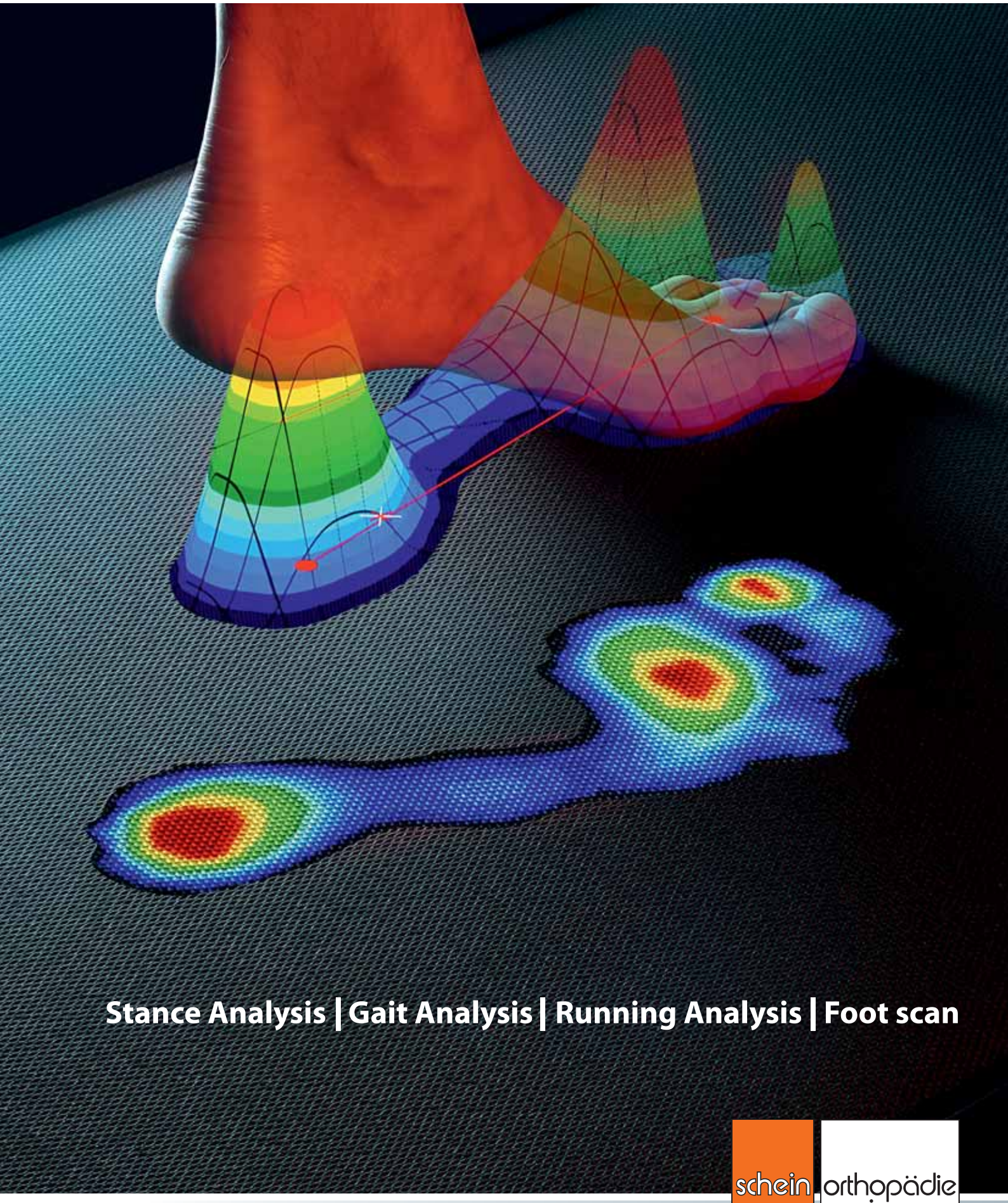
SCHEINWORKS

Measuring and Analysis Systems by schein



Stance Analysis | Gait Analysis | Running Analysis | Foot scan

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Three systems, one software.

The SCHEINWORKS System allows using several measuring systems with only a single software.

