# SENSOR MEDICA

## Catalogue

**“Don’t mistake movement for progress. A rocking horse continues to move without making any progress at all.”**

## | WHO WE ARE |

Determination, ambition and values: this is what makes us Sensor Medica.
We work everyday in the development of the best analysis system in the biochemical field: our mission is to take care of our patients and their health.
Our story began in 2010, as the outcome of years of knowledge.
We love new challenges, and we like to face them with passion and enthusiasm.
At the same time, with our experience we guarantee solidity, reliability and awareness.
We’re proud of our Made in Italy products, a mark of excellence which we love to export worldwide.
It’s our goal to become your strategic partner today, in order to support you on a daily basis in the performance of your profession. To continue to design new devices together in the future, to meet your needs and to anticipate the market itself.
Integrated system for the motion analysis and the production of orthotic plantars.

# INTEGRATED SYSTEMS for the MOTION ANALYSIS and the PRODUCTION of ORTHOTICS

## | RESEARCH AND TECHNOLOGY |

If we had to choose just a word to describe ourselves, it would be “RESEARCH”.
Scientific research is the only way to transform projects and visions into concrete reality, with satisfying and performing results.
Each of our new products and equipment - both hardware or software - are the consequence of often, years of commitment, perseverance and valid results.

# “The impossible becomes reality when you find the strength to leave your comfort zone behind.”

## | OUR ACTIVITY |

We design and develop systems for the evaluation and analysis of human body movement.
We costantly work to combine innovation and offering cutting-edge technological solutions.
In order to do this at best, we have always cooperated with the world of scientific and university research and with the sports medicine’s one.
We are the only company in the world to provide a complete range of systems for the analysis of the step, of the running, posture and rehabilitation.


# Let’s start our journey in the world of Sensor Medica

## | ANALYSIS SYSTEMS | Acquisition devices |

**FREESTEP**
Professional software for baropodometry analysis, posture and biomechanics, able to meet the different needs of each individual professional.

**FREEMED**
Baropodometric and stabilometric platforms for the study of plantar support and posture.
Available in different sizes, from the smallest BASE 40x40 up to SPORT 300x50, they all allow the static, dynamic, stabilometric and videographic analysis of the patient.

**RUNTIME**
Baropodometric treadmill for gait and run analysis. Symmetry indexes, efficiency indexes, left and right load graphs.

**FLEXINFIT**
System of wearable sensorized insoles for in-shoes biomechanical and postural analysis of plantar pressure, usable both with and without orthotics, to evaluate their effectiveness. Bluetooth transmission up to 100 meters in free field, data storage on microSD card.

# A set of products that allow an unique and significant work experience

**OPTOELECTRONIC SYSTEMS**
Optical acquisition systems for posture analysis. Full HD Podoscopes and 2D Podoscan for digital acquisition and footprint measurement.

**INERTIAL SYSTEM**
Single or multiple IMU sensor acquisition systems for joint ROM assessment and 3D motion analysis

**SPINE 3D**
Non-invasive 3D spine scan thanks to Lidar technology (Light Detection and Ranging).

# freeStep

## Baropodometry, biomechanics, posture analysis

### | FREESTEP |

It is the most complete software in the world for the biomechanical and postural analysis of the human body. The only software infrastructure capable of analysing and manage countless types of acquisitions, with a unified database. Always keep up to date thanks to automatic Liveupdate.

### | WHO CAN USE IT? |

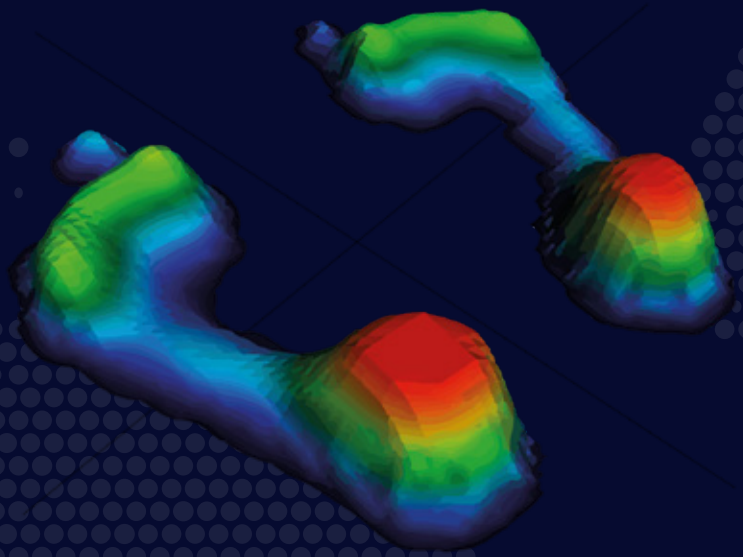
You, of course! It can be used by multi-disciplinary practices and sole practitioners alike, thanks to interactive menus that guarantee a custom configuration based on individual needs.

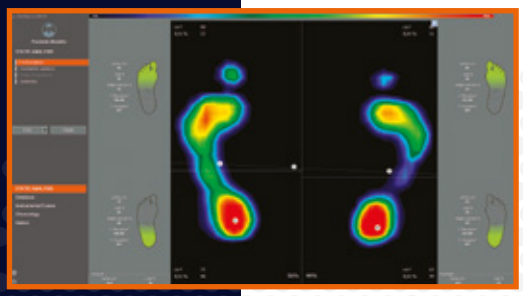
## | ALL-IN-ONE |

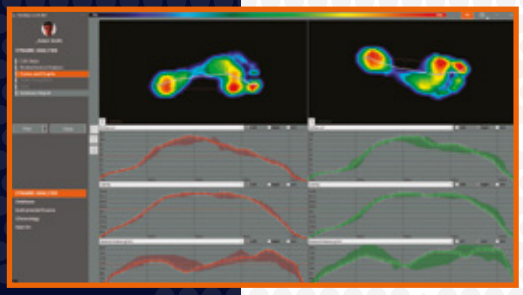
You will no longer have to go back and forth among several softwares!
With **freeStep** you can manage all of your Sensor Medica diagnostic equipment in one place. Baropodometric and stabilometric platforms, sensorised insoles, sensorised treadmills, 3D and 2D podoscan, inertial motion sensor networks and much more. One suite, perfectly integrated with your working method.
Just a click away.

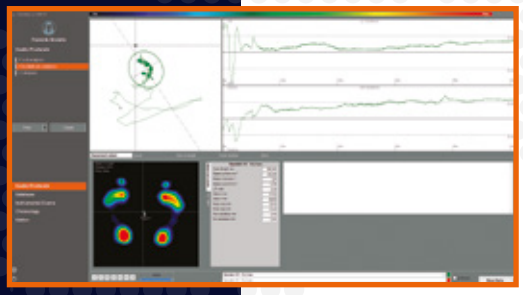
## | STATIC | STATIC ANALYSIS |

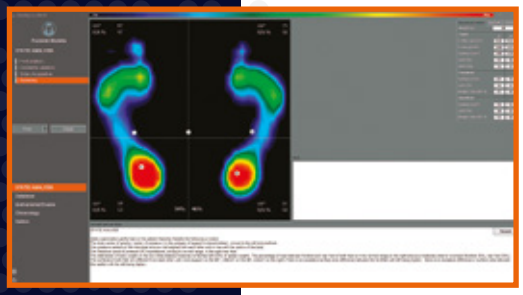
- Examination of foot support, in upright position both with and without footwear
- High resolution, point-based visualization, three-dimensional and isobaric
- Even more realistic with 250 frames in 5 seconds.
- Numerical information concerning the distribution of loads, surfaces, retro/outpost ratios, centre of gravity and pressure centres left/right
- Automatic pressure reporting and comparison with normality values











## | DYNAMICS | DYNAMIC ANALYSIS |

- Continuous phase acquisition up to 500 Hz of walking and running
- Analyse and record every single footprint, gait cycle, numerical values, result of the forces and video recording
- Automatic pressure reporting and comparison with normality values

## | STABILOMETRY | STABILOMETRIC ANALYSIS |

- Evaluation and study of the balance of maintenance mechanisms
- Defined and customizable acquisition protocols (Romberg test, Sway test, etc.)
- High sampling rate. (selectable from 5 to 150 hz) and frequency filters
- Statokinesigram, Fourier analysis, speed curves, confidence ellipse, RMS, standard deviation, postural rectangle

## | VIDEOGRAPHY | VIDEOGRAPHIC ANALYSIS |

- Complete morphological measurement of the subject by identification in order to detect any body asymmetry
- Guided positioning protocol marker, free measurements, automatic and manual calibration images
- Reports exportable in PDF format
- Video analysis and import of synchronized videos
- Allows simultaneous use of 4 different cameras

