QUALISYS
Motion Capture Systems

Functional Assessment

Professional and recreational athletes alike can benefit from accurate assessments of their body movements. Poor body posture or lack of strength and stability will ultimately affect performance and, in the worst case, health.

This is where Qualisys' unique Functional Assessment module software comes into play. It offers a suite of test protocols tailored to collect objective information about an athlete's movement status before or after an injury. The solution builds on accurate measurements of the athlete's movement while performing tasks such as running, cutting, counter-movement jumps, and drop jumps, among others.

Motion capture cameras are set up around the athlete. They record the 3D position of reflective markers placed on the athlete's body along with ground reaction forces that are integrated into the floor. Results are presented in a comprehensive web report, supporting and enhancing your recommendations.

FEATURES

- Tailored solution to assess status of athletes and non-athletes alike
- High-precision 3D measurement at 300 Hz frame rate or more[1]
- Test protocols and parameters selected by experts
- Full body and lower body marker set for accurate 3D tracking of all major body segments
- Easy processing and data management workflow
- Markerless capabilities
- External synchronization
- Interactive Web Report

[1]Frame rate depends on the chosen camera type.

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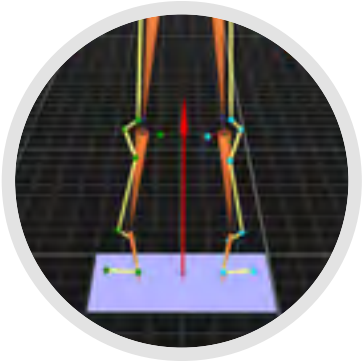
Precise 3D tracking

Qualisys cameras track the movements of the athlete in all three dimensions.



Accurate model

Force plates and EMG systems are seamlessly integrated into the system.

Comprehensive report

Create an online or PDF report with results and space for your logo.

PROCESS

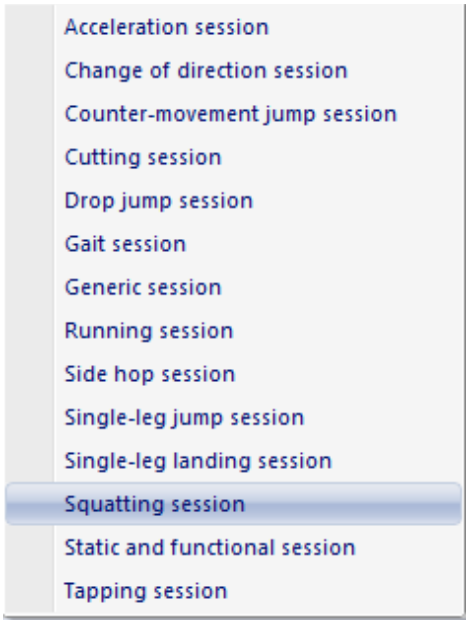
After recording any or all of the given tasks with the Qualisys Motion Capture system, data from the movement is processed by Visual3D (marker-based system) or Theia (markerless system), which perform all necessary calculations and prepare the data for the report. The user can choose to collect data from the full body or only the lower extremity,

REPORT

Generate an online report with all relevant measurement results and space for your logo. The package automatically generates a report that includes variables such as joint angles, joint moments ,and ground reaction forces. Electromyography (EMG) may also be included to measure the athlete's muscle activity.

GO MARKERLESS!

Calibrate and capture in Qualisys Track Manager (QTM) using Miqus Video or Miqus Hybrid cameras, while the Theia Markerless software tracks the data. Theia automatically detects and labels anatomical landmarks in the video images, which serve as the input for 3D tracking of all major body parts.



The module includes reports for a comprehensive list of tasks

MODULE OPTIONS AND REQUIREMENTS

Module	Cameras	Room size (min)[1]	Processing engine	Report
Functional Assessment - Marker-based	8-12 Marker-based or Hybrid	10 x 5 m (30 x 15 ft)	V3D	Visual3D, Web report
Functional Assessment - Markerless	8-12 Video or Hybrid	10 x 5 m (30 x 15 ft)	V3D THEIA[2]	Visual3D, Web report

[1] More space is recommended for Change of Direction and Running tasks to accomodate approach and retreat

[2] Theia software requires Qualisys Markerless Computer

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