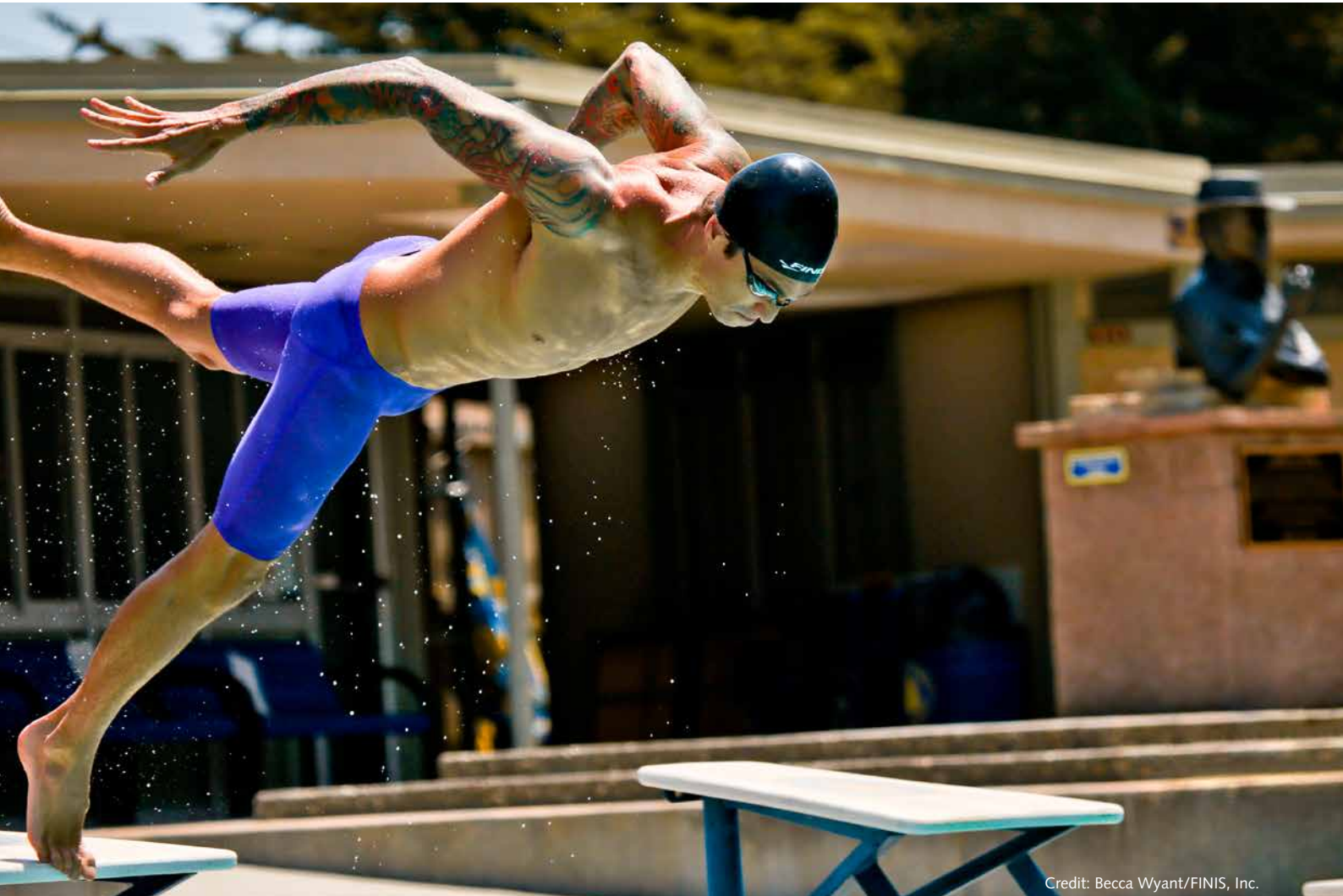


KISTLER

measure. analyze. innovate.



Credit: Becca Wyant/FINIS, Inc.

Anthony Ervin, Olympic Champion 2016, 50m freestyle.

