

MT 10 - HANDHELD IMPEDANCE TYMPANOMETER

- 33665 MT10 - HANDHELD TYMPANOMETER
 - 33666 MT10 - HANDHELD TYMPANOMETER WITH IPSI-REFLEX
- Professional handheld tympanometer for setting fast and reliable testing in an easy and cost effective way.

Objective analysis

The MT10 automatic tympanometer is fast and easy to operate and provides objective measures that cannot be obtained by otoscopy alone.

Easy and fast tympanograms

Results can be obtained with little efforts and with no response required from the patient. This is especially beneficial when dealing with difficult-to-test patients or small children.

Clinical application

The MT10 is also suitable for diagnostic use as tympanometer and (33666 only) reflex responses are all recorded with great detail. With MT10 you can detect otitis media (a major cause of temporary or permanent hearing impairment in children), a perforated eardrum, cholesteatomas and certain neurological disorders. You can also check tympanostomy tubes and follow up on post medical treatments.

Ipsilateral Acoustic Reflex (33666 only)

Four different reflex tests at 500, 1,000, 2,000, 4,000 Hz may be performed per ear using either fixed or automatic intensity selection. The test is carried out at the correct pressure level and the actual reflex characteristics are displayed on the screen for the operator to view and interpret.

30 patients in memory

The MT10 can hold test results of up to 30 patients in its memory. This makes it possible to screen a large group of patients and print out the data at a later time.

PC-integration

Full data-transfer to PC through optional infrared USB interface and software. Supplied with handle, set of 139 disposable ear-tips (mixed sizes) and 4x1.5 V, manual in GB, DE, FR, IT, ES, SE, GR, PT, DK, FI, CZ, PL, LT, EE, HU, NL, NO, IS, RO, MK.



33669



- -400 to +200 daPa
- ipsi-reflex (33666 only)
- 30 patient memory
- PC integration

Size: 19x8x4 cm
excluding probe
(length with
probe 22.5 cm)
Weight 285g
without battery



The MT10 is ergonomic to hold but also offers the possibility of using the included handle to make it even more stable and lightweight as it can rest on your arm during the measurement.

- 33667 INTERFACE USB ADAPTER AND SOFTWARE
- 33668 BET55 SET OF DISPOSABLE EAR-TIPS - box of 139 mixed sizes
- 33669 SANIBEL MPTII PORTABLE THERMAL PRINTER
- 33670 THERMAL PAPER ROLLS - box of 3

TECHNICAL SPECIFICATIONS

Tympanometry			
Analysis performed:	Peak compliance; peak pressure, gradient; equivalent ear canal volume		
Probe tone:	226 Hz		
Pressure levels:	+200 daPa to -400 daPa		
Ear volume measurement range:	0.2 ml to 5 ml		
Sweep speed:	Typically 200-300 daPa/sec; depending on ear & cavity volume		
Pressure limits (safety shut off):	+600 to -800 daPa		
Reflex measurements (33666 only)			
Measurement mode:	ipsilateral		
Reflex tone levels:	500 Hz, 1 kHz, 2 kHz, 4 kHz		
Four reflex levels:	100 dB with 5 dB or 10 dB steps; 95 dB, 90 dB or 85 dB with 5 dB steps		
Reflex analysis:	Reflex pass/refer at each level tested; Maximum amplitude of each reflex (seen on printed report and PC report); Pressure at which reflex was performed		
Data management			
Data storage:	30 records. Any recording can be stored once the tympanogram is viewed		
	Data held:	Patient Initials, Tympanogram and Reflex graphs and analysis for Left Ear and/or Right Ear, Time and Date of recording, which ears were tested, whether or not the record has been printed and for sent to a PC, parameters printed and/or sent to a PC, parameters used for analysis	
	Other data	Internal backup power supply: >30 days without main batteries fitted	
	Battery Lifetime:	Approx. 400 tests (Alkaline AA batteries)	
	Supported printer:	Martel MCP8830 or Sanibel MPTII	
	Interface:	Infra-red, IrDA hardware, 9600 baud	
	Information printed:	Space for patient and clinician's details, Tympanogram analysis parameters, Tympanogram, Reflex analysis parameters, Reflex graph, Serial Number of device, Last and Next Due Calibration dates	
	Standards:	Safety: IEC 60601-1. EMC: IEC 60601-1-2 Impedance standard: IEC 60645-5, Type 2 Tympanometer	

PA5 PEDIATRIC PORTABLE AUDIOMETER

- 33601 PA5 AUDIOMETER
- 33602 TDH39 AUDIOMETRIC HEAD PHONE

PA5 is a paediatric portable audiometer with air conduction, free-field and visual stimulation capabilities. By means of a headphone it can be also used as a regular screening audiometer for adults. PA5 unique features are primarily meant to help doctors in evaluating the auditory behaviour in neonates and infants till 24 months of age by means of specific tests:

Auropalpebral Reflex (APR) test

APR test is a startle reflex of the eyelid elicited by relatively strong sounds that can be performed on neonates from the day of birth. It is not based on co-operation with the newborn child.

Conditioned Orientation Response (COR) test

COR test is based on the phenomenon called "Orientation Reflex" which is a natural reflex movement elicited by sound or visual stimulation. If the visual stimulation elicits a reflex which is conditioned by a tone, the child will look towards the visual stimulation as soon as the tone is heard. If the conditioning is effective the child will look in the direction of the sound source even before the visual stimulation is presented.

Visual Reinforcement Audiometry (VRA) test

VRA test is an extension and modification of COR, where the cooperation with the child is less important. Not only the sound

localisation orientation reflex are accepted but also four other reactions: reflex reactions (body and face), search reactions, orientation reactions and spontaneous reactions.

Reflex audiometry and maturation of auditory response tests

Different stimuli are presented in terms of intensity, frequency, duration, direction of sound in order to elicit proper reactions like waking-up, crying, astonishment, direct sound localization. Supplied with GB manual and quick guide (GB, US, DE, FR, SE, IT, PT, DK, FI, ES, GR, CZ, PL, NL, NO, EE, HU, SL).



TECHNICAL SPECIFICATIONS

Frequencies:	500, 1,000, 2,000, 3,000, 4,000 Hz
Stimuli:	Warble tone, NB and WN
Intensities:	Distance 50 cm: 20/30-80dB HL in 10dB steps, for Warble Tone and WN 10/20-70dB for NB
	Distance 16 cm: increases intensity by 10 dB
Weight:	360 g
Dimensions:	LxWxH: 25x7x5 cm
Power supply:	3AA batteries (included)

PC OR PC-iPAD CONTROLLED PORTABLE AUDIOMETERS

PICCOLO PORTABLE AUDIOMETERS

Piccolo is a basic diagnostic audiometer offering air, bone and speech audiometry functions. Piccolo can be controlled either from a computer running Windows or, for the first time ever, from an iPad®. Lightweight, compact design, powerful, user-friendly software and Noah connectivity combine to make Piccolo the ideal choice for professionals on the move.

- three different models available:

Basic (AC only) for Pc use

Plus (AC/BC) for Pc or Pc-iPad® use (Aero version)

Speech (AC/BC/Live Speech) for Pc-iPad® use

- iPad® control (includes Aero option, 33616, 33618 only) through the Maestro App. Wireless Bluetooth connectivity

- computer control through the dedicated Noah or Daisy module. USB connection port

- small and light weight
- power supply through the USB connection, when controlled by computer.

Made in Italy.

Software language:

GB, FR, IT, ES, DE, PL, PT.

Manual:

GB, FR, IT, ES, DE, PL, PT, NL.



