

English



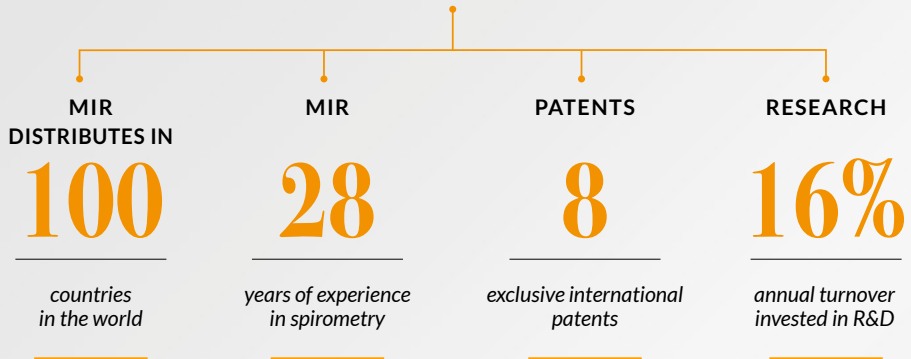
Innovation in Spirometry Oximetry Telemedicine

www.spirometry.com
www.mirsmartone.com

Global spirometer market: company share analysis

MIR distributes its products in over 100 countries and it has been ranked among the top 5 spirometry major players in the world!

*MIR is identified as **visionary leader** for the strength of product portfolio, distribution network across the globe and business strategy excellence. **



*** Sources (2019):**

Global Spirometry Market, Analysis and Forecast to 2023
Secondary Research, Company Annual Reports, Press Releases





Item Code 910004



**INTERNATIONAL
PATENT**

**Volume Accuracy
± 2,5% or 50 ml**

FlowMIR™

Disposable Turbine Flowmeter MIR exclusive product International patent

Each turbine, which includes a cardboard mouthpiece, has been individually factory tested with a computerized system

For each patient, after the Spirometry test, both turbine and mouthpiece are thrown away



FlowMIR Dispensers (10 and 60 pcs)



Comfortable
Packaging



Singularly Tested
and Packed



Eliminates staff
clean-up time



No Sterilisation



No Calibration



No Cross
Contamination



No Antibacterial
Filter



Always 100%
accurate and hygienic



ATS/ERS Compliant
for accuracy



Not affected by
Vapour Condensation



Not affected by
Ambient conditions



The Best Sensor
for Spirometry

ADVANCED



Spirolab™ Bluetooth®

7 inch Touchscreen
All in one portable Desktop Spirometer
with Oximetry option



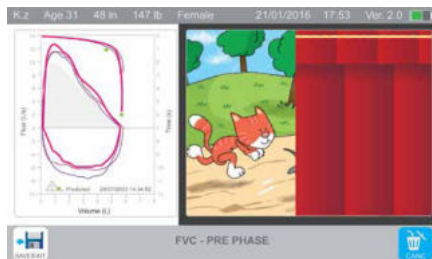
Real-time tests with **wireless Bluetooth™** and **USB**

Fast and silent **built-in printer** with customizable
printout format

Lightweight for easy mobility, **carrying case** included,
long life **rechargeable battery**.

GLI predicted sets available in Stand-Alone mode
and PC mode

Pediatric Incentive available on display



On screen paediatric incentive



Always included: professional PC software,
with unlimited free update



ATS/ERS 2019,
CE 0476, FDA 510(k)



Optional function available:
Oximeter with adult or paediatric finger probe



Available with both **DISPOSABLE**
or **REUSABLE** turbine flowmeter



Spirometry test: FVC, VC, IVC, MVV, PRE/
POST Bronchodilator comparison with a
wide range of selectable parameters



Direct connection to an external USB printer



ADVANCED



Detachable flowmeter head to facilitate Oximetry test during 6 Minute Walk Test

Spirodoc™ Bluetooth® Touchscreen Spirometer and 3D Oximeter™: 6MWT, Sleep test, 24h SpO2 Holter

Real-time tests with **wireless Bluetooth™** and USB

Long life Rechargeable Battery

Unique feature: can be configured for both Doctor's Office or for Patient Home use



Fully featured stand alone Oximeter



Patient data entry



Always included: professional PC software,
with unlimited free update



ATS/ERS 2019,
CE 0476, FDA 510(k)



Optional function available:
Oximeter with adult or paediatric finger probe



Available with both DISPOSABLE
or REUSABLE turbine flowmeter



Spirometry test:
FVC, VC, IVC, MVV, PRE/POST
Bronchodilator comparison with a
wide range of selectable parameters

ADVANCED



Spirobank II™ Advanced Spirometer with Oximetry Option

Portable minilab for **pulmonologists and respiratory therapists**

Real-time tests with **wireless Bluetooth™** and **USB**

Rechargeable, **long-life battery**

Traffic lights for immediate test interpretation

SpO2 and pulse rate (optional) directly on the display (including **plethysmographic curve**)



