# PARTNER ASPAN

## CAD/CAM FOR CNC MACHINERY

Release

# X6

**A TOOL** SOFTWARE

## New features introduced with release **X6**

# General functions and Supervisor Environment

- *"Import / Export > Preferences"*:
  added new option *"Join routings on different layers"*. If the option is enabled during **DXF import** it allows joinining in a path for adjacent routings that belong to different layers.
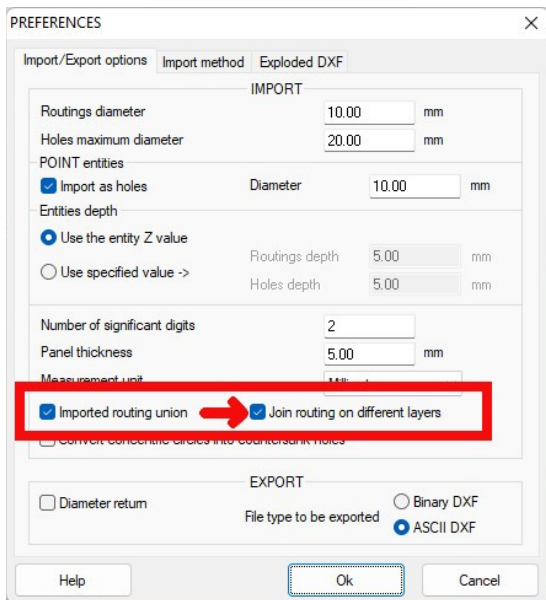
# CAD Environment

- New command **"Path > Sand"**:
  given a path composed of several segments, the *"sand"* command allows the profile to be smoothed while **maintaining the tangency** between the segments that make it up.
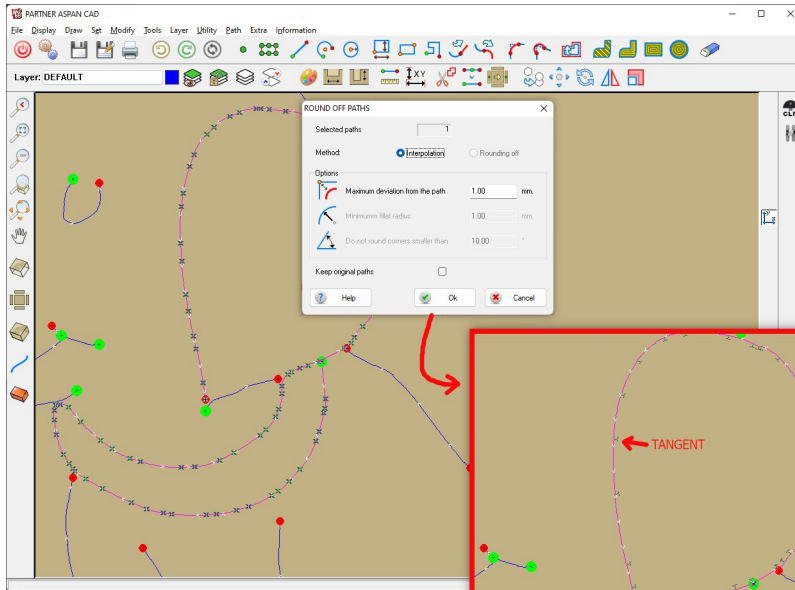


