

Where Intelligence Meets Infrastructure<sup>®</sup>



Advanced Metering Systems and Products  
to Manage the Delivery and Use of Water



**Mueller** SYSTEMS<sup>™</sup>



## Utilities Today Need Innovative Solutions to Optimize the Delivery and Management of Water and Energy

Continued population growth and increasing demand is putting added pressure on North America's aging water infrastructure. Utilities need partners to help them manage their water and energy resources. Mueller Systems' wide variety of metering systems and products provide utilities with the infrastructure and actionable data needed to optimize their water and energy programs.

**Smart *Move***<sup>®</sup>



## Where Intelligence Meets Infrastructure®

Mueller Systems enables utilities to manage water and data more accurately and effectively. Our state-of-the-art systems and products are designed to increase operational efficiencies, improve customer service and conserve a vital natural resource.

Mueller Systems offers a full line of residential, fire line and commercial meters, Automated Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) systems and related products. By building on our expertise in water management, we help electric utilities better manage their operations and energy resources.

You need to account for every drop of water your facilities or customers use. Mueller Systems helps you achieve that goal.



For more than 150 years, the most practical, respected and intuitive products in the water infrastructure industry have been built by the Company now known as Mueller Systems.

**Hersey® Meters** was integrated with Mueller Systems to reflect the breadth of innovative solutions for advanced metering infrastructure the Company now offers. While the combined entity is known as Mueller Systems, **Hersey** remains the Company's brand for water meters.





# Sustainability, Accuracy and Revenue

Water is our most vital natural resource. Our physical and economic well-being relies on access to safe, clean drinking water. As issues such as drought and an aging water infrastructure intensify, so too does the need for an active water management program. Providing the products and services utilities need to implement active water management programs reflects Mueller Systems' commitment to sustainability and to ensuring that future generations have the same access to safe, clean drinking water we enjoy today.

*Our commitment to sustainability is not limited to the products and services you need for active water management programs; It extends to the way we make our products, such as our composite positive displacement (PD) meter. The Mueller Systems 420 and 435 composite PD meters (see page 11) contain no lead and exceed NSF-61 and EPA requirements.*





# Generation

## Mueller Systems helps utilities:

### Address Water Leakage

Estimates of how much water is lost to infrastructure leakage are as high as 20%. Our metering systems and products are designed to provide accurate data collection and intelligent data analysis that help locate the leaks, assess their severity, and allow for continued leak monitoring. This flexibility to detect small leaks and repair high priority leaks allows you to decide how to manage your utility resources more effectively.

The **Mi.Net**<sup>®</sup> Mueller Infrastructure Network for Utilities our industry-leading AMI system addresses water leaks through state-of-the-art Acoustic Sensors, allowing complete system data analysis from the comfort of your desk each morning. This type of detailed analysis allows for preventive maintenance to be done which will help you avoid costly emergency repairs.

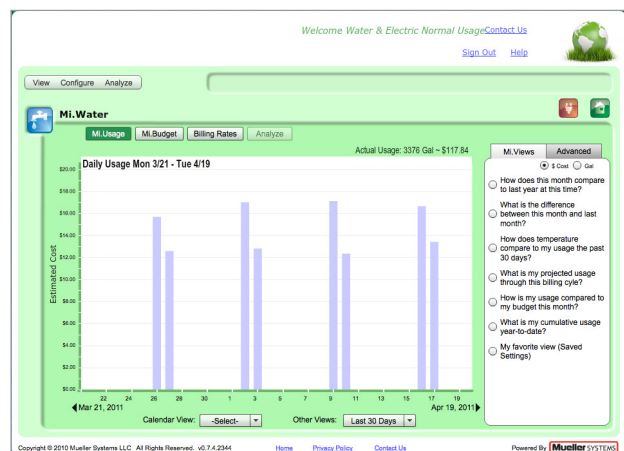
### Reduce Carbon Footprint

The **Mi.Net** System links meters, distribution infrastructure and control devices in a single, highly efficient data network that utilizes integral Meter Data Management (MDM) software. By enabling true two-way communication between your utility, ancillary devices and the meter, we reduce your carbon footprint and encourage more efficient use of water and energy.

