

CASELLA

Product Guide



Noise



Dust



Vibration



Environment

www.casellasolutions.com

Working today for a healthier tomorrow.

Casella is dedicated to reducing environmental and occupational health risks by developing equipment and technology for dust, noise and vibration monitoring.

The company has provided precision instrumentation since 1799 and supplied eminent figures, including Charles Darwin, with instrumentation for exploration and scientific work.

Casella's core purpose is to create technology aimed at improving the working environment of employees, while providing robust data and equipment platforms to enable organisations to remain compliant with health and safety regulations.



- 1799 -** Casella established by Cesare Tagliabue
- 1830 -** Charles Darwin is supplied with meteorological instrumentation
- 1861 -** Casella sells the first patented mercury thermometer
- 1961 -** Develops the first personal air sampling pump
- 1983 -** Develops the world's first microprocessor based on sound level meter with CMOS memory
- 1993 -** Launches the world's first hand held, battery powered real time noise analyser
- 2002 -** Launch of the Apex personal sampling pump
- 2006 -** Produces the world's first advanced all-digital, badge style noise dosimeter
- 2008 -** World's smallest colour screen real time noise analyser
- 2009 -** Launches first M1 rated Intrinsically safe pump for mining
- 2012 -** Casella launch the Microdust Pro with the widest dust measurement range in the industry
- 2016 -** Casella release their multi-agent environmental monitor - Guardian2
- 2016 -** Implements Bluetooth technology in the dBadge2 and the Apex2
- 2017 -** Releases the intrinsically safe Apex2
- 2018 -** Launch a universal air sampling pump calibrator with pulsation detection
- 2020 -** Launch the VAPex low flow air sampling pump
- 2021 -** Launch the Vortex3, completing the pump family with this high flow air sampling pump

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Noise Monitoring Products

dBadge2 Personal Noise Dosimeter

The dBadge2 is the ideal tool for a variety of workplace noise assessments and campaigns with the added benefit of Bluetooth® connectivity to remotely monitor your worker and email run data to your laptop.

As well as measuring all noise dose parameters and time history profiles, features include octave band analysis and the recording of audio events. With up to 55 hours of battery life you can be set for multiple full shifts without interruptions.



3-Way chargers can be used as a download station



Intelligent display shows remaining hours of battery




Compatible with
NoiseSafe
page 13.

Key Features:

- Measures all workplace noise parameters simultaneously
- Optional audio recording and real time octave band analysis
- Airwave Mobile App to check noise data remotely
- Motion Sensor
- Multiple 'simulated' dosimeters
- Measurements in accordance with CFR 1910.95, ISO9612:2009, L108 Controlling Noise at Work
- Intrinsically safe versions available
- Complete kits available with single or multiple dBadge2s

Ordering Information:

	Standard	Plus	Pro
H-M-L (C-A)	•	•	•
Programmable Delay Timer	•	•	•
Fixed Run Timer	•	•	•
Pause Function	•	•	•
Bluetooth	•	•	•
Time History	•	•	•
Audio Recording		•	•
Octave Band			•

240 Series Sound Level Meter Instantaneous Noise Monitoring

A simple survey instrument such as the 240 Series Sound Level Meter is ideal for general noise measurements like walk through surveys, spot checks on machinery or testing of fire alarms.

Choose the CEL-240 Sound Level Meter or the CEL-246 Sound Level Meter with averaging and datalogging.

Key Features:

- Simple operation for quick and easy measurements
- Compact rugged design for industrial environments
- Over 35 hours battery life (3 x AA)
- High resolution graphical display for clear results in real time
- USB output to download collected data & generate reports with the Casella Noiseapp
- Meets IEC 61672 Class 2 and ANSI S1.4



CEL-120 Calibrator
Compatible with dBadge2
& SLMs



For Sound Level Meters that offer octave band analysis or recordings over time, see 620 or 630 series overleaf.

