

EMCO FLOW SYSTEMS

An Advanced Energy Company

**LEADING EDGE
TECHNOLOGY FLOWMETERS**

*for advanced measurement
of liquid, gas and steam.*



EMCO Flow Systems is a long established manufacturer of precision flowmeters for liquid, gas and steam applications for commerce and industry. Founded in Colorado in 1967, EMCO Flow Systems has over 30 years experience in the field of flow measurement and is able to provide its customers with a comprehensive line of products capable of measuring and controlling most liquids, gases and steam. In 2001, EMCO Flow Systems was acquired by Advanced Energy Industries and has since become an integral part of AE's strategy to provide best-of-breed technology for its integrated component solutions for semiconductor manufacturing and other industries, while continuing to support EMCO's traditional flowmetering customers.

The Company

EMCO Flow Systems manufactures under an ISO 9001 certified quality system that includes extensive flow calibration capability, engineering, applications and service. Our commitment to quality underpins a worldwide sales and service organization which is focused on providing the best and most cost-effective flowmeters in the industry.

With over three decades of flowmetering and applications experience, we know that one flowmeter does not fit all flow measurement applications. Therefore EMCO Flow Systems provides a wide selection of flowmetering technologies and a worldwide representation to offer you the personalized service and support needed to ensure that you receive the best flowmeter for your application.

EMCO flowmeters are available for most liquid, gas and steam applications in pipe sizes ranging from 1/4 to 100 inches.



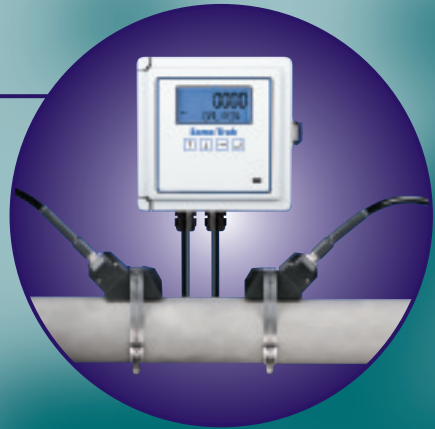


- Manufacturing is housed in a 50,000 square-foot modern plant located in Longmont, Colorado.
- Modern clean-room, mechanized assembly equipment and computer based testing ensure the highest quality product.
- Extensive flow calibration facilities are traceable to NIST.
- Trained professional flow specialists and technicians offer timely customer assistance.
- Factory trained and certified field technicians provide product support services.
- Professional worldwide sales organization to provide local personalized service.

transit-time ultrasonic

Sono-Trak™

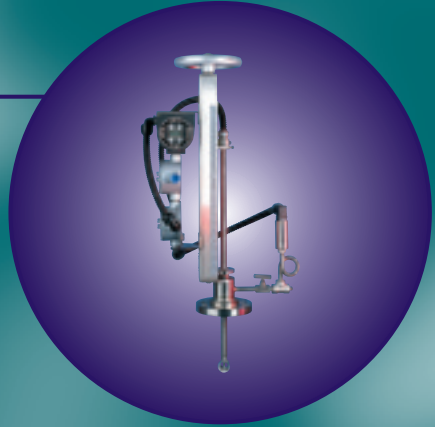
- Liquid applications
- Accuracy $\pm 1-2\%$ of rate
- Simple non-invasive clamp-on installation
- Maintenance free operation
- Multiple outputs available
- NEMA 6-rated transducers are fully submersible
- EZ-Logic™ menu-driven user interface
- Built-in infrared capability for optional PC interface



insertion vortex

V-Bar™

- Liquid, gas and steam applications
- EZ Logic™ user interface
- Installation without process shutdown
- No moving parts, resulting in no maintenance
- Accuracy
 - Liquids $\pm 1.0\%$ of rate
 - Gas and Steam $\pm 1.5\%$ of rate
- Repeatability $\pm 0.15\%$ of rate



