

## Systems Duct

## Summary

Learn to utilize Systems Duct for Revit 2016.

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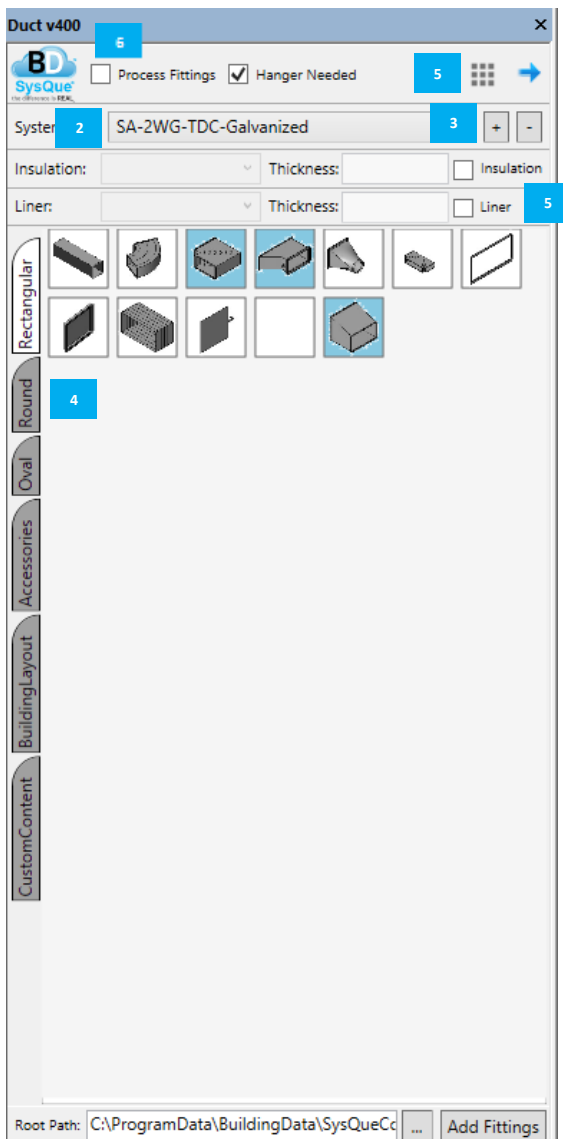
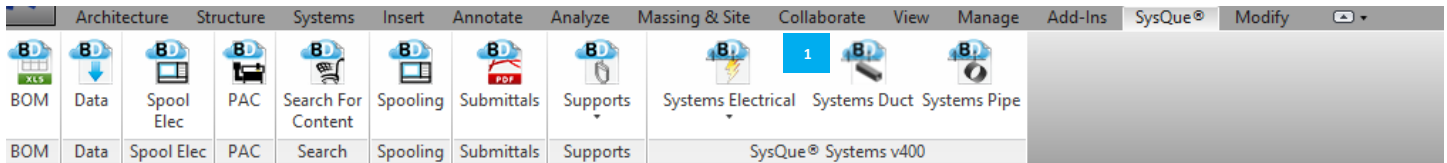
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## Introduction

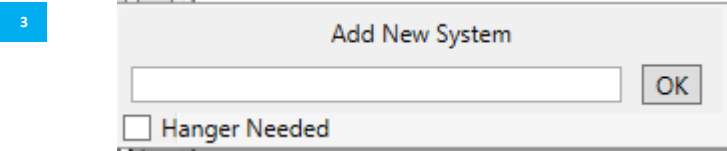
[In this document, users will learn](#) how to utilize SysQue Systems Duct, and how to draw Duct into their projects.

## SysQue Systems Duct

1 SysQue Systems is located in the second to last panel.



2 To view the list of available systems from the list, simply click on that system. SA-2WG TDC Galvanized will be our example here.



To add a new system, click on the + box. Check the 'Hanger Needed' Box if a hanger is needed. Inversely, clicking – will delete the currently selected System.

4 Tabs along the left side each contain their own set of buttons. It will simulate the items available in that system i.e. round, oval, accessories, etc.

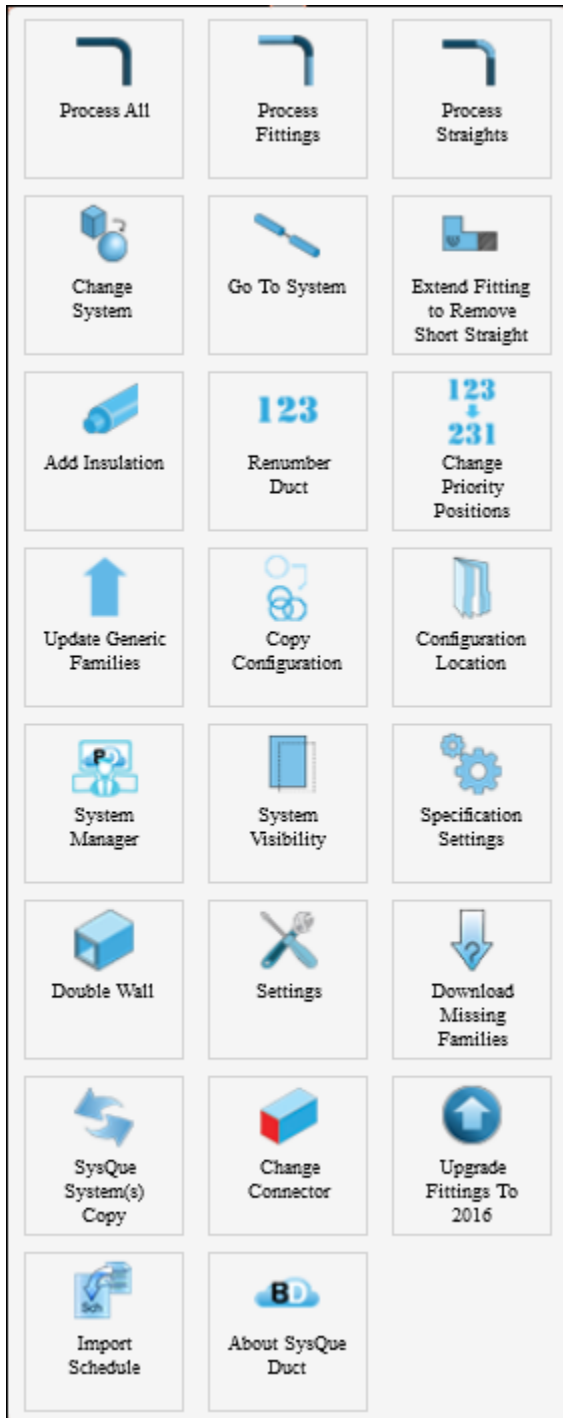
5 Insulation/Linear can be added by simply placing a check mark on these boxes. The Insulation/Linear drop-down menus will no longer be greyed out and you will have the option to click on them after you check the boxes.

6 Process Fittings Only. When checked, SysQue will not cut the duct into full lengths.

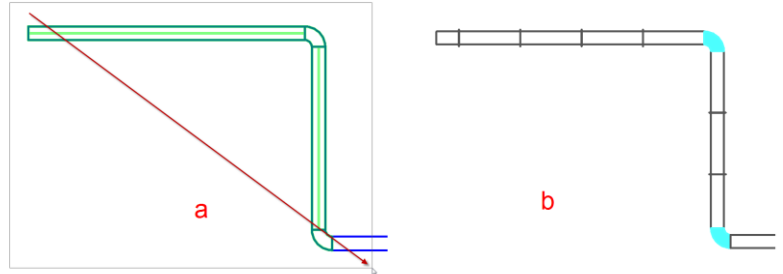
NOTE: When checked, the duct is left in a “design” state, meaning it is represented as one long, continuous straight duct. This simplifies and speeds up the design process, while also allowing for changes to be made more quickly. The straight duct is split into standard lengths as the final step after you have completed your HVAC model.

