

Insulation Tools: Insulation Export



Programmed Result of Tool:

Insulation Export allows users to take their Revit model and export insulation pieces to a file that is formatted to be compatible with automation machinery. The exported file contains information about the insulation, such as its outline, cutouts, recesses, pin locations, and more.

Steps to Perform Tool Operation:

1. Select the Insulation Export tool under the Insulation drop-down.
2. If the user does not pre-select the desired assembly elements prior to clicking the Insulation Export tool, the user will be required to select one or more assembly elements and click the "Finish" button that is in the Revit options bar.
3. Confirm the export folder path, file name suffix, and file formats within the displayed window.
4. Select Export.
5. Files for each assembly instance will be saved a folder within the selected folder path named: *Project Number* - *Project Name*
 - a. The Project Number will be pulled from the Project Number parameter in the Project Information within Revit.
 - b. The Project Name will be pulled from the Project Name parameter in the Project Information within Revit.

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Expected Interactions:

- Different aspects of the Revit assembly will be saved to layers defined in the CAD Export Settings within the exported DWG/DXF file as follows:
 - Insulation
 - This will define the outline of each piece of insulation
 - Cutouts and Recesses
 - This will represent cutouts and recesses within the insulation
 - Pins
 - A circle will represent each pin
 - Slots
 - A line will represent each slot
 - Extra Ties
 - A diamond will be placed around each pin/slot that has the Extra Ties parameter checked
 - Mark Symbol
 - This represents a circle around the insulation's mark
 - Mark Text
 - This shows the insulation's INSULATION_MARK parameter value
- The layer names and colors will be defined and assigned to the different aspects within the CAD Export Settings tool.
- Certain aspects of the insulation can be disabled and not exported in the CAD Export Settings as well.
- The export folder path, file suffix, and file format set in the Insulation Export window will auto populate with the same settings as the last successful export within that document during the current Revit session. If the user has not exported an assembly from the document in the current Revit session the default settings set in the CAD Export Settings tool will be displayed upon opening the window.

Expected interactions:

- Before running the Insulation Export tool on an assembly, it is important to run either the Top as Cast Tool or Match Top as Cast Tool first because the assembly origin of the piece will drive how the information about the assembly gets exported.
- In the exported file, the insulation pieces will be exploded outward from the center of the grouping of insulation within the assembly.

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Known Limitations:

- To qualify as “insulation”, the element must conform to the following rules:
 - Belong to the Specialty Equipment or Generic Models categories
 - Have a MANUFACTURE_COMPONENT value that contains the term INSULATION
- To qualify as a “pin”, the element must conform to the following rules:
 - Belong to the Specialty Equipment or Generic Models categories
 - Have a MANUFACTURE_COMPONENT value that contains the term PIN
- To qualify as a “slot”, the element must conform to the following rules:
 - Belong to the Specialty Equipment or Generic Models categories
 - Have a MANUFACTURE_COMPONENT value that contains the terms PIN and COMPOSITE
- Insulation, pins, and or slots must be included in an assembly in order to be eligible for export
- Pins/slots do not have to be cut from the insulation to get represented in the exported file.
- If a piece of insulation does not have a value assigned to its INSULATION_MARK parameter, then a dash will be exported in place of the mark.