

quick start guide



start the program

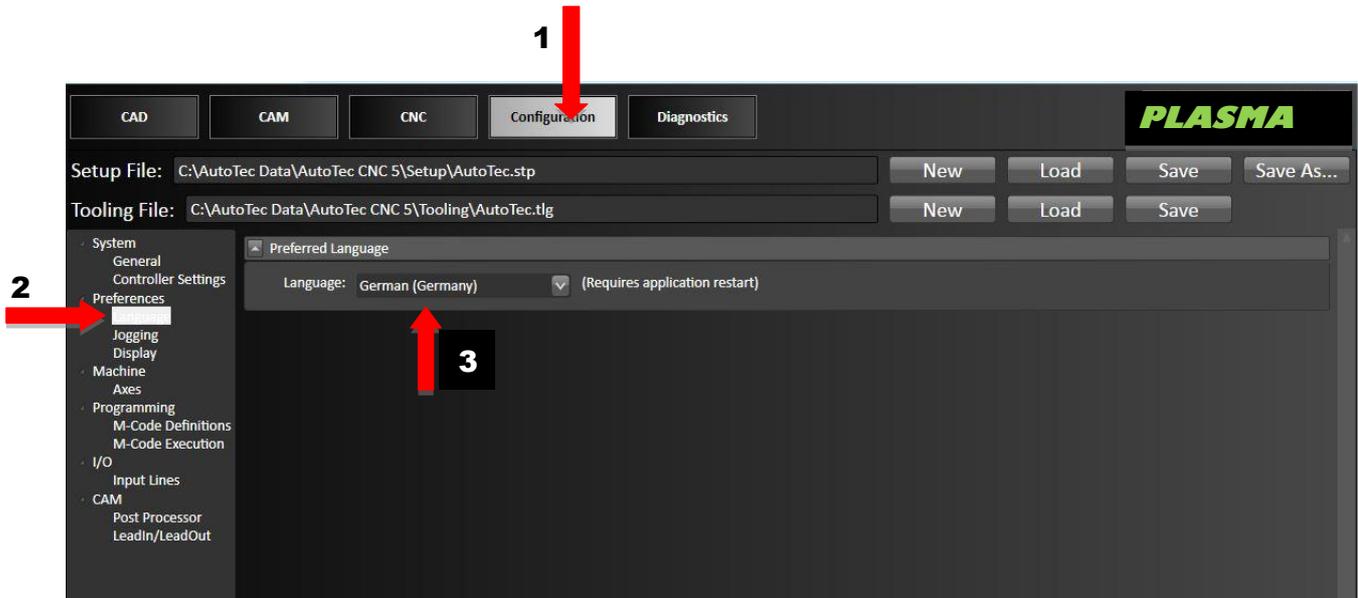
become familiar with the interface

working tools: CAD-CAM-CNC

import a DXF file

IMPORTANT

The first thing to do, once you have installed the software, is setting the language:



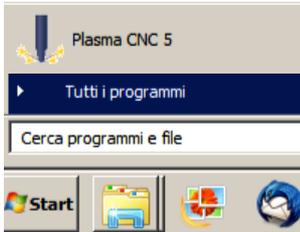
Proceed as indicated in points 1, 2 and 3.

Then the software will have to be closed and restarted.

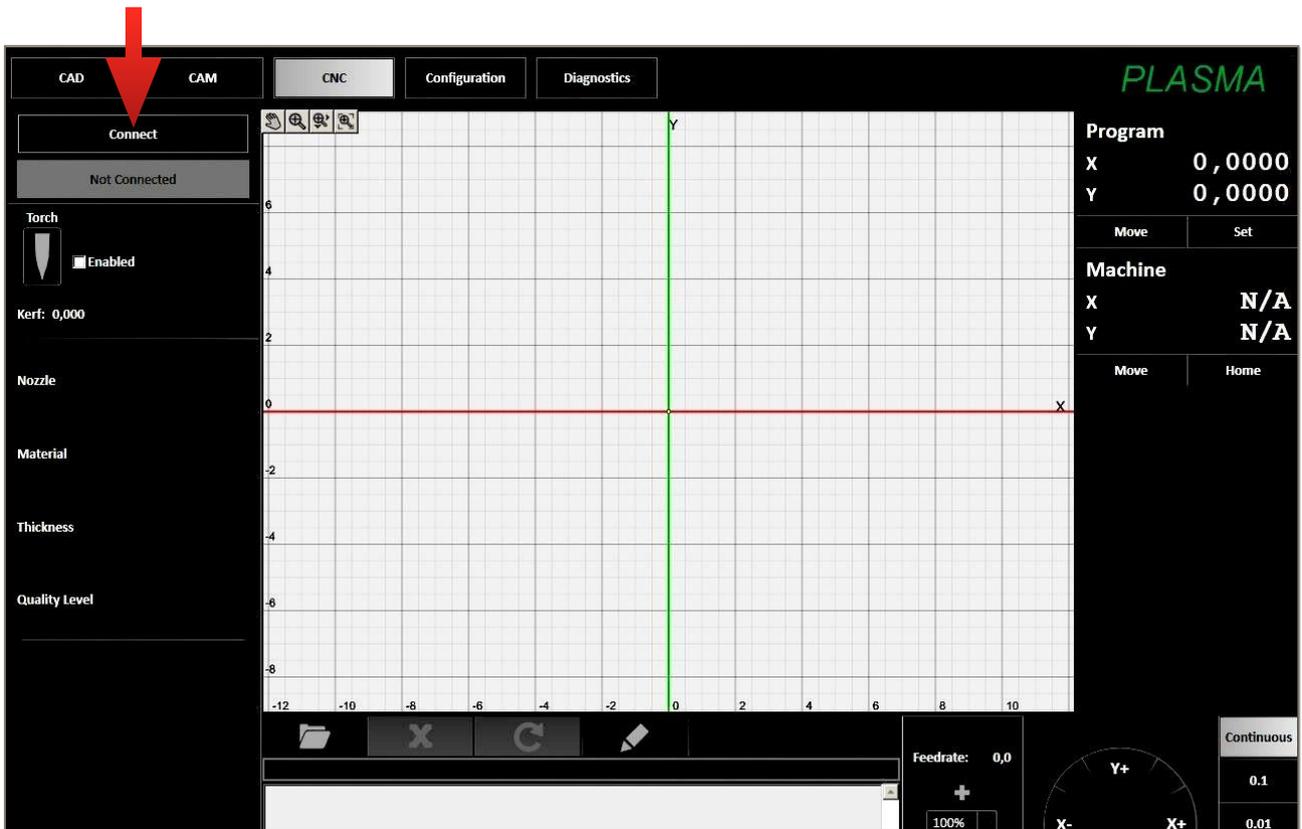
For proper operation of our software follow these guidelines:

