
The zebris FDM-T System for stance and gait analysis



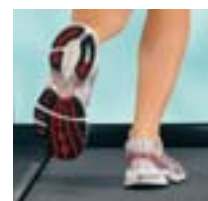
FDM-T SYSTEM



The new zebris FDM-T System - a stan



Using the zebris® FDM-T Analysis Center, gait and roll-off analyses can be carried out easily and quickly. The basic system can be extended in a variety of ways with video, motion analysis and EMG.



The treadmill can be used with shoes on or bare-foot. As a result, the influence of the shoes on the roll-off behavior can be examined.



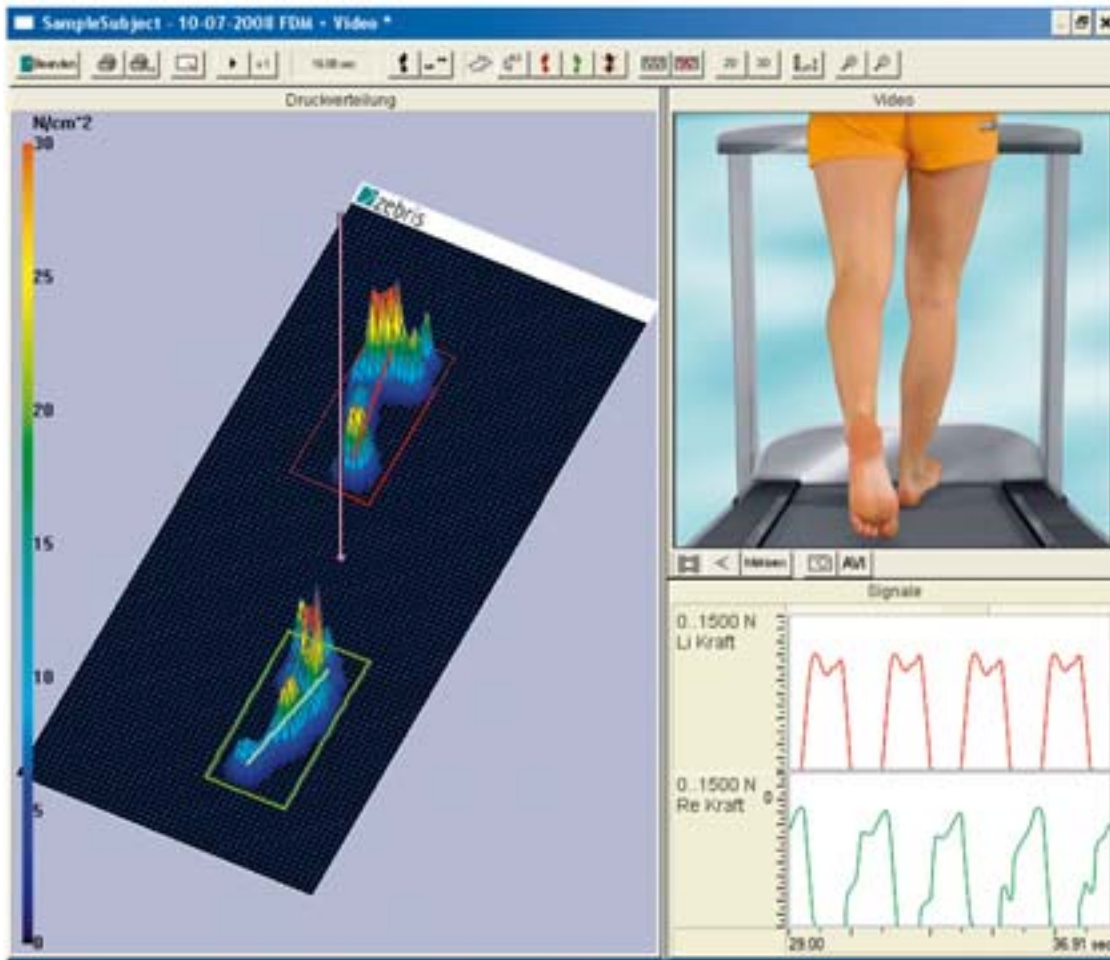
The use of modern inertial sensors enables a kinematic motion analysis, whereby a skeleton model is animated.

