

Quattro Jump

Type 9290BD

Portable Force Plate System

Leg performance is a determinant factor for success in most sports. A mixture of explosive force, endurance and coordination is trained and very carefully optimized for each particular sports type.

Quattro Jump provides an objective measurement of force, power and jump height. A special protocol developed by Prof. Carmelo Bosco allows the quantification of leg performance.

- Objective measurement of jump force, jump height and jump power
- Immediate feedback to optimize the training program
- Rugged and accurate Kistler force plate technology. Portable thanks to lightweight sandwich design

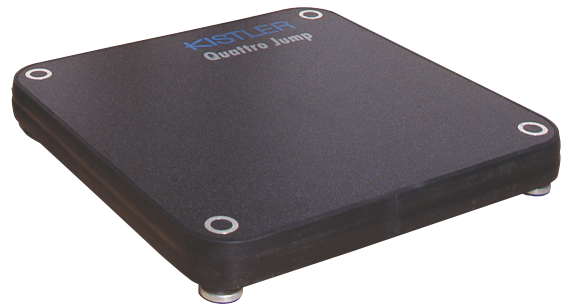
Description

Quattro Jump consists of a portable Kistler force plate on which different jump types are performed. The force plate measures the vertical jump force which is analyzed with the computer connected to the system.

Kistler force plates are a worldwide standard in biomechanics and sports science since 40 years.

Requirements for the PC

- Operating System: Windows® XP, Windows® Vista or Windows® 7
- Acrobat® Reader® for reading the PDF Instruction Manual
- Intel Pentium 4 class processor (1 GHz or higher recommended)
- 2 GB of RAM minimum
- Video display set to at least 800x600, 256 colors, small fonts selected
- Disk (free) space required: 125 MB in the target directory for data storage and software installation
- Microsoft compatible mouse
- Windows® Installer version 1.1 or later
- One (1) direct serial port (RS-232C) or USB to serial port adapter
- A color printer is recommended for creating hard copies of graphs



Technical Data

| | | |
|-------------------------------|-------------------|-------------|
| Dimensions of the force plate | mm | 920x920x125 |
| Range | F _z kN | 0 ... 10 |
| Overload | F _z kN | 15 |
| Linearity | %FSO | <±0,5 |
| Hysteresis | %FSO | <1 |
| Natural Frequency | Hz | ≈150 |
| Operating temperature range | ° C | 0 ... 50 |
| Weight | kg | 21,6 |
| Sampling rate | Hz | 500 |
| Resolution | | |
| Range 1 | N/bit | 1 |
| Range 2 | N/bit | 0,2 |
| Interface to the computer | | |
| Connector type | | USB |
| Power supply via USB | V | 5 |

Conforms with the provisions of directive 86/336/EG in accordance with the CE Declaration of Conformity.

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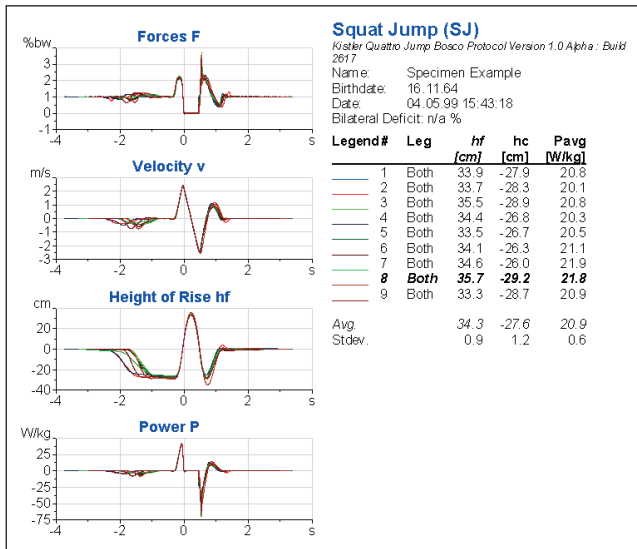
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Quattro Jump Software

The Quattro Jump Software is dedicated for routine jump performance measurement. It is therefore very easy to use. After every jump the protocol on the right side of the screen is updated. The best jump is highlighted.

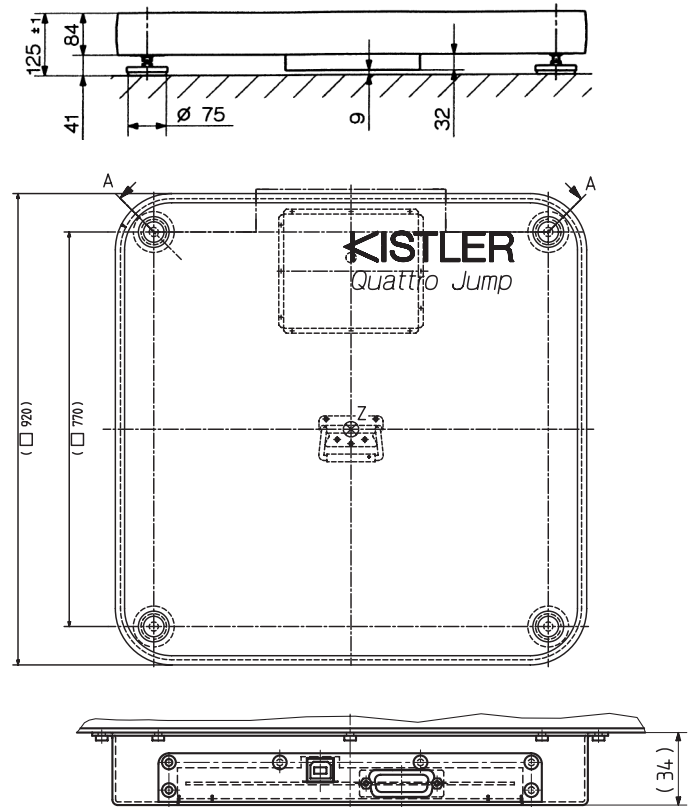
The control area on the left side of the screen allows the user to delete or temporarily hide jumps from the protocol.



