

VivePad

Portable Force Platform

User Manual

VPC02
VPC02-UM-EN, Version 1.2

About this manual

This manual contains the information required for the safe installation, use and maintenance of the VivePad VPC02 portable force platform. The entire manual must be read before the device is used and must be kept for future reference. When the device is passed on to another user, the manual must be handed over together with the device.

The current version of the manual is available via the QR code on the device label or at **medroco.com**. In the event of any discrepancy between the printed version and the online version, the online version shall prevail.

Symbols used in this manual

Symbol	Meaning
WARNING	A situation that may result in injury if not observed
CAUTION	A situation that may result in damage to the device or measurement errors if not observed
NOTE	Additional information that makes use easier

Contents

1	Safety instructions	4
2	Intended use	6
3	Box contents	7
4	Device overview	8
5	First use	10
6	Software installation and device registration	12
7	ViveLab	15
8	Measurement	32
9	Scientific methodology	41
10	Use without an app	50
11	Games	52
12	Light indicators	53
13	Power and battery	56
14	Account, ownership and transfer	58
15	Maintenance, cleaning and storage	60
16	Troubleshooting	62
17	Technical specifications	64
18	Compliance, disposal and warranty	66
	Warranty Certificate	70

1

Safety instructions

The following instructions must be read before the device is used and must be followed throughout use.

WARNING **Load and use**

- The maximum static load capacity of the device is 400 kg. This value must not be exceeded.
- During jumping and landing, the force applied to the surface rises to several times the person's body weight. For this reason, Countermovement Jump (CMJ) analyses and activities involving jumps are recommended only for users with a body weight below 100 kg (see Section 8.4, "Dynamic load").
- Only one person should stand on the platform at a time.
- When stepping onto and off the platform, the user should step on the center of the platform, not on its edge.
- The device must be used only on a flat, hard and dry surface.
- The device must not be used on a wet surface, with wet feet or with wet footwear.
- Persons with balance difficulties and children should use the device only under the supervision of an adult.
- If dizziness, pain or discomfort is felt during use, the user should step off the platform and pause use.
- Heavy objects must not be dropped onto the device, and heavy equipment must not be used on the device.
- The device must not be used as a step or stool.

WARNING **Electrical and battery**

- The device must be charged only with a 5 V USB power supply or a Quick Charge 2.0 compatible 9 V USB power supply.
- Damaged cables or adapters must not be used.
- The device is not waterproof. If liquid comes into contact with the device, the device must be switched off, the charging cable must be disconnected, and the device must not be switched on again until it is completely dry.
- The device contains a lithium-ion battery that cannot be replaced by the user. The battery must not be removed, punctured, heated or disposed of in fire.
- The device must not be charged below 0 °C or above 40 °C.

CAUTION **Opening the device**

- The device housing must not be opened by the user. There are no user-serviceable parts inside.
- Opening the device outside an authorized service center, removing the battery or tampering with its software without authorization voids the warranty.
- Where service is required, contact **info@medroco.com**.

2

Intended use

VivePad is a portable force platform that measures balance, weight shifting and jumping for the purposes of exercise, training and movement analysis. The device is designed for athletes, coaches, movement professionals and researchers.

VivePad is not a medical device and does not provide a diagnosis. Measurements are for information purposes only; interpretation and decisions are the responsibility of the user or the expert the user works with.

The device must not be used outside the purpose and conditions defined in this manual.

3

Box contents

Qty	Item
1	VivePad VPC02
1	USB-C charging cable
1	Quick start card
1	User manual and warranty certificate

When the box is opened, the contents should be checked to ensure they are complete and undamaged. If any part is missing or damaged, contact the seller or **info@medroco.com**.

NOTE A charging adapter is not included in the box. The device can be charged with any commercially available 5 V USB adapter or a computer's USB port.

4

Device overview



Figure 1: top view, numbered

No.	Part	Description
1	Platform surface	The area on which the user stands
2	Medroco logo	Indicates the front of the device. When the user stands on the platform, the user must face the logo
3	Light ring	A ring of light that shows the center of pressure (CoP), battery status and device status
4	Power button	Switches the device on and off

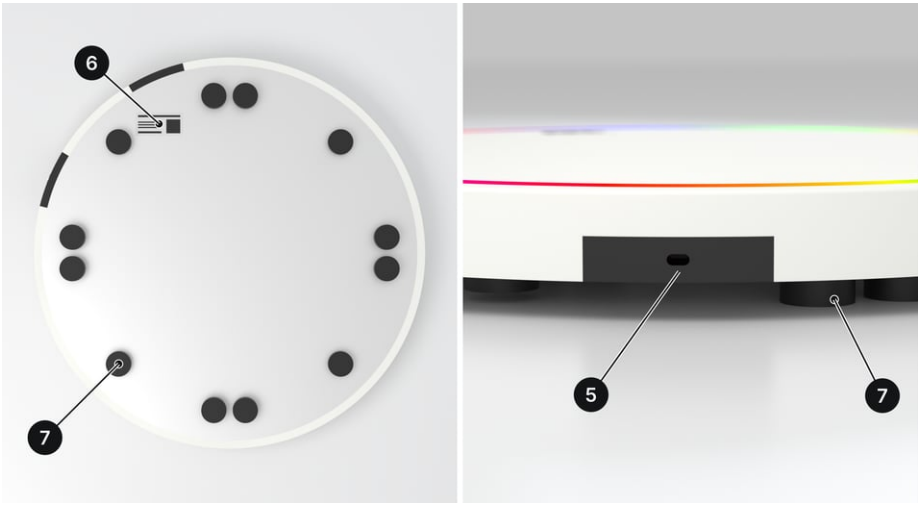


Figure 2: side and bottom view, numbered

No.	Part	Description
5	USB-C port	Charging port
6	Product label	Serial number, QR code and conformity markings
7	Feet	Feet with non-slip bases

Device orientation

In measurements, the "front", "back", "right" and "left" directions are defined relative to the device logo. When the user stands on the platform, the user must face the Medroco logo. Otherwise, the directional information in the app and in the reports will be read in reverse.

5

First use

5.1 Charging

1. One end of the USB-C cable must be connected to the device's USB-C port and the other end to a USB power supply.
2. The light ring goes off briefly, then switches to the battery view.
3. When the entire ring begins to ripple in green, the battery is full.

The device must be fully charged before first use.

NOTE Details of the charging view are explained in Section 12 and Section 13.

NOTE When the cable is connected and the device has not been switched on with the button, the device is in "charging mode". In this mode Bluetooth is off; the app cannot find the device. To use the device with the app, the device must first be switched on.

5.2 Switching on

Briefly press the power button. After the start-up animation, the ring rotates slowly in rainbow colors; the device is ready for use.

If a short red arc flashes on the ring when the button is pressed, the battery level is insufficient to switch the device on. The device must be connected to a charger and switched on again after a few minutes.

5.3 Switching off

Briefly press the power button. The ring goes off.

- If the charging cable is not connected, the device enters sleep mode.
- If the charging cable is connected, the device returns to the battery view shortly and continues charging.

NOTE For a short time after switching on or off, the button does not respond. This prevents unintended double presses.

NOTE On the first switch-off after a software update, a dim blue light may rotate on the ring for a short time. The device switches off by itself when verification is complete.

NOTE If the device does not respond, hold the button down. A dim red arc shortens on the ring; when the arc ends, the device restarts. Releasing the button early cancels the action. User data and calibration are not erased.

CAUTION Pressing the power button while the user is on the platform switches the device off and ends the measurement in progress.

5.4 Idle state

When the device is on and not connected to any app, the light ring dims after a while. The device does not switch off. When the user steps onto the platform or an app connects, the ring returns to normal brightness.

The device has no automatic shutdown; when use is finished, the device must be switched off with the button.

6

Software installation and device registration

6.1 Apps

App	Function	Platform	Address
ViveLab	Measurement and analysis	iPhone, iPad (App Store); Android (Google Play); macOS, Windows	**medroco.com/apps/vivelab**
MedrocoHub	Desktop app and game catalog, installation, updates, device connection	macOS, Windows	**medroco.com/solutions/medroco-hub**
Medroco One	Reports, history, expert connection	Web browser	**medroco.com**

On desktop computers, ViveLab is installed and launched from within MedrocoHub.

medroco.com/solutions/medroco-hub

6.2 Bluetooth permissions

- iPhone and iPad: The Bluetooth permission requested at first launch must be granted.
- Android 12 and later: The "Nearby devices" permission requested at first launch must be granted. Location permission is not required.
- macOS: The system Bluetooth permission requested at first launch must be granted.

- Windows: The computer must have a Bluetooth adapter, and it must be enabled.

6.3 Internet connection

An internet connection is required at the first connection for device registration and software verification. Subsequent measurements can be taken offline; reports are uploaded to the Medroco One account when an internet connection becomes available.

6.4 Connecting the device

1. VivePad must be switched on (the ring must be rotating in rainbow colors).
2. ViveLab must be opened and the user must sign in with a Medroco One account. If there is no account, one can be created free of charge from within the app.
3. The VivePad listed on the "Searching for Device" screen must be selected.
4. The app checks the device's software version and establishes the connection. When the connection is established, the rainbow view goes off; the ring stays dark while the platform is empty, and the light that shows the center of pressure (CoP) appears when the user steps onto the platform.

NOTE The device can connect to only one app at a time. While the device is connected to MedrocoHub, the phone app does not list the device.

