

## TwistFlow™ Assembly

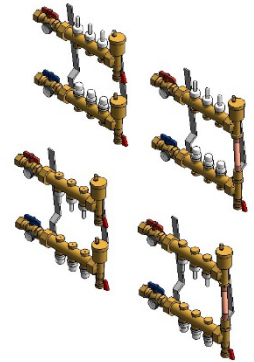
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**668S1 Series**

### Revit Content Instructions Guide

**Manufacturer & Product:** Caleffi TwistFlow 668S1 Distribution Manifold

*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-3\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-3\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-4\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-4\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-5\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-5\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-6\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-6\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-7\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-7\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-8\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-8\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-9\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-9\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-10\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-10\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-11\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-11\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-12\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-12\_Outlet-ByPass.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-13\_Outlet.rfa*  
*Distribution\_Manifold-TwistFlow-Caleffi-Brass-668S1\_Series-13\_Outlet-ByPass.rfa*


**Files:**
**Type Catalog:**

Not Applicable

**Rendering file:**

Not Applicable

**Schedule file:**

Not Applicable

**The families contain the following main variations or types:**

- 1.25in. FNPT with and without ByPass (example: 6687C5S1A)
- 1.25in. FNPT Inverted with and without ByPass (example: 6687C5S1A IN)
- 1in. FNPT with and without ByPass (example: 6686C5S1A)
- 1in. FNPT Inverted with and without ByPass (example: 6686C5S1A IN)

Manifolds with and without bypass have separate families and applicable family should be selected from the list of files provided above.

### Instance Properties

Here is a curated list of notable parameters for the Revit user within the 3-port OBCaleffi TwistFlow 668S1 Distribution Manifold family.

Construction	
Vertical Offset (default)	This controls placement of the family.
Offset from Mounting Surface (default)	This controls placement of the family.
▼ Manifold Port Connection Options (default) <ul style="list-style-type: none"> <li>① MPT_3/4in. (default)</li> <li>① Universal PEX_5/16in. (default)</li> <li>② Universal PEX_3/8in. (default)</li> <li>③ Universal PEX_1/2in. (default)</li> <li>④ Universal PEX_5/8in. (default)</li> <li>⑤ Universal PEX_3/4in. (default)</li> <li>⑥ PEX-AL-PEX_3/8in. (default)</li> <li>⑦ PEX-AL-PEX_1/2in. (default)</li> </ul>	Select one of the connection options per loop.

<ul style="list-style-type: none"> <li>8 PEX-AL-PEX_5/8in. (default)</li> <li>9 PEX-AL-PEX_3/4in. (default)</li> </ul>	
<ul style="list-style-type: none"> <li>▼ Loop Return Port Manifold Operator Options (default) <ul style="list-style-type: none"> <li>1 Manual Knob (default)</li> <li>2 6563 - Actuator (default)</li> <li>3 6563 - Actuator w/Micro-Switch (default)</li> <li>4 6564 - Actuator (default)</li> <li>5 6564 - Actuator w/Switch (default)</li> </ul> </li> </ul>	Select one of the return port options per loop. <b>(Only 6564 Actuator available on Inverted configuration)</b>

Mechanical	
Manifold Flow Status (default)	This tells you if the flow you specified for any of the loops below exceeds the maximum allowable for the manifold.
Manifold Actual Supply Flow (default)	This tells you the total flow on the manifold without Recirculation Flow Rate considered.
Radiant Port 01 Flow (default)	Specify a flow for this loop.
Radiant Port 02 Flow (default)	Specify a flow for this loop.
Radiant Port 03 Flow (default)	Specify a flow for this loop.
Recirculation Flow Rate (default)	Specify a flow for recirculation.
Total Radiant Port Flow (default)	This shows the total flow from everything you've specified on each port along with the Recirculation Flow Rate.
Mechanical - Loads	
Manifold Actual Pressure Drop (default)	This tells you the pressure drop of the manifold and the critical radiant port pressure drop
Radiant Port 01 Pressure Drop (default)	Specify a pressure drop for this loop.
Radiant Port 02 Pressure Drop (default)	Specify a pressure drop for this loop.
Radiant Port 03 Pressure Drop (default)	Specify a pressure drop for this loop.
Manifold Pressure Drop (default)	Specify a pressure drop for the manifold.
System Pressure Drop (default)	This takes into account the Pressure Drop Feet of Water.
Pressure Drop Feet of Water (default)	Specify the pressure drop in feed of water.
Water Heater Pressure Drop (default)	Specify the water heater pressure drop.

