

Quattro Jump

Type 9290DD

Portable performance analysis system

Kistler Quattro Jump is a versatile system for performance assessment in sports and rehabilitation.

It immediately delivers all relevant performance parameters of the legs to help you develop your athletes at an optimum level and prevent injuries.

It supports frequent testing in a very short amount of time and gives a clear overview of the performance parameters that matter most. Consequently you can monitor fatigue, recommend specific workout or regeneration phases and set clear developmental goals.

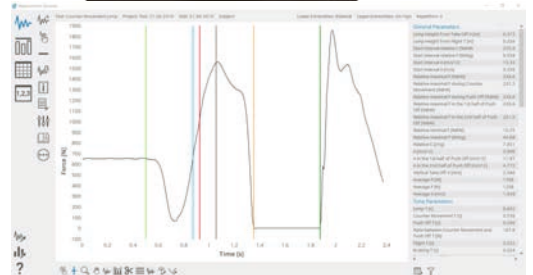
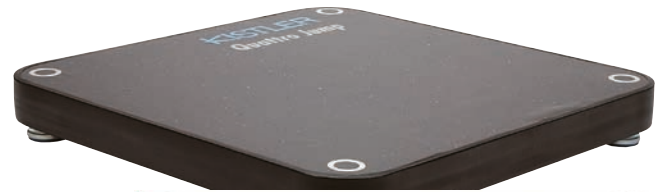
- Objective performance logging
- User-friendly and intuitive
- Portable, rugged and accurate
- Complete analysis of force measurements
- Extensive data management
- Efficient preparation of reports
- Dashboard view of performance trends
- Comparison of different athletes or training periods
- Visual feedback by video

Description

Quattro Jump consists of a portable Kistler force plate and the comprehensive Kistler MARS performance analysis software. The force plate measures the vertical force which is used to assess a large variety of performance parameters. Optional high-speed video recording captures the athlete's performance of the movement simultaneously with the force measurement. Kistler force plates are a worldwide standard in biomechanics and sports science for over 40 years.

Minimum PC requirements (with cameras)

- Operating system: Windows 8 and 10
- Processor: Intel core i7, with at least 2 GHz
- Memory: 16 GB RAM
- Hard drive: SSD with at least 10 GB free disk space
- Screen resolution: 1920 x 1080 pixels
- 2 USB ports
- Gigabit Ethernet port with support for jumbo packets



Technical data

Force plate		Piezoelectric 1D force plate
Number of force dimensions		1
Dimensions	mm	920x920x125
Measurement range F_z	kN	0 ... 10
Overload F_z	kN	15
Linearity	% FSO	< \pm 0.5
Hysteresis	% FSO	< 1
Natural frequency	Hz	\approx 150
Weight	kg	21.6

System

Number of force plates		1
Number of high-speed cameras		1-2
DAQ required		No
Acquisition rate		
Force plate	Hz	500
Camera	fps	100
Resolution		14 bits
Triggering method		
Force plate		Hardware synchronized
Camera		
Power supply		
Force plate		via USB
Camera		Via power unit
Interface to computer		1x USB, 1x Ethernet
Software		MARS Quattro Jump /KiJump

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Kistler MARS software for Quattro Jump

