MICROLAB

POSTURE AND REMODULATION

MEDICAL DEVICES

Platform | Movement evaluation | Postural Folder | Biofeedback

Contents

Research and development, creation of software and instrumental solutions for clinical and postural evaluation.

Specialists in technologies for posturology and orthodontics with a strong focus on researching state-of-the-art systems.
The development and research have been carried out by the Microlab staff for over 30 years with the satisfaction of our customers

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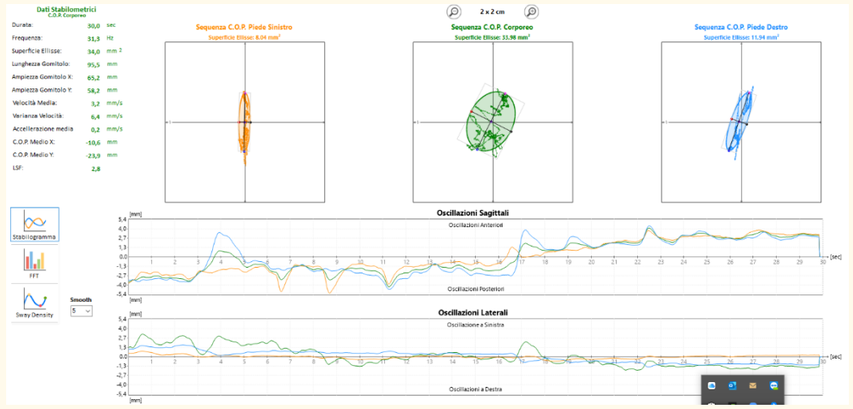
MICROLAB
SOFTWARE E SISTEMI POSTURALI

version 1.0 revision date: 09.2021

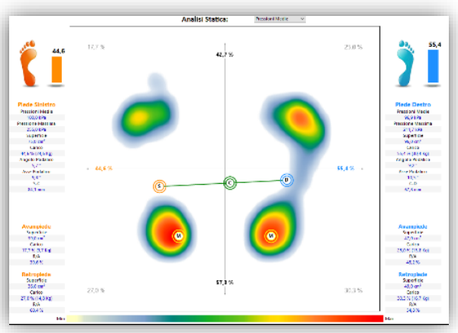
The our solutions

1. Stabilometry

Stabilometric analysis - statokinesiogram (ball and confidence ellipse with axis orientation).
Breech balls.
FFT and Cross Fourier for the study in the frequency domain of the postural fine system (SPF)



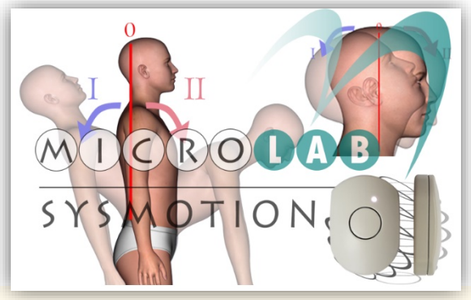
2. Pressure Analysis

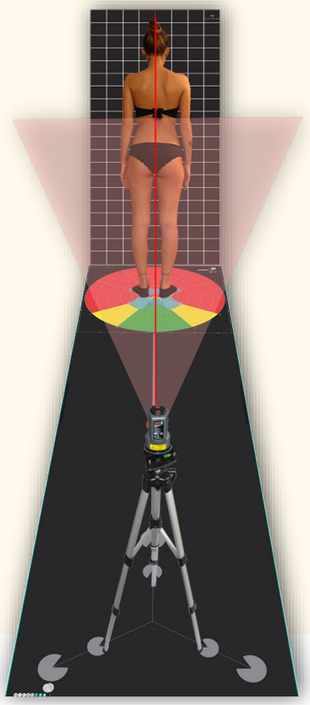


Posturometric analysis (distribution of partial and total loads and support surfaces, CdP axis,% of support, determination of the type of foot

3. Joint ROM evaluetions

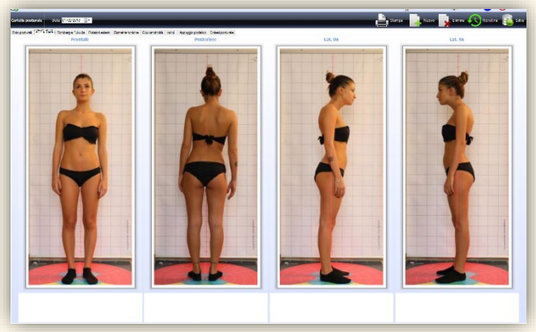
The protocols are based on angular measurements of the three movements (Rotation, Flexion / Extension, Latero-Flexion) according to the INTERNATIONAL METHOD OF JOINT MEASUREMENT S.F.T.R.



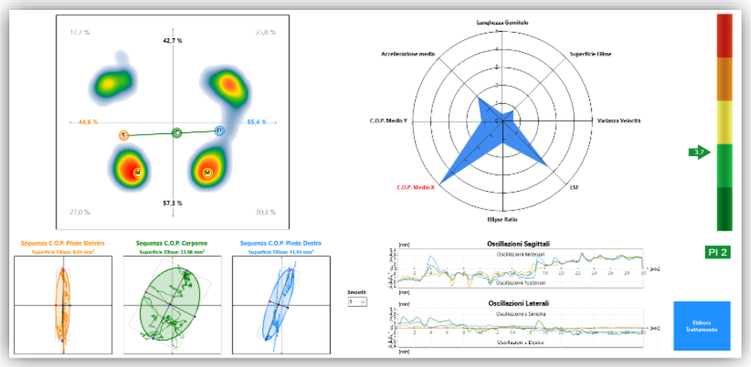


4. Postural Evaluetion

Postural photographic analysis.



5. Global Synthesis



Global summary of the analysis with automatic calculation of the postural index, generated by an exclusive Microlab algorithm and derived from the Radar Balance of the main postural descriptors.

PodLight

Lightweight and transportable.