Always included: professional PC software, with unlimited free update



ATS/ERS 2019, CE 0476, FDA 510(k)



Available with both DISPOSABLE or REUSABLE turbine flowmeter



Spirometry test: FVC, VC, IVC, MVV, PRE/POST Bronchodilator comparison with a wide range of selectable parameters



Optional function available:
Oximeter with adult or paediatric finger probe



Minispir™ Computer-based Spirometer

Real time Flow/Volume and Volume/Time curves on your PC for a comprehensive Spirometry

Includes a wide range of selectable parameters

Power via USB, no internal memory, no display, no maintenance

Embedded **Temperature sensor** for BTPS conversion



Always included: professional PC software, with unlimited free update



ATS/ERS 2019, CE 0476, FDA 510(k)



Available with both DISPOSABLE or REUSABLE turbine flowmeter



Spirometry test: FVC, VC, IVC, MVV, PRE/POST Bronchodilator comparison with a wide range of selectable parameters

LIGHT



Spirobank II[™] Basic

Essential,
easy to use Spirometer

*Ideal for family doctors,
occupational medicine, screening*

Real-time tests via USB

Rechargeable, long-life battery

Traffic lights for immediate test interpretation

Backl, high-resolution display

On screen results and curves preview



*Always included: professional PC software,
with unlimited free update*



*ATS/ERS 2019,
CE 0476, FDA 510(k)*



*Available with both DISPOSABLE
or REUSABLE turbine flowmeter*



*Spirometry test: FVC, VC, IVC, IC ERV,
PRE/POST Bronchodilator comparison
with a wide range of selectable parameters*

Minispir Light[™]

Simplified Computer-based
Spirometer

*Real time COPD and Asthma screening
have never been so intuitive and inexpensive!*

Spirometry test interpretation

*Power via USB, no internal memory, no display,
no maintenance*

*Embedded Temperature sensor for BTPS
conversion*



*Always included: professional PC software,
with unlimited free update*



Available with DISPOSABLE turbine flowmeter



*Spirometry test: FVC, VC, IVC, PRE/POST
Bronchodilator comparison*

ADVANCED SMART



Spirobank II™ Smart

Complete Spirometer with Oximetry option for PC, iPad and Android Tablets

Real-time tests with **wireless Bluetooth™** connection to Tablets, and **USB connection** to PC

Rechargeable, **long-life battery**

SpO2 and Pulse rate (optional) directly on the display (including plethysmographic curve)

Highly innovative **Virtual Assistant** available on the App, to support the operator before, during and after the test.

Share test results via the App, in PDF or HL7 to a remote server.



Quanjer 2012-GLI

Predicted values with LLN and Z-score



Pediatric Incentive



Always included: professional PC software, with unlimited free update



Always included: professional App (MIR Spiro) for iPad and Android Tablets



ATS/ERS 2019, CE 0476, FDA 510(k)



Available with both **DISPOSABLE** or **REUSABLE** turbine flowmeter



Spirometry test: FVC, VC, IVC, MVV, PRE/POST Bronchodilator comparison with a wide range of selectable parameters



Optional function available: Oximeter with adult or paediatric finger probe



PERSONAL



Spirotel™ Bluetooth®

4 in One for Home use:
Touchscreen Spirometer, 3D Oximeter™,
Triaxial Accelerometer and eDiary

*3D Oximeter™ with triaxial accelerometer allows to correlate
SpO2 Desaturation Events, patient Physical Activity
and Body Position during data recording*

*The best solution for remote management in Asthma, COPD,
Cystic Fibrosis and Lung Transplant*

Ideal for Clinical Trials with customizable protocols

Long life Rechargeable Battery



Customizable eDiary



**Always included: professional PC software,
with unlimited free update**



Optional function available:
Oximeter with adult or paediatric finger probe



Spirometry test: FVC, FEV1, FEV1/FVC Ratio,
FEV6, FEF, FET, FEF2575

PERSONAL SMART



Spirobank Smart™



MIR Spirobank

The simplest device
for cost-effective spirometry

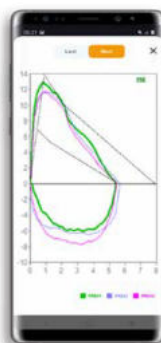
Real time test on Smartphone and
via **Bluetooth Smart 4.0**

Suitable for **all ages from 5 to 93 years** and
multi-ethnic groups (GLI predicted sets)

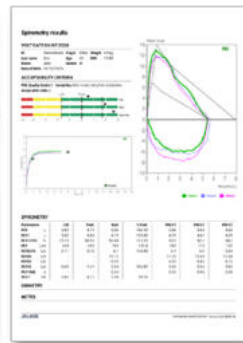
Professional PDF report, share with anyone you like
via Email, whatsapp and other Apps

Test results and spirometry guidelines are **easy to understand** via the App.

