



# MiniSpir<sup>®</sup>

PC based  
USB Spirometer with Oximetry option

New option:  
Disposable turbine



Fast  
Simple  
Accurate

The most convenient way to access  
a mini-laboratory in one small device

- Plugs directly into the USB socket on your PC
- Ideal and easy solution for custom made applications
- No batteries required



PC software  
included

SpO2  
option



  
Quality Instruments

CE  
0476

FDA  
Approved

ATS-ERS  
Standards

ISO  
9001-2000

ISO  
13485



Quality Instruments

# MiniSpir<sup>®</sup>

## PC based USB Spirometer with Oximetry option

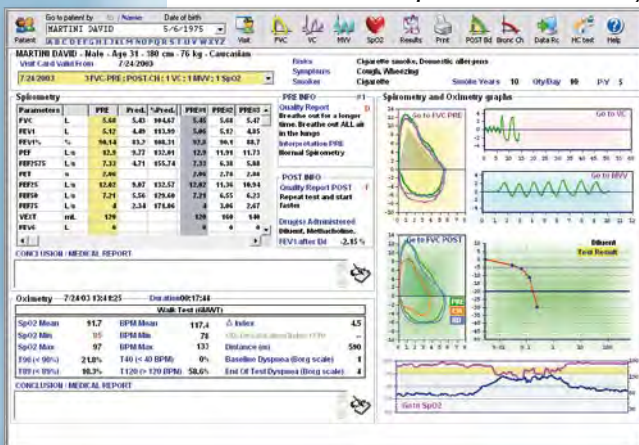
### Spirometer

FVC, VC, IVC, MVV, PRE-POST BD  
Internal temperature sensor for automatic BTPS conversion  
Available with disposable or reusable digital turbine flowmeters

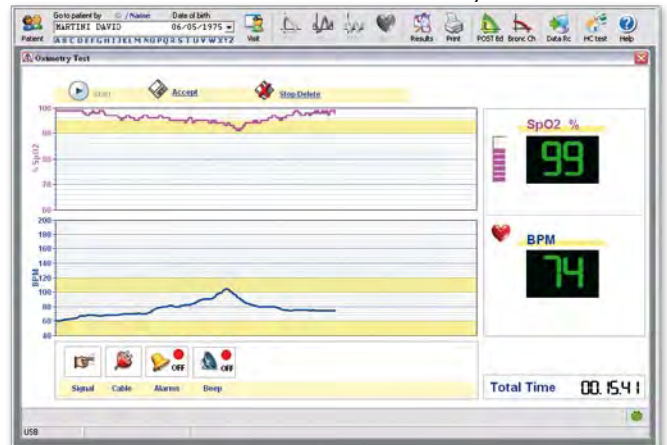
### Oximeter

MiniSpir<sup>®</sup> calculates all major parameters recommend in peer reviewed scientific literature (ie: min, max, mean SpO2 and Pulse Rate, Delta Index, T90%, T89%, T88%, T5 etc.)

Complete test summary



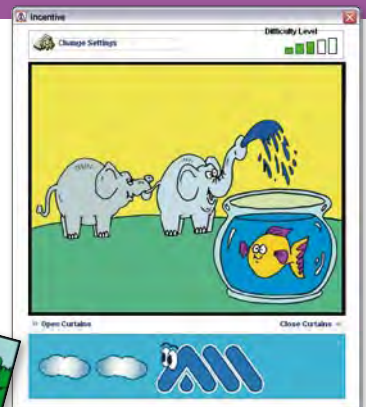
Online oximetry measurement



## winspiroPRO PC - Spirometry program

Used worldwide by over 50,000 physicians

- On line PC connection with icon-based interface
- Real time Flow/Volume and Volume/time curves
- PRE-POST bronchodilator comparison
- Advanced spirometry test interpretation
- Pediatric incentive animations
- Lung age estimation
- Bronchial challenge test with FEV1 dose-response curve
- Several sets of predicted values
- Integration with EMR systems
- Data export also via e-mail

