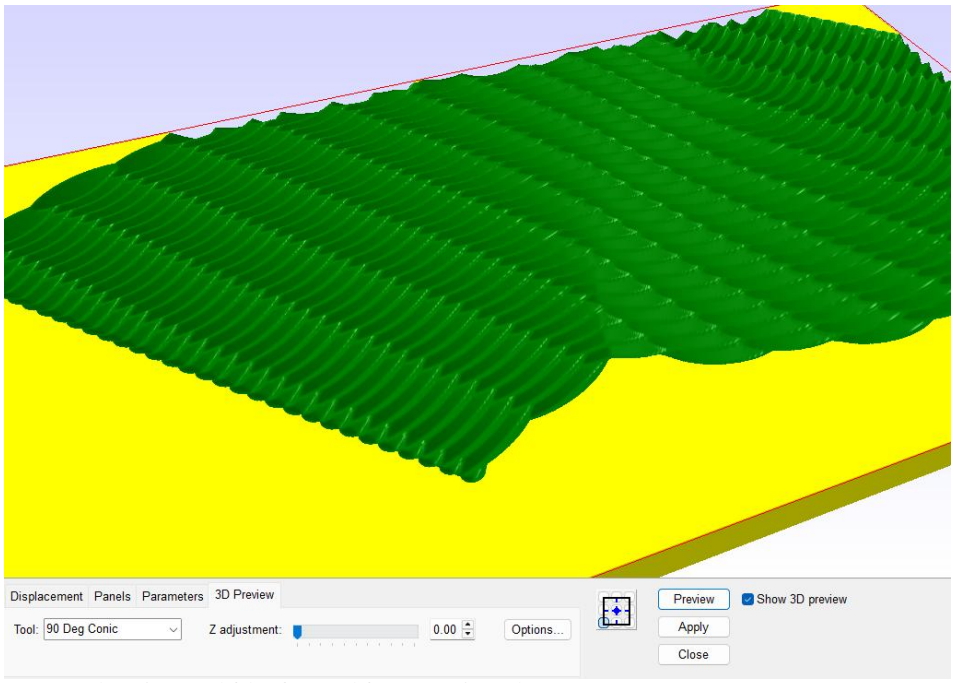
#Releasenotes – EnRoute

Build 2500162

Functionality updates

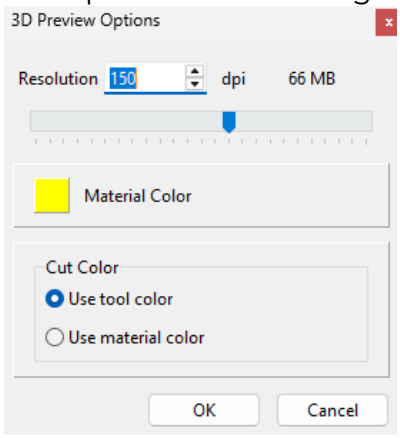
- **Rapid Texture Previewing**
  We have incorporated the preview option into the rapid texture function, so users no longer need to first generate the geometries, apply the tool paths, and launch the 3D rendering.



. 3D preview from within the rapid texture function

In the 3D preview tab, users can select which tool to use for previewing and use the Z adjustment slider to sink the rapid texture further into the material.

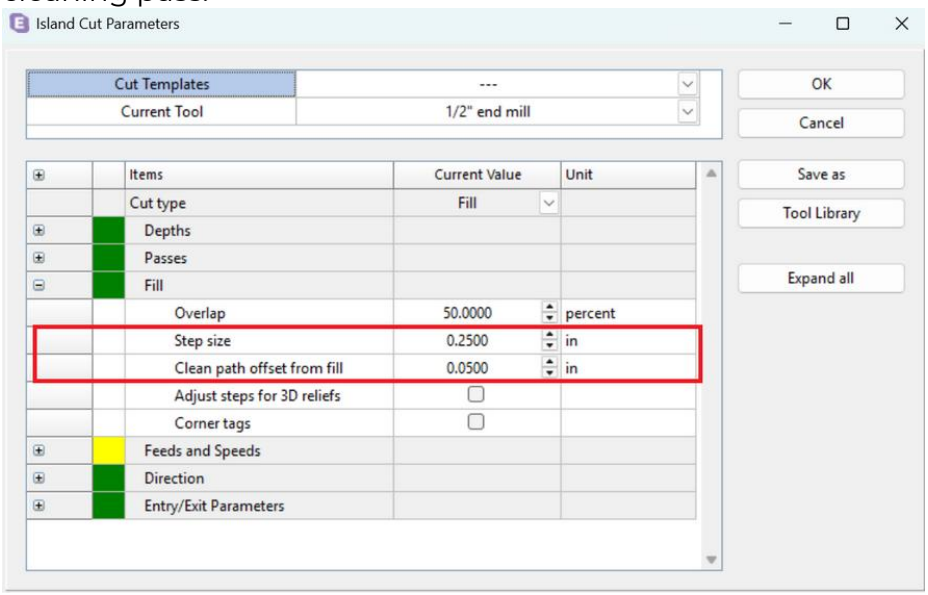
The options button brings up the rendering options.



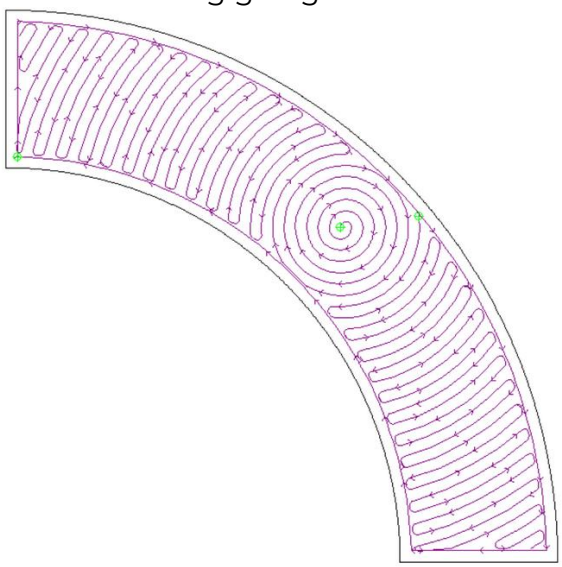
. 3D preview rendering options

- **Progressive milling refinement**
  Added parameters:
  Step size allows you to enter a distance value per step. The overlap is then defined by the step size (and vice versa)

  Clean path offset from fill allows the user to control the amount of material that is removed with the cleaning part of this tool path. Increasing this variable will push the “fill” part inward, leaving more material to be removed by the cleaning pass.



