

Defender 500 Series

Defender 510

Volumetric Primary Flow Standard

Defender 520

Enhanced Volumetric Primary Flow Standard

Defender 530+

Standardized and Volumetric Primary Flow Standard



Defender 500 Series

Turn the Defender on. Connect it to your pump. Take measurements. It's that simple. Instantly calibrate your gas flow using Quick Start – there is no preparation involved, no messy soap bubble solutions. Defender's many user-selectable options makes customizing your calibrations easy, giving you exactly what you need in the format you prefer. All you have to do is choose between the 510, the 520 or the 530+.

		Defender 510	Defender 520	Defender 530+
Model and Flow Ranges		Low: 5-500 ccm Medium: 50-5,000 ccm High: 300-30,000 ccm	Low: 5-500 ccm Medium: 50-5,000 ccm High: 300-30,000 ccm	Low: 5-500 ccm Medium: 50-5,000 ccm High: 300-30,000 ccm
Volumetric Accuracy		1%	1%	0.75%
Standardized Accuracy		N/A	N/A	1%
User Selectable Measurement Units	Volumetric	mL/min, L/min, cc/min, cf/min	mL/min, L/min, cc/min, cf/min	mL/min, L/min, cc/min, cf/min
	Standardized	N/A	N/A	smL/min, sL/min, scc/min, scf/min
	Temperature	N/A	°C °F	°C °F
	Pressure	N/A	mmHg, PSI, kPa	mmHg, PSI, kPa
Pressure Accuracy		N/A	± 3.5 mmHg (typical) ± 7.0 mm (max)	± 3.5 mmHg (typical) ± 7.0 mm (max)
Temperature Accuracy		N/A	± 0.8 °C (typical) ± 1.3 °C (max)	± 0.8 °C (typical) ± 1.3 °C (max)
Industry Applications		<ul style="list-style-type: none"> Industrial Hygiene Air Quality 		<ul style="list-style-type: none"> Instrument Manufacturing Air Quality Personal Gas Sampling

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Approximate Time per Reading:	1-15 seconds
Reading Styles (with averaging function user-selectable from 1 to 100 measurement):	Single (manual), Continuous or Burst
Gas Compatibility:	Non-corrosive, non-condensing, less than 70% humidity
Flow Modes:	Pressure or Suction
Measurement Cell Style:	Integrated
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 for 510 & 520:	1/4" ID Hose Barb
Pressure and Suction Fittings for Defender 530+	1/4" ID Swagelok® compression fittings, 3/8" fittings on High Model
Warranty:	1 year; battery 6 months
Storage Temperature:	0-70° C
Ambient Humidity:	0-70%, non-condensing
Operating Pressure (Absolute):	Atmospheric, 15 PSI Max
Display:	Backlit graphical LCD
Data Port (for PC interface):	Serial (RS-232)
Data Cable (for PC interface):	1 meter (Defender Data Port to PC included)
Protective Case:	Pelican case available
Dimensions (H x W x D):	5.5" x 6" x 3" / 140 x 150 x 75 mm
Weight:	29 oz / 820 g

RoHS and CE Compliant

Backed by ISO 17025 and Proven DryCal® Technology, the Defender 530+ helps assure compliance with environmental regulations and improves your process control.



The Butler, N.J. manufacturing facility (pictured above) is Mesa Labs NVLAP accredited ISO 17025 laboratory.