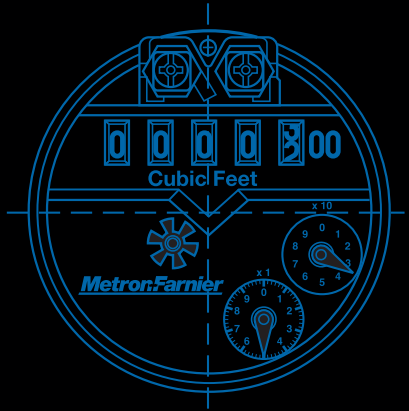


ENGINEERED FOR EXCELLENCE

*Advanced Single-Jet Technology
Water Meters from Metron-Farnier*



Widest Range

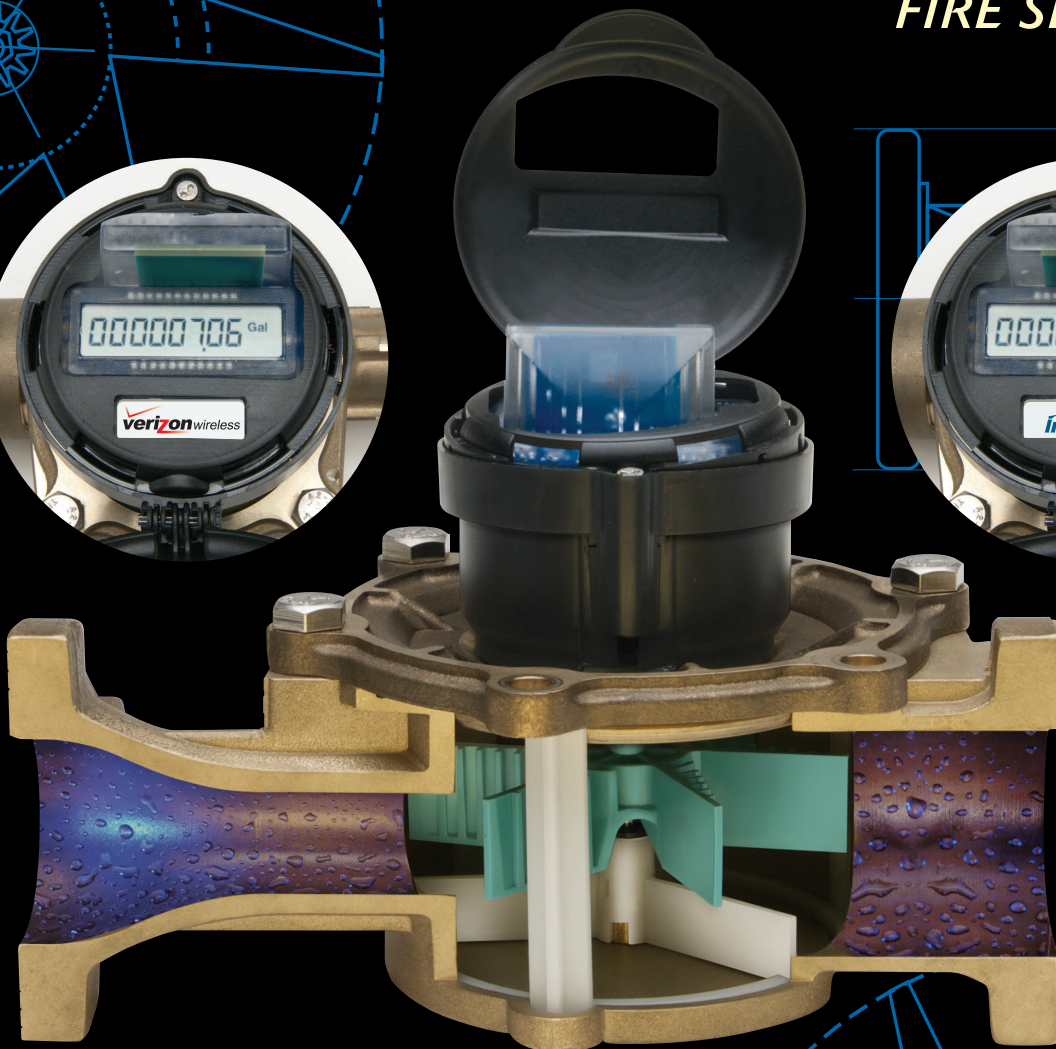
~ *RESIDENTIAL*

Maximized Revenue

~ *COMMERCIAL*

Consistent Accuracy

~ *INDUSTRIAL &
FIRE SERVICE*



Metron-Farnier

Advanced Single-Jet Technology

CORPORATE OVERVIEW

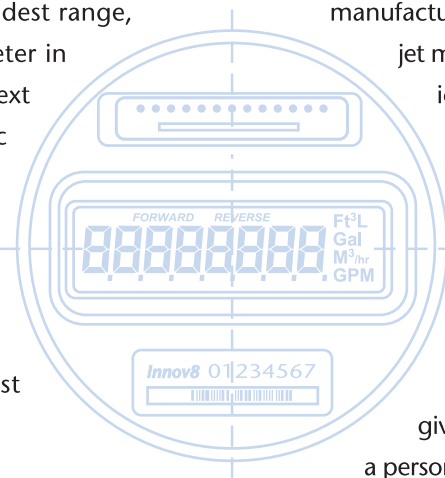
Setting the Industry Standard

Metron-Farnier was established in 1990 to aid water utilities in their ongoing effort to maximize revenue and eliminate water loss. We offer the widest range, most accurate and durable water meter in the world. Before you purchase your next compound, turbine, multi-jet, or disc meter, take a look at the specs. Metron-Farnier offers higher accuracy, upgraded materials, lead-free alloys, absolute encoders, and longer warranties. If you think your metering system can't be improved, you need to test some Metron-Farnier meters.

In addition to a world-class water meter, Metron-Farnier offers the most sophisticated, all digital, absolute encoder in the industry. Further, Metron-Farnier absolute encoder packages are based on a standard protocol allowing for complete migration into any currently available AMR applications eliminating the possibility of "marriage" to any one particular system.