## Account for Every Drop of Water

As the demand for water increases and the supply diminishes, there is an ever-greater need for active water management programs. By helping account for every drop of water, we help you conserve water and address lost revenue opportunities. This, in turn, helps you recover more of the cost of treating and distributing water and enables you to invest more in upgrading your water infrastructure systems.

Our AMR and AMI systems offer interval consumption data, as well as leak detection and other alert programming, to successfully manage water and energy usage and resolve customer disputes. This empowers you to increase your level of customer service while also better managing all your resources.



*Consumers can monitor their water consumption through the **Mi.Net** System's web-based portal.*

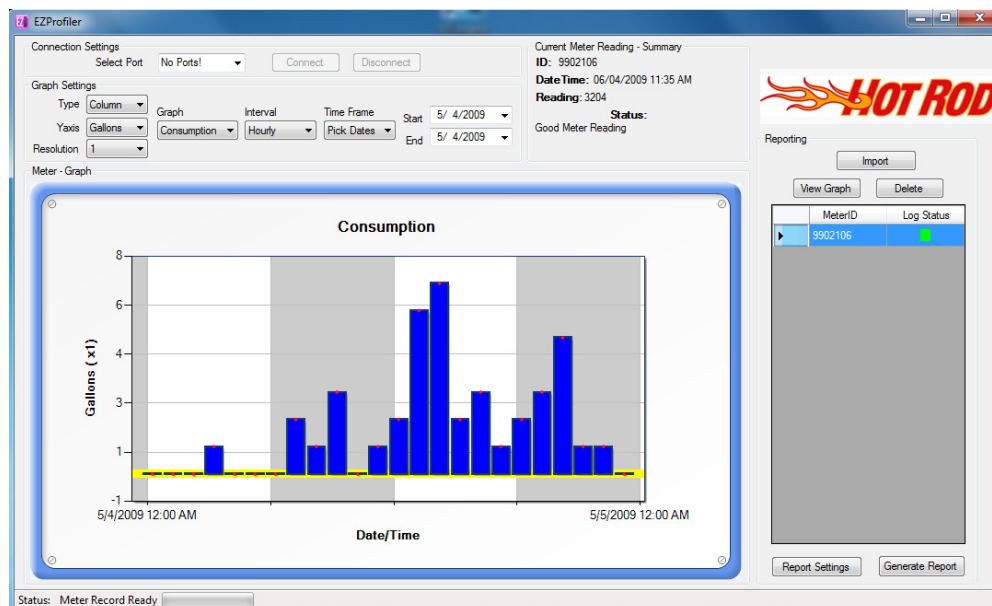


**Mueller** SYSTEMS™

# Revolution in Residential Metering

Utilities are looking for ways to improve customer service while simultaneously increasing operational efficiencies.

Mueller Systems offers both AMR and AMI systems that offer onsite hourly consumption data to effectively manage water and energy usage and resolve customer disputes. Our systems are flexible and scalable, allowing utilities to upgrade as needs and budgets permit.



*Meter readers can access monthly, daily or hourly usage data in the field using Mueller Systems' AMR system — Hot Rod®.*



## High-Performance AMR

Mueller Systems' advanced AMR system design outpaces every other contender. Conveying data every three seconds and on multiple channels, **Hot Rod®** transmitters increase your ability to capture drive-by meter readings up to 400%. The lightweight and agile **Street Machine 2™** receiver works in tandem with the versatile **EZ Reader™** software on any laptop running the latest Microsoft platforms to provide data that reliably interfaces with your billing system.

Even more impressive, the open architecture of all Mueller Systems' AMR components means they can work seamlessly with other brands of encoded meters that you may already have installed.

Additionally, the **Hot Rod** AMR system includes a comprehensive and powerful data logging feature called Consumption Profiling. This capability allows for six months' worth of hourly usage analysis stored at the meter, with alarms that are graphically displayed to enable utilities to quickly respond to customer questions and proactively approach customers about possible leaks or tampering.

Mueller Systems makes it easy to get up and running. All **Hot Rod** transmitters are pre-programmed and ready for installation utilizing integral mounting brackets; no assembly required.



