AUTODESK® INVENTOR™ 2008

Using the Frame Generator Customization Tool

This paper provides information that helps you to successfully use the new Frame Generator customization tool for Autodesk® Inventor™ software. With this functionality, you can add new profiles to the Frame Generator feature of the Inventor 2008 family of software products.

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Overview

Creating new usable profiles in the Frame Generator feature is a simple, three-step process:

1. First, execute the Author and Publish step. In this step, you identify the profile to be added to the Frame Generator library, locate the default attachment location, and identify parameters that will be varied for different members of the profile family.
2. Second, use the Content Editor command to export a data structure that you can use to prepare a data table that defines the different sizes of profiles.
3. Third, import the data table so that all the new profiles are available to be added to your frame structures.

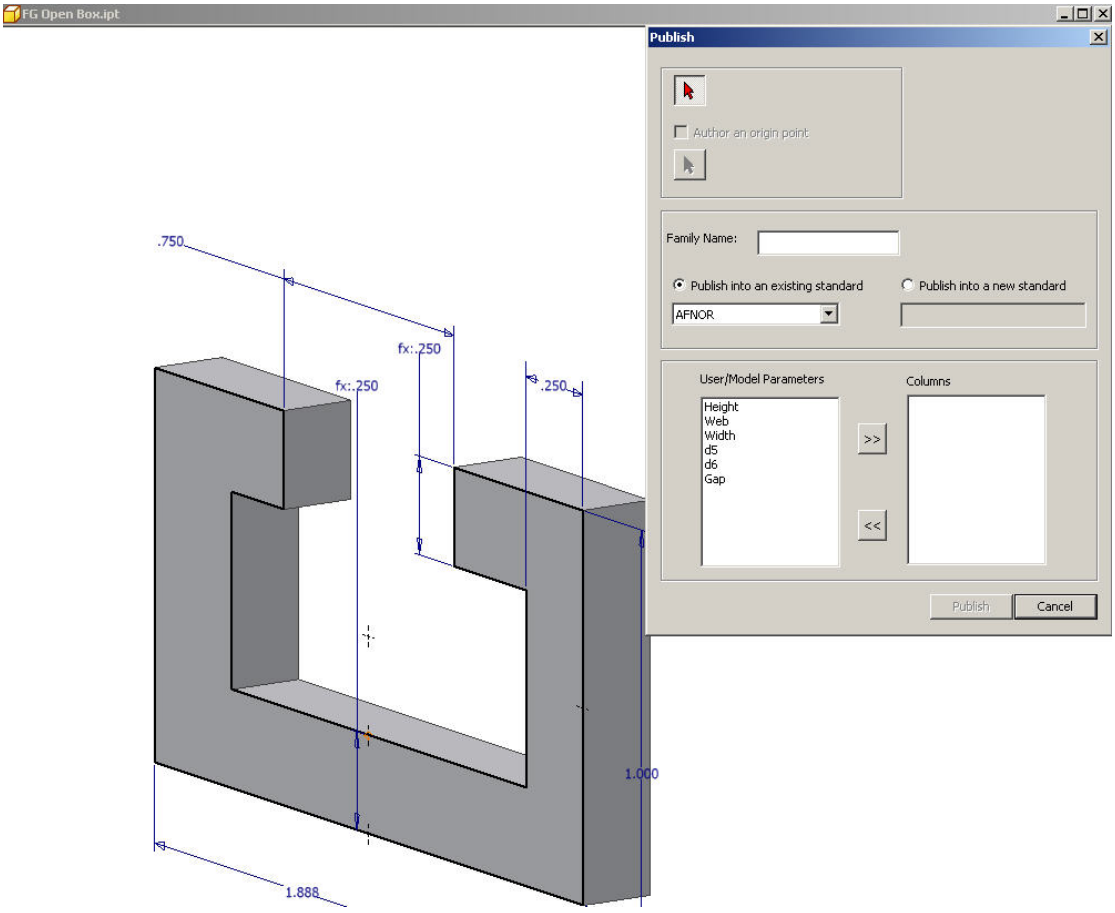
Access the Frame Generator Customization Tool

This tool is available for use with Inventor parts. It provides an alternate set of commands in lieu of those on the Part Features palette. Click the pull-down arrow on the Part Features command palette to access the new command set.

When the Frame Generator customization tool is activated, two new commands are available to you: Author and Publish, and Content Editor.

Author and Publish

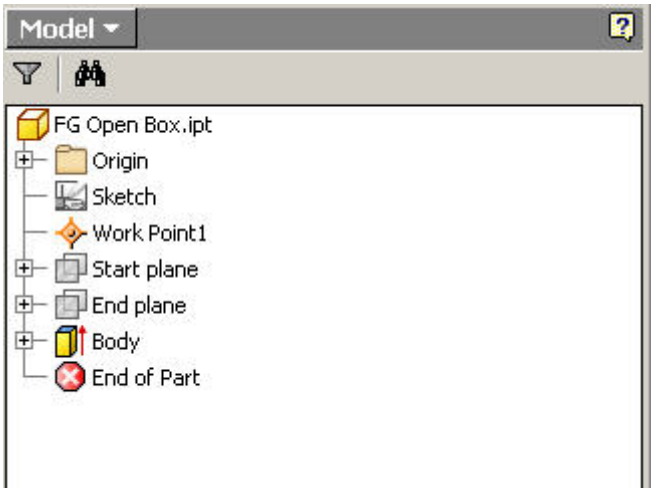
Use the Author and Publish tool to identify the profile and assign model parameters. The model parameters will become the variables that you will use later to create a family of profiles in the Content Editor. To make it easier to determine the appropriate parameters, it is a good idea to use the Inventor Parameter Editor to rename those parameters that are important in defining the shape of the profile.