We specialize in "turnkey" meter upgrades and AMR replacement. Regardless of current meter age, type, or manufacturer, an upgrade to Metron-Farnier single-jet meters and digital AMR systems, will dramatically increase utility revenue and improve your current meter reading system.

Let us show you how we can reduce your water loss, eliminate meter maintenance, and automate your meter reading system. Visit our website at www.MetronFarnier.com, or better yet, give us a call at 1-800-7METRON to schedule a personal visit from one of our regional managers.



MetronFarnier
Advanced Single-Jet Technology



INDUSTRIAL & FIRE SERVICE

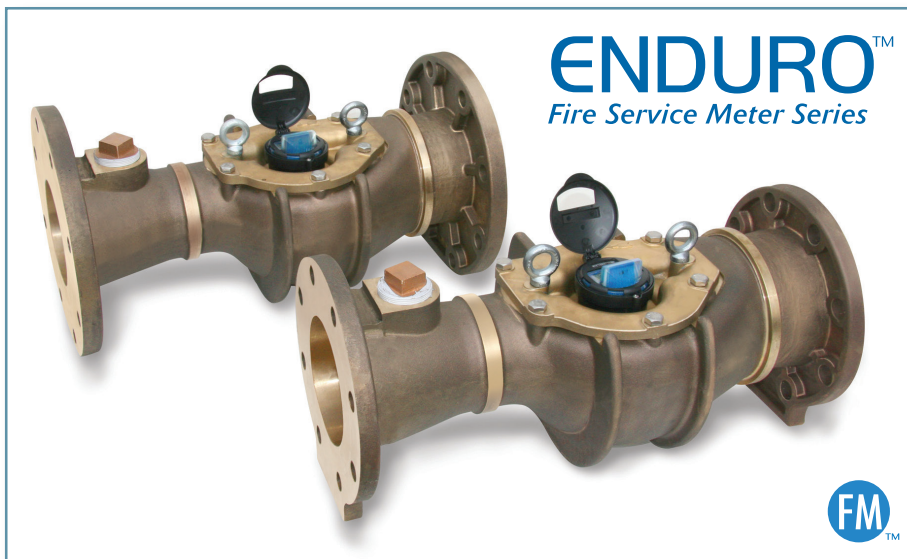
No Bypass, No Crossover, No Check Valve

DESIGN

Metron-Farnier Enduro class meter is a precisely engineered measuring device, which suspends a small single-jet meter in a meticulously designed large meter casing. The measuring device does not extend across the entire cross-sectioned area of the meter, resulting in extremely low head loss and unobstructed high flow. This design allows for sustained accuracy at high and low flow rates using a single measuring element.