6.5 Registering the device to an account

At the first connection, the app displays the "Register the device to your account" screen.

- If the device is for personal use, **Register to my account** must be selected.
- If the device belongs to an organization and the user has signed in with the organization account, **Register to my organization** must be selected.

Registration is mandatory; the connection is terminated if registration is not completed. The device can be registered to only one account at a time. Knowing the serial number alone is not sufficient for registration.

When connecting to a device registered to another account, the warning "This device is registered to another account. You can take measurements." is displayed. In this case, measurements can be taken; the device cannot be registered.

6.6 Device name

If more than one device is used, the devices can be named from within the app. The assigned name is displayed in the device list.

7

ViveLab

7.1 Introduction

ViveLab is the Medroco app used to run, report and share the Quiet Stand Balance, Countermovement Jump (CMJ) and Limits of Stability measurements taken with VivePad between the expert and the client. The app is used on phones and tablets, and on desktop computers through MedrocoHub. Installation is described in Section 6 and measurement instructions in Section 8. This section explains the app's screens and workflow.

ViveLab is used with client and expert accounts. If the app is not suited to the account type, the **Not Available With This Account** screen is displayed. In this case, the user must sign in with a suitable Medroco account.

The app can also be explored without an account. In the demo version opened with the **CONTINUE WITHOUT SIGNING IN** option on the sign-in screen, export and reporting functions are limited. **SIGN UP** must be selected for all features.

After signing in, four tabs are displayed in the bottom navigation bar:

- **Analysis:** The home screen, where measurements are started.
- **Reports:** Saved measurements. On an expert account, the **Users** list opens first.
- **Feedback:** Feedback exchanged between the expert and the client on reports.
- **Connections:** Expert and client connections.

A badge on a tab indicates a pending report or feedback. The profile icon is in the top right corner of the home screen.



Image: ViveLab home screen, three analysis cards and bottom navigation bar

7.2 Devices

The home screen shows the **Quiet Stand Balance**, **Countermovement Jump (CMJ)** and **Limits of Stability** cards. If no device is connected when a card is tapped, device selection starts automatically. The required permissions are requested, Bluetooth is turned on and the **Searching for Device** screen is displayed. The device must be selected from the list. If the screen is closed without a selection, the analysis screen does not open.

If no device is found, the message **No Medroco device found yet** is displayed. The user must check that the device is switched on and nearby. For Bluetooth permissions, see Section 6; for device registration, see Section 6 and Section 14.

While a device is connected, a connected device card is displayed at the bottom of the home screen. The close button on the card ends the connection. Tapping the card opens the **<device name> Details** page. This page contains:

- battery status,
- the **Account registration** card,
- the rows **Manufacturer**, **Device name**, **Custom Name**, **Model Name**, **Model Code** and **Firmware**.

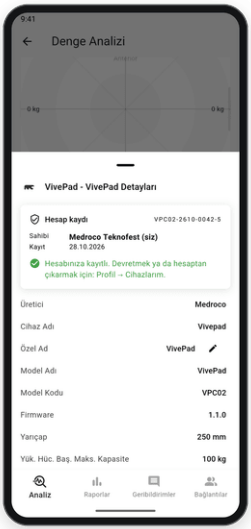


Image: Device details page

To give the device a custom name, the pencil icon on the **Custom Name** row must be selected, the **New Name** field must be filled in on the **Rename Device** window, and **Save** must be selected. The name consists of letters and digits only, and is at most 15 characters long.

The **Account registration** card shows the device owner and registration details. If the device is registered to another account, measurements can be taken; to take over the device, its owner must transfer it. If the device is registered to an organization, members of the organization can use it.

If new software is available for the device, the **A new update is available for your device** screen is displayed. The update must be installed to continue using the device. **Update** must be selected, and the device must be kept nearby until the process ends. The process is complete when the message **Update Successful! The device is restarting.** is displayed.

NOTE If the message **Device locked** is displayed, the device does not work in the apps. Support must be contacted.

WARNING If the warning **The device's measurement sensors could not be started** is on the screen, the measurement does not open. The device must be switched off and on again; if the problem persists, support must be contacted. If the message **Device information could not be retrieved from the server.** is displayed, the information must be refreshed and the operation repeated.

7.3 Choosing a measurement

There are three analysis types. The expert decides which one to use in which situation. Stances and movements are described in detail in Section 8.

Card	Used for
Quiet Stand Balance	Change of the center of pressure (CoP) over time
Countermovement Jump (CMJ)	Force and height information of jumps
Limits of Stability	Center of pressure (CoP) movement toward on-screen targets

Tapping a card opens the relevant analysis screen, and the preparation steps run first. The measurement cannot be started until preparation is finished.

1. **Step off the platform:** There must be no person and nothing on the platform.
2. **Taring:** The device zeros itself. The platform must not be touched during this step.
3. **Step onto the platform:** The stance described in Section 8 must be taken.

4. **Measuring body weight:** This step applies only to **Countermovement Jump (CMJ)**. The person must stand still.
5. **Ready:** The message **You can start the activity.** is displayed.

During preparation, the status **Stable** or **Reading unstable** is shown on the screen. **Start Over** restarts the steps. **Skip Preparation** skips them. The top bar of the **Countermovement Jump (CMJ)** screen contains the weight information: it reads **Not measured** if no measurement has been taken, and **Body Weight (estimated)** if an estimated value is in use. **Measure Again** renews the weight. This button cannot be used during recording.

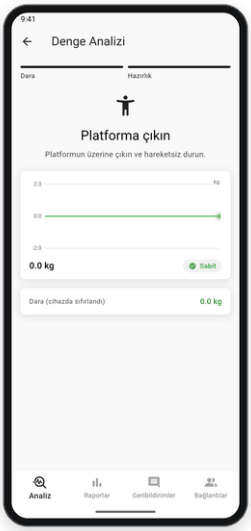


Image: Preparation steps screen

7.4 Live measurement

When preparation is completed, the live measurement screen opens. The **Quiet Stand Balance** and **Limits of Stability** screens have the indicators **Instantaneous Velocity**, **Vector Angle**, **Vector Length (kg)**, **Vector Length (cm)**, **Frequency** and **Signal Quality**. The **Countermovement Jump (CMJ)** screen shows **Frequency** and **Signal Quality**. If no jump has been performed yet, it reads **No jump data yet.**

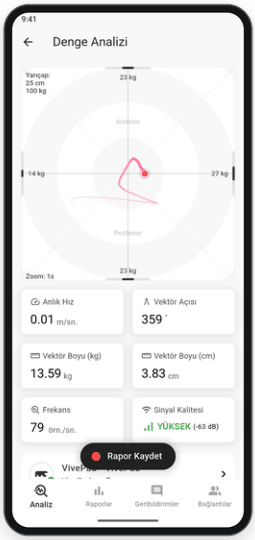


Image: Quiet Stand Balance live measurement screen

The data shown on the screen at this stage is not reported. Recording is started with the following steps:

1. **Save Report** must be selected. On the **Limits of Stability** screen, this button is named **Start Test**.
2. On an expert account, the client must be selected in the **User to Report** field. Recording does not start if no selection is made.
3. **Analysis Duration** must be selected. The options are 15, 30, 45, 60, 90 and 120 seconds for **Quiet Stand Balance** and **Countermovement Jump (CMJ)**, and 30, 60, 120, 180 and 300 seconds for **Limits of Stability**. With **Custom**, another duration of at least 5 seconds can be entered; the upper limit is stated on the screen.
4. **Start** must be selected.

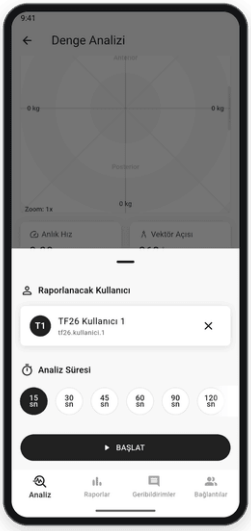


Image: Analysis duration and user selection page

For **Limits of Stability**, the **Measurement Settings** screen opens after **Start** is selected. The **Target Distance** field is set between **Near (easy)** and **Far (hard)**. In the **Target Order** field, **Random** or **Custom** is selected. When **Custom** is selected, the targets are marked in the desired order, and **Clear** resets the selection. The **Preview** field shows the positions of the targets. After the settings, **Start** must be selected. For the recommended target distance, see Section 8.

A progress bar is displayed during recording. **Cancel** stops the measurement. **FINISH AND SAVE** ends the measurement before the selected duration and moves on to the saving step.

WARNING If the message **Device disconnected.** is displayed during a measurement, the ongoing measurement is saved as a report. **Close Page** must be used to return to the home screen.

WARNING When the **Battery almost empty** window is displayed, the ongoing measurement must be finished, because the device will shut down shortly. If the device shuts down because the battery is depleted, the ongoing measurement is saved as a report.

7.5 Result screen

When the duration ends, the **Activity Completed** window opens.

1. If desired, a name can be entered in the **Report name (optional)** field. If the field is left blank, the activity name and date are used.
2. To keep the report, **SAVE** must be selected; to delete the measurement, **DELETE REPORT** must be selected.

The **OPEN REPORT** button next to the **Report saved.** message opens the report directly. This message disappears after a few seconds; the report can be opened later from the **Reports** tab.



