KINVENT

MEASURE. MOVE. PROGRESS.

3D DELTAS

USER MANUAL

NOTICE

This manual concerns 3D DELTAS products. The information content of this manual belongs to KINVENT, and is provided only for the purpose of operating 3D DELTAS and software. This manual is subject to modifications. The latest version is available on physio.kinvent.com

NOTICE

The advice given in this manual is intended to supplement, not supersede, the normal safety requirements prevailing in the user's country

Manufacturer

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physio.kinvent.com

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CE

Graphic Symbol

CE	**European Conformity**
	**Keep Dry.**
	Consult electronic instruction for use
	Attention, See Instructions for use before use.
SN	Manufacturer's **serial number**
	Recyclable Packaging Box
	Recycling instruction for specific countries
IP22	Environmental Protection indicator,

	Class III Electrical Equipment
	Sensor will not work when connected to AC outlet
	**Non Ionizing radiation**
	Direct Current IN
Bluetooth	The devices utilize a **Bluetooth LE** radio for wireless communications
	**Do not dispose of the units in normal household waste**. Dispose products in accordance with local regulations
	Plastic Resin codes of materials used (eg. Polypropylene)

Contents

Introduction

Thank you for purchasing the **3D DELTAS**

3D DELTAS is the product line developed by KINVENT to objectively quantify training. **3D DELTAS** is the complete tool designed for assessing, monitoring and exercising balance, strength and explosiveness. The platforms are built with high precision measuring systems and with the **K**INVENT's excellence in interface development, mechanics and electronics.

About us

KINVENT is specialized in the design and manufacturing of biomechanics equipment. Our strength is that we can conceive and implement solutions to any challenge in sports biomechanics and physical rehabilitation. Our products include ready-to-use force plates, inertial wireless sensors, dynamometers, simulators and various custom-made applications.
Find more information on our products at www.k-invent.com.

Safety Information

The instructions and safety information in this user manual must be followed to ensure safe operation of the **3D DELTAS**. Please note that if the equipment is used in a manner not specified by KINVENT, the protection provided by the equipment may be impaired.
The following types of safety information appear throughout the Manual. Details are given in the format as shown below:

⚠ WARNING — The term WARNING is used to inform you about situations that could result in serious damage to the device or other part of the System and to the environment.

⚠ CAUTION — The term CAUTION is used to inform you about situations that could result in damage to the device that affect the measurement results or pose a risk to the safety of the patient/user or the operator.

NOTICE — The term NOTICE is used to indicate information considered important but not hazard related (e.g., security messages, maintenance and cleaning guidelines)

Photosensitive seizure warning

⚠ WARNING

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while watching video games. These seizures may have a variety of symptoms, including altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury.
Immediately discontinue playing and consult a doctor if you experience any of these symptoms. Parents should watch for or ask their children about the above symptoms.

KINVENT Fitness application (v. 2.19[1])

KINVENT Physio is the only app you will need for the **3D DELTAS.**
All tutorials for the KINVENT Physio app are available online at: Kinvent.link/quickstart

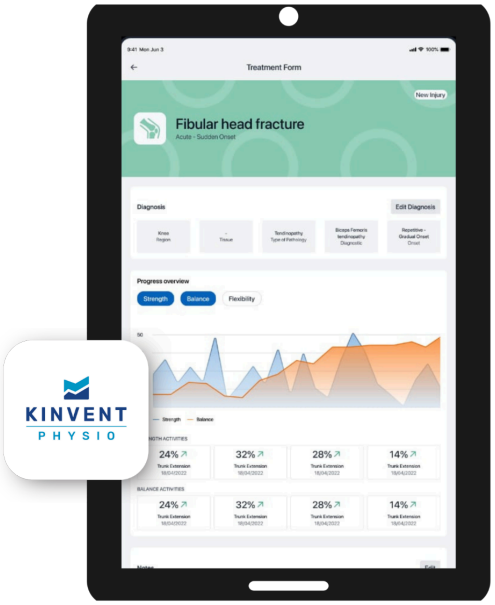
The app is a smartphone/tablet application that supports the **3D DELTAS** and K-SENSORS. The KINVENT Physio app records the measurement data from all compatible sensors and provides instant analysis and advanced parameter calculations replacing manual calculations.

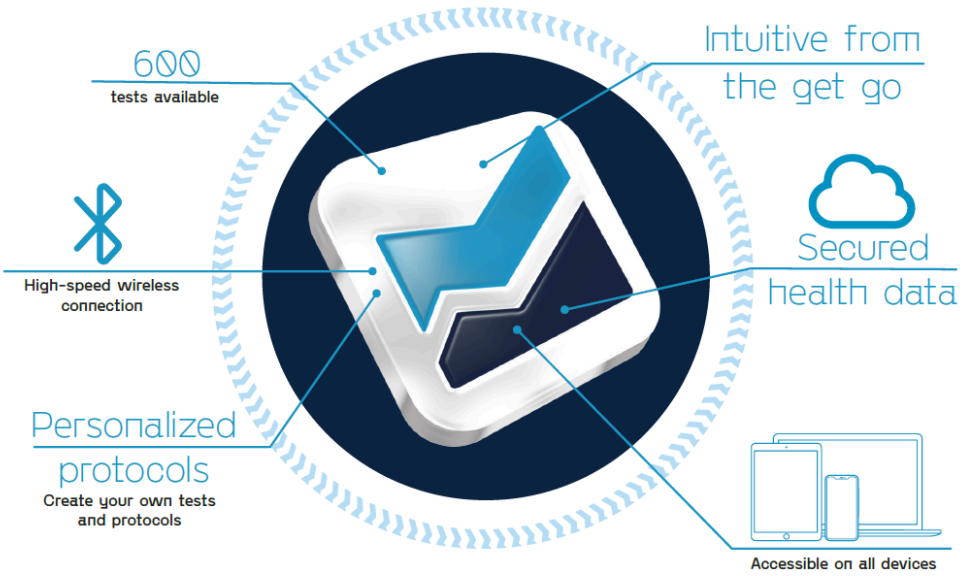
The KINVENT Physio app allows users to select the duration of recording, the rest time, repetitions, initial pause, detection threshold, sampling frequency, measurement units, enable video capture, as well as get detailed information on the measurement protocols via images and on-screen help. Further information such as white-papers are available for reference. The KINVENT Physio app can take unlimited number of recordings (limited by the available smartphone/tablet storage) which are also stored in the cloud and can be shared with the patients via the MyKinvent cloud platform

