ADVANCED

SPIROBANK II ADVANCED™

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

A complete Spirometer and Oximeter, designed for all respiratory therapists.

MIR
MEDICAL INTERNATIONAL RESEARCH

www.spirometry.com

MAIN features

REAL-TIME TEST

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

CARRY EVERYWHERE

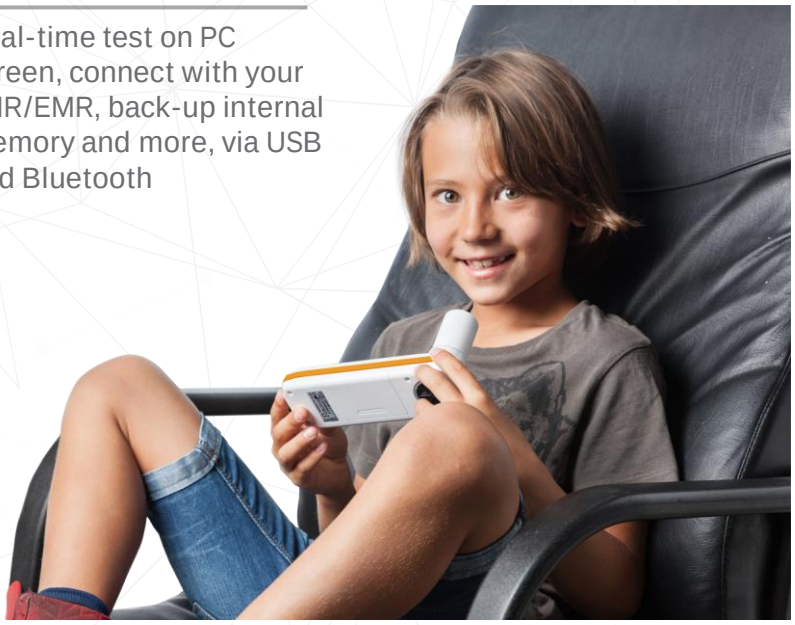
High resolution backlight display, long battery life, large internal storage, carrying case included

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

OXIMETRY OPTION

Spot test in Real-Time and 6MWT, Sleep Test, 24h Holter in PC-mode (calculated)

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

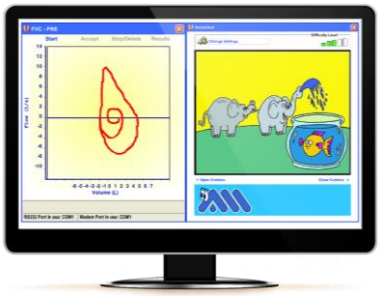
- Carrying case
- USB cable
- Noseclip
- PC Software license

With Oximetry Option:

- Finger Probe

Compatible SOFTWARE

winspiroPRO



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

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

MAIN FEATURES

Windows-based solution for Spirometry, Oximetry and Telemedicine.

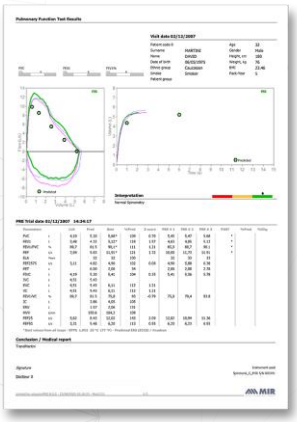
Wide range of predicted sets and values, including GLI Predicted sets, LLN and Z–score.

Embedded EHR/EMR connectivity.

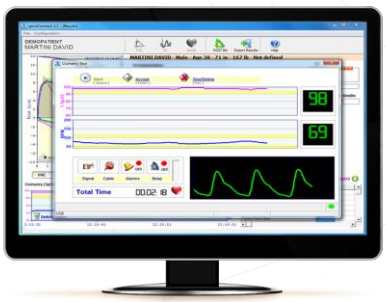
NET VERSION available, share one database between different PC workstations.

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

		Mouthpiece	Turbine Disinfection	Turbine Calibration	Packaging	Antiviral Filter
flowMIR ™ Disposable Turbine		Included Disposable	Not required	Not required	Individually sealed: 60 or 10 units / box	Available Disposable
Reusable Turbine		Required, Not Included	Required	Required	1 unit in Carton box	Required Disposable