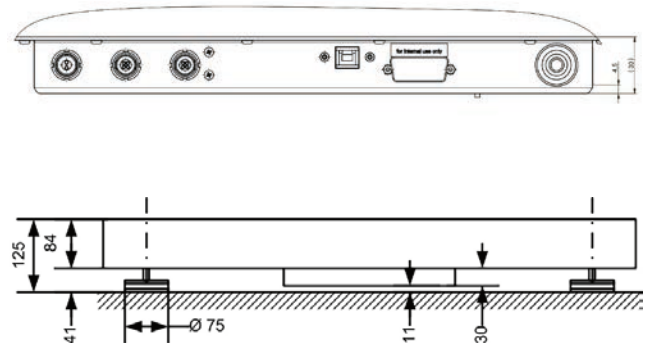
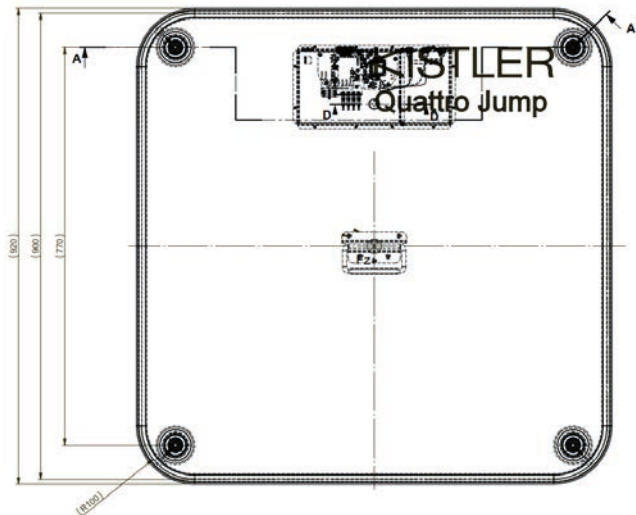
The Measurement, Analysis and Reporting Software (MARS) analyzes the acquired signals, calculates a range of significant parameters and displays the measurements in graphical format. The software processes and structures data from projects, test subjects and measurement data and saves these to a database using the Management tool. There they are available for comparisons and reports.

The data are evaluated in various test modules according to relevant output parameters. Input parameters and the data acquisition setup can be configured separately for each test. All software functions are intuitive and easy to operate. The software's help system provides in-depth information and a number of different examples.

Test module	Short description
Squat jump	Vertical jump test of concentric power for the lower extremities.
Counter movement jump	Vertical jump test of eccentric-concentric power for the lower extremities.
Drop jump	Vertical drop jump test of eccentric-concentric power for lower legs. Testing is performed using progressively higher drop heights.
Jumps with additional weights	3 consecutive vertical concentric and eccentric-concentric jumps. The test is performed using progressive loading with weights.
Repetitive counter movement jumps	Vertical jump test of endurance in eccentric-concentric conditions for lower extremities.

Repetitive hopping	Vertical jump test of endurance in eccentric-concentric conditions for lower legs.
Squat	Vertical movement test of concentric power for the lower extremities.
Maximum voluntary contraction	Maximum voluntary contraction (MVC) test of maximal strength and rate of force development (RFD).
Fatigue	Sustained isometric contraction test of endurance of the neuromuscular system.
Tracking	Dynamic force control test by adapting the force level to specific requirements.
Stamping	Test of maximal frequency and endurance of stamping for lower and upper extremities.

Dimensions



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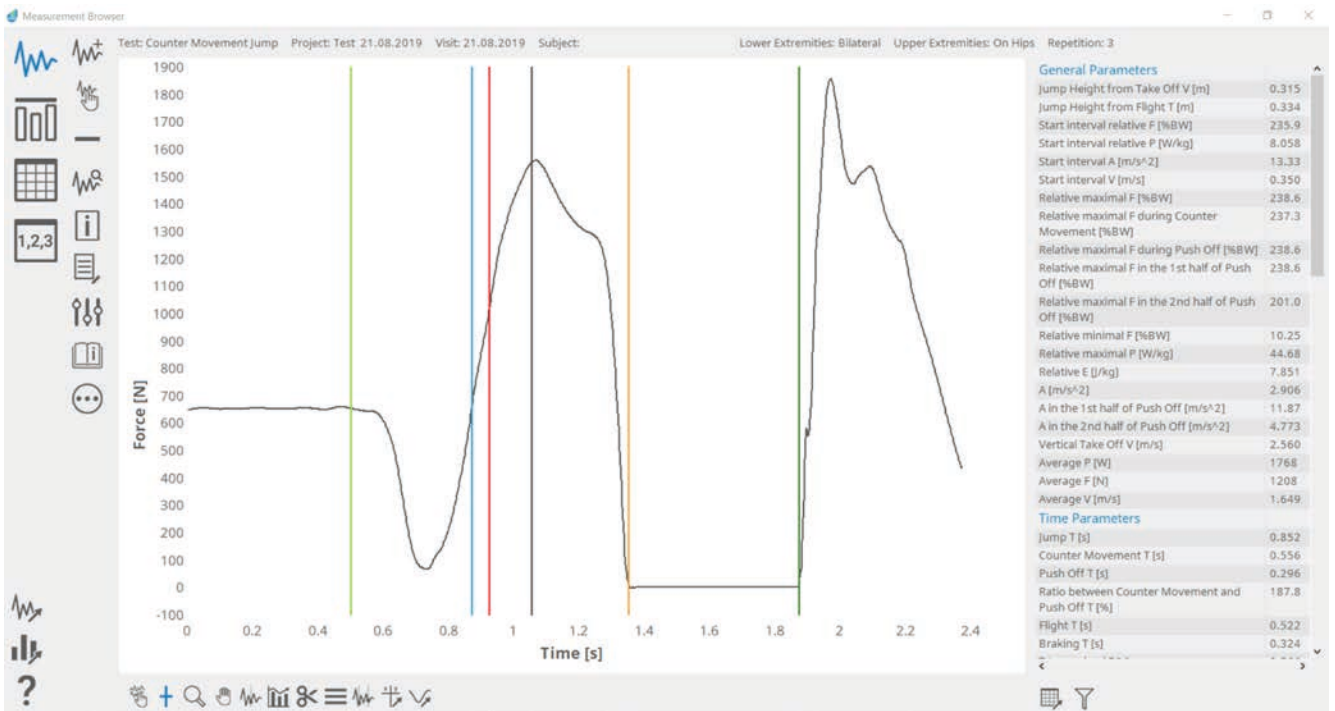