The KINVENT Physio app enables users to:

- Create user and trainer profiles and assign tags / filters by pathology
- Collect and store multiple measurements from all compatible sensors for any of the user profiles.
- Transmit the data to the KINVENT Health data servers in an encrypted format
- Create PDF reports
- Export measurements in CSV format (Excellence Tier feature)
- Use validated protocols (Different protocols available depending on License Tier)
- Train using games (Starter Tier feature)

[1] Latest version may differ on the **App Store** / **Google Play**





Installation the Application on the Host Device

Minimum Requirements: Android 10.0+ or iOS 12.0+, 2GB of RAM, Bluetooth Low Energy 4.2+, 5'' (12.7cm) Screen diagonal. For Mac OS a minimum of M1 processor is required
Recommended: Android 15.0+ or iOS 18.0+, 4GB of RAM, Bluetooth Low Energy 5.0+, 6.5'' (16.5 cm) Screen diagonal. For Mac OS M2 and M3 processors are recommended.

Download the App from **Google Play** for Android Devices or **App Store** for iOS devices

Follow the Instruction registration on the App

GET IT ON Google Play

Download on the App Store

Connect the Device with the App Via BLE

First Login

The KINVENT Physio App will require an initial registration and some information regarding the operator's specialty and profile to help ensure proper use.

Security
It is highly recommended to keep the app unlock pattern enabled to guard the sensitive information stored and use a complex pattern. It is important to also secure your smartphone/tablet since you will be storing personal health information via the use of passcode, 6 digit or higher PIN, Touch ID or Face ID (availability depends on the smartphone abilities). Review your smartphone for information on how to add a layer of security.

The KINVENT Physio App does not require an active internet connection for the recording and analysis of the data. All data will be stored in the local memory of the smartphone/tablet. However for cybersecurity purposes, the user is required to periodically re-login so that the account is verified and internet connection is required during the log-in. Additionally, the locally stored data will be synced when the internet connection is again available.

You need to connect the **3D DELTAS** with compatible Bluetooth® Low Energy (BLE) devices to store, analyze and view the measurement data. These host devices HD can be, for example mobile devices running respective host applications (KINVENT Physio) for data visualization.

Registering sensors

The **3D DELTAS** can be registered in the KINVENT Physio App in order to be easily identified when starting an exercise.

You can register the devices with multiple host devices, but only one connection can be active at a time.

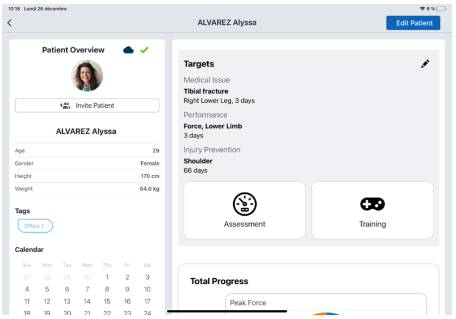
To register a sensor
- Launch the app
- Log-in using your password and unlock pattern
- Tap the sensors "  " icon
- The app will ask to enable the Bluetooth connection, tap on enable
- Make sure you have turned on the K-Sensor you wish to register
- Tap on "**Register Sensor**"
- The app will start to search for devices, and will prompt you to select the type of K-Sensor you wish to register (**3D DELTAS**)
- Select the device you want to register from the list
- If no K-SENSORS are found you will be prompted to retry making sure that their LED is on and flashing Green

Adding a user

To create a new user profile:

- From the Home screen tap "**Patient List**" or tap on the icon "  " on the bottom

- Tap “**(+) Add patient**”
- There it is necessary to fill in the Last Name/ First Name and the Date of Birth of the patient. You can scroll and add other information such as weight/height contact info etc. or add a photo.
- Once you have completed all the information, tap on “**Complete**”



Full patient file

- Fill in the patient’s pathology information to guide care and make their file available to all healthcare professionals in your office.

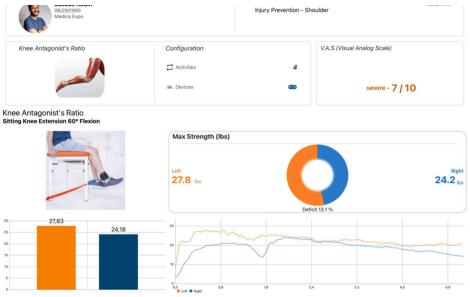
Starting a measurement

To start a measurement:

- From the Home screen tap “**Patient List**” or tap on the icon “ ” on the bottom
- Scroll or search for the patient that will be performing the assessment
- Tap on the name of the patient
- Scroll downwards and tap either on **“Assessment”** (or **“Training”** if available)
- A list of exercises/protocols is shown. A series of filters are shown on the right depending on the K Sensor to be used and the body part that will be assessed
- Make a selection of the appropriate assessment type.
- Single type assessments have one type of assessment, while protocols have multiple steps and in-between rest recommendations or other steps.
- Once you tap on the selected assessment, the configuration screen will show up
- Select the Left/Right or the side that will begin with, select the preparation time, the duration and rest times, choose the number of repetitions as well any other specific to the assessment setting (threshold/segment length/video capture)
- On the top right, the list of the required K-SENSORS will be displayed along with a flashing orb.
- The orb color and flashing indicates the status of the connection.
  - Grey orb slow flash: Searching
  - Circle rotating: Connection in progress
  - Blue tick: Connection established and ready for exercise
  - Red orb: Error on the device or connection failed
- Once all devices have a blue tick shown , tap on “Start” and follow the on-screen instruction.

