

# Podoscopes

## 02991 PODOLUX

This is a podoscope that is used to analyse the plantar loading, and allows to obtain a real view of the sole and to highlight the points of greatest and least load. It has a top lit by energy efficient LED lights that are high power and long-life. The height of the device off the floor promotes easy access for the aged or people with limited motor capacity. The ample support base for the feet also favours comfortable, free positioning. The device is light weight and can be moved easily. It comes with a transparent, removable protective film. Turning off the device is provided with direct disconnection of the power cord from the power supply. The device operates in low-energy consumption. Safe working load: 170 kg ; Dimensions: (cm) 53,5 x 40 x 17 h; Weight: 9 kg



## 02992 PODOCOLOR


This podoscope comes with a control that is used to adjust the intensity and colour of the light source, in order to achieve better viewing of the imprint, according to the user's needs. It allows to obtain a real view of the soles of the feet and to highlight points of greatest and least loads thanks to an energy efficient LED light source that is high power and long-life. The height of the device off the floor promotes easy access for the aged or people with limited motor capacity. The ample support base for the feet also favours comfortable, free positioning. The device is light weight and can be moved easily. It comes with a transparent, removable protective film. Turning off the device is provided with direct disconnection of the power cord from the power supply. The device operates in low-energy consumption. Safe working load: 170 kg; Dimensions: (cm) 53,5 x 40 x 17 h; Weight: 9 kg



**I = normal arch;  
II and III = flat foot**

**I = normal arch;  
II and III = cavus foot**





The video provides an overview of the possible postural analyses, using various devices as well as acquiring and comparing images at different times. As part of this type of examination, the podoscope is still an essential observation tool since the first stages of the developmental age.

## ACCESSORIES



### AC0584 PROTECTIVE FILM

A protective accessory for the podoscope. It's made of transparent plastic and is easy to remove. It is ideal for applying to articles 02991 PODOLUX and 02992 PODOCOLOR.



### AC0677 CABLE SWITCH

It's possible to integrate the podoscope code 02991 or 02992 with specific switch off to prevent the removal of the cable from the wall outlet.



### 02049 HINDFOOT PROTRACTOR

The hindfoot protractor is a tool designed to measure the alignment of the child's hindfoot. It consists of a polygonal plexiglas which embodies a protractor scale, a needle and a base that keeps it upright.

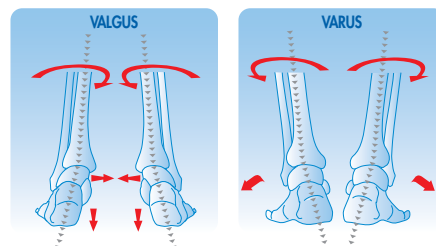
## 02990 LUX PODOSCOPE

It is a typical device for analysing the foot type (normal / cavus / flat) of the subject being examined. It consists of a lacquered wood frame, a crystal surface and a mirror below. Double side lighting provides a visual image of foot pressure and a representation of load distribution points. "Podostabil 2" - code 01767 can be ordered as an accessory to help patient feel safe while standing on the platform. Safe working load: 135 kg; Dimensions: cm 46 x 55 x h 33; Weight: 15 kg



## 02993 FOOT ANALYZER 2.0

The foot analyzer consists of a bilaminate platform with two webcams and a CD with GPS 5.0 software for acquisition and handling of images for foot pressure and heels. It can be combined only with Lux Podoscope code 02990. The computer is not included, but it can be ordered as an accessory code 01799 with webcams configuration in advance and GPS 5.0 software pre-installed. Dimensions cm 40 x 33 x 39,5 h; Weight: kg 5

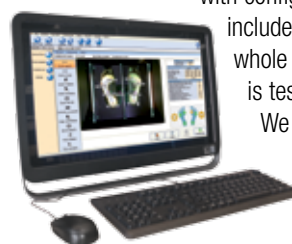


## 01767 PODOSTABIL 2

This item provides greater safety to the individual when he stands on a podoscope or a stabilometric footboard. It consists of a bilaminate base, aluminum side bars and wooden handrail. The device can be ordered separately or be part of a postural work station (see following pages). Working safety load: 135 kg; Dimensions: cm 71 x 128 x h 126; Weight: 28 kg

