3D L.A.S.A.R. Posture

Bringing balance for everyday use
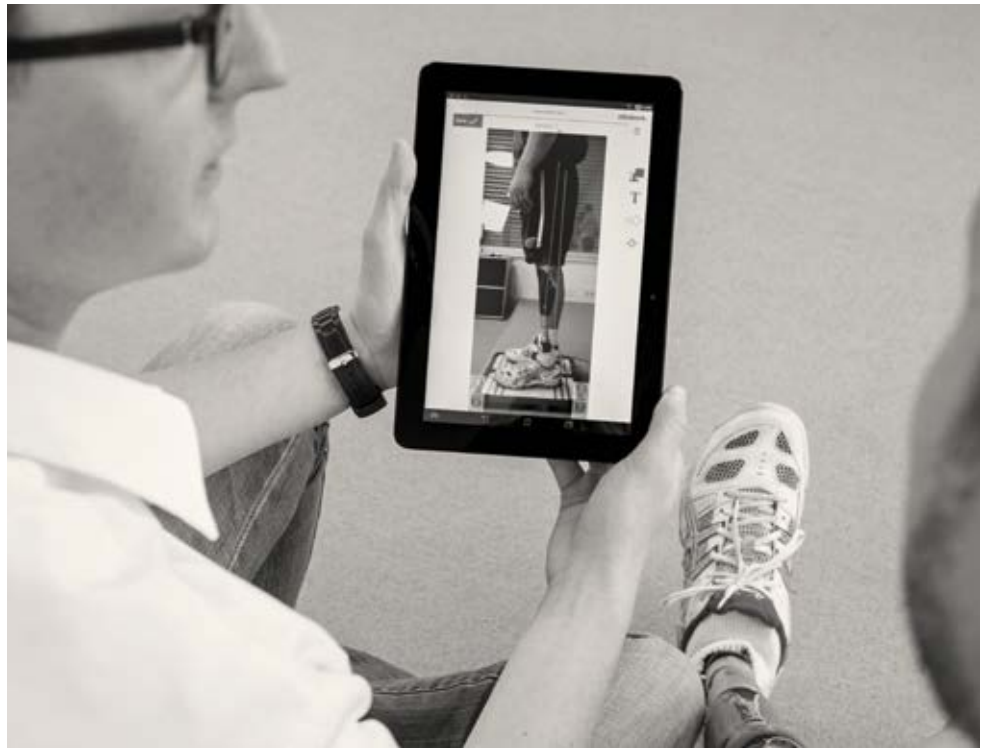
Quality for life

The right statics are the only way to achieve high mobility

The alignment of a prosthesis or orthosis is a key factor in the quality of your fitting. Only when the statics are correct can the medical device reveal its full functionality and the user regain the highest possible level of mobility and independence.

Areas of application for the 3D L.A.S.A.R. Posture

Devices with correct static alignment have a positive effect on users' posture and mobility: Malpositions are minimised, the body is relieved and users find it easier to maintain their balance.

The 3D L.A.S.A.R. Posture supports technicians in providing optimal prosthetic and orthotic alignments as well as in checking body posture. Our latest new developments for this proven product, which is highly valued in everyday work thanks to its numerous advantages, make working with the 3D L.A.S.A.R. Posture even easier and more comfortable. We placed particular focus on simplifying the documentation process as well as expanding the measurement function.

With the new 3D L.A.S.A.R. Posture, cameras take a live recording of the patient standing on the measuring plate and transmit the image to a tablet PC. The measured forces are represented as lines on the tablet's display, which are positioned with millimetre accuracy over the patient's image.