Software Development Kit (iOS and Android)
available for developers



Flow/Volume Curve



Professional PDF report



Spirometry test: PEF, FEV1, FVC, FEV1/FVC, FEF2575, FEV6, VEXT, DTPEF, FEF75, FEF25, FEF50



Available with both **DISPOSABLE**
or **REUSABLE** single patient turbine flowmeter



Always included: personal App (MIR Spirobank)
for iOS and Android Smartphones

ATS/ERS 2019, CE 0476, FDA 510(k)



PERSONAL SMART



MIR Spirobank

Spirobank Oxi™



Now available with SpO2 (%) and Pulse (BPM)

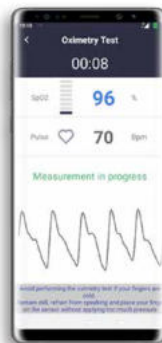
Real time **plethysmographic curve** on Smartphone via Bluetooth Smart 4.0

Ready to Connect: designed for **Remote Patient Monitoring**, Homecare, Clinical Trials and 3rd party software integration.

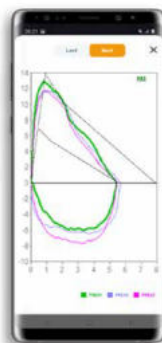
Live Video Exam: connect with your Healthcare provider in real-time, from the comfort of your home

Innovative reflectance **Pulse-Oximetry sensor** (Touch). Easy to use and accurate

Software Development Kit (iOS and Android) available for developers



Real-time plethysmographic curve



Flow/Volume Curve



Spirometry test: PEF, FEV1, FVC, FEV1/FVC, FEF2575, FEV6, VEXT, DTPEF, FEF75, FEF25, FEF50



Oximetry test: SpO2 (%), Pulse (BPM), Plethysmographic curve



Available with both **DISPOSABLE** or **REUSABLE** single patient turbine flowmeter



Always included: personal App (MIR Spirobank) for iOS and Android Smartphones



ATS/ESR 2019, CE0476, FDA Pending

PERSONAL SMART



Smart One™



SmartOne

Peak Flow and FEV1 on your Smartphone and Tablet

*Ideal in the **self management** of Asthma, COPD, Lung Transplant care, Cystic Fibrosis and for use in Clinical Trials*

*Suitable for **all ages from 5 to 93** years and multi-ethnic groups (GLI predicted sets)*

***Easy-to-read** test results. Symptoms scoring and notes can be added to each test*

Share results in pdf (WhatsApp, email etc.) and print directly.

***Software Development Kit** (iOS and Android) available for developers*



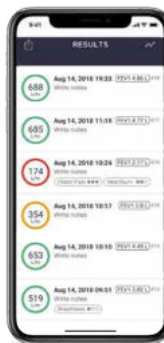
Spirometry test: PEF, FEV1



Available with REUSABLE
single patient turbine flowmeter



Always included: personal App (MIR Smart One)
for Smartphone and Tablet



Traffic light health indicator for PEF, symptoms scoring and notes



Graphic trend of Peak Flow or FEV1



ATS/ESR 2019, CE0476, FDA 510(k) - O.T.C.



PERSONAL SMART



Smart One OXI™



SmartOne

Now available with SpO2 (%) and Pulse (BPM)

Real time **plethysmographic curve** on Smartphone and Tablet via Bluetooth Smart 4.0

Innovative reflectance **Pulse-Oximetry sensor (Touch)**.
Easy to use and accurate

Ready-to-Connect with **3rd party Apps** for Personal Care

Share results in pdf (WhatsApp, email etc.) and print directly.

Software Development Kit (iOS and Android) available for developers



Spirometry test: PEF, FEV1



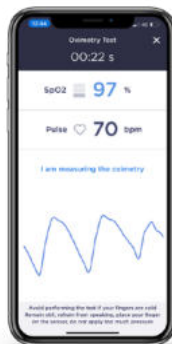
Oximetry test: SpO2 (%), Pulse (BPM),
Plethysmographic curve



