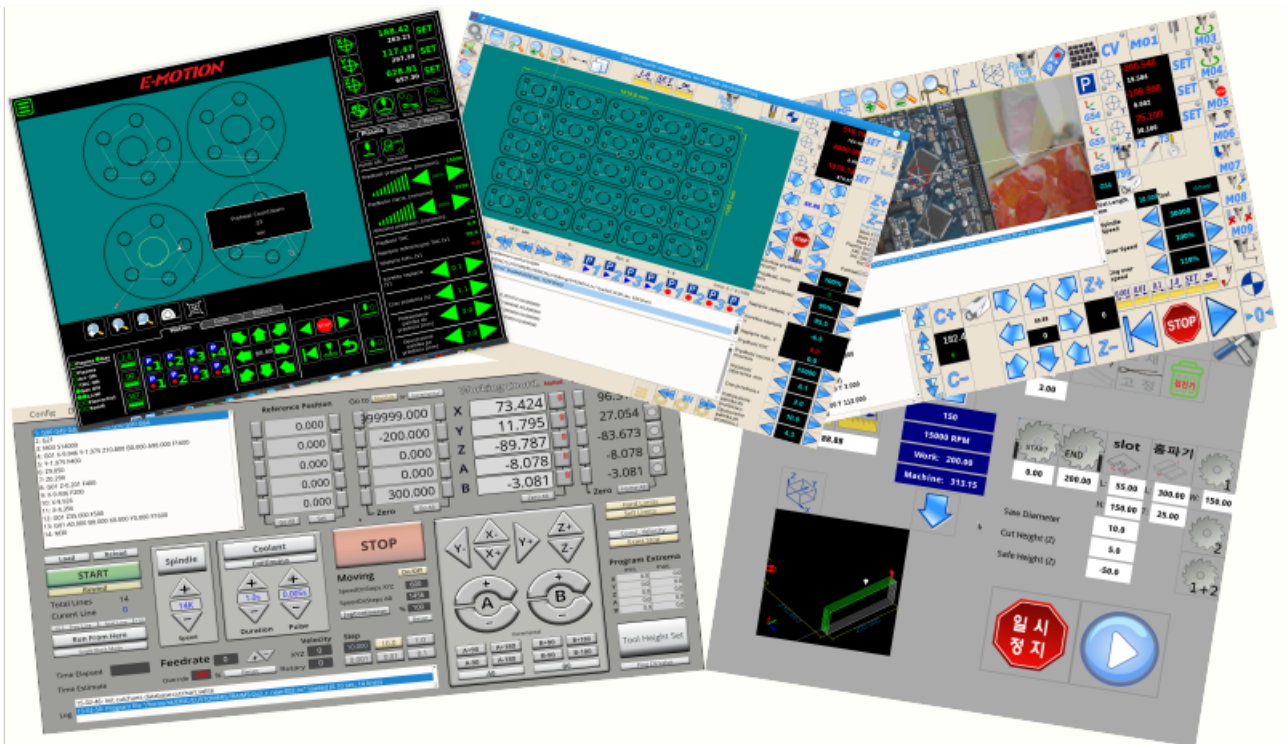


myCNC Software Main Features

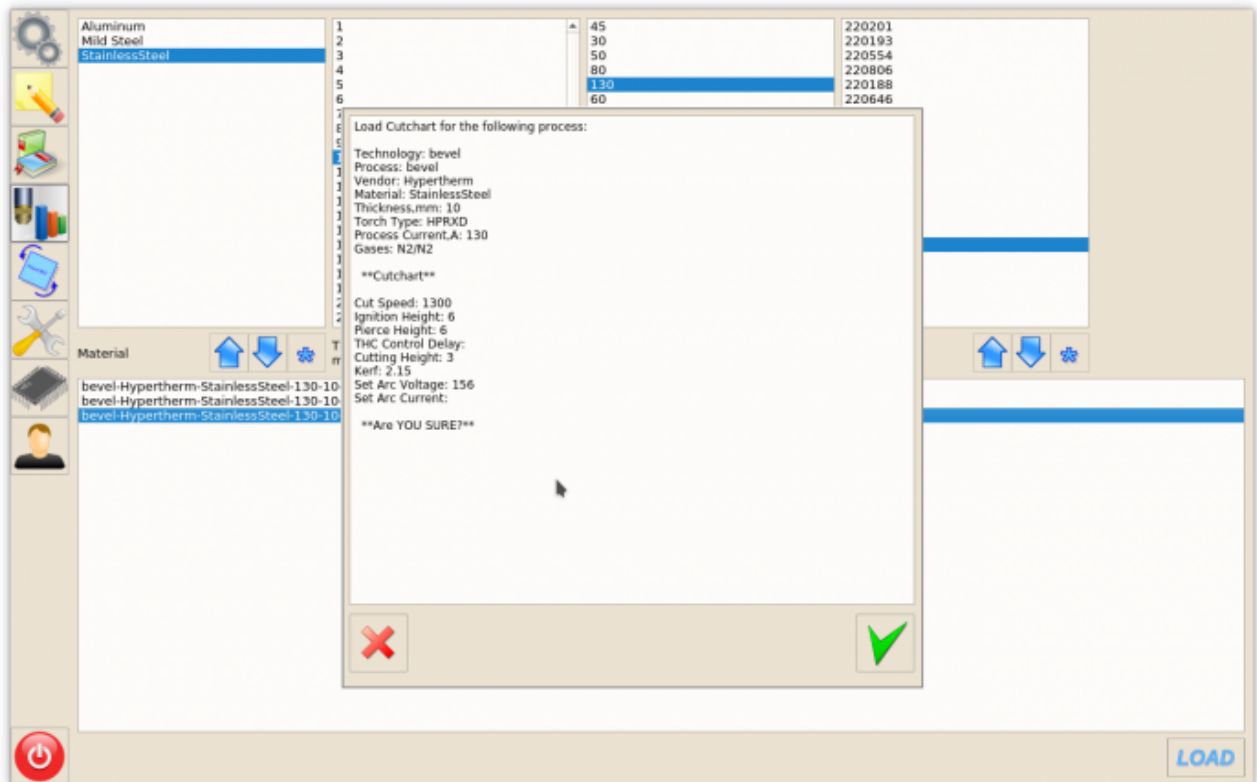
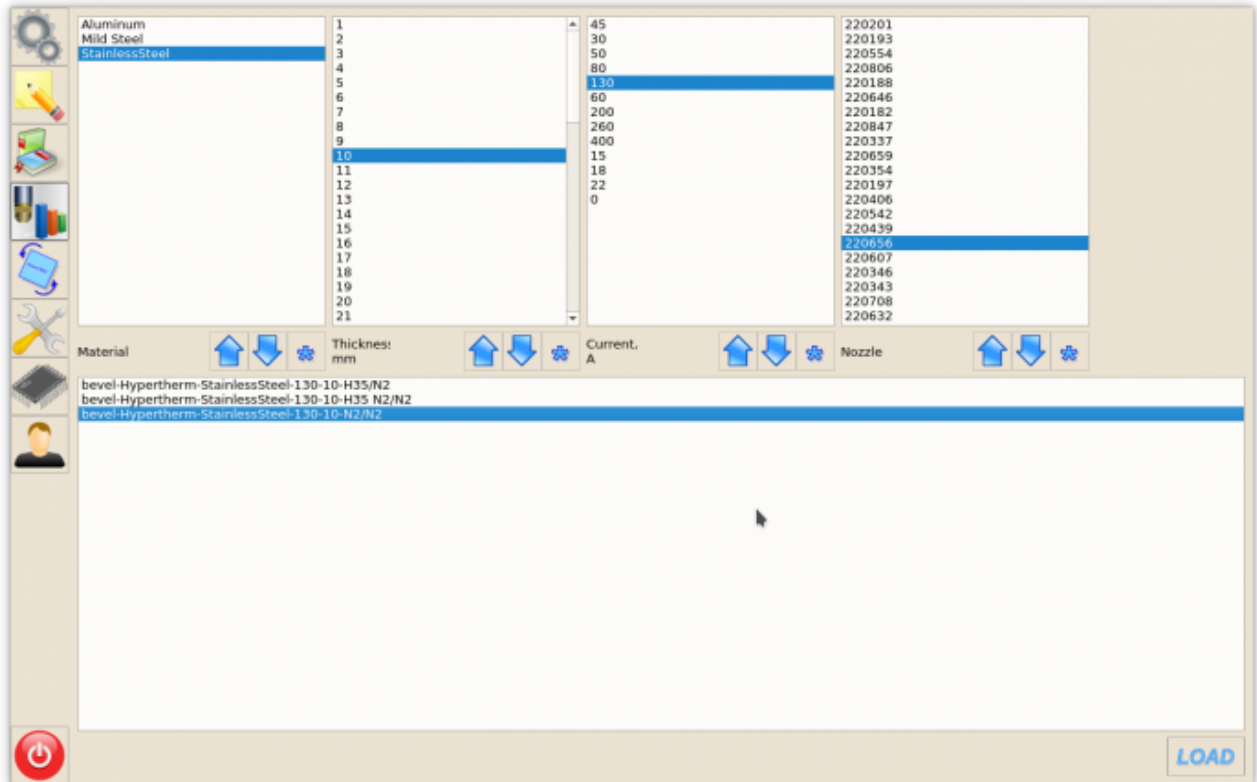
myCNC is multi-tasking and multi-platform CNC Control Software working under MS Windows (7, 8, 10), Linux, Embedded Linux Operating systems. myCNC can be run on Desktop PC, Industrial PC, Laptop or Single Board Computer (SBC) like Raspberry Pi 2/3, Odroid-C2/XU4, Asus Tinker Board, Rock64, Cubieboard2 and some others.

