

Spirolab Plus

The evolution of desktop spirometry

Wi-Fi **NEW**

Work List **NEW**

Wireless printing **NEW**

RFID Turbine **NEW**

EMR Integration

Oximetry **OPTIONAL**



ITALY

MIR Medical International
Research S.p.A.

Viale Luigi Schiavonetti, 270
00173, Rome

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

Tel. +1 (262) 565-6797
Fax +1 (262) 364-2030

mir-usa@spirometry.com

FRANCE

MIR Local Office

Jardin des Entreprises, 290,
Chemin de Saint Dionisy 30980 LANGLADE

Tel. +33 (0)4 66 37 20 68
Fax +33 (0)4 84 25 14 32

mirfrance@spirometry.com

BRAZIL

MIR Local Office

Rua Pinheiro Machado, 2659,
Sl.303, Caxias do Sul RS

Tel. +55 5430253070

mirbrazil@spirometry.com

spirometry.com



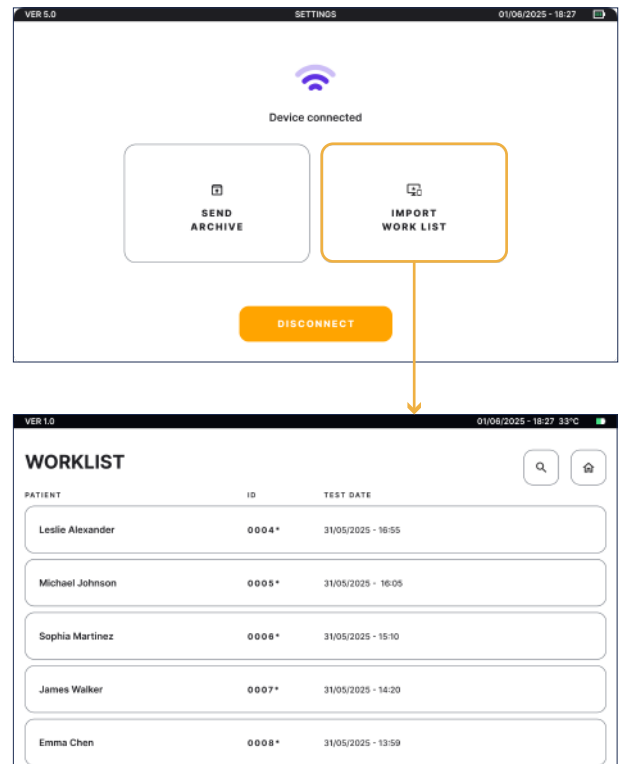
Distinctive features

Wi-Fi Connectivity NEW

- ✓ Connect with MIR Spiro software and EMR systems
- ✓ Import worklist
- ✓ Send test results back to the software (single test, completed session, or full device archive)
- ✓ Print reports directly via paired printers

Work List Management NEW

Import patient lists from MIR Spiro Software or EMR systems via Wi-Fi, Bluetooth, or USB



Embedded Thermal Printer

Integrated thermal printer for instant, detailed, and customizable test reports

Up to 80–120 prints per roll for continuous workflow. Paper size: 112 mm. Paper weight: 56 g ± 4 g/m². Use of non-original MIR paper rolls or paper with a higher grammage than specified may permanently damage the printer

On-Device Calibration (ATS/ERS 2021)

Executable directly on device, with calibration report printable by the instrument

SpO₂% Sensor OPTIONAL

Oximetry module for measuring blood oxygen saturation

Touchscreen Display

High-resolution (1024 × 600 px) display for enhanced data readability



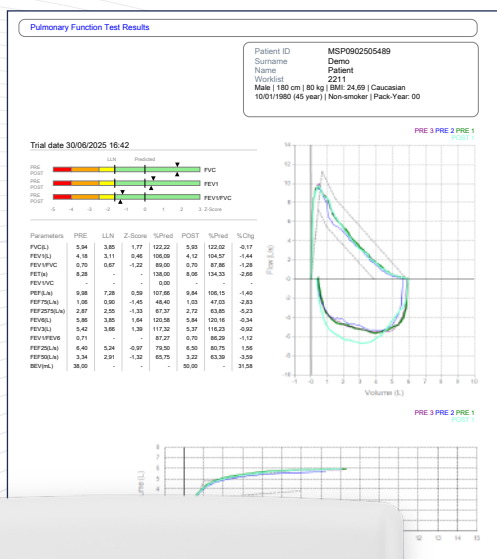
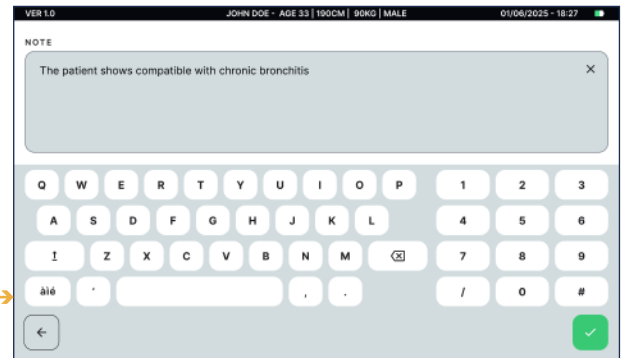
Other features

Interpretation Flexibility NEW

Supports **ATS/ERS 2019** and **ATS/ERS 2021** interpretative criteria, allowing physicians to switch according to their needs

Direct Test Annotations NEW

Add **clinical notes** to patient tests from the device



Larger internal memory

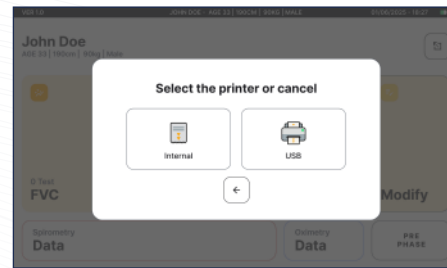
Store up to **15,000** spirometry tests or **750 hours** of oximetry recordings

Long-Lasting Rechargeable Battery

Extended autonomy in stand-alone mode

External Printing

Print reports directly via compatible PostScript printers using Wi-Fi or USB



EMR/EHR Integration

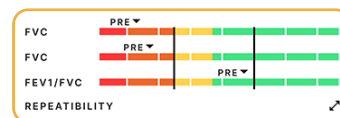
Integrates with EMR/EHR systems through MIR Spiro Software using HL7, GDT, FHIR, and Exchange Protocol

Pediatric Incentive

Real-time animation on device display to improve patient cooperation during testing

Traffic Light System

Immediate visual feedback to support test quality and interpretation



Predicted Values

Wide selection of predicted values, including GLI and ATS/ERS reference sets, available directly on the device and PC

Integrated Temperature Sensor

Automatic BTPS conversion for accurate and standardized measurements

Supported tests

Spirometry: FVC, VC, MVV, PRE/POST bronchodilator comparison

Oximetry (optional): Spot test (SpO2%, BPM)

