

POSTURE ANALYSER LIMITED EDITION

PA200LE

Computer-controlled
Body Monitoring and Analysis System

SPECS



[PA200 USB CAMERA & STAND]
Dimensions : 300(w)×300(d)×1100(h)mm
Weight : 3kg



[PA200 PLATFORM]
Dimensions : 520(w)×598(d)×55(h) mm
Active area : 420 × 420 mm
Weight : 4kg

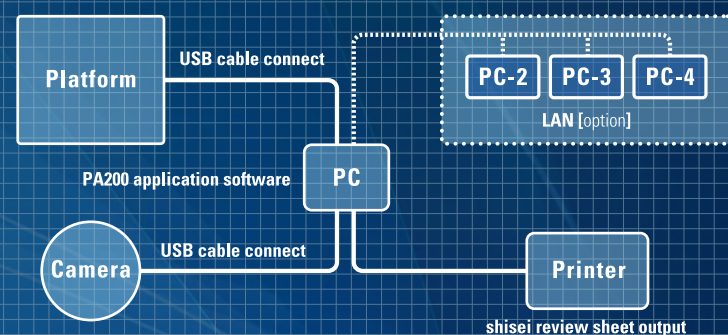
PA200 PACKAGE

- USB camera (1)
- Foot pressure platform (1)
- Application CD-ROM (1)
- Installation Manual (1 PDF file)
- Operation Manual (1 PDF file)

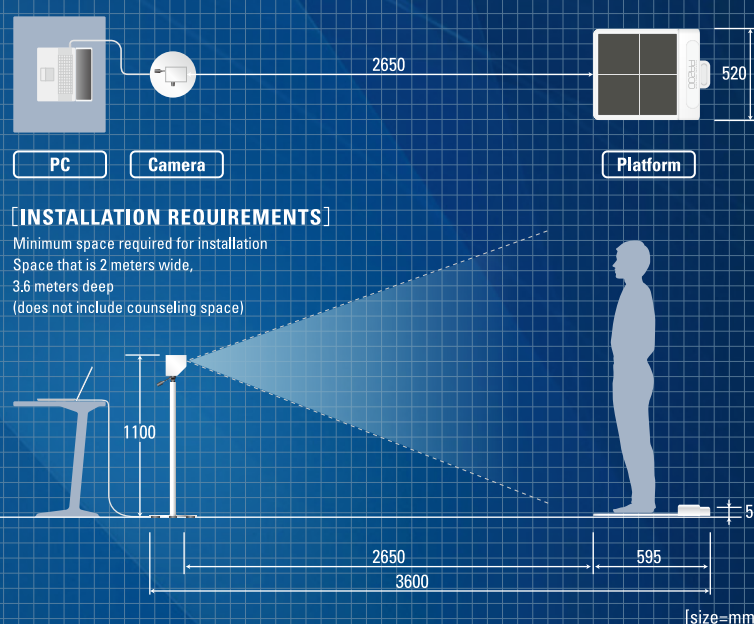
OPTION

- PC, with monitor
- Camera tripod
- Laser Printer

INSTALLATION IMAGE



SIZE FIGURE



[INSTALLATION REQUIREMENTS]

Minimum space required for installation
Space that is 2 meters wide,
3.6 meters deep
(does not include counseling space)

OPERATING ENVIRONMENT

Operating system:	Windows® 7	Windows® 8
CPU:	Intel® Core™ i3 processor or higher	Intel® Core™ i5 processor or higher
Memory:	4GB or higher	8GB or higher
Required hard disk space:	300GB or larger	
External connection terminals:	USB 2.0 X 2 or more	
Printer:	Inkjet / Laser printer capable of color output on A4 size paper or larger (printer capable of printing with margins of less than 10 mm on all four sides)	
Network environment (when measurements are made with more than one PC and used for counseling):	Network (LAN) connector (1000 BASE-T) (1) or network hub capable of gigabit ethernet	

Windows® is a registered trademark of Microsoft Corp. in the United States and other countries.
Intel® Core™ is a registered trademark of Intel Corp.

