

# HASTINGS

## INSTRUMENTS

### METALINE™

#### Models MFM-300, MFC-302

#### FEATURES

- ±0.75% of Full-Scale Accuracy @ 3 Sigma
- All-metal Seals
- Settling Times:  
MFM-300 0.50 sec  
MFC-302 0.75 sec
- Range — 5 to 30,000  
sccm (N<sub>2</sub> Equivalent)
- Large Diameter Sensor  
Tube
- Low Wetted Surface  
Area
- Operating Pressures to  
500 psi or higher
- NIST Traceable  
Calibration

#### APPLICATIONS

- Leak Testing
- Research
- Vapor Deposition
- MBE and Process Tools
- Semiconductor Processes
- Pulsed Jetting
- Gas Mixing
- Chromatography



MFM-300



MFC-302

#### DESIGN FEATURES

Hastings instruments products represent over 50 years of experience in the design and manufacture of mass flow products. The all-metal wet Zero Drift Module is a culmination of this experience with patented technology that makes these instruments the most accurate and consistent available today.

The Hastings Mass Flow 300 Module Series meters and controllers are designed to accurately measure mass flow without corrections or compensation for gas pressure and temperature. They are accurate to better than ±0.75% at 3 sigma. Hastings mass flow instruments do not require any periodic maintenance under normal operating conditions with clean gases. No drainage will occur from the use of stainless steel pumps (~100 psi) or overflows. Instruments are normally calibrated with the appropriate standard calibration gas (air or nitrogen). When a correction factor is used to adjust the output for the intended gas, special calibrations for other gases, such as oxygen, helium and argon, are available upon special order.

These products contain a number of features that set them apart from other available instruments. (1) They are inherently linear, so linearity correction is not required. (2) Direct measurement is the technique desired by calibration standard is required. The customer needs to simply set the zero and span points. (3) The output signal is linear for very large overflows and will not come back on scale when a flow on order of magnitude over the full scale flow rate is measured. (4) The MFM-300 incorporates a noncondensable sensor module.



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