#### Benefits of HYPOXcontrolS

- » Portable interval altitude training device for customised altitude training plans
- » Flexible use in any existing training facility
- » Altitude simulation capabilities of up to 6,000 metres at alternating intervals with concentrated oxygen
- » Real time monitoring of all relevant vital signs
- » Touch screen for intuitive and autonomous control of the training session
- » Authentication using a chip card
- » Biofeedback for determining the personal tolerance levels for changes in altitude
- » Intelligent analysis software for fully documenting training results
- » Database for saving profiles and training data
- » Optional network connection
- » Certified medical device

### Benefits of altitude training: Train High – Sleep Low

- » Increases performance during competition training not only for endurance sports
- » Improves endurance capacities
- » Increased muscle growth
- » Shortens the regeneration time while training
- » Optimises the rehabilitation time after sport injuries
- » Lowers athlete's susceptibility to injuries
- » Increases the body's physical and mental endurance levels
- » Prepares for altitude acclimatisation and optimises performance levels prior to spending time at high altitudes
- » Has a relaxing effect on the body and helps people cope with stress
- » Supportive effects for the body's immune system
- » Positive results for weight loss
- » Increases a person's ability to concentrate







## Positive metabolic effects of hypO<sub>2</sub>xia on the body

## Increases physical fitness

- » Increases resting lactate levels
- » Increases insulin sensitivity
- » Lowers blood pressure

# The energy supply for cells is improved

- » Increased production of the glycolytic system & glucose transporters
- » Increasing number of mitochondria

hypO<sub>2</sub>xia-inducible factor HIF-1 Alpha

The body is placed under

reduced oxygen conditions.

These lower levels of oxygen lead

to signal transmission via the

## Increased vascularization

The transport of

oxygen is improved

Increased EPO in the kidneys

Additional red blood cells

are produced in the

bone marrow

- » Increases the angiogenesis factors VEGF, MMP2, MMP9, endostatin
- » Increased capillarization

## Vascular tone is increased

- » Increases endothelin& adrenomedullin
- » Improves blood circulation

## Increased iron metabolism

- » Increases production of transferrins and cerruplasmins
- » Promotes erythropoiesis

## Improves the supply of oxygen to the body



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Technical changes and errors excepted. Ref. A 04.2010







The efficient altitude training system with concentrated oxygen



Increase your performance in a targeted way
by training at a simulated altitude of up to 6000 m

Optimise your body's energy supply
by increasing number of mitochondria and erythrocytes

Reduce your regeneration and rehabilitation times
with increased cellular metabolism and vascular growth





The efficient altitude training system with concentrated oxygen

#### **Innovative & Portable**

HYPOXcontrolS is an efficient and versatile altitude training system. Training at simulated altitudes is recommended for any athlete who wants to optimise his or her **performance and endurance levels**. The HYPOXcontrolS portable training system gives patients air with reduced oxygen levels – hypO<sub>2</sub>xic – to breathe during the first interval and provides them with oxygen-enriched air – hyperO<sub>2</sub>xic – in the second interval. With this **interval altitude** training system, the body's own altitude acclimatisation effects can be utilised for increasing performance levels during competition phases in a targeted way. The regeneration and rehabilitation phases are also optimised.

#### **Automatic & Simple**

The unique HYPOXcontrolS biofeedback is the first step before creating a personal training plan. The vital signs are monitored during a step test and the current altitude training level is automatically determined. A personal and safe altitude training level is selected for the athlete based on this test.





#### **Intuitive & Personalized**

Any athlete can **independently** configure his or her own **personalised** hypO<sub>2</sub>xic and hyperO<sub>2</sub>xic interval altitude training plan on the touch screen display by using the intuitive software interface, and can save it on their own chip card.





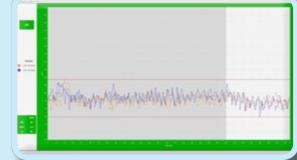


All relevant vital signs are shown on a live graphical overview during the biofeedback phase and the entire altitude interval training session, and they are monitored using pre-set safety limits.

#### **Compatible & Progressive**

During the entire duration of the altitude interval training session, live streaming of up to four people can be shown simultaneously on a split screen. An existing computer system can be easily used to analyse training results as efficiently as possible.





#### **Effective & Efficient**

In addition to taking vital signs, such as the heart rate and oxygen saturation levels, the device also indicates, saves and evaluates **unique vital signs**, like the heart rate variability and the transcutaneous partial pressure of oxygen.



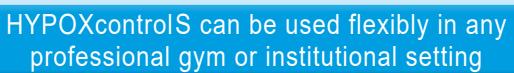








In the **analysis software interface**, all interval altitude training sessions can be documented in a **clearly organised training report**, which can be distributed as a PDF document. Moreover, up to five different training sessions can be shown on a tabular and graphical overview for comparison and analysis purposes.



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