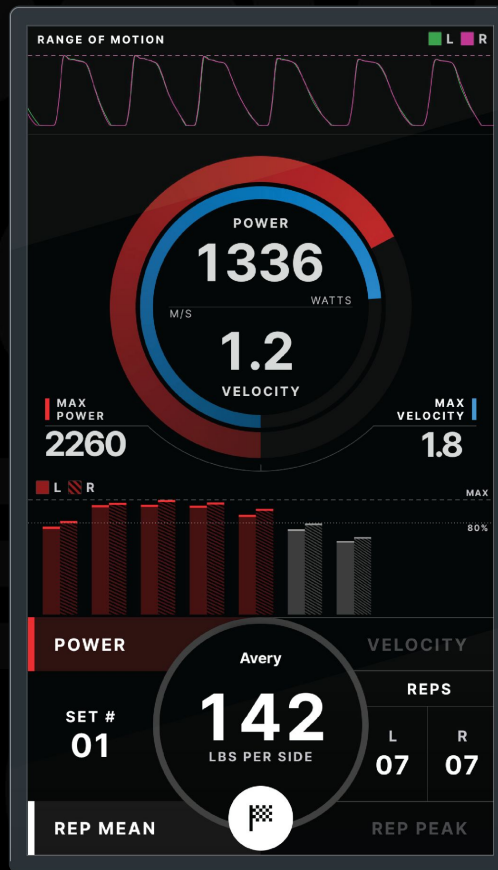


**KEISER A400**  
**UNLOCK TRAINING  
POTENTIAL WITH  
UNPARALLELED DATA**



## CAPTURE IMPORTANT DATA FROM EACH OF YOUR WORKOUT SETS



**POWER**  
(mean and peak)



**VELOCITY**  
(mean and peak)

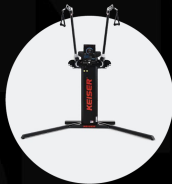


**RANGE  
OF MOTION**

## AVAILABLE FOR ALL KEISER STRENGTH LINES



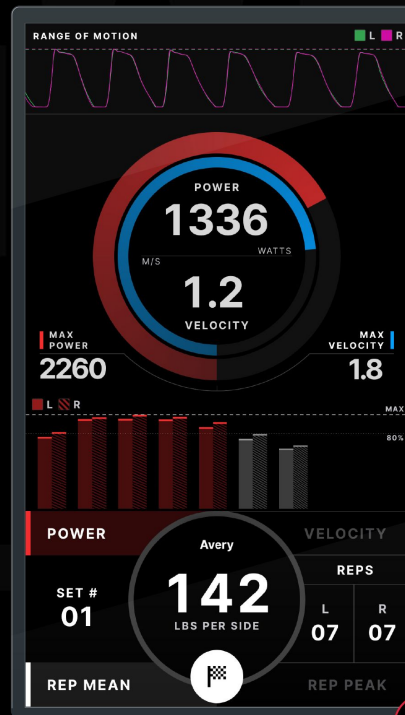
**RESISTANCE  
MACHINES**



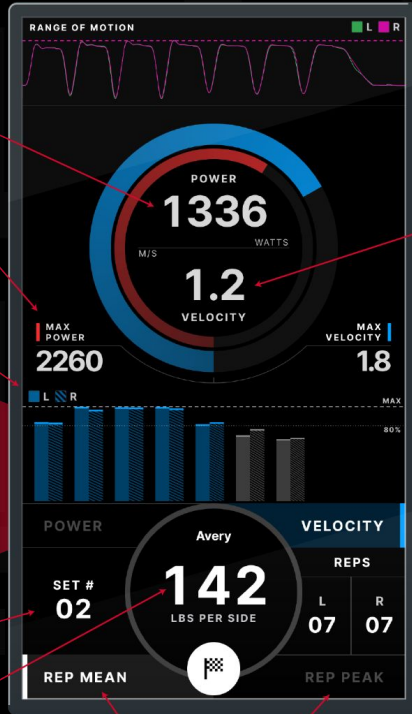
**FUNCTIONAL CABLE  
MACHINES**



**RACKS**



# REAL-TIME FEEDBACK AT THE MOMENT OF EXERCISE



Large 15.6" Touch-screen Display

Real-time Range of Motion  
(Eccentric and Concentric)

