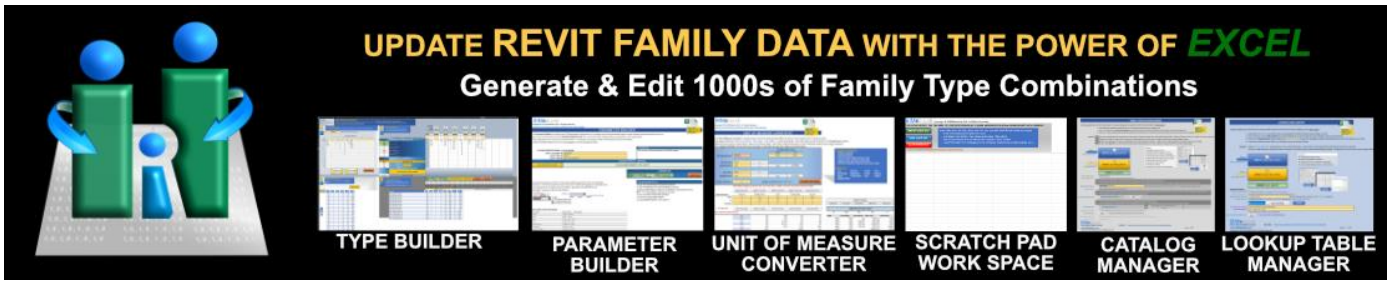
FAMILY TYPE MANAGER

USER GUIDE

Version 2.00

September 15, 2022



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SECTION 1 - FAMILY TYPE MANAGER OVERVIEW

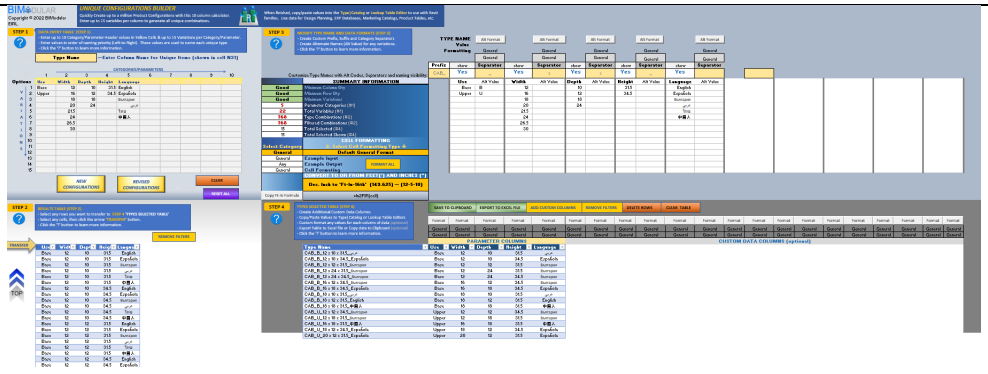
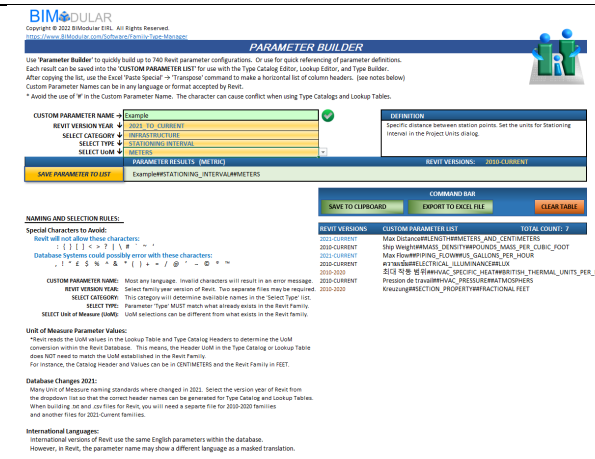
1.1 What is FAMILY TYPE MANAGER?

FAMILY TYPE MANAGER is a powerful Excel program designed for Revit users and content creators to easily update Revit Family data in bulk. The features can also be utilized by nearly any business in the world. The application was purpose built to automate many of the time-consuming tasks related to updating and creating Revit family content. The program bi-directionally imports and exports Revit family data with Excel using .csv and .txt files for the management of ***Type Catalogs*** and ***Lookup Tables***. The program has a ***Type Builder*** feature that generates **over 1 million** unique combinations of family types in a matter of seconds, has a ***Parameter Builder*** that generates all **740 Revit parameter** types for creating column headers, ***Unit of Measure Converter*** for bulk conversions between imperial and metric, and a document management ***Scratch Pad***.

The amazing part about ***FAMILY TYPE MANAGER*** is that it works with **any version year and language** of Revit! Revit families and project files can also remain open during editing and testing for real-time rapid testing and deployment during content creation. Revit is also not required so data can be managed by non-Revit users!

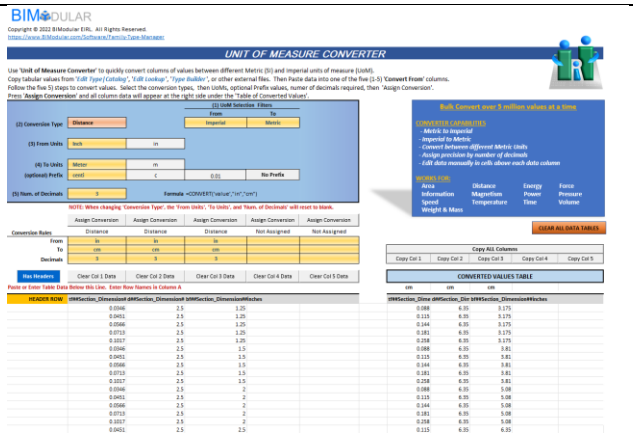
1.2 What tasks can the program perform?

There are six major features of ***FAMILY TYPE MANAGER***:

TYPE BUILDER - Create over 1 million configurations in seconds - Data for Family Types - Data for Lookup Tables - Data for Database Systems - Make hundreds of Revit Family Types within minutes - Share data with clients	
PARAMETER BUILDER - Search all 740 parameter types with definitions - Create custom lists of unique parameter names - Parameters are filtered by category, type, and unit of measure. - Shows imperial and metric assignments - Shows parameters by Revit version years	

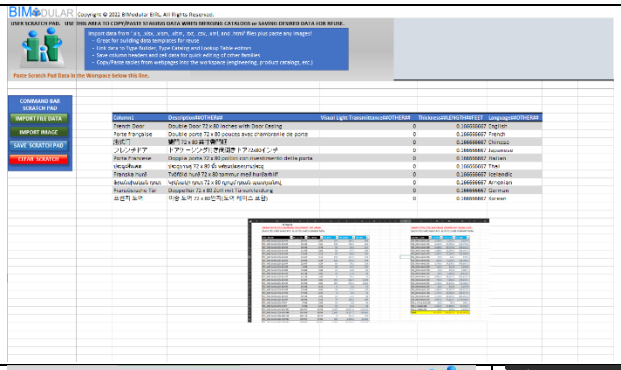
UNIT OF MEASURE CONVERTER

- Quickly convert thousands of rows of data between Imperial and Metric units of measure.
- Convert up to 5 columns
- Control decimal values
- Assign prefix values to metric measurements
- Copy data to other applications
- 5+ million conversions



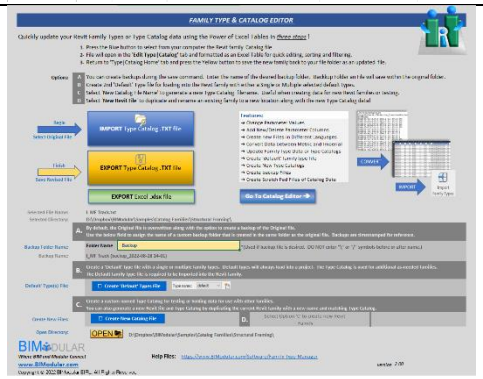
SCRATCH PAD

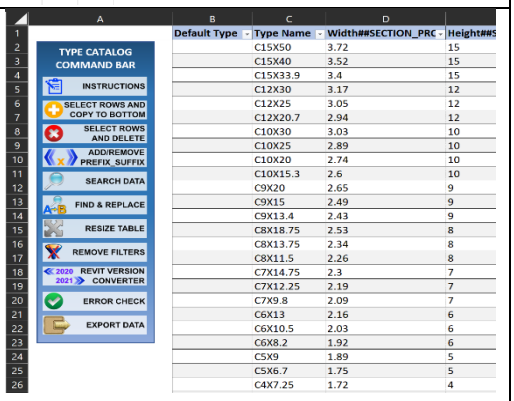
- Import select data from other Excel files, .xml, .csv, .txt, .html, and images
- Export data to new Excel files
- Link data with all Family Editors or external data sources for quick updates



TYPE CATALOG EDITOR

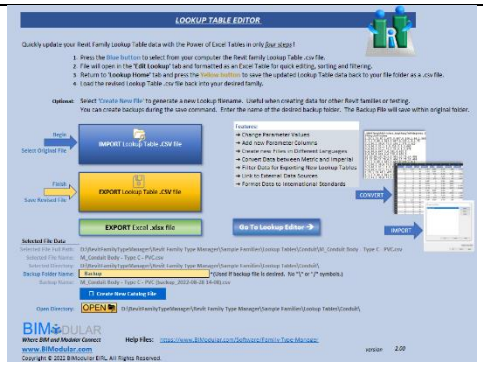
- Edit Family Types
- Edit/Create Type Catalogs
- Create Default Types
- Create Backups
- Duplicate Revit Families
- Duplicate Type Catalogs
- Any language/Any Unit of Measure/Any Version
- Real-time updating within Revit Families and Projects
- Use with External Data Sources
- Use Master Catalogs for multiple families

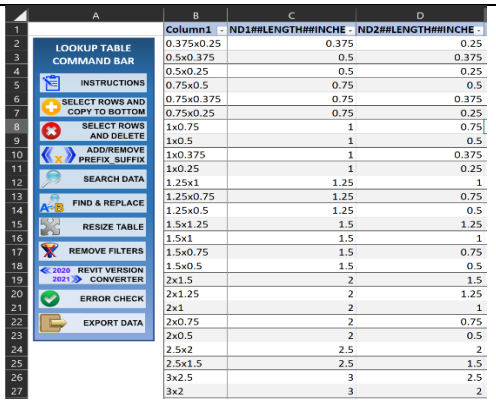




LOOKUP TABLE EDITOR

- Edit Family Lookup Tables
- Create Multi-line Data Fields
- Create new Lookup Tables
- Duplicate Lookup Tables
- Use with External Data Sources
- Create Relational Database Lookup Tables
- Use Lookup Tables for most Revit Family Categories





1.3 What versions of Revit does the program work with?

FAMILY TYPE MANAGER works with Revit 2010-2023 and in all Revit language formats.

1.4 Who should use FAMILY TYPE MANAGER?

If you edit Revit families to customized data, you need ***Family Type Manager***. The program is a perfect daily tool for Revit content creators, product manufacturers, and international businesses. Any person that needs to modify, convert, or create data in bulk and easily share data with others will gain tremendous benefit with ***FAMILY TYPE MANAGER***. Beyond Revit interactions, Users can also generate product codes, product bundling options, create product sizes and charts, determine interior finish option sets, convert data between imperial and metric units of measures, generate machine data files, create price catalogs, and determine fabrication time and materials planning. The power of ***FAMILY TYPE MANAGER*** is amazing, and Users will continue to find business automation benefits for years.

1.5 What business benefits does the application offer?

a. Quickly update and create Revit Family Data (Family Types, Type Catalogs and Lookup Tables) in any Revit version.

b. With rules-based naming conventions, generate up to a million configurations for products, room types, modular structures, development planning, product mixes, or endless other possibilities.

c. Share exported data between departments and clients and import data received from others.

d. Created database tables for Enterprise Resource Planning (ERP) applications, make PDF product tables, and use for decision making of product offerings.

e. Convert up to 5 million measurements in bulk between metric and imperial unis.

f. Collect, manage, and consolidate project and manufacturing data into grouped files.

g. Users can use the same generated Type Catalogs and Lookup Tables with all versions of Revit and create filterable 'Master Catalogs' for use across multiple families.

1.6 Are Autodesk Revit and Microsoft Excel both required to use the application?

No, ***FAMILY TYPE MANAGER*** is purpose built to share data between Revit Users and Non-Users. The application is not a Revit add-in, but instead, is an independent Excel program that interacts and updates Revit data. However, the User must have a licensed copy of Microsoft Excel on their Windows computer.

1.7 With what software versions has FAMILY TYPE MANAGER been evaluated?

The application is built for use with the Windows operating system and evaluated on Windows 10 and 11.

Revit 2015 through 2023 has been evaluated by BIModular.

Testing has been performed using Microsoft 2010, 2013, 2016, 2019, and Desktop 365.

1.8 What software versions are either untested or not supported?

Mac OS is not yet supported. Program has not been tested on Mac OS using a virtual Windows machine.

Microsoft Excel Online/Cloud is not supported. The license is assigned to a user email and machine ID.

1.9 Is FAMILY TYPE MANAGER open source?

No, ***FAMILY TYPE MANAGER*** code is private and encrypted. The program is 100% written in Microsoft Excel and compiled as an encrypted software program. Access to the development code is restricted.

1.10 Is the User required to be online to use FAMILY TYPE MANAGER?

The User must be online during the software activation process. The User can use the application without being online. However, when starting ***FAMILY TYPE MANAGER***, the program will perform random checks to verify that the software subscription is still active. This process will require the User to be online during these random checks with the BIModular licensing server. Afterwards, the User can turn off their internet services if necessary.

1.11 Is User data private?

Yes, privacy is especially important. ***FAMILY TYPE MANAGER*** does not collect or share any data processed within the application. The application resides on the User's computer in a file location of User's choice. However, to verify subscription license rights, BIModular collects only the User email address at time of purchase and computer ID during activation of the software. The User email address and computer ID are used to generate the activation key and are both kept on BIModular's private secured license management application. BIModular has no access to the User's computer or files. Like other subscription services, when the program is activated, at random, ***FAMILY TYPE MANAGER*** will verify the license subscription is current by checking the activation code against the remote licensing application. BIModular follows in strict accordance with Autodesk App Store policies.

To learn more, read BIModular's EULA documents and User License agreements by visiting: https://www.bimodular.com/Legal/AppTermsAndConditions

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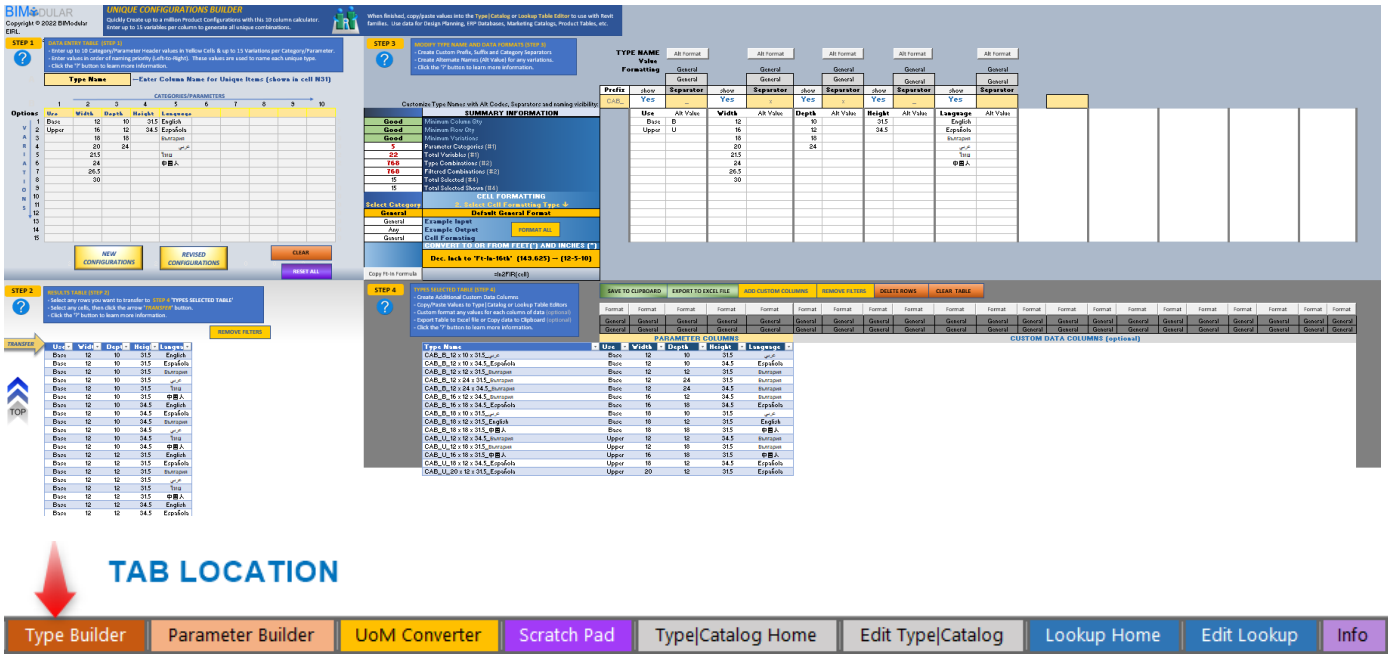
SECTION 2 - TYPE BUILDER



FAMILY TYPE MANAGER includes the **TYPE BUILDER** application. Type Builder can generate over one million unique product configurations in a matter of seconds. It uses mathematical rules to select a unique value in each of the category columns to generate a unique combination in the order of column priority. The application allows for up to ten (10) Categories/Parameter names and up to fifteen (15) values/variations for each Category. Data can be entered in any language and unit of measure.

Once all unique configurations have been generated, the User can select all configurations they desire and transfer the selections to a table to be used within Revit families, databases, business Enterprise Resource Planning (ERP) software, PDF publications, or other business needs. Type Builder can be used for creating unique configurations for products, architectural room types, housing developments, modular building type names, or most anything that requires a determination of all combinations.

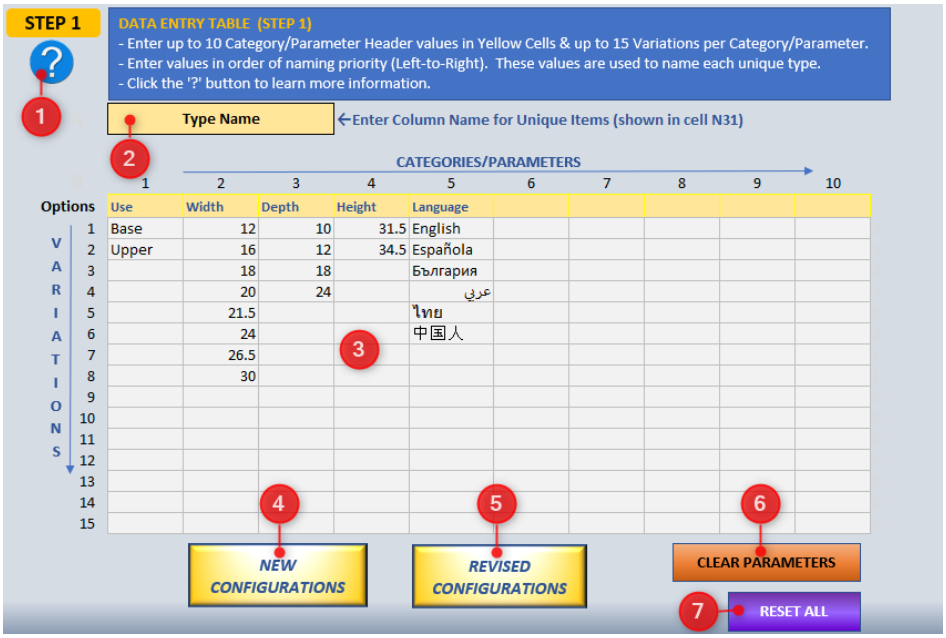
The User can further customize the rules-based naming of all configurations with alternate code values, prefix and suffix values, parameter separators, and formatting of data table values. Individual Category/Parameter names can also be turned on or off when customizing the final naming of all Types.

The User can also add up to nineteen (19) additional columns of data for fields that do not determine configuration types. The fields can be any data type use any Excel field formatting. This feature allows the User to generate very robust tables with dynamic (formula driven) or static value fields for every column of data and format the data for importing into other business system. Users can also connect to multiple external data sources to populate data in each additional column. Customized Feet-Inch values can also be generated along with any other Excel formatting.

Finally, the User can save the data in an Excel spreadsheet to send to a client for review, share data with other non-Revit Users for data entry completion (adding part numbers, pricing, lead times), import all generated data into Revit families as Type Catalogs or Revit Lookup Tables.

TYPE BUILDER can save a company hundreds-to-thousands of labor hours and significantly reduce the risk of human data entry errors.

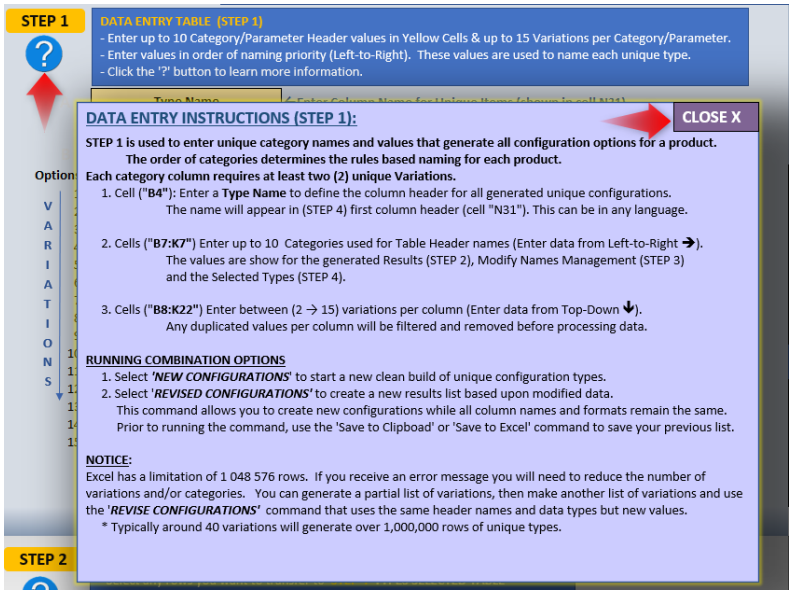
2.1 – TYPE BUILDER: DATA ENTRY TABLE



STEP 1 - **DATA ENTRY TABLE** is where the User enters all unique product parameters and related values to generate each unique configuration. In this STEP, the User defines the header name of the generated configuration types, enters all Parameter names and Variations that are required for determining product options, then selects to generate new calculations or revised calculations when dealing with substantial amounts of data.

Below are details about each feature within ***FAMILY TYPE MANAGER*** **TYPE BUILDER** workspace:

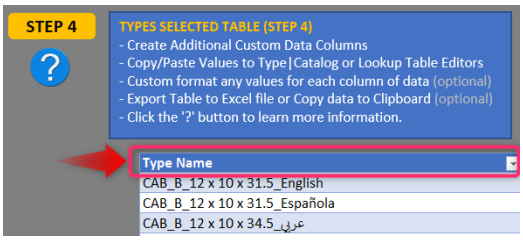
2.1.1 **DATA ENTRY INFORMATION** - Select the '**INFO**' button to show additional instructions for the User. When finished, select the '**CLOSE X**' button to remove the popup screen. All four steps (1-4) have customized information screens to provide information for any requirements or User actions.



2.1.2 **TABLE HEADER NAME** - Enter a custom name you want for the column header in STEP 4. This will be the header name for all unique configurations or Revit Types. This can be in any language.

*** NOTICE**: Avoid the use of the following characters in names or separators. Common software applications use these characters to separate data or other data manipulations. These characters can negatively impact the quality of your data imports into other applications.

Comma (**,**) Semi-colon (**;**) Colon (**:**) Exclamation (**!**) Question Mark (**?**) Plus Sign (**+**) Minus Sign (**-**) Pipe (**|**) Registration Marks (**© ℗ ® ™**) Asterisk (*****) Hashtag (#) or (##) Percentage (%)



2.1.3 **DATA ENTRY COLUMN HEADERS** - Enter column header names for each Revit parameter. You can use '**Parameter Builder'** to generate all names, then paste the names into the header table row using the Excel paste -> transpose command. Use can use a short name or the full parameter name with units of measure.

A. The configuration Type Name is determined by the order of the header parameters going left-to-right. It is best practice to name columns in order of the most common highest-level parameters first then the lowest-level unique detail parameter last.

For example, a door is named: "Type_Width x Height x Thickness_Swing_Material"

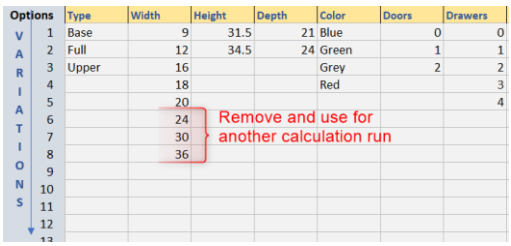
"Exterior_36x84x2_(LH)_Pine"

This method will organize a list of products where all Exterior doors are grouped together, then the widths, followed by heights, and so forth down to the most unique value last which is the material.

B. Enter between 2-15 values for each parameter. These must be of the same field formatting that is established in Revit. If not, import errors will occur or imported data will not be accurate (i.e., the value 6 could be imported as 6 millimeters versus 6 meters). When using the data with Type Catalogs and Lookup Tables, ensure your header measurements reflect the numeric values entered. * Always evaluate your Revit families after importing results back into Revit.

C. Excel has a limit of 1,048,576 rows of data in a worksheet. Usually around a total of forty (40) parameter variations will generate about one (1) million unique product configurations. If all 150 variations could be evaluated, **Type Builder** would create over 576 billion unique combinations!

In you exceed the limits of Excel, the generator will not run, and a warning message will appear. To resolve this issue, reduce the number of value options in a parameter column until the generator runs. Then use the '**REVISED CONFIGURATIONS'** button to run a second set of data with the remaining parameter values.