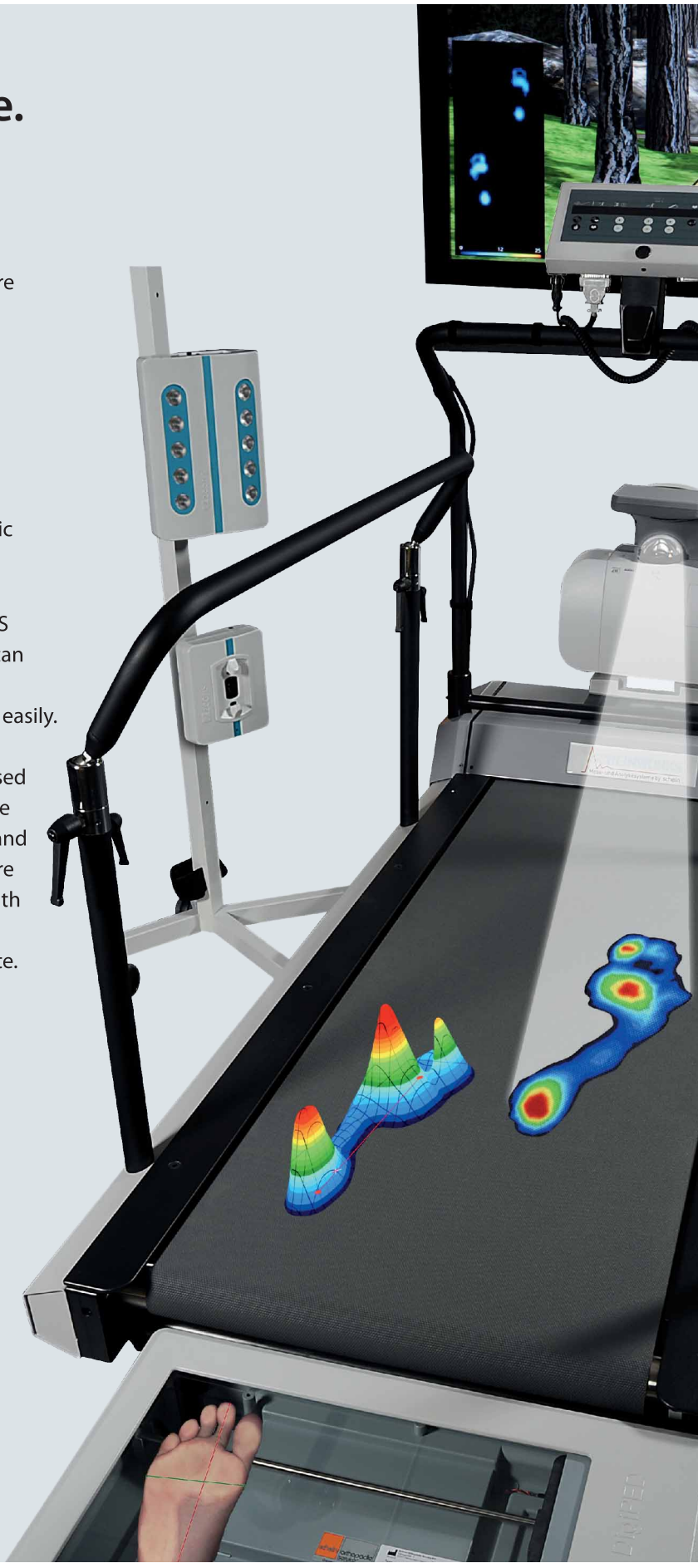
The core of the analysis is the treadmill with integrated pressure measuring plate. A sequence of steps is recorded without the patient being wired. The measured parameters are displayed in a well-structured left/right comparison.

The right treadmill for any use:

Mobile - smaller treadmill for mobile use
Sports - medium treadmills for analysing athletes
OT-Rehab - large treadmills for gait analysis in the orthopaedic area, also for users of prostheses

In combination with the optional synchronized SCHEINWORKS cameras, motion analysis can also be performed visually. You can chose where to place the camera and angle illustration allows individual analysis. Several camera modules can be combined easily.

The SCHEINWORKS DigiPED foot scanner, which can also be used as an individual measuring unit, complements the analysis. The 2D-scanner statically records the sole of the foot. Foot length and width can be determined, and special features, such as pressure marks, can be documented. Images of the dynamic analysis with the average pressure can be overlaid on the static foot-scan in combination with the SCHEINWORKS pressure measuring plate.



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Treadmill mobile

Stance analysis

Gait analysis

The treadmill is a practical solution for smaller sized set-ups if only little space is available. Its light-weight construction makes it perfect for mobile use. It can be set up and folded away easily. It is delivered completely assembled and can be taken into operation at once.

Technical Data Treadmill mobile FDM-TLR Art. No. 032110-011

Treadmill	Speed	0,8 - 14 km/h
	Running surface (L x W)	122 x 44 cm
	Weight	approx. 75 kg
	Dimensions (L x W x H)	160 x 80 x 131 cm
	Dimensions folded (L x W x H)	159 x 80 x 47 cm
	Track access height	19 cm
	Elevation	0 %, not adjustable
	Maximum user weight	approx. 100 kg
Sensor	Measuring range	1 - 120 N/cm^2
	Sampling frequency	100 Hz
	Sensor surface	**94,8 x 40,6 cm**
	Number of sensors	**5376**

Treadmill sports

Stance analysis

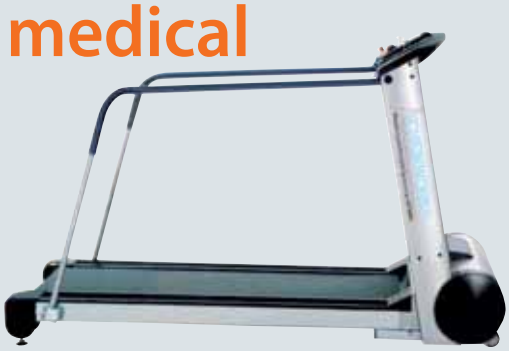
Gait analysis

Running analysis

The treadmill has a weight of about 200 kg. It is characterised by easy handling. Its smooth movement, high stability and its speed of up to 24 km/h make the treadmill suitable even especially for the sports area. It can be equipped with two different pressure measuring plates.

