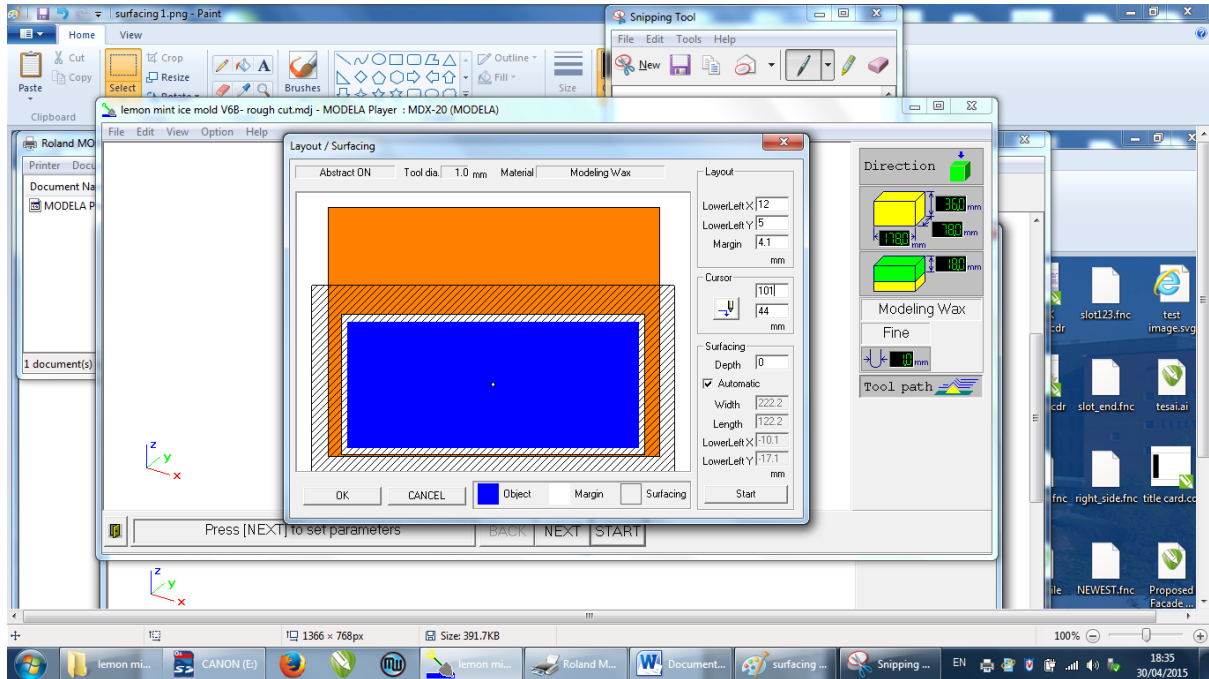


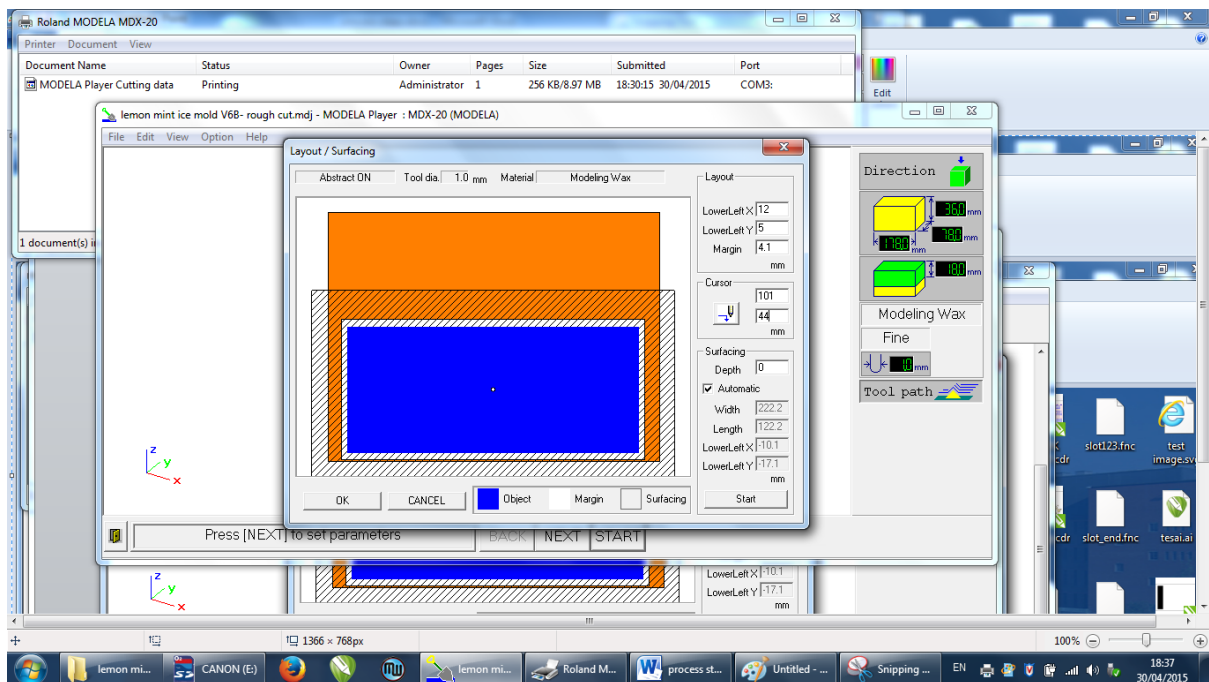
Modela Player Process steps for machining a mold in wax