**Street Machine 2™  
Receiver Kit**





**Mueller** SYSTEMS™

# The Smart Move for Residential Metering

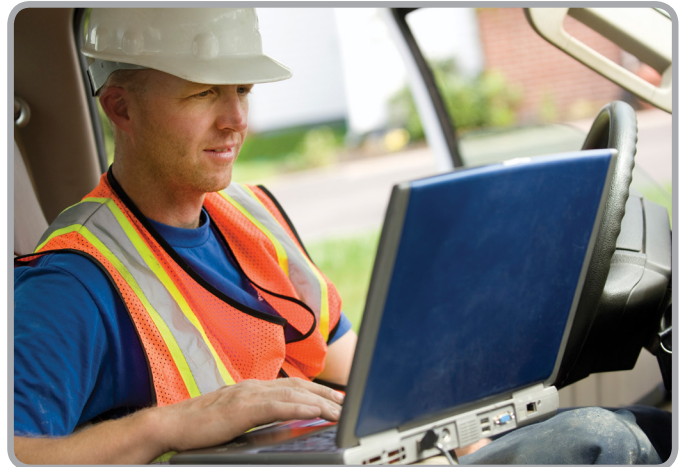


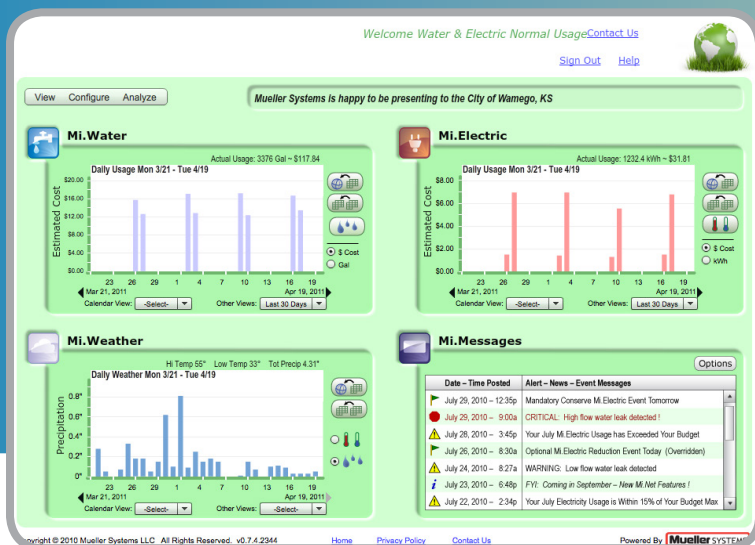
## Intelligence That Drives The Network.

When you are ready for a true two-way AMI system, the **Mi.Net**® Mueller Infrastructure Network for Utilities is your ideal solution. The **Mi.Net** System is a communications network that fully automates the meter-reading-to-billing process, linking meters, distribution sites and control devices in a single, highly efficient data network. The **Mi.Net** System is flexible and scalable, enabling utilities to deploy newer technology in stages, as their needs and budgets allow.

The **Mi.Net** System uses **Mi.Node** transceivers on metering devices to gather and pass data through radio frequency technology to area **Mi.Hubs**. These gateways collect and upload the data to either the utility's server or our hosted server with **Mi.Host** MDM software via GPRS or other data backhaul options. The many benefits of the **Mi.Net** System include "On Demand" meter readings, e-mail alerts and alarms based upon near real-time information, and the ability to best manage your water resources through on-going access to custom data and information.

As technology and your needs evolve, Mueller Systems continues to develop valuable, visionary solutions that offer easier implementation, better functionality and a faster return on your investment. Take a look at some of the innovative products that work seamlessly within the **Mi.Net** System.





*Mi.Data's easy-to-use dashboard helps consumers easily monitor their monthly usage and estimate costs before getting the shock of their monthly bill.*

## Communication from the Office to the Curb – and All Points in Between.

**Mi.Data** from Mueller Systems enables municipalities to strengthen relationships with consumers by providing a consolidated view of their water and electricity consumption online to help them better understand and manage usage behavior and enhance communication with their municipality.

420 Remote Disconnect Meter\* (RDM) from Mueller Systems enables utilities to remotely manage water services from the office. The ability to remotely manage service through AMI helps municipalities to improve customer service, as consumers will not have to wait for a field crew to arrive to turn on their water. The 420 RDM also helps municipalities—especially those that experience high account turnover—to improve employee safety, reduce labor and operational costs and to reduce their carbon footprint, as field crews and service vehicles will not have to be dispatched to connect or disconnect water services.

