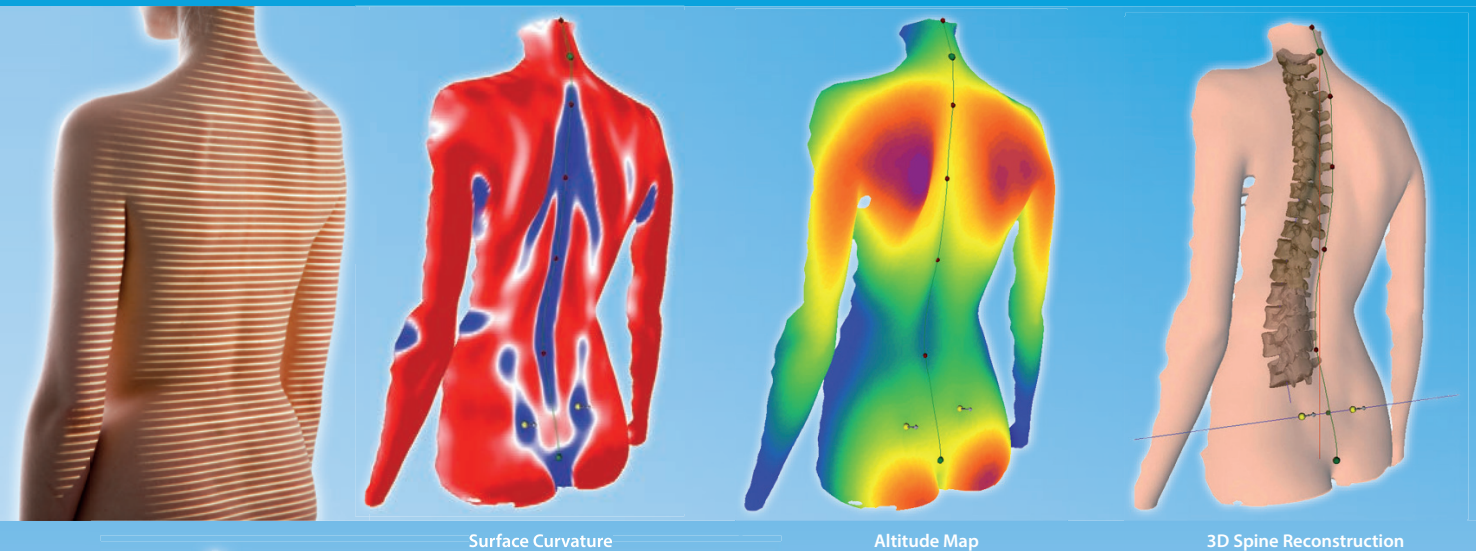


# BIOMEDICAL SOLUTIONS



# DIERS formetric 4D | 3D / 4D Spine & Posture Analysis



- radiation-free
- contactless
- fast & accurate

## Clinical Applications:

- Scoliosis & scoliotic malpositions
- Leg length discrepancies
- Pelvic obliquity / rotation / torsion
- Posture-related pain symptoms
- Posture variances
- Hyper-/Hypo-Lordosis/-Kyphosis
- Osteoporosis
- Arthrosis
- Temporomandibular joint dysfunction (TMJ)
- Vertebral blockages
- Neurologic symptoms (e.g. Romberg-Test)
- Muscle deficits/imbbalances (Matthiass-Test, Flamingo Test)
- and many more

The **DIERS formetric** measuring technology is the most widespread system for the optical 3D Spine & Posture Analysis worldwide.

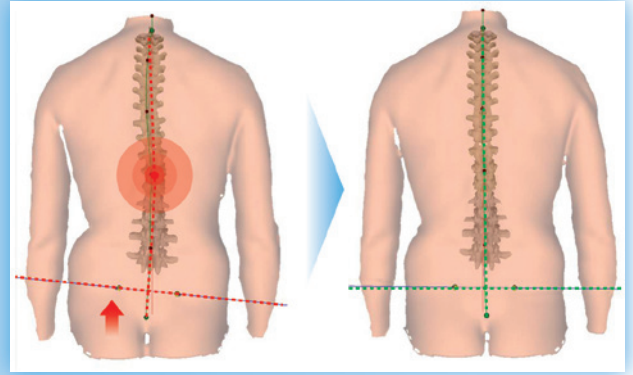
The **DIERS formetric** measuring procedures were developed in close collaboration with leading universities and through research projects within the European Union.

