GILIBRATOR-2® Diagnostic Calibration System

Primary standard accuracy and performance validation for sampling pump air flows from 1cc to 30 LPM

Sensidyne's GILIBRATOR-2® System provides the user with a convenient and highly automated way to check almost any commercially available air sampling pumps for proper air flow function before their deployment.

The system consists of an electronic GILIBRATOR-2® Base, which is used with any of three sizes of wet bubble cells. It can also be used with a new soapless piston-type cell, offering the ultimate in convenience and fast setup.

These patented interchangeable components are also available as part of kits which can also include a complete calibration diagnostic panel. All cells use a twist-on bayonet design for quick and easy mounting to the base. All are certified for accuracy, traceable to NIST. Sensidyne recommends calibration of your Gilibrator System, whether wet cell or soapless dry cell, at least once a year.

The GILIBRATOR-2® Base can be used with any of three wet cells (left) or the Sensidyne unique new soapless piston cell (shown mounted on base).

Wet Cells
Three bubble-type cells are available, for air flow ranges of:
- 1 to 250 cc (low flow cell);
- 20cc to 6 LPM (standard flow cell); and
- 2 to 30 LPM (high flow cell).

When used with the GILIBRATOR-2® Base, these unique, interchangeable wet cells automatically generate perfect bubble films at the touch of a button, using infrared technology to read the bubble flow rate, which is then calculated and displayed.

Piston Cell
This unique cell uses a soapless piston-type design to provide a primary flow standard for air flows from 1 to 5 LPM. Based on a nearly frictionless piston, it is ideal for field or lab environments where the user may prefer a liquid-free instrument, assuring accuracy and reproducibility.

GILIBRATOR-2® Base
Easy to operate, microprocessor-controlled unit features simple on/off and reset touchpad with large LCD screen that displays flow rate, the calculated average of multiple flow samples in a series, and the sample number. Light in weight, it operates with either AC power or rechargeable Nicad batteries (8 hour life), for easy portability in either the lab or the field.

GILIBRATOR-2® Diagnostic Kits
Offers the industrial hygienist a complete, portable calibration laboratory. Consists of GILIBRATOR-2® Base with either three wet bubble cells or one soapless piston cell in a cushioned carrying case, with a full diagnostic panel built into the top lid of the case. The panel uses an interchangeable rotameter design for 2 to 5,000 cc flow capability and will run any of several diagnostic tests:
- "Load" simulation – Offers two load simulations for high and low flows to imitate line back-pressures.
- Back pressure reading – A built-in Magnehelic® gauge allows visual monitoring of in-line back pressures up to 30" H2O.
- Leak checking – Built-in Magnehelic® gauge allows visual leak testing and monitoring capabilities.
- Pump flow adjustment – Rotameters allow instant visual indication of approximate flow rates, assisting in properly adjusting air flows.

Deluxe Wet Cell Diagnostic Kit

Specifications

Low Flow Wet Cell
Dimensions: 2"W x 4"H x 2.1"D (51W x 102H x 53mmD) ***Weight:*** 0.4 lbs. (.18 kg)

Standard Flow Wet Cell
Dimensions: 2.5"W x 6"H x 2.6"D (64W x 152H x 66mmD) ***Weight:*** 0.82 lbs. (0.37 kg)

High Flow Wet Cell
Dimensions: 3.5"W x 8.1"H x 3.7"D (89W x 206H x 94mmD) ***Weight:*** 2.26 lbs. (1.02 kg)

Piston Soapless Cell
Dimensions: 4.0"W x 9.6"H x 7.5"D (102W x 244H x 191mmD)
Weight: 2.74 lbs. (0.24 kg)

Flow Range, Accuracy
Low Flow Wet Cell, 1 - 250 cc/min., ±1% of reading accuracy; ***Piston Soapless Cell,*** 1 - 5 LPM, ±3% of reading accuracy; ***Standard Flow Wet Cell,*** 20cc to 6 LPM, ±1% of reading accuracy; ***High Flow Wet Cell,*** 2-30 LPM, ±1% of reading accuracy

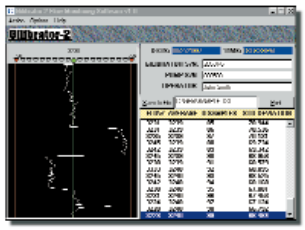
Temperature Limits:
Operating Temperature: 5° to 35°C (41° to 95°F); ***Storage Temperature:*** 0° to 50°C (32° to 122°F)

Electrical:
DC Power Source: Internal Battery Pack; ***AC Power Source:*** Continuous operation through adapter/charger; ***Battery Charge Time:*** 14 Hrs.; ***Expected Battery Life:*** over 300 charge/recharge cycles; ***Transmission Link:*** RS-232; ***Interface Connectors:*** Charger Jack (2.1mm barrel jack), Printer Jack (DB-25), SensorJack - Piston Cell (DB-15), SensorJack - Wet Cell (DB-9)

Deluxe Wet Cell Kit with printer

Optional Printer, PC Interface Kit

An optional thermal dot matrix printer is available for hard copy printouts of calibration data and can be included in Kits. Also optionally available is a new Windows® compatible PC Interface Kit for real-time data download to and manipulation with a personal computer. It includes a cable for connecting the computer to the RS-232 port of the GILIBRATOR-2® Base, as well as PC software that allows the user to log in pump and calibrator serial numbers, data, operator name, flow rates, averaging data, number of samples, sample sequence, and standard deviation data.