- *"Path > Cut and join"*: by scrolling through the vertices of a path, in the status bar at the bottom left of the program window, the **index** of the selected vertex, the **depth** and the **ID** of the current section are displayed.
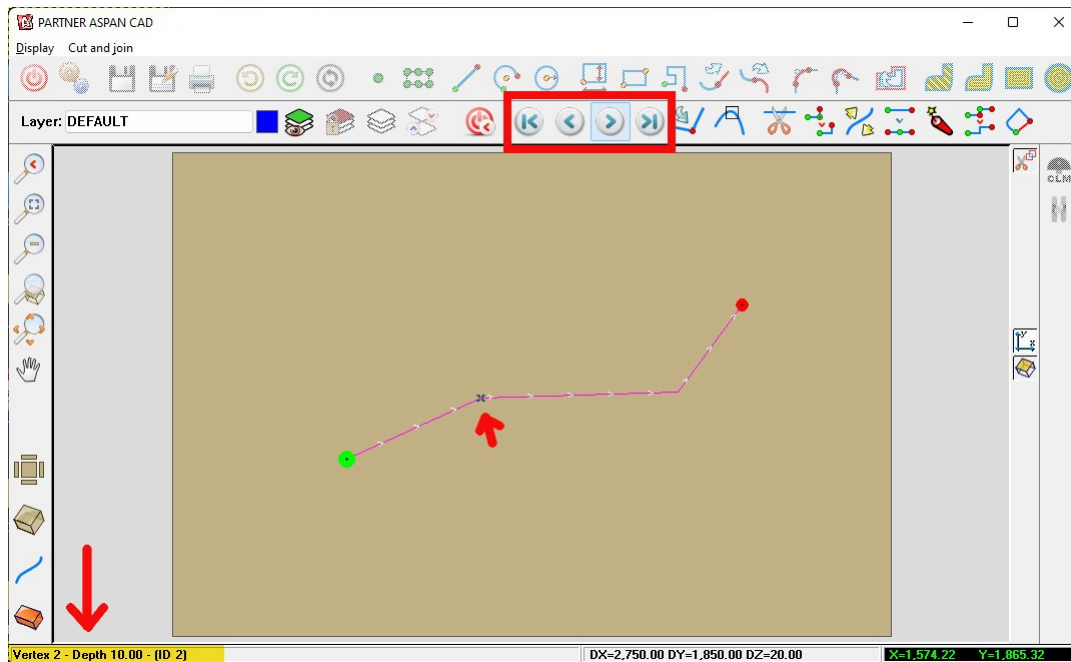
- *"Path > **Cut and Join > Multiple Join"**: when joining several segments to form a single routing path, the command checks that all entities have congruent characteristics and therefore have the <u>same diameter and equal depth</u> at the joining points.
  If one of these requirements is not met, similarly to the *'Auto Join'* command, a message warns the user and proposes to **automatically correct the parameters of the lines** before the merge operation.
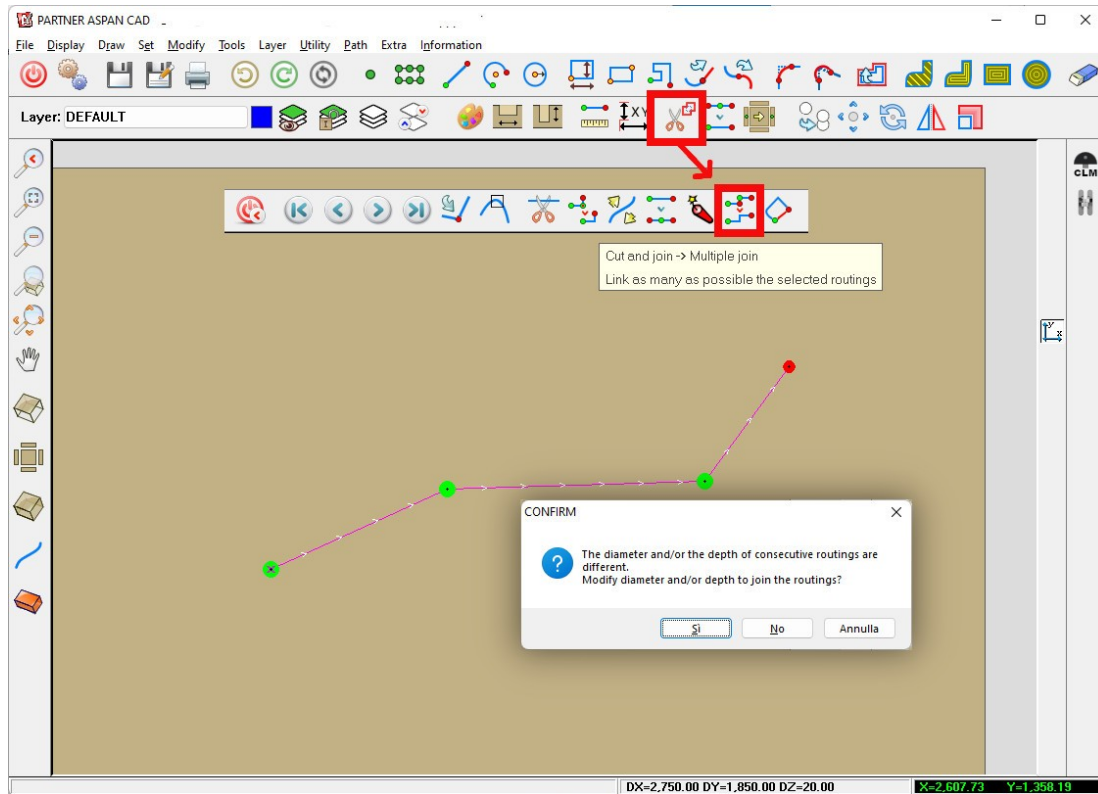