PERFORMANCE

The Metron-Farnier Enduro meter is designed to replace traditional two-meter fire service assemblies. It is the only single meter currently available that is capable of measuring both fire and domestic usage. Accuracy registration begins at 5 gpm and pressure ratings meet or exceed fire service requirements. By eliminating separate meters and valves for domestic and fire usage, this meter dramatically increases utility revenue on combined meter accounts. As with all Metron-Farnier single-jet meters, it is maintenance-free and can be left in service for years with no loss in accuracy. In addition to dual domestic/fire service applications, it is also ideally suited for master metering, raw water/well head metering, industrial and irrigation applications.



SPECTRUM™ Residential Fire Service Meters

Across the U.S. there is growing market for residential fire service meters. These meters are used to supply water to homes and small commercial buildings that have sprinkler systems for fire suppression.

Fire departments around the country have been requesting /demanding that displacement meters be removed from these services. Displacement meters are not recommended by the AWWA for these applications because of the danger of "small particles which become lodged between the chamber and adjacent components, thus shutting off fire flow" (AWWA C700).

Our Spectrum™ Single-jet meters pass debris readily. Single-jet meters have the added advantage that in the unlikely case of failure, they will continue to pass water to the sprinkler system. Thus they are the ideal meter for the residential fire service market.



RESIDENTIAL METER APPLICATIONS

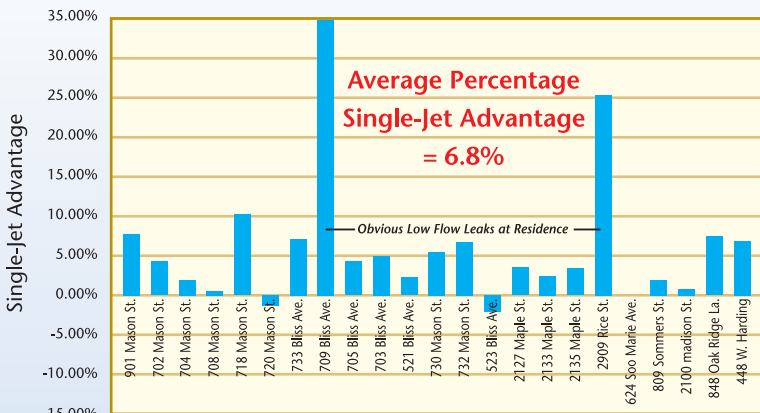
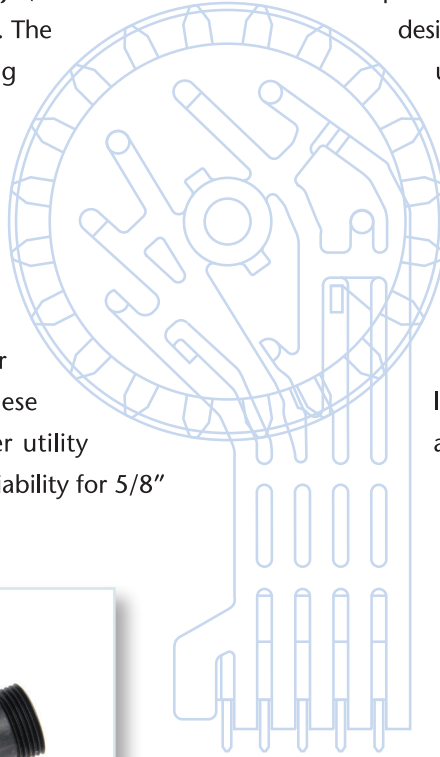
Extended Range and Friction Free

DESIGN

The Metron-Farnier single-jet meter is a *velocity*-type meter that incorporates a “single” *tangential jet*, which flows across a paddle wheel or impeller. The impeller is offset from the water flowing through the tangential jet such that the water travels perpendicular to the rotational axis of the impeller. Metron-Farnier residential size single-jet water meters are manufactured using the finest materials available, from state-of-the-art “touchless” absolute encoder registers to lead-free alloy castings. These upgraded materials offer today’s water utility unmatched accuracy, durability, and reliability for 5/8” and 3/4” metering applications.

PERFORMANCE

The performance of Metron-Farnier single-jet water meters is superior to that of displacement and multi-jet type designs. Metron-Farnier single-jet meters operate using an *exclusive “twin pivot” design* which combines excellent sensitivity at low flow rates and friction-free operation at high flow rates. Size-for-size, Metron-Farnier single-jet type meters record flows 10 times lower than displacement or multi-jet type meters. Extended range combined with friction-free operation allows for a much longer service life and significantly increased accountability.



