



Introducing a milestone in the desktop spirometry market!

- ▶ Full Spirometry testing (FVC, SVC, MVV and Bronchial-Challenge Test)
- ▶ Colour LCD display with real time graphs
- ▶ Embedded high speed Thermal Printer
- ▶ Available with Disposable Pneumotach or Turbine Flowmeter
- ▶ Advanced software for data management and real time testing on PC
- ▶ Airway Resistance Rocc (optional)
- ▶ Integrated Digital Oximeter (optional)
- ▶ ATS Validation



Pony FX is a new generation portable spirometer developed for lung function screening in different fields of application. Design was studied to allow easy spirometry testing without sacrificing anything to functionality.

An alphanumeric keyboard and the navigator tool allow simple user access to all functions: enter patient data, move rapidly through the menus, perform all available tests and check in real time the correct test execution on the wide colour display. An embedded printer summarizes all the information collected in a comprehensible report.

## Applications

Pony FX features may be appreciated in different application fields: Small Clinic, Family Practice, General Practitioner, Occupational Health, Preventive Medicine, Sports Medicine.

## Accurate & Reliable Flow/ Volume measurements

Pony FX is available with two different choices of flowmeters:

- ▶ **Bidirectional digital turbine flowmeter:** practical and accurate, it does not require constant calibration. Easily sterilized and used with disposable antibacterial filters or paper mouthpieces.
- ▶ **Pneumotach "Flowsafe":** a single-use differential pressure transducer. Extremely accurate also at low flows. It does not require calibration.

Both flowmeters comply with the most stringent requirements for accuracy fixed by ATS and ERS.

## Accurate Measurements

Forced Vital Capacity, Slow Vital Capacity (Inspiratory & Expiratory), Maximum Voluntary Ventilation, Respiratory pattern, Bronchial challenge tests.

Options: Airway Resistance (Rocc), Integrated Pulse Oximeter.

## High connectivity !

Pony FX is the first desktop spirometer available in the market which offers 3 different interfacing options:

- ▶ USB-B port for PC connection, for data download or real time testing via PC keyboard.
- ▶ USB-A for direct printing with an external inkjet or laser printer.
- ▶ RS232 for PC connection (alternative to USB-B) or other external devices (such as pulse oximeter).

## Key Features

Pony FX hardware has been recently upgraded in order to improve significantly system reliability, power consumption and performances.

Main features of Pony FX are:

- ▶ Improved color LCD display for real time testing
- ▶ Integrated 120mm thermal printer produces high quality reports in few seconds
- ▶ Compact size (20x23x6cm) and light weight (1.2 kg)
- ▶ Internal memory that can store up to 600 tests/patients for future reference or also to be permanently archived on a PC
- ▶ New Li-Ion battery with autonomy of up to 6 hours (charging time 2h10).

## PC Software

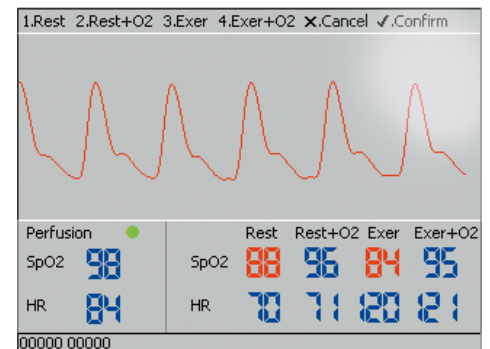
- ▶ Complete database management for patients, diagnosis, clinical report, bronchial challenge protocols;
- ▶ Advanced features and user defined protocols to easily manage bronchial challenge tests;
- ▶ Detailed printing of F/V, V/t, bronchial challenge response graphics, PD 10, 15 and PD 20 calculation;
- ▶ Pre-Post test with either bronchial dilator or metacholine;
- ▶ Powerful post-analysis elaboration of data with possibility to compare tests performed in different test sessions;



Turbine flowmeter



"Flowsafe", disposable pneumotach



Pulse oximeter (option)

**Bronchial challenge test** Users can execute a pre/post test after the assumption of a bronco stimulant and following defined protocols to easily manage bronchial challenge/dilator tests

**Automatic diagnosis** The automatic interpretation of test results as per the latest interpretation criteria fixed by ATS and ERS, is automatically suggested by the software at the end of the test. User however can manually modify the diagnosis, customize the diagnosis database and add notes. Pony FX is currently the unique spirometer that incorporates the diagnosis for COPD after a bronchial dilator test.