Static and dynamic baropodometric and stabilometric evaluation

Postural-stabilometric Evaluation

Technical specifications

CE

CE Medical Device Class I according to directive 93/42/EEC

Type	**Trasportable**
Measurements (Length x Width)	**61 x 58 cm**
Thickness	**1 cm**
Weight	**3 kg**
Active surface	**40 x 40 cm**
Number of sensors	**1600**
Sensor size	**1 x 1 cm**
Sensor type	**Resistive**
Sensor life time	**More than 1 000 000 cycles**
Maximum pressure (each sensor)	**100 N/cm2**
Temperature range	**from 0ºC to 60ºC**
Connection / power supply	**USB**
Frequency	**100 Hz ~100 acquisitions / second**

Software compatibility

BioPostural M-IO

BioPostural System

Accessories

Transport bag

Aequilibrium

Baropodometric system and Rehabilitation (Biofeedback)

Evaluation e rehabilitation

Technical specifications

CE Medical Device Class I according to directive 93/42/EEC	
Type	**Trasportable**
Measurements (Length x Width)	**61 x 58 cm**
Thickness	**0.5 cm**
Weight	**2.2 kg**
Active surface	**40 x 40 cm**
Number of sensors	**1600**
Sensor size	**1 x 1 cm**
Sensor type	**Resistive**
Sensor life time	**More than 1 000 000 cycles**
Maximum pressure (each sensor)	**100 N/cm2**
Temperature range	**from 0ºC to 60ºC**
Connection / power supply	**USB**
Frequency	**100 Hz ~100 acquisitions / second**

Software compatibility

BioPostural M-IO

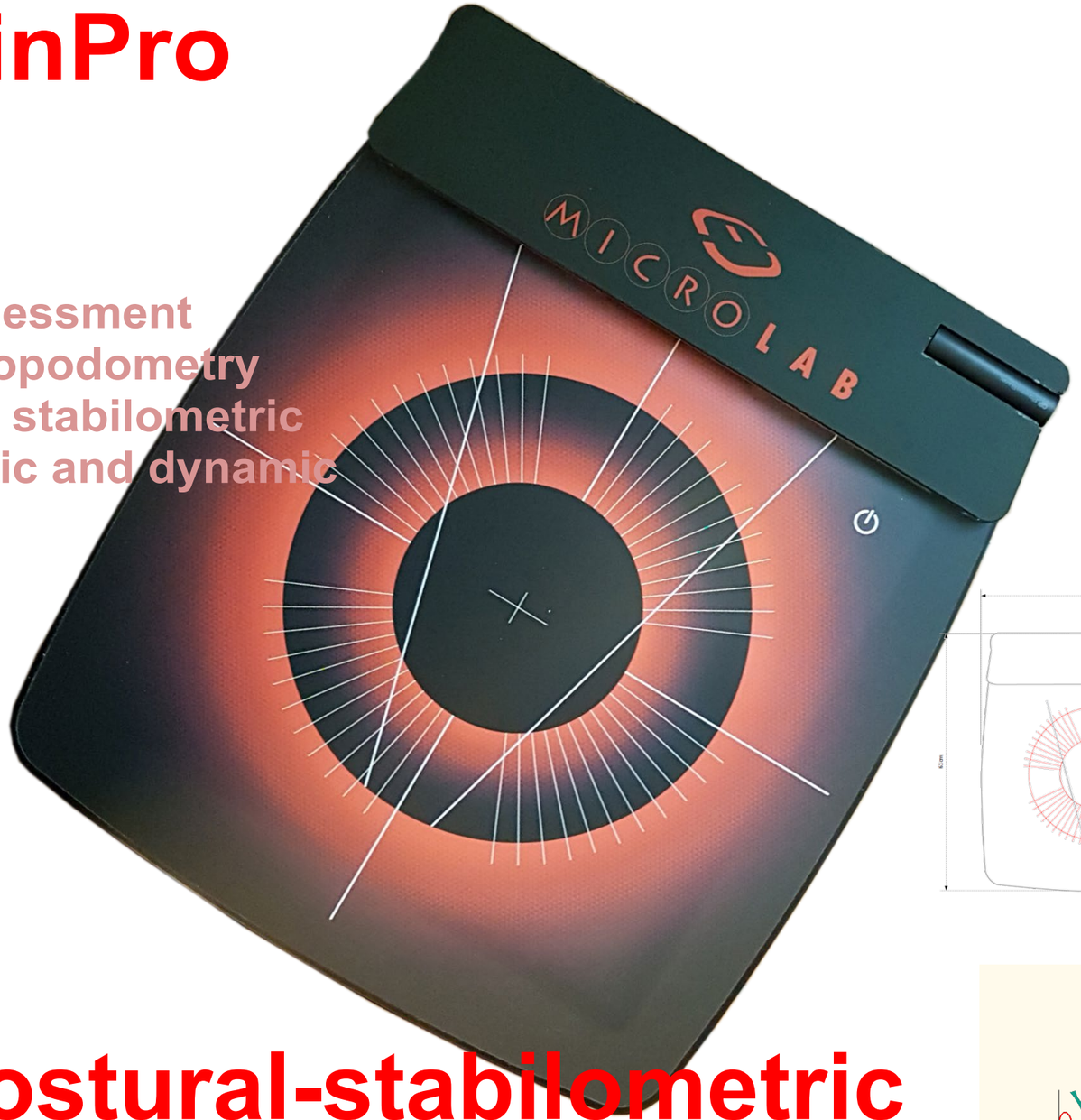
BioPostural System

Accessories

Transport bag

WinPro

Assessment baropodometry and stabilometric static and dynamic



Postural-stabilometric Evaluation

Technical specifications

CE

CE Medical Device Class I according to directive 93/42/EEC	
Type	Trasportable
Measurements (Length x Width)	61 x 53 cm
Thickness	0.5 cm
Weight	6,8 kg
Active Surface	48 x 48 cm
Number of sensors	2304
Sensor size	0.8x 0.8 cm
Sensor type	Resistive
Sensor life time	More than 1 000 000 cycles
Maximum pressure (each sensor)	100 N/cm2
Temperature Range	from 0ºC to 60ºC
Connection / power supply	USB
Frequency	100 Hz ~100 acquisitions / second

Software compatibility

BioPostural M-IO

BioPostural System

Accessories

Transport bag

PodBase

Assessment baropodometry and stabilometric static and dynamic

Postural-stabilometric Evaluation

Technical specifications

CE Medical Device Class I according to directive 93/42/EEC	
Type	**Trasportable**
Measurements (Length x Width)	**44 x 62 cm**
Thickness	**1 cm**
Weight	**6 kg**
Active Surface	**40 x 40 cm**
Number of sensors	**1600**
Sensor size	**1 x 1 cm**
Sensor type	**Resistive**
Sensor life time	**More than 1 000 000 cycles**
Maximum pressure (each sensor)	**150 N/cm2**
Temperature Range	**from 0ºC to 55ºC**
Connection / power supply	**USB**
Frequency	**100 Hz ~100 acquisizioni/secondo**