TECHNICAL SPECIFICATIONS

	Piccolo Basic	Piccolo Plus	Piccolo Speech
Type of device	Pc control	PC (33615) or Pc and iPad® control (33616)	Pc and iPad® control
Class EN 60645-1, ANSI S3.6	4-screening	3-diagnostic	3-diagnostic
Output	AC	AC, BC	AC, BC, Live Speech
Masking	NBN	NBN	NBN, WN, SN
Warble tone	Yes	Yes	Yes
Pulsed tone	0.5 Hz, 1 Hz, 2 Hz	0.5 Hz, 1 Hz, 2 Hz	0.5 Hz, 1 Hz, 2 Hz
Frequency range	125 - 8,000 Hz	125 - 8,000 Hz	125 - 8,000 Hz
Maximum output intensities	AC: -10 to 120 dB HL	AC: -10 to 120 dB HL BC: -10 to 80 dB HL	AC: -10 to 120 dB HL BC: -10 to 80 dB HL
Attenuator step	5 dB	5 dB	5 dB
Automatic audiometry	HW auto threshold	HW auto threshold	HW auto threshold
Speech audiometry	No	No	Yes
Speech inputs	-	-	EXT1, EXT2, Mic
Talk over	External microphone	External microphone	External microphone
Connection to PC	USB [driverless]	USB [driverless]	USB [driverless]
Controlling software	-	Daisy or Noah with Maestro module	-
Connection to iPad	-	Bluetooth 4 (only 33616)	Bluetooth 4
Controlling app	-	Maestro (App Store)	Maestro (App Store)
Dimensions	-	16x16x3cm (16.3 x 6.3 x 1.2 in)	-
Weight	300 g (10.6 oz)	300 g (10.6 oz)	300 g (10.6 oz)
Operating voltage	100-240 V, 50/60 Hz	100-240 V, 50/60 Hz	100-240 V, 50/60 Hz



GIMA code	SCREENING AND DIAGNOSTIC AUDIOMETERS	Management
33613	Piccolo Basic screening audiometer - air + mask	PC
33615	Piccolo Plus diagnostic audiometer - air + bone + mask	PC
33616	Piccolo Plus Aero diagnostic audiometer - air + bone + mask	PC + iPad
33618	Piccolo Speech Aero diagnostic audiometer - air + bone + live speech + mask	PC + iPad

STANDARD ACCESSORIES

- TDH-39 supra-aural headphones
- B71 bone vibrator (33615/6/8 only)
- Patient response switch
- Clip-on microphone for operator
- to-patient communication
- Jack/jack cable (Ø 3.5 mm) - 33618 only
- Inventis Daisy Patient Record Manager, with Daisy Maestro module
- Noah Maestro module
- USB connection cable
- Medical grande power supply
- User Manual

BELL PLUS DIAGNOSTIC AUDIOMETER

• 33635 BELL PLUS DIAGNOSTIC AUDIOMETER - air + bone + mask

Bell is a basic diagnostic audiometer performing fast and accurate air and bone conduction threshold examinations.

Simple operation, fast and reliable automatic examination mode, user-friendly interface and easy portability make Bell the ideal instrument for private clinics, multi-specialist clinics and occupational medicine application.

- pure tone audiometry in AC and BC
 - Hughson-Westlake auto threshold test
 - colour graphic display
 - internal memory for 100 patients
 - cost effective solution
 - Supplied with air conduction phone and vibrator for bone conduction.
- Made in Italy

Manual:
GB, FR, IT, ES, DE, PT.



33635

STANDARD ACCESSORIES

- TDH-39 supra-aural headphones
- B71 bone vibrator
- Patient response switch
- Plastic cover sheet
- Medical grade power supply
- User Manual

TECHNICAL SPECIFICATIONS

Type of device	Hybrid audiometer
Class (EN 60645-1, ANSI S3.6)	3 diagnostic
Output	AC, BC
Masking	NBN, WN
Insert masking earphone	Yes
Warble tone	Yes
Pulsed tone	0.5 Hz, 1 Hz, 2 Hz
Frequency range	125 - 8,000 Hz
Maximum output intensities	AC: -10 to 120 dB HL BC: -10 to 80 dB HL
Attenuator step	5 dB
Automatic audiometry	HW auto threshold
Talk over	Internal or external microphone
Display type	Colour graphic
Display size resolution	4.3", 480x272
Internal memory	100 patients
Operating voltage	100-240 V, 50/60 Hz
Dimensions	32x32x9 cm (12.6x12.6x3.5 in)
Weight	1.8 kg (4.0 lbs)

PORTABLE AUDIOMETERS

33612

- 33610 SCREENING AUDIOMETER AS5-A - air conduction
- 33612 DIAGNOSTIC AUDIOMETER AS5-AOM - air+bone+masking

Gima audiometers have a microprocessor allowing simple and quick measure audition levels. All the operations can be made by a membrane keyboard and visualized on an alphanumeric LCD display of 16 characters.

- 33620 TEST RESULTS PAD - pack of 100
- 33621 INSULATION DEVICE for air conduction phone (insulation 3-4 db)
- 33622 AIR CONDUCTION PHONE TDH39 - spare
- 27139 CARRYING BAG - nylon



AUDIOMETERS FEATURES

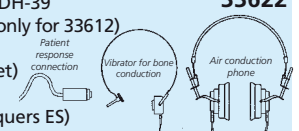
	33610 AS5-A	33612 AS5-AOM
Audiometry type	4 screening	3 diagnostic
Air conduction	•	•
TDH39 phones	•	•
Continuous tone	•	•
Pulse tone	•	•
Signal indicator	•	•
Masking by white noise	•	•
Bone conduction		•
Bone vibrator		•
Patient response	•	•
LCD display	•	•

TECHNICAL SPECIFICATIONS

Channels: one
 Masking noise (33612 only): White noise
 Level range = 30 to 80 dB SPL
 Levels increments = 5 dB
 Power supply: 220 V 50/60 Hz, 15 W (110-120V on request)
 Dimensions: 342x246x95 mm Weight: 2.5 Kg
 Safety standard: UNE 20-613, IEC 601.1 Made in Europe

STANDARD ACCESSORIES

- 1. Air conduction phones TDH-39
- 1. Bone conduction phone (only for 33612)
- 1. Patient response switch
- 1. Test results pad (100 sheet)
- 1. Pen (red, blue)
- User manual (GB, IT. On request ES)



FREQUENCY AND SOUND PRESSURE LEVELS

Frequency	250	500	1000	2000	3000	4000	6000	8000	Hz
Max. pure tone ac	90	105	105	105	105	105	90	80	dB HL
Max. pure tone bc	40	50	50	50	50	50	-	-	dB HL
Min. pure tone ac/bc	-10	-10	-10	-10	-10	-10	-10	-10	dB HL
Level increments	5	5	5	5	5	5	5	5	dB HL
Frequency accuracy	±3% at all frequencies								
Levels accuracy	±3 dB								
	ISO 389, UNE 74-020-78								

SCREENING DIAGNOSTIC AND CLINICAL 2 CHANNEL AUDIOMETERS

Dimension: 390x260x105 mm
 Weight: 2.4 kg without accessories
 Power: 100-240 V, 50/60 Hz

LCD alphanumeric backlight 2x16



Programme to personalize the audiometer according to the needs of the user

- 33623 SIBELSOUND 400-A SCREENING AUDIOMETER - air conduction
- 33624 SIBELSOUND 400-AOM DIAGNOSTIC AUDIOMETER - air + bone + masking
- 33626 SIBELSOUND 400-SUPRA CLINICAL AUDIOMETER - air + bone + mask + supraliminal tests + W50 software

The SIBELSOUND 400 is a two-channel digital audiometer based on DSP processing. This audiometer is designed for quick and easy audiometric exploration of hearing thresholds and screening tests, such as suprathreshold pure tone tests (FOWLER-ABLB, TONE DECAY, WEBER, LUSCHER, ...).

