McCROMETER

Experts in Flow Since 1955

MUNICIPAL

FLOW METERING

Sustainability & renewability starts with your meter.

You can't manage what you don't measure.

McCrometer has a full suite of flow measurement products to fit the various flow applications in the drinking water, water treatment, wastewater, and wastewater treatment industries. From source and storm water measurement, to slurries, fuel, and steam measurement, our meters are designed for challenging flow conditions. Where other technologies and meters struggle, ours thrive and provide the reliable and accurate flow measurement data you need. You can rely on McCrometer to be the sole source provider of flow measurement devices, whether you need an off-the-shelf type meter to quickly install, or a custom solution engineered to ensure you meet your measurement needs.

Talk about versatility!

We recommend watching our YouTube videos to become more informed about installation and meter functionality. You may download each product's specification sheets and manuals from our website to understand more of the technical details. The flow professionals at the factory are always available to answer questions and provide a quote when you're ready to start your next flow project.

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TURN FLOW DATA INTO INFORMED DECISIONS

When you're managing a network of water utilities, resource management is critical. We know that you can't manage what you can't measure – and our meters help you get the most accurate measurement for process control and district metering. McCrometer customizes a flow measurement solution for each municipal water application to give you the flow data you need to make informed decisions about your water management.

Turn Data into Information

Water engineers and technicians will find McCrometer has a versatile Smart Output mag meter solution that is Sensus or Itron system compatible for nearly every type of AMR and AMI application. These accurate, reliable and cost-effective mag meters are available for line sizes from 4 to 138 inches in hot tap insertion or full bore styles, which can be AC or DC powered, battery powered or solar. Smart Output gives water utility managers the flexibility they need to network the flow meters across their distribution systems with the AMI solution of their choice. Smart Output reduces costs, calls, travel, and labor, while it increases efficiency, ensuring your data is accurate.

Smart Output mag meters from McCrometer are designed with a highly intelligent module in their transmitters that is similar to a communication protocol. This capability allows McCrometer mag meters to transmit data on a schedule or on demand, as well as receive diagnostic queries to ensure or update meter operation. There's no need for technicians to gather flow data manually or check meter status with McCrometer's Smart Output mag meters.

With advanced plug-and-play, real-time Smart Output communications, McCrometer's FPI Mag Flow Meter, SPI Mag Flow Meter and Ultra Mag Flow Meter provide highly effective solutions for automatic meter reading (AMR) and advanced meter infrastructure (AMI) in support of utility smart grids that help conserve valuable water resources, reduce expensive non-revenue water costs, and simplify daily operations and routine maintenance.

McCrometer's Smart Output technology is backed by the company's 60-plus years of solving flow measurement problems.

Itron SENSUS NEPTUNE TECHNOLOGY GROUP

For more information visit: https://www.mccrometer.com/muni

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OUR PRODUCTS

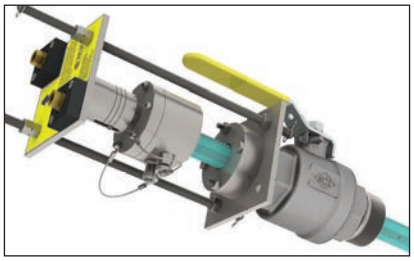
The Benefits of McCrometer Flow Meters for Municipal Water Applications

Thousands of instrument engineers at municipal wastewater facilities and industrial process plants with wastewater treatment operations have found McCrometer flow measuring devices provide superior accuracy, long life, trouble free installation, and low total cost of ownership.

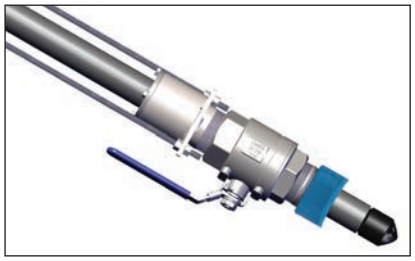
Problems This Solves:

- Accurate flow measurement to 0.2% or 0.5% of flow
- Measures clean water, wastewater, effluent water, sludge
- Installation without flanges, cutting line, or welding pipes
- Improved uptime, reduced pipe shutdown
- Meter arrives calibrated to user's specific applications