Software compatibility

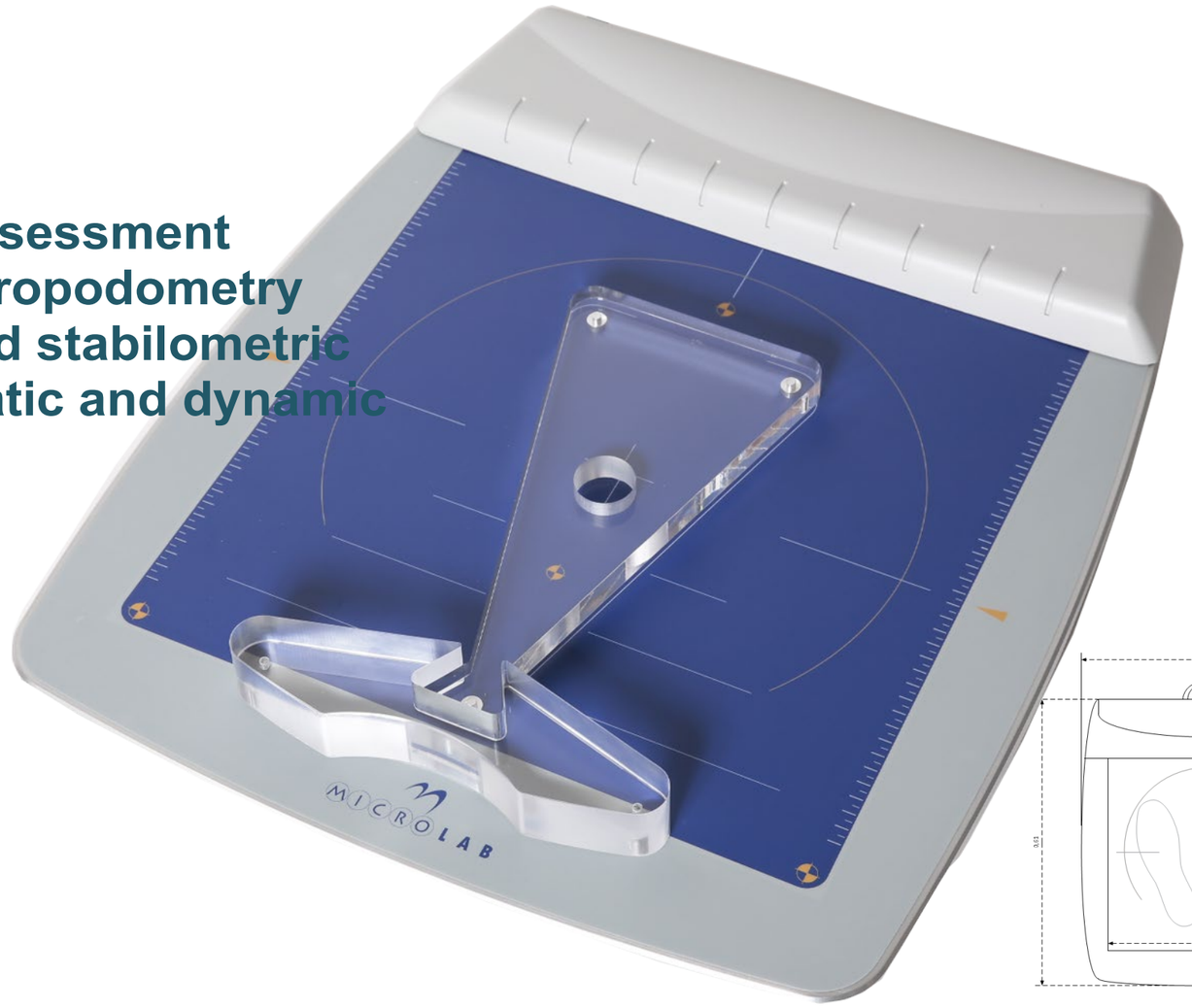
BioPostural M-IO

BioPostural System

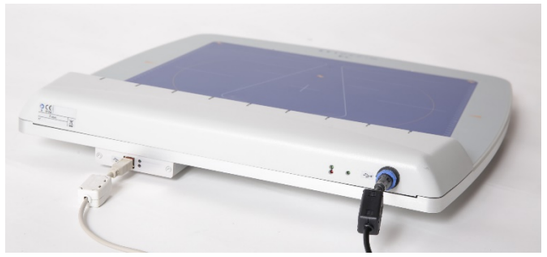
Accessories

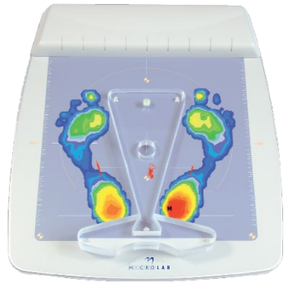
Transport bag

PodCombo



Assessment baropodometry and stabilometric static and dynamic





Technical specifications

CE Medical Device Class I according to directive 93/42/EEC	
Type	**Trasportabile**
Measurements (Length x Width)	**61 x 53 cm**
Thickness	**7 cm**
Weight	**12,5 kg**
Active Surface	**40 x 40 cm**
Number of sensors	**2304**
Sensor size	**1 x 1 cm**
Sensor type	**Resistivo**
Stabilometric sensors	**3 celle di carico**
Sensor life time	**Più di 1 000 000 acquisizioni**
Maximum pressure (each sensor)	**100 N/cm2**
Temperature Range	**da 0ºC a 60ºC**
Connection / power supply	**USB**
Frequency	**40 Hz ~200 acquisizioni/secondo**

Assessment Posturo-stabilometric standardized

The **BPS Combo** is a high resolution 3-point platform surmounted by a surface of baropodometric sensors, unique of its kind for a dual stabilometric and baropodometric evaluation.