Standard premium evaluations

Take a scientific approach to validated standard protocols: CMJ, Drop jump, Squat jump, McCall test, ASH test, squat analysis, Romberg, test profile strength, DSI, EVA, max strength, IMPT, antagonist ratio, posture analysis.



Accessing the Library

In the KINVENT Physio app, a variety of scientific and academic documents are available for in-depth study. Additionally Tutorials and helpful videos are available

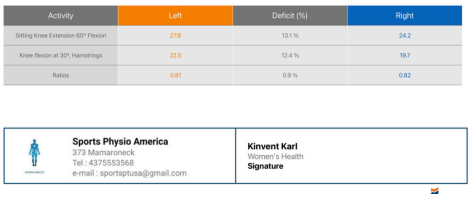
- From the Home screen tap the “  ” icon at the bottom
- A list of features is available
  - **K-Pedia:** A database with explanation of terminology for all parameters and metrics available and calculated in the app
  - **Test Bank:** A list of all available protocols and assessments. Tap on any one of them to view instructions on how to perform, definitions, purpose of the assessment, K-Sensors and tools required, suggested configurations and instructions for the patient as well as key results obtained and any references regarding the validity of the assessment.
  - **Bookshelf :** A list of ebooks , white papers and publications
  - **K-Start:** A link to the online quick start videos to help users familiarize with the application
  - **Tutorials:** A list of video tutorials for a number of exercises and assessments with live demonstrations and guidance
  - **Help Center:** A link to the list of short help articles of more advanced features of the app.

Settings and Account management

- From the Home tap on the icon “  ” on the bottom
- In the menu, you can adjust your personal info and other app settings
  - Tap on **“Profile”** to edit personal details and change your password
  - Tap on **“Organization”** to add a logo and set the name/address and other info to be shown in your personalized reports
  - Tap on **“Users”** to add other physician/medical personnel that will be using this account (Number of users depends on the license tier)
  - Tap on **“Settings”** to choose the language, measurement units, set the sampling frequency, enable/disable sound effects.
  - Tap on **“Addons”** to enable or connect any one of the additional app extensions. To use these features a separate account with these providers may be necessary
  - Tap on **“Pattern”** to enable or change your unlock pattern
  - Tap on **“Cloud”** to check the current connection status and/or upload manually the local measurements
  - Tap on **“Subscription Plan”** to view your current subscription level, and review the privacy policy and General Terms & Conditions
  - Tap on **“Contact us”** to connect with customer support
  - Tap on **“Privacy Information”** to review legal documents and check the app version.

Supplemental App Features

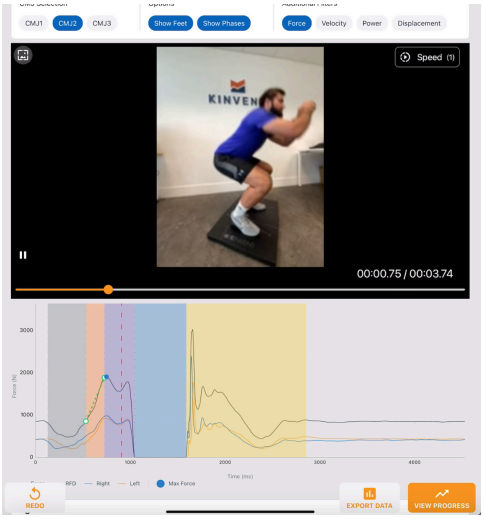
Personalized reports
Synthesize your rehabilitation results with the multiple export module.



K-apture
Film your patient's movement and synchronize it with every KINVENT Physio evaluations. Carry out qualitative analysis to integrate in your reports.

MyKinvent
Give your patient agency in their rehabilitation by giving them access to their own data.

KINVENT Connect
Centralize all your data in one place and access it from any device: smartphone, tablet, computer, etc.



Safety precautions

The safety information must be read thoroughly and understood before starting the work with **3D DELTAS**

⚠ WARNING

- **If the equipment is operated in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired**
- **Take care of the strong attachment and placement on the floor of the 3D DELTAS**
- **Do not dispose of the 3D DELTAS sensors in fire.**
- **3D DELTAS contain lithium-polymer batteries. *Do not dispose of the* batteries with household waste**
- **The 3D DELTAS are not protected against ingress of liquids. Keep sensors dry. Do not immerse the 3D DELTAS or their accessories in water.**
- **The 3D DELTAS and accessories are provided non-sterile and are not compatible with autoclave or other sterilization techniques. Do not autoclave.**
- **Use only a factory supplied wall pack power supply, charger. Use of another charger may result in electrical shock or equipment damage.**
- **3D DELTAS are not intended for use while attached to wall pack power supply or a charger. Never attempt to operate the instrument while it is connected to the charger as electrical shock or damage to the instrument may occur.**
- **The 3D DELTAS should be treated with care. Do not drop, bang, hit or subject the 3D DELTAS to strong shock . Be careful to have a firm grip when holding 3D DELTAS in order to avoid accidental fall of the system which may cause damage to the sensor or injury to the user/operator. The weight of each device is over 15kg so special caution must be taken when lifting the device.**

⚠ CAUTION

- Only use the device in your existing environment during your daily routine activities. Do not use the device during enhanced or irregular activities or outside your natural environment, unless specifically instructed otherwise by your doctor or physical therapist.
- Do not drive or operate heavy machinery while wearing the device.
- Users with disabilities (e.g neurological disorders, osteoporosis), which may cause contraindications, or users for whom exercise may be extremely dangerous, must take precaution to ensure their safety when using the device (e.g., supervision, etc.).
- Do not use the device if you suspect that it is faulty or has been damaged. Do not try to repair the device on your own. Contact KINVENT immediately via the support methods.
- Do not give, sell, rent or allow the use of your device to or by another person.