## SysQue Systems Duct Menu

For this section, we will go over each SysQue Systems Duct menu item in order from left to right, up to down.



**Process All** – Selecting a run of duct (**a**) and then picking this menu item will allow you to break up that run of duct into standard lengths (**b**). It will also apply specification data to your fittings. (Be sure to uncheck “Process fittings only” first.)



**Process Fittings** - This option will process the fittings only on your selected system. Replacing them with SysQue fittings that are populated with desired specification data.

**Process Straights** – This option will Process your selected Duct Straights and add the proper connectors and standard lengths.

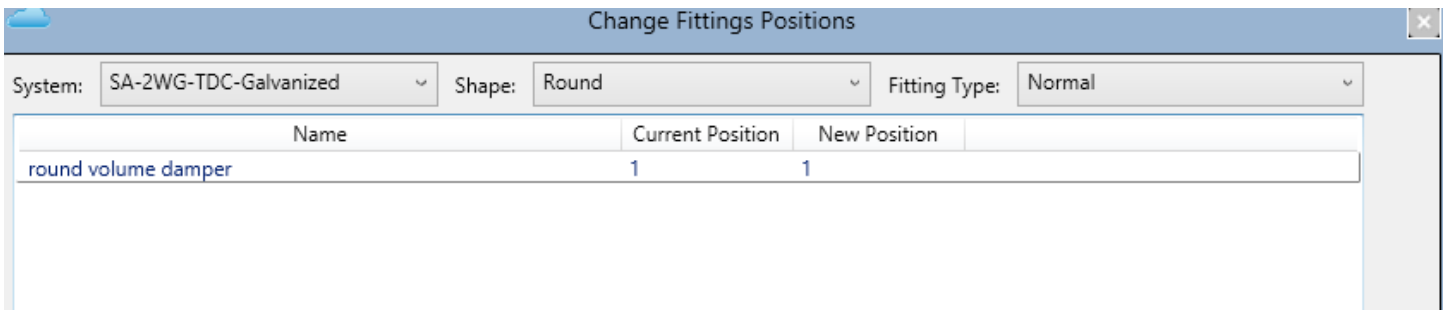
**Change System** - If you placed duct in your model using the incorrect system, you can change the system using this option.

1. Select the duct run in your model.
2. Go to the Systems drop down box and select the system to which you want to change your existing duct.

Click on the Change System menu item at the top.

**Extend Fitting to Remove Short Straight** – This option gives the user the ability to eliminate the small straights next to fittings and extends the fitting extension to take the length. Simply select the fitting and small straight you wish to lengthen and select this option.

**Add Insulation** – This option allows you to add insulation to your selected SysQue Duct system. You can choose Insulation Type and Thickness.

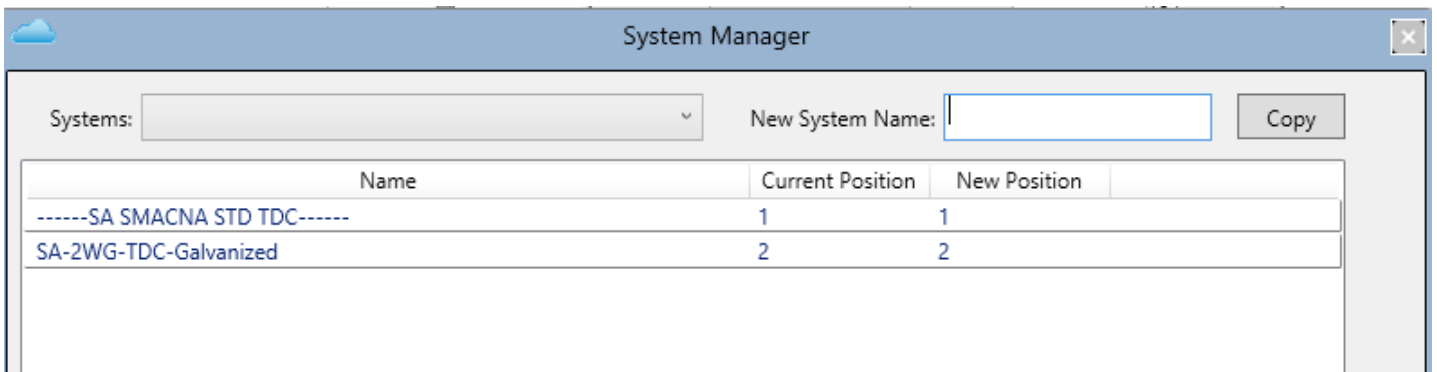


**Change Priority Positions** – This option gives you the ability to change the priority of fittings. By selecting which system, shape, and fitting type you want to change the position of. IE If you have a round bend you would like to use, you would move the position of this bend to position 1. This will tell SysQue to use this fitting first. Keep in mind if you have set a fitting as “Default” this will take precedence over this utility.

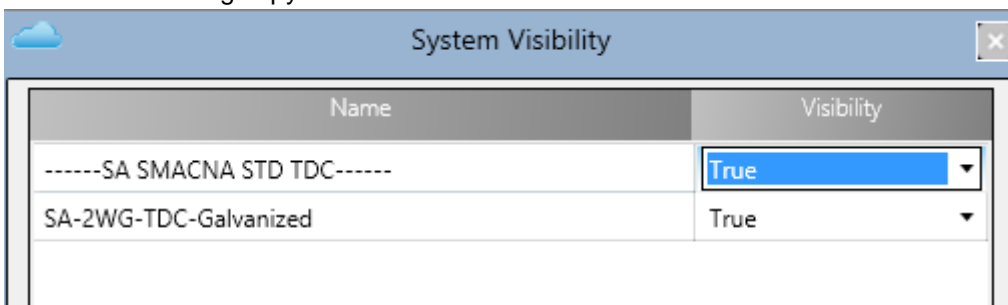
**Update Generic Families** – This option will download and update your system with the latest SysQue Generic fittings. Generic fittings are also versioned now. The system will look at your system and if it needs them to be update it will also ask.

**Copy Configuration** – This option allows the user to build custom systems and share their xml (Which holds your systems information) with other SysQue® users in their company. Simply select Copy xml and a Browse for folder box comes up. From here you select location to save. When complete a window pops up confirming the xml saved. Other users in your company can then place the xml in the following location: C:\ProgramData\BuildingData\Support\

