TENDO MyUnit

THE WEIGHT LIFTING TRACKER & YOUR EVERYDAY TRAINING PARTNER

User Manual

CONTENT

TENDO MyUnit

A weight lifting tracker for instantaneous feedback to promote athletic performances

Thank you for purchasing the Tendo MyUnit.

The purpose of the manual is to guide you through the first basic steps necessary to set up the system and give you an idea of how to begin.

What comes as a part of the Tendo MyUnit?

- Wireless Sensor Unit
- Rechargeable Batteries (4x of AA size, type NiMH)
- Built-in Battery Charger
- AC / DC Power Supply Adapter
- User Manual
- Carrying Bag
- Tripod
- Mobile Phone Holder with a Magnet

What is optional?

- Tendo Bluetooth Set - wireless connection to a computer
- Tendo Unit computer software

1. Technical description

The system consists of 2 functional components: Wireless Sensor Unit and Tendo MyUnit App (running on iOS Mobile Phones).

Mobile phone is not included in the package

| WIRELESS SENSOR UNIT | TENDO MyUnit APP |

Standard

WL

The Wireless Sensor Unit is connected to a weight by a kevlar cord with a velcro strap.

In weight exercises, muscles lift a mass *m* by applying a force *F* at a velocity *v*, produces average power *P*.

$$F = m \times g$$
$$P = F \times v$$

The system measures vertical Average and Peak Velocity of the weight lifted.

By using the known mass, the system also calculates Average Power, Peak Power and Peak Force in the concentric phase of weight training.

To calculate Peak Power and Peak Force, the system uses equation:

P = F x v , where **F = (m x g) + (m x a) ,** g-acceleration of gravity and a-acceleration

The system also measures downward average velocity; rest time between reps or sets; displacement; concentric, eccentric and total work time.

2 Wireless Sensor Unit

2.1 Battery Installation

New rechargeable batteries are pre-installed in a battery compartment.

Before the sensor unit is operated, it is necessary to pull out a safety plastic strap from the battery compartment to release the battery contact. The rechargeable batteries come pre-charged, ready for use.

The Tendo MyUnit has a built-in battery charger. To charge the batteries, use the AC / DC power adapter (included).

Power supply input adapter: 110 - 230V AC, 50-60 Hz Output: 12V DC, 1.2A

*** **Use only NiMH, AA size rechargeable batteries, 2000 - 2500 mAh!** ***

2.2 Battery status indication

If the batteries need to be charged, the sensor unit will lit red light.

Tendo MyUnit also displays the sensor unit's current battery charge in the upper left corner of the app's main window.

2.3 How to charge the batteries

1. Connect the power adapter to 110 - 230V AC power outlet
2. Plug the connector into the Power Supply Connector on the front panel of the Wireless Sensor Unit

Battery status indication while charging the sensor unit:

- **red light** indicates low voltage —> batteries need to be charged
- **red light** —> also accompanies the charging process
- **once the red light is turned off** the batteries are sufficiently charged —> end the charging process

2.4 How to change the batteries

1. Open the battery compartment
2. Remove old batteries
3. Referring to the insert drawing, place the batteries into the compartment. Press 4 batteries into the battery compartment. MAKE SURE that the positive ends of the batteries (marked "+" are touching the springs (marked "+") in the battery compartment.

*** **Use only NiMH, AA size rechargeable batteries, 2000 - 2500 mAh!** ***

If the batteries are correctly positioned in the battery compartment, when turned on, the sensor unit illuminates with a pulsing blue light.

If the sensor unit is turned on and is lit with red light (low battery charge), the batteries need charging.

!! If the sensor unit does not lit up, please check the polarity of inserted batteries !!

!! Tendo MyUnit can also be used when the batteries are charging !!

2.5 How to attach Sensor Unit to barbells or exercise machines?

Fasten the sensor unit cord to a bar, dumbbell or top weight of a weight stack with the Velcro strap. Position the sensor, so the cord's trajectory will be perpendicular to the floor when performing the exercise. See examples below.
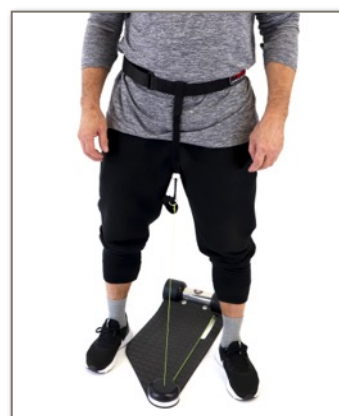
Where to attach Sensor Unit?
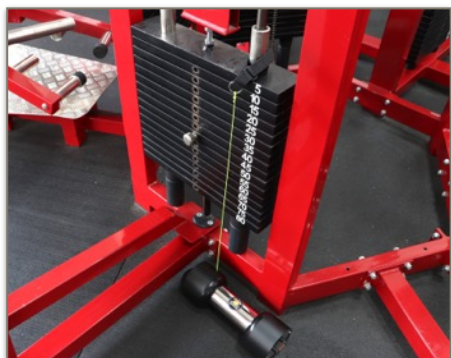

Outer end of bar

Grip section

Waist belt

Weight stack

Leg press machine

Note:

Suppose the sensor unit was turned on and paired with the Tendo MyUnit app before you attached the cord to the barbell. In that case, you can delete this repetition (caused by pulling the cord upwards) using the Delete rep command in the application.

3 Tendo MyUnit Application

3.1 Connecting wireless sensor with Tendo MyUnit App

1. Download the iOS app, TENDO MyUnit, from Apple Store
2. Turn on the Wireless Sensor Unit
-   To turn ON the sensor unit, press and hold the button for 3 seconds until you hear a beep
-   To turn OFF the sensor unit, press and hold the button for 3 seconds until you hear a beep
3. Make sure that the Wireless Sensor Unit and the Bluetooth on your mobile phone are turned on.
4. Launch TENDO MyUnit app and click "*OFFLINE, tap to connect*"
5. When the available Wireless Sensor Units are displayed, select the Sensor Unit to which you want to connect. By clicking on the chosen sensor unit, the selected unit will pair the app with the unit.

ON / OFF button
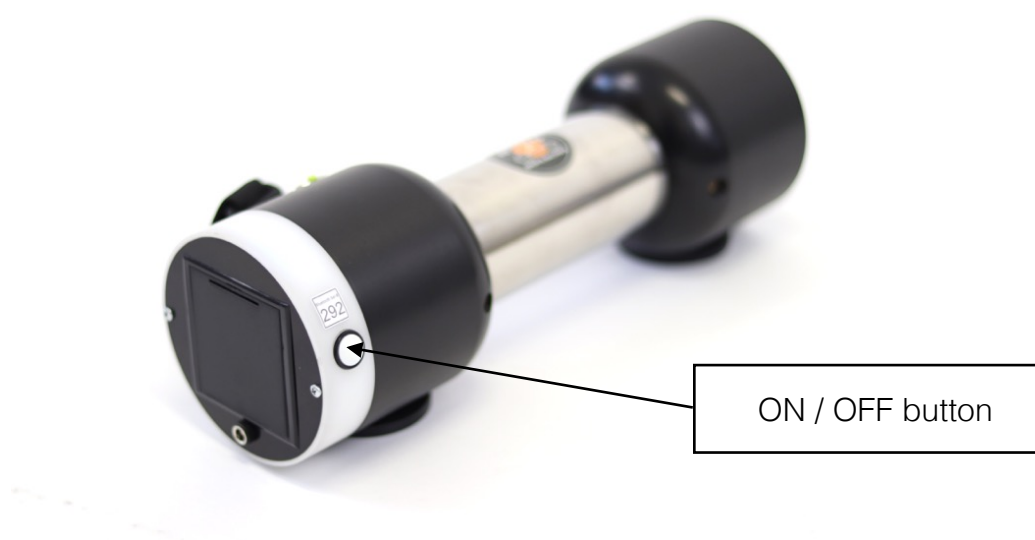
LED light indication of connection on Tendo Wireless Sensor:

-   **pulsing blue light** = searching for bluetooth connection with Tendo MyUnit App
-   **steady blue light** = the sensor unit is successfully connected with Tendo MyUnit App
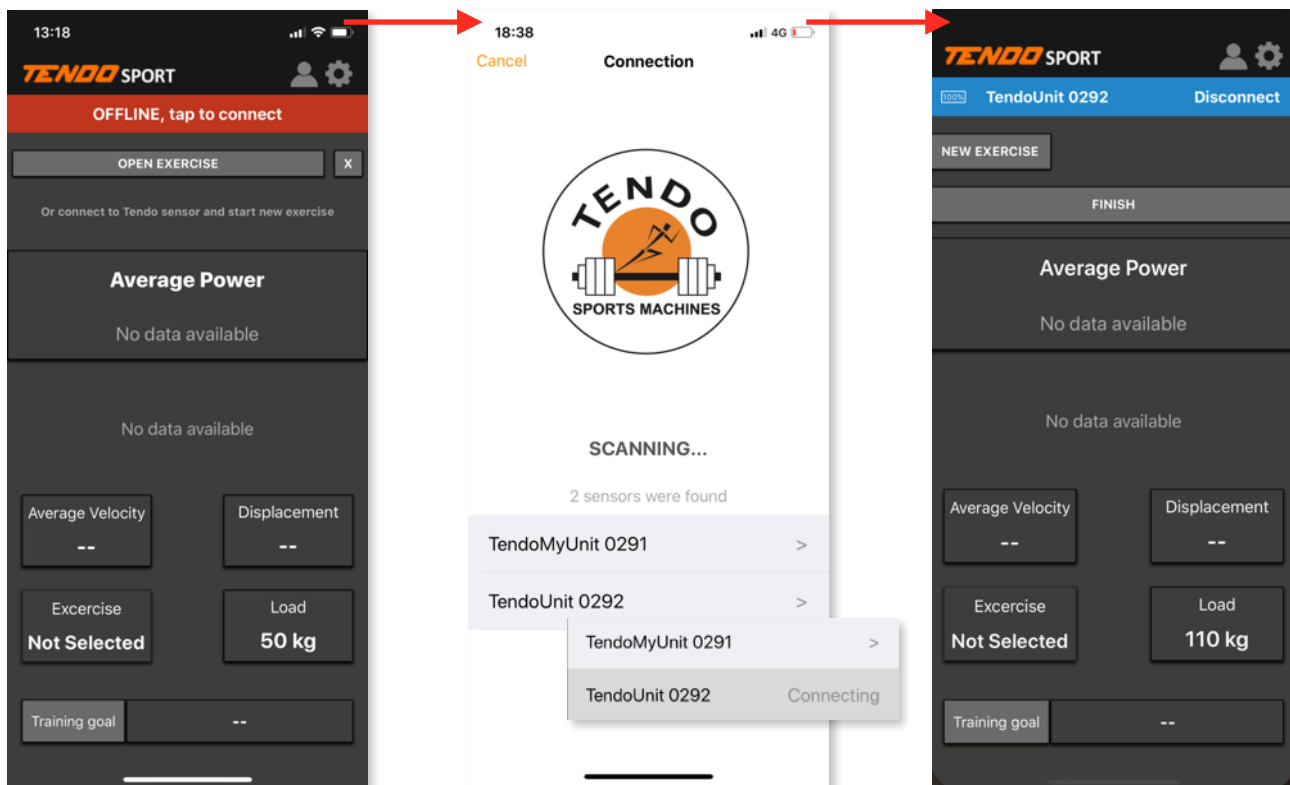
The most common mistakes:

- The Bluetooth on your iOS device is turned off

- The Wireless Sensor Unit is turned off

- The Wireless Sensor has low battery charge

- The Tendo MyUnit app is paired with another Wireless Sensor Unit

Switching to another Wireless Tendo Sensor:

If you want to connect another Wireless Tendo Sensor, you must first disconnect the currently connected Wireless Tendo Sensor (by clicking "Disconnect").

If data has already been measured, the "Disconnect" command does not clear the data from the Tendo MyUnit app; it just disconnects the app from the Wireless Tendo Unit. If you do not delete the measured data, you will be able to continue the exercise series after reconnecting to the original Tendo unit.

After the connection is established between the Wireless Sensor Unit and the Tendo MyUnit App, the system is ready for measurement.

3.2 How Tendo MyUnit app works

After each repetition (upward pull of the cable), the application displays:

- Average Power, Peak Power, Partial Average Power, Average Velocity, Peak Velocity, Peak Force and Percent value of the best repetition in particular set in the main numerical panel
- Total / Eccentric / Concentric Work Time, Eccentric Average Velocity, Average Velocity, Peak Velocity in the auxiliary window
- Repetition number, Rest Time, Displacement
- Percentage of the best rep

* *Preset parameter (AVG Power, Peak Power, AVG Velocity, Peak Velocity, Partial AVG Power, Peak Force) in the first repetition will be set as 100%. Subsequent reps will be displayed as a percentage of this maximum. However, should any subsequent repetition be higher than the previous 100%, it will be considered the new 100%. All subsequent reps will be compared with the new 100%.*

* *If there is a multi-weight exercise set (different weight setting without resetting between weight change), all reps will be compared with the absolute best repetition.*

3.2.1 What is measured and calculated

- **Average power measured in Watts [W]** – for the full range of motion.
- **Partial average power measured in Watts [W]** – average power for the limited (pre-set) range of motion from 0 to 100% of range of motion.
- **Peak power measured in Watts [W]** – the highest possible power in the full range of motion.
- **Average velocity measured in meter per second [m/s]** – for the full range of motion.
- **Peak velocity measured in meter per second [m/s]** – the highest possible speed.
- **Peak Force measured in Newtons [N]** – maximum force for the limited (pre-set) range of motion from 0 to 100% of the range of motion.
- Microcomputer also measures **a rest time between reps or sets measured in seconds.**
- **Eccentric average velocity** (average velocity in downward movement) measured in meter per second **[m/s]**
- **Eccentric, concentric and total work time**
- **Displacement**

4 Tendo MyUnit Settings

4.1 Setting the Wireless Sensor Unit in Tendo MyUnit App

If you change the Wireless Sensor Unit's settings while the Tendo MyUnit is offline (e.i, the Wireless Sensor Unit is not yet connected to the Tendo MyUnit app), the sensor unit changes its settings once the application is connected to the sensor unit.

If the Tendo MyUnit app is already connected to the Wireless Sensor Unit, the sensor unit's settings change immediately.

Both the Tendo MyUnit app and the Wireless Sensor Unit retain the settings in memory, i.e. even after the unit is turned off and the application is closed and restarted, the last saved setting remains.