1. Setting centre and Surfacing

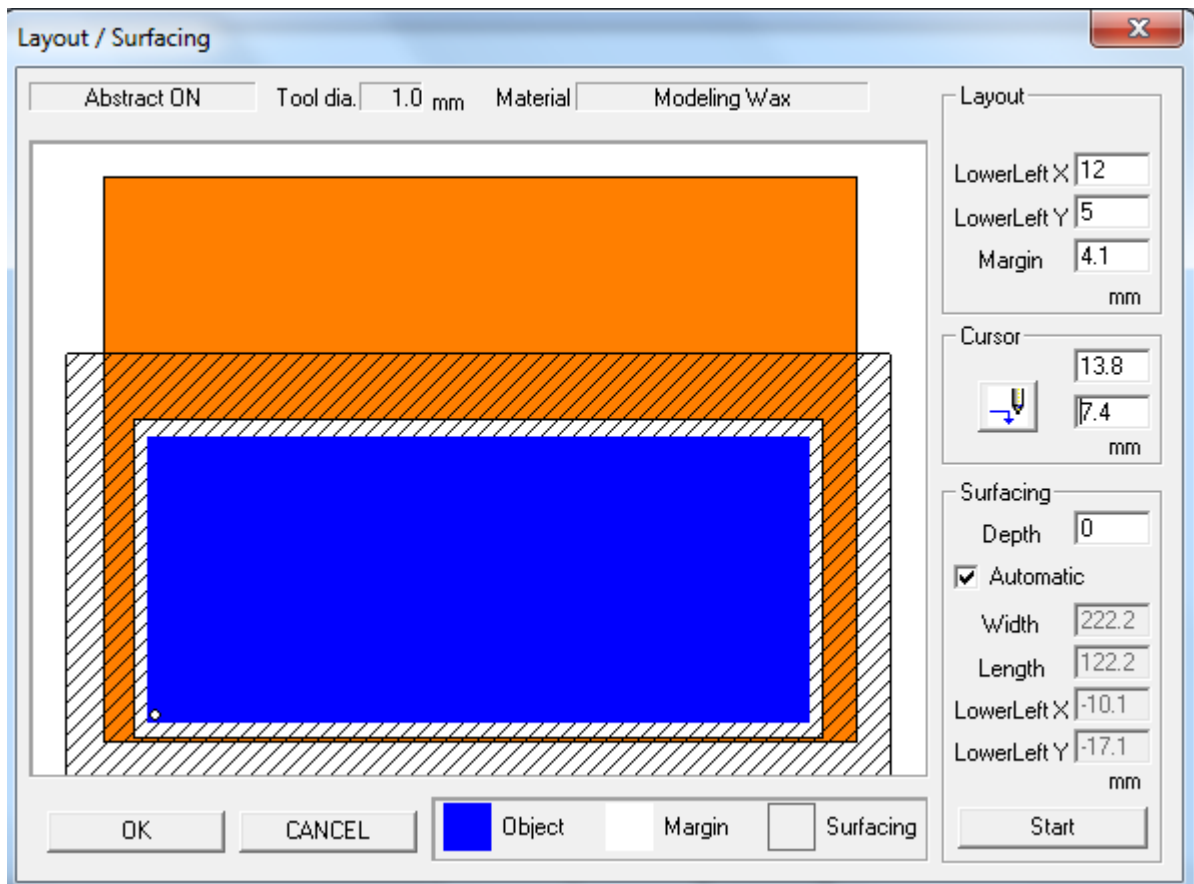
First click cursor into numbers are (otherwise won't let you drag centre point on blue block)



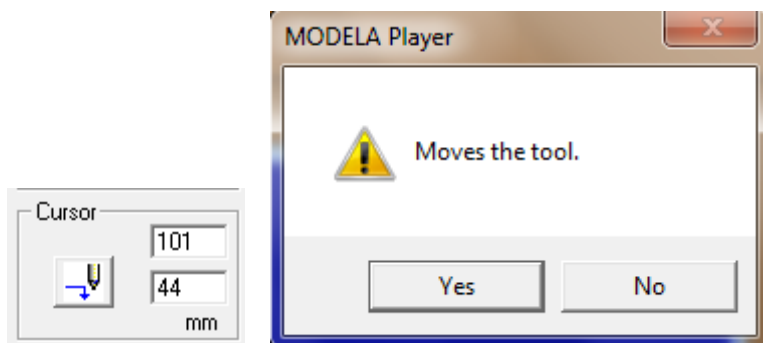
When cursor changes from cross hairs to hand you can drag the centre point



Drag the centre to where the edge of the block. The number will change in the cursor area. This is where it is putting the new locating point.



When you click the move tool icon to this point it will bring up a pop up screen asking you do you want to move to this point. Say yes



The tool will move to this point (it won't do this if you don't have the safety cover on or if you are still in view mode so make sure the safety cover is on and you aren't in view mode)

Use your judgement by eye to try and line up how far the centre of the tool bit is away from the edge of the piece to cut. To move the tool bit to the edge of the piece change the numbers here

