Parameters and Features Chart

The chart below is a guide for selecting an instrument to best fit your measurement needs.

	Model	Temperature	Humidity, Wet Bulb, Dew Point	CO_2 (Carbon Dioxide)	CO (Carbon Monoxide)	% Outside Air	Air Velocity	Flow Rate	Differential Pressure	Particles	Data Logging/ Downloading	Review Data	Statistics	Field Calibration Adjustment	Optional Plug-In Probes
Q-Trak	7565	•	•	•	•	•	0	0			•	•	•	•	•
IAQ-Calc	7515			•									•	•	
	7525	•	•	•		•					•	•	•	•	
	7535			•							•	•	•	•	
	7545	•	•	•	•	•					•	•	•	•	
DustTrak	8520									•	•	•	•	•	
SidePak	AM510									•	•	•	•	•	
P-Trak	8525									•	•	•	•		
AeroTrak OPC	8220									•	•	•	•		
TH-Calc	7415	•	H, WB											•	
	7425	•	•			•					•	•	•	•	
VelociCheck	9515	•					T								
	9525						T								
VelociCalc	9535	•					T	T			•	•	•	•	
	9535-A	•					T	T			•	•	•	•	
	9545	•	•				T	T			•	•	•	•	
	9545-A	•	•				T	T			•	•	•	•	
VelociCalc	9555	•	•	0	0	0	T, P	T, P, [3]	•		•	•	•	•	•
	9555-A	•	•	0	0	0	T, P	T, P, [3]	•		•	•	•	•	•
VelociCalc Rotating Vane	5725	•					V	•			•	•	•	•	
AccuBalance	8371							D							
	8372	•						D			•	•	•	•	
	8373	•						D			•	•	•	•	
	8375	•	0				P	D, P, [3]	•		•	•	•	•	•
DP-Calc	8710	•	0				P	P, [3]	•		•	•	•	•	•
	5815						P		•					•	
	5825						P	P	•		•	•	•	•	

All instruments include a NIST Calibration certificate at no additional charge

- • = Feature of Instrument
- T = Thermal Anemometer
- P = Pitot Tube Reading
- [3] = Calculated from Differential Pressure
- V = Rotating Vane Anemometer
- WB = Wet Bulb
- H = Humidity
- DP = Dew Point
- O = Optional
- D = Direct Reading

Optional Probes for VelociCalc 9555 Series and Q-Trak 7565

Model	Probe Description
960 -	Air Velocity and Temperature, straight probe
962 -	Air Velocity and Temperature, articulating probe
964 -	Air Velocity, Temperature, and Humidity, straight probe
966 -	Air Velocity, Temperature, and Humidity, articulating probe
995 -	100 mm Rotating Vane probe
968 -	Draft and Comfort probe
972 -	Surface Temperature probe
974 -	Air Temperature probe
980 -	Indoor Air Quality probe
982 -	Indoor Air Quality probe, with CO

TSI is an industry leader in the design and production of precision measurement instruments. With headquarters based in the US, field offices throughout Europe and Asia and product distribution in 30 countries worldwide, TSI has set a global standard in particle measurement. Measurement problems in a variety of environments are solved with research backed by major universities, field testing and forward thinking. By fostering this standard of innovation and development, TSI's over 400 employees turn research into reality.

Contact TSI for a free IAQ and/or HVAC Handbook

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The Leader in Performance Indoor Air Quality Measurements

TRUST. SCIENCE. INNOVATION.

Professional Measurement Solutions that Help You Save Energy, Increase Occupant Comfort and Assure a Healthy Environment

Breathe a Little Easier with TSI

Indoor air quality is a growing concern. With the increasing amount of time we spend indoors—over 90% according to a U.S. Environmental Protection Agency study—the problems associated with tighter building construction in the interest of conserving energy are exacerbated. In response, building owners, facility personnel, industrial hygienists and others are increasingly focused on IAQ for both comfort and health.

Comfort

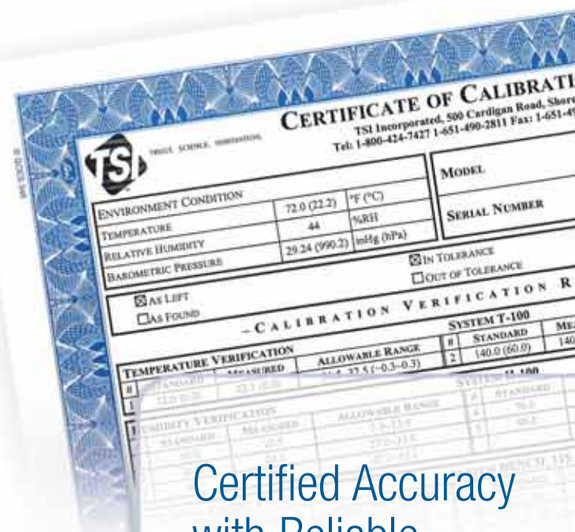
Measures of comfort typically include temperature, humidity, ventilation and draft. TSI offers several instruments that help you quickly and accurately assess basic IAQ parameters. Maintaining comfort levels can significantly improve occupant satisfaction, as shown through increased concentration and productivity, and help reduce absenteeism.

