VELOCICALC® MULTI-FUNCTION VENTILATION METER
MODEL 9565

The VelociCalc® Model 9565 series are portable, handheld, Multi-Function Ventilation Test Instruments featuring a menu-driven user interface for easy operation in your local language. On-screen prompts and step-by-step instructions guide the user through instrument setup, operation, and field calibration. The 9565 also features an ergonomic, overmolded case design with probe holder and a keypad lockout to prevent tampering during unattended use. These instruments are available with or without a differential pressure sensor and are designed to work with a wide range of plug-in probes.
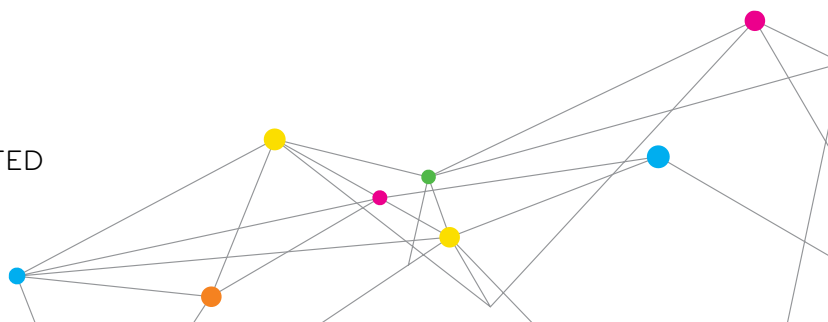
Applications

+ HVAC testing and balancing
+ Cleanroom testing
+ Biological safety cabinet and laboratory fume hood testing
+ HVAC commissioning and troubleshooting
+ IAQ investigations
+ Thermal comfort studies
+ Ventilation evaluations
+ Process air flow testing

Features and Benefits

+ Best-in-class air velocity accuracy
+ Optional smart plug-in probes, including VOC, CO_2, and rotating vane probes
+ Accommodates up to two K-alloy thermocouples
+ Large graphic display
  – Displays up to five measurements simultaneously
  – On-screen messages and instructions
  – Program for local language
+ Intuitive menu structure allows for ease of use and setup
+ Multiple data logging formats
+ Bluetooth communications for transferring data or remote polling
+ Includes TrakPro™ and LogDat2™ downloading software with USB cable

UNDERSTANDING, ACCELERATED

VelociCalc Plug-In Probes

The plug-in probes allow users to make various measurements by simply plugging in a different probe that has the features and functions best suited for a particular application.

Plug-in probes for the VelociCalc series can be ordered at any time and include a data sheet with certificate of traceability. When it's time for servicing, only the probe needs to be returned since all the calibration data is stored within the probe.

Thermoanemometer Air Velocity Probes

TSI offers four models featuring multiple measurements in a compact, robust probe design. These telescopic probes are available in straight or articulating construction, and with or without a relative humidity sensor. Models with a relative humidity sensor can also calculate wet bulb and dewpoint temperature.

Common applications include duct traversing, face velocity testing of chemical fume hoods, biological safety cabinets and HEPA filters. When combined with the 9565, advanced measurement applications can be performed including heat flow, draft rate and turbulence intensity.

Rotating Vane Anemometer Probe

The 4" (100 mm) rotating vane probe measures air velocity and temperature with flow calculation. Measurement applications include face velocity as well as air velocity in turbulent airstreams. An optional telescopic articulating probe and an Aircone kit are also available.

Pitot Probes and Airflow Probe 800187

Pitot probes are used to obtain air velocity and air volume measurements within ductwork by performing a duct traverse. Consult factory for sizes and part numbers.

The Airflow Probe Model 800187 is an 18" (46 cm) straight Pitot probe that can be used to perform duct traverses and are ideally suited for measuring in small diameter ductwork.

LogDat2™ Downloading Software

The VelociCalc Model 9565 Series includes downloading software called LogDat2. LogDat2 software transfers the stored data from the Model 9565 to a computer as a spreadsheet file. This software is useful for applications such as duct traverses, fume hood, and filter face velocity testing.

Data Collection and Reporting

Expanded data logging capacity and the inclusion of TrakPro Data Analysis Software provides the capabilities to work more effectively and efficiently. The 9565 can store up to 38.9 days of data collected at one-minute log intervals. The stored data can be recalled, reviewed on screen, and downloaded for easy reporting. This software is usefule for long term, unattended data logging applications such as IAQ and VOC investigations.