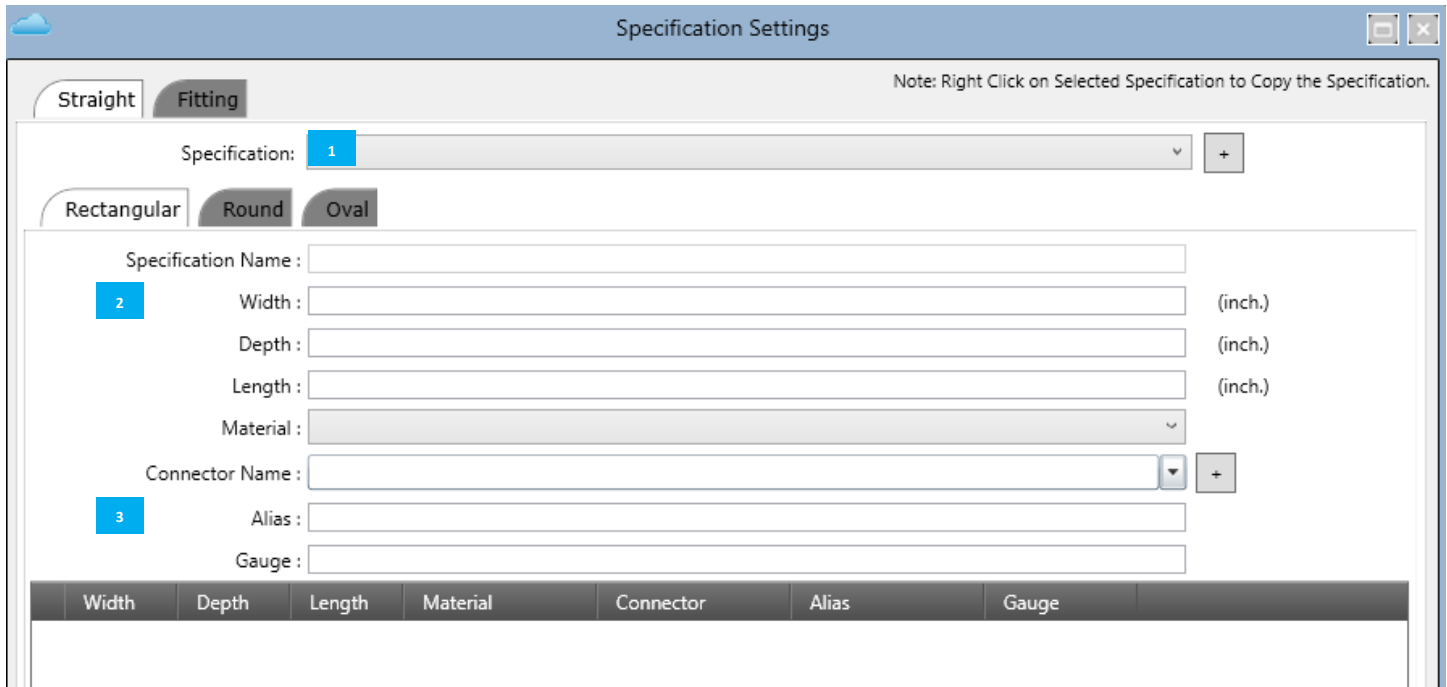
**Configuration Location** – This option allows the user to place their Custom XML onto a network location, so that all users are pointing to the same systems. Any additions will update all users at once.



**System Manager** – This gives you the ability to rearrange your Duct Systems in the SysQue Duct Systems drop down. This helps when you have created your own systems and would like them to be organized. Simply load the System manager. Find the Duct System you would like to move and select the up arrow until you find the desired spot. Select “Apply” and then close System Manager. You can also copy created systems by selecting the system, choosing another name and selecting copy.



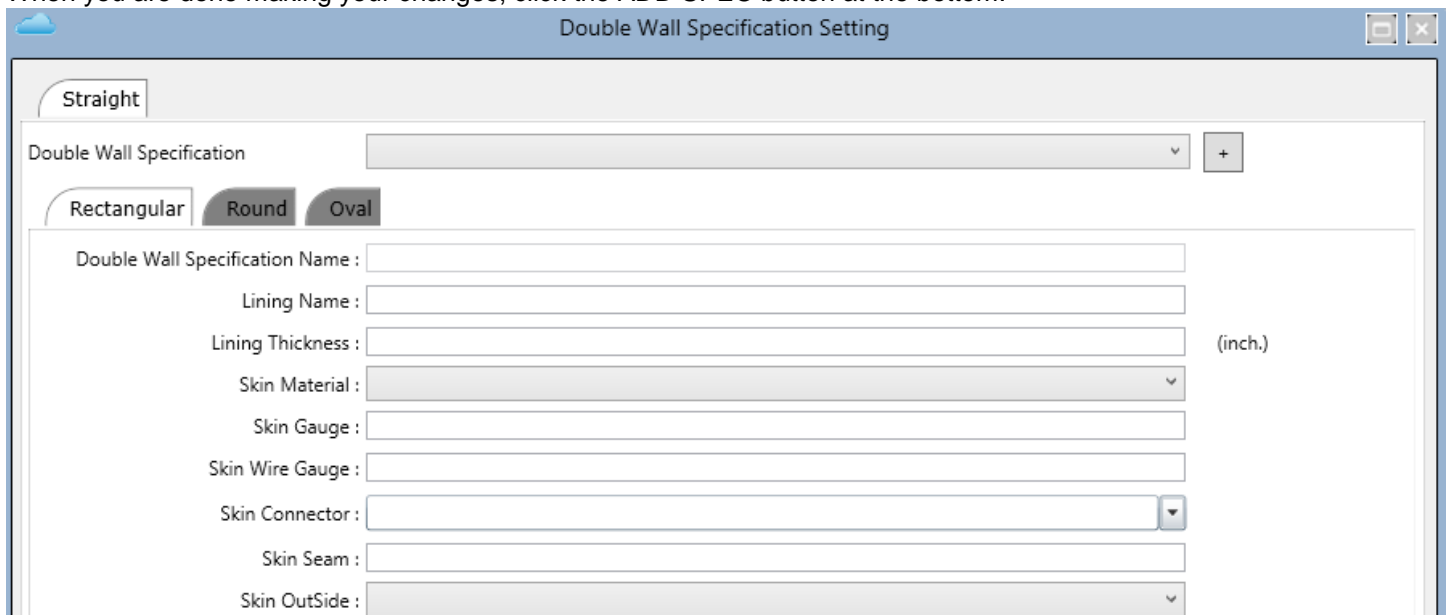
**System Visibility** – This option gives you the ability to “hide” a system or systems you do not want to use or show up in the SysQue Systems Drop down. Simply select the system you do not want to show up and change the Visibility to “FALSE”. When finished choosing what systems you do not want, click Apply then close. You will then notice the Systems do not show up in the Systems drop down menu.



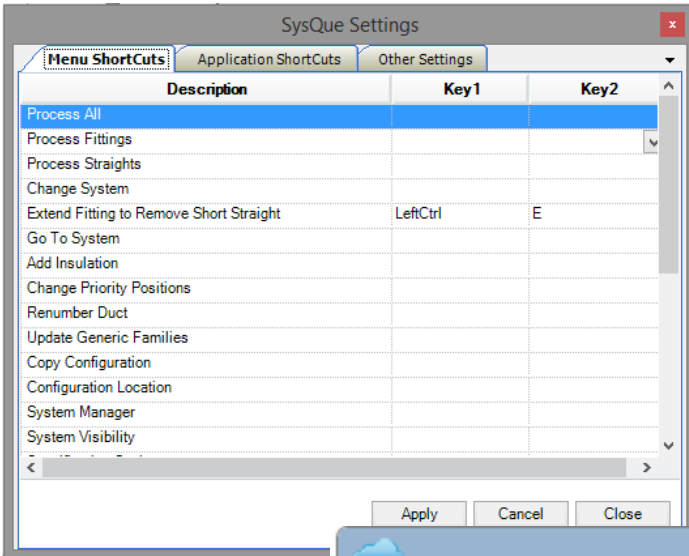
**Specification Setting** – Selecting this menu item will call up the “Specification Settings” window. Herein, you can view the default rectangular, round, and oval duct specifications that come with the system. You can modify the specs by doing the following:

- 1 Select a specification from the Specification drop down menu at the top.
- 2 In the grid that appears below, pick the row you wish to modify.
- 3 In the middle of the window, you can then change the Material, Connector, and gauge that particular size calls for.

When you are done making your changes, click the ADD SPEC button at the bottom.



**Double Wall** – This will allow you to setup Double Specification if needed with your Duct System. Simply insert the required information and select ADD SPEC.



**Settings** - This feature allows the user to customize key commands to your certain SysQue® commands, allowing users the ability to work faster by utilizing key commands as well.

