## **TECHNICAL CHARACTERISTICS: LILLY PNEUMOTACHOGRAPH**

(MICRO 5000 / MICRO 5000 (Version micro 6000) / MICRO 5000 (Version Blue Spiro))

- ► Typical measurement range 0.02 to 15 L/sec (actual range set by user 20 L/sec suggested max)
- ► Accuracy: error max < 3%
- Acquisition frequency (100 to 400 Hz)
- ► Dead space 35 ml
- Volume expressed in B.T.P.S.
- Calibration by 3 liter syringe (optional syringe)
- ► In compliance ATS ERS BTS recommendations
- Exchangeable Pneumotachograph head
- Automatic compensation of the differential pressure
- Cross infection and contamination control
- Designed for use with barrier filter Medisoft MS028 Ideal

## **GENERAL CHARACTERISTICS**

### CONTROL OF THE CONTAMINATION

• Requires use of single barrier filter with 99,9999 % effect

- Temperature: 10 C° to 40 C°
- Relative humidity 25% to 85 % (not condensed

Galvanic isolation by optical coupler (same as Micro 5000 (Version Blue Spiro) USB version)

### Conform to electrical safety requirements IEC 60601-1 and IEC 60601-1-2

- For the Micro 5000 (Version micro 6000) and the Spiro Air LT: weather station integrated
- For the Micro 5000 : Integrated thermometer

## **MICRO 5000**

## (REF. NUMBER: 10-MI-01)

- Height: 130 mmWidth: 190 mm
- Depth: 295 mm Weight: 4.2 kg (basic version)

- Power requirements: 230 Vac 50Hz or 115 VAC 60 Hz
- Power consumption 15Va (Basic version)

RS232 or USB interface with electrical isolation

• For the options refer to page 2

### MICRO 5000 (Version Blue Spiro)

### (REF. NUMBER: 10-BS-01)

- Total height: 135 mm
- Pneumotachograph diameter : 60 mm Weight: 340 gr (without battery)

- Power requirements : Battery 9 Volt dry cell / rechargable
- Power consumption : ~ 1,6W (Bluetooth version)

Bluetooth or USB interface with electrical isolation

## **EXPAIR Software**

## VERSION PFT OR MICRO 5000 (Version Blue Spiro)

- A sophisticated and powerful data-base function and electric storage function
- Trends report (Historic function)
- Interpretation function
- Comment function
- Data input "offline" and data transfer "online"
- Report designer
- · Predicted value editor
- Choice of languages • Bronchial test generation
- · Blood gases with blood chemistry analysis for manual entry
- Choice of units for the measured parameters
- Measurement sequencing configuration
- Full calculation function : display of calculation points with manual correction
- Technical toolbox to enable diagnostic function and full program control
- Inbuilt quality control with calibration markers for performance
- Remote Diagnostic Service

## MICRO 5000 (V.micro 6000)

(REF. NUMBER: 20-MI-02)

(REF. NUMBER: 10-SL-01)

- Height: 90 mm
- Weight: 1.9 kg

- Power requirements: 230 Vac 50Hx or 115 VAC 60 Hz
- Power consumption: 10 Va

USB interface with electrical isolation

## SPIRO AIR LT

- Height : 380mm
- Width : 378mm Depth: 400mm
- Weight: 14 kg

- · Power requirements: 5 Volts DC by USB port
- Power consumption: 0.3 A

· USB interface with electrical isolation

- Bell construction from Stainless steel
- Displacement 12 litres (other volumes on request)
- Digital resolution precision 6 ml
- Frequency bandwidth 35Hz
- Ultra Low resistance, low mass, excellent dynamic response

Your official dealder

BELGIUM HEADQUARTER P.A.E. de Sorinnes Route de la Voie Cuivrée 1 B-5503 Sorinnes – Belgium Tel: +32 (0)82 22 30 20 Fax: +32 (0)82 22 33 34

www.medisoft.he

MEDISOFT FRANCE Rue du Maréchal de Lattre de Tassigny, 8 59000 Lille Tel: + 33 (0)825 280 030 Fax: +33 (0)320 787 609

www.medisoft.fr

Medisoft s.a. reserves the right to change and improve the above specifications without prior notice

MEDISOFT ITALIA Via Germania, 14 35127 CAMIN (PD) ITALY Tel: +39 049 87 03 355 Fax: +39 049 87 03 388

www.medisoft-ram.it

MEDISOFT GERMANY GmbH Universitätsstraße, 136 D-44799 Bochum GERMANY Tel.: +49 (0) 234 976-58410 Fax: +49 (0) 234 976-69507

www.medisoft-nft.de

MEDISOFT CHINA West Tower, Shun Tak Centre 168 Connaught Road Central Hona Kona Fax: +852 2267 8983









# SPIROMETRY instrument range Our most comprehensive range of Spirometers suitable for

Clinical, Pre-screening, Outpatients, and bedside measurement; through to full Pharmacology and epidemiology studies.