- Stop the use of the system immediately if parts are damaged or if a change in the performance is observed.
- Stop the use of the system immediately if an allergic reaction is observed.
- Do not modify this system without prior written authorization of the manufacturer. If this system is modified, appropriate inspection and testing must be conducted to ensure continued safe use of the system.
- Always consult your doctor if you have a medical condition and before beginning a program.
- Always consult your doctor before using the device if you have a pacemaker or other implanted device. Although several implanted pacemaker manufacturers state the risk associated with the simultaneous use is low, it is essential to consult a doctor who knows the exact type and model of the implanted device in question before using the system. In any case keep the device at least 15 cm (6") away from the implanted device.
- Do not use the device during magnetic resonance imaging (MRI), unless specifically approved by the personnel operating the MRI equipment. The battery inside the device is sensitive to magnetic fields.
- The device is not for multiple users if consequences from possible cross contamination may be severe. Careful cleaning and disinfection are recommended to prevent cross infection if used by multiple users.
- The conductive parts of the device must not be allowed to contact any conductive parts, including protective earth connection.
- Keep the device and any part of the system away from the reach of children, pets or pests when not in use.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the system. Otherwise, degradation of the performance of this system could result.
- Use of this system adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this system and the other equipment should be observed to verify that they are operating normally.
- If the storage temperature is below 0°C , allow the parts of the system internal temperature to stabilize for at least 30 min before use. Be aware of condensation
- If the part of the system is to be used in an environment prone to dirt build-up, clean the device regularly. For cleaning, please follow the instructions provided in paragraph " Cleaning".
- Use the system at least 30 cm (12") away from the sources of power line frequency magnetic fields, radio frequency communications equipment and other sources of radio frequency signals (such as radars or microwave ovens).
- If the measurement results are fluctuated by a strong nearby radio frequency disturbance source, move further away from the source of the radio frequency disturbances.

- Avoid using the system in the proximity of electrostatic disturbance sources. Do not use close to a 2.4GHz signal source, as strong signals may negatively affect the performance of the radio link.
- Prior to each use of the device you may want to re-check and confirm that parts are properly attached.
- Should any problem occur as a result of the device, you are advised to discontinue use immediately and contact your doctor or physician immediately
- Contact the manufacturer in case assistance is needed in setting up, using or maintaining the device or to report unexpected operation or events.
- The **3D DELTAS** should only be used by trained professionals.
- Not recommended for use in extreme temperatures, high humidity, or direct sunlight
- Ensure the user is able to keep his balance while watching the screen to avoid fall
- **3D DELTAS** are not known to contain any hazardous materials. For proper disposal instructions, consult your local waste management facility. E-waste recycling should be used where available.
- Do not service the battery while in use with a user.
- Never disassemble or modify the system using any accessories not specifically approved by KINVENT Biomécanique, LLC, this will void the warranty as well as reduce immunity to electromagnetic interference, or increase electromagnetic emissions, and result in improper operation.
- Don't place the **3D DELTAS** or its components on unstable surfaces, or surfaces subject to vibration.
- Electrical Equipment needs special precautions regarding EMC. **3D DELTAS** need to be installed and put into service according to the information provided in this manual.

Replaceable Parts

- None

General Operating Conditions

Operating Environment

3D DELTAS must be used indoors. **3D DELTAS** must be used only in clean, dry rooms with leveled floors. Make sure you have plenty of space around you when you use it.

Storage, Packaging and Transportation

Altitude up to 2000 m, Temperature -10 °C to 40 °C (14 °F to 104 °F) , Humidity: < 85% (without condensation), POLLUTION DEGREE 2

When not in use, please store them in the protective carrying bag or trolley.

If the **3D DELTAS** are stored for longer than 30 days, check battery level and recharge if necessary before using.

⚠ CAUTION

Please observe the storage conditions and never store them in an automobile except when transporting them.

Calibration

3D DELTAS gives you metrics on the human muscular force. **3D DELTAS** are sold already calibrated, to make them ready for use out of the box.

We recommend that the product be tested for calibration at least once a year under normal use or sooner under severe conditions and usage.

3D DELTAS are not user serviceable and do not include a service manual. For more information on calibration as well as special requirements, please contact your **3D DELTAS** dealer.

Cleaning

NOTICE

The cleaning paragraph must be read thoroughly and understood before starting the cleaning work.

3D DELTAS should be cleaned after each use. Cleaning and disinfection of the **3D DELTAS** can be performed by the system operator or the user.
In order to clean the **3D DELTAS**'s housing, use a damp cloth moistened with water or a mild detergent. If the dirt is persistent, rub the surface of the **3D DELTAS** with a cloth moistened with ethanol-based disinfectant or with 70% alcohol solvent. Do not use aggressive cleaning agents such as acetone.
For more persistent stains and for disinfecting the **3D DELTAS Low level or intermediate level disinfectants should be used (e.g. alcohol wipes). Do not use bleach to clean the plastic parts, prefer alcohol blends**

Do not use objects that could damage or scratch the surface.
If the inside of the **3D DELTAS** is contaminated, contact your local distributor or KINVENT support directly.

