

ST75/ST75V Gas Mass Flow Meters for Line Sizes 1/4 to 2 inch [6 to 51 mm]



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**Now Includes
NEW ST75V with VORTAB**

Mass Flow Meter Summary

The ST75 is an accurate, no moving parts, direct mass flow measurement and monitoring solution for fuel gases, air, compressed air, inert and other gas flows within industrial processes. It is available in nine different sizes for direct, in-line installation in line sizes from 1/4 to 2 inch [6 to 51mm].

By combining precision lithography structured platinum RTD sensors embedded in FCI's equal mass thermowells with microprocessor electronics and precise actual gas calibration, the ST75 achieves outstanding flow measurement performance. Using FCI's proven thermal dispersion technology, the ST75's direct mass flow measurement, eliminates the cost and space of additional sensors required by inferred technologies. With its 100:1 turndown and flow ranges from 0.01 to 559 SCFM [0.01 to 950 NCMH], the ST75 measures over a wide flow range, from low to high flow conditions. The ST75 is available in specific calibrations for most gases including natural gas, methane and other hydrocarbon gases, as well as, nitrogen, CO₂, argon and all inert gases, compressed air and more.

Applications

- ▶ Burner and Boiler Fuel and Air Feed Lines
- ▶ Industrial Furnaces, Kilns and Oven Fuel/Air Controls
- ▶ Chiller Air Flow Measurements
- ▶ Dosing and Gas Injection Rate Controls
- ▶ Heat Treating Gas Controls Industrial Furnaces, Kilns and Oven Fuel/Air Controls
- ▶ Air Compressor System Control and Point-of-Use Monitoring
- ▶ Co-Gen and Turbine Generator Fuel Flow Measurements

Specifications

Media Compatibility: Air, compressed air, nitrogen, oxygen, argon, CO₂, ozone, other inert gases, natural gas, and other hydrocarbon gases.

Pipe/Line Size Compatibility: 1/4" to 2" [6mm to 51mm]

Instrument

Range: *

NPT Line Size	1/4"	1/2"	3/4"	1"	1 1/2"	2"
Min. SCFM	0.04	0.13	0.22	0.35	0.85	1.40
Min. [NCMH]	[0.07]	[0.22]	[0.38]	[0.59]	[1.44]	[2.38]
Max. SCFM	17.34	50.64	88.88	139.95	339.31	559.27
Max. [NCMH]	[29.47]	[86.04]	[151.00]	[237.78]	[576.48]	[950.20]

Tubing Line Size	1/4"	1/2"	1"
Min. SCFM	0.01	0.05	0.25
Min. [NCMH]	[0.01]	[0.09]	[0.42]
Max. SCFM	3.02	21.15	99.08
Max. [NCMH]	[5.14]	[35.94]	[168.33]

* Actual range subject to gas type and specific conditions.

Accuracy: ±2% reading ±0.5% full scale (std. ST75); ±1% reading ± 0.5% full scale (optional ST75, std. ST75V)

Repeatability: ±0.5% reading

Turndown Ratio: Factory set at 10:1 to 100:1

Temperature Compensation:

- ▶ Standard 40 to 100°F [4 to 38°C]
- ▶ Optional: 0 to 250°F [-18 to 121°C]

Turndown Ratio: 10:1 to 100:1

Agency Approvals: FM/CSA/CRN for hazardous location installation, Class 1, Div. I Groups B, C, D.

Div. II Group A, B, C; ATEX/IECEX Zone I, II 2 G Ex d IIC T6...T3; II 2 D Ex td A21, IP67
T90°...T300° (pending);

CE Marked.

N.I.S.T. Certified Test Lab Calibration: Standard

Flow Element

Installation: In-line "T", NPT or tube

Type: Thermal dispersion

Materials of Construction: All welded 316L stainless steel probe element with Hastelloy-C thermowells; 316 stainless steel NPT and tube fittings.

Process Connection:

- ▶ T-fitting [NPT female]: 1/4", 1/2", 3/4", 1", 1 1/2" or 2"
- ▶ Tubing: 1/4", 1/2" or 1"

Operating Temperature: 0 - 250°F [-18 to 55°C]

Operating Pressure:

- ▶ T-fitting [NPT female]: 240 psig [16.5 bar(g)]
- ▶ Tube: 600 psig [41 bar(g)]

Flow Transmitter

Enclosure: NEMA 4X (IP67) aluminum epoxy coated

Output Signals:

- ▶ (2) 4-20 mA assignable to flow or temperature
- ▶ (1) 0-1 kHz pulse proportional to flow for totalizer/counter

Communication Port: RS-232C standard, optional wireless IR to PDA with digital display models

Input Power:

- ▶ DC: 18 to 36 Vdc
- ▶ AC: 85 to 265 Vac (*CE mark approval from 100 to 240 Vac)

Operating Temperature Range: 0 to 140°F [-18 to 60°C]

Digital Display: (Optional)

- ▶ 4-LCD, 2 line x 16 characters. First line is flow rate and engineering units. Second line is user selectable as temperature, flow totalizer or alternating.

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