

Main Window

The help for the main window is divided into two parts:

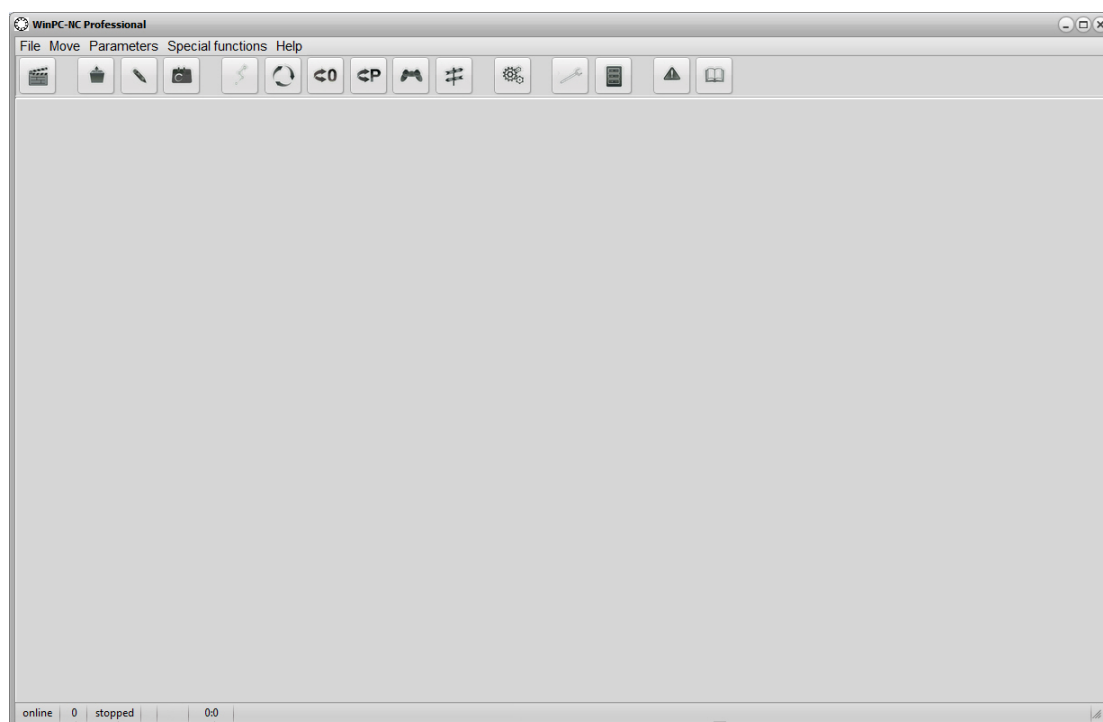
- Empty window without loaded NC file
- operating options and graphical display with loaded NC file

Empty window without loaded NC file

In the middle of the screen the **WinPC-NC** working screen appears which is divided into several areas.

- Title bar
- Menu bar
- Bar with speed buttons for easy function call
- empty display area
- Status bar

If delivery is made in combination with a machine, probably a menu will be displayed and you can select your machine. Thus any pre-defined settings are automatically carried out and the contact block and resolution of axes should be in conformity with your plant.



**screen
layout**

The title bar and menu bar are located at the top edge of the screen. The drop-down menus open from the menu bar.

The quick speed buttons enable you to select important functions simply by clicking with the mouse.

The function of the individual buttons is as follows:

End of program



Move Joystick



open NC file



Reference move



Load current or new
file in the editor



Display of parameter
settings



Call profile manage-
ment



Handling of molette



Start Job



Select Tool



JOG



Info concerning current
version



Move to current zero
point



HELP

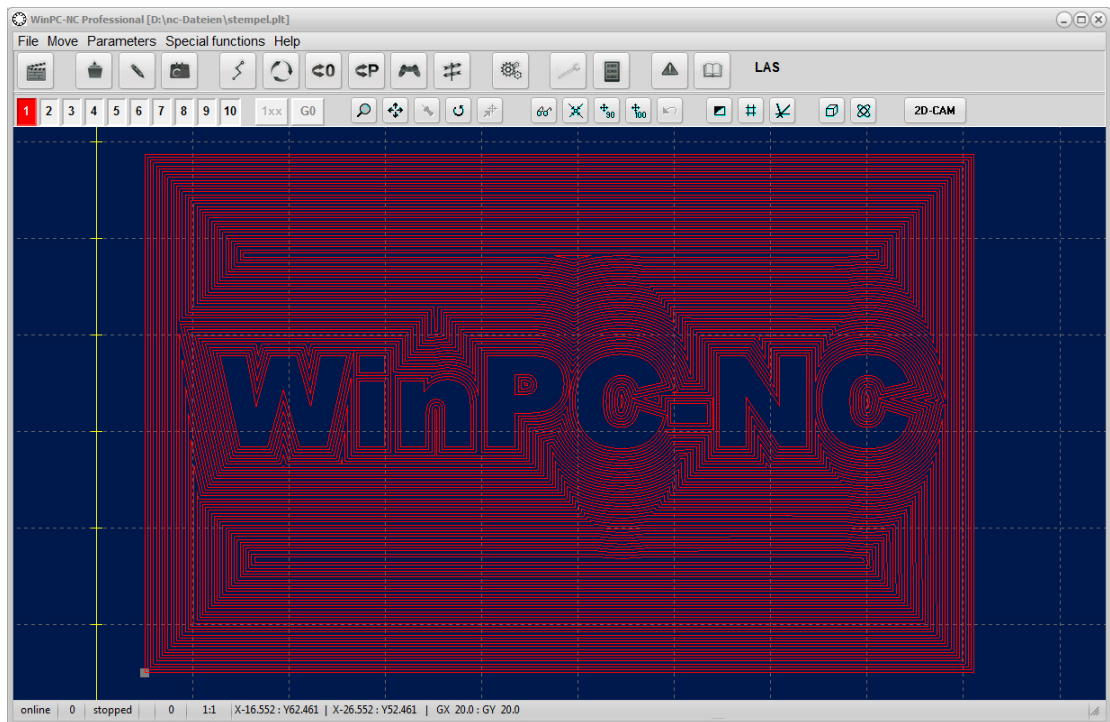


Move to current park
position

LAS CIR DIS
3DP GRI TAN

Current technology
function

operating options and graphical display with loaded NC file



WinPC-NC main screen with NC file

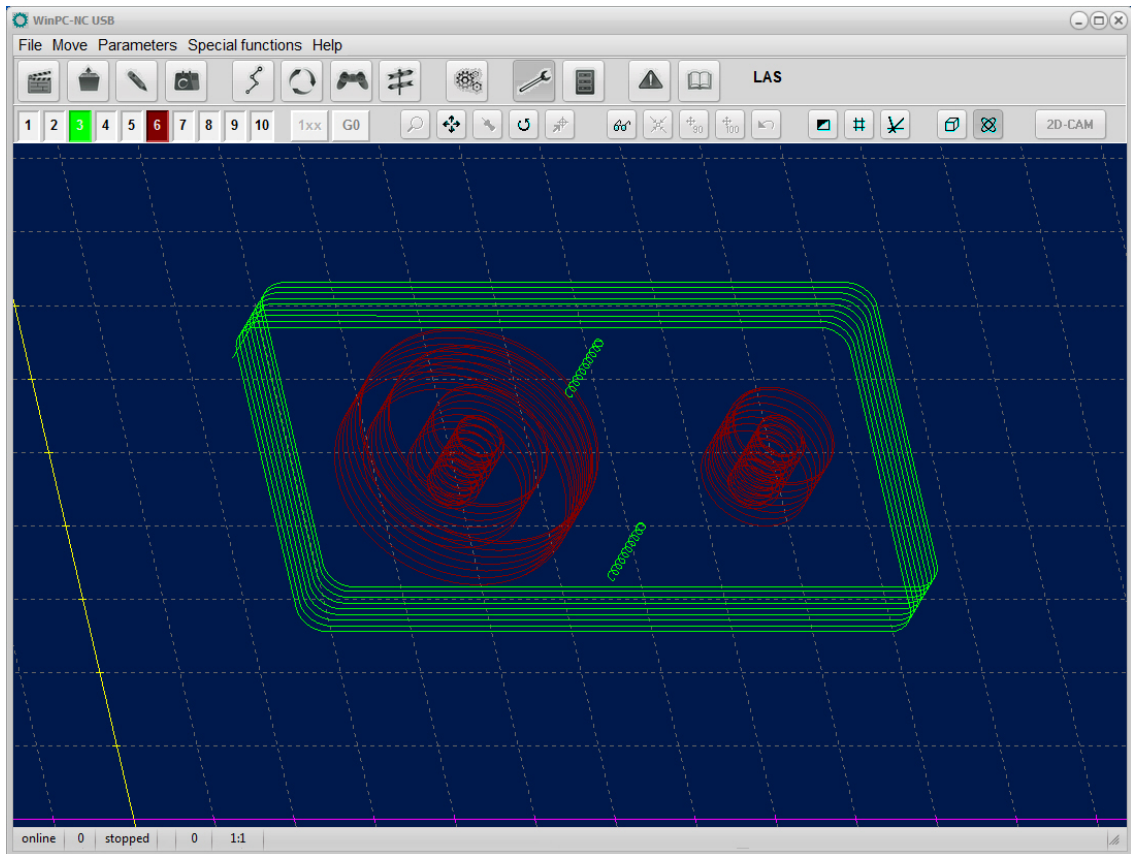
Buttons for using display and tools are placed in the second button bar.

The status bar at the bottom displays information about the operating status of the software and the machine, or else a help text about the functions which are currently active. The emergency-stop status can be shown by a red marked area at status bar as well. Buttons for operating the display and the tools are located in the second button bar.

The large area is the working area where **WinPC-NC** displays the currently loaded NC file in graphical format.

