

## DryCal DC-Lite Primary Flow Meter

Bios International is the world leader in portable dry piston technology, and nowhere is this more evident than with our DryCal DC-Lite primary gas flow calibrator. Building upon the success of its predecessors, the DryCal DC-1 and DC-2, the popular, user-friendly DC-Lite is the ideal flow meter for a wide variety of industrial hygiene, environmental, and laboratory applications. Its high-speed measurements, combined with its compact size, field-portability, and affordable cost, make the DC-Lite the preferred, low-maintenance tool for  $\pm 1\%$  per-reading volumetric calibrations. Available in five autonomous flow models, the DC-Lite covers a convenient measuring range, from 1 ml—30,000 ml per minute.



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Preparation-free and capable of quick, single measurements or hands-free operation through continuous measurements with averages, the DC-Lite reduces calibration time, increasing application efficiency. Optionally, its flow readings can be printed to our battery-powered, portable thermal printer, or downloaded into a PC spreadsheet with the aid of our parallel-to-serial converter.

Additionally, the power of the DC-Lite can be expanded through use of its companion product, the [Nexus](#) data-logging module. With the [Nexus](#), the DC-Lite's volumetric flow measurements can be automatically corrected for standardized temperature and pressure conditions, time and date stamped, stored in non-volatile memory, or downloaded into a PC spreadsheet.

# DryCal DC-Lite Features

## Simple Operation

Provides the user with accurate volumetric flow readings with the push of a button.

## Fast

Quick setup and rapid readings saves valuable time. Hands-Free Auto Mode Flow readings can be taken continuously in the Auto Mode, providing hands-free calibration.



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## Immune to Flow Source Pulsation

No need for in-line dampers.

## Patented Graphite Composite Piston Assembly

Eliminates the inherent inaccuracies and mess associated with bubble soap; no mercury seals.

## Sealed Lead Acid Battery

Can be charged indefinitely. DryCal can be used while charging.

## 5-Minute Auto Shut-Off

Preserves battery life.

## Alphanumeric Display (LCD)

Indicates flow rate, flow average and number of readings included in average, as well as battery charge level.

## Built-In Leak Test

Quality assurance self-test allows user to periodically verify flow cell integrity.

## Parallel Port

## NIST Traceable | CE Approved

# DryCal DC-Lite Primary Flow Meter: Flow Ranges & Accuracies

## Low: 10 – 500 ml/min, $\pm 1\%$

### Accuracy below 10 ml/min

|                             |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Air Flow</b><br>(ml/min) | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| <b>Accuracy</b>             | 5.8% | 3.0% | 2.1% | 1.7% | 1.4% | 1.3% | 1.1% | 1.1% | 1.0% | 1.0% |

Maximum Leakage is 0.05 ml/min

## Medium Low: 50 ml/min – 2 L/min, $\pm 1\%$ 2.001 L/min – 5 L/min, $\pm 3.5\%$

### Accuracy below 50 ml/min

|                             |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Air Flow</b><br>(ml/min) | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   |
| <b>Accuracy</b>             | 5.8% | 3.0% | 2.1% | 1.7% | 1.4% | 1.3% | 1.1% | 1.1% | 1.0% | 1.0% |

Maximum Leakage is 0.25 ml/min

## Medium: 100 ml/min – 7 L/min, $\pm 1\%$ 7.001 L/min – 12 L/min, $\pm 1.25\%$

### Accuracy below 100 ml/min

|                             |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Air Flow</b><br>(ml/min) | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  |
| <b>Accuracy</b>             | 5.8% | 3.0% | 2.1% | 1.7% | 1.4% | 1.3% | 1.1% | 1.1% | 1.0% | 1.0% |

Maximum Leakage is 0.5 ml/min

## Medium High: 200 ml/min – 20 L/min, $\pm 1\%$

### Accuracy below 200 ml/min

|                             |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Air Flow</b><br>(ml/min) | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 200  |
| <b>Accuracy</b>             | 5.8% | 3.0% | 2.1% | 1.7% | 1.4% | 1.3% | 1.1% | 1.1% | 1.0% | 1.0% |

Maximum Leakage is 2.5 ml/min

## High: 500 ml/min – 30 L/min, $\pm 1\%$

### Accuracy below 500 ml/min

|                             |      |      |      |      |      |      |      |      |      |      |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Air Flow</b><br>(ml/min) | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  |
| <b>Accuracy</b>             | 5.8% | 3.0% | 2.1% | 1.7% | 1.4% | 1.3% | 1.1% | 1.1% | 1.0% | 1.0% |

Maximum Leakage is 2.5 ml/min

# DryCal DC-Lite Specifications

## Size

5.25" H x 5" W x 2.75" D • 133 mm H x 127 mm W x 70 mm D

## Weight

40 oz. • 1134 g

## Flow Ranges | Air Flow Accuracy

| Model | 1% Optimum Flow Range | Extended Flow Range |
|-------|-----------------------|---------------------|
| L     | 10 ml/min—500 ml/min  | 1 ml/min—500 ml/min |
| ML    | 50 ml/min—2 L/min     | 5 ml/min—5 L/min    |
| M     | 100 ml/min—7 L/min    | 10 ml/min—12 L/min  |
| MH    | 200 ml/min—20 L/min   | 20 ml/min—20 L/min  |
| H     | 500 ml/min—30 L/min   | 50 ml/min—30 L/min  |

Specifications based on averaged readings: lower limit is based on self-tested maximum leakage.

## Battery System

6V rechargeable, sealed lead acid, 6–8 hours typical operation

## AC Battery Charger | Power Adapter

Wall-mounted, single station charger. Input: 100-120 VAC, 60 Hz; output: 12 VDC. Optional input: 200-240 VAC, 50 Hz.; output 12 VDC.

## Operating Modes

Single cycle, 10-readings, or auto-mode.

## Temperature Range

0–55° C

## Humidity Range

0–70% non-condensing

## Printer Port

Standard parallel (IBM Centronics, for printing to Bios' battery-powered printer)

## Warranty

Product, 1 year; battery, 6 months



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