The medical version is equipped with pre-installed handrails and a specifically shielded motor. Optional handrails can also be supplied for the other treadmills of the **sports** series.

medical



Because of its technical construction, the treadmill **medical FDM-TDM** meets all standard requirements for use in clinical settings.

medical FDM-TDM	Art. No. 032110-030
Handrails	Art. No. 032124-000

Technical Data Treadmill sports

Treadmill	Speed	0,2 - 24 km/h
	Running surface (L x W)	150 x 50 cm
	Weight	FDM-TDS approx. 190 kg / FDM-TDM approx. 210 kg
	Dimensions (L x W x H)	200 x 92 x 150 cm
	Track access height	18 cm
	Elevation	-2 % up to 15 %
	Maximum user weight	approx.150 kg

sports FDM-TDSL		Art. No. 032110-016
Sensor	Measuring range	1 - 120 N/cm²
	Sampling frequency	100 Hz
	Sensor surface	**94,8 x 40,6 cm**
	Number of sensors	**5376**

sports FDM-TDS		Art. No. 032110-020
Sensor	Measuring range	1 - 120 N/cm²
	Sampling frequency	120 Hz, optional 240 Hz
	Sensor surface	**108,4 x 47,4 cm**
	Number of sensors	**7168**

Treadmill OT-Rehab

Stance analysis

Gait analysis

Gait analysis

Running analysis

The wide SCHEINWORKS treadmills are suitable for gait training. It can be used in prosthetics to adjust and safety measure new prosthetics as well. The handrails can be individually adjusted in height and width to provide proper adjustment.

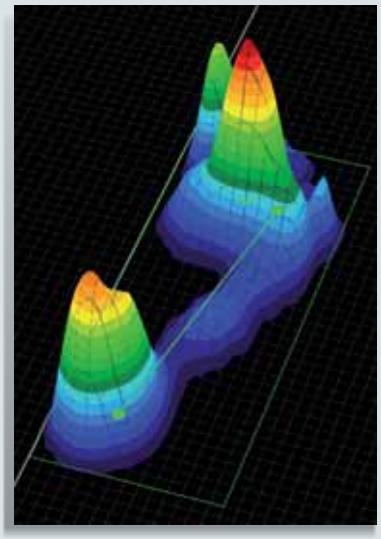
Technical Data Treadmill OT-Rehab

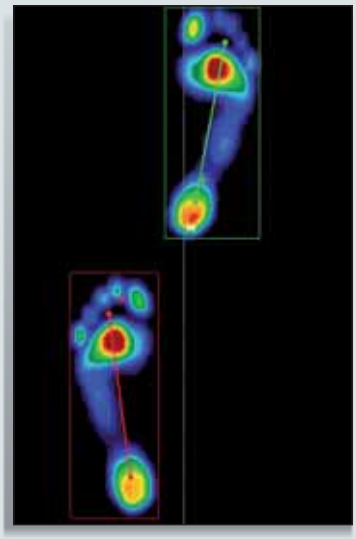
Treadmill		**FDM-TF 1.6**		**FDM-TF 1.8**	
Speed		0,1 - 12 km/h		0,1 - 12 km/h	
Running surface (L x W)		160 x 60 cm		180 x 70 cm	
Weight		approx. 240 kg		approx. 260 kg	
Dimensions (L x W x H)		210 x 90 x 135 cm		236 x 102 x 135 cm	
Track access height		18 cm		18 cm	
Elevation (optional)		15%		15%	
Maximum user weight		approx. 135 kg		approx. 135 kg	
		OT-Rehab walk Art. No. 032110-035	**OT-Rehab standard** Art. No. 032110-036	**OT-Rehab walk** Art. No. 032110-039	**OT-Rehab standard** Art. No. 032110-040
Sensor	Measuring range	1 - 120 N/cm²	1 - 120 N/cm²	1 - 120 N/cm²	1 - 120 N/cm²
	Sampling frequency	100 Hz	120 Hz	100 Hz	120 Hz
	Sensor surface	**112 x 50 cm**	**109 x 48 cm**	**132 x 56 cm**	**135 x 54 cm**
	Number of sensors	**3432**	**7168**	**4576**	**10240**