Available with **REUSABLE**
single patient turbine flowmeter



Always included: personal App (MIR Smart One)
for Smartphone and Tablet



Real-time
plethysmographic
curve



Traffic light health
indicator for PEF,
symptoms scoring
and notes










ATS/ESR 2019, CE0476, FDA Pending

COMPARISON MATRIX - GENERAL FEATURES

	Name	SPIROLAB	SPIROBANK II BASIC	SPIROBANK II ADVANCED	SPIROBANK II SMART	MINISPIR LIGHT	MINISPIR	SPIRODOC
	Picture							
DEVICE	Dimensions	8.6×8.3×2" (220×210×51 mm)	6×2×1" (160×55×25 mm)	6×2×1" (160×55×25 mm)	6×2×1" (160×55×25 mm)	5.5×1.9×1" (142×49.7×26 mm)	5.5×1.9×1" (142×49.7×26 mm)	4.2×2.4×1.0" (101×48×16 mm)
	Display	7"	2.5"	2.5"	2.5"	Not Required	Not Required	3"
	Weight	51 Oz (1450 g)	5 Oz (140 g)	5 Oz (145 g)	5 Oz (145 g)	2.2 Oz (65 g)	2.2 Oz (65 g)	4.0 Oz (116 g)
	Carrying Case	Included	Canvas Pouch	Canvas Pouch	Canvas Pouch	No	Canvas Pouch	Canvas Pouch
	Device Type	Desktop	Pocket Size	Pocket Size	Pocket Size	PC Based	PC Based	Pocket Size
	Real Time PC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Real Time Tablet	No	No	No	Yes	No	No	No
	Power Supply	Rechargeable battery	Rechargeable battery	Rechargeable battery	Rechargeable battery	USB Socket of PC	USB Socket of PC	Rechargeable battery
	Battery Charger	Included	Not Included	Not Included	Not Included	Not Required	Not Required	Not Included
	Thermal Printer	Internal	No	No	No	No	No	No
	Connectivity	USB, Bluetooth 2.0	USB	USB, Bluetooth 2.0	USB, Bluetooth 4.0	USB	USB	USB, Bluetooth 2.0
	USB to Printer	Yes	No	No	No	No	No	No
POST BD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Memory Spiro	10,000 tests	10,000 tests	10,000 tests	10,000 tests	Uses PC Memory	Uses PC Memory	10,000 tests	
Pulse-Oximetry	Optional	No	Optional	Optional	No	No	Optional	
SENSOR	Sensor Type	Turbine	Turbine	Turbine	Turbine	Turbine	Turbine	Turbine
	Disposable Sensor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Reusable Sensor	Yes	Yes	Yes	Yes	No	Yes	Yes
SOFTWARE	Software Name Always Included	WinspiroPRO	WinspiroPRO	WinspiroPRO	WinspiroPRO	Winspiro Light	WinspiroPRO	WinspiroPRO
	USB to PC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Bluetooth to PC	Yes	No	Yes	No only to tablet	No	No	Yes
	Network Version	Optional	Optional	Optional	Optional	No	Optional	Optional

MIR products comply with the latest ATS/ERS standardization of spirometry (September 2019 update), Volume accuracy $\pm 2.5\%$ or 50 ml