# A single software, multiple analysis

## INTEGRATED DEVICES

**PRESSURE PLATES**
- Static, dynamic, stabilometric and videographic analysis on a sensorized platform

**TREADMILL**
- Walk and run analysis on a sensorized treadmill

**PODOSCAN 3D**
- Monopodalic acquisition in full load, semi-load and off load in in 3/5 "

**PODOSCAN 2D**
- Electronic podoscope for 2D acquisition of the footprint

## WEARABLE INTEGRATED DEVICES

### FLEXINFIT
- System of wearable sensorized insoles for the biomechanical analysis of plantar pressure whilst wearing shoes

### EMG
- Surface electromyography to detect electrical muscle activity (time, duration, and extent of activation of a muscle during movement)
- Bluetooth connection

### MOOVER
- Miniaturized 3D motion inertial sensor

### MOVIT GATE
- Motion acquisition system with multiple sensors
- Wearable, wireless and non-invasive

## FREESTEP ALSO OFFERS

### STATISTICS
- Powerful statistics engine
- Data export in CSV format
- Pre-set and free aggregation queries

### AUTOMATIC REPORT
- Automatic textual report
- Comparison with the normal values and analytical description of the differences with respect to the norm
- International texts in 12 different languages
- Instant and editable by the operator

### COMPARISONS
- Visual and numerical comparison between various exams of the same patient
- Indispensable in the follow up and management of results pre and post treatment

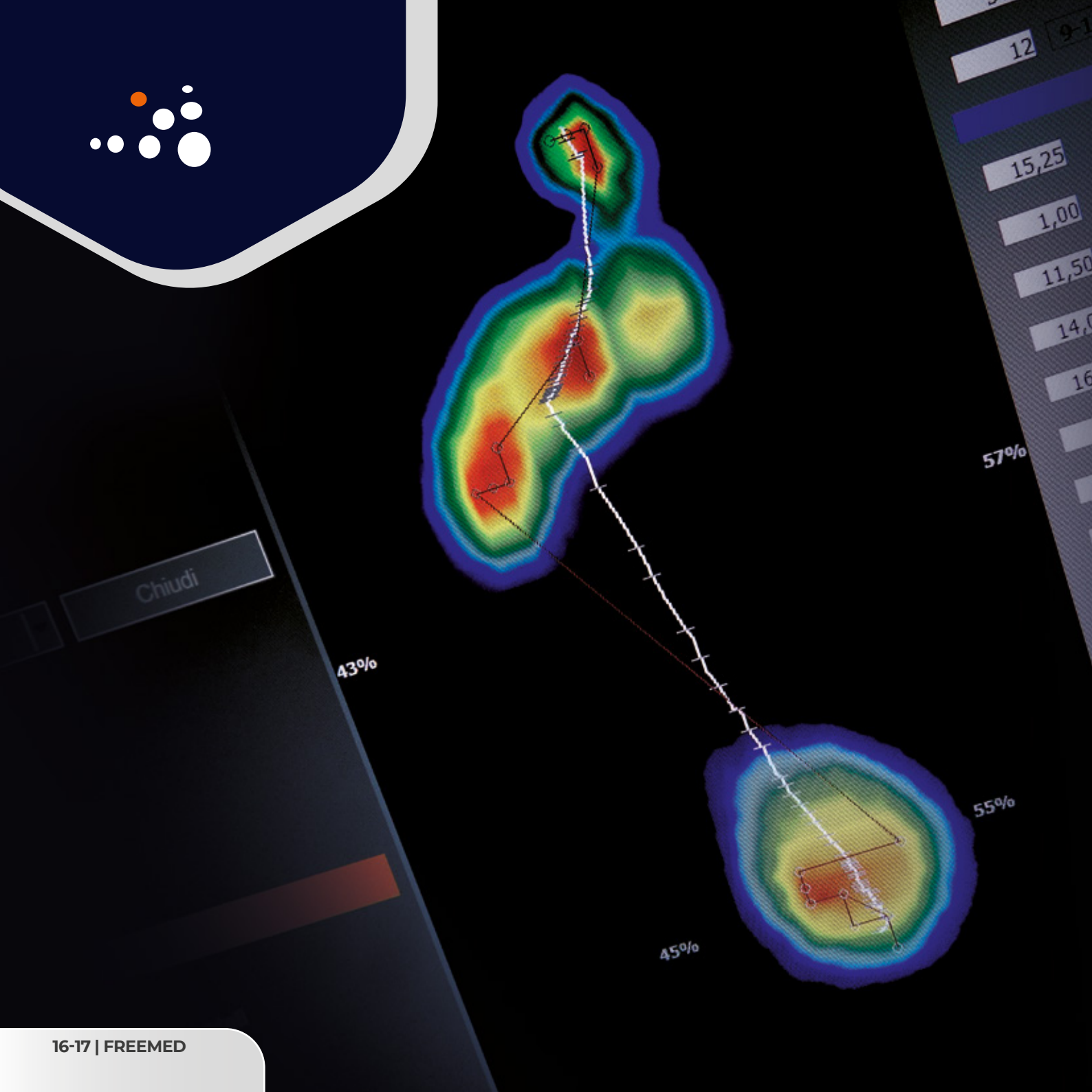
freeMed

# Pressure plates for gait analysis

| FREEMED |

**freeMed** is a line of systems for the evaluation of the foot load support and the posture that allows static, dynamic, stable and videographic analysis of the patient.
Ultra-thin platforms made of thousands of resistive pressure sensors 24K gold coated, to ensure unique reliability and repeatability. Sampling frequency over 400 Hz, to translate in real time thousands of analog signals, transforming them into accurate and reliable images and data. Our pressure plates are made of aluminum alloy, eye catching lightweight and durable. Available in

various sizes, from the smallest and transportable, up to 300x50 often used in the most advanced biomechanics and research laboratories in the world. The system-interfaced via USB port or Bluetooth is managed through **freeStep** software for Windows. All configurations are equipped with passive walkways in and out, to facilitate a natural walking of the patient and carrying bag (optional and available up to the Dynamic version, 120x50). For the Base 40x40 and Maxi 60x50 versions, wi-feet module is available for maximum freedom of use.
Dual amplifier multipoint automatic calibration.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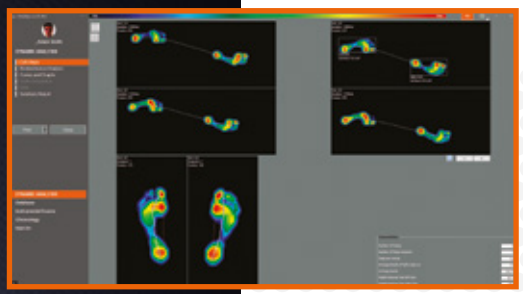
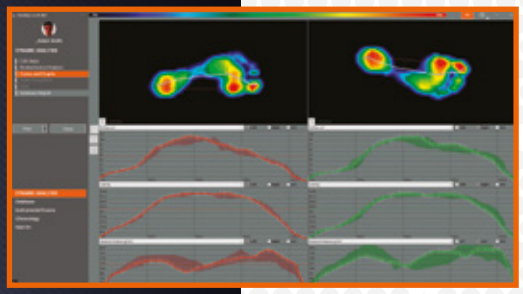
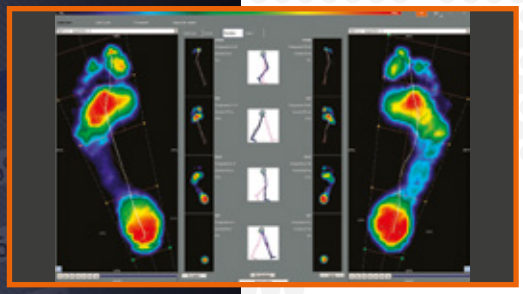






## HIGH ACQUISITION FREQUENCY

Ability to acquire over 400 frames per second to obtain a detailed analysis of the gait line and the oscillations of the body center of gravity

## SPACE-TEMPORAL PARAMETERS

- Support surfaces
- Load distribution
- Podalic axes and angles
- Foot length
- Speed
- Gait line
- Rockers