- **ABSOLUTELY DO NOT** download or install any Windows system upgrade
- **DO NOT** uninstall the software for any reason
- **For any problem contact your dealer**

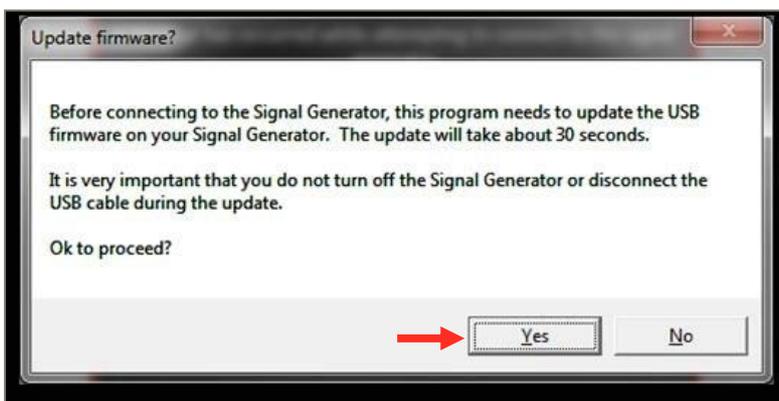
1. Start the program



To start Plasma5 CNC , open the start menu by clicking the Windows icon in the lower left corner of the screen. In Windows 8, go to the Apps View; in Windows 7, select *All Programs*. Locate and double-click Plasma5 CNC to launch it.

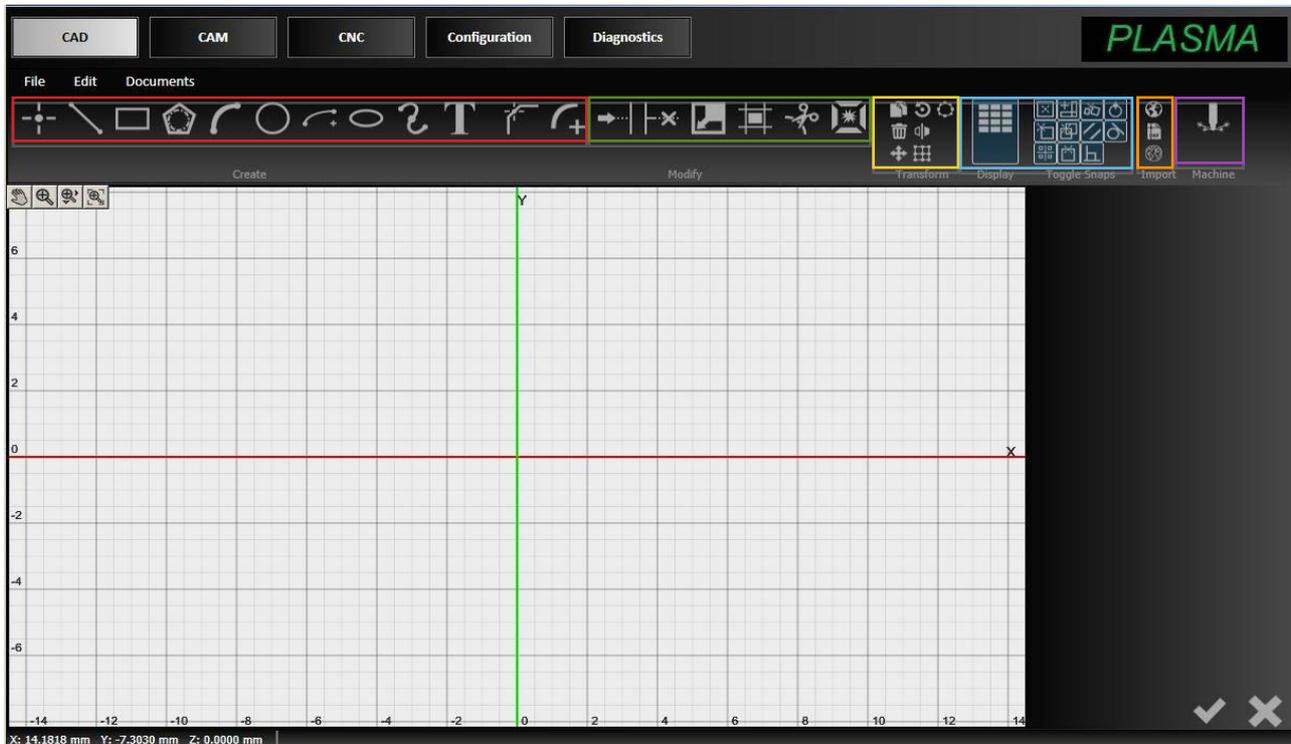


The Plasma5 CNC main window should now open, and the CNC Editor will be displayed. In the top left corner, select the black *Connect* button to link Plasma5 CNC to the Signal Generator. The first time you Connect to the signal generator, you may be prompted to update the USB firmware on your signal generator. If you see this prompt, click *Yes* to update the USB firmware.



