



PRESS RELEASE

For Immediate Release

Sierra's QuadraTherm® 640i/780i Wins Flow Control's Innovation Award

Innovation Drives Product Development Recognized by Nine Years of Industry Honors

MONTEREY, CA — August 23, 2013 — Sierra Instruments is pleased to announce that their QuadraTherm® 640i/780i flow meter has been chosen by the readers of [Flow Control Magazine](#) as the winner of the 2013 Innovation Awards in the flow measurement category. Sierra's commitment to innovative products to solve customer's application challenges has been recognized by winning Flow Control's Innovation Award for nine straight years. With its innovations in flow sensor design and computational algorithms, Sierra's new QuadraTherm 640i/780i series thermal mass flow meters creates a new paradigm in thermal dispersion technology. The result is a measurement accuracy of 0.5% of reading above 50% of full scale flow. This new technology gives end users high accuracy flow measurement to increase efficiency of their process, increase quality of manufacturing, and save money in custody transfer applications.

Before QuadraTherm, this level of accuracy was never thought possible with [thermal dispersion mass flow meters](#). The innovation in the patented QuadraTherm four-sensor technology provides the critical inputs to achieve +/- 0.5% accuracy. In the traditional "two-sensor" flow meter, the heat lost via stem conduction is not accounted for. This can introduce errors as high as 20 percent, depending on the gradient between the gas temperature and the temperature outside of the pipe. The new "four-sensor" design of this thermal gas flow meter solves this problem by adding two more sensors to the traditional flow sensor, offering customers higher accuracy, competing with the accuracy of Coriolis meters at a fraction of the installed cost.

"We thank the readers of Flow Control for choosing Sierra for the ninth time! We are excited that years of hard work and innovation have been recognized, but what we are most proud of is that the QuadraTherm 640i/780i mass flow meter offers our customers greater accuracy and efficiency than ever thought possible with thermal dispersion technology. This marks a turning point in thermal dispersion technology which will reshape customers' expectations about performance and accuracy specs for thermal measurement instrumentation," says Erica Giannini, Director of Marketing at Sierra instruments.

Along with this four-sensor innovation, QuadraTherm Technology moves from the traditional Wheatstone bridge circuit to a powerful microprocessor that runs a comprehensive flow-measurement algorithm called qTherm™, the "brain" of the instrument. This algorithm uses the dry sensor technology and inputs from the four temperature sensors to solve the first law of thermodynamics in a fraction of a second for each mass flow meter data point. This allows the QuadraTherm 640i/780i to manage changes in:

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NORTH AMERICA
5 Harris Court, Building L / Monterey, CA 93940
800.866.0200 / 831.373.0200
fx 831.373.4402
www.sierrainstruments.com

EUROPE
Bijlmansweid 2
1934RE Egmond aan den Hoef
The Netherlands
+31 72 5071400 / fx +31 72 5071401

ASIA-PACIFIC
RM. 618, Tomson Centre, Building A / 188 Zhang
Yang Road
Pu Dong New District
Shanghai, P.R. China 200122
+8621 5879 8521/22 / fx +8621 5879 8586



- Gas mass flow rate
- Gas temperature
- Gas pressure
- Outside temperature
- Pipe conditions (size and roughness)
- Flow profile

The QuadraTherm Series also has multivariable outputs (mass flow, temperature, and pressure), measures all non-condensing clean gases, and features ValidCal™ Diagnostics to validate calibration in the field.

Summary of Key Features

- Accuracy: +/- 0.5% of Reading
- Flow ranges up to 60,000 sfp (305 smps)
- Multivariable: Mass flow rate, T, and P
- QuadraTherm® four-sensor design
- DrySense™ no-drift sensor with lifetime warranty
- qTherm™ “Brain” manages changes in gas, T, P, Outside Temp
- Dial-A-Pipe®: Change pipe size

Learn more about QuadraTherm thermal gas mass flow meters today:

<http://www.sierrainstruments.com/products/quadratherm.html>

ABOUT SIERRA

A global leader in flow measurement and control for over 40 years, [Sierra Instruments](http://www.sierrainstruments.com) designs and manufactures high performance flow instrumentation for gas, liquid and steam applications commonly found in the pharmaceutical, scientific research, health, energy and semi-conductor industries. With over 150 offices in 50 countries, Sierra is uniquely positioned to provide their innovative products and lifetime support for the leading companies of today and the growth enterprises of tomorrow.

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Press Contact:

Maryadine Washington, Marketing Manager

831-373-0200

831-373-4402 (fax)

m_washington@sierrainstruments.com

NORTH AMERICA

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