Displacement Meter vs Single-Jet Meter
 •Wisconsin Water Utility 5/8 in. Meter Series Test



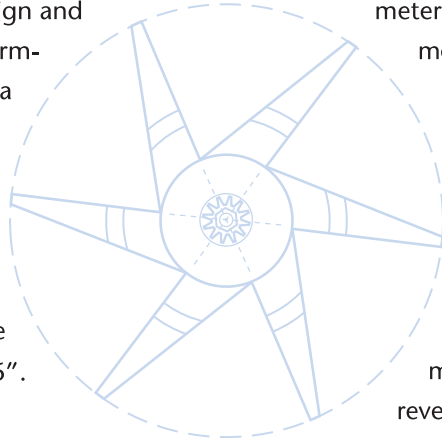
Complexity vs Simplicity:

COMMERCIAL METER APPLICATIONS

Sustained Accuracy & Maximized Revenue

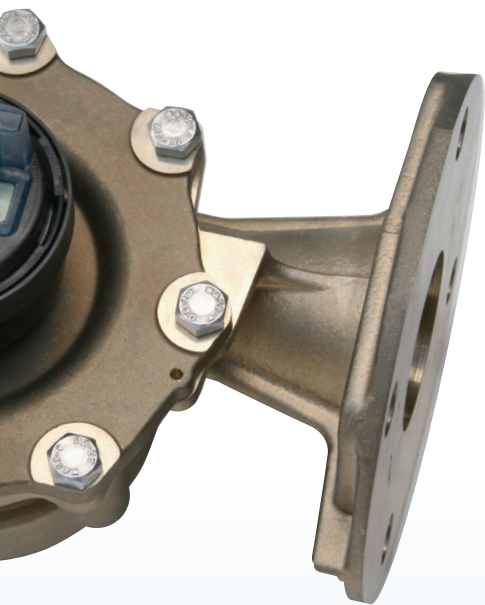
DESIGN

Save for the larger bore, Metron-Farnier commercial single-jet meters are identical in design to our residential size meters. Superior design and materials combine for higher performance. Meter bodies are cast using a silicon bronze with a lead content of less than 1/10th of 1%. The register contains an IP 68 rated, sealed register for submersible installation. These design enhancements eliminate the need for costly maintenance and repair for meter sizes 1" to 6".



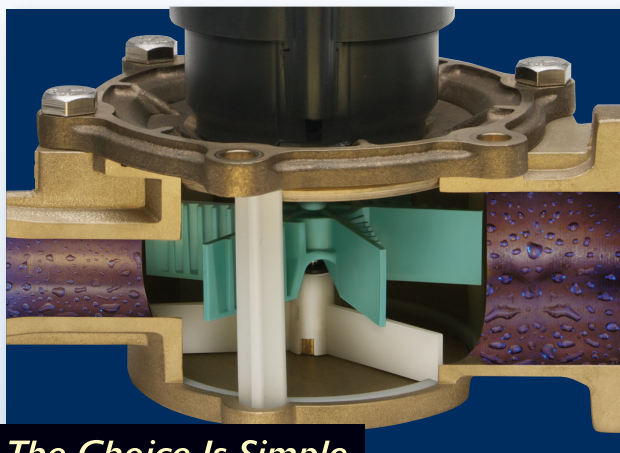
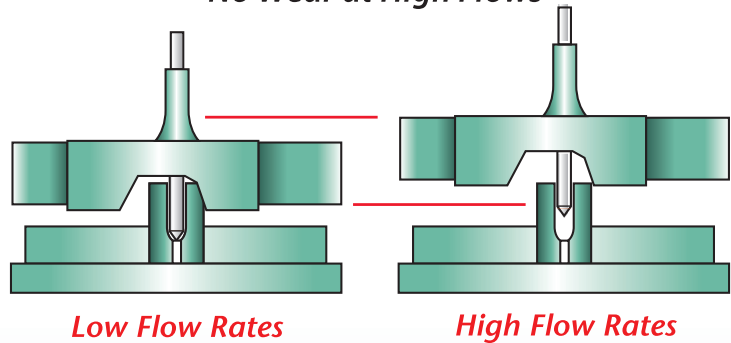
PERFORMANCE

Metron-Farnier commercial size single-jet meters are designed to replace limited range displacement and turbine type meters, and maintenance intensive compound type meters. Our commercial single-jet meter is 10 times more accurate at low flows than displacement meters and 10 times more accurate at low flows than turbine meters. Although similar to a compound meter in range, the Metron-Farnier single-jet meter exceeds it considerably in durability, reliability, and accuracy over time. The combination of greater accuracy with no maintenance requirements yields unmatched revenue maximization for commercial services.