- Spiro Air LT

► Micro 5000 (Version Blue Spiro)

Lilly Pneumotachograph, technology with the cone for laminar flow across the total surface area of the mesh, coupled with the Minken P. Yeh calibration method to ensure total linearity and reproducibility aver the full flow range. A reference method.

Spiro Air LT true volume displacement rolling seal « Gold Standard », for accurate volume determination.

## **RELAXED AND FORCED SPIROMETRY** & VENTILATORY MECHANIC













## **MICRO 5000**

THE EXPANDABLE SOLUTION, THE BASIC SPIROMETER **ALLOWS ONE OPTIONAL IN ADDITION TO MAKE A VERSATILE TEST STATION; CHOOSE FROM;** 



**►** Mouth occlusion pressure MIP – MEP \*



Spontaneous Nasal Inspiratory Pressure SNIP \*



**► Total Lung Resistance with interruption (Rint / Rocc)** 



Thoracic resistance by forced oscillation (ROSC)



Inspiratory Occlusion pressure (P01)



Nasal resistance



► Lung Compliance (Static, Dynamic and Quasi-static) with oesophageal cartheter



 Automated Dosimeter for Bronchial Challenge (Provo, Pressure triggered)

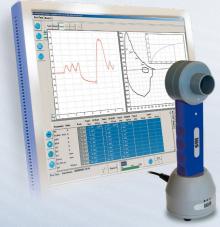


Negative Expiratory Flow measurement (NEP)





Easy disassembling of the pneumotachograph to maintain the grid



## MICRO 5000 (Version Blue Spiro)

**IDEAL DOMICILIARY SPIROMETER TO SUPPLEMENT THE DOCTORS OFFICE MEASUREMENTS OF LUNG FUNCTION.** THREE COMBINATIONS TO SUIT INTENDED USE.

- BLUE TOOTH
- USB CONNECTED



PROTECT YOUR PATIENTS AND INSTRUMENTS BY USING THE MEDISOFT ANTIBACTERIAL FILTERS REF. NUMBER: MS 28



- Desktop computerised spirometer with full weather station to provide accurate and repeatable Spirometer measurements in Clinical Pharmacology and Clinical applications.
- A Quality Spirometer with unequalled high performance and value for money.



## **SPIRO AIR LT**

- Direct measurement of volume.
- Absolute measurement by volume displacement to high definition.
- GOLD STANDARD
- ► The advantage of «True» Spirometry by this method is it is unaffected by the content of the gas to be measured, requiring no computerised correction to values and «absolute» scale, the materials used ensure excellent temperature stability under all conditions.
- ► The displacement is unaffected by viscosity of nature of gas to be measured.
- ► The « Quality control » for other similar devices within the laboratory, or a « work horse » where high frequency of repeat measurements are required.

## **MEASURED AND CALCULATED PARAMETERS**

### RELAXED SPIROMETRY

- Vital Capacity (VC) Inspiratory and Expiratory
- Inspiratory and Expiratory Capacity
- Expiratory Reserve Volume (ERV)
- Tidal Volume (VT)
- Respiratory Frequency (RR)

## **FORCED SPIROMETRY**

- ► Forced Vital Capacity (FVC, FIVC)
- ► Forced Expiratory Volume (FEV1)
- ► Peak Flow (PEF)
- Mid Flows
- (MEF, MEF25%, MEF50%, MEF75%)
- End Volumes Flows (FEV6, FVC6)
- Partial Flows (30%) VC

## **MAXIMAL STUDIES**

- ► MVV (RR, TV)
- Ve (Minute Ventilation)
- ► VMM V minute
- VT / Ka
- Ti / Ttot
- Te / Ttot
- ► VT / Kg twice X

- Pre-Post testing to Bronchodilator response
- Provocation Challenge Testing • Multilevel Spirometry -EIA