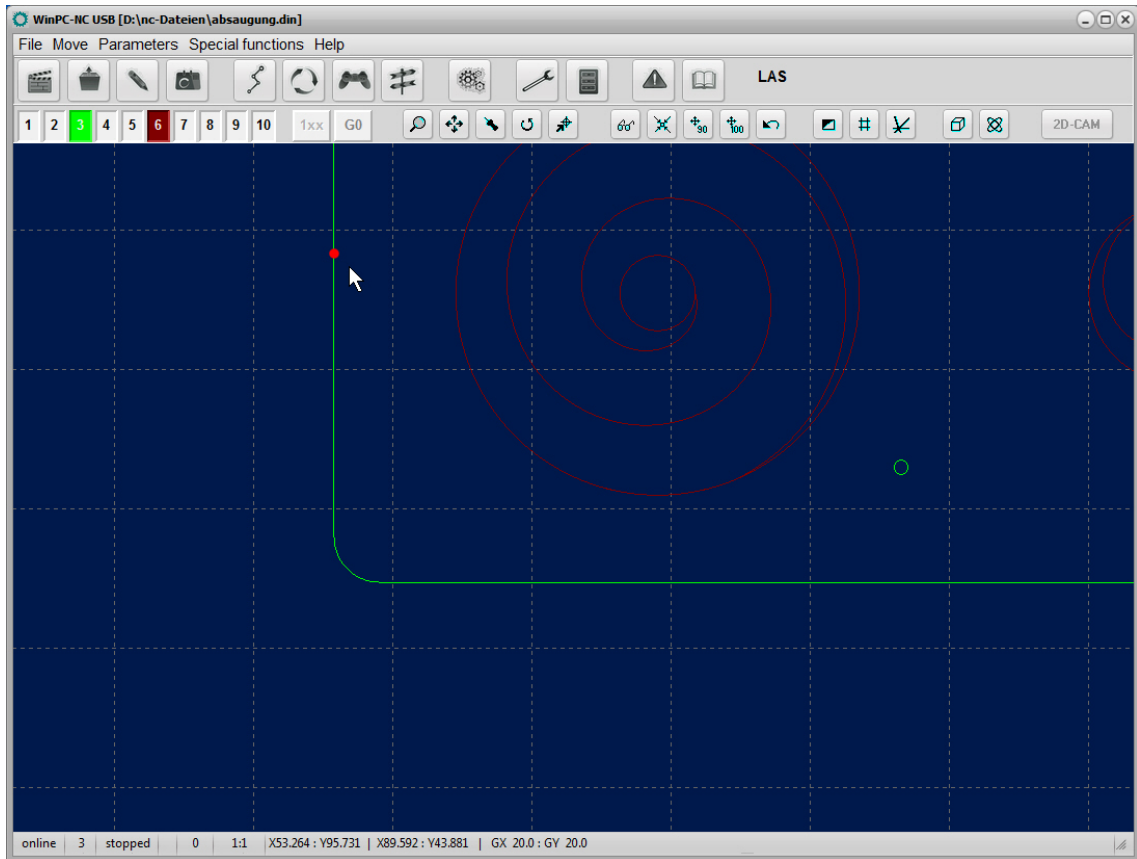
Graphical preview of the NC files

The graphical preview function in WinPC-NC is activated as soon as a NC file is selected. All contours or vectors can be seen in the tool color.



Graphical display in perspective view after selecting a NC file

Graphical measurements can easily be estimated by visible grid-lines. The distance is displayed below the graphic. The workpiece zero point appears as a small grey quadrat and the current position of the machine is presented as a small red point. Visibility of the actual machine position requires that **WinPC-NC** knows the actual site or a prior reference move.



Zoom in the graphical display of the NC file with zero point and current position

The first view of a loaded file is always the plane view on to the XY level. Several perspectives can be seen by using various display functions and can be even freely zoomed and scrolled.

The following actions are possible on the graphical display :



Zoom

With the zoom function, it is easy to view certain sections of the screen in a magnified view.

The zoom function of **WinPC-NC** can be used either by scrolling the mouse wheel or by clicking the zoom button. Then the graphical display has to be clicked by the left mouse pointer. While pressing the left mouse button it is possible to zoom and scroll the graphics by soft movements.

Move

The move function makes it possible to use the mouse to move a zoomed image and enables you to view another part of the NC file in greater detail. For scrolling the view you have to click on to the display window by the right mouse button and keep it pressed. By moving the mouse the view is now scrolled into the individual direction in real time.



Display original size

Clicking this symbol restores the original size and position. This undoes all zoom and move actions.



Define current machine position

The current machine position is represented by a small red dot in the graphic. Using the function described here, you can position the NC file in the way that the current machine position corresponds exactly to a point or a certain position in the file. The file zero point is simply recalculated internally.

Using this method it is quite simple to position the workingpiece and the NC file with great accuracy.



Move to position

For a speedy move to specific positions within the working area or the graphics please use this function. By a click to the button move to position the cursor appears as a target cross pointer and moves the machine immediately to a clicked position with rapid speed. Using the corresponding zoom factor you are able to move to the desired positions with great accuracy and thus for instance aligning a workpiece prior to clamping.