- *"Path > **Cut and Join > Multiple Join"**: optimised the lines **merge functionality** especially with regard to the calculation of machining direction and depth management.

- *"Path > **Cut and Join > Multiple Join"**: the **new flag** *"Join through layers"* when active allows adjacent routings to be joined even if they are on different layers.
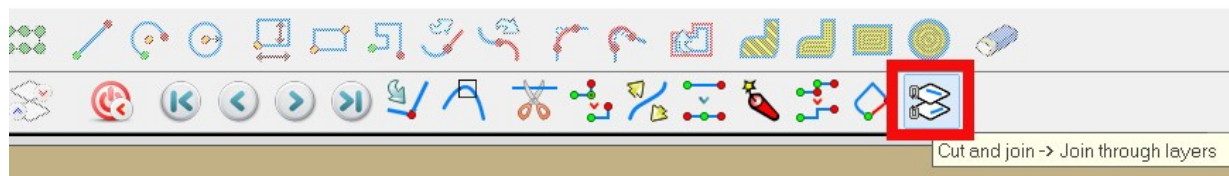


 **Disabled**: (default) lines belonging to different layers cannot be joined.

 **Enabled**: multiple join also merges lines that belong to different layers.

- New command *"Tools > Bubble fillet"*:
  creates a bubble connection between two adjacent entities.
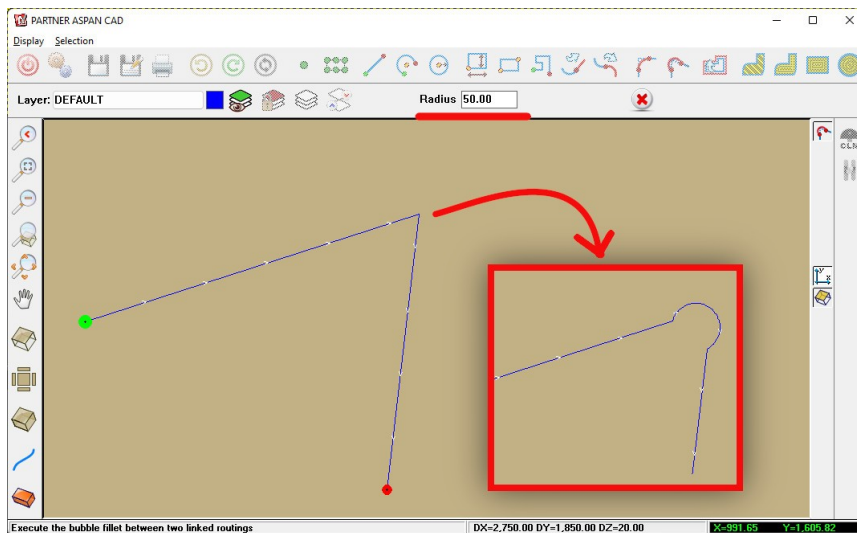