Image: Activity Completed window

The report screen header shows the report name, with the report number below it as **Report #**. The following actions are available on the screen:

- **Rename:** The report name is changed in the **Rename Report** window. If the name is deleted and saved, the automatic name is restored.
- **Share icon:** The report data is exported (see Sharing and export).
- **Show / Hide:** Graph series are turned on and off. If no series is selected, it reads **No data to display.**
- **CROP:** In balance reports, allows only a specific segment to be examined. The **Crop Data** section is opened, the **Start** and **End** seconds are selected with the slider, and the **CROP** button is pressed. Metrics and graphs are recalculated for this segment. Cropping affects only the current view; the saved report does not change, and the report opens in full after leaving the screen.

The meaning of the metrics in the report is explained in Section 8, and the measurement logic in Section 9.

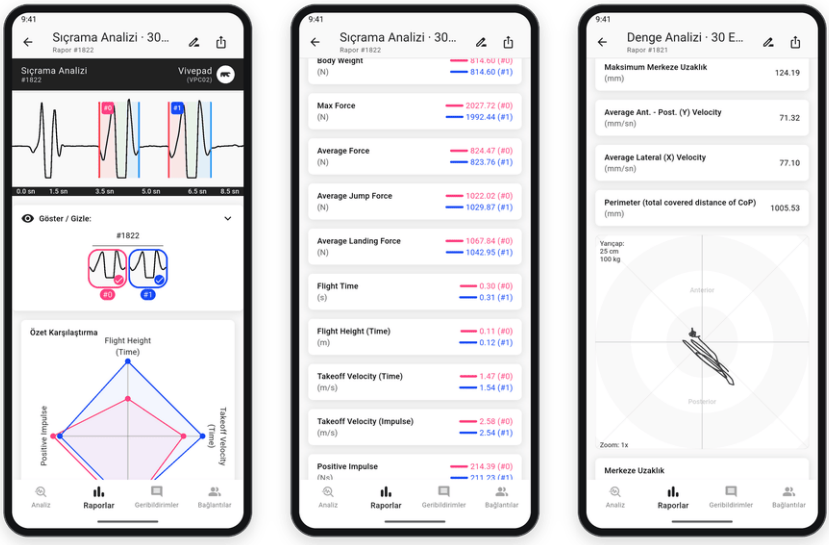


Image: Report screen, graph and Show / Hide area

7.6 Report history

Saved reports are listed in the **Reports** tab. The expert first selects the client from the **Users** list. The number of reports that can be viewed and saved depends on the membership package; the limits are given in Section 8. Reports outside the limit are displayed as **This report is locked**.

Report Filters are used to narrow the list. A report name or activity can be entered in the **Search** field, and a date range can be selected. After **All Reports** or **Without Feedback** is ticked, **APPLY** must be selected.

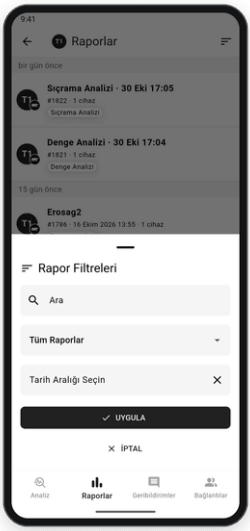


Image: Reports list and filters

To compare two or more reports:

1. The menu button at the bottom right of the list screen must be opened, and the **Compare** icon must be selected.
2. The reports must be ticked. Until at least two reports are selected, the button appears as **NO REPORT SELECTED**.
3. **COMPARE (n)** must be selected. The report screen opens with the title **(n) Reports Selected**. CMJ reports also include a **Summary Comparison** area.

A measurement that cannot be sent to the server because the allowance has run out is not lost. The message **Measurement stored on this device.** is displayed, and the measurement is held on the phone or tablet in use. When the report allowance becomes available, it is sent with **UPLOAD** on the **Reports** screen.

NOTE A measurement waiting locally can be uploaded only from the device on which it was saved. If the app is deleted, the waiting measurement is deleted too, so it must be uploaded before the app is deleted.

7.7 Sharing and export

Report data is exported as a CSV file. PDF output is not available in the app.

1. The report must be opened.
2. The share icon in the top area must be selected.
3. If there is a single report and a single device, the phone's share menu opens directly. If there is more than one activity, the selection must be made in the **Select Activities to Export:** window, and **EXPORT** must be selected.
4. Email, file or the desired app must be selected from the share menu.

The file name is in the format **Medroco_Report_<report number>_<device>**.

7.8 Expert and client

For an expert to view a client's reports, the two must establish a connection. The **Connections** tab has the sub-tabs **My Connections**, **Connection Requests** and **Blocked**.

To establish a connection:

1. The client must open the **All Experts** list, or the expert the **All Users** list, and search for the person.
2. **ADD** must be selected. The message **Request sent.** is displayed. The request can be cancelled with **WITHDRAW**.
3. The other party responds to the request under **Connection Requests** with **Approve** or **Reject**.

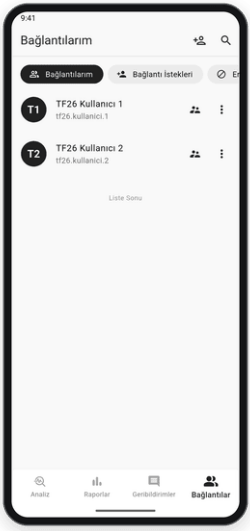


Image: Connections screen

From the menu of an established connection, **Unfollow** ends the connection and **Block** blocks the person.

Whether a client can add an expert depends on the membership package. If the package does not allow it, the message **Your subscription package does not allow expert access.** is displayed. On managed accounts, the expert is assigned only by the managing account.

To create a managed account (expert):

1. **Create Managed User** must be selected from the add menu. If the package allows it, the **Add Independent User** option is also displayed.
2. On the **Create Managed Account** screen, **Full Name** must be entered, **Username** or **Email** must be selected for sign-in, and a password must be set.
3. The agreement must be accepted and the account created.

A managed account is directly linked to the expert and has limited features. The expert can delete this account with **Delete Account** in the connection menu.

To send feedback (expert):

1. The client must be selected in the **Reports** tab.
2. The feedback icon must be selected from the menu button at the bottom right.
3. One or more reports must be ticked, and **SEND FEEDBACK (n)** must be selected.
4. A text of up to 4000 characters must be written in the **Enter your feedback message** field and sent.

The client sees incoming feedback in the **Feedback** tab; new feedback is indicated by a tab badge. When feedback is opened, the client and the expert can reply by writing messages on the same screen.

When an incoming message is pressed and held, the options **Copy** and **Report** are displayed. If **Report** is selected, the **Create Complaint** window opens; a reason is selected, a complaint text of at least 10 characters is written, and **Send** is selected.

7.9 Organization

Organizations can manage their devices and expert accounts through Medroco. A device is registered to an organization with the **Register to my organization** step described in Section 6. The **Account registration** card of a device registered to an organization reads **Registered to your organization. Organization members can use the device.**

In ViveLab, the organization is used through expert accounts. An organization expert is a managed account created by the organization itself; an independent expert cannot join an organization later. Depending on the organization's setting, the options for an organization expert to add individual clients may be turned off.

It is not possible to sign in to ViveLab with an organization administrator account. The sign-in screen shows the warning **This app is not suitable for your Medroco membership type.**, and opening through MedrocoHub shows the **Not Available With This Account** screen.

Organization management is done on the Medroco Business web panel at **organization.medroco.com**. Expert and user accounts are created on the panel's **Experts** and **Users** pages.

7.10 Settings

When the profile icon at the top right is selected, the options **Profile and Settings**, **Delete Account** and **Sign Out** are displayed. The **Profile and Settings** page contains the following headings.

- **Account Settings: Profile Information**, **Password Change**, **Time Zone**, **2-Step Verification** and **Health Data Consent**. Consent is optional; it can be given and withdrawn.
- **Subscription Information:** Membership package.
- **Session History: Sign-ins** and **Attempts**. **SIGN OUT FROM OTHER DEVICES** closes sessions on other devices.
- **Payment History:** Payments made.
- **Buyer / Billing Information**, **Discount Codes:** Displayed only in ViveLab on a computer. On phones and tablets these headings do not exist, because payment is taken by the app store.
- **My Devices:** Devices registered to the account. The device menu contains the options **Transfer**, **Cancel transfer** and **Remove from account**. The transfer flow is described in Section 14.
- **Support Requests:** A request is opened with **CREATE REQUEST** by writing the **Support Request Title** and **Support Request Text**. The request status is tracked as **PENDING**, **ANSWERED** or **CLOSED**.

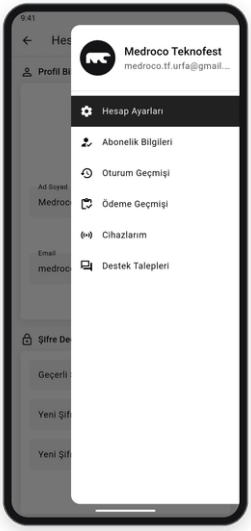


Image: Profile and Settings page

NOTE When **2-Step Verification** is turned on, verification by email is performed at sign-in.

7.11 Use in MedrocoHub

MedrocoHub is the desktop app used to install and open Medroco apps on macOS and Windows computers. Its menu contains **Home**, **Library**, **Store**, **Devices** and **Settings**.

Sign-in: When **Sign In** is selected, the process opens in the browser. When sign-in is complete, the user returns to MedrocoHub automatically.

