Multi-Joint Isokinetic Training and Testing System

Product Formation

It consists of a main unit, seats, and control software.

Mechanism of Action

At a constant movement speed, the torque generated by muscle contraction to drive joint motion can balance the opposing force produced by isokinetic exercise equipment. Sensor data collected on various aspects of muscle strength changes are utilized for strength testing and training, enabling the representation of strength variations through objective quantitative metrics.

Scope of Application

Mainly used for rehabilitation assessment and training of joint function and muscle strength in patients with muscle dysfunction.

Adapter Function

The combination of diverse adapters enhances the efficiency and utilization rate of testing and training processes.

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Multi-Joint Isokinetic Training and Testing System

Product Features

1. Six major joints can be trained.

Capable of training and testing over 30 types of movements across six major joints: hip, knee, ankle, shoulder, elbow, and wrist.

2. Game Interface

Immersive training ensures real-time synchronization between virtual character movements and actual human body motions. Engaging games enhance patient participation and focus, while a variety of interactive activities boost motivation and improve training efficiency.

3. Training Feedback Interface

The training feedback interface displays monitoring values for peak torque on both sides, preset angular velocity, total repetitions, current repetition count, steps, and time. It also allows switching between torque-time variation curves, torque-angle variation curves, flexural torque histograms, and extension torque histograms.

4. Report Interface

Includes reporting functionality to display peak torque, peak torque-to-body-weight ratio, maximum single-action work, maximum average power per action, and range of motion.

I、 Peak torque angle, time to reach peak torque, force decay time, as well as variation coefficient, ratio, difference, fatigue level, and total work data.

5. Preview interface.

Equipped with muscle strength image analysis functionality, it enables quantitative assessment and displays visualized images of rehabilitation efficacy.

(6. Power head function.

The power head features an electric lifting adjustment function with a range of (0–1200) mm, meeting the requirements for extensive joint mobility.

7. Patient information and training program management functions.

It enables users to register, delete, and modify patient information, as well as create, select, modify, delete, and save training plans and steps operations,making it convenient for users to view them.

8. Emergency protective measures.

Equipped with an emergency stop switch and providing a patient-friendly grip handle.

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