

Elevate your Experience

Plus Line

Headquartered in Rome

3 Global Branches



MIR – Medical International Research

Italian excellence around the world

With over **30 years of experience**, we develop premium medical equipment, including **spirometers** and **oximeters** for professional and **personal use**, to manage and prevent respiratory diseases.

With **3 direct branches** (**North America**, **France**, and **Brazil**) and a well-established distribution network, we distribute our products in more than **100 countries** thanks to the many **certifications** and the ongoing investment in **Research & Development**.

Among our achievements, we count the launch of the **world's first homecare tele spirometer**, the first **personal homecare ECG**, and a **proprietary software ecosystem**.

The year **2025** will culminate with the launch of our 5th generation of spirometers: **the Plus and Plus ESI Lines**. The evolution of the Plus ESI Line is the groundbreaking integration of **ESI (Emphysema Severity Index)**, the only parameter able to detect pulmonary emphysema through standard spirometry.

Today, MIR represents the excellence of ***Made in Italy***.

Distribution

+100

Countries
worldwide

Experience

+30

Years of
experience

Recurring

+5M

Turbines sold
per year

Growth

+11k

New healthcare
professionals per year



New Plus Line

Elevate your Experience

The **4Ps** of MIR Plus Line:

+ Preventive

+ Precise

+ Predictive

+ Personalized

With a **modern** and **ergonomic design**, the professional devices of the Plus Line **redefine quality** and **performance standards**, bringing innovation directly into the hands of professionals, enhancing the user experience and usability while significantly simplifying interaction.

Spirolab Plus

All-in-one desktop spirometer providing accurate and versatile testing with embedded printer



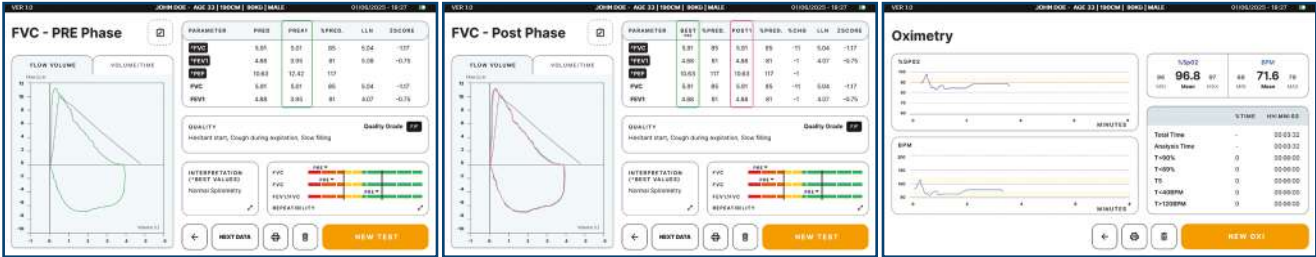
Available with Oximetry option

Spirolab Plus is the latest generation of **desktop** spirometers from MIR's Plus Line. Now equipped with **Wi-Fi**, Spirolab Plus transforms the way you work, making every step **faster**, **easier**, and **completely wireless**. The **integrated tag reader** allows a **bidirectional communication** with **MIR Plus**

Always included: MIR Spiro Software

Available with Plus Turbine Only

Spirometry



FVC PRE Phase

FVC POST Phase

Oximetry



Work List

PATIENT	ID	TEST DATE
Leslie Alexander	0004*	31/05/2025 - 16:03
Michael Johnson	0005*	31/05/2025 - 16:05
Sophie Martinez	0006*	31/05/2025 - 16:18
James Walker	0007*	31/05/2025 - 14:20
Emma Chen	0008*	31/05/2025 - 13:05

Wi-Fi



Key Features

- 

Wi-Fi connection: Import patient worklists, send results back to the software, connect to EMRs, and print reports directly from a paired printer – everything **wireless**, with a single touch
- 

Work List: Import a list of patients created from **MIR Spiro Software** or from **EMRs** via **Wi-fi**, **Bluetooth** and **USB** directly to the device and return test results
- 

Direct test annotations: Add **clinical notes** to patient tests from the device
- 

Display: It features a **7” touchscreen display** with a resolution of **1024 x 600** pixel for enhanced data readability
- 

Larger internal memory: Store up to **15,000** spirometry tests or **750** hours of oximetry recordings
- 

Battery: Long-lasting rechargeable battery for extended autonomy in Stand Alone mode
- 

Print Test Results: Enables **printing** of test results via the **built-in printer** or through **USB** and **Bluetooth** connection to an external **PostScript** printer
- 

New Smart Technology: Flowmir Plus and Reusable Plus, deliver **repeatable**, **accurate**, and **precise** testing even at low flows



Spirobank II Plus

Portable spirometer

3 mode of use in a single device: Stand Alone, PC, Tablet

2024
2025



- ✓ Color Touchscreen display
- ✓ Work List
- ✓ New Technology



Available with
Oximetry option

Spirobank II Plus is the latest generation of **portable** spirometers from MIR's Plus Line.

Modern and compact, it introduces a **color touchscreen display**.

The **integrated tag reader** allows a **bidirectional communication** with **MIR Plus**

turbines transmitting and receiving key data, i.e. **calibration** and **automatic turbine type recognition**.

Fully compliant with the latest **ATS/ERS 2021 standards**, Spirobank II Plus guarantees the highest levels of test accuracy and quality.