2.1.4 **GENERATE CONFIGURATIONS** - After all parameter names and values have been entered, press the '**GENERATE NEW CONFIGURATIONS**' button to create all unique Types.

a. A message will appear when all unique types have been generated.

b. All unique types will be listed in a table format *in STEP 2 – GENERATED CONFIGURATIONS RESULTS TABLE.*

c. *STEP 3* 'SUMMARY INFORMATION' will also update with quantities of all generated results.

	SUMMARY INFORMATION
Good	Minimum Column Qty
Good	Minimum Row Qty
Good	Minimum Variations
7	Parameter Categories (#1)
27	Total Variables (#1)
5760	Type Combinations (#2)
5760	Filtered Combinations (#2)
13	Total Selected (#4)
13	Total Selected Shown (#4)

2.1.5 **REVISED CONFIGURATIONS** - To reduce the number of generated Types, enter only a few relevant values for each parameter, generate the results, select your items. Save the original table of selected items to another location, then update the STEP 1 table with new values. After new values have been entered, select the '**REVISED CONFIGURATIONS'** button to run a new set of calculations. You can then transfer any new values to the clean STEP 4 Types Selected table. The process can be repeated multiple times.

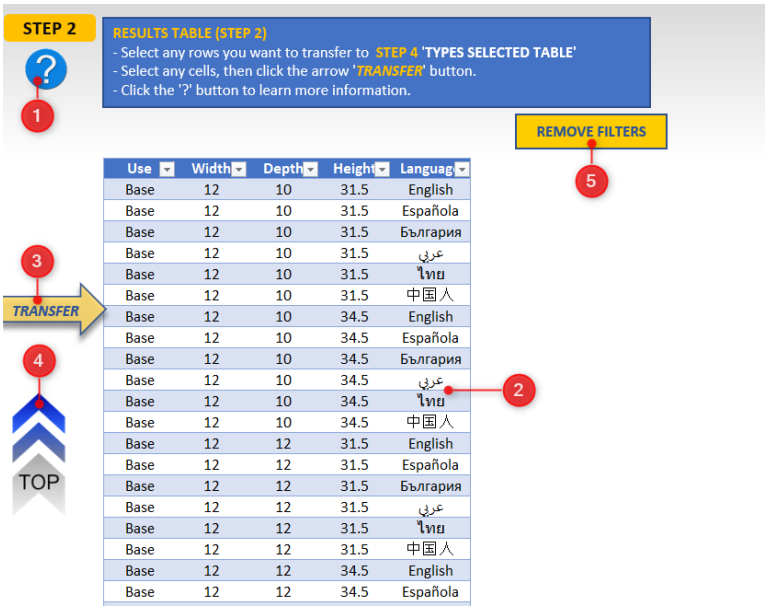
By selecting 'REVISED CONFIGURATIONS' all existing column types and custom column formulas will remain in the Types Selected Table. The new data will then be transferred to the cleared table.

* As a rule, all Category/Parameter header names and column data types must remain the same when appending data. If data types or header names have been changed an error message will appear. * ALL DATA TYPES WITHIN EACH COLUMN MUST BE CONSISTENT. A button will appear allowing you to reset the original header values.

2.1.6 **CLEAR PARAMETERS** - This button will clear all Table Header Names and Variation values. Use the button when you are only wanting to reset the User Entry table.

2.1.7 **RESET ALL** - This button will reset all tables and settings. Use the button when you are preparing to run a clean new set of calculations.

2.2 – TYPE BUILDER: CONFIGURATIONS RESULTS TABLE

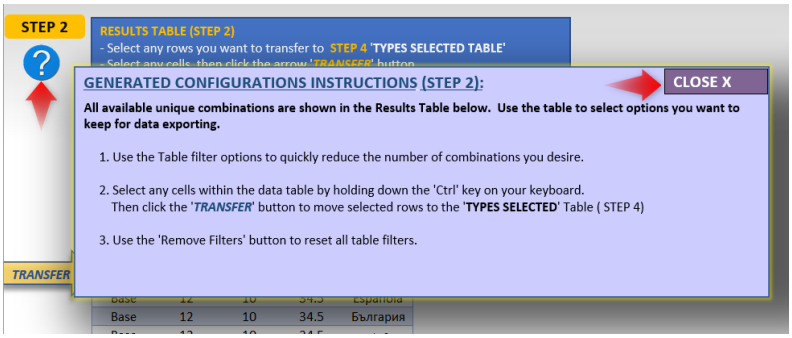


Use	Width	Depth	Height	Languag
Base	12	10	31.5	English
Base	12	10	31.5	Española
Base	12	10	31.5	България
Base	12	10	31.5	عربي
Base	12	10	31.5	ไทย
Base	12	10	31.5	中国人
Base	12	10	34.5	English
Base	12	10	34.5	Española
Base	12	10	34.5	България
Base	12	10	34.5	عربي
Base	12	10	34.5	ไทย
Base	12	10	34.5	中国人
Base	12	12	31.5	English
Base	12	12	31.5	Española
Base	12	12	31.5	България
Base	12	12	31.5	عربي
Base	12	12	31.5	ไทย
Base	12	12	31.5	中国人
Base	12	12	34.5	English
Base	12	12	34.5	Española

STEP 2 - RESULTS TABLE is where all unique combination results are placed. The User can select any rows of data by clicking a single cell or highlighting a collection of cells to transfer rows to the **STEP 4** Types Selected table. The results list can be filtered. As the User scrolls down the worksheet, the '**Transfer**' and '**Top**' buttons will follow and appear after any cell is selected. This makes it easy to select all items for transfer and to quickly return to the top of the worksheet.

Below are details about each feature within ***FAMILY TYPE MANAGER*** **TYPE BUILDER** workspace:

2.2.1 **RESULTS TABLE INFORMATION** - Select the '**?**' button to show additional instructions for the User. When finished, select the '**CLOSE X**' button to remove the popup screen.



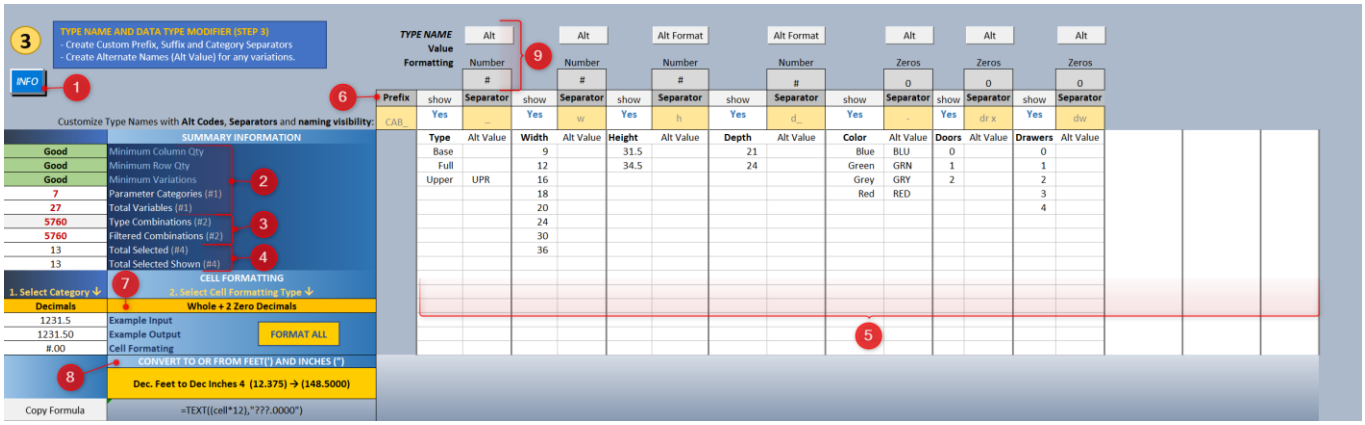
2.2.2 **RESULTS TABLE DATA** – This table contains all generated configurations. The table can be multi-filtered to quickly reduce the list down to desired items. *Table sorting is not possible as sorting can impact data in the Type Selected Table.

2.2.3 **TRANSFER SELECTIONS** - Click the '*TRANSFER*' button to move all selected rows to STEP 4 Type Selected Table. Hold down the [Ctrl] key to select multiple individual cells or the [Shift] key to select groups of rows.

2.2.4 **RETURN TO TOP** - After scrolling down the worksheet, click the 'TOP' button to return to the top of the worksheet.

2.2.5 **REMOVE FILTERS –** Click the 'REMOVE FILTERS' button to remove all existing filters in the Results Table.

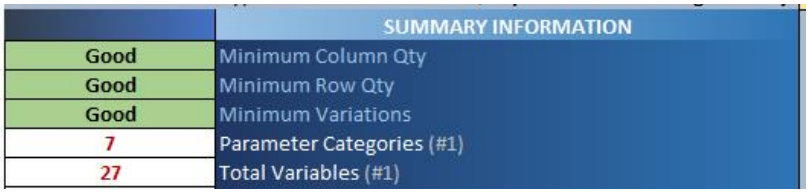
2.3 - TYPE BUILDER: TYPE NAMES AND DATA TYPE MODIFIERS



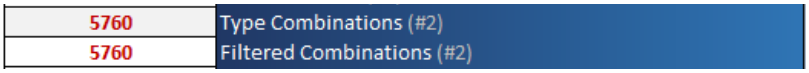
STEP 3 - TYPE NAME AND DATA TYPE MODIFIER is where the User can see all dashboard results, modify Type Name data, and replace data type formatting. All Category/Parameter headers along with variable values will be reported in this SECTION. The User can then create alternate names for each parameter value, add a prefix and suffix to each Type Name, and generate separator characters between each parameter. The following SECTIONS outline in detail each function and its abilities.

2.3.1 **DATA TYPE MODIFIER INFORMATION** - Select the '**?**' button to show additional instructions for the User. When finished, select the '**CLOSE X**' button to remove the popup screen.

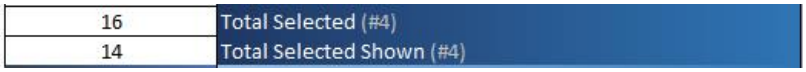
2.3.2 **SUMMARY TABLE QUALITY CHECK** – The first three cells verify if data values meet the conditions for generating all configurations. The generator will remove any matching or blank values on a per column basis. Afterwards, if a column has less than two (2) unique values the generator will not run, and a red 'Invalid' text value will appear. The Summary Table also shows how many Categories/Parameters were assigned and the total number of Variable values processed.



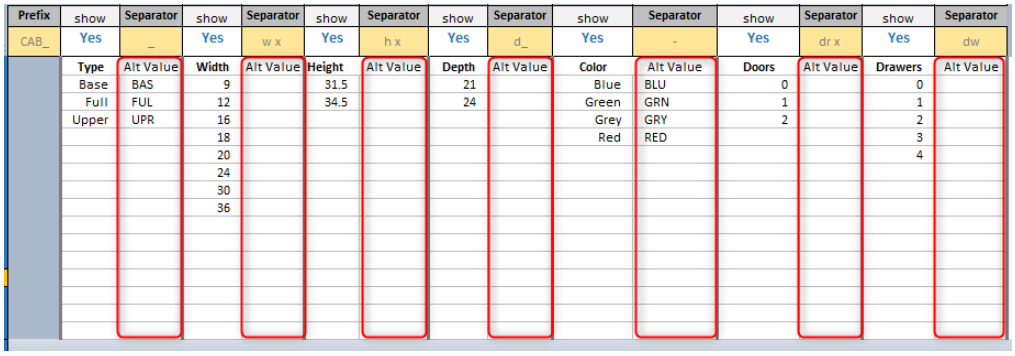
2.3.3 **SUMMARY TABLE GENERATED TYPES** – The two fields show the total number of configurations generated and if filtering has occurred the total number of shown items shown in the table. The max value of generated configurations for the worksheet is 1,048,545 Unique Types.



2.3.4 **SUMMARY TABLE SELECTED TYPES** – The two lower fields show how many Types have been placed into the Selected Types Table. If filtering is active on the table, the second cell will count how many rows are shown. This feature provides the User with a quick count of how many configurations have been selected and are currently shown.



2.3.5 **TYPE NAME MODIFIER TABLE** – The worksheet region receives all User defined Variables and places the data into dedicated columns. To the right of each column, the User can assign alternate values for each Parameter. Alt codes can be an abbreviation, item code, foreign translation, etc. for each parameter. These values will automatically update the Type Name in the Selected Types Table in STEP 4.



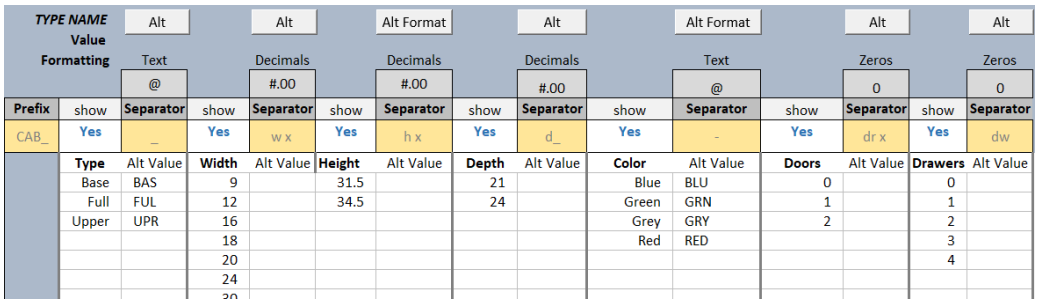
Prefix	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator
CAB_	Yes	_	Yes	w x	Yes	h x	Yes	d_	Yes	-	Yes	dr x	Yes	dw
	Type	Alt Value	Width	Alt Value	Height	Alt Value	Depth	Alt Value	Color	Alt Value	Doors	Alt Value	Drawers	Alt Value
	Base	BAS	9		31.5		21		Blue	BLU	0		0	
	Full	FUL	12		34.5		24		Green	GRN	1		1	
	Upper	UPR	16						Grey	GRY	2		2	
			18						Red	RED			3	
			20										4	
			24											
			30											
			36											

2.3.6 **TYPE NAME FORMATTING** – This STEP has several features. First, the User can assign a Prefix, Suffix, and any spacing characters that would be shared with all selected Type Names. As the User enters Separator values the Type Names will update in real-time. Users can also update the formatting of values in the Type Name by selecting the Excel formatting (see SECTION 2.3.7), then left click on the 'ALT Format' buttons.

Users can also select the 'YES' / 'NO' cells to control the visibility of parameter names in the Type Name.

*Warning – If a User turns off Type Name parameters this may cause parameters to have the same names and impact the quality of data importing into Revit Families or other database systems as the Type Names will no longer be unique. Duplicate Type Names will be automatically highlighted.

In the below example, values for Prefix, parameter separators and a Suffix have been added. Column values also use Alt Formatting for numerical data, and Type names are using Alt Value naming codes for the Type and Color columns.



TYPE NAME Value Formatting		Alt Text @		Alt Decimals #.00		Alt Format Decimals #.00		Alt Decimals #.00		Alt Format Text @		Alt Zeros 0		Alt Zeros 0
Prefix	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator
CAB_	Yes	_	Yes	w x	Yes	h x	Yes	d_	Yes	-	Yes	dr x	Yes	dw
	Type	Alt Value	Width	Alt Value	Height	Alt Value	Depth	Alt Value	Color	Alt Value	Doors	Alt Value	Drawers	Alt Value
	Base	BAS	9		31.5		21		Blue	BLU	0		0	
	Full	FUL	12		34.5		24		Green	GRN	1		1	
	Upper	UPR	16						Grey	GRY	2		2	
			18						Red	RED			3	
			20										4	
			24											

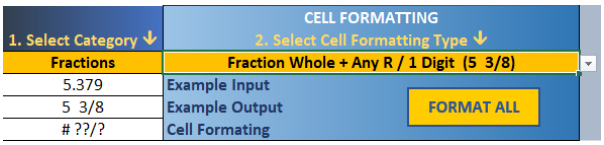
Below all Type Names are updated to reflect the User defined rules:

	PARAMETER COLUMNS						
Type Name	Type	Width	Height	Depth	Color	Doors	Drawers
CAB_BAS_9.00w x 31.50h x 21.00d_BLU-1dr x 2dw	Base	9.000	31.500	21.000	Blue	1	2
CAB_FUL_9.00w x 31.50h x 21.00d_GRN-2dr x 1dw	Full	9.000	31.500	21.000	Green	2	1
CAB_FUL_9.00w x 31.50h x 21.00d_RED-1dr x 1dw	Full	9.000	31.500	21.000	Red	1	1
CAB_BAS_18.00w x 34.50h x 21.00d_GRN-0dr x 3dw	Base	18.000	34.500	21.000	Green	0	3
CAB_BAS_24.00w x 31.50h x 21.00d_GRY-0dr x 1dw	Base	24.000	31.500	21.000	Grey	0	1
CAB_BAS_30.00w x 34.50h x 24.00d_GRN-1dr x 4dw	Base	30.000	34.500	24.000	Green	1	4
CAB_FUL_18.00w x 31.50h x 21.00d_RED-0dr x 3dw	Full	18.000	31.500	21.000	Red	0	3

2.3.7 **CELL VALUE FORMATTING** – This powerful feature provides the User with a friendly version of formatting selections that provides a formatting description along with examples for the input, output, and the code string.

The User select the Category first, then to the right they select the dropdown list to select the exact formatting condition they desire. When assigning formatting to columns, the User has two options. They can select the 'FORMAT ALL' button to assign the formatting to all Parameter columns or the User can select the formatting they want, then select the individual 'Format' buttons above any of the parameter columns. This will then assign the code string to the selected data table columns and all data will be updated accordingly.

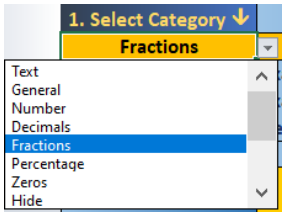
User Interface



Example with Individual Formatting of Columns

Format	Format	Format	Format	Format	Format
General	Decimals	Number	Zeros	Temperature	Currency
General	#.00	#	0	#"°C"	#,##0.00 €
					CUSTOM DATA COLU
Manuf	Weight	Lead Time	Box Width	Storage	Price
ACME	83.35	1	1'-3"	15°C	135.86 €
ACME	83.35	3	1'-3"	23°C	135.86 €

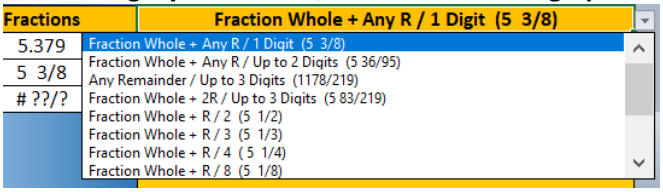
Dropdown Select the formatting Category Type:



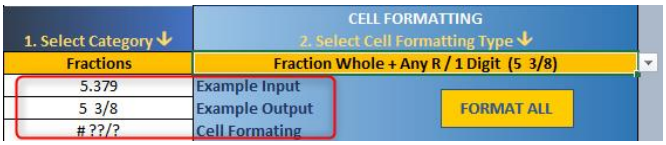
All available Formatting Categories

Text	Hide
General	Toggle
Number	Currency
Decimals	Temperature
Fractions	Time
Percentage	Date
Zeros	Phone

After Category is Selected, Choose Formatting option

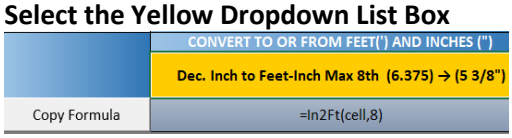


Each dropdown list gives the User a written description and an example format. After selecting a format, the table at left will update with input/output examples and cell formatting code.

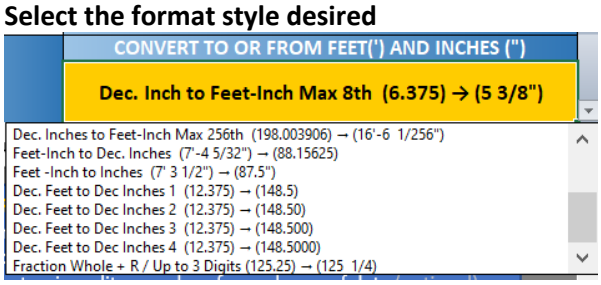


2.3.8 **FEET-INCHES CONVERTER** – By default Excel does not have an easy method for converting values to feet or inches. ***FAMILY TYPE MANAGER*** has internal programming that allows this feature to be easily available to Users.

Select the Yellow Dropdown List Box



Select the format style desired



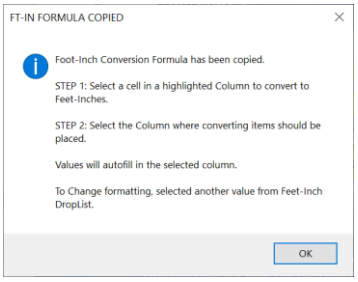
Press 'Copy Formula' to save to clipboard

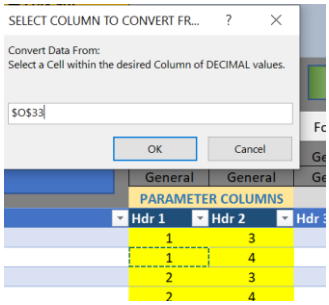
	CONVERT TO OR FROM FEET(') AND INCHES (")
	Dec. Inch to Feet-Inch Max 8th (6.375) → (5 3/8")
Copy Formula	=In2Ft(cell,8)

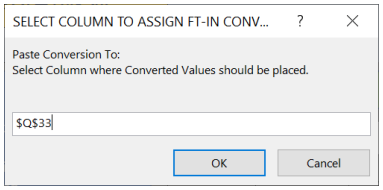
Conversion Options:

Dec. Inch to 'Ft-In-16th' (149.625) → (12-5-10)
Dec. Inch to Feet-Inch Max 8th (6.375) → (5 3/8")
Dec. Inch to Feet-Inch Max 16th (198.0325) → (16'-6 1/16")
Dec. Inch to Feet-Inch Max 32nd (198.0325) → (16'-6 1/32")
Dec. Inches to Feet-Inch Max 64th (198.0468) → (16'-6 1/64")
Dec. Inches to Feet-Inch Max 128th (198.0078) → (16'-6 1/128")
Dec. Inches to Feet-Inch Max 256th (198.003906) → (16'-6 1/256")
Feet-Inch to Dec. Inches (7'-4 5/32") → (88.15625)
Feet -Inch to Inches (7' 3 1/2") → (87.5")
Dec. Feet to Dec Inches 1 (12.375) → (148.5)
Dec. Feet to Dec Inches 2 (12.375) → (148.50)
Dec. Feet to Dec Inches 3 (12.375) → (148.500)
Dec. Feet to Dec Inches 4 (12.375) → (148.5000)
Fraction Whole + R / Up to 3 Digits (125.25) → (125 1/4)

For Feet-Inch values, it is necessary to first add a custom column to the Selected Types table in STEP 4. Assign a header name to the new column, then select the '**Copy Formula**' button. This will launch a 2-2-Step command to select from any highlighted column of values, then select the column to place the feet-inch calculations. The entire column will auto-fill with the feet-inch converted values!







PARAMETER COLUMNS

Height	Depth	Color	Doors	Drawers	Manuf	Weight	Lead Time	Box Width
31.500	21.000	Blue	1	2	ACME	83.35	1	2'-7 1/2"
31.500	21.000	Green	2	1	ACME	83.35	3	2'-7 1/2"

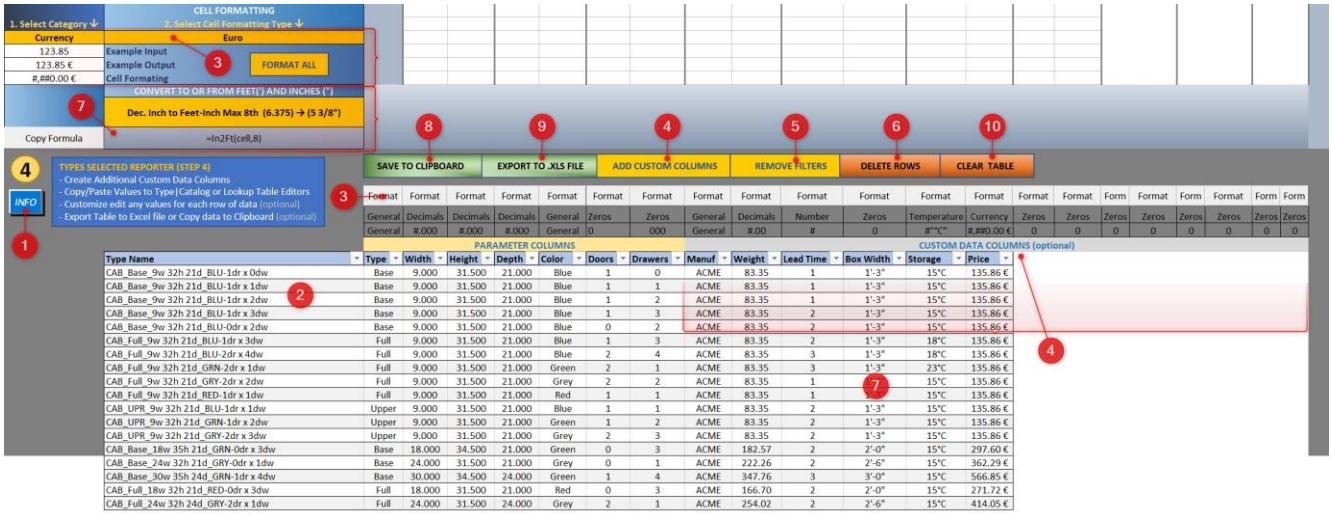
2.3.9 **ALTERNATE VALUE FORMATTING** – The Type Names have further naming control by assigning Alt Value formulas to the 'MODIFY TYPE NAME AND DATA FORMATS' table. By default, Type Names will use the values assigned at the start of the process. If the User then wants to modify/override the naming convention, they can then assign alt values to each column they desire.

