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, cholesteotomas 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

Interacoustics

- -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 ergono-mic 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 measuremets (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: lEe 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).

Interacoustics

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)	

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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	AC: -10 to 120 dB HL
		BC : -10 to 80 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
- Hughsone-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.

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)

33635

220

PORTABLE AUDIOMETERS

CE 0318

33621

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	•	•

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								

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
33622
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 requers ES)

Patient response connection

Vibrator for bone conduction

Air conduction phone
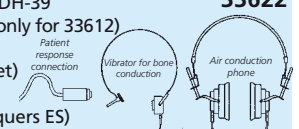
SCREENING DIAGNOSTIC AND CLINICAL 2 CHANNEL AUDIOMETERS

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

CE

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 + supraliminar 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 to100 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:** continous, pulse, anternate, 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.
- **33628 INTERCOM KIT (headphone + microphone)**
- **33621 INSULATION DEVICE for air conduction phone**
- **33629 AUDIOMETRY SOFTWARE W50**

FREQUENCIES AND LEVELS												
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												
Narrow bandwidth AC	60	80	100	100	100	100	100	100	100	100	90	dB HL
Narrow bandwidth BC	–	50	60	60	70	70	70	70	70	–	–	dB HL
White AC							100					dB SPL
Speech							100					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.

SIBELSOUND 400 FEATURES			
	A	AOM	SUPRA
Audiometry type	4 screening	3 diagnostic	2 clinical
Air conduction TDH 39	•	•	•
Bone conduction B71		•	•
Masking by white narrow band & speech noise		•	•
Sisi test			•
Supraliminar 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

28 dB

33650 + 33651

32 dB

33654 + 33651

45 dB

33660

• **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					

*Left opening available on request   **Height includes air ventilation system (25 cm)*

Cable connection module

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

Probe cables 30 cm

• **33607 OTOREAD SCREENER TE**
• **33608 OTOREAD COMBO DP+TE**

DPOAE AND TEOAE

100-240 V, 50-60 Hz power supply

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	90 dB SPL.
(Protection)	(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.

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

	TE	
Screener (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

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 CE 0476

- **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 transmisson 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

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

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

Size: 74x88x38 mm - Weight: 151 g

FDA MIR

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)
Pulse 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.

33526   **33508**

MOUTHPIECES FOR MOST SPIROMETER BRANDS

Dispenser of 100

CE 0476

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)
33897	dispenser of 100				
33411	box of 250	paper	2.0x2.2x6 paediatric		Micromedical Vitalograph, Mir
33412	-	Plastic adapter		33411	Mir
33506	box of 100	paper	2.6x2.8x6.5	33480, 33484-7	Sibel
33494	box of 100	paper	1.9x2.1x7	33486, 33487	Sibel
33890	dispenser of 100	paper	2.5x2.7x7	-	Fukuda, Thor
33892	dispenser of 100	paper	2.8x3.05x7	-	Cosmed (Pony model)
33898	box of 500	paper	2.8x3.05x7	-	Cosmed (Pony model)
33432	-	plastic	1.7x2.1x5 2.7x3x5	33431, 33433	Ferraris
33691	box of 100	plastic		33682-4, 6, 8	Thor

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

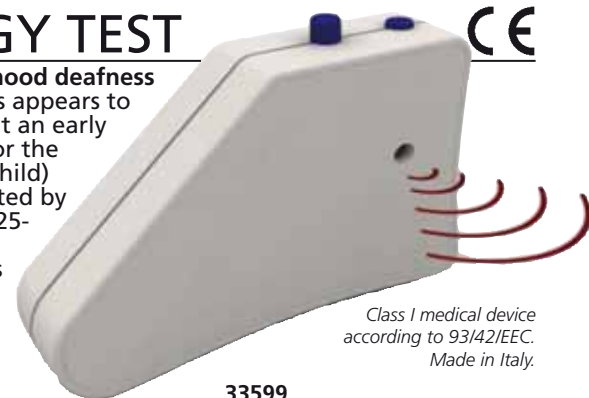# NOSECLIP

33474

- **33474 NOSE CLIP**
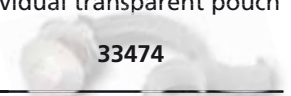
BACTERIAL FILTER

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

Compatibility of Spiroguard

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

BOEL STYLE PEDIATRIC AUDIOLOGY TEST CE

- **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/IEC. Made in Italy.