- *"Draw > Routings > **Rectangle"***: the rectangle creation dialog box now allows the automatic creation of **bubble fillet** on the corners of the rectangle created.
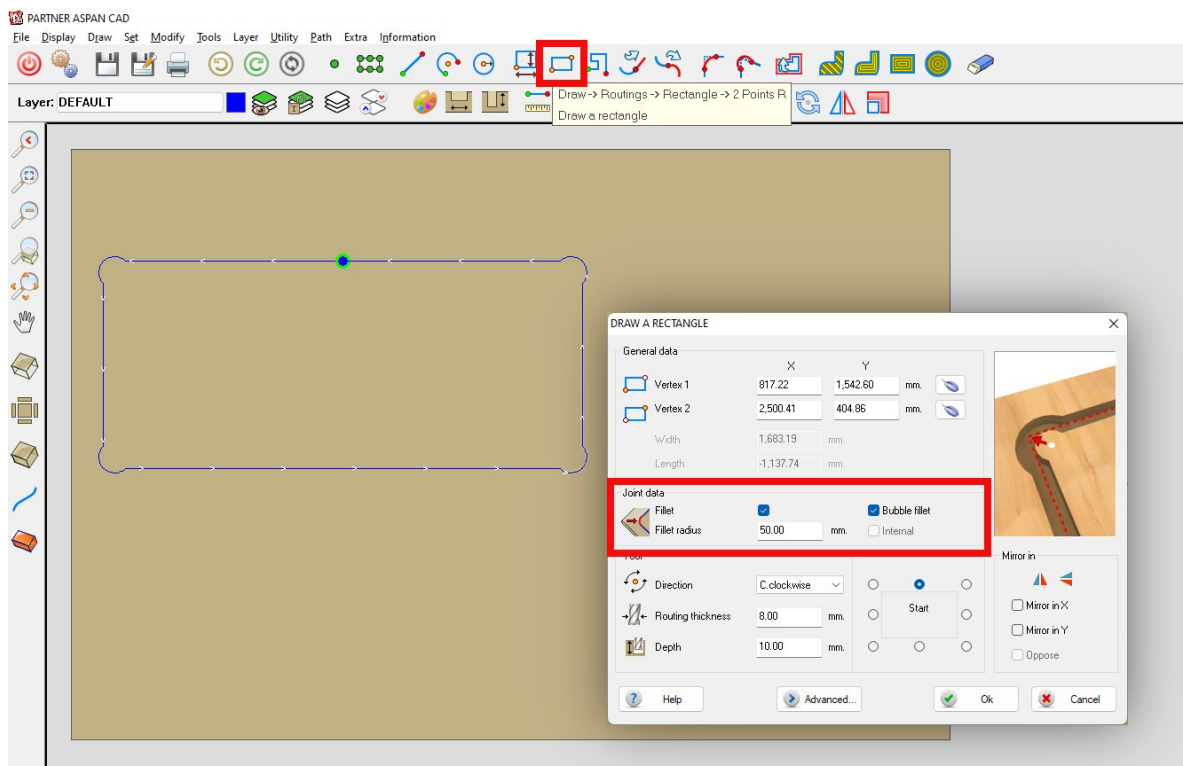


- **"Modify > Entity"**: created new **quick access** for the modify entity command, which can now be executed by pressing the **key [ N ]**.

# CAM Environment and Tooling

- "*Machine > Machine Tooling > Edit*": improvements to the tool data dialog.
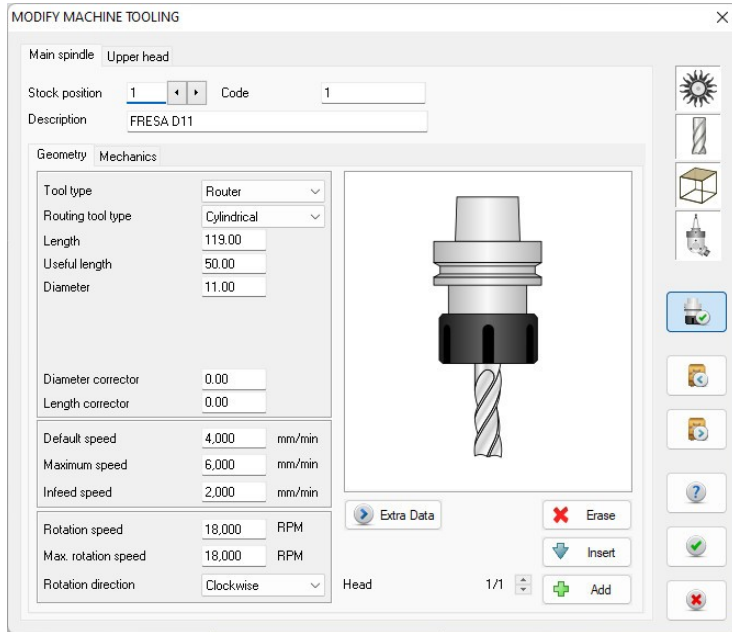