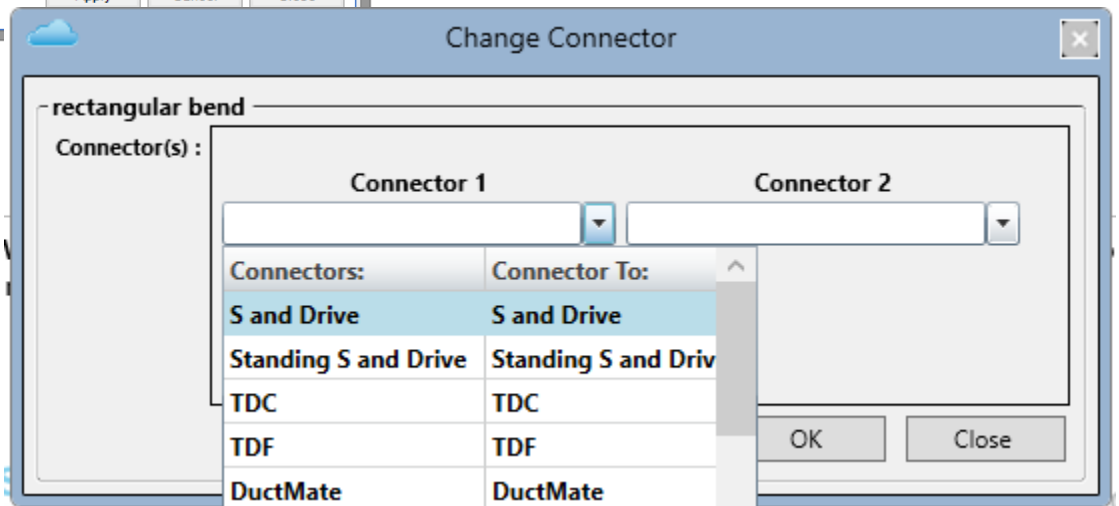
**Download Missing Families** – This will download unreferenced families. While this will usually prompt when opening a system in SysQue, you can also access this on the menu if you have changed your families without rebooting the System.

**SysQue System(s) Copy** – Import a new system or Export the current SysQue system you are using currently into your folder structure.

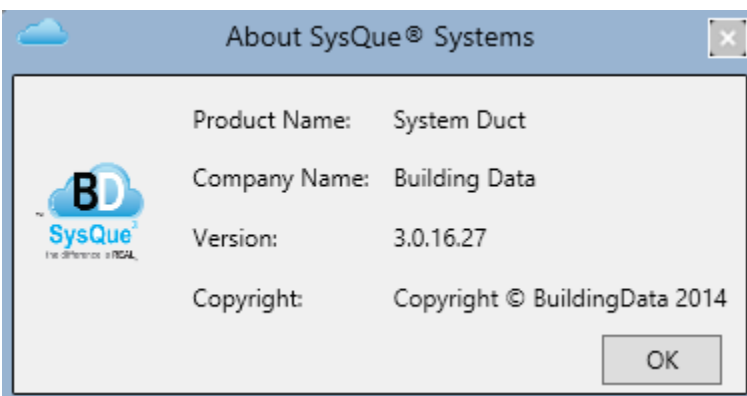
**Change Connector –**

Swap the current connector you are using with a different one. This will only activate if you have selected a valid connector.

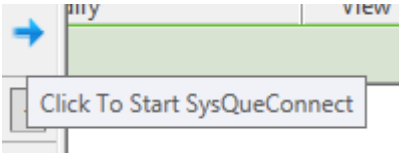
**Upgrade Fittings to 2016 –** Upgrade your current fittings to the latest 2016 version since you can bring in your previous systems from 2015.



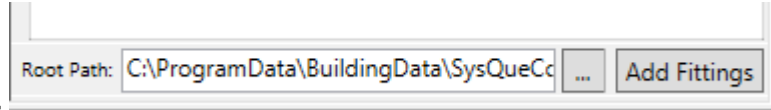
**Import Schedule** – Import a schedule from .xls or Excel format. To do so, you'll need to export a Revit Schedule, save it in excel format, and then the import schedule function will allow you to import it into Revit.



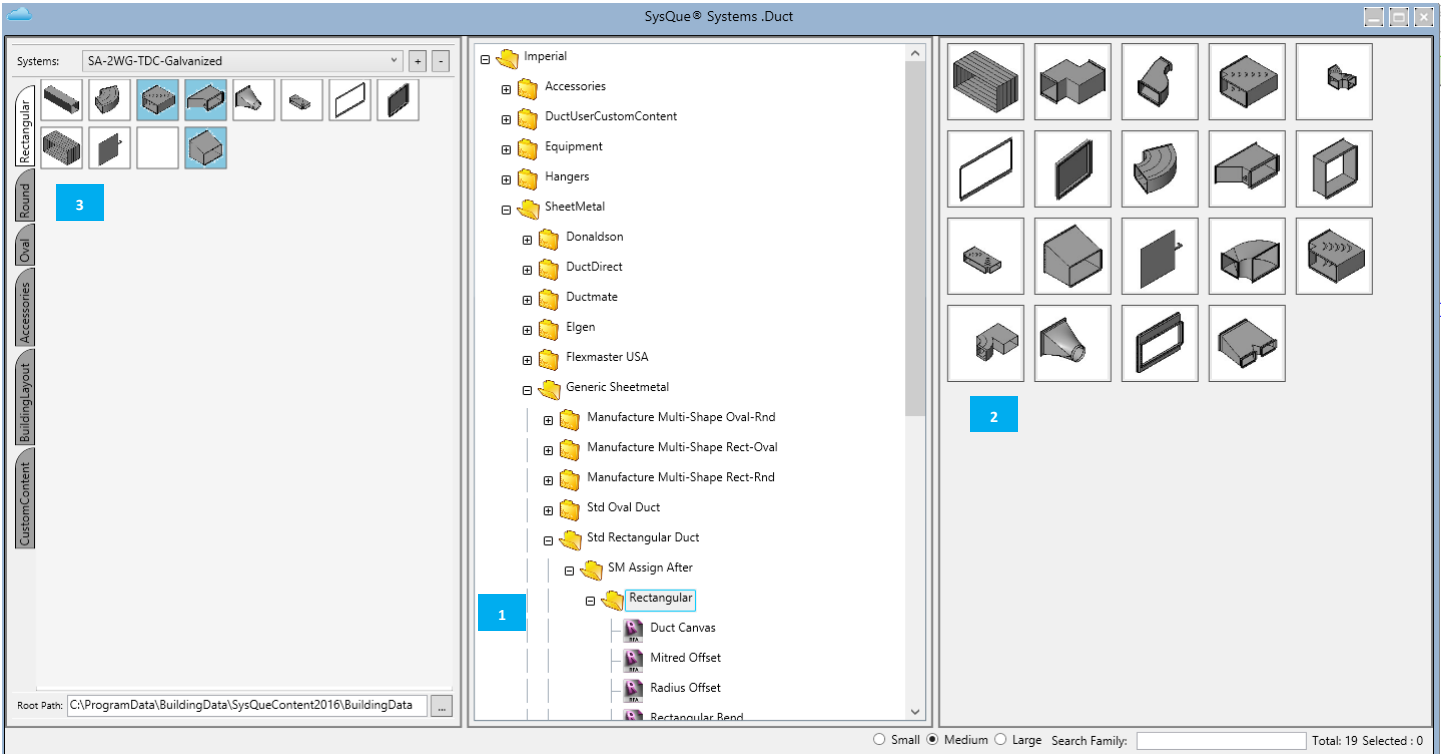
**About SysQue® Duct** - Clicking on this brings up the “About SysQue® Systems” window, which lists, among other things, the SysQue® System Duct version number. Click OK to close this window.



