

VELOCICALC®

Rotating Vane Anemometers

Models 8321, 8322 and 8324

TSI's VELOCICALC Rotating Vane Anemometers accurately measure air velocity and temperature, calculate flow rate, perform averaging, and determine minimum and maximum readings. In addition, the Model 8324 provides data logging capability.

Features and Benefits

All Models

- 4-inch diameter rotating vane head provides reliable (weighted average of) velocity readings
- Sweep mode makes it easy to sweep across an area for one overall measurement
- Flow rate feature calculates volumetric flow (when the user inputs the duct shape and size or area)
- NIST* traceable calibration certificate

Model 8321

- Displays temperature and velocity simultaneously
- Vane head swivels 270 degrees so display always faces the operator
- Easy, push button operation

Models 8322 and 8324

- Sampling function records multiple point measurements
- Statistics function displays average, maximum and minimum values, and the number of recorded samples
- Variable time constant modes available for a steady display when measuring fluctuating flows
- Optional 36-inch telescopic probe with an articulated swivel head
- Optional 1.4-inch diameter rotating vane head
- Optional portable printer provides hard copy documentation of your readings

Model 8324 Data Logging Features

- Allows user to log 2,849 samples with a time and date stamp
- Single point and continuous modes to fit your application
- Data can be reviewed on-screen, printed and downloaded to a computer spreadsheet program
- TSI downloading software permits easy data transfer to a computer

Applications

- Heating and cooling coil analysis
- Diffuser and grille measurements
- Fume hood face velocity tests
- Filter face velocity measurements
- Indoor air quality tests



Model 8321

Model 8324

Model 8322

Models 8321, 8322 and 8324 VELOCICALC SPECIFICATIONS

	Models 8322 and 8324	Model 8321
Velocity (100mm head)		
Range:	50 to 6,000 ft/min (0.25 to 30 m/sec)	50 to 6,000 ft/min (0.25 to 30 m/sec); 0.57 to 68 mph (0.9 to 110 km/hr)
Resolution:	1.0 ft/min (0.01 m/sec)	1.0 ft/min (0.001 m/sec or 0.01 mph)
Accuracy:	±1.0% of reading or ±3 ft/min (±0.015 m/sec), whichever is greater	±1.0% of reading or ±5 ft/min (±0.025 m/sec), whichever is greater
Velocity (35mm head)		
Range:	80 to 6,000 ft/min (0.4 to 30 m/sec)	N/A
Resolution:	1.0 ft/min (0.01 m/sec)	N/A
Accuracy:	±1.5% of reading or ±5 ft/min (±0.025 m/sec), whichever is greater	N/A
Temperature		
Range:	32 to 176°F (0 to 80°C)	32 to 140°F (0 to 60°C)
Resolution:	0.1°F (0.1°C)	1°F (1°C)
Accuracy:	±1.0°F (±0.5°C)	±2.0°F (±1.0°C)
Volumetric Flow Rate		
Range:	0 to 2.6 × 10 ⁶ ft ³ /min** (0 to 1.23 × 10 ⁶ l/sec or 0 to 4.36 × 10 ⁶ m ³ /hr)	4 to 5.4 × 10 ⁶ ft ³ /min† (1.9 to 2.5 × 10 ⁶ l/sec or 6.8 to 9.174 × 10 ⁶ m ³ /hr)
Resolution:	0.1 ft ³ /min (0.01 l/sec or 0.01 m ³ /hr)	1.0 ft ³ /min (0.1 l/sec or 0.1 m ³ /hr or 0.001 km.hr)
Averaging:	Up to 255 values each of velocity and temperature	N/A
Data Logging (Model 8324 only)		
Range:	Up to 2,849 samples and 1,000 test IDs	N/A
Intervals:	1, 2, 5, 10, 15, 20, 30, 60 sec; 2, 5, 10, 15, 20, 30, 60 min	N/A
Time Constant:	1, 2, 5, 10, 15, 20 sec intervals	N/A
Operating Temperature		
Electronics:	40 to 113°F (5 to 45°C)	32 to 140°F (0 to 60°C)
Probe:	32 to 176°F (0 to 80°C)	32 to 140°F (0 to 60°C)
Storage Temperature:	-4 to 140°F (-20 to 60°C)	14 to 140°F (-10 to 60°C)
Display:	4-digit LCD, 0.6 in. (15 mm) digit height	4-digit LCD, 0.45 in. (11 mm) digit height, 2.5-digit LCD, 0.15 in. (3.8 mm) high temperature indicator
Power:	4 AA batteries (included) or optional AC adapter	4 AA batteries (included)
Battery Life:	Approximately 24 hr continuous use	Approximately 24 hr continuous use
Dimensions (L × H × D)		
Electronics:	3.9 × 6.6 × 1.5 in. (10 × 16.8 × 3.8 cm)	11.5 × 4.0 × 1.8 in. (29.2 × 10.2 × 4.7 cm) vane head included
Vane Head:	4.0 in. (100 mm) standard head, 1.4 in. (35 mm) optional head	4.0 in. (100 mm)
Weight (with batteries):	1.5 lb (0.68 kg)	13.1 oz (0.37 kg)
Printer Interface:	1200 baud serial interface	N/A

	Velocity	Temperature	Volumetric Flowrate	Sweep Mode	Averaging Capability	Variable Time Constant	Data Logging/ Downloading	Review Data	Printer Output	NIST* Calibration Certificate
8321	●	●	●	●	●					●
8322	●	●	●	●	●	●			●	●
8324	●	●	●	●	●	●	●	●	●	●

Specification are subject to change without notice.

*U.S. National Institute of Standards and Technology

**Actual range is a function of maximum velocity and duct size.

†Actual range is a function of velocity × area input where area input is 0.08 to 900 ft² (0.007 to 83 m²).



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