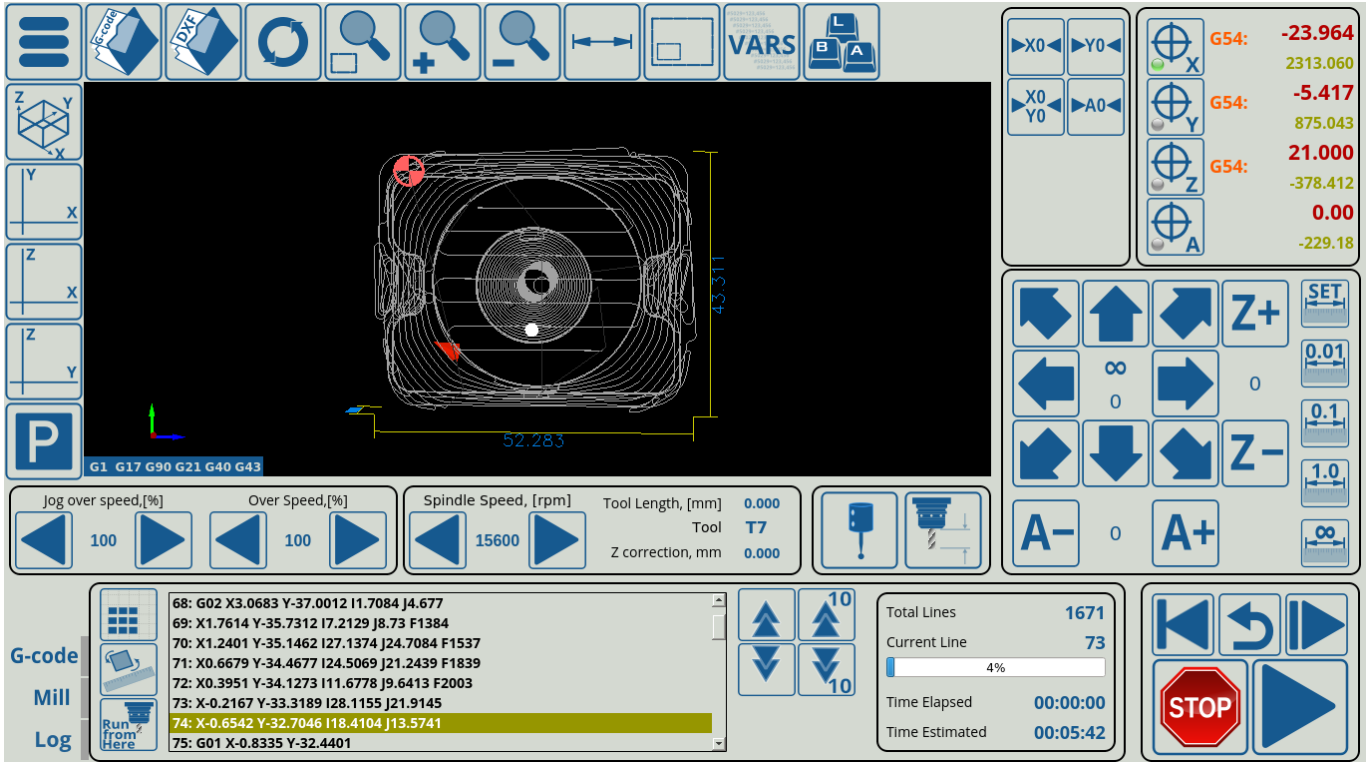


myCNC control software main screen description

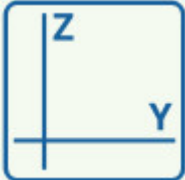







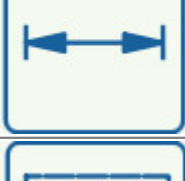
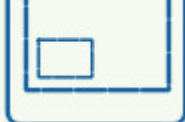
The following describes the main windows and buttons within the X1366M4 profile.












The main screen of the 4 axes Mill profile is shown below:



























Description of main screen buttons and windows




	<p>Go to the main window.</p>
	<p>Reorient the working area into an orthogonal view</p>
	<p>Reorient the file into an XY plane orientation</p>
	<p>Reorient the file into an XY plane orientation</p>

	Reorient the file into an YZ plane orientation
	Open the Parking Window (see table below)
	Open a G-code file
	Open a DXF file
	Reload the program file from the hard drive
	Zoom - Fit to Window
	Zoom - Zoom In
	Zoom - Zoom Out
	Show dimensions of the nesting chart
	Show work area with the nesting chart

	<p>Show the virtual keyboard</p>
	<p>Minimize the myCNC software</p>
	<p>Close the myCNC software</p>
	<p>Shut down the workstation. Note that this summons a script for the process (sudo poweroff). A similar system can be used for other actions, such as summoning applications. To have the summoned application give over control, use the “&” symbol in your custom .sh script.</p>
	<p>Open the myCNC settings</p>
	<p>Custom machine settings (see the manual for Speed Settings setup)</p>
	<p>A library of standard parts for cutting, milling, etc</p>
	<p>Open up the editor</p>
	<p>Open up the system diagnostics window</p>
	<p>Run the homing for the x-axis</p>
	<p>Run the homing for the y-axis</p>