Velocity by Rep  
(Peak or Mean)\*

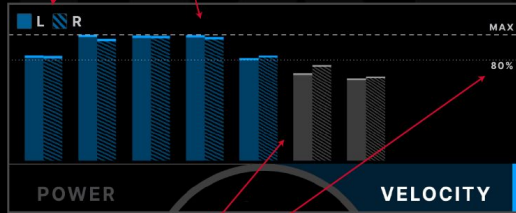
Best Velocity per Set  
(Peak or Mean)\*

Power by Rep  
(Peak or Mean)\*

Best Power per Set  
(Peak or Mean)\*

Velocity Over Time

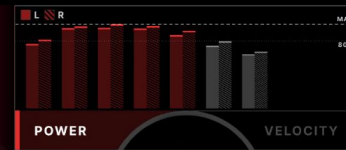
Unilateral Comparisons  
(Left and Right)



Performance Drop-off  
Bar color changes to gray if Velocity or Power drops below your chosen performance threshold (optional).

Set Indicator

Resistance

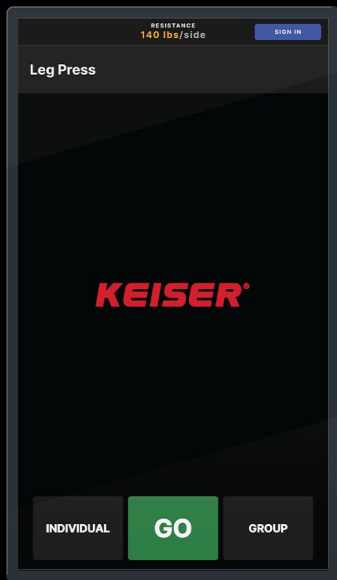


Power Over Time

Rep Counter

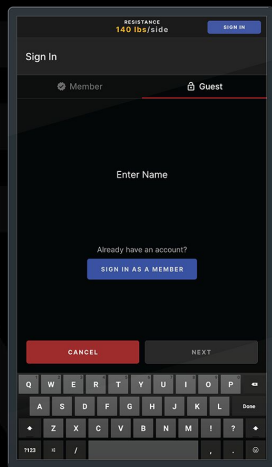
\*Peak/Mean Mode Selection

## START A SESSION



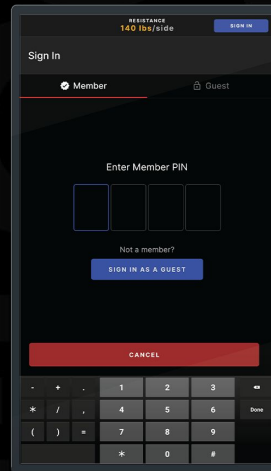
Touch display to start a session. Choose the type of session you would like to start.

## USER SETUP



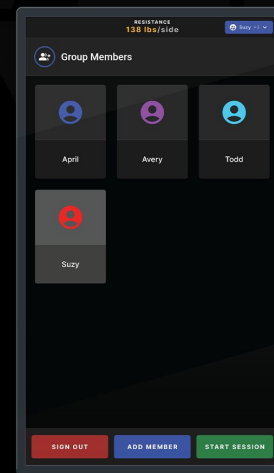
Add temporary users directly on the display at the time of exercise.

OR



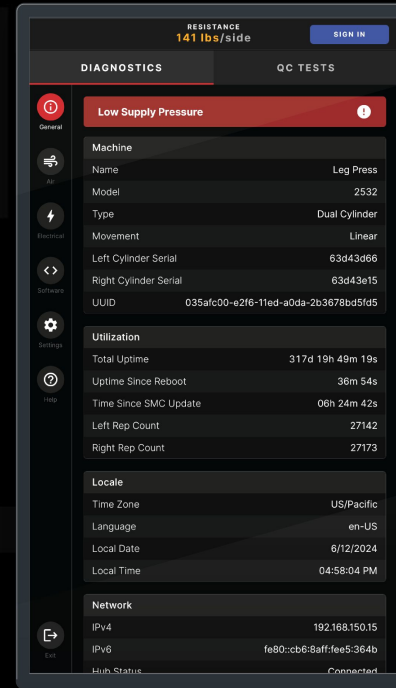
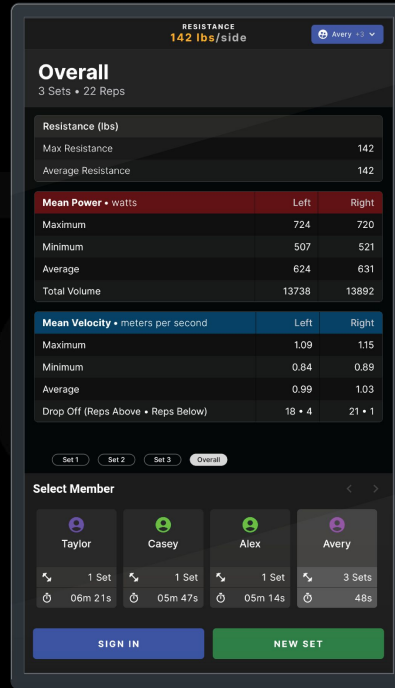
Registered users can log in using their PIN to track their data over time.