Installation: On the **Store** page, the ViveLab card is opened and **Install** is selected. When installation ends, the card reads **Installed** and ViveLab appears on the **Library** page. The app is opened from the **Library** page or with **Start App** on its card. If a new version exists, the same button becomes **Update**. The app is removed with **Uninstall** in the **...** menu of the **Library** card.

Connecting the device:

1. The device must be switched on and kept near the computer.
2. On the **Devices** page, **Connect a Medroco Device** must be selected and scanning started.
3. When the device is displayed as **Connected**, clicking it gives access to details, naming and software update.

Opening ViveLab: If the device is connected in MedrocoHub, ViveLab opens with the device without asking and takes over the device. In this case, no separate device scan is performed in ViveLab. If no device is connected, the **How Should ViveLab Open?** window is displayed:

- **With a Medroco Device:** The device is switched on and kept nearby, and MedrocoHub establishes the connection.
- **Open Without a Device:** Reports and past measurements can be reviewed. A device is required for a new measurement.



Image: MedrocoHub, How Should ViveLab Open? window

From this point on, measurement, report and connection operations are carried out as described in this section.

WARNING If the device shuts down or moves out of Bluetooth range, the **Device disconnected** window is displayed and the open ViveLab is closed. The device must be reconnected and the app reopened.

8

Measurement

8.1 Placement

- The device must be placed on a flat, hard and dry surface. Carpets, mats and soft surfaces reduce measurement accuracy.
- The device must be kept away from sources of vibration (treadmills, running machinery, high-traffic areas).
- The edges of the device must not touch a wall, furniture or cables.
- The device must be positioned so that the user faces the Medroco logo when standing on the platform.

Figure 3 compares common placement faults with a correct setup.

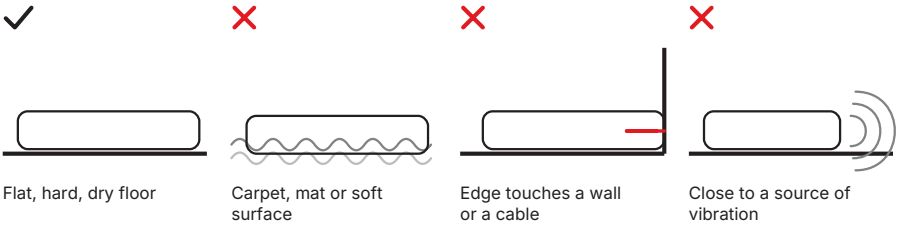


Figure 3: Correct setup and three placement faults. Schematic illustration.

8.2 Preparation

ViveLab guides the user through the following preparation steps before each measurement.

1. **Step off the platform.** The device performs zeroing while the platform is empty and still. The platform must not be touched during this time.
2. **Step onto the platform.** The user should stand in the center of the platform, feet shoulder-width apart, facing the logo.
3. **Stand still (CMJ only).** The device measures body weight; this takes a few seconds. Body weight does not need to be entered manually. This step does not apply to Quiet Stand Balance and Limits of Stability analyses.

4. **The measurement can be started.**

If preparation stays at "Reading unstable" or stops with the warning "Load on platform": the user must step off the platform, check that nothing is touching the edges of the device, and restart preparation.

8.3 Stance

- Feet shoulder-width apart, in the center of the platform.
- Knees slightly bent, torso upright.
- Gaze fixed on a point at eye level.
- Barefoot or in flat-soled athletic shoes. Heeled or thick-soled shoes affect the measurement.
- The user should not talk or look at the screen during the measurement.

Figure 4 shows the correct stance from the front and the side, followed by two common faults.

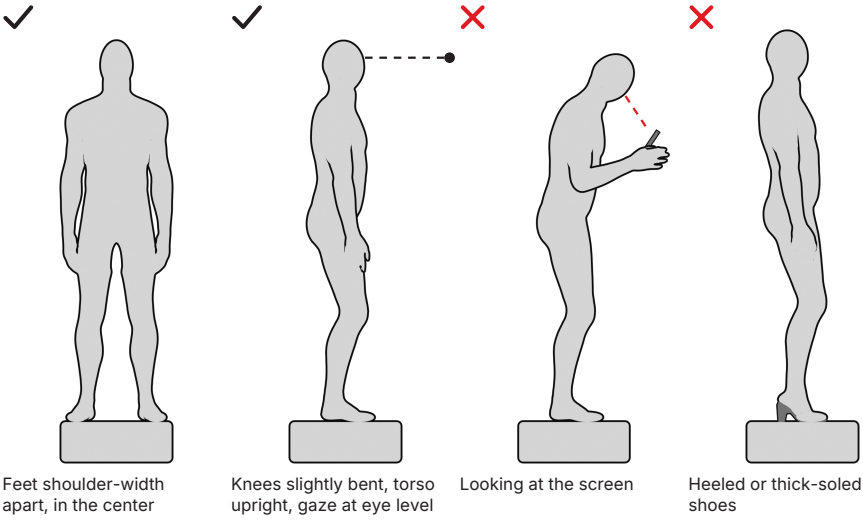


Figure 4: Correct stance and two common faults. Schematic illustration.

8.4 Dynamic load

The maximum static load capacity of the device is 400 kg. However, the force applied to the surface during jumping and landing can momentarily reach three to six times body weight. For example, a hard landing by a user weighing 80 kg can momentarily apply a force exceeding 400 kg to the platform.

Therefore:

- Countermovement Jump (CMJ) analyses and activities involving jumps are recommended for users with a body weight below 100 kg.
- Landing must be performed in the center of the platform, on both feet at the same time and with the knees bent.
- Capacity overloads are recorded by the device and read out during service. Repeated overloads may reduce measurement accuracy and are not covered by the warranty.
- For uses requiring a higher dynamic load, the higher-capacity VivePad Pro model is suitable.

Figure 5 shows a safe landing after a jump.

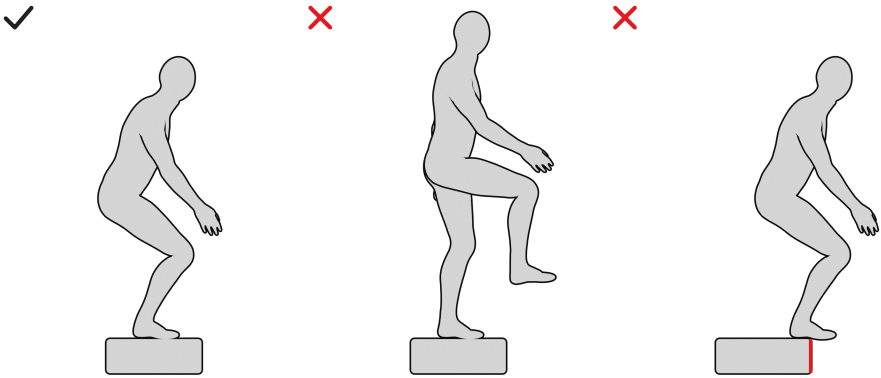


Figure 5: Safe landing and two incorrect landings. Schematic illustration.

8.5 Quiet Stand Balance

Measures: The path followed by the center of pressure (CoP) during the measurement.

Procedure: After preparation is completed, the user should stand as still as possible for the duration of the measurement. The user selects the measurement duration before starting (see Section 7.4).

Report contents:

- Balance score
- Center of pressure (CoP) trajectory and total path length
- Mean, minimum and maximum distance from the center (mm)
- Mean anteroposterior and mediolateral velocity (mm/s)

Guidance

- Position your feet before starting; do not move your feet during recording. Taking a step or stepping off the platform changes the center of pressure path.
- The distances in the report are relative to the geometric center of the platform. If your stance is off-center, this is reflected in the distance to center even when sway is low.
- When comparing recordings of the same person, keep the stance and duration the same.

Report metrics

Metric names are given as they appear in the app; the report screen shows some of the names in English.

Metric	Unit	What it shows
SCORE	points	Composite indicator summarizing balance performance; its method is specific to Medroco.
Average CoP X	mm	Mean position of the center of pressure on the right-left axis during the recording. A positive value is toward the right.
Average CoP Y	mm	Mean position of the center of pressure on the front-back axis during the recording. A positive value is toward the front.
Average Distance to Center	mm	Mean distance of the center of pressure from the center of the platform.

Metric	Unit	What it shows
Minimum Distance to Center	mm	Smallest distance in the recording.
Maximum Distance to Center	mm	Largest distance in the recording.
Average Ant. - Post. (Y) Velocity	mm/s	Mean movement velocity on the front-back axis.
Average Lateral (X) Velocity	mm/s	Mean movement velocity on the right-left axis.
Perimeter (total covered distance of CoP)	mm	Total path covered by the center of pressure during the recording.

Graphs: Distance to Center (mm) and Instantaneous Velocity (mm/s) series. Instantaneous Velocity is shown in the **X Axis**, **Y Axis** and **Resultant** graphs.

8.6 Limits of Stability

Measures: The ability to shift weight in specific directions and return it to the center.

Procedure: A target is displayed on the screen (front, side, back or back diagonal). The user should shift weight in that direction to move the light dot to the target, then return to the center. The target distance can be set between 70% and 100%; 100% is the farthest target. Starting at 70% is recommended for the first sessions.

Report contents:

- Outward path to each target and return path to the center
- Mean sway and sway area
- Peak and mean force

Guidance

- The session duration is selected as 30, 60, 120, 180 or 300 seconds; a custom duration can also be entered. The duration is divided equally among the targets.