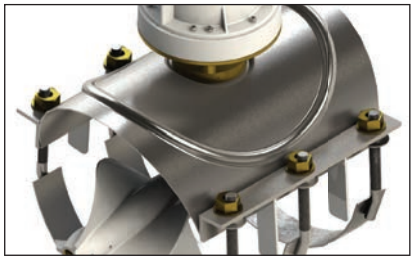
ULTRA MAG



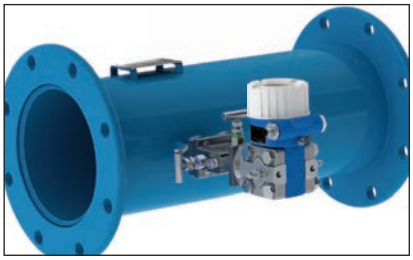
FPI MAG



SPI MAG



WATER SPECIALTIES PROPELLER



V-CONE

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Application Guide to McCrometer Meters

Works for application
Potentially works for application
Does not work for application

Water Treatment	Ultra Mag	FPI	SPI	WS Prop	V-Cone
Raw Water	•	•	•	•	
Borehole/Well/Abstractions	•	•	•	•	
Desalination	•	•			•
Pumping Station	•	•	•	•	•
Coagulation	•				
Sedimentation/Filtration	•				
Treatment	•	•	•	•	
Final Water Discharge	•	•	•	•	
Water Distribution	**Ultra Mag**	**FPI**	**SPI**	**WS Prop**	**V-Cone**
Water Storage	•	•	•	•	•
Reservoirs	•	•	•	•	•
Revenue Billing	•	•	•	•	
Grey Water	•	•	•	•	
Water Loss	•	•	•	•	
Distribution	•	•	•	•	
Waste Water Collection	**Ultra Mag**	**FPI**	**SPI**	**WS Prop**	**V-Cone**
Pumping Station	•				
Stormwater	•				
Waste Water Treatment	**Ultra Mag**	**FPI**	**SPI**	**WS Prop**	**V-Cone**
Treatment Plant Inlet	•				
Primary Sedimentation	•				
Aeration and Digestion	•				•
Sludge Incineration					•
Final Sedimentation	•				
Effluent Discharge	•	•	•		

ULTRA MAG®

Features

- No flow obstructions
- No moving parts
- Maintenance free
- No head loss
- Bi-directional flow
- Empty pipe detection
- Debris or solids will not clog the meter
- Unaffected by changes in density and viscosity
- No risk of liner delamination or separation

Product Summary

The Ultra Mag flow meter is an electromagnetic flow meter designed specifically for the water and wastewater industry measuring liquids, slurries and sludge. With a wide flow range, no head loss, and zero maintenance the Ultra Mag delivers highly accurate measurement you can count on.

This full-bore mag meter has no moving parts, providing a maintenance free, highly durable flow meter solution. The lifetime guaranteed epoxy UltraLiner™ eliminates the risk of delamination. The Ultra Mag is available in common line sizes ranging from 2" – 48" nominal pipe size.

Performance

- Accuracy up to ± 0.2% or ± 0.5% of actual flow (battery-powered is up to ± 1% of flow); calibrated in our NIST-traceable flow lab
- Repeatability ± 0.05% or +/ 0.0008 ft/s, whichever is greater
- Maximum pressure
  Operating pressure 150 PSI or 300 PSI
- Maximum temperature
  Operating: 14 to 170 F (10 to 77 C)
  Storage: 5 to 170 F (15 to 77 C)
- Warranty: 2-Year standard warranty
- 3M fusion-bonded epoxy
- UltraLiner™
- Certified to NSF/ANSI Standards

Water Treatment

- Raw Water
- Borehole/Well/Abstractions
- Desalination
- Pumping Station
- Coagulation
- Sedimentation/Filtration
- Treatment
- Final Water Discharge

Wastewater Treatment

- Treatment Plant Inlet
- Primary Sedimentation
- Aeration and Digestion
- Final Sedimentation
- Effluent Discharge