- "*Machine > Machine Tooling > Edit*": new section for tool **"Additional Data"**.
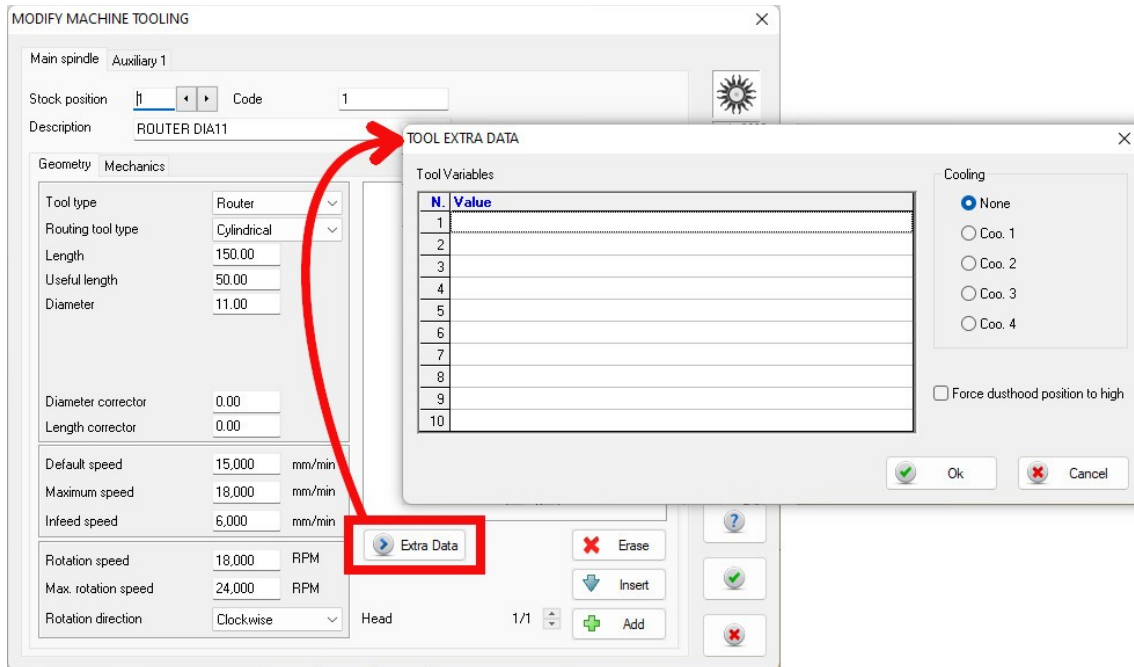


For each tool, it is possible to specify Additional Data that can be used by enabled processors to perform particular functions. It is also possible to specify **coolant/lubrication options** and **force the dust hood in high position** when that particular tool is used.

*Note: These features are only available for enabled processors.*
*Please contact Atool Software for verification.*

- *"Machine > **Machine Tooling > Stock"***: improved stock management window and added **[ Delete ]** button to quickly remove unnecessary tools from the stock.



- *"Machine > **Machine Tooling > Stock"***: tools saved in the stock now also retain the **mechanics data** and **additional data** introduced with this version.