**Mi.Hydrant** from Mueller Systems transforms the fire hydrant into an active part of a fixed two-way AMI network. **Mi.Hydrant** stores meter data in internal memory and transmits it to other devices within the **Mi.Net** System. When employed in a multi-path configuration, the **Mi.Hydrant** interface extends the **Mi.Net System's** two-way network coverage by relaying data between meters equipped with the **Mi.Net** System units.

\*Pat. [www.mwppat.com](http://www.mwppat.com)

*Mi.Hydrant uses the existing water infrastructure to increase the effectiveness of our AMI system.*



*Our 420 Remote Disconnect Meter enables utilities to manage service from the office, not the curb.*





# Residential Metering

## Positive Displacement (PD) Meters

Mueller Systems is an industry leader in offering high-quality, technologically advanced water measurement products. Those products serve as an integral part of helping utilities account for every drop of water their customers use – minute by minute, month after month. The accuracy, durability, and adaptability of our positive displacement meters are unsurpassed in the industry.

The largest measuring chamber in the industry allows **Hersey** PD meters from Mueller Systems to outperform all others. Rugged bronze cases in 5/8" through 2" sizes give you years of unwavering, unsurpassed service; NSF-61 compliant meters can be ordered as an option. The **Hersey** PD meter offers exceptional tamper protection with a standard visual-read register, with a **Translator®** encoder register. A wide selection of AMR/AMI options gives you the flexibility to create a system best suited to your performance needs and revenue targets.



**435 Bronze PD Meter**

Sizes	Model	Operating Range
5/8"x 1/2"	420	1/8 to 20 GPM
5/8"x 3/4"	420	1/8 to 20 GPM
3/4"	435	1/4 to 30 GPM
1"	452	3/4 to 50 GPM
1-1/2"	562	1-1/2 to 100 GPM
2"	572	2 to 160 GPM





## Composite Positive Displacement Meters

Composite meters represent the latest advancement in positive displacement meter technology. **Hersey** composite meters from Mueller Systems incorporate lead free, renewable resources into all meter components that come in contact with water, giving utilities and their customers a metering option that is environmentally friendly, sustainable, and in compliance with all current regulations. In addition, our composite meters weigh less and are more durable than other meters. With no possibility for corrosion or lead contamination, and with the ability to encourage conservation when utilized with **Hot Rod** and the **Mi.Net** System, **Hersey** composite meters from Mueller Systems are the premier green metering choice for the future.

Our composite meters help customers accurately and reliably measure potable water over time for residential and small commercial applications, especially where water volumes are low and low flow sensitivity is critical. The meter employs industry first stainless steel threads for corrosion free connections. The permanently sealed register has a unique seal and heat-treated glass to eliminate dirt, moisture infiltration and lens fogging. To resist tampering with the register, an integral tamper-proof locking feature is provided.



**420 Composite Meter**

Sizes	Model	Operating Range
5/8" x 1/2"	420	1/8 to 20 GPM
5/8" x 3/4"	420	1/8 to 20 GPM
3/4"	435	1/4 to 30 GPM