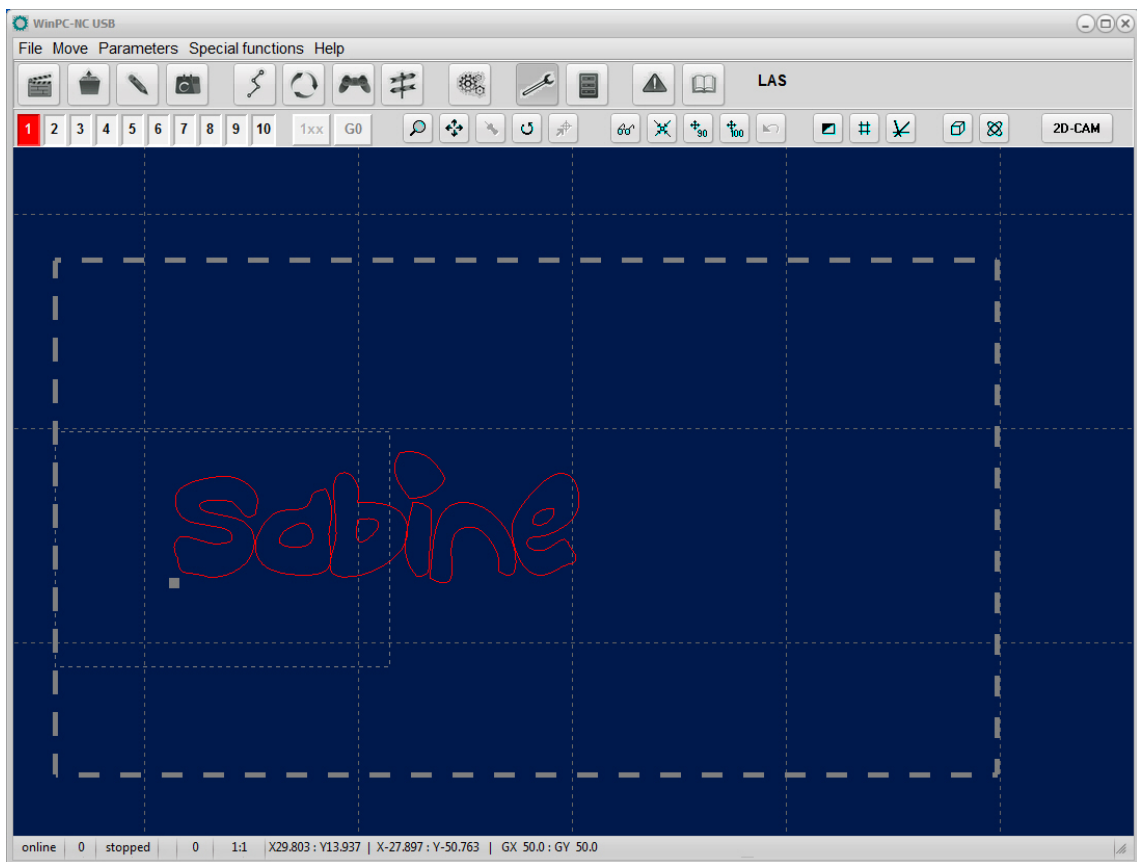
Turning data

By clicking the TURN button it is possible to turn the indicated data by 90°. In this way it is easier to place the data on the material.



Selecting the display area

By means of the button AREA the graphical display can easily be changed. So it is possible to display only the piece to be produced and its corresponding data. There is also the possibility to display the defined workpiece area or the stipulated machine size with the current position. In this way it is easy to recognize the location of the piece and whether it can be worked without any problems within the defined limits.



Display with work piece and working area



Centering within the workpiece area

Concerning engravings and millings it is sometimes advisable to center all data in the pre-set area or on an *empty part*. This is automatically done by the centering function without any size change and the zero point parameters are re-calculated.

