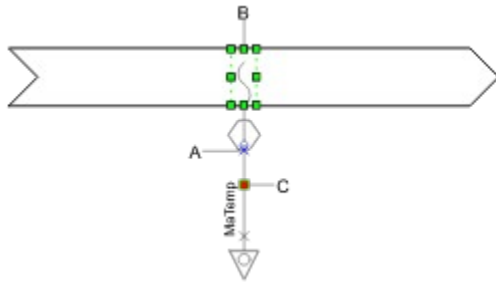



**Label**

To replace existing text, select the shape, then type.


## I/O Point


Use with Sensor and Actuator shapes. The I/O Point is intended to always be vertically oriented. To set type, user name, wire type, and wire code, right-click the shape.



- A Glue to connection points  on Sensor and Actuator shapes.
- B Drop sensor shape on top of duct shape.
- C Drag to reposition bend.

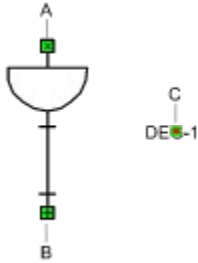
## Power Connection


Use with Chiller, Starter, Boiler, and VSD shapes. To set type, right-click the shape. To reposition the label, drag the control handle . To connect to other shapes, glue an endpoint on this shape to a connection point

 on the other shapes.



## Actuator

Use to indicate automatic control over equipment such as Valves and Dampers. To set type, power input, B-O-M tag, and part number, right-click the shape.



- A Glue to connection points  on equipment shapes.
- B Glue connection points on I/O Point shapes to these connection points.
- C Available only when you have specified a B-O-M Tag. Drag to move text.

## Connection Line

To set wire type and wire code, right-click the shape. To reposition the bend, drag the control handle . To connect to other shapes, glue an endpoint on this shape to a connection point  on the other shapes.

## Wire Note

To hide or show the box, right-click the shape. To replace existing text, select the shape, then type. To reposition the bend, drag the control handle ■.

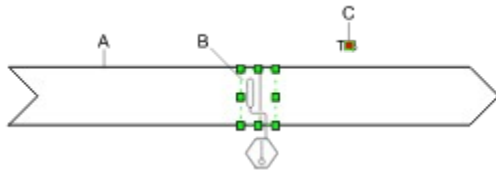
To connect to other shapes, glue an endpoint on this shape to a connection point ☒ on the other shapes.

## End Switch

Use to indicate the status of equipment shapes, such as dampers and valves. To set open or closed contact, B-O-M tag, and part number, right-click the shape. To change the switch offset, drag the associated control handle ■. To move the text, drag the associated control handle. To connect this shape to a Damper or Valve shape, glue the control handle on this shape to a connection point ☒ on the equipment shapes.

## Sensor Shapes

Use with Duct and Piping shapes to represent a specific type of HVAC Control sensor. To set control, type, limit switch, reset switch, B-O-M tag, and part number, right-click the shape.

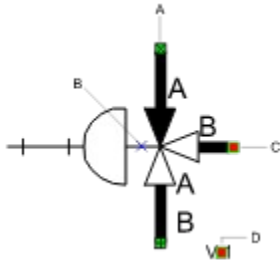



- A Drop the duct shape.
- B Drop sensor shape on top of duct shape.
- C Available only when you have specified a B-O-M Tag. Drag to move text.



## Valve

Use with Actuator to indicate automatic control. To set type, N.C. port, B-O-M tag, and part number, right-click the shape.

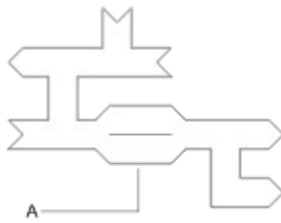


- A Glue to connection points  on equipment shapes.
- B Glue connection points on Actuator shape to this connection point.
- C Drag to lengthen pipes.
- D Available only when you have specified a B-O-M Tag. Drag to move text.