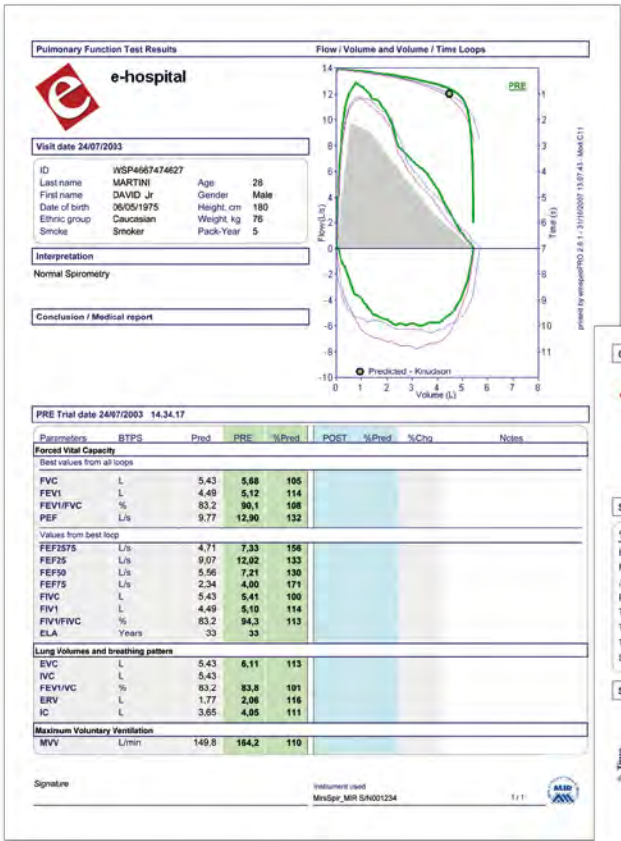


## winspiroPRO PC - Oximetry program

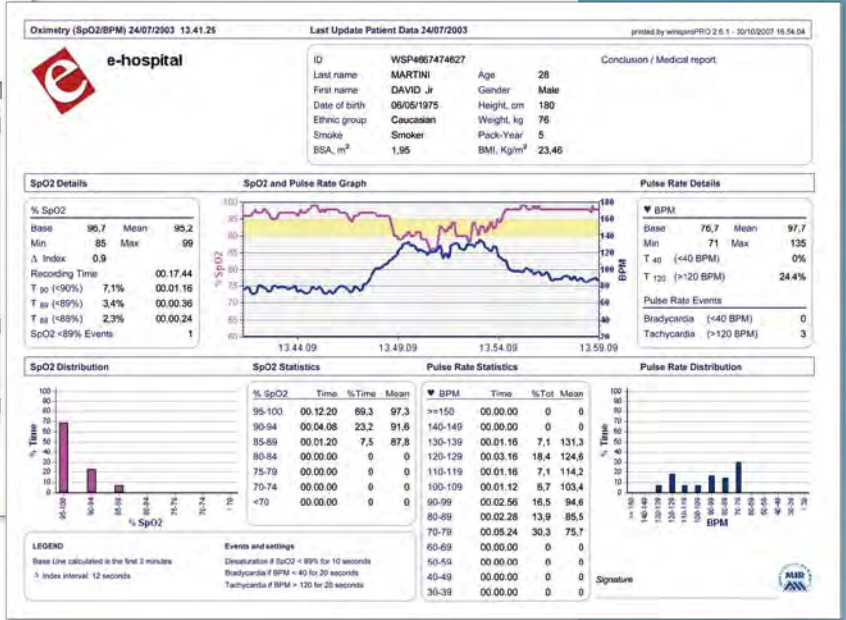
PC online test with real time SpO2 and Pulse Rate

- Complete SpO2 and Pulse Rate graphic trends
- Statistical analysis for assessing desaturation events
- Flexible reporting with several printouts available





Printout with oximetry report



Printout with spirometry report

Two different flowmeters available

FlowMir disposable turbine for single patient use

- High accuracy
- Easy to replace
- Very low cost
- Designed for use with MIR spirometers
- FlowMIR is factory calibrated
- Available in box of 100 pieces
- No maintenance – No filter – No problem
- Hygiene 100% guaranteed by single packaging



World's First International Patent Pending

Reusable turbine for long term operation

- High accuracy
- Long term stability
- Easy to clean or sanitized



MIR digital reusable and disposable turbines are developed in full compliance with ATS standards and guarantee accuracy in all environmental conditions



# MiniSpir®

PC based  
USB Spirometer with Oximetry option



## MiniSpir® spirometer

### Technical specification

Temperature sensor: semiconductor (0-45°C)  
Flow sensor: bi-directional digital turbine  
Flow range:  $\pm 16$  L/s  
Volume accuracy:  $\pm 3\%$  or 50 mL  
Flow accuracy:  $\pm 5\%$  or 200 mL/s  
Dynamic resistance at 12 L/s:  $<0.5$  cmH<sub>2</sub>O/L/s  
Communication port: USB  
Power Supply: line powered from USB port  
Dimension: 2.1x5.0x1.0 inch (52x128x26 mm)  
Weight: 2.5 Oz (70 gram)

### Measured parameters

FVC, FEV1, FEV1/FVC%, FEV3, FEV3/FVC%,  
FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%,  
FEF75%, FEF25-75%, FET, Vext, Lung Age,  
FIVC, FIV1, FIV1/FIVC%, PIF, VC, IVC, IC, ERV,  
FEV1/VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ti, MVV

## Available options

- PC Software **winspiroPRO NET** Network Version
- Adult reusable SpO<sub>2</sub> finger probe
- Adult disposable SpO<sub>2</sub> finger probe
- Pediatric reusable SpO<sub>2</sub> finger probe
- Infant disposable SpO<sub>2</sub> probe
- Neonatal disposable SpO<sub>2</sub> probe
- Ear clip SpO<sub>2</sub> probe
- SpO<sub>2</sub> finger probe extension cable



## SpO<sub>2</sub> Option

### Technical specification

SpO<sub>2</sub> range: 0-99%  
SpO<sub>2</sub> accuracy:  $\pm 2\%$  between 70-99% SpO<sub>2</sub>  
Pulse Rate range: 30-254 BPM  
Pulse Rate accuracy:  $\pm 2$  BPM or 2%

### Measured parameters

SpO<sub>2</sub> [Baseline, Min, Max, Mean], Pulse  
Rate [Baseline, Min, Max, Mean], T90  
[SpO<sub>2</sub><90%], T89 [SpO<sub>2</sub><89%],  
T88 [SpO<sub>2</sub><88%], T5 [ $\Delta$ SpO<sub>2</sub>>5%],  
 $\Delta$  Index [12s], SpO<sub>2</sub> Events,  
Pulse Rate Events [Bradycardia, Tachycardia]

## Standard price includes

- **MiniSpir®** base unit
- USB cable
- Carrying bag
- **winspiroPRO** software CD

Adult reusable  
finger probe



Pediatric reusable  
finger probe

## winspiroPRO PC system requirements

Microsoft Windows: Vista, 2000, XP  
Screen resolution: 1024 x 768  
Hard disk space: 500 MB  
USB socket available

**MIR - Medical International Research**  
Via del Maggiolino, 125 - 00155 Roma (Italy)  
Tel. +39 06.22754777 - Fax. +39 06.22754785  
www.spirometry.com  
mir@spirometry.com

www.spirometry.com