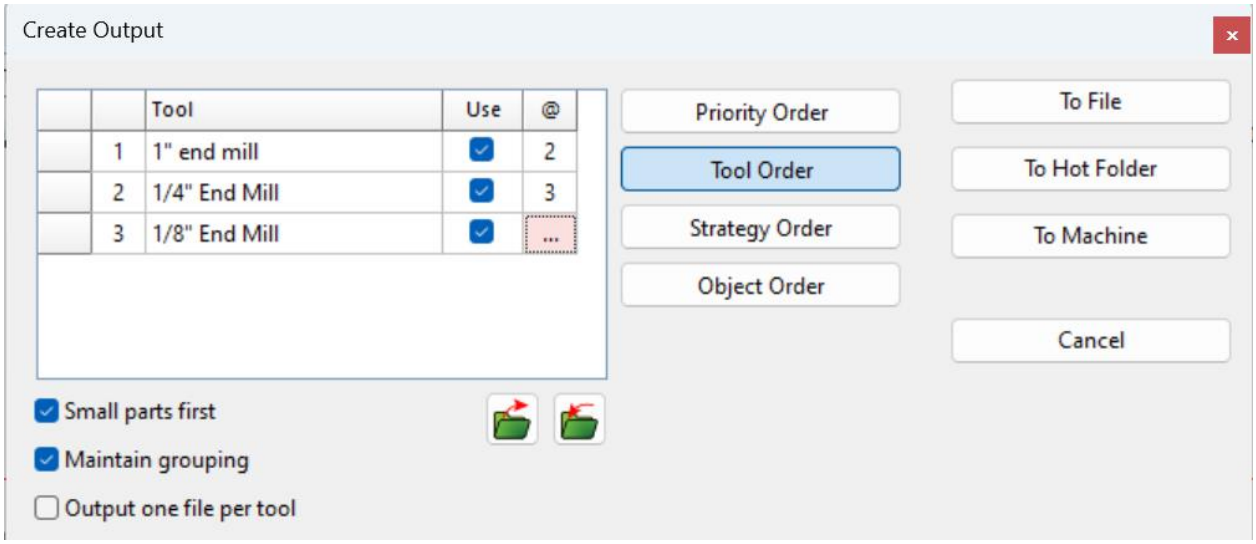
#Releasenotes - EnRoute - EnRoute 24.3

Functionality updates

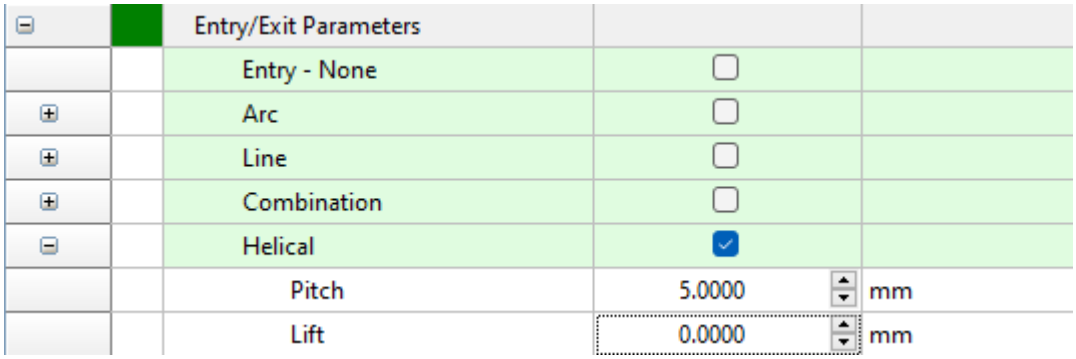
- ### Visualization of tool positions

In the **Tool Order tab** of the output window, users can now **view the specific positions** in the machine's tool changer where the used tools have been placed. When a tool is unassigned, users can access the tool changer by clicking on the "..." symbol in the @ column. Assigned tool numbers also have the same functionality, allowing users to reassign tools if necessary.