- The target distance settings screen opens with 100% selected. To follow the 70% recommendation for first use, lower the level manually. The level changes in steps of 5 percent.
- Move the on-screen pointer to the flashing target by shifting your center of pressure. The moment the pointer touches the target circle is recorded as arrival.
- Do not lift your feet off the platform while moving toward the target.

Target directions

A front, AR front right, R right, PR back right, P back, PL back left, L left, AL front left. Targets are arranged with the logo side of the platform as the front (Figure 6).

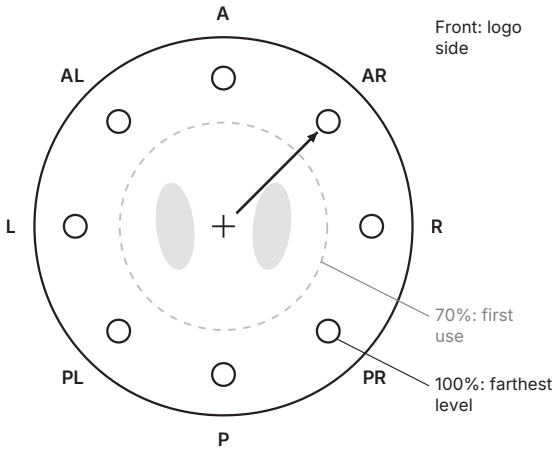


Figure 6: The eight target directions; the arrow shows a move from the center to a target. Schematic illustration.

Report metrics

All metrics are given per target direction:

Metric	Unit	What it shows
Target Distance	%	Level selected for the session; percentage of the farthest level.
Average Postural Sway	mm	Mean deviation of the center of pressure from the straight line running from the center to the target.
Sway Area	cm^2	Area covered by the center of pressure on the way to that target.
Perimeter (total covered distance of CoP)	m	Total path covered on the way to that target.
Period	s	Time from the previous arrival to arrival at this target.
Max Force	N	Highest directional force in that period.
Average Force	N	Mean directional force in that period.

Max Force and Average Force show not the total body load, but the portion of the load shifted in a direction.

8.7 Countermovement Jump (CMJ)

Measures: The force profile of a vertical jump.

Procedure: After preparation is completed, the user should stand still. At the app's signal, the user should squat and jump as high as possible. Landing must be performed in the center of the platform, on both feet at the same time. Multiple repetitions can be performed.

Report contents:

- Body weight
- Flight time and jump height
- Take-off velocity

- Impulse (net, positive, negative)
- Peak and mean force, landing force
- Force-time graph and comparison between repetitions

Guidance

- Do not skip the stand-still step in preparation: body weight is the basis of all jump calculations.
- Stand calmly on the platform before and after each jump. A jump for which no calm standing segment can be found is not included in the report.
- Land on the platform, at the spot you jumped from.
- Movements with a very short or very long flight time are not counted as jumps.

Report metrics

Metric	Unit	What it shows
Body Weight	N	Newton equivalent of the body weight found during preparation. Displayed on the live CMJ screen.
Max Force	N	Highest total force in the jump repetition.
Average Force	N	Mean total force over the entire jump repetition.
Average Jump Force	N	Mean force in the take-off phase.
Average Landing Force	N	Mean force in the landing phase.
Flight Time	s	Duration for which contact with the platform is lost.
Flight Height (Time)	m	Jump height calculated from flight time.
Takeoff Velocity (Time)	m/s	Take-off velocity calculated from flight time.
Takeoff Velocity (Impulse)	m/s	Take-off velocity calculated from impulse.

Metric	Unit	What it shows
Positive Impulse	Ns	Accumulation over time of the force above body weight in the take-off phase.
Negative Impulse	Ns	Accumulation over time of the force below body weight in the take-off phase.
Net Impulse	Ns	Difference between positive and negative impulse.

The same metrics appear on the live CMJ screen with small name differences: Flight Height by Time, Takeoff Velocity by Time, Takeoff Velocity by Impulse.

WARNING Section 8.4 "Dynamic load" must be read before performing a CMJ analysis.

8.8 Reports

Each measurement is saved as a report to the Medroco One account. Reports can be viewed from the app and from the user dashboard at **medroco.com**, downloaded in CSV format and shared with the connected expert.

On a free account, 5 reports can be created per week and the last 10 reports can be viewed. On a Premium account, there is no report limit and the expert connection is enabled.

9

Scientific methodology

This section explains what the metrics in reports measure, what logic they rest on and how the result should be read. VivePad calculates and displays values; it does not interpret them. Evaluation belongs to the expert accompanying the process.

9.1 Data source

VivePad measures the magnitude and distribution of the load on the platform with precise sensors and samples it 80 times per second. What the device obtains directly is force and time. From this data ViveLab derives two basic quantities: the total load on the platform and the center of pressure. Other values such as velocity and height are not measured; they are derived from these two quantities using Newton's laws.

9.2 Preparation

An accurate result needs two starting values. The first is the zero point of the empty platform: the platform sets its own zero before the person steps on. For this reason, no load should be placed on the platform during preparation. The second is body weight: it is taken while the person stands still on the platform. Because force and impulse in the CMJ analysis are evaluated against this weight, moving during preparation affects the results.

9.3 Center of pressure (CoP)

The center of pressure is the point of application of the resultant force the feet exert on the ground. It is not the same as the center of mass: the center of mass is the average position of the body mass, whereas the center of pressure also reflects the continuous corrections made to keep the body in that position (Winter, 1995). Because standing is never fully motionless, the center of pressure makes small movements even in quiet stance.

The position is given in millimeters relative to the platform center, on the right-left (X) and front-back (Y) axes. Because the load distribution is scaled to the total load, the position depends on how the load is shared across the platform, not on the person's weight. Figure 7 shows both concepts and the axes together.

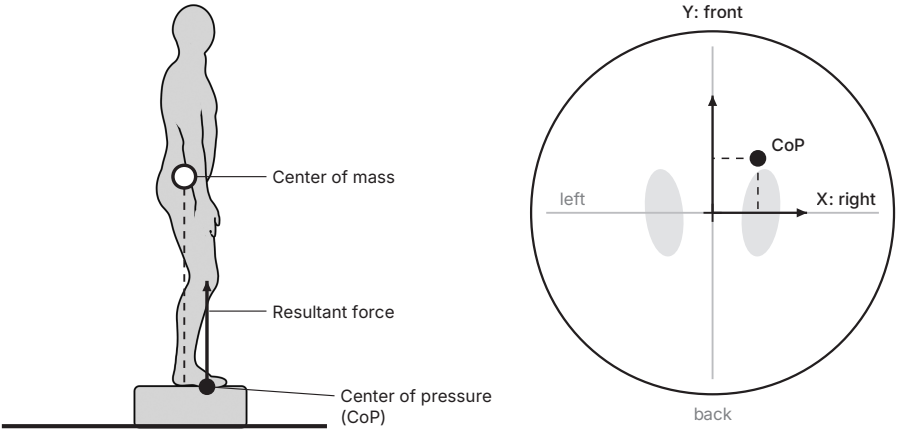


Figure 7: Left, side view of center of mass and center of pressure; right, the axes from above. Schematic illustration.

9.4 Quiet Stand Balance

Purpose. This analysis examines the path followed by the center of pressure while the person stands quietly, that is, its trajectory. Because standing requires constant small corrections, the trajectory makes visible how much and in what way these corrections are made. Metrics derived from the trajectory are widely used in the literature to describe postural steadiness (Prieto et al., 1996).

Metrics

- **Perimeter (path length):** The total path covered by the center of pressure during the recording; it can be thought of as the length of the trajectory. It is the simplest metric drawn from the trajectory. A shorter path generally means less movement. Because the value depends on recording duration, only recordings of equal duration are compared.

- **Lateral and Ant.-Post. velocity:** The path covered per unit of time on each axis. It makes path length readable independently of duration and shows on which axis the recording was more active. A low value generally describes a calmer stance, but it is not an absolute criterion: someone making quick, small corrections may show a high value, and someone slow to notice the need for correction may show a low one.
- **Average CoP X and Y:** The mean position during the recording. It shows which side the load has shifted to. A value far from zero may result from where the stance is placed on the platform as much as from weight being favored on one side.
- **Distance to center:** The distance of the center of pressure from the geometric center of the platform, given as mean, minimum and maximum values. The mean describes the placement of the stance; the gap between minimum and maximum describes the extent of the movement.
- **SCORE:** A composite indicator summarizing balance performance; its method is specific to Medroco. It allows a recording to be followed at a glance. It is used to compare recordings of the same person under the same conditions. It has no reference range or category and should be read together with the other metrics.

Figure 8 shows what these metrics correspond to on the trajectory.

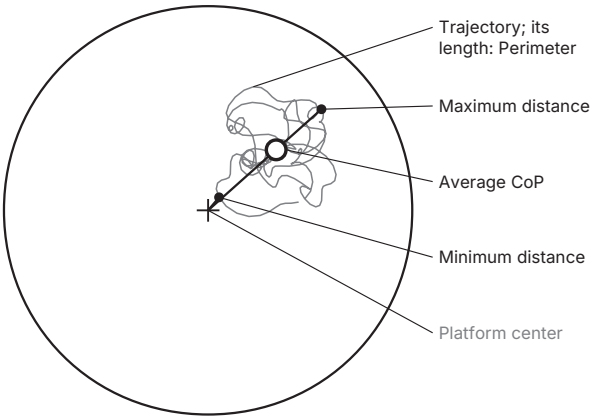


Figure 8: A quiet stance trajectory and the metrics drawn from it. Schematic illustration.