TYPE NAME Value Formatting	Alt Text @		Alt Decimals #.00		Alt Format Decimals #.00		Alt Decimals #.00		Alt Format Text @	
Prefix	show	Separator	show	Separator	show	Separator	show	Separator	show	Separator
CAB_	Yes	_	Yes	w x	Yes	h x	Yes	d_	Yes	-
	Type	Alt Value	Width	Alt Value	Height	Alt Value	Depth	Alt Value	Color	Alt Value
	Base	BAS	9		31.5		21		Blue	BLU

Even though the original values were 9, 31.5, 21, the Alt Format assignment will change the Type Name to what the User requires.

		PARAMETER CO		
Type Name	Type	Width	Height	Depth
CAB_BAS_9.00w x 31.50h x 21.00d_BLU-1dr x 2dw	Base	9.	31.5	21.
CAB_FUL_9.00w x 31.50h x 21.00d_GRN-2dr x 1dw	Full	9.	31.5	21.

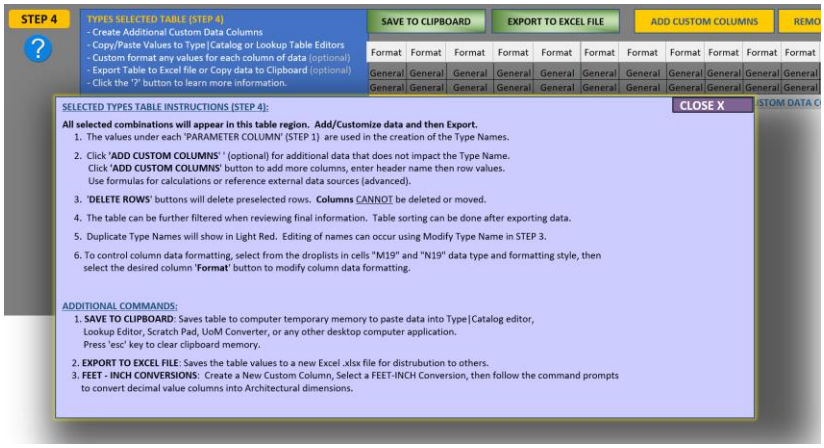
2.4 - TYPE BUILDER: TYPES SELECTED REPORTER



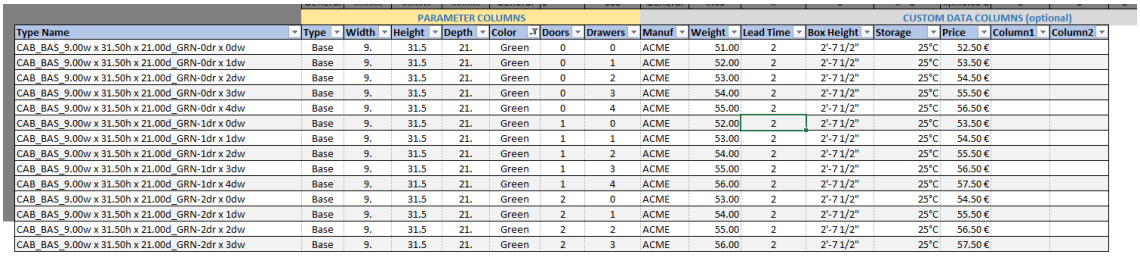
STEP 4 – TYPES SELECTED REPORTER collects all the selected configuration Types. The list can be filtered, new columns added, rows deleted, columns formatted for databases/reports, and then the table data can be exported to Excel for sending to others or copied for use in other ***FAMILY TYPE MANAGER*** applications.

Below are details about each feature within the ***FAMILY TYPE MANAGER*** **TYPE BUILDER** workspace:

2.4.0 **TYPES SELECTED INFORMATION** - Select the '**?**' button to show additional instructions for the User. When finished, select the '**CLOSE X**' button to remove the popup screen.



2.4.1 **TYPES SELECTED TABLE** – This table contains all the selected unique configuration Types. Each time the User selects the '***TRANSFER***' button in STEP 2, the row of data is then copied to the Types Selected Table. The User is then able to modify formatting for each data column, add custom columns, and filter the data according to their needs. *Table sorting is NOT possible as sorting can impact data in the STEP 2 Results Table.

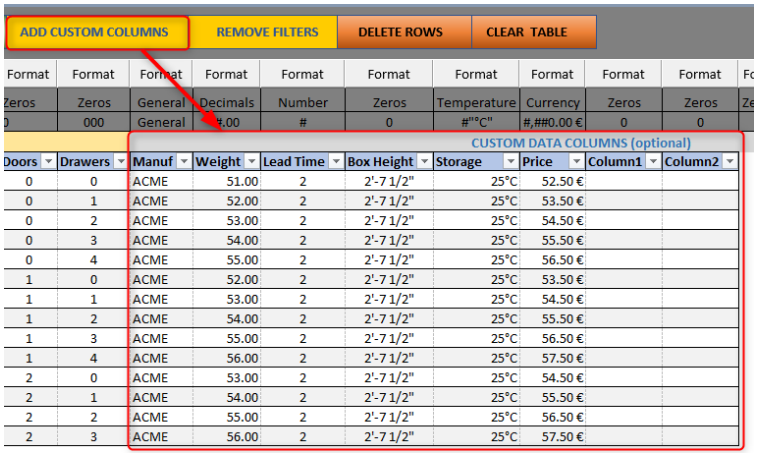


2.4.2 **CELL VALUE COLUMN FORMMATING** – See SECTION 2.3.7 (**CELL VALUE FORMATTING)** to learn details and features of formatting the table columns.

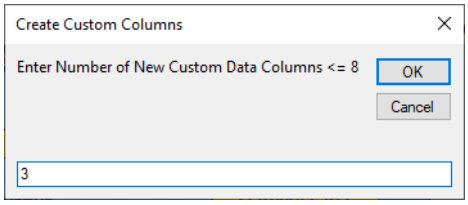
Format	Format	Format	Format	Format	Format	Format	Format	Format	Format	Format	Format	Format
General	Decimals	Decimals	Decimals	General	Zeros	Zeros	General	Decimals	Number	Zeros	Temperature	Currency
General	####.#	####.#	####.#	General	0	000	General	#.00	#	0	#"°C"	#,##0.00 €
PARAMETER COLUMNS												CUSTOM DATA COL
Type	Width	Height	Depth	Color	Doors	Drawers	Manuf	Weight	Lead Time	Box Height	Storage	Price
Base	9.	31.5	21.	Green	0	0	ACME	51.00	2	2'-7 1/2"	25°C	52.50 €

2.4.3 **ADDING CUSTOM COLUMNS** – Users can add up to 19 additional custom columns of data to the Types Selected Table. The columns can hold any type of static or dynamic formula driven data. Even data from external data sources can be queried to populate each column. Custom columns can include any data that is required but is not part of the configuration options. This could be manufacturer name, dates, weights, colors, model series, or any other necessary data that relates to the unique configuration.

When the User selects the '**ADD CUSTOM COLUMNS**' button, a dialog box will appear informing the User of how many columns they can add. The User enters an Integer value (1-19) and then the columns will appear to the right of the existing data. *Columns cannot be moved but data within each custom column can be copy and pasted to other column locations. The User can copy/paste data from Scratch Pad or other data applications into the custom columns. User must update the column formatting if columns are copy/paste relocated. This is easily achieved by selecting the formatting type, then selecting the individual 'Format' button above the modified columns.



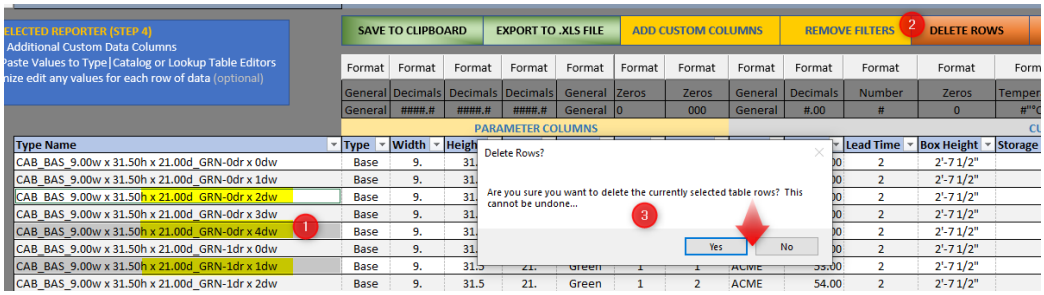
Doors	Drawers	Manuf	Weight	Lead Time	Box Height	Storage	Price	Column1	Column2
0	0	ACME	51.00	2	2'-7 1/2"	25°C	52.50 €		
0	1	ACME	52.00	2	2'-7 1/2"	25°C	53.50 €		
0	2	ACME	53.00	2	2'-7 1/2"	25°C	54.50 €		
0	3	ACME	54.00	2	2'-7 1/2"	25°C	55.50 €		
0	4	ACME	55.00	2	2'-7 1/2"	25°C	56.50 €		
1	0	ACME	52.00	2	2'-7 1/2"	25°C	53.50 €		
1	1	ACME	53.00	2	2'-7 1/2"	25°C	54.50 €		
1	2	ACME	54.00	2	2'-7 1/2"	25°C	55.50 €		
1	3	ACME	55.00	2	2'-7 1/2"	25°C	56.50 €		
1	4	ACME	56.00	2	2'-7 1/2"	25°C	57.50 €		
2	0	ACME	53.00	2	2'-7 1/2"	25°C	54.50 €		
2	1	ACME	54.00	2	2'-7 1/2"	25°C	55.50 €		
2	2	ACME	55.00	2	2'-7 1/2"	25°C	56.50 €		
2	3	ACME	56.00	2	2'-7 1/2"	25°C	57.50 €		



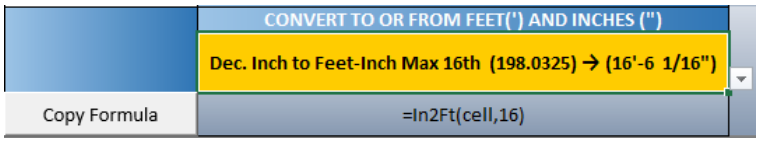
The application will read how many columns are available and the dialog box will update for the User. In this example the User has an additional 8 custom columns they can add.

2.4.4 **REMOVE TABLE FILTERS** – If the table columns have been filtered by the User, click the 'REMOVE FILTERS' button to show the complete data table.

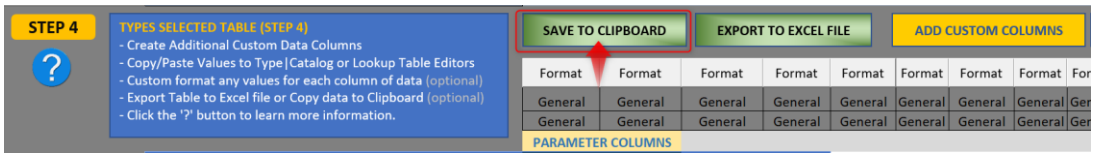
2.4.5 **DELETE TABLE ROWS** – If rows have been added to the Types Selected table and no longer are required, the User can select the rows they want to remove, then click the 'DELETE ROWS' button. The selected rows will be removed, and the table will update.



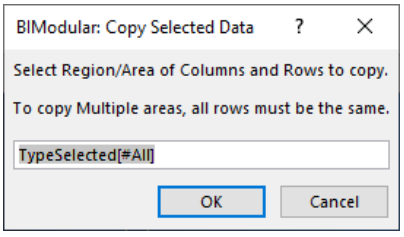
2.4.6 **FEET-INCHES CELL FORMATTING** - See the previous SECTION 2.3.9 **FEET-INCHES CONVERTER** to learn details and features of Column Formatting the with Feet and Inches feature.



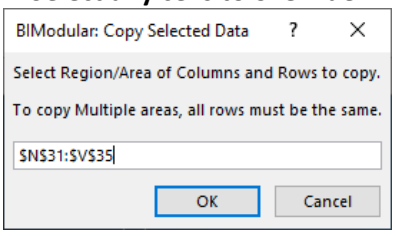
2.4.7 **SAVE TO CLIPBOARD** – Once all Selected Types have been placed in the table, the User can click the 'Save to Clipboard' button and save the information they desire to the computer temporary memory. The User can then paste the values into any other ***FAMILY TYPE MANAGER*** applications or paste the data to an external file. By default, the entire Types Selected table will be selected. The User can override and select any range of data.



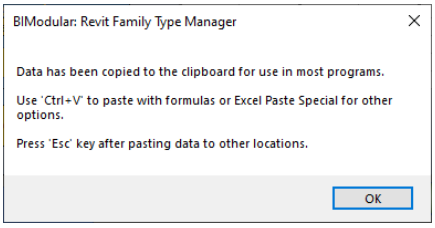
Default with Data Table Selected



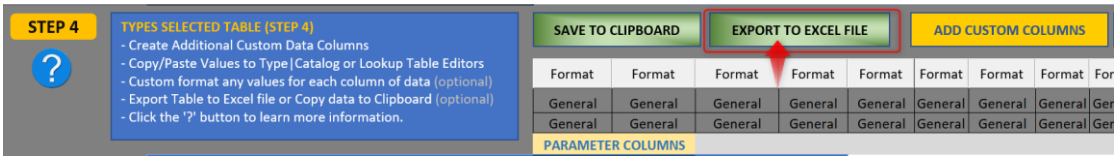
Select any cells to override



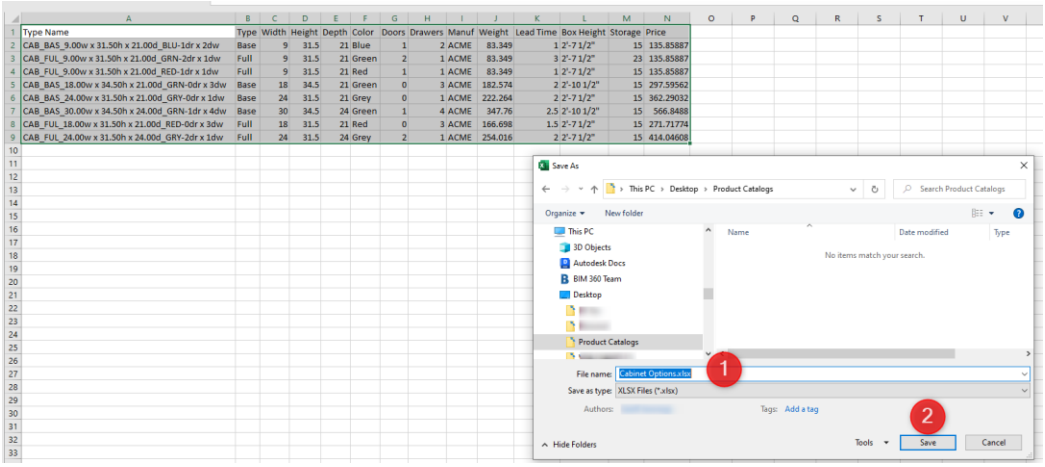
Press 'OK' to save then…



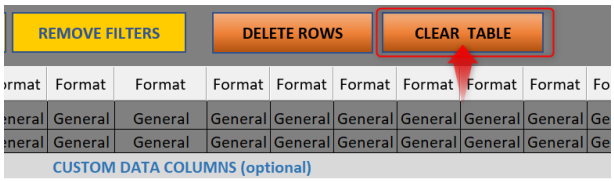
2.4.8 **EXPORT EXCEL FILE** – The Types Selected table can also be exported and saved as a separate Excel file. This is of great value when the data needs to be sent to a client for review and comment, internal departments need to update, review, or add data values, or to save the file for use in other business operations for example: marketing, sales, procurement, or manufacturing.

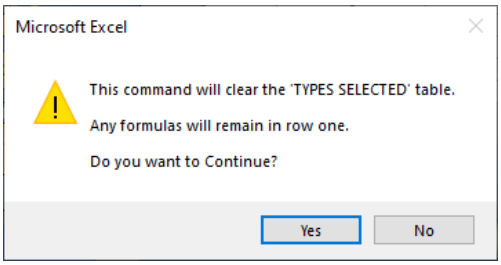


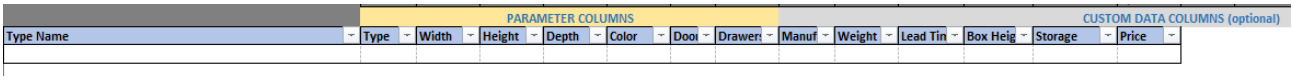
When '**EXPORT TO EXCEL FILE**' button is clicked, the program will open a new instance of Excel with the copied data table values. A 'Save As' command prompt will also appear for the User to select the location where the file should be saved. A message box will appear letting the User know the file was saved. The file will remain open for further User editing. Once done, close the new Excel file and return to ***FAMILY TYPE MANAGER*** for further work.

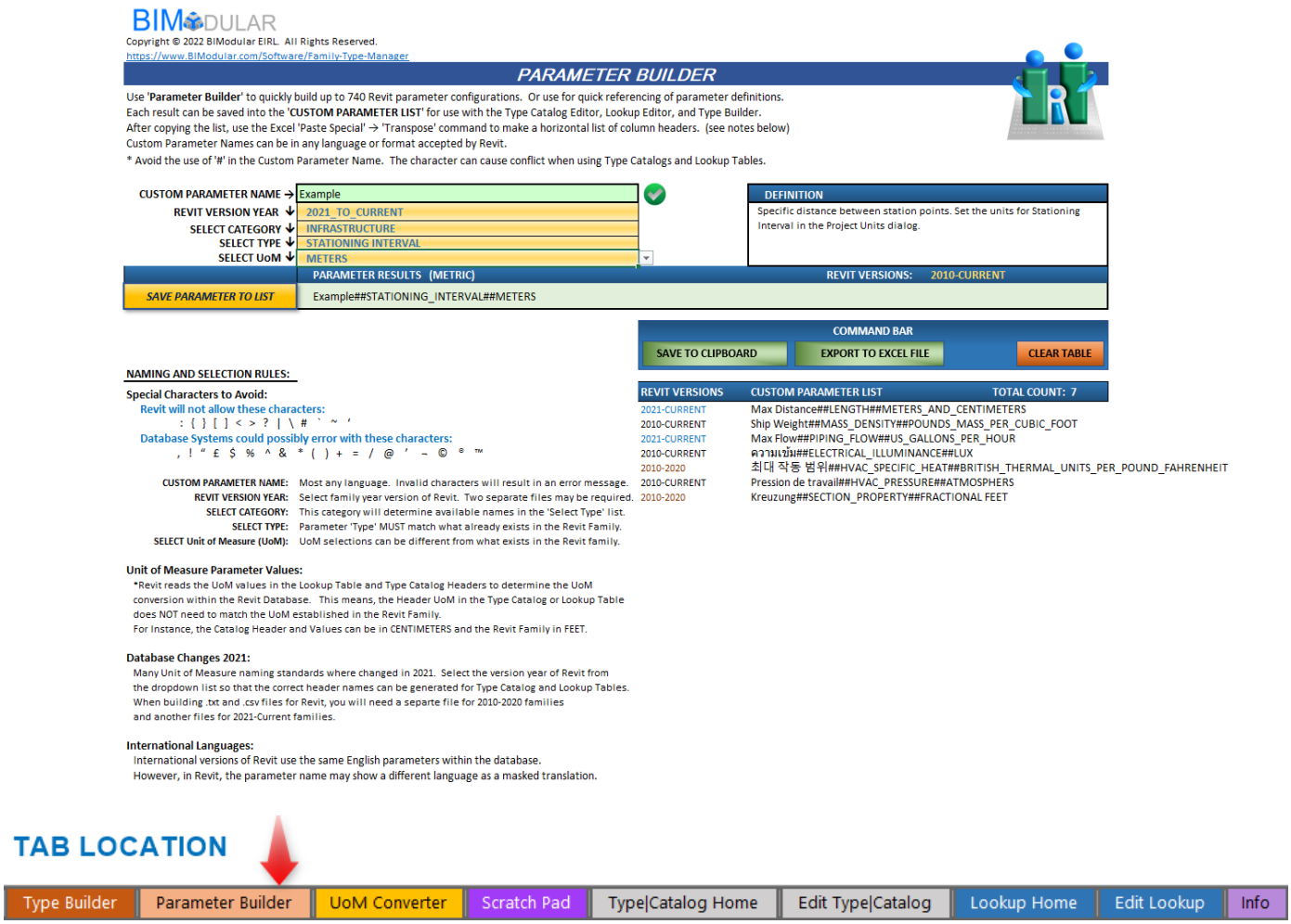


2.4.9 **CLEAR TYPES SELECTED TABLE** – To clear the entire Types Selected Table, click the 'CLEAR TABLE' button. A warning message will appear for the User to confirm the request. If 'Yes' is selected, all data values will be removed, but the column headers will remain including the custom columns.







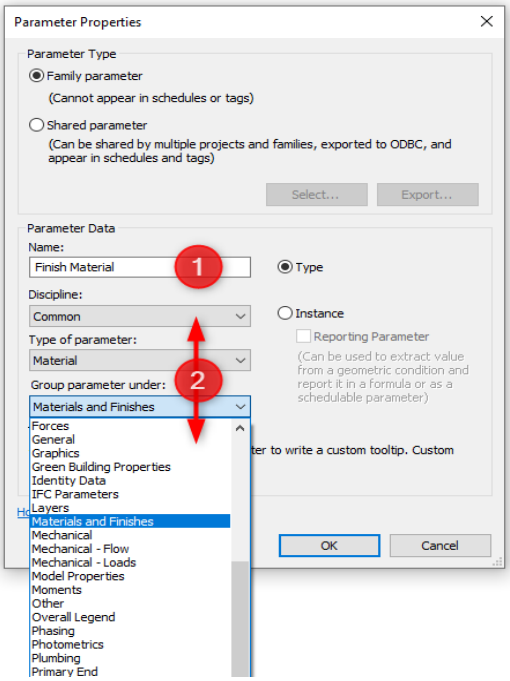


PARAMETER BUILDER is a much-needed solution to quickly find, research, and create unique parameters for Lookup Tables and Type Catalogs. There are 740 Revit parameters that are managed through a cascading drop-down list structure. The User can generate up to 30 custom parameters at a time! The system provides a definition for how each parameter type is used within Revit, if it is imperial or metric, and then generates the correct formatting of parameters per Revit requirements. The generator works for all parameter types and parameter groups between Revit 2010-Current. By changing Revit version years, all parameter naming rules change.

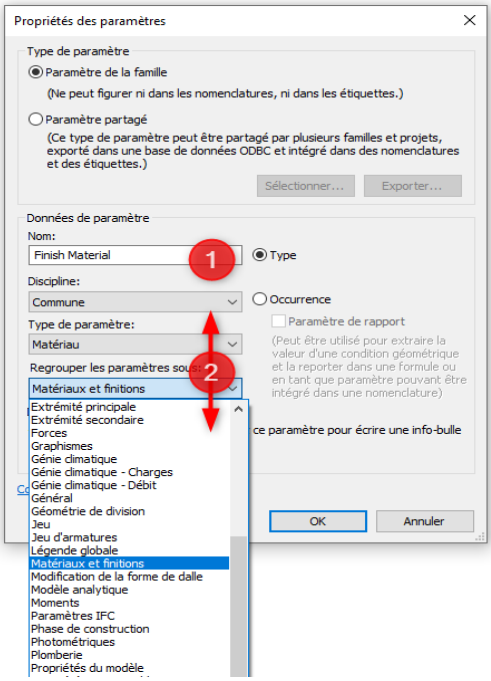
Below are details about each feature within ***FAMILY TYPE MANAGER*** **PARAMETER BUILDER** workspace:

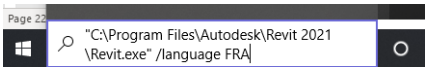
3.0 **WORKING WITH INTERNATIONAL PARAMETERS** – Revit is published in 14 language formats; however, the Revit database is based on the English language. Each Revit international language version masks the English words with the translated language. This means that any Revit Family can be shared and opened in any other Revit language! Only the User created parameter names will remain the same (see #1 below). The other classification fields (see #2 below): ‘Discipline’, ‘Type of parameter’ and ‘Group parameter under’ all use English names in the database, but Revit will convert the classification fields to the User language automatically.

English Family opened in Revit **English Version**



English Family opened in Revit **French Version**



To test this in Windows, enter the following in the command prompt 

to launch the French version of Revit on the User's machine.

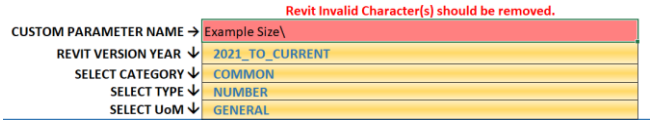
```
"C:\Program Files\Autodesk\Revit 2021\Revit.exe" /language FRA
```

More Information from Autodesk:
https://knowledge.autodesk.com/support/revit/troubleshooting/caas/CloudHelp/cloudhelp/2021/ENU/Revit-Installation/files/GUID-BD09C1B4-5520-475D-BE7E-773642EEBD6C-htm.html

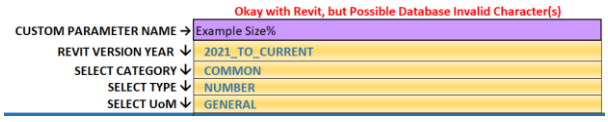
* **NOTE**: When using **Parameter Builder**, **Type Catalog Editor** and **Lookup Editor**, non-English Users will see all parameters in English. When the data is imported back into Revit the values will automatically show the translated language names.

3.1 **CUSTOM PARAMETER NAMES** – Enter any Alphanumeric value for the proposed parameter name. Avoid any use of special symbols. The name can be in any language.