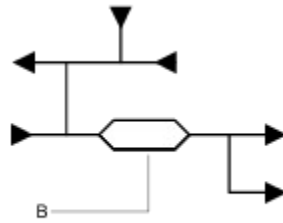
## Duct Section Shapes

To set single- or double-line ducts for all ducts on the page, right-click the shape. To add text, select the shape, then type.

To connect Return Duct to Duct, drop Return Duct on top of Duct with Return Duct endpoints in the center of the duct to which they are to join.



Double-line view



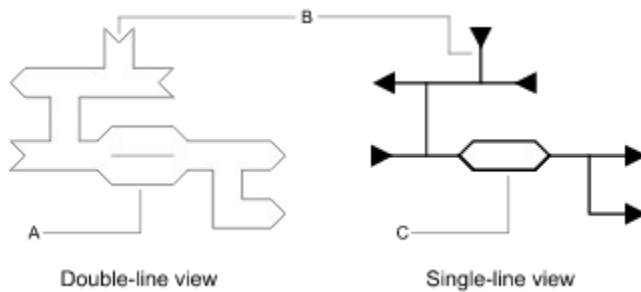
Single-line view

- A To set all ducts on page to single-line style, right-click any duct shape.
- B To set all ducts on page to double-line style, right-click any duct shape.

## Duct Section Shapes

To set supply or return duct, right-click the shape. To set single- or double-line ducts for all ducts on the page, right-click the shape. To add text, select the shape, then type. On the Supply Duct shape, to shorten or lengthen duct end, drag the control handle ■.

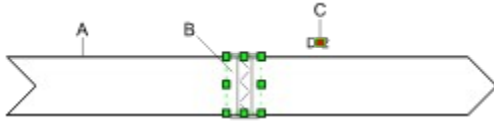
To connect with other duct equipment shapes, drop equipment shapes on top of duct section shapes.



- A To set all ducts on page to single-line style, right-click any duct shape.
- B To set Supply Duct or Duct Extension shapes as supply or return ducts, right-click the shapes.
- C To set all ducts on page to double-line style, right-click any duct shape.

## Damper and Filter Shapes

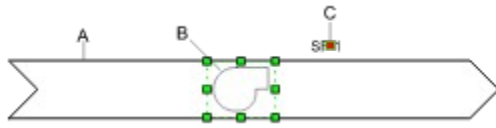
Drop Damper and Filter shapes inside ductwork shapes. To set type, B-O-M Tag, sleeve, and part number, right-click the shape.



- A Drop the duct shape.
- B Drop the Damper and Filter shapes on top of duct shape.
- C Available only when you have specified a B-O-M Tag. Drag to move text.

## Mechanical Fan Shapes

Drop Mechanical Fan shapes on top of duct section shapes. To set use, control, and name, right-click the shape.



- A Drop the duct shape.
- B Drop the Mechanical Fan shape on top of duct shape.
- C Available only when you have specified a name. Drag to move text.

## **VAV Box Shapes**

Represents single- or dual-duct variable air volume (VAV) or constant volume (CV) box. To replace existing text, select the shape, then type. To move the text, drag the control handle ■. To resize the length of the duct(s), drag an end selection handle.

## **Unit Heater**

To add text, select the shape, then type.

## Air Flow Station

Drop Air Flow Station shapes inside ductwork shapes. To set B-O-M Tag and part number, right-click the shape.

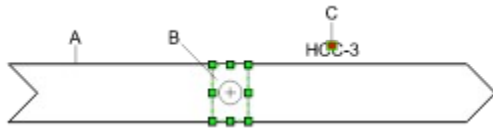


- A Drop the duct shape.
- B Drop the Air Flow Station shape on top of the duct shape.
- C Available only when you have specified a B-O-M Tag. Drag to move text.



## Heating/Cooling Coil

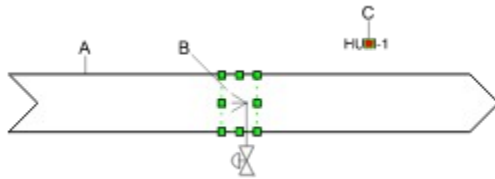
Drop the Heating and/or Cooling Coil shape (Htg/Clg Coil shape) on top of ductwork shapes. To set type, stages, and name, right-click the shape.



- A Drop a duct shape.
- B Drop the Htg/Clg Coil shape on top of the duct shape.
- C Available only when you have specified a name. Drag to move text.

## Humidifier

Drop the Humidifier shape inside ductwork shapes. To set type, B-O-M Tag, and part number, right-click the shape.




- A Drop the duct shape.
- B Drop the Humidifier shape on top of duct shape.
- C Available only when you have specified a B-O-M Tag. Drag to move text.

## **Fan Coil Housing**

To add text, select the shape, then type. To move the text, drag the control handle ■. To resize housing, drag the control handle. To resize the length of the duct(s), drag an end selection handle.

### **Side to Bottom Pipe**

To add or remove arrowhead, right-click the shape. To add text, select the shape, then type.

To connect to equipment or to other piping shapes, glue an endpoint on this shape to a connection point  on the other shapes.

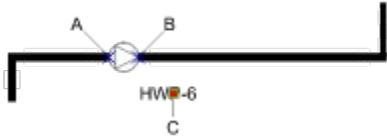
## **Multi Fan Section**

To set 2-, 3-, or 4-fan sections, right-click the shape. To set single- or double-line ducts for all ducts on the page, right-click the shape. To add text, select the shape, then type.

To connect with other equipment shapes, drop Multi Fan Section directly on top of duct section shapes. The shapes automatically blend together.


## Pump

Use with two Piping shapes. To set name and use, right-click the shape. When Piping shapes are connected to a Pump shape, the shapes will move together.



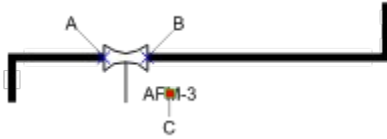
- A Glue endpoint on one piping shape to a connection point on Pump shape.
- B Glue endpoint on another piping shape to the other connection point on Pump shape.
- C Available only when you have specified a name. Drag to move text.

## Pipe Flow Arrow

To add text, select the shape, then type. To connect to equipment or to other piping shapes, glue an endpoint on the other shape to a connection point  on this shape.

## Water Flow Meter

Use with two Piping shapes. To set type, B-O-M tag, and part number, right-click the shape. When Piping shapes are connected to a Water Flow Meter shape, the shapes move together.



- A Glue endpoint on one piping shape to a connection point on Water Flow Meter shape.
- B Glue endpoint on another piping shape to the other connection point on Water Flow Meter shape.
- C Available only when you have specified a B-O-M Tag. Drag to move text.



## Piping

To add or remove arrowhead, right-click the shape. To add text, select the shape, then type. To reposition the bend, drag the control handle ■.

To create longer or more complicated pipes, glue Piping shapes to Pipe Flow Arrow shapes. To connect to equipment or to other piping shapes, glue an endpoint on this shape to a connection point ☒ on the other shapes.

## VSD

Represents the Variable Speed Drive. To set type, name, load power type, and load voltage, right-click the shape. To move load power type and load voltage text, drag the associated control handle ■. To move the name text, drag the associated control handle.


To connect this shape to other shapes, such as the I/O Point, glue an endpoint on a 1-D shape to a connection point ☒ on this shape.

## Starter


To set type, name, control, load voltage, and load type, right-click the shape. To move load voltage and load type text, drag the associated control handle ■. To move the name text, drag the associated control handle. To lengthen the wiring line, drag the associated control handle.

To connect this shape to other shapes, glue an endpoint on a 1-D shape to a connection point ☒ on this shape.

## Heat Exchanger

To add text, select the shape, then type. To connect this shape to other shapes, glue an endpoint on a 1-D shape to a connection point  on this shape.

## **HVAC Equipment Shapes**

To replace existing text, select the shape, then type. To resize proportionally, drag a top or bottom selection handle. To connect this shape to other shapes, glue an endpoint on a 1-D shape to a connection point  on this shape.