Reading. Metrics are evaluated together; a single value is not a result on its own. There is no full consensus in the literature on how to interpret quiet stance metrics, so the most reliable comparison is with the person's own earlier recordings. For this, stance, duration and eye condition should be kept the same; the repeatability of the metrics depends on these conditions and on recording duration (Ruhe et al., 2010). Figure 9 shows the logic of this comparison.

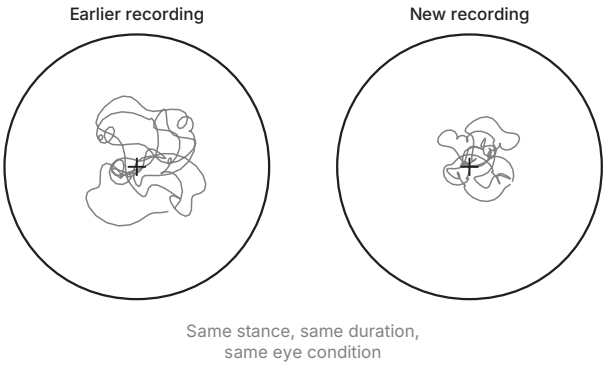


Figure 9: A shorter trajectory across two recordings made under the same conditions. Schematic illustration.

9.5 Limits of Stability

Purpose. While Quiet Stand Balance looks at quiet stance, Limits of Stability looks at the ability to move the center of pressure deliberately in given directions. The person moves to targets in eight directions in turn, and metrics are calculated separately for each target. The recording is therefore not reduced to a single number, and differences between directions can be seen.

Metrics

- **Period:** The time from the previous arrival to arrival at this target. It describes the speed of the approach. A shorter time shows a faster approach; however, a fast but deviating movement does not count as better than a slightly slower but smooth one.
- **Perimeter:** The total path covered on the way to the target. It describes how indirect the movement was. A value close to the direct path shows that the movement was made with less deviation.

- **Average Postural Sway:** The mean distance of the center of pressure from the straight line running from the center to the target. It describes how well the movement was held in the direction of the target. A small value means a straighter movement.
- **Sway Area:** The area covered by the center of pressure on the way to the target. It shows how widely the movement spreads. Unlike in quiet stance, the person moves the center of pressure deliberately here, so some area is expected; the real information lies in the differences between directions.
- **Max Force and Average Force:** They show the portion of the load shifted toward the target direction, not the total body load. They describe how much load the person can transfer in that direction. They are used to compare directions.

Figure 10 separates the concepts of path, deviation and area on a single move to a target.

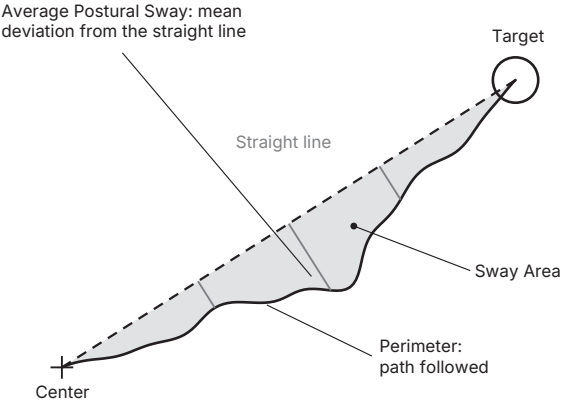


Figure 10: A single move from the center to a target. Schematic illustration.

Reading. A clearly longer time, longer path or lower force in one direction suggests that movement in that direction is harder. Reading opposite directions (right and left, front and back) side by side is especially useful. Recordings with different Target Distance values should not be compared directly. Figure 11 gives an example of such a side-by-side reading.

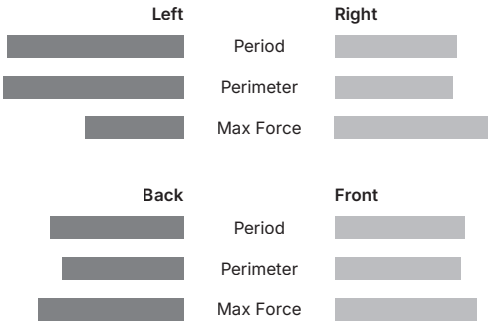


Figure 11: Opposite directions compared; in this example time and path are longer and force lower to the left. Schematic illustration.

9.6 Countermovement Jump (CMJ)

Purpose. The CMJ analysis examines how total force changes over time, that is, the force-time curve. It makes visible not only the result of the jump but also how that result was reached. In a person standing still, force equals body weight; every departure from this value shows that the body is speeding up or slowing down.

Phases

Phase	What happens	Common fault
Preparation	The person stands still; force stays steady at body weight.	Fidgeting before starting.
Take-off	The person dips and pushes. Force first falls below body weight, then rises above it and lasts until contact is lost.	Changing dip depth or arm action between repetitions.
Flight	Contact with the platform is lost; force is close to zero.	Tucking the knees in the air.
Landing	The feet return to the platform, force rises quickly and settles back to quiet stance.	Landing on one foot or on the edge of the platform.

Figure 12 shows these phases on a single force-time curve.

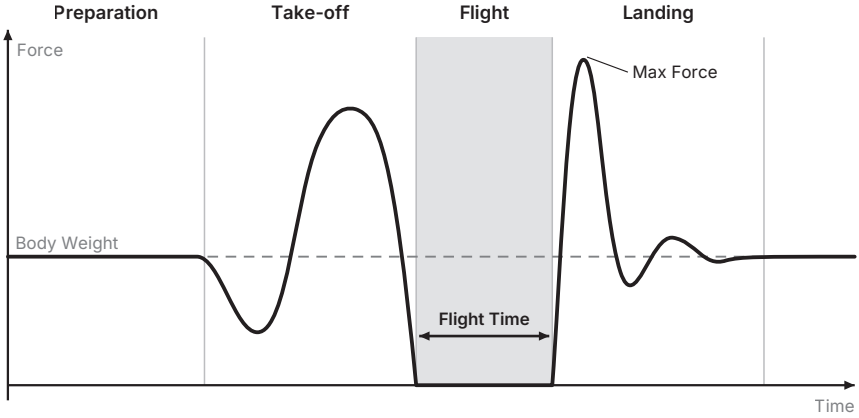


Figure 12: Force-time curve of a single jump; force is close to zero in flight. Schematic illustration.

Metrics

- **Flight Time and Flight Height (Time):** Flight time is the time between take-off and landing. Jump height is calculated from this time: if free flight is assumed to be symmetrical, rising and falling take equal time and the general physics relation $h = g \cdot t^2 / 8$ applies (Bosco et al., 1983; Linthorne, 2001). Here t is flight time and g is the acceleration of gravity. It is the simplest value summarizing the result of the jump. A longer flight time means a higher jump.
- **Takeoff Velocity (Time):** The value of velocity at take-off, found from flight time: $v = g \cdot t / 2$. It gives the same information as height, expressed as a velocity.
- **Positive, Negative and Net Impulse:** Impulse is the accumulation of force over time; it can be thought of as the area under the force-time curve. Positive Impulse is the accumulation of force above body weight, Negative Impulse of force below it, and Net Impulse is the difference between the two. This is the quantity that determines take-off velocity. The same impulse can be produced by high force over a short time or low force over a long time, so impulse is read together with the force-time curve.

- **Takeoff Velocity (Impulse):** According to the impulse-momentum relation, the impulse above body weight divided by mass gives the take-off velocity (Linthorne, 2001). This calculation is independent of flight time and comes directly from force, so it is not affected by the way the person lands.
- **Max Force, Average Force, Average Jump Force, Average Landing Force:** These summarize the force level of the repetition. Average Jump Force describes the force at take-off and Average Landing Force the force at landing. Max Force is the highest value in the whole repetition, so it may also occur at landing. Force values depend on the person's weight; between different people they are read together with Body Weight.
- **Body Weight:** The newton equivalent of the weight found in preparation. Because all impulse calculations are made against this value, moving during preparation affects the results.

Figure 13 shows the place of impulse on the curve.

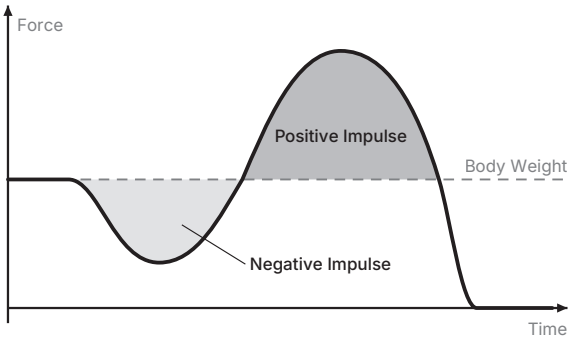


Figure 13: The areas below and above body weight. Schematic illustration.

Reading. Because the two take-off velocities are calculated by different methods, they may not match exactly; the difference does not mean an error, and recordings should be compared using the same method. Looking at several repetitions and their consistency gives a sounder result than a single jump.

