

New Ventilator Validation System Allows Device Manufacturers to Test the Pressure and Volume of Ventilators

System will support the rapid development and testing of hardware for COVID-19 treatment

Goleta, California – March 24, 2020

[BIOPAC Systems, Inc.](#) announced a new **Ventilator Validation System** for researchers, engineers and device manufacturers to use when designing and testing new or existing ventilators for humans. The system allows manufacturers to test and validate the pressure and volume of the ventilator circuit when manufacturing new and existing ventilators for the COVID-19 pandemic. It can be used for new prototype development, existing design for validation for production testing, and mobile field testing and verification.

The [Ventilator Validation System](#) (VVK100-SYS) is a complete solution for validating ventilators for human use. The VVK100-SYS includes a pulmonary airflow transducer, calibration syringe, airway pressure transducer, and a data acquisition system with automated pulmonary function analysis software. Components of the system have been used by thousands of researchers and developers in the world's top universities. Each system can monitor up to eight ventilators at a time.

"Medical device companies, research institutions, medical centers, labs, and prototype developers need a fast way to develop and manufacture ventilators," said BIOPAC CEO Frazer Findlay, "and BIOPAC has produced pulmonary and respiration products for over 30 years. We can help in the fight against COVID-19 by supporting ventilator research and manufacturing with access to quality validation tools, and we can easily provide the resources to meet this urgent need."

Included in the Ventilator Validation System are five important components:

1. The 16-channel [MP160WS/W](#) Data Acquisition and Analysis System for Windows or Macintosh. The MP160 System can monitor pressure and volume in eight ventilators, simultaneously. Multiple systems can operate in concert to increase productivity and maximize efficiency.
2. The [TSD117A](#) Airflow (Pneumotach) Transducer with Amplifier ([DA100C](#)) is designed for human use and can be inserted, in-line, to typical hospital ventilator systems. To aid in interfacing, BIOPAC offers a wide range of tubing, adapters, bacterial filters, valves, and related accessories. Airflow transducer calibration and verification is straightforward. The transducer is also available as an MRI conditional device.
3. The [AFT27](#) 3-liter Calibration Syringe is included for calibration and validation and is certified to meet or exceed an accuracy of 0.5% (3 liters $\pm 0.5\%$).
4. The [TSD160D](#) is a Differential Pressure Transducer and Amplifier ([DA100C](#)) that can interface with any pneumatic circuit to monitor airway pressure. When combined with the TSD117A, it is possible to monitor airflow and airway pressure to provide the user with real-time validation data of pump volume and pump pressure ranges.
5. [AcqKnowledge](#) software controls the hardware, displays the data, and analyzes the signals in real time. The data is also available in real time for further third-party analysis by using the optional [Network Data Transfer](#) feature, providing your systems with immediate network access to the data while the validation process is taking place.

This system supports measurements for ventilator validation: Pressure and Timing; Cough Pressure Release (obstruction valve); Positive End-Expiratory Pressure (PEEP); Pressure; Oxygen Concentration; Air Flow & Volume.

Ventilatory Validation Systems are available immediately. [Contact your local BIOPAC representative](#) for more information.

About BIOPAC Systems

BIOPAC was founded in 1985 and is recognized around the world as a premier choice for life science hardware and software. Worldwide, 99% of the top 100 universities plus Global Fortune 500 companies rely on BIOPAC for their life science research and teaching system needs. BIOPAC makes high-quality scientific tools for physiology measurement and interpretation. BIOPAC solutions range from educational solutions to cutting-edge devices for use in laboratory, real world, and virtual reality research environments. For more information on BIOPAC products, visit www.biopac.com.

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