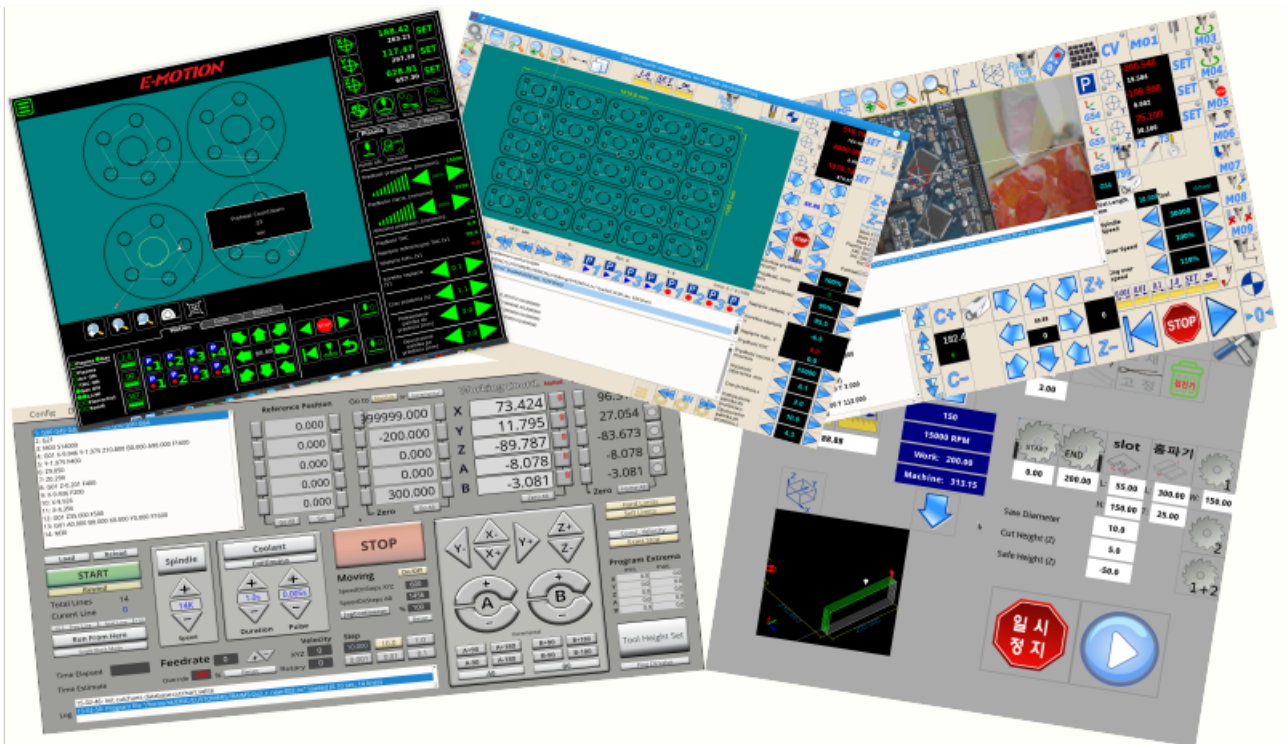


myCNC Software Main Features

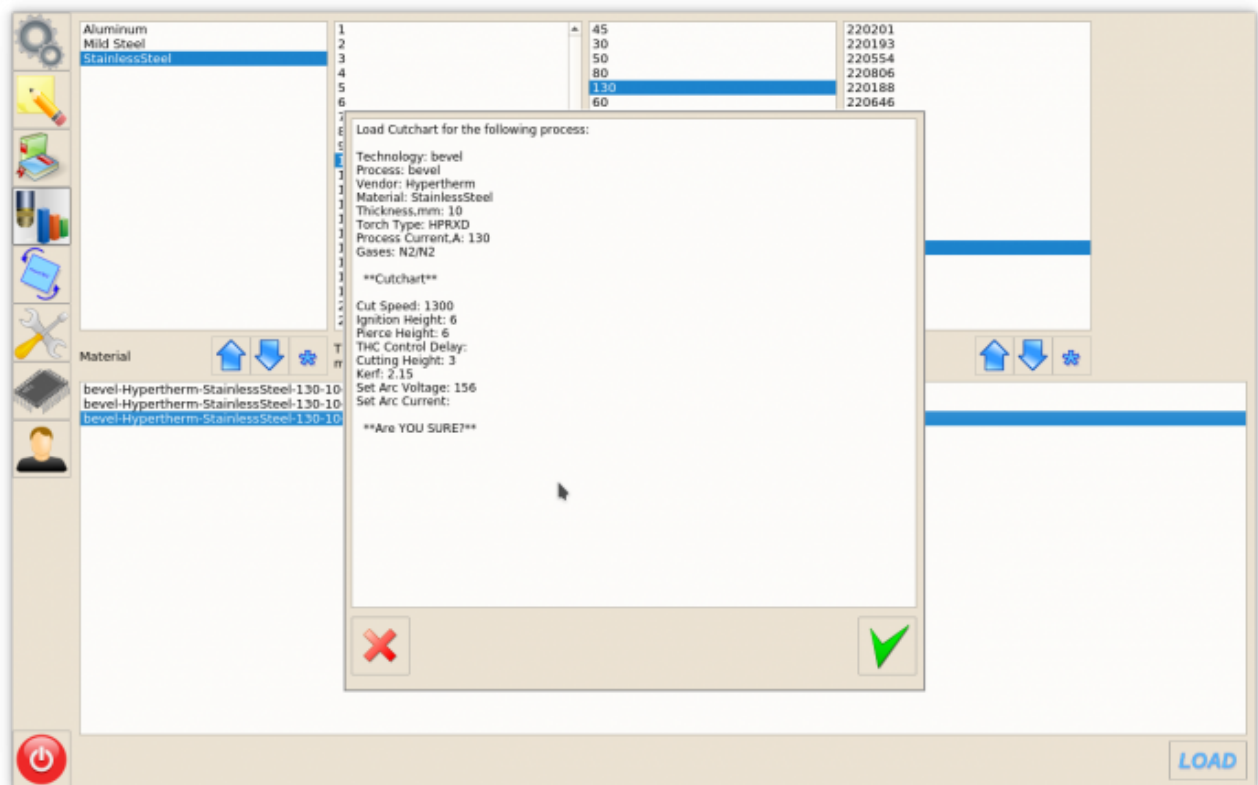
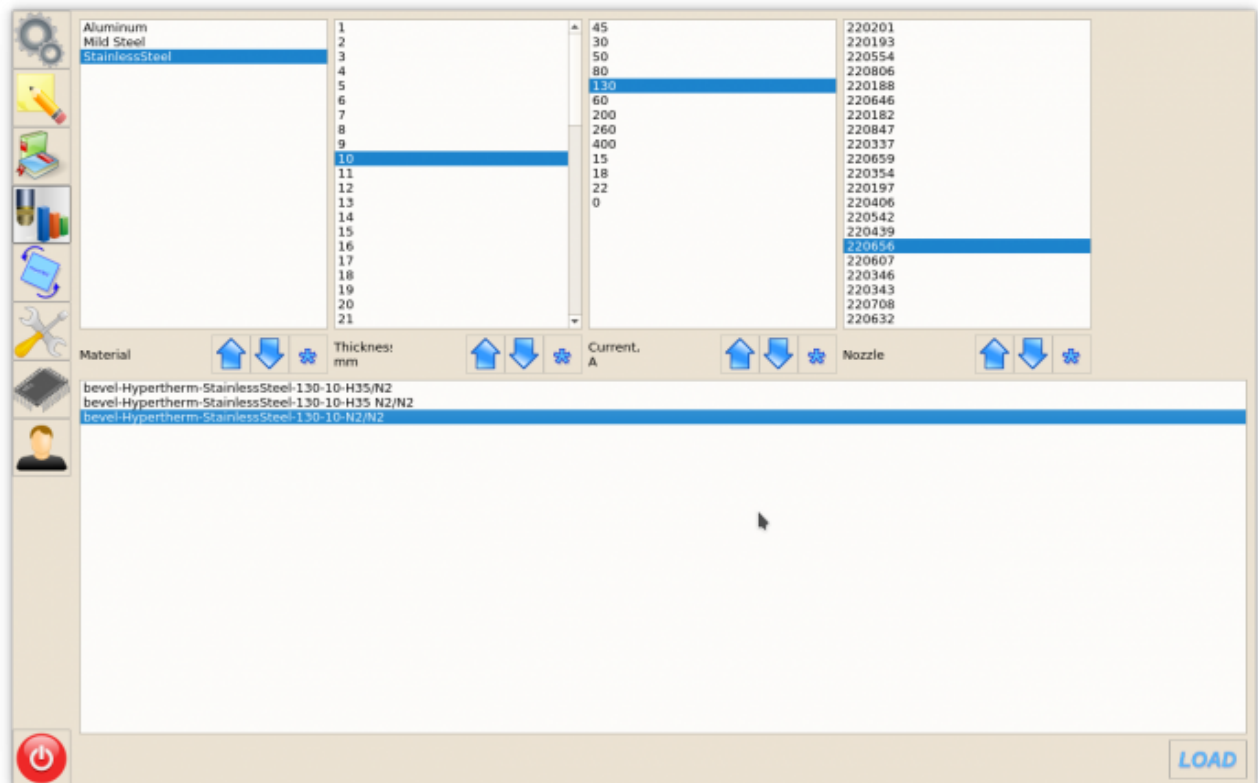
myCNC is multi-tasking and multi-platform CNC Control Software working under MS Windows (7, 8, 10), Linux, Embedded Linux Operating systems. myCNC can be run on Desktop PC, Industrial PC, Laptop or Single Board Computer (SBC) like Raspberry Pi 2/3, Odroid-C2/XU4, Asus Tinker Board, Rock64, Cubieboard2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

myCNC Control features

1. **6 Axes simultaneous 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)

