• Definer 220

Primary Flow Meter

PROVEN DryCal® TECHNOLOGY

Bios

Driving a Higher Standard in Flow Measurement℠

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 Definer 220

The Definer 220 is everything you value about Bios DryCal® Technology in a hand-held flow meter that makes it easier than ever to verify gas flow rates.

Turn the Definer 220 on. Connect it to your flow stream. Take measurements. It's that simple.

Whether you're in the field or in the lab, the Definer 220's Quick Start operation will have you up and running in an instant, verifying gas flow rates on the spot. Featuring a number of quality and performance enhancements over traditional flow meter technologies, the Definer 220 offers primary measurement – manually, or in your choice of two hands-free continuous modes – as well as a graphical LCD display, user-selectable flow units and time intervals between measurements. Fully customizable, the Definer 220 gives you exactly what you need, in the format you prefer.

Flexible Ways of Working

No matter your application, the portable Definer 220 is ready to go to work for you. Because it's a true volumetric standard based on the principle of positive displacement, the Definer 220 provides immediate indication of the actual gas flow rate, accurately and independently of the gas type. It also includes integrated temperature sensors and pressure transducers in the flow stream, so you can compensate for standard conditions – allowing traceable verifications of mass flow devices, before or after you use them and wherever they're located.

A versatile, push-button flow meter, the Definer 220 is also a primary flow standard, enabling you to accurately calibrate a variety of instrumentation while maintaining an ISO 17025-traceable audit trail.

Optimizer Software

Take the calibration process one step further and document your results with Definer 220's Windows-based Optimizer 110 software (included). Bios Optimizer 110 establishes communication with your Definer, downloads calibration data in real time, displays and graphs it on your PC's screen and stores it to a text file – quickly and easily, with no configuration necessary. Later, import your text file into any spreadsheet program for further analysis and customization.

Definer 220

Primary Flow Meter

With Proven DryCal® Technology.
Engineered for the process measurement community.

Customizing Your Calibrations

The Definer 220's many customizable options are simple and intuitive. Take measurements one at a time, or automate the process using the hands-free Continuous or Burst modes. In all modes, the averaging function is user-selectable from 1 to 100 measurements. Time profile your gas flows with measurement intervals spanning from 1 to 60 minutes. Or, decide how to view your data – use the handy Zoom feature to display the size and detail that's right for you, and select your preferred measurement units.

Flow Ranges	**Low (L)** 5 scc/min– 500 scc/min **Medium (M)** 50 scc/min – 5,000 scc/min **High (H)** 300 scc/min – 30,000 scc/min
Accuracy	1% Standardized / 0.75% Volumetric
Size	Small enough to fit easily in your hand; slim enough to slide into a briefcase or tote
Weight	29 oz / 820 g
Dimensions (H x W x D)	5.5 x 6 x 3 in / 140 x 150 x 75 mm

User-Selectable Measurement Units	
Volumetric Flow	mL/min L/min cc/min cf/min
Standard Flow	smL/min sL/min scc/min scf/min
Pressure	mmHg PSI kPa
Temperature	ºC ºF

Reliable
15 years of Proven DryCal® Technology

Accurate
Backed by ISO 17025; NVLAP accredited

Portable
Lightweight and impact-resistant

Simple
Push button testing; no user interpretation or external calculations required

Streamlined
Bios Optimizer software transfers calibration data directly to any Windows-based PC using built-in serial port

Definer 220 Specifications	
Approximate Time per Reading:	1–15 seconds
Gas Compatibility:	Use with non-corrosive, non-condensing, non-combustible gases, less than 70% humidity
Flow Modes:	Pressure or Suction
Measurement Cell Style:	Integrated
Temperature and Pressure Sensors:	In the flow stream Press.: 3.5 mmHg (typical), 7.0 mm (max); Temp.: 0.8° C (typical), 1.3° C (max)
Reading Styles:	Single (manual), Continuous or Burst, with averaging function user-selectable from 1 to 100 measurements
AC Adapter/Charger:	12V DC, >250ma, 2.5 mm, center positive
Battery System:	6V rechargeable, sealed lead-acid, 6–8 hrs typical operation
Battery Operational Time (5 cycles/min):	3 hrs backlight on, 8 hrs backlight off
Pressure and Suction Fittings:	¼" ID Swagelok® compression fittings
Warranty:	1 year; battery 6 months
Storage Temperature:	0–70° C
Ambient Humidity:	0–70%, non-condensing
Operating Pressure (Absolute):	15 PSI
Display:	Backlit graphical LCD
Data Port (for use with Optimizer software):	Serial (RS-232)
Data Cable (for use with Optimizer software):	1 meter (Definer Data Port to PC serial port)
Protective Case:	Soft side or Pelican case available
RoHS- and CE-compliant	

Backed by ISO 17025 and Proven DryCal® Technology, the Definer 220 helps assure compliance with environmental regulations and improves your process control.

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.

NVLAP®
NVLAP Lab Code 200661

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