

ST75 Thermal Mass Flow Meter Provides Precise Gas Line Control For Industrial Ovens and Furnaces

*Ideal for Chemical Processing, Electronics Manufacturing, Food/Beverage
Electric Power Generation, Metals & Materials, Pharmaceutical*

San Marcos, CA — The advanced, compact [ST75 air/gas flow meter](#) from [Fluid Components International \(FCI\)](#), which measures fuel gas, process gas, inert gas, waste gases and air in small line sizes, is ideal for optimizing natural gas flow control for industrial ovens, heat chambers and furnaces to reduce process and plant fuel costs.

Natural gas fueled industrial ovens, heat chambers and furnaces are used in a wide variety of heating process applications. Two of the most common types of industrial ovens are the batch oven and the conveyor oven. Batch ovens support variable production load sizes, volumes and multiple temperature profiles where a high degree of process flexibility is desirable. Conveyor ovens, on the other hand, support highly repeatable temperature profiles with uniform, predictable volumes.

No matter the type of oven, heat chamber or furnace, they all benefit from the precise control of natural gas flow. FCI's ST75 flow meter helps process and plant engineers more accurately control their complex heating processes to optimize rise time, which lowers gas consumption and minimizes plant energy costs. In addition, reducing natural gas consumption shrinks a plant's carbon footprint to protect the environment.

The ST75 flow meter is equally well suited for low flow and high flow operations in industrial ovens and operates over a wide flow range, from 0.01 SCFM to 559 SCFM [0.01 NCMH to 950 NCMH] depending on line size. For variable process conditions, the ST75 is factory preset to a wide turndown range at 10:1 to 100:1.

With built-in temperature compensation, the ST75 flow meter maintains consistent performance in rugged, hot industrial process environments. It features accuracy to $\pm 2\%$ of reading with $\pm 0.5\%$ repeatability over varying process temperatures in line sizes from 0.25 inches to 2 inches [6 mm to 51 mm]. With a Vortab flow conditioner added as a spool piece, the Models ST75V or ST75AV are ideal for installations with limited straight-run and/or for operating in transitional flow ranges with accuracy of $\pm 1\%$ reading, $\pm 0.5\%$ full scale.



The ST75 flow meter's precision flow element has a no-moving parts design that employs platinum RTD sensors embedded in equal mass thermowells with microprocessor electronics calibrated to laboratory standards for a wide range of gases.

Ideal for ovens, heat chambers and furnaces, the ST75 flow meter features remote mounting capabilities for hazardous or crowded plant environments. The remote mount transmitter, which includes a full digital display, can be mounted up to 50 feet (15 meters) away from its thermal mass flow sensor in the process piping and connected via two 0.50-inch FNPT or M conduit connections.

The ST75 flow meter's fully scalable dual 4-20 mA standard outputs are user assignable to flow rate and/or temperature and a 0-1 kHz pulse output of total flow. The instrument can be ordered for input power with either 18 Vdc to 36 Vdc or 85 Vac to 265 Vac, with or without a built-in LCD digital display.

Offering direct-flow measurement for higher performance at a lower cost with proven thermal dispersion technology, the ST75 flow meter eliminates the need for additional pressure and temperature sensors, flow computers, or other devices that are required with orifice plates, Venturis, Vortex shedding, and other volumetric meters. The ST75 flow meter also requires virtually no maintenance for both a low installed and low life-cycle cost.

The FM and CSA approved ST75 flow meter is enclosed in a rugged, all-metal, dust and water resistant NEMA Type 4X (IP66) rated package designed for Class 1, Div 1 hazardous area installations and includes a rugged sensing element constructed with all welded 316 stainless steel and Hastelloy-C tips. ATEX/IEC approvals include: Zone 1, II 2 G Ex d IIC T6 . . . T3; II 2 D Ex tD A21, IP67 T90° . . . T300°.

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.