- ### Helical entry option

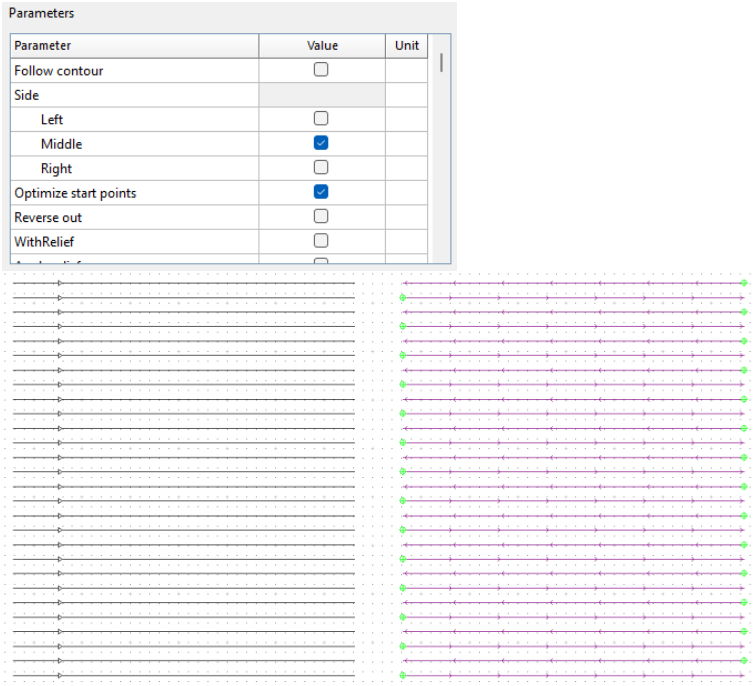
A **Helical entry option** has been added in the list of possible island fill strategies



- ### Optimization of Start Points

The **"Optimization of Start Points" option for Open Contour Offset** modifies the tool path so that the tool is no longer constrained to follow the exact contour. Instead, it prioritizes the

shortest path, optimizing the tool's movement to minimize travel time during the tool path application.

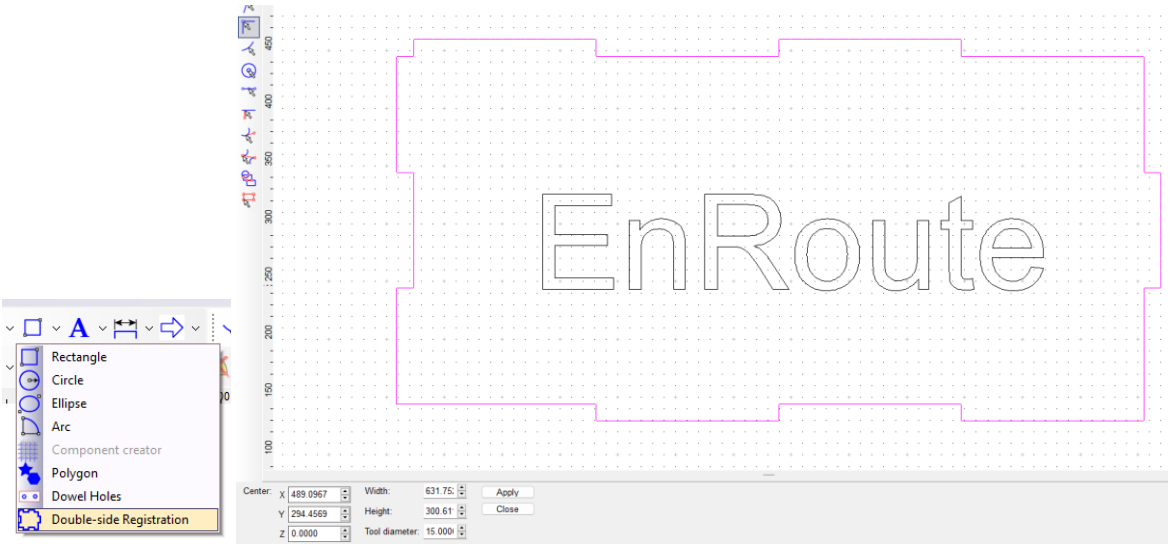


- **"Reverse Out" option for Open Contour Offset**

The **"Reverse Out" option for Open Contour Offset** configures the tool path to precisely retrace its entry path upon exit. This ensures that the tool follows the exact same route out as it initially followed on the way in.

