



## RESMON PRO

RESMON PRO FULL is the new professional device based on FOT, offering a complete and in-depth functional assessment of the human respiratory system.

FULL 

Developed and manufactured by:

**RESMONTech**  
RESPIRATORY TECHNOLOGY

Distributed by:





The forced oscillation technique (FOT) is a noninvasive way to measure the mechanical properties of the lung and airways. It is based on the assessment of the response of the respiratory system to small pressure stimuli applied to the airway opening during normal breathing. FOT provides information about the resistance and the reactance of respiratory system.

#### EXPIRATORY FLOW LIMITATION INDEX

## $\Delta X_{rs}$

Patent number:  
WO03103493 (A1)

#### PEDIATRIC APPLICATIONS



Total dead space and load make the device compliant with international guide lines for pediatric applications (see Technical Data).

RESMON PRO FULL is simple and easy to be used by both patients and physicians for the diagnosis and evaluation of pulmonary diseases.

After few seconds of spontaneous breathing, it allows, in addition to standard breathing pattern index, to identify:

- the detection of expiratory flow limitation using the  $\Delta X_{rs}$  index<sup>®</sup>;
- the assessment of the degree level of airway obstruction;
- the evaluation of bronchial reversibility.

Built-in reference values for normality and drugs response.

RESMON PRO FULL is also an essential diagnostic tool when spirometry cannot be performed as for:

- children;
- elderly;
- subjects with neuromuscular diseases;
- uncollaborative people.

Moreover, thanks to its versatility, it is an ideal tool for research studies.



#### ADJUSTABLE SMART SUPPORT



RESMON PRO FULL is provided with several built-in measurement protocols:



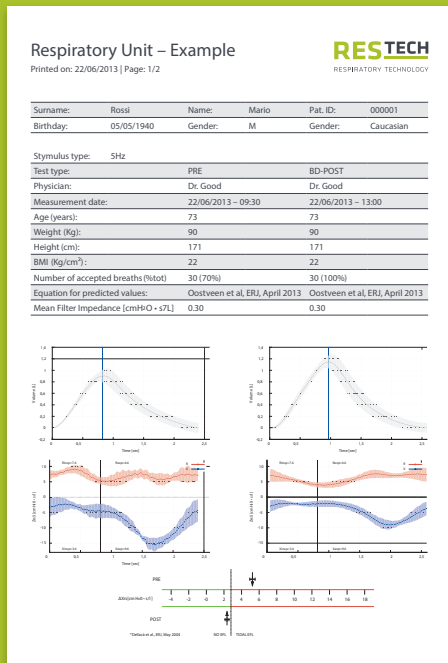
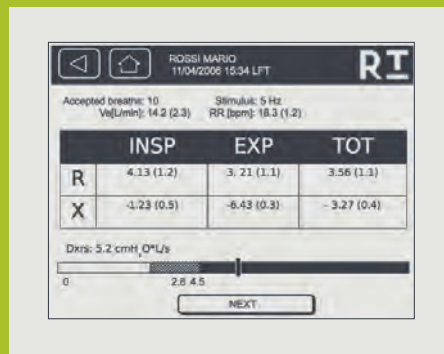
classical pseudo-random noise (5-37 Hz)

within-breath single frequency (5, 6, 8, 10 Hz)

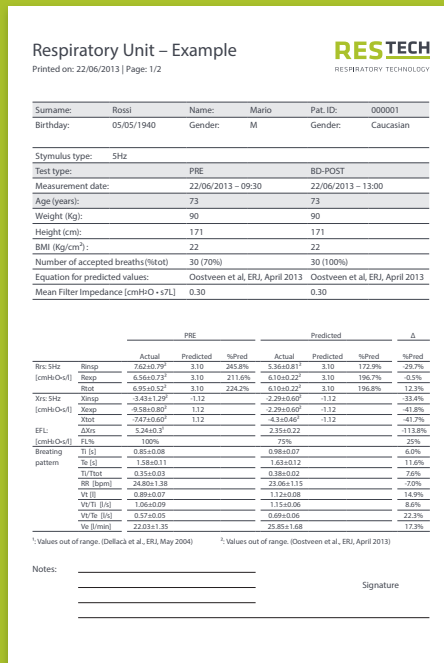
new within-breath multiple frequency (5+11+19 Hz)



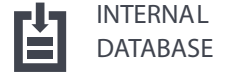
Display layout



Report



RESMON PRO FULL CERTIFICATIONS



The internal database allows to easily store and retrieve the tests.



Each user can have his own protocol settings.



Easy export of measurement tracings for customized post processing.



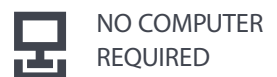
Wide touch screen (5,7") for a fast, easy and intuitive management of the device.



Automatic generation of single and matched clinical report with normality ranges.



With the automatic rejection of artifacts you need just few breath to obtain a reliable result.



# RESMON PRO FULL TECHNICAL DATA

REF. RT-1100



Flow measurement mesh type	Range	± 2 L/s		
	Linearity	± 2% in the range ± 1.5 L/s		
Mouth pressure	Range	± 2.5 cmH <sub>2</sub> O		
	Linearity	0.05% fs		
	Resolution	0.015 cm H <sub>2</sub> O		
Test signals	Within-breath protocols	Single	5, 6, 8, 10 Hz	
		Multiple	5 + 11 + 19 Hz	
	Pseudo random noise (PSRN)	Multiple	5-37 Hz	
Accuracy of the measurement	±0.1 cmH <sub>2</sub> O · s/L or 10% of the measured value			
Calibration	Factory calibration according to international guidelines + auto-zeroing of the sensors before each test + calibration check with a test object (provided)			
Total load to the patient	0.25 - 0.49 cmH <sub>2</sub> O · s/L in the frequencies of normal breathing (0.1 - 1 Hz)			
Device dead space	35 mL			
FOT parameters	Within-breath analysis	Single/Multiple frequency	R <sub>insp</sub> : mean inspiratory resistance	
			R <sub>exp</sub> : mean expiratory resistance	
		R <sub>TOT</sub> : mean resistance		
		X <sub>insp</sub> : mean inspiratory reactance		
		X <sub>exp</sub> : mean expiratory reactance		
		X <sub>TOT</sub> : mean reactance		
		EFL index ©		ΔX <sub>RS</sub> for detection of expiratory flow limitation
Heterogeneity index		R <sub>5-15</sub> : degree of heterogeneity of airway obstruction		
Breathing pattern	Ti: Inspiratory Time	Te: Expiratory Time	Ti/Ttot: Respiratory Duty Cycle	
	RR: Respiratory Rate			
	Vt: Tidal Volume	Vt/Ti: Mean Inspiratory Flow	Vt/Te: Mean Expiratory Flow	Ve: L/min
Connectivity	2 USB full speed to connect USB flash memories			
	Ethernet 10/100			
Processor and memory	Dual core architecture, 64 Mb RAM			
Display	5.7" LCD backlight touchscreen display			
Electrical specifications	Power supply	100/240V, 50/60 Hz, 60W, input AC / 15VDC output power supply (included)		
	Stand-by current	250 mA		
	Average current	1500 mA		
Materials	External case	ABS		
	Holder	Alluminium		
	Flow Mesh	AISI 304 Stainless Steel		
	Loudspeaker membrane	Silicone rubber		
Dimensions	89×55×26 cm			
Weight of the box	~ 7 Kg			
Acoustic Noise	(measured at a distance from the device equal to the average distance of the patient's ear from the device while making a test)			< 64 dB rms



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All data contained can be subject to changes. Please contact the manufacturer.