



Industrial and HVAC Flow Measurement Product Guide



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/sarco

Metering

EMCO is the brand of precision flow meters for liquid, gas, and steam applications, accommodating a wide range of pipe sizes. Field proven for over 40 years, the EMCO product line offers solutions for measurement, including industrial inline vortex, industrial insertion vortex and turbine, and variable area flow products. EMCO products provide a wide range of metering solutions to diverse industries, including the military, hospitals, universities, and many Fortune 500 companies.

Our manufacturing facilities are dedicated to producing only the highest quality and advanced products. Our years of experience, together with our culture of continuous improvement, ensure that our meters are the most up-to-date and as comprehensive as possible.

As well as continually developing and enhancing our products, we make sure they don't lose the qualities for which EMCO products are renowned. These are designed and built to international quality standards, easy to use, reliable and available with flexible installation options.

The EMCO commitment to quality is focused on extensive flow calibration capabilities, engineering excellence, and superior service, resulting in the best and most cost-effective flow meters in the industry.



Liquid Measurement

Suited to traditional and conductive liquid applications, our line of industrial, municipal, and HVAC flow meters provides superior accuracy and maintenance-free operation for ultimate performance.



Sono-Trak® Transit Time Ultrasonic

- Clean liquid applications
- Accuracy typically $\pm 2.0\%$ of rate
- Simple, noninvasive, clamp-on installation
- Maintenance-free operation
- Built-in infrared capability for optional PC interface
- Available in portable model
- Fully submersible NEMA 6-rated transducers
- EZ-Logic™ menu-driven user interface
- Multiple outputs available



Sono-Trak® Doppler Ultrasonic

- Liquid applications with reflective materials or air bubbles
- Typically $\pm 2.0\%$ full-scale accuracy with proper flow conditions
- Automatic gain control for variable conditions
- Variable frequency drive (VFD) immunity
- Simple, clamp-on installation
- Custom cable lengths of up to 5000'
- User-friendly, menu-driven interface



UniMag DT-M Series Flanged Flowtubes for Full Pipes

- Sizes 8" - 80" (200mm - 2000mm)
- Sizes $\leq 48"$ (1200mm) use 2 UniMag sensors; larger tubes use 4 sensors
- No liner required
- Media conductivity, optional: $\geq 0.08 \mu\text{S}/\text{cm}$; normal: $1 \mu\text{S}/\text{cm}$
- Typically $\leq 0.5\%$ of rate accuracy



UniMag DS-M Series Municipal Flanged Flowtubes for Full Pipes

- Sizes 2" - 6" (50mm - 150mm)
- No liner required
- Media conductivity, optional: $\geq 0.08 \mu\text{S/cm}$; normal: $1 \mu\text{S/cm}$
- Typically $\leq 0.5\%$ of rate accuracy



UniMag PVC Flowtubes for Full Pipes

- Sizes 1½" - 12" (40mm - 300mm)
- Single and double sensors available
- Media conductivity, optional: $\geq 0.08 \mu\text{S/cm}$; normal: $1 \mu\text{S/cm}$
- Typically $\leq 0.5\%$ of rate accuracy (with two sensors)
- Virtually the same accuracy for one sensor with longer straight runs



Magflo® Electromagnetic

- 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, etc.



Steam & Gas Measurement

Designed for steam, gas, and liquid measurement for industrial, and HVAC applications, our exceptional line of metering technologies offers the perfect set of features to fit your particular criteria.



V-Bar™ Insertion Vortex

- Liquid, gas, and steam applications
- EZ Logic™ user interface
- Liquid flow velocity down to 1.5 ft/sec (0.45 m/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 $\pm 0.15\%$ of rate
- No moving parts, resulting in no maintenance



Turbo-Bar™ Insertion Turbine

- Liquid, gas, and steam applications
- EZ Logic™ user interface
- Liquid flow velocity down to 1 ft/sec (0.3 m/sec)
- Installation without process shutdown
- Repeatability $\pm 0.25\%$ of rate
- Flow turndown ratio up to 35:1
- Accuracy
 - Liquids $\pm 1.0\%$ of rate
 - Gas and steam $\pm 1.5\%$ to 3.0% of rate depending on rotor



Vortex PhD™ In-line Vortex

- Gas, steam, and liquid applications
- EZ Logic™ user interface
- Liquid flow velocity down to 1.5 ft/sec (0.45 m/sec)
- 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



DIVA: Direct In-line Variable Area

- Wide rangeability
- Density compensated (Saturated Steam)
- Compact installation (6D upstream & 3D downstream)
- Simple, 5 button keypad user interface with display
- Factory calibrated
- 4-20mA (loop powered) and pulsed outputs
- Display and outputs in Mass or Energy units
- Reliable, Maintenance-free operation
- Accuracy: $\pm 2.0\%$ of flow rate (between 100% and 10% of range) $\pm 0.2\%$ FSD from 10% to 2% of range)
- Repeatability: $\pm 0.25\%$ of flow rate
- Turndown: Up to 50:1



SRG GILFLO: Spring Loaded Variable Area

- Wide rangeability
- Suitable for all industrial fluids
- Compact installation (6D upstream & 3D downstream)
- Horizontal and vertically down flows
- Factory calibrated
- Nominal pressure drop of 140" wg at maximum range
- Full pressure and temperature compensation for all fluids with optional ancillaries
- Mechanical stop prevents damage from over-ranging or reverse flow
- Reliable, Maintenance-free operation
- Accuracy: $\pm 1.0\%$ of flow rate (between 100% and 5% of range) $\pm 0.1\%$ FSD (between 1% and 5% of range)
- Repeatability: $\pm 0.25\%$ of flow rate
- Turndown: Up to 100:1



ILVA: In-line Variable Area

- Wide rangeability
- Suitable for all industrial fluids
- Compact installation (6D upstream & 3D downstream)
- Horizontal and vertically down flows
- Factory calibrated
- Nominal pressure drop of 200" wg at maximum range
- Full pressure and temperature compensation for all fluids with optional ancillaries
- Mechanical stop prevents damage from over-ranging or reverse flow
- Reliable, Maintenance-free operation
- Accuracy: $\pm 1.0\%$ of flow rate (between 100% and 5% of range) $\pm 0.1\%$ FSD (between 1% and 5% of range)
- Repeatability: $\pm 0.25\%$ of flow rate
- Turndown: Up to 100:1

EMCO is a long established manufacturer of precision flowmeters for liquid, gas and steam applications for commerce and industry. Founded in Colorado in 1967, EMCO has over 40 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.

EMCO manufactures under a 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 four decades of flowmetering and applications experience, we know that one flowmeter does not fit all flow measurement applications. Therefore EMCO provides a wide selection of flowmetering technologies and a worldwide representation to offer you the personalized service and support needed to ensure 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.

EMCO is a trademark of Spirax Sarco, Inc.

For information on EMCO industrial flow products, contact:

EMCO • 2150 Miller Drive Suite H • Longmont, CO 80501

T: 800.356.9362 or 303.682.7060 • F: 303.682.7069 • sales@emcoflow.com • www.emcoflow.com

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SPIRAX SARCO, INC.
1150 Northpoint Blvd.
Blythewood, SC 29016
t: 800.883.4411
or: 803.714.2000
f: 803.714.2222
www.spiraxsarco.com/us

spirax
/sarco