Gas Detection & Analysis

Gastec Detector Tube System
Portable Gas Detectors
Fixed Gas Monitoring Systems
Service & Support
a1-cbiss have over 20 years experience in the gas detection market. a1-cbiss pride themselves on placing great emphasis on customer service and support, which can only benefit customers.

a1-cbiss know the importance of fast delivery times and have therefore invested in cold storage for the Gastec tubes and large stock holding for other gas detection instrumentation.
The key markets which a1-cbiss supply are:

- **Oil & Gas** Genie Probes, Portable Gas Detectors, Fixed Gas Detectors, Gastec Detector Tubes, Compressed Air Testing Kit
- **Shipping & Marine** Portable Gas Detectors, Fixed Gas Detection Systems, Gastec Detector Tubes, Compressed Air Testing Kit
- **Petrochemical/Chemical** Portable Gas Detectors, Fixed Gas Detection Systems, Survey Monitors, Gastec Detector Tubes
- **Industrial Safety** Portable Gas Detectors, Fixed Gas Detection Systems, Gastec Detector Tubes
- **Pharmaceutical** Fixed Gas Detection Systems, Gastec Detector Tubes
- **Environmental** Portable Gas Detectors, Survey Monitors, Gastec Detector Tubes
- **Water/Wastewater** Portable Gas Detectors, Survey Monitors, Fixed Gas Detection Systems, Gastec Detector Tubes

Other markets we operate in:
- Agriculture
- Laboratories & Universities
- Food & Beverage
- Distribution
- Landfill
- Hazardous Material Storage
- Manufacturing
- Construction
- Printing
GASTEC Detector Tube System

Simple, quick, accurate and cost-effective

a1-cbiss supply the Gastec detector tubes – the most accurate, cost effective yet simple method of gas detection and air sampling, with the capacity to detect over 600 gases, vapours and particulates from acetaldehyde to xylene.

The Gastec detector tube system comprises two major components; the patented precision piston-style pump, which utilises an easy draw, and the Gastec standard detector tubes, which give a precise and easy to read colour change.

Benefits of buying from a1-cbiss:
- Next day delivery
- All packs of standard tubes, same price - £29.95
- Helpful service and support
- The most accurate detector tube system available
- The Gastec tubes give a clear and precise, easy to read colour change
- Easy to use sample pump which requires minimal pump strokes
- Pump adapter to provide convenient, one handed operation

Enhance your Gastec Gas Detection System with the following spares & accessories
- Gastec Handbook
- Dosi-tube Holders
- Tube Tip Breaker
- One Handed Pump Adapter
- Sampling Extension Hose
- Hot Probe
- Pump Maintenance Kit

Standard tubes - £29.95
Next day delivery
Usage:
Gastec Detector Tubes provide quantitative information of concentrations of known target gases within the environment. Gastec Tubes are used as a cost-effective short term or long term detection method worldwide in:

- Determining and measuring concentration peaks
- Measuring personal exposure in the inhalation area
- Detecting leaks in pipelines, gas installations etc
- Air analysis in sewers, shafts and confined spaces

Applications:
- Workplace air
- Emission measurements
- Quality control
- Process control
- Monitoring of compressed air for breathing apparatus
- Environmental and hazardous substance detection applications

Whether you are in occupational hygiene, environmental analysis or COSHH assessment, Gastec has the answer!

Gastec Pyrotec Pyrolyzer
Conventionally, measurements of fluorochlorocarbons (CFC) gases have required expensive equipment and skilled specialists. The Gastec Pyrotec System has made this monitoring easy and economical by combining detector tube technology and a portable pyrolyzer.

Gastec Sampling Pump
The Gastec Sampling Pump offers superior benefits over other tube sampling techniques.

