



® Knowledge  
Beyond  
Measure.



# Occupational Health & Safety

Product Guide



# Building Strong Health and Safety Programs Together



As an occupational health & safety professional or an industrial hygienist, you are continuously auditing, documenting, and taking corrective or preventive actions. It's the only way to keep your teams safe and healthy—and to stay in compliance.

A strong safety program depends on good data. Only with correct measurements, can you identify risks, report on them with confidence, and make informed decisions.

## Measuring What's Important

TSI® develops and manufactures accurate and reliable occupational health and safety instruments to measure what's important in your safety program. We understand how important your job is—and what you need to do it well.

That's why we offer a comprehensive range of occupational health and safety, indoor and outdoor environmental, software and service solutions designed to support many facets of your monitoring needs. You can trust us to deliver advanced and reliable solutions that help enhance the health and safety in the workplace and community.

## Offering solutions in:

- Respirator Fit Testing
- Exposure Monitoring for:
  - Aerosols and Dust
  - Heat Stress
  - Noise and Sound
- NEW TSI OmniTrak™ Solution
- TSI Link™ Software
- Air Quality for:
  - Indoor Environments
  - Outdoor Environmental
- Service

Trust TSI® to help you handle your OH&S challenges every day.

# Respirator Fit Testers



## PortaCount™ Respirator Fit Tester Models 8040 & 8048

The PortaCount™ Respirator Fit Tester provides a consistent and objective respirator fit test in less than 2½ minutes. Beyond the fit test, PortaCount™ instruments allow users to see how respirator fit changes in real-time during donning and adjustment, providing valuable training and making mask selection easy.

The PortaCount Respirator Fit Tester Model 8048 can fit test any respirator, including all N95s. The model 8040 provides the same quality fit test for all respirators with ≥99% filter efficiency.

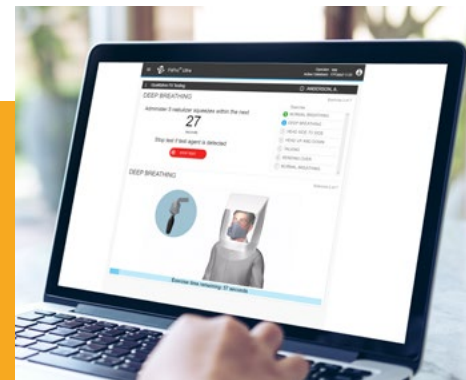
### Applications

- Quantitative respirator fit testing (QNFT)
- Half-facepiece elastomeric respirator fit testing
- Full-facepiece elastomeric respirator fit testing
- Disposable filtering-facepiece respirator fit testing for NIOSH Series -95 / -99 / -100 and EN-P1 / -P2 / -P3 masks (availability dependent on model)
- SCBA fit testing

Although the most accurate fit testing method is with quantitative fit testers (QNFT) using data to calculate the fit factor with PortaCount™ Respirator Fit Tester, we know some respiratory programs still utilize the qualitative fit testing (QLFT) method. If you're not doing quantitative fit testing, let's help ensure you're doing qualitative fit testing consistently and correctly.

### Qualitative Fit Testing Software FPU-QLFT

Now offering a single software solution for both fit test methods with Qualitative Fit Test Software. Providing step-by-step animated guidance on completing a qualitative respirator fit test consistently and correctly.





# Exposure Monitoring

## Aerosol and Dust Monitors

### DustTrak™ II and DustTrak™ DRX Aerosol Monitors

Models 8530 & 8533



The DustTrak™ II and DustTrak™ DRX Aerosol Monitors are battery-operated, data-logging, light-scattering laser photometers that provide real-time mass concentration readings for aerosol contaminants such as dust, smoke, fumes and mist. Instruments use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance.

The DustTrak™ II Aerosol Monitor provides real-time aerosol mass readings, while the DustTrak™ DRX Aerosol Monitor can measure mass concentrations in four size fractions simultaneously. Both instruments also collect gravimetric samples for lab analysis.

#### Applications

- Industrial/occupational hygiene surveys
- Outdoor environmental monitoring
- Engineering control evaluations
- Process monitoring
- Aerosol research studies

## Handheld Aerosol and Dust Monitors

### DustTrak™ II and DustTrak™ DRX Handheld Aerosol Monitors

Models 8532 & 8534



The DustTrak™ II Aerosol Monitor 8532 is a handheld battery-operated, data-logging, single-channel, light-scattering laser photometer that gives you real-time aerosol mass readings. It uses a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance.