***SYMBOLS TO AVOID :** Comma (**,**) Semi-colon (**;**) Colon (**:**) Exclamation (**!**) Question Mark (**?**) Plus Sign (**+**) Minus Sign (**-**) Pipe (**|**) Registration Marks (**© ℗ ® ™**) Asterisk (*****) Hashtag (**# or ##**)

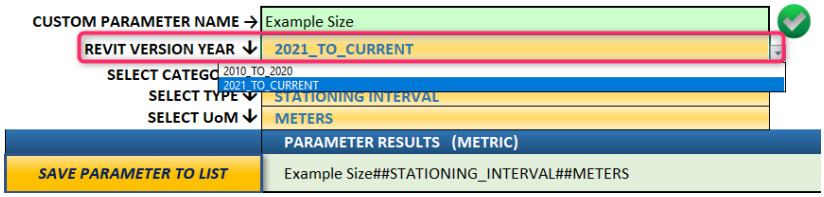


Possible Invalid Revit Characters



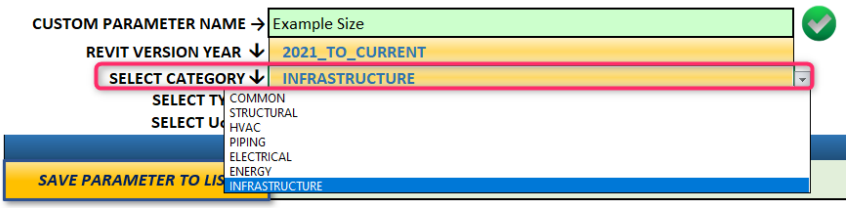
Possible Invalid Database Characters

3.2 **SELECT REVIT VERSION YEARS** – Select from the dropdown list the required Revit years.



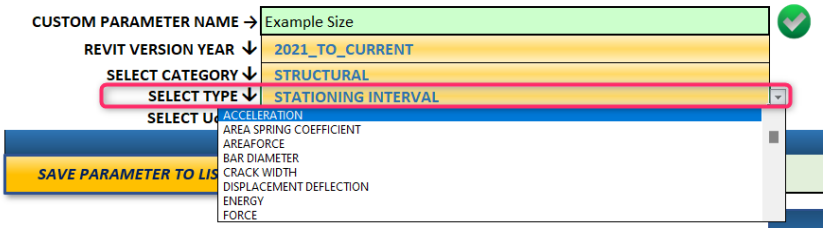
This will change the formatting of the parameter string. In 2021, formatting for many parameters changed.

3.3 **SELECT PARAMETER CATEGORY** – Select from the dropdown list the desired Revit parameter category.

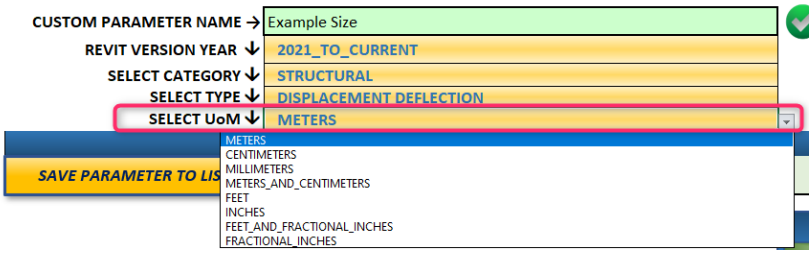


* INFRASTRUCTURE will only appear for '2021_TO_CURRENT' selection.

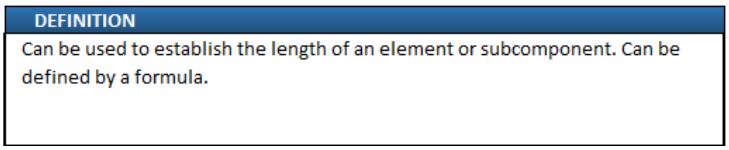
3.4 **SELECT PARAMETER TYPE** – Once a Category is selected the SELECT TYPE menu will update and provide the User with all available Revit types that relate to the parent Category. The User then selects the Type they desire.



3.5 **SELECT PARAMETER UNIT OF MEASURE** – Once a Type is selected, the Unit of Measure (UoM) drop list menu will update with all UoM values that are relevant to the selections. In the below example 'Length' was selected. All UoM values will now show both Imperial and Metric allowed formats.

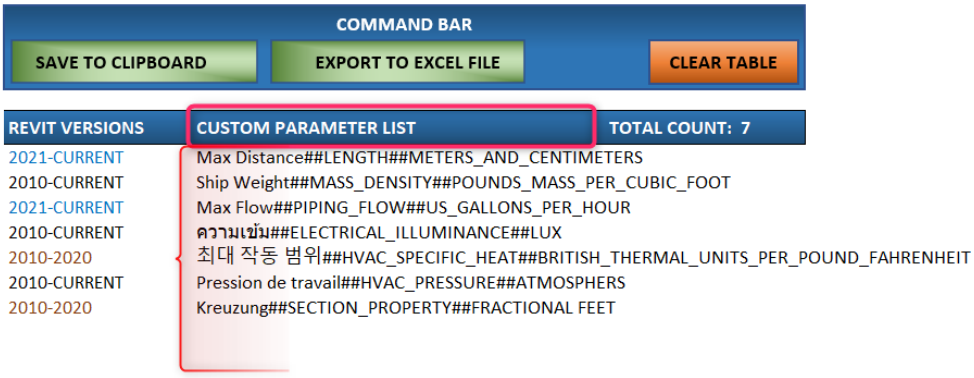


3.6 **PARAMETER DEFINITION** – When the User selects a Category and Type, the Definitions box will update to provide the User with details about how the parameter should be used and any options allowed with the selected parameter.

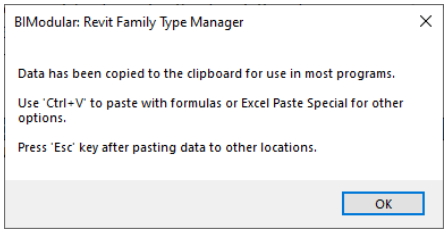


3.7 **SAVE PARAMETER TO LIST** – When the custom parameter is defined, the User will see the full name of the parameter and if it is Metric or Imperial. This helps the User know what type of parameter they are creating to avoid conflict with blending Metric and Imperial data within a family. Once approved, the User clicks the button 'SAVE PARAMETER TO LIST'. The parameter is then moved to the storage list at the right.

3.8 **CUSTOM PARAMETER LIST** – All saved parameters are written to this location. The list will hold a maximum of thirty (30) custom parameters.



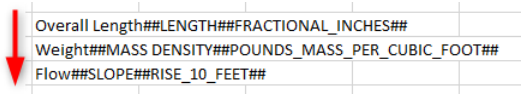
3.9 **SAVE TO CLIPBOARD** – Click the button to save all the parameters to the computer clipboard. The values can then be pasted into any FAMILY TYPE MANAGER application or any external file locations. A message box will appear to confirm all items were copied and ready for pasting.



When pasting the data in Excel, right click in the desired cell location to show the Paste options.

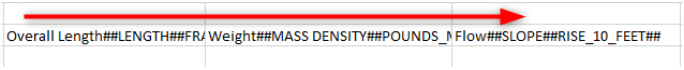
Normal 'Paste'

Select the first three options will paste the items in a vertical format.

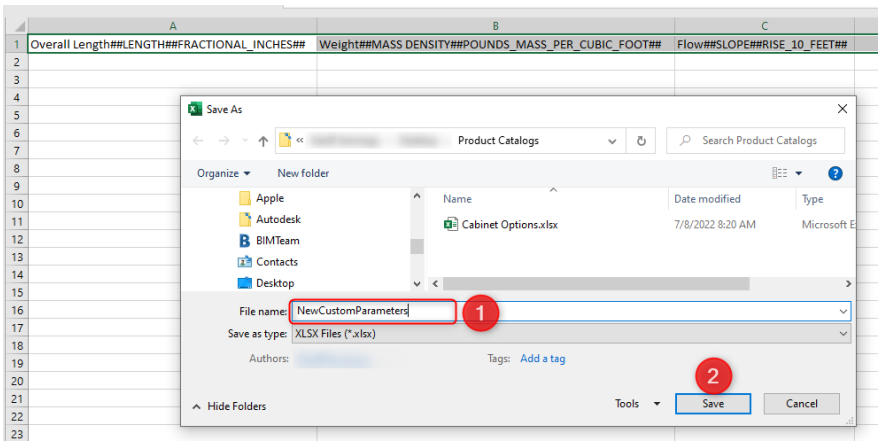


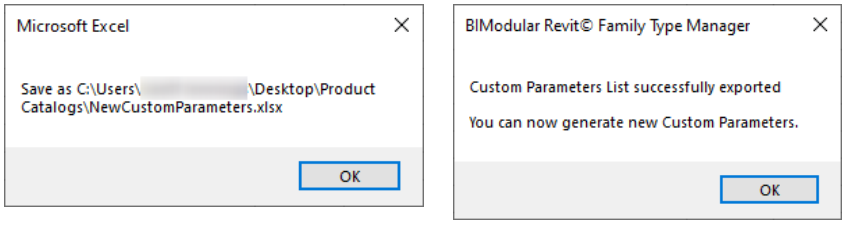
Transpose 'Paste'

Select the 4th option "Transpose" will place the data in a horizontal format for use with Type Builder, Type Catalog Editor, Lookup Table Editor. Each parameter will be placed in a separate column.

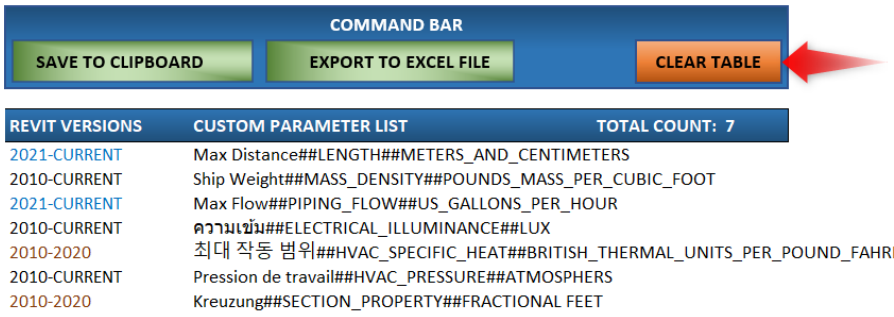


3.10 **EXPORT TO EXCEL FILE** – From the Command Bar, when the User clicks 'EXPORT TO EXCEL FILE', all parameters will be selected, a new instance of Excel will open with the parameter data placed along the top row, and a dialog box will appear for the User to select the file location and provide a file name. Once the file has been saved, a dialog box will appear confirming the saved file and location. Press 'OK' and then another box will appear with a notice to return to ***FAMILY TYPE MANAGER***. The saved parameters file will remain open so the Use can conveniently verify all data or begin adding data to the new file.

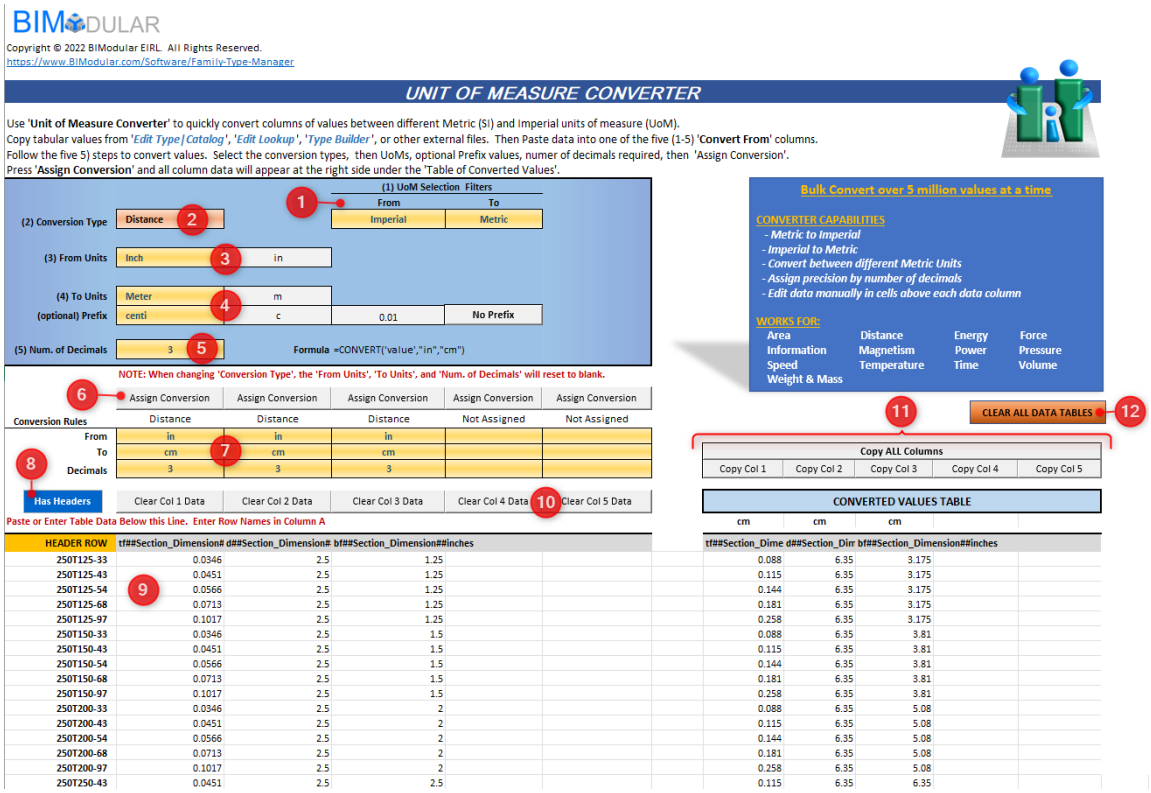




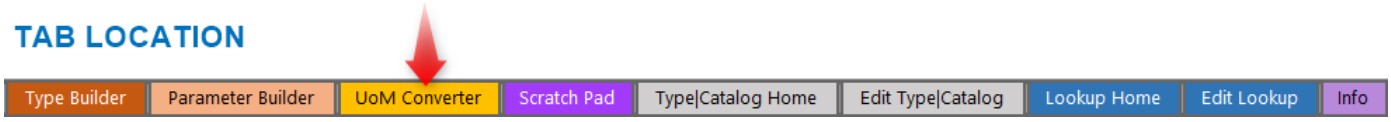
3.11 **CLEAR CUSTOM PARAMETER LIST** – Click the button to clear the list and begin creating a new list of custom parameters.



SECTION 4 – UNIT OF MEASURE CONVERTER



TAB LOCATION



UNIT OF MEASURE (UoM) CONVERTER is a power and efficient application to converter unit of measures in bulk. The User can convert up to five (5) columns of values with up to 1 million rows per column. The user can select any combination of Imperial or Metric unit types, the measurement category and related unit of measures. Values are immediately converted into a new table for use in the Type Catalog editor, Lookup Table editor, Scratch Pad, or any external data source. Use this application when converting Revit Family data from imperial-to-metric or when converting values within a particular unit of measure (i.e., feet-to-inches, m3-to-cm3).

*Note – Revit Type Catalog and Lookup table headers define the type of measurement read by the family.
If the Revit family Project Units are in Inches, the family can read the ##millimeters header from the .csv or .txt file and report values as inches in the family correctly.

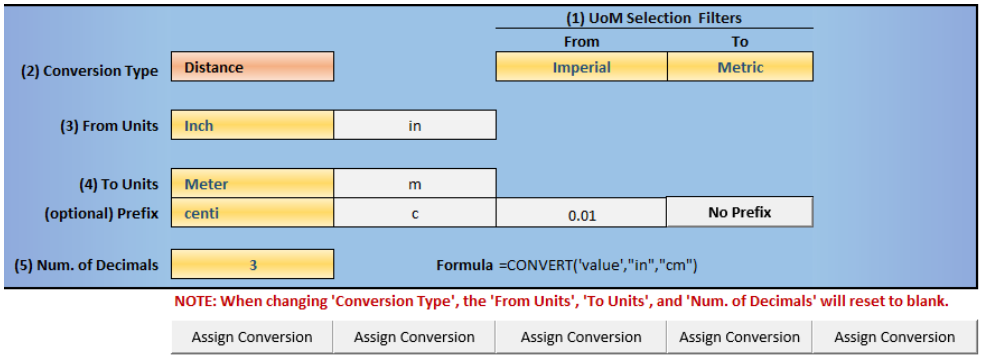
Base Units in Revit Unit System

Base Unit	Unit In Revit	Unit System
Length	Feet (ft)	Imperial
Angle	Radian	Metric
Mass	Kilogram (kg)	Metric
Time	Seconds (s)	Metric
Electric Current	Ampere (A)	Metric
Temperature	Kelvin (K)	Metric
Luminous Intensity	Candela (cd)	Metric

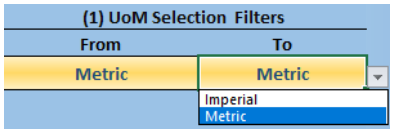
https://knowledge.autodesk.com/support/revit/learn-explore/caas/CloudHelp/cloudhelp/2014/ENU/Revit/files/GUID-099B3FD9-1C5B-459C-AC1E-EF958551DFB6-htm.html

Below are details about each feature within ***FAMILY TYPE MANAGER*** **UoM CONVERTER** workspace:

Unit Type Converter Selections details are listed below in SECTIONS 4.1 – 4.10



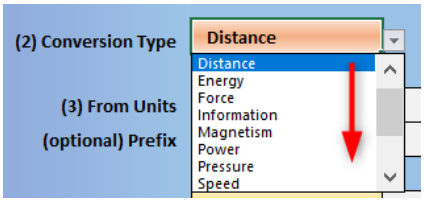
4.1 **UoM SELECTION FILTERS** – Select from the dropdown lists the convert 'From' and 'To' units of measure. The choices are Imperial and Metric. Based upon the selections, the 'From' and 'To' conversion dropdown lists will only show options based upon the selected unit of measure.



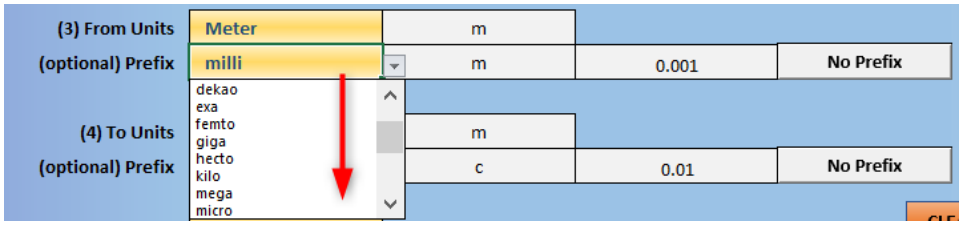
4.2 **CONVERSION TYPE** – Select from the dropdown list the main category for conversions. All unit of measure options will then be filtered to only show relevant values per Conversion Type.
The allowable Conversion Types are:

Area – Distance – Energy – Force – Information – Magnetism – Power

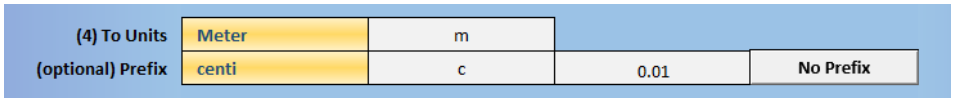
Pressure – Speed – Temperature – Time – Volume – Weight & Mass.



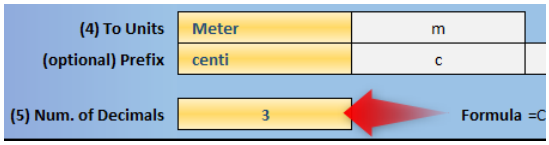
4.3 **CONVERT FROM UNITS** – Select the main unit of measure to convert From. The dropdown list will filter based upon the selected Conversion Type. If Metric filter is selected, the prefix row will appear with metric prefix options. To clear any prefix options, click the button to the right called '**No Prefix**'. Use the prefix values to assign the exact type of metric measurement (i.e., centi = centimeter, milli = millimeter, kilo = kilometer). If the unit of measure is Imperial, the prefix row will not show.



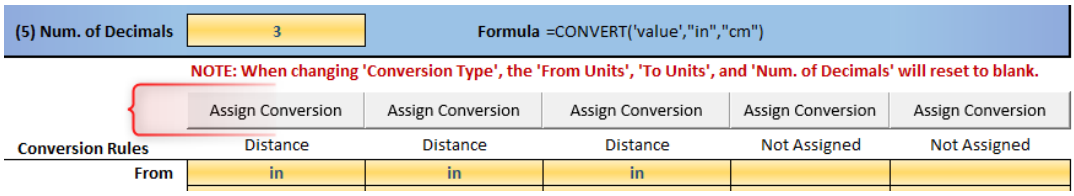
4.4 **CONVERT TO UNITS** – Select the main unit of measure to convert To. The dropdown list will filter based upon the selected Conversion Type. If Metric filtering is selected, the prefix row will appear with metric prefix options. To clear any prefix options, click the button to the right called '**No Prefix**'. Use the prefix values to assign the exact type of metric measurement (i.e., centi = centimeter, milli = millimeter, kilo = kilometer). If the unit of measure is Imperial, the prefix row will not show.



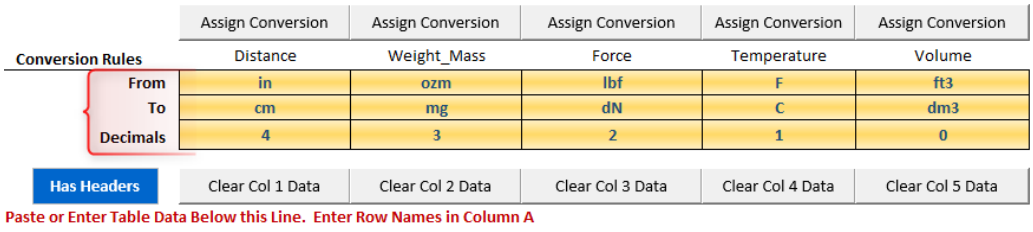
4.5 **NUMBER OF DECIMALS** – To control the precision of the conversion results, enter the number of decimals required.



4.6 **ASSIGN CONVERSION** – Each of the five 'Convert From' columns have an 'Assign Conversion' button. Select the appropriate button to assign the conversion values to the column. The converted values will appear in a new column to the right under the 'Converted Values Table'. To assign the conversion to all columns, select each button above the associated column.

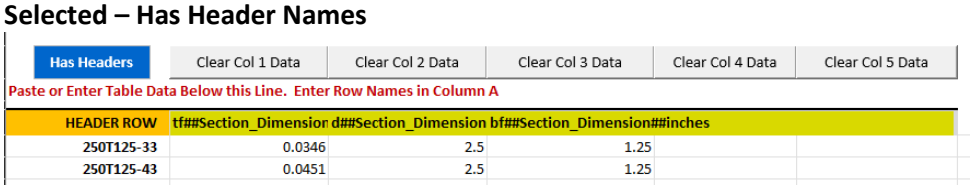


4.7 **CONVERSION PARAMETERS** – When values are assigned to a column, the conversion settings are copied to this section. The User has the option to manually modify the column conversion settings. The Convert To associated column will update to reflect the new manually changed values. Press the 'Assign Conversion' button again to overwrite the data with the most recent conversion setting.



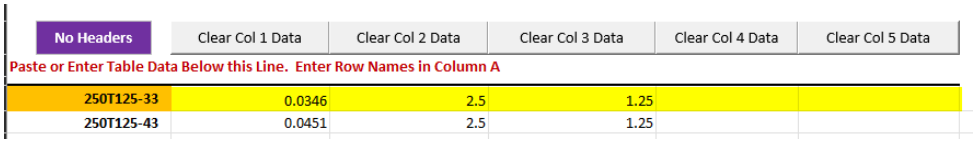
4.8 **HEADER NAMES** – This button controls how conversions will be assigned. If the pasted 'Convert From' data (see 4.9 below) has headers, select the button. If 'Has Headers', the header names will copy to the new columns and all conversion data will occur in the rows below the header.

Selected – Has Header Names



If there are no headers, then select the 'Has Headers' button again. When 'No Headers', all conversions will occur in the first row of data.

Selected – No Header Names



No Headers	Clear Col 1 Data	Clear Col 2 Data	Clear Col 3 Data	Clear Col 4 Data	Clear Col 5 Data
Paste or Enter Table Data Below this Line. Enter Row Names in Column A					
250T125-33	0.0346	2.5	1.25		
250T125-43	0.0451	2.5	1.25		

4.9 **DATA TO CONVERT** – ***Unit of Measure Converter*** allows for up to five (5) columns of data to be converted at a time. Select the columns of data from any source location. This can be from Type Builder, Type Catalog Editor, Lookup Table Editor, Scratch Pad, or any other external data source. Use the right click paste values option when pasting data. The User can paste data by column or up to five columns at one time. Pasted data can have header values or no header values. When converting data, the User must ensure they are selecting the correct 'From' unit of measure value for each column.

*** All pasted conversion values must be in numeric format without any unit of measure characters.**

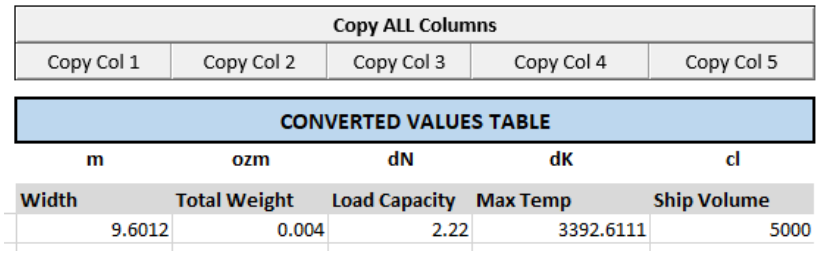
Correct	Incorrect		
14.25	14' 3"	14.25m	14.25sf

Copied data can be in any column length up to 1,048,546 rows.

4.10 **CLEAR COLUMN DATA** – Each 'Convert From' data column allows easy deletion of existing column data. When selecting the '**Clear Col (x) Data**' button, the associated 'Convert To' column will also be deleted. A warning box will appear for the User to confirm the delete command. The column will be cleared and ready to receive new data either manually entered column values or pasted column values.

4.11 **COPY CONVERTED VALUES TABLE** – All converted values will be placed in the 'Converted Values Table' section. For reference, the Convert To unit of measure is also shown above each column. If 'Convert From' data has headers, the header values will also be shown.