Centering area means pre-defined workpiece area. Any defini-

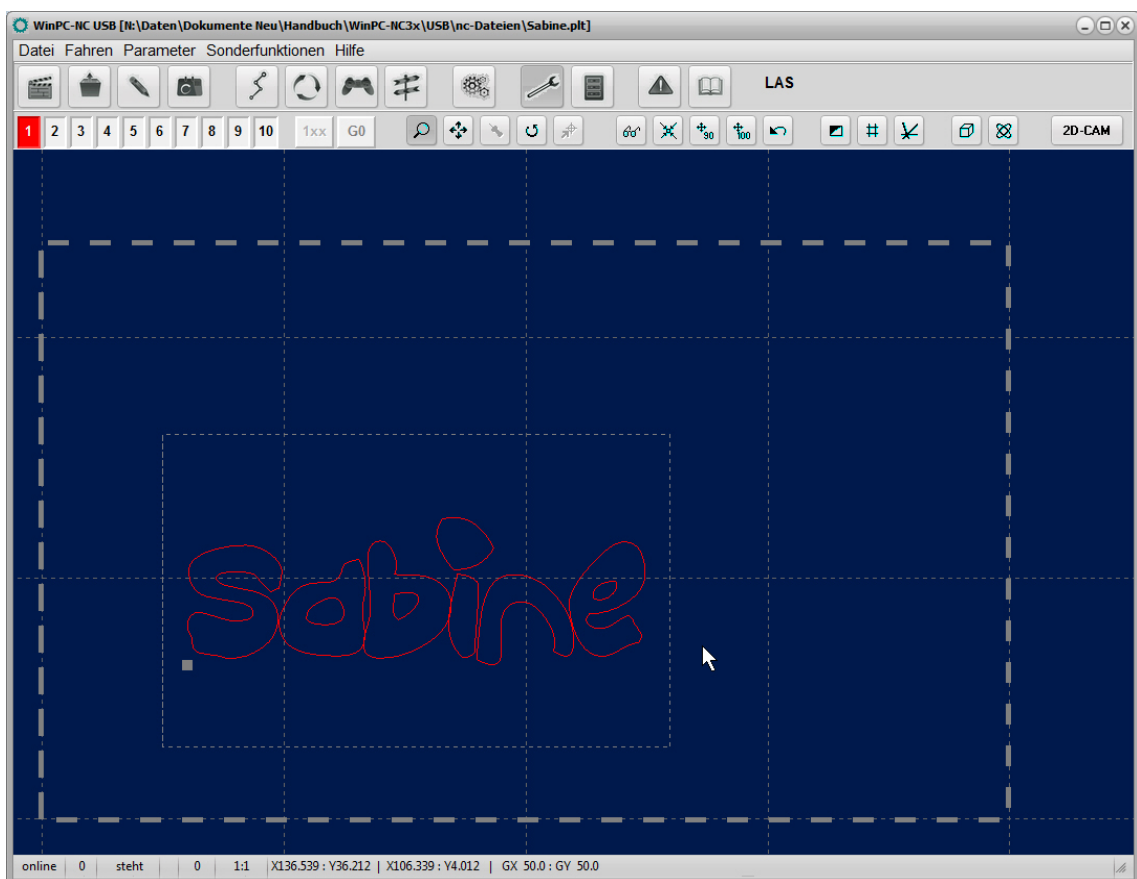
tions and settings can be specified in parameter-coordinates or by manual move to the left bottom or top right corners as well as by the function keys **F5** and **F6**.



Scaling and centering



Besides automatic centering data can additionally be scaled up to 90 % or 100 % of the predetermined workpiece sizes. In this way the engraving is properly centered with correct size and thus ready for being executed.