Static alignment or verification of body posture in:
- Lower limb prosthetics
- Custom lower limb orthotics
- Orthopaedic foot care
- Incorrect posture of pelvis and legs
- Leg length discrepancy
- Physiotherapy
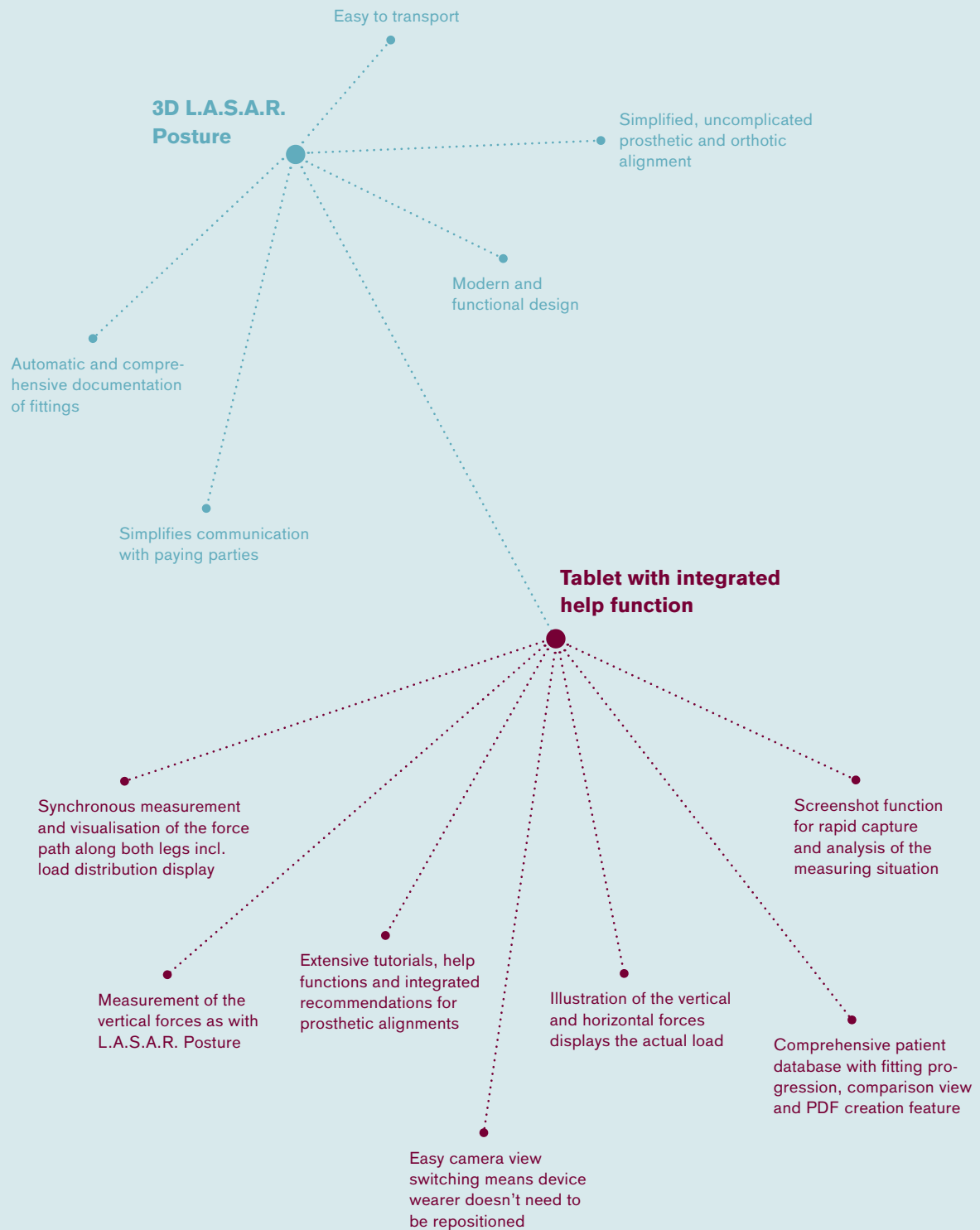- Rehabilitation

