



No.: AIIMS MG/Procurement/ PAC /2021-22/ 4D Spine, Posture, Gait & Motion Analysis System

Date: 10/11/2021

**CALL FOR OBJECTION**

AIIMS Mangalagiri has a requirement of 4D Spine, Posture, Gait & Motion Analysis System, Model Formetric 4D for the department of PMR. In this regard comments/ objection, if any are invited before declaring the article as proprietary in nature.

In this regard, the proposal submitted by M/s Hanuman Health Care, C-2/2536, Vasant kunj, New Delhi who is authorized dealer of M/s DIERS Biomedical Solutions Pvt Ltd, Germany (sole manufacture of this product) along with Proprietary Article Certificate are attached and duly uploaded on Institute website for open information to submit objections/comments, if any from any manufacturer/ supplier before declaring the article of the said equipment/items to be procured as proprietary.

The objections/comments should be sent to the O/o AO (Procurement), 4<sup>th</sup> floor, Nursing college building, AIIMS Mangalagiri, Guntur, Andhra Pradesh 522503 in a sealed envelope with the above reference on or before 30/11/2021, 03:00 PM, failing which it will be presumed that any other manufacture/vendor is having no objections/comments to offer and the case will be decided on merits.

  
10/Nov 2021  
AO (Procurement)

For Director, AIIMS Mangalagiri

**Enclosure:**

1. PAC of Manufacturer
2. PAC of Department
3. Specification of the product
4. Manufacturer Authorisation form



**P-3 FORM**  
**(To be attached with P-2 form for Proprietary items)**  
**AIIMS Mangalagiri**

**PROPRIETARY ARTICLE CERTIFICATE**

It is certified that the Article – 4D Spine, posture, GAIT & Motion analysis system Model 4D Formetric for Patient care and research required in the P-2 form should be purchased from M/s Hanuman Healthcare, New Delhi. To the best of my knowledge M/s Hanuman Healthcare, New Delhi are the sole agents of the sole manufacturers M/s DIERS International GmbH, Dillenerweg 4 D 65388, Schlangenbad, Germany. Similar items manufactured by other firm(s) shall not be suitable for our purpose for the following reasons:-

This is the only system providing 4D motion and balance analyses of patients in static and dynamic condition using light-optical scanning method based on Video-Raster-Stereography, integrated with video gait, spine & posture analysis. DIERS International GmbH is the only manufacturer of this system.

This provides static and dynamic measurements of spine, vertebra, pelvis, legs and foot in 4D for comprehensive comparison of patient results pre - post therapy /treatment on all parameters in the same unit. This unit is compact, can be installed in small space 10ftx 20ft, without any requirement of special wall surfaces, ceiling, floorings or lighting in the room.

All These features mentioned above are important for comprehensive Rehabilitation therapy for neurological and orthopedic patients and research and are not available in any other product

-sd-  
Sign of Indentor  
Designation Assistant Professor  
Department Physical medicine & Rehabilitation.

-sd-  
Signature of Head of Department /Section

**N.B.:** The indenter before recording the above certificate should satisfy himself that the article is genuinely of proprietary nature manufactured under patent laws.



DIERS International GmbH - 11064 Berlin, Germany - Tel: +49 30 120 11 11 11

**TO WHOMEVER IT MAY CONCERN**

**Proprietary Article Certificate**

We hereby certify that DIERS International GmbH is the sole manufacturer of the Motion Lab with 4D Formetric for dynamic spine and surface measurement.

DIERS Formetric is based on the principle of optical stereographic measuring and was consequently focused on the human surface and depiction of the spine.


Compromises, due to the constraints of industrial scanners, could thus be avoided. Contrary to simple 3D measurement methods which only detect individual measurement points on the skin, the DIERS Formetric performs 4D complete shape scanning (surface measurement) of the back. This makes it possible to record even extraordinarily small changes which occur in therapeutic measures.


To avoid movement effects, the scanning times for individual images need to be very short. Scanning times of one second or longer cause inaccuracy. For that reason, the scanning time is set to a maximum of 20 milliseconds in the Formetric system.

Due to the short scanning time of the individual images, the method is able to generate scan sequences with individually selected time and image frequency.