Data centered within the workpiece are and scaled up to 90%



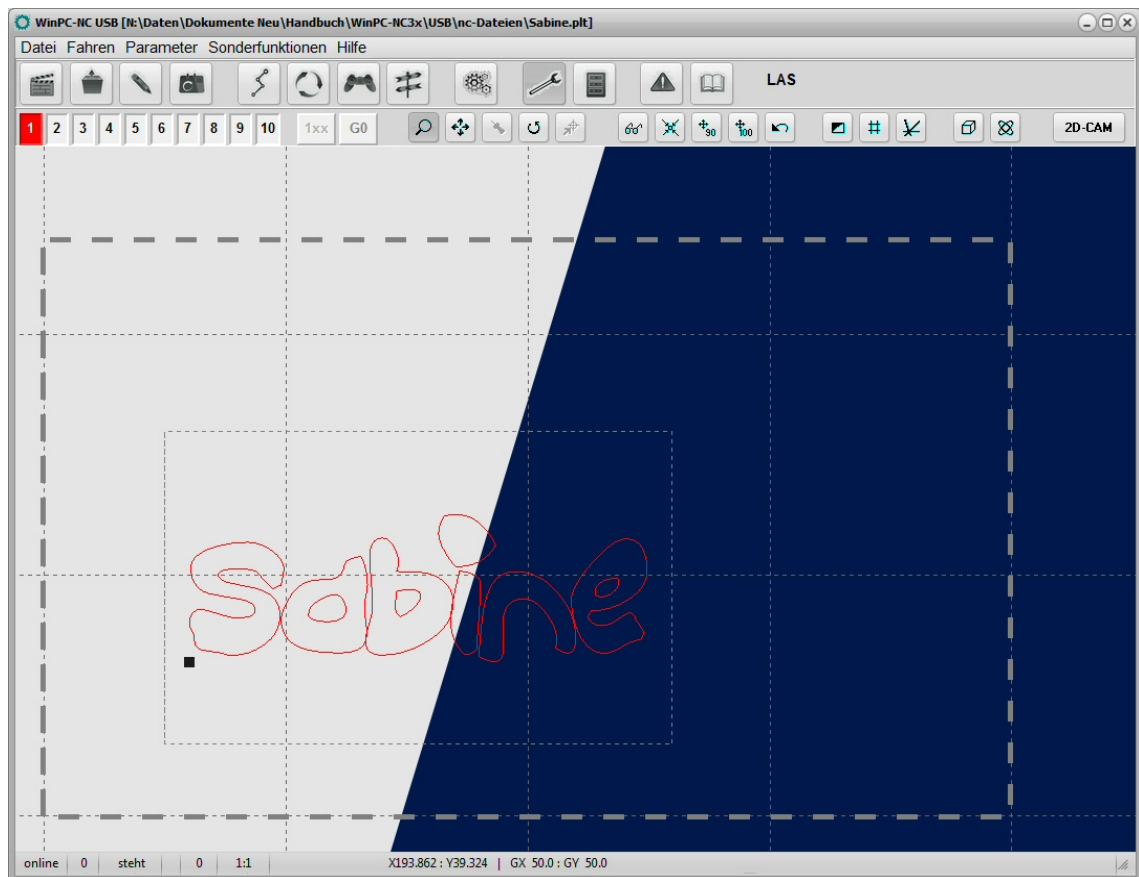
Undo scaling and centering

Automatic scalings and centerings which have been executed last can be cancelled by activating this button and the previous set parameters are restored.



Change background

This button changes the background color of the graphical screen. A dark blue and a light grey which corresponds more or less to the background color of the previous version. The individual color can be selected depending on your preference.



Background color dark or bright



Activate/Deactivate gridlines

This button activates or deactivates gridlines which serve as a base and are automatically scaled according to the drawing size. In GX and GY in the bottom bar the grid size can be read out.



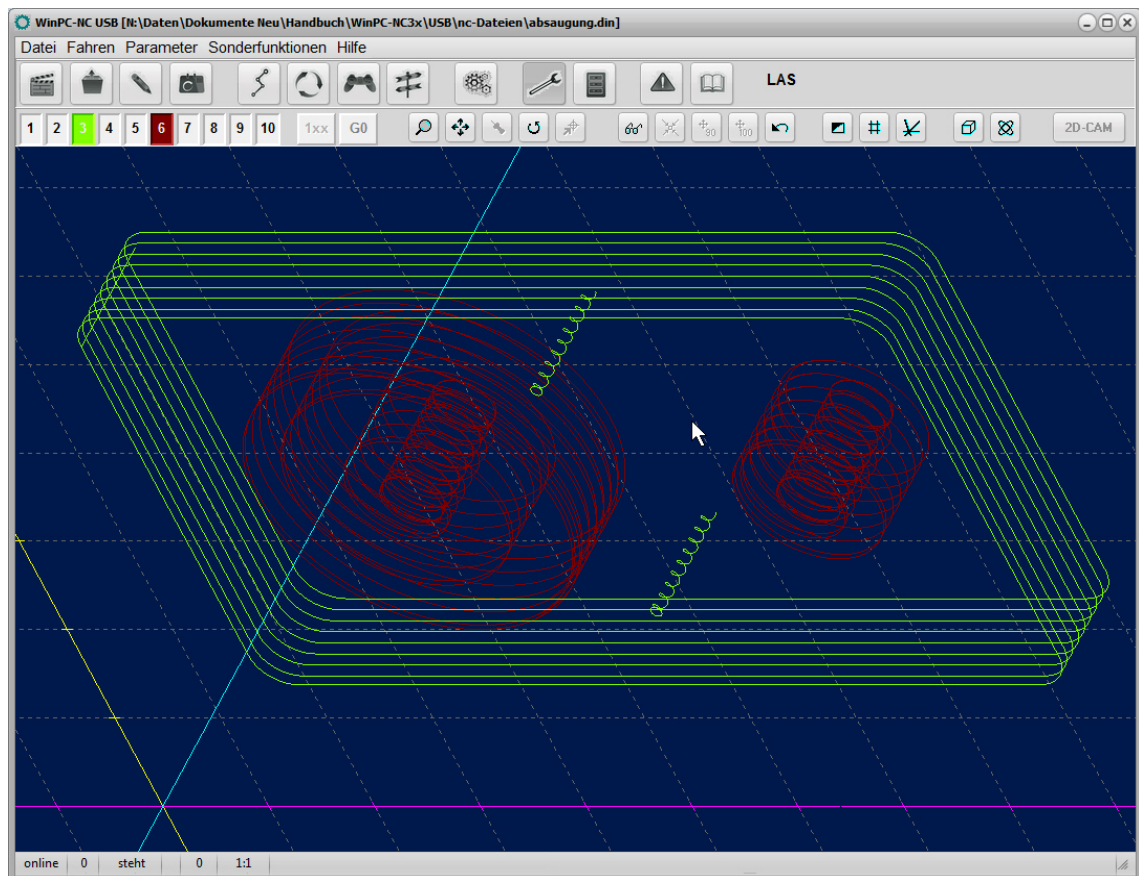
Displaying/Shielding axis of coordinate system

This button switches the display of the axis of the coordinate system. In particular the display and orientation of the Z-axis can be seen as benefit in the perspective display.