## GROUP SETUP



Create a group of one-time and/or registered users to access group features.

# DETAILED SUMMARIES AND DIAGNOSTICS



## BRING YOUR DATA INTO ANALYTICS

You can choose to share your data with your chosen analytics software so you can track everything that happens in the weight room.



**EQUIPMENT  
DISPLAYS**

**HUB**

### **The Hub**

The small-footprint Hub lets you capture user data and system software locally. The Hub has two drives for data redundancy, protecting you from accidental data loss. Internet is required for software updates and technical support.

**TABLET/MOBILE  
DEVICES**

**EXPORT DATA**

### **Analytics Compatibility**

Keiser makes it easy to export your data into CSV format for seamless integration with major off-the-shelf and custom-built performance analytics platforms. An open API for extracting data is under development.

**ANALYTICS  
SOFTWARE**

## TEST, EVALUATE, PRESCRIBE



Jump Squats: 3×10, 1.75-2.00 m/s Mean Velocity  
Back Squats: 3×4, 0.45-0.60 m/s Mean Velocity on final rep



Single Leg Press: 2-4 sets of 8 reps, 80% 1 RPM,  
30% Drop-off Mean Velocity



Kneeling High to Low Chop: 3×10, 20% Drop-off Peak Power



You're done.  
Now what?

## DATA AGGREGATION



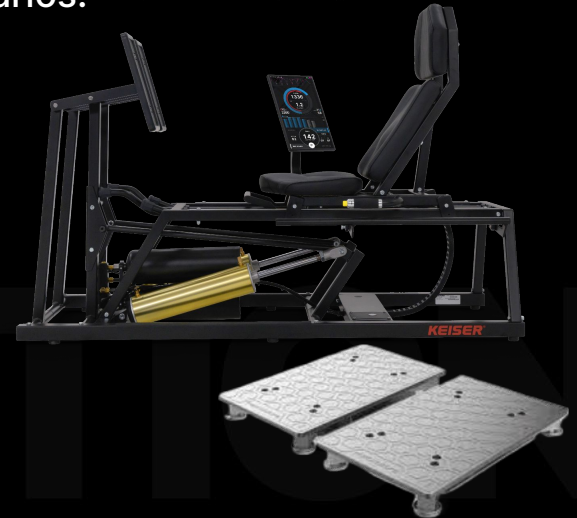
Aggregate the  
entire session.

A 'GPS' for your facility.



## ADVANCED USE CASES: Keiser A400 Leg Press

- **Dual Force Plate Use:** Complementary to CMJ and SJ testing. No need to analyze if athlete depth was consistent across tests like force plate testing.
- **Post-Injury Rehabilitation:** Allows for gradual loading of hip and knee structures with minimal load, while monitoring range of motion (ROM), velocity, and power.
- **Return to Play Assessment:** Provides neuromuscular insights for the quadriceps and hips, aiding in function and pain evaluation for athlete's return to competition.
- **Versatile Training Tool:** Useful for targeted knee and hip flexion exercises, while being beneficial in both healthy and rehabilitative scenarios.



## ADVANCED USE CASES: Keiser A400 Leg Press

- **Load-Velocity Profiling:** Requires 4 data points, with a total assessment time of 4-6 minutes.
- **Joint-Angle Specific Monitoring:** Offers specialized training and monitoring options, particularly useful for rehabilitation.
- **Unilateral Training Option:** Accommodates unilateral exercises, enhancing training flexibility.
- **ROM Data Capture:** Records both live and retrospective range of motion data, vital for tracking progress and recovery.



## ADVANCED USE CASES: Keiser A400 Leg Extension Pro

- **Isokinetic Leg Extension Device:** Mimics traditional isokinetic leg extension tests, aiding in return-to-play assessments and knee function analysis. But instead of keeping velocity constant, force stays relatively constant due to low-inertia properties.
- **Enhanced Rehabilitation:** Accelerates quadriceps loading post-injury with very low load options, tracking ROM, velocity, and power throughout rehabilitation stages.
- **Neuromuscular Insights:** Provides detailed analysis of quadriceps muscles, impacting function and pain management.