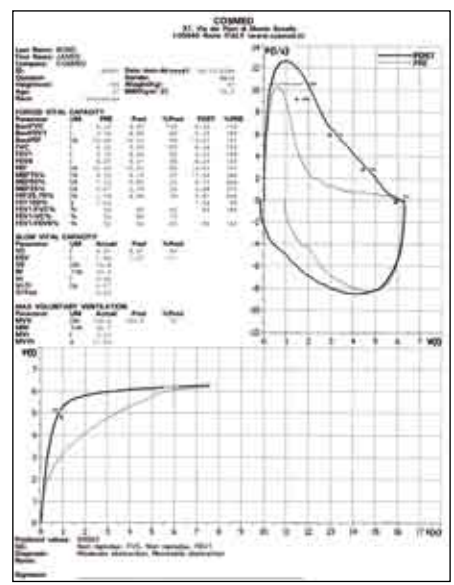
**Post data elaboration** Powerful post-analysis data elaboration with possibility to overlap tests performed in different test sessions. Multiple parameters trend analysis.

**Incentivation for children** Software encouragement tool for pediatric and non-cooperative patients

**Predicted values** 11 pre-selectable sets of predicted values including the new NHANES III.

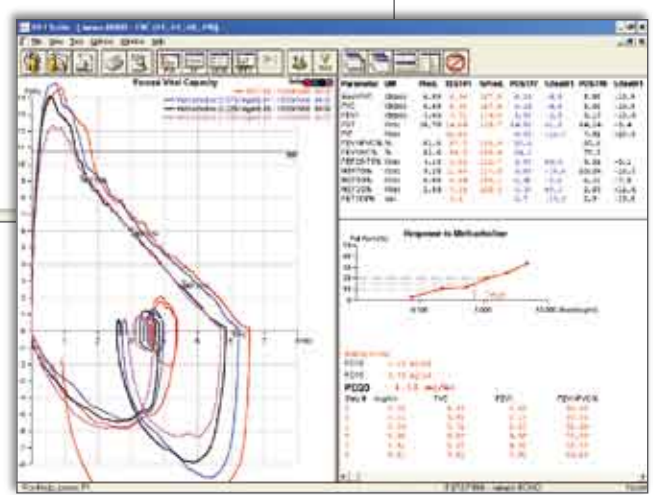
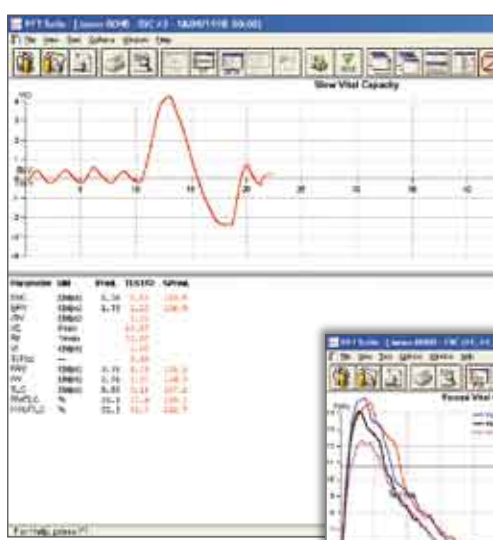
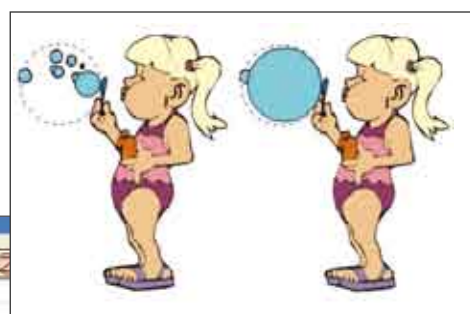
**Online PC** Every test can also be executed through a PC keyboard by connecting the Pony FX directly to the PC

**ATS/ERS Compliance** COSMED turbine flowmeter and Flowsafe Pneumotach comply with ATS and ERS recommendations. All flow and volume measurement systems are pre-tested in our lab with a pulmonary waveform generator system against the 24 + 26 curves (BTPS conditions) according to the ATS/ERS standards



Pony FX allows to print reports with PCL5 compatible printers via direct USB connection

- ▶ Batch print of multiple spirometry tests;
- ▶ Software encouragement tool for children and non-cooperative patients;
- ▶ Several selectable sets of predicted values: ERS, NHANES III, etc;
- ▶ Create custom parameters and user defined set of predicted equations;
- ▶ FEV6 parameter and related calculations now measured;
- ▶ Printout report according to the ERS-ATS requirements;
- ▶ Customizable printouts as per user's requirements;
- ▶ Best Test selection and results reproducibility according to ATS 1994 standards;
- ▶ Quality control messages according to the ATS guidelines for spirometry tests.



