

HVAC Layout Template

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The HVAC LayoutTemplate contains ductwork, pipes, and valves for use in creating single- and double-line HVAC plans.

For information about how a particular shape behaves, right-click the shape, then choose Shape Help from the shortcut menu.

Setting up your drawing environment

By default, the HVAC Layout Template opens with an unscaled drawing page in landscape orientation. The ruler and grid are set to Fine resolution, and the ruler zero point and grid origin are at the lower-left corner of the drawing page. You can change these settings at any time.

To change the page settings and drawing scale:

1. Choose File > Page Setup.
2. On the Page Size tab and the Drawing Scale tab, choose the settings you want for the drawing size, the printed page size, and the drawing scale, then click OK.

To change the measurement units, click the Page Properties tab and choose the unit you want to use from the Measurement Units list, then click OK.

To change ruler and grid settings:

1. Choose Tools > Ruler & Grid.
2. In the Ruler & Grid dialog box, choose the settings you want for the ruler and grid resolution, and for the ruler zero point and grid origin.

You can change the grid origin only of fixed grids. To set a fixed grid, choose Fixed under Grid Spacing, then type the values you want for the minimum spacing of the grid lines.

3. When you've finished adjusting the grid and ruler settings, click OK.

See also:

[Rotating and resizing pages](#)

[Setting page orientation and scale](#)

Working with ductwork shapes

You can configure some of the pipe and valve shapes by right-clicking them and choosing Shape > Custom Properties. For example, to change an In-line Valve shape to a 3-Way Valve, right-click the shape, then choose 3-Way.

Creating an HVAC ductwork drawing

To create an HVAC ductwork drawing in Visio Technical, include these steps:

- Lay out the ductwork equipment on a blank page or as a layer in a space plan.
- Add shape labels or annotations.
- Add title blocks for the drawing title and any other reference information and, if you want, a schedule that contains more specific information about each item in the HVAC system.

Laying out the ductwork shapes

To lay out an HVAC system, drop single- or double-line duct shapes on the drawing page, then connect them by gluing the endpoints of 1-D shapes, such as duct shapes, to connection points on joint, junction, fan, and other 2-D shapes.

See also:

[About creating and revising connected drawings](#)

Using layers with HVAC drawings

A layer is a named category of shapes. When you create an HVAC ductwork plan, Visio Technical places the shapes on layers. For example, when you drop a duct shape, Visio Technical adds the shape to an HVAC layer.

When shapes are assigned to separate layers, you can treat the shapes separately. For example, you can hide or lock all layers except the one you want to work on or you can print shapes based on their layer assignments. You can also generate numeric or inventory reports for shapes on particular layers.

To view only one layer in a drawing:

1. Choose View > Layer Properties.
2. In the Layer Properties dialog box, under Visible, uncheck all the layers except the one you want to view, then click OK.

See also:

[About layers](#)

Incorporating an HVAC drawing into a space plan

If you want to add your HVAC diagram to an existing space plan, you can use a background page to create the HVAC drawing on top of the space plan walls. Your space plan can be a Visio Technical drawing, or you can import a drawing from another application. For example, if you created a space plan in AutoCAD, you can open the file in Visio Technical using the AutoCAD file converter. To open an AutoCAD file, choose File > Open. In the Open dialog box, under Files Of Type, choose AutoCAD (*.dwg, *.dxf).

To incorporate ductwork into a space plan:

1. In an open space plan drawing, choose Insert > Page to create a new page.
2. In the Page dialog box, type a name for the page, then click the Drawing Scale tab. On the Drawing Scale tab, under Drawing Scale, choose No Scale (1:1). Click OK twice.
3. Choose Edit > Go To, then choose the page that contains the space plan. Choose File > Page Setup, then click the Page Properties tab. On the Page Properties tab, for Type, choose Background to make the space plan a background page.
4. Choose View > Layer Properties. In the Layer Properties dialog box, click Visible to hide all the space plan layers. Under Visible, check Building Envelope to show only that layer.
5. Choose Edit > Go To, then choose the HVAC page. Choose File > Page Setup, then click the Page Properties tab. On the Page Properties tab, for Background, choose the page that contains the space plan. Visio Technical displays the walls of the space plan on the background.
6. Drop HVAC shapes on the drawing page to create the ductwork for the building. After you finish creating the ductwork, choose View > Layer Properties. Click Visible to show all the layers.

See also:

[Using backgrounds for common page elements](#)

Adding labels and annotations

Adding text labels

To add a text label to a shape, select the shape, then type.

Adding a label to show duct size

To add a label that indicates the size of a duct, right-click the duct shape, then choose Shape > Custom

Properties. In the Custom Properties dialog box, type the diameter, or the width and height, then click OK. For circular ducts, Visio Technical adds the diameter symbol (Ø) to the label automatically.

Adding annotations

To add annotations, use shapes from the General - Annotations stencil. You can glue endpoints of callout shapes to connection points on HVAC shapes, so the callout stays connected if you move the HVAC shape it's glued to.

Adding title blocks or a schedule

Adding title blocks

Use shapes from the Title Blocks stencil to add a title and other reference information to the drawing. To open the Title Blocks stencil, choose File > Stencils > Annotation > General - Title Blocks.

You can place shapes from the Title Blocks stencil on layers so you can work with them without affecting other shapes in the drawing. If you'd like the same title block information to appear on multiple drawing pages, place the Title Block shape on a background page and assign the background to your HVAC drawing.

See also:

[Using backgrounds for common page elements](#)

Creating a schedule

You can also use shapes from the Title Block stencil to create a schedule. To create the schedule framework, stack Revisions Block or Parts List Block shapes. These shapes include control handles with which you can change the width of the columns.

To add the schedule on a separate page, choose Insert > Page. In the Page Properties dialog box, choose the settings you want, then click OK. Add the appropriate shapes to the new page.

Working with shape properties

A custom property is a field in which you can store information. By default, Visio Technical associates a Diameter property field with some of the circular duct shapes. You can enter data into the field by right-clicking the duct shape and choosing Properties from the shortcut menu.

If you want to associate additional data with your HVAC layout shapes, you can run the Custom Properties Editor to add properties.

To run the Custom Properties Editor:

- Choose Tools > Macro > Custom Properties Editor.

See also:

[Adding, editing, and deleting custom-property fields](#)

Generating reports from properties

If you've associated custom-property data with your HVAC, pipe, and valve shapes, you can run the Property Reporting Wizard to generate inventory or numerical reports based on the data. For example, you could create an inventory for all the instances of a diffuser in an HVAC drawing.

To run the Property Reporting Wizard:

- Choose Tools > Property Report.

See also:

[Creating reports from custom data](#)

Linking shapes to other drawing pages, other files, or World Wide Web locations

You can add navigational links to any shape in your diagram, so that users of the diagram can right-click

the shape to jump to separate drawing pages, separate files, or documents on an intranet or the Web. For example, you can link an HVAC drawing to a spreadsheet in which the schedule is stored.

To add links to shapes:

- Choose Insert > Hyperlink.

See also:

[About using hyperlinks](#)

Placing Visio drawings on the World Wide Web

You can easily convert a Visio drawing to a format Web browsers can read. Then you can distribute the drawing on an intranet or the Web.

See also:

[Exporting shapes and drawings in .jpg or .gif format](#)

[Saving drawings as HTML pages](#)

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