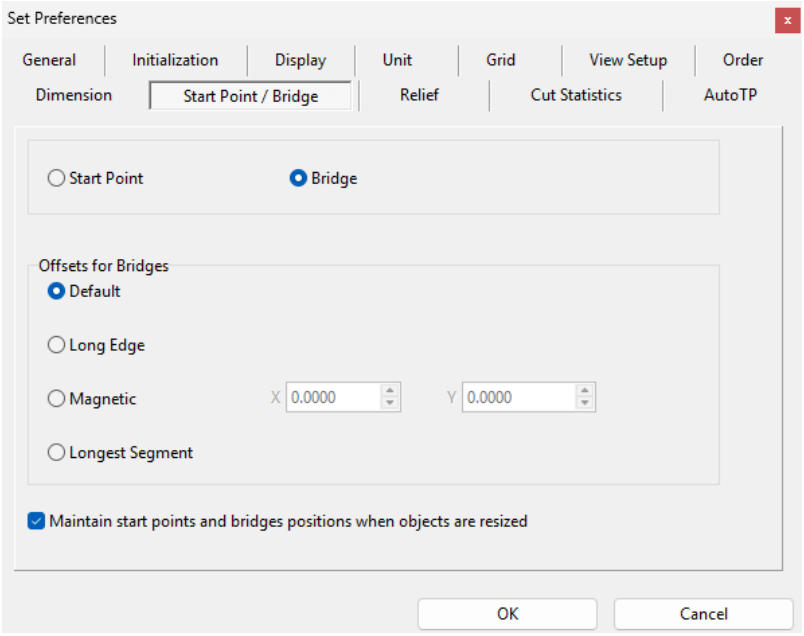
The **Bi-directional** checkbox removes directional constraints from the tool path’s directional variable. Instead of advancing while looping back on itself, it will now routing going back and forth between each step.



. Progressive milling advancing bi-directionally

- **Preferred bridge location setting**

Users have now the option to set the preferred location for bridges in a manner similar to that available for entry/exit



. Preferences options for bridge starting points

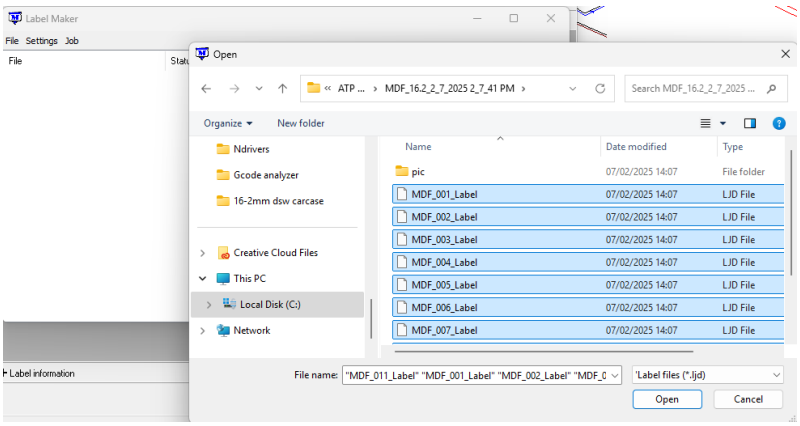
- **UI update for the Part Name column of the "Parts" tab**

The column now adapts to a lengthy part name by wrapping the text.

. Part Name wrapping the text to adapt for lengthy part name

Users can also manually adjust the width of the column.

- **Label application update**
  - Labelmaker: Users can now select multiple label files to send sequentially to the label printer.



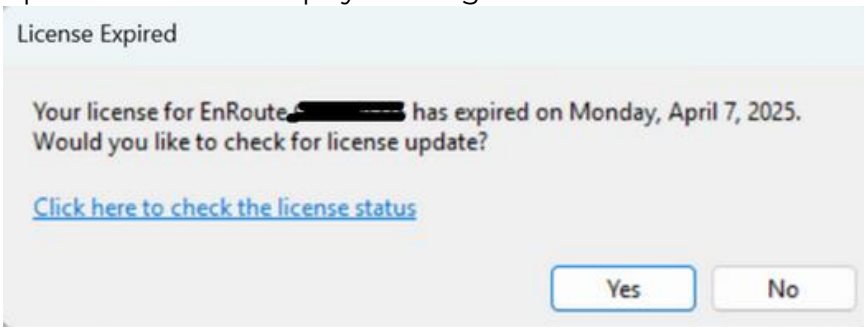
. Multi-selection of label files in LabelMaker

  - LabelPrinter: Users can now send labels from multiple label files to be simultaneously printed

. LabelPrinter's ability to send multiple individual labels from various label files

  - Label applications are now limited to a single instance instead of opening multiple instances.

- **Performance improvements**
  - Improved rendering speed of simulate 3D
  - Improved speed of manipulating a lot of objects
- **License expiry – message update**
  When a license has expired, users now have the option to check for license updates from the expiry message



Fixed bugs

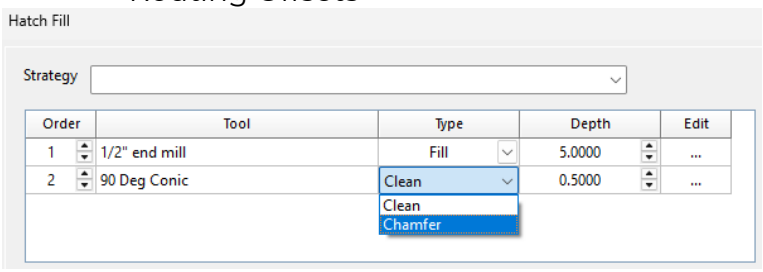
- Labeling issue - when an image object / placeholder is rotated the background becomes black
- PDF – text import problem – dots on Ï's are no longer square when imported
- Dragging dxf files into Enroute causes error
- Machining area XY information is output incorrectly when drills are present (not relevant to machining Gcode)

2500136

Functionality updates

- **New chamfer tool type**
  A new Chamfer Tool type has been added to the following tool pathing algorithms:

    - Pocketing (Island, Hatch, ...)
    - Threading
    - Routing Offsets



. Chamfer type selection in the hatch fill tool path settings

Using conic tools, users can now easily remove sharp edges or add a larger chamfer by selecting this new tool type.

