



® Knowledge
Beyond
Measure.



Occupational Health & Safety

Product Guide



Protecting Workers from Hazards:

Empower Your Health & Safety Programme with Advanced Solutions



As an occupational health & safety professional or an industrial hygienist, your role is pivotal in continuously assessing, documenting, and implementing corrective or preventative actions to help ensure the well-being of your workforce while adhering to compliance standards.

Measuring What's Important

Recognising that a robust safety programme hinges on accurate data, TSI® is proud to offer a suite of precise occupational health and safety solutions. With these instruments and software tools, you can identify and assess risks enabling you to make informed decisions with confidence.

TSI® is trusted to deliver advanced and reliable solutions that help you enhance the health and safety in the workplace and mitigate risks.

Discover Your Solutions for:

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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 HSE INDG 479 and ISO 16975-3:2017 respirator fit test. 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 disposable masks. The model 8040 provides the same quality fit test for all respirators with ≥99% filter efficiency.

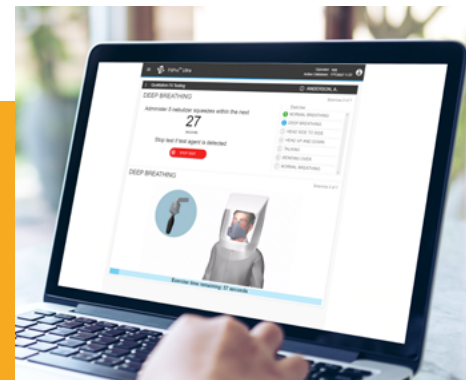
Applications

- 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 FFP1/FFP2/FFP3 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 programmes 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



Dust Monitors Real-time Dust Monitoring MicrodustPro

The Microdust Pro is a real-time hand held, data logging instrument for the detection of airborne dusts, fumes and aerosols. It is a simple to use instrument which gives the user the additional qualitative data which cannot be gained by gravimetric air sampling methods alone. This extremely versatile instrument can also be used with a range of accessories for static and size selective sampling applications. It features a real-time graphical display of dust levels for instant assessments.



Applications

- Risk assessments for dusts and aerosols
- Monitoring dust levels within the workplace
- Industrial process monitoring
- Testing air filtration efficiency



Short-Term Static Monitoring

For Gravimetric & real-time dust data, the Dust Detective from Casella™ is ideal for site operators and managers who need to monitor the dust levels within their site. The unit can be used inside or outside and will work for up to 13 hours. The Dust Detective logs data over time, which can then be downloaded for evaluation and reporting purposes using Casella™ Insight Data Management Software.

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.

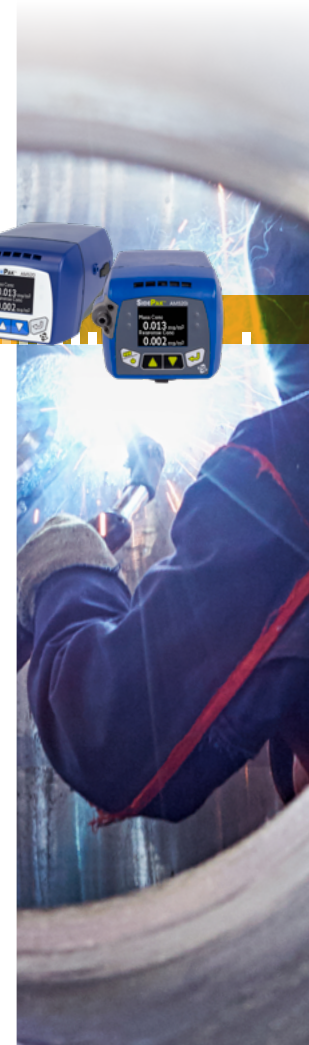
The SidePak™ AM520i is IECEx, ATEX, CSA, and IECEx-SIM certified for use in explosive environments.

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.



Exposure Monitoring



Vibration Monitors Hand-Arm Vibration Meter HAVex



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The hand arm vibration meter from Casella™, HAVex, is a specialized device for measuring hand-arm vibration exposure. It's designed to help assess and monitor vibration levels, to ensure worker safety and compliance with regulations. The HAVex meter has a simple operation and robust accelerometer & cable. It can be supplied as a kit ensuring you have everything you need to begin measuring.

Applications

- Risk assessment
- Hand arm vibration exposure measurements
- Power tool condition and maintenance database



Air Sampling Low, Medium and High Flow Pumps VAPex, Apex2, Vortex3



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Casella's range of air sampling pumps cover a variety of applications, with low flow pumps (VAPex) for sampling of vapors and gasses, to medium flow pumps (Apex2) for dust and airborne containments. Casella's high flow pump, the Vortex3 is ideal for sampling of asbestos and other hazardous materials. All sampling pumps have an IP65 rated design, for use in the harshest of environments and are lightweight with a long battery life. The Vortex3 has a unique interlocking design and is lightweight for carrying multiple units on site with ease.

Flow Rates

- VAPex: flow rate of 20mL - 500mL/min,
- Apex2: flow rate of 800mL - 5,000mL/min
- Vortex3: flow rate of 5 - 12L/min

VAPex and Apex2 models are intrinsically safe

Calibration

Flow Detective™ air flow calibrator, for onsite calibration of air sampling pumps. High accuracy calibration with rugged design and long battery life.