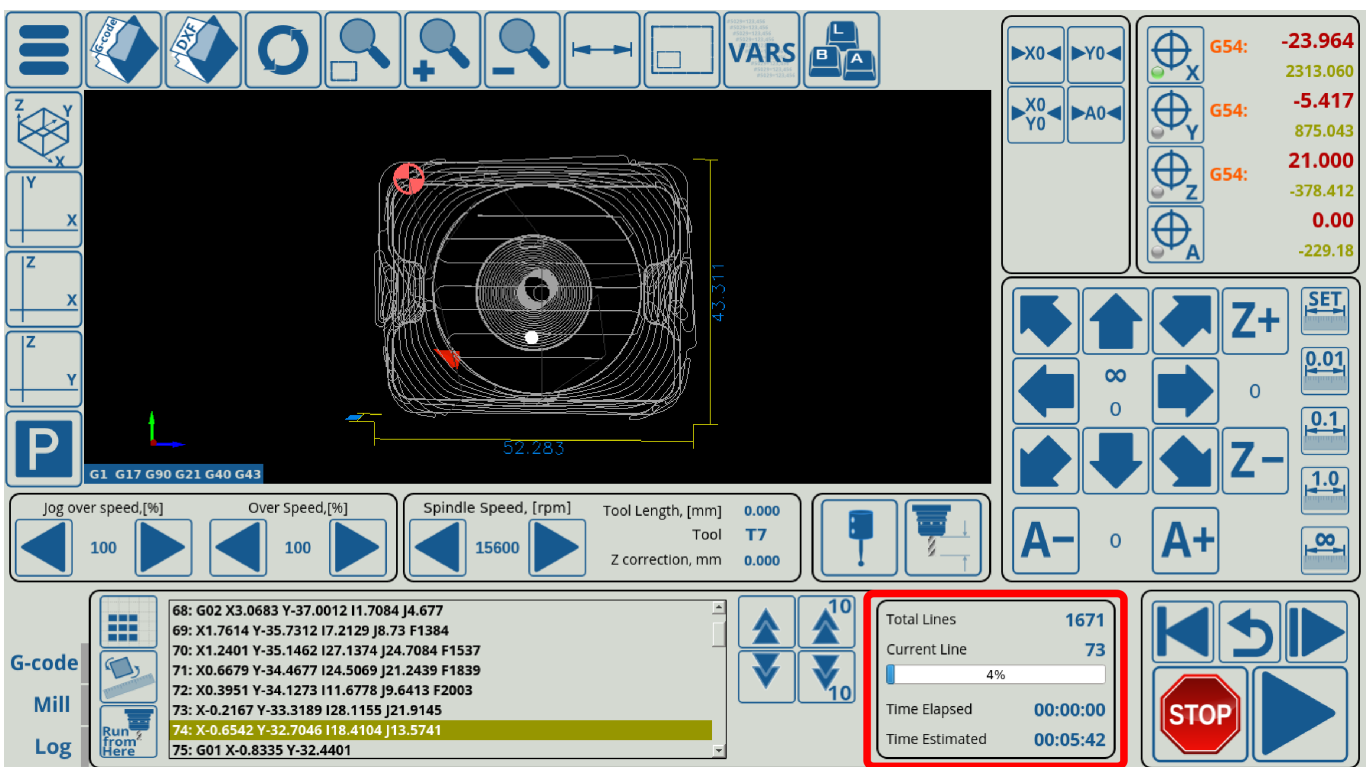
	Run the homing for the a-axis
	Run the homing for the xy plane
	Reset to zero the working x-coordinate
	Reset to zero the working y-coordinate
	Reset to zero the working z-coordinate
	Reset to zero the working a-coordinate
	Machine movement buttons (xy plane)
	Machine movement button (positive z-axis)
	Machine movement button (negative z-axis)
	Machine movement button (positive a-axis)
	Machine movement button (negative a-axis)
	Set the machine movement step size to a specified value

	Set the machine movement step size to 0.01 mm
	Set the machine movement step size to 0.1 mm
	Set the machine movement step size to 1 mm
	Set an infinite machine movement step size
	Go to the beginning of the control program
	Go forward
	Return to the working point
	Run the program
	Stop the program
	Go up one line in the program code
	Go down one line in the program code
	Go up ten lines in the program code

	Go down ten lines in the program code
	Open the Tool Specifications window (see table below)
	Open the Probe Sensor window (see table below)

Progress window

The progress window is available on the latest M4 profile versions and is located on the lower part of the main profile screen:



The screenshot displays the CNC control interface. The progress window is highlighted with a red box and contains the following information:

Total Lines	1671
Current Line	73
Time Elapsed	00:00:00
Time Estimated	00:05:42

The progress bar shows 4% completion.

The progress window shows the total number of lines in the program file, the current line that the running program is on, the progress bar, the elapsed time and the estimated time remaining.

Total Lines	5033
Current Line	0
<div style="text-align: center;">0%</div>	
Time Elapsed	00:00:00
Time Estimated	00:17:52