⚠ WARNING

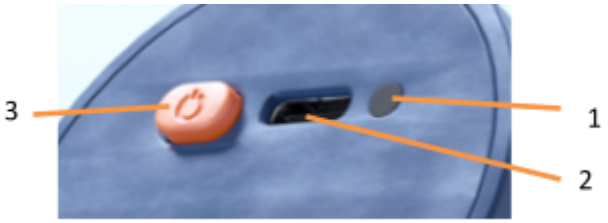
Careful cleaning and disinfection by the operator are recommended between uses to prevent cross infection if used by multiple users . Disinfect before and after each use. Allow disinfectants to dry before taking into use. Not to be used by multiple users if consequences of cross contamination may be severe.

NOTICE

Repetitive disinfection with ethanol-based disinfectant may in the long run cause aging and discoloration of the case used. Discoloration does not affect safe use. If any cracks or structural damage is observed, replace the device .

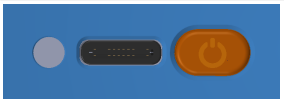
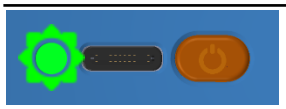
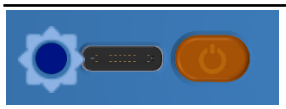
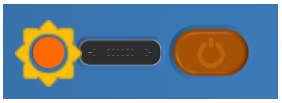
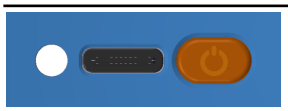
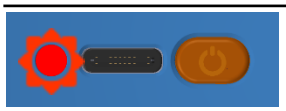
Interface

1- Multi color LED
2- USB-C charge port
3- Power on/ Command orange button



LED States

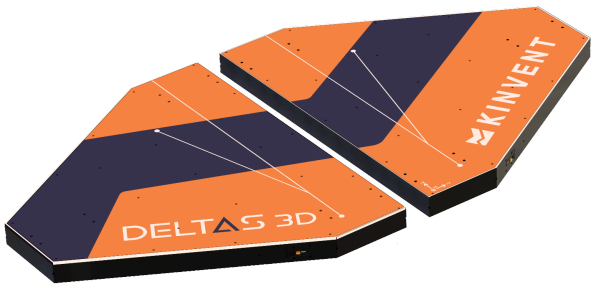
- When the sensor is connected via USB, the sensor will turn on (**GREEN** flashing LED) and begin to charge the internal battery.
- After 10 min, if not connected to the application, it will automatically power off . The battery will continue to charge indicated by a pulsing **ORANGE** light.
- Once the battery reaches full charge the sensor will indicate this by switching to permanent **WHITE** light. If power is removed the sensor will power on again.
- The sensor can wake by plugging in the USB cable or pushing the orange button.The **GREEN** led starts blinking.
- When a successful connection over Bluetooth is attained then the light begins flashing **BLUE**
- If the battery is low, then a **RED** light will flash intermittently three times and every 5 seconds. Wireless range may be affected if operating under this condition.
- The sensor will switch off if the battery voltage is lower than 1%.
- A single push on the button will display the battery status via bright ***red***, ***yellow,*** or ***green*** light depending on charge level.

Visual	LED Functionality	Explanation	Action requested
	LED is **OFF**	Sensor is **OFF**	Press the button to power on the sensor
	***GREEN*** LED is Blinking	Sensor is **ON**	Normal operation - Sensor is ready to connect
	***BLUE*** LED is Blinking	Sensor **Connected**	Sensor is connected to the app (tablet/phone)
	**ORANGE** LED Slow blink	Sensor is **OFF and charging**	None- the sensor will continue charge until full
	**WHITE** LED is lit steady	Sensor has reached **End of charge**	Internal battery is 100%, please remove charging cable
	**RED** LED is blinking **(three blinks intermittently)**	Sensor has **low battery (<10%)**	Please charge the sensor

Action	LED behavior	Explanation

Button pressed once during ready or connected state	Steady lit LED color **Green, Yellow or Red**	Battery state of charge **Green : 71 to 100%** **Yellow : 31 to 70%** **Red : <30%**
Button pressed once during a “Start screen” in the app	Steady lit LED color **Green, Yellow or Red**	**Will also start the training/exercise selected or switch sides depending on the app message**

3D DELTAS



Description

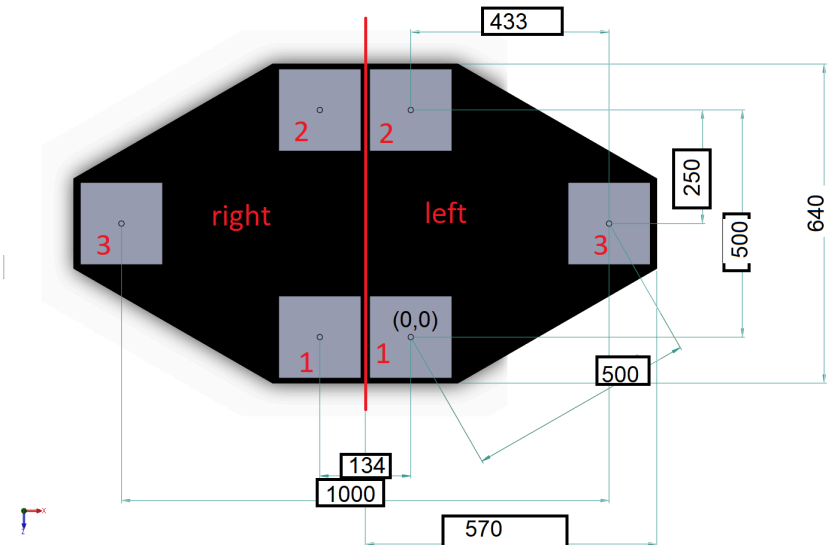
3D DELTAS are two wireless independent force platforms for rehabilitating balance and assessing lower limb muscular symmetry and strength in all 3 axis

Benefits

3D DELTAS are equipped with three triaxial electronic force transducers per platform and give real-time acoustic and optic biofeedback on your Smartphone or Tablet through the KINVENT Physio app.

