

Custom Part

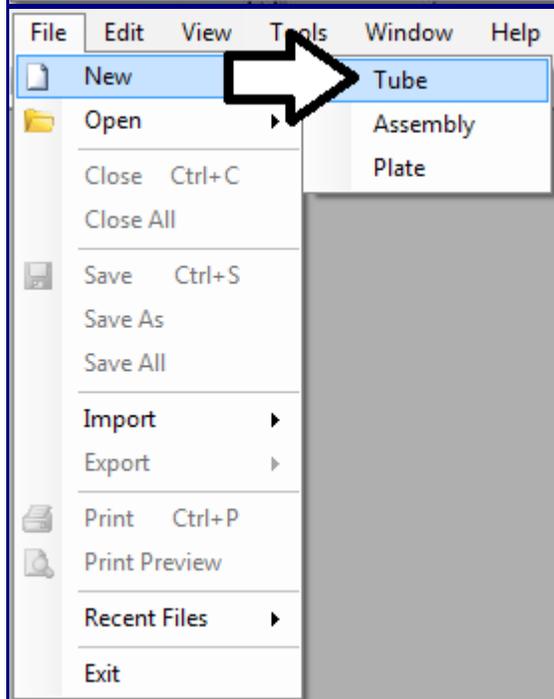
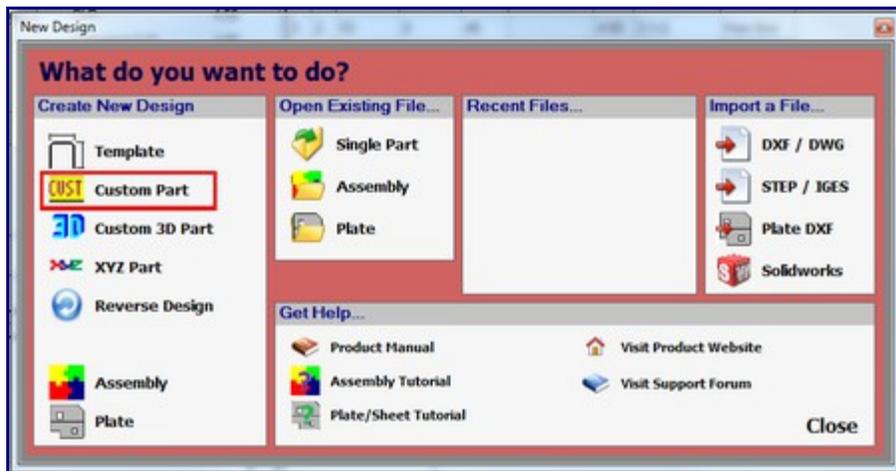
Current Item: Custom Part

Description

Custom parts can be created using the LRA coordinate interface.

How-To

Selection



To create a custom part, select the 'Custom Part' option in the New Design menu that shows up when Bend Tech starts up. This same menu will also display when 'Tube' is chosen in the 'File' menu under 'New'.

Design

The screenshot shows the Bend Tech software interface. The top section is titled 'Die & Material' and includes fields for 'Select Material' (2.25 Round 16 gauge), 'Select Die' (2.0), and various material properties like Diameter (2.25), Wall Thickness (0.07), Weight (0.00), CLR (2.00), Calibrated CLR (2.24), and Bend Location Offset (0.00). A green header bar displays 'Die: 2.0', 'Material: 2.25 Round 16 gauge', 'Cut Length: 97', and 'Part Weight: 0'. Below this is a table with columns A, B, Location, Rotation, Angle, Spring Angle, CLR, Bend Length, and Orientation. The table contains three rows of bend data. The 'Number of Bends' section on the left shows a dropdown set to 3, with checkboxes for 'Refresh on Keystroke', 'Verification Points', and 'Display Dimensions'. Below this is a table for bend specifications with columns for #, Length, Rotation, Angle, Dim Type, and Die. The 3D model on the right shows a bent tube with three bends, colored in red and grey, with a coordinate system at the bottom left.

A	B	Location	Rotation	Angle	Spring Angle	CLR	Bend Length	Orientation
1	1	N 0	90			2.00	3	From Start
2	2	S 0	90			2.00	3	From Start
3	3	S 0	45			2.00	2	From Start

#	Length	Rotation	Angle	Dim Type	Die
Bend 1	50	0	90	Tangent	2.0
Bend 2	12	180	90	Tangent	2.0
Bend 3	15	0	45	Tangent	2.0
End	12				

Once 'Custom Part' has been clicked, a new custom part window will open. If a default die and material have not been set, a die and material must be chosen before designing the part. If necessary, choose a material and die in the Die and Material tab. Once a die and material have been chosen, the custom part design section will be available to use.

This close-up screenshot shows the 'Number of Bends' section of the software. It features a dropdown menu set to '3', a 'Start Angle' field with '0', and several checkboxes: 'Refresh on Keystroke', 'Verification Points', and 'Display Dimensions', all of which are checked. There are three buttons: 'Detailed Die List', 'Refresh Part', and 'Add Custom CLR'. Below these is a table for bend specifications with columns for #, Length, Rotation, Angle, Dim Type, and Die. The table contains three rows of bend data and an 'End' row.

#	Length	Rotation	Angle	Dim Type	Die
Bend 1	50	0	90	Tangent	75mm
Bend 2	12	180	90	Tangent	75mm
Bend 3	15	0	45	Tangent	4.0
End	12				

The number of bends in the part can be chosen from the 'Number of Bends:' drop down menu. Up to 50

bends can be added to a part.

To change the starting angle of the part, enter a value in the 'Start Angle:' field. Check the box next to 'Refresh on Keystroke' to have the 3D part display and results table updated immediately when changes are made in the part design section.

Check the box next to 'Verification Points' to have blue points displayed on the part's starting point, the center of each bend, and on the end point in the 3D part display.

Check the box next to 'Display Dimensions' to display the part dimensions on the part in the 3D part display.

To manually refresh the part display and results table, click the 'Refresh Part' button.

To add a custom centerline radius, click the 'Add Custom CLR' button. Enter a value and click 'OK'. Doing this will add the entered value to the die drop down menus as 'Custom - (Entered Value)'. This will basically act as a die with only the CLR value.

Below all these options, the length, rotation, and angle values can be entered for each part's bend and the end length. To add a length, rotation, angle, or end value, just enter a number into any of the fields. Each bend will have a 'Dim Type' and 'Die' drop down menu. Dim Type will determine how the part length will be measured for that bend. To choose a dimension type, click the drop down menu and select either Apex or Tangent. Apex will measure to the outside intersection (apex) of the bends two legs. Tangent will measure to the edge of the bends, the tangents, so no bent material will be included in the measurements. Different dies can be selected for each bend by either clicking any of the 'Die' drop down menus and selecting a die/Custom CLR or by using the Detailed Die List. A bend must be selected before viewing the die list. To select a bend, click in any of the bend's LRA fields. Click the 'Detailed Die List' button to view the full die list. Once the die list is open, a die can be selected and added to the chosen bend. Click on a die to select and click the 'Select' button to apply it to the bend.