## AUTOMATIC REPORT

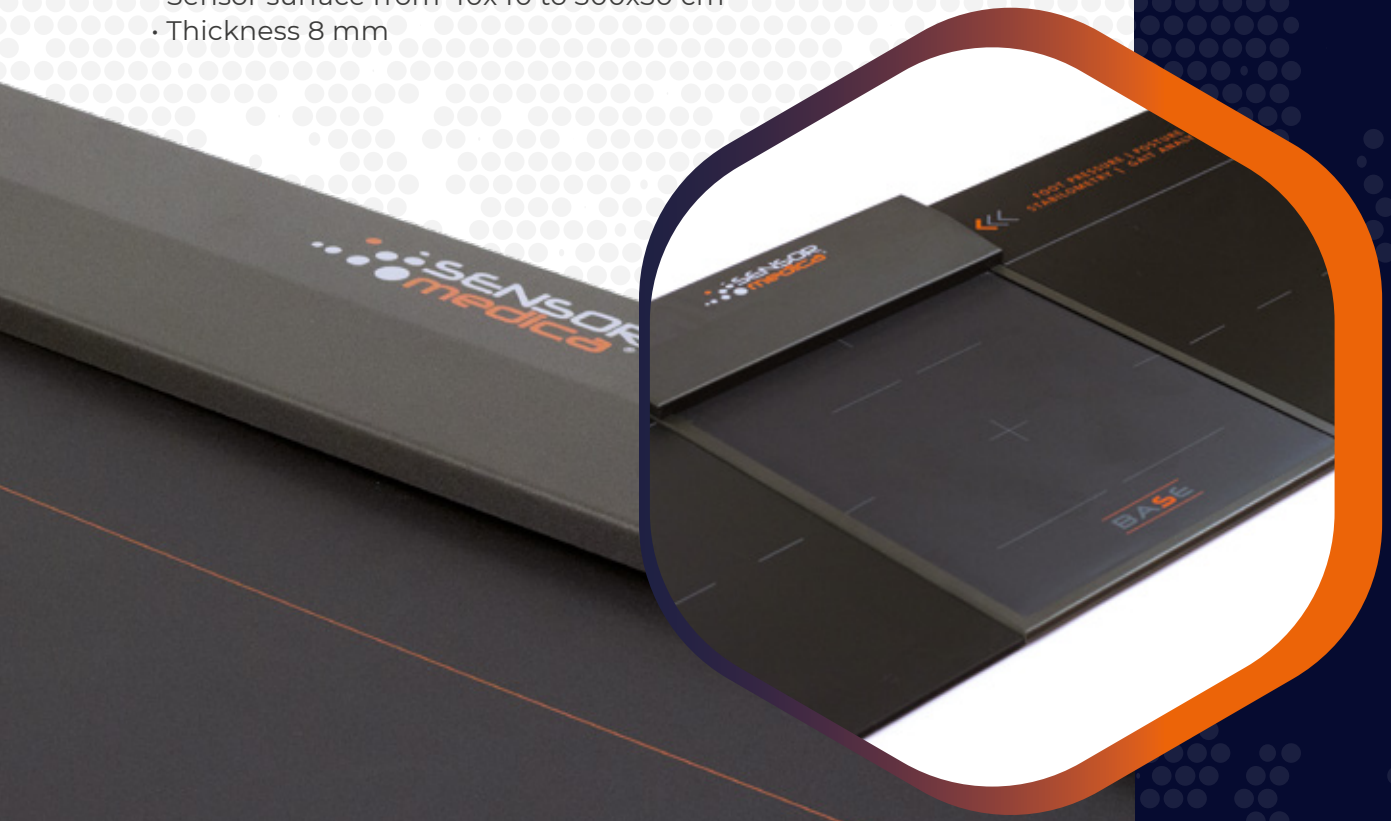
Generation of automatic reports based on normal values arising from scientific studies, supporting all types of professional with clear and concise data and easy to interpret reports.

## VIDEO SYNCHRONIZATION

Allows the visualization of footprints, synchronised with video acquisition.


Our platform, made in aluminum alloy, it's resistant, lightweight and reliable.

- 12 different configurations available
- Wi-fi module for Base 40x40 and Maxi 60x50 configurations
- Platform transport bag available in configuration Base 40x40, Maxi 60x50 and Dynamic 120x50
- 10 bit automatic calibration
- Resistive sensors 24 K gold coated, conductive rubber
- Sampling frequency: 0-500 Hz selectable
- PC interface via USB port
- Passive walkways always included
- Connectable to digital cameras
- Gait Line visual representation
- Curves and graphs optimized for easy reading
- Sensor surface from 40x40 to 300x50 $cm^2$
- Thickness 8 mm



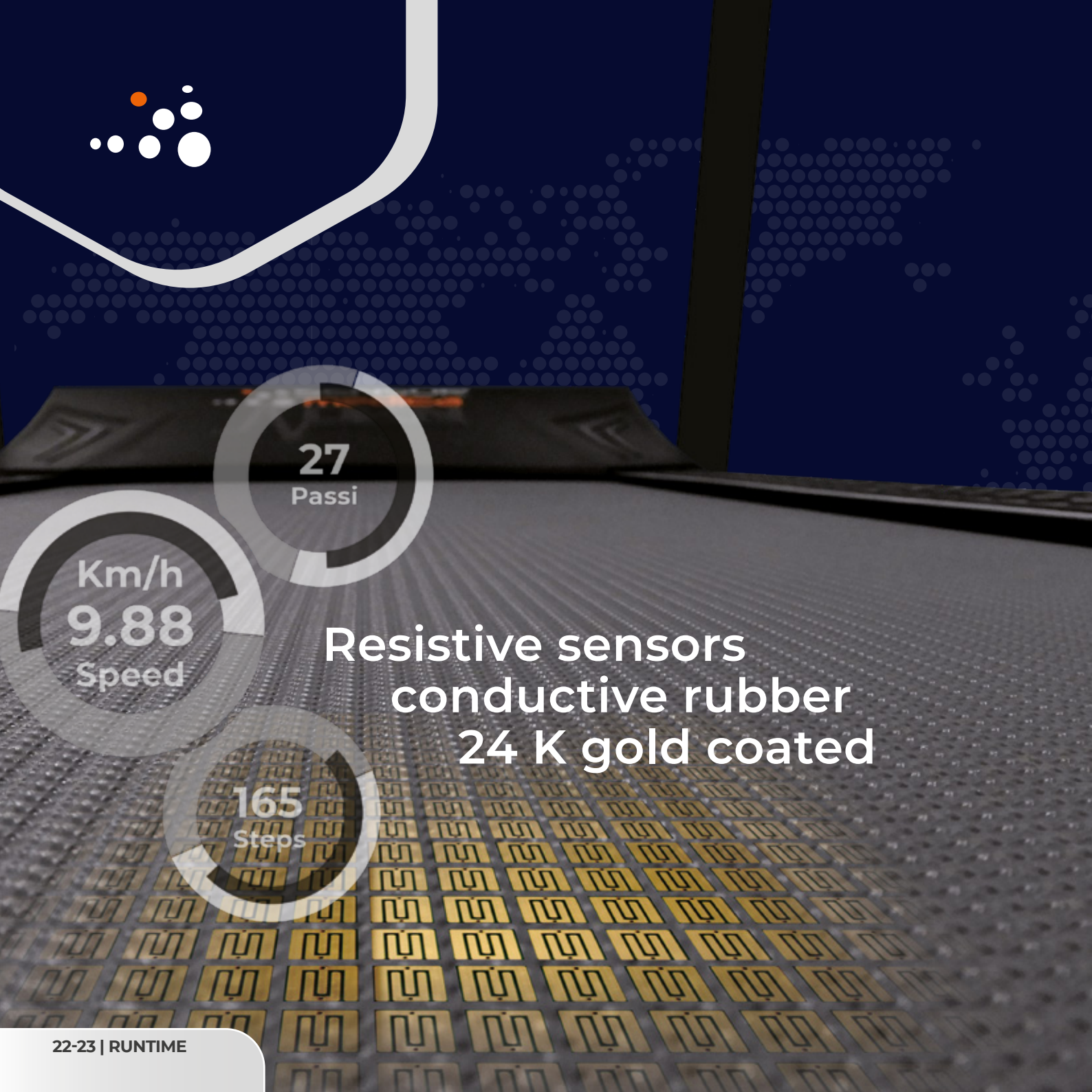
RUNTIME

# Baropodometric treadmill for the biomechanical study of the race

## | RUNTIME |

The baropodometric treadmill **Runtime**, fully sensorized bearing surface, allows an accurate analysis of plantar pressures and times of support during the walking and running phases, detecting the load distribution on the ground. The use of cameras (also available in the High Speed version up to 110 fps) synchronized the support also allows for a detailed assessment of the postural attitude during movement.
The acquisition and processing of data takes place through the **freeStep** software, in order to obtain a simultaneous assessment of plantar support, posture and biomechanics.
Developed with the most modern technologies, it is suitable for every professional both in the clinical and sport fields.