For Class 1 and environmental measurements, see 62x and 63x.

620 Series Sound Level Meter

Workplace Noise Monitoring

The 620 Series of Integrating Digital Sound Level Meters can be used for the measurement of all workplace noise parameters to comply with workplace noise legislation, e.g. EU, OSHA and ACGIH. Use the 62x Series to carry out occupational noise assessments or machinery noise tests as well as to assist with the selection of hearing protection.

Choose a 620 Series model to suit your requirements: Either a Class 1 or Class 2 model, with or without real-time Octave Band analysis.

Key Features:

- Simple operation for quick and easy measurements
- Single large measurement range
- Large memory stores multiple measurements
- Pre-defined and user-defined configurations
- Real time Octave Band analysis (B versions)
- Meets IEC 61672 and ANSI S1.4 (Class 1 or 2, model dependent) for full compliance



62xseries	Class 1	Class 2
Broadband	CEL-620A1	CEL-620A2
Octave Band	CEL-620B1	CEL-620B2

630 Series Sound Level Meter

Occupational & Environmental Noise Monitoring

The 630 Series of sound level meters are the most versatile of meters available; ideal for both workplace noise assessment (ISO9612, OSHA CFR 1910.95) and environmental measurement (e.g. BS4142). Ensure compliance with workplace noise legislation and use the 632B to assist in the selection of hearing protection. For environmental noise monitoring, the 633 can be used for boundary noise assessment, noise nuisance complaints or in the construction industry.

Choose a 630 Series model to suit your requirements: Either Class 1 or Class 2 and with or without real time Octave Band Analysis.



Key Features:

- Large single noise measurement range - up to 140dB
- Data marking and audio recording to identify triggered events
- Add voice notes to measurements
- Real time octave and 1/3 octave measurements (B&C models)
- Stores time history of noise levels in 2GB memory Meets IEC 61672 and ANSI S1.4, Class 1 or 2 (depending upon model) for full compliance

63xseries	632 Series	633 Series
Cumulative Results	●	●
Period Results	●	●
Profile Results	●	●
Audio Voice Notes	●	●
Marker Events	●	●
External Events	●	●
Statistical Values	●	●
Level Events		●

Air Sampling Pumps

VAPex Low Flow Personal Air Sampling Pump

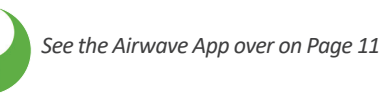
The VAPex is an extremely lightweight low flow personal air sampling pump. The pocket-sized sampling device allows the user to easily carry the pump around the site equipped with a run time of over 34 hours under typical operating conditions.

With a flow rate of 20mL - 500mL/min, it is intrinsically safe and assists occupational hygienists in the measurement of chemical exposure levels such as VOCs or hazardous Vapours and Gases.

Available as Standard and Pro models. Bluetooth is available on the Pro model only.

Key Features:

- Compact and rugged IP65 design
- Wireless Bluetooth® connectivity to any mobile device
- Maximum back pressure of 70cm H₂O
- IECEx and ATEX certified EX ia IIC T4 Ga
- Remote Calibration



VAPex	Standard	Plus
Intrinsically Safe	•	•
Motion Sensor	•	•
Constant Pressure Mode	•	•
Bluetooth & PC Download		•
Run Duration Timer		•
Fully Programmable Timers		•
Logging of Flow and Motion		•

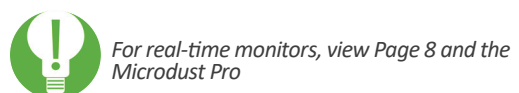
Apex2 Personal Air Sampling Pump

Whatever media you're using you can be assured that the Apex2 personal air sampling pump has the power to handle any sampling regime. The Apex2 has outstanding back pressure capability and with its high performing Li Ion batteries and pulsation value of <10%, you can have true confidence in the integrity of your samples.

Available as Standard, Plus and Pro models. All models are intrinsically safe for use in flammable atmospheres.