Once the USB firmware update is complete, Plasma5 CNC will connect to your signal generator by selecting *Connect* in the top left corner of the CNC window. When properly connected, the grey bar will turn green and display a *Connected* status. The tool is ready to be used.

2. Become familiar with the interface



Tools in the red rectangle for drawing:

POINT - LINE - RECTANGLE - POLYGON - ARC - CIRCLE - ELLIPTIC ARC - ELLIPSE - SPLINE - TEXT - CHAMFER - FILLET -

Tools in the green rectangle to modify the drawing after selecting it with the mouse:

EXTEND - TRIM - SCALE - OFFSET - CUT TOOL

Tools in the yellow rectangle to transform or display:

COPY - ROTATE - CIRCULAR PATTERN - DELETE - MIRROR (Duplicate in a specular way) - MOVE - LINEAR PATTERN

Tools in the blue rectangle to display in the window:

TOGGLE Millimetric Grid VISIBILITY
TOGGLE Drawing SNAPS see the user's manual.
At the moment they are ALL active.

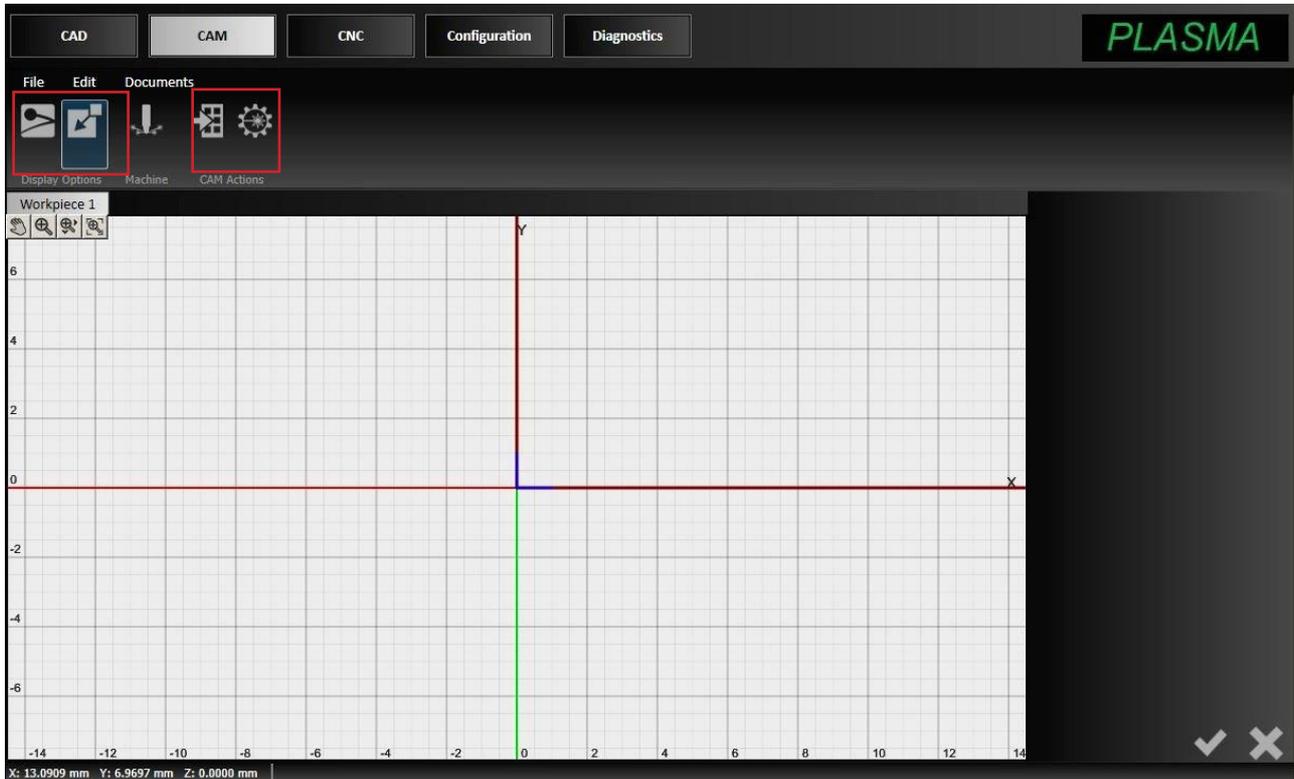
Tools in the orange rectangle to import images or files:

IMPORT SILHOUETTE IMAGE - IMPORT DXF FILE - IMPORT CENTER LINE IMAGE

Tool in the purple rectangle to launch the cutting control:

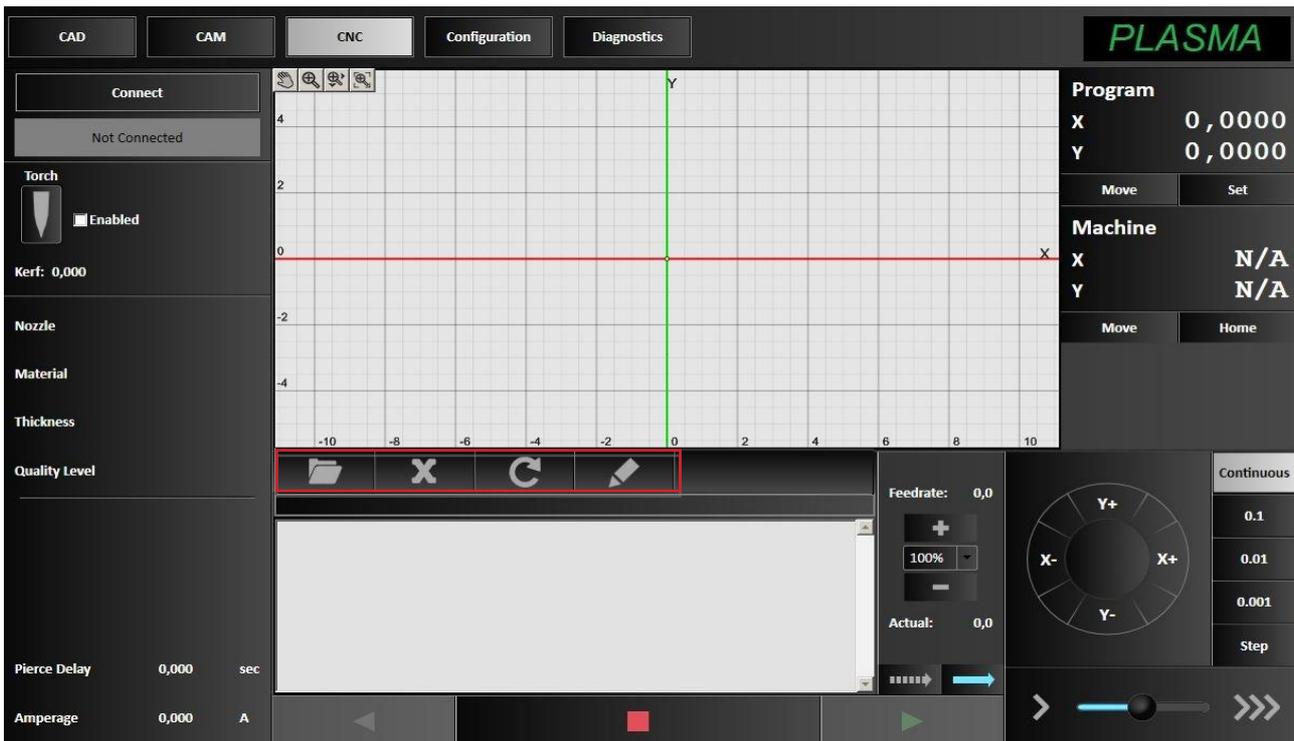
SELECT the ICON

2. Become familiar with the interface



Tools in the red rectangle:

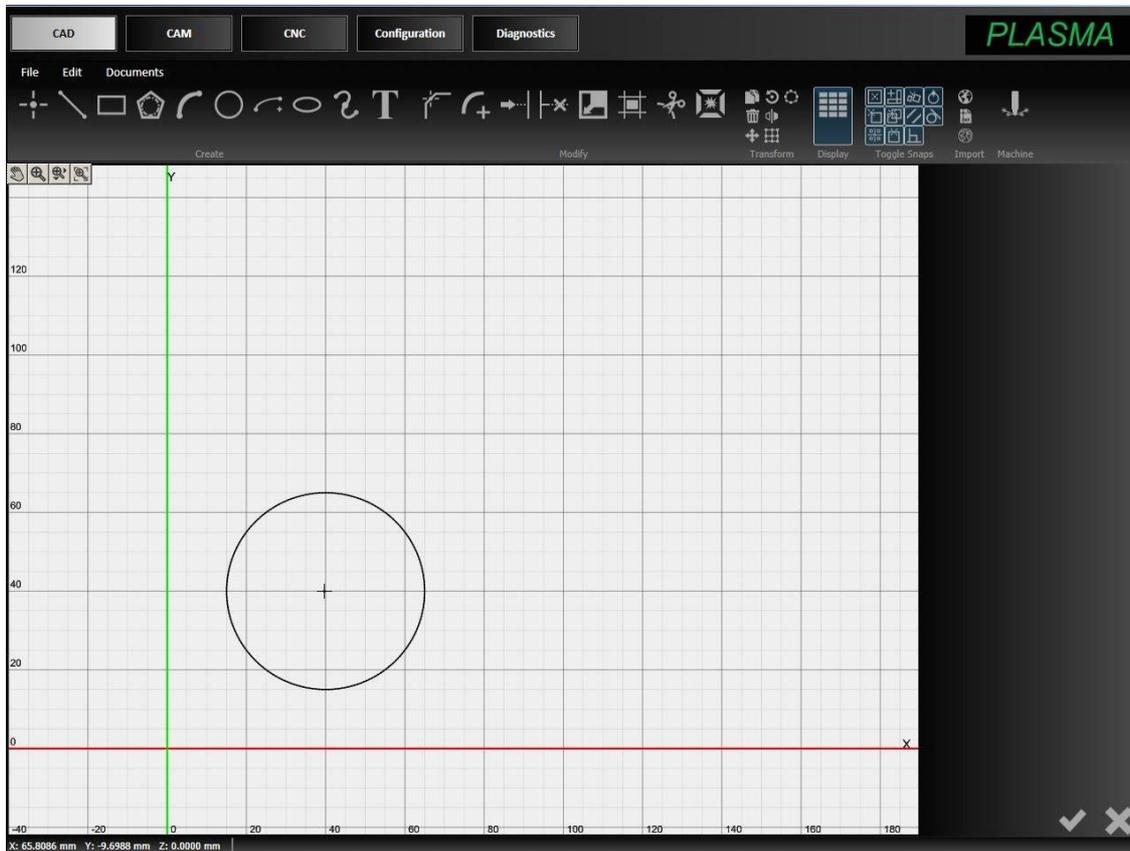
display the kerf - display the material - grid nesting - plasma settings



