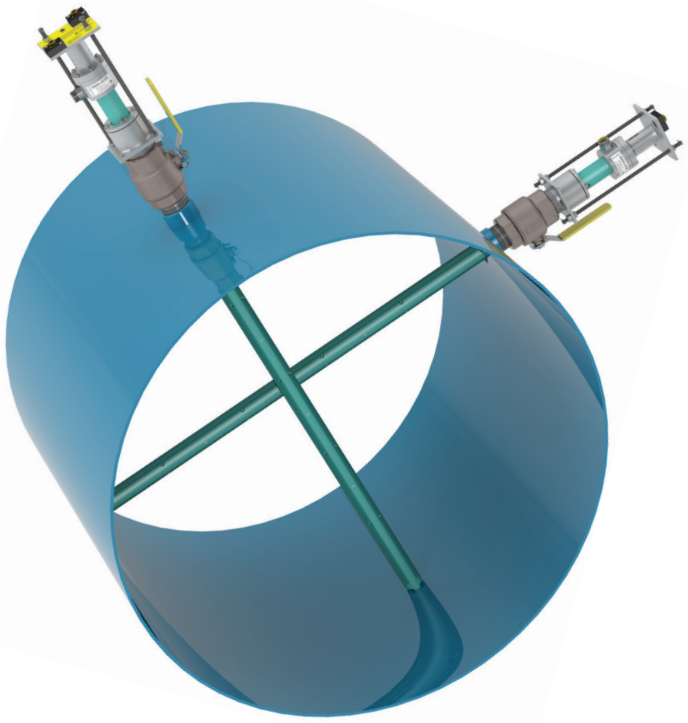
McCROMETER

FPI-X™ Dual Sensor Electromagnetic Flow Meter



Accuracy in Severe Service

McCrometer is advancing flow measurement again. Based on the revolutionary FPI Mag®, the FPI-X is designed to deliver a highly accurate measurement in severe swirling flows previously unachievable with other flow technologies.

Simple Installation

Just like McCrometer's FPI Mag, the FPI-X is designed to be one of the easiest flow meters to install. Hot tapping the installation allows for the insertion of the meter without interrupting service, de-watering lines, cutting pipe or welding flanges. The FPI-X eliminates the need for heavy equipment and manpower necessary to support installation.

Lower Costs

Operators of pumping stations will see an immediate cost savings, allowing them to measure the total station discharge instead of measuring at each pump or not measuring at all.

Robust Construction

With no moving parts, the FPI-X requires little to no maintenance for years of worry-free operation. The sensor bodies are made from heavy-duty 316 stainless steel for maximum structural integrity. The patented sensor bodies are hermetically sealed and protected by NSF certified fusion-bonded epoxy coating.

Versatile

The FPI-X is ideal for capital or maintenance projects, retrofits and sites never before metered. The unique combination of accuracy, ease of installation and total cost savings make the FPI-X the perfect choice for the Municipal Market's toughest applications.

Designed for the Most Difficult Applications

Key Applications

- Multiple Pump Discharge
- Severe Swirl
- Single Pump Discharge
- Total Station Discharge

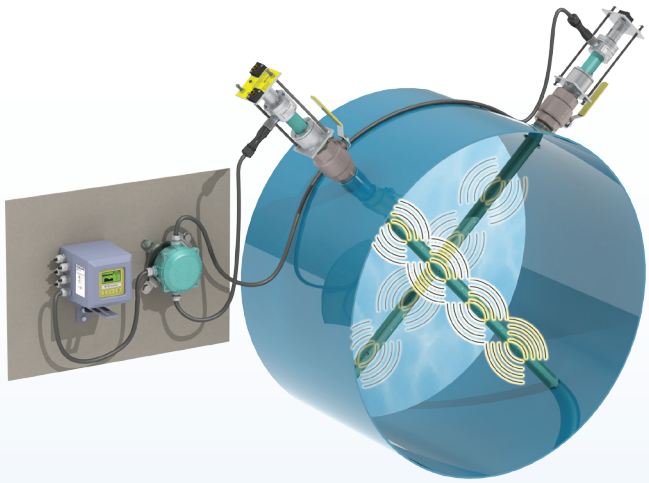
A New standard in severe flow measurement

FPI-X™

FPI-X™

Dual Sensors = Accurate Severe Service Flow Measurement

PRINCIPLE OF OPERATION



The FPI-X operates based on Faraday's Law of Electromagnetic Induction: When water (a conductor) moves through a magnetic field, it produces a voltage that is directly proportional to the velocity of the conductor.

How it Works ...

- Multiple electromagnetic coils installed throughout each sensor produce magnetic fields across the complete cross-sectional area of the pipe.
- Multiple stainless steel electrode pairs installed on each sensor collect the induced voltage induced by the flowing water
- Placing voltage sensors in two planes across the pipe compensates for differences in velocity caused by severe swirl and other flow disturbances
- The total voltage signal is then transmitted to the converter electronics where it is converted to an average flow velocity
- The converter then multiplies this average flow velocity by the pipe's cross-sectional area to create a volumetric flow rate

PERFORMANCE SPECIFICATIONS

Range:	0.3 ft/s to 32 ft/s (0.1 m/s to 10 m/s)
Accuracy:	± 0.5% from 1 ft/s to 32 ft/s (0.3 m/s to 10 m/s) ± 1% from 0.3 ft/s to 1 ft/s (0.1 m/s to 0.3 m/s)
Linearity:	0.3% of reading
Pipe Sizes:	12" - 138" (300 mm to 3,500 mm)
Materials:	316 Stainless Steel Sensor Body, Insertion Hardware and Sensor Electrodes NSF Certified Fusion-Bonded Epoxy Coating

CERTIFICATIONS AND APPROVALS

Listed by CSA to 61010-1: Certified by CSA to UL 61010-1 & CSA C22.2 No. 61010-1-04

ISO 9001:2008 certified quality management system

FPI-X CONVERTER

The FPI Mag utilizes our pre-programmed M-Series Converter*:

- Curve-fitting algorithm to improve accuracy
- Dual 4-20 mA analog outputs
- RS485 port for easy connection to DCS
- 8 line graphical LCD display
- 3 key touch programming
- Rugged enclosure meets IP67

**See data sheet for complete specs and order information*

www.mccrometer.com
3255 West Stetson Avenue, Hemet, California 92545 USA
Phone 800-220-2279 | 951-652-6811 | Fax 951-652-3078

 U.S. Patent 8,136,410. Foreign Patents Pending. Printed in USA Lit Number 30121-53 Rev 1.1 / 03-14