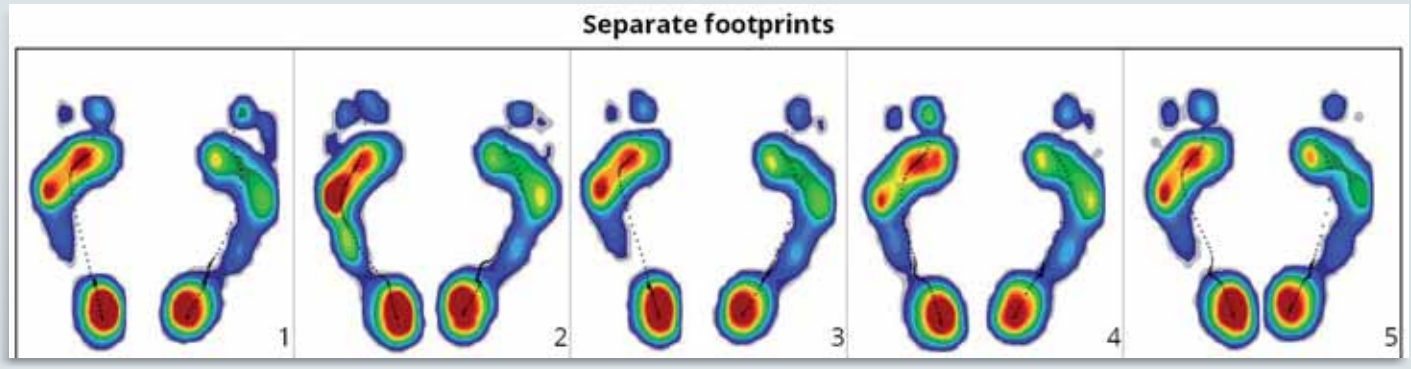
Because of its technical construction, the treadmills **OT-Rehab FDM-TF** meet all standard requirements for use in clinical settings.

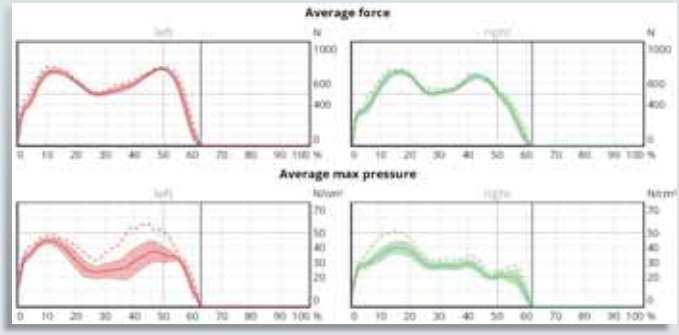
Treadmill Standard Report

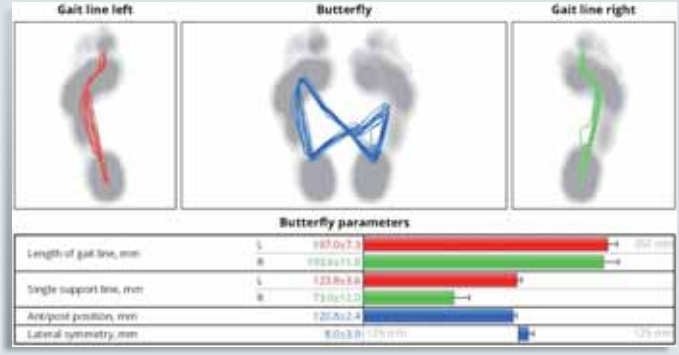
The sensor plate integrated in all treadmills generally offers the analysis of the pressure, force, time and step parameters, as well as analysis of gait symmetry. The motion cycles can be recorded with and without shoes.











Comparative measurement

Record A: 18.07.2012 12:52 barfuß 4 km/h, Gait Analysis
Record B: 18.07.2012 12:54 barfuß 13 km/h, Gait Analysis

Geometry

Foot rotation, degree	L	10.7±2.3	10.8±1.2
	R	18.3±2.5	14.1±1.3
Step length, cm	L	53±1	115±2
	R	63±2	124±1

Phases

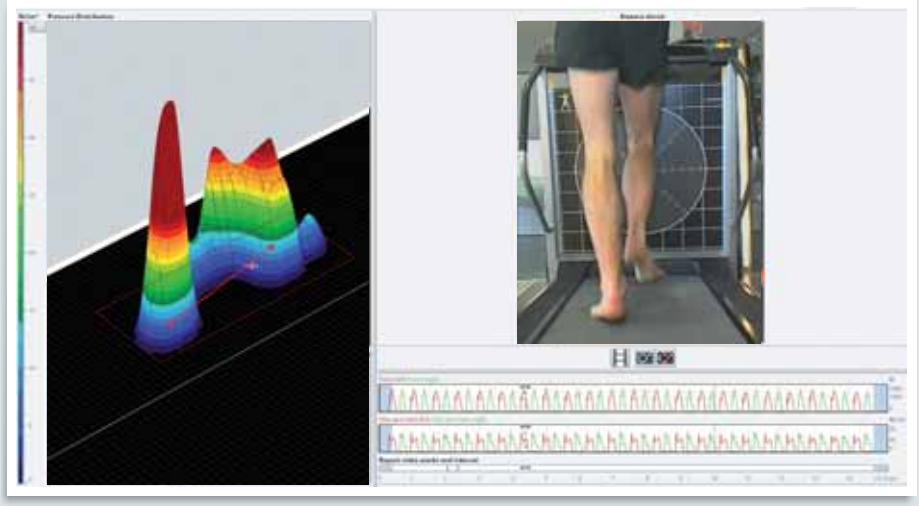
Stance phase, %	L	62.8±0.7	100 %
	R	62.0±1.4	
Load response, %	L	13.2±1.1	
	R	11.4±0.5	
Mid stance, %	L	38.1±1.4	
	R	37.2±0.7	
Pre-Swing, %	L	11.5±0.6	
	R	13.3±1.1	
Swing phase, %	L	37.2±0.7	
	R	38.0±1.4	
Double stance phase, %		24.7±1.3	