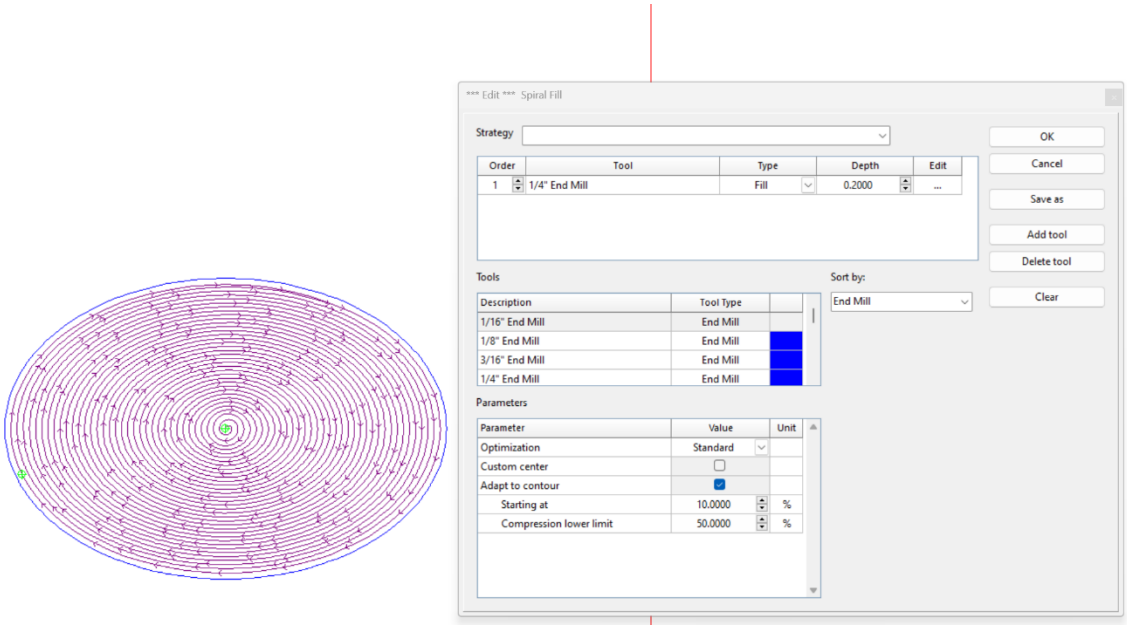
- **Double-sided positioning shape generator**

A new shape tool designed to create a precise cutout that serves as a jig is now available, facilitating accurate alignment when processing the reverse side of a workpiece. This tool will ensure consistent XY positioning by providing a reliable fixture that locks the part in the correct orientation, minimizing setup errors and maintaining alignment accuracy throughout backside machining operations.



- **Spiral fill tool path – adapt to contour option**

The spiral fill tool path was previously optimized exclusively for circular pocketing applications. It can now dynamically adapt to the specific geometry, enabling greater flexibility and precision across a wider range of shapes.



Bug fixes

- After performing an action such as move, scale, or mirror, users would have to reselect the object to move the position with the arrow keys.
- Thread milling tool path – the helical movement of the tool is not applied when using multi-tooth thread tools at shallow depths.
- Edit entry/exit: click & drag does not work for the open contour offset when applied to the left or right.
- Multi-copy tool will again remain open after clicking “apply” for a quick succession of multi-copy actions.