Specifications and prices of the product are subject to change without notice. Information on this catalog is as of April 2015.

bigS

THE BIG SPORTS Co.,Ltd.

The Head office

Aqua-Dojima West, 1-4-16 Dojimahama, Kita-ku, Osaka, JAPAN, pc.530-0004
Phone: +81-6-6442-1177 / Facsimile: +81-6-6442-1178
www.bigsports.co.jp

●The Inquiry about a product



Shisei business division Phone: +81-6-6442-1172



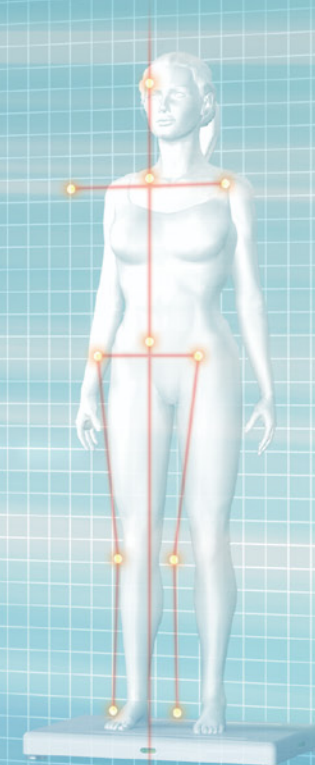
http://next501.co.kr/

shisei®

POSTURE ANALYSER LIMITED EDITION

PA200LE

*Good health
begins with
good posture.*



Simple operation

Simple operation to analyze and to measure the distortion posture.

Lucid commentary

easy to understand visualization, such as 3D graphics model.

Get an objective analysis results

The high quality whole body images can record the exact numerical data.



Computer-controlled Body Monitoring and Analysis System

Scientific analysis simplified

Posture images taken from four directions and foot pressure sensor data are used for analysis and easy-to-understand explanation of the findings, given from various angles.

Visualization and Interactive Shisei Planning

- Foot pressure measurement findings are visualized for easy understanding.
- 3-D image created from analytic findings on measurement data can be shown from all directions (360° perspective).
- Display of posture image history
- Visualization of tension-caused pressure and eccentric areas on simple human body shape for forecast of possible health problems in specific areas of the body.
- Analytic findings displayed on monitor for easy understanding, aiding in interactive Shisei Planning.

Quick monitoring and measurement

Photography of a person standing takes only several seconds. Foot pressure and weight distribution measurement with sensors linked to a computer and 360°- posture measurement is a process that is completed in several minutes and will produce precise and reliable posture evaluation.

Coordination with corrective exercise program

Posture correction exercise menu development feature can produce specific and personalized exercise program instantaneously. Posture correction exercise program based on physical exercise theory different from those of other monitoring devices can deliver a higher level of effectiveness.

Monitoring and Measurement Principles

Center-of-gravity line on posture image based on center of weight from foot pressure data becomes the common axis for photography from the various directions. Spatial axis for each point is based on the axis centering on the center-of-gravity line, and measurements based on this are analyzed.

Good health begins with good posture

The human being is constantly affected by gravity in living and moving on the planet surface. Lack of optimal amount of exercise reduces balance in muscular strength and less resistance to the weight of one's own body, resulting in war or other distortion of the skeletal framework that supports the body.

The spinal cord that serves as the central axis in supporting the human body consists of 31 pairs of spinal nerves extending to all parts of the body, interlinked with the internal organs, the skin and muscles. Disruption of balance of the spinal cord can cause problems in physical and physiological functions.

In addition to backaches and problems at the joints, incorrect posture can trigger a wide variety of health problems, ranging from digestive diseases, skin rashes and atopic dermatitis, ringing in the ear, sensitivity to cold caused by poor circulation and even senile dementia. Health problems can be improved and good health maintained by correcting such distortion and maintaining good posture.