Modules

Video module

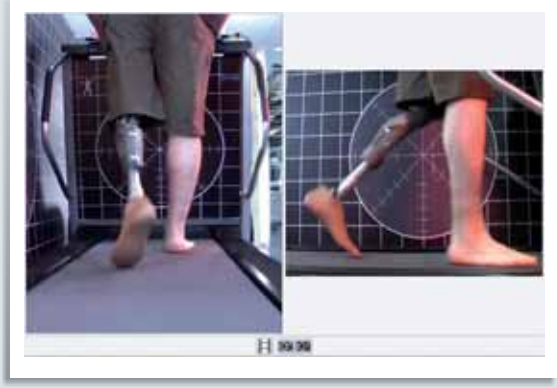
Light module

The SCHEINWORKS treadmills can be complemented with video and LED light modules as desired. They provide best recording quality at best illumination. Motion analysis is supported by HD-webcam modules which can be positioned individually (only in connection with a SCHEINWORKS treadmill). The synchronized video recordings start with pressure measurement. The generated angle indications can be imported into the analysis report.

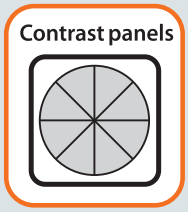


Technical Data SYNCCam Video camera		Art. No. 032116-001
	additional camera	Art. No. 032116-002
Dimensions (L x W x D)	11,0 x 12,5 x 1,5 cm	
Power supply	USB	
Principle	HD-Webcam	
Measuring rate	30 Hz	

Technical Data SYNCLight Light module	Art. No. 032132-000
Dimensions (L x W x D)	15,5 x 21,0 x 3,8 cm
Power supply	Plug
Principle	10 Power LEDs
Light colour	6200K
Light intensity	1550 Lumen continuously adjustable



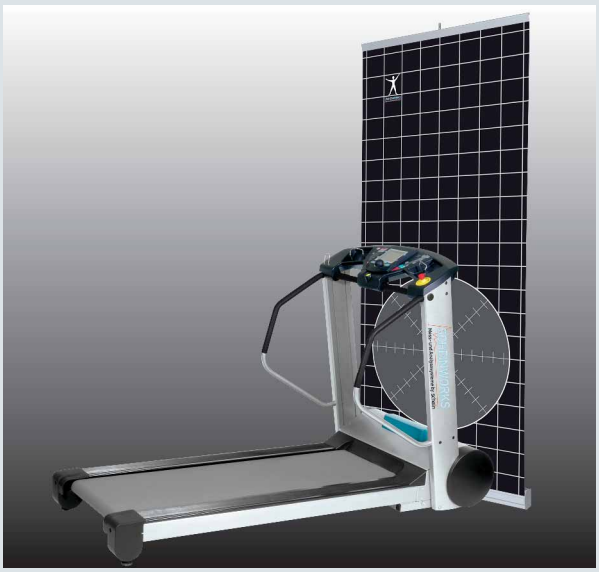
Accessories



The dark background increases contrast to the lighter skin color for better recognition capturing of the applied markers.
The **contrast panel** is attached at the side and used for sagittal camera placement. It covers the entire running surface and can be used for all treadmill models.

The **contrast plate** (only dorsal alignment of the camera) is available for the **sports** and **medical** treadmills and can also be installed subsequently.

The **roll-up** suitable for any treadmill can be placed in front (dorsal alignment of the camera), behind (camera frontal) or besides to (camera sagittal) the treadmill for any treadmill type.



