The Master-Touch Flow Averaging Tubes (FAT™) give a stable flow signal in applications where the flow profile is less than ideal, such as downstream of a bend, valve, tee or obstruction. The flow averaging tube has a number of large diameter (0.125") inlet ports along the length of the upstream impact surface. The impact pressure at each inlet port is averaged inside the tube to create the axial flow through the tube and across our flow sensor. The gas flow then passes back into the main flow stream through the gas return ports located near the flow sensing elements. Inline style FAT flowmeters can reduce the upstream requirements to as little as three diameters.

**Series 9700MP**

Series 9700MP flow averaging tubes are designed for installation in hazardous surrounding environments. Series 9700MP instruments have all of the electronics located in a double-sided enclosure mounted on the averaging tube assembly.


**Specifications**

- Linear signal output ...................................................... 0–5 VDC & 4–20 mA
- Signal Interface .............................................................. RS232 & RS485
- Accuracy, including linearity (Ref.: 21°C)* ....................... ±[1% of Reading + (0.5% + .05%/°C of Full Scale)]
- Repeatability ................................................................. ±0.2% of Full Scale
- Sensor response time ...................................................... 1 second
- Turn down ratio .............................................................. 100:1 minimum
- Electronics temperature range ....................................... 0°–50°C (32°–122°F), extended temperature optional
- Gas temperature range* .................................................. -40°–200°C (-40°–392°F), extended range available
- Gas pressure effect ......................................................... Negligible over ± 20% of absolute calibration pressure
- Pressure rating maximum ................................................ 500 PSI Std., > 500 PSI special
- Input power requirement .................................................. 24VDC @ 250mA
  - 115 VAC 50/60 Hz optional
  - 230 VAC 50/60 Hz optional
- Flow Transmitter power requirements .............................. 5 watts maximum
- Wetted materials .......................................................... 316 Stainless Steel (Hastelloy and Monel optional)
- Standard temperature & pressure (STP) ............................ 70°F & 29.92” Hg (Air .075 lb./cubic foot)
- NIST traceable calibration ................................................. Standard

**Flow Transmitter enclosure:**

Class I Division 1 Groups B, C and D; Class II E, F and G; Class III; Type 4X, 7; Ex d IIC; AEx d IIC, IP66; EEx d IIC, IP66; T2 (consult factory for T3 or T4).

Certified to US requirements; Certified to Canadian requirements

Certified to European ATEX requirements

* The accuracy specification applies to the instrument only. EPI is not responsible for measurement errors due to flow profile irregularities caused by installation piping configurations, corrosion on inner pipe surfaces, valve placement, etc.

**SSM option required for 100°–200°C (212°–392°F)

Specifications subject to change without notice.
GAS MASS FLOW MEASUREMENT & CONTROL INSTRUMENTATION

“We work as hard as our meters”