myCNC Control features

1. **6 Axes motion** control with **S-curve** speed profile for smooth machine motion;
2. G-code with **Macro Language** extension support;
3. Built-in **PLC** controllers and built-in **PLC Builder** IDE for flexible peripherals control;
4. Support special-purpose G/M codes for wide range of applications - mill, lathe, routers, tangential knife, plasma, oxyfuel, laser cutting, Torch Height Control (THC), ATC
5. **Big G-code files** up to 1GB supported
6. **Flexibly customized GUI**



7. **Cutcharts** - load cutting parameters from tables or g/m-codes and automatical setup CNC control and peripherals unit (like plasma power source, auto gas console etc)

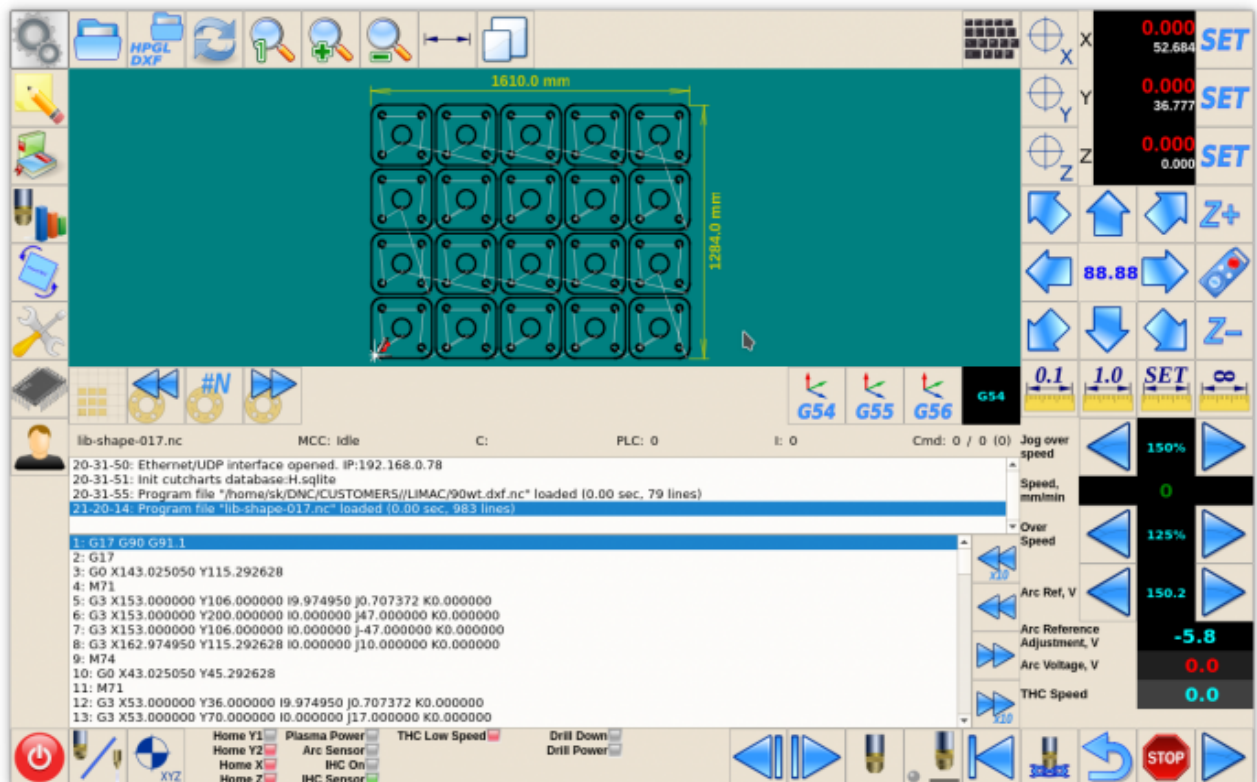


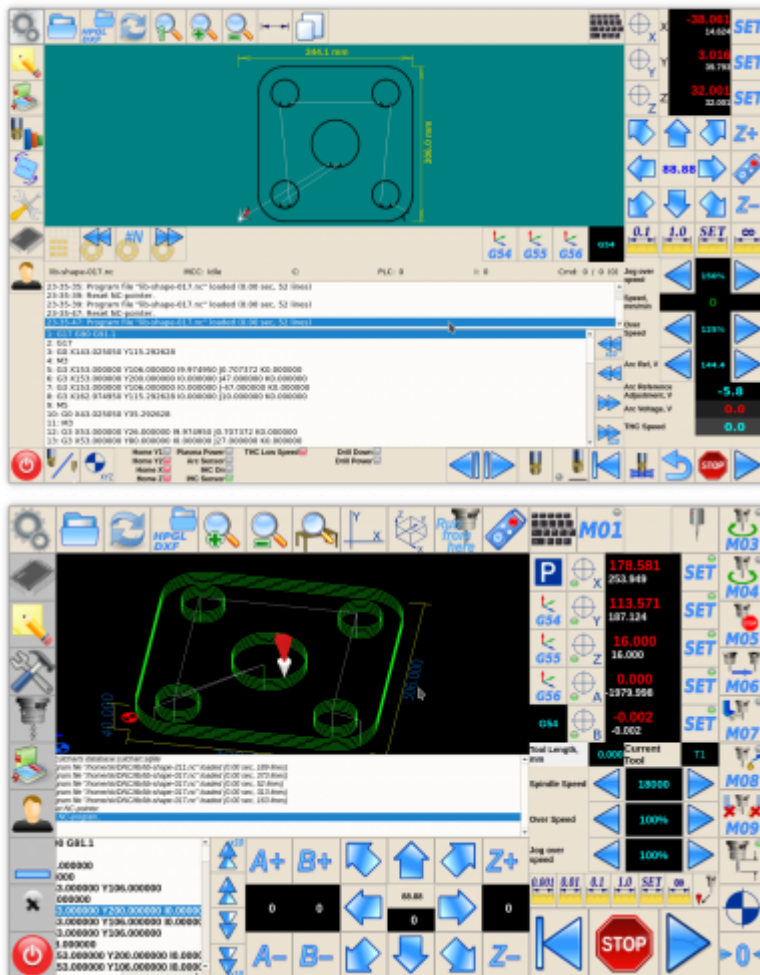
8. **Shape Library** - has a good set of parameterized shapes with row&column nesting features and several cutting technologies supported (plasma-gas cutting, engraving, multi-pass cutting). New shapes can be easily added to the Shape library by customers, [examples available](#)





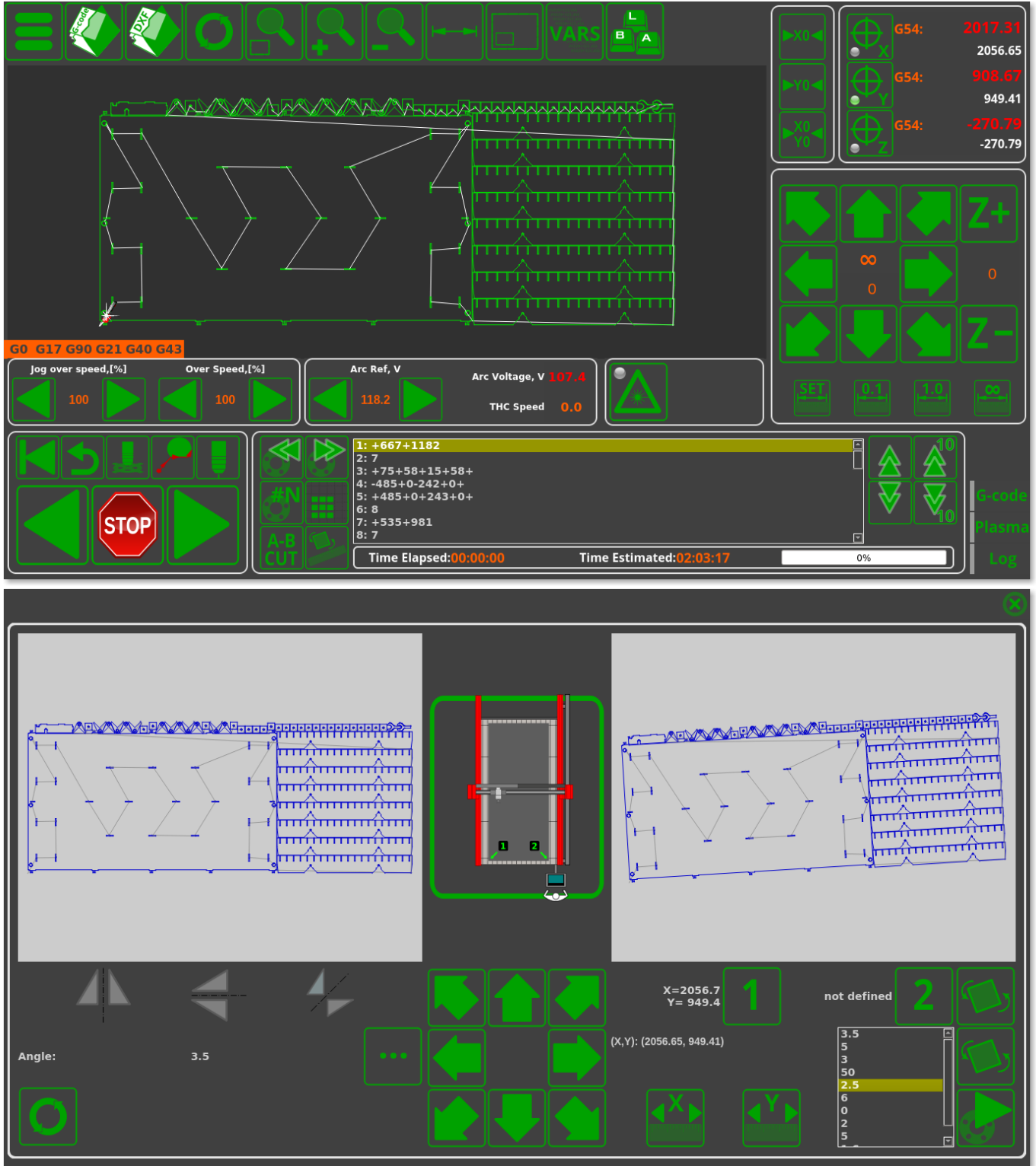
Row and column Nesting for library Shapes