Click the "*Settings icon*" in the app, located in the top right corner of the screen.
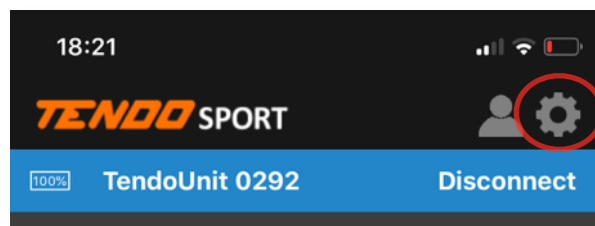
Parameters you can set:

- ***Audio Signals***: Set your training range, to signalise you your lack of intent, fatigue and when a new maximum is reached

  Minimum training range - The lower limit of the audio signal

  Maximum training range - The upper limit of the audio signal

- ***Minimum movement threshold*** - Minimum length of movement of the sensor unit's cord, necessary for the system to display the measurement. Movements with a range of motion less than the chosen value will not be displayed. Such as movements involving taking the weight of the rack or the floor.

- ***Maximum work rest time between reps*** - It is a minimum length of movement of the sensor unit's cord, necessary for the system to display the measurement. The movements with a range of motion less than the chosen value will not be displayed. Such as movements involving taking the weight of the rack or the floor.

- ***Range for partial AVG Power & Peak Force*** - Measure a limited range of motion for calculation of partial average power and peak force. E.g. to emphasise Rate of Force Development (RFD)

- ***Imperial Units for load (lbs)*** - Turn ON/OFF weight input in pounds

4.2 Audio Signals - optimal training range

Maximum training range - The upper limit of the audio signal = any value of the selected parameter (power, velocity, force) higher than the set percentage of the upper limit will be indicated by a beep of higher intensity. At the same time, the colour of the column in the bar graph and the main numerical panel will be yellow.

Minimum training range - The lower limit of the audio signal = any value of the selected parameter (power, velocity, force) below the set percentage of the lower limit will be indicated by a beep of lower intensity. At the same time the colour of the column in the bar graph and the main numerical panel will be red.

All the measurements falling in the interval between the upper and lower limits will not be indicated with audio signals. Only the colour of the columns in the bar graph and the main numerical panel will be changed to blue. It will mean that you are keeping up with your prescribed training range.

Setting range:

Lower Limit ranges from 0% to Upper Limit.

Upper Limit ranges from 100% to Lower Limit.
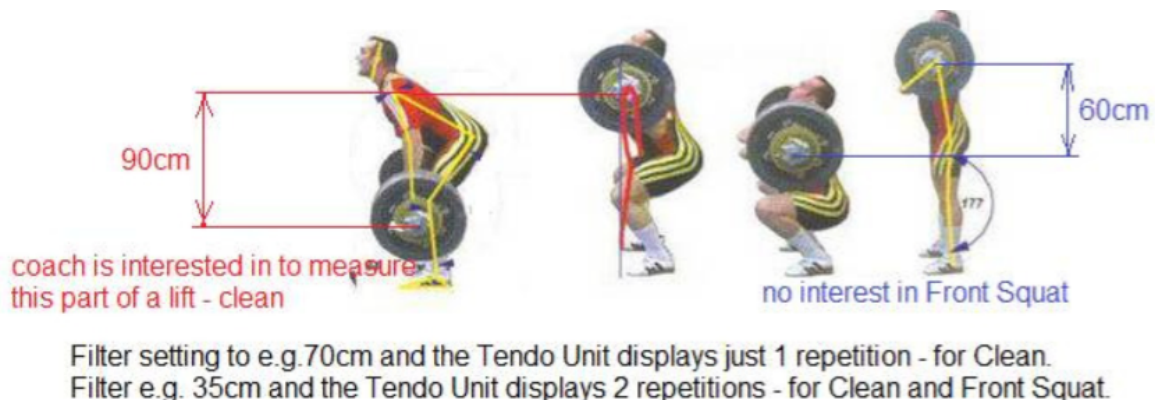
Recommended settings:

- *Developing fast muscle fibres — For training of Speed and Power:*
  - Maximum training range: 100%
    - if set to 100%, each new maximum value (100%) will be indicated by a beep.
  - Minimum training range: 90%

- *Developing slow muscle fibres:*
  - Maximum training ranger: 60%
  - Minimum training range: 20%

Use the slider to change the settings.

4.3 Minimum Movement Threshold (MMT)

The purpose of the MMT is to hide unwanted movements. All the movements with a range of motion less than the set value of the MMT will not be shown in the Tendo MyUnit App.
For instance: taking a barbell from a rack, or short movement while holding a barbell, etc.

Filter setting to e.g.70cm and the Tendo Unit displays just 1 repetition - for Clean.
Filter e.g. 35cm and the Tendo Unit displays 2 repetitions - for Clean and Front Squat.

Setting range - from 0 to 150 cm

Use the slider to change settings.

Minimum Movement Threshold is a limit from 0 to a certain predefined value of the range of motion in centimetres (10 centimetres = 0.1 meters), **which Tendo MyUnit does not show**.
It means the exercise range of motion has to be longer than the MMT value to be shown in the Tendo MyUnit App.

- For **most of the exercises** we suggest to set MMT to 35 cm.
- For **exercises with very short amplitude** (e.g. toe raise) we suggest to set MMT to 10 cm.

- For **exercises with very long range** (Olympic lifting exercises) we suggest to set MMT to more than 80 cm.

The Tendo MyUnit system measures from the lowest position to the top. The MMT does not have any influence on the measured range. The MMT just causes to not display measurement results for motions shorter than the MMT setting value.

Remember: **The value of MMT has to be set less than the length of the motion.**
It is essential to set the right value of the MMT for weightlifting exercises. (see table 1)

Table 1

Exercise name	Power Snatch	Power Clean	Jerk	Clean Pull	Snatch Pull	Hang Clean	Hang Snatch
Filter value	70-90 cm	70-90 cm	30-40 cm	70-90 cm	70-90 cm	30-40 cm	30-40 cm

Exercise name	Squat	Bench press	Toe raise				
Filter value	30-40 cm	30-35 cm	8-12 cm				

4.4 Maximum Work Rest Time between reps

It is the maximum rest period between repetitions so that the application does not end the exercise sets to calculate specific parameters related to the exercise sets. When the set time is exceeded, the application evaluates the repetition sets as the end of the training series and displays the Total Work Time in the training set.

It is necessary to separate the sets by the athlete's Rest Time to distinguish the individual exercise series. After exceeding the set maximum value of Rest Time between repetitions, the application ends the measurement of (concentric, eccentric and total) Work Time.

4.5 Range for Partial AVG Power & Peak Force

Partial Average Power is a value of average power measured from the start (0) to a certain predefined per cent value of the range of motion. The default setting is 50%.

Setting range - from 1 to 100%

Peak Force measurement has the same range setting as Partial Avg. Power.

It means the system finds peak force for setting range, from 0 to a certain predefined per cent value of the range of motion. The default setting is 50%.

Use the slider to change settings.

Why should you measure Partial Average Power?