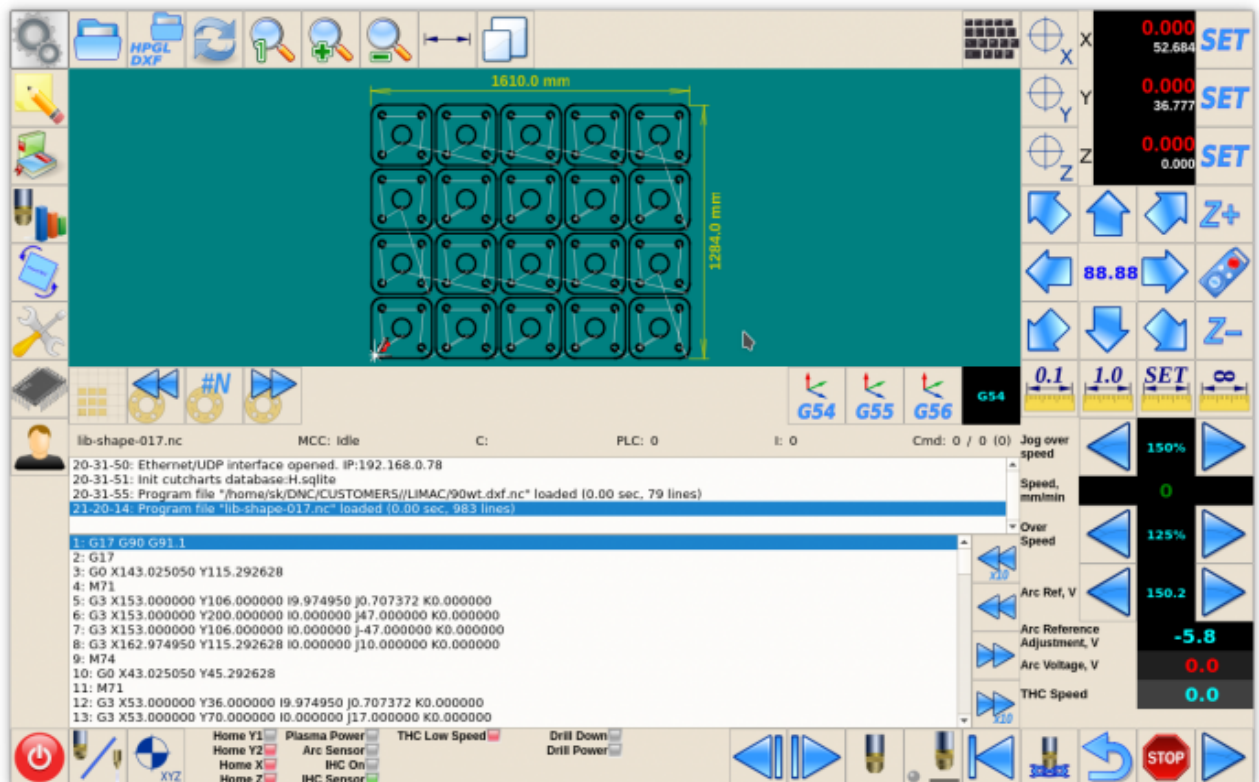


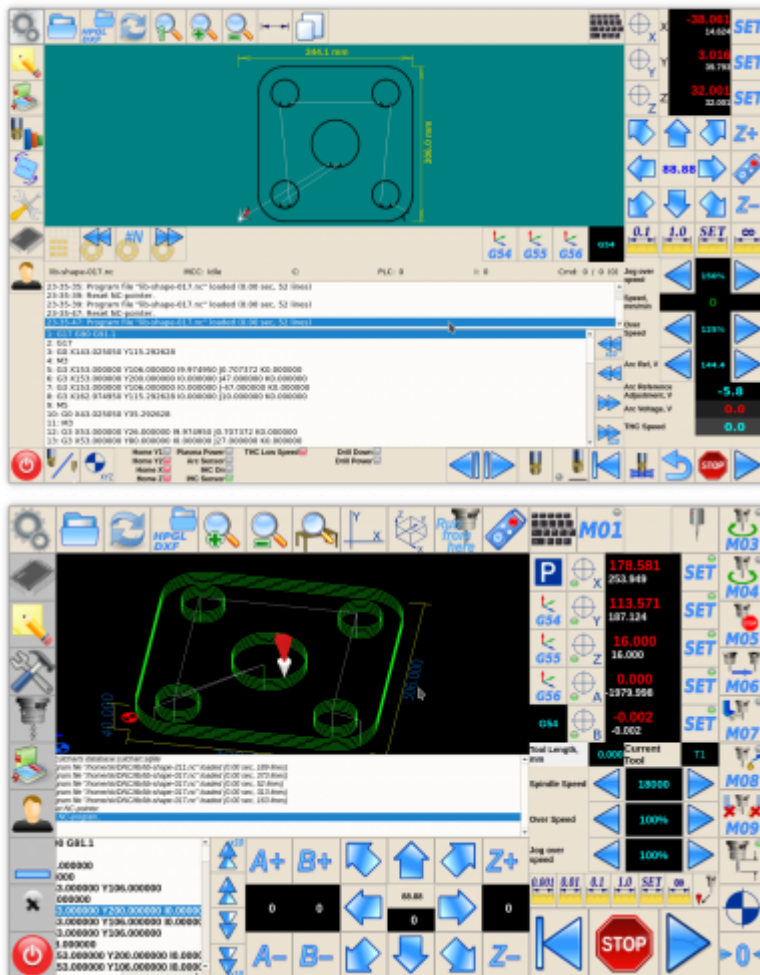
8. **Shape Library** - has a good set of parameterized shapes with row&column nesting features and several cutting technologies supported (plasma-gas cutting, engraving, multi-pass cutting). New shapes can be easily added to the Shape library by customers, [examples available](#)