ENDURUN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9.88
Speed
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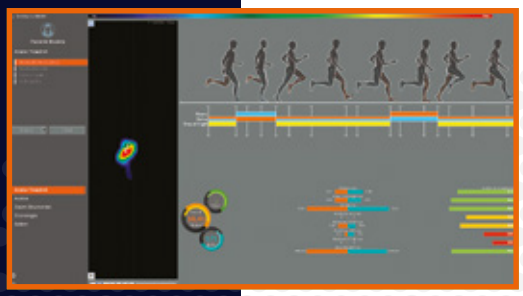
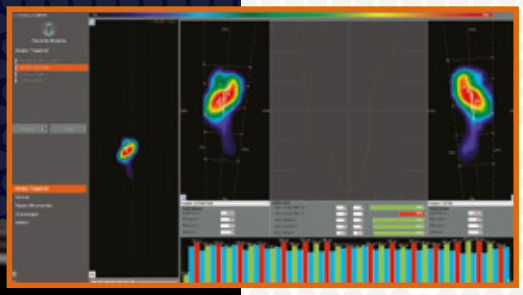
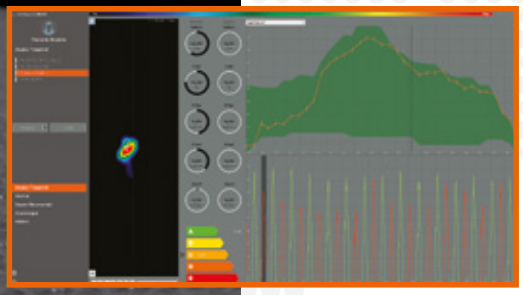
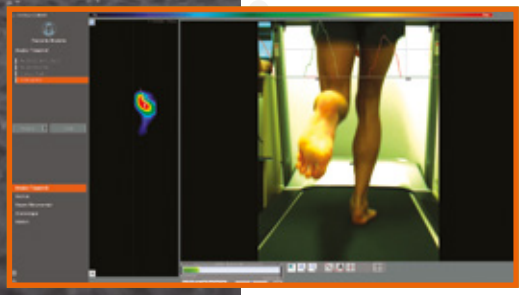
Steps
Resistive sensors
conductive rubber
24 K gold coated









## TECHNICAL FEATURES

- Symmetry indexes for biomechanics and morphology analysis
- Diversified graphics for the analysis of walking and running
- Intuitive dashboard dedicated to speed steps and steps per minute
- Gait Line visual representation
- Print report with intuitive graphics and symmetry indexes
- Curves and graphs optimized for easy reading
- Dynamic dashboards in exam playback mode
- Efficiency indexes
- Left and right load graphs
- Resistive sensors conductive rubber 24 K gold coated , with a durability of 1,000,000 cycles
- Sampling rate: up to 200 Hz in real time
- PC interfacing via USB port
- Connectable to digital cameras
- Surface of the sensors 120x40 cm
- Speed: 0.5-22 Km/h can be increased by 0.1 Km/h
- Inclination: 0-15 %
- Maximum load weight: 130 Kg
- Dimensions 1950x905x1460 cm

GAIT ANALYSIS INSOLES

FLEXINFIT

# System for detecting the pressure of the foot inside the shoe

**| FLEXINFIT | In-shoes pressure analysis |**

**FlexInFit** represents the evolution in the field of biomechanical and postural analysis until now linked almost exclusively to the use of baropodometric platforms. Each pair of insoles is made up of over four hundred pressure sensors and allows you to perform accurate analysis inside the patient's shoe, to check in real time the progress of the exam and to record data stream for up to four hours.
**FlexInFit** is a versatile tool that simplifies the work of many professionals: from the foot specialist who wants to integrate his gait analysis system, to the physiotherapist who wants to verify the real progress of a therapeutic process.

From the athletic trainer interested in the study of sports movement and its improvement, to the medical doctor interested in verifying the real points of hyperpressure to avoid the formation of ulcers in patients with diabetes.
Furthermore, **FlexInFit** is a device also used in the production of orthotic insoles, useful for verifying their effectiveness directly in the testing phase of the insole. The device is completely wireless and junction box free, since they can somehow interfere with the natural movement of the walk , and interfaces with the **freeStep** biomechanical and postural analysis software.

## TECHNICAL FEATURES

- Thickness: 0,3 mm
- Hypoallergenic polyester material
- Flexible and cuttable
- Cheap, single-use or re-usable
- Available from 35 to 48 (EU)
- Resistive sensors
- Bluetooth wireless technology up to 100 m
- Data storage on a microSD card
- Rechargeable battery, up to 4 hours of autonomy
- Each pair of insoles has more than 400 sensors
- Measuring scale for every single sensor: 0-100 N (0-1000 kPa)
- Single sensor's sensibility: 0.1 N (1 kPa)
- Real-time frequency sampling from 25 to 50 Hz
- 10 bit digital resolution
- Integral Pressure-Time, Gait Line, Rockers, Curve
- Pressures' map and CoP butterfly display

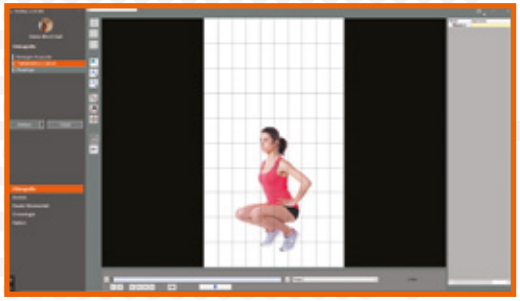
# 2D VIDEOGRAPHY

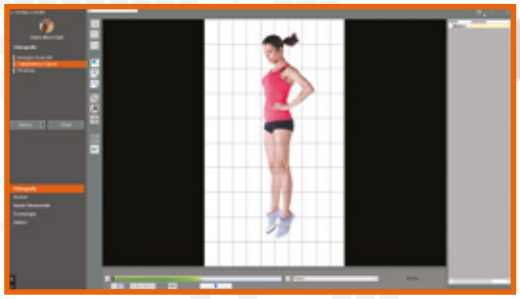
## Videography and videoanalysis with just one click

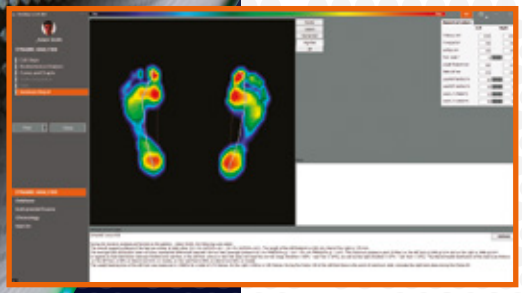
**| VIDEOGRAPHY |**

Videography and video analisys provide a qualitative and quantitative evaluation of posture and physical movement.
This analysis technique is widely used for both clinical use and technical or postural sports.
The device is perfectly integrable and can be syncronised with all the **freeStep** devices.

## Posture assessment and of the motor gesture







## TECHNICAL FEATURES

- Up until 4 cameras simultaneously
- Supports any Windows compatible camera
- Can be integrated with pressure-analysis systems
- Automatic guided protocols
- Automatic calibration system
- Unified print report
- External sources import

podoscan

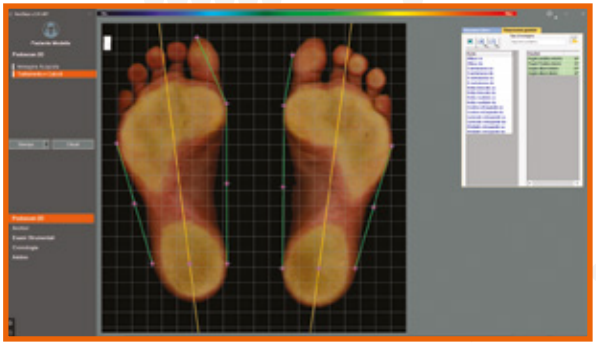
# It allows the digital detection of footprints

**| PODOSCAN 2D |**

Is the high definition optoelectronic instrument for detecting the real image of the footprint through a digital scanner. Essential in the case of patients with amputations or foot deformities. It allows the image archiving, automatic and manual measurement and comparison of pre and post treatment exams.
It is possible to adjust brightness, contrast and saturation for optimal viewing.


## TECHNICAL FEATURES

- Dimensions 65 x 44 x 13 cm
- Power supply 24 Vcc
- Absorption 100 mA
- Weight 16,4 Kg
- Maximum load 100 Kg



# It allows a correct evaluation of the foot pressure

**| PODOCAM | full hd podoscope |**

Thanks to the latest generation LED light, it allows a correct evaluation of the shape of the foot and potential problems at the epidermal level, highlighting the areas of greatest pressure.
The full HD camera, integrated in the lower part of the device, allows acquisition of the footprint pressure with 1:1 scale.