- Easy to use and minimal effort often using single pump strokes
- Complete with a tube tip breaker
- Flow finish indicator to show when pump stroke is complete
- Optional sample counter

Standard Gas Detector Tubes
Short term measurement and low level detection of over 600 different gases and vapours

Dositubes
Long term measurement of gas concentrations for personnel exposure and area monitoring

Polytec Qualitative Tubes
Qualitative Detector tubes for the determination of unknown gases and vapours

Ion Tubes
Low level measurement of contaminants in water

Airtect Kit and Tubes
Air quality testing in breathing air-lines and air-fed machinery
Test Kits

Air Quality Testing for Compressed Air Systems

EN12021 states that a competent person should test the quality of the air supplied for breathing apparatus at least once every three months.

The a1-cbiss Breathing Air Quality Test Kit allows for a convenient ‘on the spot’ indication of compressed air quality.

Breathing Air Test Kit
Measures:
- Oxygen
- CO
- CO2
- Water Vapour
- Oil Mist

Features:
- Lightweight and portable kit in a robust carry case
- Allows simultaneous testing of upstream and downstream air purity
- Compressed air pressures of up to 10 bar g
- Oxygen analyser for constant real time display of oxygen content within the compressed air system

Gastec Kits
a1-cbiss have put together a range of Gastec kits designed to meet a number of air monitoring applications. Each kit contains components for routine gas detection, guidance notes and a selection of application specific Gastec detector tubes.

Starter Kit £325
Smoke Kit £48
COSHH £375
Finding the right gas detector is easy. The hard part is deciding how to solve common gas detection problems. What do you do when your people are exposed to alarm conditions?

What do you do when gas detectors go down and you’re waiting for them to be serviced?

iNet keeps people safe by providing visibility into alarms, exposure and usage. It manages costly and time-consuming maintenance problems before they happen. And you don’t have to buy the gas detectors when you subscribe to iNet.

Instead, you receive Gas Detection as a Service.

1. Operators dock gas detectors
2. Docking Stations perform bump tests, calibrations and record-keeping
3. iNet Control provides visibility into your gas detection program via the Web
4. iNet e-mails real-time alerts and status reports
5. When iNet detects a problem, Industrial Scientific rushes a replacement gas detector to you
a1-cbiss supply high performance, single and multi-gas detectors from MSA and Industrial Scientific.

Gas Detectors Save Lives! Can You Trust Your Gas Detector?

Single Detectors

**MSA ALTAIR** is a reliable single-gas detector with sensor options of H2S, CO or O2 and provides two years or 1080 alarm minutes of service life under warranty with no maintenance.

**MSA ALTAIR PRO** features a broad range of field proven, fast responding sensors. The available 20 sensors are simple to fit reducing instrument down time.

**Industrial Scientific GasBadge® Plus** is a two-year, maintenance-free, single gas monitor ideal for personal protection from unsafe levels of CO, H2S, O2, NO2 or SO2.

**Industrial Scientific GasBadge® Pro** provides a lifetime of gas hazard protection with more features than any other single gas monitor available.

4 Gas Detectors

**MSA Altair 4X**
- 3 year warranty
- LEL, CO, H2S & O2
- 1m water submersible
- 6m drop test

**Industrial Scientific Ventis MX4**
- Draws samples of up to 100 feet with an optional, integrated sampling pump
- 4 gases including O2, CO, H2S, NO2, SO2, CH4
- Available for hire

Tel: 0151 666 8300
www.a1-cbiss.com
Multi-gas Detectors

MSA Altair 5X
- Measures up to 6 gases simultaneously
- A field-proven integral pump provides consistent gas flow without the problems of externally-attached components
- Fitted with a wide range of both toxic and infra-red sensors, providing the flexibility required to meet most applications

Industrial Scientific MX6 iBrid™
- Features a full-colour LCD display screen
- Designed to detect 1 to 6 gases including oxygen, combustible gases and up to four toxic gases
- Available for hire

Area Monitoring

BM25 Transportable Area Monitor
- Monitoring from 1 to 5 gases through diffusion or sample draw
- Designed for team protection or area surveillance
- 17 interchangeable “smart” sensor options
- Runtime greater than 100 hours
- Available for hire