## Type Properties

Here is a curated list of notable parameters for the Revit user within the 0BCaleffi TwistFlow 668S1 Distribution Manifold families.

Materials	
Body Material	Metal - Caleffi - Brass
Handle Material	Metal - Caleffi - Aluminum - Blue
Handle Material	Metal - Caleffi - Aluminum - Red
Identity Data	
Assembly Code	D3040
Contact URL*	<a href="http://www.caleffi.com/usa/en-us/contacts/contact-us">http://www.caleffi.com/usa/en-us/contacts/contact-us</a>
Copyright*	©Caleffi North America
Cost	
Description	TwistFlow™ pre-assembled distribution manifold for radiant panel systems with built-in sight flow gage/balancing valve
Family Version*	1
Keynote	
Manufacturer	Caleffi North America, Inc.
Model	6686C5S1A
Product Page URL*	<a href="https://www.caleffi.com/usa/en-us/catalogue/twistflowtm-assembly-6686c5s1a">https://www.caleffi.com/usa/en-us/catalogue/twistflowtm-assembly-6686c5s1a</a>
Type Comments	
Type Image	
Series*	668S1 Series
URL	<a href="https://www.caleffi.com/usa/en-us">https://www.caleffi.com/usa/en-us</a>

Half tone text in the property tables indicates that the value is locked from editing.

\*Indicates Shared Parameter and can be scheduled

## Rendering



Note: Standard Caleffi materials are imported. These may be modified, but please ensure that the modification selection matches an actual manufacturer supplied option.

## Loading and Placing into the Project

To work with the OBCaleffi TwistFlow 668S1 Distribution Manifold in Revit, multiple families for different loop configurations and variations are provided. Navigate to the Insert Tab > Load Family button on the Revit ribbon to load the family.

Please ensure that the visibility settings within the project are modified to have the Mechanical category visible.

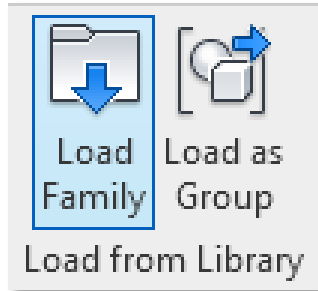


Figure 1 - Insert Tab > Load Family

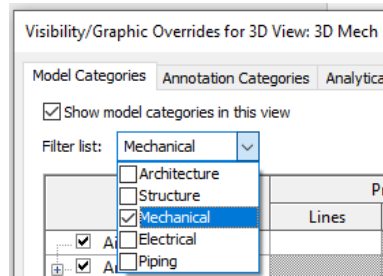
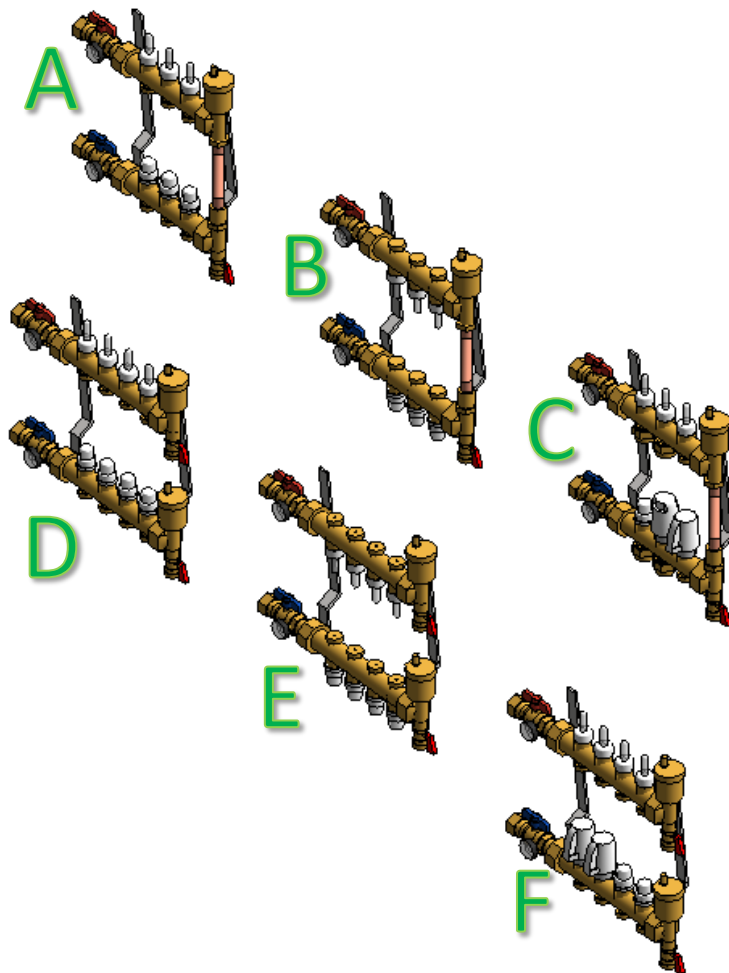