Always included:
MIR Spiro Software

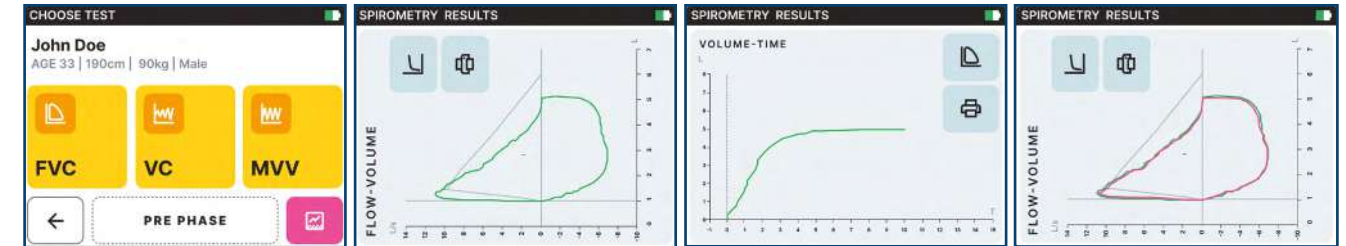


Available with
Plus Turbine Only



Dedicated app:
Connection to Tablet

Spirometry



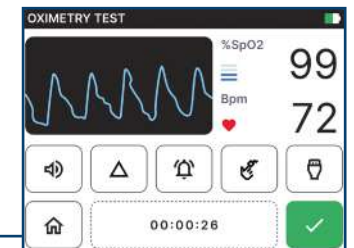
Perform a test

FVC PRE Phase

FVC POST Phase



Oximetry



Spirometry Results

Param.	Pred.	PRE#1	%Pred.	PRE#2	PRE#3
*FVC	4.77	1.61	34	1.61	1.61
*FEV1	4.10	1.54	38	1.54	1.54
*PEF	8.85	1.73	20	1.73	1.73
FVC	4.77	1.61	34	1.34	1.25

Work List

ID #0001_234	13/07/1988
John Doe	
ID #0001_235	01/11/1983
David Martini	
ID #0001_236	14/02/1990
Leslie Alexander	

Patient Name Registration

DATE OF BIRTH	♂	♀
CM	KG	
ORIGIN	▼	

Key Features



Display:

It introduces a color **touchscreen display (320 x 240 pixel)** for clear and detailed views during every stage of the test



Work List:

Receive a list of patients from **MIR Spiro Software** via **USB** and **Bluetooth** directly to the device and return test results



Patient Name Registration:

Allows you to register data patient including **first** and **last name**



Direct Test Annotations:

Allows you to add **clinical notes to patient tests** directly from the device



Larger Internal Memory:

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



Battery:

Long-lasting rechargeable **battery** for **extended autonomy** in Stand Alone mode



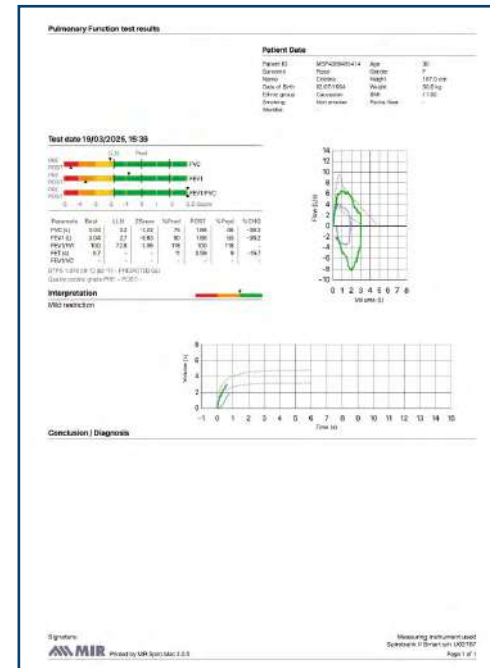
Print Test Results:

Enables **printing** of test results **directly from the device** via **USB** connection and **Bluetooth** to an external **PostScript** printer



New Smart Technology:

Flowmir Plus and Reusable Plus, deliver
repeatable, accurate, and precise testing
even at low flows



Spirobank II Light

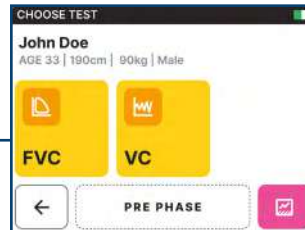
Portable spirometer

Essential Features. Exceptional Value

2024
2025



- ✓ Color Touchscreen display
- ✓ New Technology



Spirobank II Light is the **simplified** version of Spirobank II Plus.

Providing a selected number of parameters, it's the **perfect spirometer** for those who need to monitor **key yet useful data**.

Modern and compact, it introduces a **color touchscreen display**.

The **integrated tag reader** allows a **bidirectional communication** with **MIR Plus**

turbines transmitting and receiving key data, i.e. **calibration** and **automatic turbine type recognition**.

Ideal for **pediatricians**, **general practitioners**, **sports doctors**, and **screenings**, it can be used in Stand-Alone mode or connected to a PC via USB.

It is compliant with the latest **ATS/ERS 2021 standards** for test accuracy and quality.

Key Features

- Display:**
It introduces a color **touchscreen display** (320 x 240 pixel) for clear and detailed views during every stage of the test
- Patient Name Registration:**
Allows you to register data patient including **first** and **last name**
- Direct Test Annotations:**
Allows you to add **clinical notes** to **patient tests** directly from the device
- Larger Internal Memory:**
Stores up to **15,000** spirometry **tests**
- New Smart Technology:**
Flowmir Plus and Reusable Plus, deliver **repeatable**, **accurate**, and **precise** testing even at low flows



Always included:
MIR Spiro Software



Available with
Plus Turbine Only

Minispir Plus

PC – based spirometer powered
by MIR Spiro Software

- ✓ New ergonomic design
- ✓ New Technology
- ✓ Plug & Play



Minispir Plus is the latest generation of **PC-based** spirometers from MIR's *Plus Line*.

This advanced PC-based spirometer features the most **ergonomic** and **compact design** ever, enhancing **efficiency** and **ease of use** for the professionals.

