



Force Plate Analysis

Synchronized, Research-Grade Ground Reaction Force Data

- Force Vector Overlay
- Automated Jump and Cutting Analysis
- Phase Detection for Multiple Jump Types

NORAXON®

Force Plate Applications



Learn More

Leverage the versatility of force plates to evaluate human movement and performance across a wide range of testing applications. In addition to traditional vertical assessments, MR4 extends force-plate analysis to horizontal and change-of-direction movements that reflect real-world performance demands.



Jump Analysis



Change of Direction



Swing Analysis



Balance & Sway Analysis



Isometric Testing

Supported Jump Types:

- Countermovement Jump
- Squat Jump
- Drop Jump
- Broad Jump
- Jump Landing
- Hopping
- Unilateral Jumps
- Lateral Countermovement Jump
- Deceleration/Stop

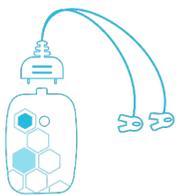
Performance Parameters

MR4 converts force plate signals into more than 65 jump-specific performance parameters, enabling objective evaluation of force production, timing, symmetry, and movement strategy across jump, landing, and change of direction tasks. These parameters support both post-trial analysis and real-time feedback to inform training and assessment:

- ▶▶ **Biomechanical Parameters** – the mechanical aspects of human movement
- ▶▶ **Temporal Parameters** – the timing aspects of different events
- ▶▶ **Jump Height Parameters** – the vertical displacement of the body

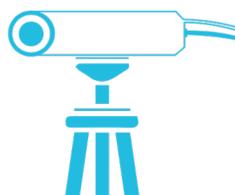
Synchronized & Integrated

Noraxon's all-in-one software platform, MR4, integrates force plates with EMG, 3D motion capture, and synchronized video in real time to provide a comprehensive view of movement.



EMG

Muscle Activation Timing



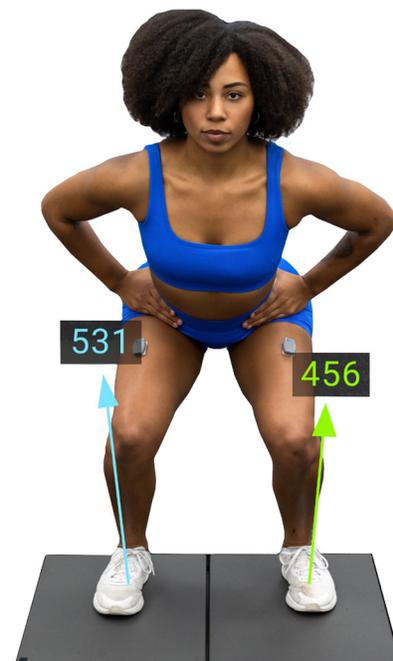
Video

Real-Time Visual Feedback
& Markerless Tracking



3D Motion Capture

Movement Kinematics



Supports force plates manufactured by:



BERTEC

KISTLER

AMTI