The DustTrak™ DRX Aerosol Monitor 8534 uses the same technology as the 8532 while adding multi-channel capabilities that can simultaneously measure both mass and size fraction.

#### Applications

- Industrial/occupational hygiene surveys
- Indoor air quality investigations
- Point source location monitoring
- Baseline trending and screening
- Engineering control evaluations



# Exposure Monitoring

## Personal Aerosol and Dust Monitors

### SidePak™ Personal Aerosol Monitors

Models AM520 & AM520i



SidePak™ AM520 and AM520i Personal Aerosol Monitors measure worker exposure to respirable dust, silica and diesel particulate matter (DPM), including: PM10, PM4 (respirable), PM2.5, PM1, and 0.8µm DPM. Designed to take measurements from the worker-breathing zone, they are the industry's most versatile, lightweight personal aerosol monitors.

The SidePak™ AM520i is IECEx, ATEX, CSA, and IECEx-SIM certified for use in explosive environments.

### Applications

- Respirable silica
- Welding
- Bulk material handling
- Chemical manufacturing and processing
- Mining
- Oil and gas /petrochemical

## Primary Calibrator

Models 4046 & 4146



TSI® offers the Model 4046 and Model 4146 Primary Calibrators used to calibrate the flow rate of air sampling instruments. These portable, battery-operated units are easy to operate and come with +/- 2 % of reading accuracy. Volumetric flow rate is displayed continuously so adjustments to pump flow can be made in real-time.

## Heat Stress Monitors

### QUESTemp° WBGT Heat Stress Monitors

Models 32/34/36 & 44/46

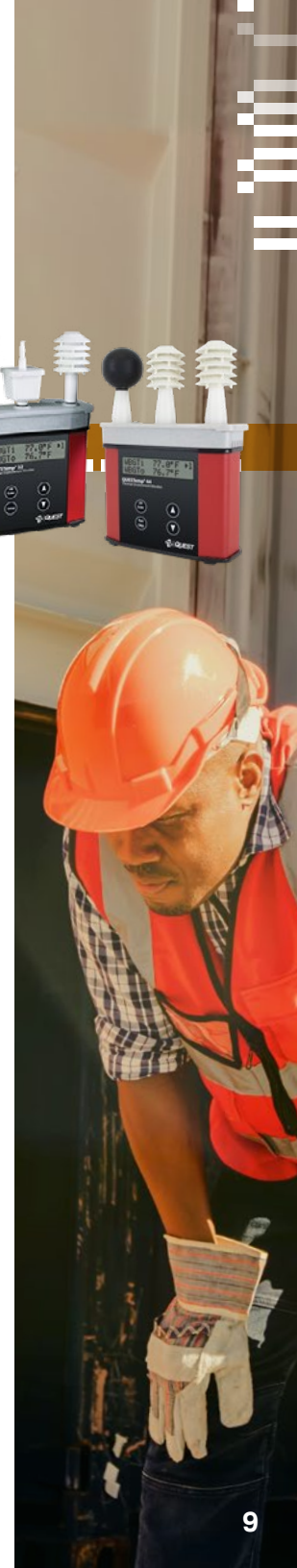


QUESTemp° Heat Stress Monitors are designed to quickly and accurately evaluate potential heat stress environments.

- The QUESTemp° 44/46 models utilize a waterless wet bulb sensor to calculate wet bulb globe temperature (WBGT).
- It eliminates the need for daily wet bulb upkeep.
- The QUESTemp° 32/34/36 models utilize a traditional wet bulb for the calculation of a WBGT index value.

### Applications

- Environmental remediation
- Military and government
- Energy and utilities
- Manufacturing





# Exposure Monitoring



## Sound Level Meters

### Quest™ Sound Examiner and SoundPro™ Sound Level Meters

Models SE-400 & SP-Series

Quest™ Sound Level Meters make it simple to document and analyze sound levels across variable environments.

