Pony FX
Desktop Spirometer

Advanced desktop spirometer with spirometry, airway resistance and respiratory mechanics

" Effective, simple lung screening in any environment "

Pony FX

COSMED
The Metabolic Company

> *The COSMED Pony FX meets ATS recommendations for accuracy and precision in measuring FVC, FEV_1, $FEF_{25-75\%}$ and peak expiratory flow under ambient and BTPS conditions[1]* ""

- **Full spirometry testing (FVC, SVC, MVV, Pre/Post BD)**
- **Airway resistance by Occlusion Technique (option)**
- **Respiratory mechanics MIP/MEP (option)**
- **Oxygen saturimetry with integrated SpO_2 monitor (option)**
- **Colour LCD display with real time graphs and embedded high speed thermal printer**
- **Validated turbine flowmeter**
- **Provided with OMNIA software for data management, real time testing and interpretation on PC**

Turbine flowmeter with AB filter for Spirometry testing

Pressure Transducer with AB filter for MIP/MEP testing

Pony FX is the new generation family of portable spirometers from COSMED, representing the ideal solution for flexible lung function screening in many fields of application. Pony FX design allows easy spirometry testing without sacrificing anything to functionality.

Two different Pony FX models are currently available:

Pony FX: desktop spirometer with COSMED validated digital bidirectional turbine flowmeter.

Pony FX MIP/MEP: desktop spirometer with digital turbine and included kit for respiratory mechanics measurements (MIP/MEP).

Design

- High quality color LCD display for real time testing
- Integrated 120 mm high speed thermal printer for high quality reports in few seconds
- Compact size (20x23x6cm) and light weight (1.2 kg)
- Alphanumeric keyboard and navigator tool to allow user access to all functions
- Internal memory of up to 600 tests/patients
- New Li-Ion battery with autonomy of up to 6 hours (charging time 2h10)

- Easy interface with PC and other devices through the ports: USB-A, USB-B, RS 232
- Possibility to print reports without using a computer by connecting directly the Pony FX via USB with a PCL5 compatible printer

Spirometry

- Full spirometry (FVC, SVC, MVV, Pre/post BD)
- New Trial Selection and Quality Control functions (in compliance with ATS/ERS guidelines)
- Innovative pediatric incentivation with selectable effort grade
- Full compliance with "2005 ATS/ERS consensus" (Interpretation, QC, etc.)
- GOLD COPD interpretation on FVC PostBD
- Includes latest Global Lung Initiative (GLI) predicteds (including Z-score)
- ATS, Metacholine-dose, Mannitol and user defined bronchochallenge protocols
- Possibility to download Six Minute Walk Test data from any Spiropalm 6MWT

Data Management & Software

Spirometry tests can be also performed real-time with Pony FX connected to a PC through the powerful software OMNIA (included in the standard package).

- Innovative user interface, touch screen, easy and self-explanatory
- Compatible with Windows 10
- Graphical data presentation both at screen and on printouts with gauges (pictograms)
- Powerful algorithm automatically elaborating results and providing comprehensive interpretation text strings including numerical results
- Full customizable time-based trends of main measured parameters
- GDT data interface protocol included
- Access and security compliant (according to US HipAA, ISO 27799:2008, EU 95/46/CE and 2002/58/CE)
- Multi-device management (single license for multiple products)
- Advanced network capabilities (Optional). Running on SQL database (both Express or Enterprise)
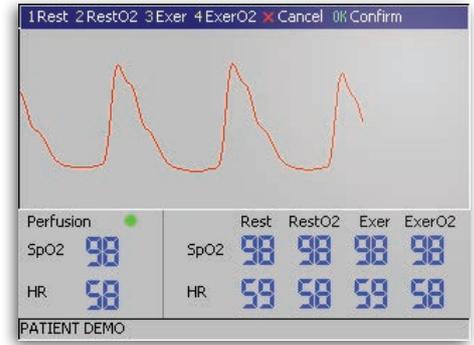
(1) Crapo R. O. (LDS Hospital) 2004 "Validation of COSMED turbine vs ATS 24 standard volume-time waveforms"

Options & Accessories

■ **Measurement of respiratory muscle strength (MIP/MEP)**. Easy to perform, quick, non-invasive. Mouth pressures recorded during these repeated maneuvers are assumed to reflect respiratory muscle strength and can be followed in real-time directly on the LCD screen.