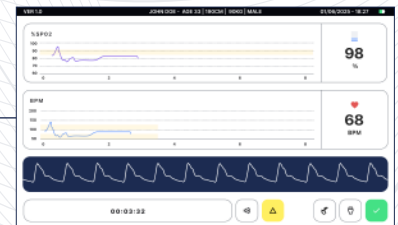
Spirometry



FVC PRE Phase



Oximetry



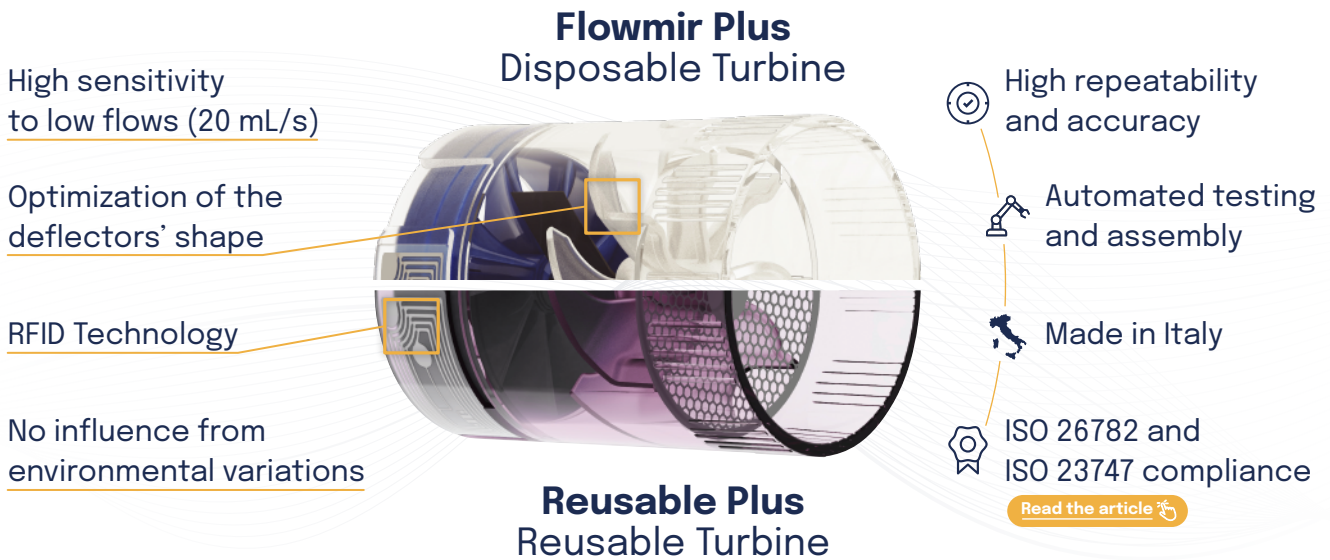
	Test Modules	Description	Parameters (From device in Stand Alone mode)	Parameters (From MIR Spiro software)	Onscreen Graphs
Spirometry	FVC (Forced Vital Capacity) + PRE/POST Bronchodilator	The total volume of air that can be exhaled during a maximal forced expiration effort.	FVC, FEV1, FEV1/FVC, *PEF, *PEF1, FEV1/VC, PEF, FEF75, FEF2575, FEV6, FET, PEF Time, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/FVC, FEV2, FEV2/FVC, FEV3, FEV3/FVC, FEV1/FEV6, BEV, FIV1, PIF, FIF25, FIF50, FIF75, FEF25, ELA, MVV, FEV1/PEF, FEV1/FEV0.5, FVC, FIV1/FVC, EVC, FEF50, FEF50/FIF50, FEF75-85	FVC, FEV1, FEV1/FVC, PEF, FEF75, FEF2575, FET, FEV6, FEV3, FEV1/FEV6, FEF25, FEF50, FVC, FIV1, FIV1/FVC, PIF, FEV1/VC, FEV3/FVC, ELA, PEF Time, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/FVC, FEV2, FEV2/FVC, FEF75-85, FIF25, FIF50, FIF75, R50, FEV1/PEF (EI), FEV1/FEV0.5 (RFEV), RFEV, BEV(mL), BEV/FVC	Flow / Volume Volume / Time
	SVC (Slow Vital Capacity)	The total volume of air that can be exhaled during a normal expiration effort.	*VC, VC, IVC, IC, ERV, IRV,VE, RR, TV, TV/tl, tl, tE, tl/tTOT	EVC, IVC, IC, VC, ERV, TV, VE, RR, tl, tE, TV/tl, tl/tTOT, IRV, TE/Tl, MV	Volume / Time
	MVV (Maximum Voluntary Ventilation)	Measures the greatest volume of air that can be inhaled and exhaled within one minute, assessing the overall capacity and endurance of the respiratory muscles.	MVV (measured), MVV (calculated)	MVV (measured), MVV (calculated)	Volume / Time
Oximetry	SpO2%, BPM	Monitors the oxygen saturation level (SpO2) and pulse rate, providing essential data on a patient's oxygenation status during rest or activity.	SpO2% [Baseline, Min, Max, Mean], Wrist Rate [Baseline, Min, Max, Mean], T90, T89, T88, T5, Index [12s], SpO2% Events, Wrist Rate Events [bradycardia, tachycardia], Tot Time, Measured Time	SpO2% [Baseline, Min, Max, Mean], Wrist Rate [Baseline, Min, Max, Mean], T90, T89, T88, T5, Index [12s], SpO2% Events, Wrist Rate Events [bradycardia, tachycardia], Tot Time, Measured Time	Plethysmographic curve

*Best Values

Compliance with guidelines and standards

Spirometry: ATS/ERS 2019–2021; ISO 23747: 2015; ISO 26782: 2009
Oximetry: ISO 80601-2-61:2017

