



GFC X | Gas Flow Controller

PRECISE CONTROL. UNPARALLELED PERFORMANCE.

The GFC X, the latest generation in Pivotal's high-flow product line, features a pressure-based flow controller with a position control valve, allowing for precise control. We offer one of the industry's widest ranges of accuracy, making it ideal for various applications, including deposition processes. The GFC X paves the way for the future of gas flow control by offering an order of magnitude improvement on key flow metrics and enabling advanced wafer-manufacturing processes. In addition, the GFC X offers a range of accuracy from 5% to 100% of full scale, surpassing many competitors.

Benefits of GFC-X

- Significantly reduces downtime
- Wide flow range
- Industry's best flow accuracy for entire flow range
- Advanced flow monitoring/self-diagnosis

Key Features

- No calibration ever required
- Innovative control technology
- Unaffected by variations in the upstream or downstream pressure or temperature
- No fixed orifice

PIVOTAL
SYSTEMS

GFC-X Specifications (GFC X5L™, GFC X20L™, GFC X50L™)

PERFORMANCE	Flow Range	100 sccm - 50000 sccm (3 part numbers cover this range)
	Flow Accuracy	±1% of setpoint for 5%-100% full scale: 0.5 slm - 5 slm (GFC X5L), 2.0 slm - 20 slm (GFC X20L), 5.0 slm to 50 slm (GFC X50L) ±0.05% of full scale for flows 0.5% to 5% full scale: 0.1 slm - 0.5 slm (GFC X5L), 0.4 slm - 2.0 slm (GFC X20L), 1.0 slm - 5.0 slm (GFC X50L)
	Repeatability	±0.25% of setpoint for 10% - 100% full scale
	Settling Time	≤150 ms 5% - 100% full scale, ≤200 ms 0.05% - 5% full scale
	Leak Integrity	≤ 1E-9 atm • cc/sec (He)
	Leak By Rate	2.5 sccm (GFC X5L), 10.0 sccm (GFC-20L), 25.0 sccm (GFC X50L)
OPERATING CONDITIONS	Supply Pressure	Standard: 276 - 448 kPaG (40 - 65 psig)
	Downstream Pressure	Vacuum to 101 kPa (0 - 760 Torr)
	Design Pressure (Burst Pressure)	2.07 MPaG (300 psig)
	Operating Temperature	15°C - 65°C
MATERIALS	Wetted Surface	316 SS per Semi F20
	Surface Finish	5 µin average Ra
	Seals	Metal
ELECTRICAL	DeviceNet	11 - 24 VDC, 5 W
	Analog and RS-485	±15 VDC; 150 mA
	In-Rush Current	<200 mA