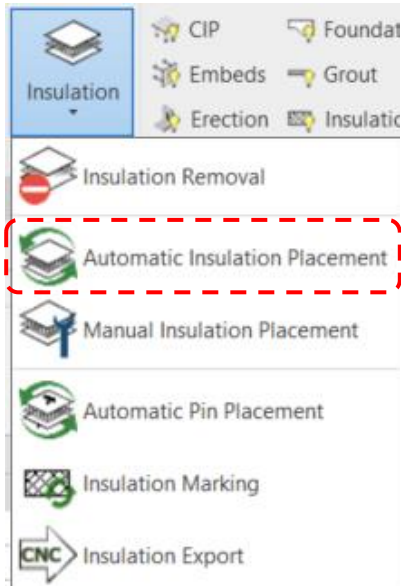


# Insulation Tools: Automatic Insulation Placement



## **Programmed Result of Tool:**

The Automatic Insulation Placement tool will automatically layout the insulation within each specified wall panel according to the maximum and minimum insulation sizes defined by the user.

## **Steps to Perform Tool Operation:**

1. Select the Automatic Insulation Placement tool under the Insulation drop-down.
2. Select the scope of wall panels to be processed: whole model, active view, or selected elements.
3. If prompted, choose the insulation family type to be placed.
  - a. If prompted, choose whether to set this insulation family as the default for this project.
    - i. If you choose to set this as the default, that insulation's family name will be written to the DEFAULT\_INSULATION parameter in Project Information.
      1. If DEFAULT\_INSULATION does not exist, run Project Shared Parameters and try again.
      - ii. If you choose not to set this as the default, you will have to continue to select which insulation family should be placed the next time the tool is run.

## **Building your Insulation Families to be Compatible with this Tool:**

- The insulation family must belong to either the Specialty Equipment or Generic Models category.
- The following shared parameters must exist as Instance parameters: DIM\_LENGTH, DIM\_WIDTH.
  - Their values cannot be read-only (i.e. the value cannot be controlled by a formula)
- The shared parameter named DIM\_THICKNESS must exist as either an Instance or Type parameter.
  - If DIM\_THICKNESS is configured as an Instance parameter, then Automatic Insulation Placement will assign a thickness value to it that matches the DIM\_WYTHE\_INSULATION parameter value from the wall panel that the insulation is being placed within.
  - If DIM\_THICKNESS is configured as a Type parameter, then Automatic Insulation Placement will find and place the family type within the insulation family that has a DIM\_THICKNESS value that matches the DIM\_WYTHE\_INSULATION parameter value from the wall panel that the insulation is being placed within.
- The following shared parameters should be added to define the maximum and minimum sheet size that should ever be created by the Automatic Insulation Placement tool: DIM\_WIDTH\_MAX, DIM\_LENGTH\_MAX, DIM\_WIDTH\_MIN, DIM\_LENGTH\_MIN.

# Insulation Tools:

## Automatic Insulation Placement

### **Known Limitations:**

- DIM\_LENGTH, DIM\_WIDTH, and DIM\_THICKNESS parameter values will always be round down to the nearest 1/8”.
- When the tool is laying out insulation it will always begin from the lower-left corner of the wall panel (if looking at the DIM\_WYTHE\_INNER face). When it is laying out the insulation and reaches the right/top edges of the wall panel, it will always leave enough room for the last piece of insulation to be placed with regard to the DIM\_WIDTH\_MIN and DIM\_LENGTH\_MIN parameter values. The adjacent insulation sheets placed by the tool will be adjusted accordingly to allow this.
- Only certain elements placed within the wall panel are eligible to automatically cut back the insulation placed by the Automatic Insulation Placement tool.
  - Void family instances must intersect the insulation to be placed and be cutting the wall panel in order to automatically be cut from the insulation placed by the tool.
  - Wood nailer family instances will automatically cut the insulation if they have been hosted using the BOM Product Hosting tool and they have a MANUFACTURE\_COMPONENT value or Family Name that contains both “WOOD” and “NAILER”.
  - Solid zone family instances will automatically cut the insulation if they have been hosted using the Addon Hosting Updater tool and they have a MANUFACTURE\_COMPONENT value that contains both “SOLID” and “ZONE”.
- This tool is programmed to work for simple wall panels. For more complex geometry, the tool may not be able to automatically layout insulation for the whole piece. The Manual Insulation Placement tool can be used to place any sheets of insulation that may have been missed.
- Automatic Insulation Placement will not process re-entrant corners. Insulation must be placed manually in those scenarios.
- Only wall panels that are built as follows will be eligible for processing by this tool:
  - Wall panel families must belong to the Structural Framing category.
  - Wall panel families must have a CONSTRUCTION\_PRODUCT parameter value that contains “WALL” and “INSULATED”.
  - The family must have a value assigned to the DIM\_WYTHE\_INNER and DIM\_WYTHE\_INSULATION parameters and values assigned to each.
  - Wall panel families must be built such that their family origin is located at the center of their DIM\_WYTHE\_INNER face.