## TECHNICAL FEATURES

- LED light for better viewing capacity
- Load: up to 150 kg
- Upper polycarbonate sheet for greater strength
- Easy to use and easy to maintain
- Dimensions: 17 x 48.5 x 40 cm
- Full HD integrated camera
- Fully integrated with **freeStep**

# Measurement of movements, accelerations and rotations in space

**| MOOVER | Range of movement |**

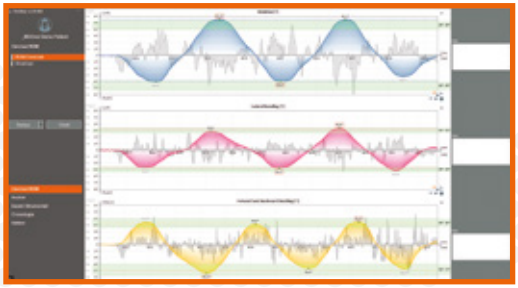
**mOOver** is a miniaturized sensor which is able to measure movements, accelerations and rotations in space.
Its application in the scientific field allows the goniometric evaluation (range of movement) of the joints, a fundamental measurement, both in terms of prevention and rehabilitation and allows us to identify the weaknesses in the analysis phase or to follow their progress during the therapeutic treatment.

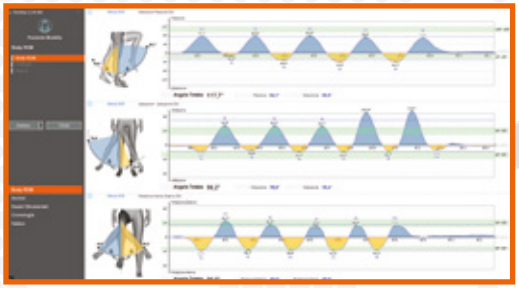
**mOOver** is ultra-compact, wireless, of high precision and with a considerable autonomy of battery operation. The software provides information on normality values and produces an automatic report of the exam.

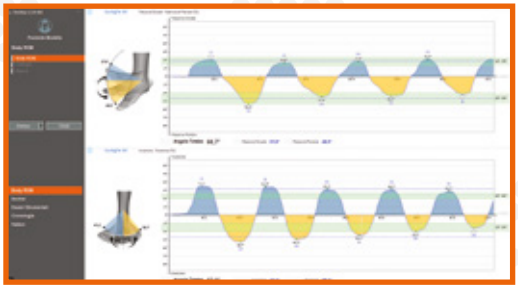
*Acquisition with stabilometric/ baropodometric platform


## TECHNICAL FEATURES

- Dimensions: 65 x 45 x 18 mm
- Weight: 28 gr (battery included)
- Connection: Bluetooth 4.0 and 2.0
- Rechargeable batteries, 6 hours of continuous acquisition
- Resolution: 16 bit
- Calibration: automatic
- Sampling frequency: 1000 Hz
- Configurable accelerometer: from 2 at 16 G
- Configurable gyroscope: from 250 to 2000 °/min
- Integrated Digital Motion Processing







# MOVIT GAIT™

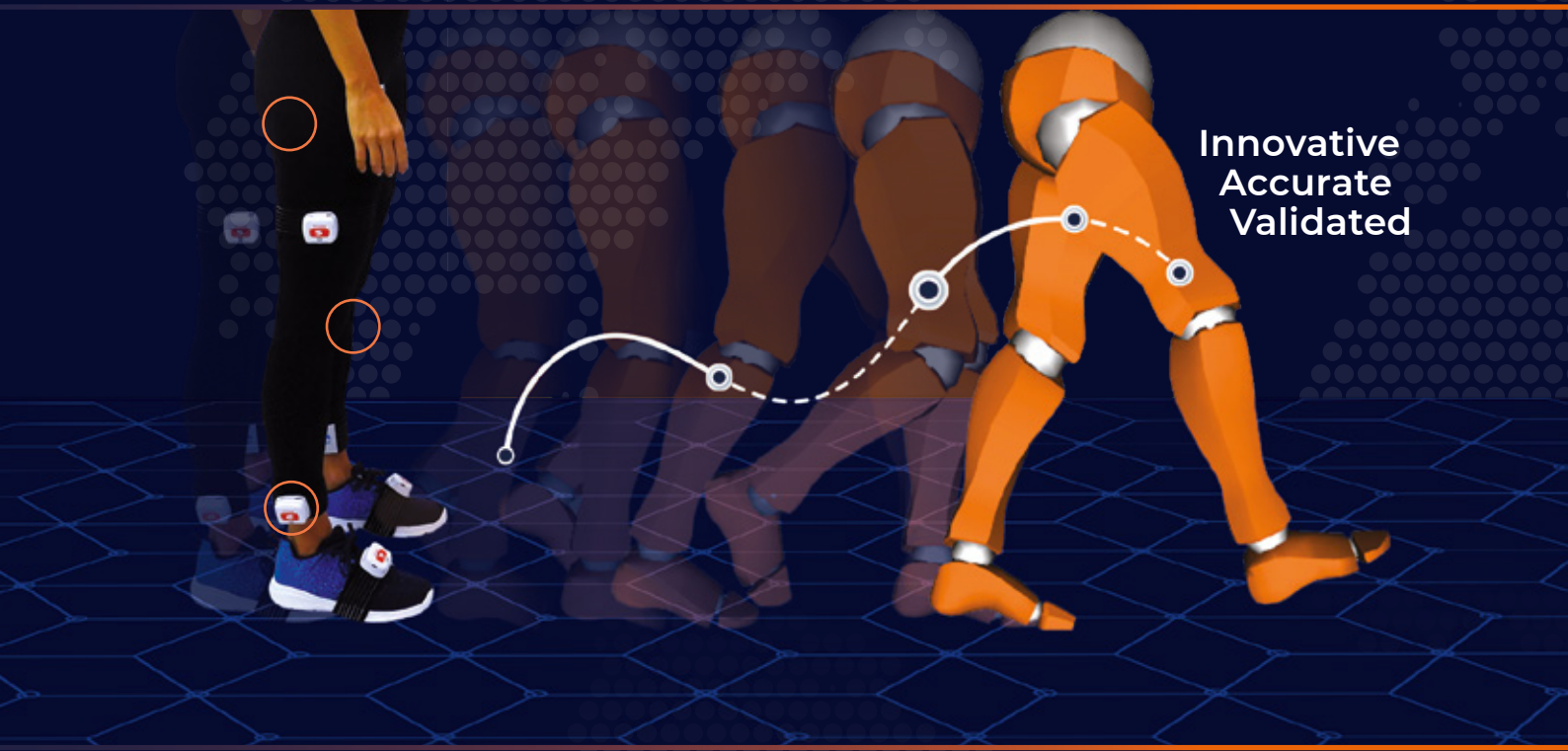
## Inertial sensors network, for the most accurate and complete movement analysis

**| MOVIT GAIT | Inertial sensors network |**

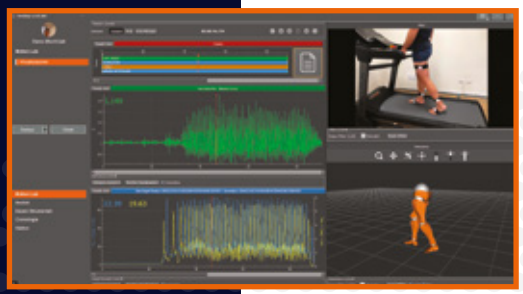
**Movit Gait™** is the ideal tool for clinicians and specialists interested in objectively monitoring and quantifying the patient's physical state and evaluating the effectiveness of a rehabilitation program. Thanks to the network of inertial sensors worn by the patient, it provides a complete and accurate movement analysis.
**Movit Gait™** introduces a new approach to movement analysis with an automatic and detailed report of the most important walking parameters.
Once the sensors have been positioned on the patient's body, it will be possible to analyze the human path in a practical and objective way.

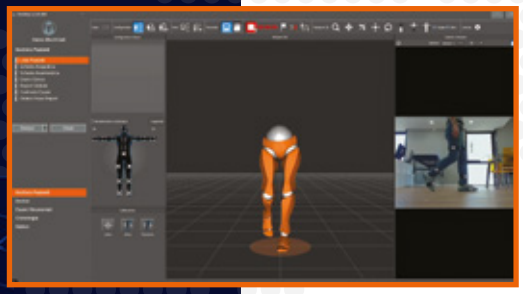
The **Movit Gait™** is a wireless and wearable movement acquisition system and is composed of small inertial sensors and a USB receiver. By means of wearable supports and a quick coupling/release system it is possible to easily position the devices on the subject. Place the sensors on the lower part of the patient's body (pelvis, thighs, shins and feet) and start with the analysis. Available in 5, 7 and 16 sensor versions.