Software compatibility

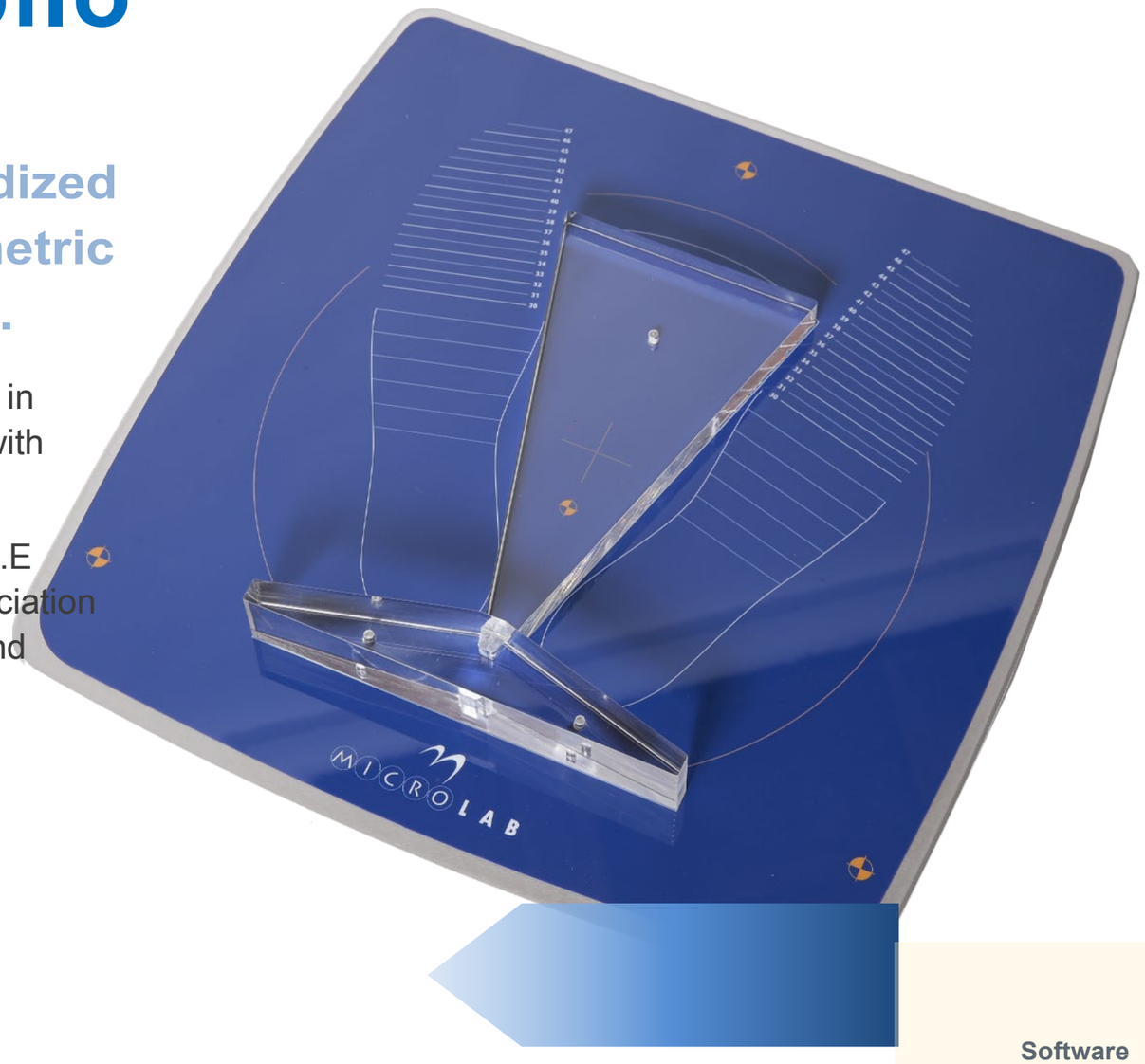
BioPostural System

Stabilo

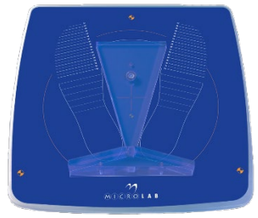
Standardized stabilometric platform.

Standardized in accordance with A.F.P. 85.

Currently A.P.E (French association for posture and balance)



Standardized stabilometry

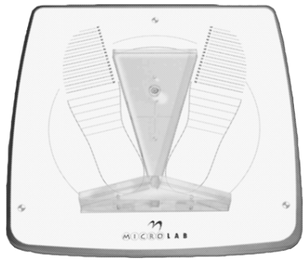


Technical specifications

CE

CE Medical Device Class I according to directive 93/42/EEC

Type	**Standardizzata 3 celle di carico**
Dimensions	**53 x 46 x 3,5 cm**
Thickness	**1,2 cm**
Weight	**7,8 kg**
Material	**Aluminio AU4G**
Maximum load	**128 kg**
Resolution	**900 punti/Kg**
Sampling range	**Adjustable from 5 Hz to 40 Hz**
Analog / digital conversion	**16 bits**
PC interface	**USB**
Power supply	**USB cable**



Software compatibility

BioPostural System

The Standardized BPS is a high resolution 3-point platform characterized by:

- perfect and immediate stability and horizontal level control by means of adjustment screws and "bubble" level indicator;
- removable breech positioners;
- Plug-and-Play connection via USB cable.

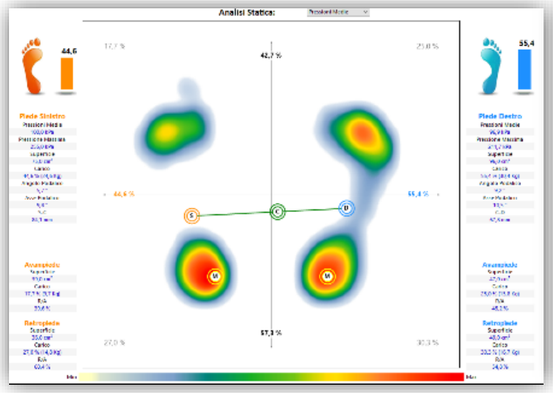
The BPS_S Platform is made with an aluminum base supported by three sensors, with integrated amplifiers, arranged in an equilateral triangle. The system software calculates the stabilometric parameters, reproducing in real time the Antero-Posterior (Y-axis) and Latero-Lateral (X-axis) oscillations.

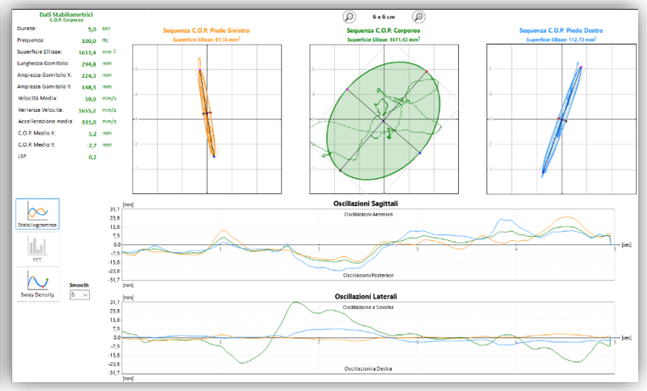
BioPostural M-IO

Static and dynamic baropodometry

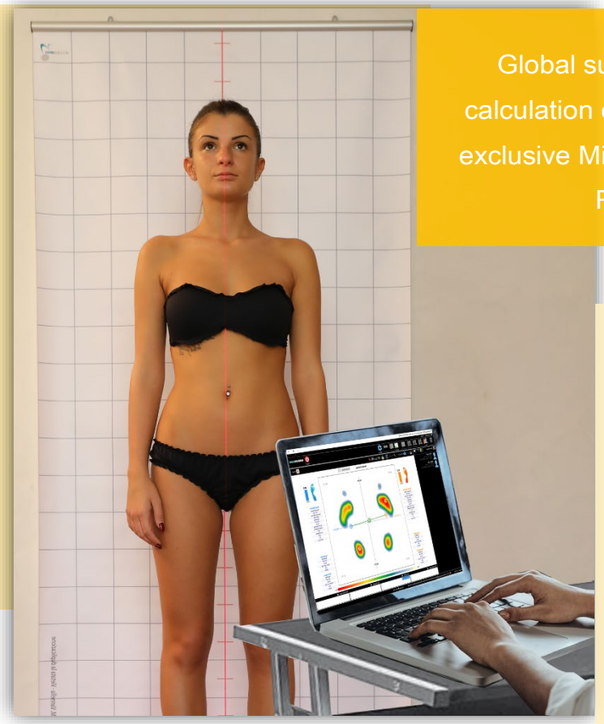
Static analysis

Analysis of plantar pressures and stabilometric data.