Wastewater Collection

- Pumping Station
- Storm Water

Water Distribution

- Water Storage
- Reservoirs
- Revenue Biling
- Grey Water
- Water Loss
- Distribution

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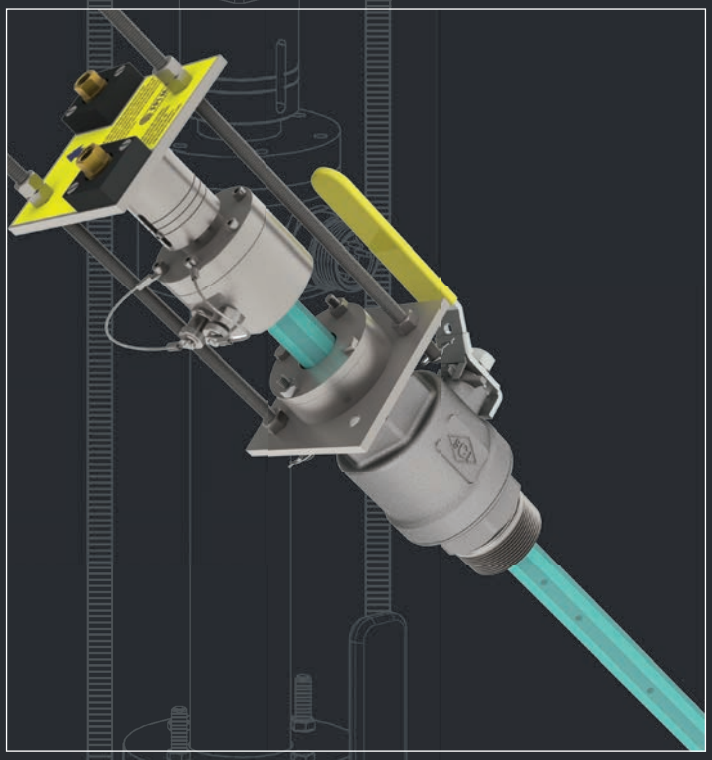
FPI MAG®



Product Summary

The FPI Mag is a full-profile insertion-type electromagnetic flow meter that 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 Mag the perfect choice for a wide range of municipal and industrial applications.

The FPI Mag is available for nominal pipe sizes 4" to 138". The NSF-61 drinking water & NSF 372 low lead approved meter measures flow in forward and reverse directions. Hot tap installation allows you to insert the meter without interrupting service, de-watering lines, cutting pipe or welding flanges.

Features

- Hot-tap installation - no service interruption
- No moving parts
- Maintenance free - no field calibration required
- Bi-directional flow
- Measures the full flow profile

Performance

- Accuracy up to ± 0.5% above 1ft/s; up to 1% for 0.3 to 1ft/s and reverse flow; calibrated in our NIST-traceable flow lab
- Repeatability 0.2% of reading
- Maximum pressure up to 250 PSI
- Maximum temperature
  - Operating: 14 to 140F
  - Storage: 5 to 140F
- Warranty: 2-Year standard warranty
- 3M fusion-bonded epoxy
- Ultraliner™
- Certified to NSF/ANSI Standards

Water Treatment

- Raw Water
- Borehole/Well/Abstractions
- Desalination
- Pumping Station
- Treatment
- Final Water Discharge

Water Distribution

- Water Storage
- Reservoirs
- Revenue Biling
- Grey Water
- Water Loss
- Distribution