Technical Data Contrast panels		
Contrast panel	Dimensions approx. 200 x 140 cm	Art. No. 032131-000
Contrast plate	Dimensions approx. 75 x 75 cm	Art. No. 032130-001
Contrast roll-up	Dimensions approx. 85 x 205 cm	Art. No. 099989-097

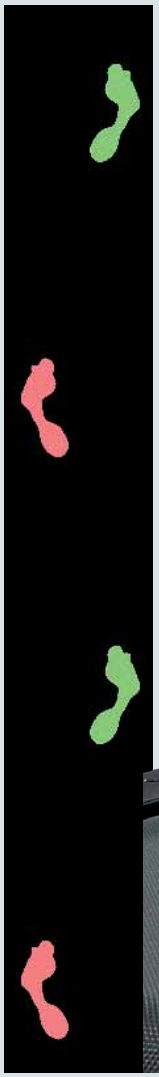
Step projection

Step projection projects the recorded pressure image onto the running surface. The gait can be adjusted in the software. Foot rotation can be individually specified as well as step length and width. The protection gives the patient a visual incentive for improving his gait. Walking with prostheses can be improved with step projection.

Step projection Art. No. 032136-... (depending on treadmill type)

individual gait image

corrected gait image



Forest walk

The software module "virtual forest path" offers another virtual incentive. A path can be explored on which obstacles such as puddles or fallen trees have to be overcome.
Activation of the forest path editor Art. No. 032135-000

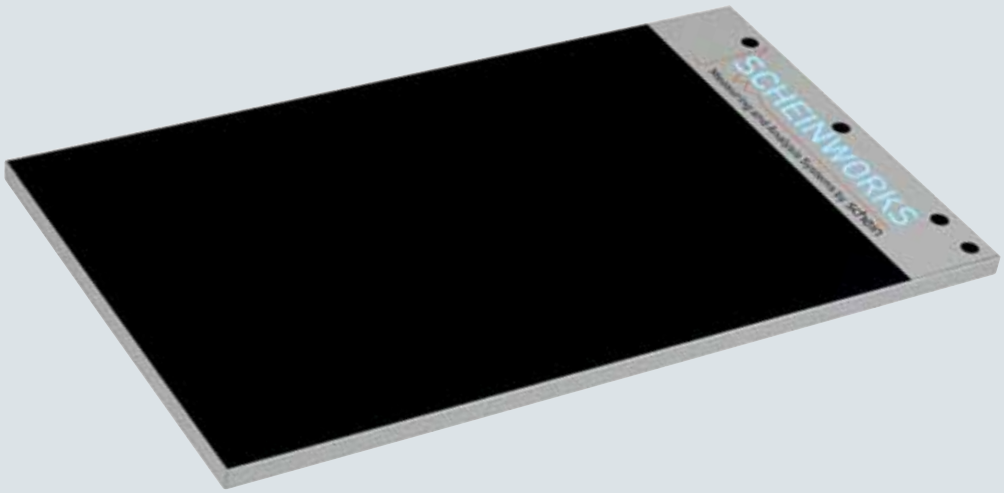
This suppresses monotonous walking and supports coordination and focus. Walking time, walking speed and inclination angle are displayed. The user's pressure images are displayed on-screen in real time. The mobile treadmill TLR is not suitable for this module. We recommend using a screen of at least 40 inch for this module. You can also use a projector.

Pressure measuring plate

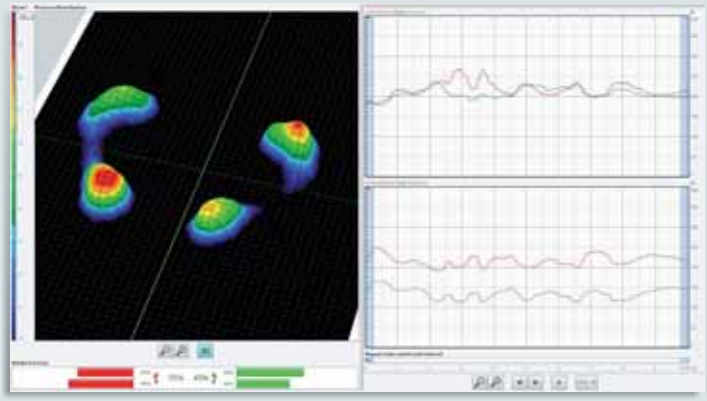
Stance analysis

Step analysis

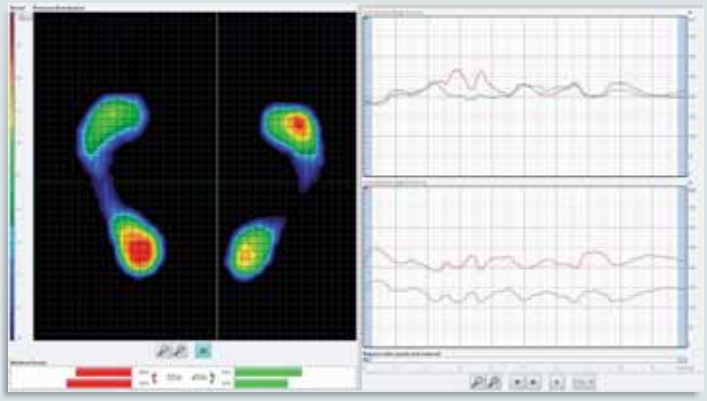
The pressure measuring plate permits analysis of static and dynamic pressure distribution under the feet/shoes. Areas of use are the simple and quick performance of dynamic foot-rolling analysis and static load distributions. They are used to determine how well the heel-to-toe movement of the foot is performed.