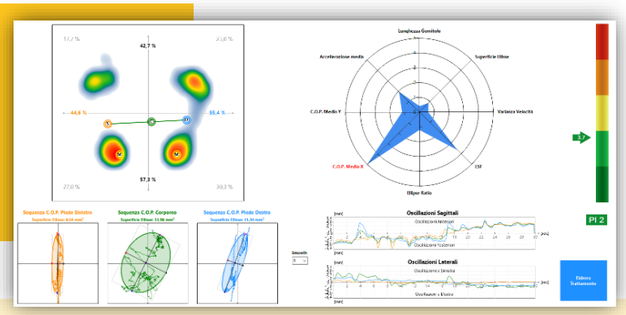




- Posturometric analysis
- Stabilometric analysis - statokinesiogramma
- Stabilograms
- breech ocillations
- FFT - Cross Fourier
- Global synthesis with postural index

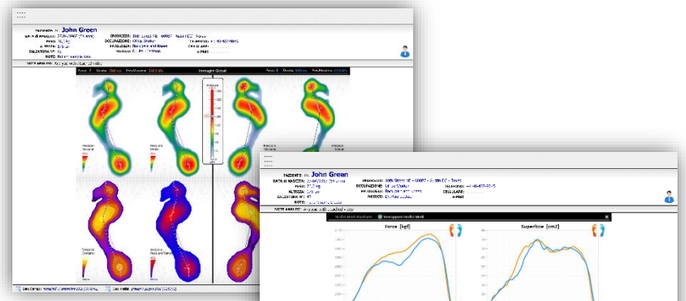


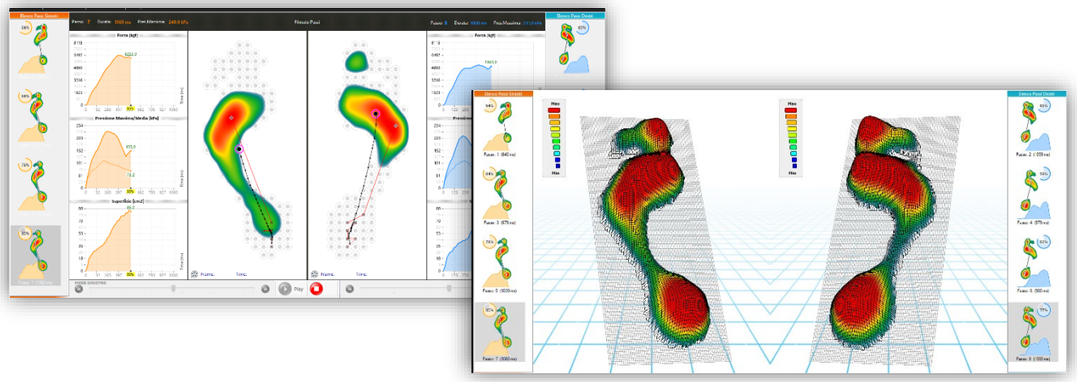
Global summary of the analysis with automatic calculation of the postural index, generated by an exclusive Microlab algorithm and derived from the Radar Balance of the main descriptors



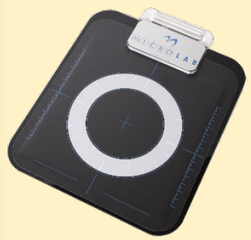
Dynamic analysis

Analysis of the distribution of loads during the step





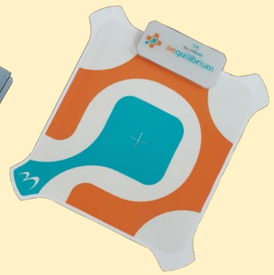
Compatible platforms



PodLight

PodPro

PodBase



Aequilibrium

Balance Software

NEW VERSION '21

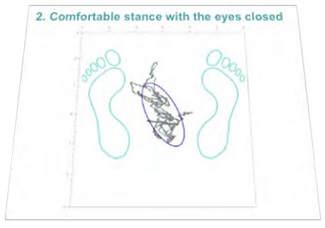
Powerful Balance assessement & training tool

Balance Assessment Protocols * not available in BPS Stabilo

mCTSIB- Modified Clinical Test of Sensory Interection on Balance &

Romberg Test

This protocol allows the static balance measurement in four sensorial conditions: stable surface and open eyes; stable surface and closed eyes; surface instable and eyes open and surface instable and eyes closed.



Body Sway

Use Body Sway to create a personalized posturography. Define initial conditions andobtain CoP variation, ML and AP variables over time. It also includes more than 30 parameters derived from a posturographic examination including Fourier analyses.

LOS - Limits of Stability

Perhaps the most used protocol for balance assessement. This protocol quantifies the directional control and the maximum distance that the patient can reach with its center of pressure in 8 different directions.

Fall Risk

Use Fall Risk to measure the static balance in four conditions: comfortable stance witheyes open and eyes closed, narrow stance with eyes open and closed. After performing,the value of the sway velocity index appears and provides a fall risk prediction.

Rhythmic Weight Shift

Use the Rhythmic Weight Shift protocol to evaluate the transfer capacity of the center of pressure rhythmically in the sagittal and anteroposterior plane, at three different velocities.

Unilateral Stance

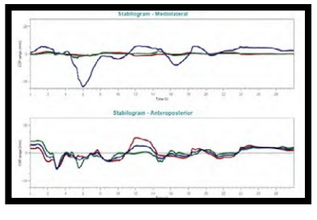
Use this protocol to measure the balance in four conditions: left foot lifted up witheyes open, left foot lifted up with eyes closed, right foot lifted up with eyes open and right foot lifted up with eyes closed.

Balance Error Scoring System

The BESS protocol allows the measurement of postural stability with eyes closedin three different positions on two types of surface (firm and unstable): two feet together, unipodal and tandem position.

Static Analysis *

This protocol allows the plantar pressure distribution analysis on the sagittal and anteroposterior planes of a single pressure image, dividing the pressure image into four quadrants.



Weight Bearing Squat *

This protocol allows observation of weight distribution in the sagittal plane with the patient standing up with different knee flexion angles (0º, 30º, 60º and 90º).

Sit-to-Stand*

Use this protocol to quantify the ability of the patient to lift from a sitting position toa standing position as quickly as possible, in three trials.

Total Balance Pro*

Use this protocol to analyse the balance integration through six parameters - proprioception, vestibular & visual input, postural stability, lower limb strength, reflexes & response time and motor control.