- Air conduction (TDH 39): 125 - 8,000 Hz or HF: 8,000 - 20,000 Hz with optional HDA 200
- Levels: AC (-10 to 120 dB HL) / BC (-10 to 70 dB HL) / speech (-10 to 100 dB HL) free field (-10 to 80 dB HL)
- Masking levels (manual or synchronized): NBN AC (-10 to 100 dB HL) NBN BC (-10 to 70 dB HL) white & speech (-10 to 100 dB SPL)
- Tone: continuous, pulse, antenate, amplitude modulation.
- Level increases: 5 (A-AOM), 1 or 5 (SUPRA)
- Frequency precision: ±1% / level precision ±2% db SPL
- Automatic calculation of hearing loss and diagnosis (COUNCIL, IMSS MEXICO, ELI, SAL, KLOCKHOFF, MOH, OTHERS ...)
- Direct USB connection to PC to W50 audiometry software for viewing, storage, transmission, analysis and introduction of audiometric tests in a Microsoft Windows® environment.

	125	250	500	750	1,000	1,500	2,000	3,000	4,000	6,000	8,000	Hz
STANDARD FREQUENCY	125	250	500	750	1,000	1,500	2,000	3,000	4,000	6,000	8,000	Hz
MUSICAL FREQUENCY	131	262	523	-	1,047	-	2,093	-	4,186	-	8,372	Hz
Air conduction (THD 39)	80	100	120	120	120	120	120	120	120	110	110	dB HL
Bone conduction (B 71)	-	50	60	60	70	70	70	70	70	-	-	dB HL
Free field	-	70	80	80	80	80	80	80	80	80	-	dB HL
MASKING NOISE											90	dB HL
Narrow bandwidth AC	60	80	100	100	100	100	100	100	100	100	-	dB HL
Narrow bandwidth BC	-	50	60	60	70	70	70	70	70	-	-	dB SPL
White AC												dB SPL
Speech												dB SPL
LOGO-AUDIOMETRY												
Air conduction	100											dB SPL
Free field	80 dB at 1m from the patient											dB SPL
Minimum levels												
All options	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	dB HL



Communication system:

- Print directly to a USB printer or connect to W50 Microsoft Windows Audiometry Software.

- 33628 INTERCOM KIT (headphone + microphone)
- 33621 INSULATION DEVICE for air conduction phone
- 33629 AUDIOMETRY SOFTWARE W50

SIBELSOUND 400 FEATURES

	A	AOM	SUPRA
Audiometry type	4 screening	3diagnostic	2 clinical
Air conduction TDH 39	•	•	•
Bone conduction B71		•	•
Masking by white narrow band & speech noise		•	•
Sisi test			•
Supraliminal tests			•
Speechaudiometry + Intercom kit	optional	optional	•
Musical frequencies			•
Intercom data base	150 tests	1000 tests	1000 tests
USB connectivity	•	•	•
W50 audiometry software	optional	optional	•
User manual English, Italian (available on request French or Spanish)	•	•	•

AUDIOMETRIC BOOTHS - CONFORM TO 93/42/CEE - 2007/47/CE - class I



- 33650 PRO 25 - 97x97x192 cm
- 33651 TABLE - 79x50 cm

Portable, compact model, easy to install in few minutes. Made in plastic laminate, with internal autoextinguishing, polyurethane, insulating panels. External fireproof covering Euroclass B.s2, d 0 Module for cable connection.

- 33654 PRO 30 - 106x106x245** cm
- 33655 PRO 30 - 209x106x245** cm
- 33656 PRO 30 - 209x209x245** cm
- 33657 PRO 30 - size on request available any size from 1x1 to 3x3
- 33651 TABLE 79x50 cm

Range with different sizes, with high noise reduction and internal ventilation system. Made in aluminium and laminate with internal autoextinguishing, polyurethane insulating panels.

Available with 60 or 90 cm doors. Module for cable connection. Made in Italy.

- 33660 PRO 45S - 216x216x245** cm
- 33661 PRO 45S - 318x216x245** cm
- 33662 PRO 45S - size on request available any size from 1x1 to 6x6
- 33651 TABLE 79x50 cm
- 33652 RAMPS couple for disabled people

Top of the range, with 11 selection of sizes, up to 6x6 m, with excellent noise reduction (-45 dB) and internal ventilation system. Made in aluminium and laminate with interior in white, washable, fire-proof fabric. Large door 75 cm and module for cable connection. Conform to ISO 8253-1. Made in Italy.

ACOUSTIC INSULATION						
Hertz	125	250	500	1000	2000	4000
PRO 25 dB	18,0	16,0	26,7	30,8	28,8	30,9
PRO 30 dB	23,4	24,1	27,8	34,5	31,3	36,4
PRO 45 dB	20,0	33,5	36,3	42,5	42,1	50,4

	TECHNICAL SPECIFICATIONS					
	33650	33654	33655	33656	33660	33661
External size (cm):	97x97xh 192	106x106xh 245	209x106xh 245	209x209xh 245	216x216xh 245**	318x216xh 245**
Internal size (cm):	85x85xh 186	92x92xh 202	194x92xh 202	194x194xh 202	195x195xh 200	297x195xh 200
Door size cm:	55xh 168	60xh 200	90xh 200	90xh 200	75xh 186	75xh 186
opening:	Left/Right	Right		Right		
Windows size cm:	58,5xh 58,5	60xh 87		60xh 85		
material:	2 - crystal insulating safety glass				4 - crystal insulating safety glass	
Wall thickness cm:	7.5	7.5	7.5	7.5	11.6	11.6
Weight (kg):	175	230	364	540	935	1229
Ventilation:	no	yes	yes	yes	yes	yes
Tested noise reduction dB:	28	32	32	32	45	45
Internal illumination power V:	220	220	220	220	220	220
Norms:	Class Medical Devices European Directive 93/42 CEE					



- STANDARD ACCESSORIES**
- Module for silent audiometer cable connection
 - Internal illumination
 - Ventilation system (PRO 30, PRO 45 only)
 - Wooden box for transport
 - Manual: English, Italian

OTOREAD™ - PORTABLE OAE WITH PRINTER

- 33607 OTOREAD SCREENER TE
- 33608 OTOREAD COMBO DP+TE

DPOAE AND TEOAE

The OtoRead™ is a fast, automatic handheld OAE instrument for testing newborn babies, children and adults. A fast and quiet thermal printer is included with the OtoRead™. A simple interface from the cradle to the printer will transfer all of the test data within seconds.

TECHNICAL SPECIFICATIONS	
Measurement type	OtoAcoustic Emissions.
Frequency range DPOAE	1.5, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 12 kHz.
Frequency range TEOAE	0.7, 1, 1.4, 1.5, 2, 2.5, 2.8, 3.5, 4 kHz.
Stimulus intensity	40 to 70 dB SPL (DPOAE). 83 dB SPL (TEOAE).
Maximum output (Protection)	90 dB SPL. (This level is well within OSHA permissible limits of 90 dBA for 8 hours).
Microphone system noise	-20 dB SPL @ 2 kHz (1 Hz bandwidth). -13 dB SPL @ 1 kHz (1 Hz bandwidth).
Battery life	Approximately 300 tests.
Display	LCD-display 4 line x 10 character.
Weight	300 g/ 10.6 oz. including batteries.
Internal software languages	English, German, French, Spanish, Russian.