Technical Features

Dimensions and Weight

Weight	15.5 kg/ 34.2lbs per platform
Dimensions (H x W x L) *5 mm/ 0.2" ground clearance*	Metric: 52 x 564 x 634 mm 
Max force	1000 kg per platform (500kg/ sensor/ axis) 2204 lbs per platform (1102 lbs / sensor)
Acquisition frequency	1500 Hz Full CoP
Cover	Anti-slip R10 film
Eco features	Self-activated "sleep" mode after 10 minutes.
Units	Selectable in application KgF, N, lbs

Sensor Performance

Nonlinearity	**All axis**	**± 0.1 %**
Accuracy combined	**All axis**	**1%**
Hysteresis	**All axis**	**± 0.1 %**
Creep (30min)	**All axis**	**± 0.1 %**
Crosstalk	**X-> Y**	**1%**

	Z-> X/Y	**1%**
	X/Y ->Z	**1%**
Temperature Effect on dead load	**All axis**	**± 0.0026% / °C**
Temperature Effect on Sensitivity	**All axis**	**± 0.0015% / °C**
Safe Overload	**All axis**	**150%**
Ultimate Overload	**All axis**	**200%**
Compensated Temperature	**All axis**	**-10 to 40 °C**

Signal Specifications

Amplifier		**24 bit ADC, 9 channels per platform**
Acquisition		**1500 Hz , 3x Fx , 3x Fy, 3x Fz / Platform**
Measuring Range	**Fx, Fy** **Fz**	**-5kN to 5kN per sensor** **-1kN to 5kN per sensor**
Resolution	**All axis**	**2mN**
Noise Peak to Peak	**All axis**	**1.2N**

Electrical and Communication Data

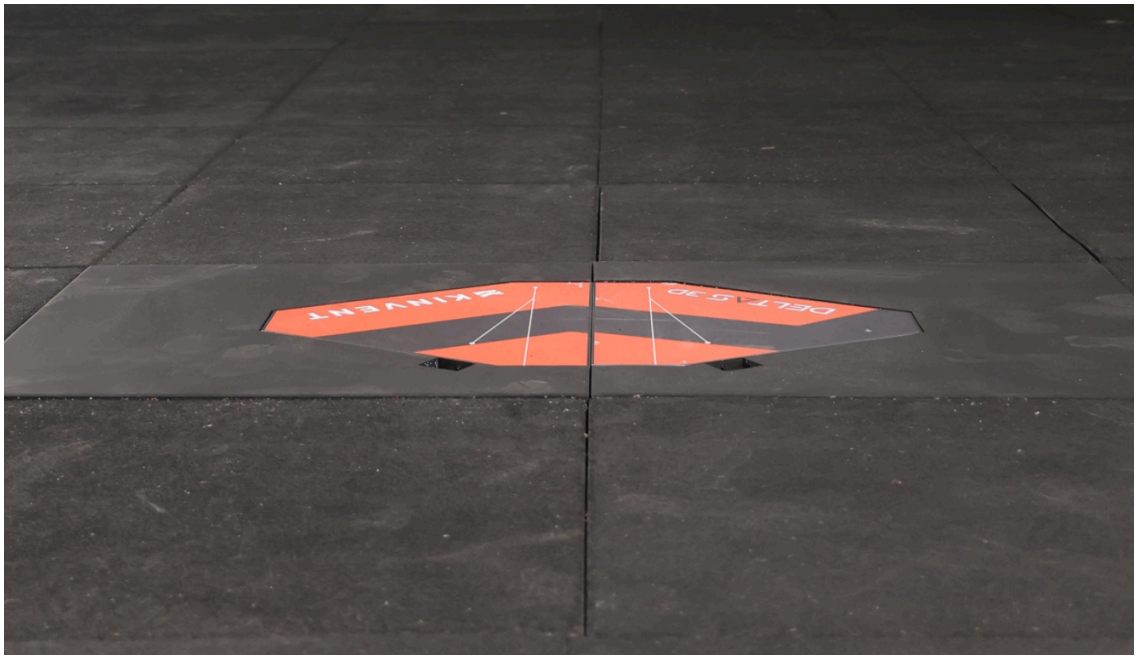
Radio Technology	Bluetooth Low Energy 5.1
Power supply	1 cell 3.7V Li-Po Battery 800 mAh / platform
Peak/Typical consumption on battery	200mA / 60 mA
Radiated output power	Max.10 mW
Wireless transmission Frequency	2.4 GHz band 2402- 2480 MHz
Modulation	GFSK
Channel Bandwidth	2 MHz
ERP	8.6dbm
Wireless range	Up to 20 meters / 21 yd
Contains FCC ID	X8WBM833
Contains IC ID	4100A-BM833
Battery	20h of autonomy, 2h charging
USB Charging Voltage	5V DC , 300mA
Minimum requirements (max sampling frequency will be limited)	Android 10.0+ or iOS 12.0+, 2GB of RAM, Bluetooth Low Energy 4.2+, 5'' (12.7cm) Screen diagonal. For Mac OS a minimum of M1 processor is required
Recommended requirements	Android 15.0+ or iOS 18.0+, 4GB of RAM, Bluetooth Low Energy 5.0+, 6.5'' (16.5 cm) Screen diagonal. For Mac OS M2 and M3 processors are recommended.

Installation

Install **3D DELTAS** according to the measurement programme selected according to the on-screen instructions.

On the floor

This configuration is ideal for balance exercises. You can place **3D DELTAS** on the ground either side by side or spaced apart. This increases the difficulty level of balance exercises, as you can work on your lower limbs muscular force at the same time. Take care when placing side by side to allow at least 2mm distance between them to allow proper force sensing.