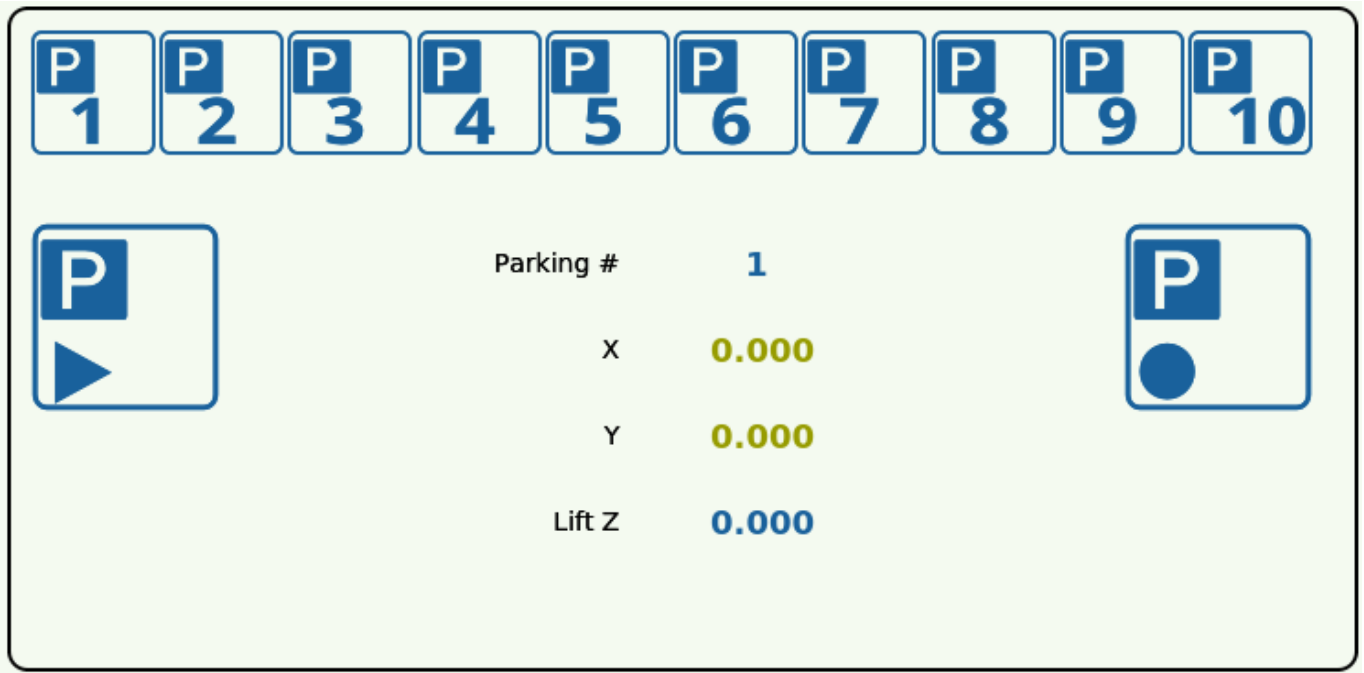
Note that the progress bar will only work properly if the following settings is turned ON: "Check Soft Limits for the full toolpath" in **Settings > Preferences > Start/Stop**.

The screenshot shows the 'CNC Settings' window with the 'Start/Stop' section selected in the left sidebar. The main area displays various configuration options:

- Cutting ON commands: M20; M71; M03;
- Cutting OFF commands: M21; M74; M05;
- Soft stop time,s: 0.15
- Limit stop time,s: 0.15
- Deceleration time, if "Stop" pressed: (empty field)
- After Stop Handler: Not defined
- On Start**
 - Check Soft Limits for the full toolpath: (highlighted with a red box)
 - Toolpath Position checking, axes: x y z a b c u v
 - Goto Toolpath Position for axes: x y z a b c u v
- Lift Height: 10
- Move-to-Toolpath speed: 6000
- Current position as Start (*): Disabled by default:
- Reset work Position on "Reset-NC", "Tie" pressed:

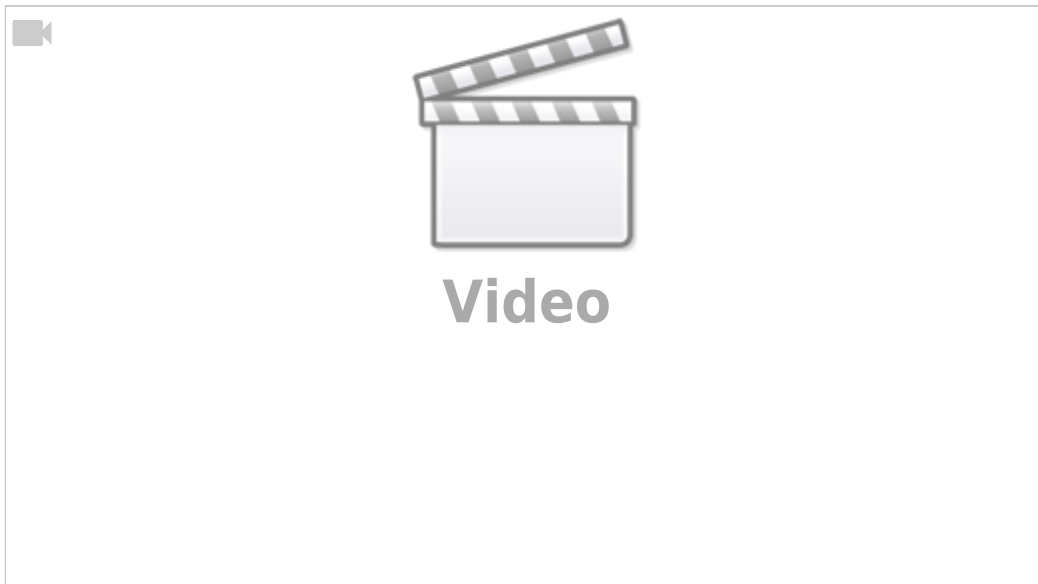
Parking Window buttons

The following Parking window opens upon pressing the Open the Parking Window button:



	Open the Parking Window
	Move to selected parking position
	Save current position as Selected Parking
	Choose a preset parking position

More info on the Parking widget and how to add it to profiles which don't display it by default:



Tool Specifications Window buttons

Upon pressing the Tool Specifications button, you are presented with the following window:

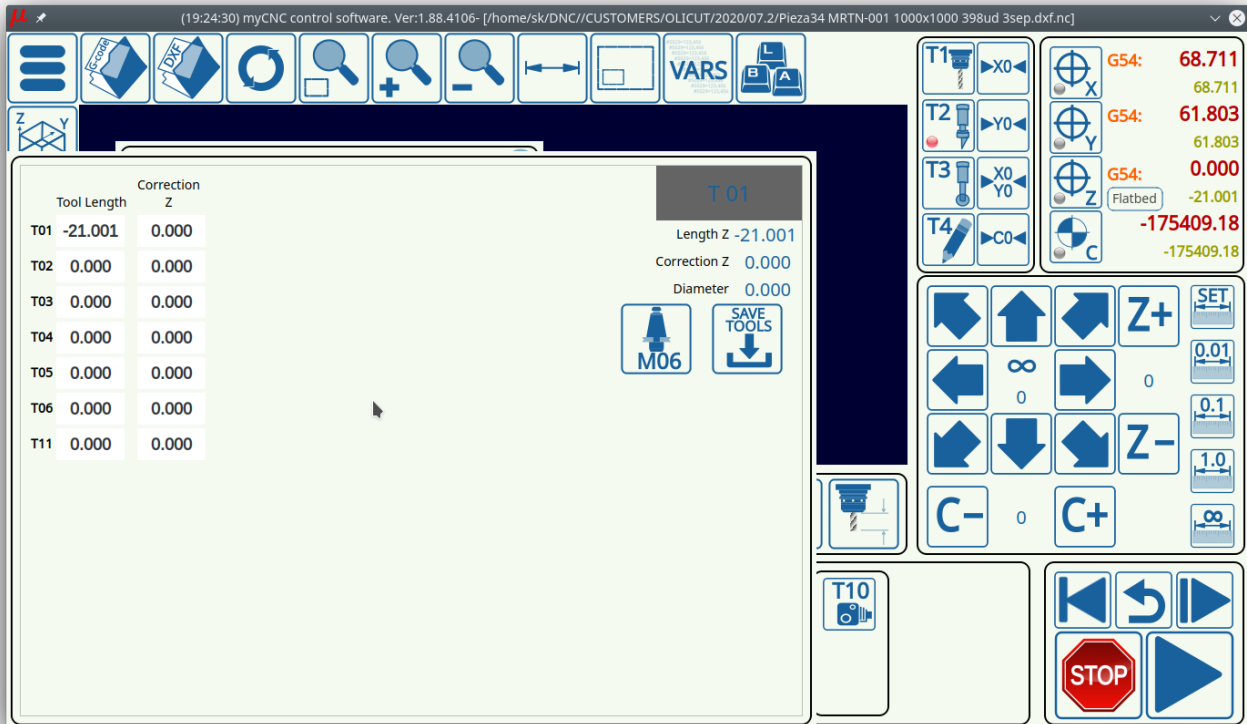
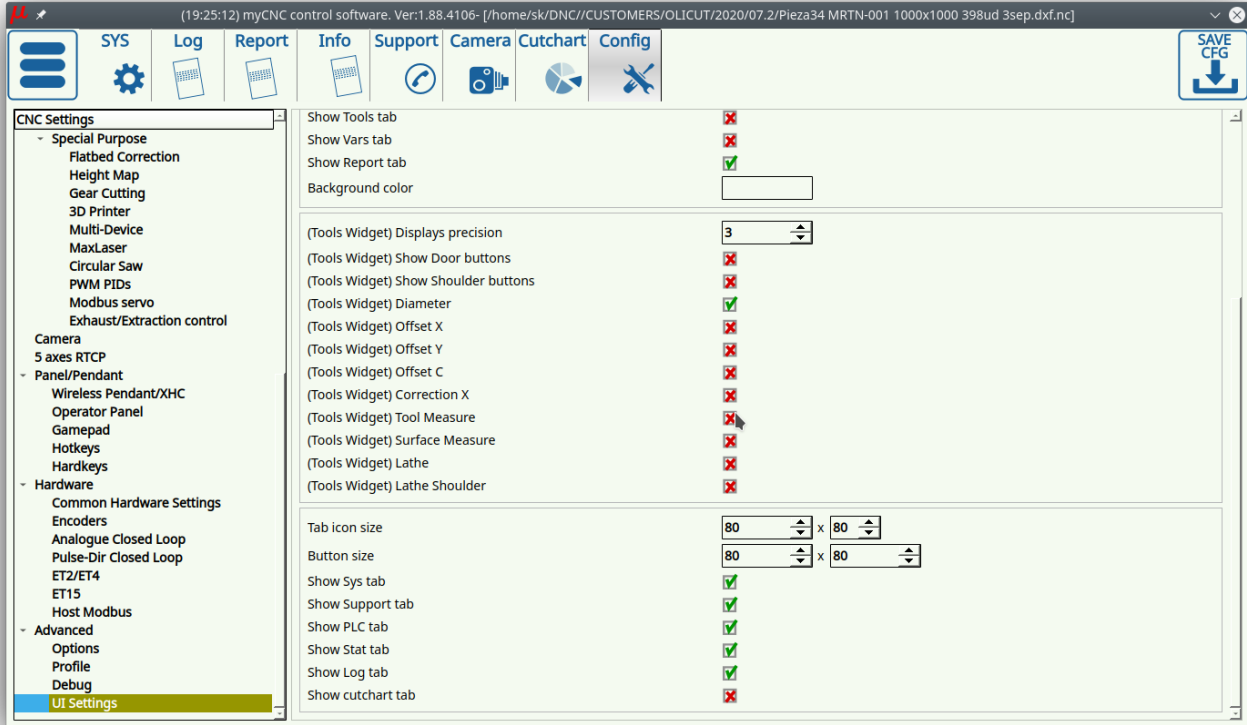
A screenshot of the Tool Specifications window. It features two tool icons on the left, a central display for tool parameters (Length Z, Offset X, Offset Y, Diameter) with values of 0.000, and a "T1" label. A download icon is in the top right. Below is a table with 7 columns: Tool Length, Correction Z, Tool Diameter (Correction), Offset X, Correction X, Offset Y, and Offset C. The table lists Tool #1 through Tool #6, all with values of 0.