	TE	
Screeener (1 fixed protocol)	6 bands 1.5-4 kHz	
	DP+TE	
Combo (2 fixed +2 customizable protocols for DP and TE - a total of 4 protocols)	6 bands 1.5-12 kHz	6 bands 700-4 kHz

100-240 V, 50-60 Hz power supply

16 languages manual:
GB, DE, F, S, GR, I, P, DK, FI, E; PL, EE, N, RO, LT, NL,

Full printout of both ears in 7 seconds



Interacoustics

Weight: 300 g

- STANDARD ACCESSORIES**
- Handheld unit (OtoRead™) including probe cord and Cradle
 - Printer including power supply and power cable, Printer Cable, Carrying Bag,
 - Probe cord for extension (100 cm/39 inches), 2 Thermal printer paper rolls
 - Box of 146 eartips (10 sizes; 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 mm), 4 probe tips
 - 4 AA/UW3/R6 Alkaline Batteries, Operation / CE manual

SPIROTEL SPIROMETERS - BLUETOOTH OPTION



- 33471 SPIROTEL with WINSPIROPRO software
 - 33472 SPIROTEL with Bluetooth and WINSPIROPRO software
 - 33473 SpO₂ PROBE - adult - optional
 - 33469 GSM MODULE - optional - suggested for 33471
- For data transmission via e-mail or FTP to a web server
- 33410 MOUTHPIECES int Ø 2,8 x ext Ø 3, h 6.5 cm

LCD backlit touch screen display 160x80 pixel



Manual and internal software languages: GB, FR, IT, DE, ES.

Size: 74x88x38 mm - Weight: 151 g



A pocket laboratory which integrates 4 devices in one:

- spirometer with touch screen display
- triaxial accelerometer with motion analysis for therapy monitoring
- intelligent 3D oximeter with on screen results (with 33473)
- e-diary for home care symptom control.

Compatible with Qualcomm Life 2 net Hub

TECHNICAL SPECIFICATION

Flow sensor: Bi-directional digital turbine
 Flow range: ±16L/s - ±3% or 50 mL Flow accuracy: ±5% or 200 mL/s
 Dynamic resistance: <0.5 cm H₂O/L/s Temperature sensor: Semiconductor (0-45°C)
 Measured parameters: Reading on spirometer: FVC, FEV1, PEF, FEF 25/75
 Reading on PC with Winspiro PRO: same parameters as Spirobank G
 SpO₂ range: 0-100% ±2% (50-100% SpO₂)
 Pulsè rate range: 20-254 BPM ±2BPM or 2%
 Data transmission: USB 2.0 or Bluetooth
 Memory capacity: Up to 10000 test - 300 hours oximetry (only with 33473)
 Power supply: Lithium-ion 3.7 V, 1100 mAh rechargeable, for 40 hours measurements

DISPOSABLE AND RE-USABLE TURBINES FOR MIR SPIROMETERS

- 33508 DISPOSABLE TURBINE WITH INTEGRATED MOUTHPIECE - box of 50
 Single patient use. Low cost and high accuracy. Individually packed to guarantee maximum hygiene. Easy to replace, no calibration needed.
 Compatible with GIMA codes: 33509, 33511-14, 33518-22, 33527-29, 33530, 33532, 33534.
- 33526 RE-USABLE TURBINE - bayonet
 Easy to replace, no calibration needed. Compatible with GIMA codes: 33511-14, 33518, 33520-22, 33528-32, 33534.



MOUTHPIECES FOR MOST SPIROMETER BRANDS



Paper mouthpieces (disposable) and plastic mouthpieces (re-usable) for most brands of spirometers and peak flow, as Cosmed,

GIMA MOUTHPIECES

GIMA code	Package	Material	Sizes - cm Ø int x ext x h	To be used with codes	Compatible with
33410	box of 500	paper	2.8x3x6.5 adult	33431, 33433, 33471-2 33509-14, 33518-22, 33528-32, 33534	Micromedical Vitalograph, Mir Ferraris (Koko legend) Cardiette (Pneumos 300) Micromedical Vitalograph, Mir
33897	dispenser of 100				
33411	box of 250	paper	2.0x2.2x6 paediatric	33411	Mir
33412	-				
33506	box of 100	paper	2.6x2.8x6.5	33480, 33484-7 33486, 33487	Sibel
33494	box of 100				
33890	dispenser of 100	paper	2.5x2.7x7	-	Fukuda, Thor
33892	dispenser of 100				
33898	box of 500	paper	2.8x3.05x7	-	Cosmed (Pony model)
33432	-				
33432	-	plastic	1.7x2.1x5 2.7x3x5	33431, 33433	Ferraris
33691	box of 100				

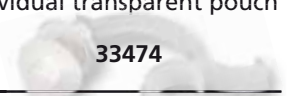
Fukuda, Ferraris, Micromedical, Mir, Multispiro, Sibel, Vitalograph, ...
 Paper mouthpieces are packed in individual transparent pouch

SPIROMETRY PAPERS

- 33492 MIR SPIROLAB PAPER - roll 112mm x 25m
 Suitable also for SIBEL DATOSPIR 120 B, C, D, DATOSPIR Touch and GIMASPIR 120 models B, C, D.
- 33893 COSMED PONY PAPER - roll 57mm x 10m - box of 5 rolls
- 33894 COSMED PONY FX PAPER - roll 112 mm x 13m - box of 25 rolls
 Compatible also with Fukuda Spirosift.
- 33250 THERMAL PAPER - roll 58 mm
 Suitable for SIBEL DATOSPIR 120 A and GIMASPIR 120-A.

NOSECLIP

- 33474 NOSE CLIP



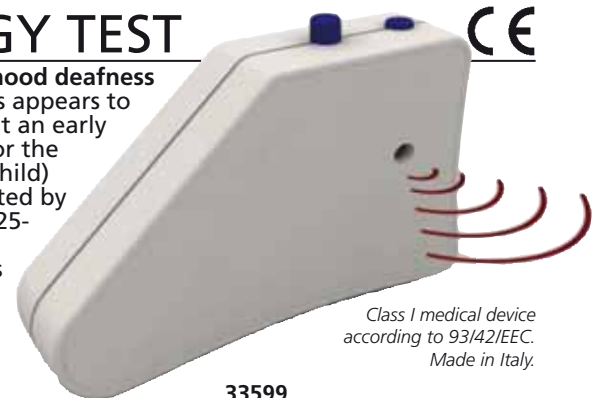
BACTERIAL FILTER

- 33525 BACTERIAL FILTER - box of 50 for MIR, Medisoft spirometers
- 33557 SPIROGUARD BACTERIAL FILTER - box of 50

Compatibility of Spiroguard
 Erich Jaeger GmbH
 Ferraris Medical - P.K. Morgan
 Sensormedics
 Vitalograph
 Masterlab and Masterscreen
 Autolink-Benchmark Transflo and USA Transfer System
 2200 - 2400 - 2450
 Wedge-Bellow-Alpha and Escort Spirometers

BOEL STYLE PEDIATRIC AUDIOLOGY TEST

• 33599 GIMA AUDIOTEST - pediatric audiology test for early detection of childhood deafness
 The only screening tool available to assess the hearing abilities of young patients appears to be the Boel test, a tool that tests the child's response to a sound stimulus, even at an early age (between 6 to 10 months). GIMA audiotest is based on the BOEL test both for the ergonomics (it is designed to be held in the palm of the hand not visible to the child) and the standard sound of the bells of the Boel test. The two sound stimuli emitted by the pediatric audiometer reproduce a dull low-frequency tone located around 125-150 Hz and an acute high-frequency tone located at about 5.0-5.1 kHz in exactly the same way as the bells of the Boel test (amplitude 86dBA; 96dBA). This means the child's response to these highly significant thresholds can be tested. Easy to use, with only two buttons for the selection of two frequencies, lightweight and battery-powered. To perform original Boel test we suggest to use an optometric pencil to capture child attention, see code 31319 at page 195.



Class I medical device according to 93/42/EEC. Made in Italy.

