The MediSoft factory is a state of the art modern facility with clinical research, precision engineering and computer design departments.

EXPAIR software

The most intuitive, user-friendly and complete software basic version.

- A sophisticated and powerful data-base function and electronic storage function
- Trends Report (Historic function)
- Interpretation function
- Comment function
- Off line input and on line data transfer
- Report designer
- Predicted value editor
- Choice of languages
- User defined calculated parameters
- Bronchial test generation
- Blood gases with blood chemistry analysis from off-line entry
- Choice of units for the measured parameters
- Measurement sequencing configuration
- Full calculation function : display of calculation points with manual correction capability
- Technical toolbox to enable diagnostic function and full program control
- Inbuilt quality control with calibration markers for performance
- TELEsistance or VPN assist

GENERAL SPECIFICATIONS
Dimensions (H x W x D) cm
14 x 40 x 33
Trolley
8 x 60 x 37
Weight
+/- 12 Kg
+/- 20 Kg
Power requirements
230/115 VAC 50/60 Hz
Power Consumption
+/- 100 VA (inductive)
Warming up Time
20 min. minimum
Conform to electrical safety req. EN60601-1 and CE 0029-certified
AMBIENT CONDITIONS
Temperature
10 to 40°C
Relative humidity
25 to 90% (non condensed)

EXPAIR software

Low cost of operation and maintenance
- No high-cost proprietary disposables

More than 10 options
- Precision engineering of the highest quality
- High performance
- Software guided clinical excellence
- Expansive capability (DLCO, MIP/MEP,...)
- More than 10 options

HYPAR COMPACT+
FLOWMETER PULMONARY FUNCTION TESTING STATION

Medisoft is a reserve the right to change and improve the above specifications without prior notice

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A fast, accurate 'One-stop' test center
- Software guided clinical excellence
- Expansive capability (DLCO, MIP/MEP,...)
- More than 10 options
- Precision engineering of the highest quality
- Low cost of operation and maintenance
- No high-cost proprietary disposables
4 Way patient valve with soda lime canister for FRC He dilution measurement

STANDARD SPIROMETRY (SLOW AND FORCED)
The Hyp’Air Compact® incorporates all the functions and performance needed to measure slow and forced vital capacity. The flow is measured by the pneumotachograph and the volume is calculated by numerical integration.

Tests under bronchodilator or bronchoconstrictor are simplified by the specifically adapted software functions (comparison table, effect-dose curves, test protocols...).

Additionally, incentive spirometry assists measurements with children. Post visualization and post treatment provide a convenience of use particularly appreciated - choice of graphical representation, selection of calculation points, alignment of the flow / volume curves vs FRC, time evolution of measured parameters by numerical and graphical representation deletion of poor efforts.

FRC HE OR N (option)
The Hyp’Air Compact® can be equipped with the functions necessary to the FRC measurement by the helium dilution technique in closed circuit or by the nitrogen washout method by pure O2 inspiration, in open circuit (single and multi breath method). These two techniques are fully automated and require only minimal user intervention.

The recording of the ventilation and of the gas concentration (He or N2) is visualised in real time, during the test, to facilitate the understanding of the measurements:

• Measurement of TLC by FRC He.
  Standard method by closed circuit He dilution technique with O2 compensation and CO2 absorption.
• Measurement of TLC by Nitrogen washout.
  The Nitrogen washout uses the accumulated volume of oxygen to wash nitrogen from the lungs as the “true” TLC value.
  On screen visualisation guides the user through the full test procedure, making the understanding and quality control of the test very easy. Importing a VC from a separate effort is possible when the subject may be unable to perform the best effort within the test. The measuring circuit uses O2 and CO2 analysers by subtraction to measure the nitrogen; the patient circuit consists of an automatic two-channel valve with automatic delivery of 100% O2.
• Measurement of TLC by FRC CO2.
  The recording of the ventilation and of the gas concentration (He or N2) is visualised in real time, during the test, to facilitate the understanding of the measurements:
  The measuring circuit uses O2 and CO2 analysers by subtraction to measure the nitrogen; the patient circuit consists of an automatic two-channel valve with automatic delivery of 100% O2.

MEASUREMENT OF DIFFUSION CAPACITY Dlco (option)

UNIQUE: the only spirometer offering the range of 5 diffusion methods:

• Single Breath using the helium trace gas He.
  The well-known technique described by E. Cotes based on the Jones McCabe method. Using a bag collection system the subject can be controlled for inspiratory volume, washed out volume and sample volume. This method has proven repeatability and the method was the same as that used to collect the predicted values we sent today.

• DLco-N (Trace gas He) NEW & EXCLUSIVE
  Membrane diffusion and capillary blood volume (Sm & Sc) measurement.
  Regarded as the “true” diffusion characteristic and the most useful indicator of membrane thickening, this measurement takes on a new lease of life. The powerful Exp’Air software makes the calculation painless. The combination of NO and CO follows the membrane diffusion and capillary blood volume (Dm & Qc) we use today.

Measurement of airway resistances by forced oscillation method, Ros
  these measurements are taken in passive mode.

• Averaging of the value with rejection by “Gauss’s curve” method.
• Choice between 3 mouth pressure calculation methods.
  Additionally, instant feedback is provided on the screen visualisation.

VENTILATION MECHANICS (OPTION)

• MIP – MEP: Maximum Inspiratory and Expiratory Pressure as an assessment of respiratory muscle strength, also useful for weaning subjects from ventilators.
• SMIP: measurement of the maximal inspiratory pressure using a nasal cannula. A non-invasive estimate of muscle fatigue.
  • Spi, – inspiratory occlusion pressure at 0.1 second: Specific version (see datasheet)
  • Static and dynamic Compliance and Resistance : measured by intra-oesophageal balloon catheter.
• Muscle strength study - specific version for a full and complete neuromuscular and neural drive study.

PROVO II (OPTION)

Equipment for fully automated bronchochallenge tests with automatic nebulizer. This option provides full control of products and doses used and of test performing criteria, for bronchochallenge testing.

FENO (OPTION)

External module for the measurement of endhaled endogenous NO by the off-train method.

A very new and sensitive test that is specific and reproducible for determining the degree of expiratory flow limitation both at rest and during exercise, particularly with subject’s known to have obstructive lung disease. This test applies a negative pressure to the mismatch between the expiratory phase, this allows the compensation of the flow volume loop with the tidal effort when reviewed as a flow volume loop display.

This method also allows the indirect measurement of the resistance (Rn) and provides a good alternative to the standard screening method.

RINT - ROS (option)

RINT Measurement of the total pulmonary resistance by the method of airway interruption (lasting 90 to 120 ms) at each respiratory cycle
  • Visualisation of the mouth pressure in real time with calculation point for each cycle.
  • Choice between 3 mouth pressure calculation methods.
  • Averaging of the value with rejection by “Gauss’s curve” method
  • Automatic functions identical to the spirometry ones for test with bronchodilator and bronchoconstrictor.
  • these measurements are taken in passive mode.

RIN Measurement of airway resistance by forced oscillation method, generated by a piston pump turning at approximately 6 to 30 Hz. This method measures the impedance (Z) and the phase (j) to calculate the resistance.

FENO (OPTION)

External module for the measurement of endhaled endogenous NO by the off-train method.