



Spirometrics

flowmate III



Product Features

Recognized Leader In Flow Spirometry

The Flowmate III provides fast, accurate and portable pulmonary function testing.

Full Function

Every one of today's Spirometry tests can be performed with your Flowmate III.

Extensive Memory

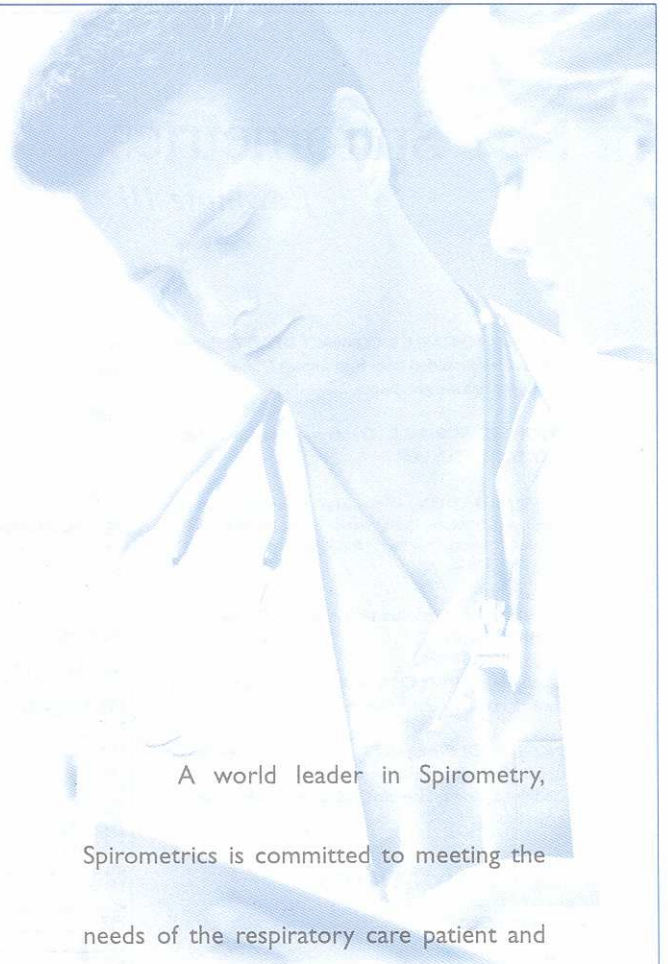
The Flowmate III can store the test results for five patients. An optional Memory Card can hold results for 118 patients, allowing you to print results at your convenience.

Extended Life

The Flowmate III delivers up to 4.5 hours of continuous portable performance from rechargeable batteries.

Cross-Contamination Protection

An in-line filter protects Flowmate III circuits from interpatient contamination.



A world leader in Spirometry, Spirometrics is committed to meeting the needs of the respiratory care patient and medical practitioner within the healthcare delivery network. As a market leader in Pulmonary Function Risk Assessment, Spirometrics offers a complete line of full function spirometers and accessories. Our products utilize technologically advanced hardware and software products, coupled with our cost effective methods of risk assessment, patient participation and protection.



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FEATURES PORTABLE & COMPACT DESIGN. Battery operated and molded from high impact UL-rated ABS plastic for lightweight design.

PREDICTED NORMALS. Composite, Knudson, Crapo (ITS), ECCS, HSU, LAM.

CUSTOMIZATION. Allows user to change report formats, temperature, barometric pressure and printer drivers; battery backup. Back pressure Less than 1.5 cm H₂O/L/S.

VALIDATION. Complies with ATS, NIOSH and OSHA standards.

CONTAMINATION CONTROL. Cross-contamination control via an external filter system.

WORLDWIDE WARRANTY. Full 24-month warranty of the Flowmate III components, parts and labor. Additional 3-year Extended Warranty / Trade-in program available.

Specifications

DIMENSIONS

Base Unit,	
Height	2.5"
Depth	5.5"
Width	8.75"
Sensor	
Height	7"
Width	6" (width includes a complete filter system)

WEIGHT

Net Weight 3 lbs., 13 oz.

