



***HFM-205 Flow Meter***  
***HFC-207 Flow Controller***

***HIGH CAPACITY FLOW METERS***  
***AND FLOW CONTROLLERS***

***FEATURES***

- $\pm 1\%$  full scale accuracy<sup>1</sup>
- Input Power: +/- 15 VDC or +24 VDC (specify when ordering)
- Available Flow Ranges:  
0 - 1000 slm up to 2500 slm (N<sub>2</sub> Equivalent)
- NIST Traceable Calibration Certificate

***APPLICATIONS***

- Leak testing
- Flame Spray
- Aerospace

***BENEFITS***

- Excellent Stability
- Proven Reliability
- Outstanding Zero Stability

**Flow Meters and Flow Controllers**



***DESCRIPTION***

The Teledyne Hastings Instruments (THI) Model HFM Mass Flow Meter and HFC Mass Flow Controller represent over 75 years of experience in designing and manufacturing reliable, high quality mass flow instruments.

The HFM/HFC Series of flow instruments is based on a modular design. At the heart of each instrument is an insulated thermal transfer sensor which provides enhanced zero stability. The instrument's inherent linear response to flow changes and THI's long-proven reputation for quality, result in the finest flow meters and flow controllers available today. The HFC also features a two-stage, pilot-operated control valve.

Instruments are normally calibrated with the appropriate standard calibration gas (air), then a gas conversion factor is used to adjust the output the intended gas. Special calibration for other gases, such as oxygen, helium and argon, are available upon special request.

Our application engineers can help you review your system requirements and work with you to provide a solution. In addition, lifetime technical support is offered with each mass flowmeter and controller manufactured by Teledyne Hastings.



## Specifications and Standards

**Options:**

- Fittings –
  - VCR®
  - VCO®
  - NPT
  - Swagelok®
- Seals -
  - Viton®
  - Kalrez®
  - Neoprene
  - Buna-N

- Outputs-
  - 0 - 5 VDC
  - 4 - 20 mA

Cleaned for Oxygen Service

**EMC**

EN 61326-1

**Accessories**

Power Supplies available with;

- Integral Flow Totalizer
- Alarm Set Points
- Interconnecting cables



THCD-101 Power Supply & Display

### COMMON SPECIFICATIONS HFM-205/HFC-207

|   |   |
|---|---|
| <b>Accuracy<sup>1</sup></b>                                       | ± 1.0% of F.S.  |
| <b>Repeatability</b>  | ± 0.05% of F.S.   |
| <b>Standard Operating Pressure</b><br><b>High Pressure Option</b> | 500 psi<br>1000 psi   |
| <b>Pressure Coefficient</b>                                       | +0.0067% /psi   |
| <b>Leak Integrity</b>   | < 1x10 <sup>-9</sup> sccs He  |
| <b>Operating Temperature</b>                                      | -20°C - 70°C  |
| <b>Temperature Coefficients</b>                                   | Zero ± 0.035% F.S. / °C (-20 - 70°C)<br>Span ± 0.06% F.S. / °C (-20 - 70°C) |
| <b>Standard Output</b><br><b>Optional Output</b>                  | 0 - 5 VDC<br>4 - 20 mA  |
| <b>Connector (±15 VDC)</b><br><b>Connector (+24 VDC)</b>          | 15-pin subminiature D<br>9-pin subminiature D                               |

### SPECIFICATIONS HFM-205

|                                   |   |
|-----------------------------------|---|
| <b>Power Requirements (±15 V)</b> | ± (13-36) VDC @ +55mA / -20 mA (< 2 Watt)       |
| <b>Power Requirements (+24 V)</b> | (13-36) VDC (< 4 Watt)                          |
| <b>Wetted Materials</b>           | 316 SS, Viton®, Microbrazo 50 and Incusil Braze |
| <b>Weight (approx.)</b>           | 8.1 lb (3.65 kg)                                |