Applications:
- Oil & Gas
- Shipping & Marine
- Petrochemical/Chemical
- Industrial Safety
- Pharmaceutical
- Environmental
- Water/Wastewater
- Agriculture
- Laboratories & Universities
- Food & Beverage
- Distribution
- Landfill
- Hazardous Material Storage
- Manufacturing
- Printing
- Construction
- Utilities
Photoionisation Detectors

MiniRAE 3000
Portable Handheld VOC Monitor
- PID range of 0 to 15,000 ppm
- 3-second response time
- Real-time wireless data transmission with built-in RF modem or Bluetooth
- Field-interchangeable battery pack replaced in seconds without tools
- Integrated RAE Systems correction factors list for more than 200 compounds to measure more chemicals than any other PID

MiniRAE Lite
The most reliable handheld (VOC) monitor on the market
- PID range of 0 to 5,000 ppm
- Ideal for applications ranging from environmental to construction
ppbRAE 3000
Portable Handheld VOC Monitor
- PID range of 1 ppb to 10,000 ppm
- Ideal for applications from HazMat/Homeland Security and Industrial Hygiene to Indoor Air Quality and Military applications

ToxiRAE Pro PID
The world's smallest wireless volatile organic compounds (VOC) monitor
- The ToxiRAE Pro PID provides safety professionals with wireless access to real-time instrument readings and alarm status from any location for better visibility and faster response
- Promptly detects and accurately monitors over 300 VOCs
- 0.1 to 2,000 ppm range, 0.1 ppm resolution and 190 built-in correction factors
- Reliable, rugged, and intrinsically safe
- Continuous datalogging
Odours are major problem in sewers, water treatment works and manholes. Hydrogen Sulphide in particular, attacks concrete and mortar in pipes and chambers causing it to corrode and deteriorate.

The OdaLog is specifically designed for the wastewater industry. Due to the nature of the environment in which the instrument has to operate, it has been designed to be splash resistant, robust, small and able to log data via OdaStat software for extended periods of time making it a unique product of its kind. OdaStat software takes gas data from the OdaLog and in a few simple steps, creates vital information, providing the user with a clear understanding of gas levels and patterns in graphical and tabular form.

The OdaLog is available in 3 options:

Wireless OdaLog RTx Logger

Wireless technology allows the OdaLog RTx logger to be left on site without being removed for data collection. This enables easy global access to H2S data via wireless to web monitoring and OdaStat G software, therefore reducing travel costs.

- Long life lithium battery lasts greater than 12 months, allowing for long term deployment in wastewater treatments and perimeter monitoring applications
- Operates at ranges of 0-200ppm or 0-1000ppm
- Memory capacity stores up to 42000 data points
- Easy to read instruction menu
- Large LCD making it easy to read
L2 OdaLog Logger
Purpose built, robust design with superior features
- ATEX approvals
- Stores up to 42000 data points
- Single button operation & easy to read menu
- Monitoring of H2S, Cl2, NO2, SO2, NO, CO or NH3 at ppm levels

App-Tek OdaLog Low Range H2S Logger
Designed to assist in odour control management
- Accurately monitors H2S at levels of 0.01 to 2ppm
- It is designed to assist in odour management activities at: plant fence-lines, scrubber outlets, landfill sites and residential locations where complaints are frequently reported

OdaStat-G takes gas data from the OdaLog instrument and in a few simple steps creates vital information, providing the user with a clear understanding of gas levels and patterns in graphical and tabular form.
Membrane filters protect against liquid and particulate damage and condition a sample so that it is acceptable to an analyser.

**Applications:**

**Analyser protection against liquids in gas sample conditioning systems**
- On-line and portable analysers
- GC’s, Mass Specs, O2, H2S, Moisture and others

**100 Series** – Removes 100% of entrained liquid and particulate in gas samples, preserving sample integrity. These models only allow gas samples to flow to the analysers, which protects against liquid damage.

**200 Series** – Genie Membrane Separators are suitable for removing suspended liquids in hydrocarbon liquids across a broad range of sample conditioning applications. Housing designs vary in size, shape and flow rate capacity.

