METROLOGICAL TEST BENCH

Multi-Stage Breath Alcohol Simulator

Available exclusively through:

ACS

Alcohol Countermeasure Systems

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acs-corp.com

Designed in Canada by
Alcohol Countermeasure Systems Corp

ISO/IEC 17025

ISO 17034

Warranty

The Metrological Test Bench is warranted to be free from defects in workmanship and material for one year from the date of purchase. Only qualified technicians should perform maintenance on the Metrological Test Bench.

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ALCOHOL COUNTERMEASURE SYSTEMS

Calibration technology designed for efficiency

The Metrological Test Bench replicates the composition, temperature, volume and pressure of human breath needed to verify, calibrate and certify alcohol testing products. It is designed to accommodate a variety of sensors, ethylometers and breath alcohol testing equipment, for both evidential and screening purposes.

Multi-functional and customizable

The Metrological Test Bench generates alcohol reference solutions that are customized depending on test requirements. Each component is measured and mixed inside the system, eliminating user error and ensuring that each simulated breath sample meets strict laboratory requirements.

Wet and dry calibration

Accurate testing, calibration, verification, and certification are essential aspects of maintaining the integrity and quality of all breath alcohol testing instruments. In addition to the wet gas mixture, the Metrological Test Bench is configured to use dry mixtures, maximizing sample options.

Custom breath samples

The multiple component mixture is composed of a combination of air, water, ethanol, and CO2, with the option to add chemical interferents. The system is highly regulated and flexible, allowing laboratory technicians to change parameters to obtain the desired mixture for a complete range of alcohol concentrations.

Controlled temperature zones

Regulated zones inside the Metrological Test Bench ensure that the simulated breath sample is at a temperature comparable to a real human respiratory tract. Temperature is controlled by regulators with adjustable parameters, and is precisely monitored and displayed in the control panel.

Precise monitoring

Specialized PLC and Windows software allow laboratory technicians to carefully monitor the parameters of each test. Data is displayed in graphical and mathematical formats, including regression calculus, standard deviation, results estimation, stability, and calibration coefficient evaluation.

Highly sophisticated

Temperature remains consistent and accurate throughout the process when being transferred from the Metrological Test Bench to the breath alcohol tester by means of the heated breath exit tube. Volume coincides with the maximum volume of the human lung, and pressure is maintained to match the pressure of a human breath sample.

Multiple device calibration

The Metrological Test Bench can be enhanced with a multiplexer for maximum efficiency. It allows up to 4 additional units to be serviced in sequence for high volume verification testing of evidential breath testers.

Accurate and reliable

The Metrological Test Bench meets or exceeds the requirements of metrology labs, ISO 17025 calibration laboratories and performance testing against OIML R 126 1998 and 2012 test protocols.

Concentration
0 to 3,00 mg/L

Breath time
2 to 30 seconds

Uncertainty
Less than 1,25 % (or 5 µg/L)

Display
Integrated electronic interface

Operating temperature
+34 to +35.5 °C

Operating voltage
220 V / 110 V
50 / 60 Hz

Dimensions
136 cm x 56 cm x 80 cm

Additional components
External device for wet calibration of the internal reference