Layout

LowerLeft X


LowerLeft Y

Margin

mm

and then ask the tool to move to this spot by pressing

Cursor



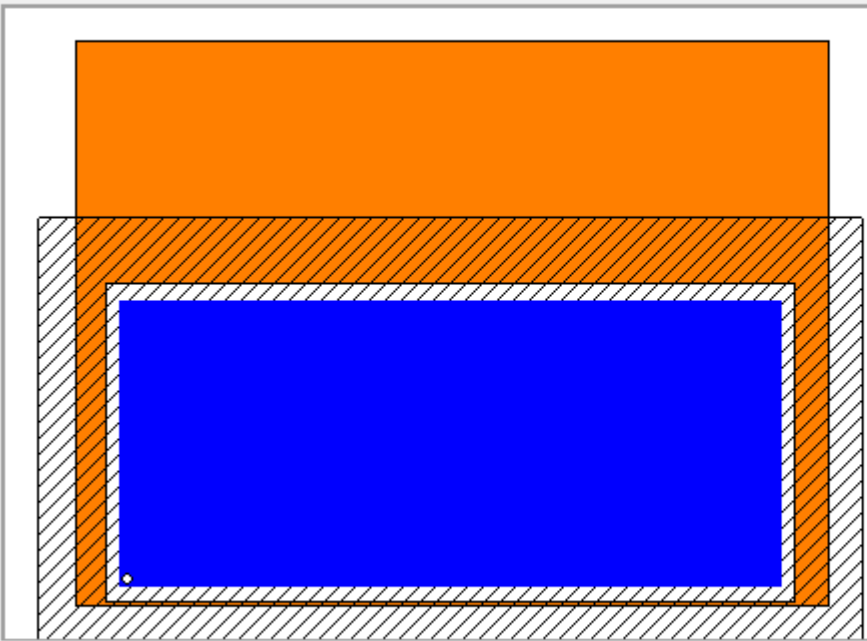
mm

This will show you where it thinks the edge of the block is.

Next set the depth of the surfacing to 1mm (depending on how uneven the surface is). Then press start. This will start surfacing the