3D view



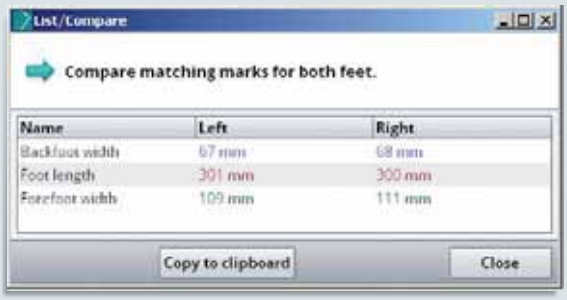
2D view

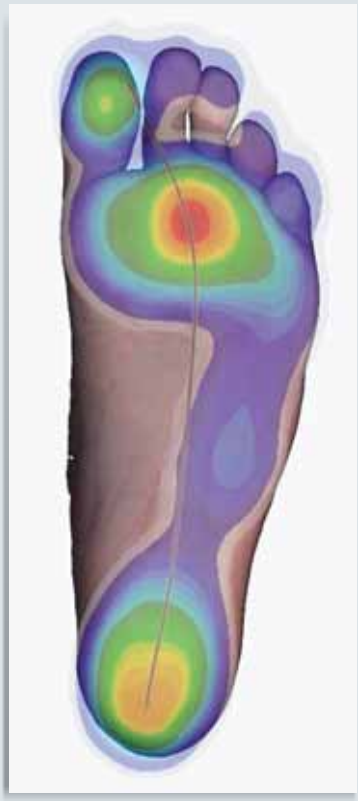


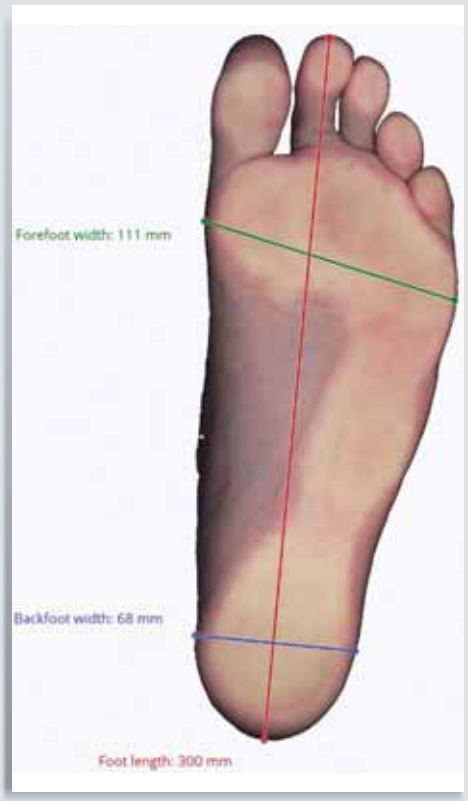
Technical Data Pressure measuring plate			
FDMS 01	Art. No. 032115-192	**FDMS 02**	Art. No. 032115-256
Dimensions (L x W x H)	55,0 x 40,0 x 2,1 cm	Dimensions (L x W x H)	70,0 x 40,0 x 2,1 cm
Weight	approx. 5,0 kg	Weight	approx. 6,5 kg
Sensor surface	**34 x 41 cm**	Sensor surface	**34 x 54 cm**
Number of sensors	**1920**	Number of sensors	**2560**
	Measuring rate	120 Hz	
	Accuracy	+/- 5%	
	Measuring range	1 - 120 N/cm^2	
	Measuring principle	capacitive	
	PC interface	USB	

DigiPED Foot scanner

The SCHEINWORKS DigiPED foot scanner takes a static image of the foot. Length ratios can be displayed and distinctive points can be marked right away. The pressure images from the SCHEINWORKS system can be easily overlaid on the scanned foot. The image with the markings can be displayed on the screen or printed out 1:1 (we recommended a DIN A 3 format printer). Present third-party scanners can be used with the software as well.







Technical Data DigiPED	Art. No. 032211-100
Dimensions (L x W x H)	65,4 x 44,4 x 11,3 cm
Colour (outside/inside)	light grey, grey
Weight	approx. 16,9 kg
Type of lamp	cold cathode fluorescent lamp
Power consumption	Standby 8 W, max. < 36 W
Maximum user weight	approx. 200 kg
Scan time	approx. 8 sec.
Interface	USB 2.0 High Speed
Power connection	24 V DC

DigiPED Foot scanner

The collected data is summarised and structured in the evaluation report. Comments can be added to document therapy progress. Individual text components for care recommendations or work processes facilitate a structured procedure. The screen display offers great image quality with a high degree of detail. Perfectly smooth computer-controlled manual rotation of the foot is possible.