Wastewater Treatment

- Effluent Discharge

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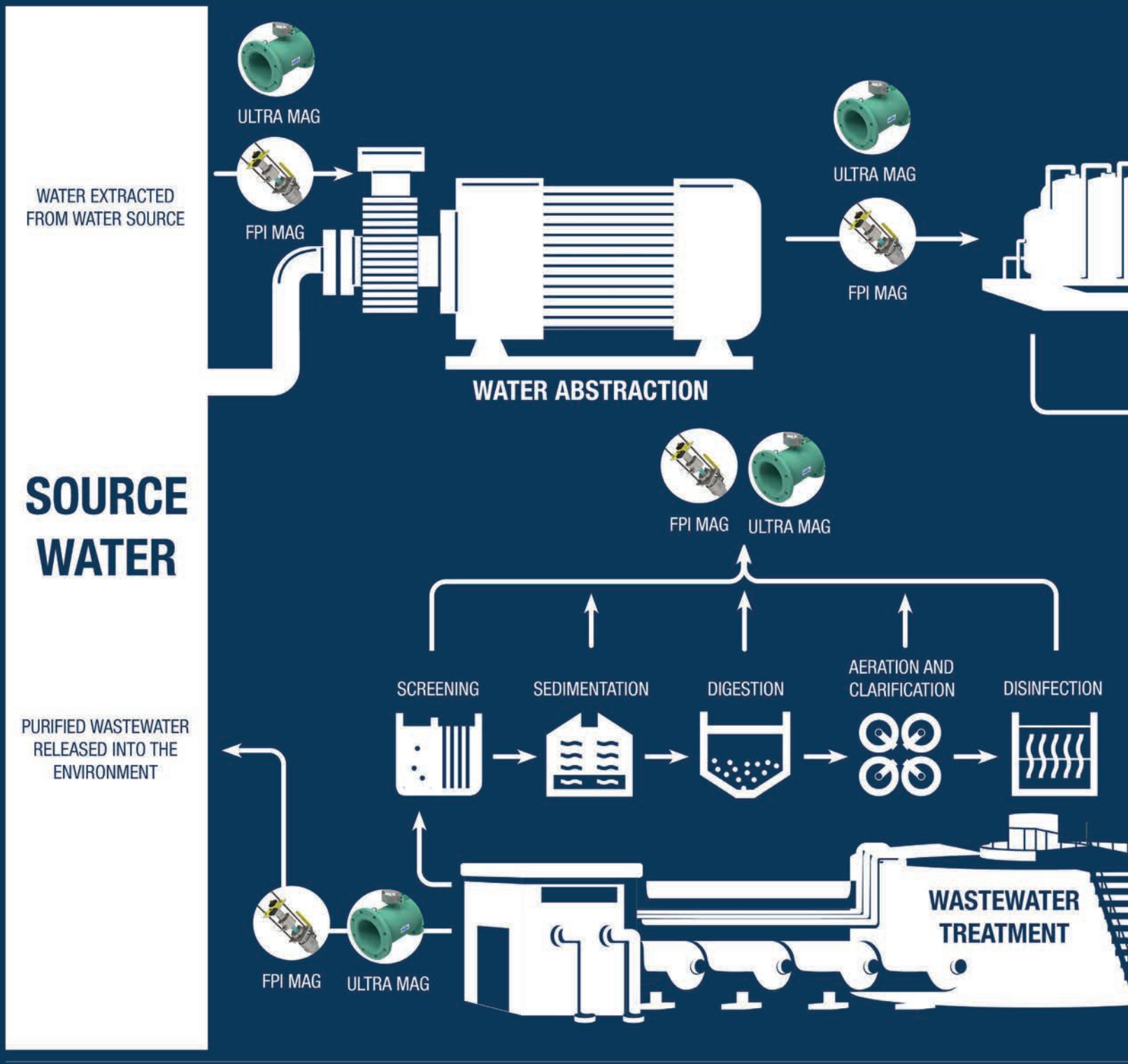

