

ADVANCED

# SPIRODOC<sup>TM</sup>

Handheld, Stand-alone and  
PC-based Spirometer

Touchscreen Spirometer and 3D Oximeter:  
6MWT, Sleep Test, 24h SpO2 Holter.

Two International Patents: Design Copywrite  
and Multifunctional capabilities.



# MAIN features



## REAL-TIME TEST

Spirometry: FVC, VC, IVC, MVV, PRE/POST  
Bronchodilator comparison  
3D Oximetry (optional):  
Spot test (SpO2, Pulse),  
6MWT, Sleep Test, 24h SpO2 Holter Test.



## CARRY EVERYWHERE

LCD Touchscreen Display,  
long battery life, large  
internal storage, carrying  
case included



## 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



# DISTINCTIVE features



## PREDICTED SETS & VALUES

Large Selection,  
including comparison  
%Pred, Z-score and LLN.  
Include GLI in PC-mode



## 6MWT, SLEEP TESTS, HOLTER

With Oximetry option,  
measure desaturation  
events during exercise,  
sleep and daily activities



## EHR/EMR CONNECTIVITY

Via PC, integration with  
patient database on your  
EHR/EMR (in HL7, GDT)



## COVID-19 PREVENTION

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

# Always INCLUDED

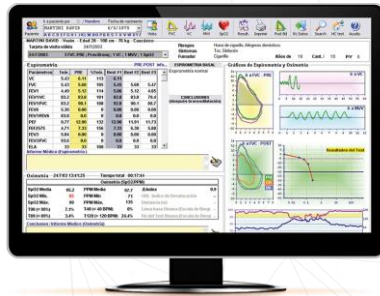
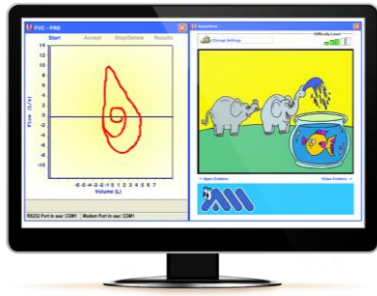
- Carrying case
- USB cable
- Noseclip
- PC Software license

With Oximetry Option:

- Finger Probe
- Plastic hard case and belt

# 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.

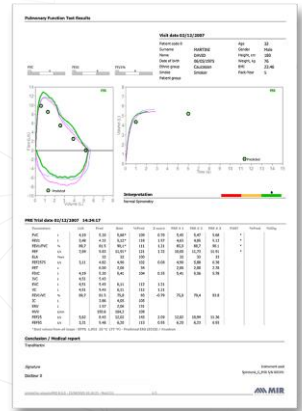
Wide range of predicted sets and values, including GLI Predicted sets, LLN and Z-score.

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



# TECHNICAL datasheet

## PRODUCT CODES - Spirodoc Configurations

910600E0 – Spirometer • 910600E1 – Spirometer with reusable turbine

910610E0 - Spirometer + Oximeter • 910610E1 - Spirometer + Oximeter with reusable turbine

### Technical specification

Main body  
Width 48 mm  
Length 101 mm  
Thickness 16 mm  
Weight 99 g (battery pack included)

Turbine housing  
Width 47 mm  
Length 46 mm  
Thickness 24 mm  
Weight 17 g

### Turbine

Reusable turbine (code 910002)

Disposable turbine (code 910004)

Tri-axial accelerometer  
Rechargeable Lithium-Ion 3.7V,  
1100 mAh  
Current capacity 1100 mAh  
Consumption ~20-30 mA (during test)  
Batteries charger voltage=5 V DC,  
current=minimum 500 mA,  
Connector : micro USB type B  
compliant with EN 60601-1

Autonomy 50 hours  
Connectivity USB 2.0, Bluetooth® 2.1  
Display LCD monochrome, 160x80 pixels  
Dimension 2.8 inch

Keyboard touchscreen  
Mouthpieces Ø 30 mm (1.18 inch)  
Type of electrical protection Internally powered  
Safety level for shock hazard Type BF Apparatus

Conditions of use Apparatus for continuous use

Storage/shipping conditions  
Temperature: MIN -20 °C,  
MAX + 60 °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  
IEC 60601-1:2005 + A1:2012  
EN 60601-1-2:2015  
ISO 80601-2-61:2017  
ISO 26782:2009  
ISO 23747:2015  
ATS/ERS: 2005, 2019 Update

### Spirometry

Flow sensor bi-directional digital turbine  
Flow range ±16L/s  
Volume accuracy ±2.5% or 50mL  
Flow accuracy ±5% or 200mL/s  
Dynamic resistance <0.5 cmH2O/L/s  
Temperature sensor semiconductor (0-45°C)  
Measured parameters FVC, FEV1, FEV1/FVC%, PEF, FEV3,  
FEV3/FVC%, FEV6, FEV1/FEV6%,  
FEF25, FEF50, FEF75, FEF2575,  
FET, EVol, ELA, FIVC, FIV1, FIV1/FIVC%,  
FEV1/VC%, TV, VE, RR, t<sub>i</sub>, t<sub>e</sub>, t<sub>i</sub>/t<sub>tot</sub>,  
VT/t<sub>i</sub>, MVV  
Up to 10000 tests

PIF, VC, IVC, IC, ERV,

Memory capacity

### Oximetry (on request)

Measurement method Red and infrared absorption  
SpO2 range 0-99%  
SpO2 accuracy ± 2% between 70-99% SpO2  
Average number of heart beats for the %SpO2 calculation 8 beats  
Pulse Rate range 30-254 BPM  
Pulse Rate accuracy ± 2BPM or 2%  
Average interval for the calculation of cardiac pulse 8 seconds

Signal quality indication 0 - 8 segments on display

Measured parameters All test  
%SpO<sub>2MIN</sub>, %SpO<sub>2MEAN</sub>, %SpO<sub>2MAX</sub>,  
BPM<sub>MIN</sub>, BPM<sub>MEAN</sub>, BPM<sub>MAX</sub>, Ttotal,  
Tanalysis, T<90%, T<89%, T<88%,  
T<87%, Ev%SpO<sub>2</sub><89, ΔIndex,  
T<40BPM, T>120BPM, Ev<40BPM,  
Ev>120BPM

Sleep test  
%SpO<sub>2BASE</sub>, BPM<sub>BASE</sub>, ODI, Mean Dur.  
Desat., TotDesaturat., Longest  
Desat., Desatur. Peak, BPM Index,  
Mean Desaturat., Mean Drop, Max  
Drop, BPM Variation, NOD4%,  
NOD89%, NOD90%, t.NOD4%,  
t.NOD89%, t.NOD90%

6MWT test  
%SPO2, BPM, Tbaseline, Twalking,  
Trecovey, Distance, T2%ΔSPO2,  
T4%ΔSPO2, Predicted, %Predicted,  
AUC/Distance, Dyspnea, Dyspnea,  
Fatigue, Diastolic, Systolic, Steps,  
VMU, O2-GAP, O2

Memory capacity up to 300 hours oximetry

### Certificates & Registrations

CE 0476 MED 9826  
FDA 510 (k) K 103530  
Health Canada 71191 (class II), 75535 (class III)  
CND code Z12150102 (spiro)  
Z1203020408 (spiro + oxy)  
GMDN code 46906 (spiro), 45607 (spiro + oxy)  
Ministry of Health 499389/R (910600), 501050/R  
(910606), 501619/R (910610)  
1271090/R (91060011)  
1271086/R (9106061)  
1271078/R (91061011)

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