

ADVANCED

SPIRODOCTM

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

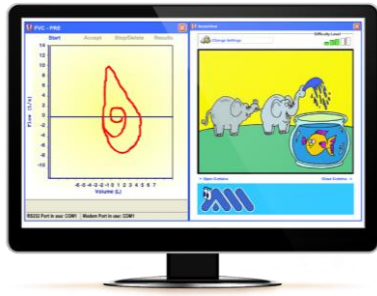
- Carrying case
- USB cable
- Noseclip
- PC Software license

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.

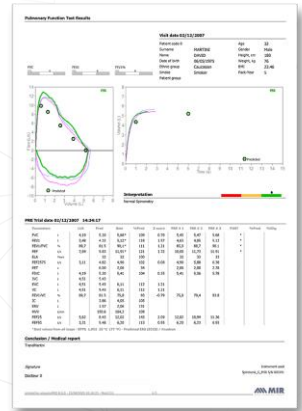
Wide range of predicted sets and values, including GLI Predicted sets, LLN and Z-score.

Embedded EHR/EMR connectivity.

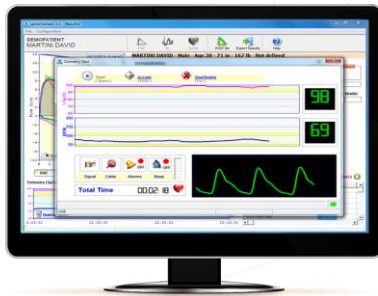
NET VERSION available, share one database between different PC workstations.

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_i, t_e, t_i/t_{tot}, VT/t_i, 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_{2MIN}, %SpO_{2MEAN}, %SpO_{2MAX}, BPM_{MIN}, BPM_{MEAN}, BPM_{MAX}, Ttotal, Tanalysis, T<90%, T<89%, T<88%, T<87%, Ev%SpO₂<89, ΔIndex, T<40BPM, T>120BPM, Ev<40BPM, Ev>120BPM

Sleep test %SpO_{2BASE}, BPM_{BASE}, 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)

ITALY

MIR Head Office
Via del Magliolino, 125
00155 Roma
Tel. +39 06 22 754 777
Fax +39 06 22 754 785
Mir.spirometry.com

USA

MIR USA, Inc.
5462 S. Westridge Drive
New Berlin, WI 53151
Phone +1 (262) 565-6797
Fax +1 (262) 364-2030

FRANCE

MIR Local Office
Jardin des Entreprises,
290, Chemin de Saint Dionisy
30980 LANGLADE (France)
Phone +33 (0)4 66 37 20 68
Fax +33 (0)4 84 25 14 32