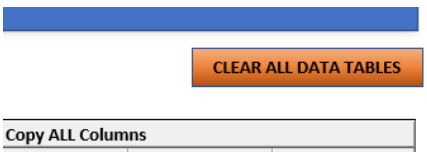
The User has multiple copy options for the converted data values. Select 'Copy ALL Columns' button to copy all converted data values to the computer clipboard. Values can then be paste into Type Catalog Editor, Lookup Editor, Scratch Pad, or any other external application. The User also has the option to select individual columns by selecting any of the '**Copy Col (x)**' buttons. A message will appear confirming the copying of data values. Press the escape 'esc' key when done pasting values. When copying data, only the values will be copied. Formulas will not be copied.

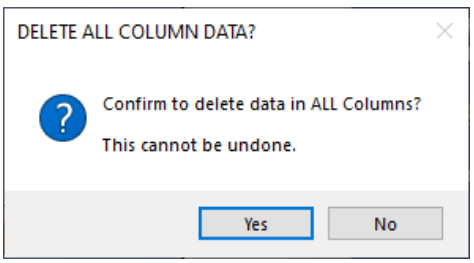


Copy ALL Columns				
Copy Col 1	Copy Col 2	Copy Col 3	Copy Col 4	Copy Col 5

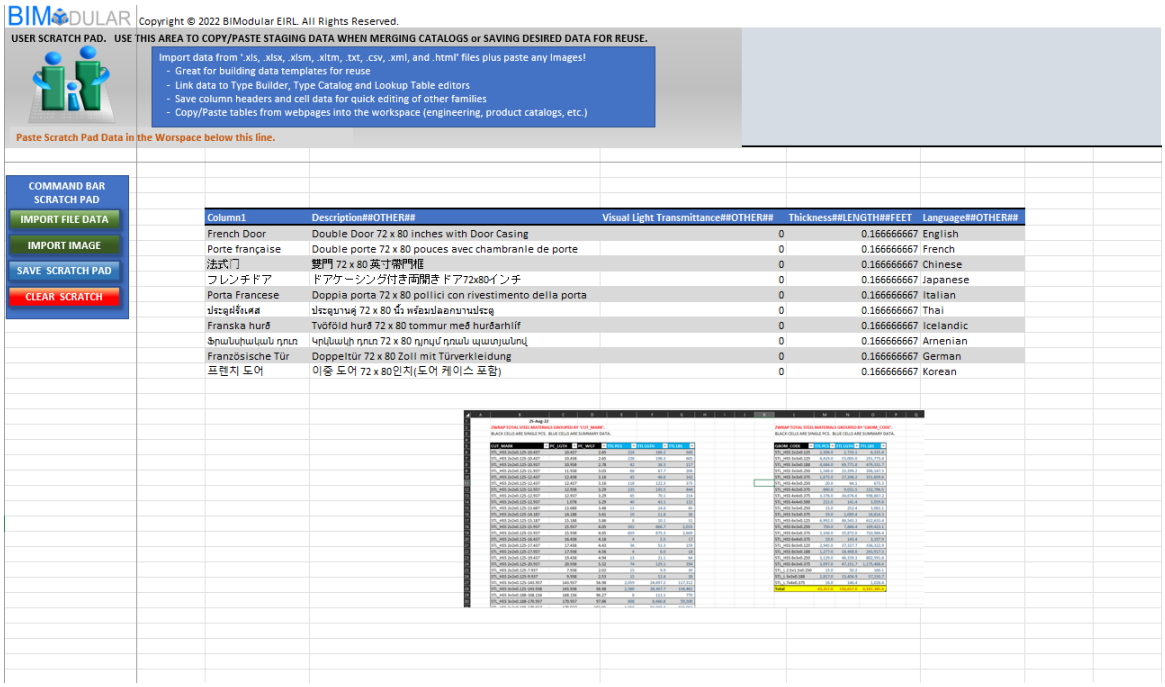
CONVERTED VALUES TABLE				
m	ozm	dN	dK	cl
Width	Total Weight	Load Capacity	Max Temp	Ship Volume
9.6012	0.004	2.22	3392.6111	5000

4.12 **CLEAR ALL DATA** – Select To clear the user data fields in the 'Convert From' and 'Convert To' tables, select the '**Clear All Data Tables**' button. A warning box will appear for the User to confirm the command.

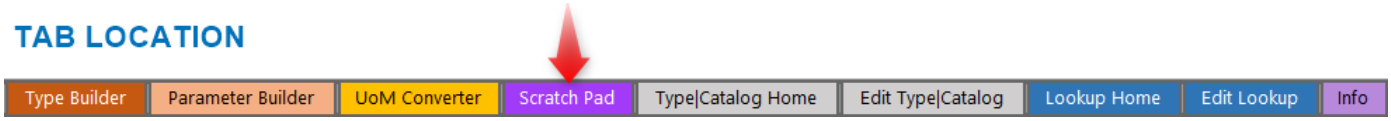




SECTION 5 - SCRATCH PAD



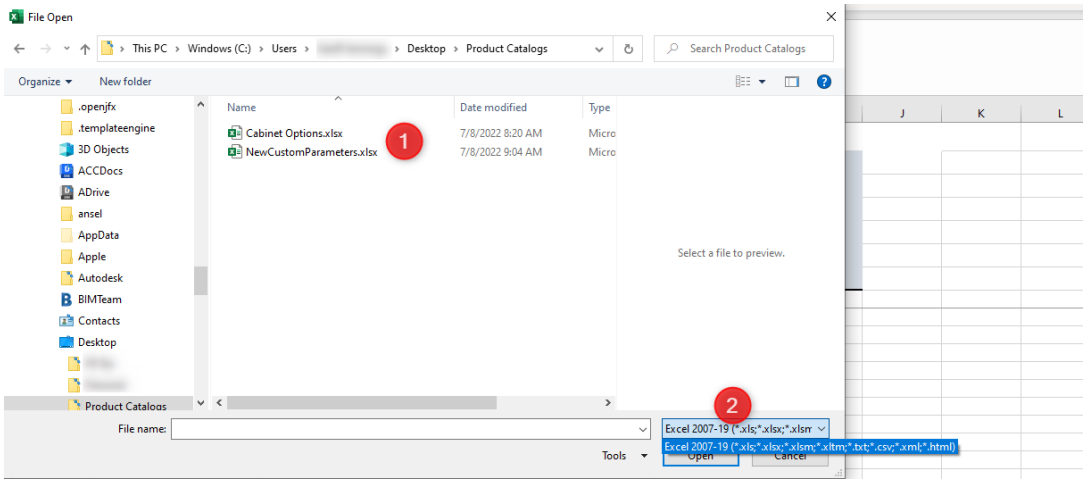
TAB LOCATION



SCRATCH PAD is a central location to store temporary data as you work on Revit families. With Scratch Pad the User can import other Excel files, .cvs, .txt., .xml, .html, and image files into ***FAMILY TYPE MANAGER***. Users can also edit Scratch Pad data, save/export selected data, and quickly clear the workspace. The feature provides many benefits for quick data referencing, Excel functions against the data such as Index Match, VLOOKUP, and linking to external data sources.

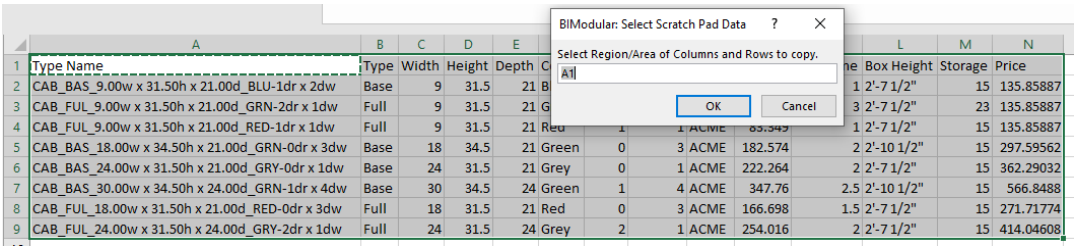
Below are details about each feature within ***FAMILY TYPE MANAGER*** **Scratch Pad** workspace:

5.1 **IMPORT SCRATCH PAD** – Select this button to open a dialog prompt to selecting the data to import.



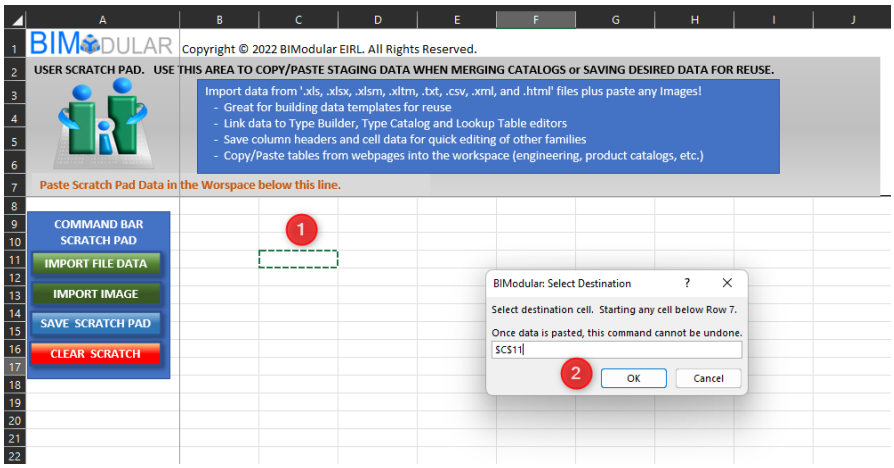
File formats include: .xls, .xlsx, .xlsm, .xltm, .txt, .csv, .xml, and .html

The file will open allowing the User to then select any data they want to import into ***FAMILY TYPE MANAGER***.



Type Name	Type	Width	Height	Depth	C					Box Height	Storage	Price
CAB_BAS_9.00w x 31.50h x 21.00d_BLU-1dr x 2dw	Base	9	31.5	21	B					1 2'-7 1/2"	15	135.85887
CAB_FUL_9.00w x 31.50h x 21.00d_GRN-2dr x 1dw	Full	9	31.5	21	G					3 2'-7 1/2"	23	135.85887
CAB_FUL_9.00w x 31.50h x 21.00d_RED-1dr x 1dw	Full	9	31.5	21	Red	1	1	ACME	83.349	1 2'-7 1/2"	15	135.85887
CAB_BAS_18.00w x 34.50h x 21.00d_GRN-0dr x 3dw	Base	18	34.5	21	Green	0	3	ACME	182.574	2 2'-10 1/2"	15	297.59562
CAB_BAS_24.00w x 31.50h x 21.00d_GRY-0dr x 1dw	Base	24	31.5	21	Grey	0	1	ACME	222.264	2 2'-7 1/2"	15	362.29032
CAB_BAS_30.00w x 34.50h x 24.00d_GRN-1dr x 4dw	Base	30	34.5	24	Green	1	4	ACME	347.76	2.5 2'-10 1/2"	15	566.8488
CAB_FUL_18.00w x 31.50h x 21.00d_RED-0dr x 3dw	Full	18	31.5	21	Red	0	3	ACME	166.698	1.5 2'-7 1/2"	15	271.71774
CAB_FUL_24.00w x 31.50h x 24.00d_GRY-2dr x 1dw	Full	24	31.5	24	Grey	2	1	ACME	254.016	2 2'-7 1/2"	15	414.04608

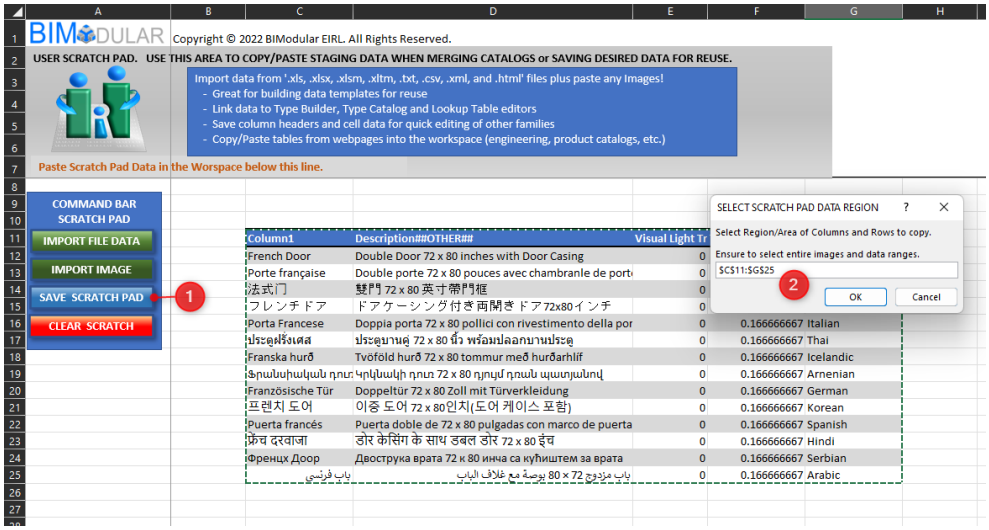
Press 'OK' and the program will return to Scratch Pad with a dialog requesting the User to select the location for placing the copied data.



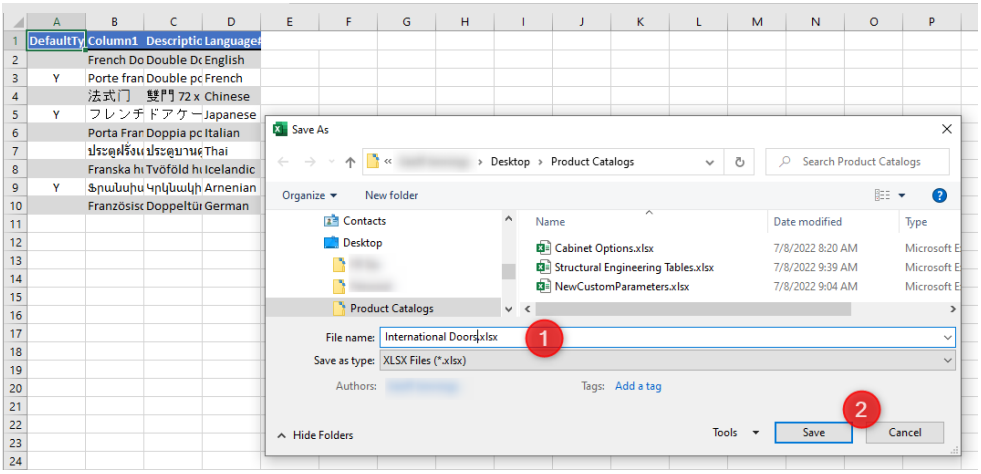
The opened file will then close, and the User can proceed using Scratch Pad pasted data. This process can be repeated many times until all desired data is consolidated and placed into Scratch Pad.

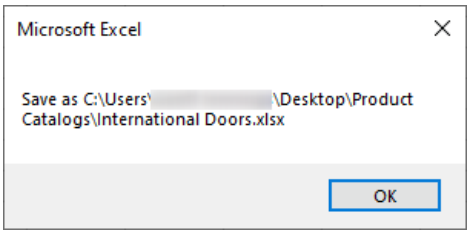
5.2 **IMPORT IMAGE** – To add images into Scratch Pad, click 'IMPORT IMAGE' to select from .JPG, JPEG, .PNG, .GIF, .TIFF, .SVG, and .BMP file formats. Select the cell where to paste the image. After pasting, select the image and resize or move accordingly.

5.3 **SAVE SCRATCH PAD** – If the User wants to save their Scratch Pad work, click the button 'SAVE SCRATCH PAD'. A dialog box will appear asking the User to select the information they want to save. The User then selects the data range (including any images) and presses 'OK'.



A new Excel file will open with the data automatically pasted into the new file. Save the file name.

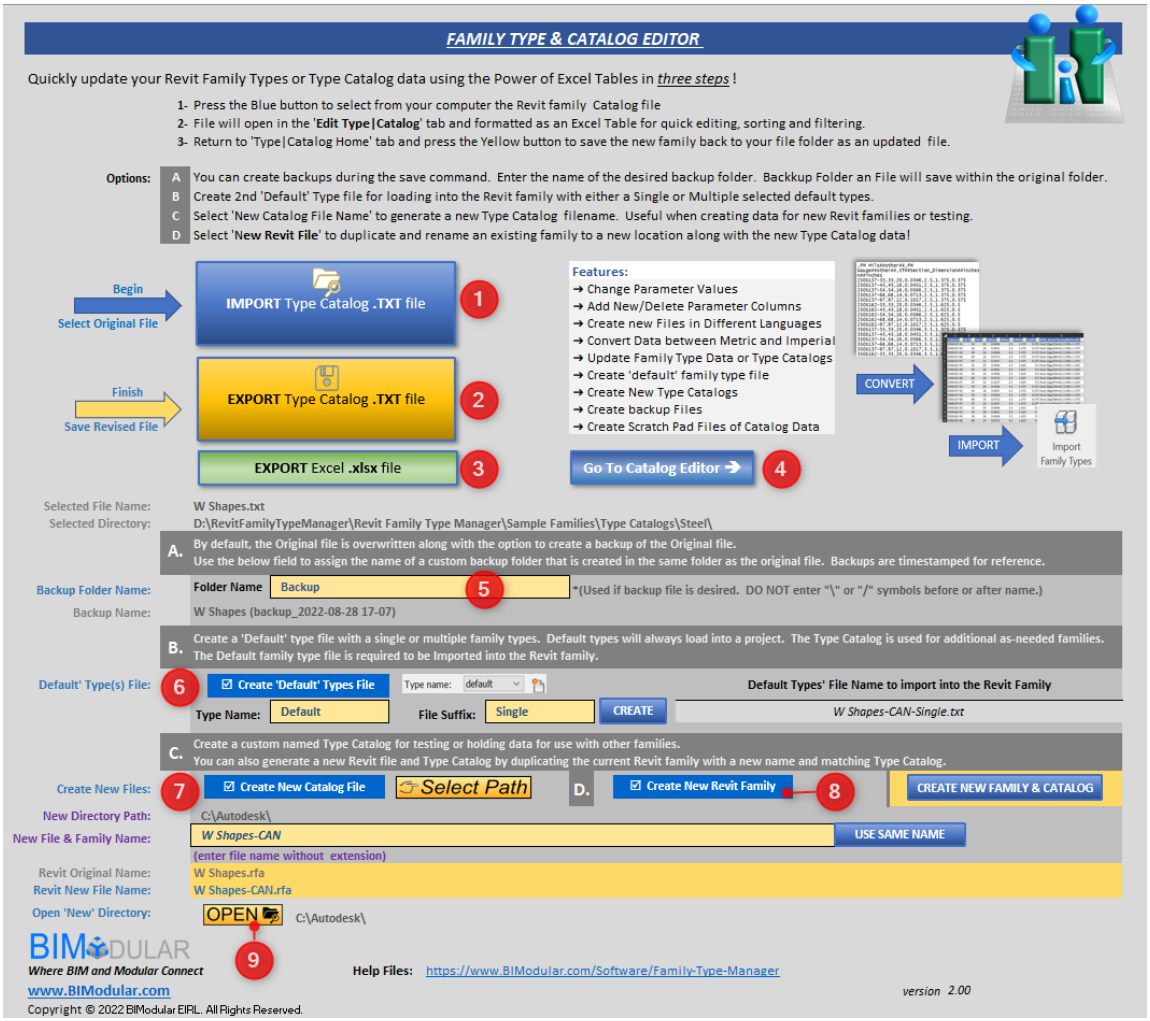




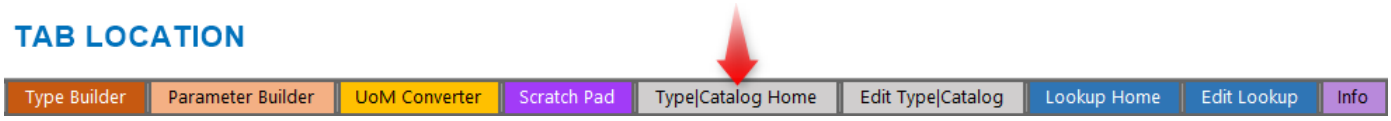
A dialog box appears confirming the file has been saved. The new file will close, and the program will return to ***FAMILY TYPE MANAGER*** Scratch Pad workspace.

5.4 **CLEAR WORKSPACE** – To reset the workspace and clear all existing data, click the button 'CLEAR WORKSPACE'.

SECTION 6 - TYPE|CATALOG HOME SCREEN



TAB LOCATION



TYPE CATALOG EDITOR is the perfect solution to edit Revit family types quickly and efficiently in bulk with the power of Excel. Instead of the cumbersome multi-step and error prone tasks of importing and exporting .txt files between Revit and Excel, **Type Catalog Editor** allows the User to perform all importing and exporting within a few clicks. The .csv data is automatically formatted into an Excel table for quick filtering and multi-level sorting. Users can then update values with Excel formulas, bulk add data, or link to external data sources. The User can add or delete columns and rows, work in any language, any unit of measure, and any international date formats.

Type Catalog editor is more than an editor. It allows the User to generate time stamped backup files, create Default Type Catalogs with a one Family Type or multiple selected Family Types, duplicate Type Catalog files with new names, and duplicate Revit families with a new name and matching Type Catalog. Each command occurs within a matter of seconds.

We also introduce the concept of '**Master Catalog**' files. With Type Catalog Editor, you can have a single Type Catalog file that stores all international data, history tracking, and Type options. Type Catalog Editor allows you to filter the table and only export Type Catalogs based on filtered and sorted data into dedicated Type Catalogs for each of your Revit families! You can also export Default Type Catalogs from each filtered table!

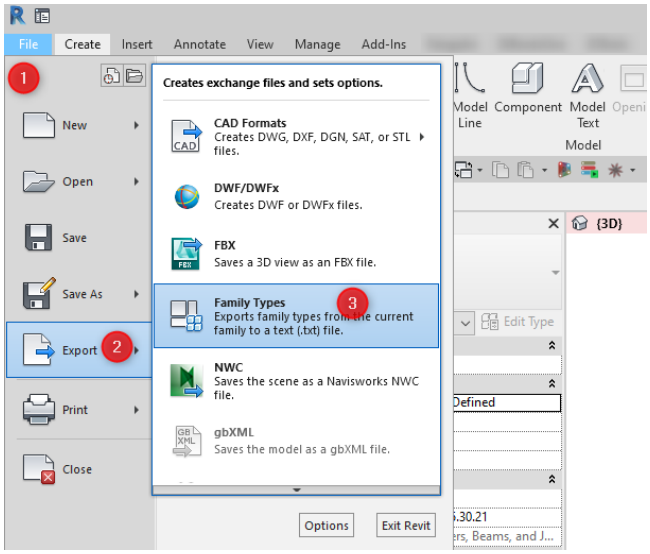
Users also have the ability to create Default Type catalogs

***NOTE**: Revit families have default parameters (i.e., Description, Model, URL). If any family default parameters are to be used in the Type Catalog, at minimum, one Family Type must have values assigned to each of the desired parameters. If the User does not add information prior to exporting the Type Catalog, future Type Catalog imports will fail with an error message. After adding values, save the Revit family. This will register the family default parameters as active in the Revit family internal file. Once values have been added, the User can later import Type Catalog data back into Revit using the Revit Family Editor environment.

The User can either export a Type Catalog from Revit then import the file into ***FAMILY TYPE MANAGER***, or they can create the complete Type Catalog from scratch within ***FAMILY TYPE MANAGER***. It is best practice to create the Revit Family with all desired parameters and parametric features, create one Family Type with sample data, then export the single Type Catalog. When importing the file into ***FAMILY TYPE MANAGER*** all sample data is easily referenced when creating other Family Types.

6.0 CREATING INITIAL TYPE CATALOG FROM REVIT

- Launch Revit and Open or Create desired Family
- Go to *File* → *Export* → *Family Types*
- File will be saved in the same folder as the family with the same name as the family except with a .txt extension
- *** See NOTE** above about adding values to Revit Family default parameters prior to exporting.

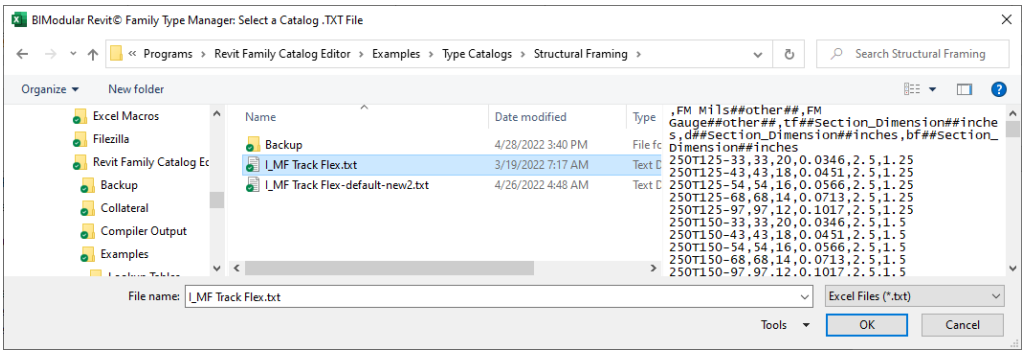


Below are details about each feature within ***FAMILY TYPE MANAGER*** **TYPE|CATALOG HOME Screen**:

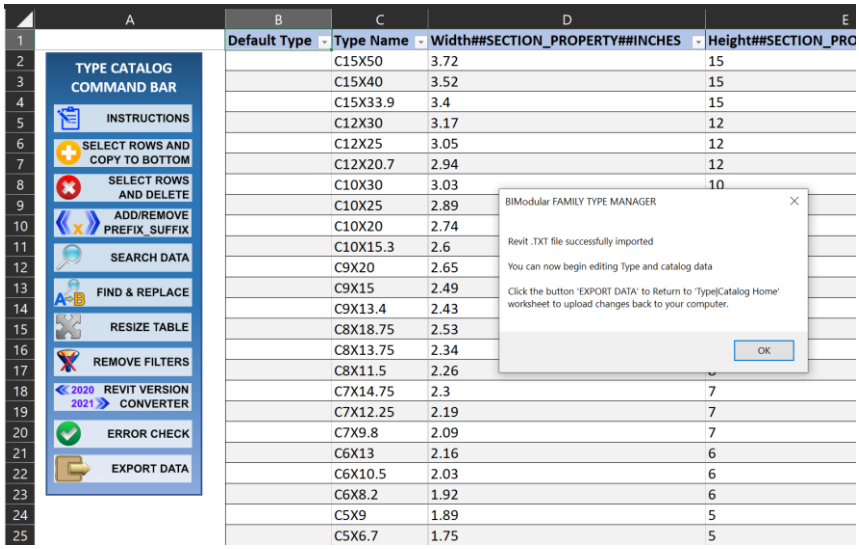
6.1 **IMPORT TYPE CATALOG .TXT FILE** – To import a Revit Type Catalog, the User selects the large blue IMPORT button. A dialog box will open requesting the User to select a Revit .txt Type Catalog file. Once the file is selected, a message will appear notifying the User of successful import and the program will then open the Type Catalog Editor workspace.