Key Features:

- High back pressure and battery life
- Flow range 800mL - 5,000mL/min
- Bluetooth® connectivity to your mobile device
- Slim ergonomic design for wearer comfort, clear & simple menu structure
- Fully compliant with ISO13137 and IP65 rated



Apex2	Standard	Plus	Pro
Intrinsically Safe	•	•	•
Motion Sensor	•	•	•
Bluetooth & PC Download		•	•
Inlet Pressure Sensing		•	•
Run Duration Timer		•	•
Fully Programmable Timers		•	•
Logging of Flow & Motion			•


Flow Detective™ Air Flow Calibrator

The Flow Detective™ is a flow meter designed for calibrating air sampling pumps, and with Casella's Apex2 and VAPex pumps, then automated calibration is possible. With an accuracy of 2%, a rugged design and a simple user interface, it is ideal for calibrations in the field. Compatible with the Airwave App (Plus model), this allows calibration data to be sent via email to your PC to ensure traceability of air sampling data.

This is the first flow meter with pulsation detection, ideal to ensure air flow is stable enough to use with cyclone sampling heads. The Flow Detective allows for remote calibration when used with Casella's VAPex and Apex2 pumps.

Key Features:

- High accuracy (2%) calibration
- Flow range of 20mL/min to 5,000mL/min
- Pulsation detection
- Simple operation and rugged design
- 70 hour battery life
- Send calibration data by email

 Flow Detective	Standard	Plus
Standard or Actual Flow	•	•
Pulsation Detection	•	•
Flow Rate to 5L/min	•	•
Low Flow Calibration		•
Bluetooth		•
Closed Loop Calibration (Apex2 & VAPex)		•



View our YouTube videos for assistance on setting up sampling trains and calibrating our pumps


Vortex3 High Flow Air Sampling Pump

Ideal for area sampling for airborne contaminants including Asbestos and other hazardous materials. The Vortex3 is the latest generation of static, high flow rate sampling pumps, which can now be controlled and monitored from your mobile phone or tablet.

With an adjustable flow rate and impressive back pressure capability, a wide range of filter media choices can be used. At just 2.17kg each, a number of Vortex3 pumps can be carried simultaneously due to the unique interlocking mechanism, making them easier to carry and distribute around a site where multiple flow samples are required.

Key Features:

- Rugged IP65 design
- ABS case design allows for easy decontamination
- Powered by battery or mains

 Vortex3	Standard	Pro
Flow Range 5-12 L/min	•	•
Flow Control +/-5%	•	•
Battery & Mains Powered	•	•
Run Duration Timer	•	•
Bluetooth - Remote Start/Stop		•
Battery Gauge		•
Pressure Indicator		•



The Vortex3 completes our range of air sampling pumps. We can now offer low, medium and high flow air sampling pumps.

Boundary & Environmental Monitoring

Dust Detective

Ideal for site operators and managers who need to monitor the dust levels within their site, inside or out, or at the boundary. The Dust Detective will work off the internal batteries for up to 13 hours. This detective logs the data over time and can be downloaded for evaluation and reporting purposes using Casella Insight Data Management Software.

Key Features:

- Gravimetric & real-time dust data
- Ease of operation
- Operates up to 13 hours
- Samples for TSP, PM10, PM2.5 and respirable fractions
- Individual instruments can be removed and utilised separately
- No external power supply required



For a fixed solution, see the Guardian2 on Page 9.

Individual instruments can be removed and utilised separately.

Real-Time Air Monitoring

Microdust Pro Real-Time Dust Monitor

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.

Key Features:

- Real-time graphical display of dust levels for instant assessments
- Simple icon driven user interface for ease of use
- Extensive range: 0.001mg/m³ to 250g/m³
- Unique removable sampling probe
- Unique on-site calibration insert



See Insight software information over on Page 11

Guardian2 Multi-Agent Monitor

Guardian2 is designed to help you remain compliant with site emission levels, using remote monitoring and reporting of noise, dust, windspeed/direction, vibration and Volatile Organic Compounds (VOC)s.