## 01799 COMPUTER

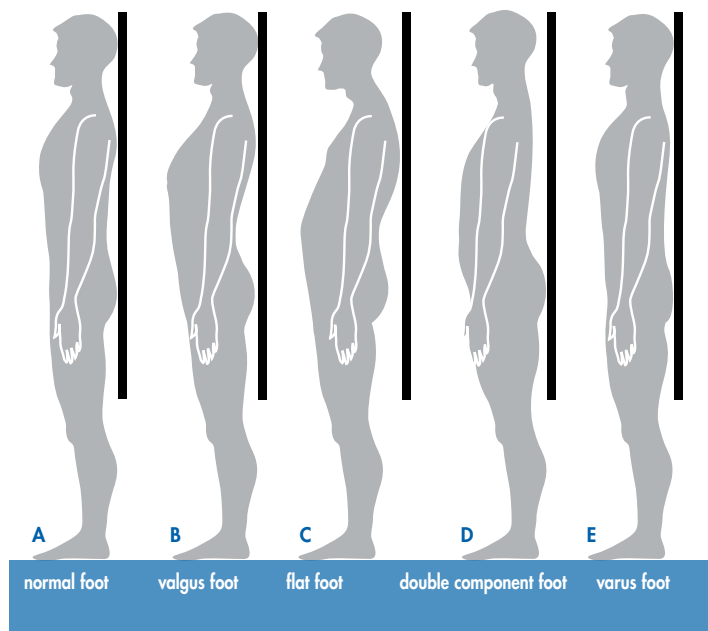
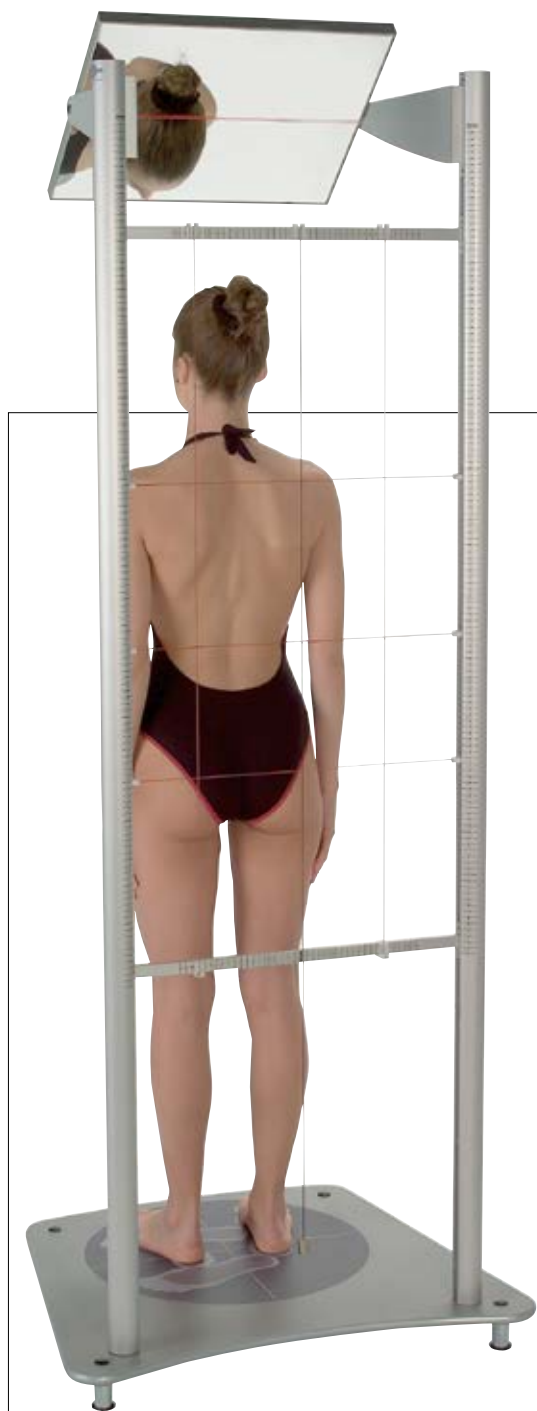
Computer is provided with 21.5" touch screen display and Windows 8.1 operating system in English version. The end user can change easily the language version. The GPS 5.0 software is pre-installed with configuration of the webcams that are included in the hardware. In this case the whole purchased postural analysis system is tested in production before shipment. We recommend not to install other software on the computer.