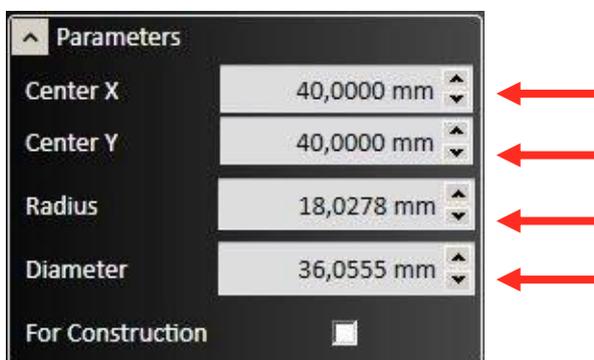
Tools in the red rectangle:

click to find the folder where the G Codes are stored - cancel the G Code in use - reset the G Code - edit the G Code

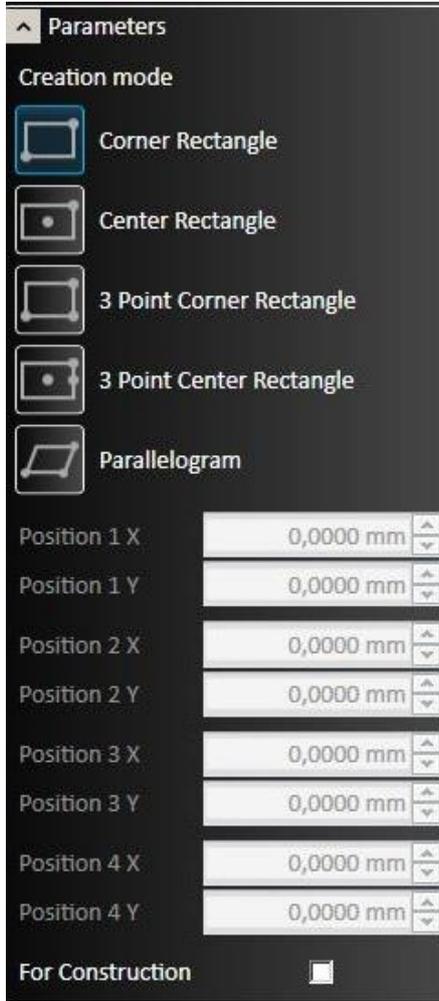
3. CAD: creating a new drawing



- Click the *CAD* button at the top of the screen. This will call open the CAD Editor.
- Click the *Circle* feature in the toolbar.
- Click in the drawing window the point where you want to position the center of the circle relative to each axis.
- Clicking on the circle (becomes red) a parameter window will open. You can manually edit all the circle measure including the exact position relative to each axes, the diameter and the radius.
- Achieved the desired drawing, select the green check mark to approve all changes and deselect the feature.



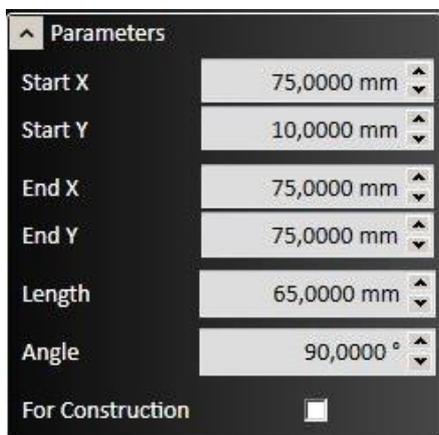
3. CAD: creating a new drawing



We will next construct the surrounding rectangle. From the drawing toolbar, select the rectangle option.

We have several ways to draw a rectangle: we select what we want to use: now we will use the 2 *Corner Rectangle*

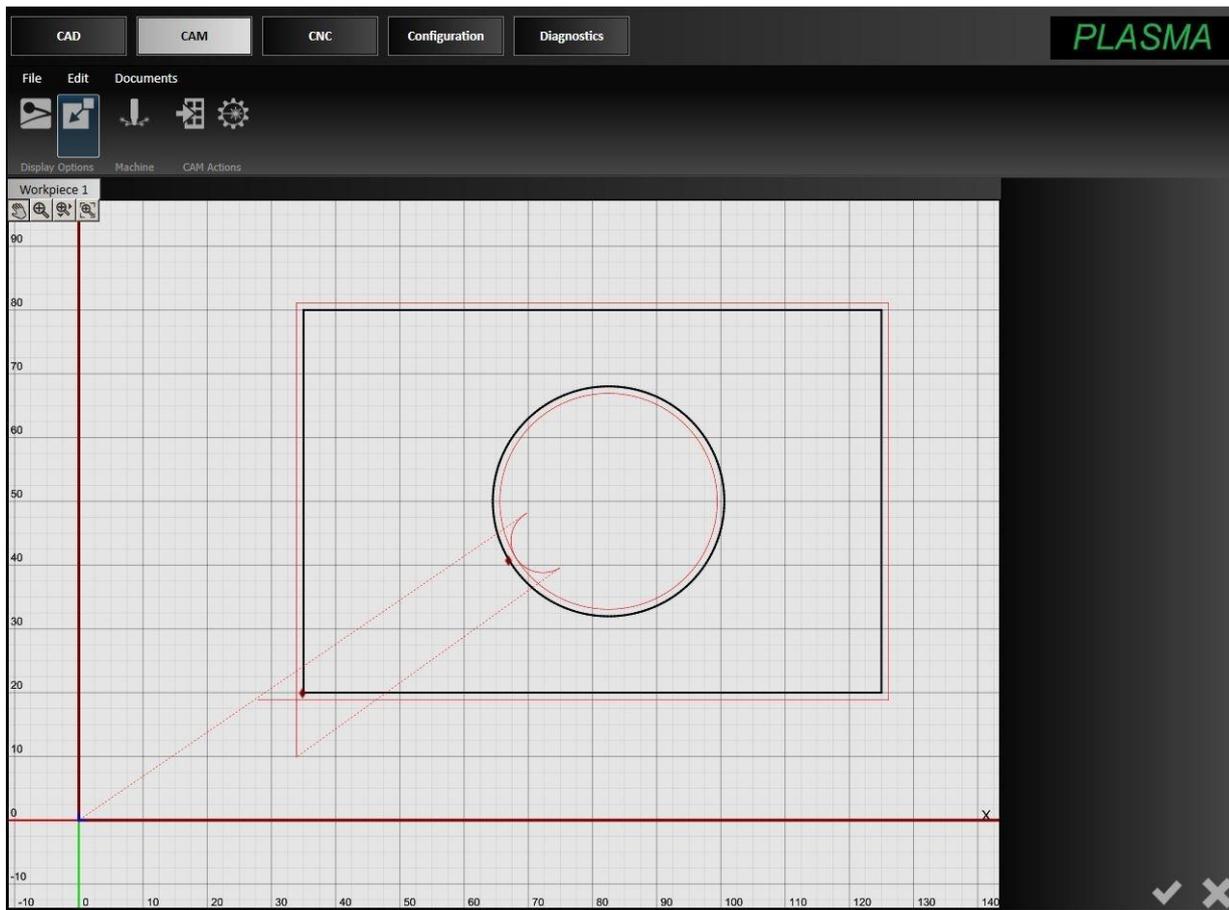
A corner rectangle will be used. Select the first corner of the rectangle by clicking the mouse, and then drag the pointer to the opposite corner and click to add the rectangle to the drawing. Press the *Esc* key to exit from the rectangle drawing tool.