COMPARISON MATRIX - SPIROMETRY PARAMETERS

	Name	SPIROLAB	SPIROBANK II BASIC	SPIROBANK II ADVANCED	SPIROBANK II SMART	MINISPIR LIGHT	MINISPIR	SPIRODOC
	Picture							
SPIROMETRY (STAND ALONE)	Parameters List Spiro	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, FEF75-85, Lung Age, Extrapolated Volume, FET, Time to PEF, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/ FVC, FEV2, FEV2/ FVC, FEV3, FEV3/ FVC, FEV6, FEV1/ FEV6, FEV1/PEF, FEV1/FEV0.5, FVC, FIV1, FIV1/ FVC, PIF, FIF25, FIF50, FIF75, FEF50/FIF50, VC, IVC, IC, ERV, IRV, Rf, VE, VT, ti, tE, VT/ti, tE/TOT, MVV (measured), MVV (calculated)	FVC, FEV1, FEV1%, PEF, FE25-75, FET, Extrap. Volume, Lung Age, VC, IVC, IC, ERV	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, FEF75-85, Lung Age, Extrap. Volume, FET, Time to PEF, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/ FVC, FEV2, FEV2/ FVC, FEV3, FEV3/ FVC, FEV6, FEV1/ FEV6, FVC, FIV1, FIV1/FVC, PIF, FIF25, FIF50, FIF75, FEF50/ FIF50, VC, IVC, IC, ERV, IRV, Rf, VE, VT, ti, tE, VT/ ti, tE/TOT, MVV (measured), MVV (calculated)	FVC, FEV1, FEV1%, FEV6, PEF, FE25- 75%, FVC, Lung Age, VC, IVC	No	No	FVC, FEV1, FEV1/ FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FE25%, FEF50%, FEF75%, FEF25%-75%, FET, Estimated Lung Age, Extr. Vol., FVC, FIV1, FIV1/ FVC%, PIF, VC, IVC, IC, ERV, FEV1/ VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ ti, MVV measured, MVV (calculated)
	E-diary	No	No	No	No	No	No	Yes
SPIROMETRY (PC BASED)	Parameters List Spiro	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, FEF75-85, Lung Age, Extrapolated Volume, FET, Time to PEF, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/ FVC, FEV2, FEV2/ FVC, FEV3, FEV3/ FVC, FEV6, FEV1/ FEV6, FEV1/PEF, FEV1/FEV0.5, FVC, FIV1, FIV1/ FVC, PIF, FIF25, FIF50, FIF75,	FVC, FEV1, FEV1%, PEF, FE25-75, FET, Extrap. Volume, Lung Age, VC, IVC, IC, ERV	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, FEF75-85, Lung Age, Extrap. Volume, FET, Time to PEF, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/ FVC, FEV2, FEV2/ FVC, FEV3, FEV3/ FVC, FEV6, FEV1/ FEV6, FVC, FIV1, FIV1/FVC, PIF, FIF25, FIF50, FIF75, FEF50/ FIF50, VC, IVC, IC, ERV, IRV, Rf, VE, VT, ti, tE, VT/ti, tE/TOT, MVV (measured), MVV (calculated)	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, FEF75-85, Lung Age, Extrap. Volume, FET, Time to PEF, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/ FVC, FEV2, FEV2/ FVC, FEV3, FEV3/ FVC, FEV6, FEV1/ FEV6, FVC, FIV1, FIV1/FVC, PIF, FIF25, FIF50, FIF75, FEF50/ FIF50, VC, IVC, IC, ERV, IRV, Rf, VE, VT, ti, tE, VT/ti, tE/TOT, MVV (measured), MVV (calculated)	FVC, FEV1, FEV1/ FVC, FEV1/VC, PEF, FE25-75, FVC, Lung Age, VC, IVC	FVC, FEV1, FEV1/FVC, FEV1/VC, PEF, FE25, FE50, FEF75, FE25-75, Lung Age, Extrap. Volume, FET, FEV3, FEV3/FVC, FEV6, FEV1/FEV6, FVC, FIV1, FIV1/FVC, PIF, VC, IVC, IC, ERV, Rf, VE, VT, ti, tE, VT/ti, tE/TOT, MVV	FVC, FEV1, FEV1/ FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FE25%, FEF50%, FEF75%, FEF25%-75%, FET, Estimated Lung Age, Extr. Vol., FVC, FIV1, FIV1/ FVC%, PIF, VC, IVC, IC, ERV, FEV1/ VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ ti, MVV measured, MVV (calculated)
SPIROMETRY (ON THE APP)	Parameters List Spiro	No	No	No	FVC, FEV1, FEV1%, PEF, FE25-75, FET, ELA, IVC, EVC	No	No	No
	Upgradable	Free Lifelong	Free Lifelong	Free Lifelong	Free Lifelong	Free Lifelong	Free Lifelong	Free Lifelong

MIR products comply with the latest ATS/ERS standardization of spirometry (September 2019 update), Volume accuracy $\pm 2.5\%$ or 50 ml

COMPARISON MATRIX - OXIMETRY PARAMETERS (OPTION)

OXIMETRY

Name	SPIROLAB	SPIROBANK II BASIC	SPIROBANK II ADVANCED	SPIROBANK II SMART	MINISPIR LIGHT	MINISPIR	SPIRODOC
Picture							
Spot Test	Yes	No	Yes	Yes	No	No	Yes
Spot Test Param	SpO2 [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean], T90, T89, T88, T5, Index [12s], SpO2 Events, Pulse Rate Events [Bradycardia, Tachycardia]	No	SpO2 [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean], T90, T89, T88, T5, Index [12s], SpO2 Events, Pulse Rate Events [Bradycardia, Tachycardia]	SpO2 [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean]	No	No	SpO2 [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean], T90, T89, T88, T5, Index [12s], SpO2 Events, Pulse Rate Events [Bradycardia, Tachycardia]
Walk Test	No	No	-	-	No	No	Yes
Walk Test Param.	-	No	-	-	No	No	O2-Gap, Estimated distance, Distance walked, Predicted distance [Min, Standard], TA2%, [SpO2±2%], TA4% [ΔSpO2±4%], Time [Rest, Walking, Recovery], Desaturation Area/ Distance Optional data entry: Borg Dyspnea [Baseline, End, Change], Borg Fatigue [Baseline, End, Change], Arterial blood pressure [Systolic, Diastolic], Oxygen administered
Sleep Test	No	No	-	-	No	No	Yes
Sleep Test Param.	-	No	-	-	No	No	Body position, SpO2 Events, Desaturation index (ODI), Desaturation [Mean Value, Mean duration, Longest duration, Nadir Peak], ΔSpO2 [Min Drop, Max Drop], Total Pulse Variations, Pulse Rate Index, NOD89% [SpO2<89%; >5min], NOD4% [SpO2 Basale<4%; >5min], NOD90% [SpO2<90%; Nadir<86%; >5min]
Memory Pulse-Ox	900 Hours Pulse-Oximetry	No	900 Hours Pulse-Oximetry	900 Hours Pulse-Oximetry	No	No	900 Hours Pulse-Oximetry