Balance improvement training

In the Sagittal and Anteroposterior exercises, the patient must reach the balance position in the sagittal plane or in the anteroposterior plane.

In the Spiderweb, Tunnel, Dots pattern and Bars pattern exercises the goal is to keep a balance position despite the visual stimulus.

In the exercises Route Bars, Route Spiral, Route Square and Route Maze the goal is to go through the routes within its boundaries with the center of pressure, following the red dots.

In the exercises Square, Circle, Eight and Spiral, the patient must reach all the dots disposed in the form indicated in the name.

In the Follow the Point and Moving Route exercises, the goal is to reach the moving red point and follow it within its tolerance margin.

General Features

Clinical Reports with normative Data

Report

Patient Management

Database Export (Excel, PDF)

Compatible plates

NEW FEATURE

New amazing feature in **Balance Software 21!**

A perfect combinationof the best balance indicators.

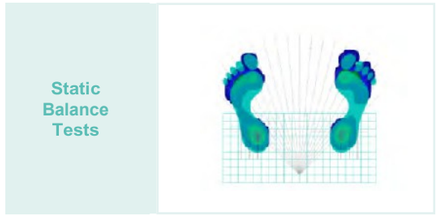
Analyse your balance integration through

six key indicators:

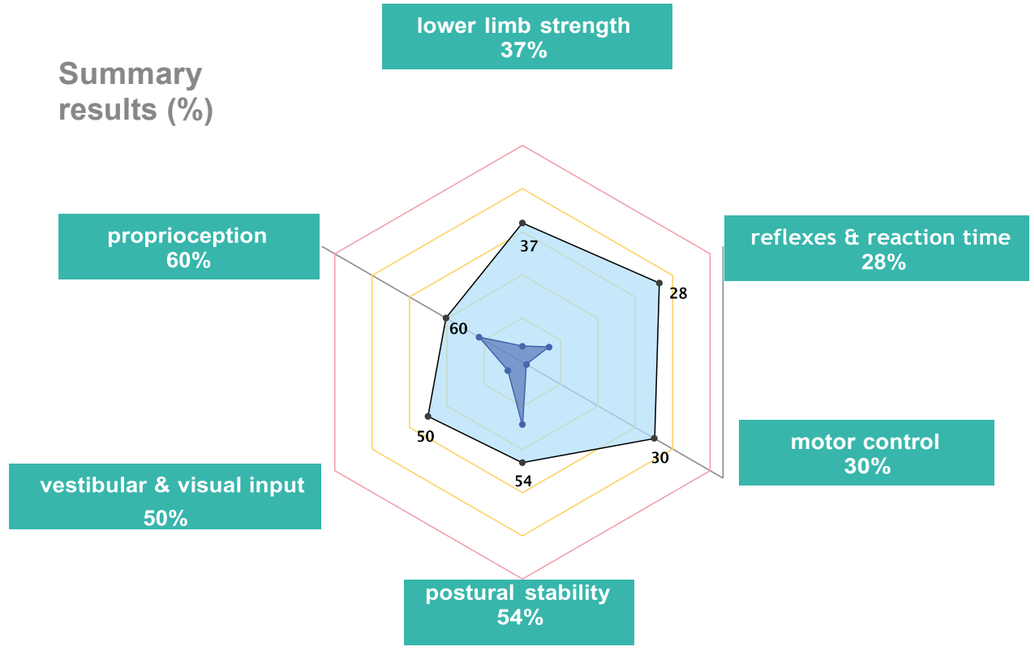
1. proprioception
2. vestibular & visual input
3. postural stability
4. lower limb strength
5. reflexes & response time
6. motor control

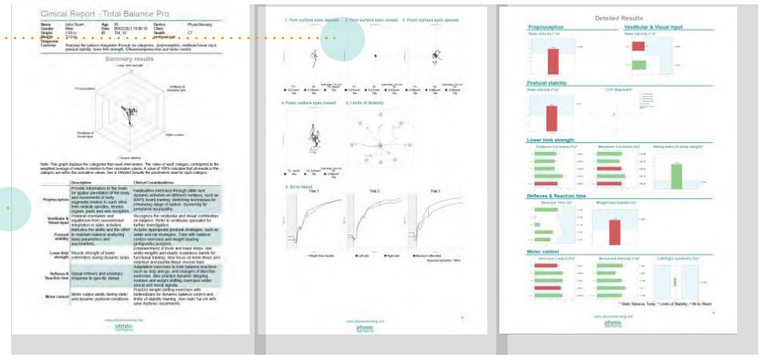
Total Balance Pro

1 Perform 3 consecutive assessment protocols: Static Balance, Limits of Stability and Sit to Stand



2 Then a graph is generated with the indication of 6 areas of clinical intervention





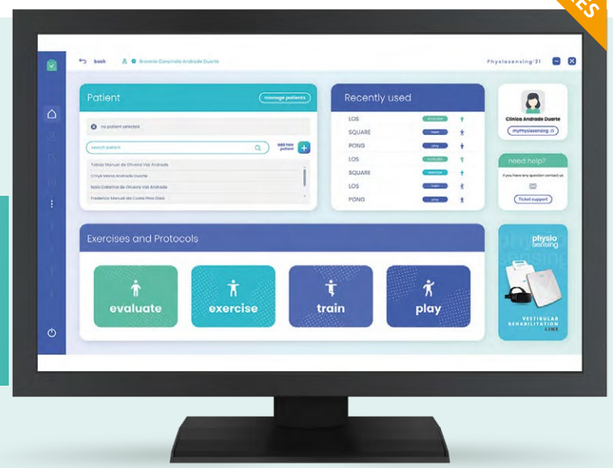
Detailed results with more than 20 variables which you may analyze more deeply

