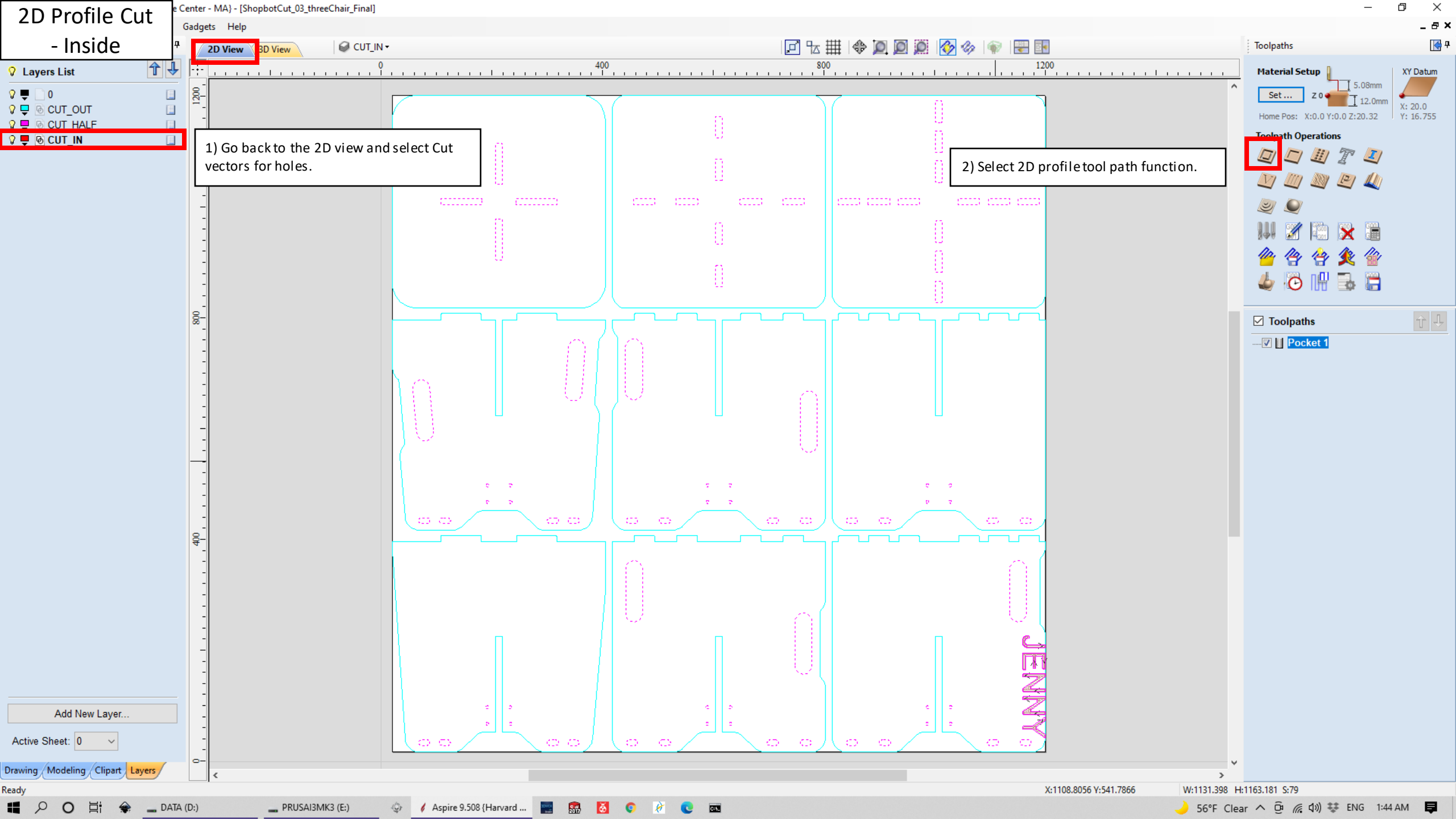
Drawing Modeling Clipart Layers

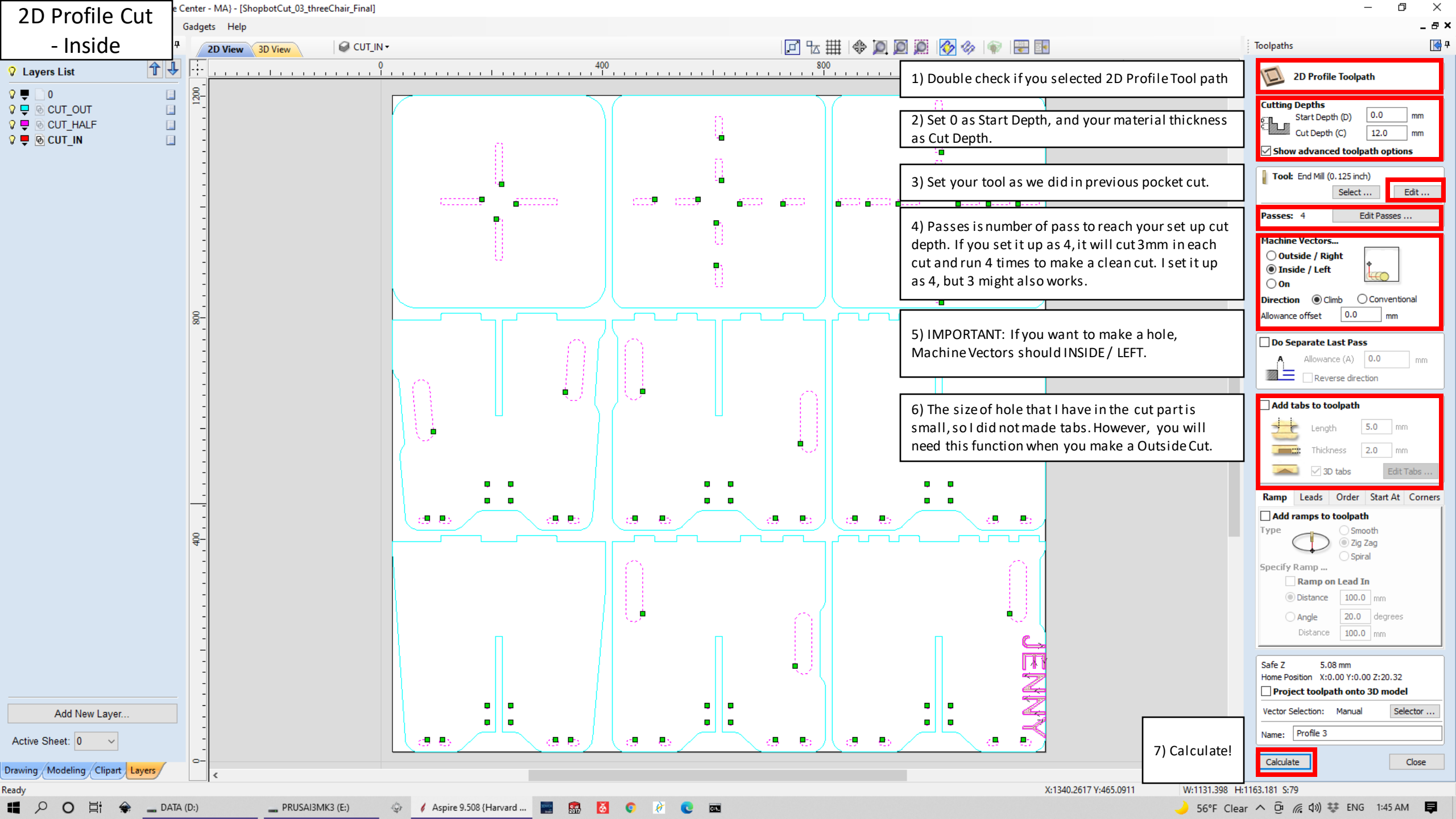
Ready

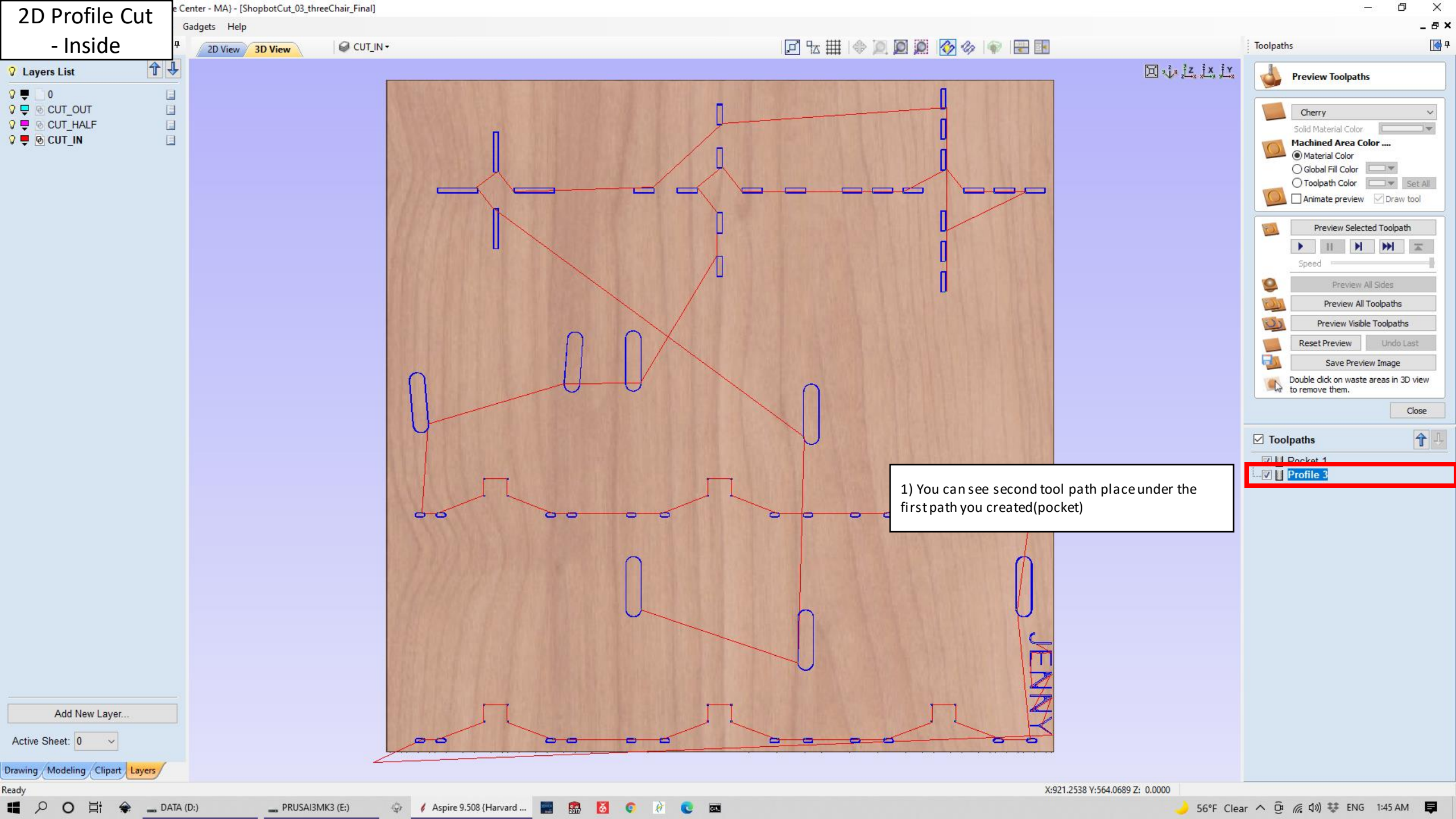
X:767.4966 Y:627.9026 Z: 0.0000