Key details:

- Minimum depths must be set to achieve specific chamfer widths.
- Depth can be increased beyond the minimum to avoid cutting with the tool tip and instead engaging the material edge with the side of the bit.

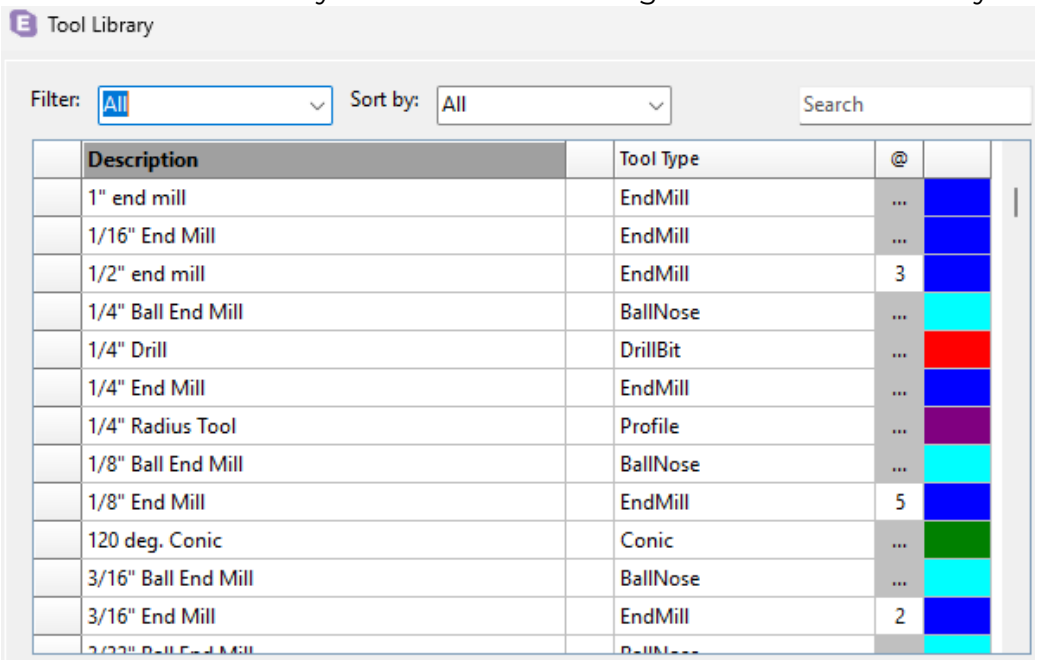
. Chamfer width setting under the hatch cut parameters

Ball nose tools can also be selected to remove burs for smoother results and to avoid the need for additional processing.

- **Final Pass Feed Rate for Bridge Cut-Off**
  The Final Pass Feed Rate now also applies to the Automatic Bridge Cut-Off option.
    - This feed rate determines how quickly the bridges are milled away at the end of the job.
    - If no final feed rate is specified, the system will fall back to the default feed rate.

- **Click and drag to import files**
  Users can now import (readable) files by simply clicking and dragging them into the interface.

- **Tool changer accessible from tool library**
  Users can now directly access the tool changer from the tool library menu (F5)



- **Enhanced rendering**
  - The drawing speed while zooming and moving in the perspective view has been improved
  - Improved drawing speed of imported STL files
  - Improved rendering speed of meshes in rendered preview mode (non-perspective view)