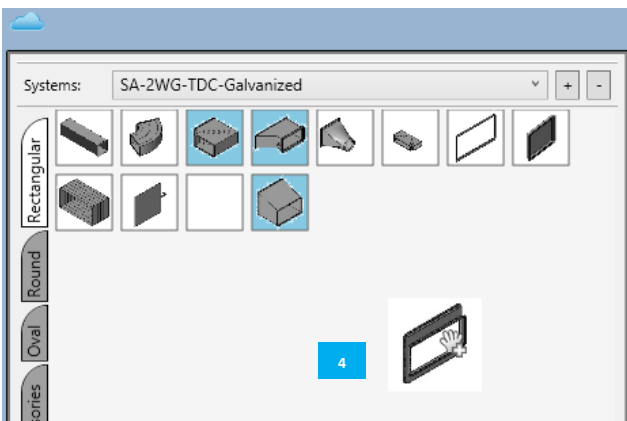
**SysQue Connect** – You can find this button next to the menu. It allows you to insert fitting to fitting and add rotational angles to your placement. Find more information about this in the next section.



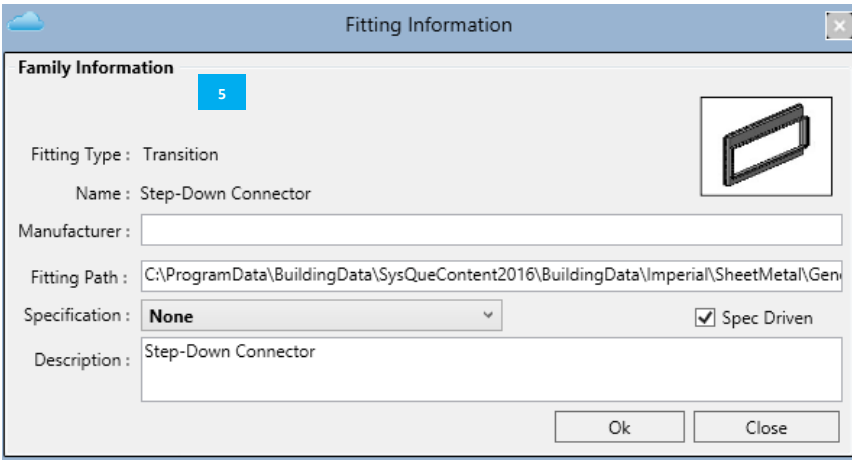
**Adding Fittings** - In the event that you are missing fittings or wish to import them over, you can 'Add Fittings,' which is located at the bottom of your Duct Panel.



- 1 Follow your folder structure to locate your current System.
- 2 These are the systems available in your folder structure that you can add into your current working palette.
- 3 These are your current systems. Notice there are less here than in your folder structure.

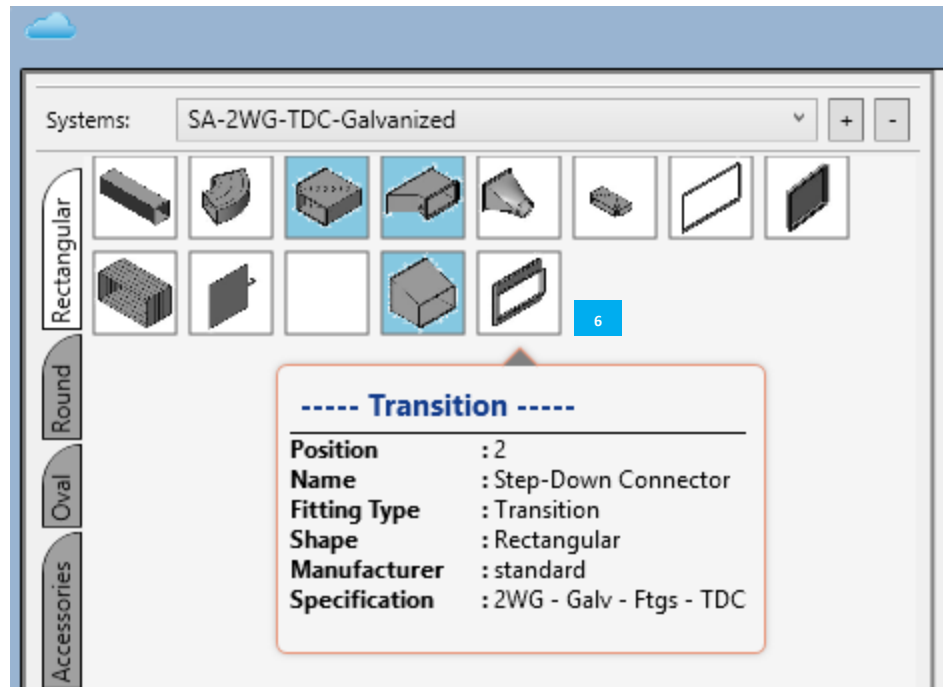


- 4 Drag and drop the fitting you would like to place in your current working palette.

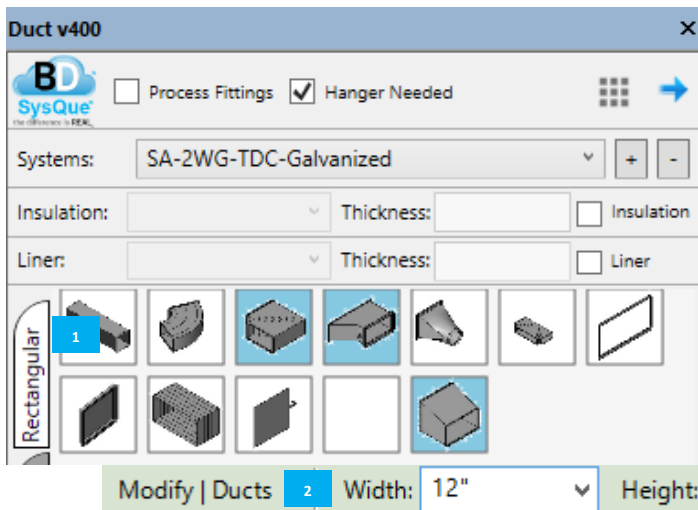


5 Insert your relevant Fitting Information here like 'Manufacturer' and any specification information.

6 Your fitting has been added successfully. You can close out of your Add Fittings menu and find the new fitting in your working palette.



## Modeling Using SysQue Systems Duct

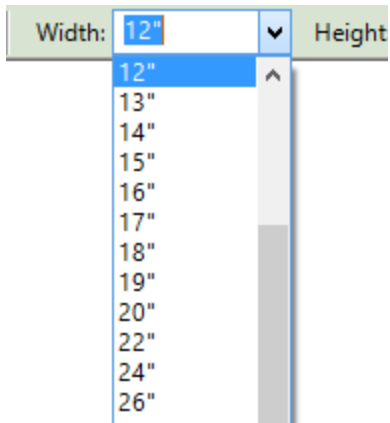


1 To draw a line of duct using the selected system, click on the button for Straight duct in the SysQue® Systems duct system window.

2. Across the top of the modeling area appears a new properties bar. Of particular interest are two items, the Width and Height textboxes 2 and the Offset combo box