### SPECIFICATIONS HFC-207

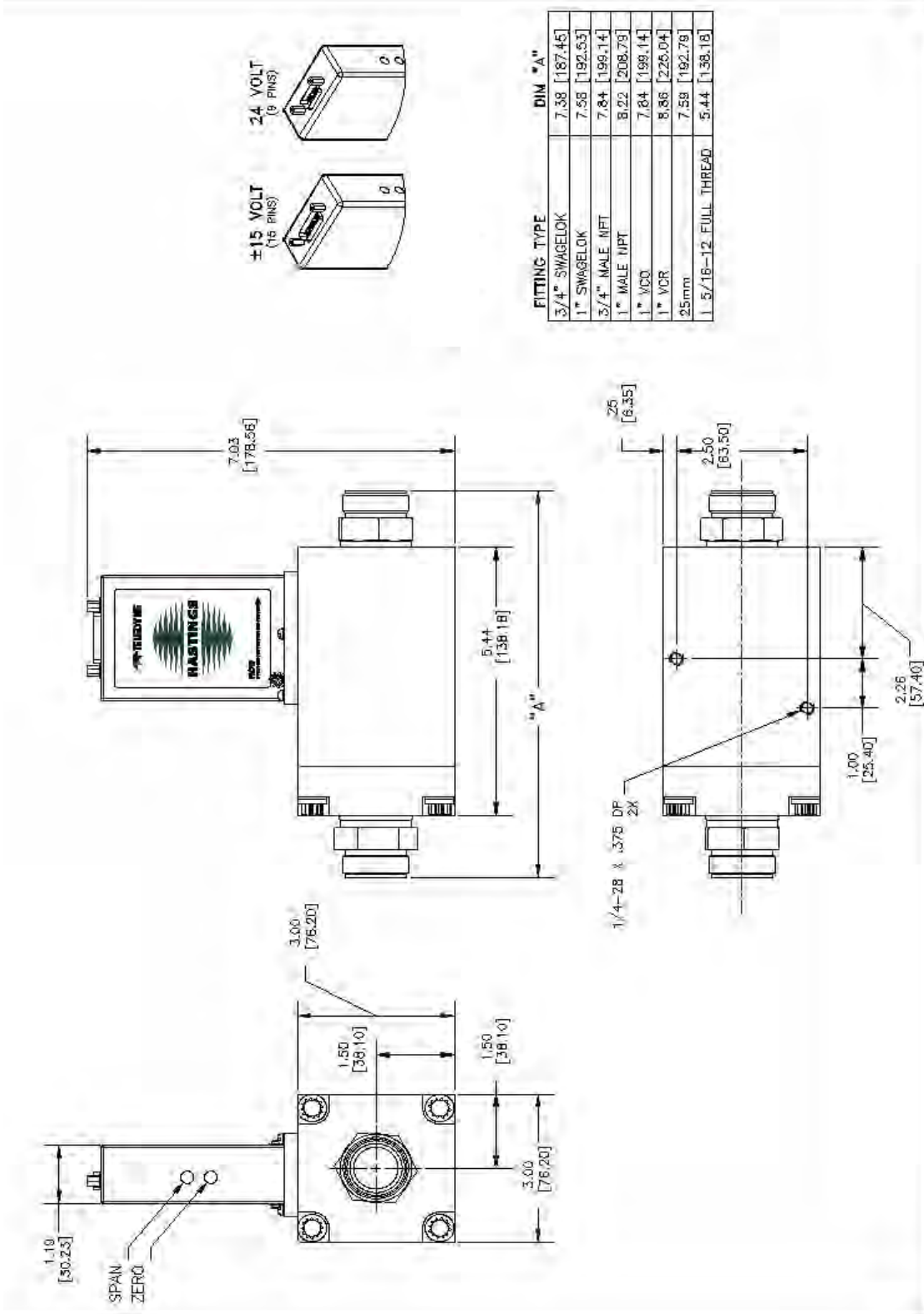
|                                   |   |
|-----------------------------------|---|
| <b>Power Requirements (±15 V)</b> | ± (14-16) VDC @ +40mA / -175 mA (< 3 Watt)  |
| <b>Power Requirements (+24 V)</b> | (14-32) VDC (< 4.2 Watt)  |
| <b>Wetted Materials</b>           | 316 SS, 302 SS, Nickel, Microbrazo 50 and Silverbrazo 45 Braze materials, FKM Elastomer, Viton®, PTFE or Delrin |
| <b>Setpoint Input</b>             | 0-5 VDC (Std) /4-20mA (optional)  |
| <b>Weight (approx.)</b>           | 14.9 lb (6.76 kg)   |

Hastings Instruments reserves the right to change or modify the design of its equipment without any obligation to provide notification of change or intent to change.

<sup>1</sup> See Product Manual for critical information on instrument accuracy and the use of GCFs (gas conversion factors). Stated accuracy is for nitrogen or other gas specific calibration and use with this gas only.