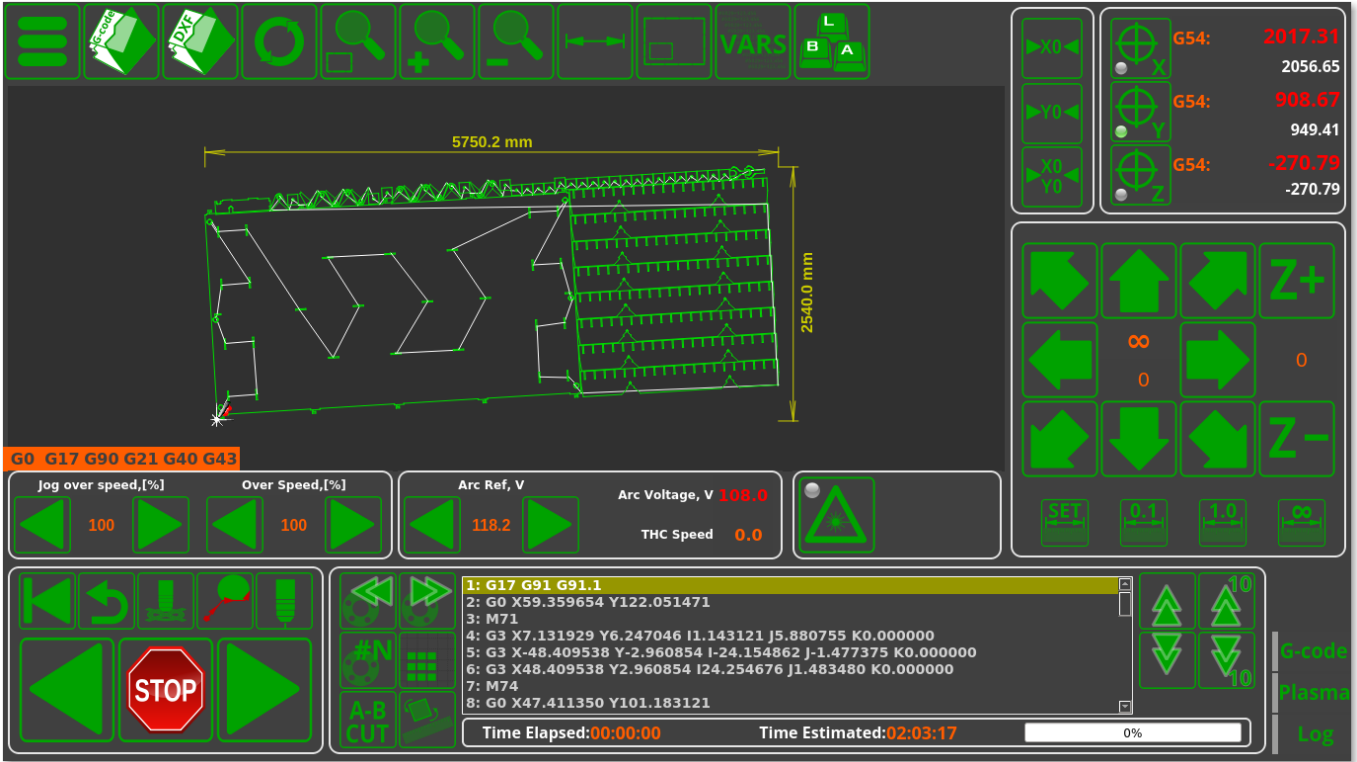




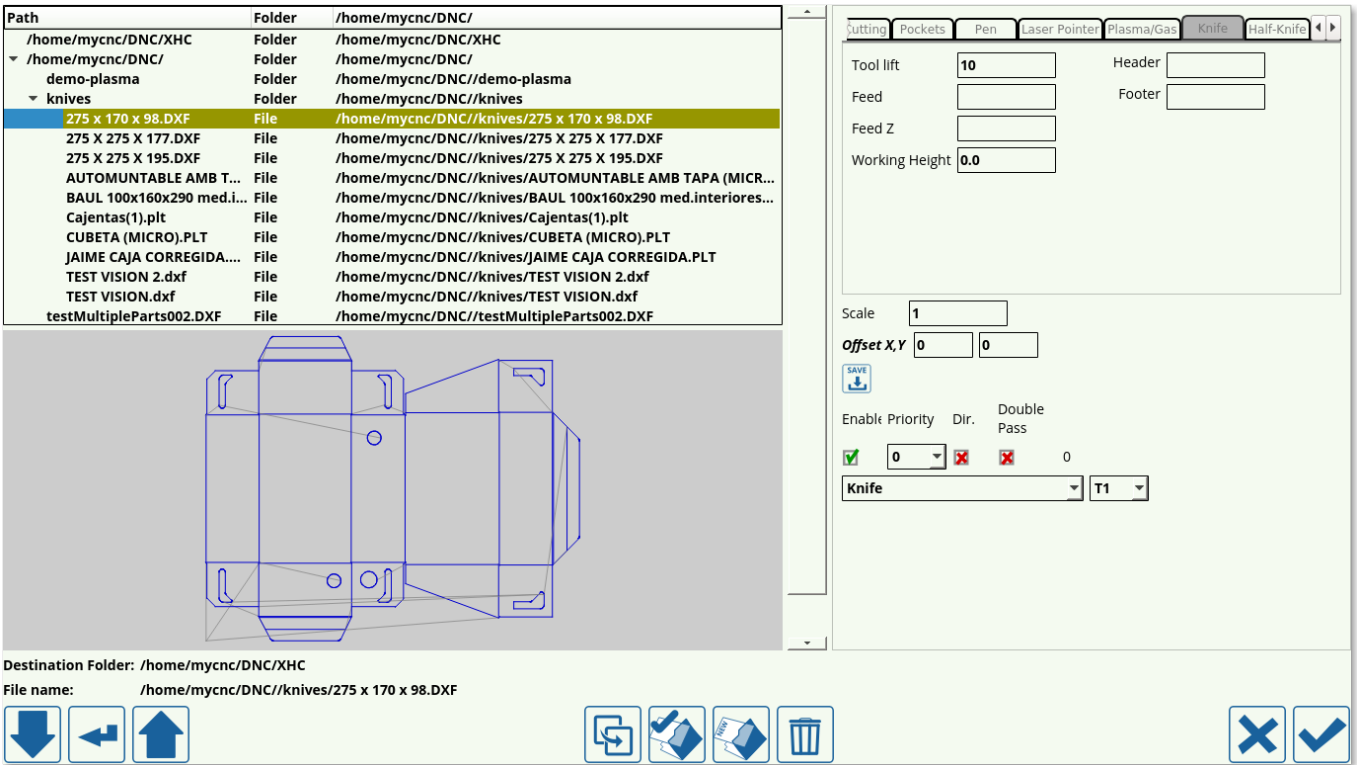
Different cutting technology supported in Shape Library - like automatic insert Lead-In/Lead-outs for Plasma/Gas Cutting or Multi Pass cutting and Engraving for Routers/Mill