POWER REQUIREMENTS

Battery	Six 1.2 volt AA Ni-Cad batteries
AC Adapter	AC adapter is UL 544 recognized 9 volts DC @ 1 amp. Power consumption is 200 milliamps in operation; battery recharge time 12 hours

ENVIRONMENTAL

Temperature	
Operating Range	50°F to 104°F (10°C to 40°C)
Maximum Storage Temperature	150°F (68°C)

USER INTERFACE

Display	2 by 40 LCD display
Keypad	20 key membrane switch keypad

PATIENT DATA

ID Number	Up to 16 digits including periods (.), and slashes (/)
Age	1 to 99

Sex	Male, Female
Race	Caucasian, Black, Non-Caucasian, Asian.
Height	Up to three digits, in inches or centimeters.
Weight	Up to three digits (optional entry) customizable as lbs. or kgs.
Smoke	0-60 cigarettes per day.

TEST MANEUVERS

FVC	Forced Vital Capacity
MVV	Maximum Voluntary Ventilation
VC	Vital Capacity (otherwise known as Slow VC)
Challenge	Methacholine Challenge

INDICES CALCULATED

FVC Maneuver	
FVC	Forced Vital Capacity
FEV1	1 second Forced Vital Capacity
FEV3	*3 second Forced Vital Capacity
FEV1/FVC%	% FEV1 Ratio
FEF25-75	Mid Expiratory Flow Rate
FEF75-85	*Late Expiratory Flow Rate
FEF200-1200	*Forced Expiratory Flow Rate between 200ml and 1200ml
FEF50	*Forced Expiratory Flow Rate at 50% of FVC
PEF	Peak Expiratory Flow
FIVC	*Forced Inspiratory Vital Capacity
FIF50	*Forced Inspiratory Flow at 50% of FVC
FEF50/FIF50	*Ratio of FEF50 to FIF50
PIF	*Peak Inspiratory Flow
COPD	Risk Assessment
Lung Age	Lung Age Assessment based on FEV1

NOTE: FEV timing is based on back extrapolation
* these indices appear on the expanded reports

MVV Maneuver	
MVV Volume	Volume Expired per minute
MVV Rate	Breaths per minute
VC Maneuver	
VC	Vital Capacity
ATI	Air Trapping Index
Challenge	
FVC	Forced Vital Capacity
FEV1	1 second Forced Vital Capacity
PD20	Provocative Dose

FLOW SENSOR

Maximum Flow Rate	+/- 16 liters/second
Accuracy	+/- 3%
Resolution	12 bit A/D
Sampling Rate	150Hz
Back Pressure	1.1 cm H ₂ O/L/S @ 14L/S

BTPS calculated automatically based on user input for environmental conditions.

Temperature	50°F to 104°F (10°C to 40°C)
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Barometric Pressure	20 to 35 inches of mercury 500 to 900 millimeters of mercury. Input values determines units automatically
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BEST TEST DETERMINATIONS (pertains to FVC trials only)

FVC	Largest regardless of test
FEV1	Largest regardless of test
Ratio	Combination of Best FEV1/Best FVC
Flow Rates	Taken from the trace with the greatest sum of FVC and FEV1
FEV1 Patient Effort	Requires clinician to evaluate acceptable or unacceptable patient effort. Discards tests the clinician deems as unacceptable.
Variability	Compares indices of current test with best test in memory. Displays and prints variability as %. Variability greater than 5% for the FVC and/or the FEV1 is regarded as poor reproducibility.
Expiratory Time	If forced expiratory time is less than 6 seconds, a "TEST TOO SHORT" message will be displayed.
Extrapolated Volume	If extrapolated volume is greater than 5% of the FVC, a "SLOW START" message will be displayed.
Interpretations	Obstruction, Restriction, or Ventilatory disorder.

INPUT/OUTPUT COMMUNICATION PORTS

Graphic Output	Printouts according to ATS scale specifications.
Print Results	External printer with selectable print drivers within customization. Results printed on standard 8.5" x 11" paper. Standard DB-25 Female IBM PC pin out to standard centronic connection.
Patient Storage	Internal minimum of 5 patients. External storage with optional memory card for an additional 118 patients (64 pin battery backup RAM Card compatible with PCMCIA 2.0 connection). FVC - 6 trials each patient MVV - 2 trials each patient VC - 6 trials each patient
Test Numbering	Numbers each patient trial that is accepted consecutively regardless of the type of test for recall later.

INSTRUMENT CALIBRATION

Syringe	Selectable from 1 to 9 liters at ATPS. Daily calibration is recommended on days testing is to be performed. Calibration reports print out automatically if printer is connected and is on-line.
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