



The Bios Met Lab® Series

- **ML-800**
±0.15% Accuracy Primary Flow Standard
- **ML-500**
±0.40% Accuracy Primary Flow Standard



Bios

Driving a Higher Standard
in Flow MeasurementSM



Bios meets the highest quality assurance standards for gas flow measurement uncertainty, including industry-leading ISO 17025, ANSI Z-540 and NIST 150 laboratory accreditation by the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology (NIST).

Bios Met Lab® Series

The world is progressing at a rapid pace. In virtually every industry, the applications driving technology are vital.

With significant time, money and opportunity on the line each day, it's absolutely essential to optimize your volumetric and mass flow devices. Precision flow measurement has become mission critical, and you need a flow standard that matches the importance of the job at hand. The Bios Met Lab® Series of positive displacement primary standards provides a cost-effective, entirely "dry" means of precisely measuring gas flow while maintaining defensible, direct traceability to NIST.

Built with the latest composite materials – yet based on the piston prover platform that's been recognized for over a century – our Met Lab® Series enables you to perform fast, incredibly accurate flow measurements, with the confidence of Proven DryCal® Technology.

Flexible Ways of Working

With the Bios Met Lab® Series, you've got choices.

Met Lab's simple push-button operation and instant gas flow measurements require little user training and minimize user interpretation – which means that multiple staff members can step in and perform precise calibrations at any time.

Or, you can take your gas flow calibration process to another level by adding Bios Optimizer Collect Software and Integrator® 110. The Optimizer Collect software works with your Met Lab® Series primary piston prover and Integrator® 110 command, control and readout device to create full calibration automation. In no time at all, you will be performing multi-set point calibrations and tests of your analog mass flow controllers and meters across their full operating ranges.



ML-800

±0.15% Accuracy Primary Flow Standard

ML-500

±0.40% Accuracy Primary Flow Standard

Bios Met Lab® ML-800			
Model	Flow Range scc/min*	Accuracy Standardized	Accuracy Volumetric
ML-800-3**	0.5-1	±0.5%	±0.5%
ML-800-3**	1.0-50	±0.25%	±0.25%
ML-800-10	5-500	±0.15%	±0.15%
ML-800-24	50-5,000	±0.15%	±0.15%
ML-800-44	500-50,000	±0.15%	±0.15%
Bios Met Lab® ML-500			
ML-500-10	5-500	±0.40%	±0.25%
ML-500-24	50-5,000	±0.35%	±0.20%
ML-500-44	500-50,000	±0.45%	±0.25%
Accuracy is stated as a percent of reading (including standardization, if applicable).			
CE-compliant			

Reliable

Over 15 years of Proven DryCal® Technology

Accurate

Backed by ISO17025; NVLAP accredited, ANSI Z-540, NIST Handbook 150

Flexible

Portable, modular design: integrated software easily customized to your needs

Convenient

Push button simplicity; dry – no mercury or other liquids

*Gas pressure of 760mmHg and a gas temperature of 25°Centigrade with Standardization temperature set to 0° Centigrade.

**ML 800-3 is only compatible with ML 800 Bases loaded with a firmware release 2.07 or higher.

Size		
Device	Weight	Footprint (H x W X D)
ML-800	160 oz / 4550 g	17 x 6 x 11 in / 430 x 150 x 280 mm
ML-500	123 oz / 3500 g	13.5 x 5.25 x 11 in / 340 x 135 x 280 mm

ML-800 and ML-500 Specifications	
Gas Compatibility:	Non-corrosive, non-condensing, non-combustible gases. Less than 70% humidity.
Flow Modes:	Pressure or Suction
Temperature and Pressure Sensors:	In the flow stream
Reading Modes:	Single, Auto or User-Specified Burst
AC Adapter/Charger:	12V DC, >500ma, 2.5 mm, center positive, North American standard, others available
Battery System:	6V rechargeable, sealed lead-acid, 6-8 hrs typical operation
Inlet and Outlet Fittings:	1/4" ID Swagelok® compression fittings (1/8" fittings Model 3) (1/2" outlet fitting Model 44)
Ambient Temperature:	15-30° C
Storage Temperature:	0-70° C
Ambient Humidity:	0-70%, non-condensing
Operating Pressure (Absolute):	15 PSI
Display:	Backlit LCD
Data Port (for use with Optimizer software):	Serial (RS-232)
Warranty:	Product 1 year; battery 6 months
CE compliant	



The Bios facility in Butler, N.J., (pictured above) is one of the world's most accurate ISO 17025 laboratories serving the environmental and process control industries. With the lowest gas flow measurement uncertainties of any commercial laboratory, Bios provides you with the legal protections and peace of mind valued in today's litigious business environment.



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