

Improve Gas Compressor Efficiency and Reduce Cost With ST75 Air/Gas Mass Flow Meter Point Measurement

*Ideal for Refineries and Natural Gas Pipelines, Refrigeration & Air Conditioning,
Manufacturing Plants, Welding Operations,
Large Engine Turbochargers*



San Marcos, CA—Engineers and technicians in search of a cost-effective air/gas mass flow monitoring solution for gas compressor point-of-use measurement will find that the rugged [ST75 Flow Meter](#) from [Fluid Components International \(FCI\)](#) delivers precision flow measurement while reducing the consumption of

energy fuel gases, specialty gases and pneumatic air.

Installing ST75 Flow Meters in large process industry facilities and assembly plants with multiple gas compressors allows the operators to compare compressor usage and adjust them for optimum efficiency. In addition, the use of mass flow meters at the point of compressed gas output helps to ensure peak performance at a given flow rate. Comparing the performance of multiple gas compressors is also useful in predictive maintenance applications where higher flow rates may indicate leaking valves or seals in one unit versus other units operating under similar conditions.

The rugged and highly reliable ST75 Flow Meter is designed for demanding process industry and manufacturing assembly plant environments. Offering an extensive set of standard features, the ST75 Flow Meter is designed for line sizes from 0.25 to 2.0 inches (6 to 51mm), which is ideal for compressor gas line measurement, and provides three unique outputs: the mass flow rate, totalized flow and media temperature.

The ST75 Flow Meter's design includes media temperature compensation to ensure performance under variable process and plant temperature conditions. It offers accuracy to $\pm 1\%$ of reading and $\pm 0.5\%$ repeatability. Its precision flow element has a no-moving parts design that employs platinum RTD sensors embedded in equal mass thermowells with microprocessor electronics that can be calibrated to laboratory standards for CO₂ as well as many other gases.

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Operating over a wide flow range, from 0.01 to 559 SCFM (0.01 to 950 NCMH) depending on line size, the ST75 Flow Meter is equally well suited for low flow and high flow applications. For variable process conditions, the ST75 is factory preset to a wide turndown range at 10:1 to 100:1.

The ST75 was developed with FCI's proven thermal dispersion technology, providing direct-flow measurement for more accurate performance at a lower cost by eliminating the need for temperature sensors, flow computers, or other devices that are required with orifice plates, Venturis, Vortex shedding, and other meters. Its no-moving parts design ensures superior service life. There are no orifices or inlets to clog or foul, which significantly reduces scheduled maintenance and unplanned shut-downs.

The ST75 Flow Meter offers fully scalable 4-20mA and 0-10V outputs. They are user assignable to flow rate and/or temperature and a 0-1kHz pulse output of total flow. The instrument can be ordered for input power with either 18 to 36 Vdc or 85 to 265 Vac, with or without a built-in LCD digital display.

The ST75 is enclosed in a rugged, all-metal, dust and water resistant NEMA Type 4X (IP66) rated package designed for hazardous area installations and manufactured with a rugged sensing element utilizing all welded 316 stainless steel construction and Hastelloy-C tips. Approvals include: Class 1, Div. I Groups B, C, D. Div. II Groups A-D; ATEX/IECEx Zone I, II 2 G Ex d IIC T6....T3; II 2 D Ex td A21, IP67 T90°...T300° (pending); FM/CSA/CRN and CE Marked.

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.

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