- Designed with industrial hygienists in mind, Sound Examiner instruments are ideal for managing hearing conservation programs. The IECex and ATEX intrinsically safe certified option is ideal for oil and gas applications.
- SoundPro™ Sound Level Meters add octave band analysis, offering comprehensive sound data information for industrial hygienists, engineers, and audiologists.

## Acoustic Calibrator

### Model AC-300

The AC-300 Acoustic Calibrator with class 1 microphone calibrates all Quest™ Noise Dosimeters and Sound Level Meters. The microphone produces two signals: 250 Hz or 1,000 Hz at a sound pressure level of 114 dB.

## Applications

- Occupational noise evaluations
- Environmental noise assessments
- General sound and frequency analysis
- Noise violations and community noise monitoring
- Automotive design and vehicle noise evaluations

## Noise Monitors

### Quest™ Edge Personal Noise Dosimeters

Models 7 & 8



Quest™ Edge Personal Noise Dosimeters are the perfect blend of flexibility and reliability for measuring and data logging a worker's personal noise exposure. This assists safety professionals with compliance in hearing conservation programs.

They're a powerful and intuitive instrument with countless capabilities that provide accurate data on noise exposure levels. Designed for day-after-day use and tough environments with intuitive detection management software that offers a variety of flexible functionality makes it a powerhouse.

Quest™ Edge 8 Personal Noise Dosimeter (intrinsically safe) - designed to be used in potentially hazardous environments.

## Applications

- Mining (Edge 8 for underground)
- Oil & gas, and energy
- Manufacturing
- Noise consultancy
- Government and military



# TSI OmniTrak™ Solution

## Smart Station and Modules

TSI OmniTrak™ Solution is a customizable, scalable, and affordable solution enabled by connecting innovative monitoring instruments, intelligent TSI Link™ software and service solutions. This platform solution of connected devices allows you to plan, measure, report, recommend, and monitor key business drivers and risks to help improve health, wellbeing, and efficiency.

A modular designed solution allowing for flexibility and connection to future generation modules for additional surveying capabilities. All connected to the OmniTrak™ Smart Station, each individual module can be wirelessly connected for different testing parameters (up to 10 at a time).

### Applications

- Portable/fixed air filter and air purifier verification
- Ventilation effectiveness testing
- IAQ studies in commercial/residential buildings, schools,
- Hospitals, industrial manufacturing, etc.
- Industrial/occupational hygiene surveys and indoor air
- Quality investigations
- Engineering control evaluations



## TSI Link™ Report Creator: Data Analysis Simplified for Better Decision-Making

Easily manage and analyze your air quality data with the TSI Link™ Report Creator. Included with your TSI Link™ subscription, this tool automatically imports, aggregates, formats, and processes your data, seamlessly integrating with Microsoft® Excel®.

This section displays the TSI OmniTrak ecosystem. On the left, there are three blue and black hardware modules: 'PM + VOC-PID', 'VOC-PID', and a larger 'OmniTrak' unit. In the center, a smartphone shows the TSI Link app interface with a large digital display of '622,970' and other air quality metrics. On the right, a laptop screen displays a detailed data analysis report with various graphs and tables. A blue banner at the bottom right contains the text 'Integrates with TSI LINK Solutions'.





# TSI Link™ Solutions

TSI® offers a full air monitoring solution that includes IoT devices such as AirAssure™ IAQ monitors, BlueSky™ outdoor air quality monitor and OmniTrak™ Smart Station in combination with TSI Link™ software.



TSI Link™ is the cloud-based platform that allows you to manage devices and view air quality data from anywhere at any time, while providing quick custom reports and multiple integration opportunities.

Benefits of TSI Link Solutions & API Data Services:

- Remote Device Management
- Customizable Dashboard and Real-Time Alerts
- Seamless Integration with Microsoft® Excel, BMS, and customer own platform
- Simplified reporting and data analysis

## Applications

- Indoor Air Quality monitoring
- Wildfire/External pollutant- Air Monitoring for employee protection
- Help improving energy efficiency
- Assess building filtration and ventilation efficacy
- Construction project monitoring
- Long term data monitoring and research

For more information,  
please visit [tsi.com/tsilink](https://tsi.com/tsilink)

# Air Quality Monitoring

## Continuous IAQ Monitors AirAssure™ Indoor Air Quality Monitors Models 8144-6, 8144-4, 8144-2

The TSI AirAssure™ Indoor Air Quality Monitors available in two, four, and six-gas models are designed to help you optimize your indoor air quality ventilation needs, while helping to achieve a safe and productive space. Utilizing low-cost sensor technology to continuously monitor gas and particulate pollutants along with essential IAQ parameters to help you achieve ideal indoor air quality. The device is able to measure the level of CO, CO<sub>2</sub>, Formaldehyde, tVOCs, SO<sub>2</sub>, O<sub>3</sub>, NO<sub>2</sub>, as well as particulate matter (PM), barometric pressure, temperature and relative humidity.

