

Precision ST75 Thermal Flow Meter Measures Chiller Air Flow To Reduce Operating Costs

Ideal for Large Commercial or Industrial HVAC & Process Cooling Systems



San Marcos, CA — Building, plant and process engineers responsible for managing large HVAC and other process cooling equipment systems will find the [ST75 Series Air/Gas Flow Meter](#) from [Fluid Components International \(FCI\)](#) provides precise direct mass flow measurement for superior accuracy, repeatability and dependability.

The energy efficiency of HVAC and other process cooling equipment systems in large commercial buildings, manufacturing plants and industrial processes relies on precision air flow metering. The ST75 Series Air/Gas Flow Meter features an advanced solid-state thermal dispersion mass flow sensing element for years of accurate, trouble-free service measuring air flow in chiller systems and duct work.

The ST75 flow meter operates over a wide air flow range that also includes mixed gas environments from 0.04 SCFM to 559 SCFM [0,07 NCMH to 950 NCMH], depending on line size. For variable demand cycles due to weather or production requirements, the ST75 meter is factory preset to 100:1 turndowns.

With built-in process temperature compensation for accuracy, the precision ST75 flow meter maintains consistent performance in high temperature climates and rugged plant environments. It features highly dependable accuracy to $\pm 1\%$ of reading with $\pm 0.5\%$ repeatability in line sizes from 0.25 inches to 2 inches [6 mm to 51 mm].

The ST75 flow meter's precision flow element has a no-moving parts design, which employs platinum RTD sensors embedded in equal mass thermowells with its microprocessor electronics calibrated to laboratory standards for air and a wide variety of other gases. This no-moving parts design provides extra reliability where process safety is a concern.

Ideal for crowded equipment areas in HVAC mechanical rooms or on the factory floor, the compact ST75 model comes in a choice of either inline or insertion mounting configurations and features remote mounting capabilities for hazardous plant environments.

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The model ST75AV features a built-in Vortab flow conditioner where lack of pipe straight-run is a potential issue. The transmitter, which includes a full digital display, can be mounted up to 50 feet [15 meters] away from its thermal mass flow sensor in piping or ductwork and connected via two 0.50-inch FNPT or M conduit connections.

The ST75 flow meter's fully scalable dual 4-20mA standard outputs 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 Vdc to 36 Vdc or 85 Vac to 265 Vac, with or without a built-in LCD digital display.

The durable ST75 flow meter withstands process temperatures from 0°F to 250°F [-18°C to 121°C]. It operates at pressures up to 240 psig [16.5 bar (g)] with a standard t-fitting (NPT female) process connection. With a tube process connection, the meter withstands 600 psig [41 bar (g)].

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 meter also requires virtually no maintenance for both a low installed cost and low life-cycle cost.

The ST75 Series electronics are housed in rugged, IP67 rated enclosure with dual conduit ports in either NPT or M20 threading. The models ST75A and ST75AV include HART as well as NAMUR compliant 4-20 mA outputs and SIL compliance rating. The complete instrument carries global Ex agency approvals for Division I/Zone 1 installations.

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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