	Tool Length	Correction Z	Tool Diameter (Correction)	Offset X	Correction X	Offset Y	Offset C
Tool #1	0	0	0	0	0	0	0
Tool #2	0	0	0	0	0	0	0
Tool #3	0	0	0	0	0	0	0
Tool #4	0	0	0	0	0	0	0
Tool #5	0	0	0	0	0	0	0
Tool #6	0	0	0	0	0	0	0












On newer profile and software versions, you are able to add additional buttons to the Tool window, by going into Settings > Advanced > UI settings:




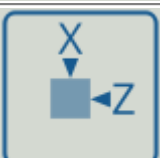




Last update:
2022/09/14
12:50

mycnc:mycnc_setup_examples:four_axes_mill http://docs.pv-automation.com/mycnc/mycnc_setup_examples/four_axes_mill



The following buttons are available:

	Run the tool length procedure (M421 macro)
	Run the surface measure procedure (M400 macro)
	Run the M06 macro
	Save the current state of the tools table
	Run the M425 command
	Set the tool setter offset
	Run the M421 command
	Close door
	Open door
	Console probe down
	Console probe up

	Left tool measure (M465)
	M464 X- Tool Measure
	M463 X+ Tool Measure
	M461 ZX- Tool Measure
	M460 ZX+ Tool Measure
	Right tool measure (M462)
	Offset X
	+Tune Z

Note that button for the M421 macro (run tool length procedure) can work with either a confirmation dialog for the Rapid Speed Length (parameter #20), or without it. The code for the two buttons is shown below:

1) Option with confirmation

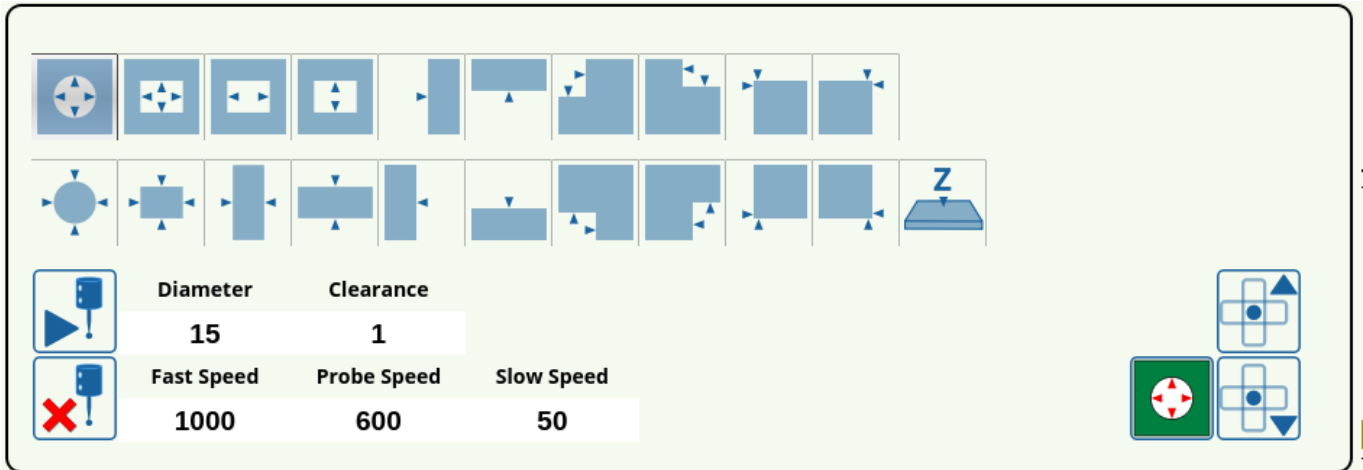
```
<gitem where="x-toolsview" position="10;10"  
width="860" height="605" name="toolsview" type="toolsview"  
fontStyle="normal" fontSize="12" noclose="1"  
tool-measure="confirm"  
bgColor="##b-main" ></gitem>
```

2) Option without confirmation

```
<gitem where="x-toolsview" position="10;10"
width="860" height="605" name="toolsview" type="toolsview"
fontStyle="normal" fontSize="12" noclose="1"
tool-measure="direct"
bgColor="###b-main" ></gitem>
```

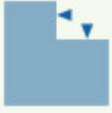
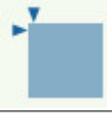