Incorrect posture can result in some of the following symptoms

- Migraines, other headaches and cerebral vascular disorder; feeling of heavy-headedness, lack of concentration; dementia, inaptitude in physical exercise and clumsiness; ringing in the ear and difficulty in hearing
- Arthritis and other joint problems; numbness or coldness of hands
- Arthritic knees and osteoarthritis; sciatic pain, bowleggedness and knock-knees
- Ankle sprains, hallux valgus; numbness or coldness of feet
- Eyestrain and intraocular pressure; nasal congestion, sinusitis, facial imbalance (jaw asymmetry); occlusion and other symptoms stemming from temporal mandibular (jaw) joint problems
- Backaches and pains after sleeping
- Asthma, cardiac diseases and diseases of the digestive tract
- Skin rashes and atopic dermatitis
- Pains on the hip joint; herniated disk in the lower spine; problems in reproductive organs and urinary tract



PA200 Function

Poor posture can cause problems including back pain, spinal dysfunction, joint degeneration, rounded shoulders and a potbelly. You can improve your posture and spinal health by making a few lifestyle adjustments.

The necessity of check in after a treatment is a key element to ensure that either a one time treatment was successful or a long time treatment is improving your posture.

Posture Analysis

Through the use of one camera, a static calibration, and specific protocols, all health related person is able to analyze the spinal alignment and all other relevant posture points. After calibrating the system, the patient stands in the area of analysis while several photos are taken of them standing in different positions. After each photo, specific anatomical body points are clicked at the user's discretion. The user can choose whichever points are necessary for his or her purposes, and the results vary depending on the selected analysis scheme.

Foot Scan

This will disclose your standing and walking style over our foot scan device. This allows us to see your contact pressures and loading pattern to analyze if you are loading efficiently.

Motion Screening

This will involve a series of tests to look at your joint mobility, muscle flexibility, stability and movement control

Confirmed in 4 directions Photos

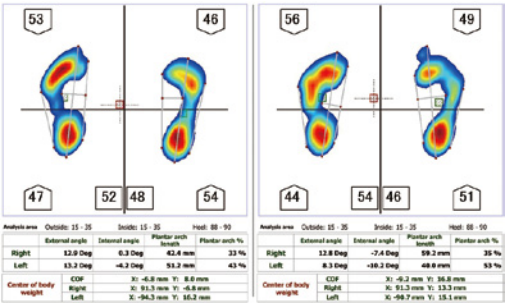
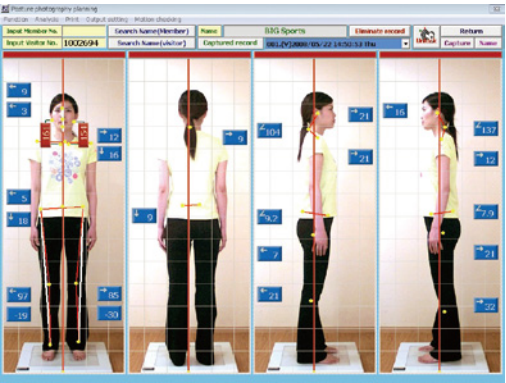
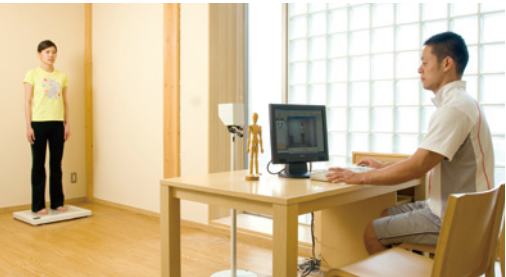
Specific anatomical alignment measurements are achieved after a 3D analysis, including:

- Anatomical lengths
 - Head inclination
 - Shoulder axis
 - Lordosis angle
 - Pelvic axis
 - Lumbar scoliosis
 - Scapula axis

All analysis data can be placed into customized reports and printed or emailed to patients.

Foot pressure distribution image

PA200LE will be lightweight and easy to handle with fast data processing and excellent graphics. Accurate interpretation of the foots behavior is simple as the centre and point of maximum pressure is tracked (concurrently) and displayed throughout plantar contact.



Representation of computer graphics

- 360 degrees image display with the 3D Posture Doll
- distortion degree as a consequence of the posture divination (red-color dole) of the measured person on posture (blue-color dole) without the distortion
- 3D posture doll turns 360 degrees from front and back / right and left / due to confirmation of postural distortion in three-dimensionally.

