Big-3™ Flow Energy Platform Eases Burden of Veteran's Affairs (VA) Facility Upgrades

Ideal Flow Measurement Solution for boiler efficiency, compressed air, steam measurement, and hot/chill water applications in VA & large facilities

Monterey, California - As the infrastructure of VA facilities ages and facilities/utilities managers strive to keep their utilities costs under control, many facilities managers must either upgrade existing equipment or replace older equipment to meet efficiency mandates or cost targets. Sierra's Big-3 iSeries flow energy measurement flow meters makes this easy by delivering a precision "flow energy" platform to manage "flows that cost money," like natural gas, compressed air, steam and hot and chilled water.

The Big-3 iSeries features Sierra's QuadraTherm® 640i/780i thermal flow meters for gases, InnovaMass® 240i/241i vortex flow meters for steam, and InnovaSonic® 207i ultrasonic flow meters for hot and chilled water. Designed, built, and calibrated in the USA by Sierra, these meters share the same software and firmware, making them easy to integrate into a complete energy management system via BacNet or other communications no matter ***what*** needs measuring. Together, they set a new standard in ease-of-purchase, performance, accuracy, reliability, and ease of use.

Key Flow Energy Management Applications

Thermal Mass Flow Meters for Precision Natural Gas/Methane Measurement

To maximize boiler efficiency, operators must know the precise amount of fuel/air going into the combustor.

QuadraTherm is the ideal flow meter to measure fuel/combustion air given its capability to provide the highest accuracy of any thermal flow meter on the market at +/- 0.5% reading over a 100:1 turndown. This information can be fed into the combustion control module to optimize the fuel/air ratio.

Thermal Mass Flow Meters for Compressed Air or other gas Measurement

In facilities that use compressed air, or other bulk gas delivery systems like oxygen, nitrogen, argon, QuadraTherm thermal mass flow meters accurately measure "mass" flow down to very low flows. Using QuadraTherm, VA utilities managers can balance distribution and allocation between buildings on the campus and determine leakage, or usage for sub-billing .

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Vortex Flow Meters for Steam Flow Production, Usage, and Allocation -Vortex Flow Meters

Accurate steam flow measurements will give managers a true assessment of the steam production and allocation throughout the campus.

The InnovaMass 240i/241i multivariable vortex mass flow meter is provides steam accuracy of +/-1% of reading, 30:1 turndown, pressure and temperature compensation, and can measure up to five process variables with one process connection: volumetric flow rate, mass flow, density, pressure, and temperature. The 241i has a hot-tap probe retractor for easy steam installation when shutting down the process is not an option and offers engineers onboard software apps via the Raptor OS like meter set up, in-situ calibration/validation, and tuning.

Innovasonic 207i for Water Measurement & Energy Btu Measurement

One of the big challenges that VA facilities have is measuring the amount of thermal energy (BTU's) that their hot and chilled water systems deliver with as low a cost and disruption as possible. Additionally, in boiler tuning, the feed water flow to the boiler is an important measurement, since engineers need to measure the efficiency at which the boiler turns this feed water into steam.

The InnovaSonic 207i clamp-on ultrasonic flow meter is an elegant and ideal solution for both of these types of water measurement due to high accuracy at both low and high flows (+/- 0.5 percent of reading from 0.16 to 40 ft/s (0.05 to 12 m/s)), installation with no pipe cutting or process shutdown, and immunity to external noise. Coupled with temperature sensors on the "hot" and "cold" legs, the thermal energy gained or lost can be measured. This thermal/BTU measurement is critical for optimizing central heating and cooling systems. The 207i helps engineers identify the problem and then confirm that the problem has been fixed so they don't waste money and energy.

Big-3 Eases the Burden of Recommissioning

The Big-3 flow energy platform provides engineers/managers/operators with the ability to work with one supplier for all of their gas, liquid and steam flow measurements The Big-3 includes:

- QuadraTherm 640i/780i, the most accurate thermal flow meters on the market for natural gas, air and other gases (Oxygen, Nitrogen, Argon, Helium, etc.)
- Insertion multivariable InnovaMass 240i/241i vortex flow meters for steam flow measurements-easy hot tap installation
- Clamp on InnovaSonic 207i ultrasonic water flow meters with energy/BTU capability
- Specialized, local support team for all three technologies
- Shared software applications and operating system for easy integration
- Designed, built, and calibrated in the USA by Sierra

Learn more about Big-3 for VA facility upgrades.

Download Free Energy Flow Guide

Watch Flow Energy Management Videos

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About Sierra

A global leader in flow measurement and control for over 40 years, Sierra Instruments designs and manufactures fluid flow measurement and control solutions for customers spanning global industries as diverse as scientific research, oil & gas, energy management, semiconductor, clean energy, aerospace, and biotech, to name a few. **In everything we do, we challenge the status quo to continually push our technologies and solutions to the next level to do the "never before possible" for customers.** With over 150 locations in over 50 countries, Sierra is uniquely positioned to provide innovative products and lifetime support for the leading companies of today and the growth enterprises of tomorrow.

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