33599

PEAK FLOW METERS: DIGITAL AND MECHANICAL

CE

Multilanguage manual

Calibrated and graduated scale from 60 to 800 l/min BTPS Comply with EU/ATS

CE 0473

33431

iSpire™

Plastic mouthpiece suitable both for adults and children

• **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 **FEV_1** meter.
The new PIKO-6™ in addition to FEV_1, measures **FEV_6 and FEV_1/ FEV_6**. 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**
In plastic, sterilizable, suitable both for adults and children.
• **33410 DISPOSABLE MOUTHPIECES - box of 500**

LUNG EXERCISE DEVICE

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

CE

33442

• **33442 RESPIPROGRAM**
Device to exercise the respiration through inspiration.
The respiratory-exerciser Respiprogram 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.
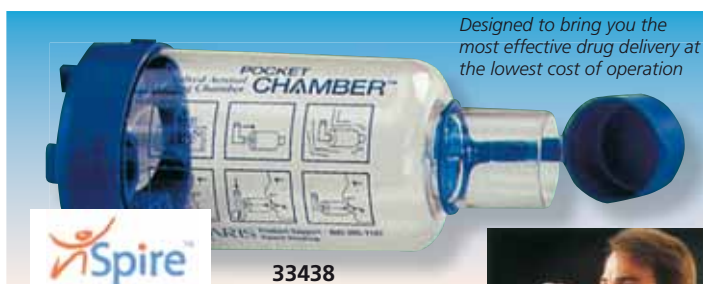• **33445 TRI-BALL® - respiratory exerciser**
The respiratory-exerciser Tri-Ball® helps the patient to recover the normal respiration after a chest or abdominal surgery.
User manual in English, French, German, Italian, Spanish.

33445

AEROSOL HOLDING CHAMBER

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

iSpire™

33438

• **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,	Made in USA
German, Italian, Dutch, Portuguese, Turkish and Greek.	

NEW SPIROBANK II - PORTABLE SPIROMETER WITH SPO$_2$ 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)
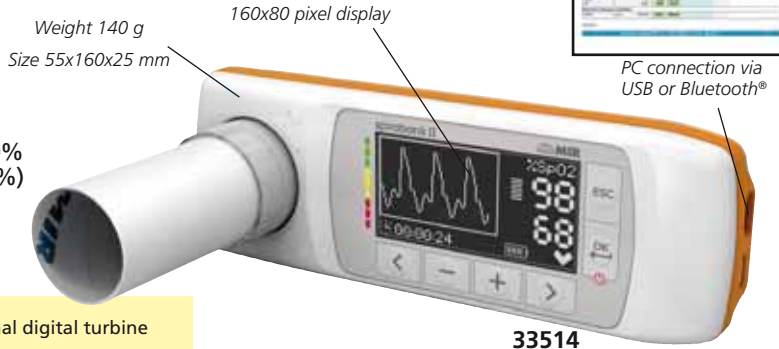
• 33514 SPIROBANK II + WINSPIROPRO SOFTWARE + OXYMETER
Same as above with more than 300 hours of oxymetric test records (SpO$_2$ % and pulse frequency tests).
Measured parameters: min, max and average SpO$_2$ %, min, max and average pulse frequency, SpO$_2$ total events, test duration, bradycardia events (<40 BPM), tachycardia events (>120 BPM), T90% (time passed with SpO$_2$ ≤89%), T89% (time passed with SpO$_2$ ≤ 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

Weight 140 g
Size 55x160x25 mm

160x80 pixel display

PC connection via USB or Bluetooth®

33514

Made in Italy

TECHNICAL SPECIFICATIONS - SPIROMETRY

Measured parameters FVC, FEV1, FEV1/FVC%, DTPEF, FEV 0.5, FEV0.5/FVC%, FEV0.75/ FVC%, FEV2, FEV2/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25%, FEF50%, FEF75%, FEF25-75%, 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 H$_2$O/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 SpO$_2$ range: 0-99% ±2 % between 70-99% SpO$_2$ 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

510 (K)
0476
Health Canada

SPIROBANK WITH SOFTWARE

0476

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)
- Suppied 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

0476

Graphic display (128x48 pixels) with user friendly icons

• 33518 SPIROBANK G + WINSPIROPRO software
- 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.

33518

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%, FEF25-75%, 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 H$_2$O/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

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

SPIROMETER + OXIMETER + 3D ACCELEROMETER IN ONE UNIT

- **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.

33534

Easy touch-screen display

Intelligent pulse oximeter with on-screen results
Simple, clear SpO_2 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 ($\%SpO_2$) 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
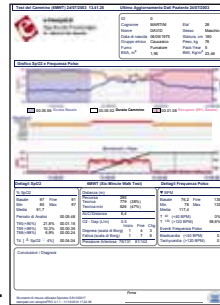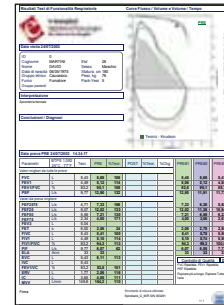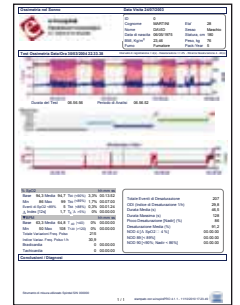
Three phase report of 6 minutes walk test: baseline, walk, recovery