# Wearable inertial system for Gait Analysis



Innovative
Accurate
Validated





## GAIT INDICES OF SYMMETRY

- Duration of the half step
- Duration of the step
- Time of the stance phase
- Time of the single stance
- Duration of the double stance
- Length of the half step
- Length of the step
- Impact of the leg
- Impact of the foot

## SPACE-TIME INDEXES

- Speed
- Duration of the half-step
- Time of the stance phase
- Time of the oscillation phase
- Duration of the single stance
- Duration of the double stance
- Length of the half-step
- Duration of the step
- Length of the step
- Impact of the leg
- Impact of the foot
- Cadence

## 3D ANIMATIONS

- 3D animation file generation
- BVH export
- Motion playback
- Slow motion function

## 3D ARTICULAR ANGLES

- Pelvis - Obliquity
- Pelvis - Tilt
- Pelvis - Rotation
- Hip - Abduction/Adduction
- Hip - Flexion/Extension
- Hip - Rotation
- Knee - Varus/Valgus
- Knee - Flexion/Extension
- Knee - Rotation
- Ankle - Inversion/Eversion
- Ankle - Flexion/Extension
- Ankle - Rotation

# Posture monitoring with 3D technology

**| SPINE 3D | 3d analysis of the vertebral column |**

**Spine3D** allows a non-invasive scanning of the vertebral column thanks to LiDar technology (Light Detection and Ranging). Non-invasive and free of radiation, it allows to carry out repeated analysis on the same subject, without any contraindications.
Thanks to the use of infrared rays, it can acquire three-dimensional spinal morphology images in any external light condition.
For immediate feedback, it also allows the import and overlapping of RX and images.

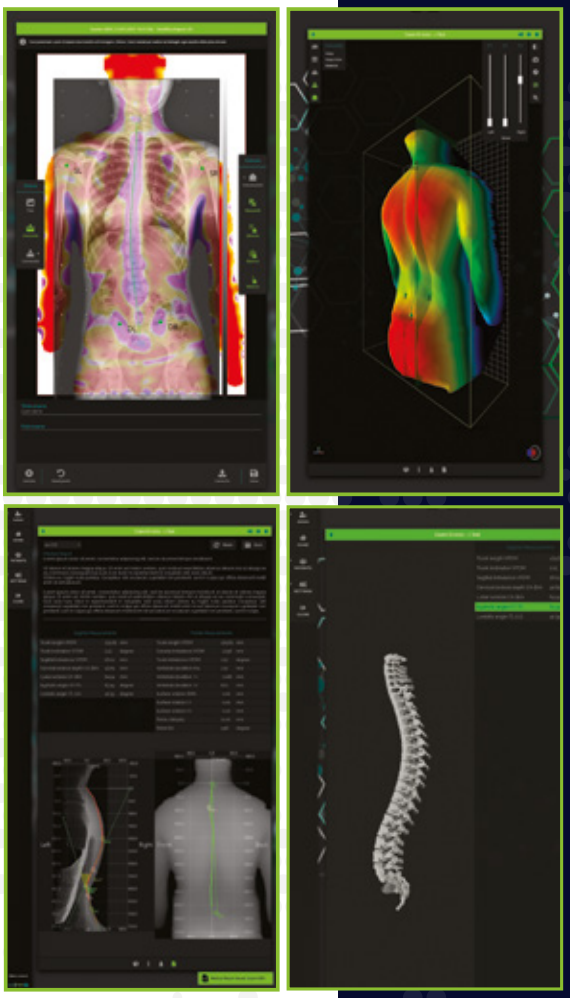

spine

**Spine3D** is able to scan the patient's vertebral column even with the absence of markers, always providing a faithful reproduction of the subject's posture.
The device offers various clinical parameters, such as posture analysis, scoliosis analysis and all possible deformations of the spine (lateral, frontal and sagittal), rotation of the vertebrae and pelvic position.

## Very high-precision 3D reconstruction

## TECHNICAL FEATURES

- ALL-IN-ONE system
- High precision 3D reconstruction
- XYZ resolution: 1 mm
- 27” vertical touch screen
- Latest generation ToF camera
- Pc with integrated wireless card
- Motorized tower with joystick control
- Multi-user software with password protection
- Patient archive with the possibility of acquiring images
- Multi-language mode also for printing reports
- Intuitive and easy-to-access menus
- Automatic reports based on the normal range of parameters that can be exported in pdf format
- Automatic reference matching
- Calculations automatic angles and symmetries



## Control of postural variations in scoliosis and hyperhypo lordosis/kyphosis scoliotic attitudes

| PRODUCTION SYSTEMS | PLANTAR ORTHOSIS |

## EASYCAD INSOLE

Software CAD for the design and computerized production of standard and custom orthotics.
Thanks to its powerful and professional performances and its comfortable ease of use, the **easyCAD Insole** is the perfect tool in the orthopedic technique field.

## SCANNER 3D

High definition survey tool for detecting three-dimensional images of the physiology of the foot and of the color image of the sole of the foot.

## VULCAN SERIES

Professional and high performance CNC Milling Machines specially conceived for the orthotics production.

## CLOUD INSOLES

The online portal for biomechanics and posture experts and for qualified technicians in the productions of orthotics. Through the Cloud it will be possible to forward orders, and to follow the status until delivery.

# Numerical control machines and software CAD for the design and computerized production of plantar orthosis

# easyCad insole

## CAD 3D modeling software that allows creation of plantar orthoses

### | WHAT IS EASYCAD INSOLE? |

**easyCAD insole** is a modeling software 3D CAD for the design and realization of orthotics.
It supports the creation of orthosis computerized plantars, starting from the design phase up. The extremely powerful and professional performance together with its simplicity of use, allow **easyCAD Insole** to be the perfect combination of orthopedic traditional technique and the modern technology of milling and 3D printing.
The development of self-modeling tools, the default object library and templates, allow the simplification of

the process of design, thus improving the professional workflow in the various stages of production of customized orthotics and standard foot pads.

## | HOW IT IMPROVES YOUR WORK |

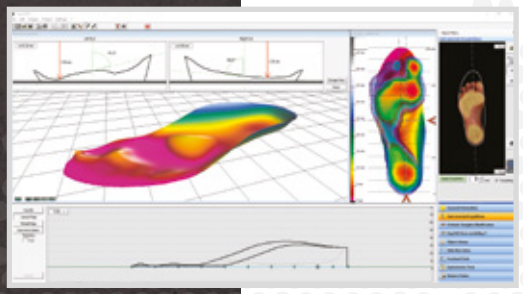
**easyCAD Insole** manages a complete archive of patients and their projects. It allows easy data transmission among the various sharpened production centres, with maximum freedom, associating each individual project with the relevant data sheet and compliance form.
It also allows autonomous management of materials and coatings, contains a complete instrumentation to draw, modify and customize the sets of templates and the development of ready-made models. **easyCAD Insole** imports automatically all analyses made through **freeStep**, ensuring full compatibility with all analysis systems of Sensor Medica and the possibility to create the project on the basis of complete and reliable data.

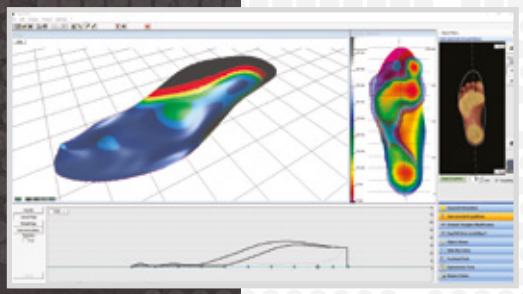
## COMPATIBLE SYSTEMS OF ANALYSIS

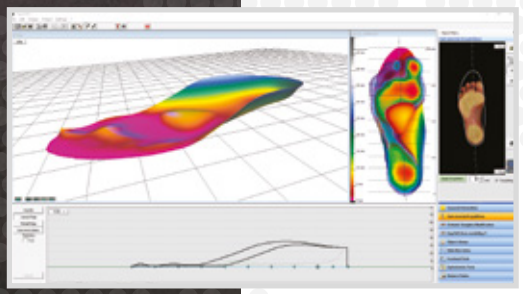
- Podoscan 2D and 3D
- FreeMed baropodometry platforms
- Treadmill Runtime
- Podoscan 2D and 3D with STL export, baropodometry platforms with raw data export

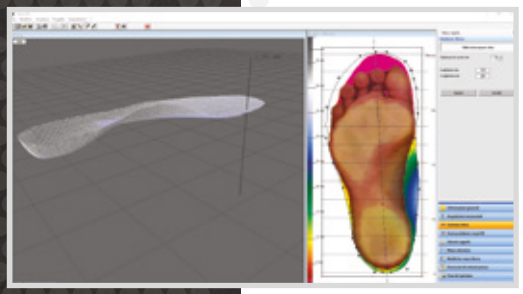
## 3D MILLING AND PRINTING SYSTEMS

- CNC Vulcan end mills
- General-purpose end mills compatible with ISO -GCODE standard
- 3D printers