Sometimes average or peak power is not sufficient parameters for assessing the athlete's qualities in weight training. Many athletes, to reach maximum power value try to accelerate at the end of the movement. This way, athletes get high average and peak power values, but those parameters are misrepresenting the actual results. Said, being fast at the end of a movement is too late. These athletes do have high average and peak power values but with a low rate of force development. The rate of force development is a crucial factor in sports performance where explosiveness is required. The partial average power will help you emphasise the rate of force development in your training and ensure explosive power development.
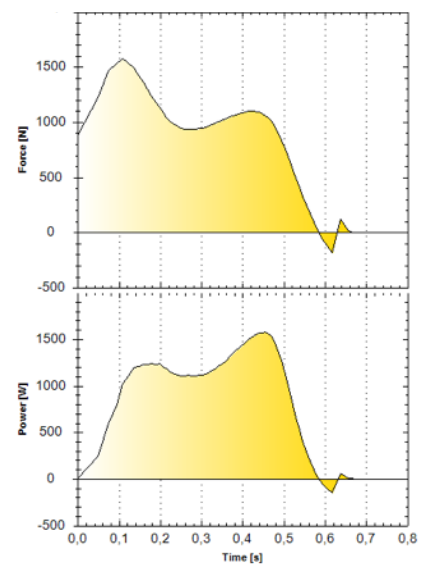
Example – *Back Squat measured on waist*

|	Ice hockey player	Olympic weightlifter
Body weight	100kg	100kg
Vertical jump height	50cm	56cm
1RM Back Squat	160kg	230kg
Average power	954W	975W
Peak Power	2316W	1579W
Partial Avg Power (40%)	803W	1073W
Peak Force up to 0.25	1320N/0.15	1574N/0.115
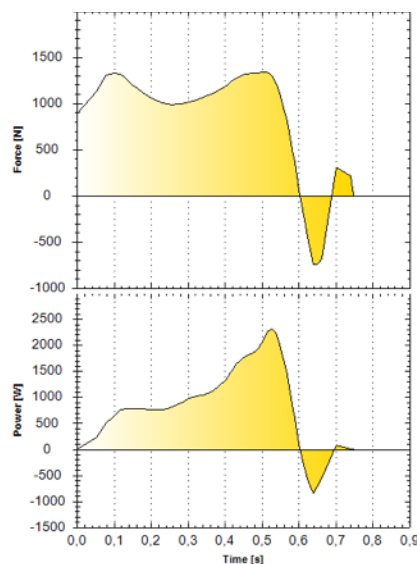
Ice Hockey player   **Olympic Weightlifter**

Why should you adjust % Range for Peak Force measurement?

In some exercises, there can be two positions for peak force — one at the beginning of the movement and another at the end. To filter out the undesirable peak at the end of the movement, shorten the range for the Peak Force measurement.
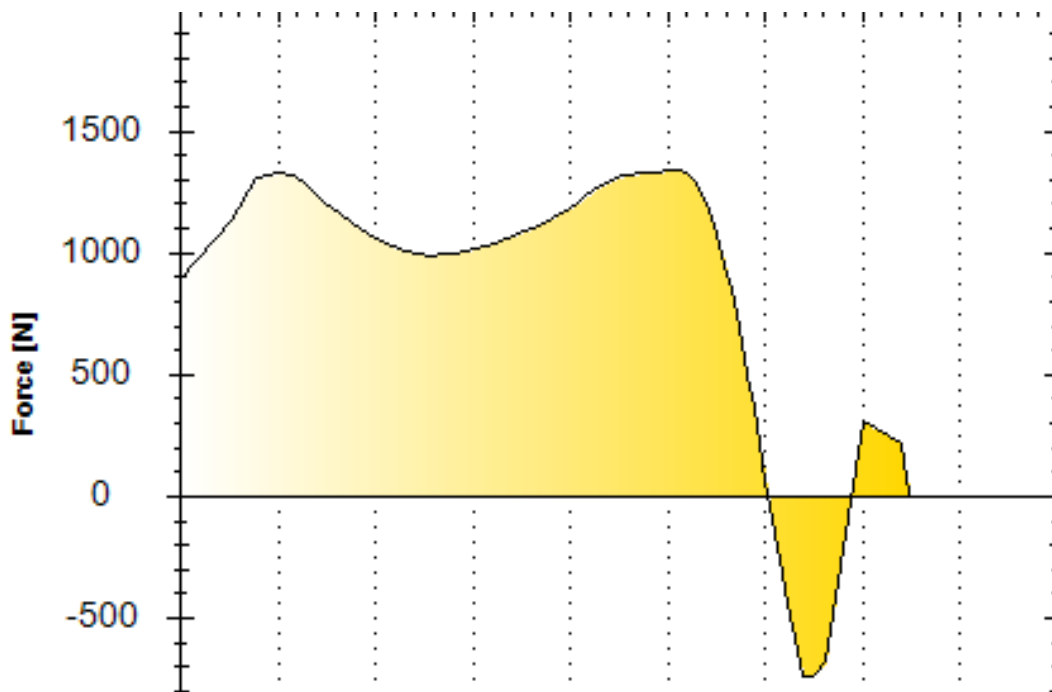
Force x time graph for back squat

4.6 IMPERIAL UNITS IN LBS

The Tendo MyUnit enables to set the weight in pounds as well.

You can change the setting by tapping the slider.

4.7 FACTORY SETTING

Load: 50kg

Filter: 35 cm

Maximum training range: 100%

Minimum training range: 90%

Partial Average Power and Peak Force range: 50%

Imperial Units for load: OFF

5 What does Tendo MyUnit display?

Main Numerical Panel

Bar Graph Panel

Auxiliary Results Window

5.1 Main Numerical Panel

The main numerical panel displays the measured values according to a selected parameter (*Average Power, Peak Power, Peak Force, Partial AVG Power, Average Velocity, Peak Velocity*).

The colour of the main numerical panel depends on the Audio Signal setting in the App Settings. The panel matches the colour of the column representing the particular rep in the bar graph.
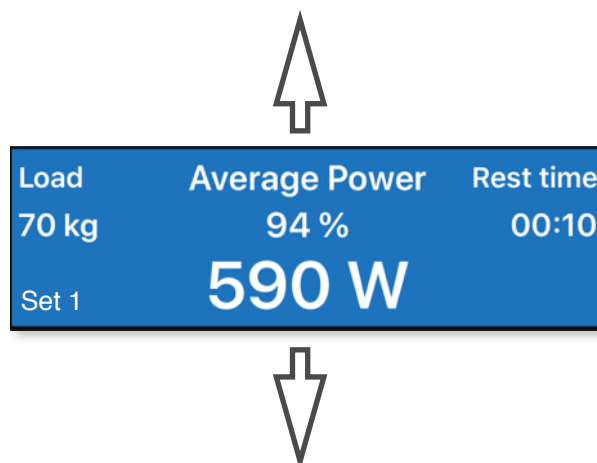
In the middle of the panel, the app displays the selected parameter and its percentage compared to the best rep in the set.

The application displays the following parameters:

- Peak Power
- Average Power
- Partial Average Power
- Peak Velocity
- Average Velocity
- Peak Force

You can change the displayed parameter by moving it up or down on the numeric panel.

Load:

The left part of the main numerical panel shows the current weight for the displayed repetition. Weight settings can also be changed during a workout series without deleting the data already loaded. If the weight setting changes during the workout series, subsequent reps will be displayed with the new weight.

* *The set weight and the displayed weight in the main numerical panel may not be the same. The weight displayed in the main numerical panel is compatible with the repetition displayed.* *

Rest Time:

If the Tendo MyUnit App is connected to a Wireless Sensor Unit and a repetition was performed, the time of subsequent sensor unit inactivity will be measured, representing the Rest Time between reps or sets.

Rest Time is not saved, only displayed when the app is connected to a Wireless Sensor Unit.

The Rest Time is automatically reset whenever the sensor cable is active.

Set number:

When the rest time between reps is exceeded, the app evaluates the repetition set as the end of the training set and displays the Total Work Time in the training set. If the exercise is not changed, the app will consider the sensor cord's subsequent movement as a new set of the same exercise.