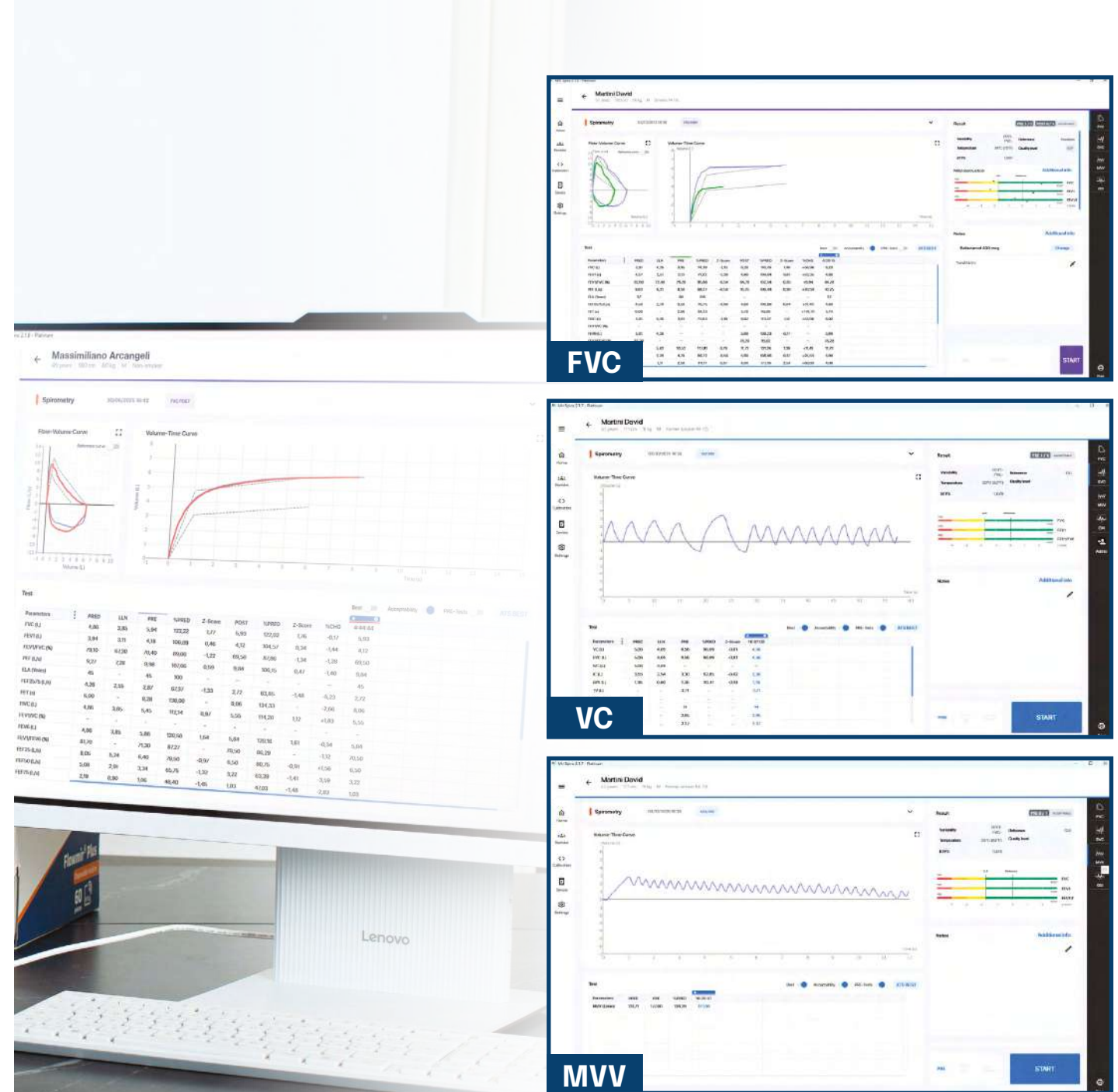
The **integrated tag reader** allows a **bidirectional communication** with **MIR Plus**

turbines transmitting and receiving key data, i.e. **calibration** and **automatic turbine type recognition**.

It is compliant with the latest **ATS/ERS 2021** standards for test accuracy and quality.

 **Always included:**
MIR Spiro Software

 Available with
Plus Turbine Only



New Smart Technology

The Best Flowmeter for Spirometry



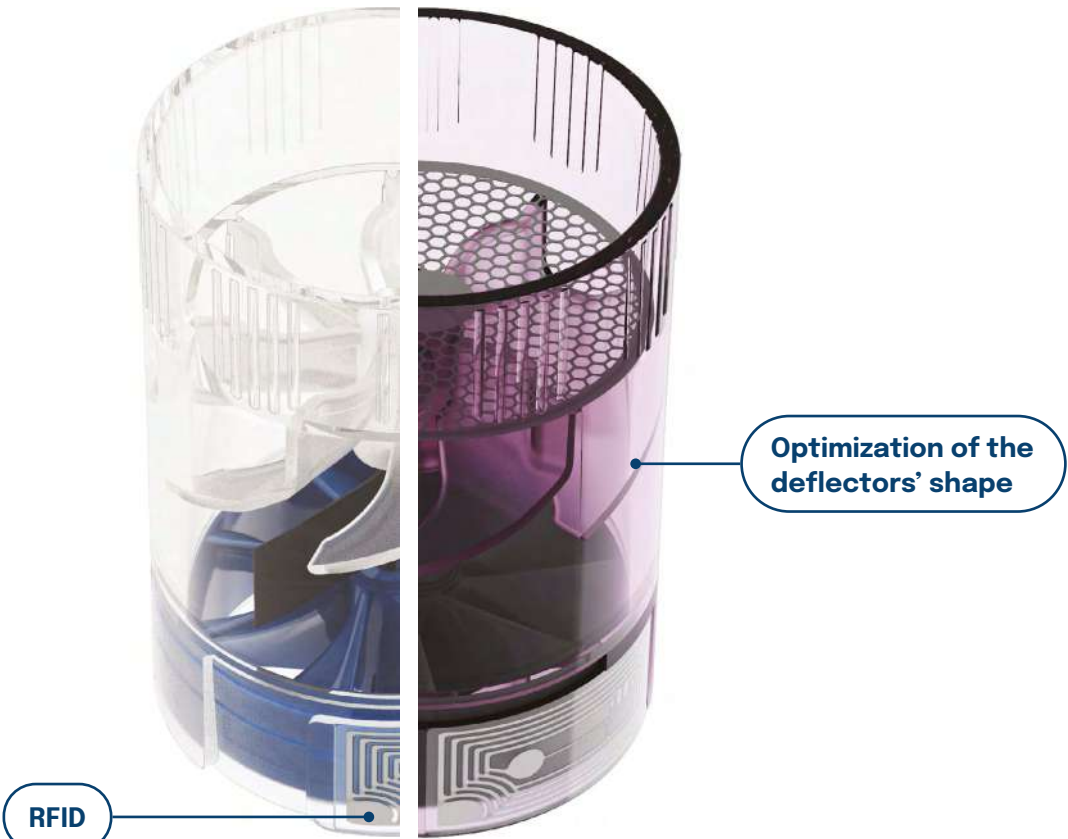
Flowmir Plus

Disposable Turbine
Singularly packed



Reusable Plus

Reusable Turbine



Key Features

- 

High sensitivity to low flows
Plus Turbined ensure accurate measurements, even with extremely reduced lung capacity (20 mL/s)
- 