insertion turbine

Turbo-Bar™

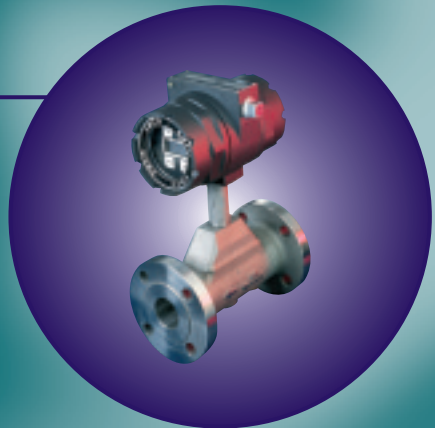
- Liquid, gas and steam applications
- EZ Logic™ user interface
- Flow velocity down to 1 foot/sec
- Installation without process shutdown
- Flow turndown ratio up to 25:1
- Accuracy
 - Liquids $\pm 1.0\%$ of rate
 - Gas and Steam $\pm 1.5\%$ of rate
- Repeatability $\pm 0.25\%$ of rate



inline vortex

Vortex PhD™

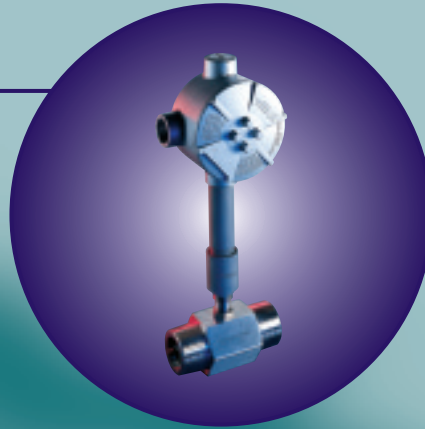
- Gas, steam and liquid applications
- EZ Logic™ user interface
- No moving parts, resulting in no maintenance
- Accuracy
 - Liquids $\pm 0.7\%$ of rate
 - Gas and steam $\pm 1.0\%$ of rate
- Repeatability $\pm 0.15\%$ of rate
- No need for bypass piping installation



inline turbine

Inline Turbine

- Liquid and gas applications
- High rangeability
- Accuracy
 - Liquids $\pm 1.0\%$ of rate
 - Gas $\pm 1.0\%$ of full scale
- Repeatability $\pm 0.1\%$ of rate
- Flow turndown ratio up to 10:1



electromagnetic

Magflo®

- Conductive liquid applications
- Accuracy up to 0.25% of rate
- No moving parts
- SENSORPROM™ technology for easy maintenance
- Backlit display
- Flanged, wafer and sanitary connections available
- Comprehensive selection of liners including ceramic, PTFE, Neoprene, LinaTex, etc.



inline vortex

Hydro-Flow™ 1100

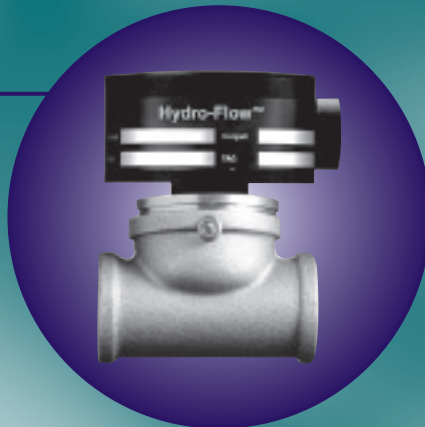
- Water and water-glycol mixtures applications
- Accuracy $\pm 0.5\%$ of full scale
- Flow range 0.5–15 feet/sec (0.15–4.5 m/sec)
- PVC schedule 80 tee fitting or flange
- No moving parts, resulting in no maintenance
- Maximum fluid temperature 140°F (60°C)
- Microprocessor based electronics with optional local display



inline vortex

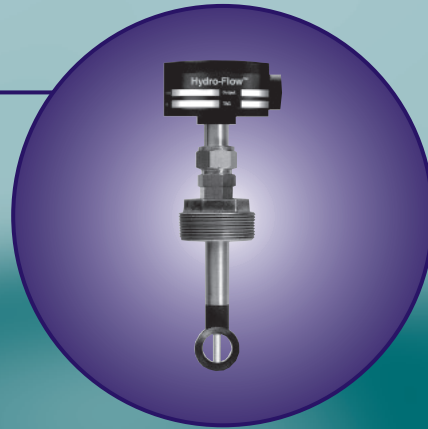
Hydro-Flow™ 1200

- Water, water-glycol mixtures and condensate applications
- Accuracy $\pm 0.5\%$ full scale
- Flow range 0.5–15 feet/sec (0.15–4.5 m/sec)
- No moving parts, resulting in no maintenance
- Maximum fluid temperature 160°F (70°C)
- Brass NPT connection
- Microprocessor based electronics with optional local display