## TECHNICAL SPECIFICATIONS

- Patient and project database management
- Database LAN sharing
- Archive of materials and coatings
- User-friendly design interface
- 3D rendering in real time
- Native libraries with 9 orthotic templates
- Native libraries with 15 orthotic corrective insoles templates
- Template library, insoles and elements customizable
- Automatic numbered creation for templates and insoles
- Quick modeling of 3D foot images
- Self-modeling functions by design quick from pressure analysis even without the use of 3D scanners
- Freehand drawing tools
- Design through the library of prepared elements
- Automatic thickness correction minimum and maximum
- Automatic development tools of models and customized templates
- Direct import from 2D scanners, 3D scanner and baropodometric platforms compatible
- Automatic compilation and printing of the technical data sheet of the project
- Integrated machine path generator: no other software needed
- Toolpath export in formats ISO G-CODE, Isel NCP, XYZ, STL

podoscan3D

# 3D technology for creation of orthotic insoles

**| 3D LASER SCANNER | 3D Scanning |**

**Podoscan3D** is a high optoelectronic tool definition for the detection of the image in three dimensions of the physiology of the foot. The 3D scanner, with an accuracy of one millimeter, allows you to capture the image of the foot in loaded, half loaded and unloaded positions.
**Podoscan 3D** also detects the footprint left in the phenolic foam. The device is aimed mainly at the orthotics production and, thanks to the calculation of the foot pressures detected through the use synergic of a baropodometric platform, allows to obtain the design of a customized orthotic really corresponding to morphological needs of the client.


The image is captured using the software **freeStep** and it can be immediately exported in the **easyCAD Insole** design software.
In addition, the detections can be used at any time for the realization of a faithful mold of the foot and for electronic archiving of casts.

## EXTENDED DESCRIPTION DATA ACQUISITION

Monopodalic acquisition in load, semi-load and out load or phenolic foam and scanning evaluation through the **freeStep** software.

## ELECTRONIC ARCHIVING

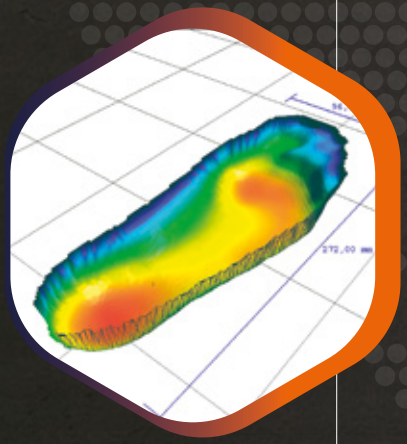
Digitization of molds and foams, allows electronic storage of data of the patient, freeing the spaces destined to the physical archiving of the casts.

## IMAGE QUALITY

Image optimization tools in processing 3D and 2D images optimized for plantar production.

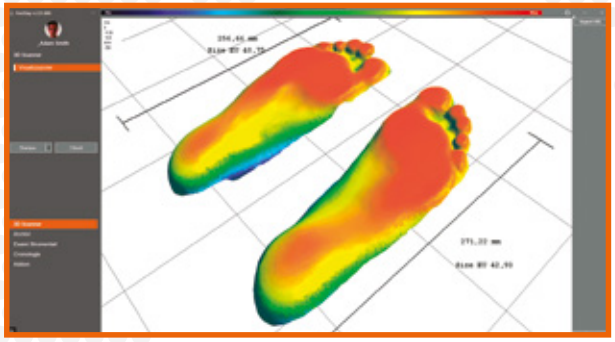
## SENDING EXAM TO EASYCAD

Maximum performance for plantar orthosis if combined with **easyCAD Insole** software



## TECHNICAL SPECIFICATIONS

- Dimensions: 540 x 290 x 80 mm
- Scan area: 340 x 160 x 80 mm
- Scan time: 3/5 “
- Accuracy: 1 mm
- Weight: 6 kg
- Maximum load: 200 kg
- Computer connection: USB
- Scanning: Feet, phenolic foams, casts
- Accessories: start acquisition pedal, support for semi-loaded acquisitions and transport bag



Vulcan Series

# Professional and high performance CNC Milling Machines specially conceived for the orthotics production

**| VULCAN SERIES | CNC Milling Machines |**

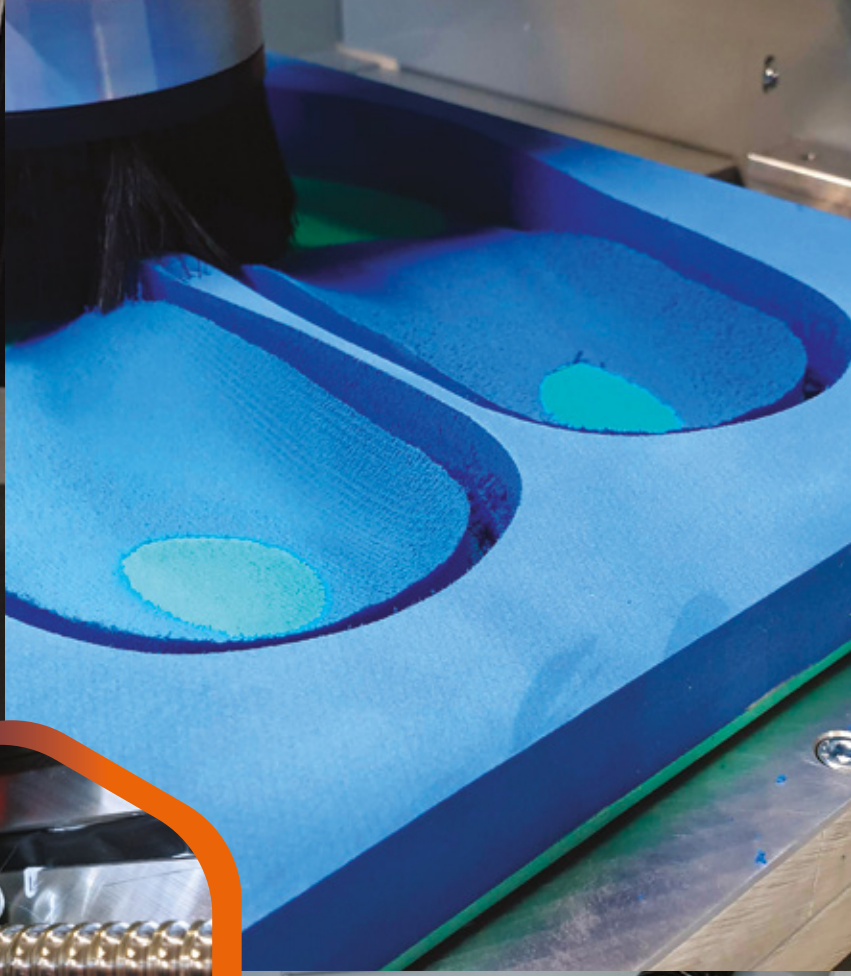
CNC milling machines for orthosis production. **Vulcan** series machining centers are numerically controlled professional machines especially conceived for the production of customized and pre-finished orthotics. Designed, developed and manufactured by us in Italy, are conceived for high workloads and are sized for operating speeds particularly high on the stands. The choice of high quality materials and the absolute care in assembly, ensure continuity in work, maximum performance in the absence of maintenance. The Vx1 and Vx1 Replica milling machines are 3-axis single-spindle, combining high reliability with performance; a pair of insoles is made respectively in 10 and 6 minutes.

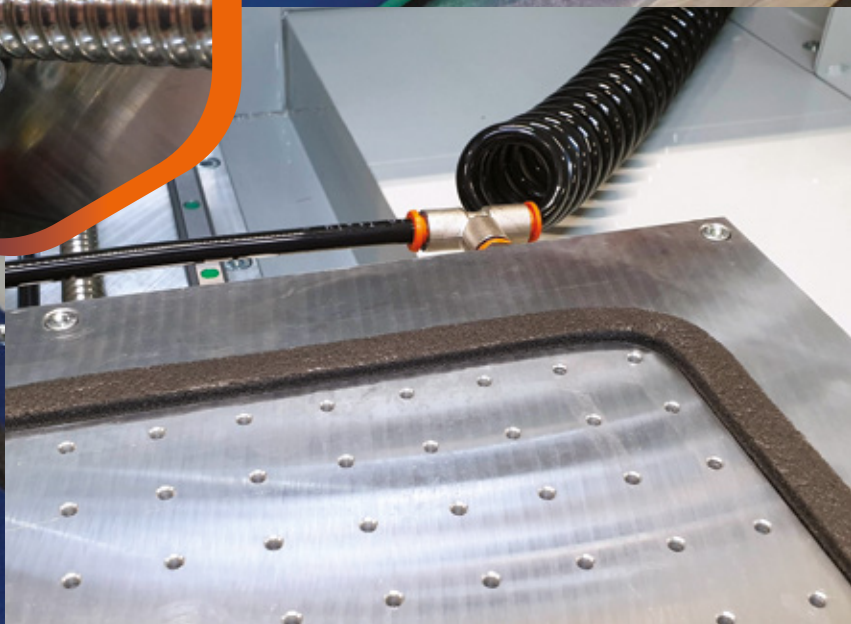

The Twincam Milling Machine, unique in in its kind, is a 4-axis system with two independent electrospindle and operates simultaneously on both plantars with an asymmetrical motion, halving the production time: a pair of insoles is realized in just 3.5 minutes.