9.7 Limitations

- **Time resolution:** Events shorter than the sampling interval do not appear in the recording; very short contacts and sudden force peaks may look different from what they are.
- **Stance and placement:** Center of pressure metrics depend on foot position, eye condition and recording duration. Recordings made under different conditions should not be compared.
- **Same name, different meaning:** Max Force and Average Force in the Limits of Stability analysis cannot be compared with the metrics of the same name in the CMJ analysis; one describes directional load, the other total force.
- **Flight time assumption:** The height calculation assumes that the person lands in the same posture as at take-off. Bending the knees early on landing extends flight time and overstates height.
- **Interpretation:** The report contains no reference range, does not label results as normal or abnormal and is not used for diagnosis. VivePad is not a medical device.

9.8 References

- Bosco C, Luhtanen P, Komi PV. A simple method for measurement of mechanical power in jumping. *Eur J Appl Physiol.* 1983;50(2):273-282.
- Linthorne NP. Analysis of standing vertical jumps using a force platform. *Am J Phys.* 2001;69(11):1198-1204.
- Prieto TE, Myklebust JB, Hoffmann RG, Lovett EG, Myklebust BM. Measures of postural steadiness: differences between healthy young and elderly adults. *IEEE Trans Biomed Eng.* 1996;43(9):956-966.
- Ruhe A, Fejer R, Walker B. The test-retest reliability of centre of pressure measures in bipedal static task conditions: a systematic review of the literature. *Gait Posture.* 2010;32(4):436-445.
- Winter DA. Human balance and posture control during standing and walking. *Gait Posture.* 1995;3(4):193-214.

The SCORE indicator is a method specific to Medroco and is not based on a published source.

10

Use without an app

When the user steps onto the platform while the device is not connected to any app, the device offers four built-in activities on the light ring. These activities do not record measurements or generate reports; they are designed for warm-up and short balance exercises.

10.1 Menu

When the user steps onto the platform, the ring divides into four colored segments and a pointer showing the center of pressure (CoP) appears.

Color	Activity
Blue	Turn
Green	Jump
Red	Reflex
Yellow	Balance

To select an activity, the user must shift weight toward the segment of that color and hold the pointer on the segment for three seconds. The selected segment brightens and the activity starts.

10.2 Activities

- **Balance (yellow):** A target zone appears on the ring. The target is completed when the pointer is held on the target for three seconds.
- **Turn (blue):** The target zone moves back and forth on the ring. The pointer must be kept inside the moving target. At each level, the target becomes smaller and faster.
- **Reflex (red):** The target zone appears at a random position on the ring and disappears shortly afterwards. The pointer must be moved to the target before the target disappears. At each level, the time becomes shorter.

- **Jump (green):** An arc showing the target flight time appears on the ring. When the user jumps, the measured flight time is compared with the arc; when the target is exceeded, the user advances to the next level.

10.3 Exit

When the user steps off the platform, the activity returns to the menu after five seconds, and the menu returns to the idle view after five seconds. During this time, the device performs zeroing while the platform is empty.

WARNING Section 8.4 "Dynamic load" applies to the Jump activity.

11

Games

The Medroco platform offers games played with VivePad. The game catalog is continuously expanding; the current list is available in MedrocoHub and at **medroco.com/apps**.

On phones and tablets, games run as standalone apps; on macOS and Windows, they run from within MedrocoHub. How each game is played with the device is explained in its "How to Play?" guide: on phones and tablets on the game's opening screen, and on macOS and Windows on the game's page in MedrocoHub and when launching it. Meta Quest versions do not have this guide yet. Therefore, game-specific usage information is not included in this manual.

Starting a game with the device

1. VivePad must be switched on.
2. The game must be opened and **With a Medroco device** must be selected in response to the question "How do you want to play?".
3. VivePad must be selected from the device list.
4. The user must step onto the platform and stand still until the game has measured body weight.

NOTE On macOS and Windows, MedrocoHub establishes the device connection and maintains it throughout the game. While the Hub is connected, the same device is not displayed in the phone app.

NOTE If the connection is lost, the game stops and displays a warning. The user should check that the device is switched on and within range, and then reconnect.

12

Light indicators

The light ring is the device's only indicator. The list below gives the meaning of each view and the required action.

12.1 Start-up and use

	**Colored arc rotating, changing color** Device is starting	Wait
	**Rainbow colors rotating slowly** Device on, not connected; dims after a while	Connect from the app, or step onto the platform to start use without an app
	Ring dark Device connected with an empty platform, or device off	If connected, step onto the platform; if off, switch on with the button
	**Blue dot; an arc that grows and turns red as balance is lost** Device connected; the light shows the center of pressure (CoP)	Ready for measurement
	**Four colored sections and a pointer** Menu for use without an app	See Section 10
	**Target arc; green or red pulse** Activity without an app in progress; green shows a successful attempt, red an unsuccessful one	See Section 10

12.2 Charging and battery

	**Arc filled to the battery level, white droplets flowing** Charging	Wait

	**Entire ring green, rippling** Battery full	The cable can be disconnected
	**Arc tip breathing, no droplets** Cable connected but no charging current	Try another adapter or cable
	**Spaced soft blue dots, breathing** Battery level cannot be read; the device is retrying	Wait a few minutes; if it persists, switch the device off and on again
	**Short red arc flashing, then going off** Battery low; the device cannot start or is shutting down	Charge the device

In the charging view, the arc color shows the battery level: from low to high, red, amber, blue, green. The same view appears when the cable is connected to a device that is off (charging mode).

12.3 Shutdown and restart

	**Dim blue light rotating, then going off** Software is being verified after an update; shutdown is not yet complete	Wait; the device switches off by itself
	**Dim red arc shortening in steps** Button held down; the device is about to restart	Releasing the button cancels; holding to the end restarts the device, and data and calibration are kept

12.4 Errors and recovery

	**Spaced dim amber dots, breathing** Safe mode (consecutive unexpected restarts)	Connect to a charger; press the button or wait a while

	**A few orange lights with a double flash at intervals** Recovery mode; the device failed to start properly several times in a row and its software needs repair	Connect to the device with ViveLab or MedrocoHub; the app starts the repair. If the repair does not complete, contact service
	**On button press, a few red lights flash three times** Recovery mode; starting with the button can no longer be tried	Repair must be done from the app: connect to the device with ViveLab or MedrocoHub. If the repair does not complete, contact service
	**Entire ring flashing orange** Sensor initialization error	Switch the device off and on again; if it persists, contact service
	**Entire ring flashing blue** Required device setting missing	Contact service
	**Entire ring flashing red** Other error	Switch the device off and on again; if it persists, contact service

Repair in recovery mode: When you connect to a device in recovery mode, ViveLab or MedrocoHub says **Let's repair your device**. The app carries out the repair; the user does not need to choose any software. Keep the device on the charger and do not close the app during the repair. If the repair cannot be completed, the app gives a help code; use this code to create a service request at **medroco.com/en/service-request**.

13

Power and battery

13.1 Charging

- The charging port is USB-C.
- The device can be charged with any 5 V USB adapter or a computer's USB port.
- For faster charging, a Quick Charge 2.0 compatible USB-A adapter and a USB-A to USB-C cable should be used; in this case, the device switches to 9 V. Charging with a USB-C to USB-C cable is always performed at 5 V.
- Charging time: up to 2.5 hours to 100% with fast charging.
- It is normal for the device to become warm during charging. The device must not be covered during charging.
- The device can also be used while the charging cable is connected. If it is in charging mode, it must first be switched on with the button.

13.2 Battery Life

A fully charged battery provides up to 12 hours of operation under normal use. Continuous use of the light ring at full brightness shortens this time.

The battery level is displayed on the device card in the app and is an approximate value. When the battery is low, the app displays a warning; when the battery runs out, the device shuts down safely.

13.3 Fully depleted battery

When the battery is fully depleted, the button does not respond and the ring does not light up. When the charging cable is connected, the battery view starts from the lowest level; after a few minutes, the device can be switched on with the button.

13.4 Software update

When new device software is released, ViveLab or MedrocoHub displays a notification.

1. The device must be connected to a charger and kept switched on.
2. **Update** must be selected in the app.
3. The update takes a few minutes. When it is completed, the device restarts automatically.

During the update, the app must not be closed and the device must not be disconnected from the charger. Reverting to a previous software version is not supported.

CAUTION Tampering with the device software by any means other than Medroco apps voids the warranty.

14

Account, ownership and transfer

14.1 My Devices

Devices registered to the account are listed in the app under **Profile > My Devices** with their name, serial number, software version and battery level.

14.2 Transfer

The device is transferred to another person or organization using the following steps.

1. Under **Profile > My Devices**, the device must be selected and **Transfer** must be selected.
2. The recipient's Medroco One email address must be entered.
3. The confirmation link sent to the current owner's email address must be confirmed within 24 hours.
4. Within 7 days, the recipient must connect the device to their own app and select **Complete transfer**.

If these time limits are exceeded, the transfer is canceled and the device remains with the current owner. Restoring the device to factory settings does not remove ownership; ownership can be changed only through this procedure.

14.3 Lock

In the event of a theft report or a payment dispute, Medroco can lock the device remotely. A locked device displays the warning "Device locked. Contact support." in the app; it does not work in any app and cannot be registered or transferred. For a lock, contact **info@medroco.com**.

14.4 Personal data

Measurements are stored in the Medroco One account and can be viewed only by the account holder and the expert the account holder has authorized. Data can be downloaded in CSV format; it is permanently deleted when the account is deleted. Privacy Policy and KVKK (Turkish Personal Data Protection Law) Information Notice: **medroco.com/privacy**.