Get started

Each Deltas platform is fitted with a USB C port used for charging, 1 LED for the working/charging state and one push-button.
You can charge **3D DELTAS** sensors through the USB A to USB C cable provided or with any USB-C charging cable. The sensor is supplied with the appropriate USB power supply. If a different charger is used, ensure that it meets the minimum safety requirements and if unsure please do not use the sensor while plugged in/charging

⚠ WARNING

Disinfect 3D DELTAS prior to use, using antiseptic alcohol wipes.

To switch on **3D DELTAS**, press the on-off button on each platform . You will notice a green flashing LED. Your **3D DELTAS** are on! Your **3D DELTAS** will switch off after 10 minutes of inactivity.
Once the sensor is switched on, go to the homepage, and select **3D DELTAS** sensor and an activity. When the **3D DELTAS** are connected, the LED turns Blue.

NOTICE

While your sensor is connecting, do not load the sensor, do not step on the sensor, do not move the sensor, do not apply force on the sensor.

Troubleshooting

If any difficulties occur while using the system check if the symptoms appear in the following list. For further assistance please visit KINVENT's Help Center at Kinvent.link/quickstart or use the KINVENT Physio app assistance menu: “support”.

Sensor difficulties

Symptom	Actions
The sensor isn't turning on	1. Connect a known working charger with a known working USB cable and charge the sensor for a minimum of 30 min. Plug and unplug the usb cable, an orange or green light should come on after a short while. 2. Press the On/Off button until an audible click is heard and felt. 3. If you suspect failure, contact your distributor or check our website for the replacement scheme or contact directly using the KINVENT PHYSIO assistance menu
While having closed the app, the sensors keeps the Blue LED on	1. Make sure the app is closed. On Android **hold the "Home" button or press the "Recently Used Apps" button to view the list of running apps**. To close the app, swipe it to the left or to the right 2. Turn off the Bluetooth on the tablet or smartphone sensor. 3. Press the on/off push button for 5 sec to force it to turn off
The sensor isn't shutting down after 10 minutes of inactivity	1. Check if an active connection is on (indicated by blue light) and close the application/bluetooth. Press optionally the on/off push button for > 5 sec to force shut down the sensor. 2. Make sure that no load is applied on the sensor. 3. If the issue persists, you can use the on-screen instruction on the app for resetting the baseline.
A calibration error message is shown.	1. Close the app and try again while making sure that no load is applied on the sensors. For **3D DELTAS** make sure the surface is flat and all feet are in contact with the ground and the platform does not wobble. 2. Contact KINVENT for scheduling a calibration. Calibration should be performed annually or sooner if special conditions apply.
A part is damaged/ lost	1. Please contact KINVENT to arrange a replacement spare part.

Connectivity difficulties

Symptom	Actions
The sensor is turned on but isn't connecting.	1. Make sure your smartphone or tablet is compatible with KINVENT Physio. 2. Check if Bluetooth and location services are enabled, on your tablet or smartphone 3. Check if the sensors are properly charged - pressing the button should light up the LED indicator and pressing a second time will bring a steady light indicating the battery charge level, make sure that it is green or orange. 4. Restart the app. On Android **hold the "Home" button or press the "Recently Used Apps" button to view the list of running apps**. To close the app, swipe it to the left or to the right 5. Restart your tablet or smartphone. 6. Make sure your sensor is close to your tablet or smartphone ideally no more than 5 meters/ 5.5 yd . 7. Don't pair manually the K-sensor in the Bluetooth settings of the tablet, otherwise please unpair immediately
The sensor lost connection during training	1. Do not plug the USB C from the sensor to a computer or smartphone for charging during training. Only use the supplied or equivalent USB charger.
While connecting the app is showing a gray or red circle on the sensor	1. Please turn off the sensor and try again. 2. Make sure that you are within range while using of the sensors 3. The official Bluetooth specifications state seven is the maximum number of Bluetooth sensors that can be connected at once. However, **three to four sensors** is a practical limit, depending on the sensor. Make sure that no other Bluetooth sensors (headphones/speakers etc.) are connected.
After connection , Green led is still flashing.	1. Use the sensor registration menu in the application to identify using the serial number of the sensor the correct sensor. Another sensor is possibly nearby. 2. Check if other sensors are in the near area and either allow them to turn off or manually power them off. 3. For **3D DELTAS** please verify that both a left and right sensor is present and powered on.

Legal information

Warranty Terms

This warranty shall not apply if the product

- is used with non-compatible products
- is used for commercial purposes such as rental
- is modified
- is damaged by accident, misuse, wear, or any other cause not related to defectiveness of materials or fabrication.

A valid proof of purchase in the form of a bill of sale or receipt must be provided to obtain warranty services.
KINVENT excludes all liability for any data loss, loss of profit or any other loss or damage suffered by the end customer.

European Union
3D DELTAS is warranted for its electronics and all mechanical components for a period of 2 (two) years from the purchase date when used in accordance with the present manual. KINVENT can proceed to replace **3D DELTAS** covered by the warranty free of charge. The warranty is invalid in case of modification or replacement of any component in **3D DELTAS**, made without the KINVENT's authorization or the authorized **3D DELTAS** dealer's authorization. KINVENT doesn't guarantee any therapeutic result when using **3D DELTAS**. You must contact KINVENT or your authorized dealer to receive a return authorization and shipping instructions.

Other countries
3D DELTAS is warranted for its electronics and all mechanical components for a period of 1 (one) year from the purchase date when used in accordance with the present user's manual. KINVENT can proceed to replace **3D DELTAS** covered by the warranty free of charge. The warranty is invalid in case of modification or replacement of any component in **3D DELTAS**, made without the authorization of KINVENT or the authorized **3D DELTAS**' dealer. KINVENT doesn't guarantee any therapeutic result when using **3D DELTAS**. You must contact KINVENT or your authorized distributor to receive a return authorization and shipping instructions.