Layout / Surfacing

Abstract ON Tool dia. 1.0 mm Material Modeling Wax



Layout


LowerLeft X

LowerLeft Y

Margin

mm

Cursor



mm

Surfacing

Depth

Automatic

Width

Length

LowerLeft X

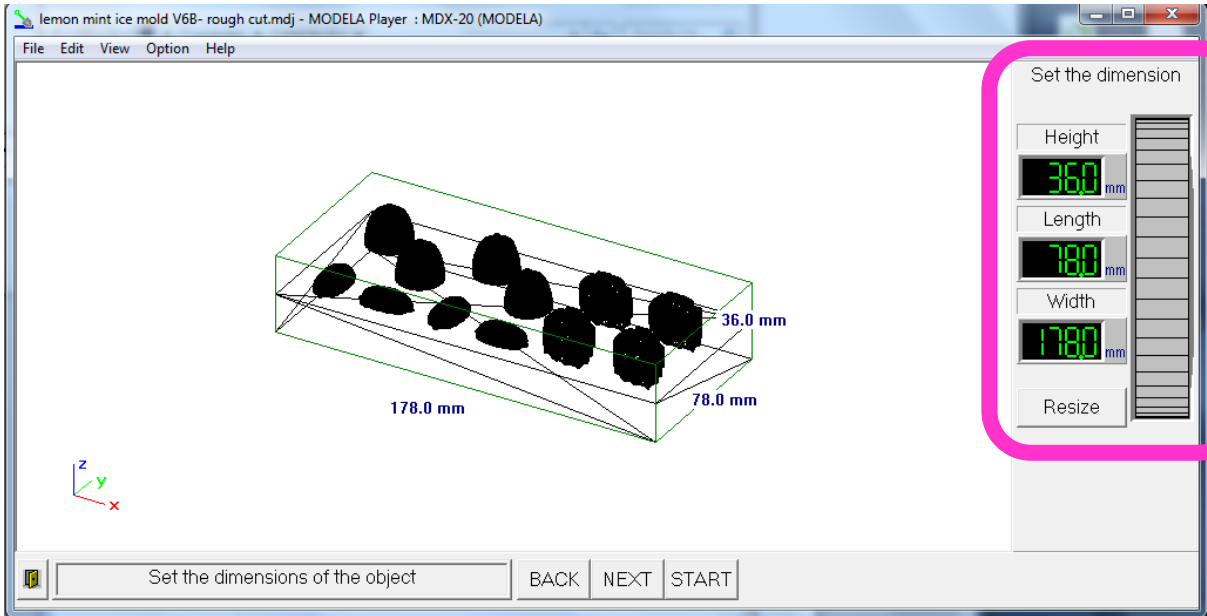
LowerLeft Y

mm

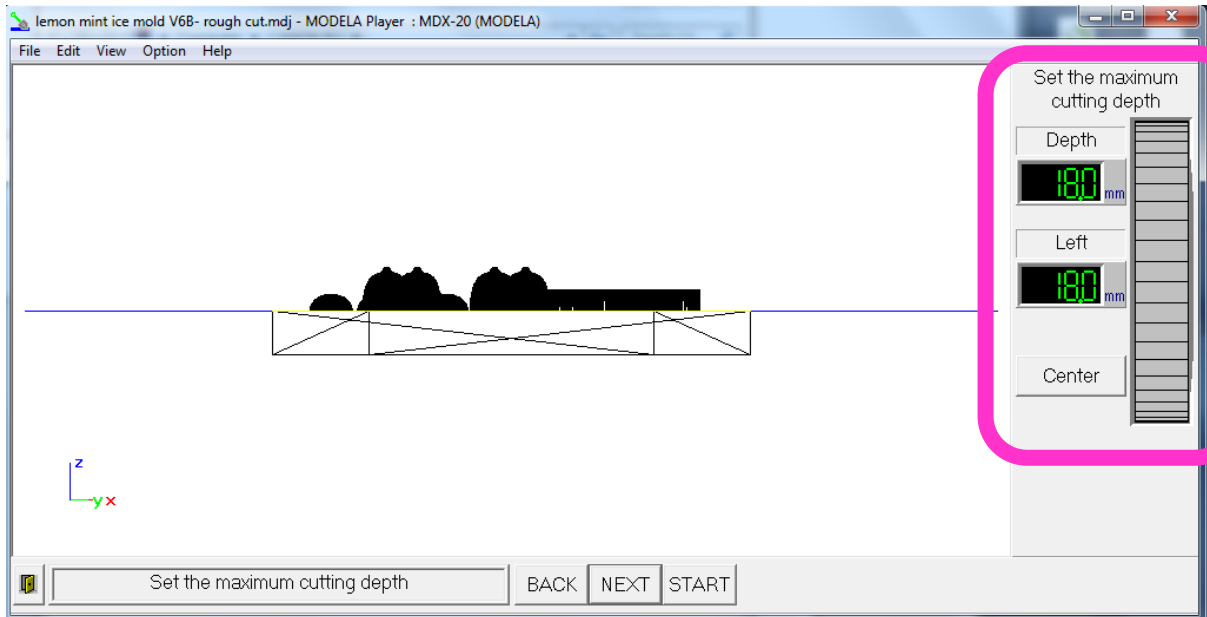
Object Margin Surfacing

2. Roughing

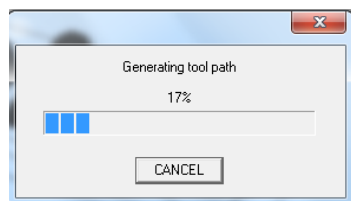
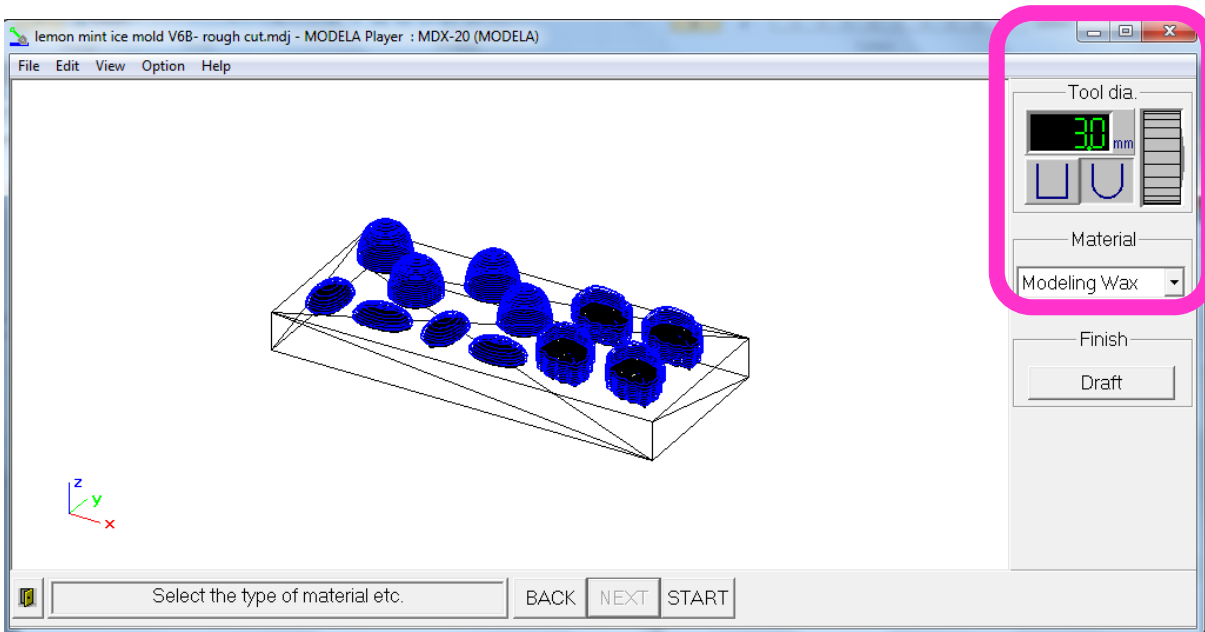
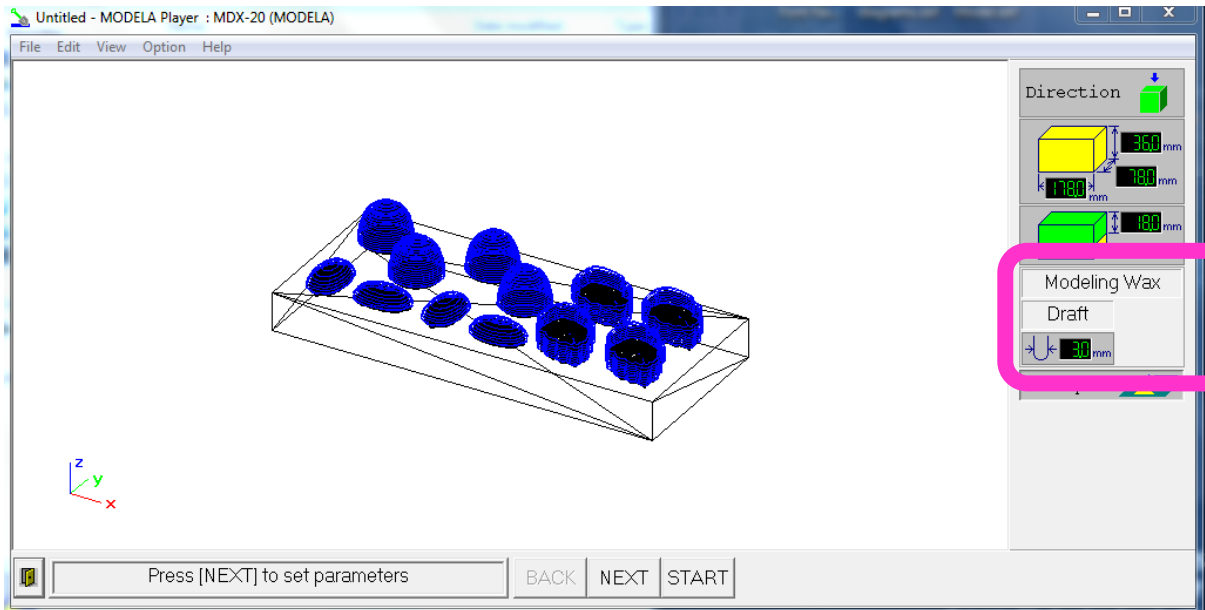
Once you have finished surfacing then you can move onto the rough cut which will get rid of most of the material quickly but won't create a good finish. First see the dimensions of the wax shown below.



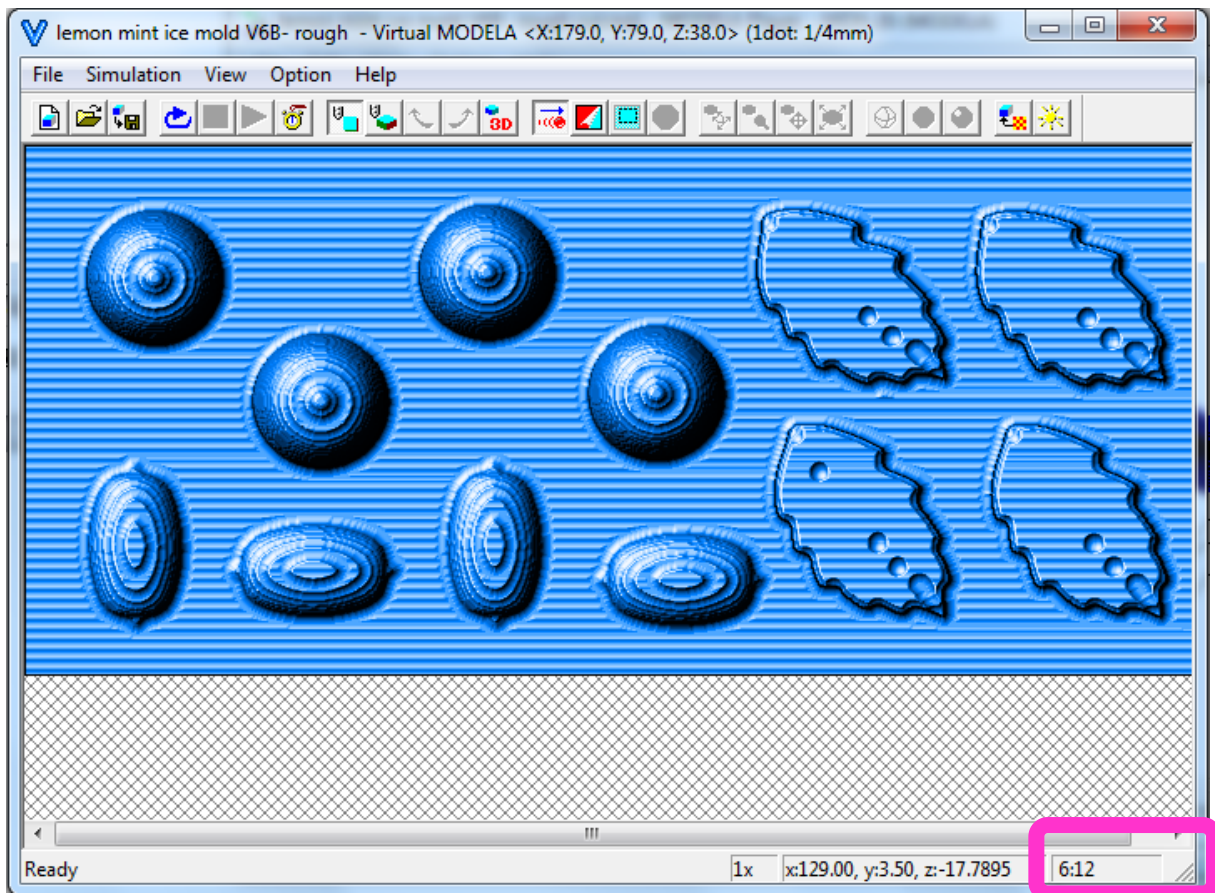
Then set the maximum cutting depth shown below.



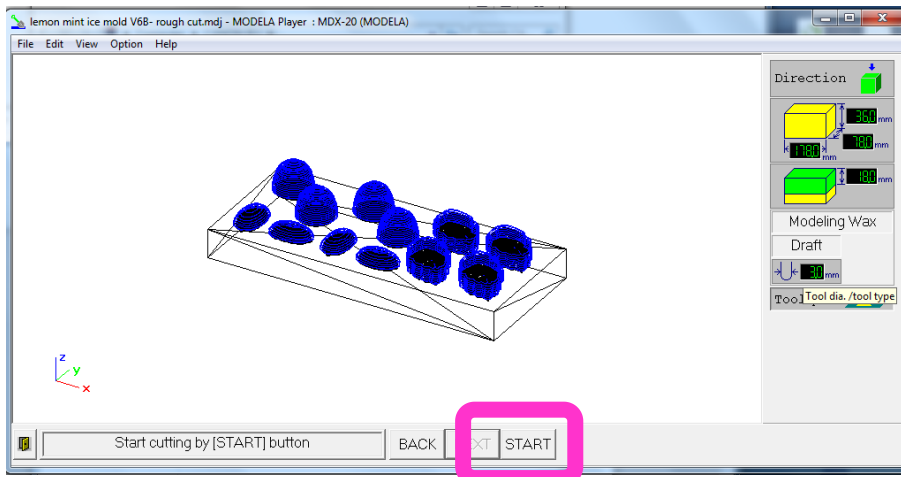
Then we need to set the tool to 3.0mm ball nose (or what tool bit you are using.). You can also set the material here too - make sure it's the correct material. Then press Tool Path. This will generate a tool path for roughing. It automatically set the speeds and paths.



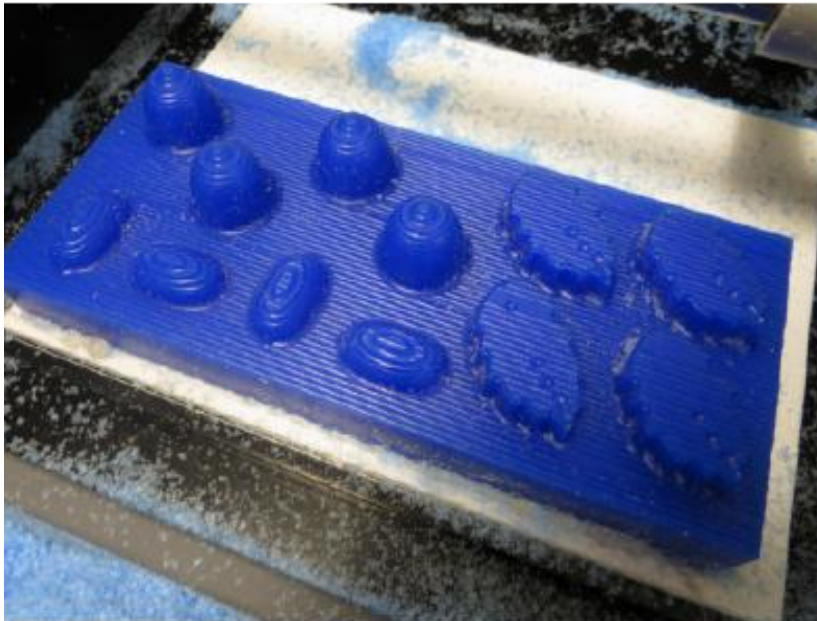
When it's generated the tool path you can see a virtual model before starting the cut. It also shows you the time it should take to cut this which is 6 hours 12 minutes. It's pretty accurate too.



To start the rough cut you just press start and it will work away.

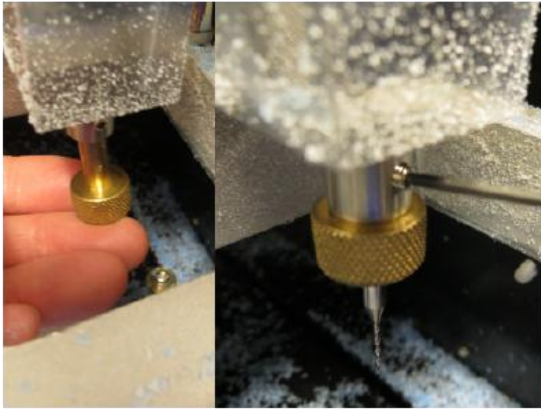


Resulting rough cut



3. Finishing pass

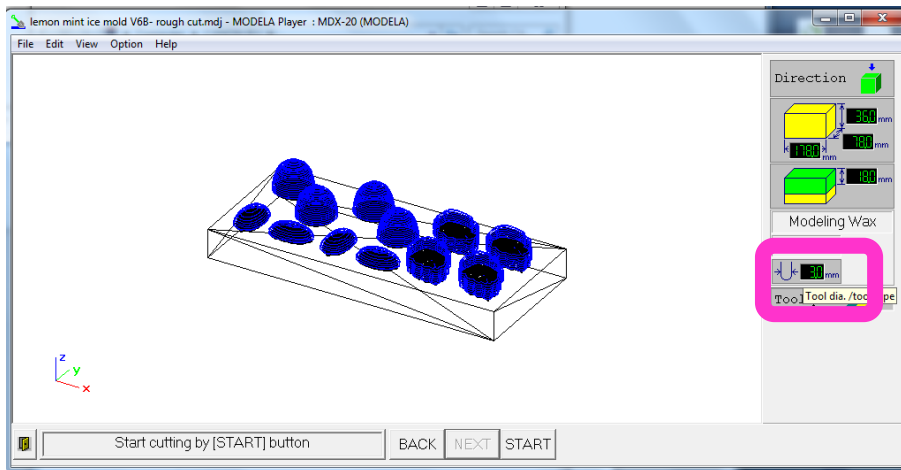
This pass will take away the final material and leave a smooth surface for casting. First you need to change the tool. Physically do this changing the whole collet with different tool bits in them so you don't lose the z index.