Health Matters

Health and safety concerns are a growing part of air quality assessment. Airborne biological substances, gases, vapors and particles can cause adverse reactions in certain individuals, depending on their sensitivity to particular substances and concentrations. Some of these ever-present unwanted contaminants are potentially toxic, infectious, allergenic, irritating or otherwise harmful. Poor IAQ is listed as a top five health concern by most major associations and agencies worldwide. Recent studies claim that over one-third of the buildings in the United States have air quality problems. Now more than ever, it is increasingly important to be proactive, identify and resolve potential problems before they get out of control. TSI Indoor Air Quality instruments are designed to help you identify and manage these tough problems.

Be Proactive in Assessing Indoor Air Quality

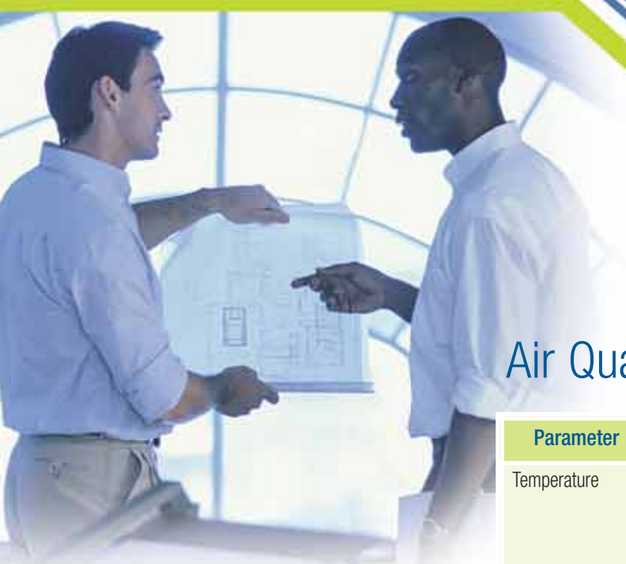
TrakPro™ Data Analysis software or LogDat2™ helps to easily create graphs and reports to document results	Improved performance on critical applications results in reliable information to reduce typical operating costs
Real-time measurement of key IAQ parameters	Seeing results on the spot allows you to make fast decisions on IAQ and necessary changes
Fast turn around calibration and repair service and exceptional customer support	Efficiency: The faster you get your instrument back the greater your effectiveness
Certified Excellence: A Calibration Certificate is included with each instrument	Peace of mind: our promise that each instrument we manufacture meets the highest standard and is guaranteed accurate



Certified Accuracy with Reliable Results

Your TSI calibration certificate ensures that you are reading and obtaining the most accurate and reliable data for a range of indoor air quality needs.

TSI Meets Your Measurement Needs



Air Quality Standards and Guidelines

Indoor air quality affects the comfort, safety and health of building occupants and directly impacts concentration and productivity. Maintaining a comfortable environment includes making measurements and taking corrective action for thermal comfort involving temperature, humidity, draft and ventilation. Providing a healthy and safe environment starts with locating and controlling sources of unwanted contamination from chemicals, biological substances and airborne particles. Be proactive in assessing air quality so that you are prepared for occupant concerns.

Parameter	Limit/Range		Reference	TSI Instrument
Temperature	Summer 73 to 79°F Winter 68 to 74.5°F		ASHRAE Standard 55-1992 ISO 7730	Q-Trak IAQ-Calc VelociCalc TH-Calc
Relative Humidity	30% to 65%		ASHRAE Standard 55-1992 ISO 7730	Q-Trak IAQ-Calc VelociCalc TH-Calc
Air Movement	0.8 ft/s (0.25 m/s)		WHO ISO 7730	VelociCalc DP-Calc AccuBalance
Ventilation (outdoor air)	Recommended volume/ person minimum depending on type of space and activity		ASHRAE Standard 62-2003 (Table 2)	Q-Trak IAQ-Calc TH-Calc
Ventilation (CO_2)	No more than 700 ppm over outdoor ambient		ASHRAE Standard 62-2003	Q-Trak IAQ-Calc
Carbon Monoxide	8 hr. TWA 50 ppm 35 ppm 9 ppm 9 ppm (peak) 25 ppm 9 ppm	1 hr. TWA — — 35 ppm — — 26 ppm	OSHA NIOSH EPA ASHRAE ACGIH WHO	Q-Trak IAQ-Calc

General Comfort

Indoor air quality monitors provide accurate measurement and data logging of temperature, humidity, CO_2 and CO, as well as calculations of dew point, wet bulb and percentage of outside air. More than half of IAQ complaints can be attributed to comfort problems.