Calibration stored on RFID
The innovative integrated RFID system records calibration data, ensuring measurement accuracy and reducing maintenance tests between patients
- 

Automatic turbine type recognition
The integrated RFID system allows for automatic recognition of the turbine
- 

No influence from environmental variations
Research studies demonstrate the turbine sensor's reliability in various environmental conditions. The turbine is unaffected by changes in pressure, humidity, temperature, and air viscosity

- 

Automated testing and assembly
The fully automated testing and assembly processes provide maximum safety, precision, and reliability for each unit
- 

Individually packed (Flowmir Plus only)
The individual packaging of the turbine is essential for preserving hygiene, reducing the risk of cross-contamination, and enhancing overall quality
- 

High repeatability and accuracy
Plus Turbines deliver consistent results with no variations in measured data
- 

ISO 26782 and ISO 23747 compliance

RFID

How it works

Thanks to the **new RFID technology**, Plus Turbines are the first ones to **establish direct communication with MIR's professional devices** ensuring **highly accurate measurements** and **optimizing workflows**.

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



ESI, Emphysema Severity Index

*Enter a new era
of spirometry*

ESI, Emphysema Severity Index

ESI, Emphysema Severity Index, is a novel parameter capable of objectively and entirely non-invasively **assessing the relative contribution of pulmonary emphysema** to airflow obstruction detected **through simple spirometry**.

ESI is the result of clinical research, innovation, and development activities aimed at contributing to the advancement of respiratory medicine and the pursuit of the **4Ps concept: Prevention, Prediction, Precision, and Personalization**.

The ESI method describes, through a model based on the fluid dynamic characteristics of the airways, the morphology of the expiratory fraction of the Flow/Volume curve, whose inflection is an indicator of the presence of emphysema. The integration of the new ESI index into spirometry allows to define **how much of the level of obstruction is attributable to inflammatory changes in the conductive airways** (chronic bronchitis, bronchiolitis, airway disease) **or to emphysematous destruction of the lung parenchyma**, proving fundamental in clinical practice for establishing personalized prognoses and therapeutic alternatives.

SOURCE

Occhipinti M, Paoletti M, Bartholmai BJ, Rajagopalan S, Karwoski RA, Nardi C , Inchingolo R , Anna R, Larici AR, Camiciottoli G, Lavorini F, Colagrande S, Brusasco V, Pistolesi M. *Spirometric assessment of emphysema presence and severity as measured by quantitative CT and CT-based radiomics in COPD*. Respir Res 20, 101, (2019).

Occhipinti M, Paoletti M, Crapo JD, Make BJ, Lynch DA, Brusasco V, Lavorini F, Silverman EK, Regan EA, Pistolesi M. *Validation of a method to assess emphysema severity by spirometry in the COPDGene study*. Respir Res 21, 103, (2020).

Dal Negro R W, Paoletti M, Pistolesi M. *Standard spirometry to assess emphysema in patients with Chronic Obstructive Pulmonary Disease: the Emphysema Severity Index (ESI)*. Multidisc Respir Med, (2021).

Luoto J, Pihlsgård M, Pistolesi M, Paoletti M, Occhipinti M, Wollmer P, Elmståhl S. *Emphysema Severity Index (ESI) associated with respiratory death in a large Swedish general population*. Respir Med 200, (2022).

In this framework, ESI stands at the forefront in the field of assessment and treatment of respiratory diseases, providing a valuable contribution to **improving early diagnosis**,

personalized patient management, and the **development of targeted therapies**, thus promoting a **better quality of life and a patient-oriented approach**.

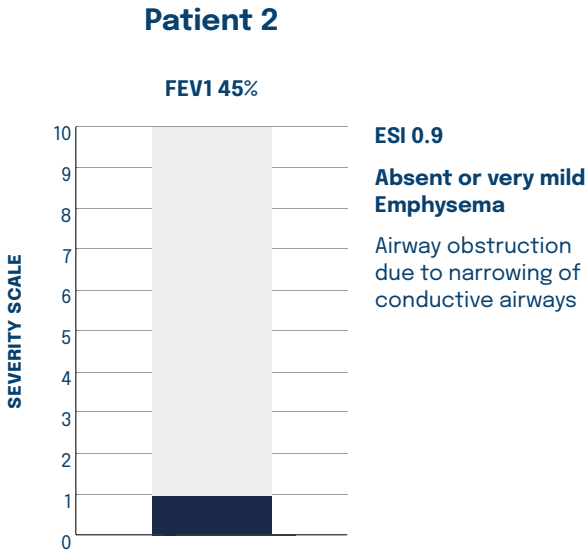
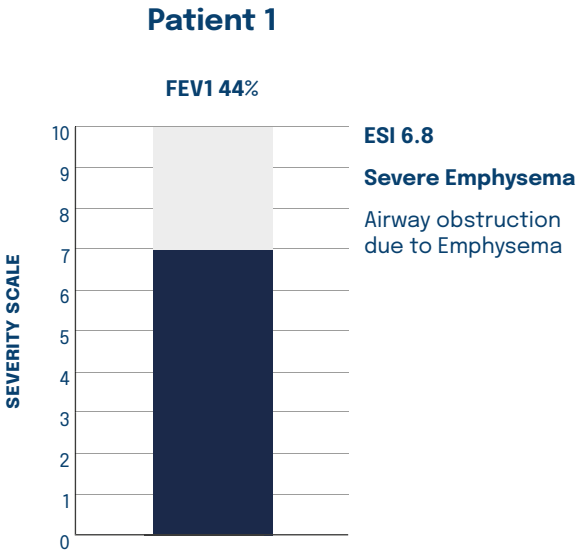


FIGURE 1

Quite different ESI values in two copd patients with comparable severe airway obstruction.

