



PRESS RELEASE

For Immediate Release

Field Adjust For Gas Composition Changes with Thermal Mass Flow Meters

*Upstream Oil & Gas Thermal Mass Flow Meter Effortlessly Solves EPA Reporting Challenges
QuadraTherm® with qMix™ Provides Accurate Flow Data Regardless of Gas Composition Changes; Perfect
for Shale Gas Upstream Production*

Monterey, CA — For the first time, oil/gas engineers can field adjust their gas composition on thermal mass flow meters in the field for flare, Vapor Recovery Unit (VRU), and storage vessels without sending the meter back to the factory for recalibration with Sierra's QuadraTherm 640i/780i with [qMix gas mixing](#) software.

Sierra's new gas mixing software package included with every QuadraTherm 640i/780i thermal mass flow meter on a beta trial basis is a unique feature of the Smart Interface Program (SIP), unlike anything available on the market for industrial mass flow meters.

qMix is a user-customizable gas mix feature that allows oil/gas engineers and operators to create custom gases or gas mixtures to compensate for gas compositional changes in the field without accuracy loss. This means oil/gas engineers can easily meet US EPA Directive 40 CFR Part 98 for shale gas upstream production operations since they can use qMix when the gas composition changes in the pipe, or when moving the meter to another location with a different gas composition.

[Watch How qMix Works Video](#)

Customer Benefits

[QuadraTherm with qMix](#) Gas Mixing Software allows end users to:

- Field adjust and maintain flow meter accuracy if gas composition changes
- Avoid costly recalibration; once qMix has been installed, no need to send unit back to the factory if gas composition changes
- Quickly create and upload unlimited gas mixtures onto one meter—free of charge
- Save custom gas mixtures onto your personal "My Gases Database" for later use
- Benefit from Sierra's proprietary, ever-improving qTherm "Gas Database" to download more accurate gases

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Traditionally, thermal mass flow meters are calibrated using the exact gas mixture they are intended to measure, or a surrogate mixture with very similar properties. In many industrial applications, like oil & gas and biogas measurement, the gas composition changes from the original calibration. When changes in gas composition occur in the field, the accuracy of the flow meter is adversely affected. In the past, the only way to correct for a change in gas composition was to return the meter to the factory for gas recalibration. QuadraTherm with qMix provides a dynamic solution to this problem by allowing end users to manage gas composition changes in the field right from the Smart Interface Program (SIP)—without ever sending the flow meter back to the factory to recalibrate the meter for the new gas composition.

Sierra's QuadraTherm 640i/780i with qMix is the perfect solution for challenging shale gas upstream production applications.

The QuadraTherm provides the best accuracy +/- 0.5% of reading above 50% of full scale for flow meter air measurement and other gases; built-in flow conditioning (inline version); has high turndown to handle low flows to high flows during upset conditions; multivariable outputs; flow ranges up to 60,000 sfp (305 smps); qTherm[®], Dial-A-Gas[®], Dial-A-Pipe[™]; accurately measures very low pressure vapors with no pressure loss; and has Hazardous Area approvals (ATEX, IECEx, CE, cFMus). The QuadraTherm is available in two models: the 640i insertion and 780i inline. The QuadraTherm family has a no-drift sensor with lifetime warranty; has multivariable output: mass flow, temperature, pressure (optional); measures all inert and all non-condensing clean gases; flammable gases (methane, propane, hydrogen, and digester gas); repeatability for mass flow rate is +/- 0.15%; ValidCal[™] Diagnostics to validate calibration in the field; gas accuracy is +/- 1°C (1.8°F); and includes above-mentioned qMix.

About Sierra

A global leader in flow measurement and control for over 40 years, Sierra instruments 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 and lifetime support for the leading companies of today and the growth enterprises of tomorrow.

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