

TURBINE FLOW METER APPLICATION GUIDE



IMPORTANT POINTS TO CONSIDER REGARDING ONICON TURBINE FLOW METERS

- General** - Typically used for conductive, low viscosity liquids in full, pressurized pipes (with filters or strainers in open loops.)
- Specifications** - Review engineering specifications carefully to determine if LCD display and/or 316SS wetted components are specified for the project. Many specifications based on industrial meters will require these features.
- Output Signals** - The models shown below are most commonly used in these applications. However, any available output signal can be used for any application. With the System-10 BTU Meter, we typically use frequency output flow meter models.
- PVC or SS Pipe** - Insertion turbine flow meters must have 316SS option to prevent galvanic corrosion. Also, use of PVC or SS pipe may indicate a process application with chemical compatibility or low conductivity to consider.
- Installation Hardware** - Costs vary greatly based on pipe material, pipe size and standard vs hot tap installation. Be specific about which pipe material and install kit types are required to determine the cost. See pages 7-9 for details.

Please refer to www.onicon.com for information on choice of single vs. dual turbine meters based on straight pipe run.

APPLICATION	LOCATION & PIPE SIZE	MODEL (signal type)	REQUIRED OPTIONS	DISPLAY
HVAC APPLICATIONS				
Chilled Water	¾" - 1" (0.8 to 38 gpm)	F-1310 (analog)	316SS for HW over 250°F 316SS for non-metallic pipe Check project specifications for required features.	D-1200 Series
	1 ¼" - 2"	F-1110 (analog)		
Hot Water (to 280°F)	2½" and up with developed flow (long pipe runs)	F-1110 (analog)		
Condenser Water (closed loop)	2½" and up with undeveloped flow due to short pipe runs	F-1210 (analog)		
Primary/Secondary Bypass & Stratified Thermal Storage	Any bi-directional application in 2½" and larger	FB-1210 (analog)		DB-1200 Series
Make-up Water	¾" - 1" (0.8 to 38gpm)	F-1330 (pulse)	Steel pipe: 316SS is preferred but optional. Copper or PVC pipe: 316SS is required to prevent galvanic corrosion. 316SS wetted metal components are required for insertion type meters in these applications.	D-1200 series
	1¼" - 2"	F-1130 (pulse)		
Domestic Hot Water	Choose single or dual based on straight pipe run	F-1130 or F-1230 (pulse)		
Domestic Cold Water				
Steam Condensate	Typically small pipes	F-1130 or F-1330 (pulse)		
Boiler Feed Water (to 280°F)	Typically small pipes	F-1130 (pulse)		
MUNICIPAL WATER				
	2½" and up with developed flow (long pipe runs)	F-1111 (iso-analog)	316SS wetted metal components are required.	D-1201 w/aux. scaled pulse output
	2½" and up with undeveloped flow due to short pipe runs	F-1211 (iso-analog)		
PROCESS APPLICATIONS				
Process cooling conductivity > 25 µS/cm	1¼" - 2"	F-1111 (iso-analog)	316SS wetted metal components required. Requires special modification for low conductivity.	D-1200 Series
	2½" and up with developed flow (long pipe runs)	F-1111 (iso-analog)		
	2½" and up with undeveloped flow due to short pipe runs	F-1211 (iso-analog)		
Process cooling, conductivity 4 - 25 µS/cm		F-1111 (iso-analog)	Requires 316SS welded construction plus modification for low conductivity.	
Acid scrubber (Check with factory regarding chemical compatibility.)		F-1111 (iso-analog)	316SS wetted metal components with all welded construction.	

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