#Releasenotes - EnRoute - EnRoute 24.2

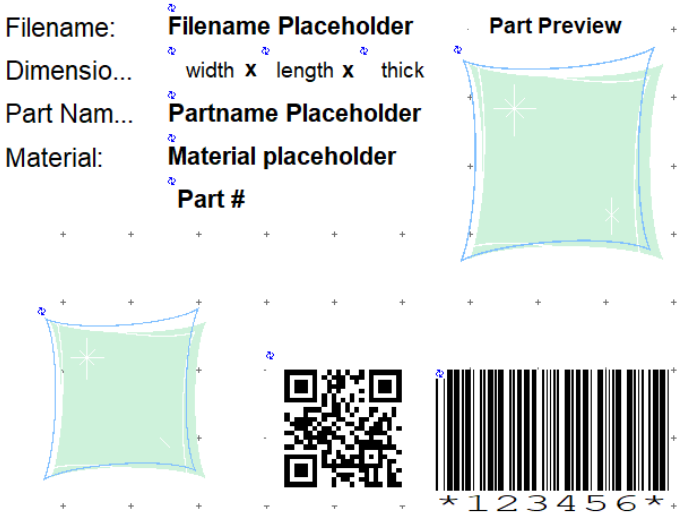
Functionality updates

- **Spiral down option for routing offsets**

The routing offset strategy has been enhanced with an option for a spiraling downward motion during routing operations. This option improves both efficiency and finishing quality in machining processes. Users can now create a downward-spiraling routing offset, where the number of passes corresponds to the number of circular passages around the geometry. It can also be used with roughing tools, followed by a subsequent cleaning pass performed by the same or a different tool. Users can define a small angle to facilitate the simultaneous execution of roughing and cleaning passes. The tool will engage the edge only upon reaching the final cutting depth, minimizing tool markings on the part's edge. It is important to note that setting the angle parameter requires the flute length of the tool to exceed the final cutting depth. If the flute length does not exceed the cutting depth, the angle will default to 0 degrees to prevent undue contact between the tool shaft and the part. In such cases, we suggest that users revert to the traditional method of performing separate roughing and cleaning passes to achieve the desired result.

- **Label update: QR codes have been added to the label design.**

Users can now add QR-codes to their labels which can also be used as placeholders for list file data.



- **Outline tool improvement: “leave original” – checkbox**

The option is checked by default but can be turned off if you wish to delete the original contours and only keep the outlines.

Bug fixes

- Text would be ungrouped after copy & pasting as well as with delete + undo
- Tool compensation will negate surface setting
- Tool order would be flipped and the thread tool would be applied first for the threading TP
- User could click and drag the exit option into the shape.
- Update order button remained greyed out after making ordering changes
- Angle, radius and diameter measuring tools did not work on tool pathed objects
- Output generation's order would interfere with certain auto-labeling drivers
- Nesting to custom plate generated from contour does not work
- Multi-copied objects would not be distributed correctly over multiple sheets
- Negative margin for standard nesting algorithm not being applied as in previous versions
- Single character text in DWG files would disappear after merging contours
- Copy & pasting + moving of multi-copied objects would cause an odd jump of the original shape

#Releasenotes - EnRoute - Enroute 24.1

Addition

- 3D surfacing improvement
  In addition to the XY plane, overlap for 3D toolpaths now also takes the Z axis into account to increase the overlap on steep areas of reliefs

Bug fixes

- Holding down Ctrl and Shift causes geometry to be misaligned
- Sharp corner option not saving to routing offset strategies
- When you edit an entry exit it will edit both internal and external
- Merging bug: Z plane is not taken into consideration in the merge function
- Speed slider for the 3D Rendering could be adjusted
- Activating Quad View Without a Created Plate Will Throw an Access Violation Exception
- ATP auto label generation issues
- Inability to delete drill center strategies
- DXF & DWG import issue
- Block nester - common line option does not work
- Silent call to ATP no longer flags if tools are missing from the turret

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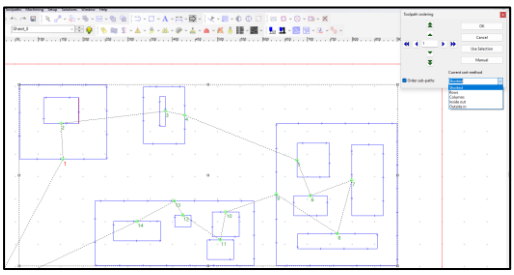
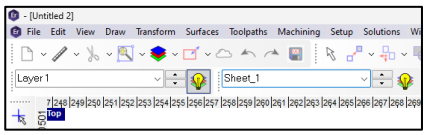
Additions

- Thread pitch toolpath
  We have added a new tool type and tool path type for cutting threads. It will apply the thread tool paths in the same way as the “drill centers” so that the threads can be applied to many geometries at once.

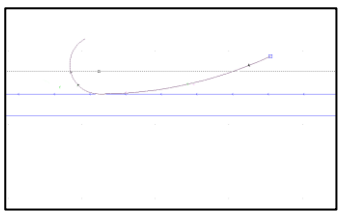
- New order parameter: Order by Entry/Pierce
  Within the toolpath ordering, we have added the possibility to order by “pierce". Every entry into the material can now be sequenced, even if it is part of a larger toolpath group.