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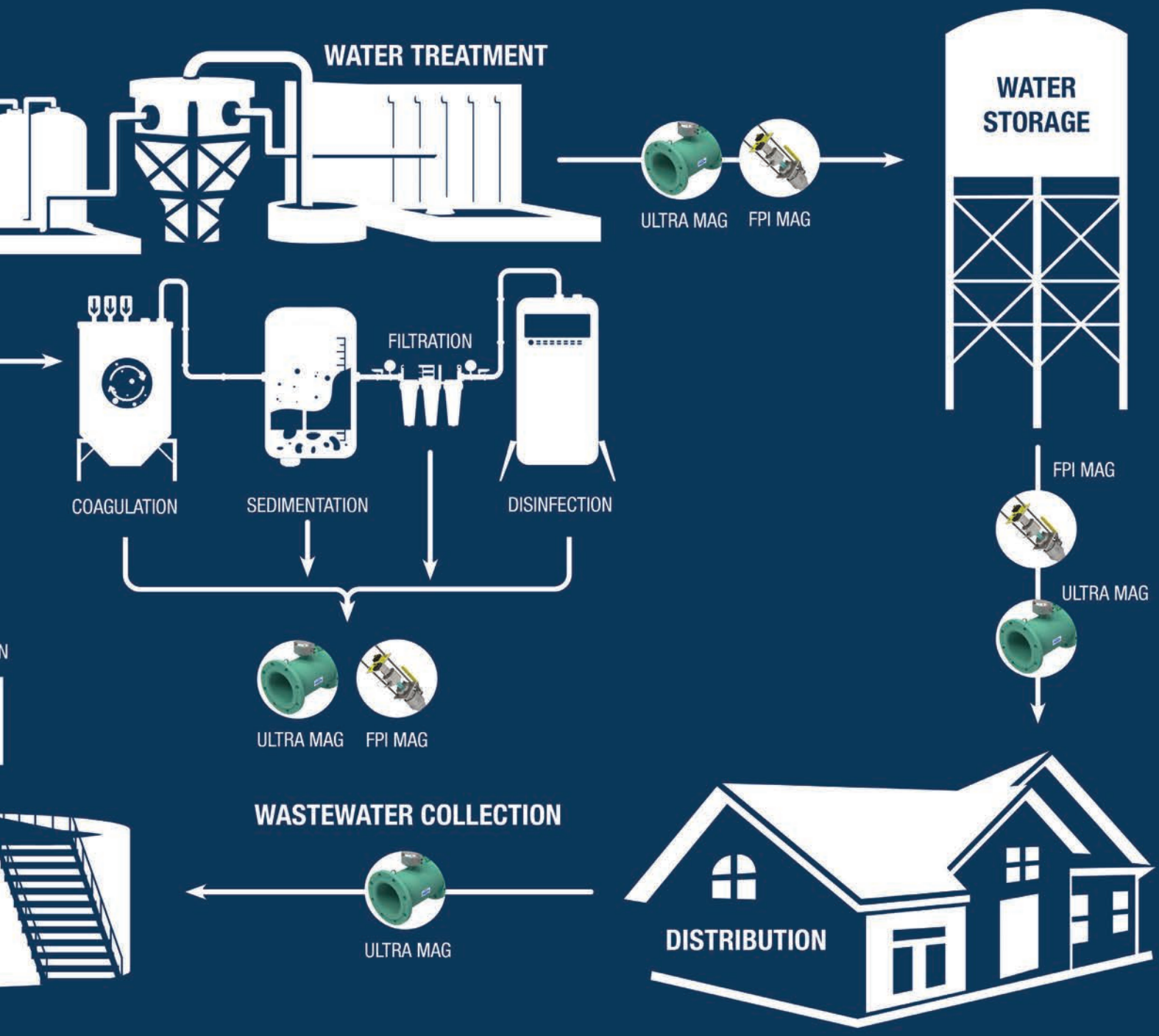
WATER TREATMENT

METERING POINTS



SPI MAG®

Product Summary

The SPI Mag is a single profile insertion-type electromagnetic flow meter that is ideal for municipal and wastewater forward-flow measurement. This model provides a highly cost-effective solution for the accurate measurement of liquid flow in closed conduit, pressurized pipe applications.

The SPI Mag reliably measures flow in many municipal flow processes involving conductive fluids such as potable water, slurries, sludge, cooling water, and pulp stock with line sizes ranging from 2” - 96” nominal.