## Applications

- Schools, colleges & universities
- Childcare & youth programs
- Government agencies and environmental organizations
- Healthcare, hospitals, assisted living campuses, and medical office buildings
- Industrial manufacturing, factories, power generation and petrochemical plants
- Hotels, conference centers, shopping malls, athletic/entertainment arenas
- Researchers and Community Groups looking to collect IAQ data



Integrates with



Solutions



# Air Quality Monitoring



## Environmental Air Quality Monitoring

### BlueSky™ Monitors

Models 8143, 8145

Available in two models to meet your needs, BlueSky™ Environmental Air Quality Monitors are small, lightweight, and affordable. Designed for easy installation, you can operate each monitor individually or as a network of sensors using more than one, accurately reporting real-time, localized air quality measurement data through TSI Link™ Software Solutions.

While specifically designed for outdoor environmental monitoring, BlueSky™ Air Quality Monitors can also be utilized inside buildings, homes and manufacturing facilities to measure indoor air quality.

### Applications

- Air Quality Monitoring for Respiratory Health
- Fence-line/Perimeter Monitoring
- Municipalities & Smart Cities
- Community Monitoring Programs
- Hot Spot Detection
- Indicative Comparisons to Federal Reference Air Quality Data

BlueSky	8143	8145
Particulate Matter (PM 1.0)	■	
Particulate Matter (PM 2.5)	■	■
Particulate Matter (PM 4.0)	■	
Particulate Matter (PM 10)	■	■
Ozone (O <sub>3</sub> )		■
Nitrogen Dioxide (NO <sub>2</sub> )		■
Sulfur Dioxide (SO <sub>2</sub> )		■
Carbon Monoxide (CO)		■
Carbon Dioxide (CO <sub>2</sub> )		■
Barometric Pressure (BP)		■
Temperature	■	■
Relative Humidity (RH)	■	■

Integrates with



Solutions



## Outdoor Environmental Monitors

### DustTrak™ Environmental Monitors

Models 854301-1, 8543, 8540

DustTrak™ Environmental Monitors are air monitoring systems utilizing data-logging, light-scattering laser photometers. Early detection features on the DustTrak™ Environmental Monitor allow for a quick response to exposure concerns. This system is built upon proven technology that thousands of people use every day.

There are a number of model configurations available for the DustTrak Environmental Monitor System.



### Applications

- Outdoor environmental monitoring
- Monitoring for a Community Air Monitoring Plan (CAMP)
- Brownfields/remediation monitoring
- Fenceline construction monitoring



# Air Quality Monitoring



## Gas Monitor Model GM460

TSI's Gas Monitor Model GM460 is a powerful hand-held instrument capable of simultaneously monitoring up to six gases. In addition to the standard four confined space gases which include combustibles, O<sub>2</sub>, CO, and H<sub>2</sub>S, the GM460 has two additional smart channels that accept PID, IR, or super toxic sensors.

### Applications

- Mining Site Monitoring
- Remediation Site Monitoring
- Oil and Gas
- Power Generation
- Chemicals or Refineries
- Other industrial industries

## Multi-Function Ventilation Meters VelociCalc™ 9600 Series Models 9600, 9630, 9650, 9650NB



The VelociCalc™ Multi-Function Ventilation Meter 9600 series includes a built-in workflow for calculating the percentage of outside air used to determine ventilation effectiveness in a building or room.