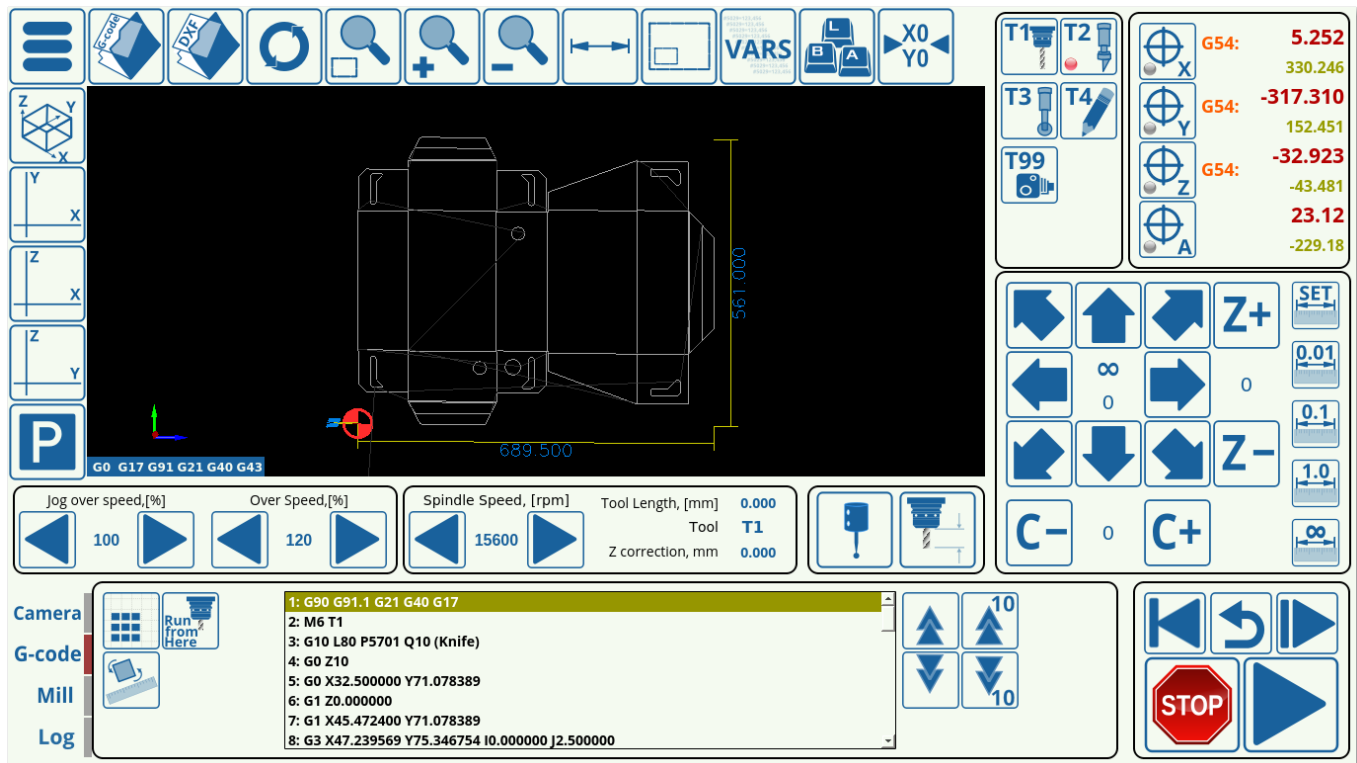
9. **G-code program Rotation, Mirror transformations** - g-code program can be mirrored relative to ($x=0$), ($y=0$) or ($x=y$) lines or rotated for given angle or to angle calculated from 2 base points. This feature widely used for heavy plasma/gas cutting machines, routers, but might be useful for mill machines as well.



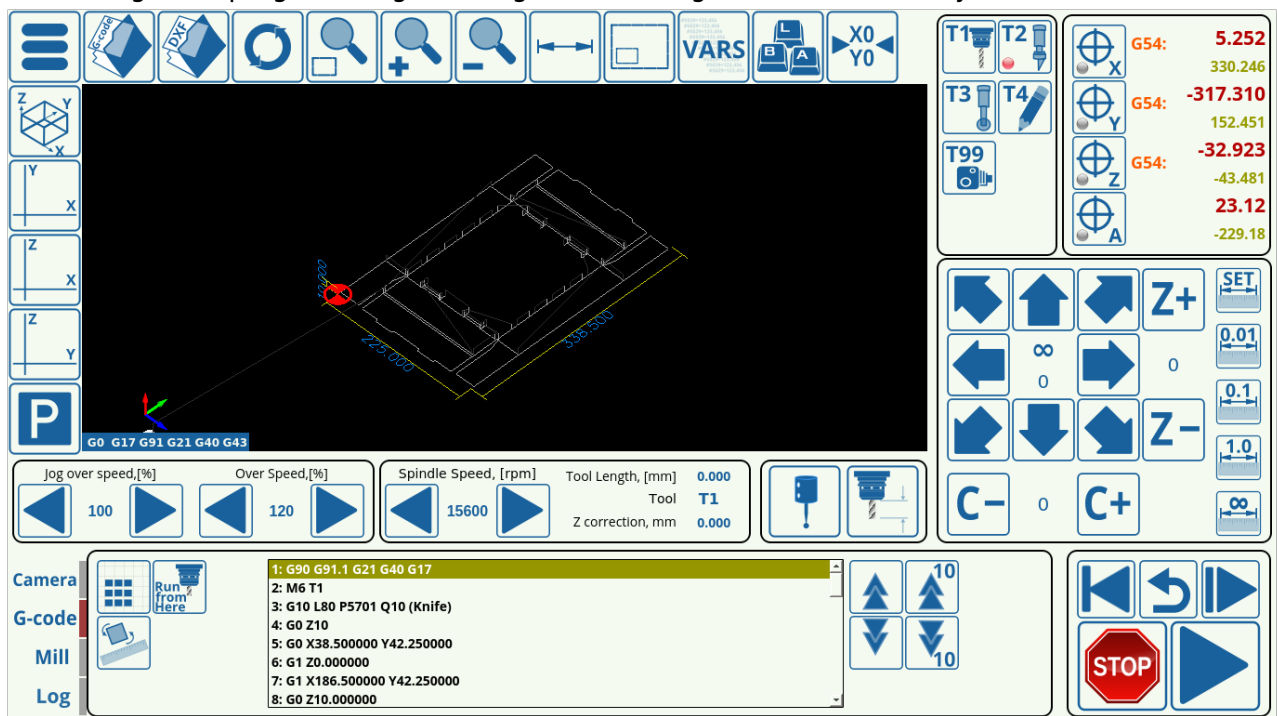


1. **DXF/HPGL import and convert to G-codes** with multi-head multi-technology support. Every layer of DXF file (or every Pen for HPGL) can be assigned to different technology and myCNC control will generate G-code accordingly:





1. Add **Lead-in/Lead-outs for Plasma-Gas-Laser** cutting
2. Add **Lift Up/Cut down Tool** for each **Engraving** contour
3. Add **Several Cut Passes** for **Multi-Pass Mill**
4. Generate **Pockets** for Pockets Layer
5. Add **Knife Lift Up/Cut down** codes for **Tangential Knife** Layer
6. Add **Computer Vision** codes for Camera Layer
7. **Tangential Knife support.** If Tangential Control activated, myCNC control software automatically add Knife Lift Up/Down and knife rotation to follow path direction, so standard 2D (or 2.5D) g-code programming is enough to run Tangential Knife with myCNC.