The set number is displayed in the lower-left corner of the main numerical panel.
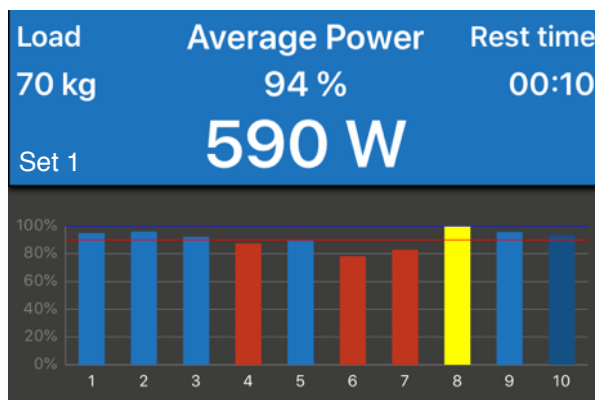
You can scroll through the repetitions by swiping to the right or left on the main numerical panel or the bar graph.

The number of the currently displayed repetition is displayed above the main numerical panel.

E.g. 10/12 means the tenth repetition of a total of 12 reps.
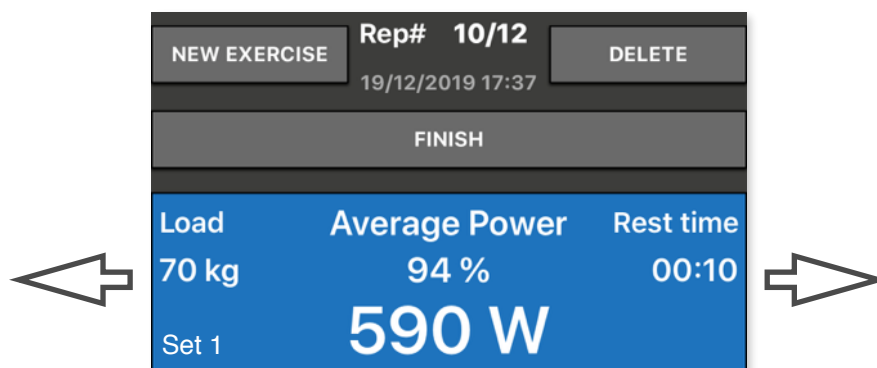
5.2 Bar Graph Panel

The coloured columns show the percentage of the best repetition for the displayed parameter in the main numerical panel.

The colour of the columns and the main numerical panel depend on the audio signal range (training range) set in the Settings.

Yellow: each repetition for the selected parameter with a percentage value greater than the upper limit of the audio signal (**reached a new maximum**).

Blue: each repetition for the selected parameter with a percentage value between the upper and lower limits of the audio signal (**in the optimal training range**).

Red: each repetition for the selected parameter with a percentage value lower than the lower limit of the audio signal (**below the training range**).

The currently displayed repetition is marked in a **darker colour** in the bar graph.

5.3 Auxiliary Results Window

Use the Auxiliary Results window to get additional information.

If you have in the main numerical panel set, e.g. Average Power, and you are interested in Average Velocity too, select this parameter in the pop-up window. You do not have to switch between these parameters in the main numerical panel.

By tapping the Auxiliary Results window, a pop-up window opens with options to select an auxiliary parameter.
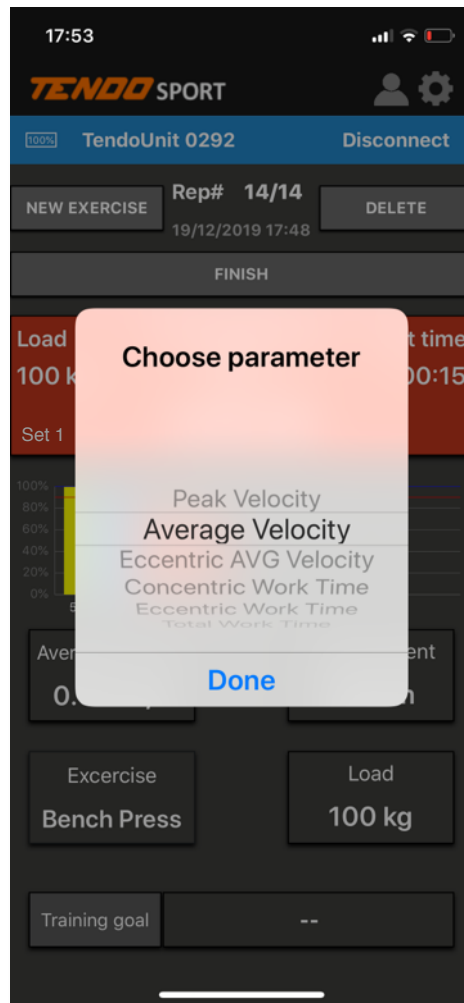
List of parameters in the Auxiliary Results window:

- *Peak Velocity*

- *Average Velocity*

- *Eccentric Average Velocity* = average downward speed

- *Concentric Work Time* = the time measured when moving upwards. When performing multiple repetitions in one exercise set, it is the sum of the times of each repetition from the first to the current repetition.

- *Eccentric Work Time* = the time measured when moving downwards. When performing multiple reps in one training set, it is the sum of the repetition times from the first to the current repetition.

- *Total Work Time* = the time measured when moving up and down, i.e. performing the full exercise rep. When performing multiple reps in one workout series, this is the sum of the repetition times from the first to the current repetition.

Select "*Done*" to confirm the auxiliary parameter.

5.4 Displacement

The Displacement window shows the length of the movement for the exercise being measured.

5.5 Load
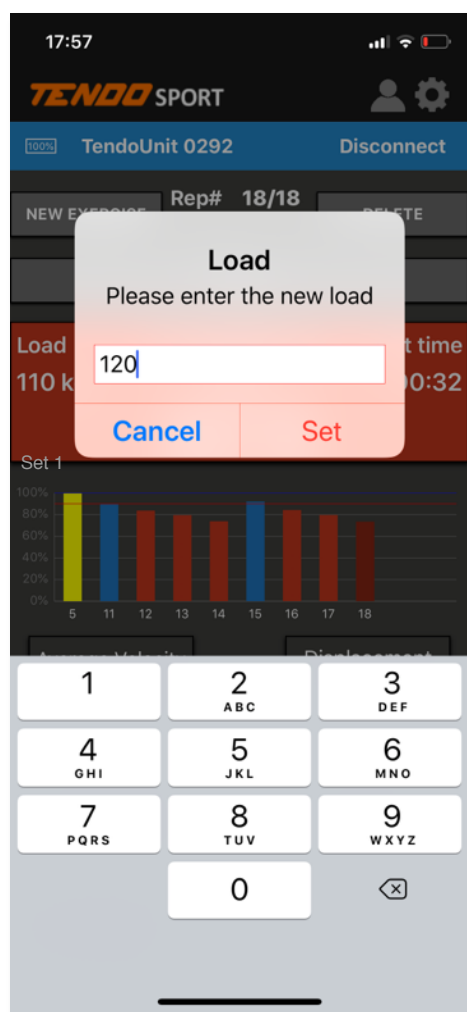
In the Load window you set the weight of the load to be used.

* If you do not set the correct weight, the measurement results for Power and Force will not be correct! *

Note:

If you do not enter the correct weight, export the activity to the Tendo Unit computer software. It is possible to change the weight in the computer program. The program recalculates all values with the new weight. *(see Tendo Unit software manual).*

To change the weight setting, click the Load window. The new weight setting window opens. Once you enter a new weight, tap "*Set*" to set the new weight.