MIR products comply with the latest ATS/ERS standardization of spirometry (September 2019 update), Volume accuracy $\pm 2.5\%$ or 50 ml

COMPARISON MATRIX - SPIROBANK SMART AND SMART ONE

	Name	SPIROBANK OXI	SPIROBANK SMART	SMART ONE	SMART ONE OXI
DEVICE	Picture				
	Dimensions	1.93x4.29x082" (49x109x21 mm)	1.93x4.29x082" (49x109x21 mm)	1.93x4.29x082" (49x109x21 mm)	1.93x4.29x082" (49x109x21 mm)
	Display	No	No	No	No
	Weight	2.14 Oz (60.7 g)	2.14 Oz (60.7 g)	2.14 Oz (60.7 g)	2.14 Oz (60.7 g)
	Carrying Case	N/A	N/A	N/A	
	Device Type	Smart	Smart	Personal Smart	Personal Smart
	Real Time PC	No	No	No	No
	Real Time Smart Phone	Yes	Yes	Yes	Yes
	Power Supply	2 batteries AAA 1.5V	2 batteries AAA 1.5V	2 batteries AAA 1.5V	2 batteries AAA 1.5V
	Battery Charger	N/A	N/A	N/A	N/A
	Thermal Printer	No	No	No	No
	Connectivity	Bluetooth 4.0	Bluetooth 4.0	Bluetooth 4.0	Bluetooth 4.0
SENSOR	Memory on Device	No	No	No	No
	Pulse- Oximetry	No	No	No	Yes
	Sensor Type	Turbine	Turbine	Turbine	Turbine
	Disposable	Yes	Yes	No	No
APP	Reusable	Yes	Yes	Yes	Yes
	Oxi	No	No	No	Touch Reflective
	App Name	MIR Spirobank	MIR Spirobank, iSpirometry	MIR Smart One	Mir Smart One
	Android	Yes	Yes	Yes	Yes
	iOs	Yes	Yes	Yes	Yes
	Memory Spiro on App	No	No	Yes	Yes
	Memory Oxi on App	No	No	No	Yes
	BT to Printer	Yes	Yes	Yes	Yes
PARAMETERS	Parameters Spiro	PEF, FEV1, FVC, FEV1/FVC, FE2575, FEV6, VEXT, DTPEF, FE25, FEV75, FE25, FEV50	PEF, FEV1, FVC, FEV1/FVC, FE2575, FEV6, VEXT, DTPEF, FE25, FEV75, FE25, FEV50	PEF, FEV1	PEF, FEV1
	Parameters Oxi	SpO2 (%), Pulse (BPM) Plethysmographic curve	No	No	SpO2 (%), Pulse (BPM) Plethysmographic curve
	Symptoms scoring	Yes	Yes	Yes	Yes

MIR products comply with the latest ATS/ERS standardization of spirometry (September 2019 update), Volume accuracy $\pm 2.5\%$ or 50 ml



Winspiro PRO™ & Winspiro PRO NET™

Complete and powerful software package for Spirometry, Oxymetry and Telemedicine projects

Winspiro PRO™

FVC, VC, IVC, MVV, Bronchodilator Reversibility, Bronchial Challenge with FEV1-response curve with protocols for both Methacholine and Mannitol

Paediatric Incentive for Spirometry

Quanjer 2012-GLI Predicted values with LLN and Z-score

Wide choice of communication protocols ... and more

3D Oximeter® management, O2Gap Index,

Sleep Desaturation Analysis, 6 Minute Walk Test, Daytime

Physical Activity Report coupled with Desaturation Events

Winspiro PRO NET™

Network version of Winspiro PRO™

Share a single database between different Network users



Winspiro PRO™ is compatible with Windows: XP, VISTA, 7, 8 and 10. Winspiro PRO™ includes free updates and is provided with Spirolab™, Spirodoc™, Spirobank II™, SpiroTel™, Minispir™, Spirolab III™

Winspiro PRO NET™ includes free updates, and is provided on request



Winspiro Light™



Simple and intuitive for essential Spirometry test

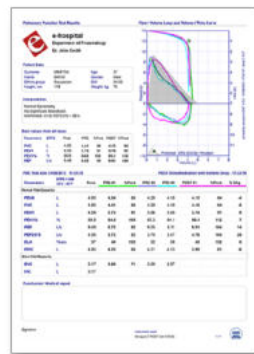
Software for Real Time Spirometry on your PC