Performance

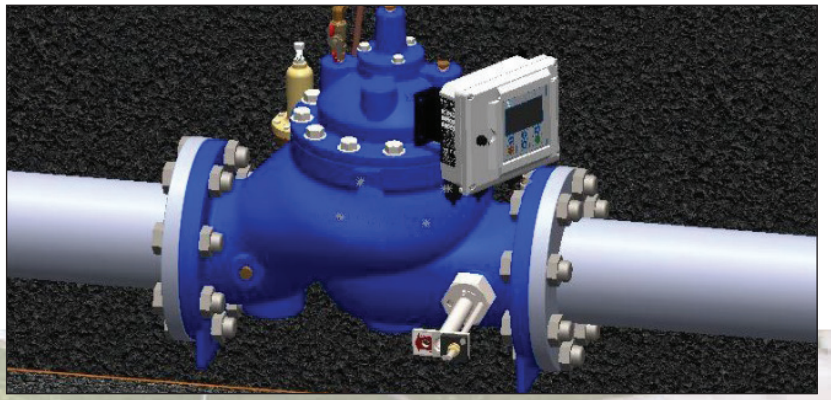
- Accuracy up to ± 2% of reading ± 0.03 ft/s; zero stability from 0.3 to 32 ft/s; velocity range 0.09 to 10 m/s
- Maximum pressure/temp
  - PVC insertion tube – up to 150 PSI @ 105°F
  - Stainless steel tube – up to 250 PSI @ 160°F
- Warranty: 2-year standard warranty

Features

- Hot-tap installation – no service interruption
- Cost independent of line size
- Maintenance free - no field calibration required
- No moving parts
- Forward flow measurement (*reverse flow indication)
- IP68 submersible sensor

Water Treatment

- Raw Water
- Borehole/Well/Abstractions
- Pumping Station
- Treatment
- Final Water Discharge



Water Distribution

- Water Storage
- Reservoirs
- Revenue Biling
- Grey Water
- Water Loss
- Distribution

Wastewater Treatment

- Effluent Discharge

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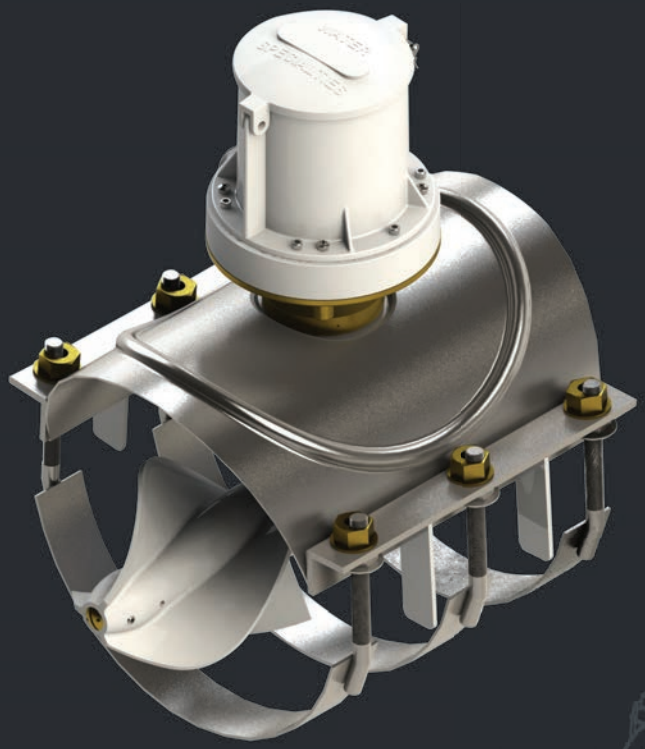
WATER SPECIALTIES PROPELLER®



Product Summary

The Water Specialties propeller meter is uniquely designed, and time tested to meet the flow measurement needs of water and wastewater users. Employed extensively in the water and wastewater industry, it has built a reputation for durability, reliability and high performance.

McCrometer's Water Specialties propeller flow meters come in a variety of standard style configurations, including strap-on saddle, open flow, vertical up flow or down flow and precision tube-style flow meters. Standard 1-year warranty. With a host of options and accessories this product ensures you can meet customer needs. Water Specialties propeller also offers exceptional sizing flexibility and can be applied to line diameters of 2" – 72".

Performance

- Accuracy up to ± 2% of reading guaranteed throughout full range; up to ± 1% over reduced range; calibrated in our NIST-traceable flow lab
- Repeatability of 0.25% or better.
- Maximum Temperature 140 F constant (standard construction.) Special construction for high temp applications available.