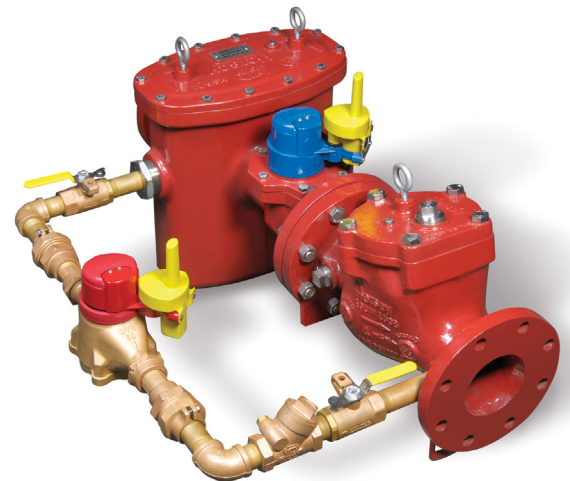




# Furnishing Flow to the Fire and Protecting Potable Water Supply

## The Standard for Fire Lines

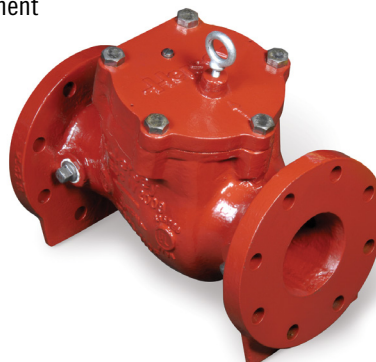
The **Hersey FM<sup>3</sup>** fire service meter with bypass from Mueller Systems' is designed for combined fire service and domestic water where a single supply line supports both fire and domestic or process needs. The meter may be utilized in automatic sprinkler systems and fire service, as a master meter for an entire water system, as a master meter for zoned systems, and for domestic or processed water where accuracy across a broad range of flows is critical. The FM<sup>3</sup> meter eliminates the need for secondary service lines, saving time and reducing installation expenses and is compliant for all UL®, FM®, NSF-61 fire service meter standards.



**FM<sup>3</sup> with Bypass**

## Keeping Leaks in Check

Theft and leaks compromise the integrity of a fire system. Mueller Systems' detector checks are spring-loaded devices that keep a check on flow irregularities, so you can tell if water is "slipping by." Rugged and reliable, they are designed to reduce pressure loss, ease maintenance, and enable an unobstructed flow through the main line. Bypasses are available with Mueller Systems' positive displacement or vertical turbine meters as a separate option.



**EDC-IV**

Sizes	Operating Range
3"	1/2 to 750 GPM
4"	3/4 to 1250 GPM
6"	2 to 2600 GPM
8"	2 to 4400 GPM
10"	2 to 7000 GPM

Sizes
3"
4"
6"
8"
10"





## The Ultimate Litmus: A UL® Stamp

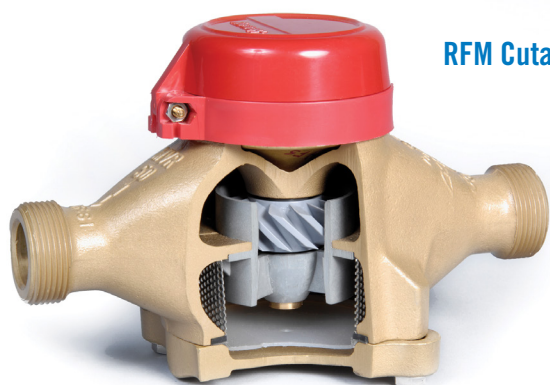
From the single-family home to a massive manufacturing structure, the sprinkler system relies on the full-rated capacity of water meters in order to do its job. For more than 100 years, Mueller Systems has been the proven leader in fire line meter design. These vigilant meters personify the reason your customers want fire sprinkler systems in the first place — peace of mind.

Mueller Systems' **Hersey** RFM meter was the first residential fire meter on the market to carry the prestigious Underwriter's Laboratory (UL®) listing, widely accepted as your assurance of system component reliability. UL subjected the RFM meter to accelerated aging, heat extremes, leaks, pressure loss, burst pressure and long-term durability tests to verify full flow reliability and long term accuracy. Designed for use in residences with fire protection systems or for combination domestic plumbing / fire service, RFM meters are available in sizes from 3/4" to 2".



**RFM Meter**

Sizes	Operating Range
3/4"	1/2 to 35 GPM
1"	3/4 to 55 GPM
1-1/2"	1-1/2 to 110 GPM
2"	2 to 175 GPM



**RFM Cutaway View**



*The **Hersey** RFM meter was the first residential meter on the market to carry the prestigious Underwriter's Laboratory (UL) listing.*





# Time-Tested Performance-Proven

## Horizontal Turbine Meters

When your business depends on measuring potable water with a moderate-to-high flow rate, Mueller Systems' horizontal turbine meters offer key advantages. Built to be accurate over extended periods of time with low head loss, they handle some of the widest flow ranges in the industry, with up to 175 PSI working pressure and within temperature ranges of 33°F and 100°F. Our exclusive D.I.M.E. (Drop-In Measuring Element) feature provides additional value by streamlining maintenance.