Simple and intuitive user interface with one main screen with all functions available

Ideal for primary care and occupational medicine

For each session produces a report with the 3 best tests including both Flow/Volume loop and Volume/Time curves that can be exported in .DOC or .PDF format

Wide range of selectable predicted values

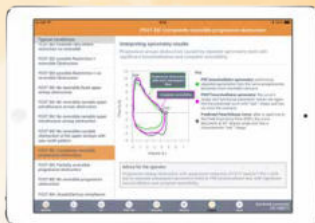


Winspiro Light™ is compatible with Windows: XP, VISTA, 7, 8 and 10.
Winspiro Light™ includes free updates and is provided with Minispir Light™

Winspiro Light™ includes free updates and is provided on request



Didactic Guide



Virtual Assistant



MIR Spiro App android iOS

Simple and intuitive App for Spirometry and Oximetry test directly on your Tablets



An expert beside you

Highly innovative **Virtual Assistant** supporting the operator with:

- ✓ recommendations for the correct execution of the test
- ✓ identification of the cause of errors during test execution
- ✓ automatic test interpretation

Sharing is caring

Test can be printed, exported in pdf and sent by email.

Data can be transferred in HL7 format to a web service and are enabled for **EMR access**

Desktop version soon available for PC and Mac, including:

Unprecedented choice of **EMR Connectivity**: ready to connect with Epic, Athen Health, All Scripts, and GE Centricity among many others

Compliance with the **latest standards** in Spirometry, Occupational Health, Privacy and Security: ATS/ERS 2019, NIOSH-OSHA, GDPR, HIPAA



Go-To-Market toolkit: **Software Development Kit (API)** available for App developers

MIR SDK



Go-To-Market-Toolkit
Software Development Kit (SDK)
For Windows, iOS and Android



MIR Software Development Kit

Is the Software Development Kit to easily connect and handle MIR spirometers and oximeters into your application. The developers will take advantage of the many libraries included in the SDK covering many different environments such as:



USB and Bluetooth® communication

Real time values for spirometry and oximetry are provided to be plotted in a chart. USB Windows Certified Driver comes with the SDK.



Spirometry Reference Values

A huge database of equations from many authors is available. For each parameter the MirPredicted library retrieves, not only the standard reference values but also the LLN, the ULN and the zScore values



Spirometry Interpretation

Spirometry Interpretation library performs the Acceptability and Repeatability calculation (Quality Control Grade) and retrieves the Variability and the Automatic Interpretation for both the baseline spirometry and the post bronchodilator sessions, according to the ERS/ATS criteria.



Oximetry Interpretation

Starting from the measured SpO2 and HeartRate "points" this library is able to perform both the generic and the specific analysis of the pulse oximetry, also using sophisticated algorithms for the detection of specific disease such as OSAS (Obstructive Sleep Apnea Syndrome), NOD (Nocturnal Oxygen Desaturation).



Spirometry and Oximetry Charts

MirCharting library returns complete charts for any spirometry or oximetry layouts



Spirometry and Oximetry Report in PDF

The SDK provides a professional and complete, ready to print report in PDF format.



LIVE VIDEO EXAM:



Windows-based medical App for remote Spirometry and Oximetry test, with real-time support of the Health Care Professional

Live Video Exam is an App for Doctor-use on PC, connecting in real-time with MIR Spirobank App (for Patient-use on Smartphone).

Live Medical Supervision increases patient cooperation in performing the test and is essential in obtaining optimal test results.

The App includes real-time video support of the Health Care Provider (HCP).

Peer-to-Peer connection is secure and protected by **end-to-end encrypt**.

Doctor and Patient can connect everywhere they are, to **reduce** travelling **costs**, operational expenses and contamination risks.

HCP receives data in real-time on the PC, can add notes and therapeutic plans, save and share results in PDF.

Patient only needs to focus on the test.

The software will transfer data automatically.

Live Video Exam is becoming the **gold standard** for any practice seeking a competitive advantage in Remote Patient Monitoring.





MIR Spirobank App android ios



Real time Spirometry and Oximetry test
on patient's Smartphone

Main Features

- ✓ Spirometry and Oximetry test in one App
- ✓ Automatic connection via Bluetooth Smart BLE 4.0
- ✓ Suitable for all ages excluding newborns and infants
- ✓ GLI-2012 predicted sets for spirometry reference value

Distinctive Features

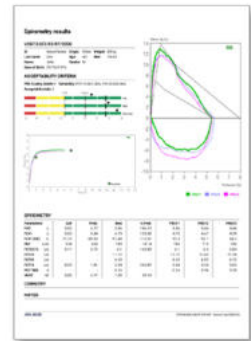
- ✓ Acceptability Messages and Real time animation on Smartphone, to improve personal compliance during the test
- ✓ E-diary, symptoms and notes can be added for each test.
- ✓ Easy-to-read graphic trends for self-monitoring of spirometry and oximetry.
- ✓ Flow/Volume loop and Real time plethysmographic curve on screen

Professional PDF Report

Share PDF report via whatsapp, e-mail and other applications.

