

SLA Series Biotech



Thermal Mass Flow Controllers & Meters

Efficiency and simplicity combine to improve bioprocessing performance with the new SLA Series *Biotech* MFC. Built on the proven performance of the industry-leading SLA Series, new options packages incorporate features to reduce the number of MFCs needed in bioprocessing equipment, simplify MFC purchasing and satisfy regulatory requirements.

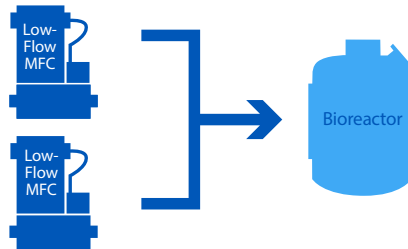
Specifications

- Zero Stability: <math><0.20\%</math> FS per year
- Accuracy: $\pm 0.9\%$ of set point (20-100% FS)
- Repeatability: 0.20% set point
- Analog & Digital I/Os: EtherNet/IP™, DeviceNet™, EtherCat®, FOUNDATION™ Fieldbus, Profibus®, RS-485
- Advanced Diagnostics: Ensures device is operating within specified limits for high process yield uptime.

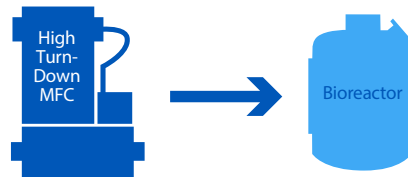
High Turndown Ratio

- 250:1 FS Flow Rates 5 sccm-150 slpm
- 150:1 FS Flow Rates > 150 slpm
- The high turndown (control range) ratio of this biotech-focused MFC controls a wider range of gas flows, reducing the number of MFCs needed to cover your full range.

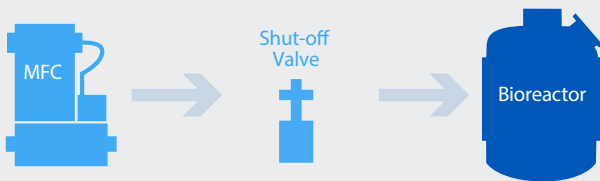
TRADITIONAL MFC: Low-Flow & High-Flow MFCs Required



SLA *Biotech* MFC: Simplified Gas Box Configuration



TRADITIONAL MFC: Shut-off Valve Required



SLA *Biotech* MFC: Simplified Gas Delivery System



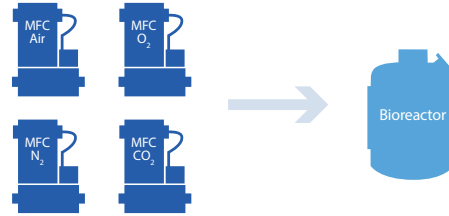
Extremely Low Leak Rate

- <math><0.005</math> sccm for FS Flow Rates 5 sccm -150 slpm
- <math><15.6</math> sccm for FS Flow Rates >150 slpm
- An enhanced control valve eliminates the need for a separate shut-off valve in the gas delivery system.
- One less system component reduces design, testing and validation time, and system footprint.

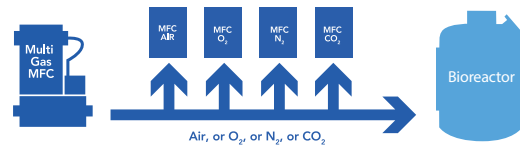
Pre-calibrated Multi-gas Pages

- When combined with a high turndown ratio, the SLA Series *Biotech* can be field-configured, reducing the number of MFC configurations required by up to 90%.
- Air, CO₂, N₂ & O₂ flows can be changed insitu to reduce the variety of MFC spares kept in stock.

TRADITIONAL MFC: Each MFC – Unique Configuration for Every Gas & Range



SLA *Biotech* MFC: Each MFC – Same Configuration with Wide Turndown & Multi-Gas



Optional Premium Materials & Certificates

Class VI Elastomers	Certifications
USP, FDA, ADI-free Class VI O-rings & Valve Seats *Certificate Included	<ul style="list-style-type: none"> • Materials of Construction (wetted path) • 2.2 Material Cert • NIST/ICC Calibration Traceability

		SLA Series Standard	SLA Series <i>Biotech</i> Performance	SLA Series <i>Biotech</i> Premium
Zero Stability	<±0.2% FS per year	✓	✓	✓
Accuracy	±0.9% of SP (20-100% FS)	✓	✓	✓
Repeatability	0.20% SP	✓	✓	✓
Alarms & Diagnostics	Ensures device is operating within user specified limits for high process yield uptime	✓	✓	✓
Analog & Digital I/O	DeviceNet, EtherCAT, EtherNet/IP, FOUNDATION Fieldbus, Profibus, RS-485	✓	✓	✓
High Turndown Ratio	<ul style="list-style-type: none"> • 250:1 FS flow rates 1-150 slpm • 150:1 all other FS flow rates 		✓	✓
Extremely Low Leak Rate Valve	<ul style="list-style-type: none"> • 0.005 sccm for size 0 & 1 bodies • 15.6 sccm for size 3 body 		✓	✓
Enhanced Sensor Design	Meets industry standards for cleanliness		✓	✓
Pre-calibrated Multi-Gas Pages	Air, CO ₂ , N ₂ & O ₂ gas pages can be changed in situ to reduce the variety of spare instruments stocked		✓	✓
Class VI Elastomers	USP, FDA, ADI-free Class VI O-rings & Valve Seats			✓
Certifications	Materials of Construction (wetted path) 2.2 Material Cert NIST/ICC Calibration Traceability			✓

Options Packages

Performance Package

- Includes enhancements reducing cost of operation

Premium Package

- Performance Package features plus:
 - Premium materials and associated certificates