Real time graphic and numeric visualization of spirometry tests



37, Via dei Piani di Monte Savello  
I-00041 Rome ITALY (www.cosmed.it)

Last Name: JAMES  
First Name: BOND  
Company:  
ID: 00000 Date (mm-dd-yyyy): 01/07/2006  
User: Gender: Male  
Height (cm): 180 Weight (Kg): 80  
Age: 43 BMI (kg/m<sup>2</sup>): 24.6  
Ethnic: Caucasian

Flowmeter calibration: 01/01/04  
Gain Exp: 3000 Gain Inc: 1000 BTIPS: 1.0773

**FORCED VITAL CAPACITY**

Parameter	UM	PRE	Pred	%Pred	POST	%PRE
BestFVC	l	3.82	4.91	72	4.46	127
BestFEV1	l	2.59	4.00	65	3.79	146
BestPEF	l/s	6.17	9.35	66	10.29	167
FVC	l	3.82	4.91	72	4.46	127
FEV1	l	2.59	4.00	65	3.79	146
PEF	l/s	6.17	9.35	66	10.29	167
MEF75%	l/s	5.97	8.11	74	8.13	136
MEF50%	l/s	2.71	5.14	53	4.46	165
MEF25%	l/s	0.82	2.24	37	1.86	226
FEF25-75%	l/s	1.93	4.34	44	3.71	192
FET100%	s	2.57			1.60	62
FEV1/FVC%	%	73	79	92	84	115
LungAge	yrs	83			45	54

Predicted values: ER293

QC: Avoid Coughing, Blow Out Longer, Blow Out More Air, Non reproduc. PFC, Non reproduc. FEV1

Diagnosis: PRE: Mild restriction, POST: Reversible obstruction

Notes:

Signature: \_\_\_\_\_

## Technical Specification

### Products Features

Flowmeter  
Type  
Flow Range  
Volume range  
Accuracy of reading  
Resistance  
Temperature sensor

### Pony FX

Digital Turbine Ø 28 mm  
Bi-directional  
0.08-20l/s  
12 litres  
±2%  
<0.6 cmH<sub>2</sub>O/l/s @ 14 l/s  
0-50° C

### Pony FX flowsafe

Pneumatoc "Flowsafe"  
Pressure Transducer (lilly)  
0.04-16 l/sec  
12 litres  
±2%  
<1.0 cmH<sub>2</sub>O/l/s @ 14 l/s  
0-50° C

### Measured parameters

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 • SpO<sub>2</sub> • HR • R<sub>occ</sub> • G<sub>occ</sub>

### Predicted values

ERS 1993 (ECCS 1983), NHANES III, Knudson 83, ECCS 1971, ITS, Zapletal, LAM, Pneumobil, Gutierrez (Chile), Multicentrico, Barcelona, Thai 2000, Austria (Forche), Crapo 1981 user defined predicted calculations.

### Hardware

Interfaces  
Dimensions (mm, inc)  
Weight (g, lbs)

RS 232, USB-A, USB-B  
198x238x76 (7.8x9.4x3)  
1200 (2.6)

### Standard Packaging Includes

PC software and user manual, Flowmeter, Flowsafe PNT (only Pony FX Flowsafe), AC/DC adapter (110-240V), USB communication cable, Carrying case, Pediatric mouthpiece adapter, Mouthpieces and nose clips, Anti-Bacterial filters, Thermal paper 12cm (4,7 in).

### Available languages

English, Italian, French, German, Spanish, Portuguese, Turkish, Chinese (Mandarin), Korean.

### PC configuration required

Pentium or faster. Operating system: Windows XP, 2000, 98/95, NT, Vista (32 bit), Windows 7 (32 bit). 32 Mb RAM or more, Available USB port, CD-ROM Drive, 20 Mb on HD space available, Monitor VGA, SVGA, XGA, Any mouse and printer compatible with the MS Windows™ operative system

### Electrical requirements

Batteries  
Power supply

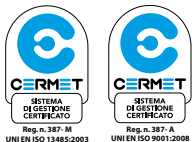
Rechargeable Li-ion batteries (2150 mAh)  
Input: AC 100-240V, Output: DC 12 V

### Safety & Quality Standards

Equipment complies with MDD (93/42 EEC);  
FDA 510(k) cleared (federal law restricts this device to sale by or on the order of a physician). EN 60601-1 (safety) / EN 60601-1-2 (EMC).



Distributed by:



**COSMED srl**  
Via dei Piani di Monte Savello 37  
Pavona di Albano - Rome  
00041 ITALY  
Phone +39 06 931-5492  
Fax +39 06 931-4580  
info@cosmed.com  
www.cosmed.com

**COSMED USA Inc.**  
2211 N. Elston Avenue #305  
Chicago, IL 60614  
UNITED STATES  
Phone +1 (773) 645-8113  
Fax +1 (773) 645-8116  
info@cosmedusa.com  
www.cosmedusa.com

**COSMED China Office**  
1st Floor, 215-1 QiYi Road  
Guangzhou 510030  
P. R. of CHINA  
Phone +86 (20) 8332-4521  
Fax +86 (20) 8332-0683  
china@cosmed.com  
www.cosmed.com