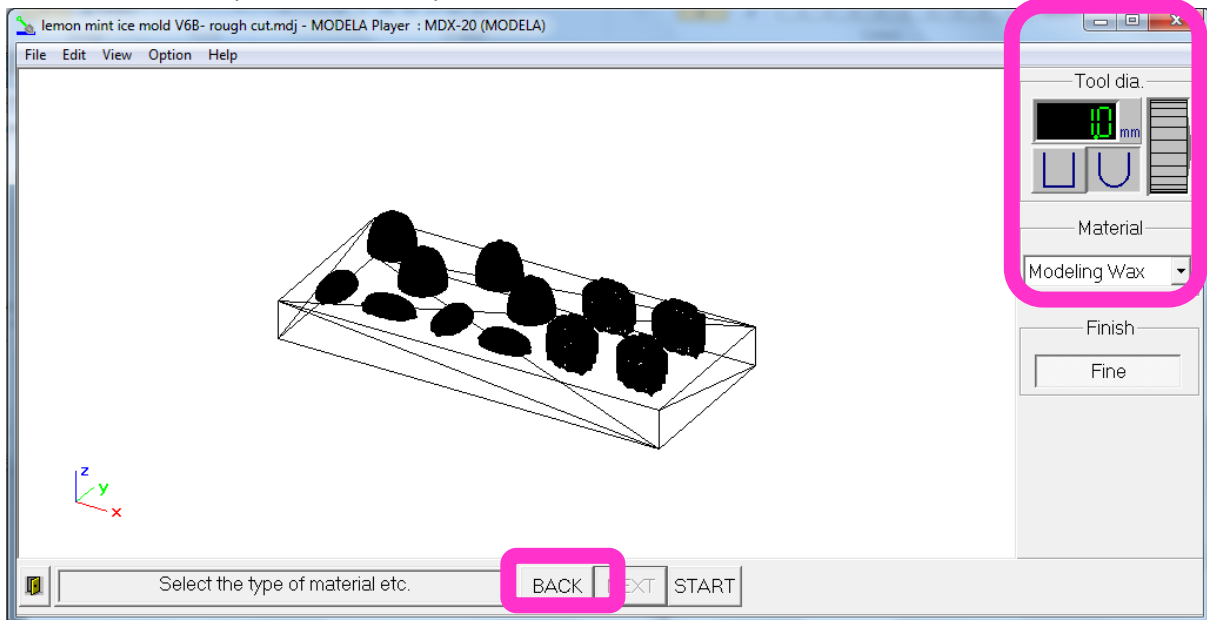
Changing Tools

***ONLY CHANGE COLLET with different tools in it**

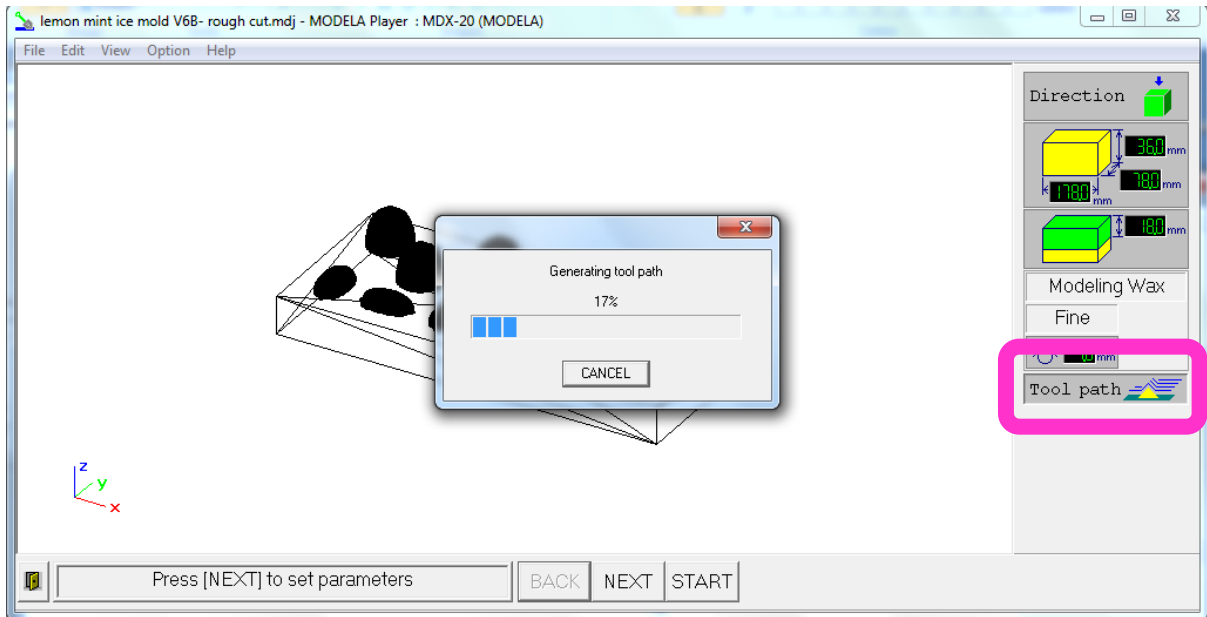
Once you've changed the tool. Then you need to set this in software. Press the tool dia button.



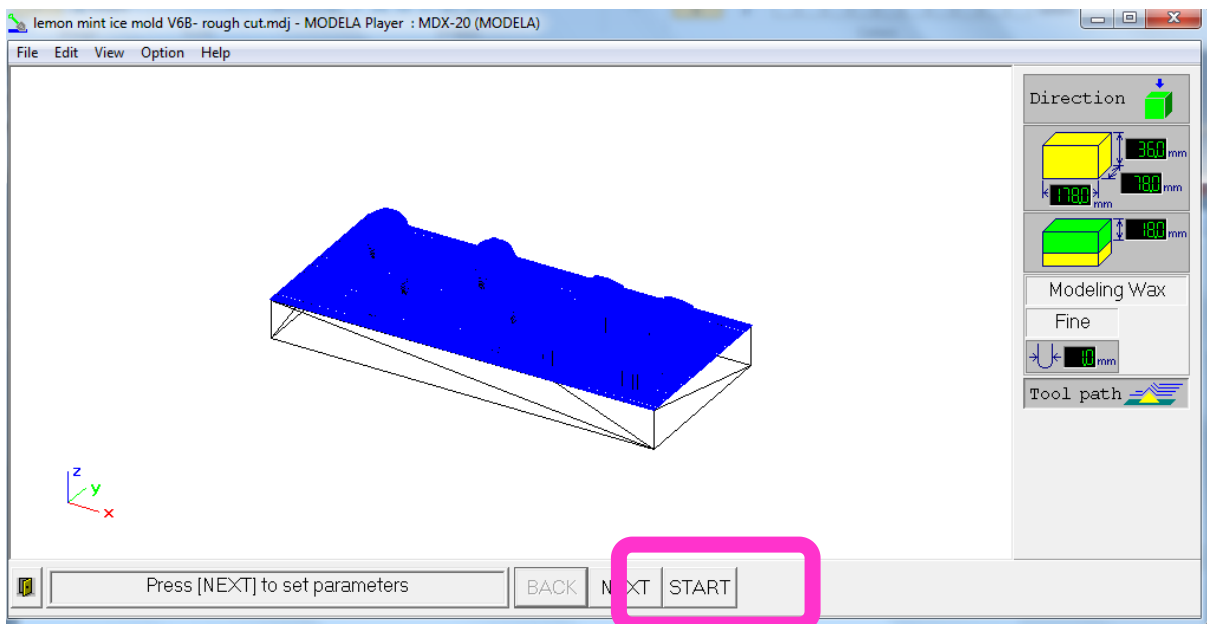
New options will come up on the right where you can set the tool size, flat or ball nose and what material it is. Once you've set these press Fine. Then select Back.