Detailed descriptionof each variables and Clinical Considerations you may follow

Balance Software 21

NEW FEATURES

NEW DESIGN AND FEATURES



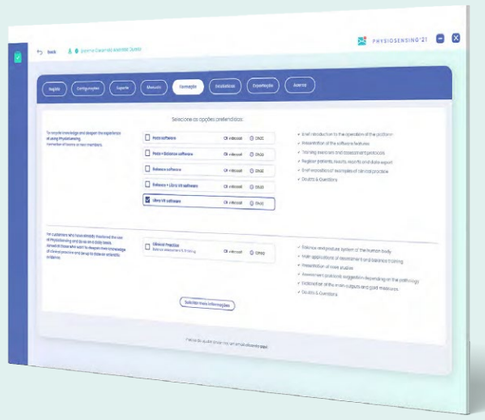
my PhysioSensing

New interface
Designed for a better experience
new

Training solutionsand Manuals
new

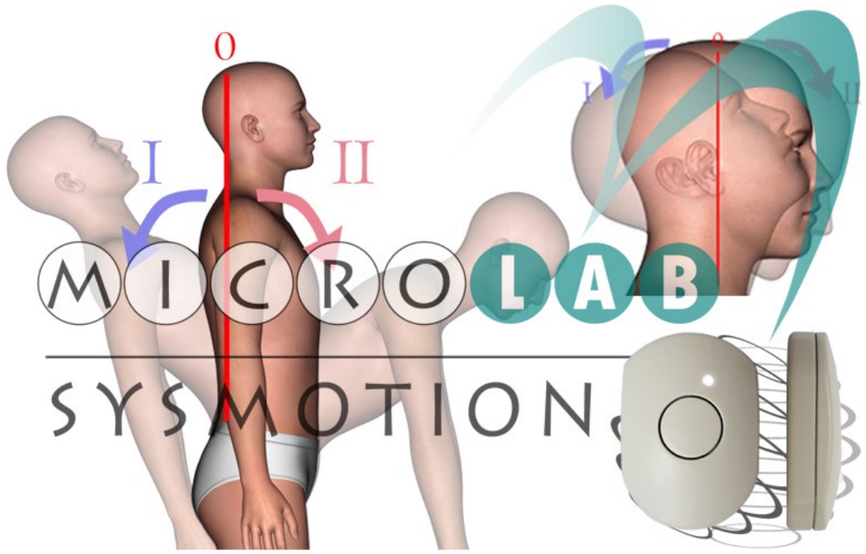
Statistics
Your own data highly customizable
new

Database Export
All data highly customizable in Excel



Sysmotion
Joint ROM evaluation

Inertial system for measuring the Range of Motion (ROM). Based on angular measurements of the three movements according to the SFTR international joint measurement method (John J. Gerhardt).



EVALUATION OF SPACE-TEMPORAL KINEMATIC PARAMETERS

Through the SysMotion® system, the evaluation of movement evolves from the traditional one, based on the use of compact, easily transportable devices that do not interfere with the normal activities of the subject. In addition to a high frequency of data acquisition (up to 200 Hz), the dimensions and low costs and the agility of Bluetooth data transmission, SysMotion® has a high modularity offering the user the possibility of choosing different packages already prepared for use, according to the application needs. ROM evaluations are performed in accordance with the international standard

THE PROTOCOLS

The protocols are based on angular measurements of the three movements (Rotation, Flexion / Extension, Latero-Flexion) according to the INTERNATIONAL METHOD OF JOINT MEASUREMENT S.F.T.R. affirmed thanks to Johnn J. Gerhardt who recognized the advantages of measuring joint movements with the "Neutral Zero" method on three fundamental planes: SFTR, [S (sagittal) - F (front) - T (transverse) - R (of rotation)] suitable for use with the calculator

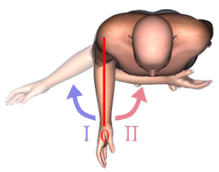
SYSMOTION-CERV®

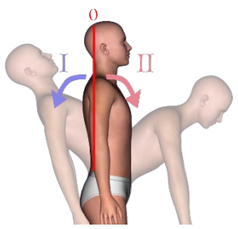
SysMotion-Cerv® is a protocol for evaluating the articular mobility of the head and neck through the measurement of the articular excursion (also called Range Of Motion, ROM) relating to flexion-extension, lateral flexion and rotation movements to verify the degrees of joint freedom, the effectiveness of treatment programs and patient progress.

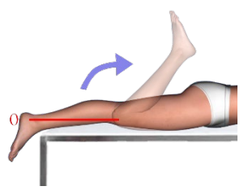
FLEX-EXTENSION

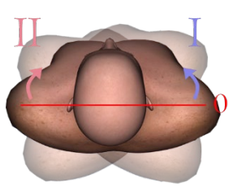
LATERAL FLEXION

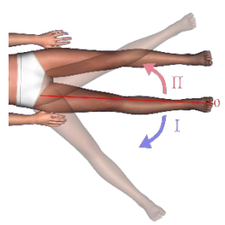
ROTATION











SYSMOTION-BODY®

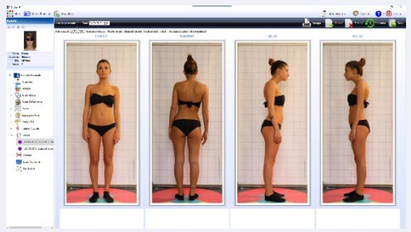
SysMotion-Body® is a mobility assessment protocol for all body joints:

Dorso-lumbar spine, lumbar spine, shoulder, wrist, hip, knee, ankle.

OrthoTP Postural

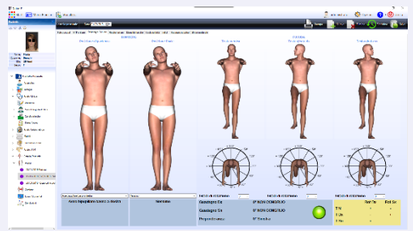
An excellent solution for the assessment of postural imbalances. It includes all the necessary clinical tests for a complete postural evaluation, starting with the basic photographic analysis.

Photographic postural evaluation



Front: Harmony of the Postural Tone
Posterior: Vertical of Barrè
Lateral L&R: Lateral Barrè

Tests Romberg and Fukuda

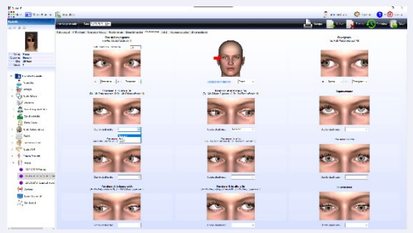


Evaluation of the postural state. The Romberg and Fukuda tests are the first two assessments proposed in the clinical test sequence.

Foot evaluation

The analysis of the breech support and the hindfoot is carried out according to the internationally validated Postural Podalic Index (PPI).

Oculomotricity

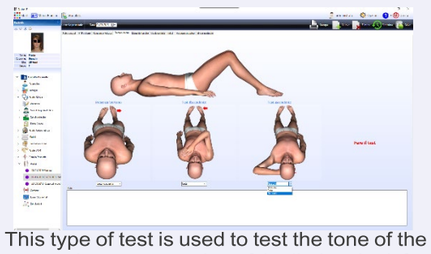


This section records all the data relating to the oculomotor test in the 6 diagnostic positions.

Index test

The index test is a neurophysiological test, once the basic test has been established, the body districts are "interrogated".

Rotator test

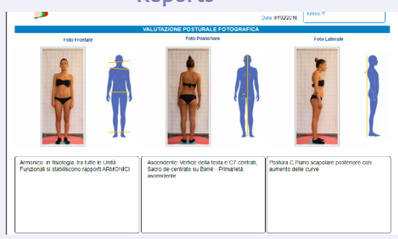


This type of test is used to test the tone of the external rotator muscles of the limb to look for the ascending or descending cause of the problem on the hypertonic limb.