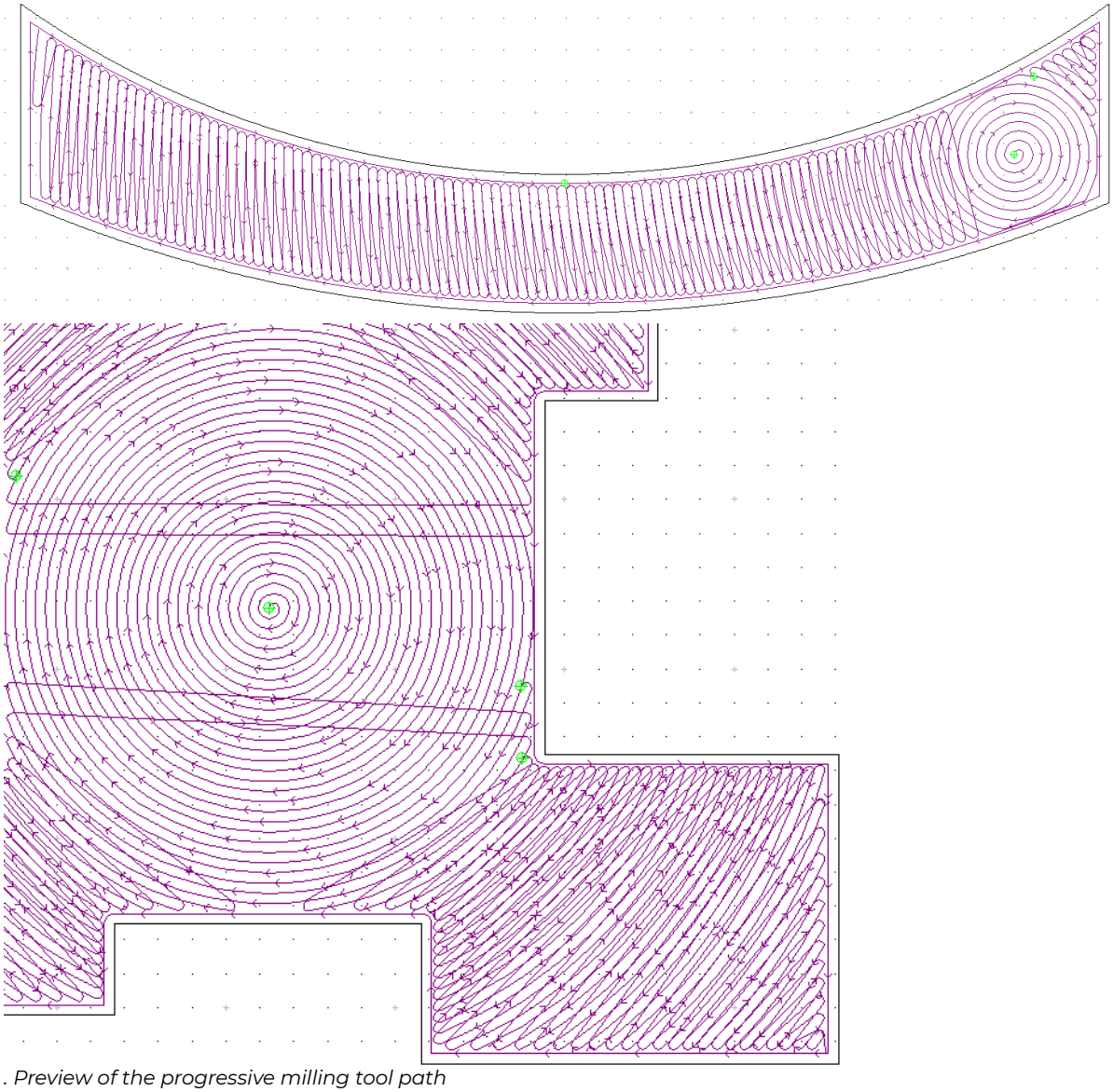
Fixed bugs

- Island fill's fine tool path does not complete the tool path correctly in constrained area
- Open offset – editing of parameters is not applied
- Cleanup & detect duplicates dialog contains mixed up tabs
- Image placeholders on labels would get a black background when rotated

2500101

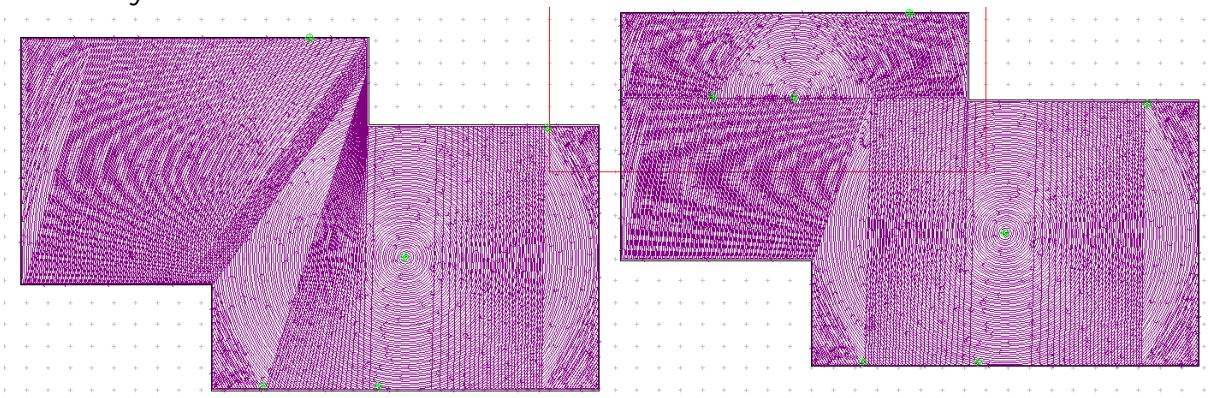
Functionality updates

- **Progressive milling**
  The newly added tool pathing option, *Progressive Milling*, focuses on maintaining a consistent tool load throughout the machining process. This is achieved by having the toolpath looping back on itself and progressing in an elliptical motion.



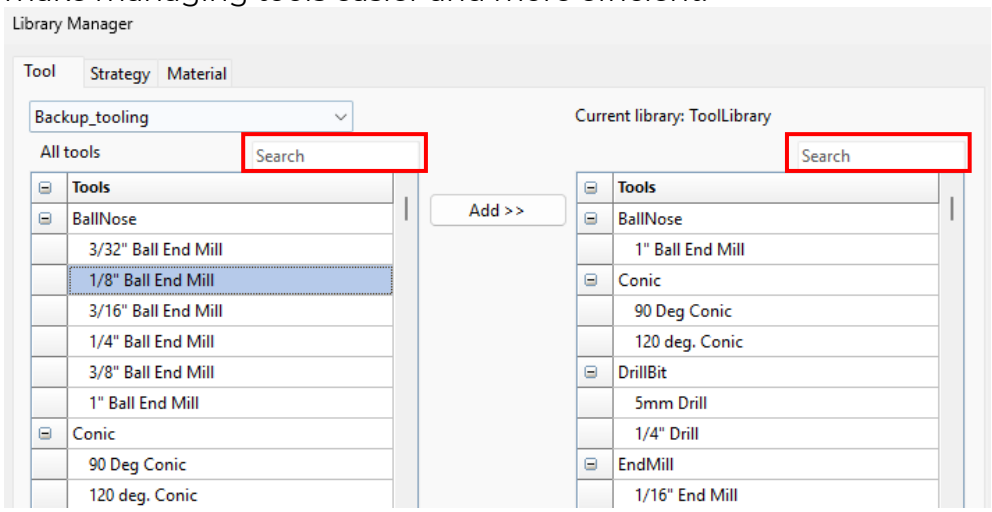
. Preview of the progressive milling tool path

Users can choose one or multiple starting points, depending on the size and shape of the geometry. Enforcing one approach over the other can improve efficiency.



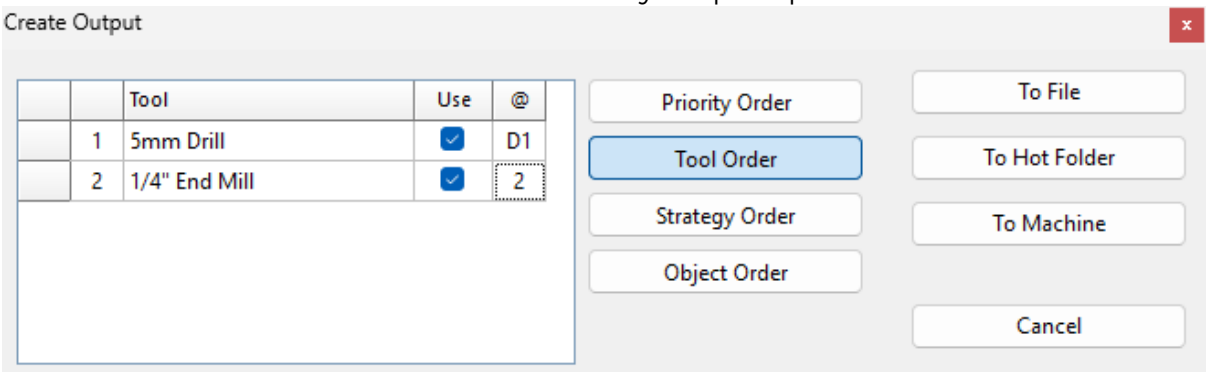
. Single starting point option on the left, versus multiple on the right

- **Tool search box for the library manager**
  A search box has been added to each tool column, in the Library Manager, to make managing tools easier and more efficient.