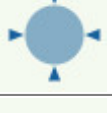
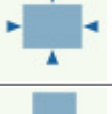
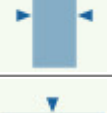
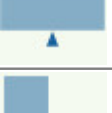
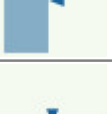

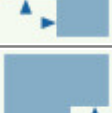
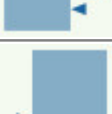





Probe Sensor Window buttons




Upon pressing the Probe Sensor button on the main screen, you are presented with the following window:



The probe sensor allows to find the edges and the corners of simple shapes and register those in the myCNC software. The following buttons can be utilized from within the software:

	Run the centering procedure for a round hole
	Run the centering procedure for a rectangular hole
	Run the centering procedure for the internal x-axis
	Run the centering procedure for the internal y-axis
	Find the edge for the positive x-axis
	Find the edge for the positive y-axis
	Find the internal corner for the negative x- and positive y-axis

	Find the internal corner for the positive x- and positive y-axis
	Find external corner for negative x- and positive y-axis
	Find external corner for positive x- and positive y-axis
	Run centering for an external round shape
	Run centering for an external rectangular shape
	Run centering for an external x-axis
	Run centering for an external y-axis
	Find the edge for the negative x-axis
	Find the edge for the negative y-axis
	Find internal corner for positive x- and positive y-axis
	Find internal corner for negative x- and positive y-axis
	Find external corner for positive x- and positive y-axis
	Find external corner for negative x- and positive y-axis
	Find the surface in the z-axis
	Run the probing procedure
	Close the probing window

	Move to the hole center
	Move the probe console up
	Move the probe console down

Mill Window buttons

Upon clicking the **Mill** button in the lower left corner of the main screen, you are presented with the following window:

G-code

Mill

Log

Spindle

Spindle CCW

Mist

Flood

Home X

Home Y

Home Z

G54

G56

G58


 XYZ

M01


 M03


 M04


 M05

G55

G57

G59








 0







 M06


 M07


 M08


 M09

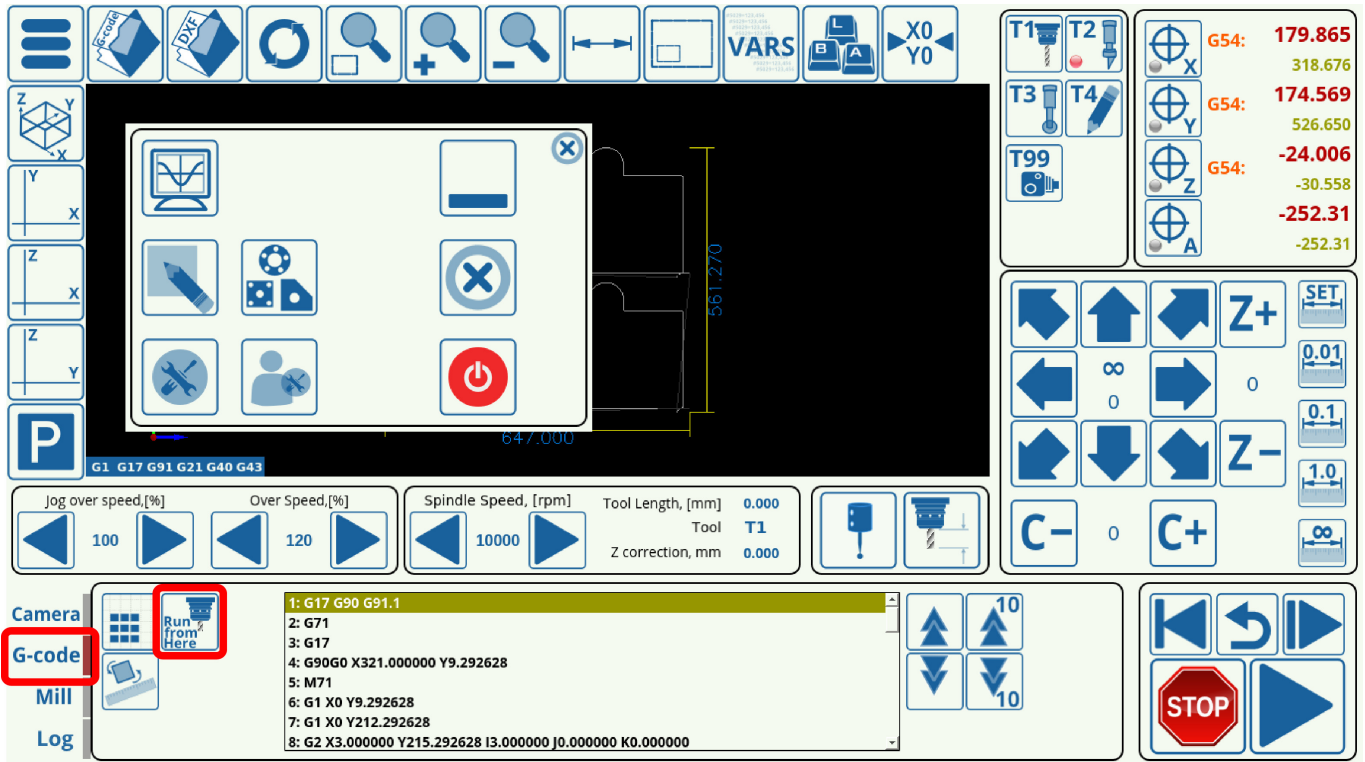
	Select the preferred coordinate system
	Run the homing procedure for all axes
	Move to work position
	Turn spindle on (clockwise rotation)
	Turn spindle on (counter-clockwise rotation)
	Turn spindle off