- New **Tool Assignment** and **Optimization managemet**:
  the new tool assignment and optimisation management makes it easy to decide when and how the program should perform **automatic tool assignment** and **sequence optimisation** operations.
  This working mode integrates and complements the pre-existing ones.
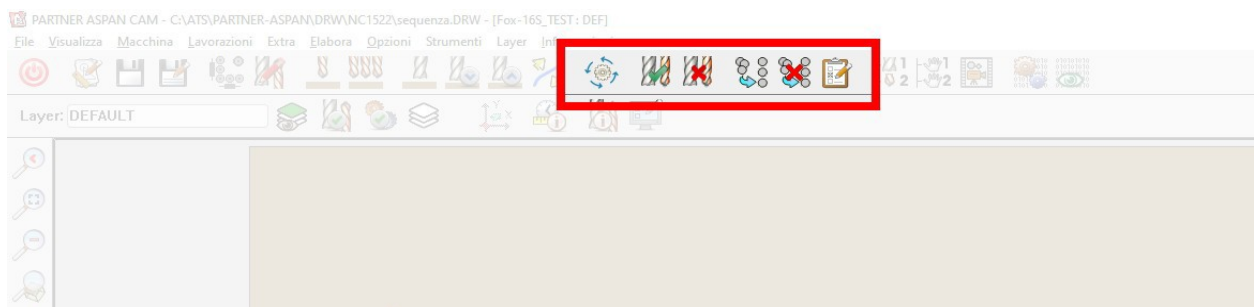


  **More information** about this new functionality can be found in the following document:
  ats_x6_new_tool_assignment_and_sequence_management.pdf >>

- Improved **machining property** and **tool selection** dialogues.



ROUTINGS MACHINING

**Machining**
◉ 1                                          Multi machining
☑ Enable machining          ☐ Reverse direction

**Tool**
Tool    [1]    [...]    Diameter 11.00    FRESA D11
RPM    [18,000]    Length 50.00
                     RPM 18,000

**Options**
Start feed    [2,000]    mm/min
Feed          [4,000]    mm/min
Depth         [10.00]    mm.

Tool compensation    [None ▼]
Overmaterial         [0.00]    mm.

**Steps**
◉ Number of passes    ○ Pass Depth
Steps    [1]    ☐ Inverted Pass

Hood position    [0 ▼]

Help    [        ]    [Ok]    [Cancel]

**Confirm current operation**

TOOL SELECTION

| Tool change posit. | 9 - 60 SPIANARE |
| Diameter/ Useful length | 20.00 / 12.00 |
| FRESA 60mm P409.600.12D | |

| Tool change posit. | 10 - 3N |
| Thickness / Radius | 3.00 / 60.00 |
| FRESA 3mm N   303.030.8D | |

| Tool change posit. | 11 - 35 SPIANARE |
| Max / Min diameter | 35.00 / 3.20 |
| FRESA P409.350.8D | |

| Tool change posit. | 12 - 3 U |
| Diameter/ Useful length | 3.00 / 12.00 |
| FRESA P313.030.3D BALL NOSE | |

| Tool change posit. | 12 - T12b |
| Thickness / Radius | 3.00 / 50.00 |

| Tool change posit. | 1 - A1-T1 - Auxiliary 1 |
| Thickness / Length | 0.50 / 5.00 |
| CUTTER | |