. Preview of the library manager with search boxes above each list box

- **The tool order section of the output window now shows now also displays the positions of the drills**
  The Tool Order section of the Output window now also displays the positions of the drills when a drill bank is enabled for your post-processor.



. Drill position preview in the tool order tab (G1-output)

Consistent with the behavior of the tool changer, clicking the drill position-box will bring up the Drill Bank menu.

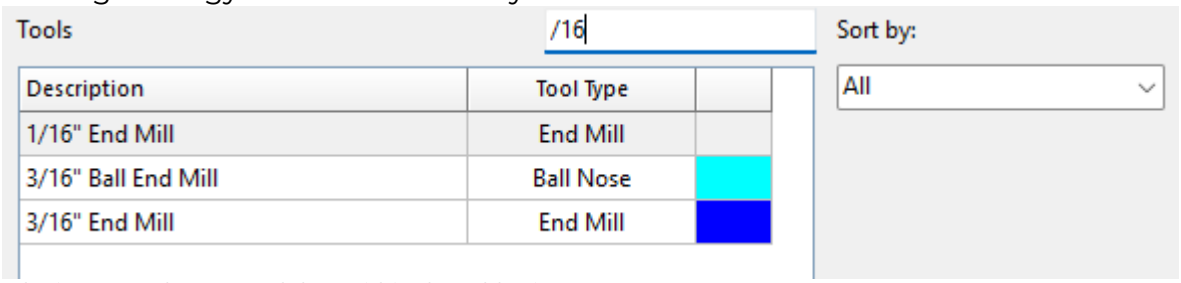
Fixed bugs

- Adding textures to reliefs on the bottom of a plate extended them beyond boundary limits
- Panning the bottom plate caused artifacts and disrupted the view window
- In the ATP Close dialog, clicking “X” did not cancel the close action
- Tool-pathing issue: toolpaths were incorrectly applied when shapes angled back onto themselves
- Units were incorrectly converted for 3D reliefs when opened with a different measurement unit setting
- Detached toolbars were not deactivated after being closed and then reloaded automatically upon restart.
- ATP strategy order was not respected—*Engrave* and *Open Offset* would jump ahead in the sequence

build 2500087

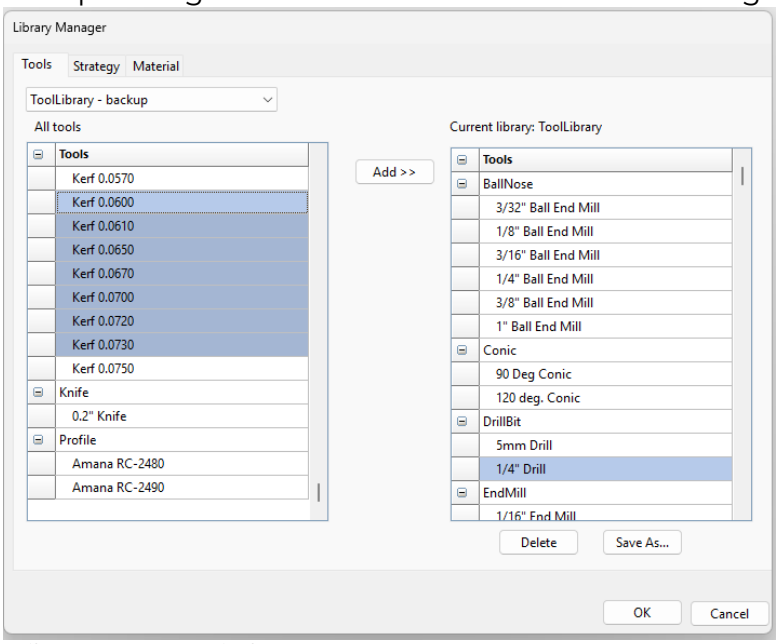
Functionality updates

- **Search box for tools**
  To enhance the retrieval of tools, a search box has been incorporated into each routing strategy and the tool library menu.



. the integrated text search box within the table view.

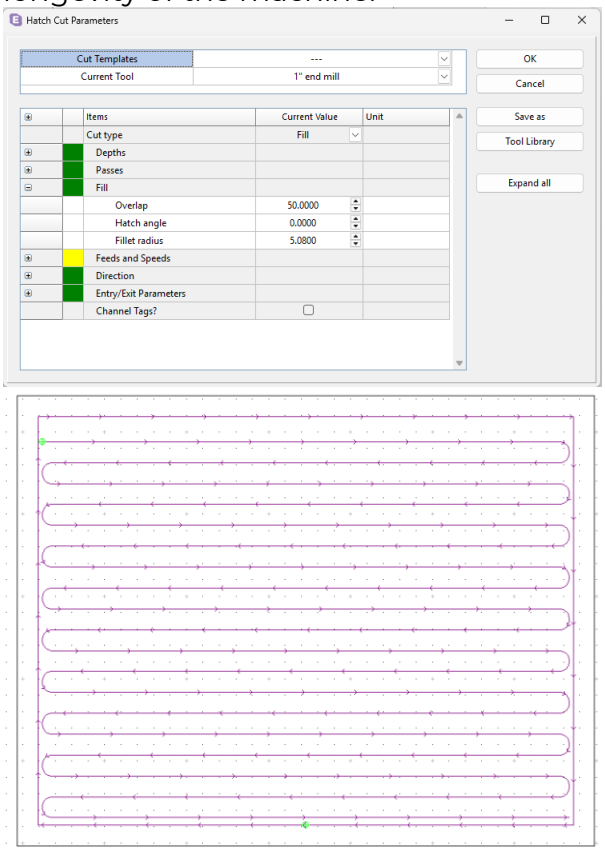
- **Library Manager addition**
  The library manager enables users to modify their active tool library by incorporating tools from other libraries or removing existing tools.



. Library Manager window

The library manager will also permit you to hide strategies and materials that you do not utilize without the necessity of deleting them entirely.

- **A new parameter, “fillet radius,” has been introduced to the hatch fill tool path.**
  When users increase the radius of this parameter beyond 0, the path will be rounded, mitigating abrupt changes in direction during routing. This modification is expected to enhance the surface finish and contribute to the longevity of the machine.