**Avengers** – The Avengers are built for coalescing and removal of entrained liquid in sample gas and particle filtration for gas and liquid streams.

**Applications:**
a1-cbiss offer superior probes to provide a representative gas sample in applications where it’s required to extract a sample from the process line or vessel.
- Natural gas pipeline
- Petrochemical
- Oil refining

**GPR Probes** - Genie Insertion Probes and Probe Regulators are simple, safe, and affordable whilst rejecting liquids and particulates at line pressure from natural gas pipeline at pipeline pressure and temperature conditions. Enables probe maintenance without depressurising sample source.
Isocyanate Monitoring

Fixed Isocyanate Monitoring - SPM
“Chemcassette®” is the unique trademarked name for a calibration free toxic gas detection method that uses an optical scanning system to detect the presence of gas by a colour change on the specially chemically impregnated paper tape.

- Fast response monitor specific to target gas only
- Gas sensitivity to ppb levels
- Minimum maintenance and no dynamic calibration
- Customised for harsh industrial environments
- More than 50 gas calibrations available

Portable Isocyanate Monitoring - NextStep
The NextStep’s automated and self-calibrating features make it one of the most reliable, fool proof, user-friendly gas detectors on the market.

- Designed for industrial hygienists in industries producing isocyanates
- The NextStep is a versatile instrument that can be configured to detect a variety of gases, eliminating the need to purchase different instruments to sample different gases
- A fully charged lead calcium gel battery powers the NextStep for 12 continuous hours

Personal Badges
The SafeAir aromatic isocyanates badge may be used for personnel or area monitoring for exposure times ranging from 15 minutes to 24 hours. The SafeAir consists of a direct reading colourimetric badge and a colour comparison chart.

- Easy to use
- Highly sensitive and selective
- Measure TWA exposure
- Ideal for daily employee screening or leak detection due to small size & fast response time
- No calibration or laboratory analysis needed
In many industrial applications, safety is ensured around the clock by a fixed gas detection system. Hazards can have several origins: the release of toxic gases, oxygen deficiency or enrichment as well as the presence of combustible gases and vapours.

With most systems having 4-20mA, digital or relay outputs, a signal can be used to trigger industrial processes if a situation becomes dangerous. For example, starting extractor fans or to turn off supply lines. When detected at an early stage, countermeasures can be initiated to protect personnel, workplaces and equipment.

a1-cbiss offer a range of control panels and detectors from the market’s leading manufacturers.

**Fixed Gas Detection Control Panels**

**The Monicon 4 Channel Gas Monitor**
- Individual voltage free relay contact
- Advanced digital readout
- Low power consumption
- 4-20mA analogue output
- Sealed to IP65 output

**Oldham MX43**
- 4 or 8 lines / 16 to 32 detectors max
- Highly versatile controller
- 4-channel visual graphic display
- LED bars that can be assigned by area or gas
- Data-logging - The MX43 can store up to 512 alarm, fault and system events – 2048 events
- Large graphic and multi-language LCD display, smart keys, response curve display for calibration
- Optional Battery (to provide battery back-up during short power interruptions)
- Multiple input/output channel
- Data download via USB
Fixed Gas Detectors/Transmitters

Oldham OLCT 100

- Designed for industrial applications for the detection of explosive gases, toxic gases and oxygen
- OLC(T) 100 is suitable for detection of all gases in ATEX zones
- State of the art IR sensor with 3-year warranty offers outstanding reliability and long sensor life
- SIL 2 capability
- Available in explosion-proof or intrinsically safe versions
- IP 66
- New XP IR infrared sensor

Monicon S500L-IR

- Full-Scale range: 0 - 100% LEL (0-100% volume CH4 also available)
- 4-20mA analogue output
- Voltage free relay contacts
- RS485 digital interface
- “One Person” calibration
- Dual detectors
- Certified ATEX II 2 G Ex d IIC T6
- Temperature compensation
- Standalone operation

Visit www.a1-cbiss.com for the full Fixed Gas Monitoring Equipment range.
The LumaSense Photoacoustic Gas Monitors are highly accurate, reliable and stable quantitative. Their measurement principle are based on the photoacoustic infrared detection method. This means that they can speciate between almost any field gas that absorbs infrared light at a very low detection limit (PPB range).

a1-cbiss supply them as standalone monitors or as part of a bespoke system.