New Smart Technology

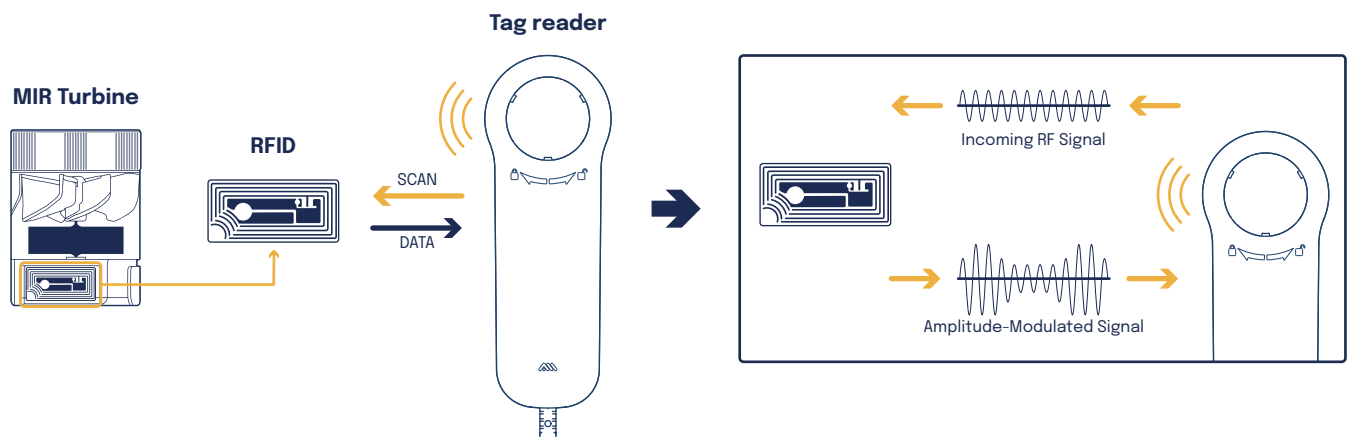


MIR Plus turbines integrate **RFID technology** that communicates directly with the built-in tag reader inside Plus devices. Plus Turbines are the **first ones** to establish **direct communication** with MIR's professional devices ensuring **highly accurate measurements** and **optimizing workflows**.

The interaction between sensor and device **eliminates manual setup**, **reduces user error**, and supports consistent performance with every test.

RFID: How it works

The **built-in reading and writing system** allow turbines to transmit and **receive key data**, i.e. **calibration** and **automatic turbine type recognition**.



MIR Spiro Platinum

Comprehensive Software for Spirometry and Oximetry



1-year license always included with your purchase



1-Year



2-Year



3-Year



Data Delivery Service

Exchange data without limits between MIR Spiro and external platforms such as Electronic Medical Records (EMRs) and clinical study environments

Network version

One single database, multiple devices. A shared database for all workstations on the same local network, designed for clinics, medical centers, and healthcare facilities

Evaluation support

Move beyond the data. For every spirometry session, MIR Spiro provides intelligent evaluation support, explaining the clinical reasoning behind each interpretation

Unlimited access to extra content and updates

Be amazed by innovation. Keep up with the latest trends

[Discover more on our website](#)



Comparison Matrix



Spirolab Plus ESI <i>Plus ESI Line</i>	Spirolab Plus <i>Plus Line</i>	Spirolab <i>Standard Line</i>
Display 7" Touch 1024x600 pixels	Display 7" Touch 1024x600 pixels	Display 7" Touch 800x480 pixels
Wi-Fi connection <ul style="list-style-type: none"> Import a patient worklist Send test results back to the software Print reports directly from a connected printer 	Wi-Fi connection <ul style="list-style-type: none"> Import a patient worklist Send test results back to the software Print reports directly from a connected printer 	Wi-Fi connection No
EMR/EHR Integration Directly from device via Wi-Fi or through MIR Spiro Software	EMR/EHR Integration Directly from device via Wi-Fi or through MIR Spiro Software	EMR/EHR Integration From MIR Spiro Software
Data Delivery Service Service for data delivery from the device database to EMR/EHR	Data Delivery Service Service for data delivery from the device database to EMR/EHR	-
Bluetooth Bluetooth 5.0	Bluetooth Bluetooth 5.0	Bluetooth Bluetooth 4.0
Work List Import a list of patients created from MIR Spiro Software or from EMRs directly to the device and return test results	Work List Import a list of patients created from MIR Spiro Software or from EMRs directly to the device and return test results	-
Observations Ability to add comments to the patient's test	Observations Ability to add comments to the patient's test	-
Internal Storage 15K tests or 750 hours of oximetry	Internal Storage 15K tests or 750 hours of oximetry	Internal Storage 10K tests or 500 hours of oximetry
ESI Index Assessment of the presence and severity of pulmonary emphysema	-	-
Tag Reader Reading and identification of data from the RFID Tag	Tag Reader Reading and identification of data from the RFID Tag	-
Flowmir Plus RFID: <ul style="list-style-type: none"> Automatic turbine type recognition Calibration stored on RFID Turbine traceability 	Flowmir Plus RFID: <ul style="list-style-type: none"> Automatic turbine type recognition Calibration stored on RFID Turbine traceability 	Flowmir

