# POSITIVE AND NEGATIVE DUCT ACCREDITATION (PANDA) SYSTEM MODEL PAN200 SERIES

The Positive and Negative Duct Accreditation (PANDA) system provides contractors, commissioning engineers, and research and development technicians with the best in class choice of test equipment to quantify air leakage in ductwork and other areas as well as the ability to measure the performance of ducted systems. The PANDA system provides a fast, accurate, automated solution and helps to ensure compliance with SMACNA, EN12237, EN1507, and EUROVENT 2/2 standards, enhancing energy savings in buildings.



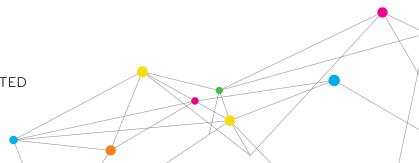
## Pass/Fail Reporting for Standards

- + SMACNA HVAC Air Duct Leakage Test Manual
- + EN12237 Ventilation for Buildings–Ductwork–Strength & Leakage of Circular Sheet Metal Ducts
- + EN1507 Ventilation for Buildings–Sheet Metal Ducts with Rectangular Section–Requirements for Strength and Leakage
- + EUROVENT 2/2 Air Leakage Rate in Sheet Metal Air Distribution Systems

#### **Features and Benefits**

- + Positive and Negative Duct Leakage Testing in one system
- + Find and fix duct leaks to save energy
- + High accuracy gives confidence in measurements
- + High-flow fan for testing large duct sections
- + Pressurizes duct quickly, allowing testing to begin in minutes
- + Includes TSI Model 9565-P and Model 5825 instruments:
  - Automatically calculate leakage rate in real time
  - Simultaneously displays flow leakage rate and static pressure
  - Monitors barometric pressure and temperature to automatically correct to Standard Temperature and Pressure (STP)
  - Simplify report generation and documentation by downloading stored data
  - Works with Model 8934 Portable Printer for field documentation





## **SPECIFICATIONS**

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#### Pressure Measurement (5825)

Range ±15 in. W.G. (±3,735 Pa) Resolution 0.001 in. W.G. (0.1 Pa)

Accuracy 1% of reading  $\pm 0.005$  in. W.G. ( $\pm 1$  Pa) Actual Duct Static Range  $\pm 10$  in. W.G. ( $\pm 2,500$  Pa) at Zero Flow

## Volume Flow Measurement (9565-P)

High leakage range Wilson Radial Flow Grid

21 to 424 cfm (10 to 200 l/s),

36 to 720 m<sup>3</sup>/hr

Low leakage range Conical Inlet Nozzle Adapter

2 to 27.5 cfm (1 to 13 l/s), 3.6 to 46.9 m<sup>3</sup>/hr,

Resolution 0.01 cfm (0.01 l/s), 0.01 m $^3$ /hr Accuracy  $\pm 2.5\%$  of reading or  $\pm 0.02$  cfm

 $(\pm 0.01 \text{ l/s}, \pm 0.04 \text{ m}^3/\text{hr}),$  whichever is greater

## Temperature Measurement (9565-P)

Resolution 0.1°F (0.1°C)

Accuracy  $\pm 0.1\%$  of reading  $\pm 2^{\circ}$ F  $(\pm 0.056\%$  of reading  $\pm 1.1^{\circ}$ C)

#### **Barometric Pressure Measurement (9565-P)**

Range 20.36 to 36.648 in. Hg

(690 to 1,241 hPa), 517.5 to 930.87 mm Hg

Accuracy ±2% of reading

## **Power requirements**

Model PAN221 220 to 240 V, 1 Phase, 50/60 Hz, 10A Model PAN221-110 110 to 120 V, 1 Phase, 50/60 Hz, 16A

## Weight

157 lbs (71 kg)

#### Dimensions (L x W x H)

44.5 in. x 26 in. x 20 in. (1,130 mm x 660 mm x 510 mm)

### PAN221, PAN221-110

Instruments included VelociCalc® Model 9565-P meter,

DP-Calc™ Model 5825 micromanometer. See spec sheets for details on

individual instruments.

Specifications are subject to change without notice.

DP-Calc is a trademark, and VelociCalc, TSI and the TSI logo are registered trademarks of

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Model 9565-P



Model 5825



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