

Create and check divers breathing with
Pressure breathing simulator
OXY ROBOT

compatible with a pressure chamber



APPLICATIONS & INDUSTRIES

- Testing closed- and semi-closed circuit rebreather (CCR, SCR)
- Testing open-circuit SCUBA
- Testing PRE with mouthpiece and full-face mask
- Tests in the pressure chamber
- RPE certification, research and design

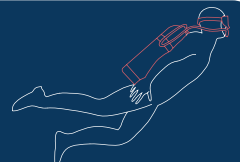
For developers
and manufacturers



For certification
bodies and testing
laboratories



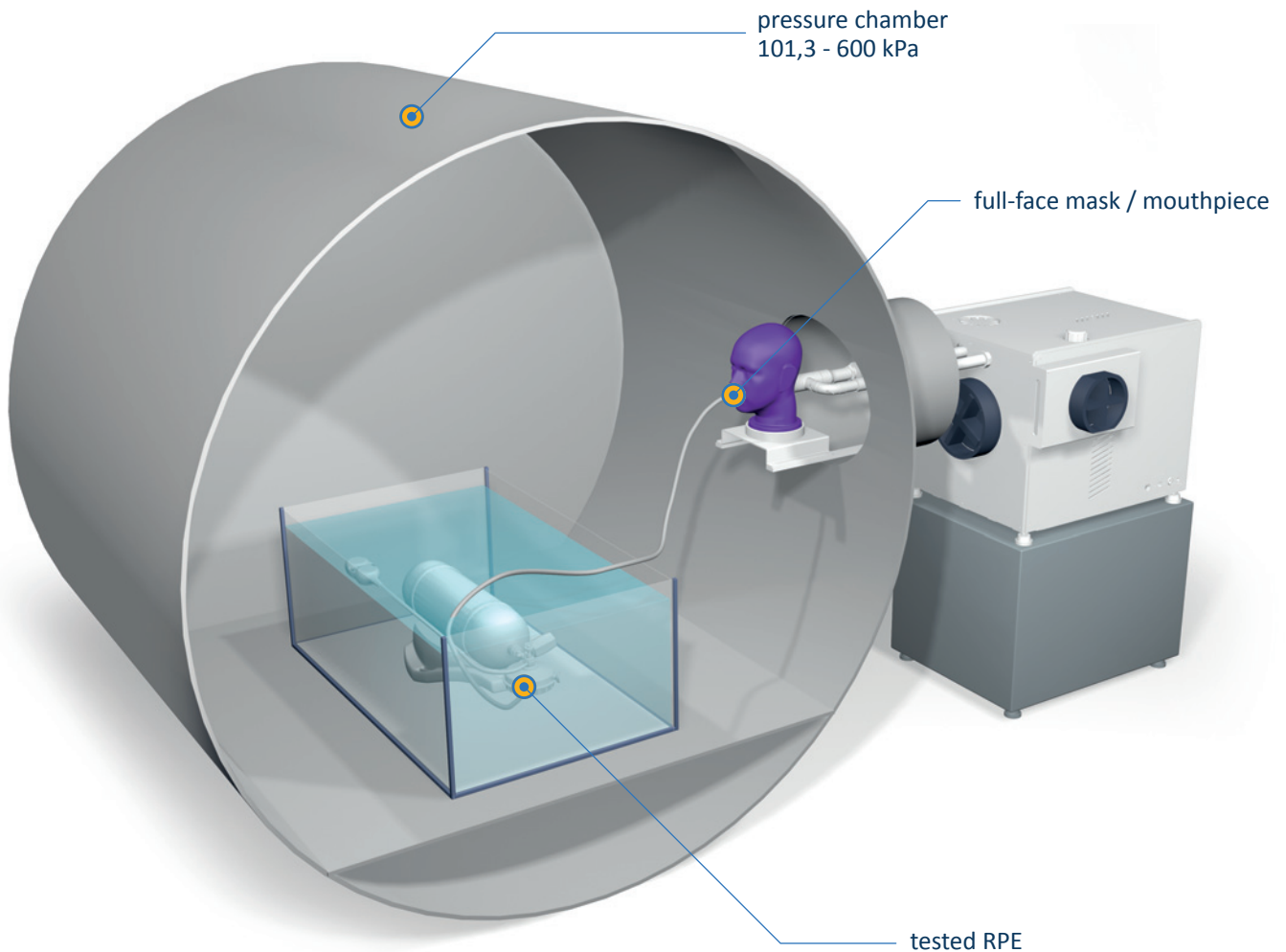
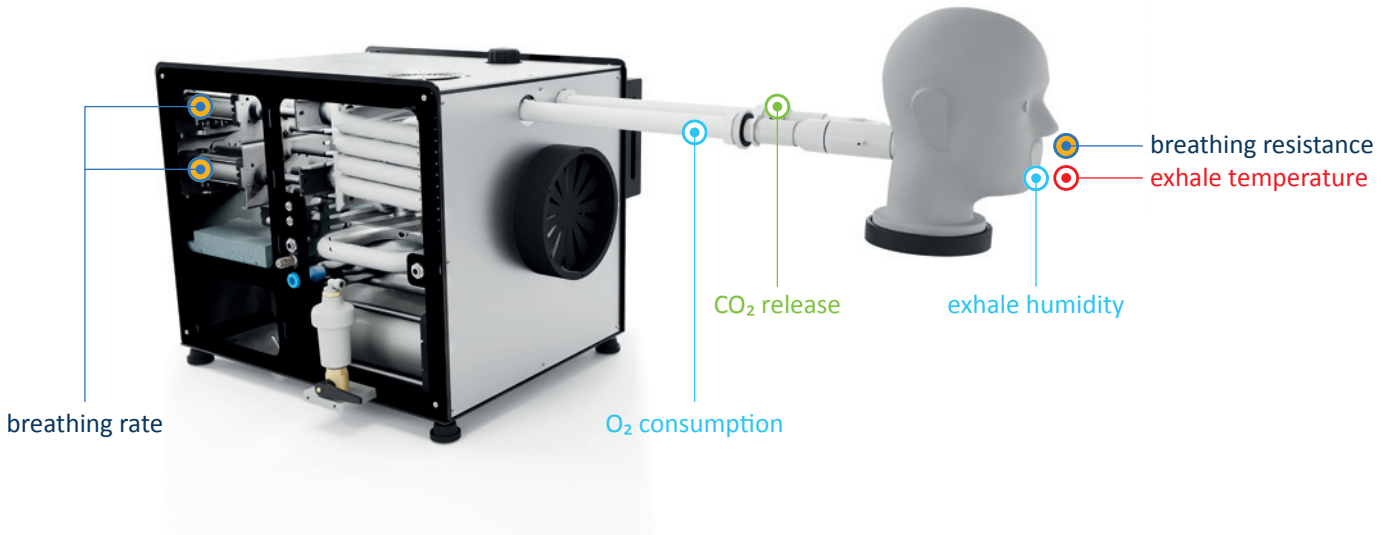
For diving
equipment



