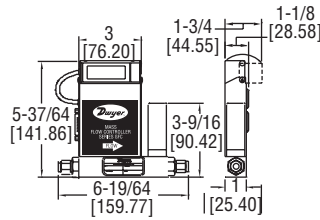
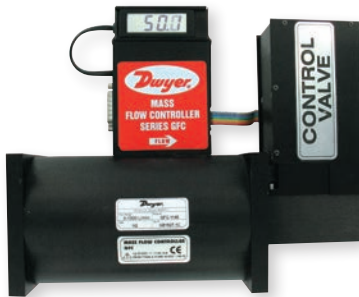
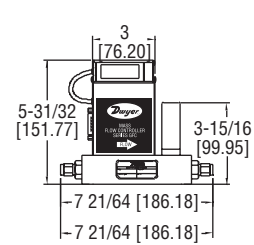


# GAS MASS FLOW CONTROLLERS

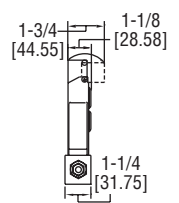
Flow Range Up to 1000 L/min, Pressures Up to 500 psi, NIST Traceable



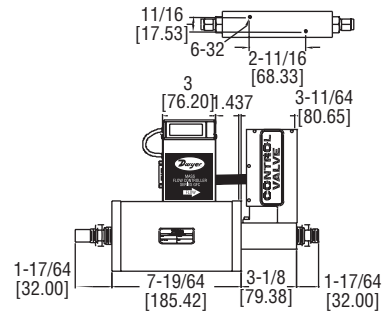
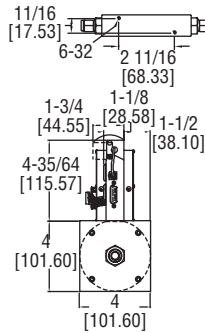
Model GFC-1101 Thru GFC-1111 & GFC-2101 Thru GFC-2111



Model GFC-1130 Thru GFC-1133 & GFC-2130 Thru GFC-2133



Model GFC-1140 Thru GFC-1142 & GFC-2140 Thru GFC-2142



Model GFC-1143 Thru GFC-1145 & GFC-2143 Thru GFC-2145

The **SERIES GFC** Gas Mass Flow Controllers combines a straight tube sensor with a restrictor flow element. It is available for flow ranges up to 1000 L/min and offered in aluminum or 316 SS in 1/4", 3/8", 1/2" and 3/4" sizes.

**FEATURES/BENEFITS**

- Provides high accuracy and repeatability
- Flow rates are virtually unaffected by temperature and pressure variations
- Utilizes an electromagnetic valve and PID electronics to maintain continuous control by comparing measured sensor signal set to flow rates
- Set points can be adjusted with local potentiometers or remotely via 0 to 5 VDC or 4 to 20 mA analog signal
- Actual gas flow is displayed in engineering units on a 3-1/2 digit, 90° tiltable LCD readout
- Can be used with Series GFT2 Flow Totalizer for applications requiring totalization
- NIST traceable certificate included

**APPLICATIONS**

- Gas flow measurement
- Gas flow control
- Operating pumps and valves
- Process equipment
- Vacuum processes
- Glass and metal coating
- Film deposition

**MODEL CHART**

Aluminum Model	SS Model	Flow Range	Process Connector Compression Fitting
GFC-1101*	GFC-2101*	0 to 10 mL/m	1/4"
GFC-1102*	GFC-2102*	0 to 20 mL/m	1/4"
GFC-1103*	GFC-2103*	0 to 50 mL/m	1/4"
GFC-1104*	GFC-2104*	0 to 100 mL/m	1/4"
GFC-1105*	GFC-2105*	0 to 200 mL/m	1/4"
GFC-1106*	GFC-2106*	0 to 500 mL/m	1/4"
GFC-1107*	GFC-2107*	0 to 1000 mL/m	1/4"
GFC-1108*	GFC-2108*	0 to 2 L/min	1/4"
GFC-1109*	GFC-2109*	0 to 5 L/min	1/4"
GFC-1111*	GFC-2111*	0 to 15 L/min	1/4"
GFC-1131*	GFC-2131*	0 to 30 L/min	1/4"
GFC-1133*	GFC-2133*	0 to 50 L/min	1/4"
GFC-1142*	GFC-2142*	0 to 100 L/min	3/8"
GFC-1143*	GFC-2143*	0 to 200 L/min	3/8"
GFC-1144*	GFC-2144*	0 to 500 L/min	1/2"
GFC-1145*	GFC-2145*	0 to 1000 L/min	3/4"

\*Specified flow ranges are for an equivalent flow of nitrogen at 70°F (21°C) @ 760 mm Hg

**SPECIFICATIONS**

**Service:** Clean gases compatible with wetted parts.  
**Wetted Materials:** GFC-1XXX: Anodized aluminum, brass, 316 SS and fluoroelastomer O-rings; GFC-2XXX: 316 SS and fluoroelastomer O-rings.  
**Accuracy:** ±1% FS including linearity over 59 to 77°F (5 to 25°C) and 5 to 60 psia (0.34 to 4 bar); Series GFC X143, X144, X145, ±1.5% FS.  
**Repeatability:** ±0.25% FS.  
**Response Time:** 2 s to within ±2% of actual flow.  
**Output:** Linear 0 to 5 VDC and 4 to 20 mA.  
**Max. Particulate Size:** 5 microns.  
**Temperature Limits:** 32 to 122°F (0 to 50°C).  
**Power Supply:** ±12 VDC.  
**Process Connections:** 1/4" compression fitting for flow rates ≤50 L/m; 3/8" for 100 and 200 L/m; 1/2" for 500 L/min; 3/4" for 1000 L/min.  
**Pressure Limits:** 1000 psig (68.9 bar); Series GFC-X143, X144, X145, 500 psig (34.5 bar).  
**Leak Integrity:** 1 x 10<sup>-9</sup> sccs of He.  
**Display:** 90° tiltable, 3-1/2 digit.  
**Agency Approvals:** CE.

**ACCESSORIES**

Model	Description
GFC-110P	110 V power supply
GFC-220PE	220 V power supply
GFC-CBL1	8' cable with 15-pin connector
GFC-CBL3	3' extension cable for LCD readout