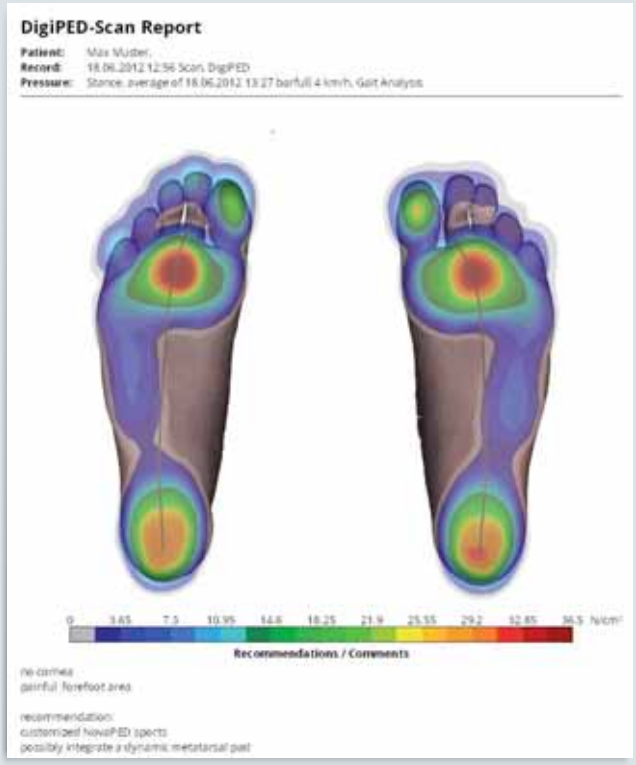


Image similar

The DigiPED foot scanner system has a wide performance range that is customised to the user's personal needs. As a "stand-alone" workplace, the measuring system takes up only one square metre of space in the sales area.

A touchscreen PC permits intuitive state-of-the-art use of the entire software without keyboard and mouse. Scanner and computer harmonise with the matching decorative column.

Of course, the foot scanner can also be integrated into present room concepts, such as a platform with measuring chair. For this, the scanner is integrated into the platform bottom to fit it precisely. Additionally, the measuring system can be transported easily and effortlessly. Only a free USB connection and the power supply for scanner and computer are required.

Everything from a single source

Whichever measuring and analysis systems you choose, we offer the following additions:

Large screen for best presentation

Installation of a large screen turns out to be a patient-friendly addition that permits better consultation. Movements can be observed visualized.

Computer with software installation

We offer a computer with the entire software pre-installed, it records and archives the data. It complies with all requirements and has sufficient capacity when desired accessories are added on.

Staff training and instruction

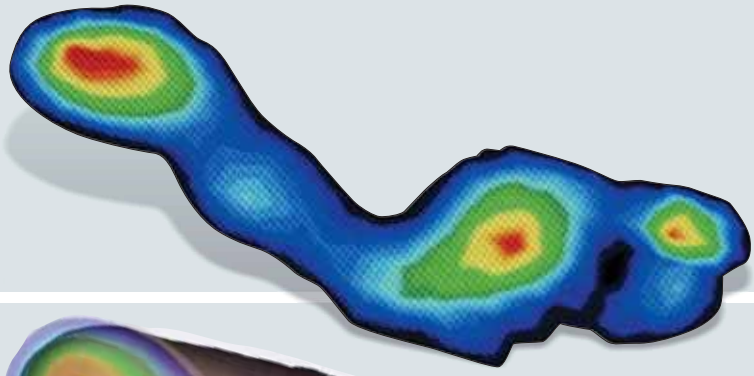
On request, you will receive detailed instructions on the handling of the devices and software on site to support smooth operation from the beginning. Our product consultants are available to support you at all times.

SCHEINWORKS

Measuring and Analysis Systems by schein

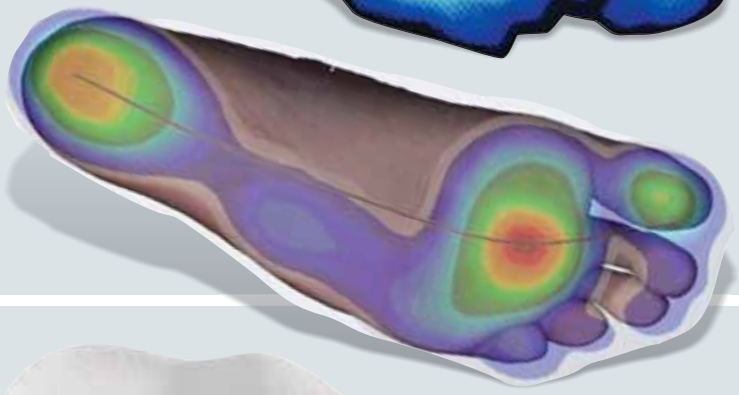
Practice-oriented measurement and analysis systems for individual patient care

- *Professional measurement*
  Stance Analysis
  Gait Analysis
  Running Analysis



- *Precise analysis*

  Foot scan



- *Targeted care*

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