# Lux Postural analyser

## 01085 LUX POSTURAL ANALYZER

It is a device typically used for analysing posture in the frontal, posterior and lateral planes. The person must stand with their feet in the positions indicated on the platform. The device consists of a bilaminar platform, two aluminum side bars, measuring indicators and sliders with strings for postural reference (Barré's vertical evaluation), and an adjustable mirror on top. The image reflected in this upper mirror makes it possible to observe whether there is any rotation of the shoulders, and to what extent. The device can be ordered separately or be part of a postural work station (see following pages). Bars can be extended for accommodating people taller than 190cm by applying the accessory "clamps" code 01777. Working safety load: 135 kg; Dimensions 80 x 72 x 225 h cm; Weight: 19 kg



"The Barré vertical exam is also to be carried out by analyzing the sagittal plane. In this case, the plumbline is placed on the cluneal-thoracic and occipital prominences and on the practical side, is the best system for analyzing the sagittal plane. In order to make a clinical-practical evaluation, we use these landmarks and can have: a situation in which these points are aligned (cases A and B) with accentuation of the curves; case C in which the most prominent point of the thoracic kyphosis is behind the centre of gravity with respect to the cluneal prominence, or case D in which the thoracic column is ahead of the centre of gravity with respect to the cluneal prominence. Case E are aligned points but a rectification of the curves exists."



### ACCESSORY

#### 01777 CLAMPS

Additional clamps for raising the mirror with people over 190 cm in height, for mounting on Lux Postural analyser - code 01085.



PHOTOS COMPARISON (GPS 5.0 software) – Easy search and fast retrieval of photos from a patient's database is a remarkable feature. This function of the Chinesport software is called "Grid" because all the photos recorded are arranged in a grid by date and position used for the analysis. Two photos can be selected for comparison by just clicking on them.

# GPS 400 Posture analysis system



Global Postural System

## INTENDED USERS:

Posture analysis can be used jointly in several medical disciplines if there is a will to consider the individual as a whole within a multidisciplinary treatment, therapy and prevention program. We recommend our posture analysis systems to the following professional categories:

- Orthopaedists
- Psychiatrists
- Physiotherapists
- Orthopedic technicians
- Osteopaths
- Chiropractors
- Ophthalmologists
- Otorhinolaryngologists
- Podiatrists
- Orthodontists
- Speech therapists
- Graduates with a degree in Motor Sciences



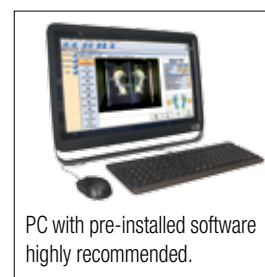
CE 0434

01085  
LUX POSTURAL ANALYZER

01599  
PODATA™

01767  
PODOSTABIL 2

01800  
DESK TOP



PC with pre-installed software highly recommended.

POSTURE ANALYSIS

## 01762 GPS 400

The GPS 400 is a posture analysis system that is made up of various hardware units and software known as GPS 5.0, that is, version 5 released in 2011. More specifically, the units comprise a DESK TOP - code 01800, a stabilometric platform, PODATA – code 01599, with six load cells and a built-in camera, a support structure, PODOSTABIL 2 – code 01767, for greater safety for the person when getting up and down and when stationary, and a posture analysis device, LUX POSTURAL ANALYZER – code 01085, with vertical / horizontal strings for postural reference and a mirror at the top. All the hardware elements are attached to one another, and the system as a whole has been certified by an authorized Body as a class I medical device, with a measuring function. The GPS 400 is therefore a modular station made up of all these elements. The computer is not included, but it can be ordered as an accessory code 01799 with webcams configuration in advance and GPS 5.0 software pre-installed. Basically the system uses photographic and stabilometric analysis.

Class I medical device with a measuring function (1M)



## DIMENSIONS



The GPS 400 postural lab is made up of the following devices:



## 01085 LUX POSTURAL ANALYZER

It is a device typically used for analysing posture in the frontal, posterior and lateral planes. The device consists of a bilaminate platform, two aluminium side bars, measuring indicators and sliders with strings for postural reference (Barré's vertical evaluation), and an adjustable mirror on top. The device can be ordered separately. Bars can be extended for accommodating people taller than 190cm by applying the accessory "clamps" code 01777.

Dimensions: 80 x 72 x 225 h cm  
Weight: 19 kg; Capacity 135 kg



## 01599 PODATA™

Innovative, patent pending device for stabilometric analysis. It consists of a bilaminate platform with crystal top, with 6 load cells and a webcam installed inside. Comes with specific, multilingual software. Main function: identification of an individual's barycentre and weight distribution on each foot - in the points corresponding to the 1st metatarsal, the 5th metatarsal and the heel - regardless of the upright stance that the patient assumes on the platform. The device can also be ordered separately.