The "*Cancel*" command cancels the weight adjustment mode without changes and returns you to the main application window.

5.6 Exercise

By tapping on the Exercise, a new page opens with a list of exercises divided into two categories:

a) **Standard exercises** = the most common weightlifting exercises

b) **Olympic style Weight-lifts** = exercises for Olympic Weightlifting

c) **Not Selected** = (N/A) without the selection of an exercise

 By tapping on a particular category, the exercise list opens.

In the selected category, you create new exercises by tapping "*Add*". To save the new exercise name, use the "*Save*" command. You can also add a note and an image to each exercise name by touching the camera icon.

By moving the row of a particular exercise to the left, "*Info*" and "Delete" options appear (*but only if the user has added the exercise*). Click "*Info*" to open an exercise profile where you can save a short exercise description and add a picture.

The preset exercises stored in the application cannot be deleted, or their name changed. However, the application will allow you to change the exercise's image and add a description of the exercise.

Only exercises added to the database by the user can be deleted.

Note:

If you want to save your training activity, you must select the exercise name so that the application identifies the activity in the database.

5.7 Training Goal

To enter a training goal, you must first select an exercise.

If you have selected the exercise, you can tap the "*Training goal*" window to choose your training goal. By tapping the "*Training goal*" window, a training goal menu opens with options:

a) **Not Selected** - without a training goal

b) **Power** - training goal aimed at development of maximal power

c) **Maximal Strength** - training goal aimed at development of maximal strength

d) **Hypertrophy** - training goal aimed at development of muscle mass growth of fast twitch muscle fibres

e) **Muscular Endurance** - training goal aimed at development of anaerobic endurance

f) **Velocity Based Training (VBT)** - special type of training in which the training load is determined based on the average barbell speed. By Tapping "*Velocity Based Training*", VBT menu opens. Choose VBT training (***Absolute Strength, Accelerative Strength, Strength-Speed, Speed-Strength, Starting Strength***) according to your training goal.

When the training goal is selected, the settings of the Tendo MyUnit's settings adjust accordingly. Eg. The main numerical panel will display Average Velocity for VBT, or Peak Velocity for Olympic style Weight-lifts. Audio signals signalising the correct training range will match the selected training goal as well.

If you are unable to achieve the number of repetitions in the training set according to the selected training goal, the application notifies you what to do to achieve your training goal.

You can set the Tendo MyUnit app and the Wireless Sensor Unit even when they are not connected.

Note:

If you are no longer achieving the training intensity according to your training range in the final reps of your training set *(the columns in the bar graph are red)*, it is necessary to end the set before reaching your training goal and adjust the load. Adjust the load so you will be able to perform the full number of reps as recommended by selected training goal.

Note:

The goal is to achieve the intensity of the exercise so that all the repetitions performed in the bar graph are blue.

TOO LIGHT   TOO HEAVY   PERFECT!

a) Not Selected

All preset values can be changed by the user according to his own needs.

For other training goals, it is not possible to change the audio signal (training range) settings. However, all other settings can be customised.

b) Power

For all exercises except Olympic-style Weight-lifts.

- The Average Power parameter will be preset in the main numerical panel.
- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%
- 5 - 8 repetitions in the set for the Power training goal are recommended.

   If the user makes more than 8 repetitions in the set, the application will display an "*Increase load for Power training goal*" message when the series is over.

   If you do less than 5 reps, the application will display a "*Decrease load for Power training goal*" message. The announcement is cancelled automatically by starting another rep.

c) Maximal Strength

For all exercises except Olympic-style Weight-lifts.

- The Average Power parameter will be preset in the main numerical panel.
- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%
- The number of repetitions in the set for the training goal "*Maximal Strength*" is 2-3.

   If you make more than 4 repetitions in the set, the application will display an "*Increase load for Maximal Strength training goal*" message.

   If you do only 1 repetition, the application will display a "*Decrease load for Maximal Strength training goal*".

d) Hypertrophy

For all exercises except Olympic-style Weight-lifts.

- The Average Power parameter will be preset in the main numerical panel.

- The Audio Signals will be preset to minimum training range 80% and maximum training range 100%.

- The Minimum Movement Threshold will be 35 cm.

- The Maximum work rest time between reps will be 15s.

- The range for Partial Average Power and Peak Force will be 50%

- The number of repetitions in the set is 8-12.

  If you make more than 12 repetitions in the set, the application will display an "*Increase load for Hypertrophy training goal*" message.

  If you make less than 8 repetitions, the application will display a "*Decrease load for Hypertrophy training goal*".

e) Muscular Endurance

For all exercises.

- The Average Power parameter will be preset in the main numerical panel.

- The Audio Signals will be preset to minimum training range 80% and maximum training range 100%.

- The Minimum Movement Threshold will be 35 cm.

- The Maximum work rest time between reps will be 5s - **this cannot be changed**

- The range for Partial Average Power and Peak Force will be 50%

- The post-series announcement evaluation will be based on the Total work time (Total work time over 20s)

- If the Total Work Time for the training set is less than the 20s, the app will display a notification "*Decrease load and increase Concentric work time for Muscular Endurance training goal*" (i.e. reduce the load and increase Total work time).

- The set will be terminated if the time for "Maximum work-rest time" exceeds 5s. It means that if you rest for more than 5s between reps, the app will consider the set to be completed and displays the Total Work time.

f) Velocity Based Training (VBT)

For all exercises except Olympic-style Weight-lifts.

- The Average Power parameter will be preset in the main numerical panel.

1. Absolute Strength: <0.5 m/s

- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.

- The Minimum Movement Threshold will be 35 cm.

- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%

2. Accelerative Strength: 0.75 - 0.5 m/s

- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%

3. Strength-Speed: 1 - 0.75 m/s

- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%

4. Speed-Strength: 1.3 - 1 m/s

- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%

5. Starting Strength: > 1.3 m/s

- The Audio Signals will be preset to minimum training range 90% and maximum training range 100%.
- The Minimum Movement Threshold will be 35 cm.
- The Maximum work rest time between reps will be 15s.
- The range for Partial Average Power and Peak Force will be 50%

Note:

Training goal for Olympic-style Weight-lifts:

After selecting the "Olympic-style Weight-lifts" exercises, no training goal is displayed. For these exercises, Peak Velocity is preset in the main numerical panel.
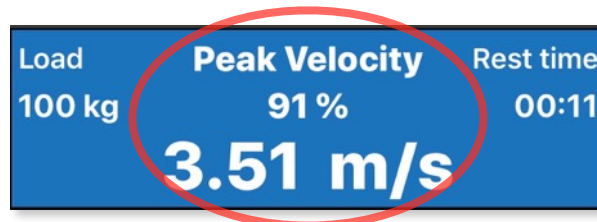
5.8 Command "Delete"
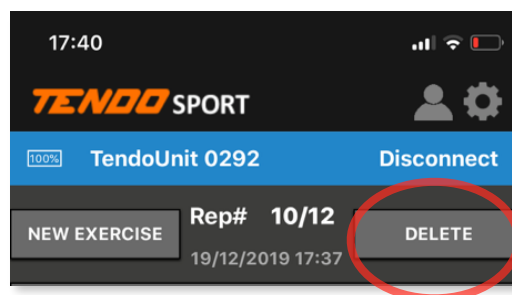
Delete a whole training activity or a selected repetition.