Obligations of the User

Except in case of damage or defect attributable to KINVENT Biomecanique, the user shall not make any claims against KINVENT or their subsidiaries for any damaged or defective products or components. The user shall carefully examine the condition of the products immediately upon receipt.

If instructions given by KINVENT Biomecanique with respect to storage, installation and handling of the products are not observed or if changes are made to the product, if components are replaced or if consumable items are used which do not comply with the original specifications, any warranty rights are forfeited unless the user is able to refute any assertion that only any of these circumstances has caused the deficiency.

Defects, incorrect deliveries, quantities, or transport damage are to be notified without delay by the user in writing, by fax, or by email (in case of defects which can be identified immediately) to the KINVENT Biomecanique's distributors or to KINVENT Biomecanique directly, otherwise within two weeks of receipt of the products at the place of destination, by clearly describing the defect; in this respect, it is necessary that the user properly fulfills his obligations of investigation and notification.

In case you need to return one or multiple **3D DELTAS**, the sensors and accessories must be decontaminated and free of infectious material in order to be handled safely in a non-biological safety laboratory (see Cleaning instructions on each sensor).

The **3D DELTAS** must be returned in the original packaging. If not available anymore please inform the support or authorized distributor.

How to repackage for a return

- Pack the sensor in the original packaging (or bubble wrap if original packaging not available)
- Print and fill the after-sales service form
- Pack the sensor + form in a package
- Stick the return voucher on the package and ship

Are considered as signs of material degradation

- Scratches
- Broken parts due to drops or inappropriate uses
- Modification or replacement of any component
- Wet environment exposition
- Underwater immersion
- Extreme temperature exposition

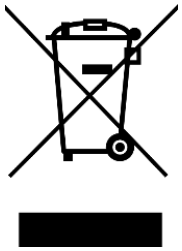
Service policy

You acknowledge that any time your **3D DELTAS** product is serviced, this service may change your settings or cause loss of data or of some functionalities. Backup your data (stored on your tablet or smartphone) on a regular basis.

Waste Electrical and Electronic Equipment (WEEE) Policy

This section provides information about disposal of waste electrical and electronic equipment by users in the European Union.

The European Directive 2012/19/EC on WEEE requires proper disposal of electrical and electronic equipment when it reaches its end of life. The crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or to a designated collection point for recycling, according to local legislation. The separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and ensures that the product is recycled in a manner that protects human health and the environment



KINVENT accepts its responsibility in accordance with the specific WEEE recycling requirements and, where a replacement product is being supplied by KINVENT, provides free recycling of its WEEE-marked electronic equipment in Europe. If a replacement product is not being purchased from KINVENT recycling can be provided upon request at additional cost. To recycle electronic equipment, contact your local distributor for the required return form. Once the form is submitted, you will be contacted by the distributor either to request follow-up information for scheduling collection of the electronic waste or to provide you with an individual quote.

Declaration of Conformity

Product Name: **3D DELTAS**

Model number: TR50LD5KN, TR50LD2KN, TR50SD5KN,TR50SD2KN

Manufacturer: **KINVENT Biomécanique SAS, Zac Eureka, Bâtiment Apollo A, 6 Rue de Pommessargues, 3 4000 Montpellier, FRANCE**

To whom it may concern,

Hereby, KINVENT Biomécanique SAS, declares under its sole responsibility that the above mentioned product is in compliance with the essential requirements and other relevant provisions of the Low Voltage Directive (LVD) 2014/35/EU, Radio Equipment Directive (RED) 2014/53/EU, Electromagnetic Compatibility (EMC) Directive 2014/30/EU and with the RoHS Directive 2011/65/EU.

Essential Requirements, Reference Standards and Normative reference of Directives:

Directive	Applied Standards	Reference
Low Voltage Directive (EN 61010-1)	**EN 61010:2010 + A1:2019 + AC2019**	*Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements*
Radio Equipment Directive Unwanted emissions in the spurious domain	**ETSI EN 300 328 V2.2.2 (2019-07)**	*Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum*
Electromagnetic Compatibility	**ETSI EN 303 446-1 v1.2.1 (2019-10)** **ELOT EN IEC 61326-1 E3:2021** **ELOT EN 55011 E5:2016 + A1:2017 + A11:2020 + A2:2021** **ETSI EN 301 489-1 v2.2.3 (2019-11)** **ETSI EN 301 489-17 v3.2.4 (2020-09)** **ELOT EN 55022 E5:2010 + AC:2011** **ELOT EN 55032 E2:2015 + A11:2020 + A1:2020**	
Electromagnetic Fields	**EN 62311:2008** **Council Recommendation 1999/519/EC**	*Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields*
RoHS Directive 2011/65/EU	**EN 63000:2018**	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

List of antennas

Antenna Type: External , Operating Frequency (MHz): 2400-2483.5, Antenna Gain (dBi): 0.73, Antenna Gain (numeric): 1.183, Average Output power (dBm): 8,Average Output power (W): 0.006

Date: 16.04.2025

Name: Athanase KOLLIAS

Position in organization: CEO

KINVENT
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web: physio.kinvent.com
VAT NB: FR36 829 348 747

(signature & stamp)

Contact Information

For any information or Assistance, please contact:

www.k-invent.com
support@k-invent.com
6 Rue de Pommessargues,
34000 Montpellier, FRANCE

Release changes

FT3D-25A	2025-02-04	Initial version
FT3D-25B	2025-03-26	Class 3, Operating conditions added, Battery and power input specifications added
FT3D-25C	2025-04-16	Update of Declaration of Conformity

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