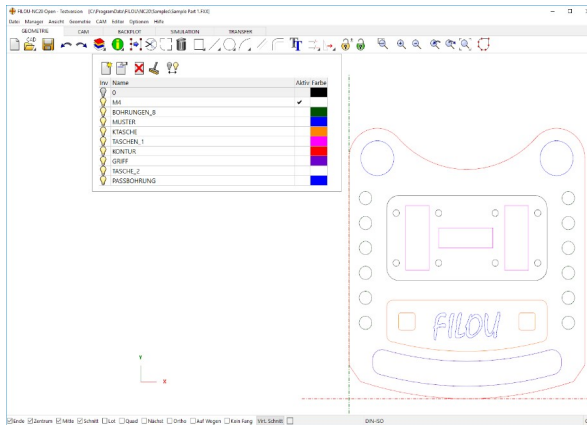# FILOU® NC

NC-programming, that's fun

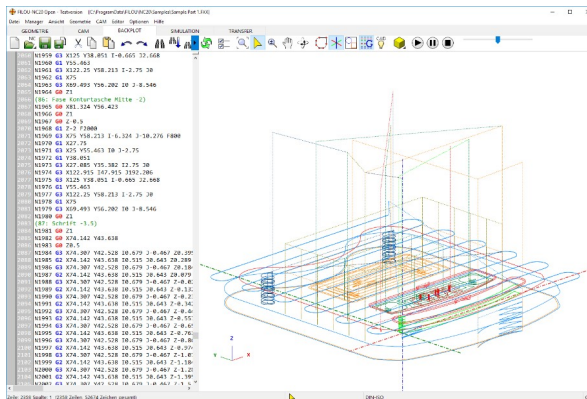# 80 - 90% of all CNC-parts are 2D parts...

2D drawing

...experts say. So there is no need to create complex 3D models, but the CNC code can easily be made from 2D geometry that is easy to create.

But not only the geometry creation is faster, the CAM program is much easier to handle. So why make things more complicated than necessary?
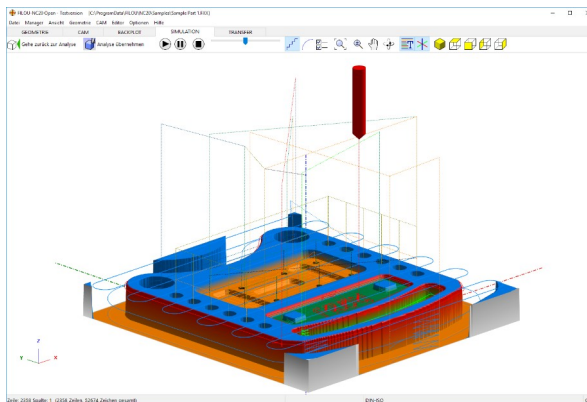
2,5D programming

Less effort also means less time and thus cost savings.

But, the simulation of the CNC program, should be in 3D. Because safety saves money too.

3D simulation

Do everything from creating drawings in 2D to data transfer to the machine with FILOU-NC..

Even already existing Drawings can be processed as well as already existing cnc-code that can be simulated in 3D. Everything with just with one software.

FILOU

FILOU NC

80 - 90% of all CNC-parts are 2D parts.

How does FILOU-NC work?

FILOU-NC consists of several Modules that operate independently. So you can switch between the modules (Geometry, CAM/Manager, Backplot, Simulation and Transfer) at any time. Once the cnc code is ready, it can be send to the machine.

In the module geometry you can open a 2D DXF file, then you can edit, change, create new or add geometry to that file if required. You can even start a new drawing from scratch.

In the CAM-Modul FILOU-NC works like a virtual Milling-machine that mills according to your DXF geometry and your inputs.

You specify how the toolpaths should be created.

You decide

whether you want to work with or without a path correction. Which feed rate or which cutter to use, whether in climb or conventional milling, how to dive into the material or how to approach or exit a contour.