Materials

- Bearing assembly impeller shaft, ball bearings and bearing house are all comprised of stainless steel.
- Register is an instantaneous flowrate indicator and six-digit straight-reading totalizer are standard. The registers are hermetically sealed within a cast iron or fabricated steel housing. The fusion-bonded epoxy is NSF-approved and protects the equipment from corrosion in harsh conditions.
- Propeller is manufactured of high-impact polypropylene which retains its shape and accuracy over the life of the meter. High temp propellers are also available.

Water Treatment

- Raw Water
- Borehole/Well/Abstractions
- Pumping Station
- Treatment
- Final Water Discharge

Water Distribution

- Water Storage
- Reservoirs
- Revenue Biling
- Grey Water
- Water Loss
- Distribution

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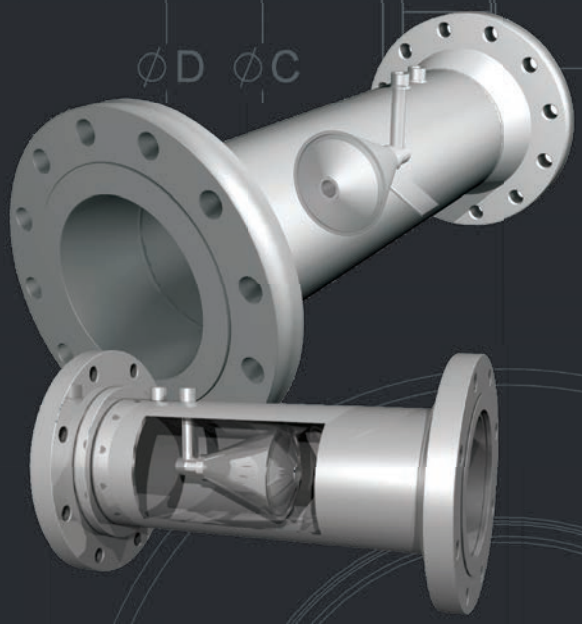
V-CONE®



Product Summary

McCrometer's V-Cone flow meters accurately measure flow over a wide range and in the most challenging applications for a variety of fluid types. V-Cone meters can be installed virtually anywhere, saving significant space, weight, and installation cost. Sporting a robust design, typical V-Cone lifespan is 25+ years.

The V-Cone is designed for today's most challenging drinking water & wastewater applications. It combines exceptional performance, low maintenance and long life for superior value.

Product Specs

- **STANDARD ACCURACY:** Up to ± 0.5% of actual flow (certain fluids and Reynolds number applications require special calibrations to achieve this value)
- **REPEATABILITY:** 0.1% or better
- **FLOW RANGES:** 10:1 and greater
- **STANDARD BETA RATIOS:** 0.45 through 0.85, special betas available
- **HEAD LOSS:** Varies with beta ratio and DP
- **INSTALLATION PIPING REQUIREMENTS:** Typically, 0-3 diameters upstream and 0-1 diameters downstream of the cone are required, depending on fittings or valves in the adjacent pipeline
- **MATERIALS OF CONSTRUCTION INCLUDE:** Duplex, 304, or 316 stainless steel, Hastelloy C 276, 6MO, carbon steels (Others on request)
- **LINE SIZES:** 0.5" to 120" or larger
- **END FITTINGS:** Flanged, threaded, hub or weld end standard (Others on request)
- **CONFIGURATIONS:** Precision flow tube and wafer type calibrated for customer application; ASME B31.3 construction standard, ASME 31.1, B31.4, B31.8, API 6A and other standards available on request
- **WARRANTY:** 1 year standard, extended warranties also available

Water Treatment
- Desalination
- Pumping Station

Water Distribution
- Water Storage
- Reservoirs

Wastewater Treatment
- Aeration and Digestion
- Sludge Incineration

VM V-Cone®

AN OFF-THE-SHELF BUNDLED SOLUTION FOR MUNICIPAL WATER APPLICATIONS

The VM V-Cone is the ideal new or retrofit flow meter for multiple clean water and wastewater treatment applications. VM V-Cone system's pre-packaged, built-in 3-way valve isolates the transmitter from the process fluid flow for easy maintenance. The flow meter arrives wet flow calibrated direct from the factory. The ready to install VM V-Cone system reduces many headaches of adding a flow meter to most flow installations.