■ **Respiratory resistance by interrupter technique (Rint, Rocc)**. Ideal solution for testing children (requires low patient collaboration) and good alternative to body plethysmography for airway resistance. Test is performed during tidal breathing through, a dedicated low flow PNT mouthpiece while an occlusion valve interrupts the airflow for 100 msec

■ **Pulse oximetry (SpO$_2$)**. Oxygen desaturation and heart rate measurement with high quality integrated monitor (Nonin© technology). Low power draw (60 mW) and intelligent pulse-by-pulse filtering.
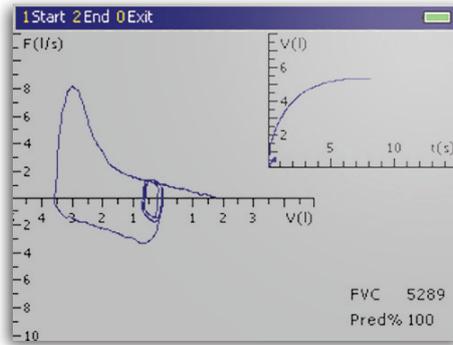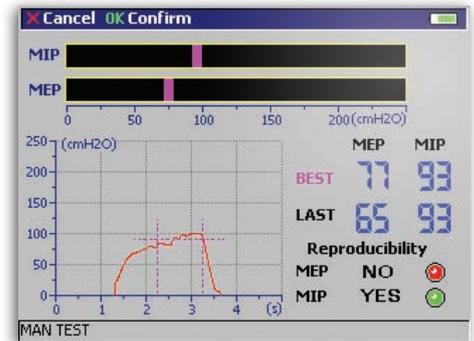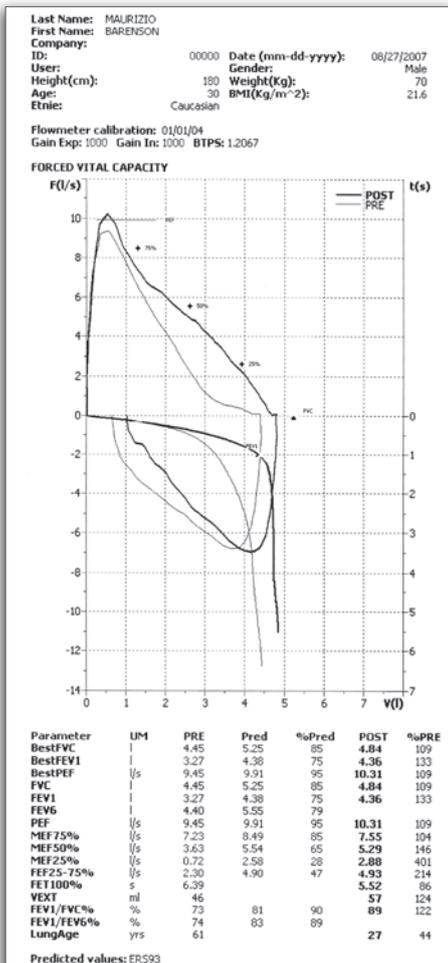

