

ADVANCED

# SPIROLAB<sup>TM</sup>

Desktop, Stand-alone and  
PC-based Spirometer,  
with Oximetry Option

All-in-one Spirometer with 7" display,  
Embedded Printer and Oximetry option,  
to carry on the go



# MAIN features



## REAL-TIME TEST

**Spirometry:** FVC, VC, IVC, MVV, PRE/POST Bronchodilator comparison  
**Oximetry** (optional): Spot test (SpO2%, Pulse BPM)



## CARRY EVERYWHERE

7" LCD Color Touchscreen Display, Long-lasting rechargeable battery, massive Internal Storage



## COMPLIANCE ATS/ERS 2019

And other Standards including ISO 26782 (for Spirometry), ISO 23747 (for PEF), ISO 80601-2-61 (for Oximetry), and more. CE0476, FDA 510 (k)



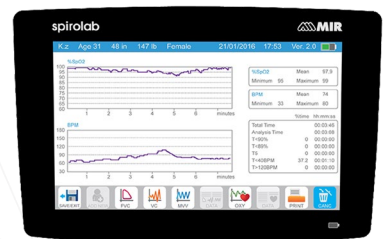
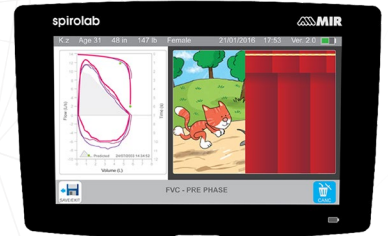
## PC CONNECTION AVAILABLE

Real-time test on PC screen, connect with your EHR/EMR, back-up internal memory and more, via USB and Bluetooth



## CALIBRATION SOFTWARE

Available on device, with printable calibration report (no separate software required)



# DISTINCTIVE features



## PREDICTED SETS & VALUES

Large Selection, including GLI, comparison %Pred, Z-score and LLN



## PRINTED EMBEDDED

Thermal printer. Paper size 112mm. Direct external print also available via PC software



## PEDIATRIC INCENTIVE

Real-time animation on display to improve patient compliance during the test



## COVID-19 PREVENTION

Complete Disposable Set with Antiviral filter. Bluetooth connection to test at safety distance

# Always INCLUDED

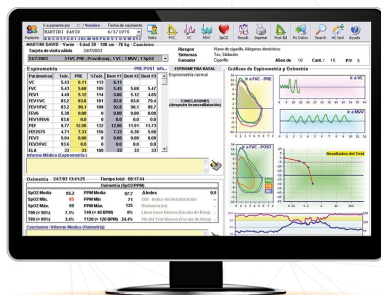
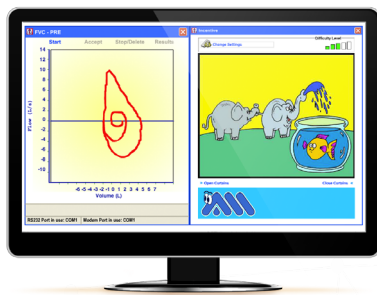
- Carrying case
- Power supply/battery charger
- USB cable
- 1 Roll of thermal printer paper

- Noseclip
- PC Software license
- With Oximetry Option:
  - Finger Probe



# Compatible SOFTWARE

winspiroPRO



**Pediatric Incentive**  
(PATENTED) to improve patient compliance during the test.

Acceptability Messages, Test interpretation and Quality Control Grade according to the latest **Spirometry Standards**

## MAIN FEATURES

Windows-based solution for Spirometry, Oximetry and Telemedicine.

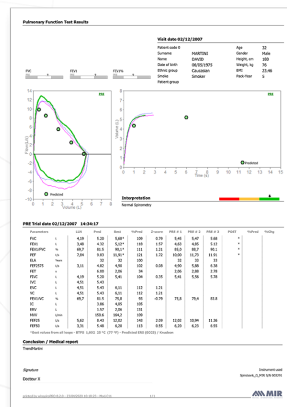
Wide range of predicted sets and values, including **GLI Predicted sets, LLN and Z-score.**

Embedded **EHR/EMR connectivity.**

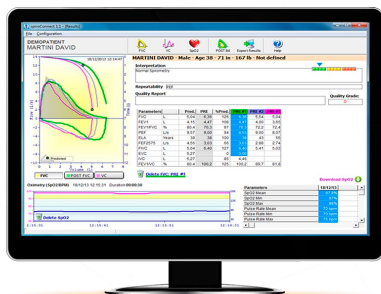
**NET VERSION** available, share one database between different PC workstations.

## MEDICAL REPORT

Specialized and **customizable printout**



spiro Connect



## MAIN FEATURES

Windows-based solution, **direct integration** with your EHR/EMR.

Real time test include **Spirometry** and **Oximetry**  
Standardized communication in **HL7** or **Exchange Protocol.**

Select patient info directly from your own **EHR/EMR**

**Spirometry test:** FVC-Pre, FVC-Post, VC-Pre  
**Oximetry Test:** SpO2 (%), Pulse (BPM)

## GO-TO-MARKET TOOLKIT

Software Development Kit available for System Integrators and App Developers.  
OEM service available for Spirometry and Oximetry.



Learn more about available SDK and OEM



# Compatible TURBINES

**flowMIR™**  
Disposable Turbine



**Reusable Turbine**



Mouthpiece

Included Disposable

Required, Not Included

Turbine Disinfection

Not required

Required

Turbine Calibration

Not required

Required

Packaging

Individually sealed: 60 or 10 units / box

1 unit in Carton box

Antiviral Filter

Available Disposable

Required Disposable

PLAY VIDEO



SCIENTIFIC PUBLICATIONS



## PRODUCT CODES - Spirolab Configurations

911080E0 – Spirometer • 911080E1 - Spirometer with reusable turbine

911081E0 - Spirometer + Oximeter • 911081E1 - Spirometer + Oximeter with reusable turbine

### Technical specification

|                  |                                |
|------------------|--------------------------------|
| <b>Width</b>     | 220 mm                         |
| <b>Length</b>    | 210 mm                         |
| <b>Thickness</b> | 51 mm                          |
| <b>Weight</b>    | 1450 g (battery pack included) |

### Sensors



miniflowmeter (code 900595)  
for reusable and disposable turbine  
dimension (Ø 30 mm, 42 mm)

Reusable soft, adult, MIR sensor for  
oximetry tests (code 919024) only  
spirolab code 911081

### Power supply

power  
**Current capacity**

**Consumption**

**Backup battery voltage**

**Batteries charger**

Rechargeable battery and mains

Ni-MH, 6 elements

4500 mAh

average 250 mA

none

Output voltage=12 V, current=1A,  
compliant with EN 60601-1

~10 hours

### Autonomy

### Connectivity

### Display

Display

### Keyboard

### Mouthpieces

### Type of electrical

### Protection

### Safety level for shock hazard

### Conditions of use

USB 2.0, Bluetooth® 2.1

7 inch colour touch screen LCD

with 800x480 resolution

absent, touchscreen

Ø 30 mm (1.18 inch)

Internally powered

Class II while charging battery

Type BF Apparatus

Apparatus for continuous use

### Storage conditions

Temperature: MIN -40 °C,  
MAX +70 °C  
Humidity: MIN 10% RH;  
MAX 95%RH

### Transport conditions

Temperature: MIN -40 °C,  
MAX +70 °C  
Humidity: MIN 10% RH;  
MAX 95%RH

### Operating conditions

Temperature: MIN + 10 °C,  
MAX + 40 °C  
Humidity: MIN 10% RH,  
MAX 95%RH

### Applied norms

Electrical Safety EN 60601-1  
Electro Magnetic Compatibility  
EN 60601-1-2

### Degree of protection

### against water penetration

IPX1 appliance protected against  
water leaks

### Codes and equipments

|                 |                                 |
|-----------------|---------------------------------|
| <b>911080E0</b> | spiro                           |
| <b>911080E1</b> | spiro with reusable turbine     |
| <b>911080E2</b> | spiro with 120 FlowMir          |
| <b>911081E0</b> | spiro+oxy                       |
| <b>911081E1</b> | spiro+oxy with reusable turbine |
| <b>911081E2</b> | spiro+oxy with 120 FlowMir      |

### Spirometry

|                            |                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flow sensor</b>         | bi-directional digital turbine                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Volume rate</b>         | 10 L                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Flow range</b>          | ±16L/s                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Volume accuracy</b>     | ±2.5% or 50 mL                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Flow accuracy</b>       | ±5% or 200 mL/s                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Dynamic resistance</b>  | <0.5 cm H2O/L/s                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Temperature sensor</b>  | semiconductor (0-45°C)                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Test available</b>      | FVC, VC, IVC, MVV, PRE-POST<br>FVC, FEV1, FEV1/FVC%, FEV1/PEF,<br>FEV1/VC, FEV1/FEF0.5, DTPEF, FEV<br>FEV0.5/FVC, FEV0.75, FEV0.75/FVC,<br>FEV2, FEV2/FVC, FEV3, FEV3/FVC,<br>FEV1/FEV6, PEF, FEF25, FEF50,<br>FEF2575, FEF7585, FET, Vext, ELA,<br>FIVC, FIV1, PIF, FIV1/FIVC, FIF25,<br>FIF75, R50, MVVcal, PIF, IRV, VC,<br>IVC, IC, ERV, IRV, FEV1/VC, TV, VE,<br>te, ti/t-tot, TV/ti, MVV |
| <b>Measured parameters</b> | Up to 10000 tests                                                                                                                                                                                                                                                                                                                                                                              |

### Oximetry (on request)

|                                                                |                                                                                                                                                                                                                         |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Measurement method</b>                                      | Red and infrared absorption                                                                                                                                                                                             |
| <b>SpO2 range</b>                                              | 0-99%                                                                                                                                                                                                                   |
| <b>SpO2 accuracy</b>                                           | ± 2% between 70-99% SpO2                                                                                                                                                                                                |
| <b>Average number of heart beats for the %SpO2 calculation</b> | 8 beats                                                                                                                                                                                                                 |
| <b>Pulse Rate range</b>                                        | 18-300 BPM                                                                                                                                                                                                              |
| <b>Pulse Rate accuracy</b>                                     | ± 2BPM or 2% whichever is greater                                                                                                                                                                                       |
| <b>Average interval for the calculation of cardiac pulse</b>   | 8 seconds                                                                                                                                                                                                               |
| <b>Signal quality indication</b>                               | 0 - 8 segments on display                                                                                                                                                                                               |
| <b>Test available</b>                                          | spot                                                                                                                                                                                                                    |
| <b>Measured parameters</b>                                     | SpO2% min, max, average<br>BPM min, max, average<br>Test duration<br>% Bradycardia Duration (<40 BPM)<br>% Tachycardia Duration (>120 BPM)<br>% of Time with SpO2 ≤ 90% (T90%,<br>T89%), T5<br>about 500 hours oximetry |

### Memory capacity

### Certificates & Registrations

|                           |                                    |
|---------------------------|------------------------------------|
| <b>CE 0476</b>            | MED 9826                           |
| <b>FDA 510 (k)</b>        | K 052140                           |
| <b>Health Canada</b>      | 71191 (class II)                   |
| <b>CND code</b>           | Z12150102 (spiro)                  |
|                           | Z1203020408 (spiro + oxy)          |
| <b>GMDN code</b>          | 46906 (spiro), 45607 (spiro + oxy) |
| <b>Ministry of Health</b> | 1272475/R (spiro)                  |
|                           | 1272476/R (spiro + oxy)            |
|                           | 1645455/R (spiro)                  |

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