SMTEC
Sport & Médical Technologies S.A.

HYPOXIA-HYPEROXIA-HYPERCAPNIA

A new approach with

AltiTrainer

- For Pulmonary Function Testing services, SMTEC developed a range of normobaric hypoxia, hyperoxia and hypercapnia apparatus for all configurations. The system is reliable, simple and economical. Unlike hypobaric chambers, no heavy infrastructure is needed. It is easy to use and extremely precise.
- **AltiTrainer® enables adjusting FiO2 between 10.5% (corresponding to an altitude of 5,500 m) and 60%, on a continuous basis. It is also possible to adjust FiCO2 between 0.5% and 8%.**
- **AltiTrainer®** enables subjecting individuals to physical exercise in conditions of hypoxia, hyperoxia and hypercapnia with custom-adjusted breathing rates of up to 200 l/min.

  The user can change the inspired oxygen or carbon dioxide fraction at any moment with a simple command.

- **AltiTrainer®** is also a tool for hypoxia training. It can be adapted to any sport with training on stationary equipment.
- **AltiTrainer®** is a novel alternative for generating stimuli during training which can positively influence performance (VO2 max, Time until exhaustion), both in the preparation and competition stages.
- **AltiTrainer®** has already proven successful in research laboratories, pulmonary function testing centers, training and rehabilitation centers as well as by national ski teams, professional cycling teams and rowing clubs.

AltiTrainer

SMTEC S.A. Switzerland Tél./fax: +41 22 797 04 62 info@smtec.net - www.smtec.net

AltiTrainer® : Technical characteristics.

Principle	Changing the partial oxygen pressure by adjusting the fraction.
Mode of action	Dilution of nitrogen or oxygen in the air
Simulated altitude	From +900 m to +5,500 m
Altitude correlation	PiO2 equivalence
O2 fraction	From 60% to 10.5%
CO2 fraction	From 0.5% to 8%
Mixture production	Customized in accordance with use
Breathing rate	up to 200 l/min
N2, O2 and CO2 supply	Through compressed gas cylinders
Electric power supply	24 V. cc
Electric power consumption	15 W. maximum
Monitoring of PO2	Electrochemical sensor
Monitoring of PCO2	External ergospirometer
Monitoring electronics	By microprocessor
Weight	10 Kg (without the bottles)
Dimensions	h : 55 cm; l : 40 cm; w : 58 cm
Breathing tube	Ultra flexible, 60 cm to 180 cm in length
Breathing mask	Of sterilizable silicone with valves.

AltiTrainer®

The basic model includes:

1 main unit
1 breathing mask
1 tube for inflow of altitude air
1 tube for pressurized nitrogen supply
1 220V/24V cc. electric power supply
1 instruction manual

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