The original clinical objective was the development of a radiation-free spine analysis system to reduce the high x-ray exposure of scoliosis patients during follow-ups.

The **DIERS formetric** allows a radiation-free and markerless surface topography scanning method including a 3D reconstruction of the spine. Varied clinical parameters from the objective and quantitative analysis of the body statics and posture, scoliosis, and various spinal deformities can be shown.

Based on the formetric method of analysis of the back, there is generally no need for markers. The anatomical landmarks (Vertebra Prominens (VP), Dimple Left/Right (DL/DR) as well as the spinal center line and spinal rotation are automatically detected by the system.

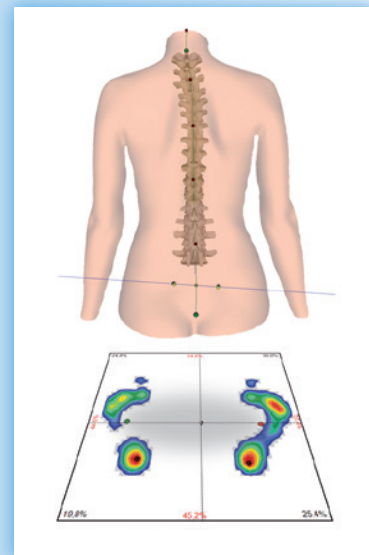
## DIERS formetric 4D + 3D simulation platform



**Example:** Simulation of a leg length compensation to adjust the curve of the spinal column

The **3D simulation platform** can be used to evaluate leg length discrepancies and foot malpositions. The effects of treatments on the spine, pelvis and posture can be simulated. During the examination the patient stands on two separate surfaces which can be adjusted in three directions. Correctional parameters are determined with millimetric precision – e.g. for insoles which are to be made.

## DIERS formetric 4D + DIERS pedoscan

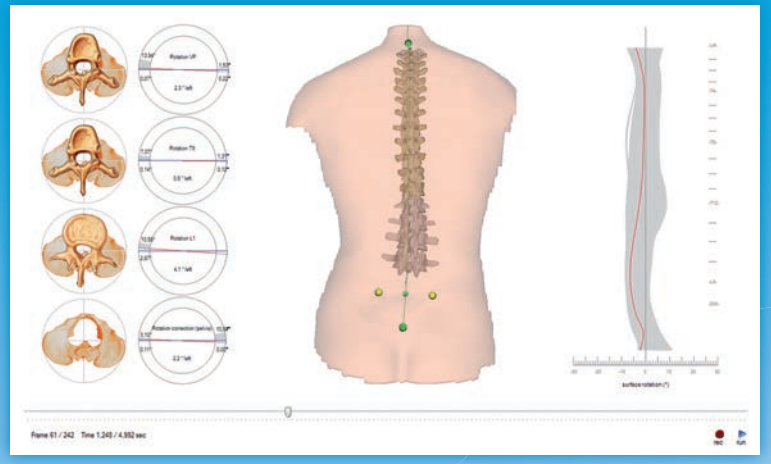


Combining the two measuring systems **DIERS formetric 4D** and **DIERS pedoscan** enables simultaneous analysis of the spinal form, the pelvic position, the pressure conditions under the feet and the body's center of pressure. This synchronized measurement is a valuable feature in determining optimal treatment (e.g. with posture-correcting insoles).



# DIERS 4D motion® Lab / The Compact Solution for

Step into a new dimension...



## DIERS 4D motion® Dynamic Spine & Posture Analysis

The **DIERS 4D motion®** system is the leading technology in the field of 3D spine and surface topography. For the first time it is possible to visualize the complex motion pattern of the spine and pelvis while walking and to monitor the results. This technological breakthrough is based on the innovative software and an advanced camera system (60 frames/second).