Dimensions: 47 x 99 x 47 h cm  
Weight: 35 kg; Capacity 135 kg



## 01767 PODOSTABIL 2

This item provides greater safety to the individual when he stands on a podoscope or a stabilometric footboard. It consists of a bilaminate base, aluminum side bars and wooden handrail. The device can be ordered separately or be part of a postural workstation (see following pages).

Working safety load: 135 kg  
Dimensions: cm 71 x 128 x h 126  
Weight: 28 kg



## 01800 DESK TOP

Desk Top is a bilaminate desk with a plexiglas column for positioning the webcams that are not included in the supply. In case of purchase of GPS 400 or GPS 100 postural labs the desk top is equipped with one webcam.

Dimensions: 71 x 50 x 130 h cm  
Weight: 40 kg



## OPTION

### 01618 CERVICAL TEST

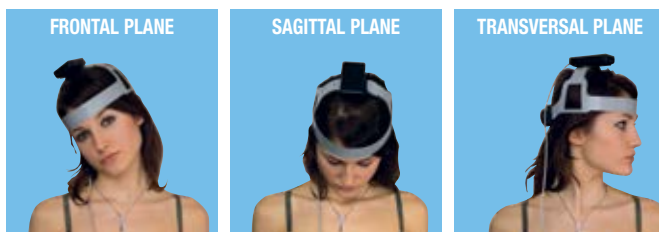
Electronic helmet that makes it possible to gather data on head movements through space via a software. The unit can be integrated in GPS 400 postural lab or other devices.



First of all the person is asked to remove their shoes and socks as well as clothing on the upper part of the body to allow the possibility of subsequent back examinations as well. Basically, the posture analysis uses photographic and stabilometric analysis.

## 01618 CERVICAL TEST

Rotation, flexo-extension and the left or right lateral flexion of the head are functionally very important parameters to check the symmetry and the normal excursion of the head that can be performed by the patient. Various means have been suggested to check these parameters, ranging from clinical observation to the use of goniometres and inclinometers. The "Cervical Test" is an electronic digital helmet for posture analysis and checks these movements within the space of the patient's skull. The system has three Wheatstone bridges with magnetic space sensors that record the magnetic field incidence in a given sensible direction. The sensors are assembled orthogonally, allowing reading the earth's magnetic field incident along the three space axes. In addition to this, the equipment uses a two-axis accelerometer, allowing the reading of its inclinations towards the gravity vector. This diagnostic unit can be integrated in the Physical Analyzer, GPS 400 and GPS 100 posture analysis systems. The computer is not included.



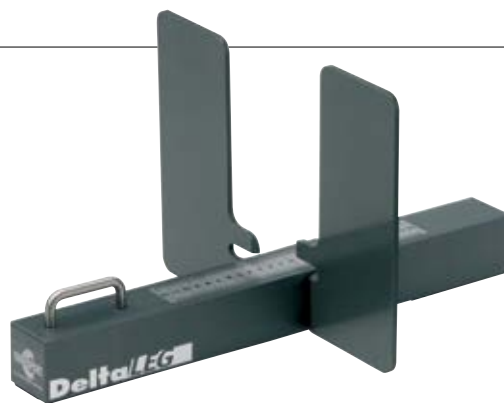
Lateral flexion or inclination      Flexion and extension      Rotation or torsion




This unit allows collecting data on the head movements of the subject through space: right/left flexion, flexion and extension, and rotation. It is possible to test the patient's symmetry and normal range of movement.

## 01303 DELTA LEG

The Delta Leg is a non-invasive manual instrument for evaluating the heterometry of lower limbs without any load bearing. It consists of a bar with two orthogonal platforms: one is stationary, while the second moves along the longitudinal axis of the bar and is equipped with a pointer indicating the positive or negative numeric value of the heterometry on a millimetric scale on the upper surface of the bar. The "zero" value is set with reference to the stationary platform. The precise structure of the instrument, the mobile platform's accurate sliding system and the millimetric scale allow fast and reliable measurement of the differences in length of the lower limbs with a margin of error of just a few millimetres. The instrument comes with a manual (code 01462). Dimensions: cm 45 x 28,5 x 22,5 h - kg 2