	Switch the working tool
	Turn the mist coolant on
	Turn the lubrication on
	Turn the coolant and lubrication off
	Conditional machine stop

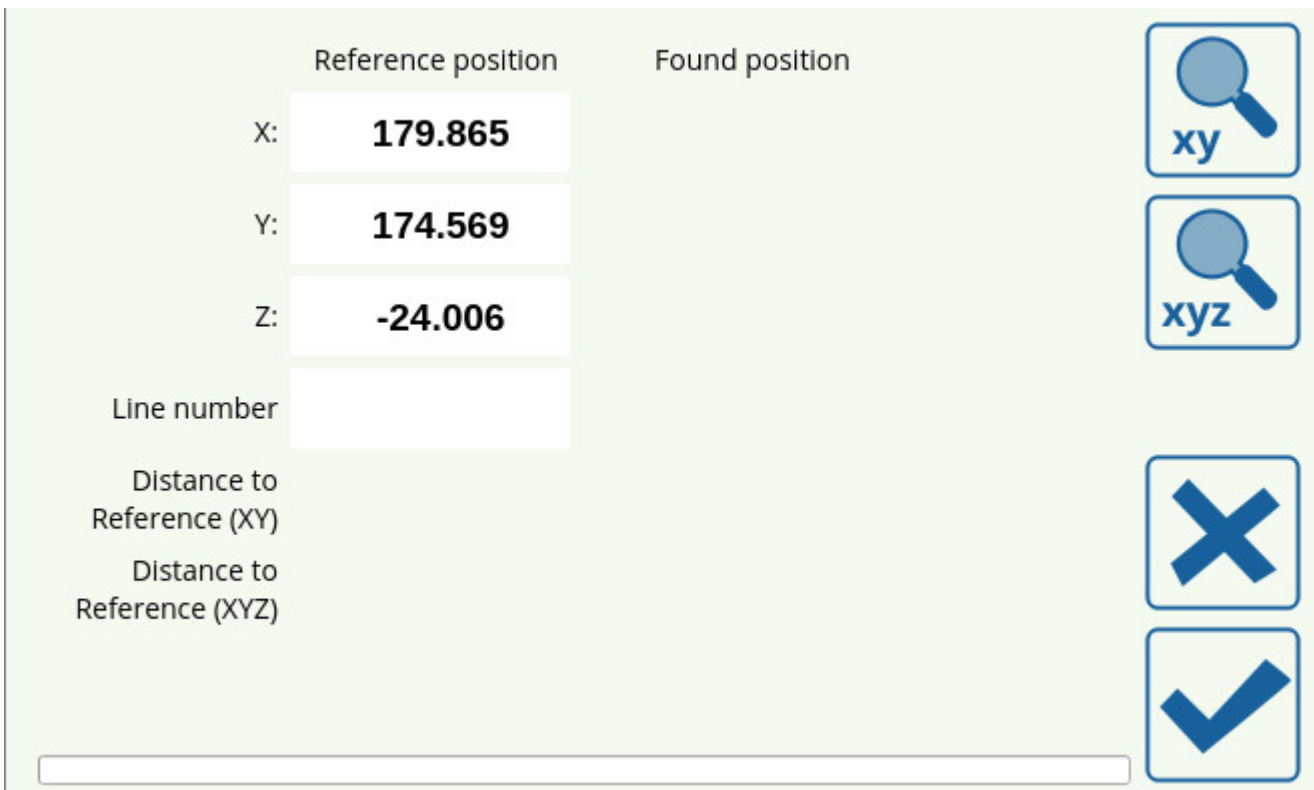
Run from here

In an event of an emergency stop or failure of a mill machine running a program file, it is often useful to be able to open the file back up afterwards and be able to continue from the middle of the program without having to go through all the steps again. This is often complicated by the fact that a large program file consists of many lines of code, making it difficult to easily navigate to the place where the cutting process stopped initially. In order to facilitate finding this spot, the **Run from Here** process is put in place in myCNC software.

Upon opening the **G-Code** tab and pressing the **Run from here** button, you are presented with the following screen:



Upon clicking the **Run from Here** button, the following screen is brought up:



If you know the particular line number from which you want to resume the cutting process, you can enter it in the **Line Number** field, and then press OK.

	Reference position	Found position
X:	179.865	
Y:	174.569	
Z:	-24.006	
Line number	365	
Distance to Reference (XY)		
Distance to Reference (XYZ)		

xy

xyz

X

✓

If, however, you do not know the particular line number at which the program was stopped, you can use the **Found Position** function in order to approximately locate the correct line.

In order to do so:

1. Navigate to the spot as close as possible to the one where the working tool has initially stopped using the onscreen buttons.