15

Maintenance, cleaning and storage

15.1 Cleaning

- Cleaning must be performed only while the device is switched off and the charging cable is disconnected.
- The surface should be wiped with a soft, slightly damp cloth.
- Solvents, alcohol, abrasives and spray cleaners must not be used.
- Liquid must not be sprayed directly onto the device, and the device must not be immersed in water.
- The non-slip bases of the feet should be cleaned regularly; dust and dirt cause slipping.

15.2 Storage

- The device draws a small current from the battery even when switched off; a full battery may run down within a day or two. This is not a fault.
- If the device will not be used for a long period, it should be charged once a month and stored in a cool, dry place.
- The storage temperature must be between -10 °C and 45 °C.
- No load should be placed on the device, and the device should not be left leaning upright.
- A device that has been stored for a long period must be charged before use.

15.3 Transport

- The device should be carried with both hands, held by its edges. The device weighs 8 kg.
- When transported in a vehicle, the device should be placed flat and secured, and no load should be placed on it.

15.4 Service

There are no user-serviceable parts inside the device. Where service is required, create a service request at **medroco.com/en/service-request** with the serial number and a description of the fault. If the form cannot be used, write to **info@medroco.com**.



CAUTION Opening the device outside an authorized service center, removing the battery or replacing parts voids the warranty.

16

Troubleshooting

Symptom	Possible cause	Solution
A short red arc flashes on the ring when the button is pressed, and the device does not switch on	Battery insufficient to switch on	Connect the device to a charger and wait a few minutes
The button does not respond, and the ring does not light up	Battery fully depleted	Connect the charging cable; wait after the battery view appears
The app does not list the device	The device is in charging mode or switched off; another app is connected; Bluetooth permission has not been granted	Switch the device on with the button; disconnect the device in the other app; check Bluetooth and permissions
Spaced dim amber dots are breathing on the ring	Safe mode	Connect the device to a charger; press the button or wait a while
App connected, ring dark	Platform empty	This is normal; the light appears when the user steps onto the platform
The start-up animation repeats, or the device drops to the battery view on its own	Low battery level	Leave the device on the charger
A weight is shown on the empty platform	Zeroing has not been performed, or something is touching the edge of the device	Wait a short time (the device zeros automatically); remove any contact; if necessary, zero from the app

Symptom	Possible cause	Solution
Preparation stays at "Reading unstable" or shows the warning "Load on platform"	The platform is not empty, or the surface is vibrating	Step off the platform, check the surface and any contact, and restart preparation
Directional information appears reversed	The user is not facing the logo	The user must stand facing the Medroco logo
The ring is flashing orange	Sensor initialization error	Switch the device off and on again; if it persists, contact service
The connection was lost during a game	Out of range, low battery or another app connected	Check the device and reconnect
A jump is not detected or is counted twice	Stamping hard; starting the game while off the platform	Squat and unweight before jumping; start the game while standing on the platform
Charging does not switch to 9 V	A USB-C to USB-C cable is being used	Use a Quick Charge compatible USB-A adapter and a USB-A to USB-C cable
The battery percentage changes suddenly before shutdown	The percentage calculation is approximate	Charge the device; if it persists, check for a software update
The software update does not start	The device is not on the charger, not connected, or the battery is low	Connect the device to a charger; the device must be switched on and connected

For other light views, see Section 12.

If the problem persists, create a service request at **medroco.com/en/service-request** with the serial number (from the label or My Devices) and a description of the symptom.

17

Technical specifications

Specification	Value
Model	VPC02
Form	Circular platform
Diameter	50 cm
Height	5.2 cm
Weight	8 kg
Maximum static load	400 kg
Sampling rate	80 Hz
Indicator	Light ring
Connectivity	Bluetooth Low Energy 5.0 and Wi-Fi, 2400 to 2483.5 MHz, maximum output power +13 dBm (Wi-Fi; BLE +9 dBm)
Battery	Lithium-ion, 21.6 Wh, not user-replaceable
Battery Life	Up to 12 hours
Charging input	USB-C, 5 V ⎓ 1.5 A / 9 V ⎓ 1.2 A (Quick Charge 2.0)
Charging time	Up to 2.5 hours to 100% with fast charging
Operating temperature	0 °C to 40 °C
Storage temperature	-10 °C to 45 °C
Protection rating	Not waterproof
Compatibility	iOS, Android, macOS, Windows; ViveLab and MedrocoHub

Product label

The label on the underside of the device shows the serial number (SN), product code (REF), hardware ID (HWID), date of manufacture, conformity markings and a QR code. The QR code opens the device-specific page: registration status, current manual and declaration of conformity.

18

Compliance, disposal and warranty

18.1 Compliance

CE This product complies with the RoHS Directive (2011/65/EU). Hereby, Medroco Medikal Robotik A.Ş. declares that the radio equipment type VivePad VPC02 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **medroco.com/d/VPC02**

18.2 Waste electrical and electronic equipment (WEEE)

This symbol means the product must be collected separately from other household waste. This product must not be disposed of with household waste. Hazardous substances in electronic waste can harm the environment and human health if not disposed of properly. At the end of its service life, the product must be handed over to a municipal or retailer collection point for electronic waste.

18.3 Battery

The product contains a lithium-ion battery that cannot be replaced by the user. The battery must be recycled only together with the product, at an electronic waste collection point.

18.4 Warranty

The product is covered by a warranty of 24 months from the date of delivery. The warranty certificate is provided on the last page of this manual. The product has a service life of 5 years. Spare parts and paid repairs are available throughout this period.

The following are not covered by the warranty:

- Use contrary to this manual

- Exceeding the 400 kg static load limit and repeated dynamic overloads
- Contact with liquids, dropping and impact
- Opening the device outside an authorized service center, removal of the battery, replacement of parts or unauthorized tampering with its software
- Use of a power supply other than those specified in this manual

18.5 Right of withdrawal

In distance sales, the consumer has the right to withdraw from the contract within 14 days of receiving the product without giving any reason. This right applies to consumer purchases in Türkiye. Notice of withdrawal must be sent to **info@medroco.com**. The product must be returned together with its box and accessories within 10 days of the notice; the return shipping cost is borne by Medroco. The purchase price is refunded to the original payment method within 14 days of the notice of withdrawal. Detailed information: **medroco.com/withdrawal**.

18.6 Manufacturer

Medroco Medikal Robotik A.Ş.
Orta Mahalle, Kavaklar Caddesi No:15, Ofisada Plaza, Adapazarı / Sakarya, Türkiye
info@medroco.com · medroco.com
MERSİS 0614145362600001

Notes

Notes

Warranty Certificate

Manufacturer

Company Medroco Medikal Robotik Anonim Şirketi
Address Orta Mahalle, Kavaklar Caddesi No:15, Ofisada Plaza, Adapazarı / Sakarya, Türkiye
Email **info@medroco.com** · Web: **medroco.com**
MERSIS 0614145362600001

Seller and delivery

The seller's details and the invoice date and number are stated on the product invoice. The warranty period starts on the delivery date. The invoice or order details are sufficient for a warranty claim.

Product

Type Portable force platform
Brand Medroco
Model VivePad VPC02
Serial number stated on the label on the underside of the device
Warranty period **24 months**
Maximum repair time **20 business days**
Service life **5 years**

Warranty terms

1. The warranty period starts on the date the product is delivered to the consumer and is 24 months.
2. The entire product, including all its parts, is covered by the warranty.
3. If the product is found to be defective, the consumer may exercise one of the elective rights set out in Article 11 of Consumer Protection Law No. 6502: withdrawing from the contract by stating readiness to return the product; keeping the product and requesting a price reduction in proportion to the defect; requesting free repair, with all costs borne by the seller, unless this entails excessive cost; or, where possible, requesting replacement of the product with a defect-free equivalent.
4. If the consumer exercises the right to free repair and the product fails again within the warranty period, or the maximum repair time is exceeded, or an authorized service station, the seller, the manufacturer or the importer determines in a report that repair is not possible, the consumer may request

a refund of the price, a price reduction in proportion to the defect or, where possible, replacement of the product with a defect-free equivalent. The seller cannot refuse this request.

5. The repair time of the product cannot exceed 20 business days. This period starts on the date the fault is notified to the authorized service station or the seller during the warranty period, and on the date the product is delivered to the authorized service station outside the warranty period. If the fault cannot be remedied within 10 business days, the manufacturer provides another product with similar features for the consumer's use until the repair is completed.
6. If the product fails within the warranty period, the time spent on repair is added to the warranty period.
7. Faults caused by use contrary to the instructions in the user manual are not covered by the warranty. This includes: exceeding the maximum static load limit (400 kg) and repeated dynamic overloads; contact with liquids; dropping and impact; opening the device outside authorized service; removing the battery, replacing parts or unauthorized interference with the software; and using a power source other than the one specified in the manual.
8. In disputes arising from the exercise of rights under the warranty, the consumer may apply to the Consumer Arbitration Committee or the Consumer Court at the consumer's place of residence or the place where the consumer transaction took place.
9. If the seller does not provide this Warranty Certificate, the consumer may apply to the General Directorate of Consumer Protection and Market Surveillance of the Ministry of Trade.

Service

Warranty and service requests: **medroco.com/en/service-request** (if the form is unavailable, **info@medroco.com**). The request must include the device serial number (from the label or from My Devices in the app) and a description of the fault; shipping instructions are given by email. Authorized service station: manufacturer's headquarters (address above).

MEDROCO

medroco.com

Current version: medroco.com/d/VPC02