When you launch the Author and Publish tool, you are asked to identify the profile. This should be the first model feature. By default, the center point of the selected profile is selected as the profile placement location. If you want to change it, select “Assign an Origin Point” by clicking the check box, and then select a previously defined work point.

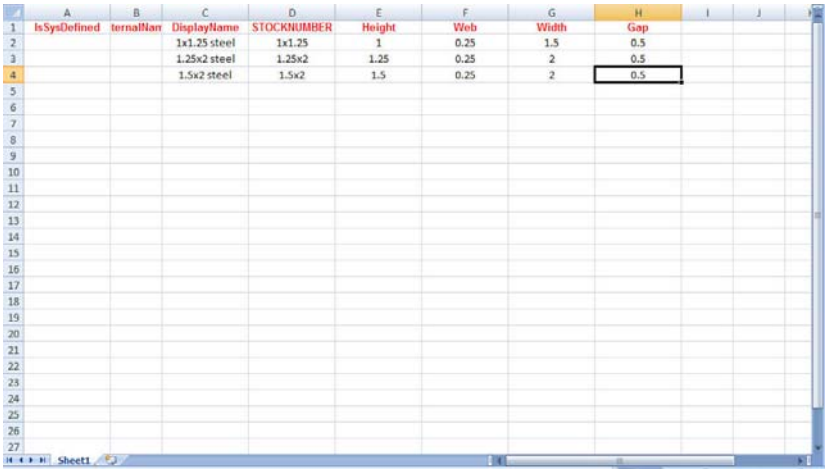
The final publishing task is to select the parameters that you want to use to define different profile sizes in the Content Editor.

Once you are satisfied with your selections, choose the Publish command. A confirmation dialog box appears for you to verify your action. Upon successful publishing, the part is updated with start and end plane features.



Content Editor

The Content Editor lists all the parts in the database. When you select a part, its table data is displayed. You can then export the table data to the Microsoft® Excel® application for editing. When you have completed defining all the profile members in the Excel spreadsheet, you import the data back into the Frame Generator database.



	A	B	C	D	E	F	G	H
1	IsSysDefined	ternalNam	DisplayName	STOCKNUMBER	Height	Web	Width	Gap
2			1x1.25 steel	1x1.25	1	0.25	1.5	0.5
3			1.25x2 steel	1.25x2	1.25	0.25	2	0.5
4			1.5x2 steel	1.5x2	1.5	0.25	2	0.5

Note that the two left-most columns are system-required columns in the table. Do not delete or add any data to these two columns.

Step by Step Guide for Publishing

1. Select the Author and Publish command from the Command palette.
2. The Publish Dialog is activated.
3. The first feature in the browser is automatically selected. If this is not the profile, click the Select button in the upper-left corner.
4. The default insertion point is the center of the profile. If you want to select a different insertion point, click Author an Insertion Point. The base sketch is activated so you can select a point.
5. Enter the family name.
6. Select a standard from the list or create a new standard by entering a new standard name in the text box.
7. Assign model parameters to the part model.
8. Click Publish. The Publish command is executed and the dialog is dismissed
9. Select the Content Editor command from the Command palette.
10. Select the family name in the browser.
11. Click Export to save the data to an Excel file or XML file.
12. Edit the file in Excel and add the parameter data.
13. Return to the Content Editor; click Import to add the data to the Content Editor.
14. Click OK to update the Frame Generator database.

Tips for Authoring

- The sketch must be drawn on the XY plane.
- Make all the profile features in the sketch.
- Frame authoring is performed on part files only. It is recommend that you fully constrain the frame profile (sketch) and extrude before authoring.
- If you want to author a frame shape with a custom origin, it is recommended that you establish the origin in the sketch using a sketch point.
- Frame authoring does not allow editing of the standard families shipped with Inventor 2008. If you want to customize the data for a standard family, select the original templates (they are read-only) and re-author them as a new family.
    1. Use the following path: *\\Autodesk\Inventor2008\DesignData\Frame Generator\Shared\Profile Systems\ANSI\Templates* to access the standard templates based on your installation directory of Inventor 2008 (usually *c:\programfiles\...*)
    2. Open the file, drag the end of part marker down to rebuild the component, and then re-author the shape to an appropriate standard, type, and family.

3. From the Content Editor, you can enter new data into the XML file or you can export the original standard so that you can copy and paste information needed. **Note:** Do not copy the data from the IsSysDefined or Internal Name columns. These should remain blank in your new XML file.
4. Save and import as described earlier.