0.01 seconds decide a race: Succeed with Kistler PAS-S

Performance analysis system for swimming starts, turns and relay changeovers


Kistler's performance analysis system prepares swimmers for the Olympics


'The Kistler system PAS-S is the advanced tool I needed to turn the worst swimming start on the world stage, into one of the best, and thus reclaiming the title of Olympic Champion.'
Anthony Ervin, Olympic Champion 2016, 50m freestyle

For competitive swimmers, performance at starts and turns is a key factor in achieving better results. Just a few hundredths of a second decide whether the race is won or lost.


One impressive example of how close finishes in swimming competitions can be is the 50 meter freestyle race at the Olympic Games in Rio. The American swimmer Anthony Ervin won the gold medal at 35 years of age by one hundredth of a second. Ervin laid the foundation for this success four months earlier when he began to train with Kistler PAS-S and improved his start little by little.


The Kistler Performance Analysis System for Swimming provides the key performance parameters to enhance elite swimmer's skills in starts and turns effectively. The system delivers immediate feedback for coaches and athletes with objective data – information which cannot be seen by eye. This detailed information gives coaches and athletes the basis to adapt the performance and technique directly in the next trial. As a result, the performance is effectively measured and improved in the daily training.

 **SwimMAC Team Elite, US:** 'The PAS-S system can make you a better coach by giving you information you wouldn't know about your athletes without it' – Kajo Kajejich, Assistant Coach.

 **British Para Swimming, UK:** 'It's a really great piece of kit as it enables to deliver good evidence based coaching. The system catches an athletes metrics and then from that we can make informed decisions going forward.' – Catherine Gilby, Head of Sport Science and Medicine.

'As the competition gets tougher and the field gets closer, it's really essential to have those good starts and turns when trying to pick up medals at major championships and Kistler enables us to do that!' – Andrew Mullen, Paralympic Medalist, European Champion.

 **Swimming Australia:** 'KPAS-S was used to assist my athlete in fine tuning their skills in the lead up to the Olympics. The ability for KPAS-S to be able to provide immediate feedback to the athlete, scientist and I was a key feature in how I used it for skill development.' – Australian Coach of an Olympic athlete.

 **Swiss Swimming:** 'The data generated by the PAS-S can't be captured with the naked eye because everything happens far too quickly and at the same time. That's why it's so important to have a tool like this one to optimize the start.' – Dave Burkhardt, Head of Junior and Youth National Team.

Start faster

Get in the game first:

- A better starter can be over 0,5 seconds faster than a poorer starter over the first 15 meters
- Up to 25% of race time consists of starting time
- Anthony Ervin had improved his start performance on the road to the Olympics and succeeded by winning the 50 meters freestyle race

