

Micro-Flow Sensors

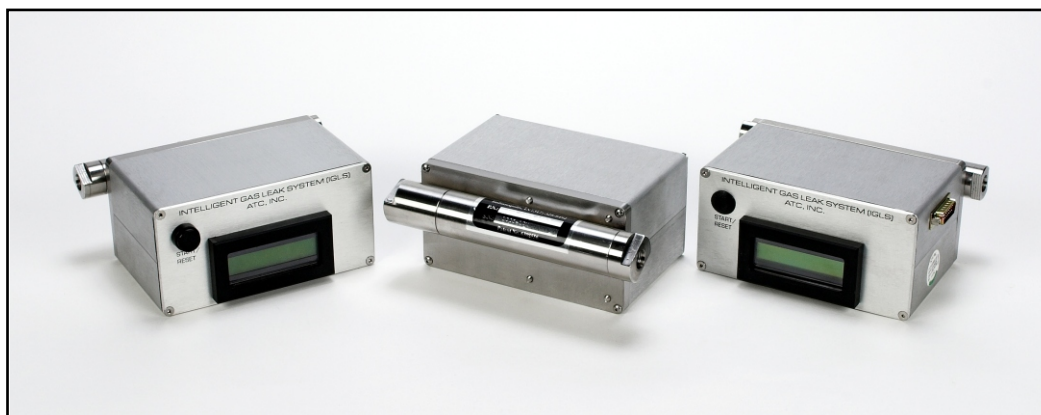
MODEL: IF2-M

Product Applications

- Micro-Flow measurement ranges
- Portable transfer flow standard
- Calibration of leak test orifices and instruments
- Gaging of micron sized holes
- Pressure/Vacuum range of 2-25 PSIA

Product Features

- Intelligent Gas Flow Sensor (IGFS)
- Measures volume flow - using ATC's patented **ALF** design
- Dual range calibration, automatic range switch
- Measures absolute downstream pressure and temperature
- Optional: Automatic compensation for gas properties, temperature and viscosity.
- Stainless steel rugged construction
- No moving parts
- No over-flow sensitivity
- Measurement units select by user, typically mm³/min (μL/min)
- Lowest capable measurement, 1x10⁻⁶ sccs at 2 psia



Micro-Flow Sensors

MODEL: IF2-M

FLOW RANGE

0-25; 0-50; 0-100; 0-250; 0-500; 0-990 mm³/min (micro liters/min)

Sensor Type: Accelerated Laminar Flow (ALF)

Measurement Uncertainty: +/- 2% of reading (1% optional), calibrated range

PRESSURE RANGE

0-15; 30; (psi-absolute)

Type: Absolute, silicon micro-machined

Measurement Uncertainty: 0.2% of Full Scale (FS)

Maximum over Pressure: 1.2 times full range/scale

TEMPERATURE RANGE

Operating and Calibrated: 10 to 45 °C

Storage: -25 to 50 °C

Sensor Type: RTD 100 Ohms

Measurement uncertainty at calibrated range: 0.5 °C

RESOLUTION

16 bits A/D and 16 bits D/A

INTERFACE

Serial port

Digital I/O: Start/Stop, type clamp and more...

Analog I/O

Power: 115 or 220 VAC, single phase

Optional: 2-line character display

MAX DIFFERENTIAL PRESSURE

Maximum 10 psi, differential

GASES USED

Use dry non-condensing and clean gases
Air, Nitrogen, Helium, Argon, & Carbon Dioxide
Other Gases Available, consult ATC.

RESPONSE TIME

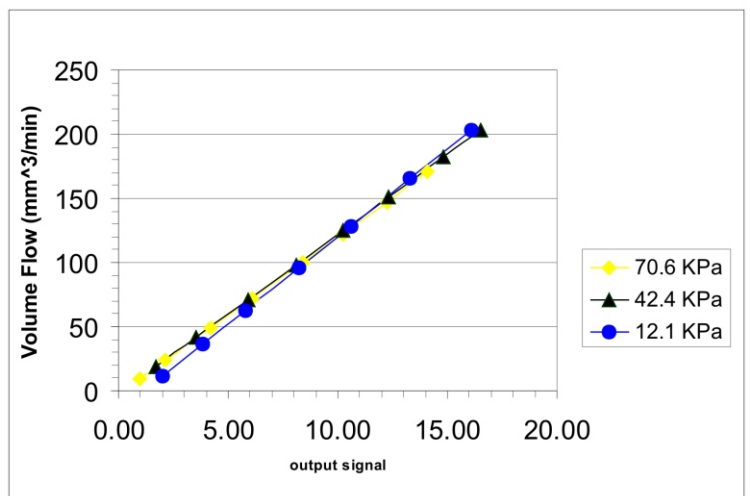
Step function: from no flow to full range - 50 ms or less
Sensor only, no volume

IF2-M Sensors measures volume flow in Viscous/Slip Flow regimes.

Volumetric flow (constant) vs. Signal

Note: 1 mm³/min = 1 micro-liter/min;

10 mm³/min @ 12.1 Kpa = 2x10⁻⁵ atm-cc/sec @ 20 °C



The COMPLETE Solution For Your Most Challenging Automatic Leak Flow Testing