



Sierra MFCs Accelerate Vaccine Development for Bioprocessing

Precise, Stable Gas Flow Quickly Scales Vaccines from Lab to Pilot to Full-Scale Production

Monterey, California – To help stop the rapidly expanding spread of COVID-19 and provide critical instrumentation for respiratory medical equipment, Sierra Instruments offers scientists, biomedical engineers, and bioreactor manufacturers a comprehensive line of [mass flow controllers to meet demanding bioprocessing applications](#). The RedySmart™ is specifically designed and engineered for to improve bioreactor performance, employing a stable no-drift MEMS sensor to quickly bring vaccines to full-scale production, while Sierra's flagship SmartTrak® 100 provides scientists the application flexibility and accuracy required for laboratory, biomedical, and respiratory medical equipment testing.

"We are committed to supporting the fight against COVID-19 by providing our bioprocessing customers with critical mass flow control instruments to quickly and successfully produce a vaccine for the virus," says Scott Harrison, General Manager at Sierra Instruments. "Customers can lean on us to both specify the ideal MFC for their bioprocessing and respiratory medical equipment testing applications and to ramp up production in anticipation of demand. As a global pioneer in scientific mass flow instruments, we can help solve this challenge together with our precise and proven instruments."

Sierra's [SmartTrak 100](#) complements their new RedySmart mass flow controller, together offering bioprocessing, biomedical, and respiratory medical equipment professionals a comprehensive MFC solution for any biotech application. Built with stable MEMS sensor technology, the [RedySmart mass flow controller](#) is designed to improve bioreactor performance with its lifetime not drift sensor warranty, modular design, flexible cabling system, and easy integration into a gas mixing block. It also features digital communication options with Modbus included at no additional charge. Sierra's SmartTrak 100 employs capillary thermal technology, offering scientists and researchers the accuracy and application flexibility required to meet any biomedical or respiratory medical equipment testing demand with one mass flow controller.

Both RedySmart and the SmartTrak 100 share the advantages of being thermal mass flow controllers, providing mass flow not volumetric flow, which is the critical output needed for accurate research data. They contain no moving parts and are unaffected by upstream temperature and pressure fluctuations, resulting in exceptional accuracy and repeatability. Sierra also performs a NIST-Traceable calibration over the entire flow range of each instrument, guaranteeing the best possible system accuracies.

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RedySmart MFCs Improve Bioreactor Performance

Effective bioprocessing requires rock-solid stability. RedySmart provides a [Lifetime No-Drift Sensor Warranty](#) made possible with high-precision MEMS (Micro-Electro-Mechanical Systems) technology utilizing an advanced, ultra-stable no-drift CMOS (Complementary Metal Oxide Semiconductor) sensor.

RedySmart's modularity allows customers to customize their configuration to meet application needs. Numerous devices can be mounted on a single flow block to minimize space in multiple mixing applications.

Key RedySmart Features

- Gases – Air, N₂, O₂ are standard. Other non-toxic, non-corrosive gases available upon request
- Accuracy – Standard: +1.0% of full scale, High Accuracy: Up to +0.3% of full scale +.05% of reading
- Repeatability – +0.2% of full scale
- Flow Rate – up to 500 slpm
- Communications – Available display communicates key flow data. Configure in the field with free software app
- Modular design and cabling system
 - Modbus included for easy communication integration
 - Competitive OEM pricing
 - Lifetime No-Drift Sensor Warranty
 - Buy Online-Fast Next Day delivery

SmartTrak for Laboratory Research and Respiratory Medical Equipment Testing

Complementing our new RedySmart, The SmartTrak 100 is ideal for biomedical research and respiratory medical equipment testing applications. Every SmartTrak 100 has a wide operating flow range and pressure requirements and is preprogrammed for up to 10 gases that are field selectable. For ease of use, scientists can easily change set points, flow rates, engineering units on directly on the push-button display or remotely with the Pilot Module. For particularly challenging applications, Sierra's dedicated engineering team can provide custom engineering to meet precise customer requirements.

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The heart of the SmartTrak 100 is a platinum-wound capillary sensor that directly measures mass flow. Sierra's patented laminar flow element eliminates non-uniformities and conditions the flow for capillary bypass where mass flow measurement occurs.

Key SmartTrak 100 Features

- All clean gases including toxics and corrosives
- Accuracy – Standard: +1.0% of full scale, High Accuracy – Up to +0.5% of full scale
- Repeatability - +0.2% of full scale
- Multi-Gas – Preprogrammed for up to 10 gases – Field selectable
- Flow Range – 0 to up to 1,000 slpm
- Local/remote display and pushbutton interface
- Buy Online-Fast Next Day delivery

We understand flow is tough. We can solve this together.

A global pioneer in the design and manufacturing of flow instruments for 45 years, Sierra Instruments provides solutions for customers in a wide variety of global industries, including scientific research, bioprocessing, semiconductor, clean energy, oil & gas, energy management, and aerospace to name a few. With over 150 locations in over 50 countries, Sierra is uniquely positioned to provide innovative products and support for the leading companies of today and the growth enterprises of tomorrow. Visit Sierra at sierrainstruments.com.

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