FILOU-NC calculates necessary tool movements or optimizes toolpaths according to your specifications. For example when drilling, FILOU-NC can optimize all travels so you have no unnecessary movements.

The toolpaths are immediately written, as CNC code and are visible in the Backplot as a 3D wireframe. With the Manager, you can change the workflow (CNC code) at any time and then recreate it with just one click.

At any time you can start the modul 3D simulation with material removal to check the CNC code in 3D. In the Backplot with connected editor you can quickly search and edit toolpaths, even if they where not created with FILOU-NC.

Very customizable post-processors and macro programming make the CNC code creation very fast and efficient.

2D contra 3D

FILOU-NC works with 2D-geometry (Vectors) unlike 3D-CAM, which work with surfaces and volumes.

No complex 3D-Models are needed, it is just based on quick and easy created 2D-Geometrie


Geometry

Import your geometry (AutoCAD DXF, HPGL, G-Code), special functions allow you to edit imported geometry or to create more/new contours with the CAD functions in FILOU-NC. During the import FILOU-NC converts splines into bows. This is a great feature, because most cnc controls can't handle splines very well.

CAM

From the geometry you can easily create your NC program. Contours, pockets, circular pockets, text milling, freehand milling, drilling with path optimization, and if desired, machine-specific cycles. In addition a tool management with cutting data calculation.
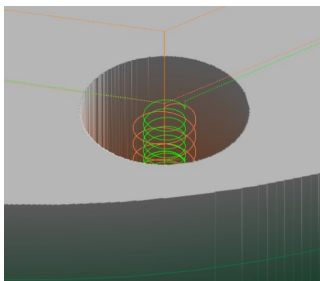

Manager

With the manager, you manage every step of the NC program creation. Which tool, total depth or levels, everything can be changed later and the NC code can then be recreated by a single click. This will save you a lot of time in case your projects subsequently change.

Backplot with Editor

The Backplot displays the tool paths in 3D. The finished nc-program is interpreted (G-Code, Heidenhain Klartext, ISEL, NCP HPGL, ...). Even programs that were not created in FILOU-NC can be processed with the Backplot and edited in the connected editor.
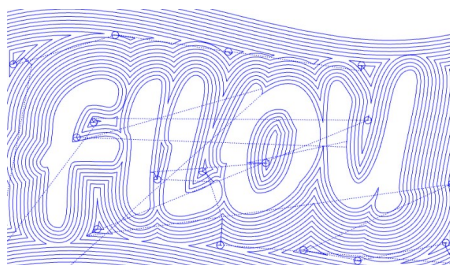
3D-Simulation

Even CNC programs not created in FILOU NC can be simulated in 3D (max. 3 simultaneous axis). All you have to do is: analyze the NC code, define the unmachined part, assign the tool and start the simulation.
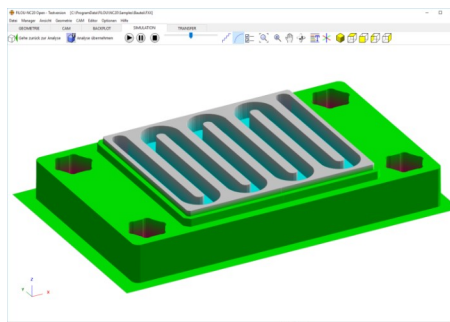
Macro-Programming

With the integrated macro programming not only own CAM macros can be written. The postprocessor can also be customized very individually for almost all controls and be equipped with its own functionality.

Transfer

With the built-in V24 / RS232 interface you are able to transfer CNC programs to and from a machine with the appropriate interface. You can create any number of machines that can then be activated when needed.

Postprocessors

For most common machines, standard postprocessors are included. If none of the supplied post processors fit to your control, you can create your own postprocessor or have us make a custom postprocessor for you (Only in FILOU-NC/OPEN). Even machine specific cycles are possible.