Live Video Exam

Connect with your Healthcare provider in real-time, from the comfort of your home



Go-To-Market toolkit: **Software Development Kit (API)** available for App developers



Smart One App android iOS

Real time Spirometry and Oximetry test for Personal Care on Smartphone and Tablet



Main Features

- ✓ Spirometry and Oximetry test in one App
- ✓ Automatic connection via Bluetooth Smart BLE 4.0
- ✓ Suitable for all ages excluding newborns and infants
- ✓ GLI-2012 predicted sets for spirometry reference value

Distinctive Features

- ✓ Acceptability Messages and Real time animation on Smartphone and Tablet, to improve personal compliance during the test
- ✓ E-diary, symptoms and notes can be added for each test.
- ✓ Easy-to-read graphic trends for self-monitoring of spirometry and oximetry.
- ✓ Acceptability Messages, "Traffic Light" result interpretation for Peak Flow.

Test Date	FEV1 (L)	FVC (L)	Peak Flow (L/min)	SpO2 (%)	Notes
1 Sep 2020 10:00	1.2	2.5	350	98	Good test
1 Sep 2020 11:00	1.1	2.4	340	97	Good test
1 Sep 2020 12:00	1.3	2.6	360	99	Good test
1 Sep 2020 13:00	1.2	2.5	350	98	Good test
1 Sep 2020 14:00	1.1	2.4	340	97	Good test
1 Sep 2020 15:00	1.2	2.5	350	98	Good test
1 Sep 2020 16:00	1.1	2.4	340	97	Good test
1 Sep 2020 17:00	1.2	2.5	350	98	Good test
1 Sep 2020 18:00	1.1	2.4	340	97	Good test
1 Sep 2020 19:00	1.2	2.5	350	98	Good test
1 Sep 2020 20:00	1.1	2.4	340	97	Good test

**Reusable Turbine**

Code 910002

MIR Model All Spiro

Reusable turbine with mesh.

**FlowMIR Turbine without mouthpiece**

Code 910001.

MIR Model All Spiro

Disposable turbine, compatible with Disposable Bacterial/Viral filter and Mouthpiece

**Paper adult disposable mouthpiece**

Code 910300

MIR Model All Spiro

Disposable, individually packed paper adult mouthpiece (CE marked).

**Reusable mouthpiece**

Code 910307

MIR Model All Spiro

Plastic adult reusable mouthpiece.

**Plastic paediatric reusable mouthpiece**

Code 910310

MIR Model All Spiro

Plastic paediatric reusable mouthpiece.

**Bacterial/Viral Filter**

Code 910302

MIR Model All Spiro

Bacterial/Viral Filter, disposable, packed in individual bag.

Consumables / Accessories



Paper roll for printer

Code 910350

MIR Model Spirolab

Standard thermal paper roll for printer.



Plastic noseclip

Code 910320

MIR Model All Spiro

Plastic noseclip.



Calibration syringe 3L

Code 919000

MIR Model All Spiro

3L calibration syringe.



Oximetry finger sensor

Code 919024

MIR Model All devices with oximetry option

Reusable, ADULT.



Oximetry finger sensor

Code 939005

MIR Model All devices with oximetry option

Reusable, PAEDIATRIC 5-45 kg.

Spirometry for all!

- ✓ **Doctor and patient**

MIR offers groundbreaking solutions for both care givers and patients.

- ✓ **Clinical Trials & System Integrators**

MIR products can communicate with third parties systems and are fully customizable.

- ✓ **Mobile Health**

Patients can self monitor themselves through Apps on their Smart phones with the same accuracy of a clinical setting and keep track of their values.

MIR Products Targets:



Spirolab



Spirobank II Advanced
Spirobank II Smart



Spirodoc



Minispir

ADVANCED

Pulmonology, Allergy, Cardiology, Geriatrics, Sleep Labs, Primary Care, Paediatrics, Occupational Medicine



Spirobank II Basic



Minispir Light

LIGHT

Primary Care, Paediatrics, Occupational Medicine, Sports Medicine, Internal Medicine, Anaesthesiology (pre-surgery), ERs



Spirobank Smart



Spirobank Oxi



Smart One



Smart One Oxi

PERSONAL /SMART

Pharma Companies (Clinical Trials), eHealthcare (Telemedicine), Home Care Monitoring, Neuromuscular Disease Management, Asthma Camps, Remote Areas Screening, Mobile Spirometry



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MIR reserves the right to modify the technical characteristics at any time