

TECH NOTES

FSM-3 SuperMag Insertion Electromagnetic Flow Meter



HOW TO USE ONICON AUTODESK® REVIT® FAMILY

OVERVIEW

The ONICON Revit Family is easy to use and incorporate into any project using Revit 2018 or later. The meter(s) will automatically connect to the piping system at the same elevation, adapt to changing sizes, inherit system types and provide installation guidance.

Further explanation of properties are provided with Tool Tips. Tool Tips are accessible by hovering over each parameter in the properties window.

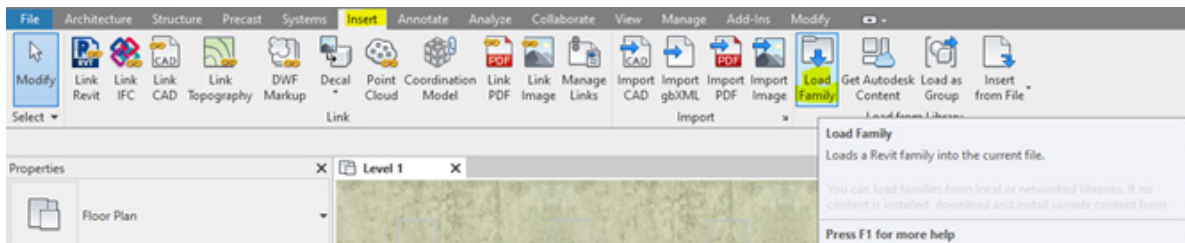


TOOLS REQUIRED

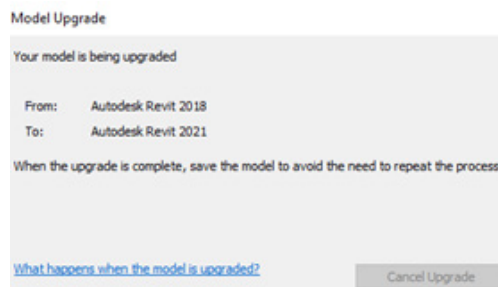
- Revit 2018 or later
- ONICON Revit zip file, located on the product page of the website.

INSERT THE FAMILY INTO A PROJECT

1. Unzip the downloaded file and place the folder in a desired location.
2. In a floor plan view (Revit 2018 or later), navigate to the Insert tab on the ribbon and select **Load Family**.



3. Locate the .RFA file in the saved location and select **Open**. The model will automatically upgrade if the current version of Revit is 2018 or later.



4. The Family will be added to the Project Browser in the Families section, located under the Pipe Accessory category.

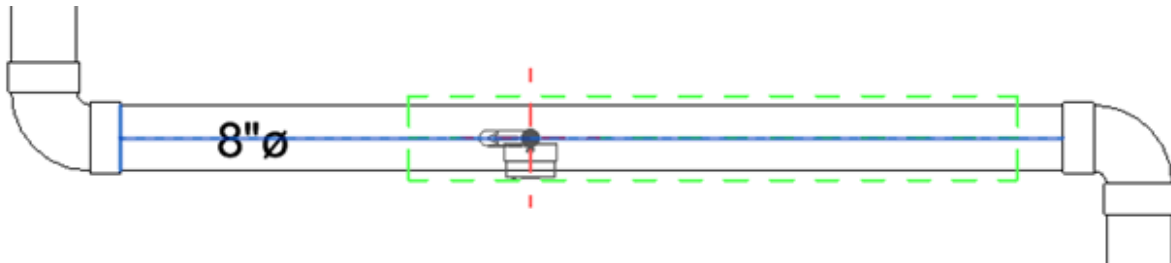
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ADD THE FAMILY TO A PIPE SYSTEM

1. Click and drag The Family from the Project Browser into a pipe. The centerline of the pipe, where the meter will cut into, will be highlighted.



With the meter selected, in the Properties window, the following sections apply:

1.1 GRAPHICS

- **Symbol Flip** - In a medium or course detail level, if the text is not upright, select this toggle box to correct.



1.2 MECHANICAL – FLOW

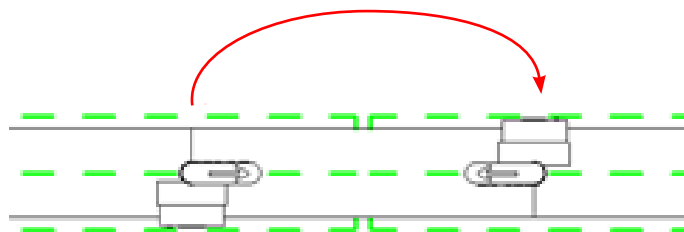
- **Max Flow – Design** - User input for maximum design flow rate, this value will populate into the meter schedule.