Datasheet

cod. 914030x (spiro) cod. 914032x (spiro+oxy)

Size	212 x 241 x 85 mm
Weight	1450 g (battery pack included)
Sensors	<ul style="list-style-type: none"> · Miniflowmeter (code 904027) for reusable and disposable turbine dimension (Ø 30 mm, 42 mm) · Reusable soft, adult, MIR sensor for oximetry test (code 919034_INV) only for Spirolab PLUS with oximetry option
Power supply	Rechargeable battery and mains power Li-Ion, 4 elements
Battery capacity	6000 mAh, 7.4 V
Consumption	In normal operation average 1.0µA Type
Batteries charger	Output voltage=5 V, current=3A, compliant with EN 60601-1
Autonomy	~ 8 hours
Connectivity	USB, Bluetooth® 5.1, Wi-Fi
Display	7 inch colour touch screen LCD Display with 1024*600 resolution
Keyboard	Absent, touchscreen
Mouthpiece	Ø 30 mm (1.18 inches)
Type of electrical protection	Internally powered Class II while charging battery
Safety level for shock hazard	Type BF Apparatus
Conditions of use	Apparatus for continuous use
Storage conditions	Temp: MIN -20°C, MAX+60°C Humidity: MIN 10% RH; MAX 95%RH
Transport conditions	Temp: MIN -20°C, MAX +60°C Humidity: MIN 10% RH; MAX 95%RH
Operating conditions	Temp: MIN +10°C, MAX +40°C Humidity: MIN 10% RH, MAX 95%RH
Degree of protection against water penetration	IPX2
Spirometry	
Flow sensor	bi-directional digital turbine
Volume rate	10 L
Flow range	±16L/s
Volume accuracy	±2.5% or 50mL
Flow accuracy	±5% or 200 mL/s
Volume resolution	0.01 L
Flow resolution	0.01 L/s
Dynamic resistance	<0.5 cm H2O/L/s
Temperature sensor	semiconductor (0-45°C)
Test available	FVC, VC, MVV, PRE-POST
Measured parameters	*FVC, *FEV1, *PEF, FVC, FEV1, FEV1/FVC, FEV1/VC, PEF, FEF25, FEF50, FEF75, FEF2575, FEF7585, ELA, BEV, FET, PEF Time, FEV0.5, FEV0.5/FVC, FEV0.75, FEV0.75/FVC, FEV2, FEV2/FVC, FEV3, FEV3/FVC, FEV6, FEV1/FEV6, FEV1/PEF, FEV1/FEV0.5, FIVC, FIV1, FIV1/FIVC, PIF, FIF25, FIF50, FIF75, FEF50/FIF50, MVVcalc, VC*, EVC, IVC, IC, ERV, IRV, SIT, SET, VE, RR, TV, TV/tl, tl, tE, tl/tTOT, 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 Recording Time Analysis Time % Bradycardia Duration <40 BPM (T40) % Tachycardia Duration >120 BPM (T120) % of Time with SpO2 ≤ 90% (T90) % of Time with SpO2 ≤ 89% (T89) % of Time with SpO2 ≤ 5% of the mean value (T5)
Memory capacity	about 500 hours of oximetry
Certificates and registrations	
CE 2460	MDR 2017/745
FDA 510 (k)	K122384
EMDN liv.4	Z121501
CND Code	Z12150102 (spiro) Z1203020408 (spiro + oxy)
GMDN Code	46906 (spiro), 45607 (spiro + oxy)
Applied standards, guidelines and regulations	Regulation EU 2017/745 Directive 2011/65/UE ROHS II Directive 2015/863/UE ROHS III Directive 2014/53/UE RED Directive 2014/30/EU IEC 60601-1:2005+A1:2012+A2:2020 (Electrical Safety) IEC 6-1-2:2014+AMD1:2020 (EMC) ATS/ERS Guidelines: 2005, 2019, 2021 update ISO 26782: 2009 ISO 23747: 2015 ISO 80601-2-61: 2017 EN ISO 14971:2019/A11:2021 ISO 10993-1: 2018