

Mini Property Equations Add-In

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Mini-PE is an add-in that allows you to create parametric formulas in Custom Properties that access Parameters and other Properties. The formula is evaluated during a document update and the results are displayed in a companion Property.

Add-In features include:

- Supports Multiple Parameters/Properties in formula.
- Allows formatting of numeric values in Parameters.
 - Feet/Inch (“Architectural”) w/configurable precision.
 - Fractional w/configurable precision.
 - Fixed decimal w/configurable precision.
 - Unformatted
- Updates performed automatically without user intervention.
- User-configurable Property prefix. (to identify format Properties)
- User can disable processing without unloading/uninstalling add-in.
- User, Model, Table Driven, Reference and Derived Parameters are supported.
- Custom Properties are supported.

Add-In Operation

The add-in searches for specifically named Custom Properties during updates in Assembly and Part documents. The add-in requires 2 Properties for correct operation: a Property to hold the results of the evaluated equation (e.g. “PARTDESC”), and a companion Property to contain the formula. This companion Property name must include the name of the results Property name along with the add-in Property Prefix (e.g. “MPE_PARTDESC”). The default prefix string is “MPE_”, however, the user can change this to any required prefix.

Format Conventions

When evaluating Property formulas, Mini-PE recognizes to special delimiters: “[]” Square Brackets to denote a Parameter, and “{ }” Curved Brackets to denote a Property. Text that appears outside these delimiters is copied into the results property verbatim.

Parameter Format (All values are required)

[Parametername:FormatPrecision]

[Leading Parameter Delimiter
Parametername	The name of the desired Inventor document Parameter. This is case sensitive as are all Inventor Parameters.
:	Colon. Required delimiter.
FormatPrecision	A 2 character format code followed by a number indicating the desired precision
]	Trailing Parameter Delimiter

The supported Format codes are:

UF Unformatted. A precision is not required. If it is included, it is ignored.

DFprecision Decimal. The precision indicates the maximum number of decimal places displayed. Trailing zeros are not added.

FIprecision Feet/Inch (Architectural). The precision denotes the lowest denominator of the fraction. Fraction denominators will be rounded up (e.g. 1/8" will displayed instead of 2/16" or 1/4" will be displayed instead of 4/16")

FRprecision Fractional. The precision denotes the lowest denominator of the fraction. Fraction denominators will be rounded up (e.g. 1/8" will displayed instead of 2/16" or 1/4" will be displayed instead of 4/16")

Examples of Parameter Formats

Given a Parameter named **Example** with a value of **26.125 inches**.

[Example:FI16] evaluates to **2'-2 1/8"**

[Example:FR16] evaluates to **26 1/8"**

[Example:DF2] evaluates to **26.12**

[Example:UF2] evaluates to **26.125**

Notes on Parameter Units

The current list of internal Parameter nits supported is as follows:

mm – millimeters

cm – centimeters

m – meters

in – inches

ft – feet

radians

degrees

grads

ul – unitless

If other formats are used, they will be returned in the Internal Format of that unit within the inventor database. For more on these units, see the Inventor help files.

Property Format

{Propertyname}

{	Leading Property Delimiter
Propertyname	The name of the desired Inventor document Property. This is case sensitive as are all Inventor Properties.
}	Trailing Property Delimiter

Currently only Custom Parameters are supported. There is no formatting supported as Properties are generally text based.

Examples of Property Formulas and Results

Given the following (using the default prefix string of “**MPE_**”:
Parameter named **Width** with a value of **26.125 inches**.
Parameter named **Length** with a value of **52.564 inches**.
Parameter named **Thickness** with a value of **.3125 inches**.
Property named **PARTNAME** with a value of **PLATE**.

Example 1:

A Property named **MPE_PARTDESC** that contains the fomula:

{PARTNAME} – [Thickness:FR16] X [Width:FR16] X [Length:FR16]

will result in a Property named **PARTDESC** containing the value:

PLATE – 5/16” X 26 1/8” X 52 9/16”

Example 2:

A Property named **MPE_BOMDESC** that contains the fomula:

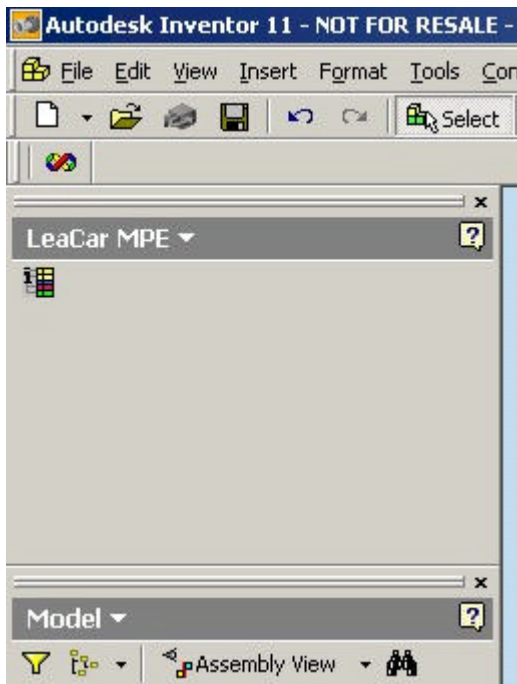
BAR [Thickness:FD2] X [Width:FD1] X [Length:FD1]

will result in a Property named **BOMDESC** containing the value:

BAR .31 X 26.1 X 52.6

User Options and Configuration

When installed, the add-in creates a Panel Bar menu named **LeaCar MPE**.



Click the icon to bring up the Mini-PE configuration dialog.



Property PREFIX: (Default Setting shown) This is the Property Search Prefix used by the add-in. Please note that only the current setting is used for Property Searches. If you change the value, older Property sets with an older prefix will be ignored.

Enable Automatic UPDATE Processing: (Default Setting Shown) Un-checking this option disables processing of Property formulas.

About: Displays information about the add-in, including version information.

Exit: Exits the configuration dialog.

Support, Feature Requests and Contact Information

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