## TECHNICAL SPECIFICATIONS

- Dimensions: Vx1 and Vx1 Replica L 82 x D 91 x H 104 cm
- Dimensions: TWINCAM L 82 x D 111 x H 107 cm 3 or 4 axis with independent double Z
- Brushless motors with incremental encoder 2500 pulses/rev
- HSS super-high speed steel tools
- Maximum machining accuracy: 0.05 mm
- Integrated control electronics with Ethernet connection
- Software player in Windows environment
- Machining speed up to 250 mm/sec with acceleration up to 2800 mm/sec$^2$
- Asynchronous motor spindle 24000 g/min, 750 W controlled by inverter, with cooling electric fan
- Working area: 300 x 400 mm
- Maximum stroke Z 140 mm
- Working area, 80 mm with standard tool, 50 mm with extractor hood
- Screws and recirculating ball guides
- Movement with 4 shoes per axis for greater rigidity
- Electro-welded steel structure with sensorized door
- Extra stability
- Linear axes in G25 straightened aluminum, with supporting structure


ELTE
MADE IN ITALY
MOTORE ASINCRONO TRIFASE
TIPO TMPE2 9/2
Volt 220/380
Hz 400
kW 0,75
Giri 24000
COSφ 0.71
IS.CL. F
IP 54





# A pair of insoles is made in just 3 and a half minutes

## TECHNICAL SPECIFICATIONS

- CNC-ground aluminum table
- Cutter in pairs on plates, modules and shaped blanks of different formats, also with double spindle (twincam)
- Controlled aspirator, for dust and processing residues suction, 1500 W
- Vacuum pump for block sealing without double-sided adhesive, 150 mbar
- Milling of polyurethane molds for manual thermoforming of insoles

- Optional: suction table with vacuum pump and filters
- Independent bell, brush and antistatic suction tube
- 2/3 service sockets with 1700 W protection
- Software Player in Windows environment
- Certificate of compliance with machinery regulations

# The complete solution for orders' management

## | WHAT IS CLOUD INSOLES |

The technological solution that allows you to access the plantar milling service in a faster and easier way. **Cloud Insoles** is an online portal that connects the biomechanics and posture expert with a qualified technician for the production of custom-made insoles. Through the **Cloud Insoles** portal it will be possible to place orders, check and follow their status until delivery. The service is a cloud-based system, integrated with the **freeStep** software, allowing you to send all the documentation relating to the creation of the orthotic with a single click. An extremely simple service: once the request has been sent, the technician receives all the documentation in real time and starts the processing by sending the data to the computerized milling center. **Cloud Insoles** is a service that allows professionals to create their own


network of specialists, to have a management control of their production center and to have a direct line with their customers. **Cloud Insoles** complies with all security requirements by encrypting the information used and maintaining the anonymity of the data collected. It is also possible to create your own safety net by adding users and assigning different roles. Inside the Cloud everyone can see what is happening. The trader can check how many orders he has placed and check the status of each of them. The technician can manage the production center, can check the workflow, approve and send the projects to be milled and check those that have been completed. The complete solution for order management.

## INSTALLATION AND TECHNICAL TRAINING

A team of qualified technicians will install the systems and provide the necessary training to use them, both on-site and via remote connection.

## CLINICAL TRAINING ON DEMAND

A network of medical professionals available to provide clinical support for the interpretation of the data.

## TRAINING PORTAL

Web platform with targeted courses of a technical and clinical nature.

## TECHNICAL ASSISTANCE

Technical assistance service with integrated ticket tracking, always active without annual fees.

## UPDATES

Live Updates allow you to automatically obtain new software releases by connecting to the web.

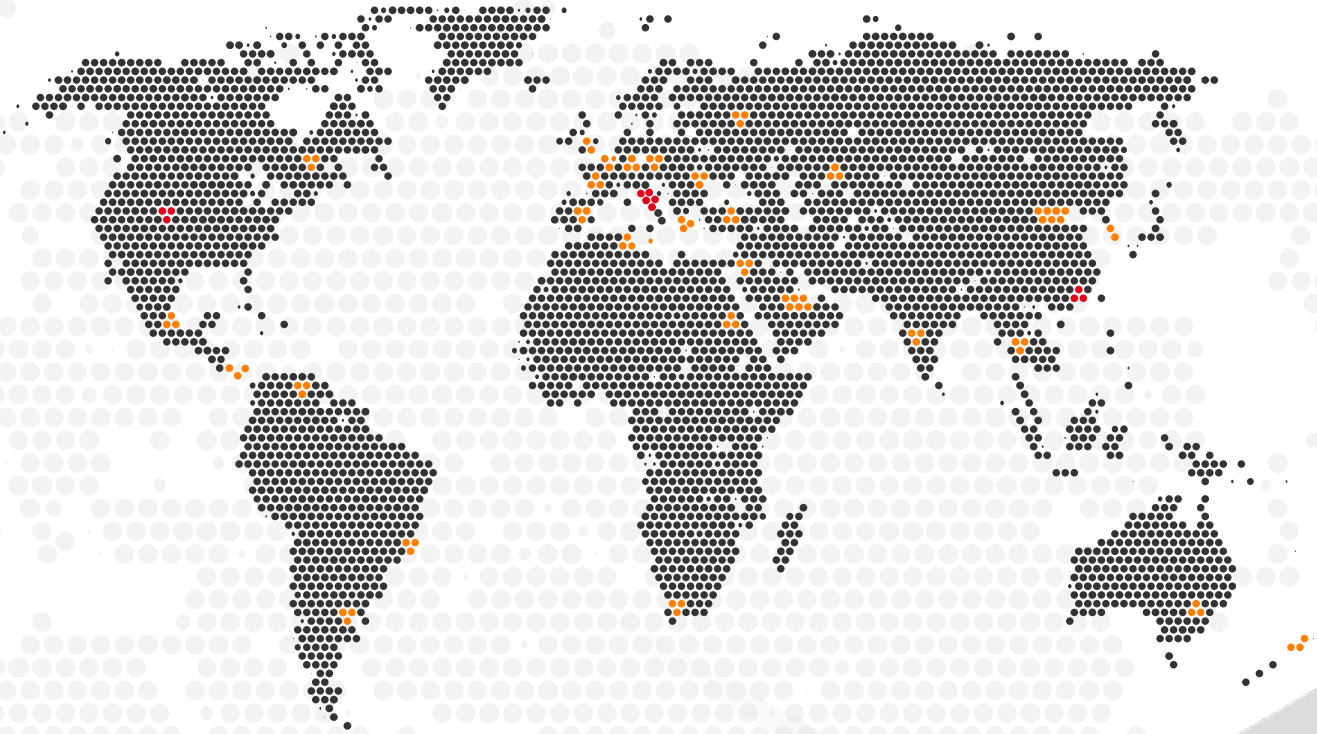

Discover how important it is for your
profession to be part of an innovative group
that invests in research and development

# Exclusive after-sales services reserved for our customers

## | AFTER SALES SERVICE |

Sensor Medica's products are made with a unique quality. Sensor Medica not only carries out quality checks at the end of the production process, but performs rigorous checks during all levels of processing. Only thanks to this approach is it possible to obtain a product that is almost free of defects and which represents our greatest value. Through this constant commitment to quality, we are the only company that offers a three-year warranty on its products and at the same time customer support via telephone, chat and email.

Sensor Medica is always available to satisfy any the customer needs. Each client is supported by our experts both in the early stages of installation and in the subsequent stages, in fact Sensor Medica systematically organizes training and refresher courses at its headquarters, or at local facilities.



The courses include an initial theoretical part, an update of the new applications and a substantial practical part. Sensor Medica is present all over the world with its distribution network. We have over 60 countries where you can find our products and our experts at your disposal. To contact our customer care you can send an email to: **helpdesk@sensormedica.com**

SENSOR MEDICA

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