The basic system consists of a treadmill ergometer with an integrated, calibrated measuring sensor matrix. This consists of numerous high-quality capacitive force sensors. Using a system specially developed by zebris® the movement of the treadmill is compensated so that a completely stable gait and rolloff pattern can be analyzed. Different types of treadmill ergometer are available for the basic system.

For the stance analysis, the force distribution and the posture are recorded and evaluated.

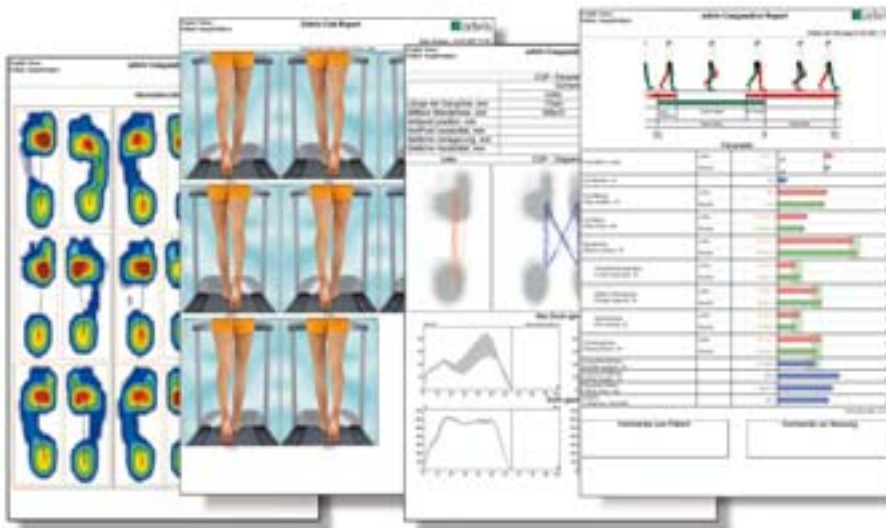


ce and gait analysis center



The display of all the measuring results is effected in real-time using commercially available PCs. A feedback control of the force on the extremities is thereby possible. The software provides a "Signal Viewer" in which all the recorded measuring variables are displayed in slow motion, and completely synchronized. The allocation of the floor contacts to the left or right side of the body is carried out fully automatically by the evaluation software.

With one mouse click the measuring results are shown on the computer and can be printed out in color for the report. This consists of several pages and contains a table with important time and place parameters, such as the gait phases – with one foot on the ground, the swing phase and the phase with two feet on the ground – step length, etc., with direct side-by-side comparison. On other pages in



the report, the lines of the centers of pressure (COP) are automatically measured. The force curves are divided into the left and right side of the body, averaged and normalized to 100% of the step cycle. Selected roll-off procedures are displayed in the Viewer as color-coded force distribution images (MPP).

The new zebris FDM-T System with numerous possibilities for extension

The basic FDM-T measuring system consists of the instrumented treadmill ergometer and the PC linked via a USB interface. For a treading area of 150 x 50 cm the sensor unit has more than 7,000 pressure / force sensors.

All the FDM-T systems are equipped



The infrared synchronization adapter is connected to the junction box of the treadmill ergometer.

in their standard form with a video synchronization output for time synchronization with the video camera.

The time synchronization using the optionally available cordless radio adapter DAB is effected via an infrared interface. The radio adapter is connected to the PC via a bluetooth interface and can be fitted with up to eight EMG amplifiers or inertial sensors for motion analysis and animation of a skeleton model. Depending on the design, the treadmill ergometer can have an additional input and output that enables any other external devices to be synchronized.



Beside the infrared interface, the cordless radio adapter has eight analog inputs, four digital inputs and an output for directly connecting a special USB through adapter cable.

Besides a high-quality video camera with stand, all the connection and synchronization cables necessary for operation, and the software extension.

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The treadmills illustrated serve for demonstration purposes.
They are not identical to the treadmills in stock.

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