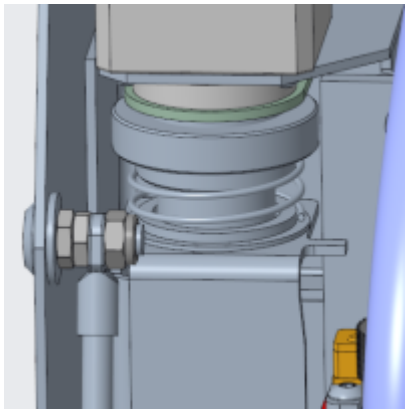
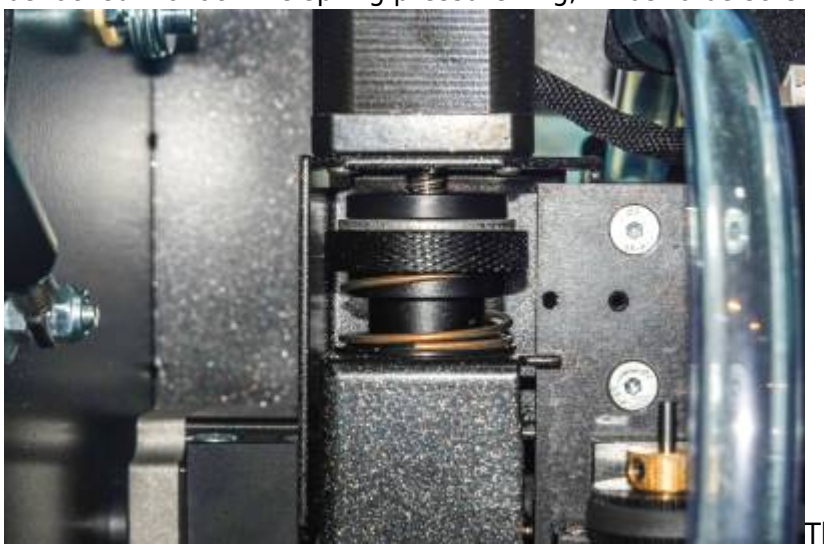
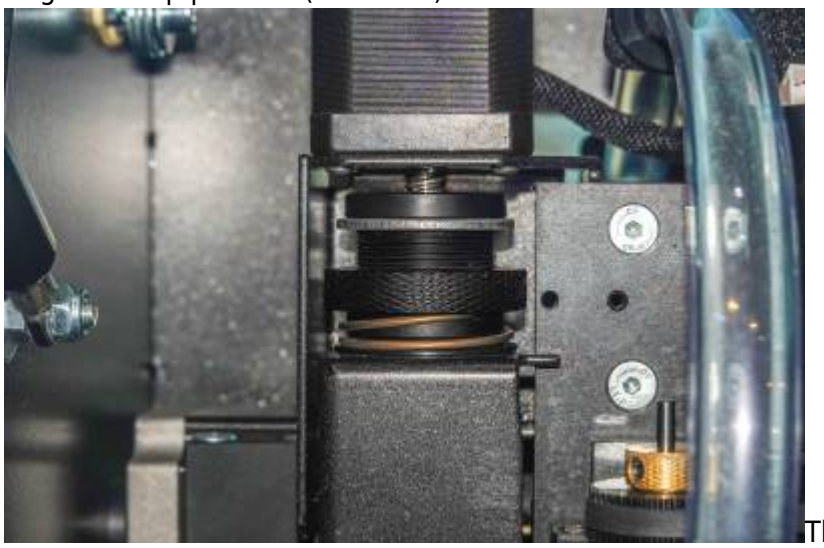
3.4.1.3. Using the spindle spring pressure



Locking the pressure spring for engraving without depth regulator nose

If you want to engrave without nosecone, e.g. when cutting a 3d relief, the spring pressure ring has to be locked. To lock the spring pressure ring, it has to be screwed down completely.


This image shows the spindle pressure ring in the up position (unlocked).


This image shows the spindle pressure ring in the down position (locked).

Note: Be extremely careful never to use the nosecone on your spindle when the spring pressure lockring is down. You may harm your Z-axis motor, the Z-axis leadscrew and even the controller. In other words, always respect the following principle: Never launch an engraving cycle with both the nosecone on the spindle and the spring pressure lock ring screwed down.

Setting the plate surface with spring pressure lockring in the down position

Here above you can read how the lockring can be screwed up and down, and how the nosecone holder ring can be screwed off the spindle.