Vars

X0 Y0

T1 T2 T3 T4 T99

G54: 31.096
356.090
G54: -29.175
440.585
G54: -0.511
-11.069
0.00
-252.31

Z+ Z- SET 0.01 0.1 1.0 ∞

C- 0 C+

10 10

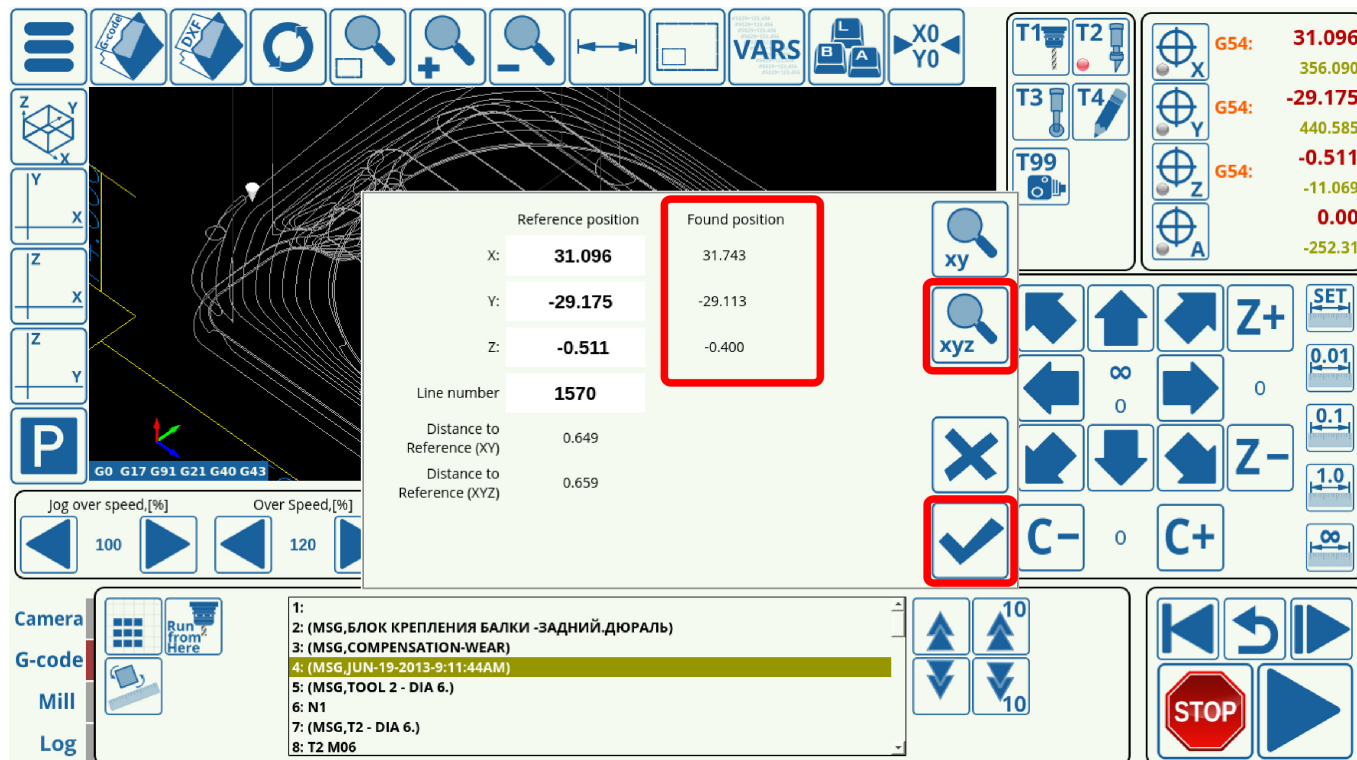
STOP

1: 2: (MSG, БЛОК КРЕПЛЕНИЯ БАЛКИ -ЗАДНИЙ ДЮРАЛЬ)
3: (MSG, COMPENSATION-WEAR)
4: (MSG, JUN-19-2013-9:11:44AM)
5: (MSG, TOOL 2 - DIA 6.)
6: N1
7: (MSG, T2 - DIA 6.)
8: T2 M06

2. Click the **Run from Here** button.

3. Depending on the specifics of your part, you can choose to either use the search in the xy or the xyz planes. The xy search is mostly used for parts that are largely flat, without a significant z-axis component to them, while the xyz will try to locate the closest point in the program file for all three axis and is primarily used for 3D components.

For this example, xyz search will be chosen, as the part used is not a simple 2D projection.



After pressing the xyz button, the Found Position coordinates appear in the popup screen. Press OK.

4. After returning to the main screen, it can be seen that the white pointer has jumped to the new Found Position, and that the selected line is now different (1570 in this example).

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mycnc:mycnc_setup_examples:four_axes_mill http://docs.pv-automation.com/mycnc/mycnc_setup_examples/four_axes_mill

The screenshot displays a CNC control interface. At the top, there is a toolbar with icons for file operations, search, and tool selection. Below this is a central area showing a wireframe model of a part with a red box highlighting a specific location. To the right of the model is a panel for tool selection (T1, T2, T3, T4, T99) and a list of G54 offsets for X, Y, Z, and A axes. Below the model is a panel for jog over speed, over speed, spindle speed, tool length, and Z correction. At the bottom, there is a camera view, G-code display, and a 'Run from Here' button. The G-code display shows the following lines:

```
1564: (MSG, TOOL 2 - DIA 6.)  
1565: (MSG, FM-facemill)  
1566: S4500  
1567: X31.7426 Y-29.1135 Z6.  
1568: Z2.  
1569: G04 Z0.1 F200  
1570: X8.2969 F500  
1571: G02 X0.5247 I-20.363 IIS-2051 J11.0155
```

The program can now be run from this position without having to manually search for the correct line.

From:
<http://docs.pv-automation.com/> - myCNC Online Documentation

Permanent link:
http://docs.pv-automation.com/mycnc/mycnc_setup_examples/four_axes_mill

Last update: 2022/09/14 12:50