### Clinical Applications:

- **Postural Deficits:** Scoliosis, hyper/hypo kyphosis, hyper/hypo lordosis, blockades, pelvic obliquities, leg length discrepancies, ...
- **Motion Asymmetries**
- **Foot & Gait Deficits** (4D motion® Lab)  
Customized orthopaedic and proprioceptive insoles
- **Medical based Training Therapy**
- **Follow-up Measurements:** Scoliosis, pre- & post surgery, posture correcting insoles etc.
- **Physiotherapy / Rehabilitation**
- **Sports Medicine & Professional Clinical Diagnostics**
- **and many more**



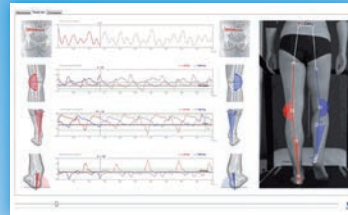
# or Motion Analysis

## Components:

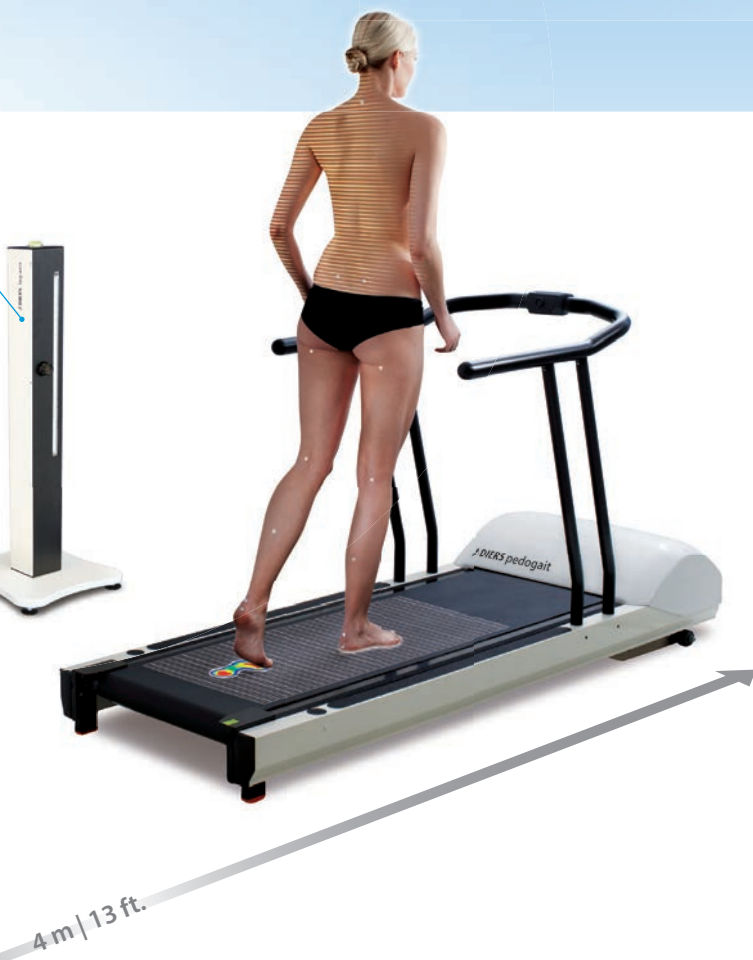
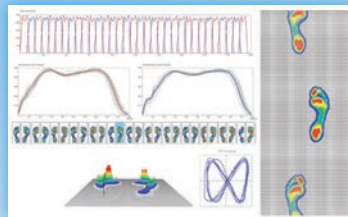
**DIERS 4D motion®**  
Dynamic measurement of the  
spine, vertebra and pelvis



**DIERS leg axis**  
Video gait analysis for the  
detection and measurement  
of leg axis



**DIERS pedogait**  
Treadmill with integrated  
pressure plate



**DIERS 4D motion® Lab**  
Dynamic analysis of the whole  
musculoskeletal system with small  
space requirement (8m<sup>2</sup>)