DATA (D:) PRUSA I3MK3 (E:) Aspire 9.508 (Harvard ...

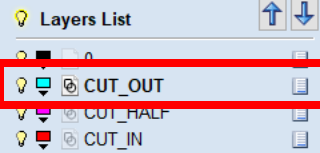
56°F Clear 1:43 AM



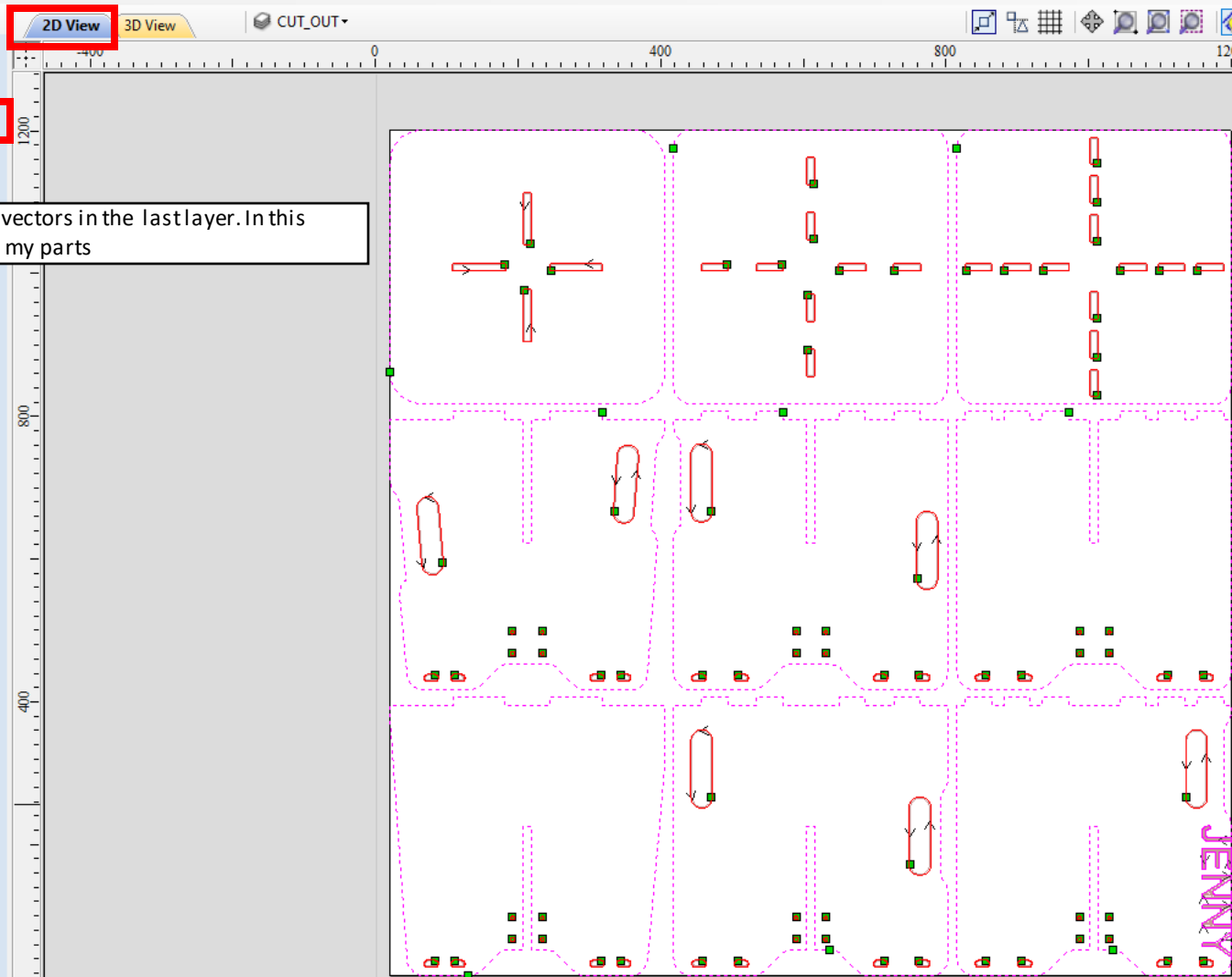




2D Profile Cut - Outside



1) Go to 2D view and select vectors in the last layer. In this layer, I place outer edges of my parts



2) Select 2D ProfileTool path function, as we did in previous step.