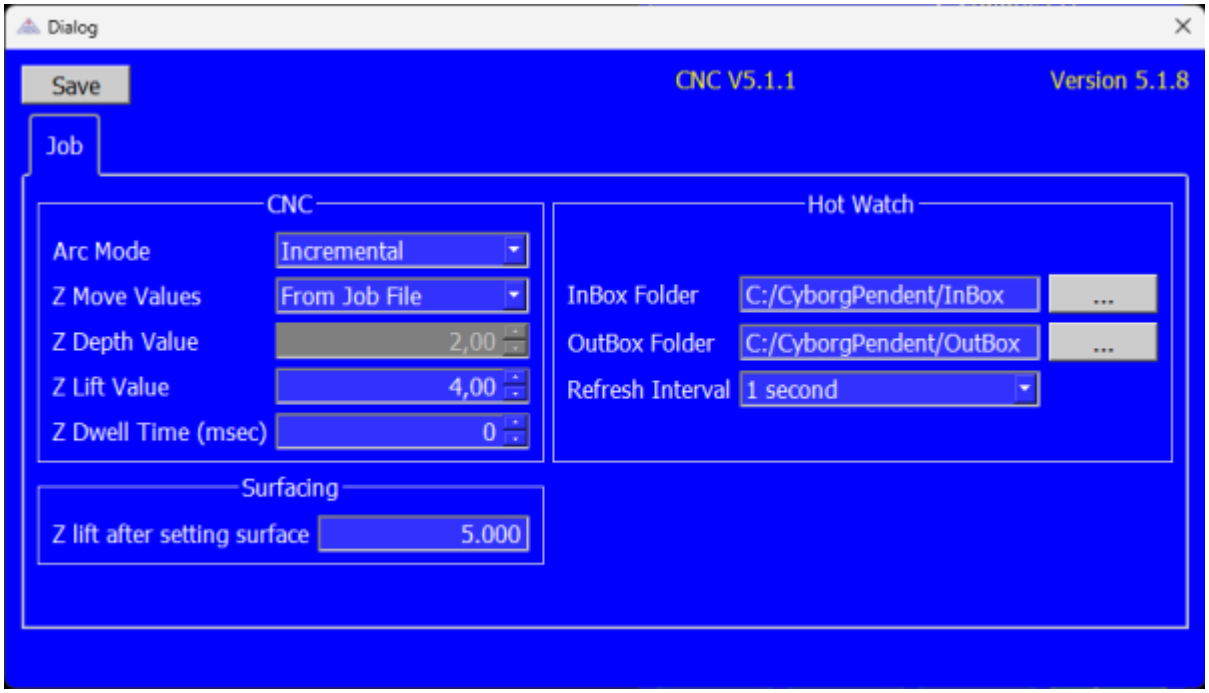
To set the plate surface and to engrave without floating nosecone, follow these steps:

1. Turn the spring pressure ring down as far as possible to lock the floating mechanism.
2. Pull of the transparent vacuum hose from the dust boot.
3. Remove the graduated nosecone holder ring with the nosecone and the dust boot.
4. Put the cutter which you want to use into the spindle and tighthen the cutter knob well (but never use pliers to do so).
5. Place the material which you want to engrave on the engraving table and make sure it cannot move.
6. Move the spindle somewhere over the plate to be engraved. Use the jog keys on the virtual keypad to do so.
7. Using the Z-down jog key move the spindle down till the tip of the cutter just touches the plate surface. You could use a piece of paper to “feel” if the Z-position is correct. Attention: Do not move down too fast, you might damage the material or break the cutter tip.
8. Click on the “set material surface” key:  on the virtual keypad.
9. In this just opened window click on the “Enter” key to set the plate surface (Z=0.00). The spindle will then move up above the engraving material.
10. This procedure implies that the tip of the cutter will touch the material. If that is prohibited, e.g. because the material is very critical to scratches, you could place a thin piece of material on top of your engraving plate and follow the same procedure. Measure the exact thickness of this piece and add that to the engraving depth in Symmetry to obtain the correct engraving depth.
11. Start your engraving job.

As an alternative to this procedure you could also follow these steps:

1. follow the steps from 1 to 6 as described here above.
2. Using the Z-down key move the spindle down till the tip of the cutter is a few millimeters above the plate surface, but not touching it.
3. Unscrew the little screw in the cutter knob and gently push the cutter down till it’s tip touches the material.
4. Retighthen the screw in the cutter knob.
5. Click on the “set material surface” key:  on the virtual keypad.
6. In this just opened window click on the “Enter” key to set the plate surface (Z=0.00). The spindle will then move up above the engraving material.

Nota's:



When engraving without nosecone and with a locked floating mechanism, the machine will execute the cutting depths which are programmed in the engraving job, on condition that the variable “Z move values” in the Job dialog window (see here above) is set to “From job file”. If your engraving job contains cutting depths or not entirely depends upon the used software. Some programs use Z-down and Z-up values, other programs only use Z-down coordinates but only a Z-up instuction without value. In the latter case the “Z move values” variable in the dialog window has to be set to “From Pendent Setting”. The engraving machine will then use a preset depth, which can be set or modified in the “Job dialog window” in the virtual keypad.

Continue to speeds and feeds for different materials.
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