DESCRIPTION

Pressure breathing simulator OXY ROBOT belongs to the metabolic simulator of human breathing (artificial lung) type test equipment. It recreates the exchange of breathing gasses and the process of human breathing (inhale and exhale) under conditions of underwater and high atmospheric pressure (up to 6 atm). The test equipment is designed to evaluate the operating duration of a breathing apparatus under varying breathing rates experienced by divers. Additionally, it can replicate prerecorded breathing patterns from real divers undertaking various activities, ensuring a comprehensive analysis of the apparatus's performance.

PRINCIPLE OF OPERATION:



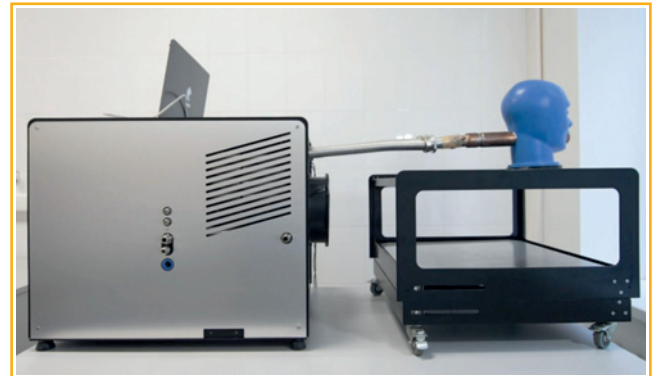
DATA SHEET

SPECIFICATIONS	VALUE	UNIT
Breathing rate	10 to 40	min ⁻¹
Breathing depth	0,5 to 3,0	dm ³
Lung ventilation	5 to 120	dm ³ /min
The ratio of inhalation and exhalation volumes	1:1	
Volumetric concentration of carbon dioxide in exhaled gas breathing mixture**	4,0	% vol
Exhaled gas temperature**	37	°C*
Relative humidity of exhaled gas breathing mixture	96	%
Breathing resistance measurement range	- 6 to 6	kPa
Tightness (pressure drop in 30s at an initial pressure from 500 to 600 kPa)	no more 1	kPa
Time to come to operating mode	no more 15	min
Weight, kg,	no more 100	kg
Power consumption	no more 2,2	kW
Power supply	~230/50	V/Hz

