

Game-Changing Interactive Equipment Offers New Training and Data Monitoring for Elite Athletes

A new line of innovative resistance equipment is helping coaches train athletes more efficiently and effectively by providing access to objective, real-time data.

As seen on Sports Business Journal

Recently introduced by Keiser Corporation, the A400 Series revolutionizes the tracking of velocity and power, making it as simple as monitoring a heart rate. The equipment showcases both mean and peak velocity, providing insights into the speed of each repetition, along with average and peak power across the entire range of motion.

By harnessing compressed air, Keiser's Dynamic Variable Resistance facilitates the seamless adjustment of resistance across a broad spectrum of velocities. This not only aids athletes in enhancing strength and power but also contributes to the augmentation of limb velocity. Characterized by a sleek design and meticulous engineering, Keiser's integrated equipment tailors training to the individual, empowering coaches and athletes to make real-time adjustments on the fly.



Coach Ryan Koester of University of Iowa Olympic Sports Strength & Conditioning performing fast and powerful reps with intent on the Keiser A400 Squat Pro



"It monitors real time velocity, power, and range of motion. Through a touch screen interface, you can switch between mean and peak metrics while the athlete is actively engaged in a set," clarified Ty Sevin, President of Keiser and a former Olympic and collegiate track coach, as well as a world-class javelin thrower. Sevin further emphasized, "This provides coaches with a competitive edge: driving intent, receiving instantaneous feedback, and accessing data that can be downloaded and assessed to track an individual athlete progress and then compare these key performance indicators to a group of athletes in the same discipline."

Additionally, the A400 offers distinctive range-of-motion data, assessing the symmetry between the right and left sides during a movement pattern. It additionally alerts users to a decrease in performance when comparing repetitions across sets and reps. These features serve to monitor fatigue, proactively preventing injuries, ensuring high-quality performance while maintaining targeted intent.

This holds particular significance as workload management gains popularity as a strategic approach in the NBA and other sports leagues. The data extracted from the A400 is utilized to assess asymmetries on one side of the body and their connection to corresponding deficiencies or potential injuries in interconnected body parts, such as the ankles, knees, hips, and shoulders.

The software of the integrated equipment provides an exclusive capability to conduct tests, evaluate performances, and prescribe workouts all within a single device.

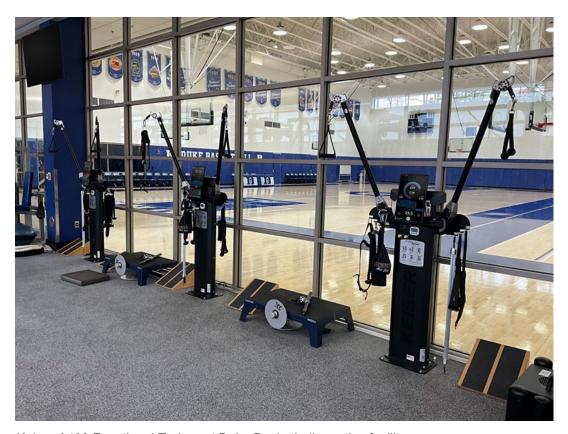
Measuring the Intangible Intent to Win

Sevin stated that the A400, for the first time, allows coaches the ability to record and follow the intangibles: "Coaches are always trying to drive intent. When an athlete does an exercise, the objective is often to operate at high velocities while creating lots of



power. You get immediate feedback on the velocity and power and range of motion; you can now drive specific intent depending on what the objective goal is."

During the development of the new equipment line, Keiser engaged with various college and professional coaches and trainers to identify their needs and areas for improvement in workout effectiveness. Driving intent and performance feedback were identified as top priorities, prompting Keiser to concentrate on delivering efficiency and the capability to monitor individuals. As Sevin stated, "I can encourage an athlete to move at maximum speed and monitor every metric for power, speed, and range of motion. In the past, this simply wasn't feasible."



Keiser A400 Functional Trainer at Duke Basketball practice facility

Coaches and athletes also have the option to transfer training data from the A400 to their respective athlete management system or a Keiser dashboard using an open API.



This not only facilitates more straightforward tracking but also enables safer scheduling for future workouts, maximizing training time and preventing injuries.

Sevin emphasized, "An athlete can go through a range of motion as fast as they can with a reduced risk of injury, 25%-30% faster than if it was mass, and they don't have to decelerate. Regardless of how fast you move, there's less stress on the joint. This is the power of pneumatics."

Organizations including the Toronto Blue Jays, Duke University, University of Iowa, Louisville University, and the University of Texas have adopted the A400 Series and are now evaluating the investment while leveraging the new features. Initial feedback from various college athletic department officials has been positive.

Bill Maxwell, University of Iowa's Director of Athletic Performance and Head Strength and Conditioning Coach for Olympic Sports, expressed his satisfaction with the A400, stating, "The fixed range of motion for the Air Squat Pro and the Leg Press allows for more aggressive output while mitigating injury risk. It has also created a very competitive environment with instant feedback."



Maxwell highlighted the system's simplicity, stating, "The interface is a very simple tablet where minimal education on operation is needed. There's minimal teaching needed to elicit high-stimulus training."



University of Texas Athletic Performance, Coach Clint Martin, performing reps on the Keiser A400 Leg Press and receiving instantaneous, objective feedback for both the right and left leg

The personalization of training with the A400 has proven transformative for the athletic department at the University of Texas, according to Donnie Maib, UT's Director of Olympic Sports Athletic Performance. He said, "You can get real-time feedback on what's happening with each rep with each athlete. You can see power production curves and see where athletes begin to break down with each rep or set. We have never been able to get that specific information during a workout. It allows us to make adjustments quickly and not waste a session."

Maib also emphasized the large display screens on the new apparatus, stating, "You can see and determine where imbalances are for each athlete depending on the exercise, the parameters prescribed, and joint angles. When our athletes get that feedback during each session, it allows them to make changes and improve quicker."



The focus on tailoring training to the individual is evident in the new series of equipment. As Sevin, Keiser's President, pointed out, "We're not in the weight room to be professional weightlifters but to be able to go on the playing field and be better competitors." Sevin mentioned that the A400 Series will continue evolving to assist coaches in creating a "road map of efficiencies."

Stay up to date on Keiser by following @KeiserFitness on Instagram. For any questions regarding Keiser A400 Series, please contact alastairw@keiser.com.