ATC (Automatic Tool Change) is supported for any myCNC control board. myCNC contains Macro Wizard to generate Tool change macros for different kind of Tool changers (linear, drum/rotary, chain)

Multi-Tool support. If several tools is installed on machine head myCNC control software can handle switching tools procedure and apply tool offsets just like standard M6/Tool change procedure

The screenshot displays the myCNC software interface. On the left, the 'CNC Settings' menu is open, with 'Multi Head' selected under the 'Technology' section. The main window shows the 'Multi-head enabled' checkbox checked and 'Number of units' set to 2. Below this, a table lists the tool settings for 8 units:

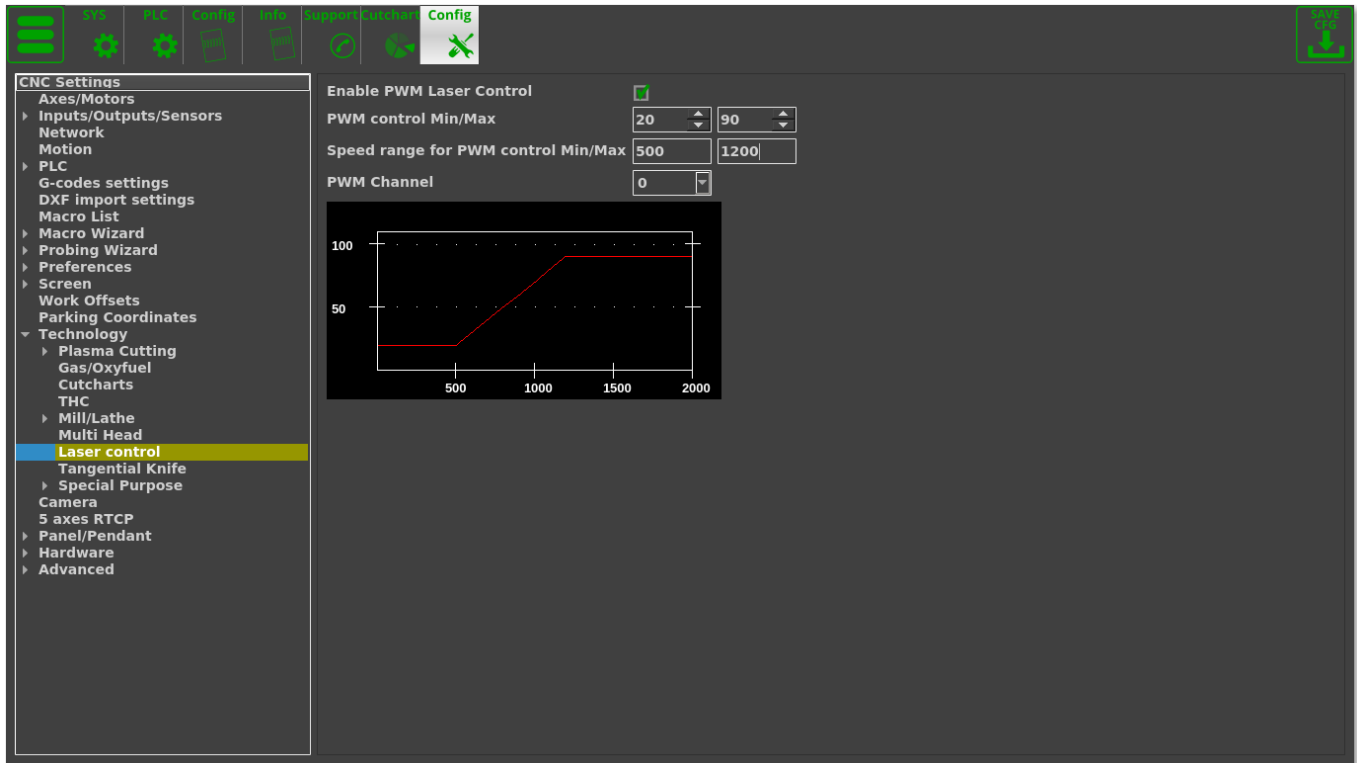
Unit	Tool Number	Offset X	Offset Y	Zero Z
Unit 01	T01	0	0	0
Unit 02	T09	250	10	0
Unit 03	T01	0	0	0
Unit 04	T01	0	0	0
Unit 05	T01	0	0	0
Unit 06	T01	0	0	0
Unit 07	T01	0	0	0
Unit 08	T01	0	0	0

The bottom section of the interface shows a 3D model of the multi-tool head. To the right of the model, a red box highlights the tool selection area, which includes buttons for T1, T2, T3, T4, and T99. Below this, a table shows the G54 offsets for the X, Y, Z, and A axes:

Axis	G54 Offset
X	5.252
Y	-317.310
Z	-32.923
A	23.12

Below the 3D model, a red box highlights the 'Camera' button and the 'G-code' button. The 'G-code' button is currently selected, showing a 2D image of a coin. The bottom right corner of the interface contains a 'STOP' button and a 'Log' button.

Laser Strength Control. myCNC software allows the user to adjust the laser strength depending on the speed with which the laser beam is moving across the surface of the material. This is highly useful to eliminate overheating from the laser beam that would otherwise occur at corners and parts of the program where the beam slows down.



Wireless Pendant control support. myCNC supports a number of Wireless Pendant Controls



Flycut process allows to go through the laser cutting/engraving process much faster than the conventional setup when thin materials are used. The flycut process can maintain precision up to a 0.1 mm at working speeds up to 100 meters/minute by syncing the laser cutting/movement processes. The M64/M65 codes turn the corresponding exit ON and OFF, while M164/M165 allow for on-the-fly pulse-width modulation.

Advanced 2D/3D visualization, real-time IO monitoring,

Row and Column Nesting. myCNC able to multiply g-code file by given number along X and Y axes.

The screenshot displays a CNC control interface with a central wireframe model of a part. The part has a circular base with concentric rings and a rectangular top section. Dimensions are shown: 52.283 for the width and 43.311 for the height. The interface includes a top toolbar with icons for file operations, search, and variables. On the right, there are coordinate readouts for X, Y, Z, and A axes, showing values like G54: -0.654 for X and 0.00 for Z. Below the model, there are control buttons for jog over speed, over speed, spindle speed, tool length, and tool Z correction. At the bottom, a G-code editor shows a list of G-code lines, and a status bar displays total lines, current line, time elapsed, and time estimated.

Top Toolbar: File, Edit, Find, Search, Variables, L, B, A.

Coordinate Readouts (Right):

- X: G54: -0.654, 2938.074
- Y: G54: -32.701, 1356.297
- Z: G54: 4.502, -451.310
- A: 0.00, -229.18

Model Dimensions: 52.283 (width), 43.311 (height).