Powered by mains (100-250VAC), solar or battery, the Guardian2 is ideal for any location.



Key Features:

- Real-time particulate, noise and ground vibration (PPV) and VOC
- Wind parameters to identify dust sources
- Simultaneous PM10, PM2.5 and PM1.0 monitoring
- Email and text alerts to nominated recipients
- Manual or automatic reports
- Web-hosted data with secure, password protected
- IEC 61672 compliant sound level meter
- Wall or pole mounted

Ordering Information:

Guardian2	Particulate	Noise	Vibration	Windspeed & Direction
208049D			•	•
208052D		•	•	
208054D		•		•
205057D		•		
208061D			•	
208063D		•	•	•
208170D	•	•	•	•
208171D	•	•		•
208172D	•		•	•
208173D	•			•
208174D	•	•	•	
208175D	•	•		
208176D	•			
208177D	•		•	

For VOC Sensor Assembly simply add /VOC to the end of the part number above

Solar & Battery Power Parts	Part Number
Solar Controller & Battery Enclosure*	208500D
Single Solar Panel Array	208512D
Dual Solar Panel Array	208511D
Triple Solar Panel Array	208510D
Battery Enclosure	208503B
Mains/Battery Enclosure	208504D
12V Leisure Battery (130Ah)	B162

See website or manual for detail on how to select the correct solar options

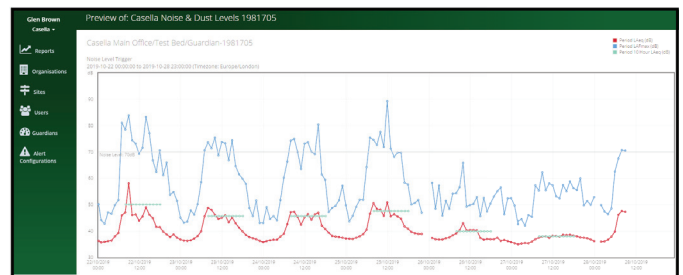
Data Anywhere with
www.casella247.com

Set up your data and reports as you need to!

Casella247.com

The Casella247 web platform based on cloud functionality ensures that the users get live updates from their Guardian2.

Users can select to receive live updates via email, SMS, website or even choose to set up their own FTP site to receive live data.



Visit our YouTube channel for online videos and additional support!

For a portable boundary monitoring unit please see our Dust Detective on Page 8.

Hand Arm Vibration Monitors

HAVex

The HAVex Tri-Axial Hand Arm Vibration Meter is a simple to use meter allowing you to measure the levels of vibration that can be transmitted to the hand from power tools. This enables you to carry out risk assessments or compile a tool database.

Supplied as a kit with everything you need to start monitoring including Vibdata Lite software to review and report your data.

Key Features:

- Simple operation with large colour display
- Robust accelerometer & cable
- Large flash memory
- Easily view, export and report data with the Vibdata Lite software
- Supplied as a kit - everything you need to begin measuring
- ISO 5349:2001 Mechanical Vibration Guidelines for Measurement



For ground vibration, see the Guardian2 on Page 9.

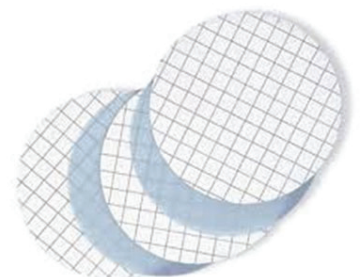


Air Sampling Consumables

Casella carries a broad range of air sampling consumables and accessories for dust, gas and vapour and asbestos sampling.