Motion lab with 4D Formetric is a proprietary item for dynamic spine and surface measurement and manufactured by DIERS International GmbH only.

DIERS International GmbH

  
Christian Diers (CEO)





### SPECIFICATIONS FOR 4D SPINE, POSTURE, GAIT & MOTION ANALYSIS SYSTEM

1. The system suitable for spine, posture, Gait & Motion analysis
  2. The system should provide balance analysis of patients in static and Dynamic condition using light-optical scanning method based on Video-Raster-Stereography without any kind of radiation
  3. The system should provide dynamic measurements of spine, vertebra, pelvis legs and foot.
  4. The system should provide comprehensive comparison of patient results pre -post therapy /treatment on all parameters
  5. System should be supplied complete with Compatible Computer & Printer
  6. The system should be easy to install in small room measuring 10 x 20 feet.
  7. The system should not require any special wall surfaces; ceiling, floorings or lightening in the room.
  8. The Balance analysis system should be BIS/ European CE approved and clinically validated
  9. The system should comprise of
    - A. Formetric 4D Motion unit for static & dynamic measurement
    - B. Treadmill with integrated Pressure plate
    - C. Video Gait analysis unit for detection and measurement of leg Axis
    - D. Software for analysis, documentation and management of measurement data
- A) Formetric 4D Motion unit for static & dynamic measurement**
- 1) system should provide visualization and dynamic measurements of spine, vertebra and pelvis during walking in 4D
  - 2) System should include a stripe projector and a video imaging system attached to the projector with Motorized height adjustment.
  - 3) System consists of a light projector which projects a line grid on the back of the patient which is recorded by an imaging unit.
  - 4) System should automatically detect anatomical landmarks (in Static) and with minimum markers in Dynamic.
  - 5) System should reconstruct model of spine with option for manual override in Static and Dynamic application.
  - 6) The system should provide comparison of patient results pre -post therapy /treatment
  - 7) System Software should measure and provide following clinical parameters
    - a. In Static Application**
      - i. Trunk length, sagittal imbalance, coronal imbalance, pelvic obliquity, pelvic torsion, pelvic rotation, surface rotation, lateral deviation, apical deviation, Kyphotic angle, Lordotic angle.
      - ii. surface rotation at each vertebra
      - iii. Pre -post patient comparison
      - iv. Scoliosis angle
      - v. Should have vertebral fracture index
      - vi. Should have a Nomogram for analysis.
    - b. In Dynamic**
      - i. Measurement of spine, Vertebra and Pelvis based on advanced camera technology with 30 fps.
      - ii. Visualization of motion pattern of the spine, each vertebra of the spine and pelvis during walking and monitor the results.
      - iii. Pre - post patient comparison
      - iv. Comparison between static & dynamic results





Date: 01<sup>st</sup> Feb. 2021

**Manufacturer's Authorization**

**To,  
The Director,  
All India Institute of Medical Sciences,  
Mangalagari, Andhra Pradesh**

**Sub: Authorization**

Dear Sir,

We, M/s DIERS Biomedical Solutions Pvt Ltd (Subsidiary of DIERS International GmbH, Germany) who are establish and reputable manufacturers of 4D Motion Lab with 3D statico, 4D Formetric for static & dynamic spine and surface measurement based at B- 154, North ex mall, Sector - 9 Rohini, Delhi 110085, with the head office at Dillenbergweg 4 65388 Schlangenbad GERMANY, hereby authorized M/s Hanuman Healthcare, C-2/2536, Vasant Kunj, New Delhi- 110070 (INDIA) to submit an offer/ tender, process the same further and enter in to contract with you against your requirement for the goods manufactured by us.

No company or firm or individual other than M/s Hanuman Healthcare are authorized to bid, negotiate and conclude the contract in regard to this business against your requirement.

We hereby extend our full guarantee/ warranty/ CMC as per relevant conditions of contract for the goods offered by the above firm.

This authorization is valid for a period of 2 years and will be automatically renewed upon mutual consent.

Thanks and Regards,

Executive Director  
**DIERS Biomedical Solutions Pvt Ltd.**