Prosthetics
- Lower leg prosthetics
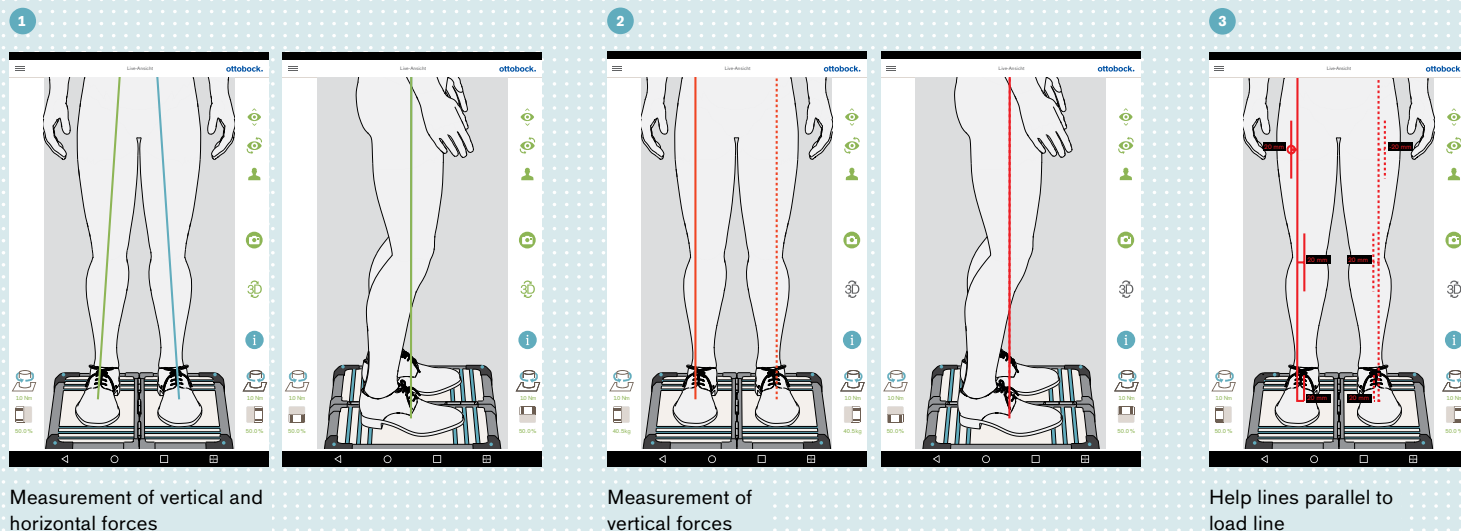- Upper leg prosthetics
- Hip disarticulation prosthetics

Orthotics
- Orthopaedic inserts and foot care
- Ankle foot orthoses
- Knee ankle foot orthoses
- Hip knee ankle foot orthoses

Benefits
at a glance

3D L.A.S.A.R. Posture

Easy to transport

Simplified, uncomplicated prosthetic and orthotic alignment

Modern and functional design

Automatic and comprehensive documentation of fittings

Simplifies communication with paying parties

Tablet with integrated help function

Synchronous measurement and visualisation of the force path along both legs incl. load distribution display

Screenshot function for rapid capture and analysis of the measuring situation

Measurement of the vertical forces as with L.A.S.A.R. Posture

Extensive tutorials, help functions and integrated recommendations for prosthetic alignments

Illustration of the vertical and horizontal forces displays the actual load

Comprehensive patient database with fitting progression, comparison view and PDF creation feature

Easy camera view switching means device wearer doesn't need to be repositioned

In the live view, the load situation for both legs is displayed simultaneously either in 3D L.A.S.A.R. Posture mode (image 1) or L.A.S.A.R. Posture mode (image 2). Help lines can also be positioned with millimetre accuracy or the alignment reference lines for the Ottobock components superimposed according to the alignment recommendations in the live image (image 3). You can capture the measuring situation using a screenshot.

Measurement of vertical and horizontal forces

Measurement of vertical forces

Help lines parallel to load line

Complex applications – completely simple

The 3D L.A.S.A.R. Posture captures the force path and simultaneously displays it for both legs in the form of lines projected onto the patient's image with millimetre accuracy. This simultaneous display of both legs means the reciprocal influences can be clearly seen. A change in the load caused by an adjustment to the device thereby results in an immediate reaction on the contralateral leg.