The VelociCalc™ Pro adds built-in workflows for heat flow calculation and four methodologies for performing a duct traverse. It's ergonomic design includes a probe holder and integrated magnets allowing for attachment to exposed ductwork, chemical fume hoods and biological safety cabinet frames hands-free operation. 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

- Testing, Adjusting, and Balancing (TAB)
- Professionals
- Commissioning Professionals
- Certification Companies
- HVAC Professionals
- Facility Management Teams
- Health & Safety Professionals
- IAQ Consultants



# Air Quality Monitoring

## Indoor Air Quality Monitors Q-Trak™ XP Indoor Air Quality Monitors Model 7585



This product is only available in North America.

Providing a comfortable, safe, and healthy indoor environment is an increasingly important concern. Measure particle mass and gas in a single, handheld instrument.

With the Q-Trak XP Indoor Air Quality Monitor, you can measure:

- Up to 20 IAQ parameters simultaneously
- Up to 6 different types of gases
- PM2.5 and PM10 mass concentrations and particle counts
- Temperature, RH, and BP
- % outside air, dew point and wet bulb temperatures

### Applications

- IAQ surveys and investigations
- Proactive IAQ monitoring (schools and office buildings)
- Indoor air quality compliance testing to local or regional standards and guidelines
- Evaluating thermal comfort (temperature and relative humidity)

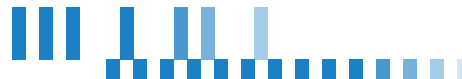
## Ultra Fine Particle Counters P-Trak™ Ultra Fine Particle Counters Model 8525



The P-Trak™ Model 8525 Ultrafine Particle Counter gives direct, real-time measurement of workplace ultrafine particulate levels (smaller than 1  $\mu\text{m}$ ). This portable instrument detects and counts ultrafine particles that often accompany or signal the presence of a pollutant that can be the root cause of IAQ complaints.

### Applications

- Check office equipment
- Off-gassing of chemical cleaning agents
- Vehicle emission migration
- Combustion leaks





## TSI® Service Plans: Focus on what matters and let us take care of your instrument

Protect your investment now and in the future with a TSI® QualityGuard™ Calibration or Bumper-to-Bumper (B2B) Warranty Plan.

### Why Do I Need a TSI® Service Plan?

- **Upfront Fixed Costs.** No need to procure additional funding for annual calibration and repairs.
- **Optimal Performance.** Regular service and calibration is the best way to ensure optimal performance during critical projects.
- **Maximum Peace of Mind.** Regular scheduled services improve process efficiency, minimize waste of time and remove the need of yearly budgeting.
- **Quality.** Our Quality System is registered to ISO 9001:2015, and TSI uses NIST traceable analytical tools and NIST traceable standard reference materials to check out and calibrate instruments.
- **Technical Expertise.** TSI has invested in sophisticated instrumentation to allow our experienced service technicians to test, calibrate and repair our instruments with unparalleled precision.
- **Value.** QualityGuard™ Calibration and B2B Warranty Plans are priced to be an incentive for routine calibration and extended warranty services.

To learn more and find out if your instrument qualifies visit:  
[tsi.com/support/service-and-calibration-agreements](https://tsi.com/support/service-and-calibration-agreements)


## Experts You Can Trust

TSI® expert technicians know how to best take care of your equipment and are trained to test, calibrate, adjust and repair your instruments with unparalleled precision.

While third-party labs can only verify your instrument, TSI® can perform multi-point calibration and adjustment, update software, firmware and repair with original parts – all from certified factory-trained technicians. Whether you are looking for calibration or repair, **TSI® is the one-stop solution for your service needs.**

## At Your Service Worldwide, with Local Support

Enjoy excellent services with reduced turnaround time through TSI regional centers around the globe.

- 
- Shoreview, MN | US
  - High Wycombe | UK
  - Aachen | Germany
  - Beijing | China
  - Singapore | Singapore

**No one knows more about your  
instrument than the manufacturer**





# Operating at a Global and Human Scale

Around the globe, TSI® provides a comprehensive range of solutions with unparalleled reliability and accuracy necessary to accomplish your goals. From workflow management, software services and measurement instruments, our complete suite of solutions are tailored to help you make informed, data-driven decisions to get your job done. Turning data into actionable information enables you to do your job more efficiently. TSI® understands the science, the data, and the processes that support your work.

We are proud to provide you with a wide array of solutions to help you with your Occupational Health & Safety concerns. Our local Sales Representatives are close by, ready to assist you.



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