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PROCOMM GO™ CONVERTER

Product Summary

The ProComm GO™ is the newest innovative converter to the ProComm suite of mag meter electronics. The easily accessibly and straightforward user interface makes the ProComm Go a favorite choice for a range of customers including farmers, irrigators, industrial operators, and engineers. Various power and mounting options make the durable ProComm Go an ideal solution for remote installations, installations without a reliable power source, and inaccessible locations.

The ProComm Go features an optical sensor that allows the display to sleep, conserving battery life, and a button-free design which minimizes the potential for entrained moisture. This signal converter is the reporting input and output control device for McCrometer's mag meter suite, calibrated with the sensor to guarantee a properly functioning system.

Features

- Diecast aluminum, powder-coated enclosure w/ tamper resistant seal
- Five-year expected battery life, five-year battery warranty
- Digital output: Digital pulse (open collector) output for volumetric
- Power Source Options:
  - Battery: three 3.6V lithium-thionyl chloride (Li-SOCI2) D size
  - AC: 100-240VAC
  - DC: Linear power supply 10
  - 35VDC, 2.4W
- Analog output: 4-20mA: galvanically isolated, 16 bit resolution
- Data logger standard with all models, minimum of five years of data stored

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PROCOMM™ CONVERTER

Product Summary

The ProComm™ is the mag meter converter providing users with the utmost functionality, compatibility, and integration. Ideal for users needing to incorporate flow data into complex data management systems, the ProComm offers an intuitive user interface, superior performance, and a durability unsurpassed by other converters or transmitters on the market. The ProComm's value-rich features are an important part of an operations manager's toolbox for effective daily management.

Offering a seamless user experience, the ProComm offers optional Hart and Modbus protocols, 4-20mA and pulse output, and is class 1, division 2 approved. The ProComm is compatible with the FPI Mag®, the Ultra Mag®, and SPI Mag® flow meters, and is an ideal fit for flow applications in the drinking water, wastewater, industrial, and HVAC verticals.Water Specialties Propeller also offers exceptional sizing flexibility and can be applied to line diameters of 2" – 72".

Features

- Curve-fitting algorithm to improve accuracy
- Dual 4-20 mA analog outputs
- RS485 port for easy connection to DCS
- HART, Modbus
- Power Source Options:
  - AC: 100-240 VAC / 45-66 Hz (10 W) AC
  - DC: 12-48 VDC (10 W)
- Datalogger
- Smart Output (Sensus or Itron)
- 8-line graphical LCD display
- 6-key touch programming
- IP67 rugged enclosure

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ABOUT

McCROMETER

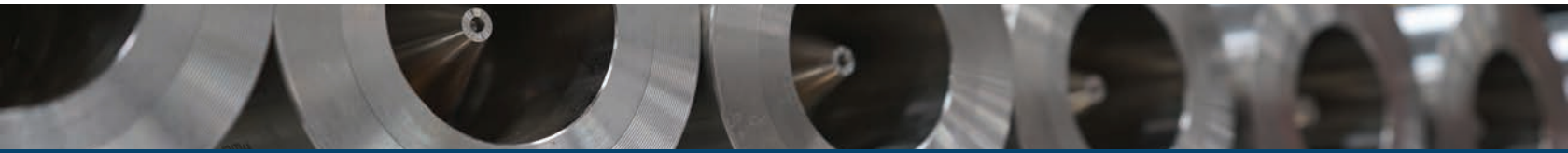
At McCrometer we provide our customers with superior flow solutions to measure confidently and reliably in the world's most challenging flow applications. We specialize in the design, manufacturing and testing of flow metering solutions that serve in a wide range of applications and markets.

Our Hemet, California factory boasts a robust Calibration Test Lab that enables production of the most accurate and precise flow instrumentation.

The test facility utilizes two gravimetric systems and two volumetric systems providing accuracy and calibration tests of flowmeters from 1/2 to 14-inch diameter, with flow rates up to 4,000 gpm.

Each flowmeter is individually wet calibrated in one of our two world-class NIST traceable calibration facilities and delivered with a Certificate of Calibration.

ISO 9001 and ISO 17025 Certified



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