1.3 IDENTITY DATA

- **Mark** – User input for name of individual meter tag (i.e FM-1, FM-2, etc.).

1.4 VISIBILITY

- **Flow Direction One Way** – Toggles this box to change the flow direction arrow. This will change the stream recommendation box accordingly for upstream and downstream clearances.



- **Bidirectional Flow Meter** – This toggle box will remove the flow directional arrow from the top of the meter and will update the flow recommendation box accordingly.

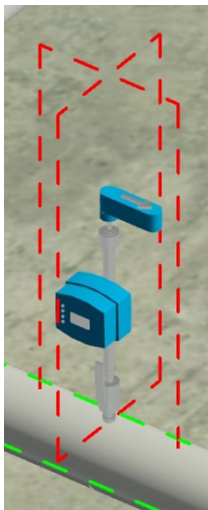
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1.4 VISIBILITY (CONTINUED)

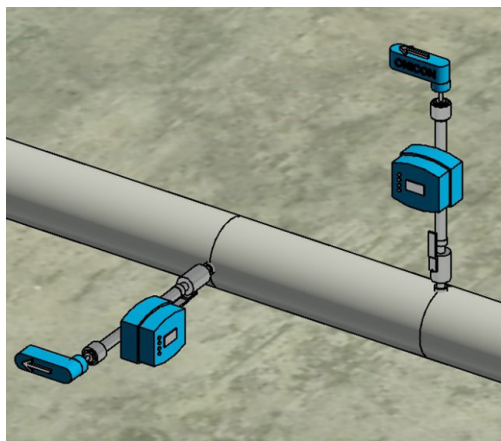
- **Installation Clearance Vis** – This box toggles the visibility of the red installation clearance box required for installing the flow meter.



- **Stream Recommendation Box** – This box toggles the green stream recommendation box. This is a recommendation for straight run of pipe before and after obstructions. Please refer to the FSM-3 IOM for a full list of straight pipe requirements. The dimension shown is applicable to a fully open butterfly valve.

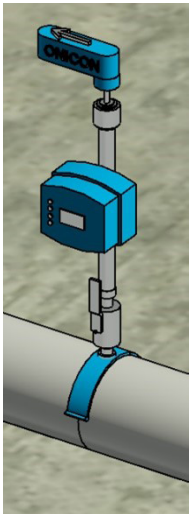


- **Transmitter Orientation...** – Selects the transmitter orientation that best suits the orientation of the design. Leave these boxes unchecked for a remote mounted transmitter, then select the cable length to accommodate the remote mount installation distance (see section 1.5).

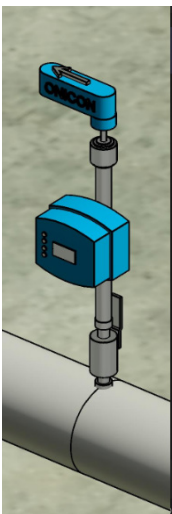


1.4 VISIBILITY (CONTINUED)

- **Pipe Saddle Installation** – Toggles visibility of the Pipe Saddle for PVC or Carbon Steel installation.



- **Weldolet Installation** – Toggles visibility of the Weldolet installation.



1.5 OTHER

- **Transmitter Cable Length...** – Specifies the cable length of the remote transmitter. The default cable length is 4'. Optional remote mount cable lengths are 25', 50' or 100'.

Other	
Transmitter Cable Length 4ft Standard (default)	<input type="checkbox"/>
Transmitter Cable Length 25ft (default)	<input type="checkbox"/>
Transmitter Cable Length 50ft (default)	<input type="checkbox"/>
Transmitter Cable Length 100ft (default)	<input type="checkbox"/>
Transmitter Cable Length (default)	Not Specified

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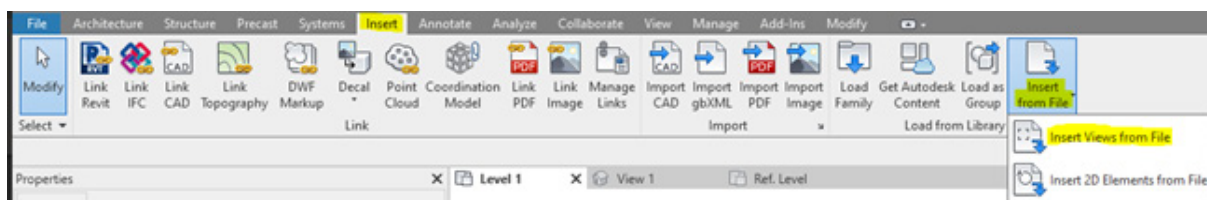
1.5 OTHER (CONTINUED)

-**Tap for...** – Populates the recommended ONICON installation kit into the meter schedule. The installation kit model number will automatically populate based on the installation requirements (i.e Dry Tap or Hot Tap, and the pipe material).