+ Log multiple parameters to investigate trends.
+ Store up to 38.9 days of data collected at one-minute log intervals
+ User-selectable logging intervals and start/stop times
+ Download data to TrakPro data analysis software
+ Report generation
+ Instrument programming
+ Graph creation
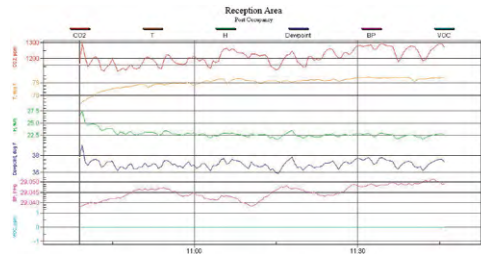
Thermoanemometer Probes · IAQ Probes · Probe Model 792 · Probe Model 794 · VOC Probes · Pitot Probe · Airflow Probe 800187 · Model 995

MODELS 960, 962, 964, 966, 995, 980, 982, 792, 794, 984, 985, 986, AND 987

960 Thermoanemometer Straight Probe Velocity and Temperature

Range	0 to 9,999 ft/min (0 to 50 m/s), 0 to 200°F (-18 to 93°C)
Accuracy	±3% of reading or ±3 ft/min (±0.015 m/s), whichever is greater[4&5], ±0.5°F (±0.3°C)[6]
Resolution	1 ft/min (0.01 m/s), 0.1°F (0.1°C)

962 Thermoanemometer Articulating Probe Velocity and Temperature

Range	0 to 9,999 ft/min (0 to 50 m/s), 0 to 200°F (-18 to 93°C)
Accuracy	±3% of reading or ±3 ft/min (±0.015 m/s), whichever is greater[4&5], ±0.5°F (±0.3°C)[6]
Resolution	1 ft/min (0.01 m/s), 0.1°F (0.1°C)

964 Thermoanemometer Straight Probe Velocity, Temperature and Humidity

Range	0 to 9,999 ft/min (0 to 50 m/s), 14 to 140°F (-10 to 60°C), 5 to 95% RH
Accuracy	±3% of reading or ±3 ft/min (±0.015 m/s), whichever is greater[4&5], ±0.5°F (±0.3°C)[6], ±3% RH[7]
Resolution	1 ft/min (0.01 m/s), 0.1°F (0.1°C), 0.1% RH

966 Thermoanemometer Articulating Probe Velocity, Temperature and Humidity

Range	0 to 9,999 ft/min (0 to 50 m/s), 14 to 140°F (-10 to 60°C), 5 to 95% RH
Accuracy	±3% of reading or ±3 ft/min (±0.015 m/s), whichever is greater[4&5], ±0.5°F (±0.3°C)[6], ±3% RH[7]
Resolution	1 ft/min (0.01 m/s), 0.1°F (0.1°C), 0.1% RH

995 Rotating Vane 4 in. (100 mm) Probe Velocity and Temperature

Range	50 to 6,000 ft/min (0.25 to 30 m/s), 32 to 140°F (0 to 60°C)
Accuracy	±1% of reading ±4 ft/min (±0.02 m/s), ±2.0°F (±1.0°C)
Resolution	1 ft/min (0.01 m/s), 0.1°F (0.1°C)

980 IAQ Probes CO_2, Temperature and Humidity

Range	0 to 5,000 ppm CO_2, 5 to 95% RH, 14 to 140°F (-10 to 60°C)
Accuracy	±3% of reading or ±50 ppm CO_2, whichever is greater[9], ±3% RH[7], ±1.0°F (±0.5°C)[6]
Resolution	1 ppm CO_2, 0.1% RH, 0.1°F (0.1°C)

982 IAQ Probes Model CO, CO_2, Temperature and Humidity

Range	0 to 500 ppm CO, 0 to 5000 ppm CO_2 5 to 95% RH, 14 to 140°F (-10 to 60°C)
Accuracy	±3% of reading or ±3 ppm CO, whichever is greater[8], ±3% of reading or ±50 ppm CO_2, whichever is greater[9], ±3% RH[7], ±1.0°F (±0.5°C)[6]
Resolution	0.1 ppm CO, 1 ppm CO_2, 0.1% RH, 0.1°F (0.1°C)

792 and 794 Thermocouple Probes Temperature

Range	-40 to 1200°F (-40 to 650°C)
Accuracy	±0.1% of reading +2°F (±0.056% of reading +1.1°C)
Resolution	0.1°F (0.1°C)

984 Low Concentration (ppb) VOC and Temperature

Range	10 to 20,000 ppb, 14 to 140°F (-10 to 60°C)
Accuracy	±1.0°F (±0.5°C)[6]
Resolution	10 ppb[10], 0.1°F (0.1°C)