## ADVANCED USE CASES: Keiser A400 Leg Extension Pro

- **Load Velocity Profiling:** Offers dynamic, momentum-free load velocity profiling from light to heavy loads.
- **Consistent Force Application:** Delivers steady force across various velocities.
- **Performance Analysis:** Identifies if an athlete is velocity-dominant, balanced, or force-dominant.
- **Accessibility and Cost-Effectiveness:** More accessible and cost-efficient compared to traditional isokinetic machines.
- **Dual-Use Equipment:** Serves as both a testing and training device, especially for knee flexion exercises in health and rehabilitation.



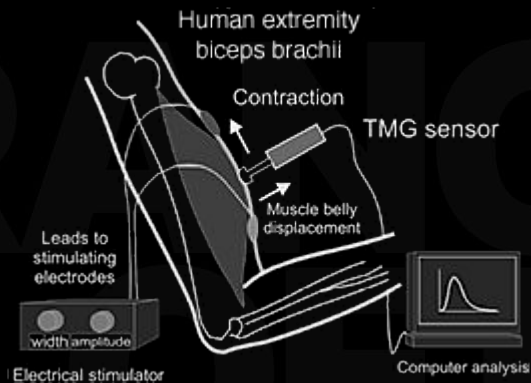
## ADVANCED USE CASES: Keiser A400 Leg Extension Pro

- **Quick Assessment:** Requires 4 data points for an accurate load-velocity profile, completed in 4-6 minutes.
- **Unilateral Training Feature:** Accommodates unilateral exercises for targeted training.
- **ROM Data Recording:** Captures live and retrospective ROM data.
- **Isokinetic and Keiser Integration:** The Keiser 400 Leg Extension complements traditional isokinetic tests, offering insights into load-torque relationships, unilateral asymmetry, and fatigue.
- **Frequent Assessment:** Enables regular monitoring of knee function and rehabilitation progress.



## ADVANCED USE CASES: Keiser A400 Leg Extension Pro

- **Eccentric Overload Training:** Its pneumatic system allows for rapid load adjustments, facilitating eccentric overload interventions.
- **Tensiomyography Integration:** Enhances assessment with Tensiomyography to explain muscular differences between limbs.



## ADVANCED USE CASES: Keiser A400 Leg Curl Pro

- **Isokinetic Leg Curl Device:** Mirrors traditional isokinetic leg curl tests, focusing on hamstring structures. But instead of keeping velocity constant, force stays relatively constant due to low-inertia properties.
- **Enhanced Post-Injury Rehabilitation:** Facilitates faster hamstring loading with minimal load options, suitable for all rehabilitation stages.
- **Comprehensive Data Capture:** Records range of motion (ROM), velocity, and power throughout rehabilitation.
- **Dynamic Load Velocity Profiling:** Offers light to heavy load profiling under dynamic conditions.



## ADVANCED USE CASES: Keiser A400 Leg Curl Pro

- **Performance Analysis:** Identifies if an athlete is velocity, balance, or force-dominant.
- **Eccentric Cut-Off Points:** Allows for joint-specific eccentric cut-offs, improving reliability over traditional NORDIC hamstring tests.
- **Versatile Training Tool:** Doubles as a training device for targeted knee flexion in both health and rehabilitation.
- **Efficient Assessment:** Requires 4 data points for an accurate load-velocity profile, taking 4-6 minutes.
- **Unilateral Training Capability:** Supports unilateral exercises for focused training.





## ADVANCED USE CASES: Keiser A400 Leg Curl Pro

- **Real-Time and Retrospective ROM Data:** Captures both live and post-exercise ROM data.
- **Eccentric and Isometric Strength Assessment:** Complements Nordbord by providing rich ROM and load-velocity relationship data at various speeds and forces.
- **Functional and Training Utility:** Acts as both an assessment tool and a training device, offering a cost-effective alternative to Nordbord subscriptions.



## ADVANCED USE CASES: Keiser A400 Leg Curl Pro

- **Eccentric Angle-Specific Breakpoints:** Captures eccentric angle-specific breakpoints, load-velocity relationships, and facilitates eccentric overload and unilateral specific training.
- **Keiser 400 Ecosystem Integration:** Adds valuable data into the Keiser 400 ecosystem for comprehensive musculoskeletal assessment and training.
- **Enhanced Knee Flexor Analysis:** Offers detailed, muscle-specific data for knee flexor assessment and training, complemented by tensiomyography to understand muscular variances between limbs.