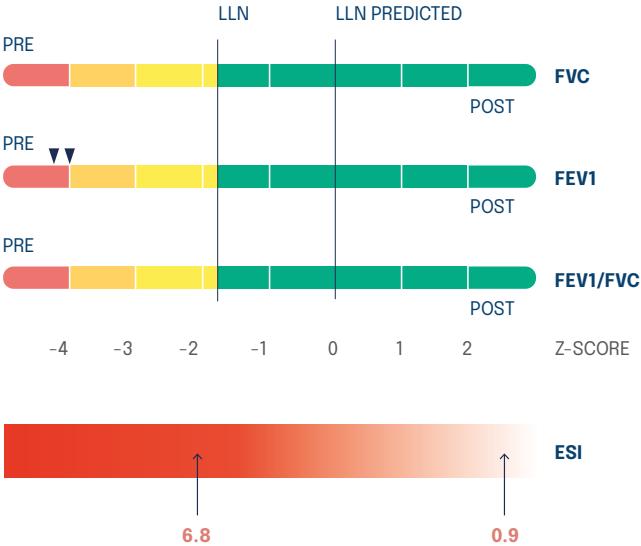


FIGURE 2

Results of spirometry with ESI computation referring to the two COPD patients reported in Figure 1. Both patients have similar severe obstruction (Z score -4, black arrowheads), but their ESI values are quite different (6.8 and 0.9, black arrows) indicating the different pathophysiologic mechanism underlying their airway obstruction.

Spirolab Plus ESI

All-in-one desktop spirometer



Wi-Fi



Available with
Oximetry option

Powerful and **advanced**, these spirometers elevate clinical practice standards by offering a **revolutionary perspective** in the management and detection of respiratory diseases.

The **Spirolab Plus ESI** and **Minispir Plus ESI** are the **first spirometers** in the world to include the capability of **assessing the presence and severity of pulmonary emphysema within the spirometry test**.



Always included:
MIR Spiro Software



Available with
Plus Turbine Only

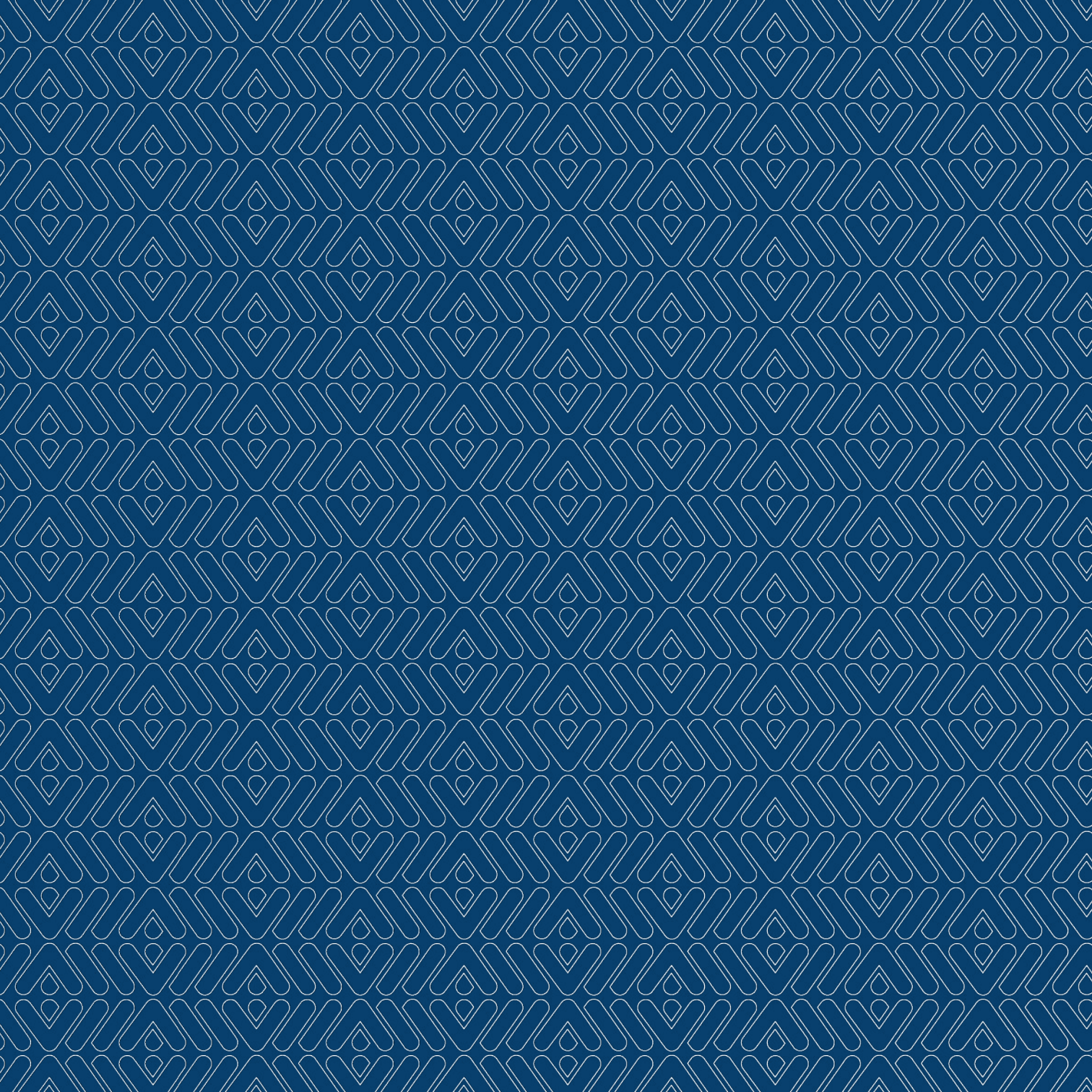
Minispir Plus ESI

*PC - based spirometer powered
by MIR Spiro Software*



In addition to the standard parameters measured during a spirometry, **Spirolab Plus ESI** and **Minispir Plus ESI** feature the novel parameter ESI, Emphysema Severity Index, that enables the assessment of whether pulmonary emphysema is the primary mechanism behind airway obstruction.