Exposure Monitoring

Heat Stress Monitors

QUESTemp° WGBT 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

Handheld Sound Level Meters

240, 620 & 630 Series

The 240, 620 and 630 series sound level meters from Casella™ offer a range of functionalities for precise noise measurements. The 240 series covers general noise measurements such as fire alarm or vehicle testing, whereas the 620 series is ideal for workplace surveys. Options include octave band analysis and kits to include an acoustic calibrator and software. The 630 series has additional functionality for environmental monitoring such as Ln% parameters and 1/3 octave band analysis. All sound level meters have a simple icon-based operation for quick and easy measurements and a high resolution graphical display for clear results in real-time.

Applications

- Fire Alarm Testing
- Vehicle Testing
- Occupational Noise
- Environmental Noise Assessments
- Industrial / Construction Noise Control
- Unattended Noise Measurements (630 Environmental Kit)

Calibration

The Casella™ CEL-120 calibrator provides accurate calibration for sound level meters and noise dosimeters, ensuring precise noise measurements. It's compact, easy to use, and essential for maintaining instrument accuracy. Available in Class 1 or Class 2 models.



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Noise Dosimeter Personal Noise Dosimeter dBadge2

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The dBadge2 is ideal for a variety of workplace noise assessments and surveys. The dBadge2 from Casella™ measures all workplace noise parameters simultaneously, simplifying noise measurement and preventing errors. The dBadge2 has an IP65 rugged design, with intrinsically safe models available. With optional audio recording and octave band measurement, plus over 55 hours of battery life, the dBadge2 is an ideal tool for measuring exposure of mobile workers. Compatible with the Airwave App for remote monitoring and control, the dBadge2 can be purchased in kits to include multiple units and a calibrator.



3-Way chargers can be used as a download station

Applications

- Occupational Noise Assessment
- Industrial Noise Control
- Complete Shift Exposure Measurements
- Selection of Hearing Protection

Remote Monitoring

Monitor and control the dBadge2 directly from your Android or iOS device without disturbing the wearer. Download from your App store.

Airwave

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 programmes. 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



TSI OmniTrak™ Solution

Smart Station and Modules

**Only available in the US, Canada, United Kingdom, and Ireland*

TSI OmniTrak™ Solution is a customisable, 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



Integrates with



Solutions

TSI Link™ Solutions



TSI Link™ Solutions are designed to harness the power of TSI's precise measurement instruments and make managing, informing, analysing, and guiding your decisions easier than ever.

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

TSI Link™ Solutions Software Remote Device Management, Real-Time Alerts, and a Custom Dashboard

Managing your devices and making informed decisions with TSI Link™ Solutions by remotely managing and viewing your devices status from anywhere. Get notified of any device warnings via in-app, email, or SMS. Designate customized parameters and be notified if your device gathers readings outside of your set limits. User-friendly dashboard enables you to easily communicate with a variety of audiences while visualising real-time readings and over-time trends.

TSI Link™ API Data Services & Integration Accessibility, Connectivity, and Data Analytics

Send data to your own platform or integrating with analytic tools, like Excel, third-party software and BSM, our API Data Services will help you focus on what really matters. TSI Link Data Services allows you to get relevant data, reporting and insights in real-time for easier guidance and better decision-making.

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®.

TSI Link™ IoT Platform

A Flexible Solution for Your Customized Needs



For more information, please visit 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, CO₂, Formaldehyde, tVOCs, SO₂, O₃, NO₂, 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

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 ₃) | | ■ |
| Nitrogen Dioxide (NO ₂) | | ■ |
| Sulfur Dioxide (SO ₂) | | ■ |
| Carbon Monoxide (CO) | | ■ |
| Carbon Dioxide (CO ₂) | | ■ |
| Barometric Pressure (BP) | | ■ |
| Temperature | ■ | ■ |
| Relative Humidity (RH) | ■ | ■ |



Integrates with



Solutions

Air Quality Monitoring



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 μm). 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

Outdoor Environmental Monitors DustTrak™ Environmental Monitors Models 854301-1, 8543, 8540

DustTrak™ Environmental Monitors are approved MCERTS air monitoring systems utilizing datalogging, light-scattering laser photometers. Early detection features on the DustTrak™ 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





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Environmental Monitoring Site and Boundary Monitor Guardian2

The Casella™ Guardian2 Boundary Monitor is designed for continuous environmental monitoring of noise, dust, and vibration. It provides real-time data and alerts to ensure compliance with regulatory limits. Ideal for construction and industrial sites, the Guardian2 helps manage environmental impact and ensures community and worker safety. Reporting of noise, dust, windspeed direction, vibration and volatile organic compounds (VOC)s and powered by AC/DC power supply, solar or battery, the Guardian2 is ideal for any location.

Applications

- Construction boundary monitoring
- Environmental compliance
- Real-time alerts of noise, dust and vibration
- Improved community relations



Data anywhere with casella247.com!

Set up your data and reports as you need to. The cloud-based web platform ensures that users get live updates from their Guardian2. Users can receive alerts via email or SMS and automatic reports.

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





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

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.

To learn more, visit [tsi.com](https://www.tsi.com)

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