



KLAB Product Line

K-LAB is KINVENT's product line for the complete laboratory assessment of the human movement for analysis in various areas such as jumping, flexibility, balance, strength, speed, power.

Portable force plates and **Inertial wireless waterproof sensors** are synchronized with the K-LAB software. K-LAB gives you the possibility of doing breakthrough analysis to athletes in competition sports as well as rehabilitation, in various performance areas, inside and outside your lab.

- **DELTA** ▶ double triangular force plates
- **SENS** 🎯 Inertial wireless waterproof sensors
- **KLAB** Software custom-made analysis and synchronization software



All devices are connected and synchronized through the **KLAB** Software from which you can lead custom-made analysis of a variety of human movements.

For any information or assistance, please contact :



www.k-invent.com

assistance@k-invent.com

91400, Orsay, FRANCE

WE MEASURE PROGRESS

DELTA

DELTA is a pair of portable triangular fully digital force plates equipped with 6 force sensors and a 1200 mm x 800 mm Center of Pressure sensing area.

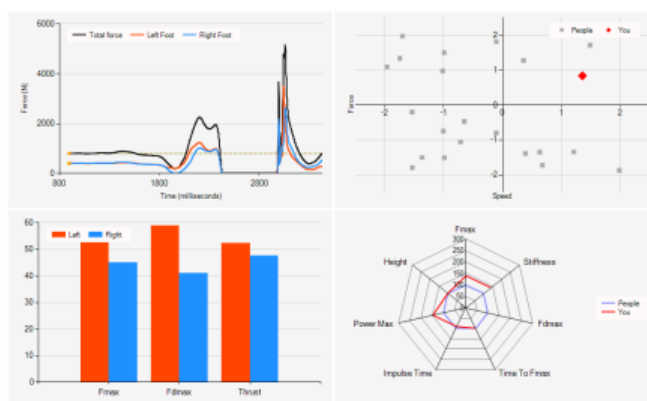


DELTA is a unique technological product for your rehabilitation center or sports clinic. Through its innovative double triangular design, K-DELTA measures precisely left and right lower limb loading separately and calculates the Center of Pressure and Weight Distribution.

Ready to perform

Through the K-LAB software, K-DELTA Triangular Force Plates performs :

- breakthrough Jump Analysis and evaluation of lower limb muscular force
- clinical evaluation and practice of balance and mobility skills
- Evaluation of lower limb symmetry, speed, power, rate of force development
- Landing Stability and Reaction Time assessment



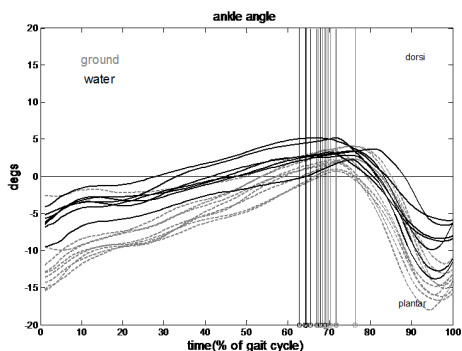
Technical Features

Connectivity	USB plugging, no external power supply needed
Surface	Aluminum or wooden
Dimensions	Triangle side up to 1200mm, Minimum height of 60mm
acquisition frequency	up to 1000Hz
Sensors	3 to 18 strain gage force sensors
Hysteresis	<0,1% Full Scale Output
Linearity	<0,1% Full Scale Output

K-SENS Inertial wireless waterproof sensors network records kinematic characteristics of human segments inside and outside the lab with unconditional practicality as you can analyse your athlete during running outside, playing football or swimming over prolonged periods of time



K-SENS is also used for the evaluation and practice of mobility skills and posture in rehabilitation.



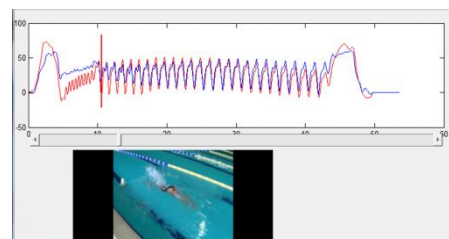
K-SENS applications

K-SENS is composed by two or more wireless IMU sensors. These sensors combined, create a network in order to fully analyze a complex human movement.

It can also.