Gilibrator 2 Part Numbers & Descriptions

GILIBRATOR-2 Item	Part No.	Description
Low-Flow Wet Cell Kit (1 to 250 cc)	800272 (120v) 800272-2 (230v) 800272-2-CE (230v, CE version)	Control base, low flow cell, DC charger/AC power supply, tubing, and and soap solution with dispenser, in hard shell carry case.
Std. Flow Wet Cell Kit (20 cc to 6 LPM)	800271 (120v) 800271-2 (230v) 800271-2-CE (230v, CE version)	Control base, standard flow cell, DC charger/AC power supply, tubing, and soap solution with dispenser, in hard shell carry case.
Std. Flow Wet Cell Diagnostic Kit	800844-2 (120v) 800844-2-230 (230v) 800844-2-230-CE (230v, CE vers)	Same items as Standard Flow Wet Cell Kit, but carry case also includes built-in diagnostic panel with rotameters and pressure gauge.
High-Flow Wet Cell Kit (2 to 30 LPM)	800270 (120v) 800270-2 (230v) 800270-2-CE (230v, CE version)	Control base, high flow cell, DC recharger/AC power supply, tubing, and soap solution with dispenser, in hard shell carry case.
Deluxe Wet Cell Kit (All Three Cell Sizes)	800275 (120v, w/ printer) 800275-2 (230v, w/ printer) 800275-2-CE (230v, CE, w/ printer) 801804 (120v, no printer) 801804-1 (230v, no printer) 801804-1-CE (230v, CE, no printer)	Control base, three interchangeable wet cells for low, standard, and high flow rates, DC charger/AC power supply, tubing, and soap solution with dispenser, in hard shell carry case. Thermal printer not included, but available as option.
Deluxe Wet Cell Diagnostic Kit	800844-4 (120v, w/ printer) 800844-4-230 (230v, w/ printer)	Same items as Deluxe Wet Cell Kit, but carry case also includes built-in diagnostic panel with rotameters and pressure gauge.
Piston Cell Basic Kit (soaplesss) (1 to 5LPM)	801868-1 (120v, no printer) 801868-2 (230v, no printer) 801868-3 (120v, with printer) 801868-4 (230v, with printer)	Control base, piston-type soapless cell, DC recharger/AC power supply, tubing, in hard carry case. Thermal printer optionally included. Not available in CE approved version.
Piston Cell Diagnostic Kit (soaplesss)(1 to 5LPM)	801869-1 (120v, no printer) 801869-2 (230v, no printer) 801869-3 (120v, with printer) 801869-4 (230v, with printer)	Same items as Piston Cell Basic Kit, but carry case also includes built-in diagnostic panel with rotameters and pressure gauge. Not available in CE approved version.
Calibrator Control Base	850190 850190-1 (CE approved)	Includes NiCad Battery Pack. Charger sold separately.
Control Base Charger	401984 (120v) 7017010 (230v) 400674 (120v) 400794-1 (230v)	For Gilibrator 2 Base (part numbers 850190 and 850190-1) For Gilibrator 2 Base (part numbers 850190 and 850190-1) For Gilibrator Base (obsolete) (part number 800268) For Gilibrator Base (obsolete) (part number 800268)
Low Flow Sensor & Cell Assembly (1 to 250cc)	800267-1 (CE approved)	Sensor and cell assembly only. Includes calibration certificate.
Standard Flow Sensor & Cell Assembly (20cc to 6 LPM)	800266-1 (CE approved)	Sensor and cell assembly only. Includes calibration certificate.
High Flow Sensor & Cell Assembly (2 to 30 LPM)	800265-1 (CE approved)	Sensor and cell assembly only. Includes calibration certificate.
Soapless Piston Cell (1-5 LPM)	801858	Sensor and cell assembly only. Includes calibration certificate.
Replacement Battery Pack	700560	For Gilibrator-2 Control Base only.
Replacement Battery Pack	400692	For Gilibrator Control Base only.
PC Interface Kit	850260	Includes special RS-232 connecting cable and software
Printer Module, 110v	800274	Includes printer paper, connecting cable and AC adapter.
Printer Module, 230v	800274-230	Includes printer paper, connecting cable and AC adapter.
Control Base Upgrade	850190U	For use with Piston Cell.
Cable For Printer	800311	Includes 16-inch connecting cable.
Printer Paper	400681 402103 402127	For Gilibrator Printer Module, part no. 400793 (five pack) For Gilibrator 2 Printer Module, 110v, part no. 801806 (one pack) For Gilibrator 2 Printer Module, 230v, part no. 700721 (one pack)
Soap for Wet Cell (8 oz.)	800450	For both Gilibrator and Gilibrator 2.
Soap Dispenser	400667	For both Gilibrator and Gilibrator 2.