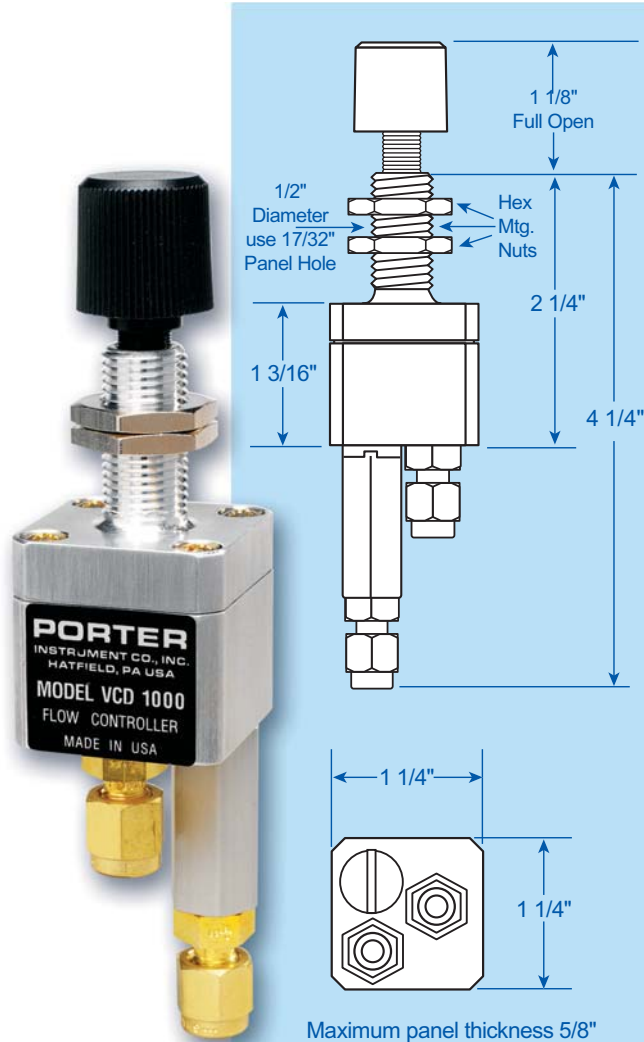


**Variable Constant Differential Flow Controllers**

The Porter Model VCD 1000 Flow Controller is precision-engineered to control low gas flows at constant mass flow rates regardless of changes in downstream pressure. The VCD 1000 maintains a preset pressure differential across a laminar flow element. Turning the fine-pitched adjusting stem varies the force on an internal diaphragm, which alters the differential pressure across the laminar flow element, thereby changing the flow rate. This design yields extremely linear flow output in relation to stem rotation and virtually eliminates the sawtoothing associated with valve-based controllers. The laminar flow elements are available in full scale flow rates from 5 sccm up to 1500 sccm (He @ 70°F and 50 PSIG).



**Ordering Information**

**Model Number and Description**

Example: 

VCD	A	B	F	8
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**Basic Model** → [A] [B] [F] [8]  
**Body Material** → [A] [S]  
 A - Aluminum  
 S - Stainless Steel  
**O-Ring Material** → [B] [V]  
 B - Buna N  
 V - Viton  
**Diaphragm Material** → [F] [S]  
 F - Fairprene BN-5029  
 S - 316 Stainless Steel  
**Flow Element Size Number** → [8]  
 5, 8, 10, 15, 25, 35, 45, 60, 95, 110  
 144, 180, 400, 465, 750, 1000, 1500

**To order, specify:**

- Model Number
- Flow Rate
- Gas Type
- Operating Pressure (inlet)
- Operating Temperature
- Body Material
- O-Ring Material
- Diaphragm Material

*Delrin® - DuPont de Nemours & Co.  
 Fairprene® - Fairprene, Inc*

**Design Features & Advantages**

- Delrin® adjusting stem with 56 pitch threads.
- Turns vs. flow relationship is linear.
- Bubble-tight shut-off
- Full scale flow rates from 5 SCCM up to 1500 SCCM (He @ 70°F and 50 PSIG)
- Replaceable inlet filter included.
- Standard panel mount configuration.

**Specifications**

**Capacities** - see chart on next page.

**Ratings** - Maximum operating pressure: 250 psig; Maximum operating temperature: 160°F; Pressure Drop required: 15 psi minimum.

**Performance** - Control Accuracy: 0.3% of instantaneous flow rate. Adjustability: 0-100% of flow over 14 turns.

**Connections** - 1/8" compression fitting (brass) with aluminum body; 1/8" compression fitting (stainless steel) with SS body.

**Dimensions** - Refer to diagram

**Materials of Construction**

**Controller Body**- Aluminum or stainless steel.

**Controller Diaphragm**- Fairprene® BN-5029 or stainless steel.

**Orifice**- Brass with aluminum body; 316 stainless steel with stainless steel body.

**O-Rings**- Buna N or Viton.

**Filter**- Aluminum with aluminum body; stainless steel with stainless steel body.