Figure 2 - Visibility/Graphic Overrides



- A. Manifold with ByPass
- B. Inverted Manifold with ByPass
- C. Manifold with ByPass with 6563 Actuator on return port 2, and 6564 Actuator on return port 3
- D. Manifold without ByPass
- E. Inverted Manifold without ByPass
- F. Inverted Manifold without ByPass with 6564 Actuator on return port 2, and 6564 Actuator with switch on return port 3

Figure 3 - OBCaleffi TwistFlow 668S1 Distribution Manifold

## Project Behavior

One way to place a OBCaleffi TwistFlow 668S1 Distribution Manifold is to go to the Systems Tab on the Revit ribbon and navigate to the Component button with Place a Component fly-out selected. The OBCaleffi TwistFlow 668S1 Distribution Manifold family can be placed on a face, such as on a wall in Revit.

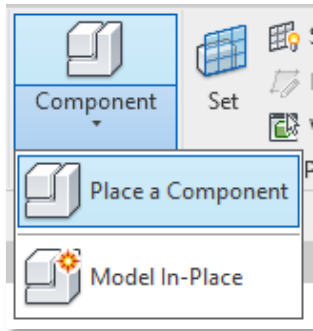


Figure 4 - Systems Tab > Component > Place a Component

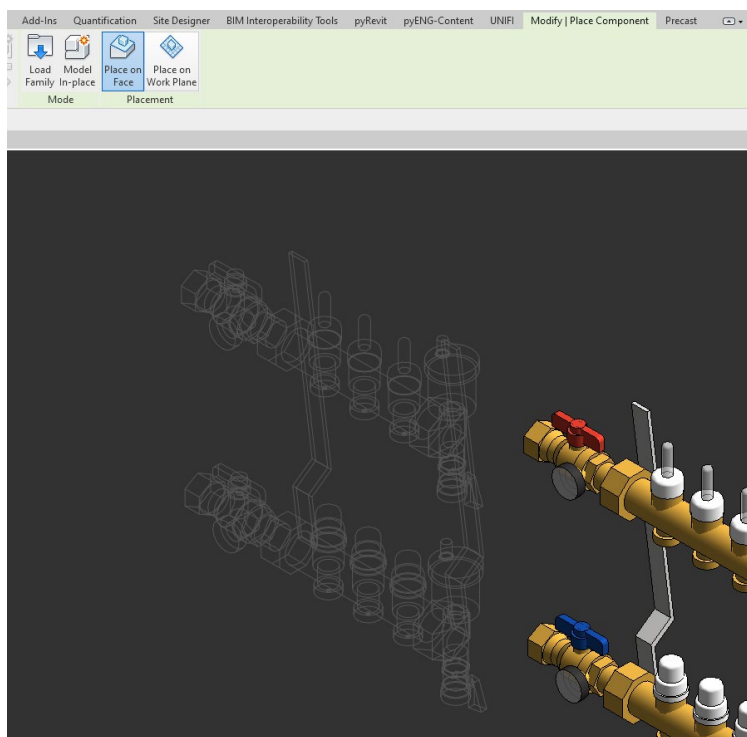


Figure 5 - Place on a Wall

The OBCaleffi TwistFlow 668S1 Distribution Manifold family is work plane based and includes multiple instance options for configuration once placed.

- Vertical Offset
- Offset From Mounting Surface
- Manifold Port Connection Options (per loop customization)
  - MPT
  - Universal PEX
  - PEX-AL-PEX
- Loop Return Port Manifold Options (per loop customization)
  - Manual Knob
  - 6563 - Actuator
  - 6563 - Actuator w/ Micro-Switch
  - 6564 - Actuator
  - 6564 - Actuator w/ Switch
- Individual Radiant Port Flows per loop
- Individual Pressure Drop per loop