If you have performed at least one rep, the application displays the "*Delete*" command in the top right corner.

Tap "*Delete*" to see the Delete menu:

a) **Delete selected rep** - This command clears the current repetition displayed in the main numerical panel

b) **Delete All reps** - Delete all reps

6 Saving an activity to MyUnit memory

6.1 New Activity

The "*New Activity*" command resets all loaded data (if any) and allows you to start a new activity. Tapping on "*New Activity*" will automatically save the previously measured data.

The exercise name and the settings will remain the same.
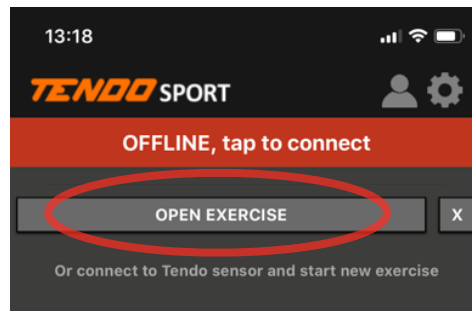
6.2 Finish

The "*Finish*" command saves the measured data (if any) and switches the application to an OFFLINE mode (e.i. *MyUnit app is disconnected from the Wireless Sensor Unit*). All data will be cleared from the screen. While in the OFFLINE mode, it will be possible to open saved files.

The values in Settings remain unchanged - as they were saved previously.

Note:

If you want to disconnect the application from the Wireless Sensor Unit and, for example, connect the application to another Wireless Sensor Unit, you can do so by clicking "*Disconnect".*
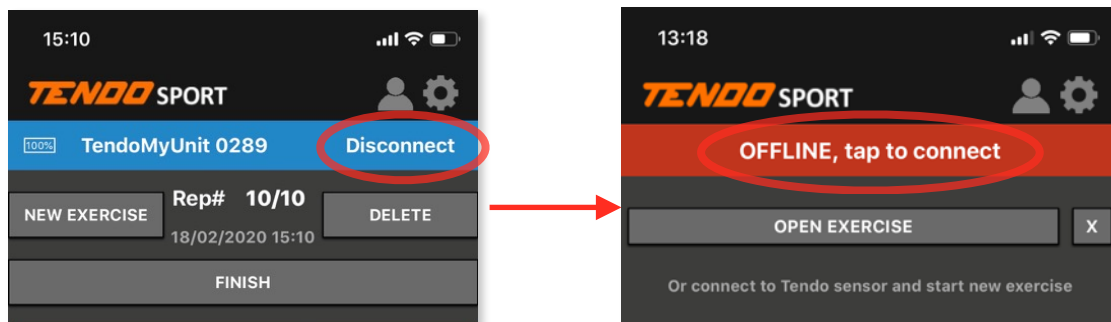
Then tap "*OFFLINE, tap to connect*" to open a list of all available Wireless Sensor Units. Tap on your chosen sensor unit (*the serial number of your Wireless Sensor Unit has to match the number in the app) to pair the application with the selected sensor*).

7 Opening saved activities / exercises

7.1 Via "Open Exercise" Search

By tapping the "*Open Exercise*", a "*Search Exercise*" window opens. Here you can filter out your activities based on a exercise type, parameter, date and load.

If no selection was made, by clicking "*Search*", the application displays all saved activities from the newest to the oldest.

Suppose you **set the filter according to your selected exercise and parameter.** In that case, the application displays **only your chosen exercise activities** and the best value of the selected parameter as **"Personal Best".**

If you mark a specific activity, the application will also display "***Training Best***" in the yellow table (*Table of Achievements*).
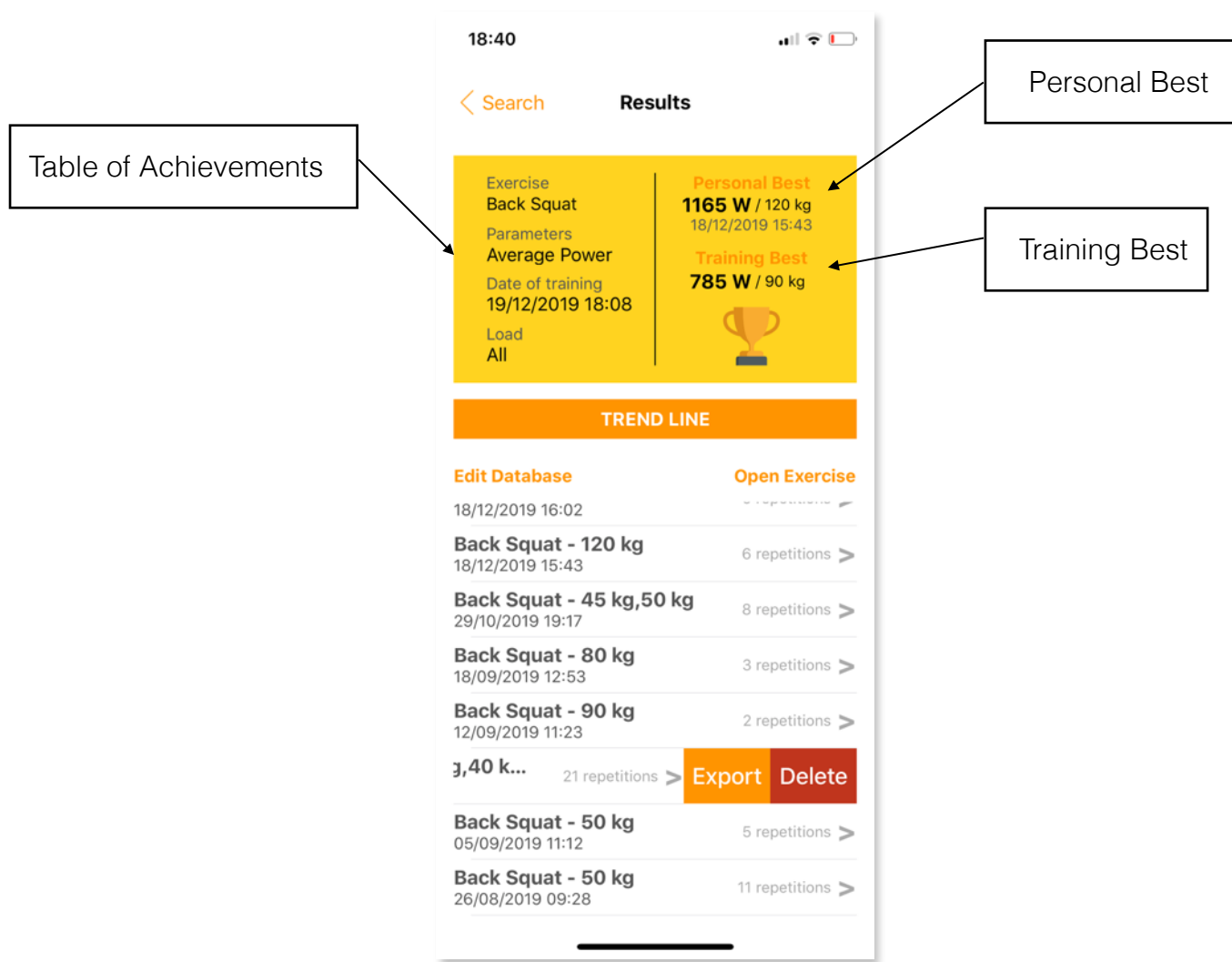
By sliding the row of the selected activity to the left, "*Export"* and "*Delete*" commands appear.

a) **Export** - allows you to send the selected file according to your choice in the menu

b) **Delete** - deletes the selected activity

If you have selected the exercise and parameter in the search filter, the application will create a trend graph for you by tapping "**Trend Line**" command. Here you can monitor your progress over time for the particular exercise and parameter.