Fig. 1: Analysis view with force-time curve and parameter list.

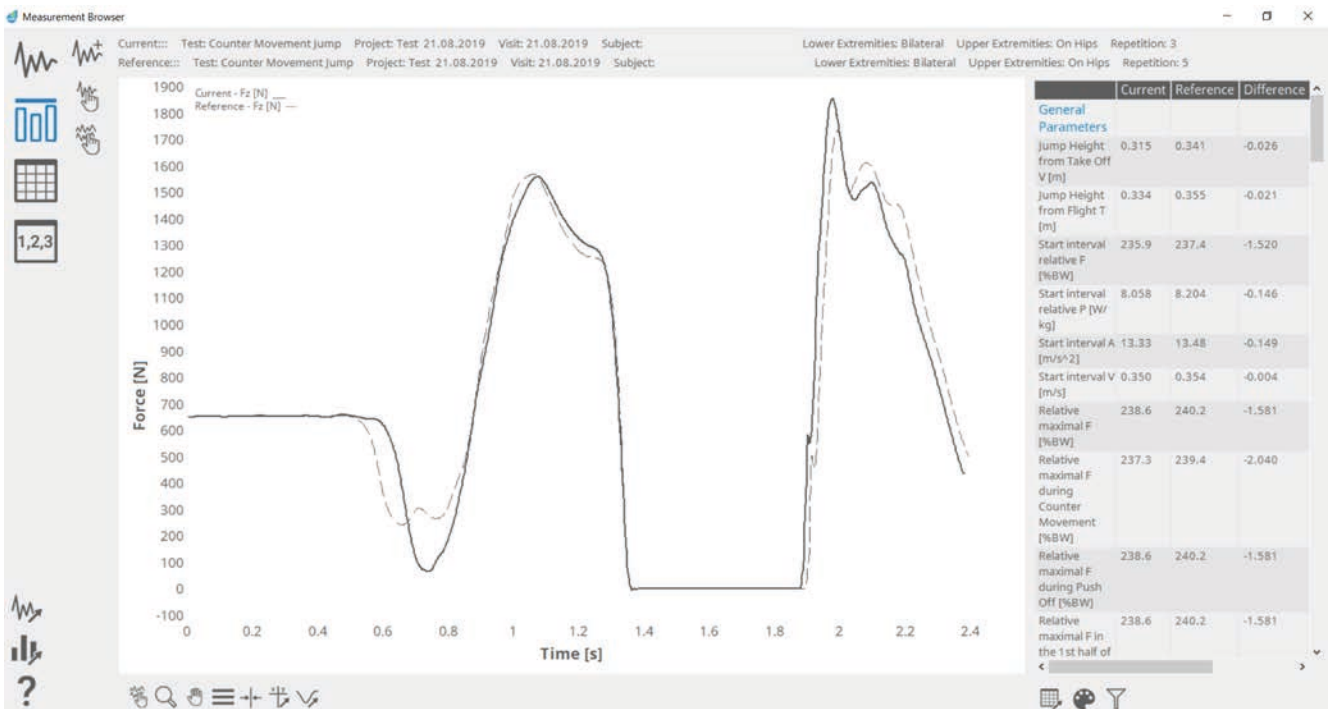


Fig. 2: Comparison mode with two different training periods.