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 H_2O/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
SpO_2 range: 0 -100%, ±2% (50-100% SpO_2)
Pulse rate range: 20-254 BPM, ±2 BPM or 2%
Pulseoximeter measured parameters
SpO_2 [Baseline, Min, Max, Mean], Pulse rate [Baseline,

Min, Max, Mean], T90% [SpO_2<90%], T89%[SpO_2<89%], T88% [SpO_2<88%], T5% [ΔSpO_2>5%], Δindex [12s], SpO_2 events, Pulse rate events [Bradycardia, Tachycardia], Step counter, Movement [VMU], Recording time, Analysis time
Sleep analysis
Body position, SpO_2 events, Desaturation index (ODI), Desaturation [Mean Value, Mean duration, Longest duration, Nadir Peak], ΔSpO_2 [Min Drop, Max Drop], Total Pulse Variations, Pulse Rate Index, NOD89% [SpO_2<89%; >5min], NOD4% [SpO_2 Basale-4%; >5min], NOD90% [SpO_2<90%; Nadir<86%; >5min]

MINISPIR LIGHT AND NEW MINISPIR-USB

- **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

- **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.

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.

FOR COMPLETE RESPIRATORY ANALYSIS

33529 *PC not included*

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

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 H_2O/L/s
Communication port: USB
Power Supply: line powered from USB port
Dimension: 50x142x26 mm
Weight: 65 g

TECHNICAL SPECIFICATIONS MINISPIR SpO_2

SpO_2 range: 0-99%
SpO_2 accuracy: ± 2% tra 70-99% SpO_2
Pulse Rate range: 30-300 BPM
Pulse Rate accuracy: ± 2 BPM or 2%
Measured parameters
SpO_2 [Baseline, Min, Max, Mean],
Pulse Rate [Baseline, Min, Max, Mean],
T90 [SpO_2<90%], T89 [SpO_2<89%], T88 [SpO_2<88%], T5 [ΔSpO_2>5%], Δ Index [12s], SpO_2 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)

226

SPIROLAB III - DIAGNOSTIC SPIROMETER WITH SPO$_2$ OPTION

PEDIATRIC INCENTIVE SYSTEM

HIGH DEFINITION LCD

DATABASE FOR 6,000 TESTS

USB

LCD Colour display
240x320 pixel,
size 90x120 mm

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

FDA   CE 0476

• **33521 SPIROLAB III - diagnostic spirometer with high resolution colour display, built-in printer and PC WINSPIROPRO software**
• **33522 SPIROLAB III same as 33521 with SpO$_2$**
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) SpO$_2$ 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 SpO$_2$ PROBE - adult - spare**
• **33516 SpO$_2$ PROBE - paediatric**
• **33525 ANTIBACTERIAL FILTER - disposable - box of 50 pcs.**
• **33508 DISPOSABLE TURBINE WITH INTEGRATED MOUTH-PIECE - 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.	

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	

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**

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

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

ULTRASONIC, DISINFECTABLE SPIROMETERS

• **33682 OTTHON SPIROMETER US (English) + SOFTWARE**
• **33683 OTTHON SPIROMETER IT + SOFTWARE**
• **33684 OTTHON SPIROMETER OTHER LANGUAGES + SOFTWARE**
Pulmonary function diagnostics and monitoring spirometer for use by general pratictioners, 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.

Size: 35x120x120 mm
Weight: 300 g

C E 0120

33682/3/4

Size: 40x60x150 mm
Weight: 300 g

33686

C E 0120
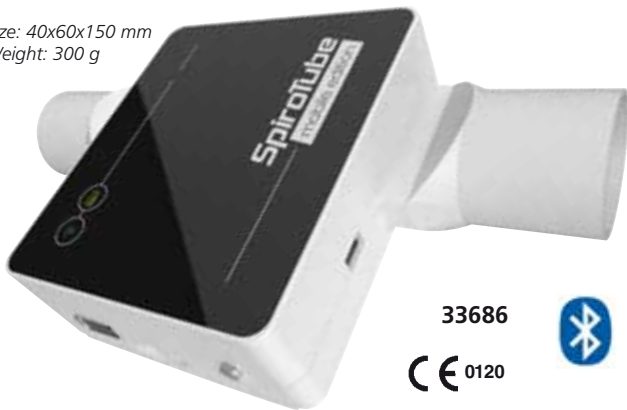
• **33686 SPIROTUBE MOBILE EDITION BLUETOOTH SPIROMETER**
Pulmonary function diagnostics and monitoring spirometer with Bluetooth communication interface and built in rechargeable battery. Suitable for screening COPD and asthma.
- wireless connection to mobile phones, PDAs, android systems. Real-time 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

C E 0120

33688

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

REGISTRATIONS
All spirometers are CE marked and registred 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.

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

GIMA code	ACCESSORIES	Minimum order
33690	Instrumed disinfectant concentrate 1 l (Bactericidal, fungidal, virucidal, sporocidal , tubercolocidal)	
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	

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**