Comparison Matrix Plus vs Standard

		
Spirolab Plus ESI	Spirolab Plus	Spirolab
Display 7" Touch 1024 x 600 pixel	Display 7" Touch 1024 x 600 pixel	Display 7" Touch 800 x 480 pixel
Wi-Fi connection - Import a patient worklist - Send test results back to the software - Print reports directly from a connected printer	Wi-Fi connection - Import a patient worklist - Send test results back to the software - Print reports directly from a connected printer	—
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	—
Connectivity Wi-Fi, USB, Bluetooth 5.0	Connectivity Wi-Fi, USB, Bluetooth 5.0	Connectivity USB, 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	—
Print Test Results Via built-in printer, USB or Bluetooth connection to a PostScript printer	Print Test Results Via built-in printer, USB or Bluetooth connection to a PostScript printer	Print Test Results Via built-in printer or USB connection to a PostScript printer
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: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir Plus RFID: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir

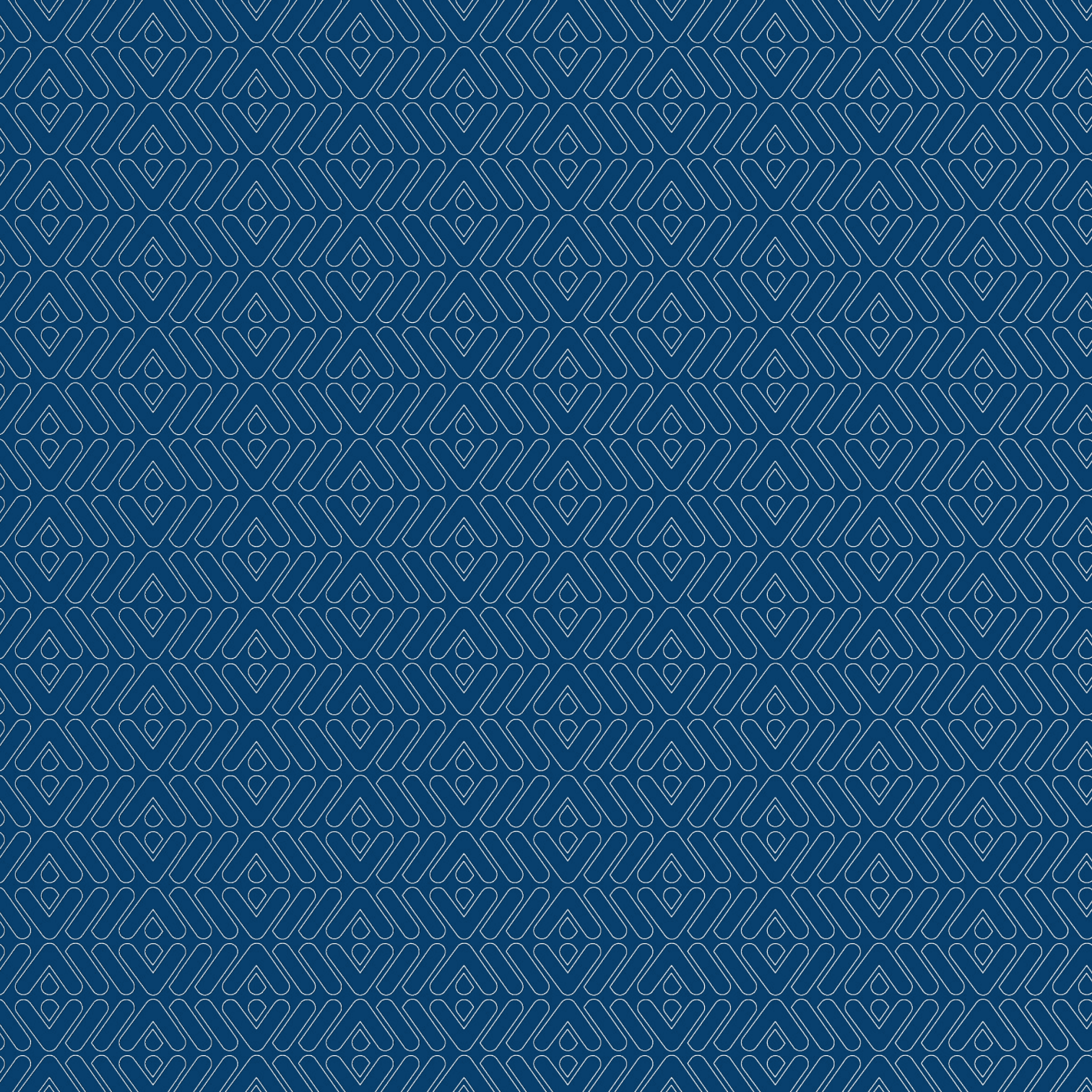
		
Minispir Plus ESI	Minispir Plus	Minispir
Hardware New STM32 technology	Hardware New STM32 technology	Hardware 32UC3A Atmel
ESI Index Assessment of the presence and severity of pulmonary emphysema	—	—
Tag Reader Reading and identification of data from the RFID Tag	Tag Reader Reading and identification of data from the RFID Tag	—
Design More ergonomic design	Design More ergonomic design	Design The classic design
Flowmir Plus RFID: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir Plus RFID: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir



Spirobank II Plus	Spirobank II Light	Spirobank II BLE	Spirobank II Basic
Display 320 x 240 pixel Color LCD Touchscreen	Display 320 x 240 pixel Color LCD Touchscreen	Display 160 x 80 pixel B/W LCD Screen	Display 160 x 80 pixel B/W LCD Screen
Hardware New STM32 technology	Hardware New STM32 technology	Hardware 32UC3A Atmel	Hardware 32UC3A Atmel
Mode of use Stand Alone, Tablet, and PC	Mode of use Stand Alone and PC	Mode of use Stand Alone, Tablet, and PC	Mode of use Stand Alone and PC
Oximetry SpO2% sensor (optional)	—	Oximetry SpO2% sensor (optional)	—
Connectivity USB, Bluetooth 5.0	Connectivity USB	Connectivity USB, Bluetooth 4.0	Connectivity USB
Work List Import a list of patients created from MIR Spiro Software or from EMRs directly to the device and return test results	—	—	—
Patient name registration Allows you to register the patient using both first and last name	Patient name registration Allows you to register the patient using both first and last name	—	—
Direct test annotation Add clinical notes to patient tests directly from the device	Direct test annotation Add clinical notes to patient tests directly from the device	—	—
Print Test Results Enables printing of spirometry and oximetry results directly from the device via USB and PostScript Printer	Print Test Results Enables printing of spirometry and oximetry results directly from the device via USB and PostScript Printer	—	—
Internal Storage 15K tests or 750 hours of oximetry	Internal Storage 15K tests	Internal Storage 10K tests or 500 hours of oximetry	Internal Storage 10K tests
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: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir Plus RFID: - Automatic turbine type recognition - Factory calibration stored on RFID - Turbine traceability	Flowmir	Flowmir