Ventilation

Air movement or draft has a significant effect on how people perceive comfort. Too much and people sense that it is “drafty;” too little and it is “stuffy.” To ensure that the proper volumes of air are being supplied to each individual occupied area, measurements should be taken at air diffusers.

Aerosols and Gases

Inhalation of aerosols (particles) or gases can challenge the body’s natural defenses by causing reactions ranging from relatively mild to severe. Respirable substances that need to be monitored include certain industrial processes like welding, grinding and cutting; construction; and other situations where dust, smoke, fumes and mist are produced.

Pressure

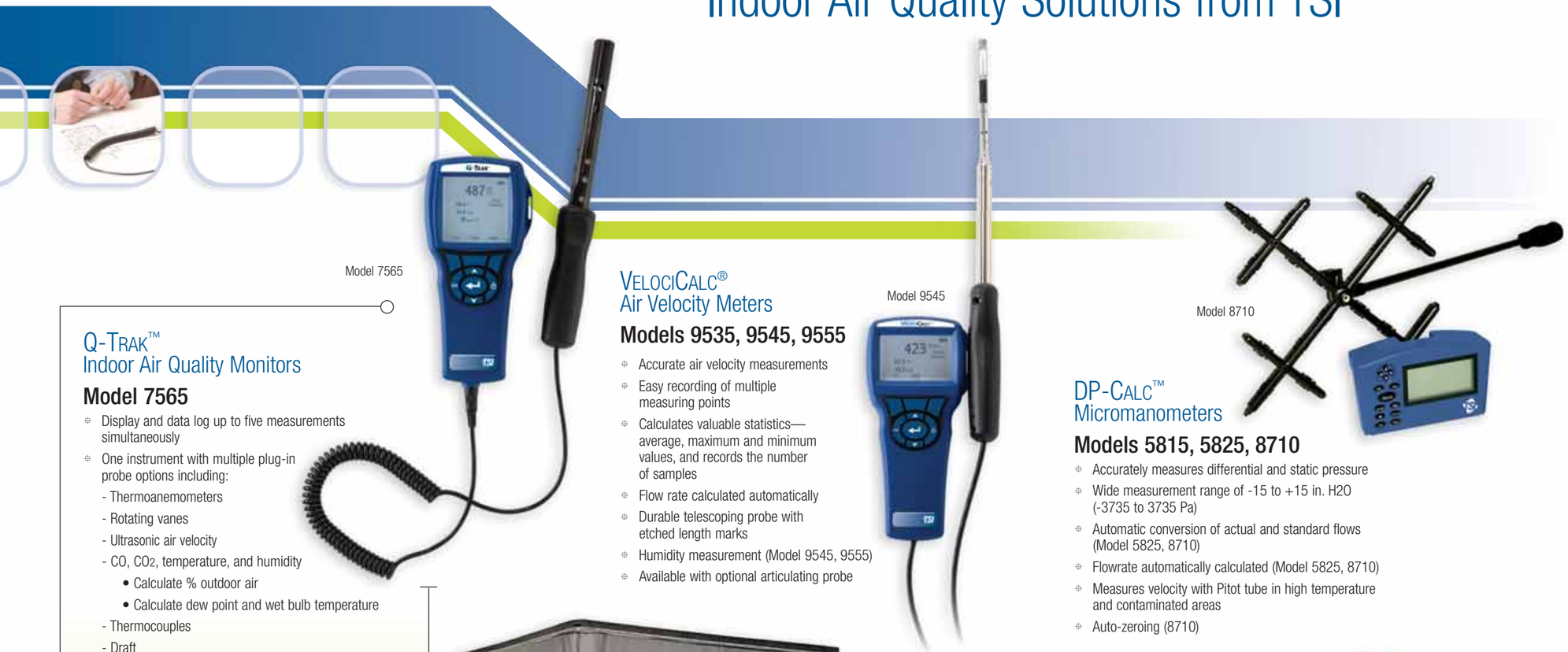
Small airborne particles and gases are transported by air movement and also migrate from areas of relatively high to low pressure. Managing differential pressure between indoors and outdoors, and between different areas of the building by regulating supply and return air volumes is a key method of controlling the migration of unwanted contaminants. This is especially critical in health care facilities where infectious, contagious or toxic substances need to be contained and controlled.