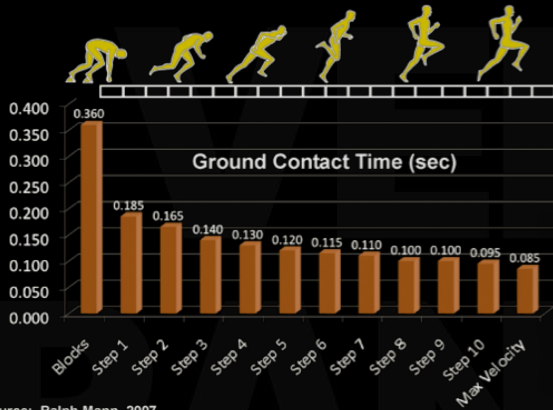


## ADVANCED USE CASES: Keiser A400 Chest Press Pro

- **Balanced Upper Body Assessment:**  
The Keiser A400 Chest Press Pro provides a reliable method to test load-velocity relationships between the right and left upper body limbs, including chest, shoulder, and triceps.
- **Accelerated Upper Body Rehabilitation:** Enables fast, post-injury loading of chest, shoulder, and triceps muscles with very low-load options, suitable for all rehabilitation stages.
- **Comprehensive Data Collection:**  
Captures a wide range of data including range of motion (ROM), velocity, and power throughout rehabilitation, along with both live and retrospective ROM data.



## ADVANCED USE CASES: Keiser A400 Seated Calf



Source: Ralph Mann, 2007



- **Enhanced Ankle Rehabilitation:** Facilitates rapid post-injury loading of ankle structures with minimal load, suitable for all phases of rehabilitation.
- **Comprehensive Data Tracking:** Records range of motion (ROM), velocity, and power throughout the rehabilitation process, along with capturing both live and retrospective ROM data.

- **Ankle Load-Velocity Assessment:** The Keiser A400 Seated Calf effectively measures load-velocity relationships in the right and left ankles, ensuring balanced lower limb analysis.

## ADVANCED USE CASES: Keiser Aggregated Workload and Positional Systems

- **Workload Aggregation in Sports:** Positional systems like GPS, RFID, and Optical Tracking are employed to compile field and court-based sports workloads.
- **Applicability Across Sports:** These systems are widely used in sports such as basketball, football, soccer, tennis, and field hockey for performance tracking and analysis.
- **Return to Play Strategy:** Essential in formulating return-to-play protocols, ensuring athletes are ready for competition.
- **Keiser 400 Ecosystem:**
  - Acts as the 'GPS for the weight room', integrating seamlessly with field/court workload data.
  - The system offers rich metadata for each exercise tag, providing specific muscle work information for comprehensive analysis.
- **Comprehensive Workload Management:** This collaboration provides a 360-degree view of an athlete's workload, encompassing rehabilitation, weight room activities, and field/court performance.

## ADVANCED USE CASES: Keiser Aggregated Workload, Positional Systems, and Force Plates

### Complements:

- **Enhanced Fatigue Monitoring:** Force plates, combined with the Keiser 400 Line, enable practitioners to understand dose-response relationships between workouts and athlete fatigue.
- **Targeted Interventions:** Allows staff to prescribe precise field and weight room adjustments, informed by a comprehensive understanding of training workloads, enhancing athlete recovery.
- **Jump Performance Insights:** For sports emphasizing jump tasks, leverage Keiser 400 Line's detailed metrics to ensure improvement in jump-specific KPIs.
- **Customized Strength Training:** Address specific athlete needs, like enhancing jump height relative to body weight, through tailored lower body exercises such as Keiser Rack back squats, Squat Pro, and Leg Press, utilizing velocity drop-offs for optimal strength stimulus.

## ADVANCED USE CASES: Keiser Aggregated Workload, Positional Systems, and Force Plates

Depending on needs, questions, and logistics, the Leg Press may be a possible replacement:

- **Beyond Force Measurement:** While force plates excel in force measurement, they lack training stimulus capabilities. The Keiser 400 line serves as both an assessment and training tool.
- **Keiser Leg Press 400 Utility:** Enables fatigue monitoring for left and right limbs using velocity or power metrics at desired loads, aids in physical benchmarking, return-to-play assessments, and facilitates specific training interventions for targeted adaptations.