PEAK FLOW METERS: DIGITAL AND MECHANICAL



- 33435 PIKO-1 - digital peak flow meter
- 33444 PIKO-6 - digital peak flow meter
- 33436 PC DOWNLOAD DEVICE + software

Suitable only for 33435
33437 MOUTHPIECES - box of 10 pcs
 PiKo-1™ is the world's first pocket sized electronic peak flow and FEV₁ meter. The new PIKO-6™ in addition to FEV₁, measures FEV₆ and FEV₁/FEV₆. Sophisticated features include automatic test quality alerts and electronic data storage of 96 tests. Data can be reviewed via a single operating button, eliminating the errors associated with paper diaries. Prices compare to mechanical peak flow meters.
PiKoNET software. All tests can be easily downloaded for tracking and trending. Results can be saved in pdf format.

TECHNICAL SPECIFICATION

PEF:	Range 15 - 999 L/min (1 L/min resolution)
FEV ₁ , FEV ₆ :	Range 0.15 - 9.99 Litre (0.01 Litre resolution)
Accuracy:	PEF: ±5% or 20 L/min (whichever is greater) FEV ₁ : ±3.5% or 0.1 Litre (whichever is greater) FEV ₆ : ±4% or 0.1 Litre (whichever is greater)
Sensor:	Pressure/flow sensor technology (patented)
Non-volatile Memory:	96 patient test scores
Colour zone:	3 colour zone (green, yellow, red)
Reference values:	User settable
Quality factor:	Warning & indicator for cough or abnormal blow
Communication:	Bi-directional IR port (RS232 format)
Dimensions-Weight:	75x35x20 mm - 35 g



- 33431 POCKET PEAK - standard 60-800 l/min - cream
 - 33433 POCKET PEAK - low 50-400 l/min - yellow
- The Pocketpeak Peak Flow Meter is designed to provide simple and reliable home asthma management. Lightweight and easy to use, it provides accurate and reliable measurements time and time again. It is easy to clean and features a universal mouthpiece. The EU/ATS Scale Pocket peaks will not only comply with the new European Standards but also with ATS (American Thoracic Society) Standards. Standards range pocket peak will cover 60-800 litres/min, low range will cover 50/400 litres/min. Package includes multilingual directions for use and peak flow diary, all packed in a cardboard box. Made in USA. Size 86x81x30 mm. Weight 45 g. Standards: EN 13826:2003
- 33432 UNIVERSAL MOUTHPIECES - re-usable
 - 33410 DISPOSABLE MOUTHPIECES - box of 500
- In plastic, sterilizable, suitable both for adults and children.

LUNG EXERCISE DEVICE



Base and small balls made in non-toxic polypropylene. Central part made in copolymer/non-toxic polystyrene. Tube and mouthpiece made in polyethylene.

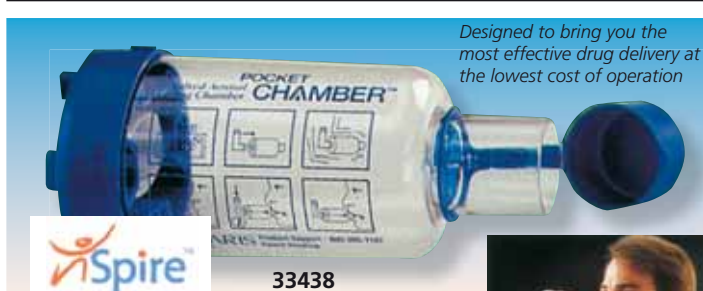
- 33442 RESPIPROGRAM
- Device to exercise the respiration through inspiration. The respiratory-exerciser Respirogram helps the patient to recover the normal respiration after a chest or abdominal surgery. The device is composed of: 1 base, 3 small balls different in dimension and colours, 1 transparent central part, divided into 3 rooms, 1 tube and mouthpiece. Each unit packed in single box. Made in Italy. User manual: English, Italian.

- 33445 TRI-BALL® - respiratory exerciser
- The respiratory-exerciser Tri-Ball® helps the patient to recover the normal respiration after a chest or abdominal surgery. User manual in English, French, German, Italian, Spanish.

33445



AEROSOL HOLDING CHAMBER



Designed to bring you the most effective drug delivery at the lowest cost of operation

- 33438 POCKET CHAMBER
- Now you can manage your asthma conveniently and effectively with a truly pocket-sized device, proven as effective as MDI chambers nearly twice its size. The Pocket Chamber delivers a high concentration of respirable aerosol, to help provide relief from asthma symptoms while capturing large particles and reducing unwanted side-effects.
- Whistle alerts patients if inspiratory rate is exceeded
 - Effective, affordable alternative to expensive aerosol delivery
 - Flexible port accepts virtually any MDI's mouthpiece

TECHNICAL SPECIFICATION

Size: 108 x 47.5 mm	Volume: 110 ml
Mouthpiece: 22mm OD	Weight: 33 g
Materials: All Latex Free Silicone	Warranty: One year
User Manual: in English, Spanish, French, German, Italian, Dutch, Portuguese, Turkish and Greek.	Made in USA

NEW SPIROBANK II - PORTABLE SPIROMETER WITH SPO₂ OPTION

• 33512 SPIROBANK II + WINSPIROPRO SOFTWARE

Spirometer with 10.000 tests memory capacity, monochromatic LCD display, 6 keys membrane keypad. Battery power supply (3,7 V-1100 mA lithium) with an autonomy of approx. 50 hours of continuous use, rechargeable with USB port.

- cable (USB 2.1) or wireless (Bluetooth 2.0) connection
- internal temperature sensor for automatic BTPS conversion
- high resolution graphic display
- automatic record of a whole spirometry session including best test
- USB cable, carrying case, CD manual (GB, FR, IT, ES, DE, PT) and software included. Selectable internal software (GB, FR, IT, ES, DE, PT)

Measured parameters: min, max and average SpO₂ %, min, max and average pulse frequency, SpO₂ total events, test duration, bradycardia events (<40 BPM), tachycardia events (>120 BPM), T90% (time passed with SpO₂ ≤89%), T89% (time passed with SpO₂ ≤ 88%)

- 33525 ANTIBACTERIAL FILTER - box of 50 disposable
- 33508 DISPOSABLE TURBINE with mouthpiece - box of 50
- 33526 REUSABLE TURBINE
- 33410 MOUTHPIECES int. Ø 2.8 x ext. Ø 3, h 6.5 cm

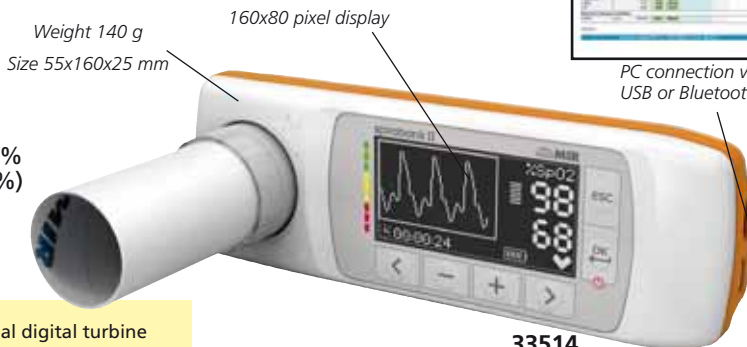
Winspiropro software functions:

- (GB, FR, IT, DE, ES, PT, PL, SE, NL, LV, CZ, TR, RU, CN, JP)
- on-line PC connection with icon interface
- real time Flow/Volume and Volume/time curves
- bronchial challenge with FEV1 dose-response
- paediatric incentive animations
- integration with EPR systems
- Lung Age Estimation
- data and graphs export also via e-mail