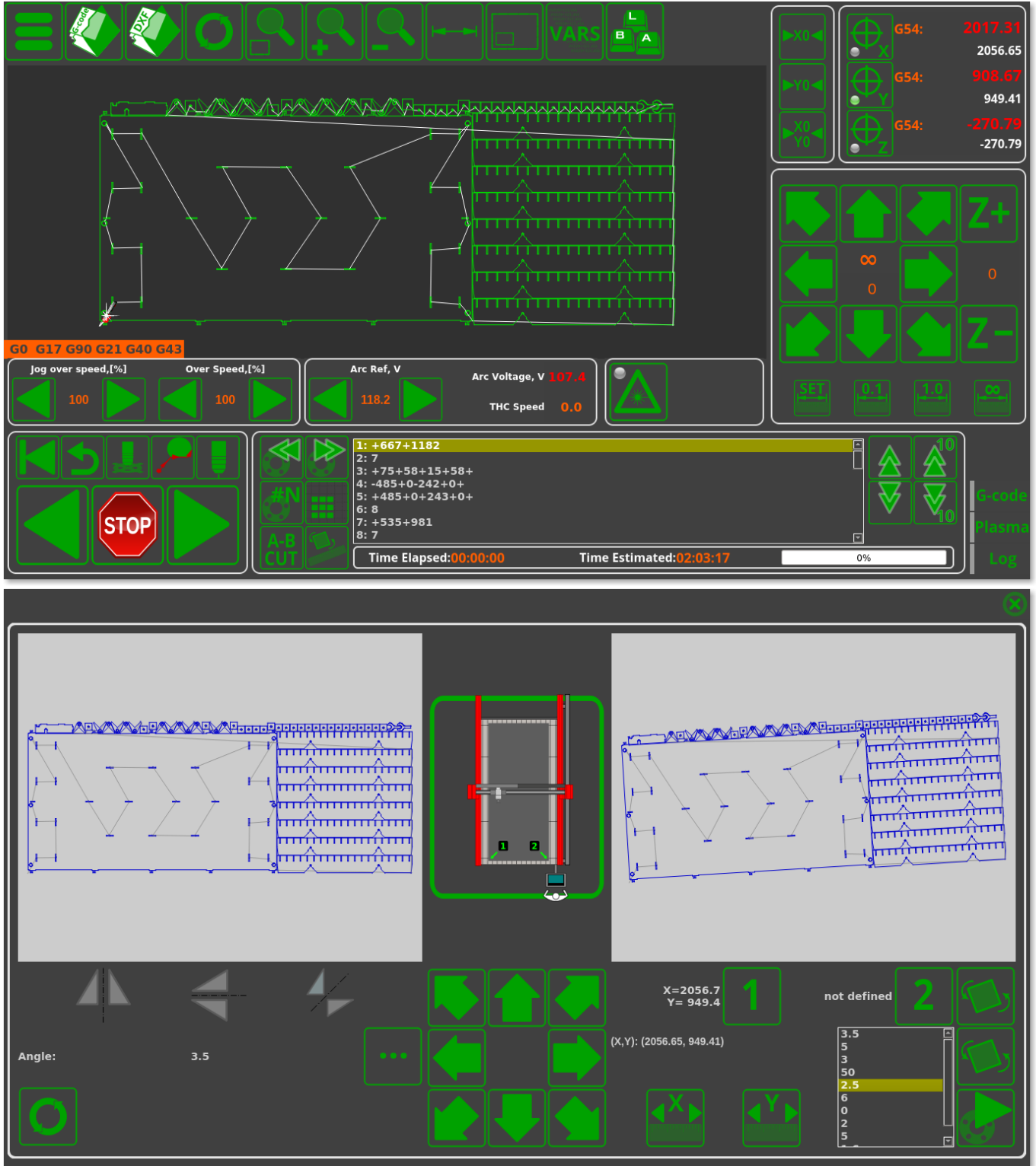
Row and column Nesting for library Shapes