Other	
Transmitter Cable Length 4ft Standard (default)	<input type="checkbox"/>
Transmitter Cable Length 25ft (default)	<input type="checkbox"/>
Transmitter Cable Length 50ft (default)	<input type="checkbox"/>
Transmitter Cable Length 100ft (default)	<input type="checkbox"/>
Transmitter Cable Length (default)	Not Specified
Dry Tap for Carbon Steel (default)	<input type="checkbox"/>
Dry Tap for Carbon Steel Domestic (default)	<input type="checkbox"/>
Dry Tap for Carbon Steel SS Fittings (default)	<input type="checkbox"/>
Dry Tap for Stainless Steel (default)	<input type="checkbox"/>
Hot Tap for Carbon Steel (default)	<input type="checkbox"/>
Hot Tap for Carbon Steel Domestic (default)	<input type="checkbox"/>
Hot Tap for Carbon Steel SS Fittings (default)	<input type="checkbox"/>
Hot Tap for Carbon Steel or PVC with Saddle 1.5" to 6" (default)	<input type="checkbox"/>
Hot Tap for Carbon Steel or PVC with Saddle 8" to 14" (default)	<input type="checkbox"/>
Hot Tap for Copper Tube with Saddle (default)	<input type="checkbox"/>
Hot Tap for Stainless Steel (default)	<input type="checkbox"/>
ONICON Installation Kit (default)	Not Specified

INSERT ONICON METER SCHEDULE INTO THE PROJECT

1. In a floor plan view (Revit 2018 or later), navigate to the Insert tab on the ribbon, select **Insert Views from File** and navigate to **ONICON_FLOW_METER_SCHEDULE**.

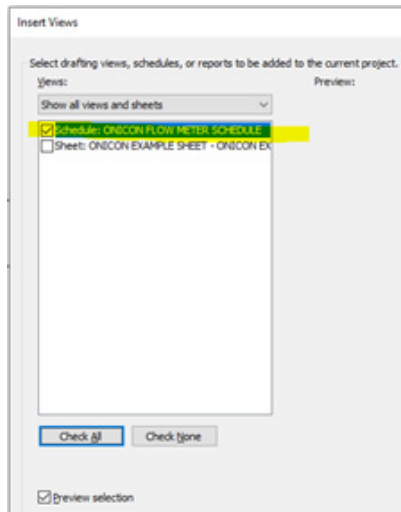


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INSERT ONICON METER SCHEDULE INTO PROJECT (CONTINUED)

2. Select the **Schedule: ONICON FLOW METER SCHEDULE** and insert into project.



3. In the Project Browser under Schedules/ Quantities, the newly added schedule **ONICON FLOW METER SCHEDULE** is listed. ONICON meters in the project will automatically populate into this schedule.

If an installation kit or transmitter cable length are not specified, the cell will highlight as an alert.

ONICON FLOW METER SCHEDULE								
TAG #	QTY	MODEL	MANUFACTURER	SYSTEM TYPE	MAX DESIGN FLOW RATE	SIZE	ONICON INSTALLATION KIT #	TRANSMITTER CABLE LENGTH
FM-1.9	1	FSM-3	ONICON	Hydronic Supply	1000 GPM	6" Meter	INSTL0018-FMD	25 ft
FM-1.10	1	FSM-3	ONICON	Hydronic Return	2500 GPM	8" Meter	INSTL0018-FMD	100ft
FM-1.11	1	FSM-3	ONICON	Domestic Cold Water	3900 GPM	10" Meter	Not Specified	50ft
FM-1.12	1	FSM-3	ONICON	Domestic Hot Water	5000 GPM	12" Meter	INSTL0006-FMH	Not Specified

If you have any questions or need assistance with the Revit file, please contact ONICON Sales at (727) 447-6140 or sales@onicon.com.