PC system requirements:
XP, Seven, Vista, 8



PC connection via USB or Bluetooth®



Weight 140 g
Size 55x160x25 mm

160x80 pixel display

33514

Made in Italy

TECHNICAL SPECIFICATIONS - SPIROMETRY

Measured parameters FVC, FEV1, FEV1/FVC%, DTPEF, FEV0.5, FEV0.5/FVC%, FEV0.75, FEV0.75/FVC%, FEV2, FEV2/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF75-75%, FEF75-85%, FET, Vext, Lung Age, EVOL, FIVC, FIV1, PIF, FIV1/FIVC%, FIF25%, FIF50%, FIF75%, R50, PIF, IRV, VC, IVC, IC, ERV, FEV1/VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ti, MVV

Flow sensor bi-directional digital turbine
Flow range ±16L/s
Volume accuracy ±3% or 50 mL
Flow accuracy ±5% or 200 mL/s
Dynamic resistance <0.5 cm H₂O/l/s
Available tests: FVC, VC, IVC, MVV, PRE - POST
Connectivity USB 2.0, Bluetooth® 2.1
Power supply Lithium-Ion 3.7V, 1100 mAh

TECHNICAL SPECIFICATIONS - OXIMETRY (33514 only)

Measurement method: red and infrared absorption
SpO₂ range: 0-99% ±2 % between 70-99% SpO₂
Pulse rate range: 18-300 BPM ±2 BPM or 2%

Signal quality indicator: 0-8 segments on display
Memory capacity: up to 300 hours oximetry



SPIROBANK WITH SOFTWARE



ATS STANDARD

Size: 162x49x32 mm
only 180 g including battery



Winspiro express
(GB, FR, IT, DE, ES, PT, PL, SE, NL, LV, CZ, TR, RU, CN, JP)

System requirements:
Microsoft Windows Vista, 2000, XP, ME, Seven, 8

Graphic display
(128x48 pixels) with friendly icons



• 33509 SPIROBANK USB - single use turbine

Complete and rapid pocket spirometer for the General Practitioner to carry out spirometry testing anywhere.

No calibration required, use disposable turbine with integrated mouthpiece (33508).

- measures the most important spirometric parameters including FVC, FEV1, FEV1%, PEF, FEF25-75, FET, VC, IVC, FEV6, ELA
- automatic interpretation with traffic light indication
- best test selected and saved in memory
- measured parameters compared to predicted values
- provided with USB cable and simple software Winspiro-Express for data download and printing only
- selectable display language and CD manual (GB, IT, ES, FR, DE, PT)
- Supplied in a carrying bag with spare mouthpiece.

• 33508 DISPOSABLE TURBINE with integrated mouthpiece - box of 50

TECHNICAL SPECIFICATION

Power supply: 9V DC PP3 battery
Flow range: + 16 l/s
Flow accuracy: ± 5% or 200 ml/s whichever is greater
Max volume: 10 l - Volume accuracy: ± 3% or 50 ml whichever is greater
Made in Italy

SPIROBANK G WITH SOFTWARE



Graphic display
(128x48 pixels) with user friendly icons

• 33518 SPIROBANK G + WINSPIROPRO software

33518

- stand alone spirometer with PC online operation
 - 6000 spirometry in memory
 - high legibility graphic display
 - FVC, VC, IVC, MVV, PRE-POST BD
 - advanced spirometry test interpretation
 - Lung Age Estimation (ELA)
 - ready for Telemedicine applications
 - internal temperature sensor for automatic BTPS
 - upgradable internal software via internet
- Standard package includes USB cable, pouch, noseclip, battery and Winspiro PRO software. Same accessories as Spirobank USB.



Supplied with CD manual
(GB, FR, IT, ES, DE, PT)
Internal software
(GB, FR, IT, ES, DE, PT, PL)

TECHNICAL SPECIFICATION

Measured parameters: FVC, FEV1, FEV1/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF75-75%, FET, Vext, Lung Age, FIVC, FIV1, FIV1/FIVC%, PIF, VC, IVC, IC, ERV, FEV1/VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ti, MVV
Temperature sensor: semiconductor (0-45 °C)
Flow sensor: bi-directional digital turbine
Max volume: 10 l
Flow range: ± 16 l/s
Volume accuracy: ± 3% or 50 ml, whichever is greater
Flow accuracy: ± 5% or 200 ml/s, whichever is greater
Dynamic resistance at 12 l/s: <0.5 cm H₂O/l/s
Power supply: 9V DC (PP3 battery)
Weight: 180 g (with battery)
Dimensions: 162x49x32 mm
Made in Italy
WinspiroPRO PC system requirements
(GB, FR, IT, DE, ES, PT, PL, SE, NL, LV, CZ, TR, RU, CN, JP)
- Microsoft Windows: Vista, 2000, XP, Me, Seven, 8
- Screen resolution: 1024x768
- Hard disk space: 160 MB

SPIRODOC - SPIROMETER AND OXIMETER

- 33532 SPIRODOC SPIROMETER + SOFTWARE WINSPIRO PRO - bluetooth
- 33533 SPIRODOC OXIMETER + SOFTWARE WINSPIRO PRO
- 33534 SPIRODOC SPIROMETER + OXIMETER + SOFTWARE - bluetooth

One touch laboratory for respiratory analysis suitable for professional and personal use.

Complete spirometer ATS/ERS compliant

Specialist-level analysis, screening and Home-care monitoring.

It has been developed with various operation modes:

"advanced" parameters for the specialist, "reduced" set of parameters for screening as well as a "simplified" version for Home-care operation. FVC, VC, IVC, MVV, PRE-POST.

Precise spirometry interpretation including post bronchodilator.

All tests are automatically memorized. Automatic BTPS conversion.

Memory capacity: 10.000 tests. Wide selection of predicted values.

Intelligent pulse oximeter with on-screen results

Simple, clear SpO₂ and Pulse Rate measurements with plethysmographic curve. During the single six-minute walk test (6 MWT), Spirodoc® estimates the level of oxygen therapy required by the patient. Spirodoc® carries out sleep desaturation studies and memorizes events as well as body position.

3D Accelerometer with motion analysis

Spirodoc® is the first 3D Oximeter® incorporating a triaxial motion sensor to correlate the saturation level (%SpO₂) with physical activity (walk counter, movement analysis and VMU).

Home-care symptoms diary

Fast on-screen symptoms entry. Touch screen with settable questions and automatic answer recording for homecare patient use (eDiary).

High performance PC software for spirometry and oximetry

All tests memorized in Spirodoc® are automatically downloaded into WinspiroPRO and a patient data card is created with a preview of the spirometry curve. WinspiroPRO can easily be connected to a database, EPR, hospital or occupational health system. This software also gives trend graphs of any parameter. All stored

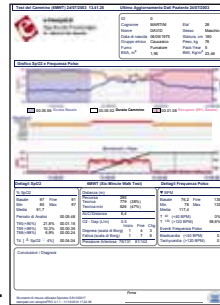
Internal software and CD manual: GB, FR, IT, ES, DE, PT (only manual)

SPIROMETER + OXIMETER + 3D ACCELEROMETER IN ONE UNIT

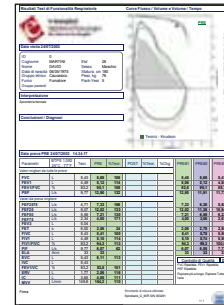


33534

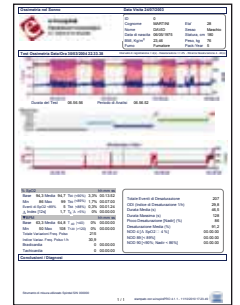
Easy touch-screen display



Three phase report of 6 minutes walk test: baseline, walk, recovery



Spirometry report



Nocturnal oximetry report with desaturation analysis

tests and curves of every patient can be reviewed on a single page and the results, including oximetry tests, can be compared. Multilanguage software: GB, FR, IT, ES, DE, PT, PL, NL SE, CZ, LV, TR, RU, CN, JP.