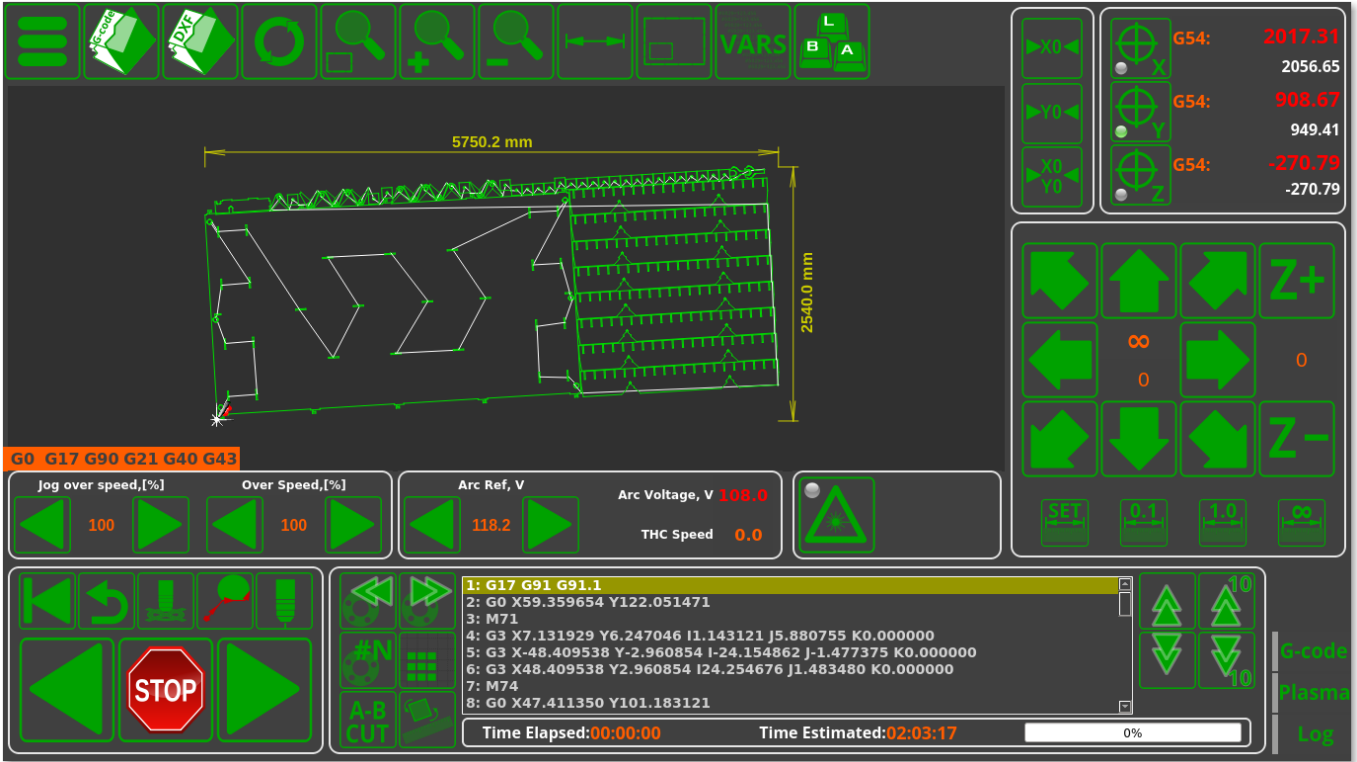




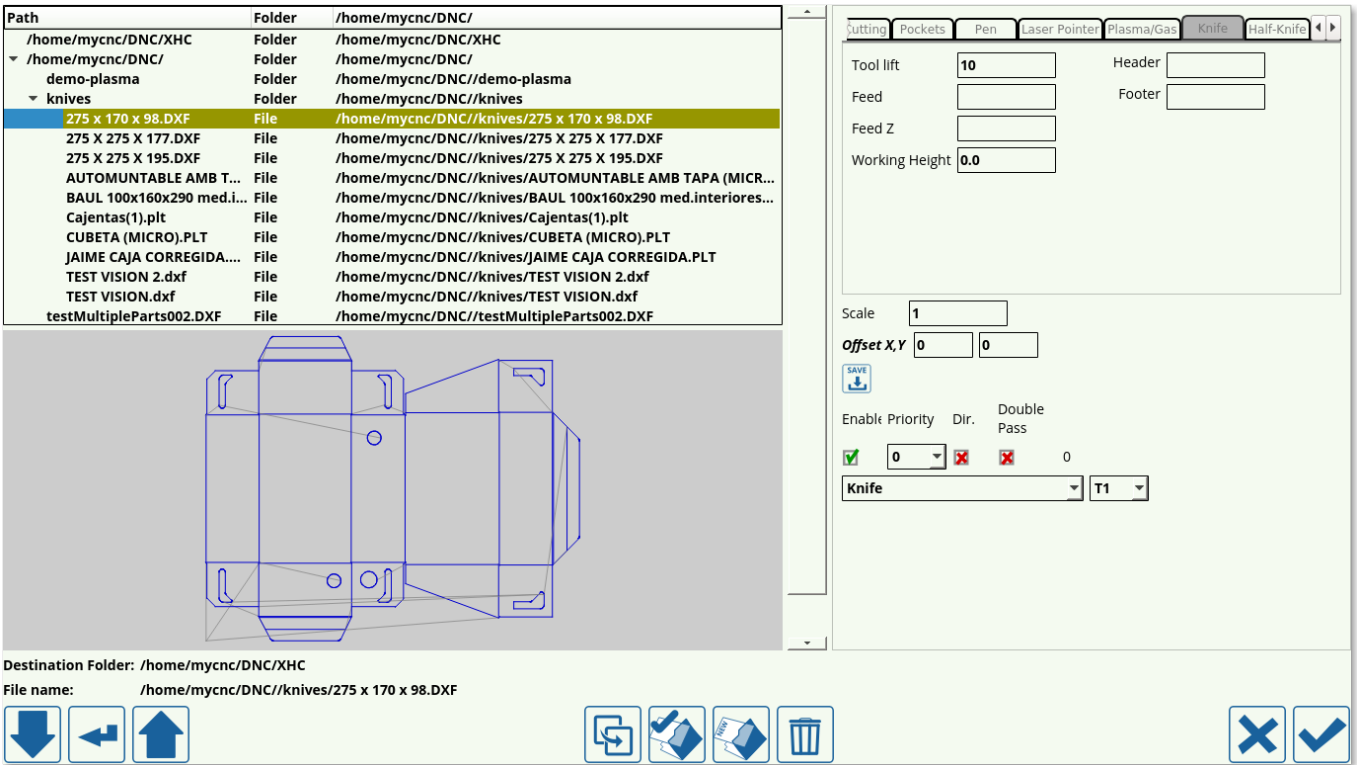
Different cutting technology supported in Shape Library - like automatic insert Lead-In/Lead-outs for Plasma/Gas Cutting or Multi Pass cutting and Engraving for Routers/Mill