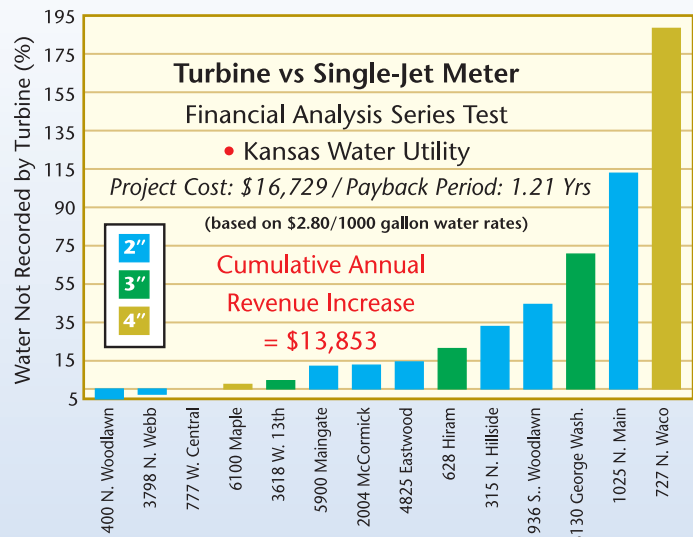


Dual Bearing Design

- No Crossover Loss
- No Wear at High Flows



Why: The Choice Is Simple



CHOICE OF REGISTER TYPES

Electronic Registers and Absolute Encoders



No-Drag, High-Sensitivity Measurement

The *innov8* utilizes an advanced magnetic sensor which eliminates the drag common to magnetically-coupled registers. This translates to improved low-flow accuracy and long-term reliability.

High-Resolution Datalogging

The *innov8* incorporates high-resolution consumption datalogging—down to the turn of the meter magnet. This historical data provides the basis for the customer-service functions and can also serve engineering, application and maintenance functions. The data is easily accessible via IR or RF channels.

Advanced Packaging

The *innov8* housing is 100% encapsulated to handle all meter environments—indoor, outdoor, pits, whatever. Optional AMR or SCADA outputs are channeled through a double-sealed cable exit to ensure environmental tightness. The housing is made from a hardened thermoplastic with UV-protection.

High-Res LCD-Display

The high-resolution, configurable LCD-display provides 8 digits of consumption resolution with on-screen total and flow units display and a flow direction indicator.

AMR & SCADA Outputs

The *innov8* offers multiple optional outputs for AMR and SCADA including a configurable 3-wire AMR, 2-wire touchpad, switch closure and a 4-20 mA analog output.



Utility Benefits from the VN Verizon-based AMI Register

- Infinitely scalable deployment: commercial, industrial, hard-to-read, remote or system-wide
- Retrofits to nearly all existing meters without needing to change-out meters
- Connects directly to **Verizon Network** assuring the highest network reliability – no infrastructure requirements
- Most detailed account analysis: 5-min. interval data and resolution down to 1/100th of a gallon
- Utility and basic end-customer data access from a secure internet location
- The “virtual network” allows for immediate deployment of endpoints and utilization of high-resolution interval data