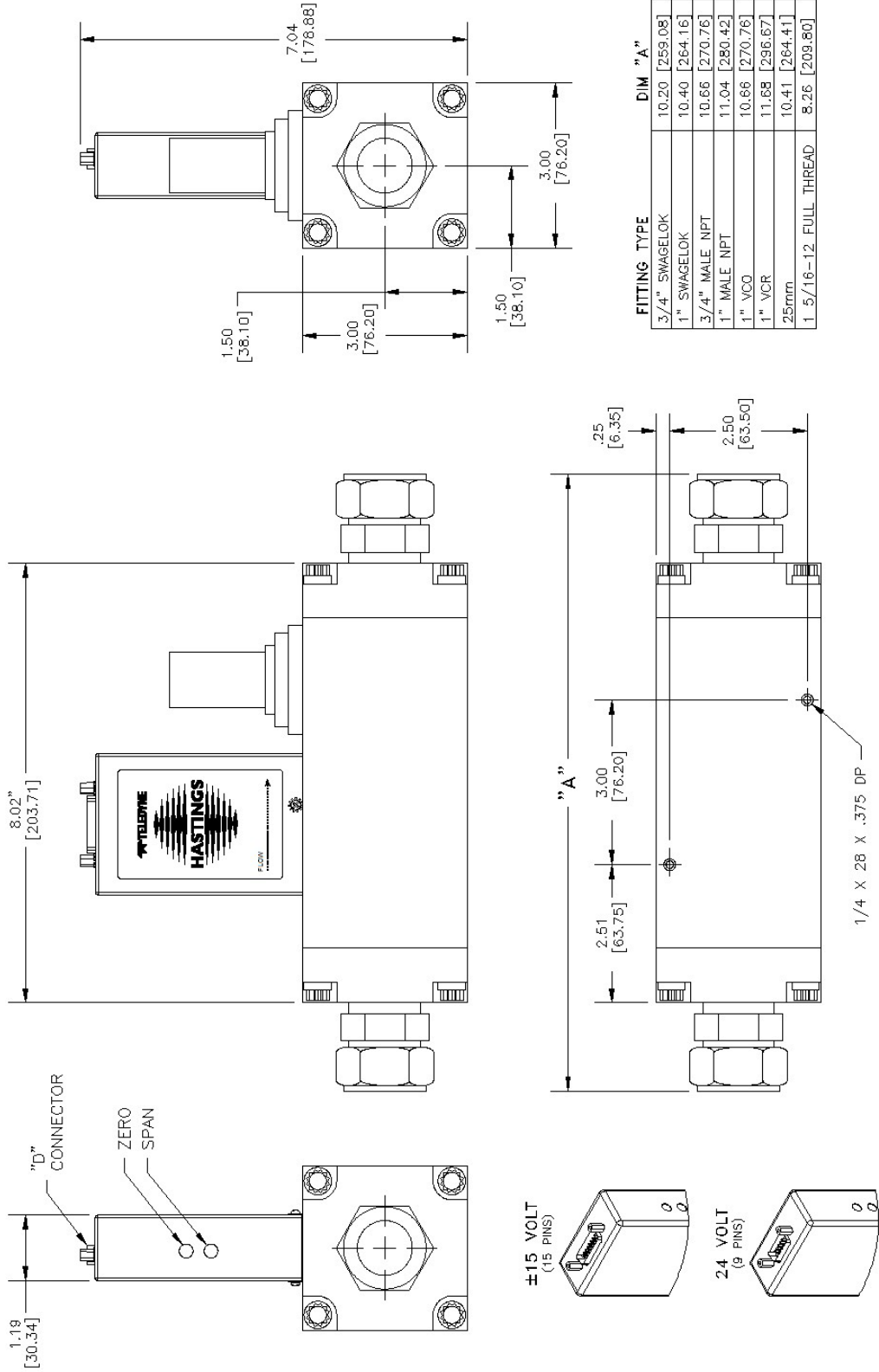
Viton® is a registered trademark of DuPont Performance Elastomers  
Kalrez® is a registered trademark of DuPont Dow Elastomers  
VCR® is a registered trademark of Swagelok Company.