Ultrafine Particles

Unless air is specially filtered, any given air sample contains many airborne particles. Many of these are classified as ultrafine or less than one-tenth of a micron in diameter. A Condensation Particle Counter allows a user to follow pathways of particles directly to their source where they can be controlled by repair, removal or replacement of the source.

We set the standard for Fast, Accurate and Reliable IAQ Test Results

Indoor Air Quality Solutions from TSI



Model 7565

Q-Trak™ Indoor Air Quality Monitors

Model 7565

- Display and data log up to five measurements simultaneously
- One instrument with multiple plug-in probe options including:
  - Thermoanemometers
  - Rotating vanes
  - Ultrasonic air velocity
  - CO, CO_2, temperature, and humidity
    - Calculate % outdoor air
    - Calculate dew point and wet bulb temperature
  - Thermocouples
  - Draft
- Data log and review statistics
- Downloads for analysis and reporting using TrakPro™ software

IAQ-Calc™ Indoor Air Quality Meters

Models 7515, 7525, 7535, 7545

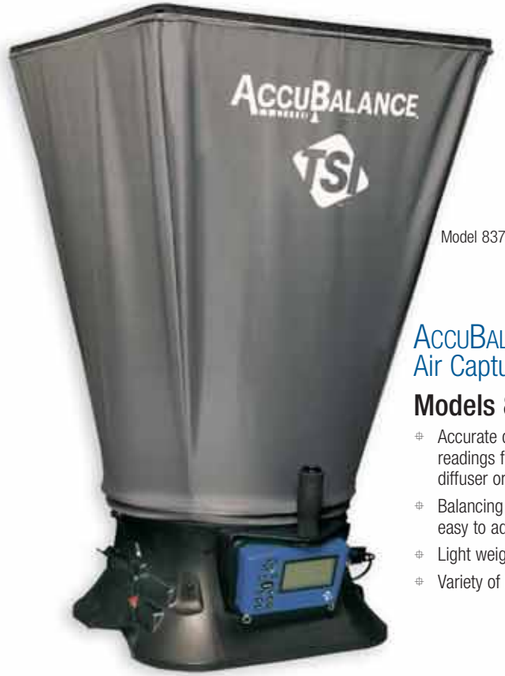
- Fast and accurate CO_2, temperature, humidity and CO readings, based on model
- % outside air calculations
- Statistics including average, maximum and minimum values
- Downloads to spreadsheet or database using LogDat2™ software (Model 7525, 7535, 7545)

VelociCalc® Air Velocity Meters

Model 9545

Models 9535, 9545, 9555

- Accurate air velocity measurements
- Easy recording of multiple measuring points
- Calculates valuable statistics—average, maximum and minimum values, and records the number of samples
- Flow rate calculated automatically
- Durable telescoping probe with etched length marks
- Humidity measurement (Model 9545, 9555)
- Available with optional articulating probe



Model 8375

AccuBalance® Air Capture Hoods

Models 8371, 8375

- Accurate direct air flow readings from a vent, diffuser or grille
- Balancing mode makes it easy to adjust dampers
- Light weight
- Variety of hood sizes available

Model 8710

DP-Calc™ Micromanometers

Models 5815, 5825, 8710

- Accurately measures differential and static pressure
- Wide measurement range of -15 to +15 in. H2O (-3735 to 3735 Pa)
- Automatic conversion of actual and standard flows (Model 5825, 8710)
- Flowrate automatically calculated (Model 5825, 8710)
- Measures velocity with Pitot tube in high temperature and contaminated areas
- Auto-zeroing (8710)

Model 8520

DustTrak™ Aerosol Monitor (Photometer)

Model 8520

- Measures aerosol mass concentrations in real time
- PM10, PM2.5, PM 1.0 and respirable size fractions
- Portable, battery operated
- Long-term unattended sampling
- Data logs and downloads to a PC for analysis and reporting

SidePak™ Personal Aerosol Monitors (Photometer)

Model AM510

- Measure aerosol mass concentrations in real time
- Small, lightweight and quiet
- PM10, PM2.5, PM1.0 and respirable fractions
- Belt mounted for personal sampling
- Battery operated
- Data logs and downloads to a PC for analysis and reporting

Model AM510

P-Trak™ Ultrafine Particle Counters (CPC)

Model 8525

- Counts ultrafine particles less than 1 micron diameter in real time
- Tracks particles to the source
- Portable, battery operated
- Data logs to document results

Model 8525

Model 8220

AeroTrak™ Handheld Opticle Particle Counters (OPC)

Model 8220

- Count and measure size in up to 6 channels from 0.3 to 10 microns
- User selectable and adjustable size channels
- Measure filter efficiency to ensure optimal HVAC performance
- Data logs and downloads to a PC for analysis and reporting