



medisoft®  
CARDIO-RESPIRATORY INSTRUMENTATION



## HypAir

PFT unit for diffusion and lung volumes

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

# HypAir

**Complete**, modular pulmonary function testing

The highest standard in open-circuit spirometry, lung volumes, diffusion, respiratory mechanics and more... PFT in one station !

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

- **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 HypAir are controlled by the powerful Expair software featuring the following testing options.



### Complete basic Spirometry:

Forced Vital Capacity, Slow Vital Capacity, Maximum Voluntary Ventilation and Minute Tidal Ventilation including bronchochallenge testing software.

### Choice of 2 Lung Volumes methods (FRC, VC, IC, ERV, RV, TLC) :

**UNIQUE** : Medisoft, the only manufacturer featuring a choice of 2 lung volumes methods.

- **Multi Breath N2 washout / LCI** (Lung Clearance Index) including closing volume (N2 Slope).
- **He Dilution**, standard method by closed circuit He dilution technique with O2 compensation and CO2 absorption with re-breathing bag.

### Choice of 6 DLCO options :

**UNIQUE** : Medisoft, the only manufacturer featuring a choice of 6 diffusion methods :

- **Single Breath** with Helium trace gas (He).
- **Rapid gas analysis diffusion** (RTD) test, Single Breath using Helium trace gas (He) or Methane trace gas (CH4).
- **Re-breathing diffusion** with Helium trace gas (He) and using inspiratory bag.
- **Intra Breath diffusion** with Cardiac Output (Qc).
- **DLCO-NO** dual diffusion method (Trace gas He) (**Exclusive**) with membrane diffusion (DM) and Capillary blood volume (Vc).
- **Steady State real time diffusion** TICO ss (**Exclusive**).

### 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, SpiroAir, 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 CO2 stimulation option.
- **Static and dynamic compliance and resistance** : measured by intra-oesophageal balloon catheters, with transpulmonary pressure option.

## 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      | 13,7 x 40 x 34 | Standing - 140 x 73 x 55<br>Seated - 120 x 73 x 55 |
| Weight              | ± 12 Kg        | ± 35 Kg  |

|   |  |
|---|--|
| <b>Power requirements :</b>                       | 230 VAC 50 Hz or 115 VAC 60 Hz   |
| <b>Power consumption :</b>                        | ± 100 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 0843  |
| <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

PAE de Sorinnes 1  
Route de le Voie Cuivrée  
B-5503 Sorinnes, Belgium  
t. +32 (0) 82 22 30 20  
f. +32 (0) 82 22 33 34  
info@medisoft.be

**Technical support :**  
t. +32 (0) 82 67 68 63  
support@medisoft.be