Select this button to import the Revit .txt file

A dialog box will appear, requesting the User to select a Revit Type Catalog file.



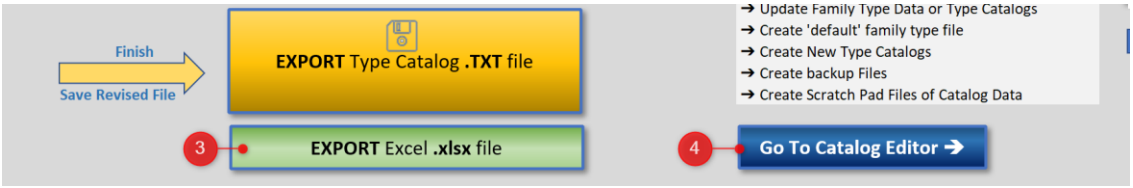
The User will see a temporary Notepad file open on the computer. This is necessary to handle the data conversion of .txt files for international special characters or other formatting conditions of existing data. The Notepad file will close within a few seconds, then ***FAMILY TYPE MANAGER*** will appear with a success message.



Further information about editing Type Catalog data is shown in SECTION 6 - **TYPE|CATALOG EDITOR** Workspace.

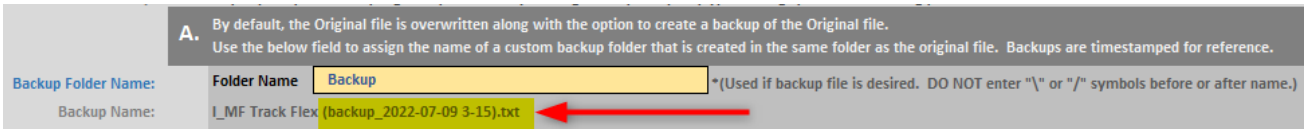
6.2 **EXPORT TYPE CATALOG .TXT FILE** – After all edits have been performed, select the '**EXPORT DATA**' button to return to the TYPE|CATALOG Home screen. From the Home screen the User clicks on the large yellow button to Export the modified Type Catalog data. When exporting data, the User will receive a message box asking if they want to perform a backup of the original file before overwriting the original file occurs. Once export is complete the User receives a confirmation message of export success. The User can then perform edits of additional Type Catalogs.

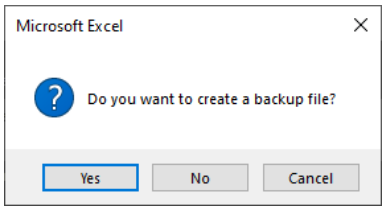
6.3 **EXPORT TO EXCEL FILE** – The User can export the Type Catalog as an Excel file to send to others for their review, approval, or changes. The filtered data is exported. During the export process, the User is asked if they want to include the 'Default Type' column. This method allows for another person to select which items should be part of the Default Catalog. When the Excel file is later returned, the User can copy/paste data back into the Type Catalog Editor then export the revised/final data back to Revit.



6.4 **GO TO CATALOG EDITOR** – This button provides alternate access to the 'Edit Type|Catalog' worksheet.

6.5 **CREATE BACKUP FILE (A)** – During the Export process the User will receive a message box asking if a backup file should be generated. Select 'Yes' to generate a backup folder and backup file. Select 'No' to skip and continue exporting by overwriting the original file. To recover a file, the User can select any backup file with the 'Import' file feature to load the file into ***FAMILY TYPE MANAGER*** then export the file with original name. In Windows Explorer, the User can also rename the backup to the original name then replace original file via copy/paste overwrite command.



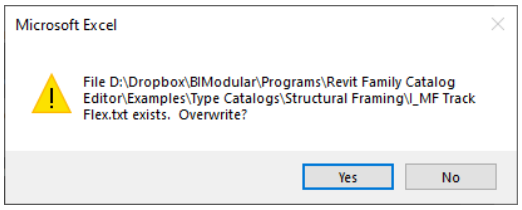


Select '**Yes**' to generate a backup.

Select '**No**' to skip the backup feature

Select '**Cancel**' to terminate the export request.

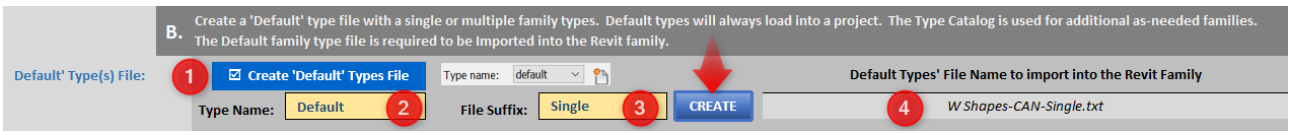
If '**Yes**' is selected, Backup is created in folder with a timestamp suffix name value.



Prior to overwriting the original file, the User will receive a message with '**Yes**' to overwrite the existing file or '**No**' to terminate the operation.

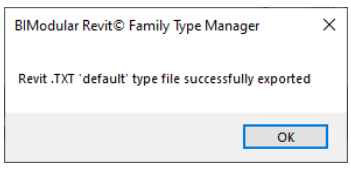
If '**Yes**' is selected the original file will be overwritten. A confirmation message box will appear when overwrite is completed.

6.6 **CREATE DEFAULT FAMILY TYPE(S) (B)** – ***FAMILY TYPE MANAGER*** provides the most efficient way to manage Type Catalog exported files. The User can export a full Type Catalog, along with a secondary 'Default Types' catalog. The Default Types catalog can be one Family Type or multiple selected Types. Since Type Catalogs are used for families with many Types, it is best to minimize how many families are loaded into a project model. The User can checkbox 'Generate default Types File' and provide a name for the one default Family Type name. The User also needs to enter a suffix value for the new Default Type file name.



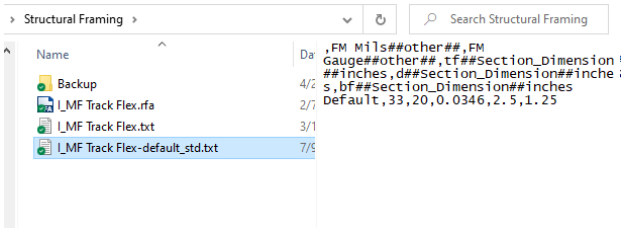
STEPS: Select '**Create Default Types File'** checkbox, enter name of the new single Default Type, enter the suffix name for the new Default Type file, then press the '**Create**' button. A preview of the file name is show to the right side of the Create button.

After exporting, a success message will show.



Up to Four (4) files will now be in the Revit family folder.

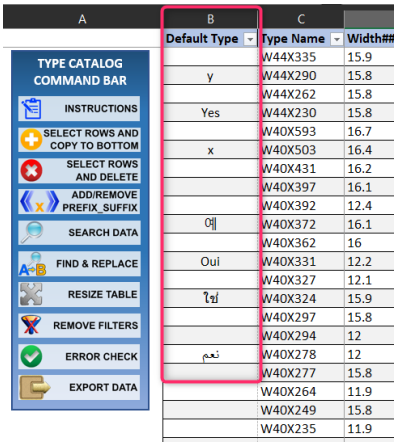
1- The "Backup" Folder with the original Type Catalog file
2- The Revit Family .rfa file
3- The new Type Catalog with all family Types
4- The Default Types Catalog with only a single or selected families to be loaded back into the Revit family.



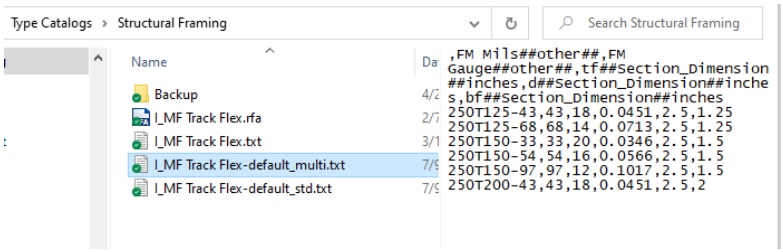
Creating a Default Types File with multiple selected Family Types:

FAMILY TYPE MANAGER looks in the 'Default Type' column so see if values exist for each row of data. The value can be in any character or language format that is easiest for the User.

The program will then generate a Default Type catalog with the selected rows.

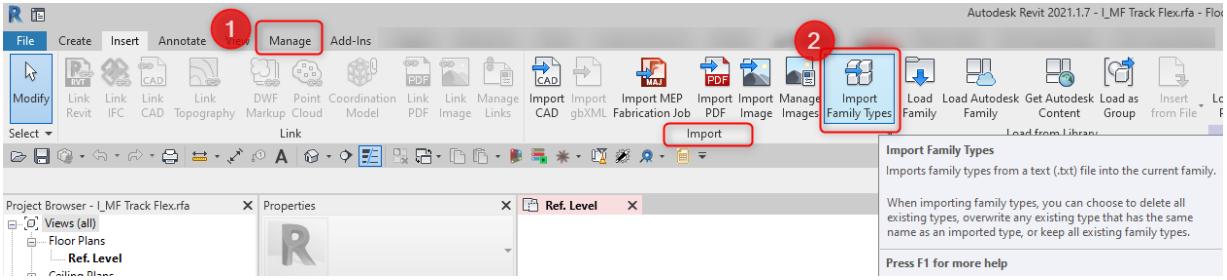


The folder now has a Default Types file that has the six (6) selected default family types.

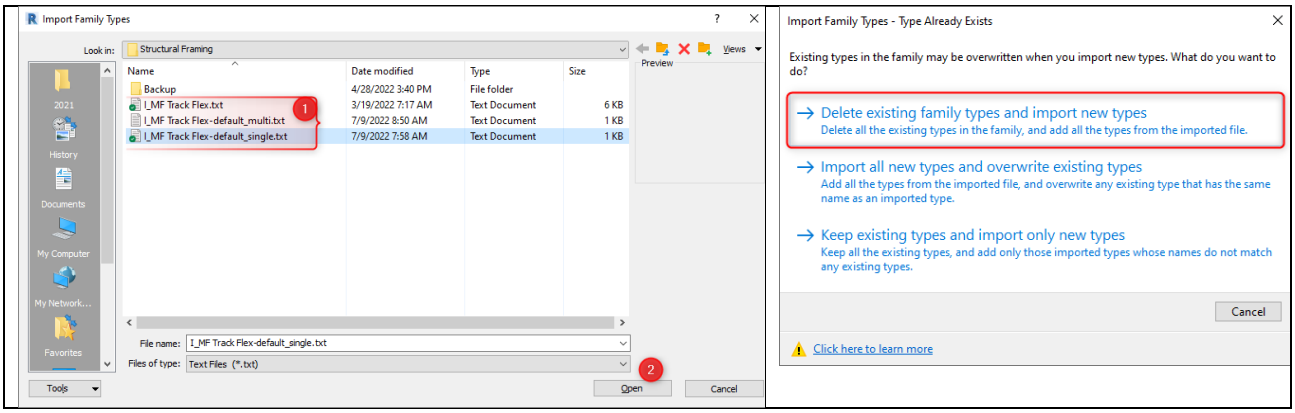


Loading the Type Catalogs into the Revit Family:

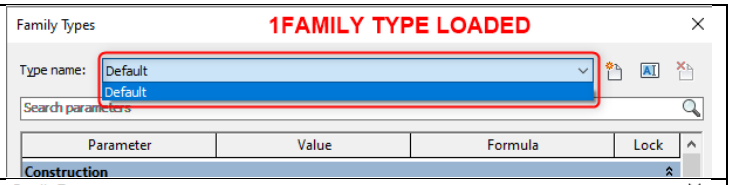
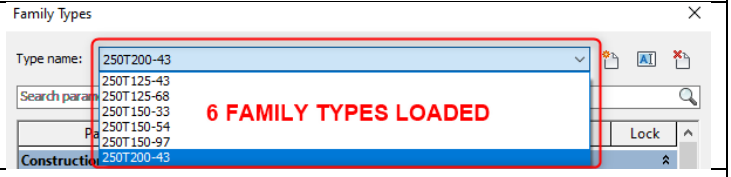
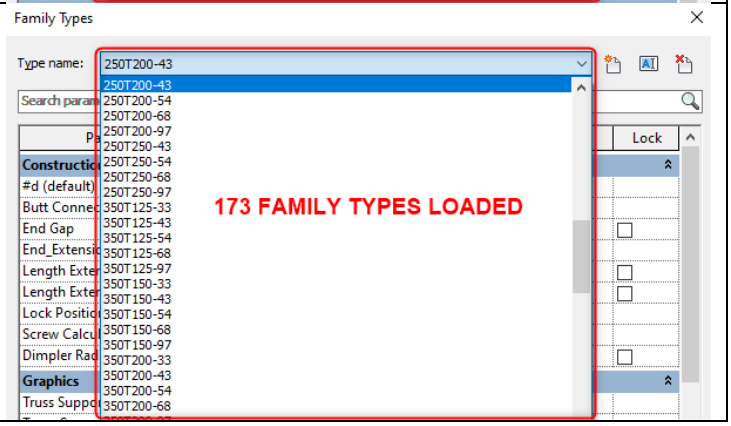
In Revit, Open the family then click on the 'Manage' tab. In the Ribbon under the 'Import' panel, select "Import Family Types".



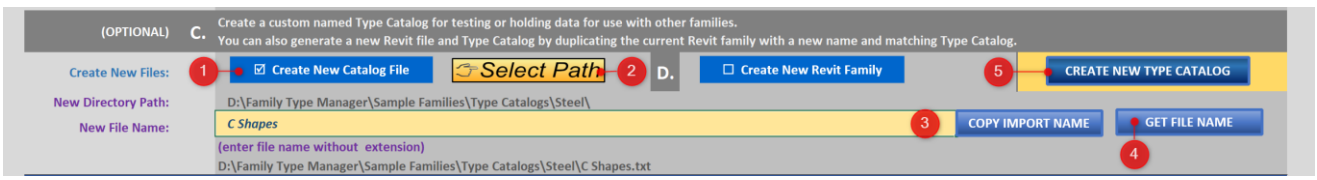
Revit will open a window to select the Type Catalog to import into the Revit Family. In this example, we with pick the Default Type Catalog with suffix '_single.txt'. Press the 'Open' button to load the file.



Revit will give the User three options for how to handle the Type Catalog import. In this example we will use the first option: "**Delete existing family types and import new types**". See below the results of loading all three Type Catalogs generated by ***FAMILY TYPE MANAGER***.

Revit Family with **Single** Default Loaded I_MF Track Flex-default_single.txt	
Revit Family with **Multiple** Default Types Loaded I_MF Track Flex-default_multi.txt	
Revit Family with **complete** Type Catalog Loaded I_MF Track Flex.rfa I_MF Track Flex.txt	

6.7 **CREATE NEW TYPE CATALOG FILE (C)** – When creating and editing Type Catalogs, the User can easily use a Type Catalog from another family, change the necessary data, then save the modified file with a new name that matches another existing Revit family. For example, a company has many identical Revit families each dedicated with different manufacturer data. With ***FAMILY TYPE MANAGER***, the User can select the master Type Catalog file, make manufacturer updates, filter the table, export the file with the family name, then filter or modify the Master Type Catalog file again for the next manufacturer, then repeat the process until all families are updated.



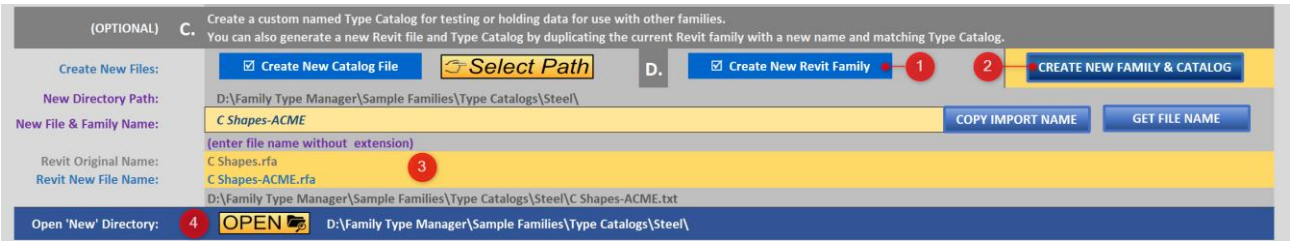
STEPS: Select 'New Catalog File Name' checkbox, select the File Path for writing new files, provide a file name, then press the '**CREATE NEW TYPE CATALOG**' button. The User can either manually type the name, or use the 'Copy Import Name' button (#3) to transfer the name then make changes. The User can also click the 'Get File Name' button (#4) to open a Windows dialog to select another Revit file to write the Type Catalog.

6.8 **DUPLICATE NEW REVIT FAMILY** – With ***FAMILY TYPE MANAGER*** the User can easily duplicate an Existing Revit Family with a new name and a matching Type Catalog based upon the latest edited Type Catalog data.

For example, the User opens the Type Catalog of a Revit furniture family, changes the data to another manufacturer, and then provides a name for the new Revit family. The original Revit family will be duplicated and renamed with the new name and an associated Type Catalog with the revised manufacturer data.

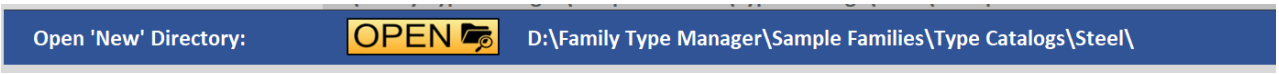
In the example below, a USA Door family was edited then renamed 'German Doors' with related German information. The User simply selects '**CREATE NEW FAMILY & CATALOG**' and both files are created instantaneously.

Below are the steps for creating a new Type Catalog with duplicated and renamed Revit Family:

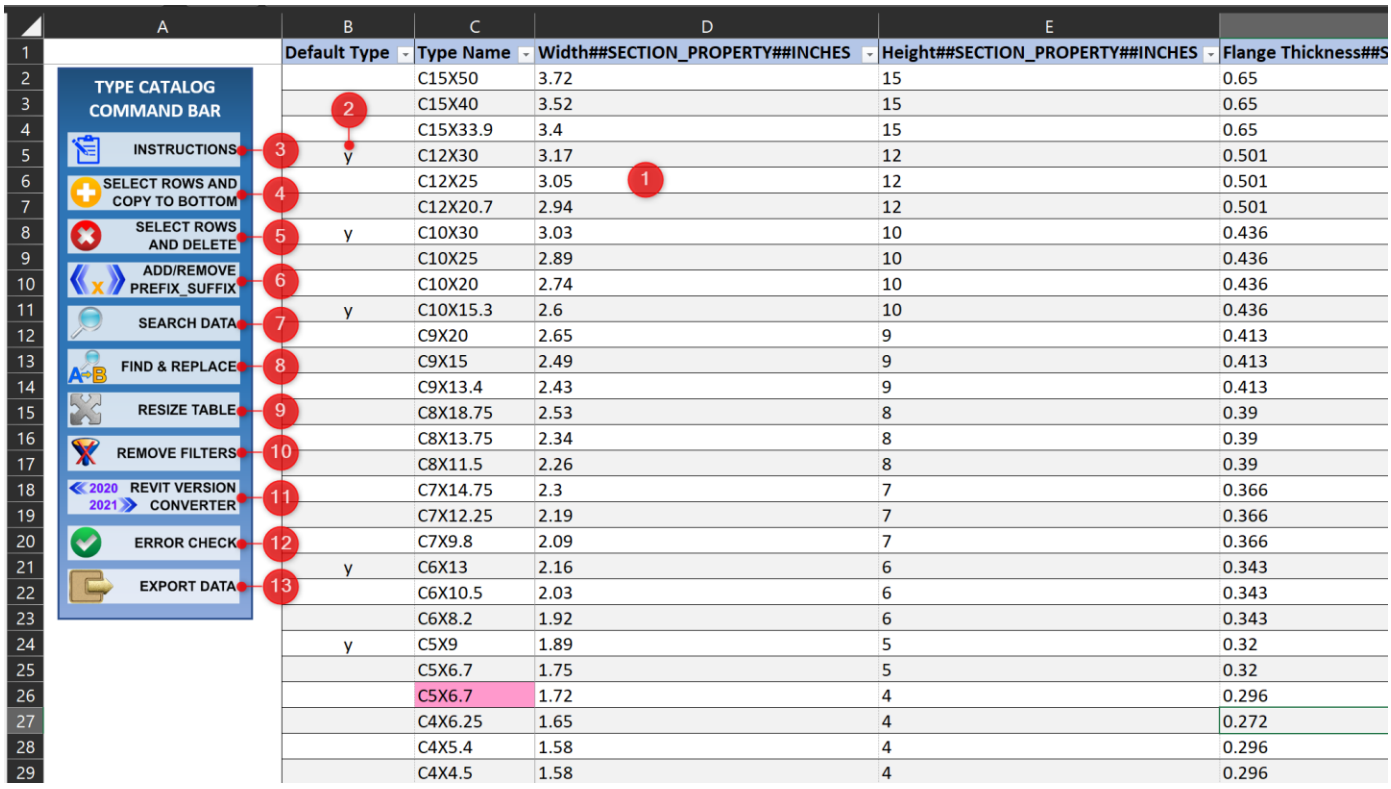


STEPS: Select '**Create New Revit Family**' checkbox. The New Revit file name will appear below (#3) along with the previously selected file path. Click '**CREATE NEW FAMILY & CATALOG**' button. A message will appear confirming that the new files have been saved.

6.9 **OPEN CATALOG FILE LOCATION** – After a file has been exported, the User can select the 'Open' button and the computer will open a Windows Explorer screen with the files shown.

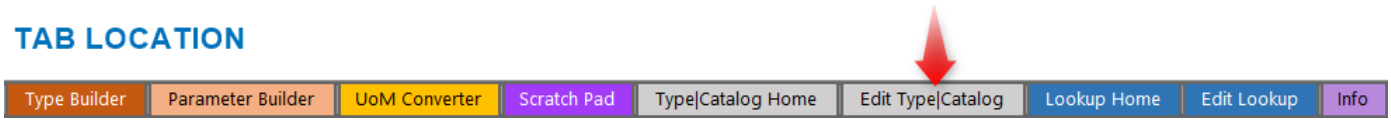


SECTION 7 - TYPE|CATALOG EDITOR



Default Type	Type Name	Width##SECTION_PROPERTY##INCHES	Height##SECTION_PROPERTY##INCHES	Flange Thickness##S
	C15X50	3.72	15	0.65
	C15X40	3.52	15	0.65
	C15X33.9	3.4	15	0.65
y	C12X30	3.17	12	0.501
	C12X25	3.05	12	0.501
	C12X20.7	2.94	12	0.501
y	C10X30	3.03	10	0.436
	C10X25	2.89	10	0.436
	C10X20	2.74	10	0.436
y	C10X15.3	2.6	10	0.436
	C9X20	2.65	9	0.413
	C9X15	2.49	9	0.413
	C9X13.4	2.43	9	0.413
	C8X18.75	2.53	8	0.39
	C8X13.75	2.34	8	0.39
	C8X11.5	2.26	8	0.39
	C7X14.75	2.3	7	0.366
	C7X12.25	2.19	7	0.366
	C7X9.8	2.09	7	0.366
y	C6X13	2.16	6	0.343
	C6X10.5	2.03	6	0.343
	C6X8.2	1.92	6	0.343
y	C5X9	1.89	5	0.32
	C5X6.7	1.75	5	0.32
	C5X6.7	1.72	4	0.296
	C4X6.25	1.65	4	0.272
	C4X5.4	1.58	4	0.296
	C4X4.5	1.58	4	0.296

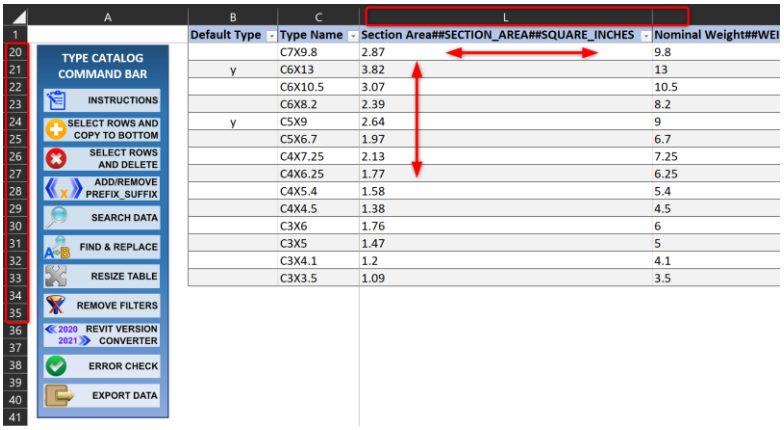
TAB LOCATION



TYPE|CATALOG EDITOR WORKSPACE is opened as soon as the imported .txt file has been loaded into ***FAMILY TYPE MANAGER***. This workspace provides the User with all the necessary tools to quickly edit or create new Family Types or Type Catalog .txt files.