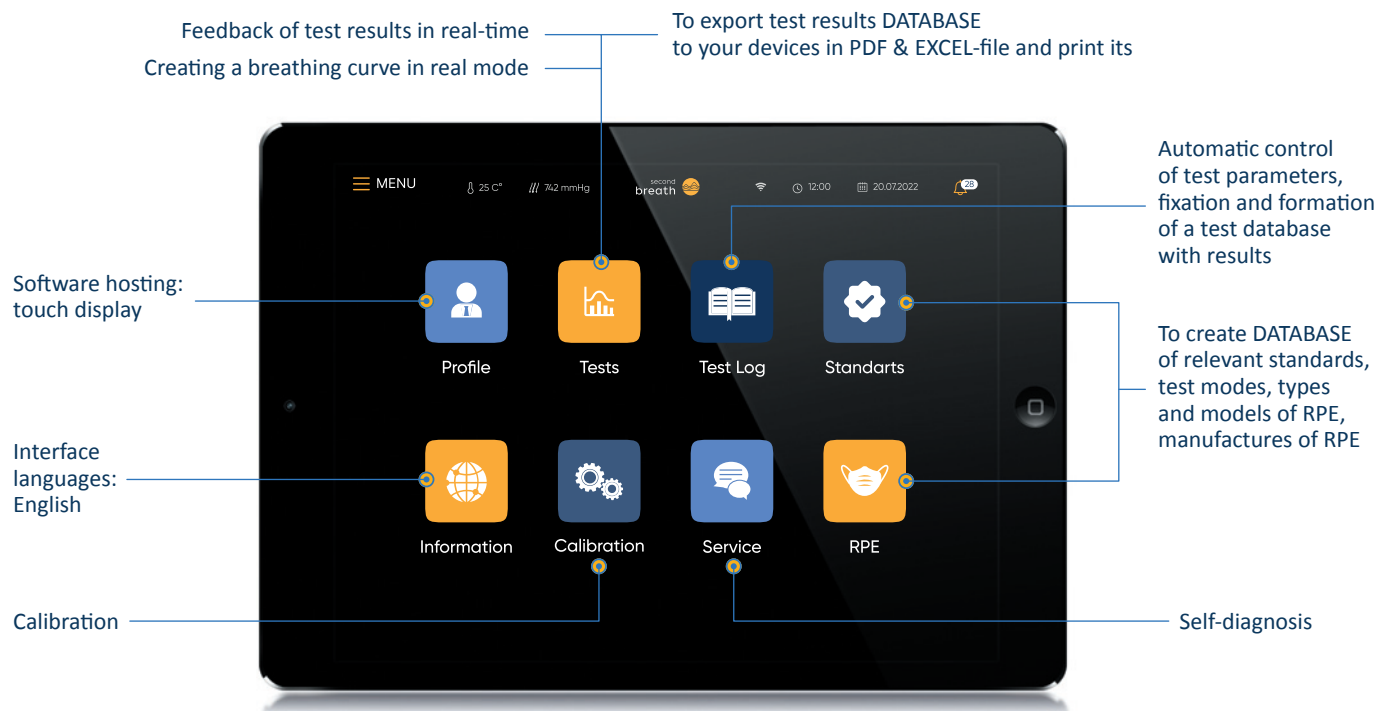
Note: * The temperature in the exhalation line thermostat is taken as the temperature of the exhaled gas breathing mixture

** Parameters can be deleted from general configuration of test equipment to test open circuit apparatus

TERM OF USE	VALUE	UNIT
Breathing gasses	Air, nitrogen-oxygen and other	
Ambient temperature	18 to 25	°C
Atmospheric pressure	630 to 800	mmHg
Pressure chamber	101.3 to 600	kPa
Relative humidity	10 to 80	%



SOFTWARE PLATFORM POSSIBILITIES



DELIVERY COMPONENTS* with test equipment

Name	Q-ty, pcs.
Dummy human head	1
Tablet PC with installed software	1
Trolley	1
Set of hoses and cables	1
Documentation set	1

*The complete set of delivery is given in the instruction manual

RELEVANT STANDARDS*

EN 14143 and others*

*meets one or more standards. If you require testing to a standard not listed, please contact us.

WHY PRESSURE BREATHING SIMULATOR OXY ROBOT

1. Universal platform for research & quality control of RPE

OXY ROBOT Pressure has a wide range of breathing parameters measurement, which is very suitable for various experiments and research tests, for testing according to different industry standards. To do this, you do not need to fully or partially optimize the equipment. You can configure* any setting flexibly and easily in the app.

*within technical possibilities

2. Increases the productivity of the testing process

Thanks to its own unique development of hardware and software, OXY ROBOT Pressure quickly comes to the mode (up to 15 minutes) and changes the test mode (up to 5 minutes), and you can do more tests per day.

3. Saves time for lab staff

The tests do not require the constant presence of the operator. Oxy Robot Pressure software automatically maintains test parameters, records and stores their results, and saves staff time.

4. Intuitive control system

No more manual switching. To control the test equipment, an application is used on a touch-screen display with a simple and convenient interface in English. It is possible to quickly and easily master the control of OXY ROBOT Pressure and involve even a laboratory intern in the work.

5. Ergonomics and mobility

OXY ROBOT Pressure has incredible technical aesthetics, ergonomics, compactness and mobility. The test equipment has the smallest weight and dimensions parameters of all existing analogues. It consists of one single structure, the weight of which is no more than 100 kg. It is placed on a trolley, which is easy to move to different laboratory areas.

SERVICE



Warranty
from 12 months



Service support
for the entire
period of use



Training
of the Customer's staff



**Development
of the equipment**
according to your terms
of reference

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