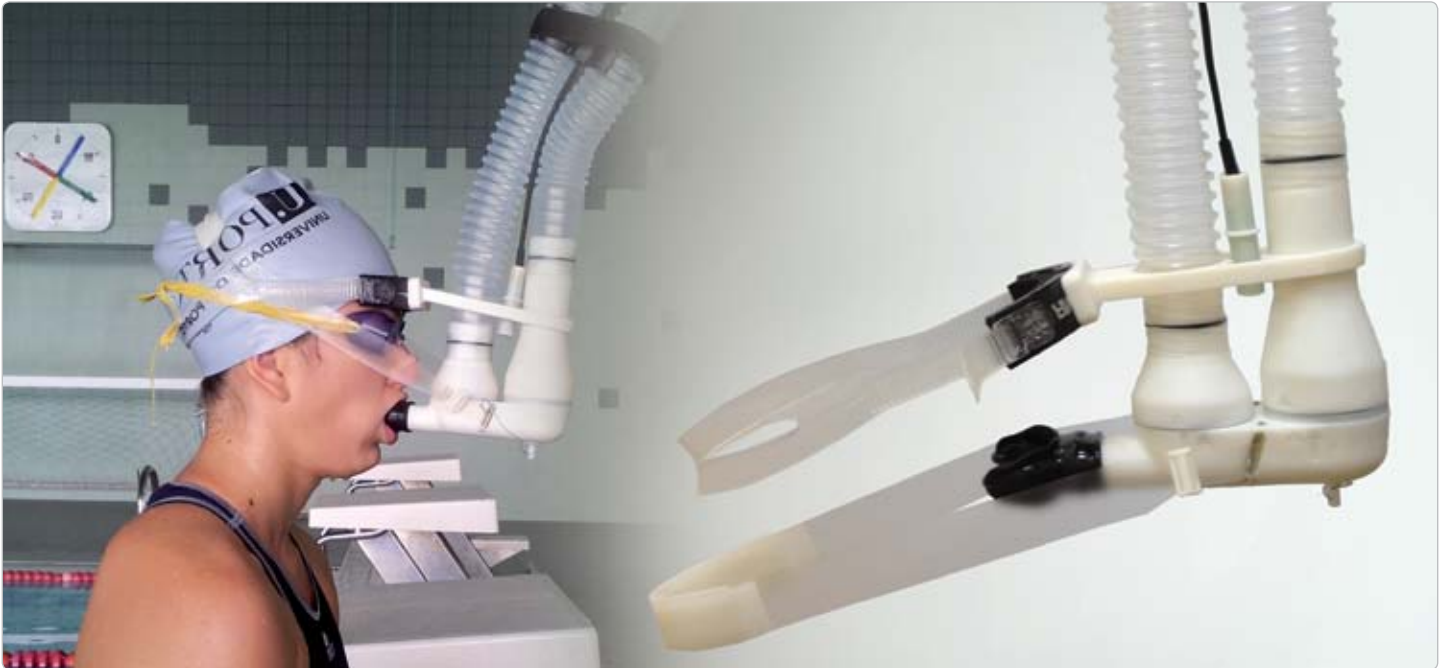


New Snorkel for enhanced Breath-by-Breath Gas Analysis during Swimming



Application

- ▶ Sport Science
- ▶ Elite swimmers
- ▶ Sports Federations & Olympic Committees

Related Products

- ▶ K4 b²
- ▶ Quark CPET[®]

Versions

- ▶ Front crawl
- ▶ Backstroke

- ▶ Improved version of the swimming snorkel kit
- ▶ Breath by Breath data acquisition during swimming (VO_2 , VCO_2 , VE, HR)
- ▶ Light and hydrodynamic design
- ▶ Ergonomic, waterproof and easy to mount
- ▶ High accuracy and proven reliability scientifically validated

Aquatrainner is an easy-to-mount swimming snorkel connected to a metabolic cart (K4b2 or Quark CPET[®]) that allows to perform gas exchange analysis during swimming. Swimming with the snorkel is considered a valid field condition to measure swimmers' cardiorespiratory response. Researchers and coaches can now acquire an incredible number of information on athletes tested in real conditions (swimming pool or flume).

In the Aquatrainner swimming snorkel the inlet and outlet tubes are connected to the turbine through a connecting unit that allows the system to distinguish expiration from inspiration, thus allowing the definition of tidal volume and respiratory frequency for BxB analysis. Gas sampling and turbine flowmeter are positioned at the output of the tube far enough from the water surface to guarantee reliability and subject's safety.

The snorkel is light, hydrodynamic and designed to suit swimmer's natural movements in different swimming styles (either front crawl or backstroke). Ergonomically designed components allow special protection to prevent water inhalation during test.

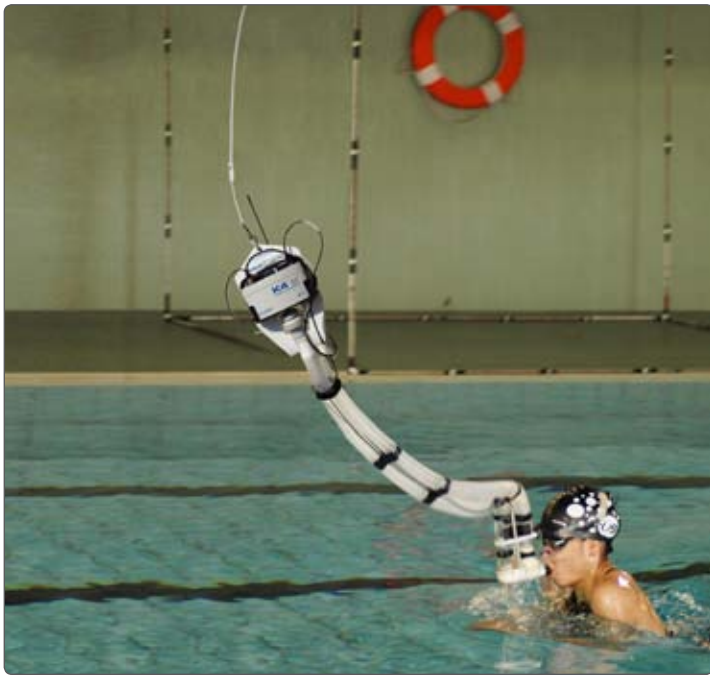
Kit includes also a special water-resistant HR belt and probe to measure heart rate frequency during swimming.

The new Aquatrainner system has been recently validated (C. Baldari et al. 2012) and it is considered suitable for steady state measurement and incremental tests with steps at least 1 minute long.



Option 1:

An operator can follow the swimmer by holding the K4b2 using a special rod (rod and harness are included in the standard packaging)



Option 2:

The K4b2 can be hung on a cable to be placed above the swimming pool lane

Technical Specification

Hardware

Dead space (mouthpiece) 11.3 ml

Standard packaging includes:

Aquatrainer swimming snorkel unit, reader support, HR belt and probe, nose clip for swimmers, rod and rod support.

Scientific Study

C. Baldari et al. "Is AquaTrainer® Snorkel Proper for VO2 Assessment?" International Journal of Sport Medicine (submitted, 07 December 2011 accepted for publication 09 June 2012).

Distributed by:



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