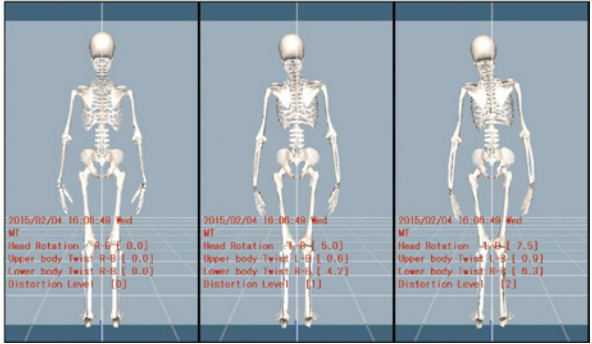
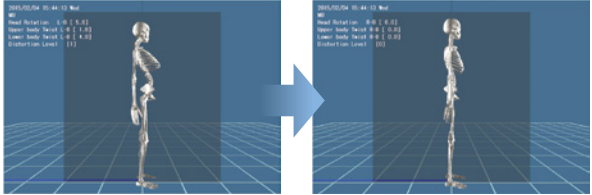
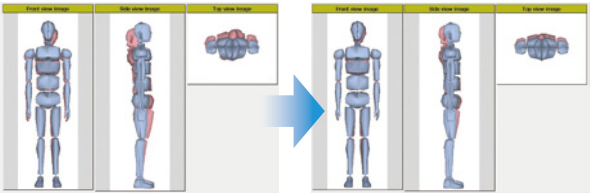
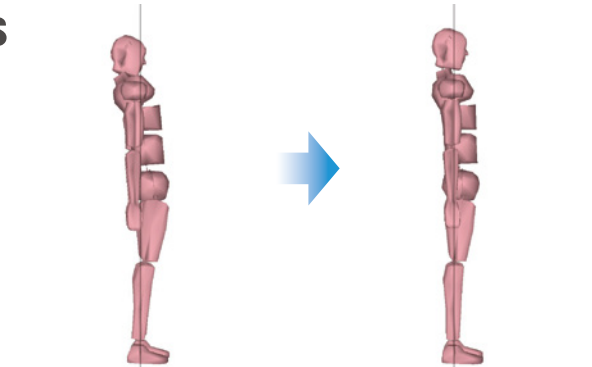
The three-dimensional representation elaborated by the software shows, besides the three-dimensional reconstruction of the spine, also the rib cage, the shoulder blades and the pelvis, with related rotations.

It is common to use the clinical evaluation of the patient's posture from the observation. Scientific studies show that the reliability of visual inspection is very weak. To resolve this problem, measurement tools are required.

- May I measure clinically the vertebral spine without any X-ray?
- How can I measure one or more joints accurately and quickly?
- How can I assess the changes achieved after the treatment?

There are measurement tools used in the health sector, especially in physiotherapy, to measure the joint angles or the posture in general:

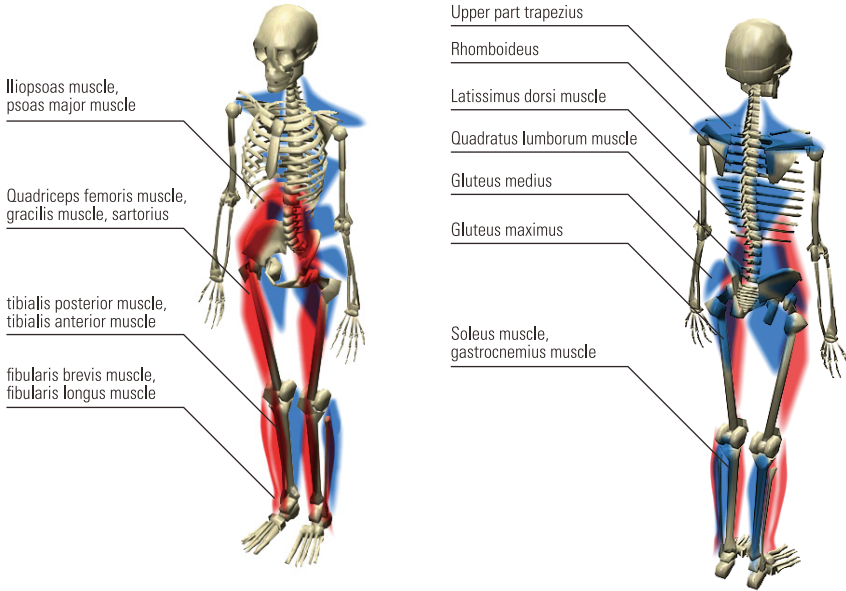
- Devices such as the goniometer or the plumb are inefficient to measure the position are inefficient to measure the posture;
- Software that use digital photography. These software measure in 2D, but the human body is three dimensional, and this reduce accuracy;
- Tools based on multicamera systems where a very large facilities are required to place a multitude of video cameras. They are tools of good validity but extraordinarily complex and very expensive;
- The radiology considered as "gold standard" present the inconvenience of being an unsafe system, selective in its analysis, and requires a suitable facilities for its location; something quite unusual in the traditional physiotherapy centers.



