

Rotary Tube Pro™

Tube Cutting Software



What's New

October 2016

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NEW FEATURES AND ENHANCEMENTS

The following enhancements are available in the Rotary Tube Pro 2.0 release:

No Rotation Cut

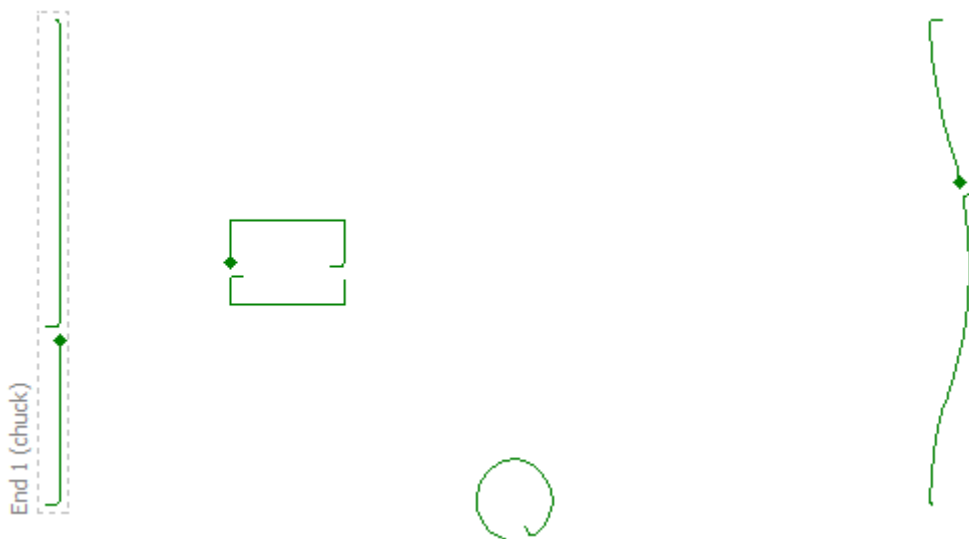
For round main tubes, No Rotation Cut is now an available property for branches and cutouts. When enabled, the main tube will not be rotated as the branch interior or cutout is cut. Instead, X and Y torch motions will be used to cut the interior. This can result in better cut quality on interiors.

Different Cut Types on Interiors

Cut type (Bevel or Perpendicular) can now be set independently for any branch or end on a tube. You can set some interiors or ends to "Bevel" and others to "Perpendicular". This gives you more control over how features on the tube are cut.

Tabbing

Tabs can be added to the interiors and ends of a tube. Tabs hold material in place during cutting, reducing the chance of tip-ups and preventing cutouts from dropping out. Tabs can also keep the work piece from separating from the tube stock after the ends are cut.



AutoTab

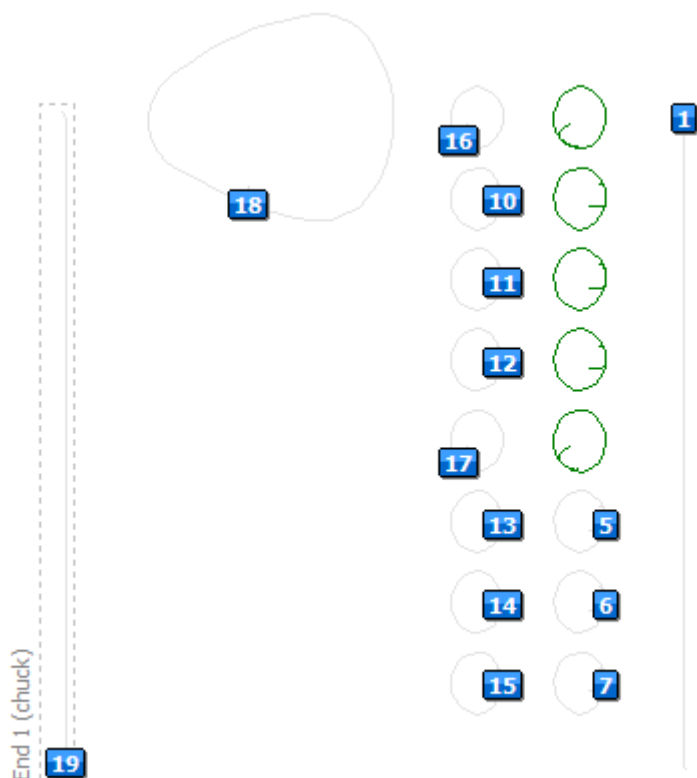
Automatically add tabs to different features on the tube with a single click. Apply tabs based on material type, thickness, profile type (ends or interiors), or profile size.

Manually add or edit tabs

Any tab, whether added automatically or manually, can be edited using a new utility called Advanced Edit. New tabs can also be added manually to any cut profile in the tube.

Manually Edit Cut Sequence

You can view or modify the cut sequence for the main tube using Cut Sequence mode in Advanced Edit. End cuts, interiors, or scribes can be manually re-sequenced in the order that you want. While in the mode, simply click profiles in order to set the sequence.

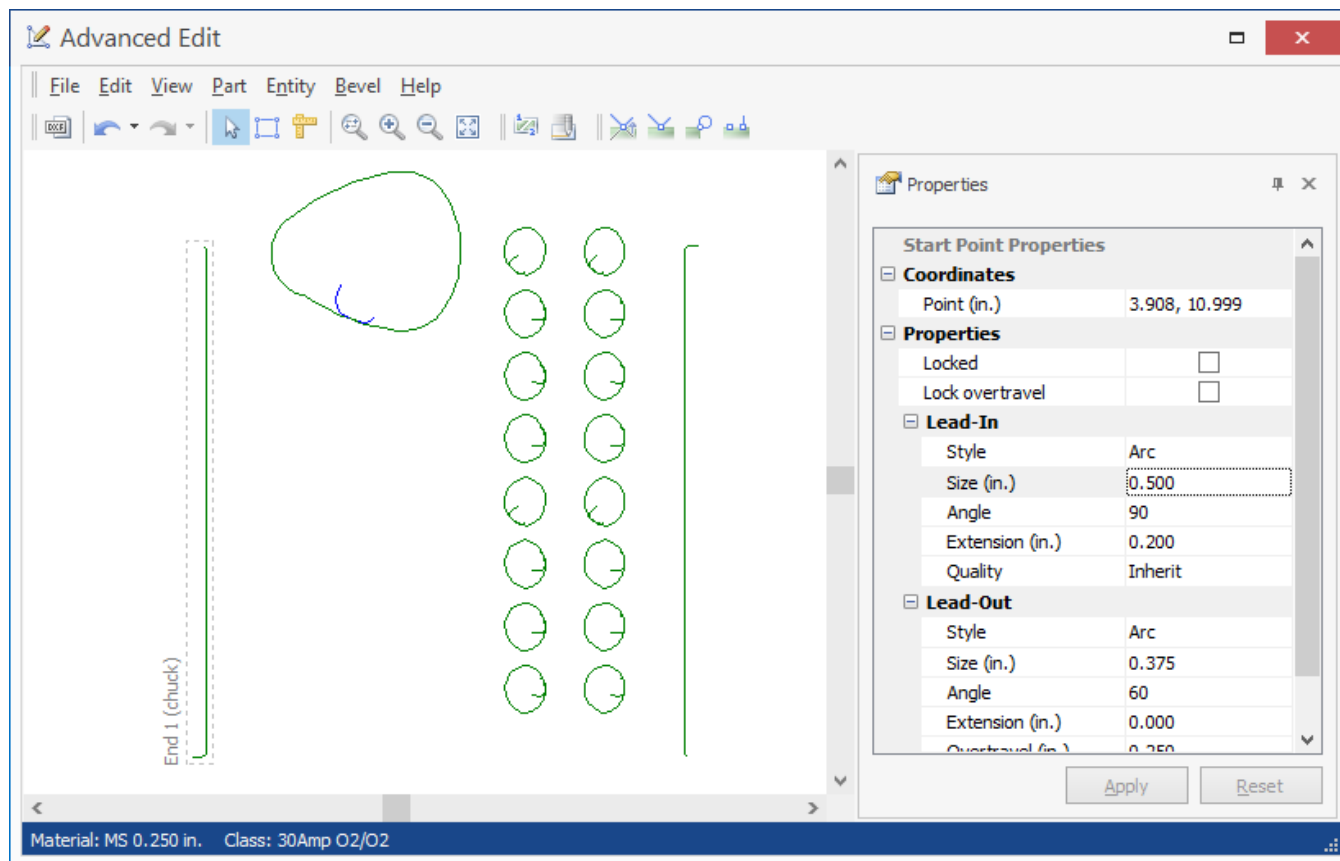


Modify Loops

Generally, loops are used for transitioning into a beveled edge. They may also be used in some cases to ensure a precise corner on a profile. In Advanced Edit, any loop, including those added automatically on beveled profiles, can be edited. Also, loops can be added manually at any intersection point on a tube.

Editing Leads

Leads are added automatically by Rotary Tube Pro based on Leads settings (or Bevel settings for tube that is beveled). Any leads on cut profiles can be moved or edited in Advanced Edit. You can change lead placement, modify the size and shape of leads, or remove leads for any cut profile. Your changes can then be permanently saved with the tube document.



Cut Direction and Kerf

You can view and edit the cut direction for any profile in Advanced Edit. Kerf commands can also be changed for any profile, if needed.

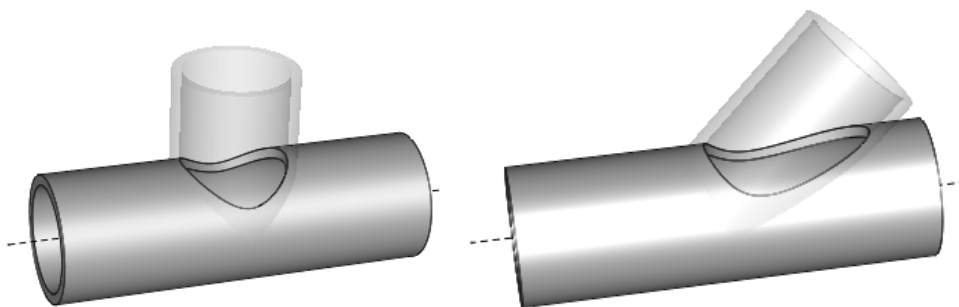
Same Size Branch and End Intersections on Round Tube

For branches and pipe intersection end styles that are the same size as the main tube, a very snug fit is now possible, particularly when using Perpendicular cutting. This improvement is useful when creating multiple round tube sections from the same size stock that will later be joined together.

Branch Intersections

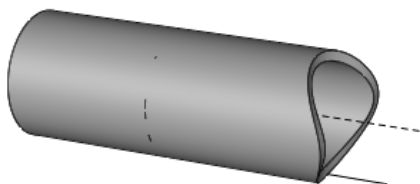
With Near Outside branch intersections, where the branch rests on the outside surface of the main tube, a very close fit can now be accomplished. Common intersection elevation angles ranging from 45° to 135° are fully supported. This is most beneficial for Perpendicular cutting.

In addition, when creating a new tube from the Near Outside branch, end geometry will maintain the same snug fit with the main tube's branch hole.



End Intersections

For ends with the Pipe Intersection style, where the intersecting tube is the same size as the main tube, the end now fits more closely when mated with the intersecting tube.



Documentation

The Rotary Tube Pro Help has moved from HTML Help format (CHM) to a new, easier-to-use Help system that opens locally using your default web browser. Searching is much more effective and you can take advantage of all the features your browser has to offer, such as Bookmarks/Favorites, opening links in new tabs, and so on.

The following features were added in v1.2 and previous:

New 3D Geometric Modeling Engine

The 3D display panel in the main Rotary Tube Pro window now uses a different modeling engine, resulting in several improvements:

- Faster, more responsive 3D model when entering dimensions and other properties
- More fluid movement of the tube model
- More accurate edge geometry on Perpendicular cuts
- More accurate representation of branch intersections
- Better zoom capability

Import STEP Files

A Rotary Tube Pro document can now be created directly from a 3D STEP file. The STEP file format (.step) is a standardized format for exchanging 3D objects from one platform to another. Typically all tube geometry is completely pre-defined in the STEP file, including attributes for the main tube, mitered or contoured end cuts, and interior features like cutouts.

STEP files can be imported from the File menu in Rotary Tube Pro.

Importing parts

End Cut for imported STEP file can be set to Not Cut.

Applications and Setups

New RTCA setups are available with updated bevel settings spreadsheets, macros, CFF, and machine files that enhance cut quality and accuracy on beveled tubes.

Some new developments include:

- More accurate cutting parameters (such as Feedrate based on interior profile size) in bevel spreadsheets.
- Metric setups particularly have more thorough cut information across more thicknesses compared with previous versions.
- Bevel spreadsheets now contain consistent Cut Height and Arc Voltage values for a given thickness in the V600 Height Control section.
- Support for up to 55 degree bevel angles has been added. Note that the Maximum/Minimum Bevel Angle should be adjusted in Bevel settings in order to use these rows.

Please contact our support department to obtain a new setup or for more information.

Bevel Material Selection

Selecting a material (e.g. MS 0.25" 80Amp O2/Air [Bevel]) for a main tube that is beveled is now simpler. When the Cut type of the Main Tube is set to Bevel, only materials and classes that actually appear in the Bevel spreadsheet and can be beveled are displayed in the Material and Class lists in the Properties pane.

Cut Sequence: Cut Both Ends Last

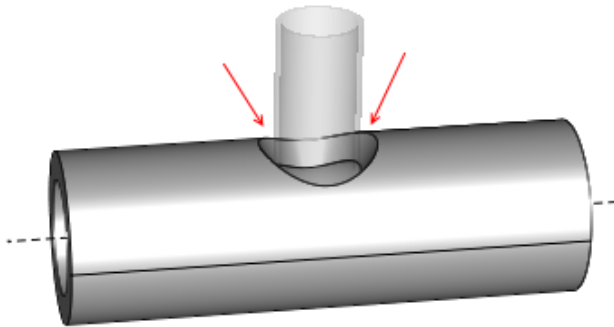
A new cut sequence setting, Cut Both Ends Last, has been added. When enabled, all interiors will be cut followed by both ends (the chuck end is always cut last).

Weld Prep

Several features related to weld gap preparation have been added.

Weld Prep on Branches

Weld prep can be applied to the main tube at branch intersections. This will leave a v-shaped channel around the branch where it intersects the main tube, to allow for welding filler.



Weld Prep on Pipe Intersection Ends

Weld prep can now be added on ends with the Pipe Intersection cut style.

Warnings

Warnings appear in the Structure pane when Weld Prep cannot be applied because the angle is too large or is otherwise physically impossible.

Reports

Weld Prep Angle for End Cuts and Branches has been added the Tube Detail report.

CNC Output Axis Settings

The Output Axis settings page has been expanded to include Flip Lateral Axis and Flip Tube Length Axis settings. This enables you to reverse the polarity (+/-) of either the X or Y axis, in order to match the axis configuration of your real-world cutting machine.

Display

Projected cutouts that extend outside the main tube are now drawn so that they end on the mid-plane of the tube. This makes these types of cutouts easier to see in the 3D display panel.