Through the K-LAB software, the K-SENS Sensors Network performs a complete analysis in various sectors and can be synchronized with force plates and video:

- ✓ **K-SWIM**, for swimming technique analysis
- ✓ **K-GAIT**, An ideal tool for gait analysis, inside and outside water
- ✓ **Playful sessions**, through bio-feedback on several posture tests
- ✓ **Custom analysis**, non linear analysis, single subject analysis, etc



Technical Features

Connectivity	Wireless sensors, DAQ box needs a USB port
Synchronization	Sync with MEMS and KDELTA<1ms
Dimensions	35x35mm, height less than 30mm
acquisition frequency	Up to 1600Hz
Sensors	3-D gyroscope, accelerometer, magnetometer
Battery	up to 5 hours of autonomy

KLAB software

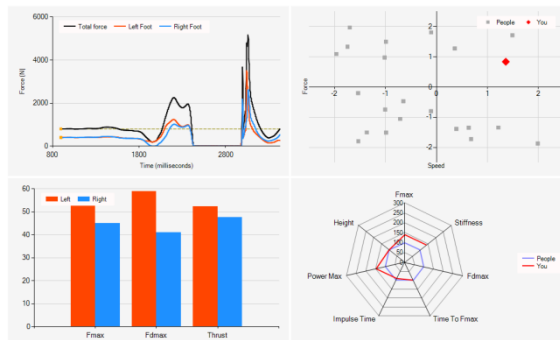
K-LAB controls K-DELTA force plates and K-SENS wireless sensors Network giving direct synchronized signals of IMU sensors and Force Plates.

K-LAB is a unique tool for your laboratory as you can perform breakthrough custom-made analysis on a variety of human movements. Thanks to its signal filtering and treatment algorithms, K-LAB is a ready-to-use solution for custom analysis or analysis through its predefined protocols.

K-JUMP, Jumping Analysis

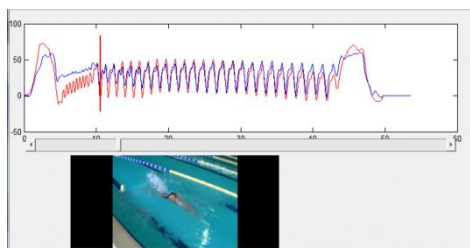
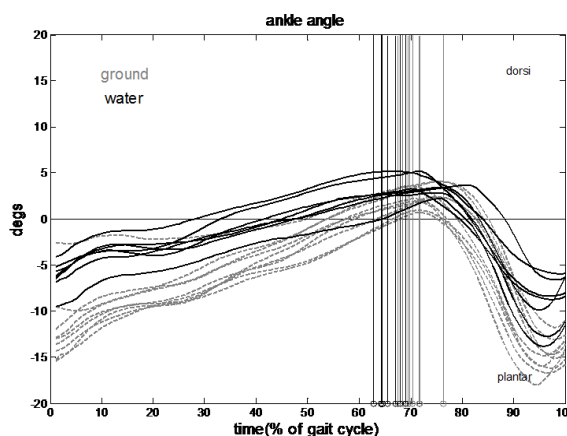
K-JUMP, Jumping Analysis software combines smart calculating algorithms and scientific methods to calculate jumping performance. You have access to various metrics like jump height, impulse time, stiffness, Power, Thrust, max force and Rate of Force development. Likewise, you are able to perform analysis on:

- ✓ Jumping and landing stability
- ✓ lower limb symmetry
- ✓ Principal Component Analysis through the database
- ✓ Classification of athletes on a Speed-Strength
- ✓ Spider Performance Diagrams



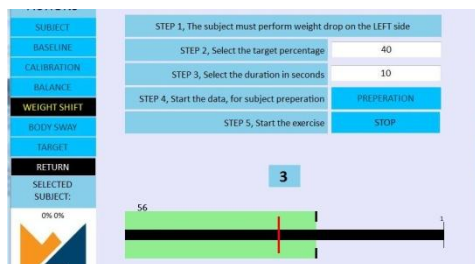
K-GAIT, Gait analysis

K-GAIT, a K-LAB's part performs gait analysis. K-GAIT is an ideal tool for gait analysis, inside and outside water. K-GAIT is a unique solution for rehabilitation, especially for therapies inside water. You can assess very important gait variables such as gait cycle time, stride time, support time, ankle and knee angles, spasticity.



K-SWIM, Swimming technique analysis

Thanks to K-SENS waterproof wireless sensors, K-SWIM, a K-LAB's part, is used in swimming technique analysis for the improvement of an elite athlete's performance.



Balance rehabilitation and posture training

K-LAB is a powerful tool that helps the rehabilitation professional to assess and practice vertical balance through playfull biofeedback certified exercises to practice mobility. Our exercise library includes:

- ✓ Body Sway movement practice
- ✓ Left-right foot stability
- ✓ 360° turn analysis
- ✓ Center of Pressure movement practice and evaluation