



TEST BENCH DIOXIDE

For testing
COVID19
masks as part
of the wearing
simulation tests
EN 149 p. 8.3.1



The test bench is designed for testing personal protective equipment in order to determine the carbon dioxide content in the «inhaled» air.

«SECOND BREATH» LLC
second-breath.net
mail@second-breath.net
+7 (999) 621-97-77





SPEED

- ▶ High speed of the required mode entering by all parameters up to 15 minutes.
- ▶ High productivity, break between subsequent tests up to 10 minutes.



TESTING

- ▶ Testing program. Wide variety of testing programs.



MOBILITY

- ▶ Test bench mobility. Low weight and a roller stand make it easy to move the test bench when needed.
- ▶ Unique weight and dimensional parameters. Does not require additional and special room.



AUTOMATION

- ▶ High level of automation. All control is performed using laptop and touch-screen.
- ▶ Recording of all required test parameters in a database for subsequent analysis. Automatic.



COST-EFFECTIVENESS

- ▶ Low cost of ownership combined with affordable service, modular and scheduled replacement of spare parts. The test bench automatically reports its malfunctions and scheduled work, thus downtime is significantly reduced.
- ▶ Autonomous operation doesn't require permanent presence of a person. Saves operator working time.
- ▶ Ease of use of the test bench. Highly qualified personnel are not required.

Volume flow rate of carbon dioxide
▶ from 0 to 6 dm³/min

Respiration frequency
▶ from 1 to 40 min⁻¹

Respiration depth
▶ from 0,5 to 3,5 dm³

Lung ventilation
▶ from 5 to 100 dm³/min

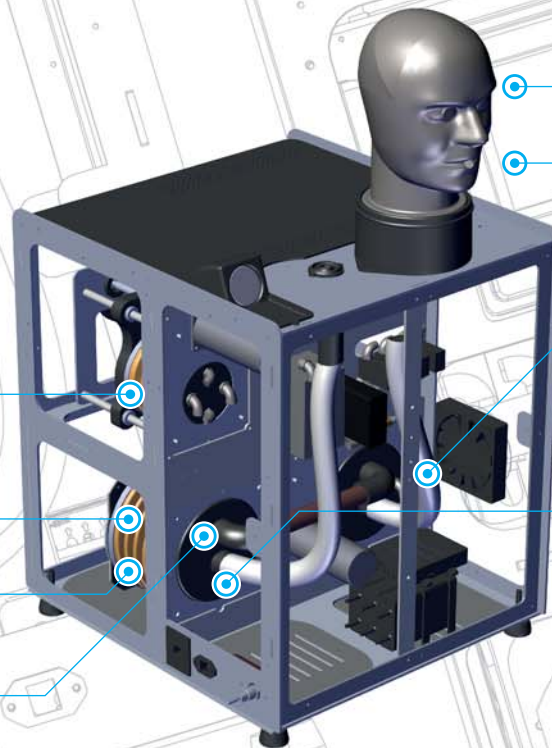
Exhalation temperature
▶ from 36,5 to 37,5 °C

Exhalation relative humidity
▶ from 95% to 100%

Carbon dioxide volume fraction at the exhalation
▶ from 0 to 5%

Duration ratio of the of inspiratory and expiratory phases*
▶ 1:1

* Customizable ratio of the duration of inspiratory/expiratory phases as per customer requirements.



Dimensions

- height: 750 mm
- width: 510 mm
- length: 580 mm

Weight no more than 49 kg

Power supply 220 V 50 Hz

Power consumption no more than 2.5 kW

Test ready time after power on no more than 15 min

Dioxide test bench meets the requirements of the following standards:

ANSI 110-2009, AS/NZS 1716:2012, BS 4667-2:1974, BS 4667-3:1974, BS 8468-2:2006, DIN 58647-7:1997, EN 136:1998, EN 137:2006, EN 138:1994, EN 140:1998, EN 142:2002, EN 145:1997, EN 149:2001+A1:2009, EN 269:1994, EN 402:2003, EN 403:2004, EN 404:2005, EN 405:2001, EN 1061:1996, EN 1146:2005, EN 1827:1999, EN 12491:1998, EN 12492:1998, EN 13274-3:2001, EN 13274-6:2001, EN 13274-8:2002, EN 13794:2002, EN 14143:2003, EN 14593-1:2005, EN 14593-2:2005, EN 14594:2018, ISO 23269-1:2008, ISO 23269-2:2011

FIELDS OF APPLICATION



Research institutes and universities



Developers and manufacturers of the RPE



Certification centers and laboratories