# HFM-205 Outline Drawing

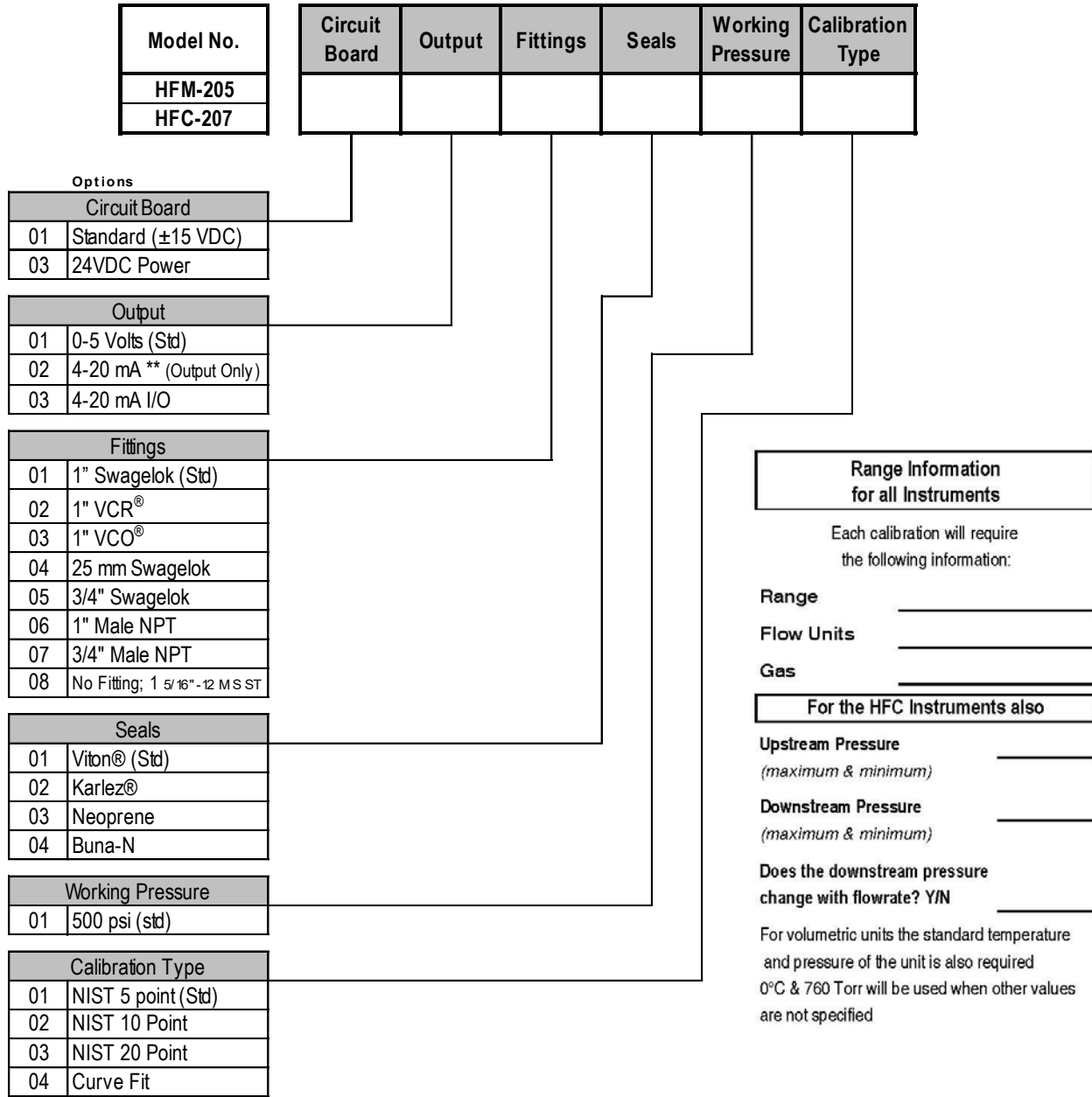


| FITTING TYPE          | DIM "A"       |
|-----------------------|---------------|
| 3/4" SWAGelok         | 7.38 [187.45] |
| 1" SWAGelok           | 7.58 [192.53] |
| 3/4" MALE NPT         | 7.84 [199.14] |
| 1" MALE NPT           | 8.22 [208.79] |
| 1" VCO                | 7.84 [199.14] |
| 1" VCR                | 8.86 [225.04] |
| 25mm                  | 7.58 [192.79] |
| 1 5/16-12 FULL THREAD | 5.44 [138.18] |

# HFC-207 Outline Drawing



# Selection Chart



\*\* 0-5 VDC Input



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