985 High Concentration (ppm) VOC and Temperature

Range	1 to 2,000 ppm, 14 to 140°F (-10 to 60°C)
Accuracy	±1.0°F (±0.5°C)[6]
Resolution	1 ppm[10], 0.1°F (0.1°C)

986 Low Concentration (ppb) VOC, Temperature, CO_2, and Humidity

Range	10 to 20,000 ppb VOC, 0 to 5,000 ppm CO_2, 14 to 140°F (-10 to 60°C), 5 to 95% RH
Accuracy	±3% of reading or 50 ppm CO_2, whichever is greater, ±1.0°F (±0.5°C)[6], ±3% RH[7]
Resolution	10 ppb[10] VOC, 0.1 ppm CO_2, 0.1°F (0.1°C), 0.1% RH

987 High Concentration (ppm) VOC, Temperature, CO_2, and Humidity

Range	1 to 2,000 ppm VOC, 0 to 5,000 ppm CO_2, 14 to 140°F (-10 to 60°C), 5 to 95% RH
Accuracy	±3% of reading or 50 ppm CO_2, whichever is greater, ±1.0°F (±0.5°C)[6], ±3% RH[7]
Resolution	1 ppm[10] VOC, 0.1 ppm CO_2, 0.1°F (0.1°C), 0.1% RH

SPECIFICATIONS

VELOCICALC® MULTI-FUNCTION VENTILATION METER MODEL 9565

MODELS 9565, 9565-A, 9565-P, 9565-X AND OPTIONAL PROBES

Velocity (Pitot or Airflow probe for Meter Models 9565, 9565-A, 9565-P)

Range[1]	250 to 15,500 ft/min (1.27 to 78.7 m/s)
Accuracy[2]	±1.5% at 2,000 ft/min (10.16 m/s)
Resolution	1 ft/min (0.01 m/s)

Duct Size

Dimensions	1 to 500 inches in increments of 0.1 in. (2.5 to 1,270 cm in increments of 0.1 cm)

Volumetric Flow Rate

Range	Actual range is a function of velocity, pressure, duct size, and K factor

Static/Differential Pressure (Meter Models 9565, 9565-A, 9565-P)

Range[3]	-15 to +15 in. H_2O (-28.0 to +28.0 mm Hg, -3,735 to +3,735 Pa)
Accuracy	±1% of reading ±0.005 in. H_2O (±0.01 mm Hg, ±1 Pa)
Resolution	0.001 in. H_2O (0.1 Pa, 0.01 mm Hg)

Barometric Pressure

Range	20.36 to 36.648 in. Hg (517.15 to 930.87 mm Hg)
Accuracy	±2% of reading

Instrument Temperature Range

Operating (Electronics)	40 to 113°F (5 to 45°C)
Storage	-4 to 140°F (-20 to 60°C)

Data Storage Capabilities

Range	26,500+ samples and 100 test IDs

Logging Interval

1 second to 1 hour

Time Constant

User selectable

External Meter Dimensions

3.8 in. x 8.3 in. x 2.1 in. (9.7 cm x 21.1 cm x 5.3 cm)

Meter Weight with Batteries

0.8 lbs. (0.36 kg)

Power Requirements

Four AA-size batteries or AC adapter

[1] Pressure velocity measurements are not recommended below 1,000 ft/min (5 m/s) and are best suited to velocities over 2,000 ft/min (10.00 m/s). Range can vary depending on barometric pressure.

[2] Accuracy is a function of converting pressure to velocity. Conversion accuracy improves when actual pressure values increase.

[3] Overpressure range = 190 in. H_2O, 48 kPa (360 mmHg).

[4] Temperature compensated over an air temperature range of 40 to 150°F (5 to 65°C).

[5] The accuracy statement begins at 30 ft/min through 9,999 ft/min (0.15 m/s through 50 m/s).

[6] Accuracy with instrument case at 77°F (25°C), add uncertainty of 0.05°F/°F (0.03°C/°C) for change in instrument temperature.

[7] Accuracy with probe at 77°F (25°C). Add uncertainty of 0.1% RH/°F (0.2% RH/°C) for change in probe temperature. Includes 1% hysteresis.

[8] At 77°F (25°C). Add uncertainty of ±0.2%/°F (0.36%/°C) for change in temperature.

[9] At calibration temperature. Add uncertainty of ±0.28%/°F (0.5%/°C) for change in temperature.

[10] When response factor is set to 1.00.

Specifications are subject to change without notice.

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TSI Incorporated - Visit our website **www.tsi.com** for more information.