Electronic register for new meter or retrofit applications



Stand-alone modem for connection to registers

ADVANCED TECHNOLOGY FROM A WORLD-CLASS LEADER

UTILITY & CONSUMER ACCESS

Spectrum & Enduro Series Meter Analytics Website



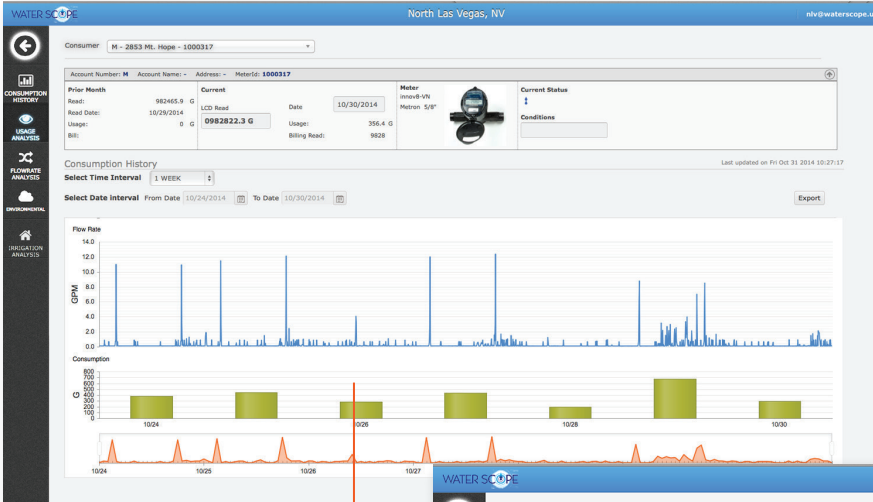
Powered by:



End-Consumer Data Access by Web

The VN System provides access to consumption data to individual end-consumers via standard web browsers. Data access is granted through the utility and provides detailed consumption reports, current billing information and indication of problem status such as leaks or high usage.

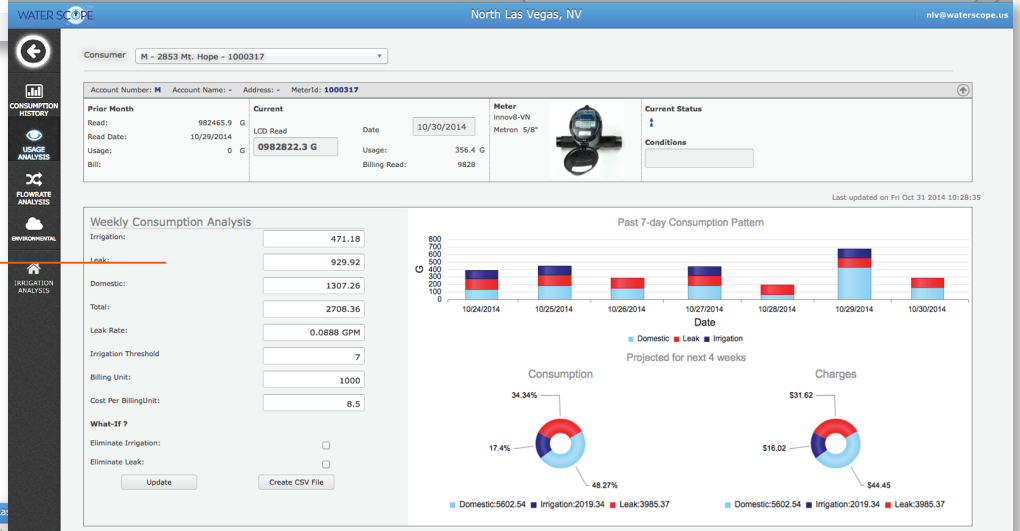
Optionally, end-consumers can configure the service to provide email notification on problem situations such as leaks and unusual consumption levels.



Interactive Rate of Flow

Identification of the Type of Water Consumption

Meter Sizing, Time of Use and Flow Rate Percentages



VN Server and Azure Storage

The VN Server is a robust and scalable cloud-computing service which acts as the AMI head-end processor – it authenticates and processes all endpoint transmissions and VN Central commands. The application is based on the **Microsoft Azure** platform and provides isolated and secure data communications for utilities. All communications from the **Verizon Wireless** network is channeled through a secure Virtual Private Network (VPN). The meter data management (MDM) is built within the ultra-secure Azure platform.