The 3D L.A.S.A.R. Posture makes it possible to verify the effect of stabilising a joint using ground reaction forces during the measuring process. Adjusting the plantar flexion under a load makes fine adjustments to the device especially quick and precise. The distances between the force vectors and the reference joint or points on the body are adjusted directly on the user's device during the fitting.

Another extremely useful feature: A display of the patient's weight on each half of the plate (in per cent, kilogrammes or pounds) displays the weight distribution across the plate halves. The reciprocal influence the two legs have on each other can only be properly determined when both legs are loaded equally. Warning messages indicate when the user isn't placing equal weight on both plates. The torsion moments are also specified (in Nm).

You can easily switch between camera perspectives with the touch of a button – from sagittal to frontal, from the leg view to the upper body view – without the user having to reposition themselves on the plate.

The alignment situation can also be saved as a screenshot with the touch of a button to enable reproducible measurements.

One system –
numerous functions

The load situation captured using screenshots can be subsequently measured and documented in detail. Within the image, areas can be greyed out, text added and distances between the load line and reference points measured with milli- metre accuracy.

Functions such as a virtual 50:50 and 60:40 gauge, which can be dragged onto the image, or the integrated zoom function support you in effortlessly keeping an eye on every detail.

Every screenshot is saved with the date and assigned to the user in the integrated user database so that you can easily document the fitting process. A number of screenshots can also be viewed using a comparison view.
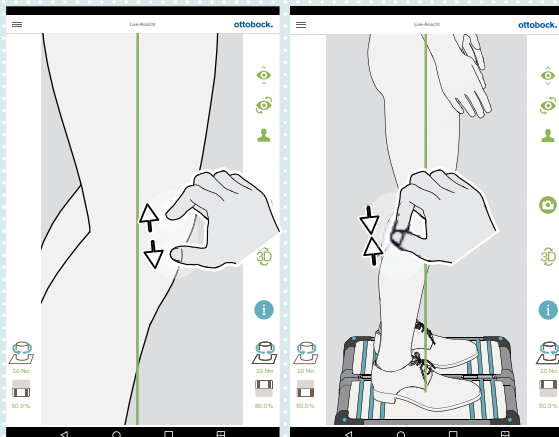
Thanks to the option of compiling selected patient details as well as measurement screens- hots and creating a PDF file from these data, communication with paying parties is simplified considerably.
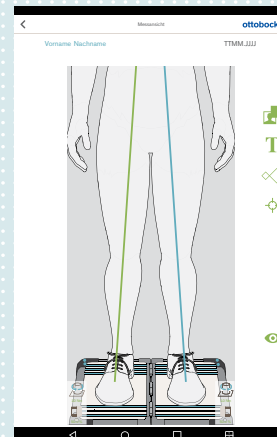

PDF file with user data and previously selected screenshots
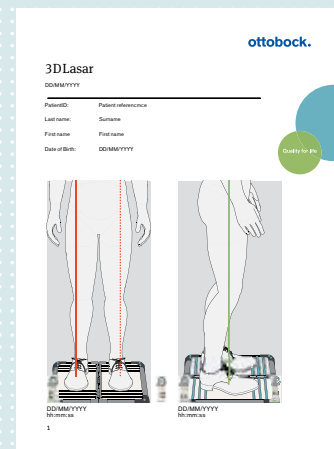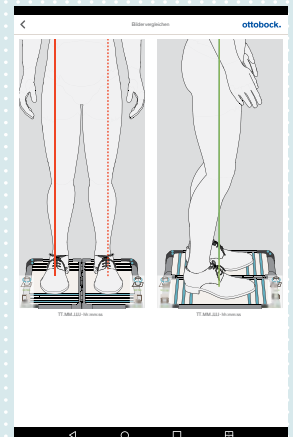