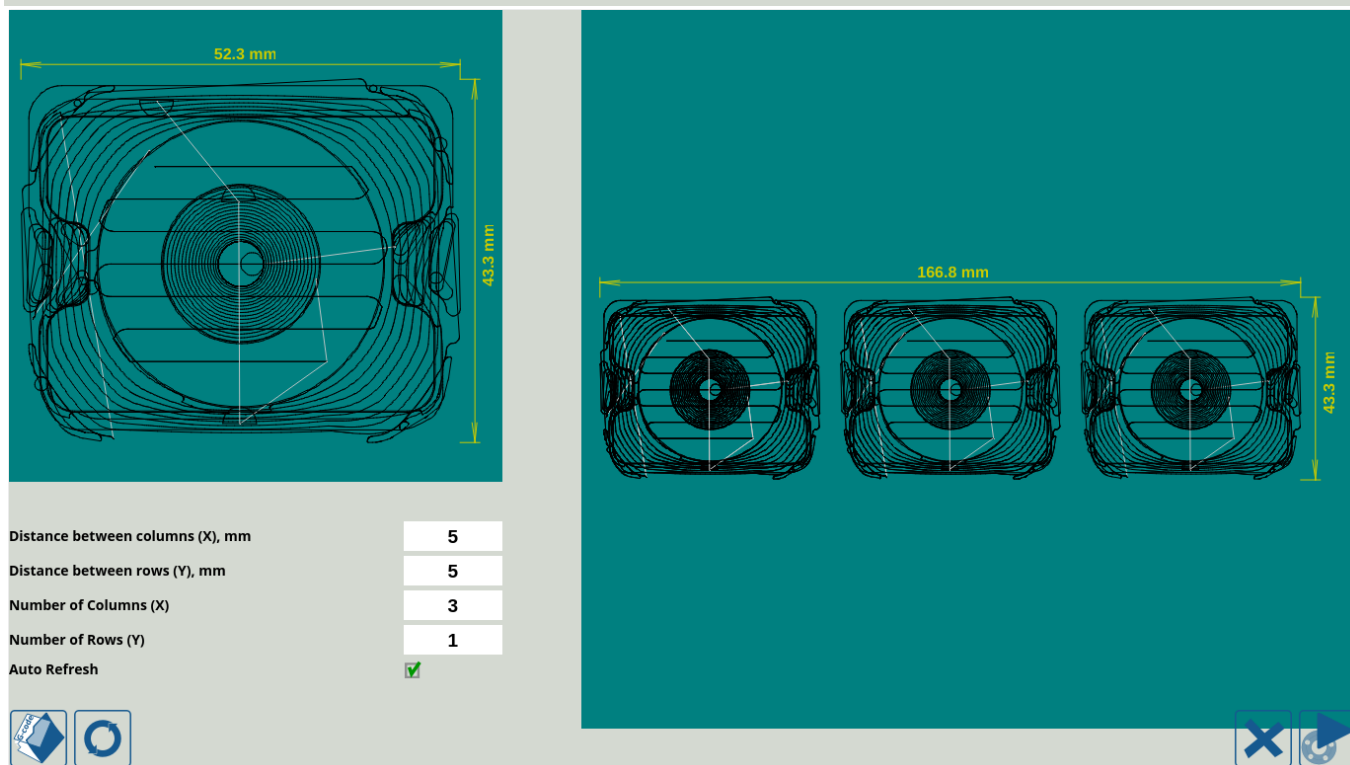
Control Buttons (Bottom): Jog over speed, Over Speed, Spindle Speed, Tool Length, Tool Z correction, A-, A+, Z+, Z-, SET, 0.01, 0.1, 1.0, ∞.

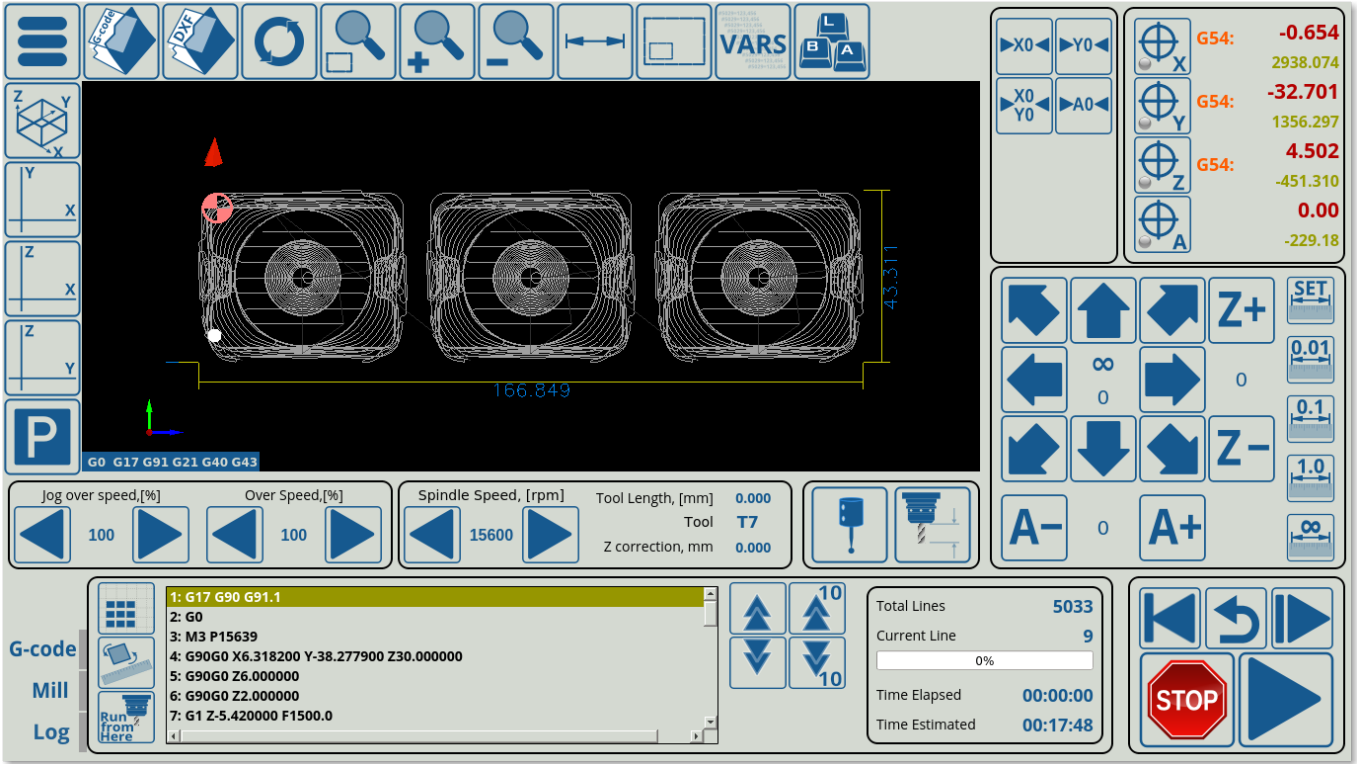
G-code Editor (Bottom Left):

```
19: G01 X3.2825 Y-37.5649 F1889
20: X2.9412 Y-37.541 F1750
21: G02 X2.8151 Y-37.5164 I0.0366 J0.5237 F1481
22: G03 X2.0825 Y-37.2984 I-4.7244 J-14.5359 F1256
23: G02 X1.2043 Y-36.8626 I0.6119 J2.3356 F1213
24: X-0.9504 Y-33.3698 I4.6286 J5.2663
25: X-1.2349 Y-32.1157 I14.6448 J3.9822
26: G03 X-1.3677 Y-31.6553 I-2.071 J-0.3477 F1305
```