. Tool path preview with “fillet radius” active.

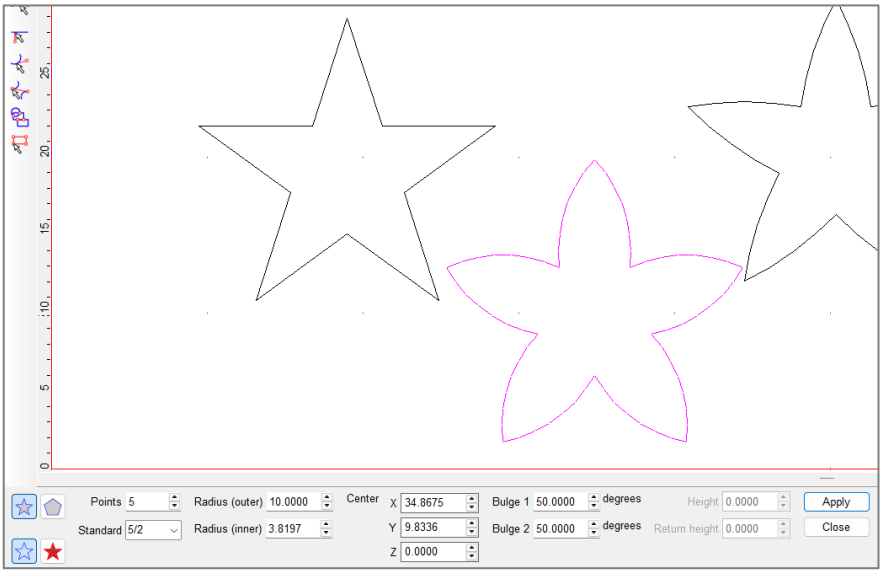
Fixed Bugs

- Dimension location setting in Preferences not being respected
- Sorting tools by type does not sorting the tools accordingly
- Using snaps and shift key not connecting segments properly
- Open offset strategy saving & applying incorrectly

Build 2500042

Functionality updates

- **Bulge settings added back to the Polygon Tool**



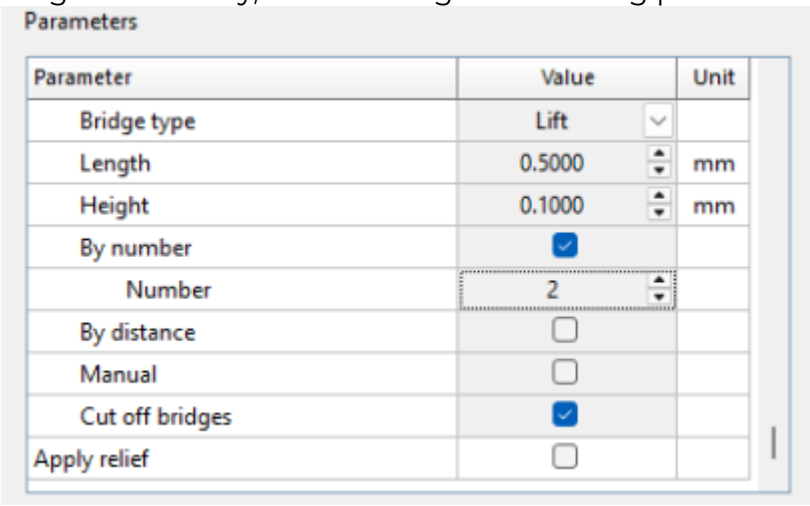
. Bulge applied with different settings and options

- **Default behavior of linking bridges feature modified for clarity**

The behavior of adding bridges manually has been modified to ensure consistency. Previously, whether a bridge applied to both the rough and clean pass depended on the zoom level. Now, by default, bridges are applied to both passes when clicking, while holding the Shift key allows users to apply them to only one pass. This makes the process more predictable and intuitive.

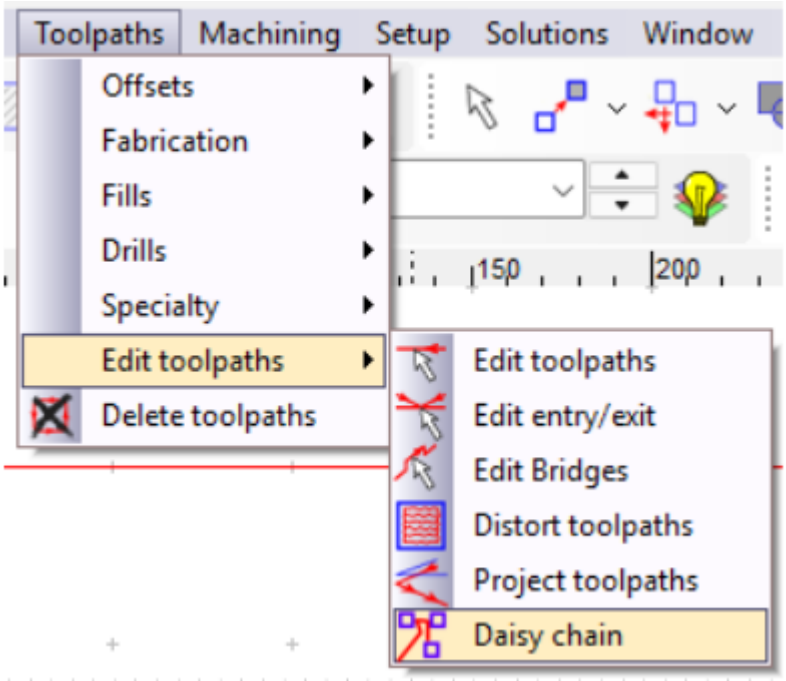
- **Bridges automatic cut-off implemented as option**

