

FlexMASter® ST98 Flow Meter Series **For High Purity and Ultra High Purity Processes**

Bio Technology, Food & Beverage, Pharmaceuticals, Specialty Chemicals



San Marcos, CA

High purity process applications requiring precise gas flow measurement will benefit from the FlexMASter® ST98 Flow Meter Series from Fluid Components International, which features a 316L stainless steel thermal mass flow sensing element with an all-welded, wetted surface in a 10 or 15 Ra electro-polish finish.

Designed for demanding sanitary process applications in food, beverage, pharmaceutical, biotech, and chemical plants, the new ST98HP and ST98UP flow meters support a wide range of gas flow measurement applications. They provide precise and repeatable gas flow measurement for high purity gas lines (e.g., CO₂ and others), pill coater air flow monitoring, CIP and SIP flow and temperature monitoring, condenser/evaporator flow control, scrubber gas discharge monitoring and more.

The ST98HP High Purity/Sanitary flow meter features a 15 Ra electro-polish finish with a 1-inch sanitary flange mated to a 316L inline flow tube. The ST98UP Ultra High Purity flow meter comes with a 10Ra electro-polish finish with a 1 inch VCR connector mated to a 316L inline flow tube. The 316L flow tube is available with butt weld or sanitary flanged end process connections.

The ST98HP and ST98UP flow meter's advanced thermal mass sensing element delivers precision flow and temperature measurement over a wide flow range. It features an accuracy of $\pm 1\%$ of reading plus $\pm 0.5\%$ of full scale. Highly consistent, the ST98 has a repeatability of $\pm 0.5\%$ of reading. Exceptionally versatile, the ST98 features a wide flow range from 2.0 to 3183 SCFM [3.4 to 5409 NCMH] in air at standard conditions for 70°F [21.2°C] and 14.7 psia [1.01324 bar (a)], typical to most gases. The ST98 offers low-flow sensitivity yet is able to operate from 10:1 to 100:1 turndown ratio.

The ST98's thermal mass sensing element is comprised of two all-welded 316L stainless steel thermowells that protect two matched platinum precision resistance temperature detectors (RTDs). With a highly reliable no-moving parts design, one RTD is heated relative to the reference RTD, and the temperature difference between the two is related to the process gas mass flow rate.

The ST98's transmitter converts the differential temperature to a standard 4-20 mA output signal that has been linearized during the FCI factory NIST traceable calibration of the flow element. The transmitter with its RS232 communications port is housed in a NEMA Type 4, Type 4X (IP66), or explosion-proof enclosure and can be integrally mounted to the flow element or remotely mounted up to 500 feet away. In addition, HART and Profibus bus communications and an LCD display screen indicating flow rate, temperature and totalized flow are available as options.

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 the flow and level of air, gases and liquids.