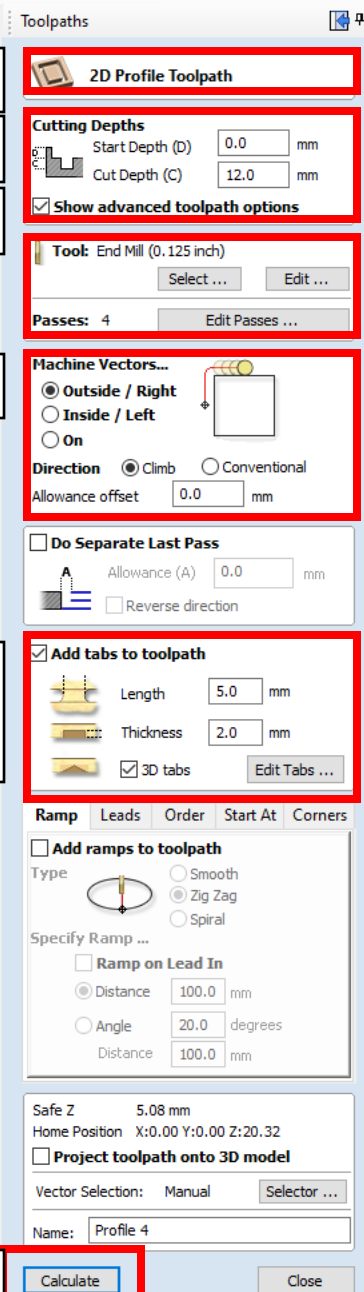
3) Set cut depth.