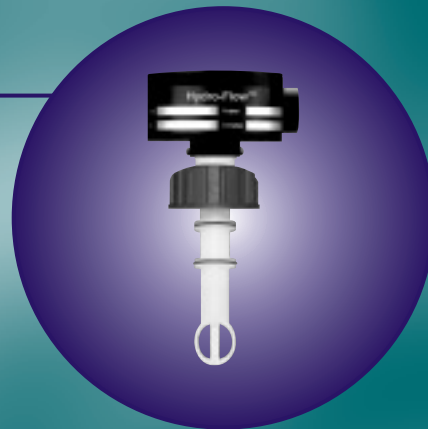
**fixed
insertion vortex** **Hydro-Flow™ 2200**

- Water, water-glycol mixtures and hot water applications
- Accuracy $\pm 1.0\%$ full scale
- Flow range 0.5–15 feet/sec (0.15–4.5 m/sec)
- No moving parts, resulting in no maintenance
- Maximum fluid temperature 160°F (70°C)
- Microprocessor based electronics with optional local display



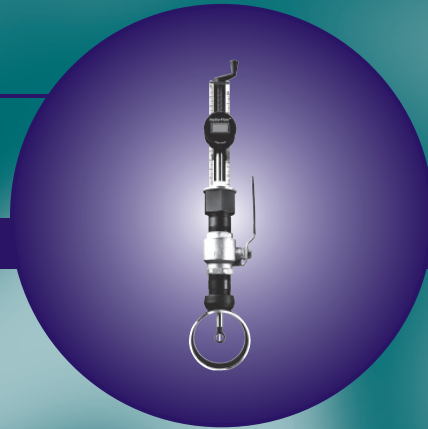
**fixed
insertion vortex** **Hydro-Flow™ 2300**

- Deionized water, ultrapure water, acid, solvents and general water applications
- Accuracy $\pm 1.0\%$ of full scale
- High turndown 30:1
- No moving parts that can shed particles
- No calibration drift
- PVDF sensor mounted in PVC, CPVC, PVDF, PP, tee, wafer and union tee fittings



**retractable
insertion vortex** **Hydro-Flow™ 3100**

- Water, water-glycol mixtures and hot water applications
- Accuracy $\pm 1.0\%$ of full scale
- Flow range 0.5–15 feet/sec (0.15–4.5 m/sec)
- Hot tappable installation without line shutdown
- No moving parts, resulting in no maintenance
- Maximum fluid temperature 160°F (70°C)
- Microprocessor based electronics with optional local display



Flowmeter Type	Steam & Gas	Water	DI & Ultra Pure Water	Viscous Liquids	Raw Sewage	Acids & Chemicals	Hydro-Carbons	Low Flow
Insertion Vortex	●	●					● **	
Insertion Turbine	●	●					● **	●
Inline Vortex	●	●				●	● **	
Inline Turbine								
Magnetic		●		● *	●	● *		●
Hydro-Flow		●	●			●		●
Sono-Trak		●	●	●	●	●	●	●

* Must be conductive liquid greater than 5 microS/cm.
 ** Low viscosity...less than 3 cP.

Line Size	1/4"	1/2"	1"	3"	12"	20"	80"	100"
Insertion Vortex				■	■	■	■	
Insertion Turbine				■	■	■	■	
Inline Vortex			■	■	■			
Inline Turbine		■	■					
Magnetic	■	■	■	■	■	■	■	
Hydro-Flow			■	■	■	■		
Sono-Trak				■	■	■	■	■

Which flowmeter is best for my application?

EMCO makes it easy to select the best flowmeter for your needs. Download the flowmeter-sizing program (EMCOSIZE) from EMCO's website and run the easy to use windows based program.

If you would rather have our professional staff assist you, call Technical Support to help you select the EMCO product that best meets your flowmetering application. Either way EMCO will provide you with the best solution for your flowmetering needs.

For Flowmetering Sizing

Download program "emcosize" at www.emcoflow.com

Technical Support

EMCO Flow Systems—Application Engineering
 303.651.0550



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