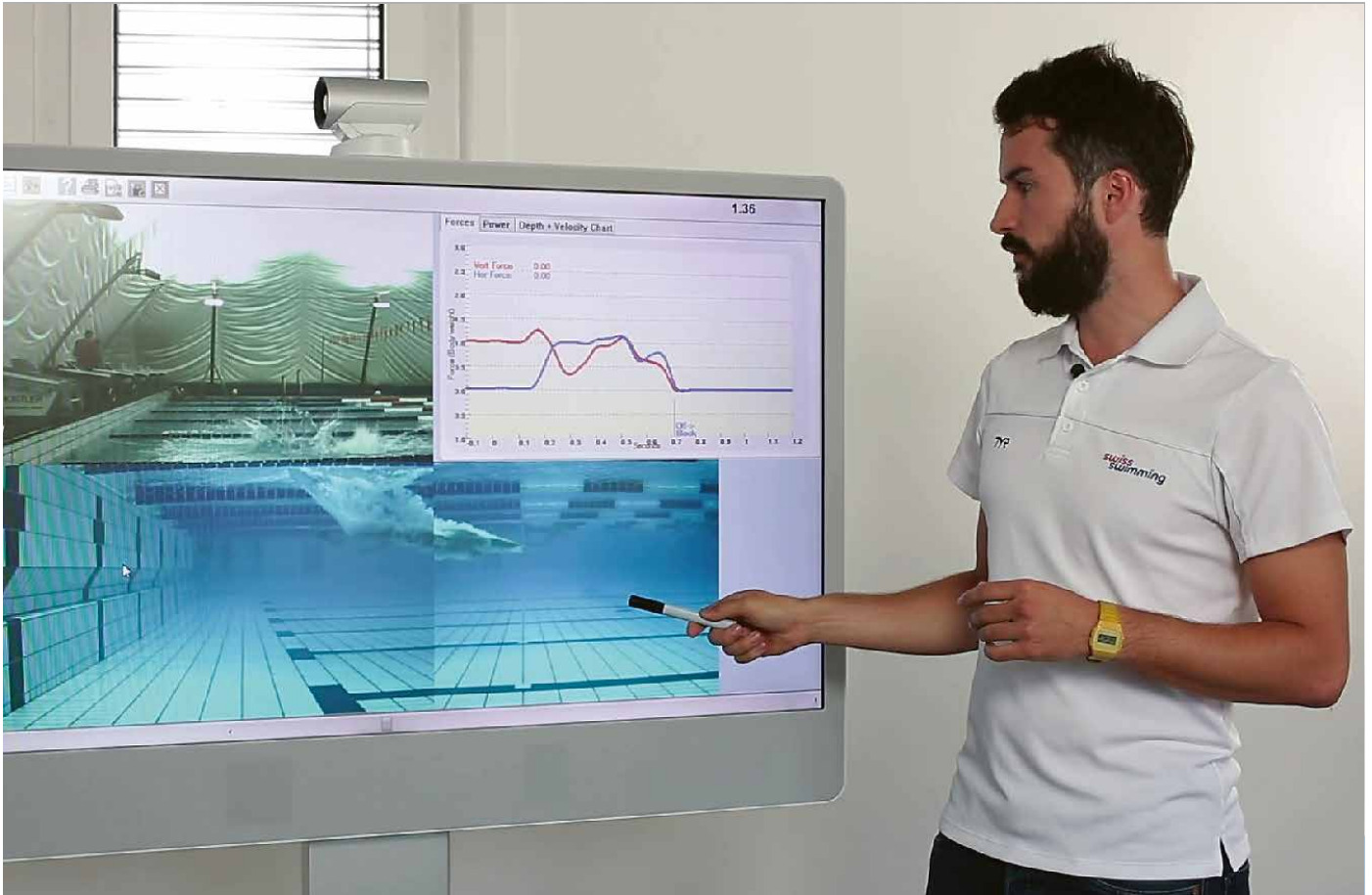


Turn faster

Win time turn-by-turn:

- In long distance races a saving of split seconds per turn can sum up to several seconds over the whole race
- Turns comprise up to 33% of total race time on short course (25 meters pool)
- Faster turns are especially beneficial in long distance races





Dave Burkhardt (Swiss Swimming) analyzing the start performance on the Kistler PAS-S user interface.

Improve faster

The Kistler solution makes analyzing easy

- Force measurement: Instrumented starting block and turning plate measure kinetic data for starts from block, backstroke starts and turns
- High-speed video capture: 5 High-speed cameras provide a complete visual image from start to 15 meters distance
- User interface: Shows the video along with a biomechanical analysis of the kinetic and kinematic information in an easy way to understand, analyze and compare trials



The innovative Kistler PAS-S system. An investment for future success.

Kistler PAS-S: The tool Olympic gold medalists rely on

Kistler PAS-S is an effective solution for capturing starts and turns in swimming. The system delivers immediate feedback for coaches and athletes through objective data and therefore even the slightest changes in the performance of athletes can be seen. This makes it possible to adapt the performance and technique directly in the next trial.

In the 2016 Olympic Games and Paralympic Games swimmers such as Anthony Ervin and athletes of the British Swim Team could celebrate huge successes. Kistler PAS-S helped them to push their limits and get the split seconds needed to win.

Kistler developed PAS-S with the future in mind. Therefore the improvement of Kistler PAS-S is an ongoing process which is based on scientific research. Regular updates make sure that Kistler PAS-S is always a state of the art solution for performance analysis in swimming.

Furthermore Kistler offers an installation and instruction service to make sure that the system can be operated properly to get the best out of it.

For more information about Kistler PAS-S visit www.kistler.com/swimming

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