We can edit all the drawing measure in the parameter window that opens when you select the rectangle's side we want to change.

Achieved the desired drawing, select the green check mark to approve all changes and deselect the feature.

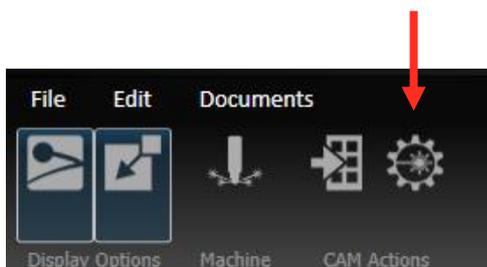
4. CAM: adjusting the toolpath



Now that the design has been completed, it is time to make adjustments to the machine toolpath in the CAM Editor. The drawing window should now display the design, as well as the machine toolpath.

The solid red lines will indicate the path that the machine will cut the material, while the dotted red lines indicate rapid and feedrate moves, during which cutting does not occur. The thick red line along the outside will show the dimensions of the material that is being cut. Finally, the blue L shape shows the location of the program zero.

We will first move the design further away from program zero. Click anywhere on the design to select it, and then drag it to a new location. Click anywhere on the screen to deselect the design.

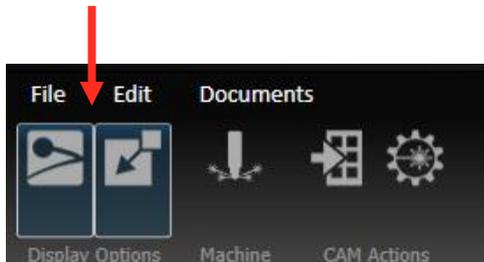


The plasma settings now have to be specified. Click the Plasma Settings button on the CAM Actions toolbar in order to open the parameter window.

5. CNC: adjusting the toolpath

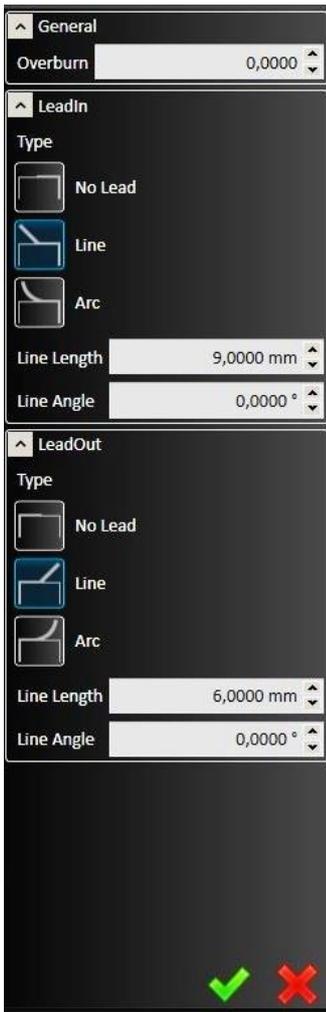
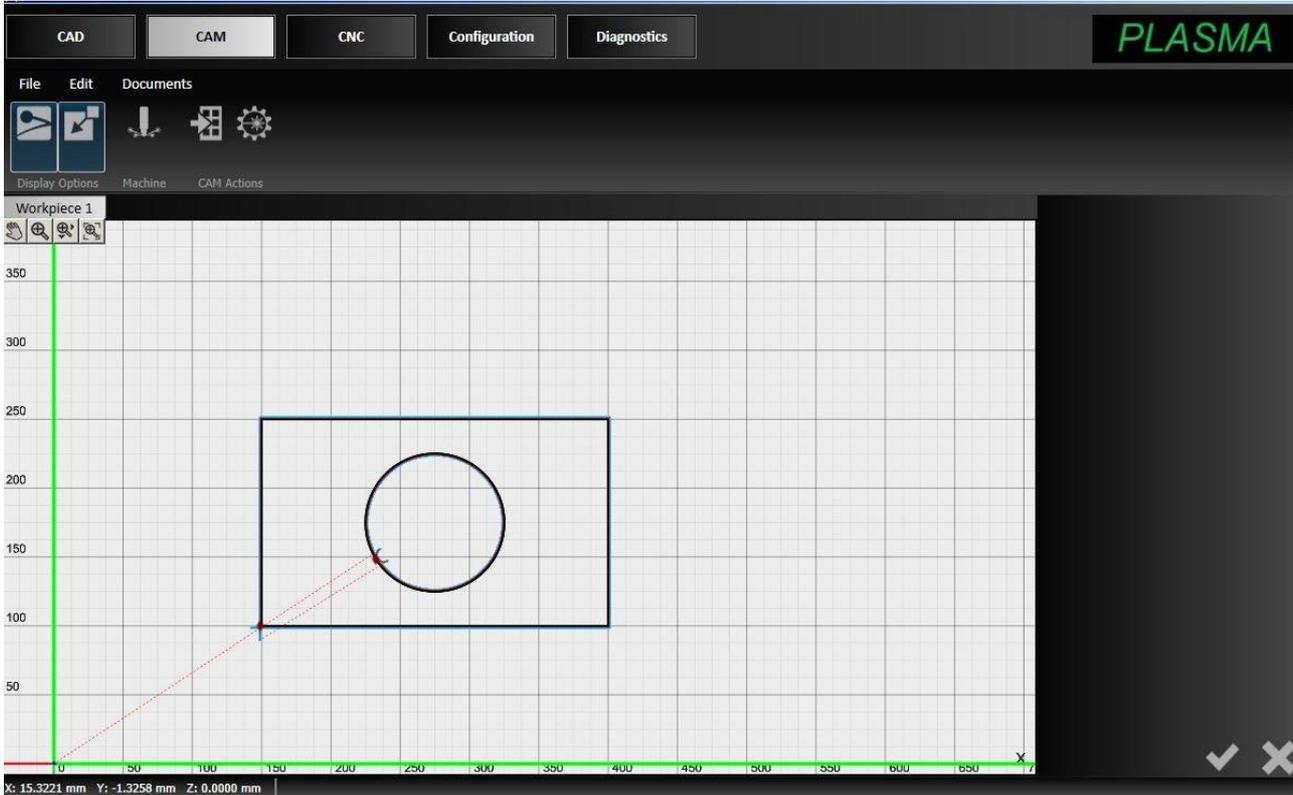