System-Requirements

- Windows 7   - 32/64 Bit
- Windows 8/10   - 32/64 Bit

with OpenGL support

The main functions

The main functions	FILOU-NC basic	FILOU-NC expert	FILOU-NC open (home**)	FILOU-NC basic WinPC-NC	FILOU-NC expert WinPC-NC	FILOU-NC open WinPC-NC
Geometry	√	√	√	√	√	√
Manager	√	√	√	√	√	√
Editor	√	√	√	√	√	√
Backplot + Editor	√	√	√	√	√	√
Transfer (RS232)	✕	✕	√	✕	✕	✕
3D Simulation	√	√	√	√	√	√
Detailed Analysis	✕	√	√	✕	✕	√
Macros	✕	√	√	✕	√	√
Custom Macros	✕	✕	√	✕	✕	√
Cycles	✕	√	√	✕	√	√
Custom Cycles	✕	✕	√	✕	✕	√
Postprocessor-adaption	✕	✕	√	✕	✕	√
Custom postprocessors	✕	✕	√	✕	✕	√
Tool library	√	√	√	√	√	√
CAM						
Contourtrace	√	√	√	√	√	√
Freehandmilling	√	√	√	√	√	√
3D contourtracing	√	√	√	√	√	√
Batch	✕	√	√	✕	√	√
Drilling, all strategies	√*	√	√	√*	√	√
Circularpockets	✕	√	√	✕	√	√
Thread milling	✕	√	√	✕	√	√
Countersink milling	✕	√	√	✕	√	√
Face milling	✕	√	√	✕	√	√
Rectangularpockets	✕	√	√	✕	√	√
Text milling	✕	√	√	✕	√	√
Pattern milling	✕	√	√	✕	√	√
Contourpockets	√*	√	√	√*	√	√
Contourm milling with bridges	√*	√	√	√*	√	√
Oscillate along contour	✕	√	√	✕	√	√
Peek along contour	✕	√	√	✕	√	√
Peel along contour	✕	√	√	✕	√	√
Insert Macro	✕	√	√	✕	√	√
Define cycle	✕	√	√	✕	√	√
Free Block	✕	√	√	✕	√	√
Create NC-Code on positions	✕	√	√	✕	√	√

* = Partial
** = Only for private (school & hobby), non-commercial use. Will not be sold to companies.

The main functions

The main functions	FILOU-NC basic	FILOU-NC expert	FILOU-NC open (home**)	FILOU-NC basic WinPC-NC	FILOU-NC expert WinPC-NC	FILOU-NC open WinPC-NC
3D Backplot						
3D display	√	√	√	√	√	√
Link with CNC editor	√	√	√	√	√	√
Display of external CNC code	√	√	√	√	√	√
DXF export of the backplot	✕	√	√	✕	✕	√
Refresh view automatically	√	√	√	√	√	√
Show the CAD geometry	√	√	√	√	√	√
3D Simulation						
3D simulation with material removal	√	√	√	√	√	√
unmachined part	√	√	√	√	√	√
time calculation	√	√	√	√	√	√
Detailed analysis	✕	√	√	✕	√	√
Own data for analysis report	✕	√	√	✕	√	√
Adjustable display accuracy	√	√	√	√	√	√
Show the CAD geometry	√	√	√	√	√	√
Transfer (V24 / RS232)						
sending	✕	✕	√	✕	✕	✕
receiving	✕	✕	√	✕	✕	✕
Any number of machines	✕	✕	√	✕	✕	✕
Postprocessors						
All	√	√	√	✕	✕	✕
WinPC-NC	√	√	√	√	√	√
HPGL	√	√	√	√	√	√
Create / change postprocessors	✕	✕	√	✕	✕	√
Custom cycles	✕	✕	√	✕	✕	√
Custom macros	✕	✕	√	✕	✕	√
Miscellaneous						
Direct sending to WinPC-NC	✕	✕	✕	√	√	√
Direct sending to other progr.	√	√	√	√	√	√
Automatic saving	√	√	√	√	√	√

*   = Partial
**   = Only for private (school & hobby), non-commercial use. Will not be sold to companies.