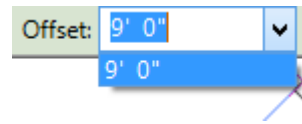
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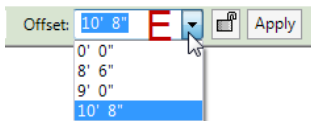
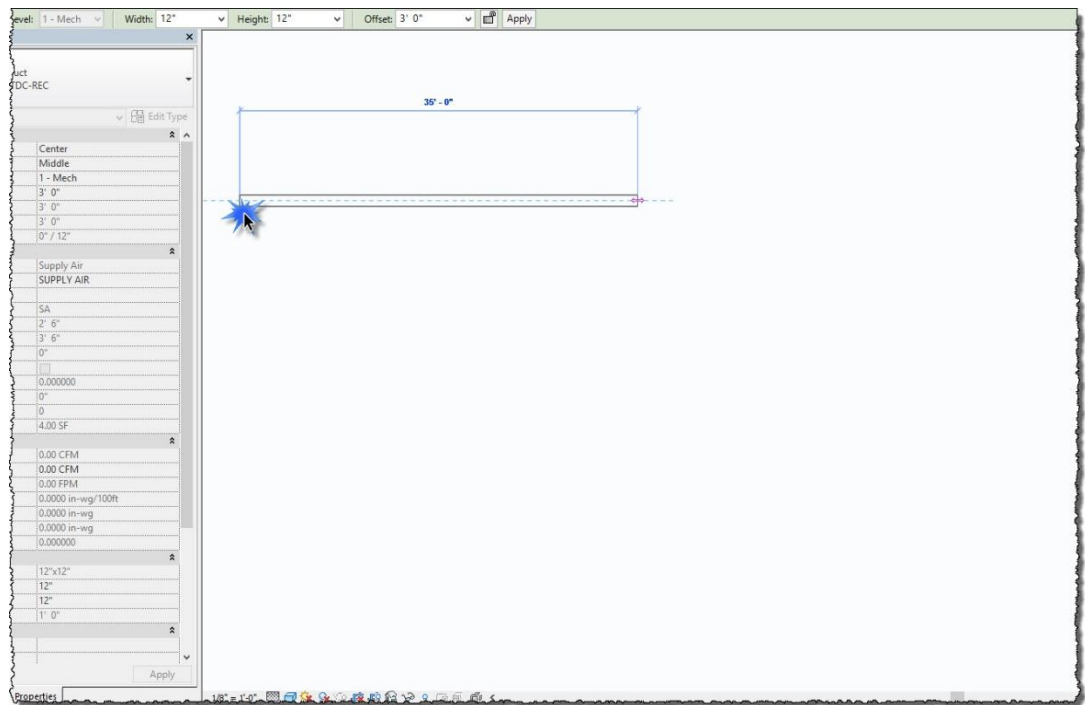


a. **Width and Height** – Clicking on the down arrow in the Width or Depth selection box causes a list of typical duct sizes to appear. Clicking on one of these sizes will place that size in the box above and the list to disappear. You can also type in any size you wish, and that size will be added to the list.

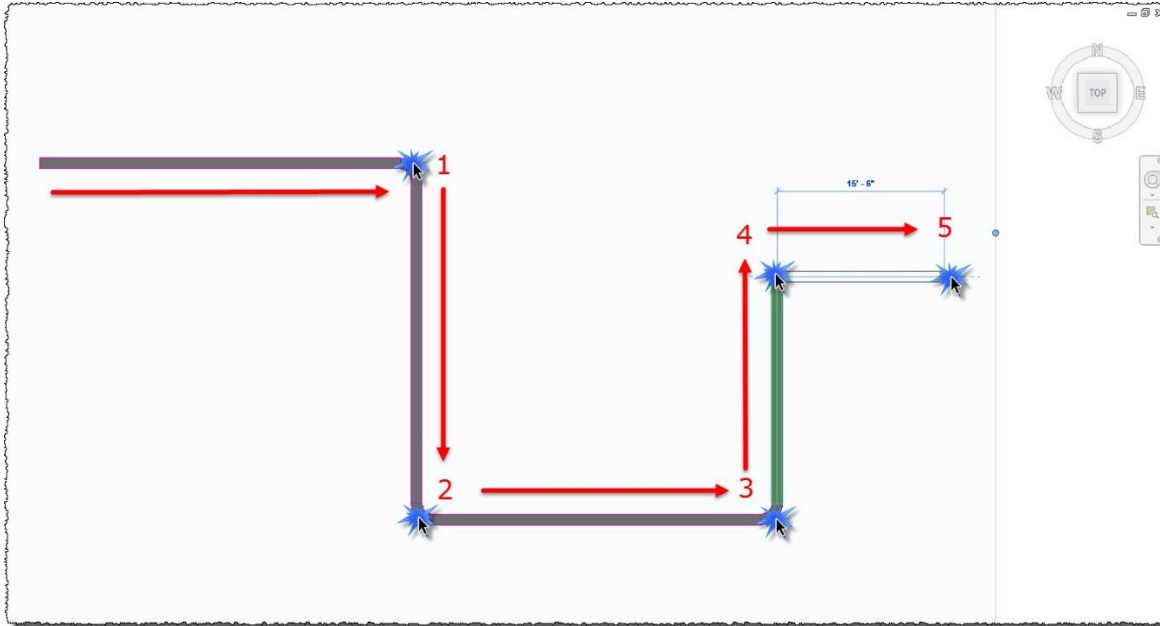
b. **Offset** – The Offset combo box allows you to set the elevation of the duct you are drawing relative to the height of the floor (or Reference Level) you are working on. A down arrow next to it (**E**) allows you to select elevations previously input.



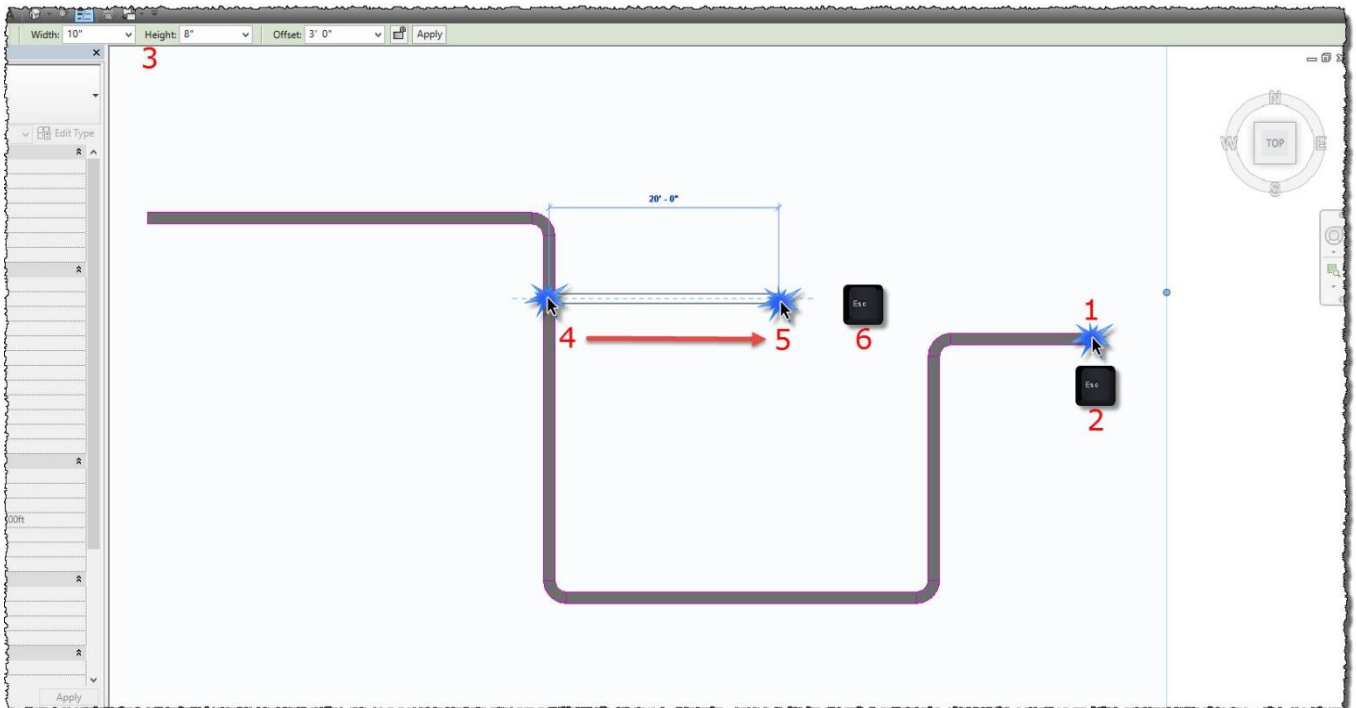
- Once you have clicked on the straight duct in the “SysQue® Systems” window for duct and selected your width, height, and offset, start your duct run by left-clicking in the modeling field and pulling your mouse in the direction you wish your duct to run. (In the below example, the duct is being drawn to the east 35’-0”.) Left-click again to set the end of the run at that point.