The Mueller Systems' FM<sup>3</sup> fire service meter with no bypass is also designed for combined fire service and domestic water where a single supply line supports both fire and domestic or process needs and usage is consistently moderate to high. The meter may be utilized in automatic sprinkler systems and fire service, as a master meter for an entire water system, as a master meter for zoned systems, and for domestic or processed water where accuracy across a broad range of flows is critical. The FM<sup>3</sup> meter eliminates the need for secondary service lines, saving time and reducing installation expenses and is compliant for all UL®, FM® and NSF-61 meter standards.



**FM<sup>3</sup> Meter without Bypass**

Sizes	Operating Range
3"	3 to 750 GPM
4"	4 to 1250 GPM
6"	9 to 2600 GPM
8"	18 to 4400 GPM
10"	30 to 7000 GPM



## Vertical Turbine Meters

If sensitivity to low flow is a consideration for your commercial, industrial, or residential application, Mueller Systems' MVR meters are the answer. The most sensitive vertical turbine meters available, they can be installed vertically or horizontally, and are the perfect replacement for compound meters. They are ideal for installation in tight spaces and the built-in strainer eliminates the need for a separate external strainer. This is the most versatile meter in the industry used in place of normal PD, turbine and compound applications.



**MVR 350**

## HbMAG Meter



HbMAG is a magnetic flow meter that is designed for easy installation, superior measurement and improved operational efficiency for potable water systems. It provides municipal water service providers with a viable replacement for applications that previously utilized a compound or horizontal turbine meter.

HbMAG features a sensor that accurately measures minimal pressure loss—allowing you to accurately account for every drop of water your customers use while conserving energy and significantly reducing pumping costs. HbMAG's compact and highly durable design does not contain any moving parts—which means virtually no wear and tear or maintenance costs—and it can be installed vertically or horizontally for ultimate flexibility in system retrofits and designs.



Sizes	Operating Range
3/4"	1/2 to 35 GPM
1"	3/4 to 55 GPM
1-1/2"	1-1/2 to 110 GPM
2"	2 to 175 GPM
3"	2-1/2 to 390 GPM
4"	3-1/2 to 715 GPM
6"	5 to 1430 GPM

## HbMAG Meter

Sizes	Operating Range
3"	1/2 to 550 GPM
4"	3/4 to 880 GPM
6"	1-1/2 to 2200 GPM
8"	2 to 3465 GPM
10"	8-3/4 to 5500 GPM
12"	15 to 8800 GPM

## Complementary Products

Mueller Systems offers additional high quality, technologically advanced products which enhance our customers' ability to communicate and collect data. These products blend seamlessly with our equipment and enable your utility to lower its costs, improve its operations, and easily and proactively respond to customer needs.



### SSR Register

The SSR Solid State Encoder Register is available on all current positive displacement meters for use with Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) systems.



### Hot Rod®

The Mueller Systems **Hot Rod** is a high performance, low cost transmitter used with the **Street Machine** Mobile Receiver and **EZ Reader** Software to provide high speed, top quality meter reading.



### Mi.Node W

The **Mi.Node** two-way transmitter can collect granular 5-minute consumption data and provide near real-time actionable alerts in a star or engineered AMI network.



### FLO® Unit and Pulser Systems

The Pulser System and the **FLO** Unit with Frequency Transmitters allow meter flow rates to be electronically transmitted to information management systems for data collection and analysis.



### Mi.Node E

An integral part of the **Mi.Net** System, this smart meter located on the consumer's premises collects data at regularly scheduled intervals and transmits it via 900MHz unlicensed RF to information gateways.

Find out how Mueller Systems can help you increase efficiencies, reduce costs, conserve water and energy, and improve customer service by calling us today at 800-323-8584 or visiting [www.muellersystems.com](http://www.muellersystems.com).



This brochure has been printed on post-consumer waste paper and is certified by the Forest Stewardship Council (FSC).

The Mueller Systems Catalog saved the following resources by printing on processed-chlorine-free paper containing up to 10% post-consumer waste.

trees	waste water	energy	solid waste	greenhouse gases
3 grown	1,152 gallons	1.9 million BTUs	127 pounds	251 pounds

**Mueller Water Products**

Smart *Move*®

©2015 Mueller Systems, LLC. All rights reserved. Mueller Systems, LLC is a Mueller Water Products, Inc. company.

All trademarks referenced herein are the property of Mueller Water Products, Inc., or an affiliate, unless specified otherwise. Printed in the USA. 03/15