TECHNICAL SPECIFICATIONS

Central unit

Display: LCD backlit touch screen display 128x64 pixels
 Power supply: Lithium ion 3.7 V, 1100 mA rechargeable battery with 50 hours measurement back up
 Accelerometer: Triaxial ±2 g, 400 Hz sampling
 Dimension and weight: central unit 101x48x16 mm, 99 g removable turbine head: 46x47x24 mm, 17 g
Spirometry
 Flow sensor: Bi-directional digital turbine
 Flow range: ±16 L/s
 Volume accuracy: ±3% or 50 mL, whichever is greater
 Flow accuracy: ±5% or 200 mL, whichever is greater
 Dynamic resistance at 12 L/s: <0.5 cm H₂O/L/s

Temperature sensor: semiconductor (0-45°C)

Spirometer measured parameters

FVC, FEV1, FEV1/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF25%-75%, FET, Estimated Lung Age, Extr. Vol., FIVC, FIV1, FIV1/FIVC%, PIF, VC, IVC, IC, ERV, FEV1/VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ti, MW measured, MW calculated

Oximetry

SpO₂ range: 0 -100%, ±2% (50-100% SpO₂)

Pulse rate range: 20-254 BPM, ±2 BPM or 2%

Pulseoximeter measured parameters

SpO₂ [Baseline, Min, Max, Mean], Pulse rate [Baseline,

Min, Max, Mean], T90% [SpO₂<90%], T89% [SpO₂<89%], T88% [SpO₂<88%], T5% [ΔSpO₂>5%], ΔIndex [12s], SpO₂ events, Pulse rate events [Bradycardia, Tachycardia], Step counter, Movement [VMU], Recording time, Analysis time
Sleep analysis
 Body position, SpO₂ events, Desaturation index (ODI), Desaturation [Mean Value, Mean duration, Longest duration, Nadir Peak], ΔSpO₂ [Min Drop, Max Drop], Total Pulse Variations, Pulse Rate Index, NOD89% [SpO₂<89%; >5min], NOD4% [SpO₂ Basale-4%; >5min], NOD90% [SpO₂<90%; Nadir<86%; >5min]

MINISPIR LIGHT

• 33527 MINISPIR with Winspiro Light
 Minispir Light measures 10 essential parameters for a diagnostic spirometry: FEV6, FVC, FEV1, FEV1%, PEF, FEF25/75%, FIVC, Lung Age, VC, IVC. Pediatric incentives. Flow/Volume loop and Volume/Time curve. Spirometry test interpretation. Temperature sensor for BTPS conversion. Minispir Light meets the requirements of integrated healthcare platforms and tablet applications. For use with FlowMir disposable turbine only (33508).
Winspiro Light is an intuitive and efficient software, for complete diagnosis included in Minispir Light.

FOR ESSENTIAL RESPIRATORY TESTING

AND NEW MINISPIR-USB

• 33528 MINISPIR with Winspiro PRO
 • 33529 MINISPIR+OXYMETER with Winspiro PRO
 Real time Flow/Volume loop and Volume/time curve with PRE/POST comparison. Advanced spirometry test interpretation. Pediatric incentive animations. Lung Age. Bronchial provocation test including new Mannitol protocol with FEV1 response curve. Temperature sensor for BTPS conversion.

FOR COMPLETE RESPIRATORY ANALYSIS

32 measured parameters: FVC, FEV1, FEV1%, FEV3, FEV3%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF25-75%, FET, Vext, Lung Age, FIVC, FIV1, FIV1%, PIF, VC, IVC, IC, ERV, FEV1/VC%, VT, VE, Rf, ti, te, ti/t-tot, VT/ti, MVV, CD manual GB, FR, IT, ES, DE, PT.

Winspiro PRO is a unique spirometry and oximetry software, which comes standard with Minispir. All patient records are shown on simple, single-screen patient cards with dynamic management of all data and graphs.

PC SYSTEM REQUIREMENTS FOR WINSPIRO LIGHT/PRO

Microsoft Windows: XP, Vista 32/64 bit, Seven 32/64 bit, 8
 Screen resolution: 1024x768 Hard disk: 128 MB (better 256 MB)
 USB socket
 Multilanguage: GB, FR, IT, ES, PT, DE, PL, SE, NL, CZ, LV, TR, RU, CN, JP

33529 PC not included

TECHNICAL SPECIFICATIONS MINISPIR/MINISPIR LIGHT

Temperature sensor: semiconductor (0-45°C)
 Flow sensor: bi-directional digital turbine
 Flow range: ± 16 L/s
 Volume accuracy: ± 3% or 50 mL
 Flow accuracy: ± 5% or 200 mL/s
 Dynamic resistance at 12 L/s: <0.5 cm H₂O/L/s
 Communication port: USB
 Power Supply: line powered from USB port
 Dimension: 50x142x26 mm
 Weight: 65 g

TECHNICAL SPECIFICATIONS MINISPIR SpO₂

SpO₂ range: 0-99%
 SpO₂ accuracy: ± 2% tra 70-99% SpO₂
 Pulse Rate range: 30-300 BPM
 Pulse Rate accuracy: ± 2 BPM or 2%
Measured parameters
 SpO₂ [Baseline, Min, Max, Mean], Pulse Rate [Baseline, Min, Max, Mean], T90 [SpO₂<90%], T89 [SpO₂<89%], T88 [SpO₂<88%], T5 [ΔSpO₂>5%], Δ Index [12s], SpO₂ Events, Pulse Rate Events [Bradycardia, Tachycardia]

GIMA code	SPARE PARTS AND ACCESSORIES
33508	Flowmir disposable turbine with integrated mouthpiece - box of 50
33410	Adult mouthpieces Ø ext 3 cm - box of 500 pieces (only for 33526)
33526	Reusable turbine (only for 33528-9)

SPIROLAB III - DIAGNOSTIC SPIROMETER WITH SpO₂ OPTION



LCD Colour display
240x320 pixel,
size 90x120 mm



- PEDIATRIC INCENTIVE SYSTEM
- HIGH DEFINITION LCD
- DATABASE FOR 6,000 TESTS
- USB

ATS Certified
ERS Standard

Mini flowmeter

33522 Connection cable (33523-4)

Only 1.9 kg for truly portability

WinspiroPRO software included (GB, FR, IT, DE, ES, PT, CZ, SE, NL, PL, LV, TR, RU, CN, JP)

Quality spirometry, precise measurement
The proven MIR digital turbine flow sensor requires **no calibration** and complies with ATS 24/26 waveforms.
Certified by Dr. Crapo at LDS Hospital, Salt Lake City - Utah



STANDARD ACCESSORIES		
Carrying case	Software Winspiro PRO.	Nose clip
Battery charger	USB port and cable	
1 roll thermal paper	CD manual: GB, FR, IT, ES, DE, PT	

