Simple – convenient – reliable

Quick and easy lung function measurements without additional requirements for your trained staff – saving time and money.

Clear instructions on patient guidance ensure continuously high quality of measurements for Cooperation-dependent measuring methods (e.g. spirometry and flow/volume).
SPIROVIT SP-1

Spirometry made simple and affordable!

The SPIROVIT SP-1 is a unique solution to simplify complex lung function testing. The high-resolution patient incentive screen displays real-time flow/volume loops and detailed measurement matrices. The data can be either printed within seconds or transmitted to a PC.

Disposable Sensor SP-150
With SCHILLER’s unique SP-150 disposable sensors, the risk of cross-contamination is reduced to a minimum. The small, lightweight sensors are low-cost and completely disposable. Simply remove, discard and replace the sensor after each patient performance. No need for disinfection, easy handling and saving time: these are maximum benefits for both patient and physician!

Reusable Sensor SP-20
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 tests.

Features
• 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” (90 mm) 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 long-term storage, retrieval and trends
• Everything in one box … memory, battery, printer, patient incentive screen
• Affordable, fast, reliable, labelled
SPIROVIT SP-2

Compact technology – good things come in small packages!

• Combines all the functions of a conventional large spirometry device in one handy unit
• Extremely easy to use
• Top design and top quality
• Excellent value for money
• Very low running and maintenance costs
• For practice use and home visits
• FVC, SVC
• MVV option
• Pre/post comparisons
• Lightning speed data transfer via infrared interface to printer
• Battery capacity of up to 30 hours
• Disposable mouthpieces designed to minimize the danger of cross-contamination
• High-quality LCD with a scale of four shades of gray

The easy way to spirometry!
The device is handed over to the patient with a new disposable mouthpiece for each test in place. Data evaluation and test results are delivered immediately, irrespective of where the tests are carried out. Battery capacity for up to 300 tests!

Data preparation
The SP-2 is equipped with a fast and efficient data evaluation software. Test results are transferred to the printer via an infrared interface where the curves are printed with high resolution to enable a precise diagnosis.

Underwater pictures: Erwin Portmann, erpo@datazug.ch
The know-how of extensive lung function tests in a low-priced small format

Because there are no unimportant measurements in lung function diagnostics.

- Handy PC spirometer for spirometry and flow/volume measurement, in- and expiratory vital capacity, partial volumes, second-volume FEV1, maximum voluntary ventilation MVV, peak-flow and more than 40 sub-parameters
- Determination of resting spirometry and flow/volume curve in a single measurement manoeuvre
- Integrated database for measurement and patient data – compatible with the SCHILLER AT-104 PC ECG system
- Online display of the measurements on a PC or notebook screen
- Hygienic and easy to care for: easy cleaning, no time-consuming dismantling into its components

SP-250 Sensor
The SP-250 has a disposable sensor, which is replaced after each use. This ensures hygienically impeccable work and increases the efficiency as the sensor does not need to be disinfected between use, making the system available any time. The disposable sensors are tested for minimum tolerance and thereby warrant an absolutely accurate measurement.

SP-260 Sensor
The SP-260 allows the same accuracy as the SP-250, but with a reusable sensor. The sensor’s inner tube can be removed and can easily be cleaned using a common disinfectant. In this sensor it is only necessary to replace the small measurement filter and the cardboard mouthpiece. This reduces material cost – ideal if there are only a few measurements carried out each day.
Motivation is everything!
• Efficient assisting programs to monitor important cooperation criteria.
• Large assisting pictures for a precise control of the breathing manoeuvre for optimal patient motivation.
• Intelligent animation graphics for children and adults during simultaneous monitoring of important measuring parameters.
• Graphic insertion of patient-specific predicted value ranges to estimate the patient cooperation.

Clear reports for all cases
• Reports are individually configurable with the requested measurement data in charts, graphics, pre/post or variance comparison.
• Integration of medication, therapy and cooperation, as well as result text possible.
• Display of parameters of different measurements in one common report.
• Report output by screen, printer, Intranet, or as graphic data for export into the doctor’s file.

• Standard reports for all measuring programs available. Configuration of any individual report possible.
• Size, number, and position of graphics selectable within each report. More than 50 different graphics available.
• Possibility to export measurement results into word-processing and graphic programs.
Whether SCHILLER SP-250 or SCHILLER SP-260 – the hardware and software comprise spirometry, flow/volume measurement, direct and indirect maximum voluntary ventilation MVV, patient data administration, programs for provocation and bronchospasmolysis, pre/post comparisons, functions for trend, statistics and protocol, as well as interfaces and much more.

Integrated program for pre/post comparisons, bronchospasmolysis tests, and provocations.