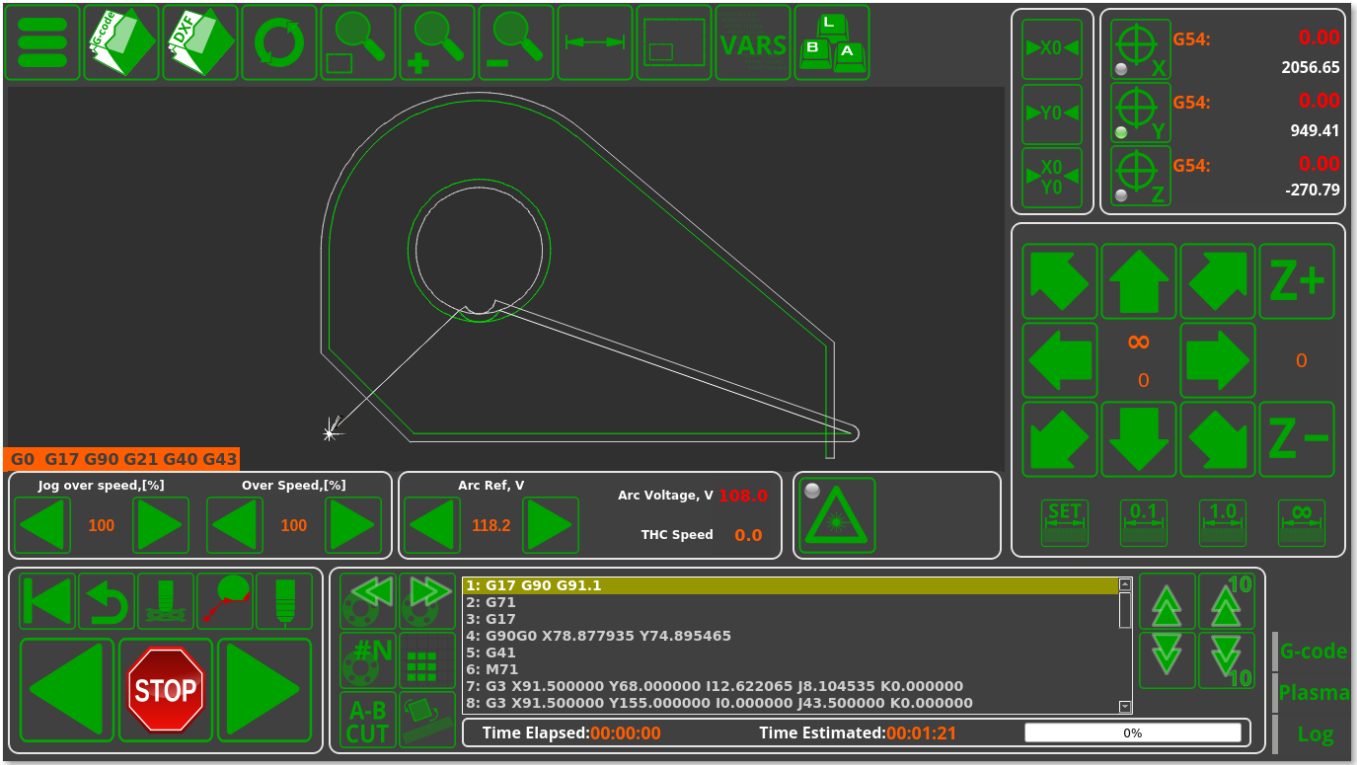
Status Bar (Bottom Right):

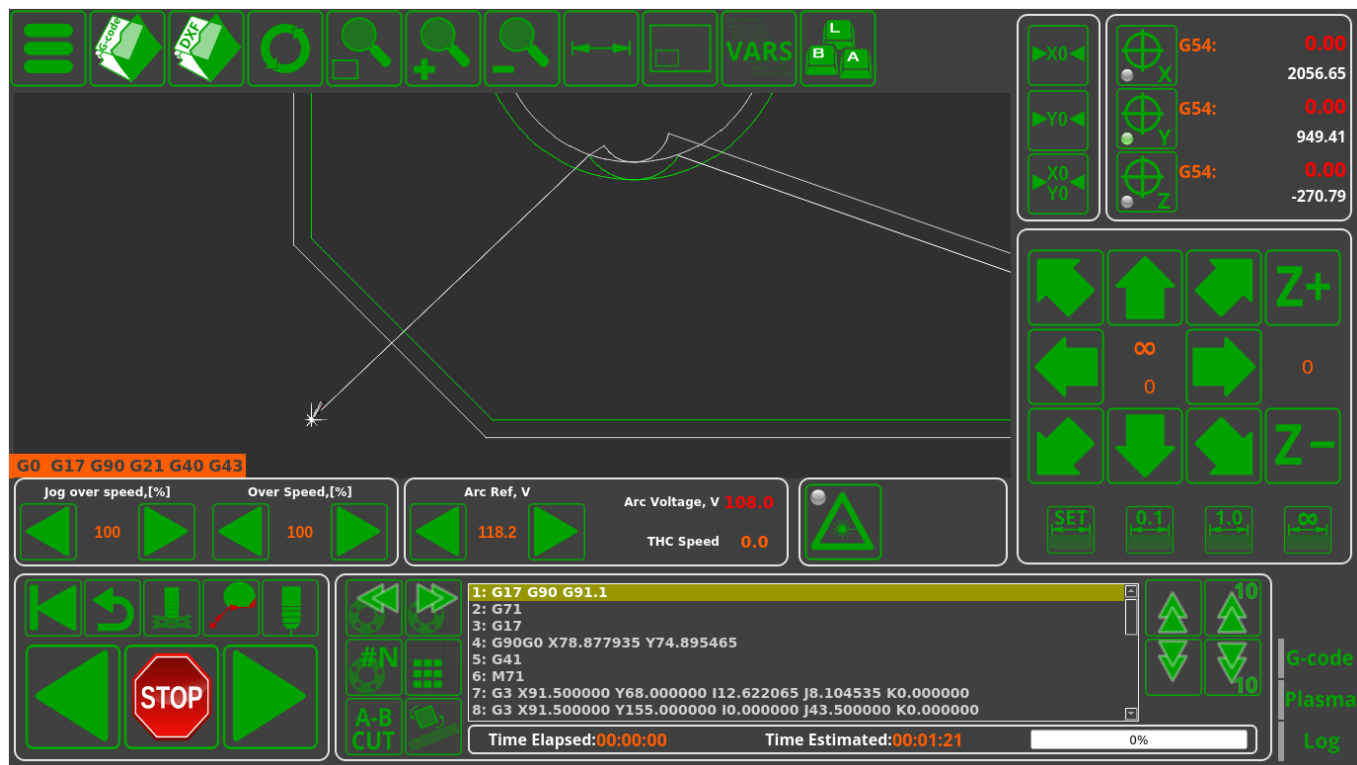
- Total Lines: 1671
- Current Line: 72
- Time Elapsed: 00:00:00
- Time Estimated: 00:05:57





Tool Radius Compensation with visualization. myCNC does Tool Radius compensation according G40-G42 codes and Tool Table and able to show results on Visualization widget to visual control.





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Last update: 2019/12/03 15:15