VISIT WEBSITE

SCIENTIFIC PUBLICATIONS

Also available in MORE CONFIGURATIONS

Technical Specification	Spirobank II Advanced	Spirobank II Smart	Spirobank II Basic
TYPE OF SPIROMETER	StandAlone + PC, with Oximetry Option	StandAlone + PC + App, with Oximetry Option	StandAlone + PC
COMPATIBLE TURBINES	flowMIR™ Disposable Turbine, Reusable Turbine Flowmeter	flowMIR™ Disposable Turbine, Reusable Turbine Flowmeter	flowMIR™ Disposable Turbine, Reusable Turbine Flowmeter
COMPATIBLE SOFTWARES	Winspiro PRO, spiro Connect	MIR Spiro App, Winspiro PRO, spiro Connect	Winspiro PRO, spiro Connect
EXTERNAL CONTROL	Real-Time test on PC screen, connect with your EHR/EMR, back-up internal memory, and much more Connect to your PC via USB and Bluetooth 2.0	Real-Time test on Tablet screen and PC screen, connect with your EHR/EMR, back-up internal memory, and much more Connect to your PC via USB (no Bluetooth) Connect to your Tablet via Bluetooth Smart BLE 4.0	Real-Time test on PC screen, connect with your EHR/EMR, back-up internal memory and much more Connect to your PC via USB
EHR CONNECTIVITY	Via PC, integration with patient database on your EHR/EMR (in HL7, GDT)	Via PC: integration with patient database on your EHR/EMR (in HL7, GDT) Via APP: transfer data to a remote server in HL7 standards	Via PC, integration with patient database on your EHR/EMR (in HL7, GDT)
MEASURED PARAMETERS	Spirometry: FVC, VC, IVC, MVV, PRE-POST Bronchodilator comparison Oximetry (optional): Spot test (SpO2, BPM) Spirometry: FVC, FEV1, FEV1/FVC%, DTPEF, FEV 0.5, FEV0.5/FVC%, FEV0.75, FEV0.75/FVC%, FEV2, FEV2/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF25-75%, FEF75-85%, FET, Vext, ELA, EVOL, FIVC, FIV1, PIF, FIV1/FIVC%, FIF25%, FIF50%, FIF75%, R50, PIF, IRV, VC, IVC, IC, ERV, FEV1/VC%, TV, VE, RR, ti, te, ti/t-tot, TV/ti, MVV Oximetry (Optional): 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%)	Spirometry: FVC, VC, IVC, MVV, PRE-POST Bronchodilator comparison Oximetry (optional): Spot test (SpO2, BPM) Spirometry: FVC, FEV1, FEV1/FVC%, DTPEF, FEV 0.5, FEV0.5/FVC%, FEV0.75, FEV0.75/FVC%, FEV2, FEV2/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25, FEF50, FEF75, FEF25-75, FEF75-85%, FET, Vext, ELA, EVOL, FIVC, FIV1, PIF, FIV1/FIVC%, FIF25, FIF50, FIF75, R50, PIF, IRV, VC, IVC, IC, ERV, FEV1/VC%, TV, VE, RR, tI, tE, tI/t-tot, TV/tI, MVV Oximetry (Optional): 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%) on MIR Spiro App: Spirometry: FVC, VC, PRE/POST Bronchodilator comparison Parameters: FVC, FEV1, FEV1%, PEF, FEF25–75, FET, Lung Age, VC, IVC. Oximetry (Optional): %SpO2 [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean] Events.	Spirometry: FVC, VC, IVC, PRE/POST Bronchodilator comparison Spirometry: FVC, VC, IVC, IC, ERV, FEV1, FEV1%, PEF, FEF 25-75, FET, EVOL, ELA

COMPARE ON WEBSITE

TECHNICAL datasheet

PRODUCT CODES - Spirobank II Advanced Configurations
911020E0 - Spirometer • 911020E1 - Spirometer with reusable turbine
911025E0 - Spirometer + Oximeter • 911025E1- Spirometer + Oximeter with reusable turbine

Technical specification

Width	55 mm
Length	160 mm
Thickness	25 mm
Weight	140 g (battery pack included)
Turbine	
	Reusable turbine (code 910002
	Disposable turbine (code 910004)
Power supply	Rechargeable Lithium-Ion 3.7V, 1100 mAh
Current capacity	1100 mAh
Consumption	~20-30 mA (during test)
Backup battery voltage	none
Batteries charger	voltage=5 V DC, current=minimum 500 mA, input current= 100VAC - 240 VAC Connector: micro USB type B compliant with EN 60601-1
Autonomy	50 hours
Connectivity	USB 2.0, Bluetooth® 2.1
Display	LCD monochrome, 160 × 80 pixel
Keyboard	membrane keyboard with 6 keys
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
Conditions of storage	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	Electrical Safety Standard EN 60601-1 Electro Magnetic Compatibility EN 60601-1-2

Spirometry

Flow sensor	bi-directional digital turbine
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%, DTPEF, FEV 0.5, FEV0.5/FVC%, FEV0.75, FEV0.75/FVC%, FEV2, FEV2/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF25-75%, FEF75-85%, FET, Vext, ELA, EVOL, FIVC, FIV1, PIF, FIV1/FIVC%, FIF25%, FIF50%, FIF75%, R50, PIF, IRV, VC, IVC, IC, ERV, FEV1/VC%, TV, VE, RR, ti, te, ti/t-tot, TV/ti, MVV
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%)
Memory capacity	up to 300 hours oximetry

Certificates & Registrations

CE 0476	MED 9826
FDA 510 (k)	K 061712
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	1038066/R (spirometer) 1038086/R (spirometer + oximeter)

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