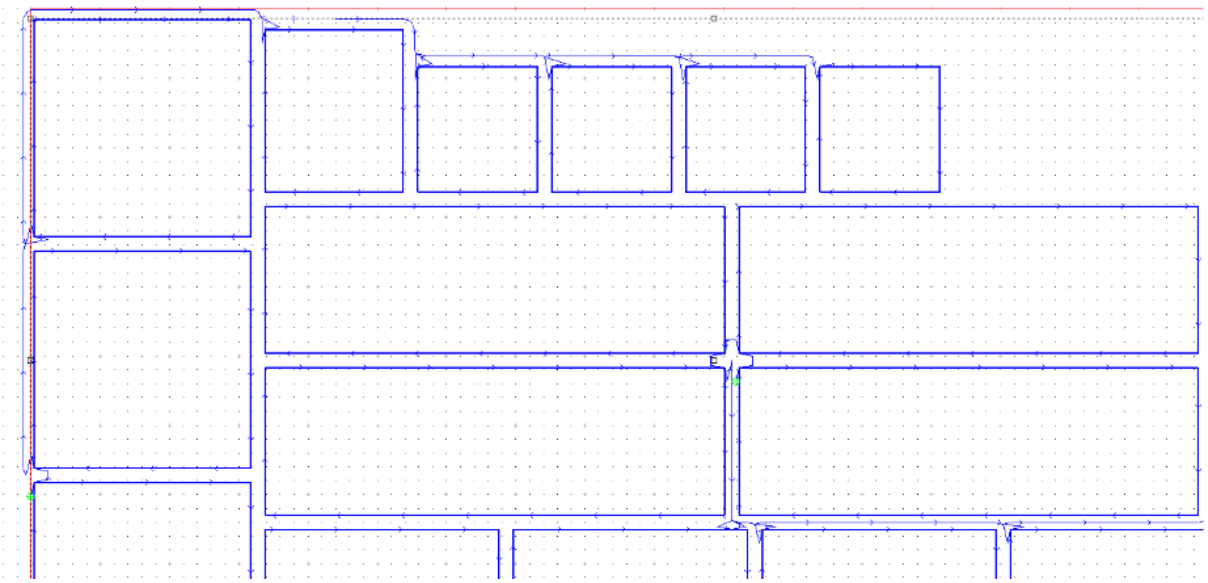
A new option has been added to allow bridges to be automatically cut off after all other cuts are complete. This enhancement enables the CNC machine to remove bridges efficiently, streamlining the finishing process and reducing manual work.



- **Daisy chaining tool paths now fixed**

Re-implemented support for daisy-chaining toolpaths, allowing users to merge multiple smaller toolpaths into a single, continuous path. This improves tool movement efficiency and makes managing complex cutting operations easier.





- **Files shared on a network are locked to prevent conflicts in a multi-user environment**

To prevent conflicts in collaborative environments, we've introduced a safeguard for network-stored files. When a user is working on a file located on a network drive, it is now protected from simultaneous modifications by another user, ensuring data integrity and avoiding accidental overwrites.

Fixed Bugs

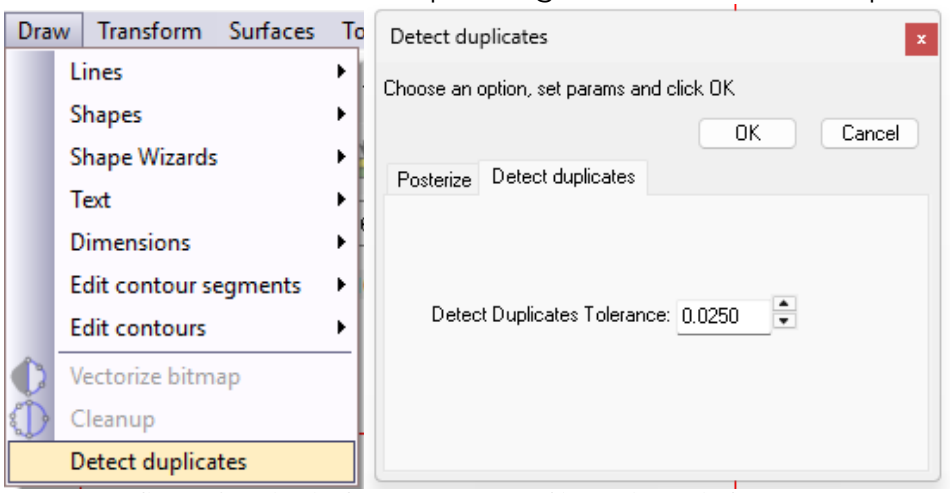
- EnRoute not recognizing tool paths in existing files
- Extend/trim lines by graphic will sometimes automatically attach to a random line
- ATP output issue: tool path is not closed in edge cases
- Edit toolpath - update value for bridges by distance does not apply

build 25.0.0.24

Functionality updates

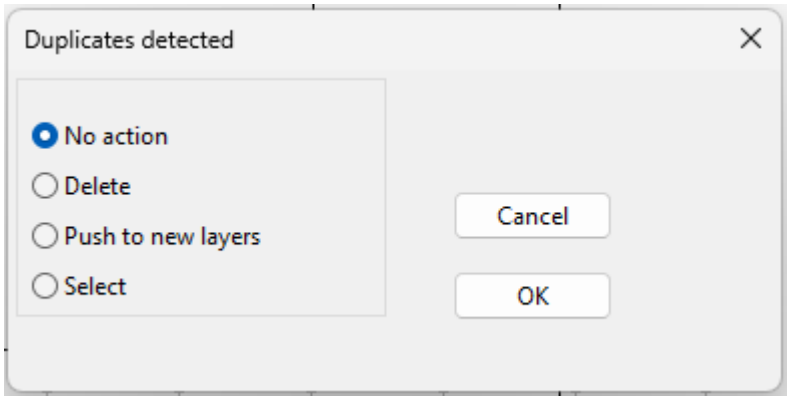
- **Duplicate Geometry Detection**

When overlapping geometries are present in files, usually files with vectorial graphics, issues can arise during tool pathing and G-code output. A new function has been added to detect duplicate geometries that overlap.