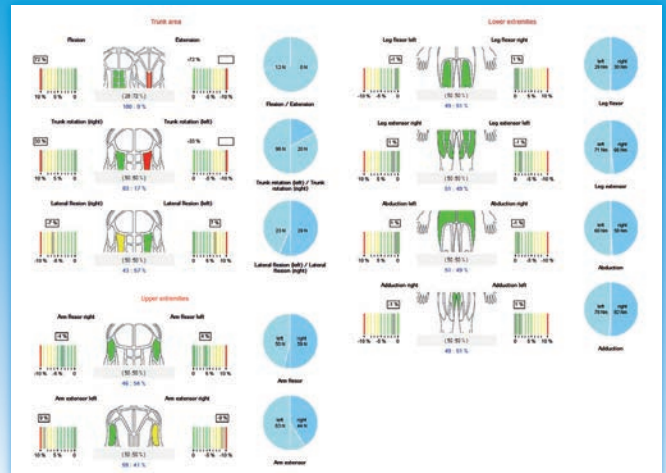
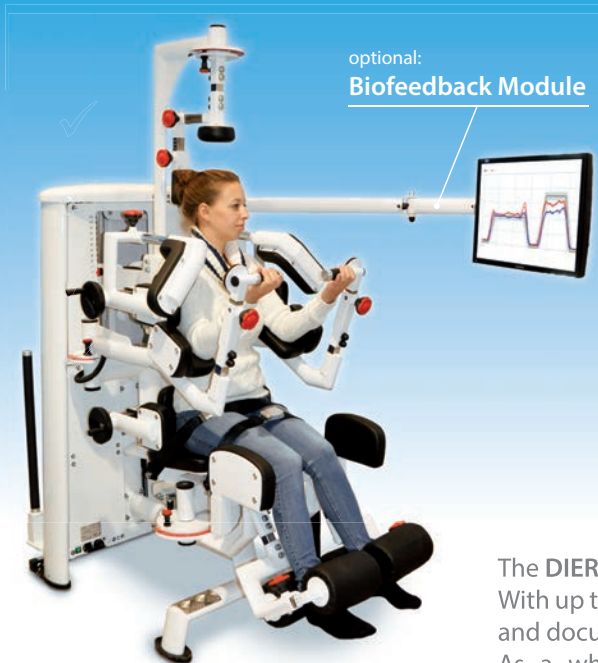
The **DIERS 4D motion®** system for dynamic spine measurement is the key technology for the development of the **DIERS 4D motion® Lab**.

This motion laboratory allows a synchronized measurement of the whole skeletal system and opens new fields of clinical applications: ranging from medical diagnosis via training therapy to sport sciences.

The dynamic spine analysis is a key measurement modality in clinical diagnostics, research and further studies.

# DIERS myoline | Isometric Muscle Strength Measurement

Up to 28 Measurement Directions



The **DIERS myoline** is a multifunctional muscle strength measurement device. With up to 28 test directions the **DIERS myoline** is a compact solution for recording and documentation of all posture-relevant muscle strength parameters. As a whole body measurement system, the **DIERS myoline** unifies several conventional devices and offers the user considerable savings of time, because all measurements can be done while the patient is sitting - a new positioning is not necessary. The device was developed and tested in a university environment. Its solid construction guarantees reliable measurement results and high operating safety. Aside from recording diagnostic measurement parameters the system is also ready to be used for biofeedback training therapy.

GERMANY (Headquarter):

**DIERS International GmbH**

Dillenbergweg 4 | 65388 Schlangenbad, Germany  
Phone +49 (0) 6129 48 86 0 | Fax +49 (0) 6129 48 86 50  
info@diers.de | www.diers.de

USA:

**DIERS Medical Systems, Inc.**  
1752 Capital Street, Suite 310  
Elgin, Illinois 60124 / USA  
Phone: +1 312 419-0205  
Fax: +1 312 277-3416  
info@diersmedical.com  
www.diersmedical.com

INDIA:

**DIERS Biomedical Solutions, Pvt. Ltd.**  
Office B-154, North-ex Mall, Sector 9,  
Rohini, New Delhi-110085, India  
Phone: +91 11 27 56 54 38  
info@diers.in | www.diers.in

RUSSIA:

**DIERS Medikal Co. Ltd.**  
9a Akademika Pavlova St, 2nd floor  
197022 Saint-Petersburg  
Russian Federation  
Phone: +7 911 924 61 75  
info@diers.ru | www.diers.ru

MIDDLE EAST:

**DIERS Middle East (ME) Est**  
Room 14 | King Faisal High Way  
Khobar 31952 | Kingdom of Saudi Arabia  
Phone: +966 567 047 034  
info@diers-me.com



[www.diers.de](http://www.diers.de)

**DIERS®**  
BIOMEDICAL SOLUTIONS