By selecting a particular activity from the list and clicking "**Open Exercise**", the application opens the chosen activity in the main window with all data measured for every rep. Here you can review your exercise sets and have a closer look at each rep.

!! Data of saved activities cannot be changed !!
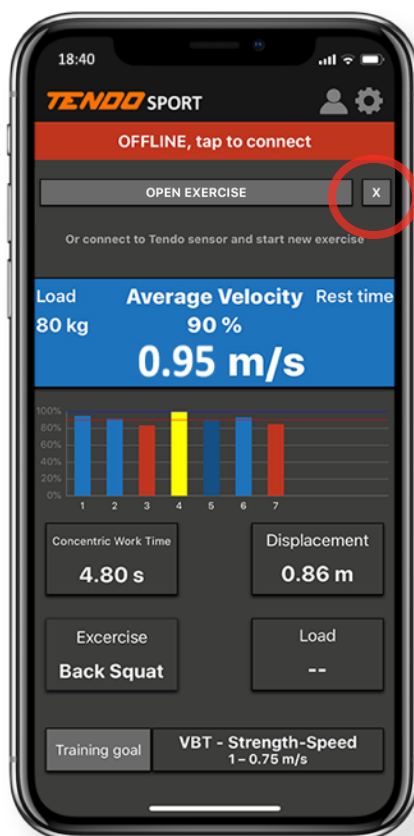
To clear the data from the main window in OFFLINE mode, tap *"X",* located next to the *"Open Exercises"* button. The *"Close Training"* window opens. Click *"Confirm"* to close the loaded training or click *"Cancel" t*o go back to the main window with loaded data without any changes.

### 7.1.1 Edit database and share training files

The "*Edit Database*" command allows you to select and mark multiple activities you want to delete ("*Delete*") or send ("*Export*").

"*Select All*" selects all activities in the database. "*Deselect All* "clears the original selection.

Note:

When deleting activities, be careful not to delete an activity that you do not want to delete! It is not possible to recover a once deleted activity!

7.2 Via User Profile
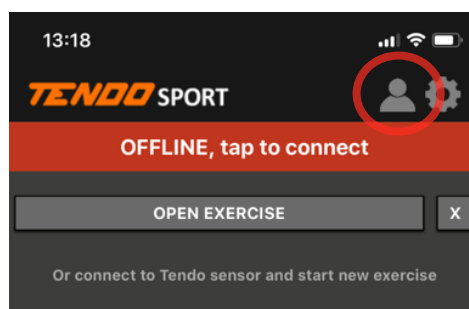
By tapping the *Profile* icon, a new page opens. Here you can set your profile and see your results.

Tap "*Edit*". "*Edit*" and "*Delete profile*" command appear.
a) **Edit** - opens new window where you can update your profile. Set your name, surname, add a short note and a profile picture. Tap "Save" to save the changes.
b) **Delete Profile** - name, surname, note and profile photo will be reset.

In the **Profile page**, you can see your photo, name, surname, short personal note, total number of trainings, your training results together with table of your achievements and Trend Line.

Tap "*Change Filter*". "*Search Exercise*" window opens. Here you can filter out your activities based on the exercise type, parameter, date and weight (s*ee more details on Training Results in section 7.1*).
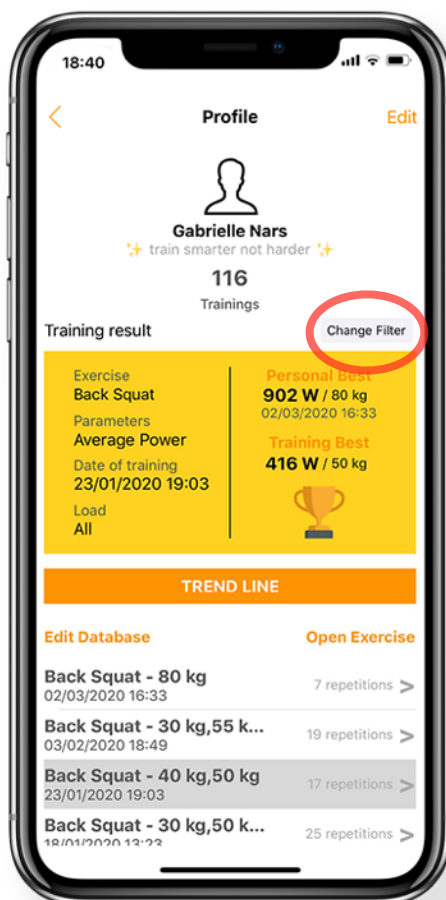
8 Connection to computer

The Wireless Sensor Units can be wirelessly connected to a computer via the Tendo Bluetooth.

‼ Tendo Bluetooth must have the same serial number as the Wireless Sensor Unit ‼
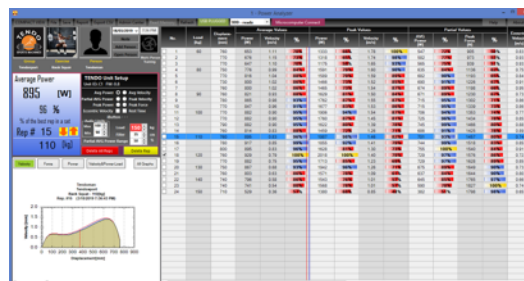
Tendo Unit computer software and Tendo Bluetooth is not included in the package and is an additional option for this model. Please contact us or your seller for more information.

9 MAINTENANCE and TROUBLE-SHOOTING

TENDO Wireless Sensor Unit can be cleaned with a soft, damp cloth. Avoid spilling liquid on the sensor unit and keep the sensor out of direct sunlight.

Remove the batteries when storing the Wireless Sensor Unit for a long time.

If the Wireless Sensor Unit does not function properly:
- Charge the batteries
- Make sure that the Wireless Sensor Unit is paired with Tendo MyUnit app
- **Check the Minimum Movement Threshold setting. The value of the MMT has to be set less than the amplitude of the motion !!!**

For indoor use, only!

Warning: The phone holder contains magnet.

Magnet Safety

1. *Proper Magnet Handling*: Assure that no two magnets come near another when handling.

2. *Transportation and Storage*: Wood, plastic or other non-ferrous containers can be used to create barriers around the magnet for safe transportation or storage.

3. *Medical Devices*: Some medical devices (such as pacemakers and heart defibrillators) can be adversely affected by strong magnetic fields.

4. *Credit Cards and Electronic Devices*: Credit cards, computer disks, and other magnetic storage devices away from magnets. Exposure to the magnetic field may result in malfunction or permanent damage to such items.

5. *Keep away from mechanical watches, compass and hearing aid*

- CDs and DVDs are not magnetic data carriers and will therefore not be damaged by static magnetic fields.
- Cameras, cell phones and smartphones contain non-magnetic storage media. Therefore, static magnetic fields near those devices cannot delete data.
- USB sticks and memory cards are not magnetic data carriers and will therefore not be damaged by static magnetic fields.
- A static magnetic field does not damage car keys or the embedded transponder for the anti-theft device. Therefore, you can hang up your vehicle key on a magnetic board.

@tendosport_official

TENDO Sport
@tendosportsmachines

@tendosport

Tendo Sports Machines
@TendoSport

Manufactured in Europe.

www.tendosport.com