**Photoacoustic Gas Monitor INNOVA 1412**
- Highly accurate, reliable and stable quantitative field gas monitor
- Selectively measures the concentration of up to 5 component gases and water vapor in any air sample
- Compensates for interference between the measured field gases, using the unique cross-compensation feature
- Detection limit is field gas-dependent but typically in the 10⁻¹⁰ ppm region
- Gases: CO₂, CO, TOC, Water Vapour, SF₆

**Photoacoustic Multi-gas Monitor INNOVA 1314**
- Can measure almost any gas which absorbs infra-red light
- Measures the concentration of up to 5 component gases and water vapor in any air sample
- Detection limit is gas-dependent, but is typically in the ppb region.
- Extremely reliable due to self-testing procedures

**Applications:**
- Research
- Indoor air quality
- Occupational health & safety
- Ventilation analysis
- Hospitals
- Agricultural production
- Exhaust emission monitoring
Bespoke Sampling Systems

a1-cbiss made their name within industry over 22 years ago by adding value to many gas detection instruments and engineering them into sampling systems. We have a 4 man strong design team with another 6 engineers to design and build bespoke systems to the customer requirements.

Many major projects include, The Natural History Museum, Tyco, Selex, Coors Brewery, E2V, Ricardo Engineering, Day International.

It’s what we stand for! Custom Built Intelligent Sampling Systems.

The monitoring systems are suitable for a variety of applications including:

- Air Pollution
- OEM for Analyser Companies
- Confined Spaces
- Car Parks
- Refrigerant Plants
- Breweries
- Tunnels
- Landfill Sites
- Sewage Treatment Works

The next generation of a1-cbiss sequential gas sampling systems provide multipoint, wide area monitoring of up to 32 individual points. Every project is fully supported by a dedicated project manager to provide one point of contact through to completion and thereafter.

CDAS (CBISS Data Acquisition Software) now mcerted, completes the a1-cbiss sampling offering. Software provision extends to site specific, legislative and budgetary requirements.

Gases Analysed:

- CH4
- CO
- CO2
- H2S
- Hexane
- HFC’s
- LEL
- NH3
- NO
- O2
- Propane
The Service Centre

Whether it be single, multi, area or fixed gas detection, a1-cbiss Service Centre offers a full range of gas detection services. The regional service support network consists of fully factory trained engineers and office based customer service advisors which are there to help you and offer advice on any queries that you may have.

The Service Centre offer two forms of service capabilities – Return to Workshop or On-site Service.

- Large, regional service support network
- Fully factory trained industry specialists on hand to provide full service, repair & calibration
- Competitive prices
- Fast turnaround times
- Stock holding of consumables and spare parts
- Dedicated customer service advisors

Return to Workshop

a1-cbiss provides a complete return to workshop solution for portables. Whether your equipment is damaged or simply in need of a service or calibration, we offer competitive rates and 2 levels of response times. All instrumentation is issued with the necessary calibration certificates in order for you to comply with your quality standards.

- 2 types of service package:
  - Standard – 7 day turnaround time*
  - Express – 3 day turnaround time *

* subject to parts availability
On-site Service – We come to you!

Service & calibration is carried out on-site to reduce downtime, saving you money. It removes the complications of shipping instrumentation off-site, eradicating the need for surplus equipment.