Pony FX screenshot: real-time FVC
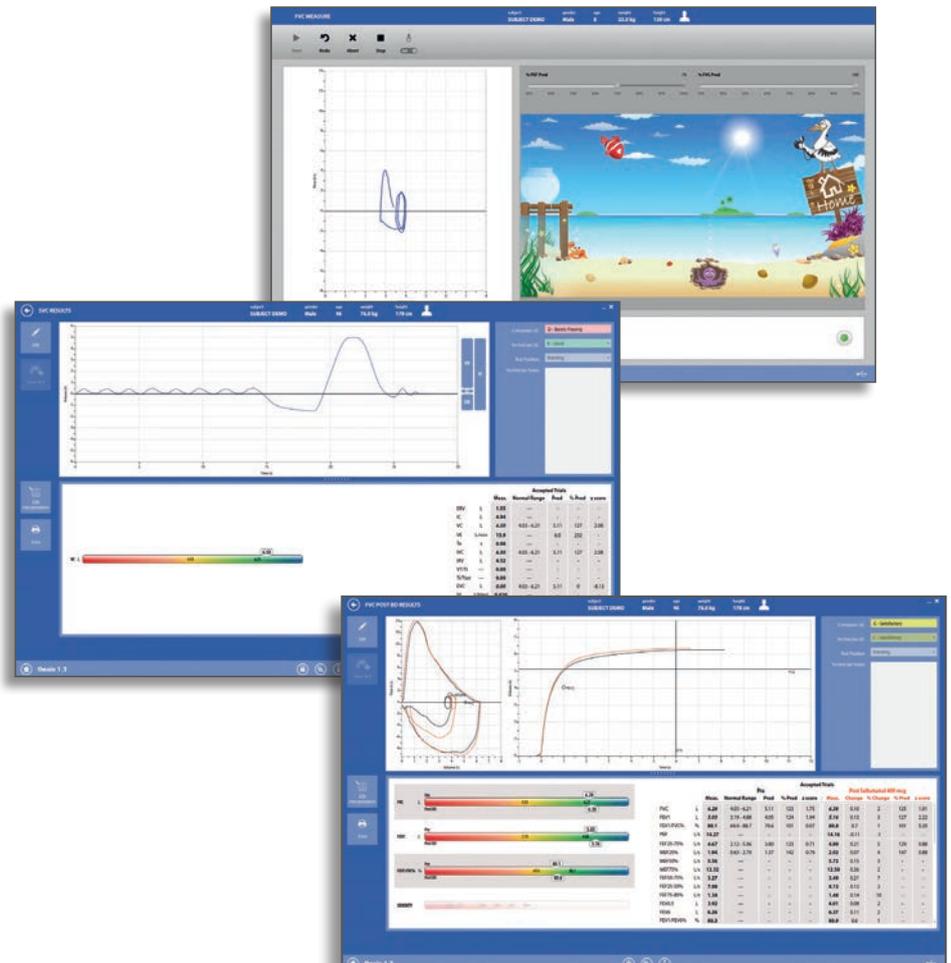

Pony FX screenshot: real-time SpO$_2$
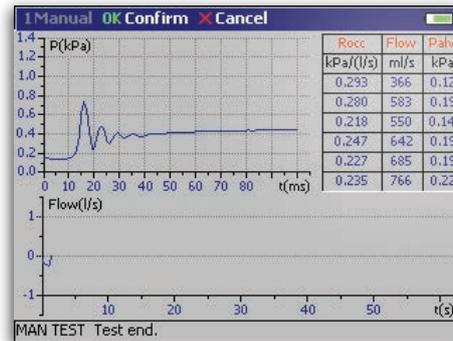
Pony FX screenshot: real-time Rocc

Pony FX screenshot: real-time MIP/MEP

Thermal printout sample (original size 110mm wide): Forced Vital Capacity (FVC)

Advanced software for data management, real time testing and interpretation directly on PC

Validation articles

- Crapo R. O. (LDS Hospital) 2004 "Validation of COSMED turbine vs ATS 24 standard volume-time waveforms "
- More scientific studies on www.cosmed.com/bibliography

Technical Specifications

Product	Description	REF
Pony FX	Desktop Spirometer with turbine flowmeter	C09062-01-99
Pony FX MIP/MEP	Desktop Spirometer with turbine flowmeter and respiratory mechanics module	C09062-05-99
Standard Tests (Spirometry)		
Tests	Forced Vital Capacity (FVC) Pre/Post, Slow Vital Capacity (SVC) Pre/Post, Maximum Voluntary Ventilation (MVV), Bronchochallenge - Bronchial Dilator/Constrictor test	
Measured Parameters (partial listing)	FVC • IVC • VC • MVV • VT • FEV1 • FEV6 • FEV1/FEV6 • FEV6/FVC • PEF • PIF • FEV1/FVC • FEF 25-75 • FEV1/VC% • %FEV1 • MEF25% • MEF50% • MEF75% • FET 100% • Lung Age • ERV • IRV • VE • Rf • ti • te • ti/t.tot • VT/ti • Best FVC • Best FEV1 • IC	
Predicted Values (partial listing)	2012 Global Lung initiative (GLI), ERS 1993 (ECCS 1983), NHANES III, Knudson 83, ECCS 1971, ITS, Zapletal, LAM, Pneumobil, Gutierrez (Chile), Multicèntrico Barcelona, Thai 2000, Austria (Forche), Crapo 1981 user defined predicted calculations.	
Automatic Interpretation	Automatic and comprehensive , with statements based on: ATS/ERS 2005 (Spirometry), GOLD COPD, ATS/ERS 2005 (Obstruction Reversibility based on FVC Post BD), ATS/ERS 2007 (Obstruction Reversibility based on Rocc)	
Hardware		
Dimensions & Weight	19.8x23.8x7.6 cm / 1.2 Kg	
Interfaces	USB-A, USB-B, RS 232	
Display	Color LCD 320 x 240 pixel	
Printer	High speed thermal printer 110 mm	
Batteries	Rechargeable Li-ion batteries (2600 mAh)	
Power Supply	100-240V $\pm$ 10% 50/60 Hz	
Flowmeter	**Turbine Ø-28mm**	
Type	Bidirectional Digital Turbine	
Resolution	12 ml	
Ventilation Range	0-300 l/min	
Flow Range	0-16 l/s	
Accuracy	$\pm$ 2% or 20 ml/s	
Resistance	<0.8 cmH$_2$O /l/s @ 14l/s	
Software	**OMNIA**	
Available languages	Italian, English, Spanish, French, German, Portuguese, Greek, Dutch, Turkish, Russian, Chinese (Traditional), Chinese (Simplified), Korean, Romanian, Czech, Norwegian	
Required PC configuration	I3 or higher processor speed. Compatible with Windows 7, 8, 8.1, 10 (32 or 64 bit). RAM 4GB (8GB recommended). HD with 4GB of free space (plus tools)	
Options & Accessories	**Description**	**REF**
Rocc	Airway Resistance kit (Rocc)	C02650-01-11
Pulse Oximetry	Oximeter Ipod (including finger clip probe)	C02390-01-05
Calibration syringe	3L syringe for accuracy check of flow volume measurements	C00600-01-11
Consumables	**Description**	**REF**
Antibacterial filters	Single-use filters to to prevent bacterial and viral cross contamination (50 pcs)	A-182-300-004
Nose clips	Clips for performing spirometry tests (100 pcs)	C04451-01-98
Thermal paper, Pony FX	Rolls for Pony FX thermal printer (10 pcs)	A-196-056-001
Paper mouthpieces	For spirometry testing (500 pcs)	C01805-01-98 (adult) C01814-01-98 (pediatric)
Safety & Quality Standards		
MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC) Complies with ATS/ERS 2005 guidelines		

CE 0476

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To know more: