

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 parts 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, typically use frequency output flow meter models.
- PVC or SS Pipe:** Insertion flow meters must have 316SS option to prevent galvanic corrosion. Also, use of PVC or SS pipe may indicate a process application with chemicals or low conductivity to consider.
- Installation Hardware** costs vary greatly based on pipe material, pipe size, and std. vs. hot tap. Be specific about what pipe material and install kit type are required to determine the cost. See pgs. 6-7 for complete 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 Hot Water (to 280 F) Condenser 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
	1.25" - 2"	F-1110 (analog)		
	2.5" and up with developed flow (long pipe runs)	F-1110 (analog)		
	2.5" and up with undeveloped flow due to short pipe runs	F-1210 (analog)		
Primary/Secondary Bypass & Stratified Thermal Storage	Any bi-directional application in 2.5" and larger	FB-1210 (analog)		DB-1200 Series
Make-up Water Domestic Hot Water Domestic Cold Water	¾" - 1" (0.8 to 38 gpm)	F-1330 (pulse)	Steel pipe: 316SS is preferred but optional Copper or PVC pipe : 316SS is required to prevent galvanic corrosion	D-1200 Series
	1.25" - 2"	F-1130 (pulse)		
	Choose single or dual based on straight pipe run	F-1130 or F-1230 (pulse)		
Steam Condensate	Typically small pipes	F-1130 or F-1330	316SS wetted metal parts is required for insertion type meters in these applications	
Boiler Feed Water (to 280 F)	Typically small pipes	F-1130		
MUNICIPAL WATER	2.5" and up with developed flow (long pipe runs)	F-1111 (iso-analog)	316SS wetted metal parts is required	D-1201 w/ aux. scaled pulse output
	2.5" and up with undeveloped flow due to short pipe runs	F-1211 (iso-analog)		
PROCESS APPLICATIONS				
Process cooling, conductivity > 25 micro mhos	1.25 - 2"	F-1111 (iso-analog)	316SS wetted metal parts required Requires special modification for low conductivity	D-1200 Series
	2.5" and up with developed flow (long pipe runs)	F-1111 (iso-analog)		
	2.5" and up with undeveloped flow due to short pipe runs	F-1211 (iso-analog)		
Process cooling, conductivity 4 - 25 µ mhos (4 µ mhos)		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 parts with all welded construction	

For additional information, please refer to our website, or, contact your local ONICON representative.