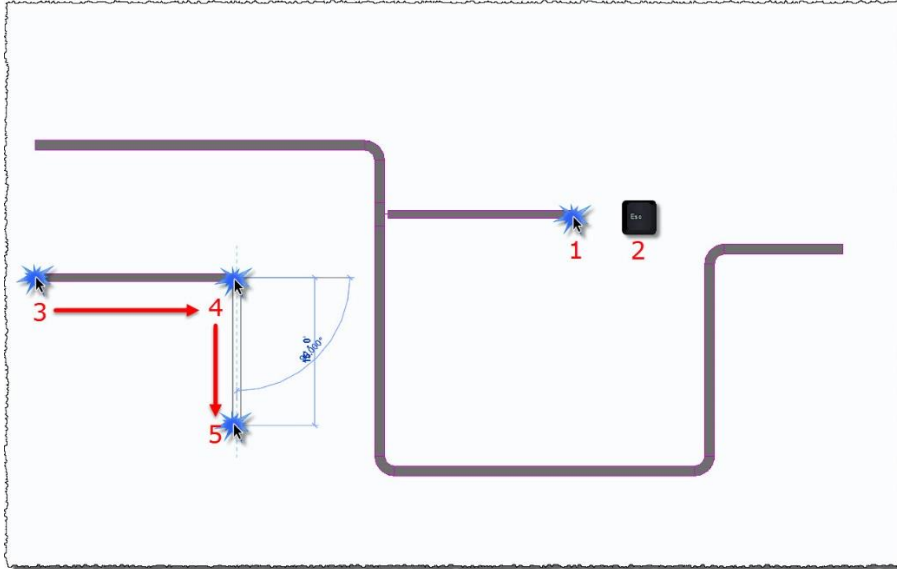
- To continue drawing your duct run, move the mouse according to the direction and distance necessary, left-clicking at each change in direction.



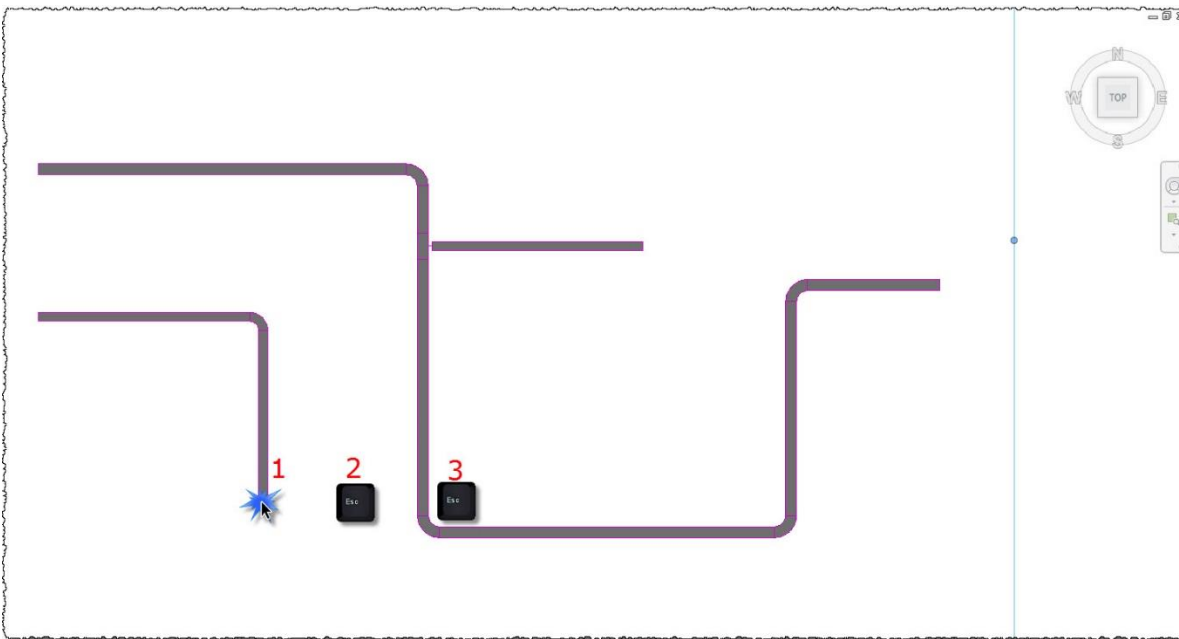
- If you want to change the size of your duct in the middle of your run, simply left-click once to place the location the change occurs. Then, go up to the Width and Height textboxes and change them to the size duct you want. Continue placing your runs as you had before.
- To add a branch, end your current run by left-clicking to set the terminus of your final duct and pressing the [ESC] key once. Change your duct width and height to the size of the branch. Move your mouse back over the section of duct you wish to attach to and left-click. Run out the direction and distance you want your branch to lead. Finally, left-click and press the [ESC] key once to end the run.



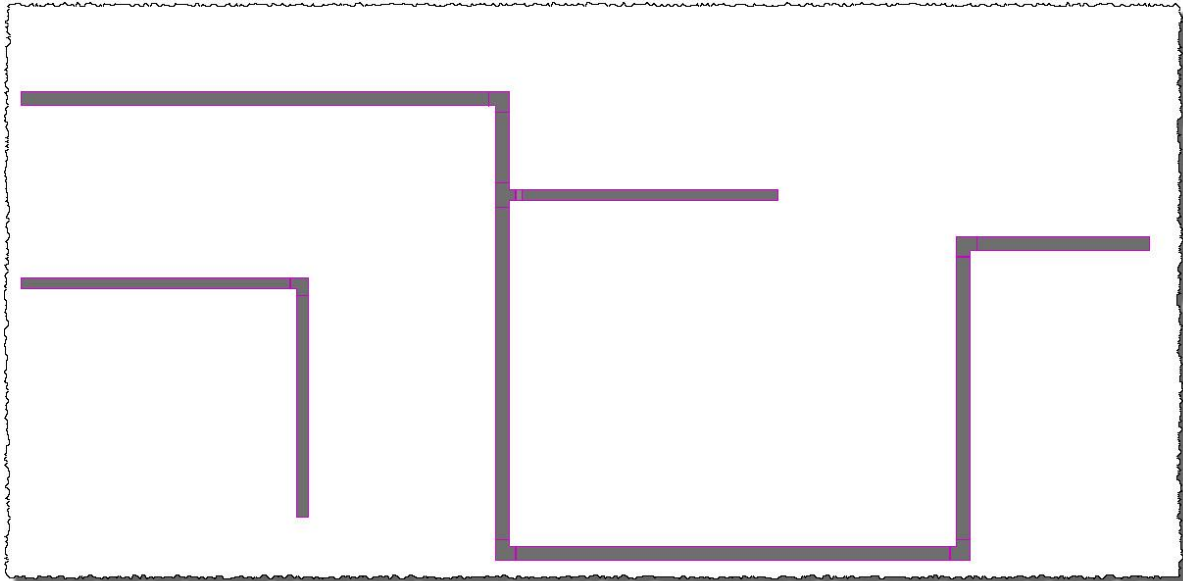
7. To end your current run and continue in a new location, left-click to set the terminus of your final duct branch run, and press the [ESC] key once. Then, move to the new location, left click, and continue as before.