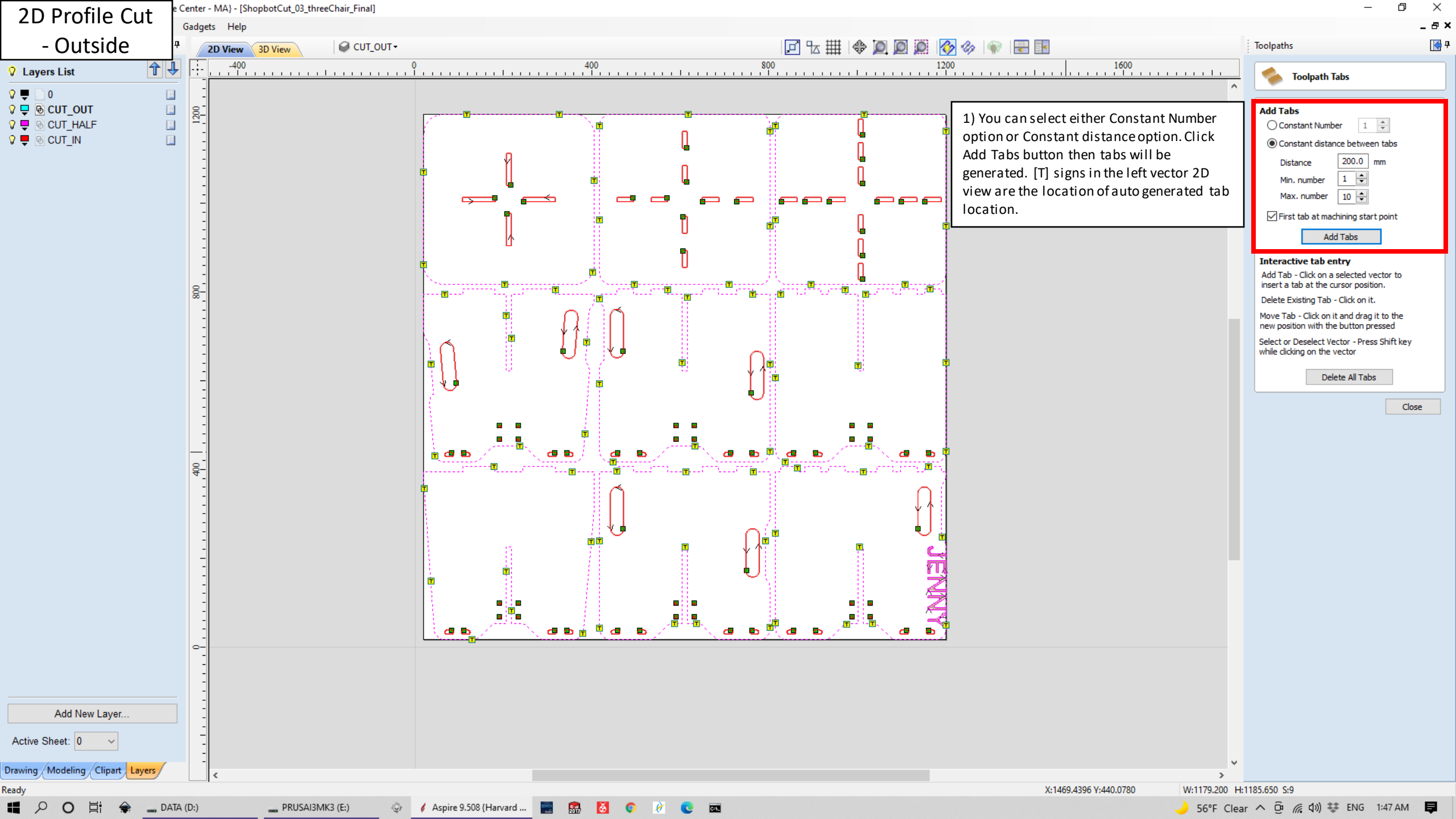
4) Set Tool

5) IMPORTANT, set Outside/Right when you cut outer edges of your part

6) Check Add tabs to toolpath, then set Length and Thickness for your tab. I found that 5mm/2mm works well. Click Edit Tabs to modify tab location.

7) After you set up tabs, click calculate.





2D Profile Cut - Outside

Gadgets Help

2D View 3D View

CUT_OUT

Layers List

0
CUT_OUT
CUT_HALF
CUT_IN

1) You can select either Constant Number option or Constant distance option. Click Add Tabs button then tabs will be generated. [T] signs in the left vector 2D view are the location of auto generated tab location.

Toolpaths

Toolpath Tabs

Add Tabs

☐ Constant Number 1
☒ Constant distance between tabs
Distance 200.0 mm
Min. number 1
Max. number 10

☒ First tab at machining start point

Add Tabs

Interactive tab entry

Add Tab - Click on a selected vector to insert a tab at the cursor position.

Delete Existing Tab - Click on it.

Move Tab - Click on it and drag it to the new position with the button pressed

Select or Deselect Vector - Press Shift key while clicking on the vector

Delete All Tabs

Close

Add New Layer...