Flowmir Plus	Flowmir
RFID: - Automatic turbine type recognition - Calibration stored on RFID - Turbine traceability	—
Perfect sensitivity to low flows	High sensitivity to low flows
Calibration No calibration required	Calibration No calibration required
Testing and assembly Fully automated process	Testing and assembly Semi-automated process
Country of origin Made in Italy	Country of origin Made in Taiwan
Condensation No vapor condensation	Condensation No vapor condensation
Environmental influence No influence from the environment	Environmental influence No influence from the environment
Compatibility All MIR Plus professional devices	Compatibility All MIR standard professional devices



MIR Spiro Software

Elevate your measurements

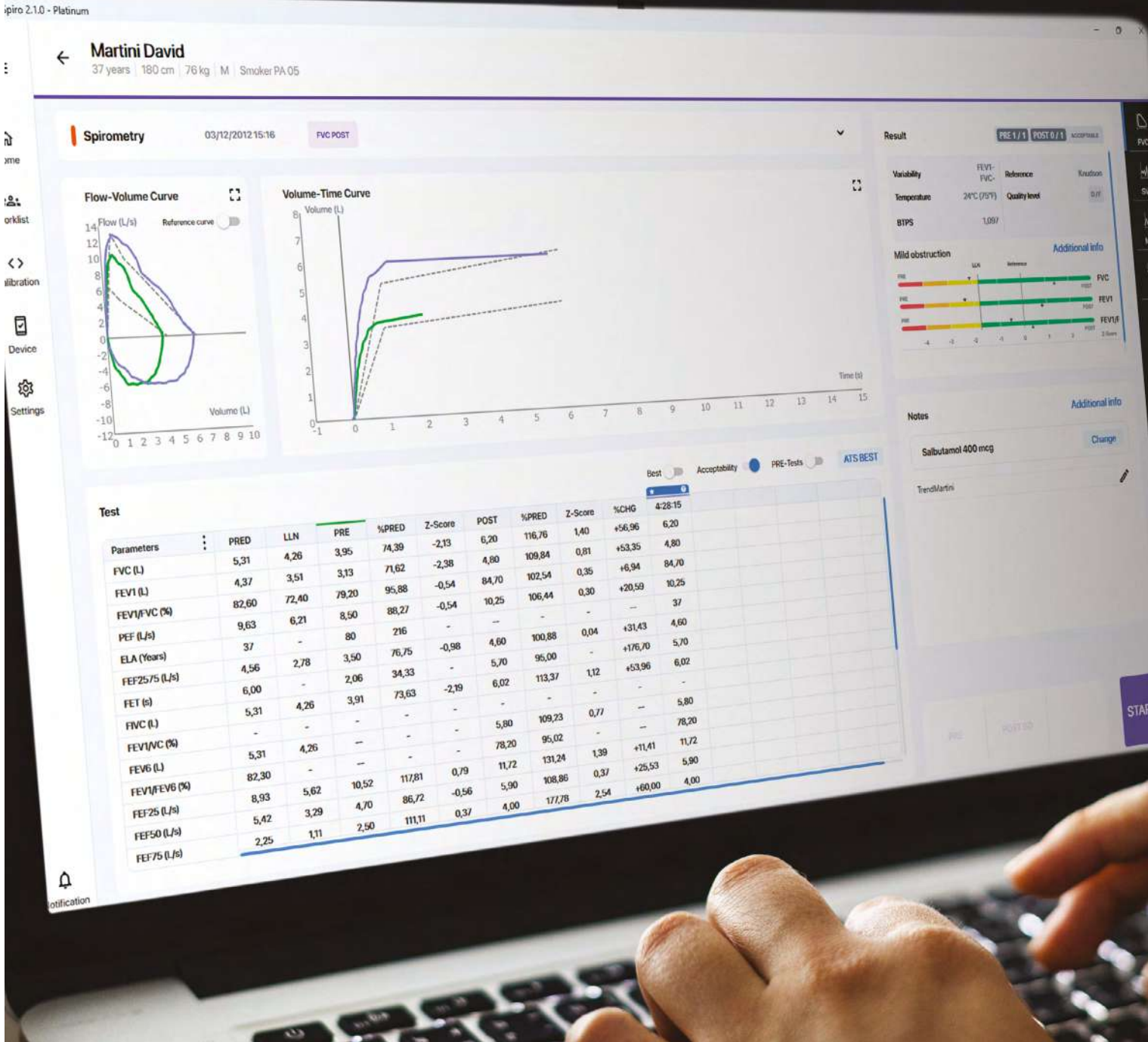
MIR Spiro

MIR Spiro is the latest-generation **software** for **Spirometry** and **Oximetry** available with all MIR professional devices.

Powerfull and advanced, it offers a wide range of **innovative features** in a **new graphic style** and customizable settings that allow for more in-depth diagnosis, ease of use, support in clinical assessments and decisions, integration with medical records (EMR/EHR).

MIR Spiro is designed to take the **ATS/ERS 2021 standards** for data collection and present them in a user friendly format, allowing you to focus more on the patient.

Designed to function efficiently and seamlessly on both **macOS** and **Windows** operating system, MIR Spiro ensures a **stable, reliable, and lasting user experience**.



Be Platinum

Always included in your purchase

With your Platinum plan, you will have **uninterrupted access** to all features of MIR Spiro, **exchange data unlimitedly** and **free** of charge between MIR Spiro and remote platforms, and **access updates**.