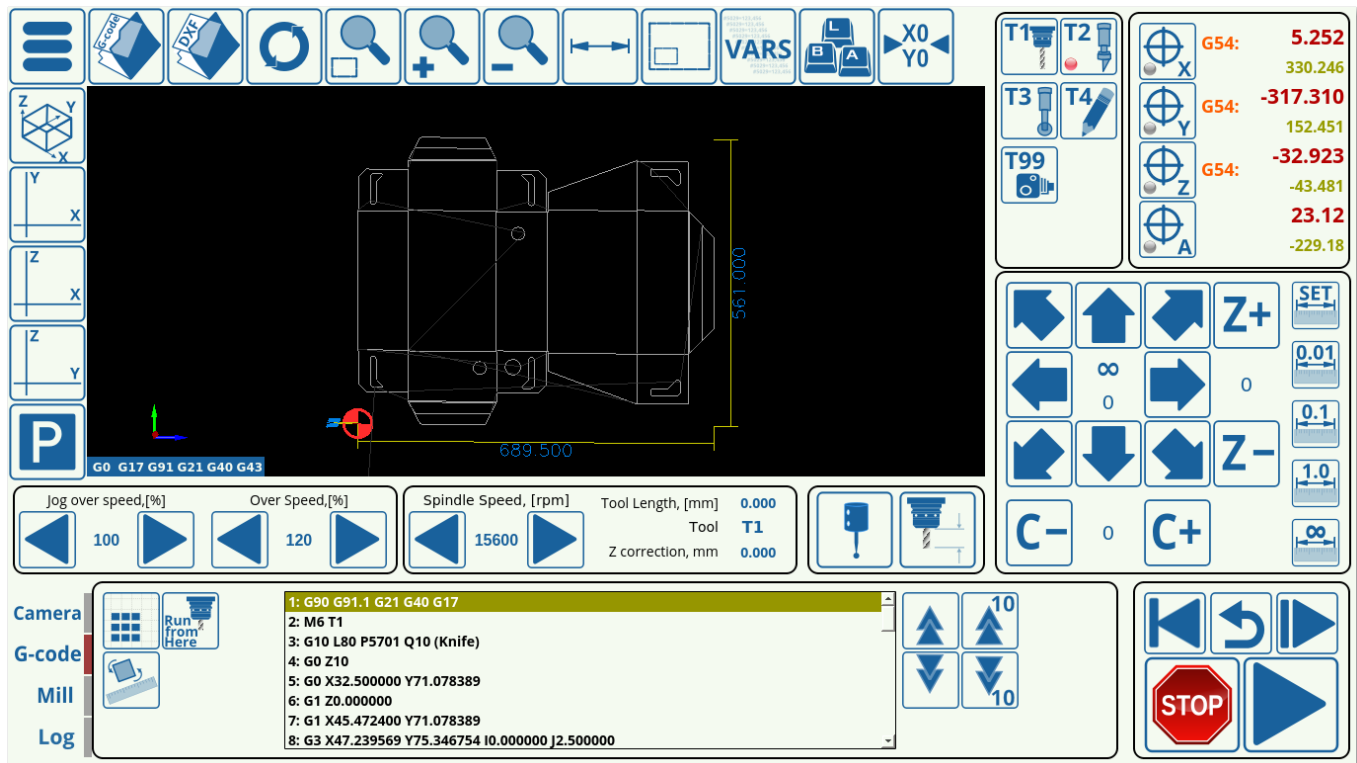
9. **G-code program Rotation, Mirror transformations** - g-code program can be mirrored relative to ($x=0$), ($y=0$) or ($x=y$) lines or rotated for given angle or to angle calculated from 2 base points. This feature widely used for heavy plasma/gas cutting machines, routers, but might be useful for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



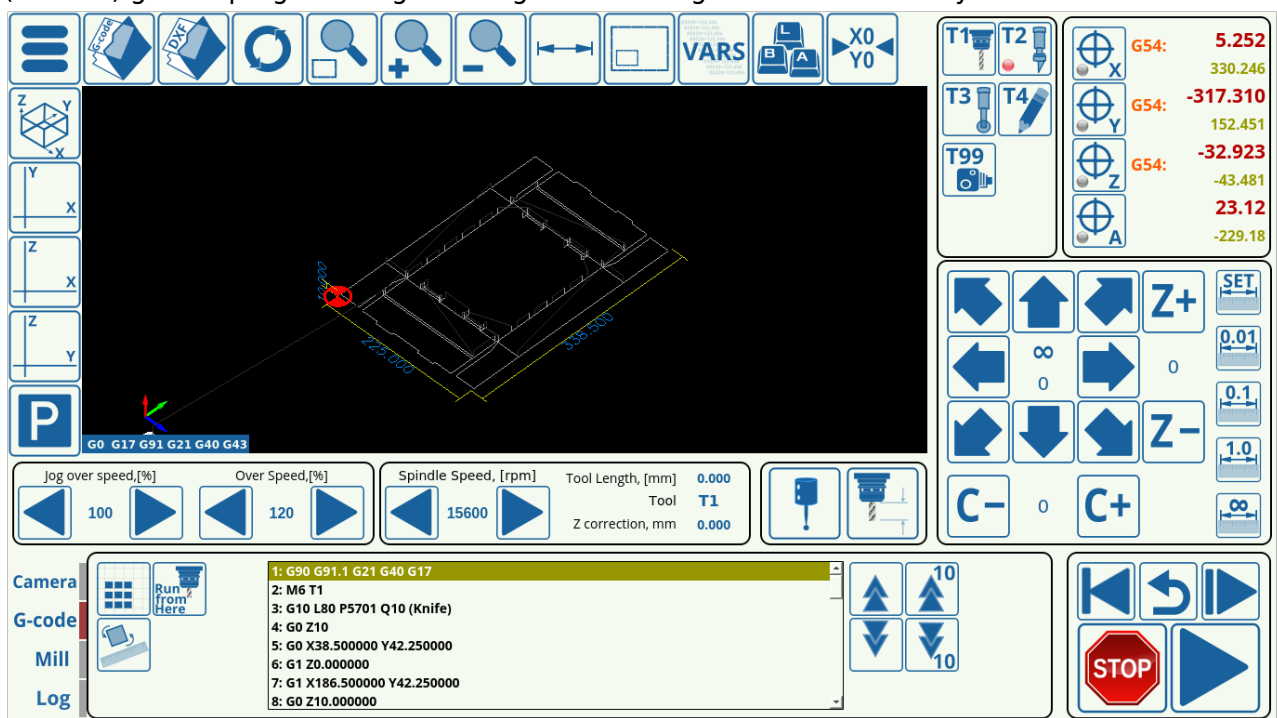


1. **DXF/HPGL import and convert to G-codes** with multi-head multi-technology support. Every layer of DXF file (or every Pen for HPGL) can be assigned to different technology and myCNC control will generate G-code accordingly:





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)

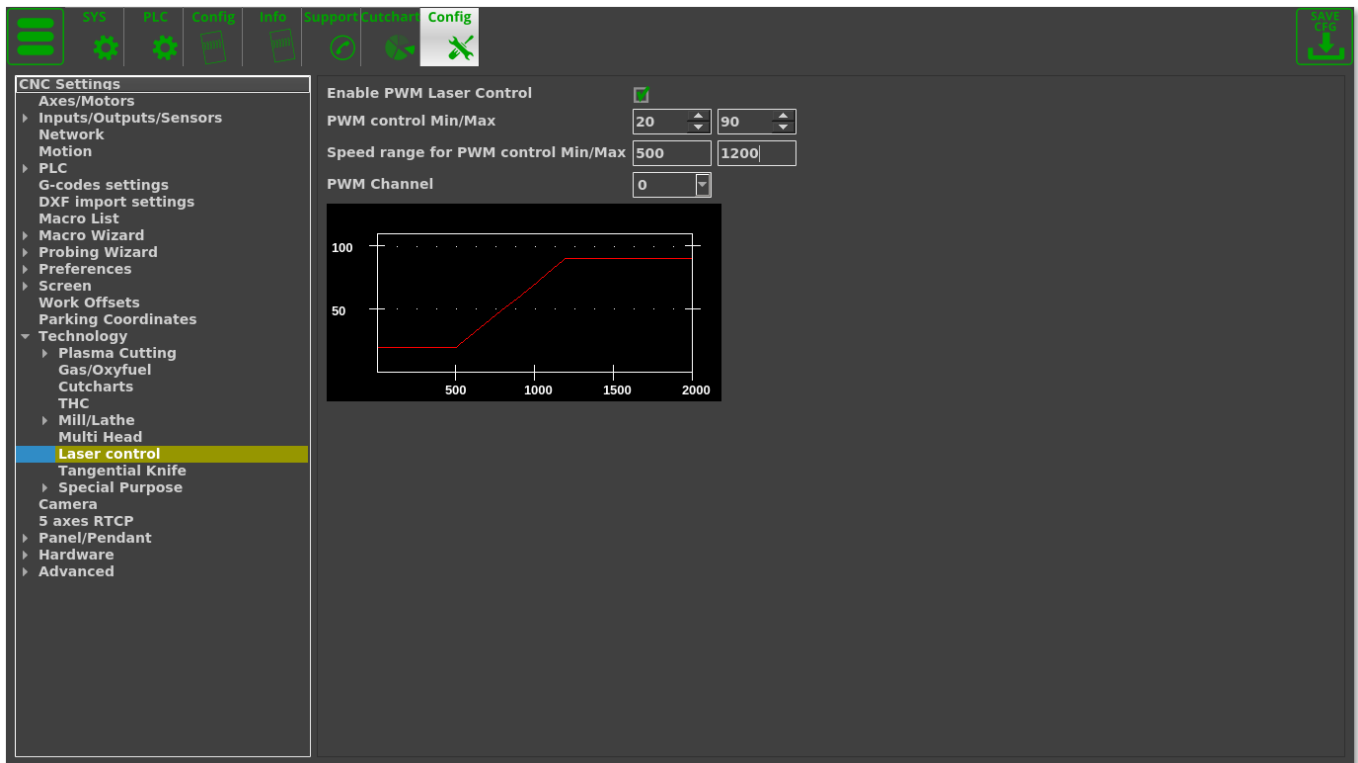
Multi-Tool support. If several tools is installed on machine head myCNC control software can handle switching tools procedure and apply tool offsets just like standard M6/Tool change procedure

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 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 a part with dimensions. To the right of the model is a tool selection panel with icons for T1, T2, T3, T4, and T99. Further right is a coordinate display showing G54 offsets: X: 5.252, Y: -317.310, Z: -32.923. Below the 3D model is a status bar with jog over speed, over speed, spindle speed (15600 rpm), tool length (0.000 mm), and tool (T1). At the bottom left, a camera view shows a close-up of a coin. The bottom right contains a control panel with various buttons including a red 'STOP' 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.

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 3D model of a square part. The part has dimensions of 52.3 mm by 43.3 mm. The interface includes a G-code editor, a parameter table, and a 3D visualization area.

G-code Editor:

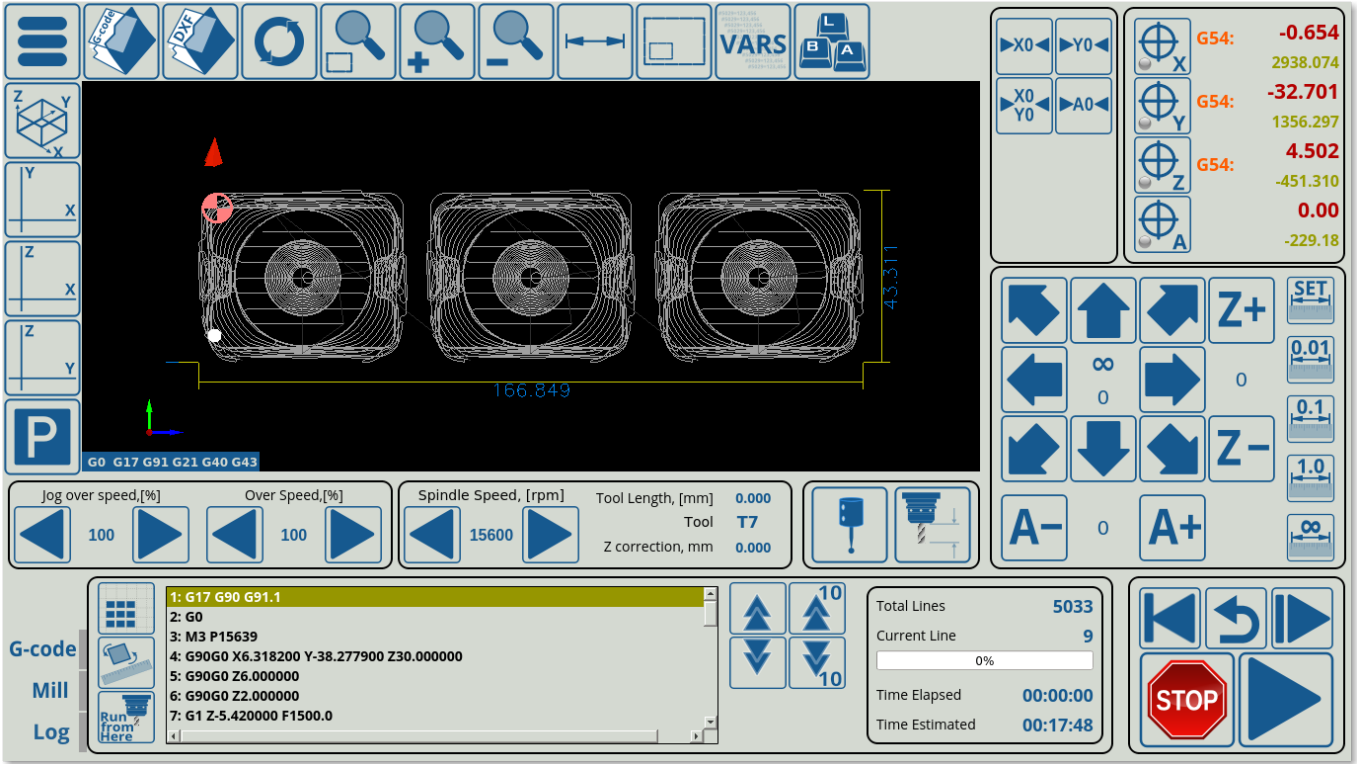
```
G01 X3.2825 Y-37.5649 F1889
X2.9412 Y-37.541 F1750
G02 X2.8151 Y-37.5164 I0.0366 J0.5237 F1481
G03 X2.0825 Y-37.2984 I-4.7244 J-14.5359 F1256
G02 X1.2043 Y-36.8626 I0.6119 J2.3356 F1213
X-0.9504 Y-33.3698 I4.6286 J5.2663
X-1.2349 Y-32.1157 I14.6448 J3.9822
G03 X-1.3677 Y-31.6553 I-2.071 J-0.3477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

Parameter Table:

Distance between columns (X), mm	Distance between rows (Y), mm	Number of Columns (X)	Number of Rows (Y)	Auto Refresh
5	5	3	1	<input checked="" type="checkbox"/>

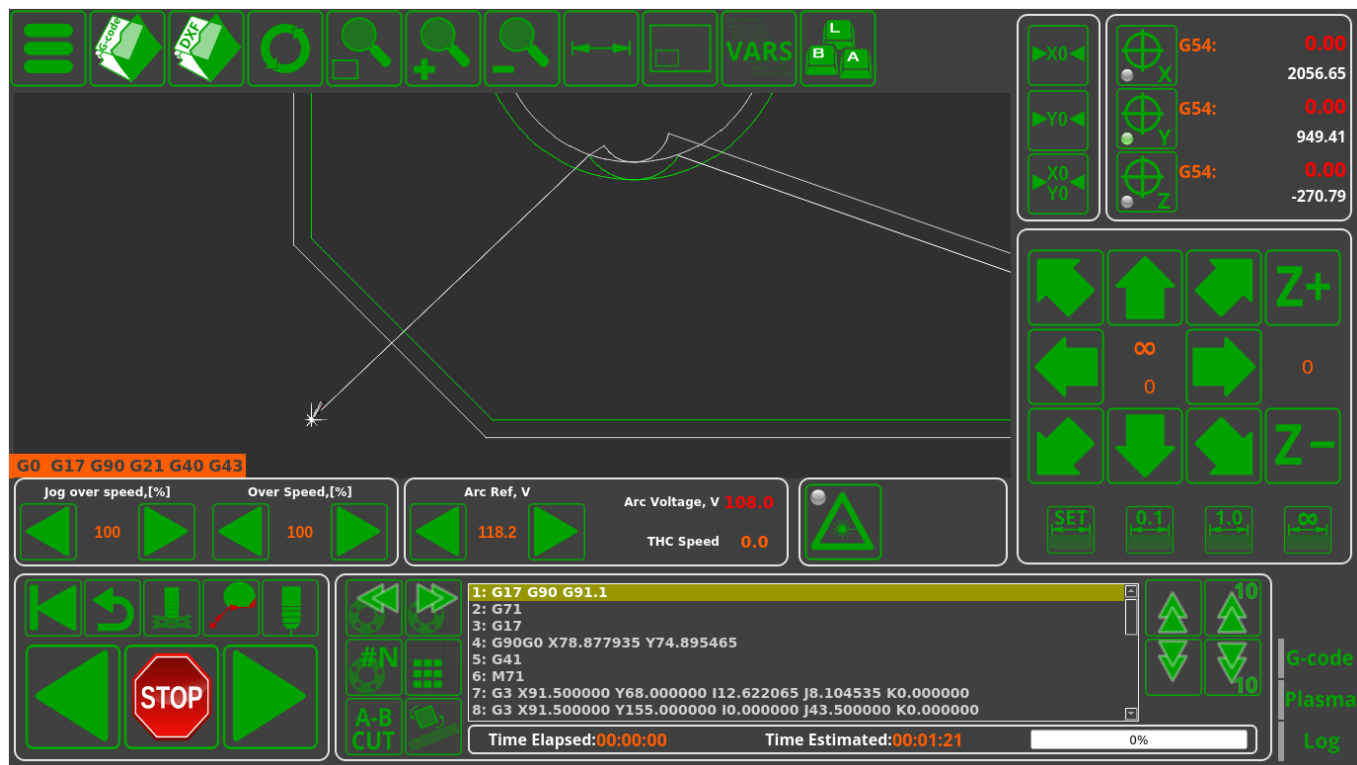
3D Visualization:

The 3D visualization shows a square part with a central circular feature. The dimensions 52.3 mm and 43.3 mm are indicated. The part is shown in a perspective view, and the dimensions are highlighted in red.



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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