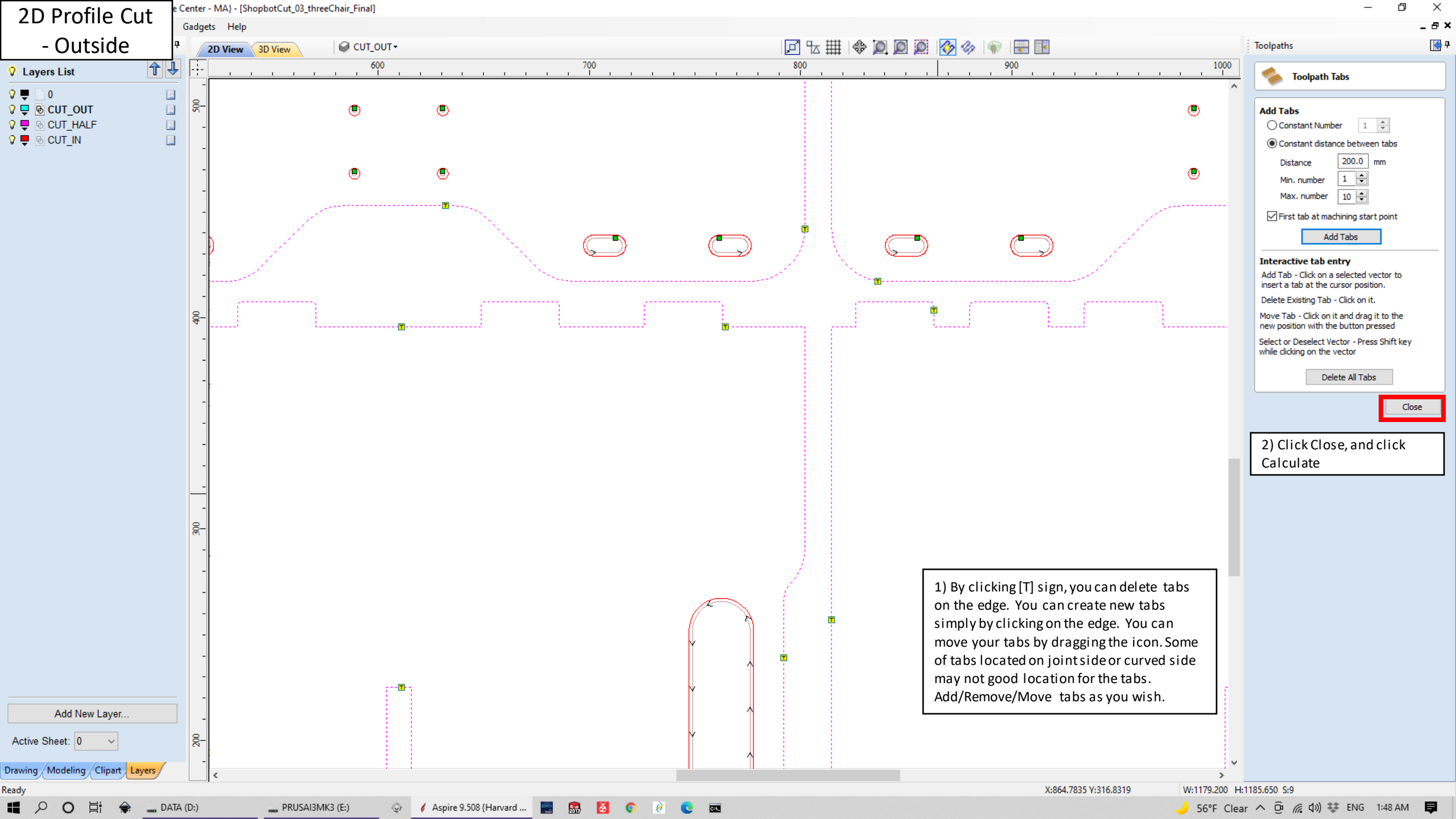
Active Sheet: 0

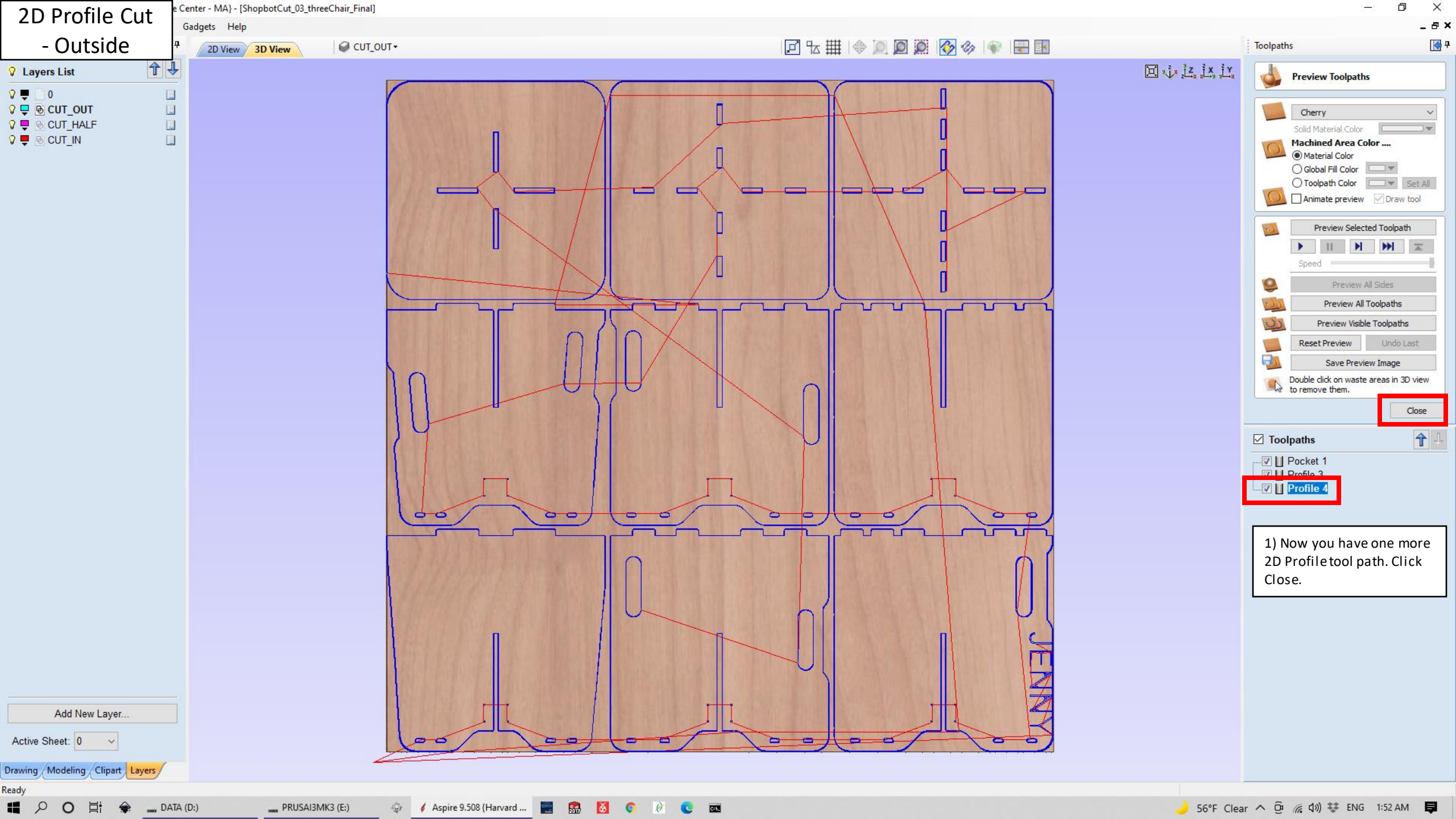
Drawing Modeling Clipart Layers

Ready

X:1469.4396 Y:440.0780

W:1179.200 H:1185.650 S:9





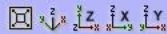
2D Profile Cut - Outside

Gadgets Help

2D View

3D View

CUT_OUT



Toolpaths



Preview Toolpaths



Cherry

Solid Material Color



Machined Area Color ...

☒ Material Color

☐ Global Fill Color

☐ Toolpath Color

☐ Animate preview ☒ Draw tool



Preview Selected Toolpath



Speed



Preview All Sides



Preview All Toolpaths



Preview Visible Toolpaths



Reset Preview



Undo Last



Save Preview Image

Double click on waste areas in 3D view to remove them.