Important Parameters

- Force time curve F(t)
- Jump height (rise of center of gravity) hf
- Depth of countermovement
- Average Power Pavg
- % Fast Twitch Fibers (estimate) %FT
- Force at the transition from eccentric to concentric Fi
- Bosco Index
- Leg Equilibrium Index
- Speed/Endurance Index
- Effect of Prestretch
- Fatigue Parameters
- approximately 70 further Parameters

Dimensions



Bosco Test

The Bosco Protocol evaluates different types of «Squat Jump», «Countermovement Jump» and «Continuous Jump»:

| Des. | Type of jump | No. | Description |
|--------|--------------------------------|-------------|--|
| SJ | Squat Jump | 3 * | Single jump starting from knees bent at 90 degrees |
| SJbw | Squat Jump + Body Weight | 3 * | Squat jump with additional load of up to one body weight |
| CMJ | Countermovement Jump | 3 * | Single jump starting with straight legs with a natural flexion before takeoff |
| CJbref | Continuous Jump Bent Legs Ref. | 5 * | Series of jumps with bent knees, used as reference to compare with CJb (15 ... 60 s) |
| CJs | Cont. Jump straight leg | 5 * | Series of jumps with straight knees |
| CJb | Cont. Jump Bent Legs | 15 ... 60 s | Series of 15 ... 60 s jumping with bent knees |

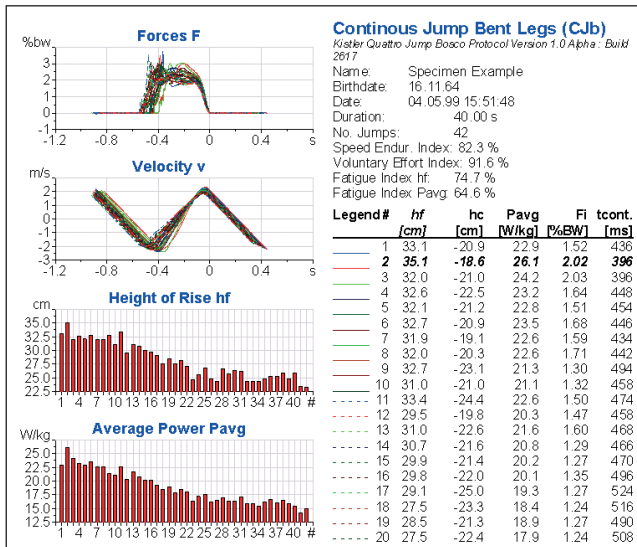
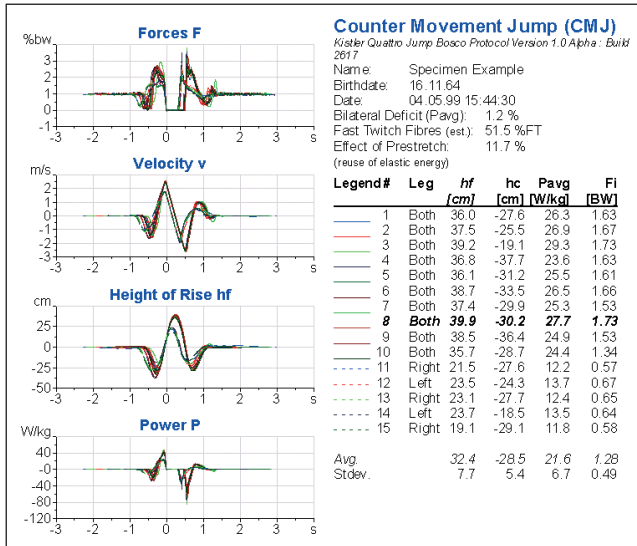
* Recommended No. of jumps

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Jump Type Specific Bosco Protocols

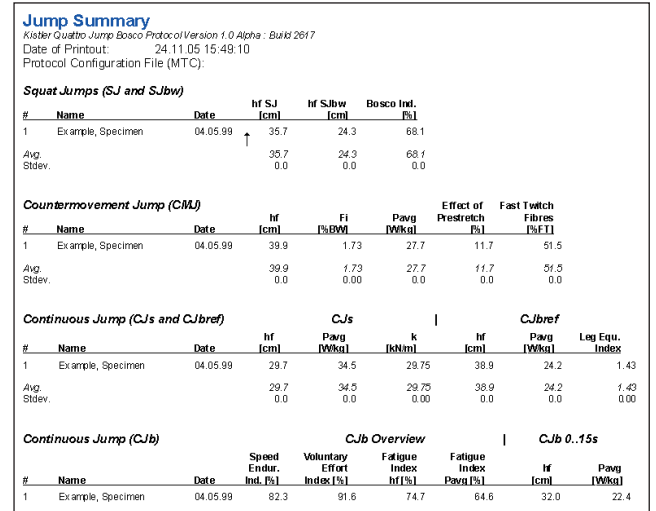
For each jump type a variety of parameters is calculated and presented in a jump type specific protocol. This protocol can be customized by the user.

Examples:



Summary Protocol

A summary protocol (also customizable) combines the most important parameters of an entire test. It also allows the comparison of different tests for instance within a team or over a certain time.



Included Accessories

- Quattro Jump Software
- USB cable type A – type B

Type/Art. No.

2822A-01-0
55066002

Optional Accessories

- none

Ordering Code

- Quattro Jump Portable force plate system

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