### 01462

#### DELTA LEG MANUAL

Guide to "Delta Leg", a non-invasive manual instrument for evaluating the heterometry of lower limbs without any load bearing. Author: Dr. Flavio D'Ossualdo (Director of Pediatric Rehabilitation Center in Udine - Italy); Available languages: Italian/English

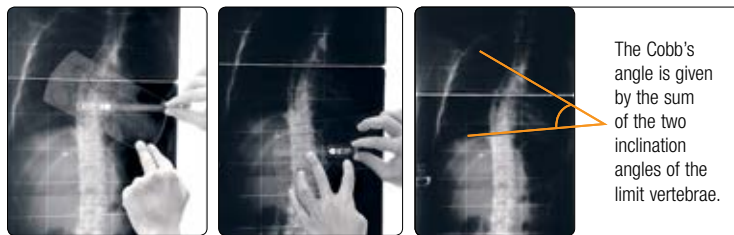


# Other Tools for posture analysis

## 06855 D'OSUALDO INCLINOMETER

The D'Oswaldo Inclinator is an instrument for measuring the Cobb and gibbus angles. The inclinometer is made of an almost-rectangular plexiglas element with a goniometric scale; a small rod (free to rotate) with a bubble is positioned at the centre of the scale. The free end of the rod has the reading index for the goniometric scale. The longest side of the rectangle has a recess in order to make its application on the patient easier (in the event that the spinous processes of the vertebrae are protruding). The inclinometer is a manual instrument, normally used in two clinical situations:

1. when measuring the rotation angle of the torso during the forward-directed flexion test;
2. when measuring the Cobb's angle on X-rays (both in AP and LL projection), therefore both for scoliosis as well as kyphosis/lordosis. It comes with a manual (code 01304).



The Cobb's angle is given by the sum of the two inclination angles of the limit vertebrae.



## 01304

### D'OSUALDO INCLINOMETER MANUAL

Guide to the inclinometer, a non-invasive instrument for measuring the Cobb and gibbus angles.

Author: Dr. Flavio D'Oswaldo (Director of Pediatric Rehabilitation Center in Udine - Italy); Available languages: Italian/English/German/Spanish/French



### MEASURING TECHNIQUE OF THE COBB'S ANGLE WITH THE INCLINOMETER ON THE X-RAYS

In addition, measuring the angle is faster than the traditional method (it only requires moving the instrument close to the limit vertebrae and reading the value on the graduated scale); it does not require additional instruments, it does not deteriorate the X-rays and it simplifies measuring by eliminating a few possible causes of error. Finally, an advantage of the inclinometer over other instruments is the possibility of measuring both the rotation angle of the patient's torso (gibbus) as well as the Cobb's angle on the X-rays with one simple instrument.

## 01706 D'OSUALDO ARCOMETER

The arcometer is a manual device made up of a ruled bar bearing three perpendicular arms: the first one is fixed at one end, the central one is mobile on two axes and the third one mobile on one axis only. The ends of the three arms identify three points through which a single circumference can be drawn. Using the arcometer we can measure the chord and the rise. These two values allow us to calculate the radius of the curve and the Cobb's angle by using a two entry table. The instrument comes with a table to calculate the Cobb's angle (current use to integrate the clinical examination). The instrument comes with a manual (code 01769).



The picture shows the arcometer working principle: note that, in order to make calculations easier, the intermediate arm has to be placed into the mid-point between the lateral arms.



## 01769

### D'OSUALDO ARCOMETER MANUAL

Guide to the Arcometer, a non-invasive instrument for measurement of kyphosis and lordosis. Author: Dr. Flavio D'Oswaldo (Director of Pediatric Rehabilitation Center in Udine - Italy); Available languages: Italian/English



## 02049 HINDFOOT PROTRACTOR

The hindfoot protractor, or PEDI Protractor, is a small, simple and intuitive tool, designed to measure the alignment of the child's hindfoot. It consists of a polygonal plexiglas which embodies a protractor scale, a needle and a base that keeps it upright. The tool is placed adjacent to the hindfoot, with the subject to be examined, remaining still. The needle is moved parallel to the hindfoot axis and the value of the valgus or the varus, is immediately shown in degrees. Due to variances in age and weight distribution (e.g.: on a single foot or both) of the child, determining the limits of normality cannot be expressed in absolute terms. However, regarding valgus, it is possible to pay closer attention with a span of more than 10° C. As for varus, any degree should be considered with care. In uncertain cases it is not so much the absolute value, as the course of time that will lead towards a physiological situation or not.