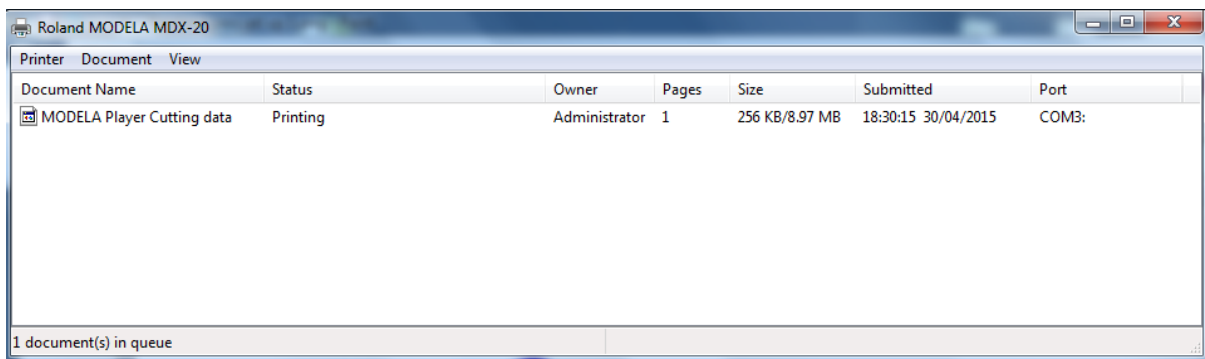
Next press tool path. This will go away and generate the cutting paths for the finishing cut. You'll see a pop up window when it's doing this.



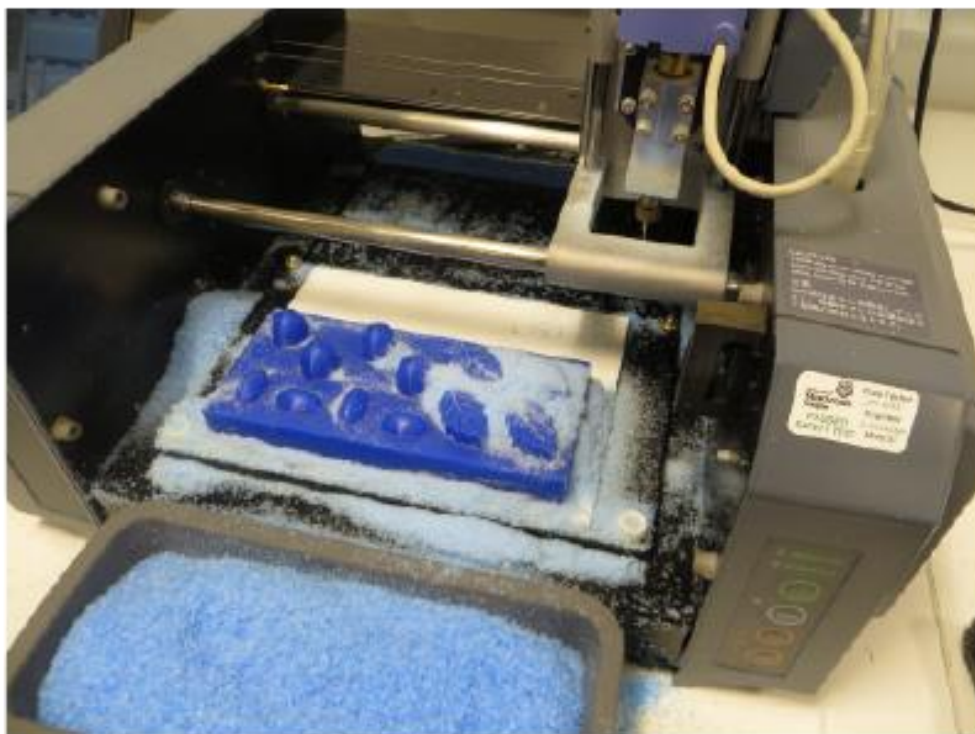
It'll then show you the paths it will go through if you are happy with this then press start.



You can see the sent file to the Modela in your printer window for the Roland Modela MDX-20



Final result of the finishing pass



4. Getting into View mode - Extra important note

You can use view mode to change the tool bit by bringing getting the machine to bring the tool to the back right of the machine bed. To get into this you press view



If you are in view mode you won't be able to do anything else. So make sure you go out of it before you try to cut or if it won't cut for you make sure you're not in view mode.

5. Cancelling current process

To cancel what the machine is currently doing hold down the up and down buttons together. I think you can sue this to get out of view mode as well.