- 1-4 scheduled service and calibration visits per year
- Guaranteed response time from 48 hours
- Site allocated service engineer
- Comprehensive stockists of critical spare parts and consumables

Annual Service Contracts

Standard – 5 day response
Premium – 48 hour callout response

We specifically support products from the following manufacturers:
Client Reference List

Maersk Oil
Shell UK
Conoco Philips
BP Chemicals Ltd
Bayer Crop Science UK Ltd
BNFL PLC
BP Shipping
Coors Brewers Ltd
John Smiths
Continental Teves
Costain Oil and Gas Process Ltd
Johnson Matthey PLC
Elster Instruments
Scottish Agricultural College
Glanbia Cheese
The Natural History Museum
GlaxoSmithKline
Hawker Beechcraft
Stena Line
International Mining and Marine
Isotron
King Sturge
Michell Instruments
Huntsman Tioxide
New Britain Oils
Proctor & Gamble
Schlumberger Oilfield UK
Scotts Company (UK) Ltd
Selex Sensors & Airborne
SGS UK
University of Exeter
University of Manchester
University of York
Urenco Capenhurst Ltd
Anglian Water
H & M Environmental
Ineos Manufacturing Ltd
Total UK Ltd
Chubb Fire Scotland
Loughborough University
London Waste
ExxonMobil Chemical Ltd
Rentokil Ltd
Dow Corning Ltd
Ricardo UK
Vale Europe Ltd
Cobra Hydro UK Ltd
BAE Systems
Yara Industrial
Odournet UK
Lucite International UK
Bayer Crop Science
Unilever UK
Innospec Ltd
Odour Services International
Novartis
Thames Water
United Utilities
DSTL
Veolia ERF
Day International
Catalent
Cory Environmental
Testimonials

“We have recently decided to change from drager tube analysis to Gastec. The main drive for the change is the competitive price of the Gastec tubes and the next day delivery as standard. In addition after a trial of the Gastec pump the user found it easier and quicker to use as most of the time the Gastec pump requires only one pull against 10 strokes on the drager pump”.

Sandrine Colle
Team Leader Process Control Laboratory, Vale Europe Ltd

“a1-cbiss have supplied Ricardo UK with both fixed and portable gas detection. The service and support has been good, quickly resolving any product issues that were no cause of their own. Overall I would happily contact them again if and when we have another gas detection requirement”.

Alan Platt
Plant Maintenance Supervisor, Ricardo UK Ltd

Museum application note

The natural history museum’s newest exhibition, the giant squid, called Archie, is 8.62m long and was caught off the coast of the Falkland Islands in March 2004. The final home for Archie is a specially made acrylic tank filled with a 10% solution of formal-saline as a preservative. The tank was constructed in California, by the people who made the tanks for Damien Hirsts’ various artworks of animals in formaldehyde. The tank is 9m and 45cm long and stands on a 1-metre stainless steel stand so that the giant squid can be viewed from any angle. The risk assessment indentified the possibility of potential formaldehyde leakage, anything above 0.3ppm release to atmosphere is considered a risk to health, therefore, low level gas detection was installed as a first point of detection for formaldehyde leakage.

a1-cbiss were chosen to supply the gas detection and sampling system. Due to the size of the area and the low detection levels required, a1-cbiss engineered a solution that included two Innova 1412 Photoacoustic Gas Monitors which detects formaldehyde down to 0.1ppm as well as their own Mark IV Samplers, which samples from over 70 locations across the museum.

a1-cbiss offers design, engineering, manufacturing, project management, installation and commissioning with all major projects keeping quality control all in house to ensure trouble free project completion.

Shipping Vessels application note

To satisfy parts of ‘The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Chemical Agents) Regulations 2010’, a1-cbiss were chosen by Stena Line to supply multi-gas detectors for each of their vessels. The detectors had to monitor for CO, CO₂, LEL, O₂, H₂S & SO₂. It was critical that the gas detectors were easy to use, offered functions for datalogging recording and reporting software and were fully maintained via service, repair and calibration.

Captain Andy Humphreys, Safety and Environmental Manager, Stena Line says

“Since the beginning of the project, we are very happy with the close contact support that we received from the sales and service teams at a1-cbiss, which has ensured that we have bought the most cost effective and suitable solution to meet the legislation and protect our employees. We chose to use a1-cbiss to service the gas detectors every 6 months as we have a very good relationship with the team there and they are always available to give me the expert advice I require”.

MONITORING & CONTROL FOR YOUR ENVIRONMENT
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