- 33521 SPIROLAB III - diagnostic spirometer with high resolution colour display, built-in printer and PC WINSPIROPRO software
 - 33522 SPIROLAB III same as 33521 with SpO₂
- A really complete spirometry system:
- FVC, VC with breathing pattern plus MVV tests with real time curves
 - over 30 parameters with **automatic interpretation** and test quality control
 - PRE/POST bronchial response protocol with F/V loop comparison
 - up to 8 blows curve on one screen
 - internal database for about 6,000 complete tests
 - predicted values with various authors
 - rechargeable battery plus mains power 220 V, 50-60 Hz (110V on request)
 - user-friendly keyboard with dedicated function keys plus alphanumeric data entry
 - internal temperature sensor for automatic BTPS conversion
 - free upgradable internal software from web, maintaining previously stored data
 - selectable multilanguage internal software (GB, FR, IT). Possibility to order also with following internal languages: DE, ES, PL, PT, RU, CN, TR.
- Finger Oximeter (33522 only)**
- short or long term (overnight) SpO₂ and Pulse Rate measurements
 - ODI, NOD, T90%, T89%, T88, T87%
 - oximetry during exercise test
- 33410 ADULT MOUTHPIECES - Ø 3 cm ext - box of 500 pcs.
 - 33492 THERMAL PAPER - 112 mm x 25 m
 - 33515 SpO₂ PROBE - adult - spare
 - 33516 SpO₂ PROBE - paediatric
 - 33525 ANTIBACTERIAL FILTER - disposable - box of 50 pcs.
 - 33508 DISPOSABLE TURBINE WITH INTEGRATED MOUTHPIECE - box of 50
 - 33524 CONNECTION CABLE MINIFLOWER-SPIROLAB III (532370) - spare
 - 33523 CONNECTION CABLE MINIFLOWER-SPIROLAB and SPIROLAB II (532375) - spare

TECHNICAL SPECIFICATIONS 33521-33522	
Flow/volume range:	± 16 l/s
Volume accuracy:	±3% or 50 ml
Flow accuracy:	±5% or 200 ml/s
Dynamic resistance:	<0.8 cm H ₂ O/l/s
Dimensions:	310x205x65 mm
Parameters:	FVC, FEV1, FEV1/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25-75%, FEF25%, FEF50%, FEF75%, FET, Vext, *FVC, *FEV1, *PEF, PIF, FIVC, FIV1, FIV1/FIVC%, VC, IVC, ERV, IC, FEV/VC%, VT, VE, Rf, Ti, Te, Ti/T-tot, VT/Ti, MVV * : Best value
PC System requirements:	Windows 2000, ME, XP, Seven, Vista, 8.
Made in Italy.	

SP-10 POCKET SPIROMETER



33536

- 33536 SP-10 POCKET SPIROMETER
- Pocket, portable spirometer with large TFT screen to clearly display both numbers and flow charts.
Synchronously measure FVC, PEF, FEV1, FEV1%, FEV25, FEF2575, FEF75.
Support diagnosis evidence by volume and flow rate chart display. Built-in predicted values.
Built-in lithium rechargeable battery and battery power display.
Supplied with USB cable for PC connection, battery charger and software to calculate data and analyse trend.
- 33410 ADULT MOUTHPIECES - Ø 3 cm ext. - box of 500 pcs

STANDARD ACCESSORIES
Internal lithium battery
USB cable
PC software (english language)

TECHNICAL SPECIFICATIONS
Max volume: 10 l
Flow range: 2 l/sec - 16 l/sec
Volume accuracy: ±3% or 50 ml whichever is greater
Flow accuracy: ±5% or 200 ml/sec whichever is greater
Parameters: FVC, FEV1, PEF, FEV1%, FEV25, FEF2575, FEF75
Made in PRC
CE 92/42 - EMC group I class B - protection type BF

ULTRASONIC, DISINFECTABLE SPIROMETERS

- 33682 OTTHON SPIROMETER US (English) + SOFTWARE
- 33683 OTTHON SPIROMETER IT + SOFTWARE
- 33684 OTTHON SPIROMETER OTHER LANGUAGES + SOFTWARE

Size: 35x120x120 mm
Weight: 300 g

Pulmonary function diagnostics and monitoring spirometer for use by general practitioners, respiratory physicians and patients. Compact, mobile, affordable solution for screening COPD (Cronic Obstructive Pulmonary Disease) and asthma.

- automated diagnostic interpretation
- voice and video explain use of device and communicate results
- battery or USB charger
- touchscreen, bright colour high resolution LCD display QVGA (320x240 px), 16 M colours
- external printer connectivity
- automatic internal calibration
- flow tube disinfectable by cold sterilization
- power supply: USB 5 V or built in rechargeable battery

Internal software languages: GB, FR, IT, DE, ES, HU.
Voice languages available: US (English), AU, FR, IT, DE, ES, AT, HU.
Please indicate requested language with order.
Made in Europe.



33682/3/4

Size: 40x60x150 mm
Weight: 300 g



33686

- 33686 SPIROTUBE MOBILE EDITION BLUETOOTH SPIROMETER
- Pulmonary function diagnostics and monitoring spirometer with Bluetooth communication interface and built in rechargeable battery. Suitable for screening COPD and asthma.
- wireless connection to mobile phones, PDAs, android systems. Real-time measurement with FVC curve visible on the mobile screen
 - plug & play USB connection to PC
 - automatic internal calibration
 - tele-medical connection via Bluetooth
 - automated medical interpretation
 - long-term monitoring for home care use
 - pharmaceutical testing subsystem
 - flow tube disinfectable by cold sterilization
 - software can be downloaded free from Google Play Store
- Made in Europe.



Spirotube mobile edition connects to Android based systems turning these devices into respiratory diagnostic stations

- 33688 SPIROTUBE PC SPIROMETER + SOFTWARE
- PC based pulmonary function diagnostics and monitoring spirometer with ultrasonic Idegen™ respiratory sensor. Suitable for screening COPD and asthma.
- automatic internal calibration
 - tele-medical connection via internet
 - plug & play USB PC connection detection
 - easy upgrade, standard interfaces, XML, HL7
 - long-term monitoring for life-long patient support
 - pharmaceutical testing subsystem
 - flow tube disinfectable by cold sterilization
- Power supply: USB 5 V.
Made in Europe.

Size: 27x60x150 mm
Weight: 300 g



33688

	STANDARD ACCESSORIES		
	33682/3/4	33686	33688
Thorsoft software	•	•	•
Plastic mouthpieces	•	•	•
Mini USB cable	•	•	•
Cups for disinfection	•	•	•
Battery charger	•	•	•
Bacterial filter	•	•	•
Carrying bag	•	•	•
Paper manual (GB)	•	•	•
CD manual (GB, IT, ES, DE, HU)	•	•	•

TECHNICAL SPECIFICATIONS	
Flow measurement principle	Idegen™ multiple-path
Flow tube diameter	30 mm (OD)
Dead space	16.8 ml
Flow resolution	3 ml/s (33686), 8 mb/s (33682-4, 33688)
Flow precision	2% (33686, 33688), 3% (33682-4)
Flow range	±18 l/s
Connection to PC	USB

MEASURED PARAMETERS	
FVC, -FEV*0.5, FEV*0.5/IVC, FEV*0.5/FVC, FEV*1.0/IVC, FEV*1.0/FVC, PEF, FEF*25-75%, MEF*75%, MEF*50%, MEF*25%, FET, MTT, FIVC, FIV*0.5, FEV1/FVC (Tiffeneau index) FIV*1.0, PIF, FIF*25-75%, IRV, ERV, TV, Breath rate value	
- Insp./Expi ratio: From 1:10 to 10:1	

REGISTRATIONS
All spirometers are CE marked and registered in Indonesia, Hong Kong, Australia, New Zeland, Korea, Argentine.

THORSOFT - PULMONARY DIAGNOSTIC PC SOFTWARE
Standard medical interfaces (HL7, GDT, BDT, XML).
Automatic interpretation module.
Diagnostic decision support system (for general practitioners and physicians)
Complete stress testing procedure
Languages: GB, IT, DE, ES, SE, TR, RO, HU, SL.



GIMA code	ACCESSORIES	Minimum order
33690	Instrumed disinfectant concentrate 1 l (Bactericidal, fungidal, virucidal, sporocidal, tuberculocidal)	
33691	Plastic mouthpieces	box of 10
33890	Disposable mouthpieces	box of 100
33692	Loki Green single use bacterial filter	box of 50
33505	Calibration syringe 3 l	