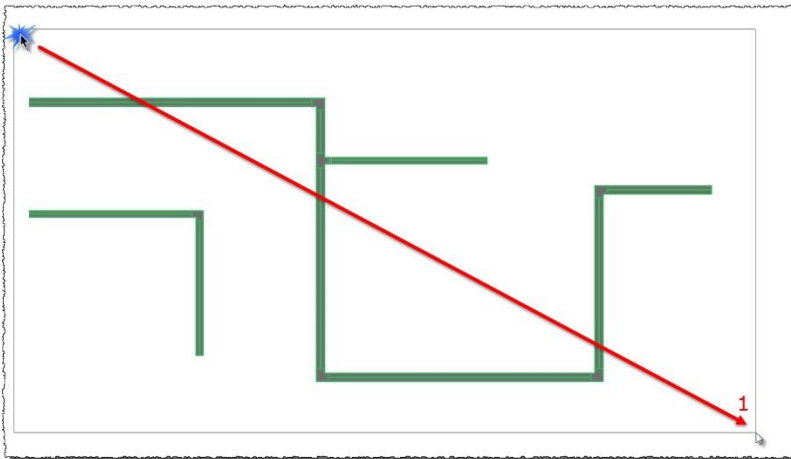
8. To end your run and stop drawing duct, left-click to set the terminus of your final duct run, and press the [ESC] key twice.



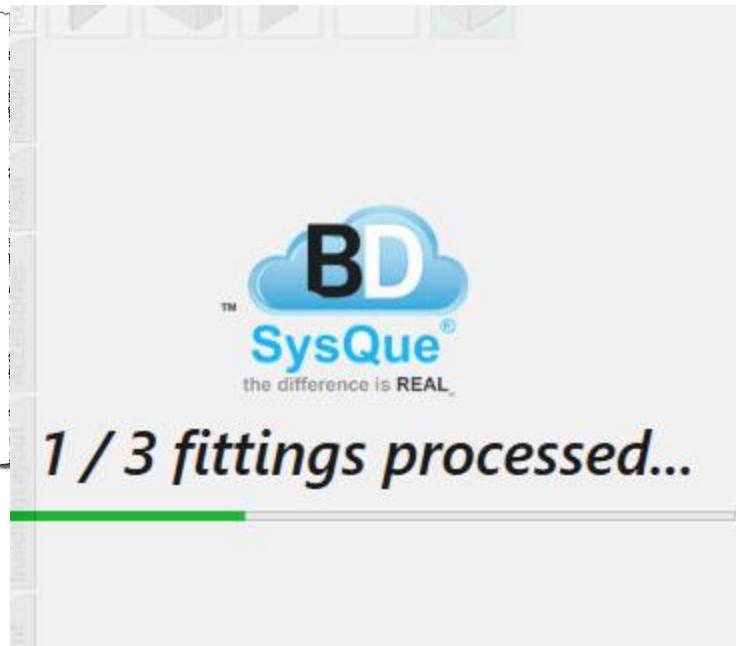
9. At this point, SysQue® will calculate the fittings. It will also automatically begin to load the appropriate families into the model. However, it will not split the straight duct into standard lengths at this point if your “Process Fittings Only” box is checked.



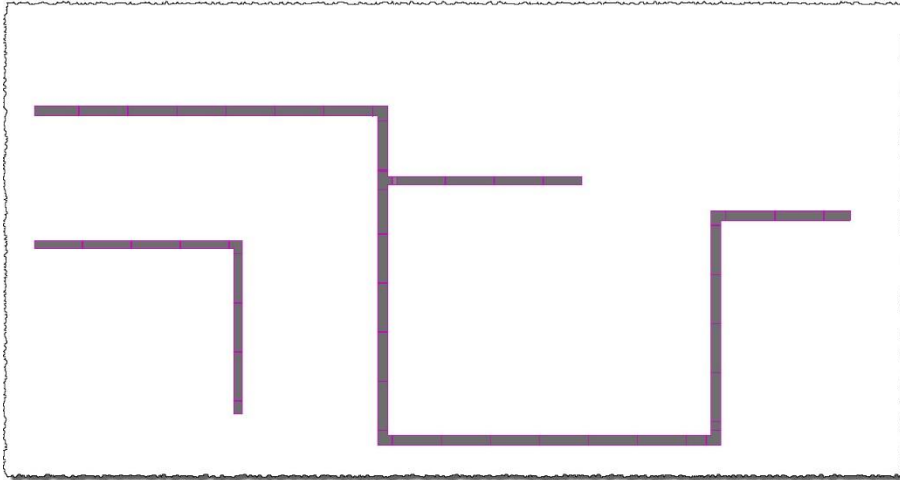
10. When you have completely modeled your entire duct system, you can split the straight duct into standard lengths by first selecting the entire duct system, and select "Process Straights" or "Process All" from the drop down menu.



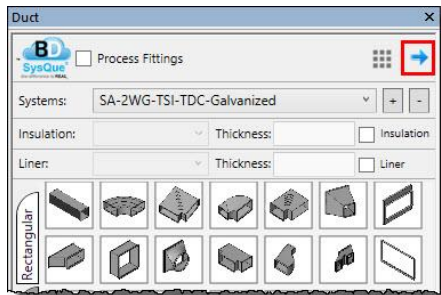
Please wait while the system calculates standard length straights.



11. When the process completes, you will have inside Revit a model of your HVAC system as you would actually manufacture it.

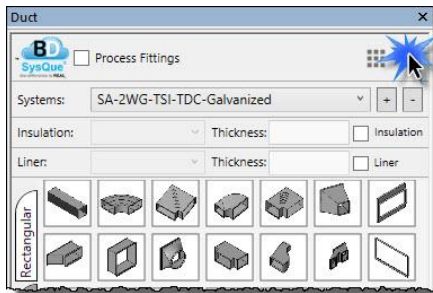
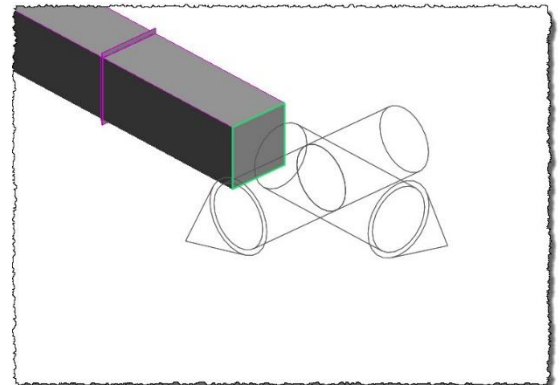


## SysQue Connect

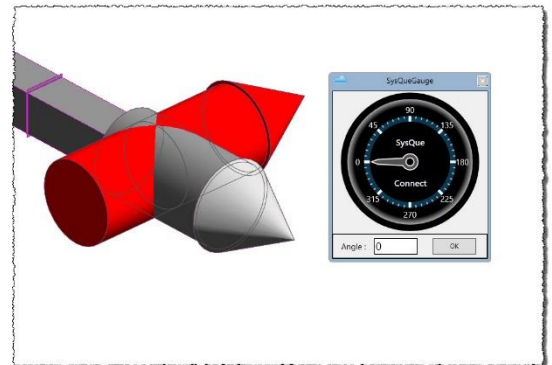


Users can attach and rotate fittings easily. Works great for tight spaces with many back to back fittings with multiple rotations and helps quickly put together complex Duct systems.

1) To draw with the connector first draw a piece of duct then select the SysQue Connect icon.



2) After selecting the connector arrow, you will be returned to your project with the arrow activated. Connect the arrow to the side of pipe you want to take off from. Once this is done the "Select Rotation Angle" box pops up. Choose your desired angle. You can manually insert your angle in the "Angle" Box or drag the arrow to your desired position.



3) Once you have selected your desired angle press ok. Your SysQue® Systems will come back and then choose which fitting you would like to connect. Grayed out fittings won't place with the arrow. We are continuing to add more and more with updates. You can repeat this as much as you like until you are complete. If you wish to connect a straight piece of Duct, simply left clicking with your mouse will place the standard length you have set. If you right click the straight and select "Take off by length". This will allow you to manually insert the length you would like, in inches.