Close

☒ Toolpaths

☒ Pocket 1

☒ Profile 3

☒ Profile 4

1) Now you have one more 2D Profiletool path. Click Close.

Add New Layer...

Active Sheet: 0

Drawing Modeling Clipart Layers

Ready

Export Toolpath

enter - MA} - [ShopbotCut_03_threeChair_Final]

adgets Help

2D View 3D View CUT_OUT



Layers List

0

CUT_OUT

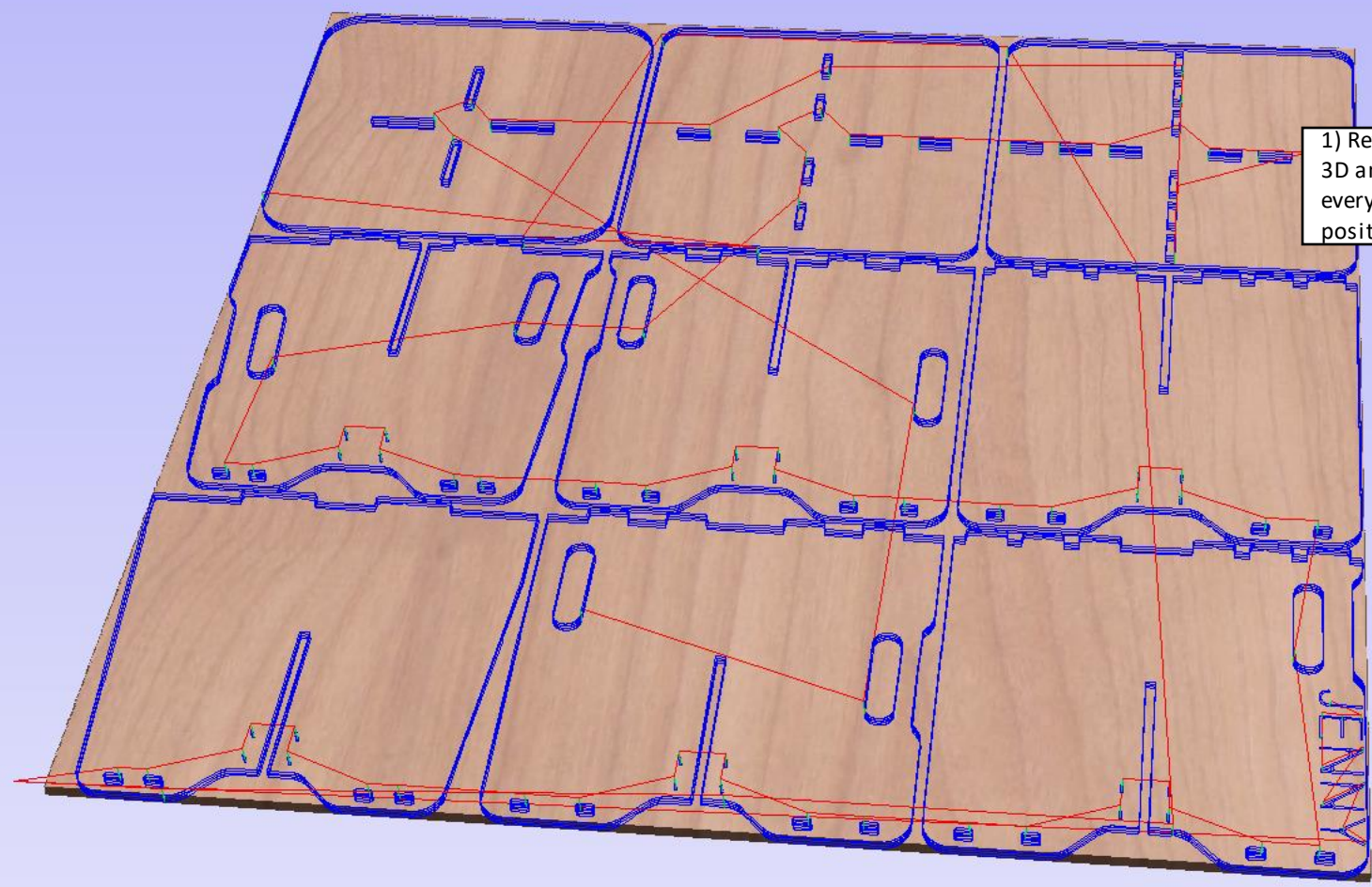
CUT_HALF

CUT_IN

Add New Layer...

Active Sheet: 0

Drawing Modeling Clipart Layers



1) Review your tool path in 3D and 2D view. If you find everything placed in right position, click save icon.