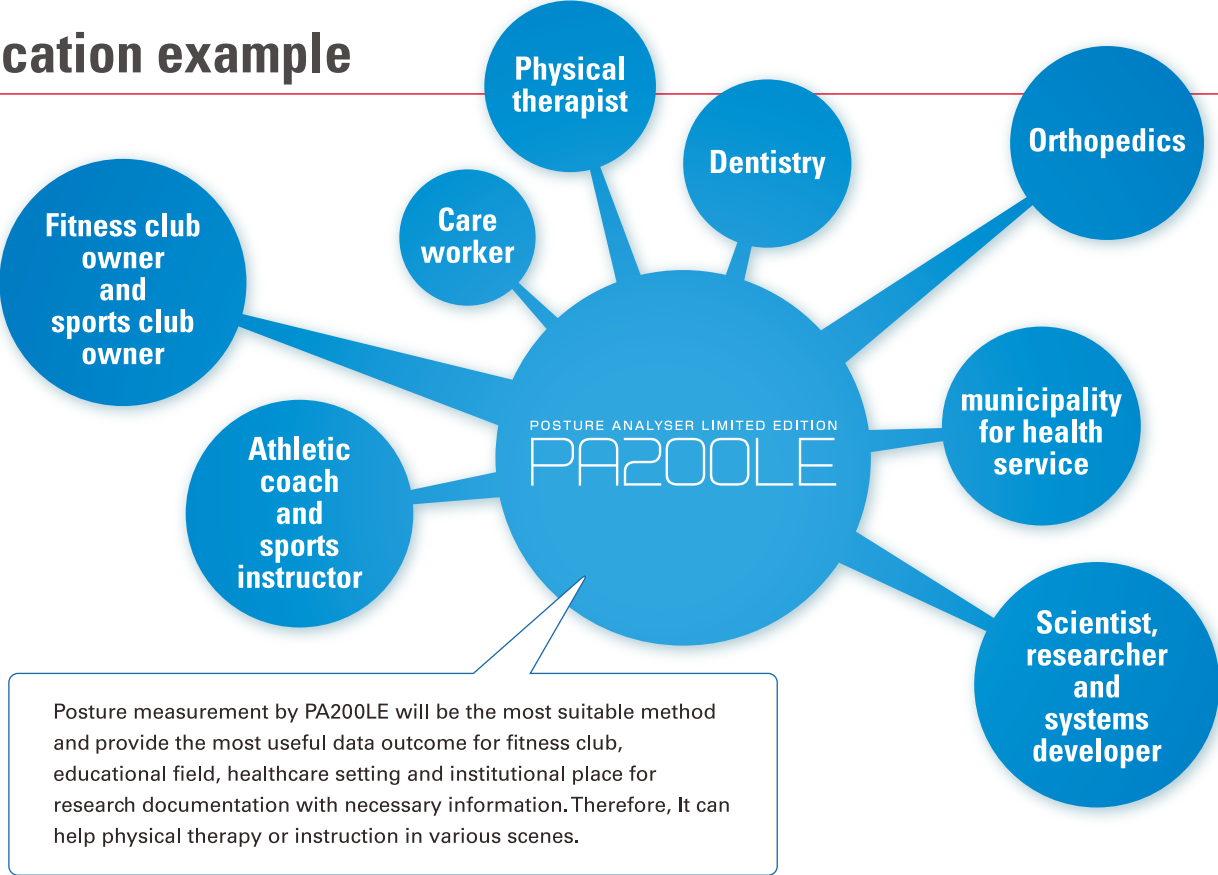
Distortion image

Display tension (a red) drawn out and pressed strain (blue) on a skeletal CG illustration. * Expression of the physical tension from distortion of the posture which may vary with the sense of the measured person.

- Analysis for the distortion of the posture and a state of the antigravity muscle in the erect position posture.
- Display of two-different-colored-framed image for predicted muscle stress indication by posture distortion.