. Detect Duplicates function in the Draw Menu and its settings window

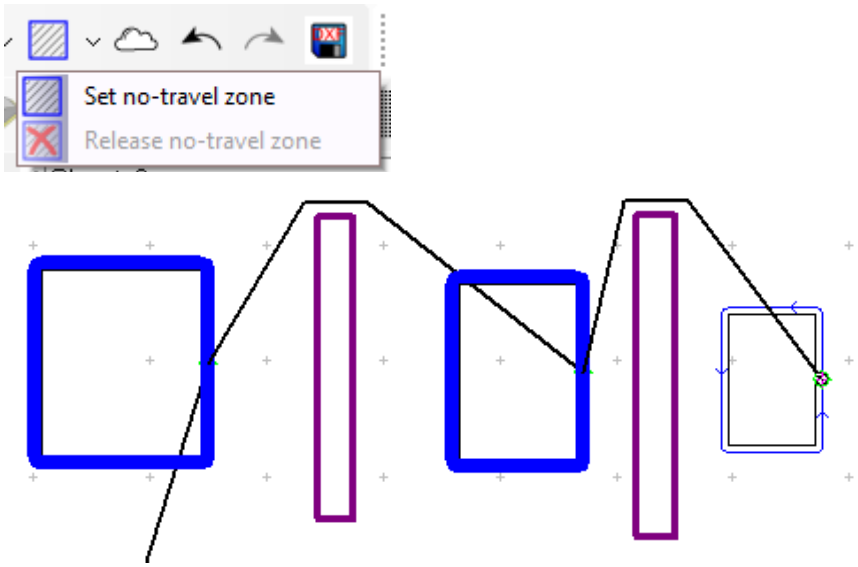
When such geometries are detected, users have the option to select, delete, or move them to a new layer for better control and organization.



. Detect Duplicates follow-up actions selections

- **Configurable "No-Travel Zones"**

Users can now define “no-travel zones" on the sheet by drawing geometries and marking them accordingly. This feature prevents tool movement through these restricted areas. During output generation, EnRoute will automatically divert any movement that would otherwise pass through these zones.



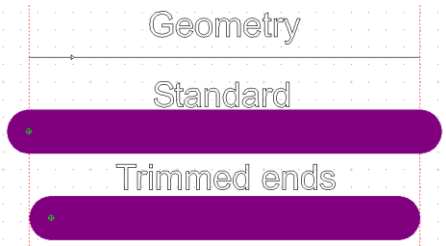
. Tool Paths preview with No-travel zones set and activated

- **EnRoute Installer Improvements**

The EnRoute installer has been enhanced to preserve user configurations during updates. If users overwrite an existing installation, their setup and configuration files will remain intact, ensuring a seamless upgrade experience.

- **Open Offset Path Improvement: Subtract Tool Radius from Start and End**

When applying the open offset tool path, users can now opt to subtract the tool radius at the start and end of the path. This ensures that the resulting cut length matches the exact length of the geometry displayed on screen.

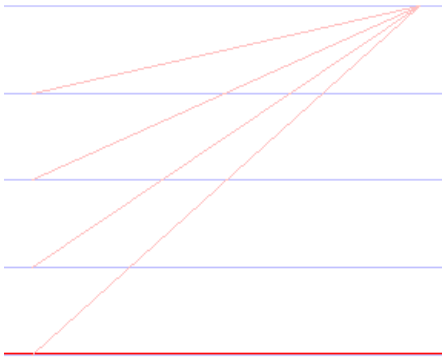


. Visualization of the same path without or with Trimmed ends enabled

- **No-Lift Tool Pathing with 3D Line Entry**

The no-lift tool pathing feature has been improved to support scenarios where a 3D line entry is set. This feature will work seamlessly as long as the entry angle is set to 0.

Standard lift:

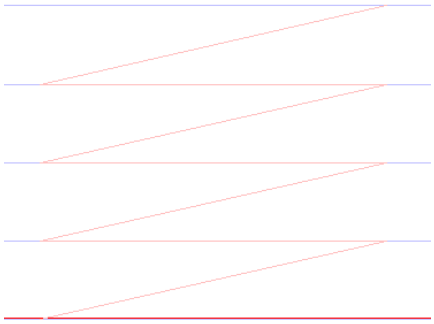


. The tool lifts between every pass

No lift with Standard option:

. The plunge's start point will dynamically move along with the tool path between passes.

No lift with Align option:



. The plunge will maintain the same XY coordinates for each pass by reversing to the original entry start point without lifting

- **Importing Multiple Files Simultaneously**

Multiple files can now be selected in the Import UI. Moreover, in the EnRoute preferences, users can configure how multi-file imports are handled:

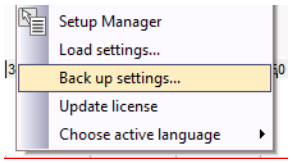
- Files can be automatically placed next to one another with a defined gap.
- Files can be visually placed using the left mouse button for precise positioning.

- **Sub path Ordering in Output**

A new option for ordering sub paths has been added to the G1 output window. This allows users to break up tool path groups and organize them before proceeding with the ordering process, enabling more efficient output management.

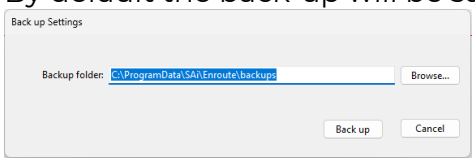
- **Back-up option**

Users can now create back-ups via the help menu.



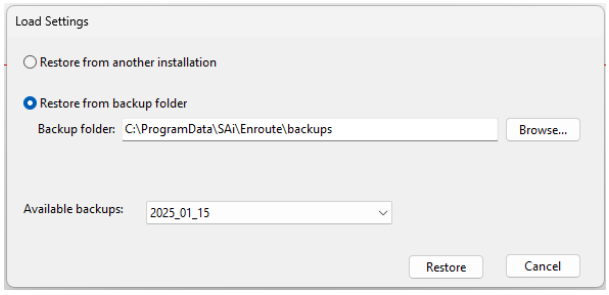
. New Back up option available under the Help menu

By default the back-up will be saved in the ProgramData folder on the C driver.



. Select the location of Backup through settings

Loading a back-up can be done via the load settings option.



. Multiple backups can be maintained and used to restore the software to a previous state

- **Perspective View: Zoom Improvement**

Zooming in and out in the perspective view now functions based on the location of the mouse cursor, aligning with the behavior of other views for a more intuitive user experience.

Fixed Bugs

- Trim tool incorrectly recognizing boundaries, and redrawing lines
- Drawing line with Snap arc to tangent and snap two arc tangents – resulting line does not touch the geometry
- Enroute 24 does not maintain the ordering when you go from Simulate 2D or simulate ortho to Manual ordering
- When a final pass is set to 0 with no lift toolpath, it causes lift in Z on last pass
- Clicking on order sub-paths button causes visual glitch with numbers.
- ATP: Print out of parts is repeated for each generated file/plate
- ATP - double sided processing: flip side is looped over countless times
- Spiral fill custom center incorrect range
- Adaptive spiral fill doesn't generate tool paths when Optimization is set to None
- Editing of the entry / exit not working correctly when the tool path has certain Z depth