1 YEAR



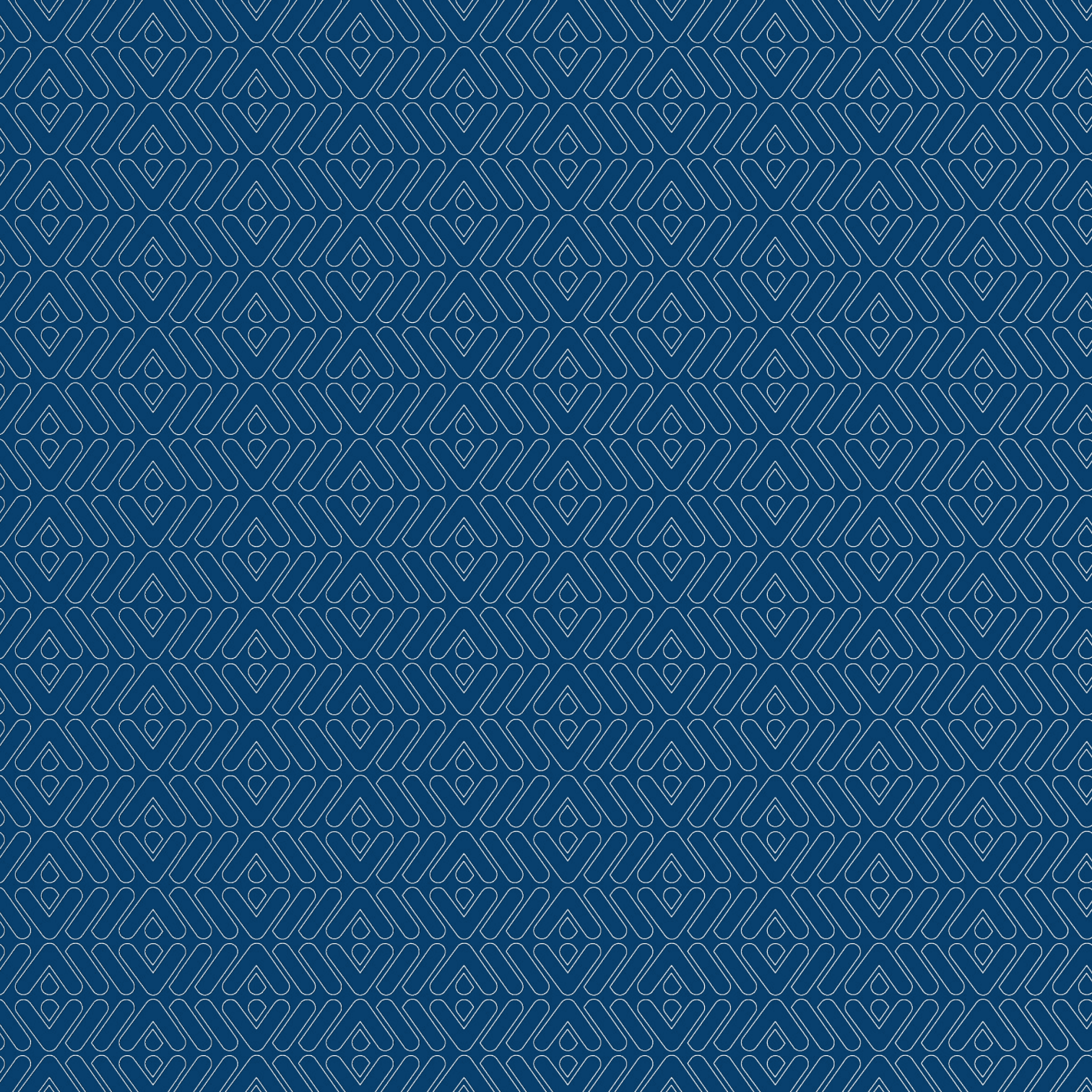
2 YEAR



5 YEAR



- **DATA DELIVERY SERVICE (DDS)**
DDS acts as a gateway between **MIR applications** and **cloud-based platforms**, such as Electronic Medical Records (EMRs) and clinical study environments. DDS supports a wide range of protocols and standards, including but not limited to REST, SOAP, FHIR, HL7v2, GDT
- **NETWORK VERSION**
A single database, multiple devices. One shared database for all workstations on the same local network, designed for clinics, outpatient centers, and healthcare facilities
- **FVC BRONCHIAL CHALLENGE**
Enables precise measurement of lung function during bronchial challenge tests for accurate assessment of airway responsiveness.
- **VIRTUAL ASSISTANT**
For each spirometry session performed, MIR Spiro displays the relationship between spirometry interpretation (obstruction/restriction) and the shape of the flow/volume curve, providing diagnostic support
- **PLATINUM CUSTOMER SUPPORT**
1 free session of remote video assistance. Get live support from a MIR operator.



Consumables and Accessories

	Flowmir Plus Turbine Disposable Turbine flowmeter.	Code: 913001 MIR Model: All the MIR Professional Plus products
	Reusable Turbine Plus Compatible with cardboard mouthpiece.	Code: 913002 MIR Model: All the MIR Professional Plus products
	Cardboard adult disposable mouthpiece Disposable, individually packed cardboard adult mouthpiece. Packed in bags of 100 pcs.	Code: 910300_B MIR Model: All Spirometers
	Plastic mouthpiece Plastic adult reusable mouthpiece. Packed in bags of 120 pcs.	Code: 910307 MIR Model: All Spirometers
	Plastic pediatric mouthpiece Plastic pediatric reusable mouthpiece (white, conical). Packed in bags of 15 pcs.	Code: 910310 MIR Model: All Spirometers

	Bacterial/Viral Filter Bacterial/Viral Filter NeumoFilt with ergonomic design. Disposable, packed in individual bag.	Code: 910306 MIR Model: All professional-use products
	Thermal paper for Spirolab printer Standard paper roll for printer. Packed in boxes of 10 or 50 pcs.	Code: 910350 MIR Model: Spirolab
	Plastic noseclip Plastic noseclip. Packed in bags of 100 pcs.	Code: 910322 MIR Model: All Spirometers
	Calibration syringe 3L 3L calibration syringe. Individually packed.	Code: 919000 MIR Model: All Spirometers
	SpO2 Reusable Sensor Adult Reusable, adult.	Code: 919034_INV MIR Model: All professional-use products with oximetry option

ITALY

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