- **Feedrate:** for circles, to obtain optimum cutting quality, reduce the speed of 40% compared to the straight cuts.
- **Safe Z Level:** it is recommended not to change the parameter
- **Pierce Height:** it is recommended not to change the parameter
- **Pierce Delay:** the time the torch needs to pierce the material before it starts cutting. Modify according to your needs.
- **Set Point:** it is recommended not to change the parameter



Next, we will adjust the leading lines on the drawing. This will allow us to customize the toolpath and finalize the drawing. At this stage, it helps to view the kerf and/or cutting direction of the plasma torch. Select Display Cutting Direction and Display Kerf in the Display Options toolbar.

6. CNC: finalizing the drawing and cutting



To edit a set of leading lines, click the diamond on the circle to bring up the leading lines parameter window.

Click now the diamond on the circle segment.

Select *Arc* as *Leadin* and as *Leadout* and edit the desired measurement.

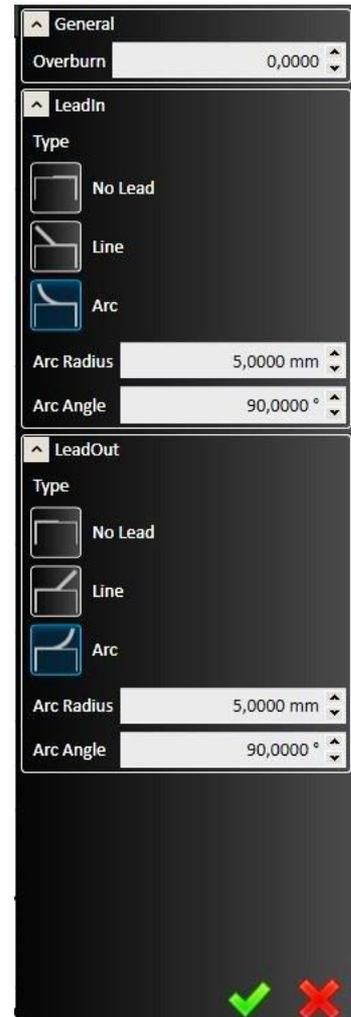
For each CURVE shape always use ARC as Leadin and Leadout.

Click now the diamond on the rectangle segment.