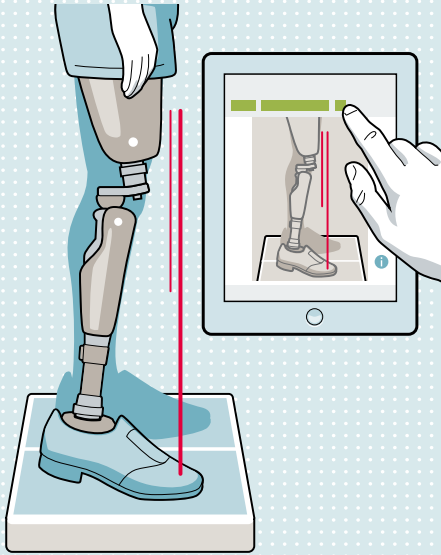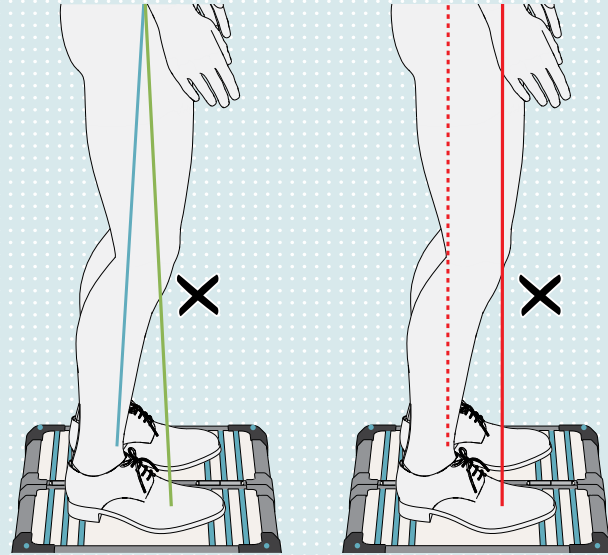Zoom function can be used in both live and measurement views

Measurement view

Comparison view

Step-by-step animations guide you through the device alignment

Application example: deviations in the course of load lines in 3D mode (left: 3D L.A.S.A.R. Posture mode; right: L.A.S.A.R. Posture mode)

Our goal in the further development of the 3D L.A.S.A.R. Posture was to make your work as easy as possible. That's why you'll find the tried-and-tested alignment recommendations for TT and TF fittings in the help section of the application as well as step-by-step animations for prosthetic alignments and for measurement taking as well as recommendations for interpreting the results of measurements.

Good to know: If new Ottobock prosthetic or orthotic joints are introduced to the market or alignment guidelines modified over time, you'll always stay on top of these changes thanks to the app updates.

Application example: deviations in the course of load lines in 3D mode
- Force transmission points far away from one another
- Tilted sharply towards one another in upward direction

Possible causes
- Proper bench alignment not ensured
- Static alignment with shoes not optimised
- Varying heel heights of different shoes not adjusted
- TF prostheses: equinus position for knee stabilisation
- Orthosis: spasm

Possible solutions
- Ensure proper bench alignment
- Optimise static alignment with shoes (prosthetics: adjust plantar flexion)
- Adjust varying heel heights of different shoes to a single heel height using inserts (taking contralateral side into account as well)
- Orthosis: use suitable means to establish contact between raised heel and the floor to better balance the force transmission

A case full of possibilities

The 3D L.A.S.A.R. Posture consists of the following components

- Two interconnected force measurement plates which capture the ground reaction force independently of one another
- Two tripods with two integrated cameras each
- A tablet which functions as both a display and a control unit
- A transport case with wheels and pull-out handle in which all components are stored. The two sides of the case also serve as tripod feet for the camera tripods. Alternatively, the system can be removed from the case and permanently installed in one place

Technical data

- Article number: 743L500
- Product type: Class 1M medical device
- Electrical connection: 110 – 240 V / 50 – 60 Hz
- Max. load capacity: 150 kg
- Measurement tolerance: 1 mm at load locus
- Space requirements: 1.80 m x 1.80 m
- Case dimensions: 280 mm x 630 mm x 520 mm
- Weight incl. case: 20 kg

Complete system consisting of two tripods with two cameras each, a force measurement plate and a tablet