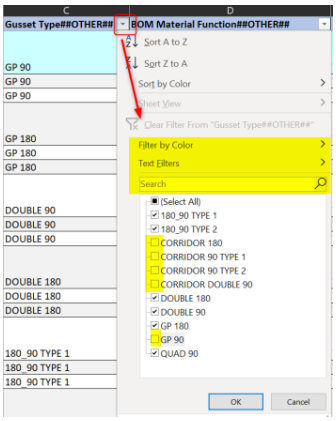
Below are details about each feature within ***FAMILY TYPE MANAGER*** **EDIT TYPE|CATALOG**

7.1 **EDIT TYPE|CATALOG WORKSPACE** - This is the main User workspace for editing Type Catalog and Family data. By default, the top row and column C are frozen. As the User scrolls right or downward the data remains fixed on the screen. This allows the User to easily track what row and column they are working on. To further assist the User, the 'COMMAND BAR' will move as the user scrolls down the worksheet. Any duplicate Type Names will be automatically highlighted as shown above (see 'C5X6.7' Type Name).



Default Type	Type Name	Section Area##SECTION_AREA##SQUARE_INCHES	Nominal Weight##WEI
	C7X9.8	2.87	9.8
y	C6X13	3.82	13
	C6X10.5	3.07	10.5
	C6X8.2	2.39	8.2
y	C5X9	2.64	9
	C5X6.7	1.97	6.7
	C4X7.25	2.13	7.25
	C4X6.25	1.77	6.25
	C4X5.4	1.58	5.4
	C4X4.5	1.38	4.5
	C3X6	1.76	6
	C3X5	1.47	5
	C3X4.1	1.2	4.1
	C3X3.5	1.09	3.5

a. **FILTERING:** The User can filter all rows to easily drill down to relevant data.



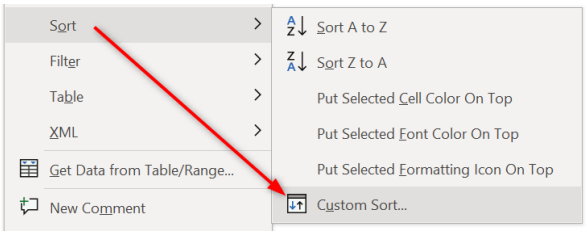
Select the arrow at the right side of the column header.

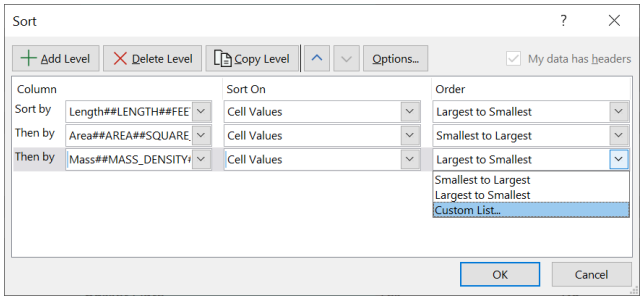
The drop-down menu will provide the User with options for ways to filter the table information.

This process is repeated for each column the User wants to filter.

The command bar on the left of the workspace has a button to remove all existing filters with one click.

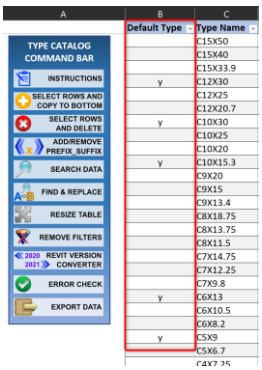
b. **SORTING**: The User can sort the table by column or perform Excel multi-column sorting. Right click on the column header, in the shortcut menu → go to *Sort*, select a Sort option, or choose '*Custom Sort*'. In '*Custom Sort*' the User can then perform multi-level sorting. Once the file has been sorted, this structure will remain when the data is exported from ***FAMILY TYPE MANAGER***!



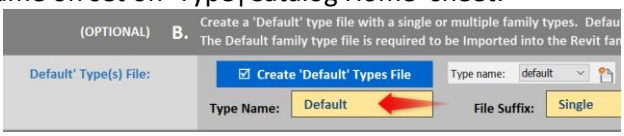


Example with three columns custom sorted.

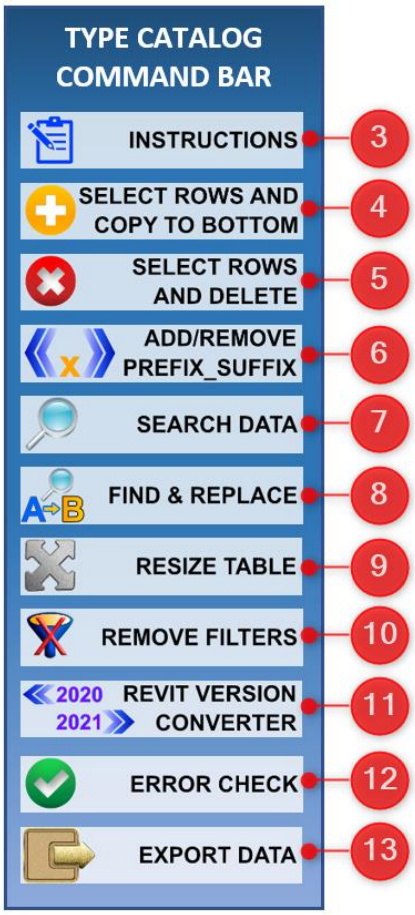
7.2 **DEFAULT TYPES** – The [Default Type] data column allows the User to select which rows of data should be included in the Revit Family as a default type. The User can leave all values blank and export only a single default type catalog. The User can place any character values in the [Default Type] column and each row with a mark will be included in the Types dropdown list for the Revit family. See SECTION 6.6 for exporting Default Type Catalogs and importing the .txt Catalogs into the Revit family.



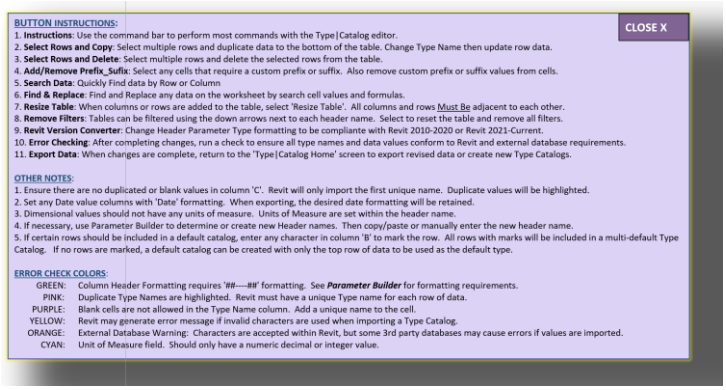
Markers can be in any language, any character(s) or numbers. ***FAMILY TYPE MANAGER*** only looks if value exists in the cell. The program then selects the marked rows for export.
If no items are marked, then only the top row is exported and named the given name on set on 'Type|Catalog Home' sheet.



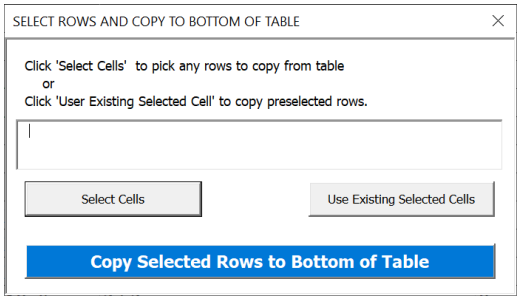
COMMAND BAR



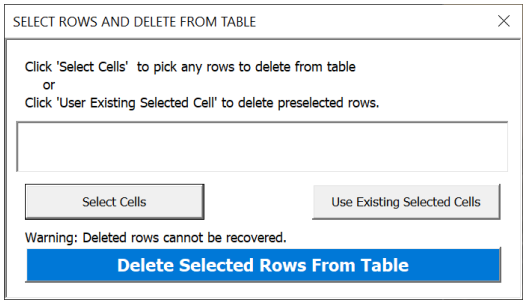
7.3 **INSTRUCTIONS** will pop up on the screen to present all Command Bar features and any Type Catalog editing notices



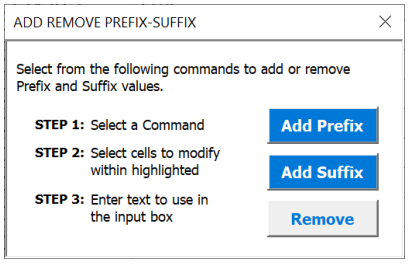
7.4 **SELECT AND COPY TABLE ROWS** copies selected rows to the bottom of the table. The User can then modify the copied row data. The User can also start entering any data in the first empty row or column and the table will expand to include the new area.

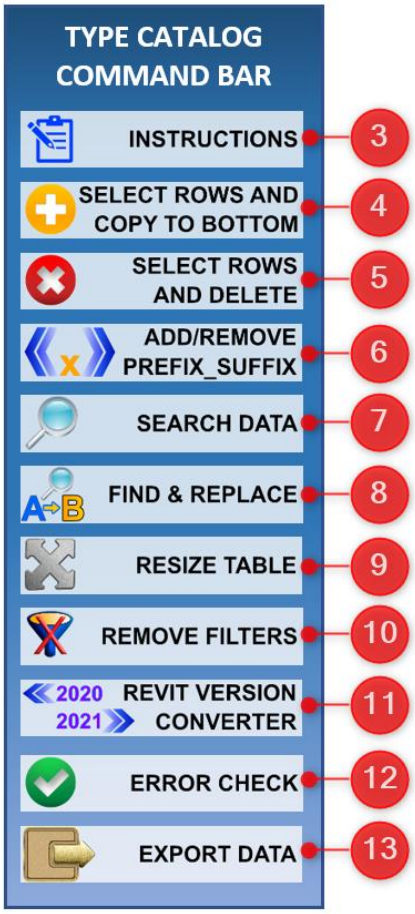


7.5 **SELECT TABLE ROWS TO DELETE** deletes all selected rows during data editing. A Warning message will appear for the User to confirm the delete command. *Once rows are deleted the command CANNOT be undone.

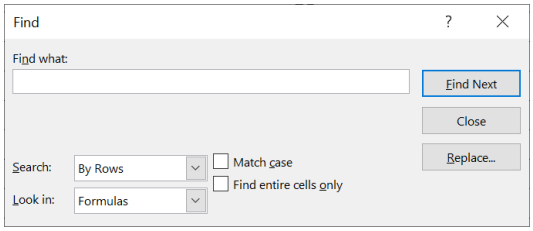


7.6 **ADD/REMOVE PREFIX/SUFFIX** allow the User to easily add custom Prefix or Suffix values to any selected cells. The same process is also used to remove Prefix or Suffix values from any selected cells.

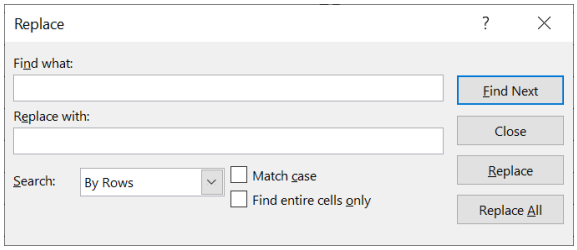




7.7 **SEARCH DATA** finds all data in the table based upon search selected region, rows, or columns. User can search by formula, value, notes, or comments. Search is performed by rows or columns. User can select to match case, partial value, or exact value.

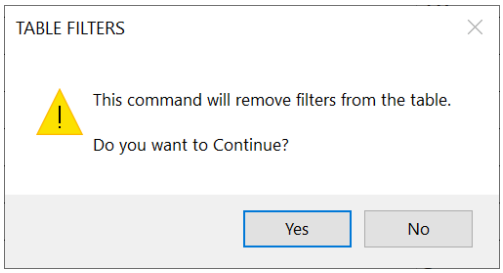


7.8 **FIND & REPLACE** finds each or all instances of a value in the table and changes the cells to the new value. The feature performs find and replaces by rows or columns. Search can be for any alphanumeric characters in the cell or within a formula. Search by partial value, full string, and matching by character case. Replace cell on individual basis or replace all.

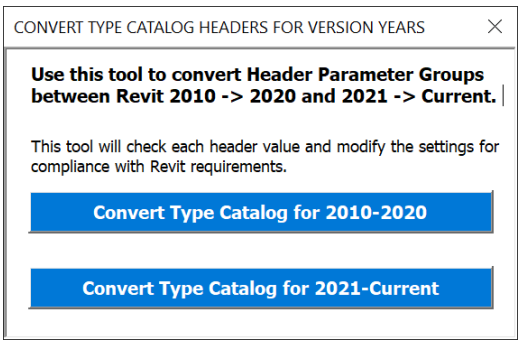


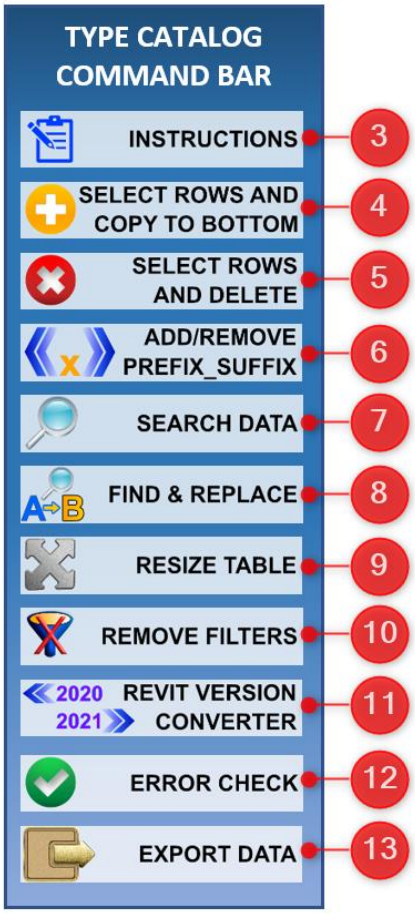
7.9 **RESIZE CATALOG TABLE** will ensure the table is resized prior to exporting the data. By default, the table will resize when the User adds new rows and columns.

7.10 **REMOVE TABLE FILTERS** removes all filters from the workspace table.

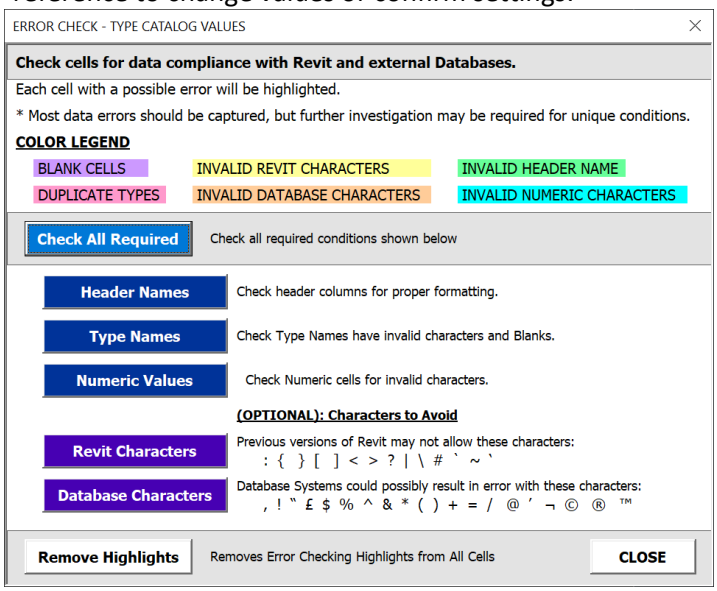


7.11 **REVIT VERSION CONVERTER** will automatically change Header Parameter formatting for Revit 2010-2020 or Revit 2021-Current.



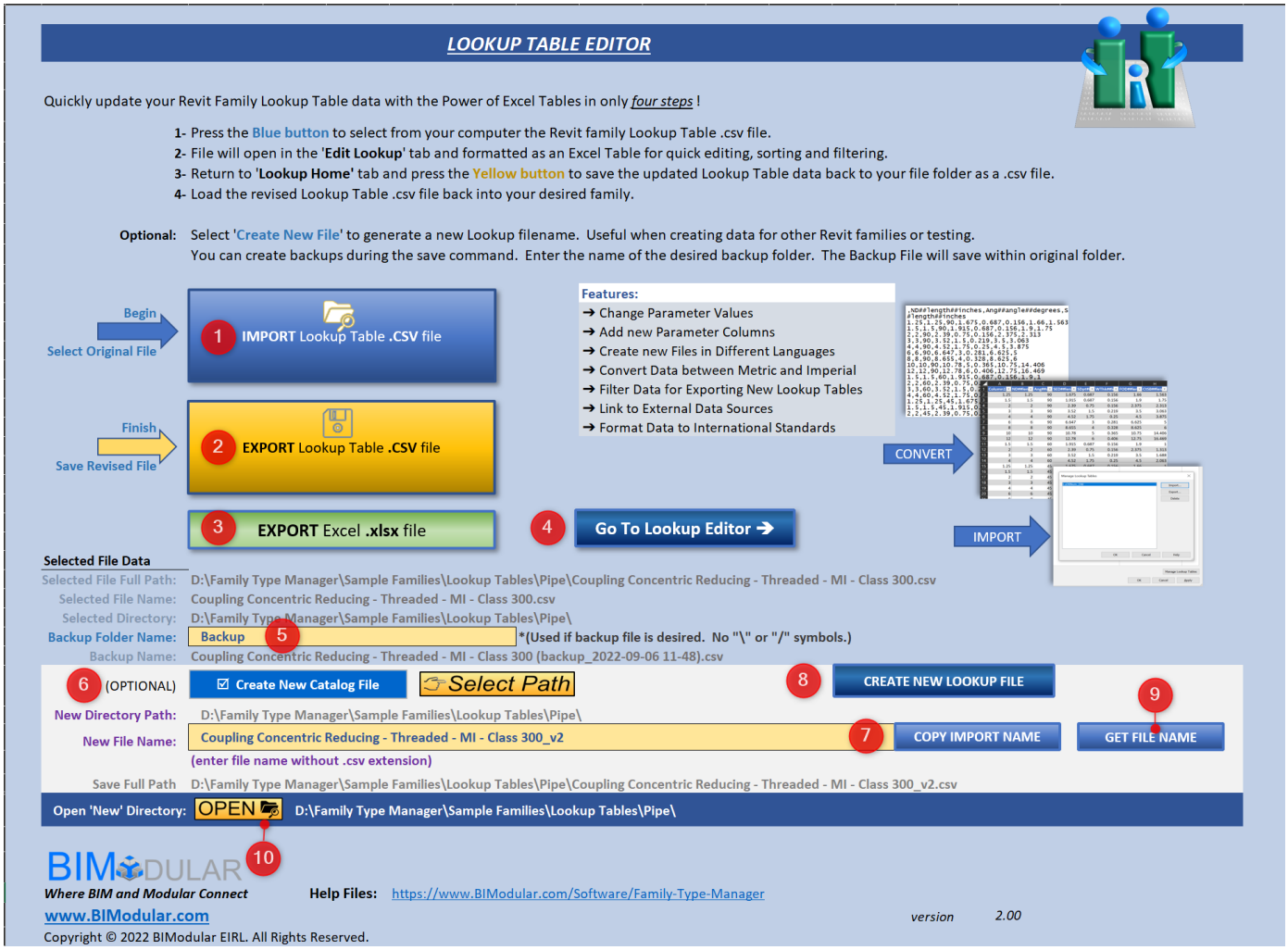


7.12 **ERROR CHECK** will launch a dialog to allow the user to automatically check all Header names, Type Names, Numeric Values, and any possible Revit or Database invalid characters. All concern items are highlighted for easily reference to change values or confirm settings.

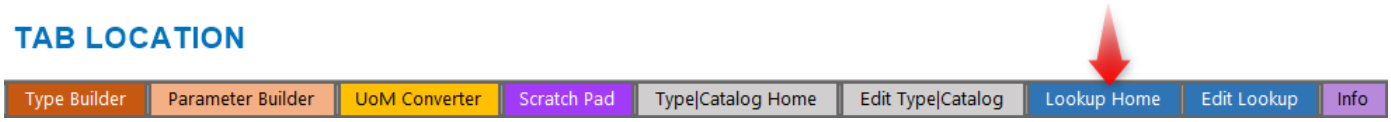


7.13 **EXPORT TYPE CATALOG FILE** returns the User back to the 'TYPE|CATALOG Home' Screen to perform export options.

SECTION 8 - LOOKUP TABLE HOME SCREEN



TAB LOCATION



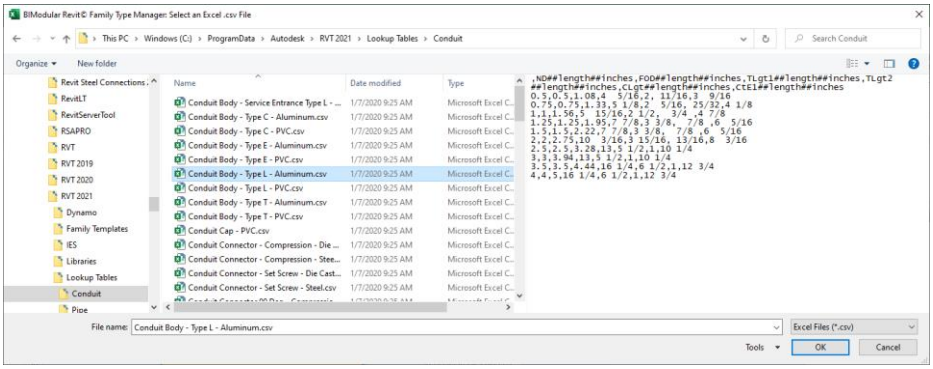
LOOKUP TABLE Editor is one of the most efficient ways to update Revit Lookup Table data.

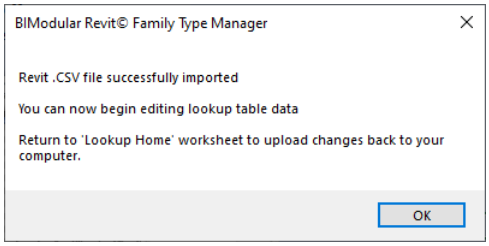
Below are details about each feature within ***FAMILY TYPE MANAGER*** **LOOKUP HOME** screen:

8.1 **IMPORT LOOKUP TABLE .CSV FILE** – To import a Revit Lookup Table, the User selects the large blue IMPORT button. A dialog box will open requesting the User to select a .csv Revit Lookup Table. Once the file is selected, a message will appear notifying the User of successful import and the program will then activate the Lookup Table Editor workspace.

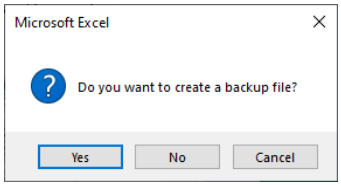
Select this button to import the Revit Lookup Table .CSV file

A dialog box will open, requesting the User to select a Revit Lookup Table file.

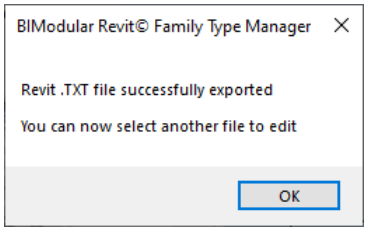




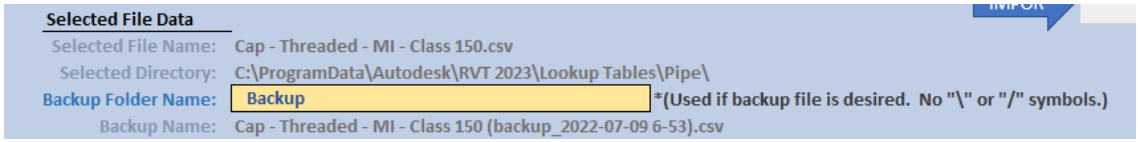
8.2 **EXPORT LOOKUP TABLE .CSV FILE** – When exporting a revised Lookup Table, ***FAMILY TYPE MANAGER*** will ask the User if they want to perform a backup. Select 'Yes' or 'No'. (Backup details SECTION 7.3 below).



After selecting the backup option, the file will overwrite the original file and provide the User with a confirmation screen. The application will then return to the Lookup Table Home page.

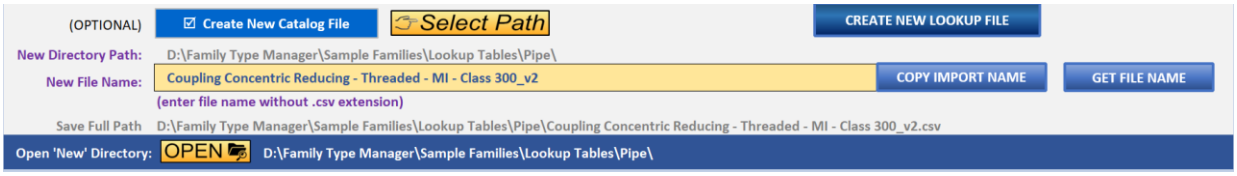


8.3 **CREATE BACKUP FILE** – Prior to exporting the revised data Lookup Table, the User must establish a backup folder name to store the backup files. This can be in any language or standards normal to the User. Each backup will receive a suffix string containing '("backup"_year-month-day-hour-minute)'. This method allows the User to quickly reference the file location and which version they may want to recover. To recover a file, the User can select any backup file with the 'Import' file feature to load the file into ***FAMILY TYPE MANAGER*** then export the file with original name. In Windows Explorer, the User can also rename the backup to the original name then replace original file via copy/paste overwrite command.



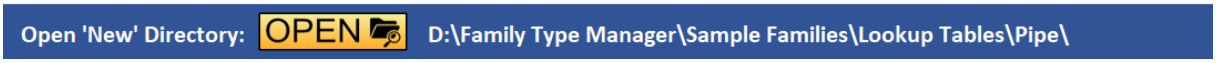
8.4 **CREATE NEW LOOKUP FILE** – If the Users requires a new Lookup Table, the User can import any Lookup table they need, make edits to the file, then click the 'CREATE NEW LOOKUP FILE' button. Select the folder

path where the new file is to be stored, then provide a new name for the Lookup Table without the .csv extension. The feature allows the User to quickly select a Lookup Table, change company or product related information within Excel, then export the file back out as a Lookup Table to use with other Revit families. The User can also generate a Lookup Table from scratch and use **PARAMETER BUILDER** (SECTION 3) to assist in created all column header names.