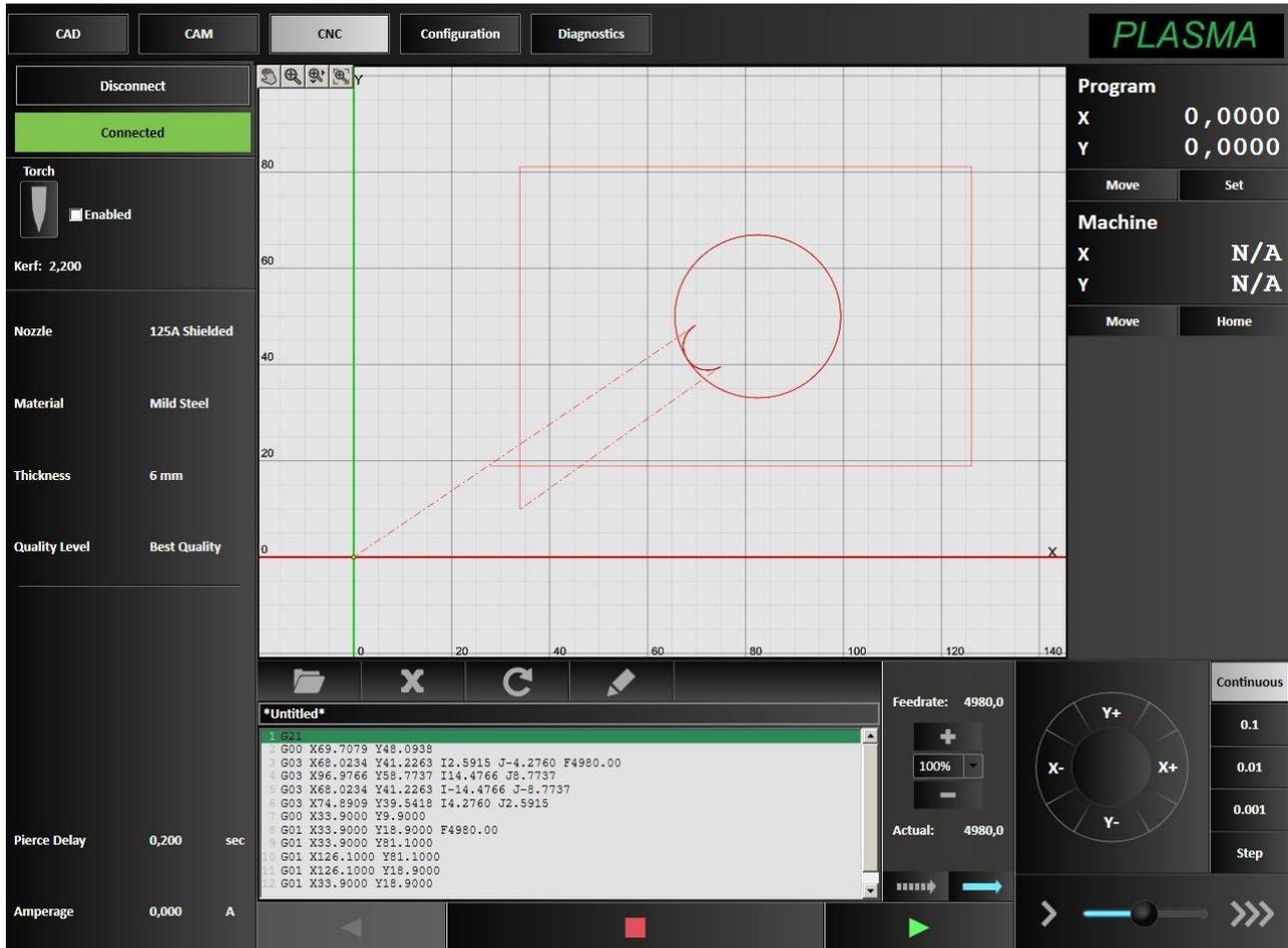
Select *Line* and edit the desired measurement.

For each shape that has SHARP CORNERS always use LINE as Leadin and Leadout.

Select the green check mark to approve all changes and deselect the feature. At this point, the drawing is ready to be cut. When everything is finalized, click the *Machine* button on the top toolbar.

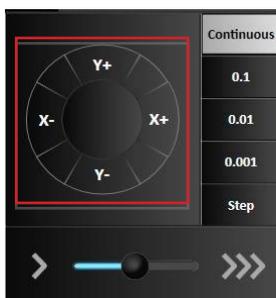


6. CNC: finalizing the drawing and cutting

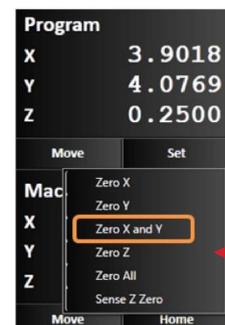


The *Machine* button will automatically input the G-Code into the programming window. Before we can cut the part, we must first set the program zero on the machine.

Clicking the buttons on the jog toolbar, move the torch to the location of the program start indicated as the origin in the viewport window. First, we will move the torch in the X and Y directions. When the torch is in the correct position, click *Zero X and Y* in the *Set* menu underneath the program coordinates.



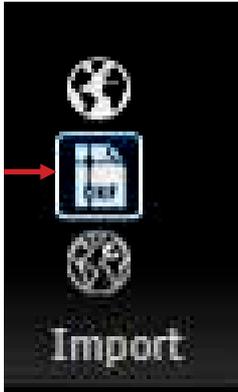
The X and Y values should change to zero. Once you are satisfied the program will behave properly re-establish communications with the Signal Generator by selecting *Connect* in the top left corner of the CNC Editor window. Choose the *Start* button and the torch will begin to cut your first part.



Always be on alert to choose the red Feed Hold button or press the Emergency button on the Cutting Table in case of emergency.

Congratulations! You have successfully cut your first part using Plasma5 CNC.

7. import a DXF file



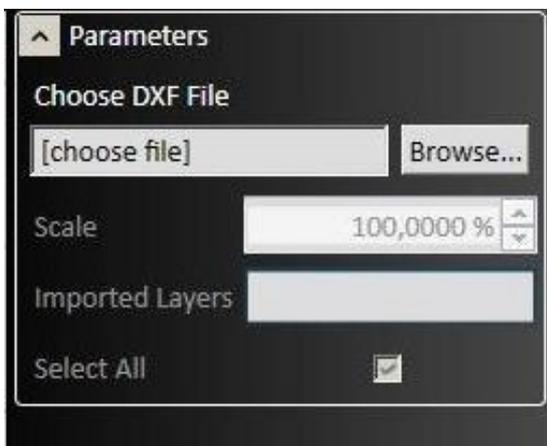
Plasma5 CNC can also import DXF files stored on your computer or in another device.

Start the program.

Go to the CAD editor window.

Click on the DXF icon.

It will open the *Parameters Window*.



Clicking on Browse you can locate the folder or the device that has stored the DXF files

Select your desired file, and it will appear on the CAD window.

Proceed as shown on section 3.



Plasma5 CNC September 2014

Mod. GR/E/9.14