Eliminate Long-Term Accuracy Loss

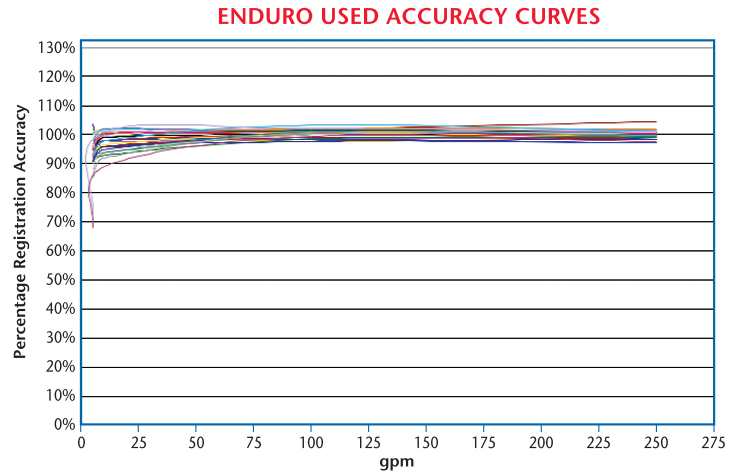
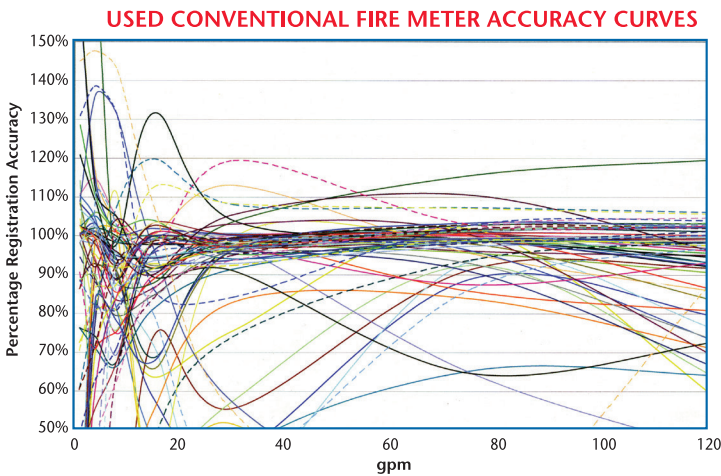
These two charts represent independent accuracy testing from conventional multi-chamber fire service meters and our single element Enduro Fire Service water meter. The test results are from the same Southwestern utility. The graph depicting the conventional fire service meter accuracy test results (from 47 meters, 2-15 years old) show explicitly how much maintenance is required by a utility to maintain accuracy. It also highlights the very significant loss of revenue due to the inaccuracy of conventional fire service meter designs over time. The graph depicting the accuracy of a similar quantity of installed Enduro fire meters clearly illustrates the accuracy stability over time of our single-element design.

The twin-pivot design of our meter prohibits inaccuracy above the minimum stated flow rate of each size of meter. The utility noted in these graphs, increased revenue by several hundred thousand dollars per year after installing the Enduro Fire Service meters. Our single-element design also eliminated all crossover loss associated with the previously installed conventional fire service designs.

Best Fire Service Warranty in the Business

All Metron-Farnier Fire Service meters include the industry's only **"5-Year Flange-to-Flange Warranty"**. Our single-rotor design eliminates the risk of losing revenue and assures utilities that consistent maintenance will never be necessary with any Enduro Fire Service product to maintain stable revenue-collection over the meter life.

Only Metron-Farnier can warranty zero-maintenance over a 5-year period assuring your decision to specify and install Enduro Fire Service meters as **a rock-solid investment**.



GENERAL SPECIFICATIONS

Model	Size	Typical Starting Flow Rate	Minimum Test Flow (95-102%)	Normal Operating Range (98-102%)	Maximum Continuous Duty	Head Loss at Maximum Continuous Flow
Spectrum 25	5/8"	1/20 gpm	1/10 gpm	1/8-30 gpm	25 gpm	7.25 psi
Spectrum 22	3/4"	1/20 gpm	1/10 gpm	1/8-30 gpm	22 gpm	7.25 psi
Spectrum 30	3/4"	1/20 gpm	1/10 gpm	1/8-40 gpm	30 gpm	7.25 psi
Spectrum 50	1"	1/16 gpm	1/4 gpm	1/2-70 gpm	50 gpm	7.25 psi
Spectrum 88	1 1/2"	1/10 gpm	1/2 gpm	3/4-105 gpm	88 gpm	7.25 psi
Spectrum 130	2"	1/8 gpm	1/2 gpm	3/4-185 gpm	130 gpm	7.25 psi
Spectrum 175	3"	1/4 gpm	1/2 gpm	3/4-350 gpm	175 gpm	7.25 psi
Spectrum 500	3" / 4"	1/4 gpm	1/2 gpm	3/4-500 gpm	500 gpm	7.25 psi
Spectrum 1000	4" / 6"	0.6 gpm	1 gpm	2-1000 gpm	1000 gpm	7.25 psi
Enduro 2800	6" / 8"	5 gpm	7 gpm	10-3500 gpm	3500 gpm	6.40 psi

MetronFarnier

Advanced Single-Jet Technology

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