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# PRECISE MEASUREMENT TOOLS FOR WATER CONSERVATION

*Since 1976, Master Meter has been a technology partner to water utilities. The company is a pioneer in the design, development, and manufacture of water meters used in homes and businesses throughout North America.*



Written by Leon Bracey

**H**eadquartered in Mansfield, Texas near Fort Worth, Master Meter specializes in developing smart water meter products that provide important water system information and consumption data. The company's products help utilities' customers become more proactive, act as better stewards of water resources, and help ratepayers better manage their water and drive down monthly bills.

Ian MacLeod, VP of Marketing, spoke to Business in Focus about Master Meter and why the company has been successful in implementing water measurement projects.

"In our industry, the majority of water meter manufacturers are over 100 years old," MacLeod says. "Master Meter started in 1976, so when it comes to dealing with technology, our relative youth has given us an advantage. We don't have the legacy issues that affect other companies; we have been forward thinking in tech development."

Due to the demand for water conservation in the market, Master Meter has continued to grow in

spite of industry setbacks such as declining housing starts during the recession. Increasingly dense populations in cities, the need to properly measure and account for water, and the importance of detecting and eliminating leaks or holes in the system have all meant that there is a continuing place for industry leaders like Master Meter. "Measuring water helps manage and preserve it for a sustainable future," believes MacLeod.

He notes that many larger cities are leading the efforts for water conservation. "Water conservation as it relates to changing geographic climate conditions is a significant driver for Master Meter. Likewise, greater concentrations of populations in urban areas demand that municipalities

must preserve the water they have available today. Our technology accomplishes this through precise measurement and frequent reliable reporting of not just usage trends and consumption profiles, but the presence of hits to the bottom line from non-revenue water leaks, theft of water, and tamper of equipment."

Master Meter is a wholly-owned subsidiary of Israel-based Arad Group, a world leader in the development of water measurement technology, metering communication, and software, and MacLeod feels this gives Master Meter a competitive advantage due to Israel's water conservation issues and how they've been handled over the years.

"Due to the arid nature and lack of water in Israel, the country has been a leader in micro irrigation, desalination, and solar technology as well as best practices for agriculture," MacLeod says. "There is a real strong pipeline to

water-focused technology there and they lead the world in their efforts."

Originally a distributor of Arad's water technology, the demand in North America was strong

enough to move manufacturing operations domestically. Originally performing, testing and selling water measurement products, Master Meter now manufactures in its facility in Texas. The support from Arad Group gives Master Meter the financial backing to invest in innovative measurement technology.

One notable product of Master Meter's is the Octave Ultrasonic Meter, which uses ultrasonic sound to accurately measure water use. Master Meter worked closely with clients to develop this innovative product technology and revenue solution focused on managing water. Ranging in sizes from 2 to 12 inches, the Octave Ultrasonic Meter represents a new approach to comprehensive flow ▶

**"Municipalities must preserve the water they have available today. Our technology accomplishes this through precise measurement and frequent reliable reporting."**



► management and accountability based on a greatly improved version of the AWWA C750 standard, explains the company's website, [www.mastermeter.com](http://www.mastermeter.com). "This highly advanced, all-digital technology achieves precise measurement without any moving parts to ensure optimum revenue without compromised performance over time."

This meter solution is an ideal replacement for any mechanical compound, fire service, or turbine meter, says the company. Commonly, 20 percent of a utility's installed meter base generates 80 percent of the utility's revenue, and the Octave focuses advanced metering science where the real revenue exists — within the Commercial & Industrial meter assets. The meter boasts intelligence such as Empty Pipe Alerts, Leak Alarms, Battery Level, Rate of Flow, and can accurately measure flow bi-directionally.

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**"Master Meter's niche focus has been in customizing solutions for small to mid size utilities."**

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"The Octave Ultrasonic Meter is innovative because it doesn't have any moving parts, so there is no wear associated with the meter," explains MacLeod. "Since it never wears out, its accountability is preserved."

The Octave Ultrasonic meter is used throughout North America – In all 50 U.S. states, Canada and Mexico. Master Meter's niche focus has been in customizing solutions for small to mid-size utilities, often in rural environments that are too often overlooked by other providers. Master Meter's technology is also used in large expansive suburban metropolitan areas as well. The company's Harmony Meter Data Management and Analytics (MDMA) software enables such municipalities to leverage data and analytics to make smarter decisions about their water infrastructure and water sustainability.

Another product that Master Meter will be introducing this year is the Allegro Advanced Metering Infrastructure (AMI) network solution, which provides rich measurement data to water utilities, such as hourly data and customer usage profiles. "Customers can better understand and take control of conservation efforts, making it a two-way partnership," says MacLeod. "What if a city can empower people with data with a software app to look at water usage, or get alerts in case water usage exceeds their budget? The information from Allegro and Harmony can give people alerts about leaks and send notices about water usage – you can't manage what you don't measure and you can't manage when you don't know what's going on. Allegro enables water utilities to adequately provide that data to take control of the water footprint." ►►



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**“The Octave Ultrasonic Meter represents a new approach to comprehensive flow management and accountability.”**

- ▶ Master Meter has formed strategic alliances with two global leaders in the Smart Grid AMI space. These companies are Landis & Gyr, and Silver Spring Networks, and Master Meter

provides these companies with reliable, trusted water measurement products to their overall smart grid, smart city infrastructure solutions.

Recent projects that use Master Meter's technology include Automatic Meter Reading (AMR) deployments with United Kingdom utility company Southern Water – one of the largest projects of its kind. Master Meter also has AMR deployments in Mumbai, India.

MacLeod credits this ongoing success and growth of the company to the team's dedication to their customers. “Our CEO, Jerry Potter, set the tone for customer-focused dedication,” he shares. “We are a customer centric company and that is a reflection of the fact that Mr. Potter got his start in installation and testing. He built this business and truly understands customers because he rose up in rank from the ground level. He brought focus and attention to the marketplace and is a strong advocate for doing what is right for customers by providing the service and support they need.”

Some of these efforts for customer outreach include engaging in customer focus groups to bring in new ideas for meaningful solutions that matter most to utilities. As well, “We have distributor advisory meetings to ferret out new opportunities to drive value for our channel partners and in turn, municipalities looking for advanced water management and conservation solutions.”

Additionally, Master Meter employs customer review teams and vendor review boards to find ways to streamline operations and improve yield, output, and capacity; the company also boasts cost-reduction programs to continue to bring competitive products to the marketplace. The team also invests in new software to manage and track issues and customer feedback. “We're willing to make the appropriate adjustments accord-



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ing to our customers’ wants and needs,” says MacLeod. “This includes continual measurement, tracking, and responding, using advanced software and process modeling.”

For almost four decades, Master Meter has provided municipalities with the tools they need for water conservation and measurement, and has continually aimed to elevate best practices industry-wide. To this end, Master Meter is an active participant on the Standards Committee with the American Water Works Association (AWWA) and works with other industry leaders to help structure meaningful standards for industry quality and efficacy.

“The demand for water and better management of it has put a focus on providing tools and resources to measure time, information, and how and when people use water,” concludes MacLeod. Master Meter provides software solutions that empower both utilities and ratepayers alike to access and utilize this information. ■



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