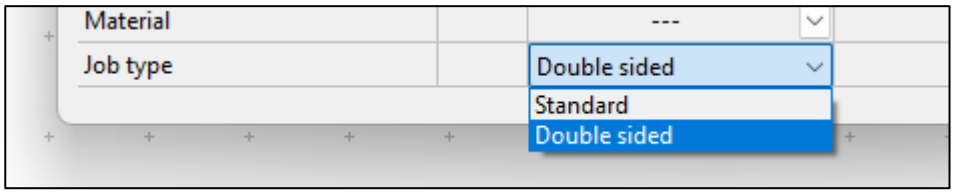
- Plate tool bar addition
  When nesting files across one or multiple plates, you now have to option to ‘maintain layers’ so that an object and its toolpaths remain on their respective layer after nesting. This option is now checked by default in the preferences.



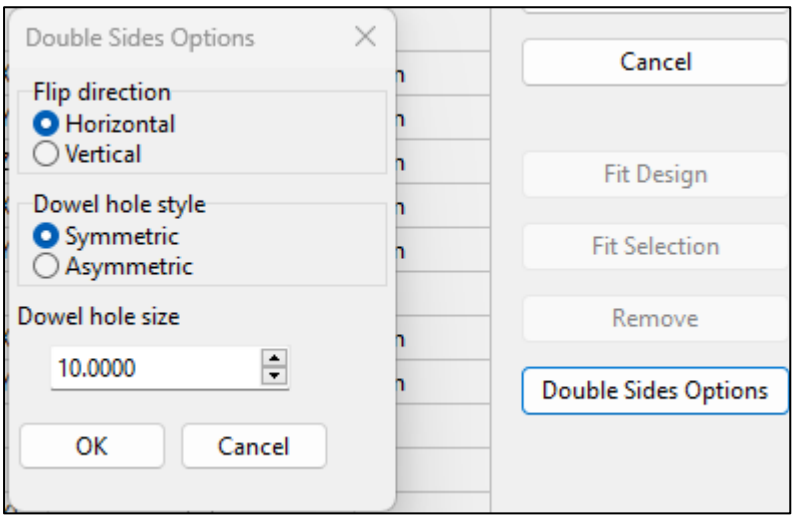
- Easily editable Entry/exit of tool paths
  A user now has the ability to edit size and angle of entry/exit objects simply by clicking and dragging them as preferred.



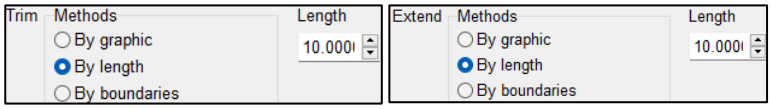
- double sided machining in EnRoute
  Upon the creation of a plate, you now have option to choose between a standard job and a double-sided one.



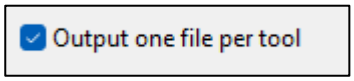
When you choose double-sided, you will get additional options where you choose the flip direction, dowel hole type and dowel size. The dowels will be used to position the job when flipping over the material.



- Extend/trim by length
  We have re-enabled the ability to trim and extend contours by a set length.

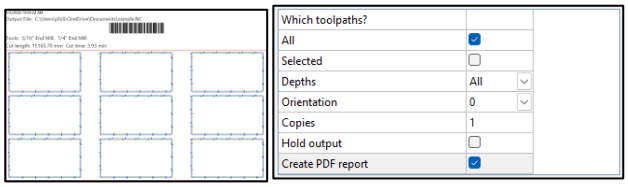


- Output file generation for each tool
  For users that do not work with an automatic tool changer, we have added the option, upon output, so that you can now choose to automatically create an output file for each tool that is used in your file. The tool name will be appended to the set name of the output file.



- Snap to point option in Point-editing-mode
  We added the functionality to snap to points while editing contours using the point editing tools.

- Create PDF report on output G1
  When outputting, you can now generate a PDF report which will give you the cut time estimation, tool list, a barcode, and print preview of the plate.



- Added option to maintain entry/exit/bridges relative position after scaling
  Customers can now choose to maintain the relative position of entry/exit/bridge on a toolpath when scaling. In previous versions of EnRoute it would reset them to their default position as it recalculated the toolpath.