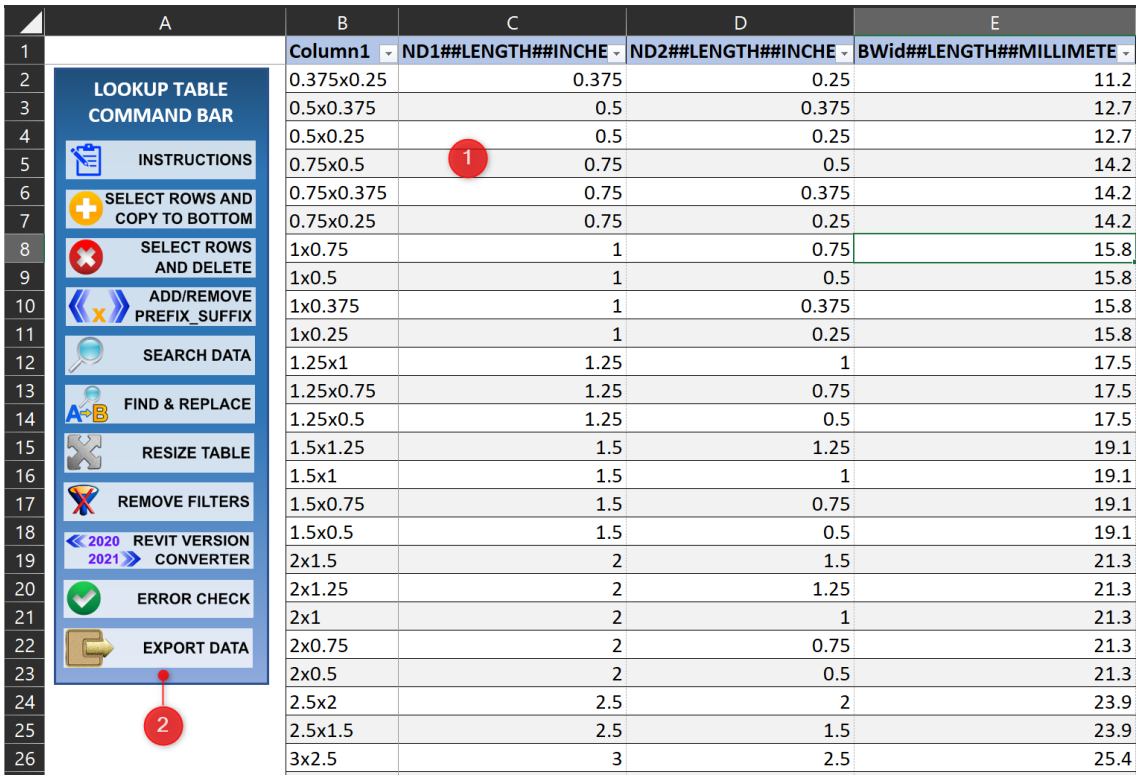


To minimize the time and risks with entry of the New File Name, click either the 'COPY IMPORT NAME' button to copy the original file name then modify the name. Or the User can click 'GET FILE NAME' to open a Windows Dialog screen and select an existing Lookup Table file on their computer.

8.5 **OPEN LOOKUP FILE LOCATION** – After a file has been exported, the User can select the 'Open' button and the computer will open a Windows Explorer screen with the files shown. The location automatically updates based upon active user selections. By default the location references the imported file location. If a User decides to create a new catalog file, the location will update to the new export location.

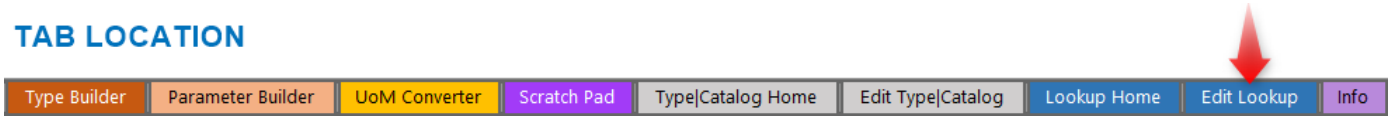


SECTION 9 - LOOKUP TABLE EDITOR



	Column1	ND1##LENGTH##INCHE	ND2##LENGTH##INCHE	BWid##LENGTH##MILLIMETE
2	0.375x0.25	0.375	0.25	11.2
3	0.5x0.375	0.5	0.375	12.7
4	0.5x0.25	0.5	0.25	12.7
5	0.75x0.5	0.75	0.5	14.2
6	0.75x0.375	0.75	0.375	14.2
7	0.75x0.25	0.75	0.25	14.2
8	1x0.75	1	0.75	15.8
9	1x0.5	1	0.5	15.8
10	1x0.375	1	0.375	15.8
11	1x0.25	1	0.25	15.8
12	1.25x1	1.25	1	17.5
13	1.25x0.75	1.25	0.75	17.5
14	1.25x0.5	1.25	0.5	17.5
15	1.5x1.25	1.5	1.25	19.1
16	1.5x1	1.5	1	19.1
17	1.5x0.75	1.5	0.75	19.1
18	1.5x0.5	1.5	0.5	19.1
19	2x1.5	2	1.5	21.3
20	2x1.25	2	1.25	21.3
21	2x1	2	1	21.3
22	2x0.75	2	0.75	21.3
23	2x0.5	2	0.5	21.3
24	2.5x2	2.5	2	23.9
25	2.5x1.5	2.5	1.5	23.9
26	3x2.5	3	2.5	25.4

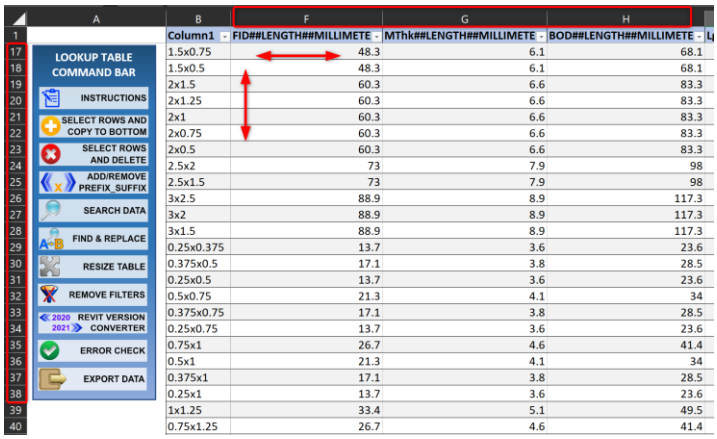
TAB LOCATION



LOOKUP TABLE EDITOR WORKSPACE is opened as soon as the imported .txt file has been loaded into ***FAMILY TYPE MANAGER***. This workspace provides the User with all the necessary tools to quickly edit or create new Lookup Table .txt files.

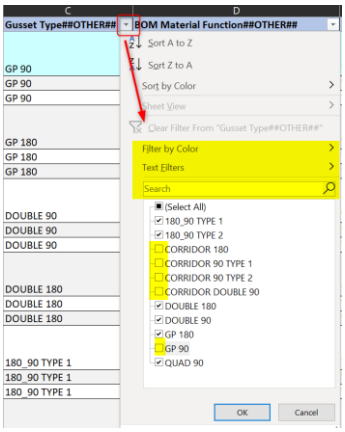
Below are details about each feature within ***FAMILY TYPE MANAGER*** **EDIT LOOKUP** screen**:**

9.1 **LOOKUP TABLE EDITOR WORKSPACE** - This is the main User workspace for editing Lookup Table data. By default, the top row and column B are frozen. As the User scrolls right or downward the data remains fixed on the screen. To further assist the User, the Command Bar moves up and down as the User scrolls vertically in the worksheet.



Column1	FID##LENGTH##MILLIMETE	MThk##LENGTH##MILLIMETE	BOD##LENGTH##MILLIMETE
1.5x0.75	48.3	6.1	68.1
1.5x0.5	48.3	6.1	68.1
2x1.5	60.3	6.6	83.3
2x1.25	60.3	6.6	83.3
2x1	60.3	6.6	83.3
2x0.75	60.3	6.6	83.3
2x0.5	60.3	6.6	83.3
2.5x2	73	7.9	98
2.5x1.5	73	7.9	98
3x2.5	88.9	8.9	117.3
3x2	88.9	8.9	117.3
3x1.5	88.9	8.9	117.3
0.25x0.375	13.7	3.6	23.6
0.375x0.5	17.1	3.8	28.5
0.25x0.5	13.7	3.6	23.6
0.5x0.75	21.3	4.1	34
0.375x0.75	17.1	3.8	28.5
0.25x0.75	13.7	3.6	23.6
0.75x1	26.7	4.6	41.4
0.5x1	21.3	4.1	34
0.375x1	17.1	3.8	28.5
0.25x1	13.7	3.6	23.6
1x1.25	33.4	5.1	49.5
0.75x1.25	26.7	4.6	41.4

a. **FILTERING:** The User can filter all rows to easily drill down to relevant data.



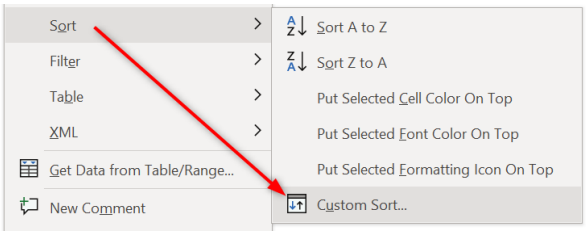
Select the arrow at the right side of the column header.

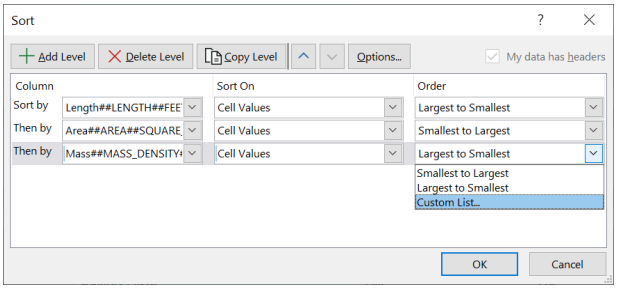
The drop-down menu will provide the User with options for ways to filter the table information.

This process is repeated for each column the User wants to filter.

The command bar on the left of the workspace has a button to remove all existing filters with one click.

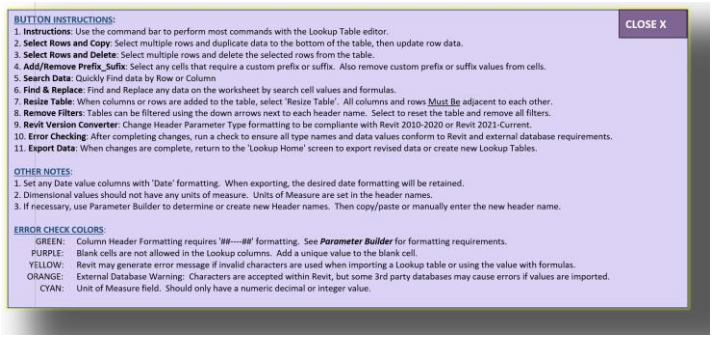
b. **SORTING**: The User can sort the table by column or perform Excel multi-column sorting. Right click on the column header, in the shortcut menu → go to *Sort*, select a Sort option, or choose '*Custom Sort*'. In '*Custom Sort*' the User can then perform multi-level sorting. Once the file has been sorted, this structure will remain when the data is exported from ***FAMILY TYPE MANAGER***!





Example with three columns custom sorted.

9.2 **INSTRUCTIONS** will pop up on the screen to present all Command Bar features and any Lookup Table editing notices



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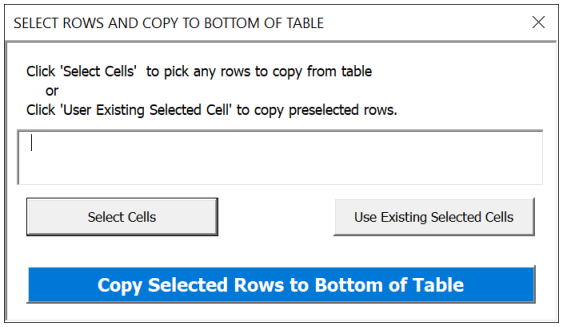
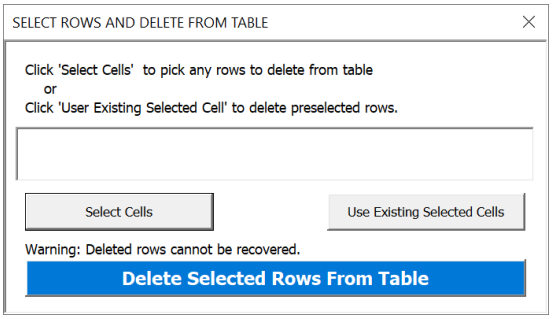


9.4 **SELECT AND DELETE TABLE ROWS** removes all selected rows during data editing. A Warning message will appear for the User to confirm the delete command. *Once rows are deleted the command CANNOT be undone.



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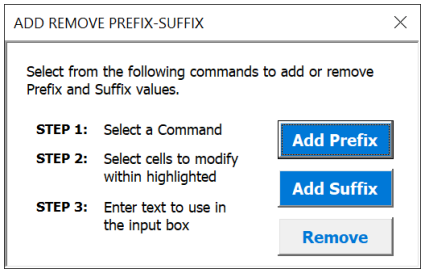

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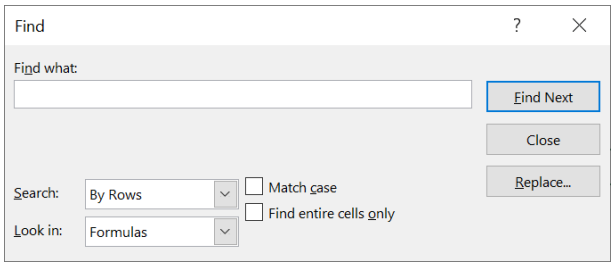

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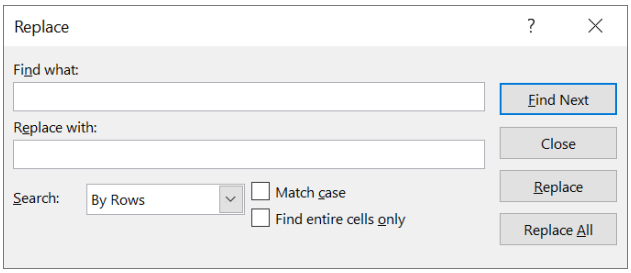

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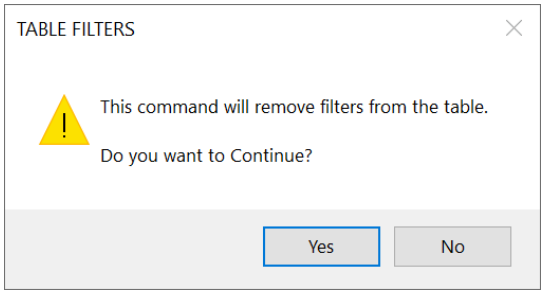

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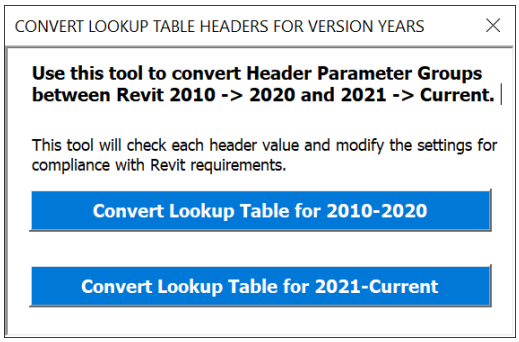
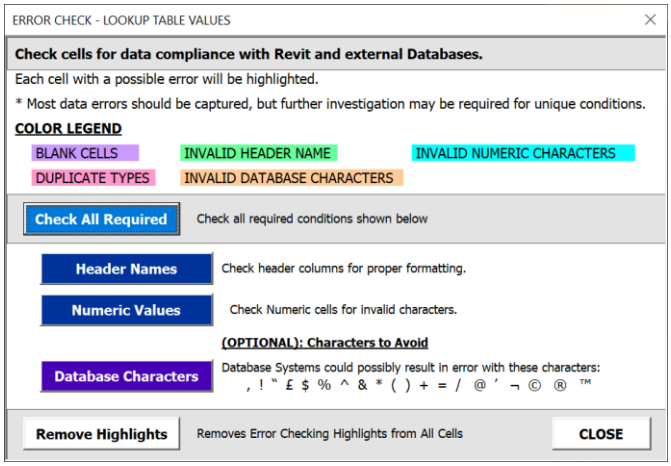
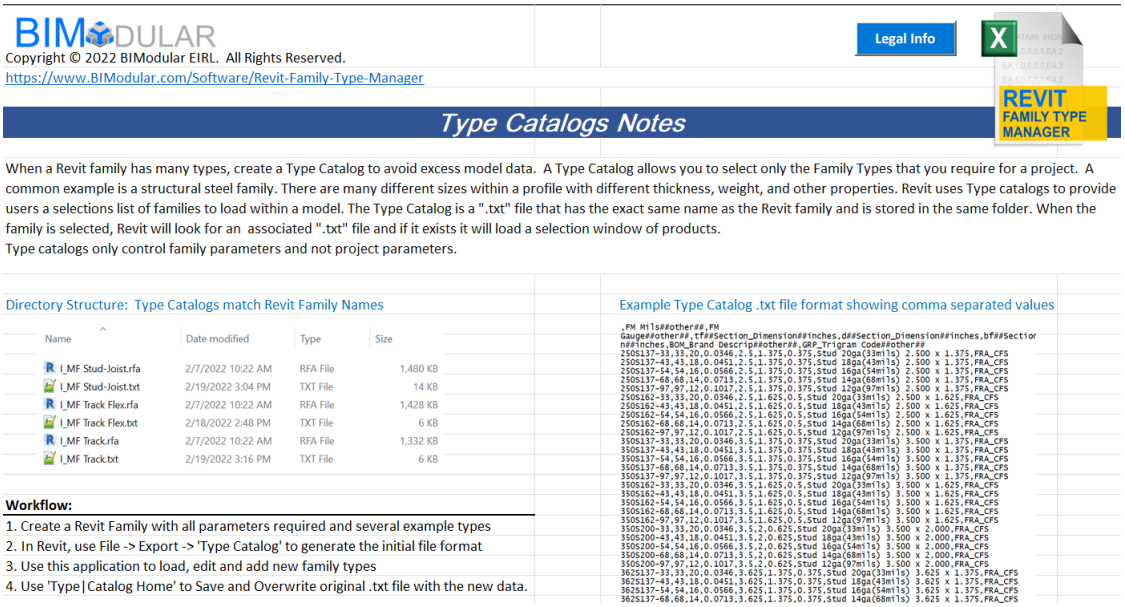


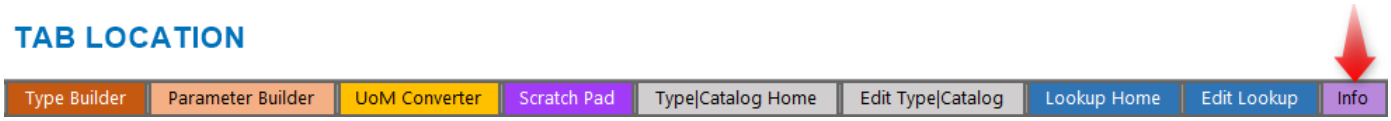
9.11 **ERROR CHECK** will launch a dialog to allow the user to automatically check all Header names, Type Names, Numeric Values, and any possible Revit or Database invalid characters. All concern items are highlighted for easily reference to change values or confirm settings.



9.12 **EXPORT LOOKUP DATA** returns the User back to the 'Lookup Home' Screen to perform export options.

SECTION 10 - INFORMATION WORKSHEET





THE **INFORMATION SCREEN** provides Users with additional information about Revit Type Catalogs and Lookup Tables. The page covers data structures, data requirements, and general rules for working with these Revit features.

Below are details about each feature within ***FAMILY TYPE MANAGER*** **INFO** screen**:**

10.1 **REVIT TYPE CATALOGS INFORMATION** - Covers Revit Requirements and How-To instructions

Autodesk Type Catalog help webpage: https://knowledge.autodesk.com/support/revit/learn-explore/caas/CloudHelp/cloudhelp/2018/ENU/Revit-Customize/files/GUID-FFA71D72-D4C5-416D-BF65-1757657C3CE9-htm.html

10.2 **REVIT LOOKUP TABLES INFORMATION** - Covers Revit Requirements and How-To instructions

Autodesk Lookup Table help webpage: https://knowledge.autodesk.com/support/revit/learn-explore/caas/CloudHelp/cloudhelp/2018/ENU/Revit-Customize/files/GUID-91270AEF-225A-49D7-BF84-1F44D1E3E216-htm.html

10.3 **MICROSOFT EXCEL KNOWLEDGE BASE** – Links to Microsoft Support Documents

10.3.1 **Microsoft Excel Data Tables**: A guide to understanding Excel tables and overall features. https://support.microsoft.com/en-us/office/overview-of-excel-tables-7ab0bb7d-3a9e-4b56-a3c9-6c94334e492c

10.3.2 **Microsoft Excel Formula Functions**: List of all Excel functions with examples and videos. https://support.microsoft.com/en-us/office/excel-functions-alphabetical-b3944572-255d-4efb-bb96-c6d90033e188

10.3.3 **Resolving Excel Warning and Error Messages**: Links to Microsoft support pages to resolve warning message or actions that my temporarily limit the full features of ***FAMILY TYPE MANAGER***.

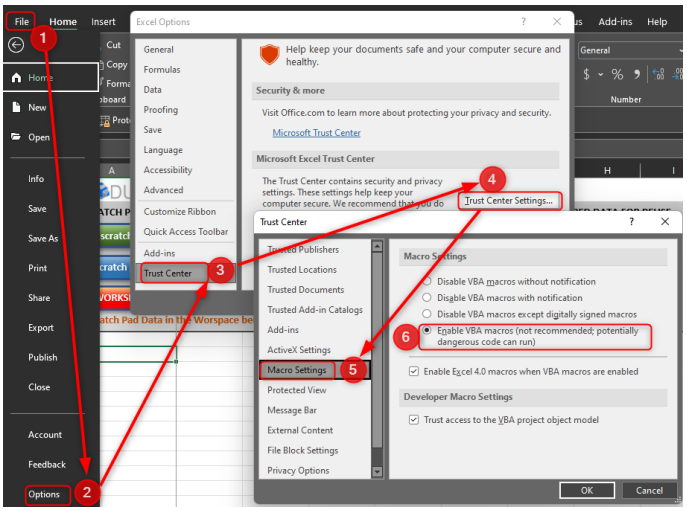
Trusting Excel Macros when activating program: https://support.microsoft.com/en-us/office/macros-in-office-files-12b036fd-d140-4e74-b45e-16fed1a7e5c6

Suspicious Websites Warning if linking to external data sources: https://support.microsoft.com/en-us/office/enable-or-disable-security-alerts-about-links-and-files-from-suspicious-websites-a1ac6ae9-5c4a-4eb3-b3f8-143336039bbe

10.3.4 **ENABLE MACROS WARNING**: FAMILY TYPE MANAGER uses Excel VBA macros extensively to automate the core tasks of the application. To enable macros on your device approve the use of macros with FAMILY TYPE MANAGER. To turn off future warning with the file, perform the following steps:

Trust Center Macro Settings

1. Select File > Options> Trust Center.
2. Click the Trust Center Settings button.
3. Select Macro Settings from the menu.
4. Check Enable All Macros, then click OK.



Yes, Excel says this is not recommended, because dangerous code can potentially run. And this is true, if you download macros from the Internet, from another person's system, or pick up a macro virus somewhere else. But if you run your own macros only, and protect your system from malware, running dangerous code is unlikely.

If this option makes you uncomfortable, choose one of the other three options, then continue to click the 'Enable Content' button below the ribbon bar when the macro workbook opens.

Note: The Change Macro settings in the Trust Center affect only the current program.

CHANGE LOG

Below is a list of all major changes associated with Family Type Manager

Version	Date	Category	Description
1.00	2022-03-15	Type Catalog Editor	Updated general commands and formatting of .txt files for importing and exporting
		Lookup Table Editor	Updated general commands and formatting of .csv files for importing and exporting
2.00	2022-09-07	Type Builder	Release of New Feature to create up to 1 million custom Revit Family Types within seconds with Type Name rules engine, custom columns, and exporting of data.
		Parameter Builder	Release of New Feature to quickly build all 740 Revit Parameter Header names in any language and for any version of Revit.
		Unit of Measure Converter	Release of New Feature to bulk convert up to 5 million values between imperial and metric units of measure for use in marketing collateral, Type Catalog conversions, Lookup Table conversions, and external business needs.
		Scratch Pad	Release of New Feature to manage all documentation related to Revit Families. External files and images can be imported, modified used for Revit family data updating, then saved for future use.
		Information	Release of Information worksheet to provide users with more detail for Revit requirements of working with Type Catalog and Lookup Tables.
		Type Catalog Home	Added the ability to generate single Default Type Catalogs, multi-default Type catalogs, creation of new concept called Master Type Catalogs, create catalogs for other families, backup files option, duplicate and rename Revit .rfa family files, quick access buttons to transfer file names, and export Type Catalogs as Excel files.
		Type Catalog Editor	Added Command Bar to manage copying and deleting of rows, adding and removing prefix/suffix values to cells, find and replace features, resize table, remove filters, convert Type Catalogs between Revit 2010-2020 and Revit 2021-to-current, robust Error Checking of: Type Names, Header Names, Numeric values, and possible invalid characters for Revit and Databases, and added an information tab to provide information on each Command Bar feature.
		Lookup Table Home	Added the ability to generate new Lookup Tables file names, backup files option, quick access buttons to transfer file names, and export Lookup Tables as Excel files.
		Lookup Table Editor	Added Command Bar to manage copying and deleting of rows, adding and removing prefix/suffix values to cells, find and replace features, resize table, remove filters, convert Lookup Tables between Revit 2010-2020 and Revit 2021-to-current, robust Error Checking of: Header Names, Numeric values, and possible invalid characters for Revit and Databases, and added an information tab to provide information on each Command Bar feature.