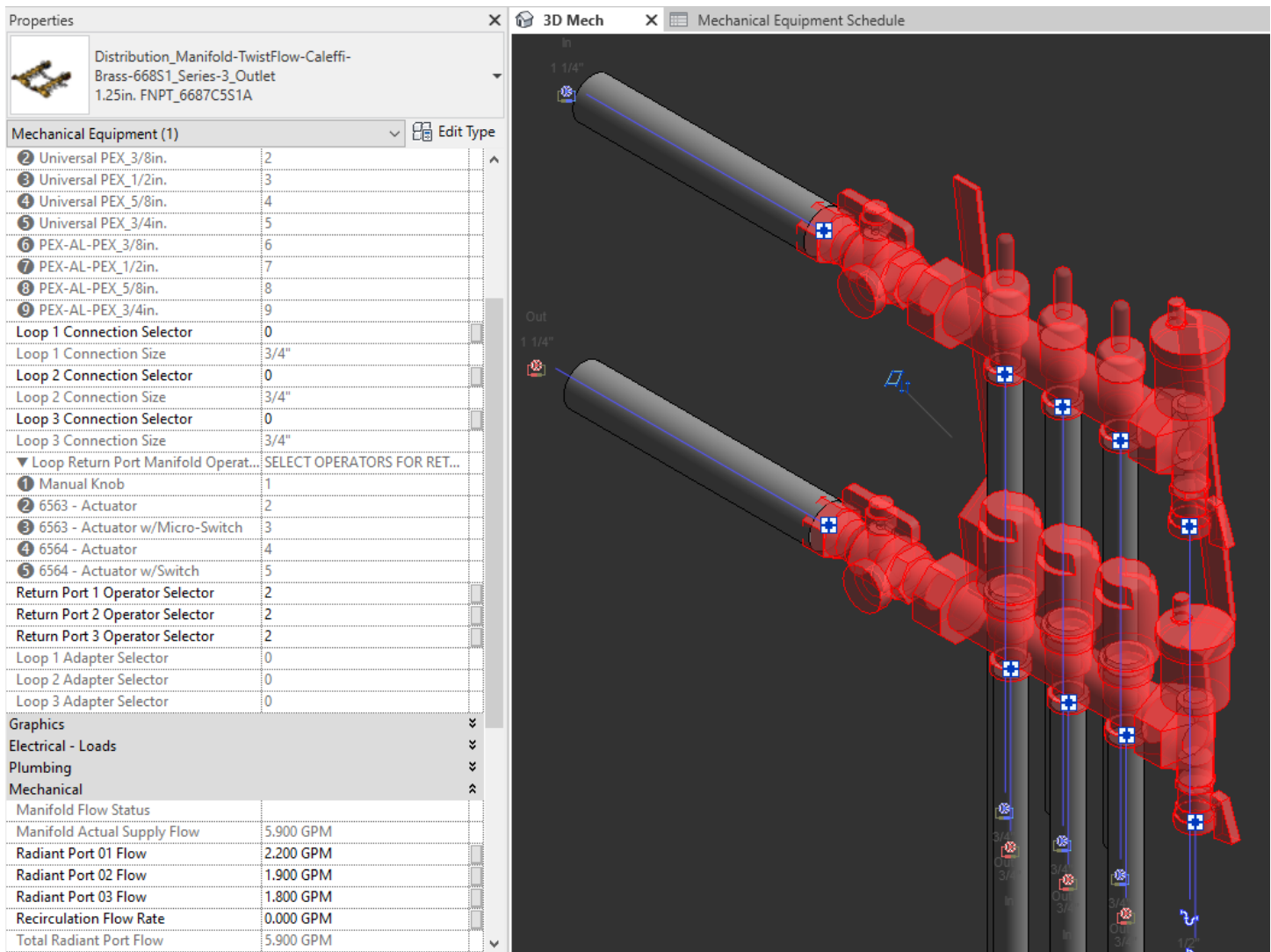


Figure 6 - A desired connection option of "0" (MPT) and Loop Return Port Manifold Operator "2" (6563 – Actuator) were selected. Individual Radiant Port Flows were specified. The manifold itself functions as a terminal unit, so the supply/return piping near the valves would be the only required pipes to integrate the OBCaleffi TwistFlow 668S1 Distribution Manifold into your system. The pipe connecting to individual loops would be optional. Pipe can be drawn from any connection point via right click > draw pipe.

## Schedule Creation

Within the type and instance properties dialogues, the Revit user will find useful information for scheduling purposes such as Type, Part Description, Part Number/Model, Family Version, Manufacturer, Series, & Product Page URL. The resulting Mechanical Equipment schedule in your project will show counts/quantities of the OBCaleffi TwistFlow 668S1 Distribution Manifold as well as separate quantities/counts of any separately purchased accessory products that do not come in box with the OBCaleffi TwistFlow 668S1 Distribution Manifold.

**For Technical Support call 1-414-338-6338, or  
email [techsupport.us@caleffi.com](mailto:techsupport.us@caleffi.com)**

