

DIGITAL FLOW CALIBRATOR



The Digital Flow Calibrator combines the simplicity & versatility of a soap film bubble meter with the speed and accuracy of a microprocessor. With handsfree operation, you can still see the bubble, but you also have precision of a digital display with accuracy of a quartz clock. No more tedious bubble formation, bubble watching, timing & flow-rate/time calculation. The DFC-1 accurately calibrates air sampling pumps (vacuum or pressure), rotameters, orifices etc quickly & reliably with accurate & reproducible results.

FEATURES

- Primary Standard
- Flow Accuracy $\pm 2\%$
- Wide Measuring Range
- Tracks Multiple Bubbles
- Auto - Ranging
- Single or Average Mode
- Run or Hold Mode
- Auto Shut-off
- Multi Function Self Diagnostic for Error free Operation
- Automatic Bubble-Feed for hand-free Operation
- Adjustable Glass Flow Cell for faster results at low flows
- Measures flow from pressure or Vacuum Source
- Field Replaceable Glass-Flow Cell
- Fully Portable
- Mains or Battery Operated
- Optional Portable Printer for Permanent Records.

PRINCIPLE OF OPERATION

The, DFC 1 gas flow calibrator operates on the principle of traditional soap film flow meter which has been automated with the use of high technology infrared sensors, quartz timing & microprocessor intelligence to provide instant digital read out of gas flow rates. A soap bubble is used to trace the gas flow through a fixed volume high precision glass flow-cell. When the liquid soap bubble passes through the first sensor, it activates a quartz timer, which stops when the soap bubble passes through the, second sensor. The, microprocessor then calculates the flow rate & instantly displays it on a liquid crystal display.

SPECIFICATIONS

- Measuring Range** : 1.0 cc/min to 5.00 lpm with Auto Ranging facility ;to cover full scale range of 199.9 ml/min., 1999 ml/min., & 5.00 lpm.
- Display** : 3 & 1/2 digit Liquid Crystal Display with additional indication of LOW-BAT and various Self-Diagnostic System-Errors. ON
- Function** : **ON RESET** - Key to reactivate the system after Auto-,Shutoff (in 2 minutes when not in use)
MULTI SINGLE - Modes to effect the measurement continuously for multiple bubble or to limit it to the first bubble.
AVERAGE - Mode to average the last four readings.
- Accuracy** : ± 2010 of Reading
- Flow Cell** : Precision, Small-Volume Glass flow cell that is vertically adjustable to provide faster results for Low-Flow applications. It also accepts any type of soap solution. However for higher flow measurement, we recommend our Standard-Solution .
- Automatic Bubble Formation** : This innovative bubble formation mechanism provides adjustable and continuous stream of bubbles for hand free operation. A large reservoir of soap solution provides long uninterrupted operation without cumbersome process of re-filling after every few minutes.
- Power** : • Mains Operated Model - 230 V AC • Battery, Operated Model - 6 V Dry Cell or Rechargeable batteries with Optional Charger.
• ON indication on Front Panel.
- Dimensions** : 20 (W) x 15 (D) x 23 (H) cms.
- Printer** : Optional Impact type, Numeric or Alpha-numeric compact, portable Printer for permanent record.
- Carrying Case** : Optional corrosion resistant carrying case to accommodate, DFC-1, soap solution, printer & battery charger.