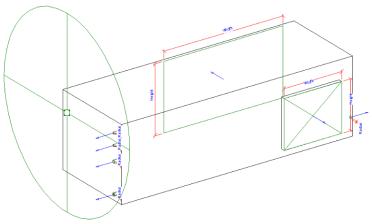
Families: Define MEP connectors

You will learn how to place MEP connectors and adjust system settings.

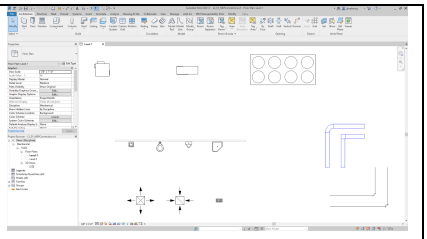


The completed exercise

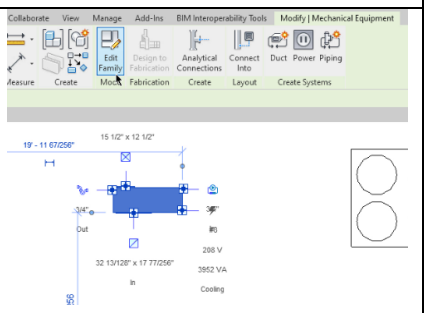
Learning objectives:

- Place MEP connectors.
- Adjust connector properties.

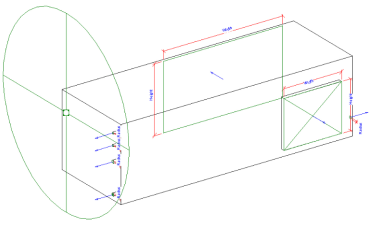
1. Open the exercise file: *L3_01_MEPConnectors.rvt*.



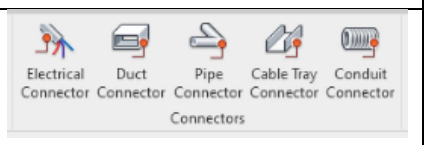
2. Select the water source heat pump and pay attention to the connector labels. The connector labels show the MEP connectors that have been placed on the component. To get a better understanding, click Edit Family on the contextual ribbon to open the family in the Family Editor.



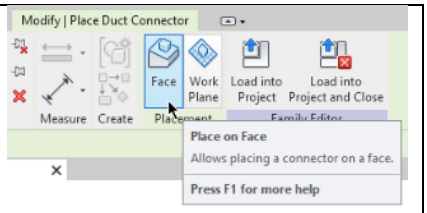
3. In the Family Editor, MEP connectors can be added and the parameters can be adjusted.



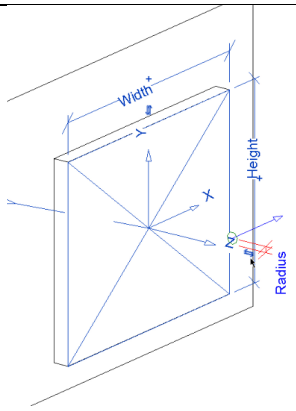
4. The tools for placing connectors are located on the Create ribbon, in the Connectors panel.



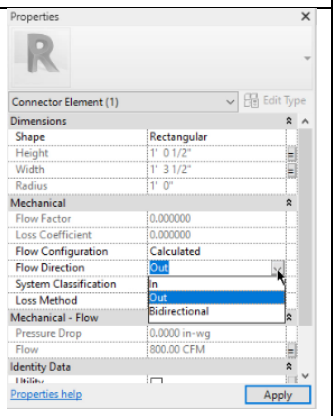
5. When placing a connector, there are two Placement options: Place on Face and Place on Work Plane. Typically, geometry is created in the family and then connectors are placed on the face of the geometry. This provides precise control over the placement of the connector.



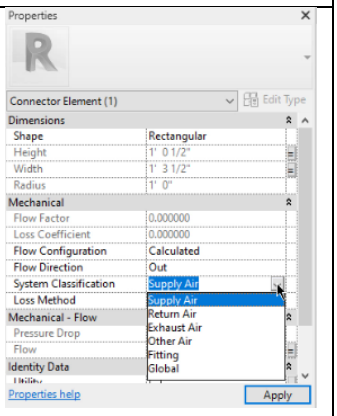
6. With a connector selected, the Z-direction should be pointing to the direction that the duct or pipe will connect from. The Z-direction does NOT represent the flow direction.



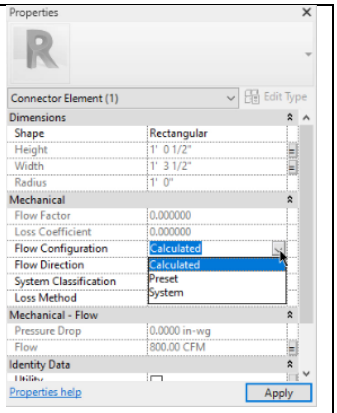
7. With a connector selected, the Flow Direction can be adjusted in the Properties palette. This can be In, Out, or Bidirectional.



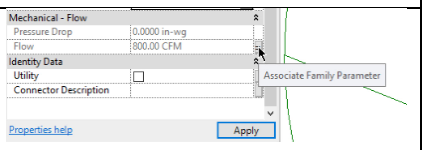
8. The System Classification can also be specified. This controls the systems that the connector can be added to. The System Classification must match between the system type and connector. There are also Fitting and Global options.



9. The Flow Configuration can be set to Calculated, Preset, or System. When set to Calculated, the flow is calculated as the total flow of the downstream components connected in the system. When set to Preset, a user-defined value is specified for flow. When set to System, a percentage of the system flow is allocated to each of the downstream components, according to the Flow Factor parameter.



10. Connector parameters can also be associated to family parameters. This allows the connector parameters to be adjusted in the project.



11. Connectors with a cross represent the primary connector. Additionally, connectors with a dashed line connecting them are linked. This only appears when one of the connectors is selected. Linking connectors is the method to model supply and return connectors that are associated.