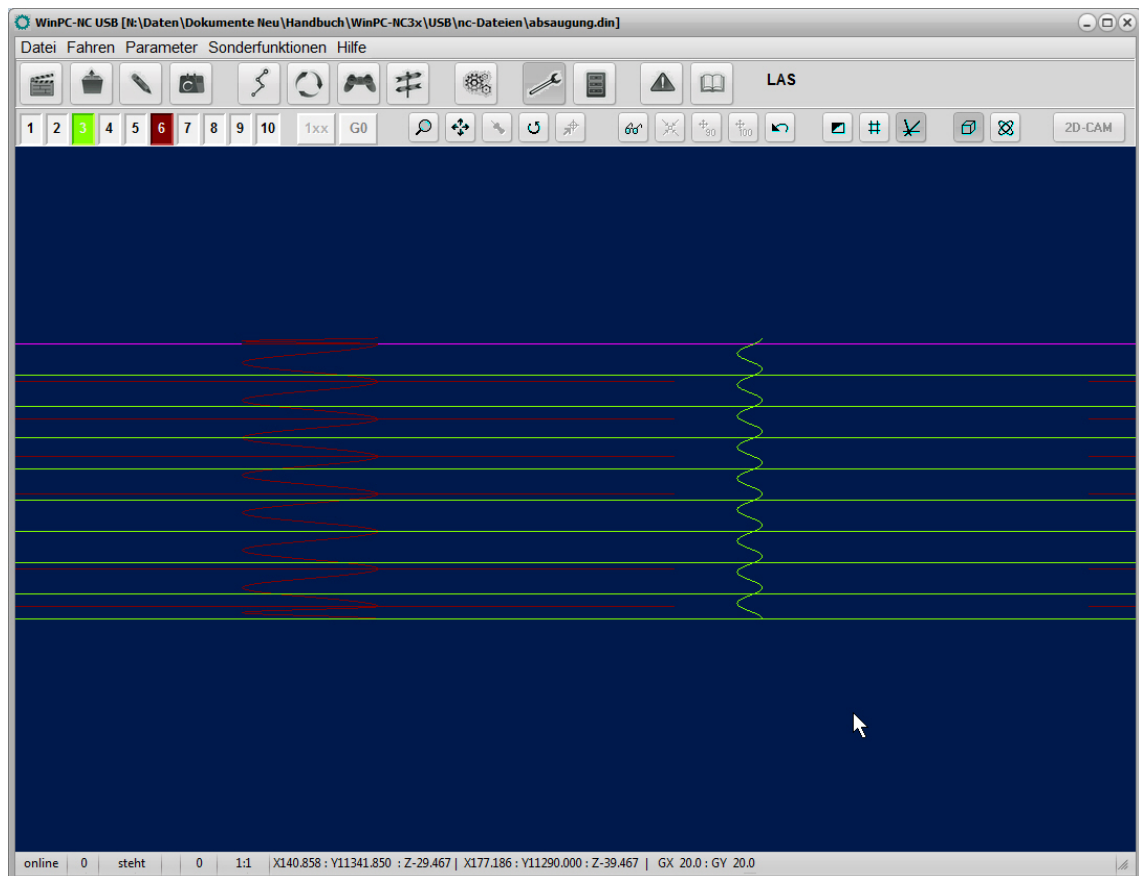


Change perspective /three-dimensional view

Clicking this button means that one of the 4 three-dimensional views jumps to the next. Included as standard the drawing is presented in plan view. With the first click the view changes diagonal forwards, with second click from below and with the third click from the left direction.