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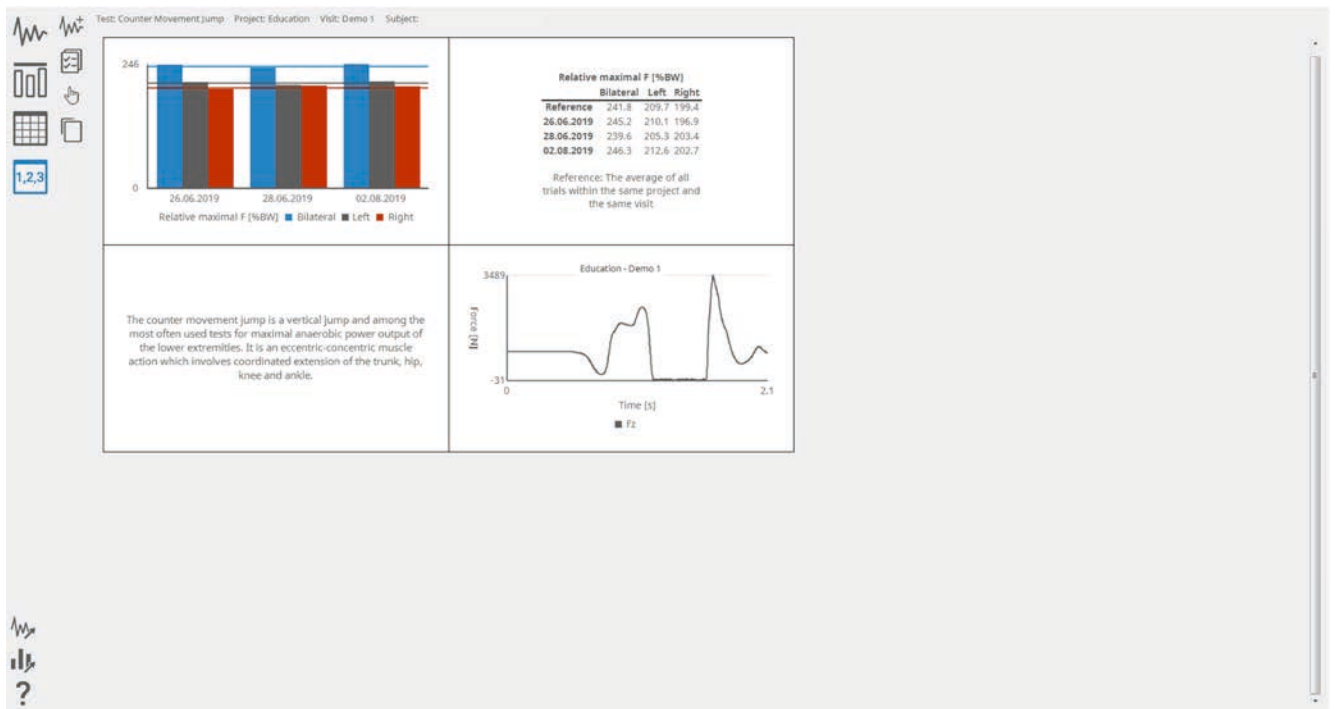


Fig. 3: Dashboard view, templates can be individually defined.

Included accessories

- MARS for Quattro Jump
- USB cable Type A - Type B

Included accessories in 9290DD1 and 9290DD2

- 1-2 x Gigabit Ethernet camera with lens
- 1-2 x Camera tripod per camera
- Camera cable (qty 2 / camera, 10 m)
- Power cable

Ordering key

System with no camera	-
System with one camera	1
System with two cameras	2

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