



medisoft®  
CARDIO-RESPIRATORY INSTRUMENTATION



## SpiroAir Volumetric P.F.T.

Gold standard dry rolling seal spirometer pulmonary function lab

[www.medisoft.be](http://www.medisoft.be)

# SpiroAir Volumetric P.F.T.

Complete, **modular pulmonary function** system, based on the most reliable, accurate transducer on the marketplace : dry rolling seal horizontal spirometer.

The most accurate device for the most accurate spirometry, lung volumes and diffusion measurements, for children and adults.

The **SPIROAIR** base unit includes spirometry, closed circuit Helium dilution, Functional Residual Capacity (FRC) and lung sub-divisions with a CO2 scrubber and circulating fans. This is the gold standard method for lung volumes with a true volume displacement horizontal dry rolling seal 12 litres spirometer, user accessible, for easy maintenance and cleaning.

- **Compact system** on trolley or table-top configuration.
- **High precision**, reliable, stable gold standard Lilly heated pneumotachograph with, no moving parts.
- **Low cost** of operation, low maintenance.
- **Expair software**, with complete operator and patient guidance.
- **Any option available** to start with what is needed and upgrade over time.



**Ideal for** : respiratory care departments, clinical labs, all pulmonary diagnostics, respiratory allergy assessment, pediatrics, physiology, research, occupational

## Complete pulmonary function testing with one device.

All measurement programs in the Medisoft SpiroAir are controlled by the powerful Expair software featuring the following testing options, included in the basic standard configuration :

### Complete basic Spirometry

With choice, every test, to use the closed circuit or the open circuit : Forced Vital Capacity, Slow Vital Capacity, Maximum Voluntary Ventilation and Minute Tidal Ventilation including bronchochallenge testing software.

### Lung Volumes methods

FRC, VC, IC , ERV, RV, TLC.

**UNIQUE** : He dilution wash-in, standard method, closed circuit by unique low resistance dry rolling seal spirometer He dilution technique with O<sub>2</sub> compensation and CO<sub>2</sub> absorption.

### Choice of 3 DLCO options :

**UNIQUE** : Medisoft, the only manufacturer featuring a choice of 3 diffusion methods :

- Single Breath with Helium trace gas He.
- DLCO-NO dual diffusion method (Trace gas He) (**Exclusive**) with membrane diffusion (DM) and Capillary blood volume (Vc).
- Re-breathing Diffusion Dlco rb using inspiratory bag.

### Extra options to complete your pulmonary diagnostic testing :

**Bronchoprovocation and special resistance testing :**

- **PROVO4 Provocation System** for automated, software controlled, accurate and safe bronchial provocation testing.
- **RINT** : resistance measurement using interrupter technique, ideal for children.
- **NEP** : this measurement (negative expiratory pressure) is an alternative method to detect expiratory flow limitation, which does not require performance of forced expiratory efforts on the part of the patient, or a body plethysmography test.

Can be combined with the following devices:

ECG, FeNO+, FOT Resmon Pro, BodyBox, HypAir, Micro 5000, Micro 6000, Ergocard Professional, Ergocard Clinical.

**Respiratory Mechanics testing :**

- **MIP – MEP** : maximum inspiratory and expiratory pressure as an indicator of respiratory muscle strength.
- **SNIP** : measurement of the maximal nasal inspiratory pressure using a nasal cannula. A non-invasive indicator of diaphragmatic muscle fatigue.
- **P01** : inspiratory occlusion pressure at 0.1 seconds, for respiratory muscle drive evaluation, even with CO<sub>2</sub> stimulation option.
- **Static and dynamic compliance and resistance** : measured by intra-oesophageal balloon catheters.



## ExpAir, the Medisoft software

The most intuitive, user-friendly and complete software package available today, for all Medisoft devices.

- Advanced, data array storage allowing re-evaluation and calculation of test parameters, with export and HL7 messaging capabilities for research and integrating to Hospital systems.
- Trend tabular data reporting of any parameter.
- Interpretation function (GLi 2012 guidelines).
- Comments and offline input.
- Online data transfer.
- Report designer.
- Predicted value editor, new interpretation algorithm based on LLN, ULN, Z-score and percentile.
- Choice of languages and units of measurement.
- Bronchial challenge testing software included.
- Manual entry of blood gases.
- Full calculation function: display of calculation points with manual correction capability.
- Quality control automated software, diagnostic functions and full program control.
- Remote assistance using Teamviewer™.

**Intended users :** Medical diagnostic device, Class IIa, should only be used by doctors, physiologists, trained respiratory technicians/nurses or under supervision of such. Data obtained must be interpreted and reported by trained medical staff only.



## Technical specifications :

| Physical Dimensions | Module           | Trolley      |
|---------------------|------------------|--------------|
| (H x W x D) cm      | 39 x 63,2 x 38,5 | 89 x 65 x 67 |
| Weight              | ± 22 Kg          | ± 35 Kg      |

|   |   |
|---|---|
| <b>Power requirements :</b>                       | 230 VAC 50 Hz or 115 VAC 60 Hz  |
| <b>Power consumption :</b>                        | +/- 110 VA (module)   |
| <b>Warmup time :</b>                              | 20 min.   |
| <b>Meets all electrical safety requirements :</b> | IEC60601-1  |
| <b>Classification :</b>                           | IIa   |
| <b>CE MARK :</b>                                  | CE 0029   |
| <b>MDD :</b>                                      | 93/42/EC and harmonized standards   |
| <b>Computer interfacing :</b>                     | Windows 7 Pro / Ultimate/ 8.0 / 8.1 ™<br>Serial interface RS232 / USB 2.0 |

## Ambient conditions for use

|                              |                            |
|------------------------------|----------------------------|
| <b>Temperature :</b>         | 10 - 35°C                  |
| <b>Relative humidity :</b>   | 25 to 85 % (non condensed) |
| <b>Barometric pressure :</b> | No restriction             |



A MGC Diagnostics subsidiary

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