

Air/Gas Flow Meter Now Withstands 850°F (454°C) For Use In High Temperature Processes

Coal-Fired Power Plants, Chemical Refining, Steel Manufacturing



San Marcos, CA—November 11, 2008—Process engineers will find the new Model ST98HT Mass Flow Meter from Fluid Components International (FCI) beats the heat without breaking a sweat in extreme process air/gas temperatures up to 850°F (454°C) while providing highly accurate flow measurement with superior repeatability.

The multi-function ST98HT Flow Meter measures air/gas mass flow rate, totalized flow and temperature in a single instrument. It supports a wide range of critical applications in electric power generation, chemical refining, steel production and other processes with high temperature air or gas flows. With its precision temperature-compensated thermal mass flow sensing element and advanced electronics, the ST98HT combines high performance with rugged packaging, ease of installation and low maintenance to reduce instrument total life cycle costs.

In coal-fired power plants, for example, the ST98HT Flow Meter measures pre-heated primary and secondary combustion air flows to the coal-fired furnace-boiler units as well as high temperature exhaust gas flow. The boilers generate steam that drives turbines to generate electricity for residential and commercial use. In the chemical industry, the ST98HT performs flow monitoring and reporting in the highest temperature specialty production processes and off-gas applications. For steel production, the ST98HT measures air and fuel gases flows to smelters and ovens as well as flue and stack gases.

The ST98HT Flow Meter is an insertion-style flow meter suitable for pipe sizes from 2.5 inches to 120 inches (63 mm to 3048 mm). This meter is designed with a direct mass flow sensing element that is accurate to $\pm 1\%$ of reading, plus $\pm 0.5\%$ of full scale, and repeatability of $\pm 0.5\%$ of reading. It operates over a broad flow range from 0.75 to 600 SFPS (0,21 to 172 NMPS) with an exceptionally wide turndown ratio up to 100:1.

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The ST98HT Flow Meter's thermal mass flow sensing element is manufactured with all-welded construction and available in 316L stainless steel or Hastelloy-C. Its no-moving part design is non-clogging and non-fouling, which means virtually maintenance-free and the highest reliability operation. The sensors are two matched precision platinum resistance temperature detectors (RTDs) in which one RTD is heated relative to the reference RTD, and the temperature difference between the two RTD's is proportional to the process gas mass flow rate.

The ST98HT Flow Meter's transmitter provides a linearized 4-20 mA output and HART two-way communications. Transmitter housing options include a weather-proof, NEMA 4/IP66 rated carbon steel enclosure, a NEMA 4X (IP66) rated aluminum enclosure, or a Division 1 (Zone 1) rated explosion-proof aluminum enclosure. The transmitter can be remotely mounted up to 1000 feet (350 m) away. The ST98HT Flow Meter is available with multiple agency approvals and certifications. They include: FM, CSA, ATEX, GOST/RGN, IEC, CPA and NEPSI. Hazardous location approvals meet Class 1 & II, Div 1 & 2, Groups B, C, D, E, F & G; and per ATEX/IECEX II2 GD Excd IIC T4.

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

Contact: FCI: 1755 La Costa Meadows Dr, San Marcos, CA 92078
Web: www.fluidcomponents.com Tel: 800-854-1993 Tel: 760-744-6950 Fax: 760-736-6250
Email: FCImarcom@fluidcomponents.com