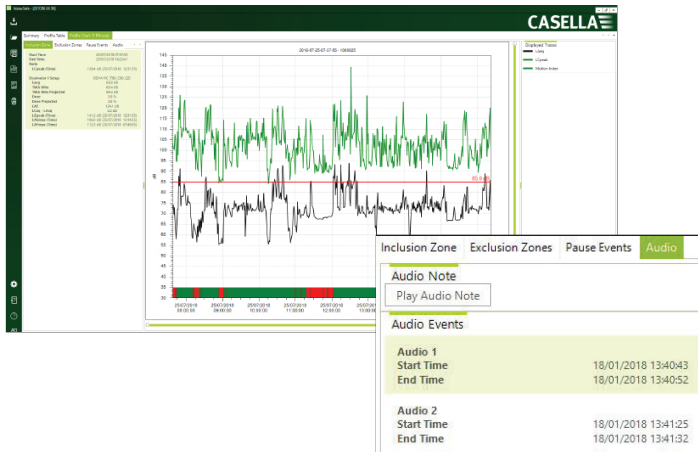
Visit www.airsamplingsolutions.com for the full range and also a comprehensive hazard search to help you identify sampling methods and the accessories that you need.

- Filter media for dust and asbestos sampling
- Sorbent tubes for gases and vapours
- Sampling heads and cassettes
- Field calibrators and a full range of accessories



Software Products

NoiseSafe NoiseSafe Software



Allowing the creation of instantaneous reports on an employee's noise exposure levels from the dBadge2. NoiseSafe downloads a typical eight-hour workplace recording in just a few seconds.

Audio and motion can be analysed to determine if any of the data is erroneous, which can be quickly and easily removed from exposure data.

Key Features:

- Supports Casella's dBadge2
- Downloadable on to any windows operating system
- Quickly and easily analyse and sort measurements
- Free from the Casella website

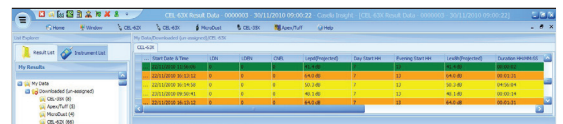
Insight

Casella Insight Data Management Software

Casella Insight data management software is a powerful tool to download, analyse and report data from Casella instruments.

Key Features:

- Store data by person, place or task
- Manage multiple instruments
- Analysis of noise level time histories
- Replay voice notes and event audio
- Generate comprehensive reports



Airwave

Casella Airwave App

Monitor the dBadge2, Apex2 and VAPex direct from your Android or iOS mobile device without disturbing the worker. Email run data alongside photos and notes from your smartphone or tablet to your laptop for easier reporting. When used with the Flow Detective, Apex2 and VAPex pumps can be automatically calibrated.

Key Features:

- Start, stop and pause the run from your mobile device
- Remotely view data
- Email run data
- Colour coded operation
- Simple functionality

Training & e-Learning

Training Courses

Introduction to Noise at Work

This one day course provides managers and safety practitioners with a pragmatic guide to best practice.

- A summary of current legislation
- Noise parameters and terminology
- Practical use of Sound Level Meters and Dosimeters
- Noise exposure calculations
- Interpretation of results
- Ear defender calculation

Introduction to Air Sampling

This comprehensive one day practical training course covers all of the main areas of air sampling and looks at the various recognised methods of dust, gas and vapour sampling.

Ideal for those responsible for workplace health and safety. Suitable for all levels of experience, this course can also act as a refresher course for current practitioners.

- A summary of COSHH legislation
- Routes of exposure and exposure limits
- Air sampling equipment overview
- Recognised methods of dust, gas and vapour sampling
- Practical set up of air sampling pumps for monitoring
- Exposure calculation
- Introduction to control measures

Webinars

Casella run a full schedule of webinar sessions covering a range of product and application training. Simply check our website and sign up to the relevant session. You can always return to previous recordings in your own time.

Technical Support & Calibration

With local service and calibration centers globally, you can always know that we are there for you.

See www.casellasolutions.com for more information.

Check our our latest videos on



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