Toolpaths

Material Setup

Set ...

z 0

5.08mm

12.0mm

Home Pos: X:0.0 Y:0.0 Z:20.32

XY Datum

X: 20.0

Y: 16.755

Toolpath Operations

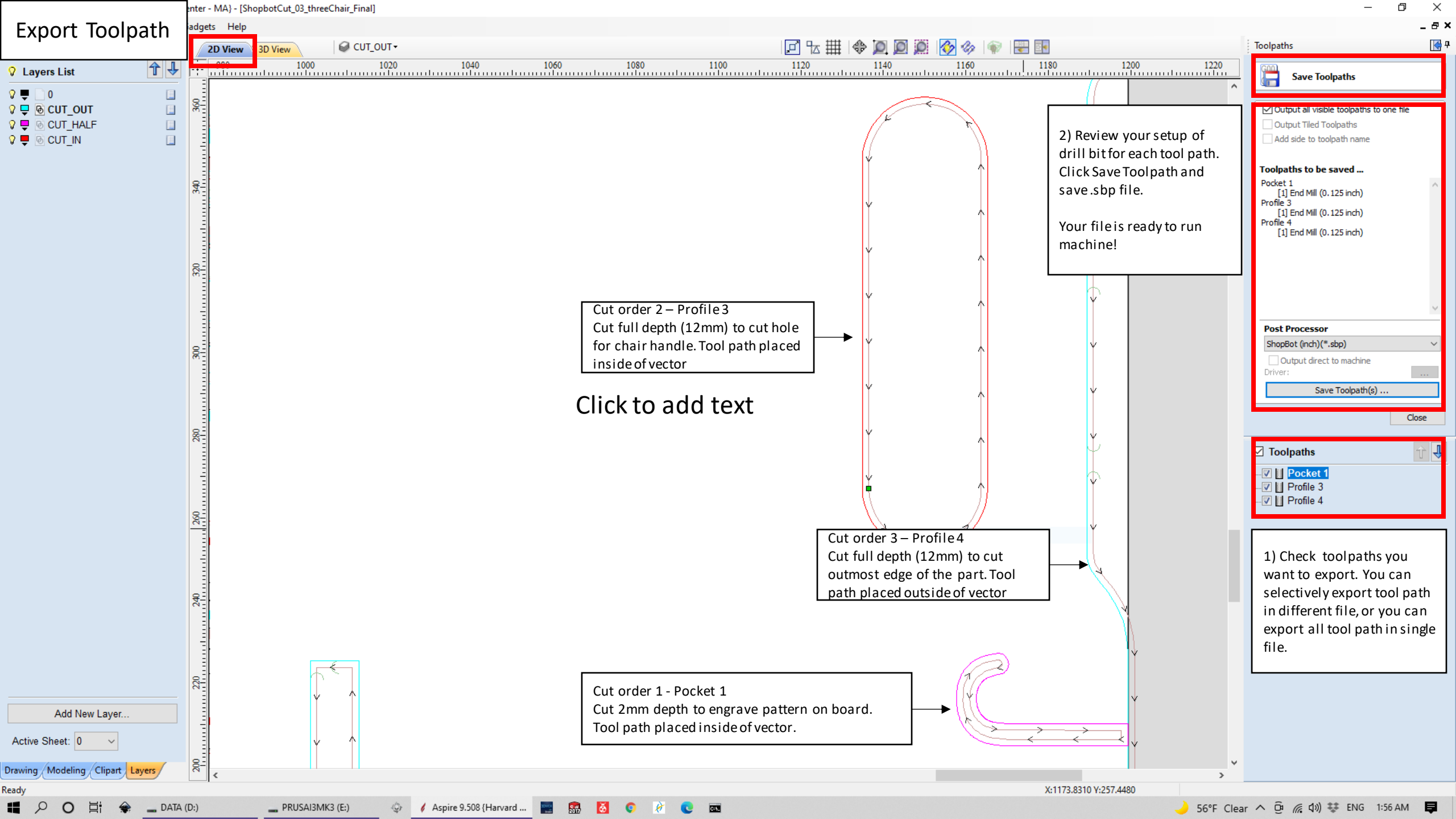
☒ Toolpaths

☒ Pocket 1

☒ Profile 3

☒ Profile 4

Export Toolpath



Layers List

- 0
- CUT_OUT
- CUT_HALF
- CUT_IN

360 340 320 300 280 260 240 220 200

1000 1020 1040 1060 1080 1100 1120 1140 1160 1180 1200 1220

Cut order 2 – Profile3
Cut full depth (12mm) to cut hole for chair handle. Tool path placed inside of vector

Cut order 3 – Profile4
Cut full depth (12mm) to cut outmost edge of the part. Tool path placed outside of vector

Cut order 1 - Pocket 1
Cut 2mm depth to engrave pattern on board. Tool path placed inside of vector.

2) Review your setup of drill bit for each tool path. Click Save Toolpath and save .sbp file.

Your file is ready to run machine!

Click to add text

Toolpaths

Save Toolpaths

☒ Output all visible toolpaths to one file
☐ Output Tiled Toolpaths
☐ Add side to toolpath name

Toolpaths to be saved ...

- Pocket 1
[1] End Mill (0.125 inch)
- Profile 3
[1] End Mill (0.125 inch)
- Profile 4
[1] End Mill (0.125 inch)

Post Processor

ShopBot (inch)(*.sbp)

☐ Output direct to machine
Driver: ...

Save Toolpath(s) ...

Close

☒ Toolpaths

- ☒ Pocket 1
- ☒ Profile 3
- ☒ Profile 4

1) Check toolpaths you want to export. You can selectively export tool path in different file, or you can export all tool path in single file.