

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)



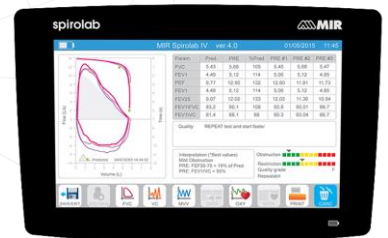
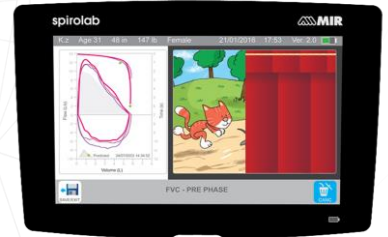
## PC CONNECTION AVAILABLE

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

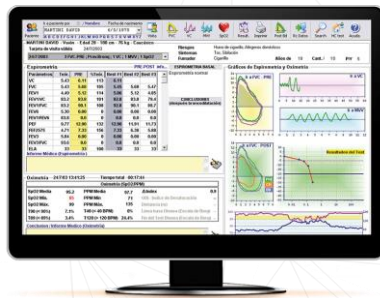
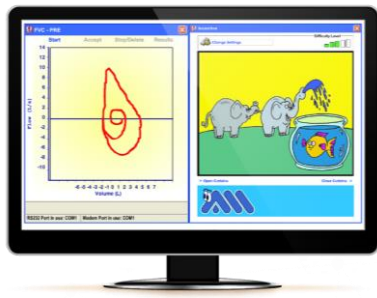
- Carrying case
- Power supply/battery charger
- USB cable
- 1 Roll of thermal printer paper

- 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.

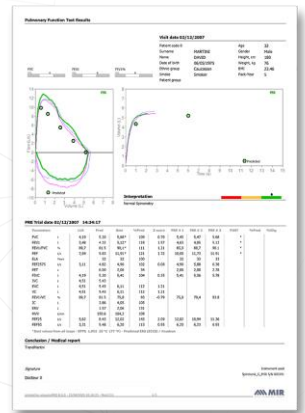
Wide range of predicted sets and values, including GLI Predicted sets, LLN and Z-score.

Embedded EHR/EMR connectivity.

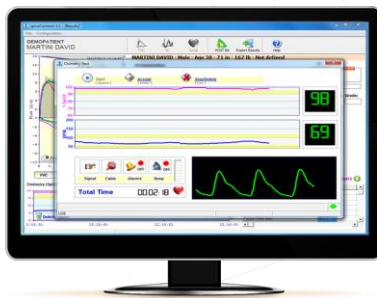
NET VERSION available, share one database between different PC workstations.

### 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





# TECHNICAL datasheet

## PRODUCT CODES - Spirolab Configurations

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

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

### Technical specification

Width	220 mm
Length	210 mm
Thickness	51 mm
Weight	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

911080EO	spiro
911080E1	spiro with reusable turbine
911080E2	spiro with 120 FlowMir
911081EO	spiro+oxy
911081E1	spiro+oxy with reusable turbine
911081E2	spiro+oxy with 120 FlowMir

### Spirometry

Flow sensor	bi-directional digital turbine
Volume rate	10 L
Flow range	±16L/s
Volume accuracy	±2.5% or 50 mL
Flow accuracy	±5% or 200 mL/s
Dynamic resistance	<0.5 cm H2O/L/s
Temperature sensor	semiconductor (0-45°C)
Test available	FVC, VC, IVC, MVV, PRE-POST
Measured parameters	FVC, FEV1, FEV1/FVC%, FEV1/PEF, FEV1/VC, FEV1/FEF0.5, DTPEF, FEV FEV0.5/FVC, FEV0.75, FEV0.75/FVC, FEV2, FEV2/FVC, FEV3, FEV3/FVC, FEV1/FEV6, PEF, FEF25, FEF50, FEF2575, FEF7585, FET, Vext, ELA, FIVC, FIV1, PIF, FIV1/FIVC, FIF25, FIF75, R50, MVVcal, PIF, IRV, VC, IVC, IC, ERV, IRV, FEV1/VC, TV, VE, te, ti/t-tot, TV/ti, MVV
0.5,	
FEV6, FEF75, EVOL, FIF50, EVC, RR, ti, Memory capacity	Up to 10000 tests

### 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	18-300 BPM
Pulse Rate accuracy	± 2BPM or 2% whichever is greater
Average interval for the calculation of cardiac pulse	8 seconds
Signal quality indication	0 - 8 segments on display
Test available	spot
Measured parameters	SpO2% min, max, average BPM min, max, average Test duration % Bradycardia Duration (<40 BPM) % Tachycardia Duration (>120 BPM) % of Time with SpO2 ≤ 90% (T90%, T89%), T5
Memory capacity	about 500 hours oximetry

### Certificates & Registrations

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

## ITALY

MIR Head Office  
Via del Maggolino, 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