- Pre/post comparisons of any measurement
- Comparison already possible during post measurement
- More safety during provocations thanks to graphic and numeric progression control with trend display
- Free configuration, storage, and output of any specific and unspecific provocation series
- Automatic time management system with alarm functions

Tailor-made – the LF8 surface for measurements and reports

- Large online on-screen display of the measurements – essential for quick work and correct judgement of breathing manoeuvres
- Simple handling because of clear and standardized screen design as well as intelligible surfaces and logic user guidance
- Editing options for all measurements
- Large, clearly labeled keys
- Identical measurement operations for all measurements
- Pause function in all measuring programs
- Free selection of graphics and measurement parameters
- Flexible graphic and time scales
- Change of measurement graphic and scales also during the measurement
- Diagnosis possible by free text and templates, also interpretation assistance by diagnostic square by Miller
Technical Data

**Technical Data SP-1:**

- **Dimensions:** 290 x 210 x 69 mm, app. 2.9 kg, 11.4 x 6.3 x 2.7 in, app. 6.3 lbs
- **Power Supply Requirements:** 220–240V, nominal 230V, 50/60Hz, or 100–115V, nominal 115V, 50/60Hz; mains-independent operation with built-in rechargeable battery and charger unit. LED indication for line or battery operation Battery Charging Time: 15 hours for a completely discharged battery (Battery Charging < 3 hours to 60 % capacity)
- **Battery Capacity:** 6 hours of normal use
- **Power Consumption:** max. 28VA
- **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
- **Printing Process:** High-resolution thermal printhead, 8 dots/mm
- **Paper Speed:** 25 mm/s
- **Safety Standards:** MDD 93/42/EEC, Annex II; EN 60601-1; 1990; IEC 60601-1-2
- **Protection Class:** I according to IEC 60601-1-1, CSA 22.2 and UL 2601 (units with internal battery)
- **Conformity:** Ila according to MDD 93/42/EEC (medical guideline)
- **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 to 1060 hPa
- **Standard Interfaces:** 1x RS-232 serial interface
- **Liquid Crystal Display (LCD):**
  - Resolution: 192 x 64 dots
  - Contrast is manually variable via keyboard
  - Mode for up to 100 tests
- **Selva PC software for validation and archiving of test data on PC**
- **Software Options:**
  - MVV test
  - Calibration syringe, P/N 2.100027
- **Accessories:**
  - 1 pack of paper
  - 1 power cable
  - 1 pack of disposable mouthpieces (for SP-150) or filters (for SP-20)
  - 1 noseclip
  - 1 pneumotach sensor (choice of SP-150 disposable or SP-20 reusable sensor)
- **Function tests with choice of predicted normals**
- **Composite, Polgar**

**Technical Data SP-2:**

- **Dimensions:** 85 x 190 x 27 mm; 0.275 kg
- **Liquid Crystal Display (LCD):**
  - Liquid crystal display for graphic and alphanumeric representation
  - Resolution: 160 x 100 pixel
  - LCD can be backlit
  - Control panel and keyboard: User-friendly rubber keys, 7 function keys, 12-key block
- **Battery capacity:** Approx. 300 complete tests, 2 built-in AA 1.5 V alkaline primary batteries
- **Storage:** flash memory for up to 20 patients (pre and post)
- **Standard Interface:** I/DA 1.0 Communication language PCL 3
- **Printer:** IrDA compatible or with IrDA adapter
- **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 to 1060 hPa
- **Safety standards:**
  - IEC/EN 60601-1: 1990; CSA 22.2 and UL 2601
- **Protection class:** Ila according to MDD 93/42/EEC
- **Software option:** MVV test
- **Accessories:**
  - 1 operating manual
  - 1 disposable mouthpiece, P/N 2.100018
  - 1 disposable mouthpiece, P/N 2.100018
- **Hardware options:**
  - Calibration syringe, P/N 2.100027
- **Option:** MVV test
- **Battery Capacity:** Approx. 300 complete tests, 2 built-in AA 1.5 V alkaline primary batteries
- **Temperature, storage:** -10° to 50° C/14° to 122° F
- **Relative humidity:** 25 to 95 % (not condensed)
- **Pressure, operating:** 700 to 1060 hPa
- **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 to 1060 hPa
- **Temperature, operating:** 10° to 40° C/50° to 104° F
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  - Temperature, storage: -10° to 50° C/14° to 122° F
  - Relative humidity: 25 to 95 % (not condensed)
  - Pressure, operating: 700 to 1060 hPa
- **Liquid Crystal Display (LCD):**
  - Resolution: 192 x 64 dots
  - Contrast is manually variable via keyboard
  - Mode for up to 100 tests
- **Selva PC software for validation and archiving of test data on PC**
- **Software Options:**
  - MVV test
  - Calibration syringe, P/N 2.100027
- **Accessories:**
  - 1 operating manual
  - 1 disposable mouthpiece, P/N 2.100018
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  - 1 operating manual
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- **Hardware options:**
  - Calibration syringe, P/N 2.100027
- **Option:** MVV test

**Technical Data SP-150 Pneumotach Flow sensor for Pulmonary Function Testing with Disposable Sensors:**

- **Dimensions:** 118 x 35 x 28 mm, app. 120 g, 4.6 x 1.4 x 1.1 in, app. 0.26 lbs
- **Measuring Method:** Pneumotachometer
- **Measuring Range:**
  - Flow: 0.0 to ±16 l/s
  - Volume: 0.0 to ±15 l
- **Accuracy:** Measured accuracy according to ATS 1994
- **Flow Impedance:** < 0.2 mbar * s/l

**Technical Data SP-20 Pneumotach Flow sensor for Pulmonary Function Testing with Reusable Sensor:**

- **Dimensions:** 125 x 36 x 28 mm, app. 165 g, 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**

All technical data is subject to changes aiming to continuous innovations.