Perspective, three-dimensional view with all visible axes



View from the left side on to the Y and Z level with exact position of the mouse



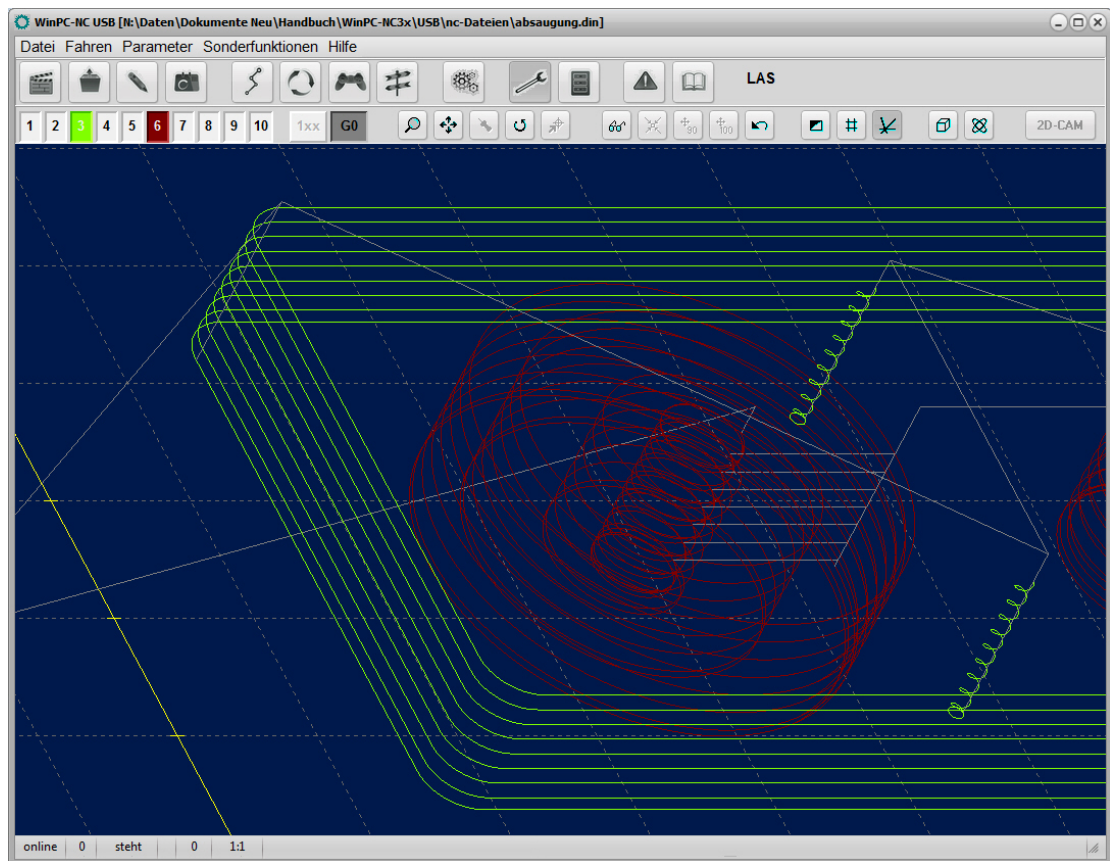
Uninterrupted 3D view, Orbit feature

In this mode the view can freely be turned and rotated. This requires nothing but a click anywhere in the graphics. By moving the mouse it is possible to turn and rotate it in any degrees of freedom and a full 360° view can be realized.



Display of unnecessary trial runs

Clicking this button means presenting or shielding unnecessary trial runs of the drawing.

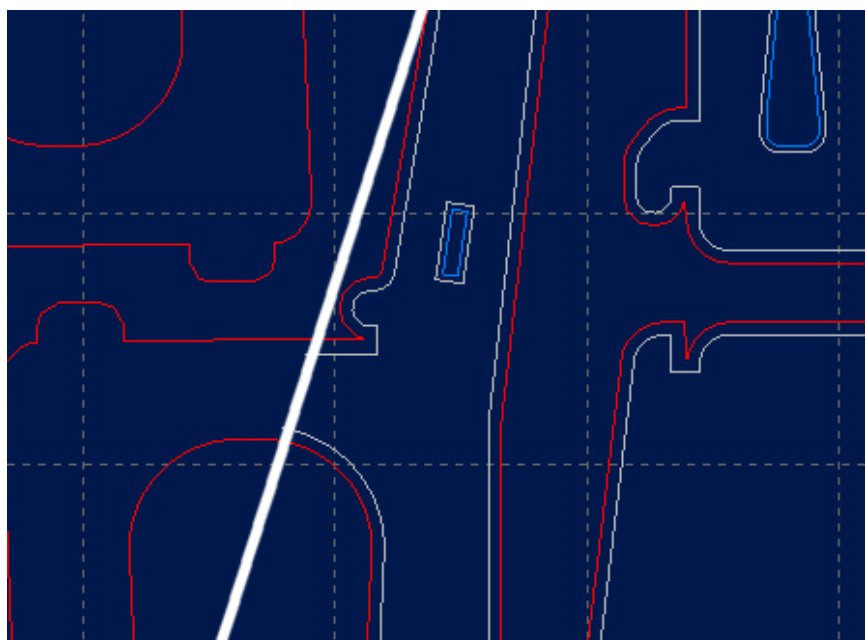


Display of unnecessary trial runs



Displaying or shielding original distances

Subsequently to a radius compensation with the internal 2D-Cam function original directions can be displayed or shielded.



Object after calculation of radius compensation with/without view on the orig. contour



Set tools active/inactive

All tools which are used in an NC file are displayed along the lefthand edge in the tool frame. They are shown using their current colors. A tool can be deactivated or activated simply by clicking the tool box. Switching in this way has the same effect as activating it in the parameters. Once tools have been switched, they immediately appear in the graphical display.

As in the example image on the left side, tool no. 1, 2 and 4 are activated. Tool no. 3 is deactivated and tool no. 5 does not appear in the drawing.



CAM functions

WinPC-NC has included simple CAM functions for all 2D data formats like HPGL, EPS/AI, DXF(2D) and drilling data files. This includes a cleanup of data, a new and optimal sorting and the calculation of tool diameter compensations.

A detailed step by step guide can be found in the next chapter.

The main screen of **WinPC-NC** as well as the window of the communication module with the position of axes and the optionally displayed timer can easily be moved and placed side by side. These positions are retained by **WinPC-NC** over more than one session.