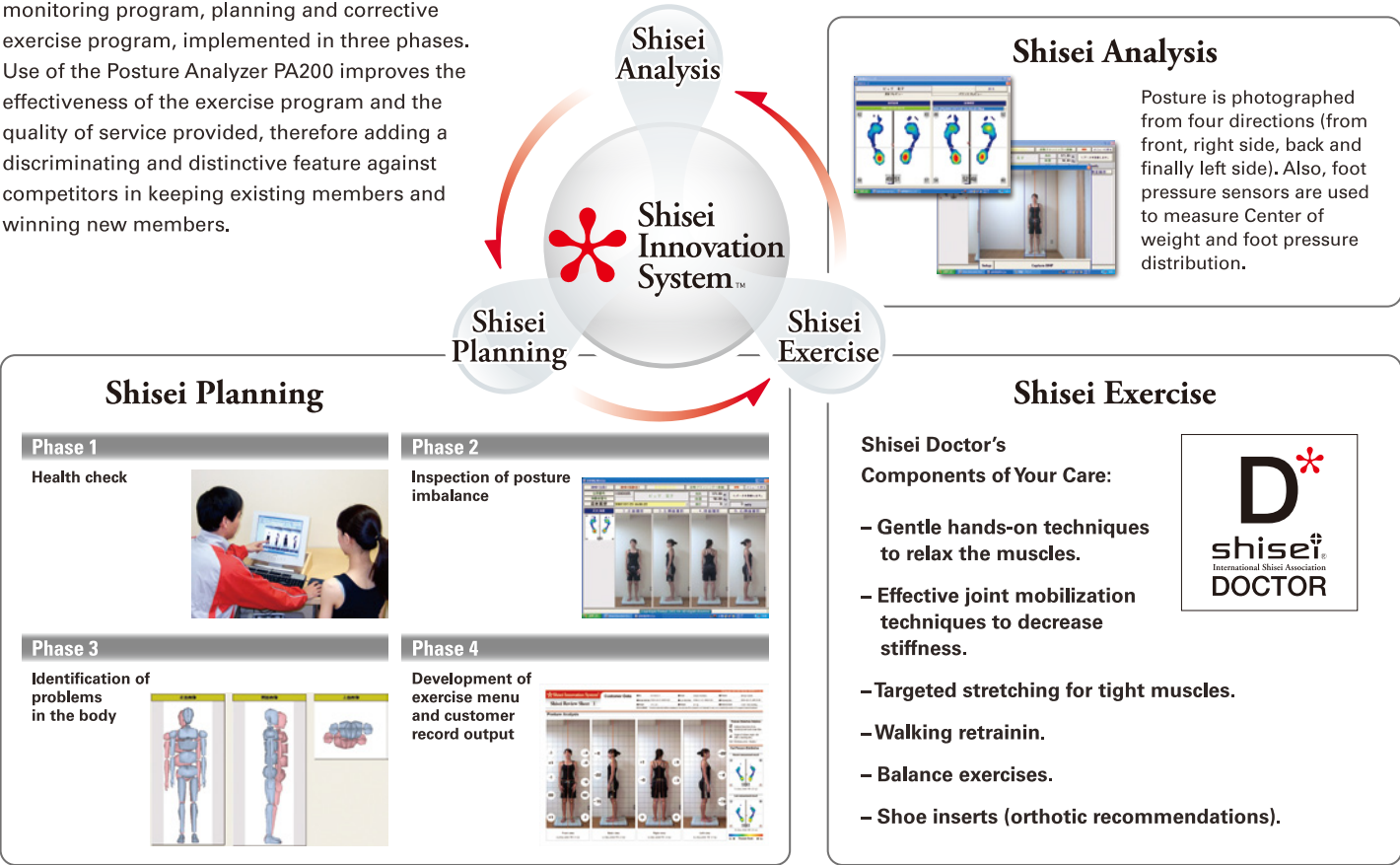
Application example



The Benefits of Club Management

Posture Analyzer PA200 is to be used in a health management system combining posture monitoring program, planning and corrective exercise program, implemented in three phases. Use of the Posture Analyzer PA200 improves the effectiveness of the exercise program and the quality of service provided, therefore adding a discriminating and distinctive feature against competitors in keeping existing members and winning new members.

Shisei Innovation System Flow



Introduction Example

Posture measurement by PA200 will be able you to obtain reliable evaluation for posture assessment in order to adapt more flexibly to changes in various fields. Posture measuring instrument method by PA200 will be good use of in line with the business model of your company.



JGA national team at physical fitness test camp

At JAPAN SPORT COUNCIL in Tokyo, JAPAN GOLF ASSOCIATION checks more than 60-item medical fitness screening test for all players from national team and team Japan youth at three times in the year. In addition, mental check and nutrition frequency investigation are carried out, too. Posture measurement byPA200 is also conducted as one of the items of the physical fitness test.

www.jga.or.jp

Wacoal human science research center

In Wacoal human science research institute, researchers conduct woman posture analysis as a part of the posture study and develop new product which they paid attention to about beauty of the posture and body style. In this research institute, they utilize all position data by center of force from foot pressure assessment device and perform a posture evaluation.

www.wacoal-science.com

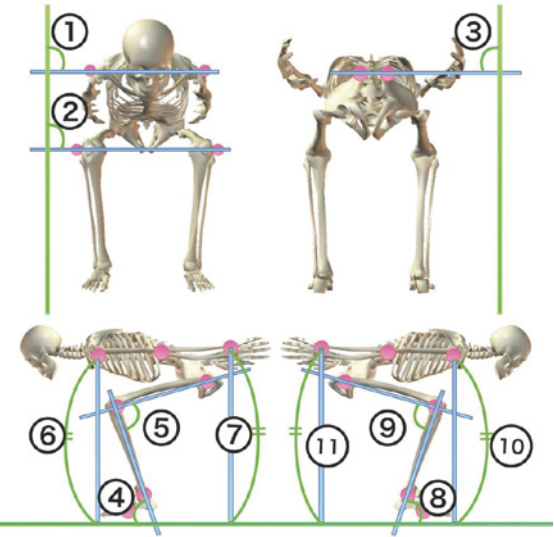


Okurayama National training center

Posture measuring instrument PA200 (higher model of PA200LE) is introduced into Okurayama NTC (national training center) established by a training institution for Japanese top-level contestants.

In this center, one of PA200 software functions as motion is utilized for posture assessment at the static standing position as well as at the time of the ski jumping approach run. In addition, it is used for measuring other various aspects.

www.joc.or.jp



Photography posture: crouch posture (posture at the time of the approach run for ski jumping)

A calculation item:

- ① The angle for a straight line and the perpendicular line linking both acromion make
- ② The angle for a straight line and the perpendicular line linking both patella make
- ③ The angle for a straight line and the perpendicular line linking both anterior inferior iliac spine make
- ④ The angle for dorsal flexion of ankle joint
- ⑤ The angle for knee joint flexure
- ⑥ Distance from floor to acromion
- ⑦ Distance from floor to ulna styloid process