



Frack Well Flow Meter Helps Meet U.S. EPA Flare Gas Reporting Regulations

Ideal for Shale Gas Upstream Production Operations



San Marcos, CA — Oil/gas engineers and operators of hydraulic fracturing well sites will find the [ST100 Series Thermal Mass Air/Gas Flow Meter](#) from [Fluid Components International \(FCI\)](#) provides an EPA compliant, rugged solution to measure flare gas flows at the wellhead.

As part of shale gas frack well drilling operations, there is frequently waste or excess gas that is returned to the surface. This gas is vented to a flare and burned off. US EPA Directive 40 CFR Part 98 requires flow measurement and reporting of these flared gases, which can be difficult with very low flow rates of 15 fps to 20 fps [4 mps to 6 mps], containing mixed gas compositions, potentially dirty gas, and at potentially elevated temperatures and wide pressure variation.

These wellhead sites are often remotely located with limited access to recording and data acquisition systems. The equipment can be exposed to severe weather conditions, including blowing dirt/dust. Instrument installations are in hazardous areas requiring instruments with full Ex approvals rated for Class 1, Div.1 [Zone 1] locations.

FCI's thermal dispersion ST100 Series Mass Flow Meter is an ideal solution for these demanding shale gas frack well drilling operations. The ST100 Flow Meter includes a digital readout with totalizer, analog or digital bus communications outputs and an on-board data logger.

FCI's thermal flow meters can measure flow rates as low as 0.25 SFPS [0.07 NMPS] and as high as 1000 SFPS [305 NMPS] with up to 1000:1 turndown. They are calibration-matched to specific mixed gas compositions and to the installation's temperature and pressure conditions, can store up to five unique calibrations and their accuracy meets the EPA's regulations.

The ST100 Series Flow Meter is IP67 rated for water and dust protection and carries global agency approvals on the entire instrument for Ex locations. With an optional VeriCal™ In-Situ Calibration System, they can provide operator in-service calibration verification and eliminate unnecessary de-installation/re-calibration costs.

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The ST100 Flow Meter sets a new industry bench mark in process and plant in air/gas flow measurement, offering the most feature-rich and function-rich electronics available. The ST100's performance delivers unsurpassed adaptability and value to meet gas flow measurement applications for today and tomorrow.

Whether the need is for 4-20 mA analog, frequency/pulse or digital bus communications such as HART, Fieldbus, PROFIBUS or Modbus, the ST100 is the solution. The ST100 Flow Meter's unique graphical, multivariable, backlit LCD display/readout brings new meaning to the term "process information." It provides the industry's most comprehensive information with continuous display of all process measurements and alarm status, and the ability to interrogate for service diagnostics.

Also standard in ST100 is an on-board data logger capable of storing up to 21 million readings of any or all measurements. The logged data is easily retrievable from a removable 2-GB micro-SD memory card or by uploading from the unit's USB port.

The ST100 can be calibrated to measure virtually any process gas, including wet gas, mixed gases and dirty gases. The basic insertion style air/gas meter features a no moving parts, non-clogging thermal flow sensing element and accuracy of ± 0.75 percent of reading, ± 0.5 percent of full scale and repeatability of ± 0.5 percent fs.

Designed for rugged industrial processes and plants, ST100 Flow Meters include service up to 850°F (454°C) and are available with both integral and remote (up to 1000 feet [300 meters]) electronics versions. The ST100 is agency approved for hazardous environments, including the entire instrument, the transmitter and the rugged, NEMA 4X/IP67 rated enclosure. Instrument approvals include FM, FMc, ATEX, IECEx, NEPSI, Inmetro, and GOST. Its bus communications are registered devices with their respective standards bodies and the ST100 has been independently evaluated to meet SIL 1 compliance.

Fluid Components International is a global company committed to meeting the needs of its customers through innovative solutions for the most challenging requirements for sensing, and measuring flow, pressure and temperature of gases.

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