

SPIROVIT SP-1

Spirometry made simple and affordable!

The SPIROVIT SP-1 utilizes the latest technology to simplify complex lung function testing. The high resolution patient incentive screen displays real-time flow volume loops and detailed measurement matrices. The system's built-in, high resolution printer provides easy-to-read reports within seconds.



Disposable Sensor

SCHILLER's unique SP-150 disposable sensors eliminate the risk of cross-contamination and the need for sterilization, providing maximum benefit for both the patient and physician. The small, lightweight sensors are low cost, completely disposable, and designed to aid patient performance, thus reducing the need for repeat testing. Simply remove, discard and replace the sensor after each patient. You can test another patient within seconds. The technology and benefits of the SP-150 disposable sensors are unrivaled.



Reusable Sensor

SCHILLER's SP-20 reusable sensors are small, lightweight and very easy to clean. The low cost filters provide the most economical method of performing pulmonary function testing.



- **FVC, SVC, MVV, MV** and pre/post medication tests with choice of predicted normals
- Simple operation
- Internal memory for up to 100 tests (optional)
- Built-in mains and battery operation
- Ready-to-file reports within seconds on 3.5" (90mm) paper
- Comparison of predicted and actual values
- Automatic interpretation
- Data transmission via built-in RS-232 interface to PC-based data management program SEMA for longterm storage, retrieval and trending
- Unique sensor technology (disposable and reusable options)
- Everything in one box...memory, battery, printer, patient incentive screen
- Affordable, fast, reliable

The SPIROVIT SP-1 offers the latest spirometry technology at an affordable price. Call now!

SPIROVIT SP-1 Technical Data

Dimensions:

290 x 210 x 69 mm, app. 2.9 kg
11.4 x 8.3 x 2.7 in, app. 6.3 lbs

Power supply requirements:

220-240V, nominal 230 V, 50/60 Hz, or
100-115V, nominal 115 V, 50/60 Hz
mains independent operation with built-in rechargeable
battery and charger unit, LED indication for Line or
battery operation

Battery charging time:

15 hours from a completely discharged battery
(< 3 hours to 60% capacity)

Battery capacity:

6 hours of normal use

Power consumption:

max. 28 VA

Storage:

Memory for up to 100 tests

Liquid crystal display:

- liquid crystal display for graphic and alphanumeric representation
- resolution: 192 x 64 dots
- contrast is manually variable via keyboard

Chart paper:

thermoreactive, Z-folded, width 90mm/3.6 in, perforation
each page

Printing process:

- high-resolution thermal printhead, 8 dots/mm

Paper speed:

25 mm/s

Safety standards:

RL 93/42/EEC
EN 60601-1:1990
pr EN 1441:1994
IEC 513:1994

Safety class:

BF according to IEC 601-1

Protection class:

- I according to IEC 601-1, VDE, UL and SEV (units with internal power supply)
- IIa according to RL 93/42/EEC (medical guideline)

Conformity: CE

according 93/42/EEC

Control panel and keyboard:

user-friendly Rubber-Keys, LED indicators

Environmental conditions:

- temperature, operating:
10° to 40° C / 50° to 104° F
- temperature, storage:
-10° to 50° C / 14° to 122° F
- relative humidity: 25 to 95 % (not condensed)
- pressure, operating: 700-1060 hPa

Standard interfaces:

- 1 x RS-232 serial interface

SPIROVIT SP-1 basic unit

performs four inspiratory and expiratory pulmonary
function tests with choice of predicted normals

Accessories:

- 1 pneumotach sensor (choice of SP-150 disposable or SP-20 reusable sensor)
- 1 noseclip
- 1 pack of disposable mouthpieces (for SP-150) or filters (for SP-20)
- 1 power cable
- 1 pack of paper
- 1 operating manual

Hardware-Options:

transport case, calibration syringe

Software-Options:

- SEMA PC-Software for validation and archiving of test data on PC
- memory for up to 100 tests

Measured values:

FVC: FVC, FEV_{0.5}, FEV_{1.0}, FEV_{1.5}, FEV_{0.5}/FVC, FEV_{1.0}/FVC, FEV_{1.5}/FVC, FEF_{0.2-1.2}, FEF_{25-75%}, FEF_{75-85%}, PEF, MEF_{75%}, MEF_{50%}, MEF_{25%}, FIVC, FIV 1.0, FIV_{1.0}/FVC, FIV_{1.5}/FVC, PIF, MIF_{50%}

SVC: SVC, ERV, IRV, TV

MV: MV, RR, TV

MVV: MVV, RR, TV

Prediction equation:

- **adults:** ECCS, Crapo, Morris, Knudson, Knudson 76, Austria, Berglund, Finnish, Indian, Composite, Polgar
- **children:** Quanier & Tammeling, Austria, India, Knudson, Knudson 76, Polgar
- Comparison pre/post medication possible
- Extrapolated predicted values

Presentation:

- flow volume loop
- flow time plot
- measurement values table

Standards Compliance:

ATS, OSHA, NIOSH

SPIROVIT SP-150 pneumotach flowsensor for pulmonary function testing with disposable sensors:

Dimensions:

118 x 36 x 28 mm, app. 120g
4.6 x 1.4 x 1.1 in., app. 0.26 lbs

Measuring method:

pneumotachometer

Measuring ranges:

- flow: 0 to ± 14 l/s
- volume: 0 to ± 11 l

Measuring accuracy:

± 3 % according ATS tests

Flow impedance:

< 0.2 mbar, s/l at 12 l/s

SPIROVIT SP-20 pneumotach flowsensor for pulmonary function with reusable sensor

dimensions: 125 x 36 x 28 mm, app. 160g
4.9 x 1.4 x 1.1 in., app. 0.34 lbs

Measuring method, measuring ranges, measuring accuracy, flow impedance same as SP-150

Accessories shown are not part of standard configuration

Technical data are subject to change without notice

SCHILLER

I N D I A

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