

Met Lab 1020

Bios Proven DryCal® Technology, redefined.
The Mesa Met Lab 1020, our high flow primary piston prover.



It's everything you expect from Mesa. Liquid-free precision, delivered instantly.

The ML-1020 breaks all the rules of high flow primary gas flow standards. Verify up to 500 standard liters per minute of gas flow – without a bell prover. Its bench-top design measures only 24W" x 30H" x 12D" and weighs just 90 pounds. Transport your ML-1020 on a moment's notice – by hand, or by air freight within a Mesa shipping container.

And it gets better. The ML-1020 doesn't require routine maintenance, or replaceable or consumable parts – just factory recalibration once each year.

Flexible Ways of Working

With the ML-1020, your calibration process is flexible – and always ready. Its push-button operation means reliable, reproducible results with minimal user-training, so any staff member can step in and perform precise calibration at any time.

- **Reliable** - Over 15 years of Bios Proven DryCal® Technology
- **Traceability** - NVLAP-accredited; ISO 17025, ANSI Z-540, NIST Handbook 150
- **Portable** - May be moved within the lab, or shipped for annual recalibration
- **Simple** - Automatic operation; no user interpretation or external calculations required
- PC Interface via RS-232 port

Customizing Your Calibrations

The ML-1020's navigation menu offers many customizable options to get you the results you need, in the format you prefer. Select the number of flow measurements in the average, from 1 to 100. Input gas Sensor Factors in order to scale your readings to match thermal mass flow devices being calibrated with surrogate gases.

Flow Ranges	5-500 sL/min*
Accuracy, 5-500 SL/min	±0.25% of reading
Weight	90 lbs / 41 kg
Dimensions (H x W x D)	24W" x 30H" x 12D"

*At gas pressure of 760 mmHg, and a gas temperature of 25° centigrade with standardization temperature set to 21.1° centigrade.

User-Selectable Flow Units

Volumetric Flow	L/min cf/min
Standard Flow	smL/min scf/min
Pressure	mmHg PSI kPa
Temperature	°C °F

Mesa Lab 1020

Mesa 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).

Mesa primary standards feature patented, Bios Proven DryCal Technology supported by world-class laboratory accreditation, delivering unmatched precision and reliability.

Mesa Met Lab 1020 Specifications

Data Cable:	1 meter, for use with data port
Data Port:	RS-232 (serial), for PC interface
Display:	Graphical LCD with backlight
Flow Measurement Cell:	Integrated (all-in-one design; no additional flow models)
Flow Measurement Style:	Single, Continuous or Burst, with averaging function user-selectable from 1 to 100
Flow Measurement Type:	Volumetric (primary by nature), Standardized
Flow Mode:	Pressure or suction
Gas Compatibility:	Noncorrosive, noncondensing, noncombustible gases, less than 70% humidity
Humidity (Ambient):	0-70%, noncondensing
Inlet and Outlet Fittings:	1 1/2" Swagelok® compression tube fitting
Overpressure Release Fitting:	1/2" Swagelok® compression tube fitting
Storage Temperature:	0-70° C
Power:	External power module Input: 100-240 VAC, 1.6A (max), 50-60 Hz Output: 12 VDC, 3.0A
Pressure (Operating):	10 - 19.5 PSI (absolute)
Pressure Transducer:	0-20 PSI (absolute), accuracy $\pm 0.05\%$ FS (typical), $\pm 0.10\%$ (max)
Purge Fittings:	1/4" Swagelok® compression tube fittings
RoHS Compliant:	Yes
Temperature (Operating):	15-30° C
Temperature Sensor:	Accuracy $\pm 0.03\%$ (max), measured in the gas flow stream
Valve Operation	Air supply: 80-100 PSI (not provided) Fitting: 1/4th" Swagelok® compression
Warranty:	1 year (battery 6 months)



Mesa's Butler, N.J. manufacturing facility (pictured above) is our NVLAP accredited ISO 17025 laboratory.