- Kerf compensation entry/exit location improvement: preferred = sharp corner or at directional change
  The corner entry/exit will now automatically default to the sharpest corner of the geometry it is being applied to.

- Text input in EnRoute is now able to handle non-Latin character based on your windows keyboard setting

- Allow to set fixed output location for label image files generated with ATP.
  You can now specify a path in the driver's CNF file to always generate the label images in the set location.
  e.g.
  [Gcode Controller-LabelOutput]
  OutputLocationLabelImages=C:\ATP OUTPUT

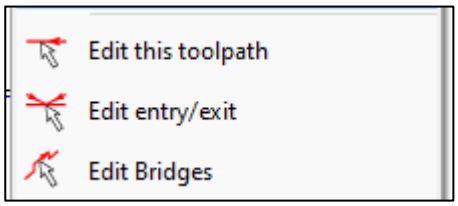
- Layer name placeholder added to labels.

- XY 0 ,0 Guide lines checkbox at plate creation
  We have added a checkbox to create XY-guidelines at the origin of the plate upon its creation.

- Drag and drop to open File
  You can now drag and drop ER files into EnRoute to open them.

- Added “Send to hotfolder as layered DXF" option
  Designs can now be sent to a hot folder as a layered DXF file.

- Edit entry/exit & edit bridges has been added to the right-click menu when targeting a toolpath.



- Kerf toolpath improvement – kerf width can be entered manually with the necessity of having such a tool set up in the tool library.

- Post-processor options are now available within the Output window of the automated tool pathing module.

Improvements

- Apply selection tolerance when selecting start points while editing entry/exit paths.
- Added edit entry/exit and Bridges to right click menu.
- Preferences set to scroll view by default when scrolling in menus.
- Separator key on numpad will now default between “.” And “,” depending on the computer's regional settings.
- Revolve tool – placement improvements using snaps.
- ATP output location based on list file. Output location will now remain set as long as the list file is selected.
- Installing EnRoute on PC with existing installation will append a new number to the file path and create new folder.
- License updates will automatically be applied.
- Setting the EnRoute TypeLibrary - EnRoute Silent calls.
- Apply selection tolerance when selecting start points while editing entry/exit paths.
- ATP - Mapping tab - Design depth should also be available for the sheet trim strategy.
- Option to send to Hypertherm/Pronest.

Bug fixes

- Slots created in v7 are not opened in v23.
- Editing tool paths does not always work across entire selection.
- Depth to Shoulder setting is not being saved.
- In certain cases, nesting causes geometry to be raised above the material.
- Printing from EnRoute 23 causes print error.
- Weld Joined Issue.
- Plate thickness warning missing in certain menus.
- Tool pathing objects created by the component creator causes crash.
- Image generation for labels & printouts of parts: subsequent layers with larger objects with make previous layers not show up.
- Draw line: right-click closes the tool instead of ending the current line.
- DXF/DWG export no longer saves the Z coordinate of geometries.
- ATP single parts processing issue - parts are nested together based on the display name in the list file and not the DXF file name.
- The "STL-to-relief" import filter missing.
- Margin parameter set for the block nester is not applied when using it through the automated tool pathing module.
- Extend tool – boundary not recognized.
- Trim tool – boundary not recognized.
- Layer bug: No longer possible to activate several layers. 1 active or all active.
- Block solution calls EnRoute 6 instead of drawing a rectangle around the selected object in 23.
- Dwell setting not outputting for the first tool change in a file.
- ATP Standard DXF filter causes the dimensions to be nested.
- Nesting bug: inconsistent nesting depending on chosen "step angle".
- Outline tool on open contour does not change from rounded to sharp corners.
- Importing Enroute 6 files with corner tags into 23 causes them to be unchecked.

- Applying a shoulder toolpath with 1/8th inch tool and sharp corners does not create a toolpath.
- Rapid texture: when wave displacement is selected, the vertical amplitude should be available.
- Nesting bug: True boundary of shape not recognized in specific cases.
- Drag selected object off screen does not work correctly unless clicking its center point.
- Send to Enroute from Flexi is creating wrong path points.
- Ordering Options not Kept when Opening from Recent File List.
- ATP: label image generation issue with rotated labels.
- Slot tool path: amount of passes not saving correctly.
- Deleting a point on a line, converts it into an arc.