Synthesis and postural correlations

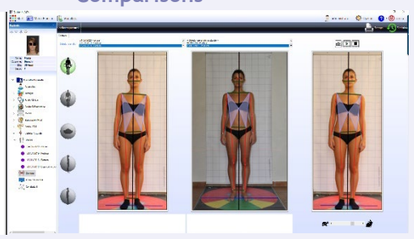
This section provides a summary of the assessments performed and related to breech support with an indication of the compensation capacity of the system.

Reports

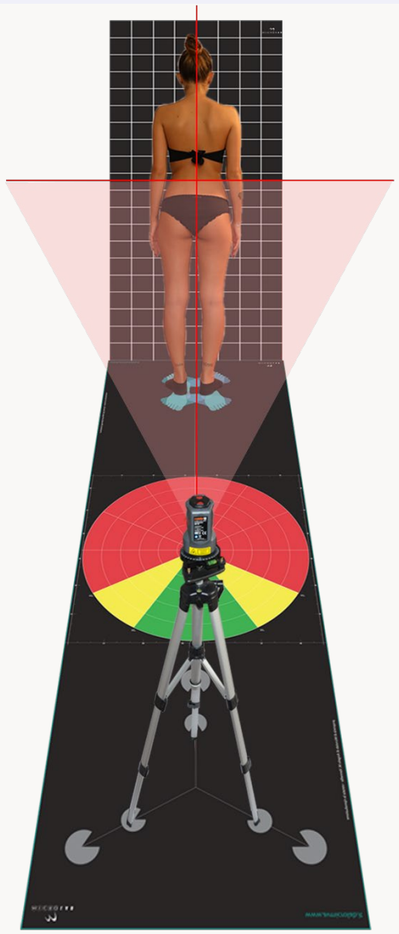


OrthoTP Postural is full of print reports to document any part of the postural analysis, to be printed on a printer or saved in PDF format for the exchange of information between operators.

Comparisons



This section is extremely important and useful to the clinician and the patient, because it allows the comparison of the three orthostatic projections acquired (initial, intermediate and final) in order to evaluate the changes in posture and therefore the trend obtained from the reprogramming of the imbalances.



Accessories for postural evaluation and contents of the package

Carpet for Postural Evaluation	
Dimensions	85 x 300 cm
Graphics and material	colors Washable, walkable and rollable PVC mat
Background grid with references	
The fabric with a checkered bottom, made with an extremely light and transportable aluminum structure	
Dimensions	85 x 200 cm
Laser	
Class II	
Output Power	1mW
Wavelenght	650nm
Accuracy level	1,0mm/m
Contour line accuracy	0,5mm/m
Viwefinder accuracy	0,5mm/m
Power supply	2 x AA batteries
Easel	

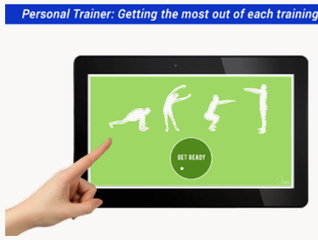
Balance training

BALANCE TRAINING plays an important role in maintaining functional joint stability. It has been shown to reduce the incidence of injuries to the ankles, knees, hips, back and upper body. It is also an excellent form of rehabilitation for injuries in those areas.

Personalized exercises

GAMES

Challenge your balance

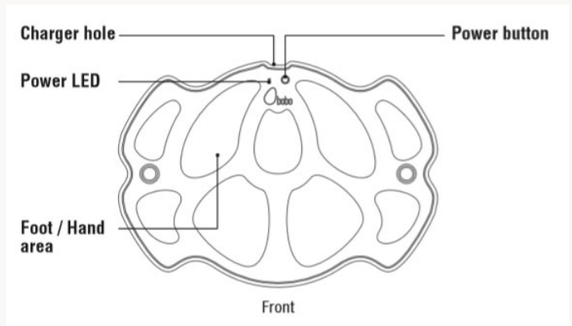


PERSONAL TRAINER

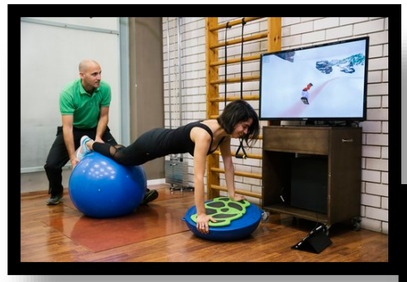
Getting the most out of each training

ANDROID

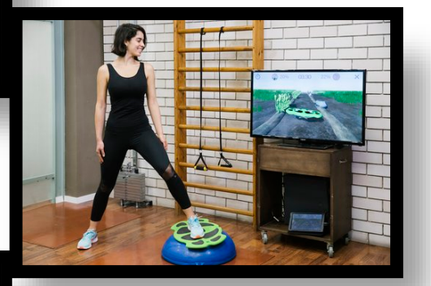
Hundreds of free, tilt-based games



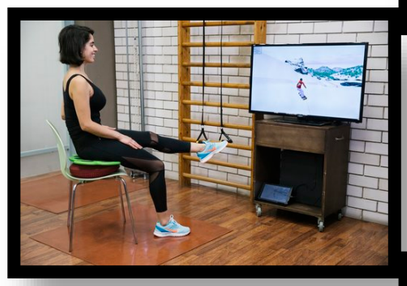
Exercise



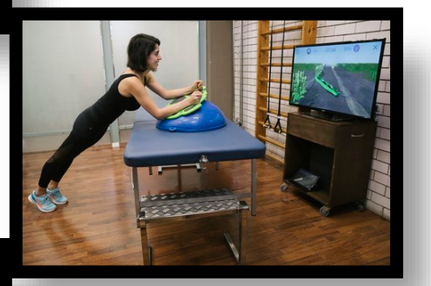
Core



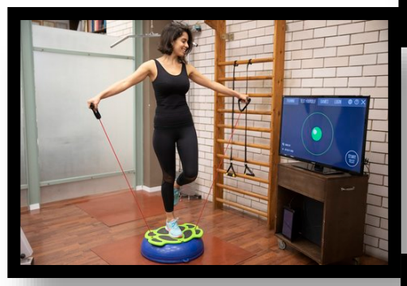
Weight



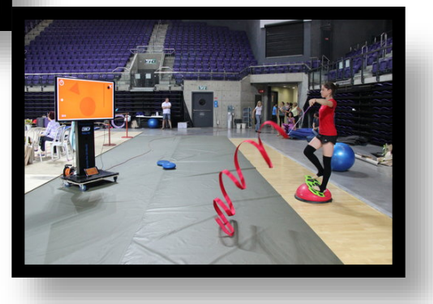
Low-functioning patients



Upper extremity



High functioning patients



Most challenging exercises

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