Help    [Ok]    [Cancel]
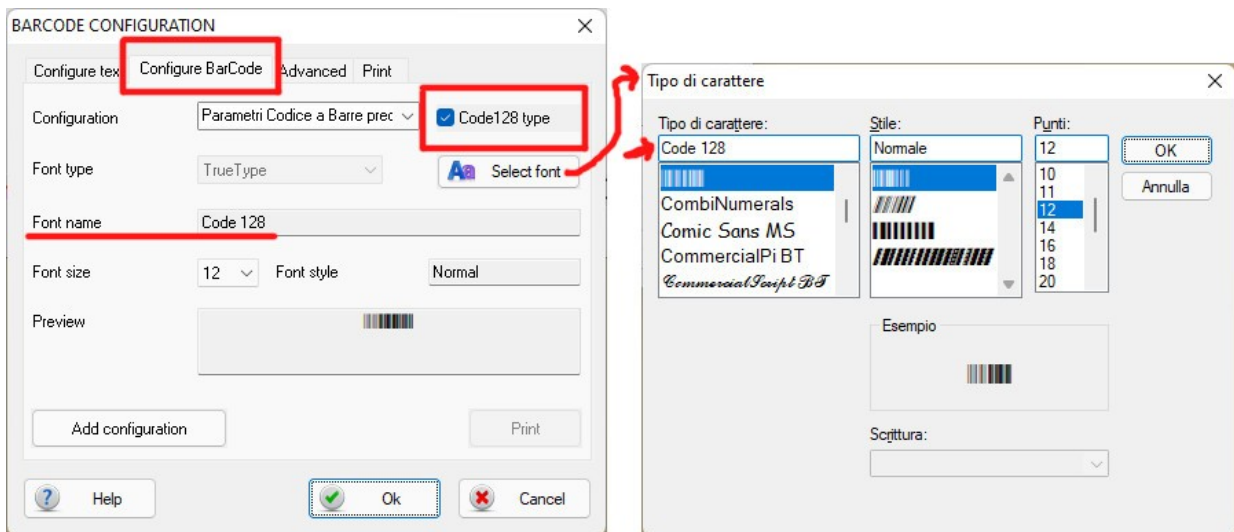
**Confirm current operation**

# NESTING Optional Module

- Improvements to "*Onion Skin"* management and start point calculation.

- (automatic labeller) "*Labels > Configure for waste sheets"*: **waste sheet label management**. It is possible to create a customised label to be applied to the waste sheet to be re-stocked.
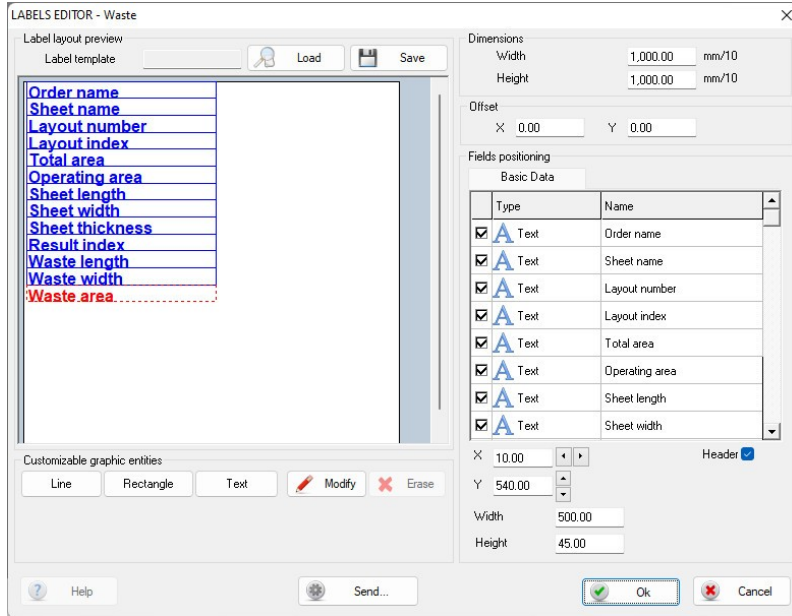


- **Code-128B barcode support**:



*\* 'Code 128' font is not included with the program but is easily retrievable online.*

## Macro

- Optimisations to *hardware macros;*

- Post-Processor developers can now use tool variables to manage special characteristics, special machining operations, and to uniquely identify a particular type of tool. Data written in "**tool variables"** are passed to the processor using the variables **TOOL_VARIABLE_N**, where N is a number from 0 to 9.

- Added post-processor variable **[COOLING]** that returns a value between 0 and 4 depending on the option selected for lubrication of the current machining. (INIT_SHAPE)

- Added post-processor variable **[DUSTHOOD_FORCED_UP]** with values 0 and 1 indicating whether the flag "Dust Hood force position high" has been activated. (INIT_SHAPE)

## Other improvements

- Added support for new CNC machines.

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