

medemTM

Maximizing Safety. Minimizing Risk.

NEW For 2024



We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

British Designed
and manufactured
by Medem



Committed to
improvement



Committed to being the best.

Medem™ is a well established electronic design and manufacturing company supplying the very best control solutions for gas safety and air quality management. Within our company we have all the skills and expertise to design, build and support our products. We have an in-depth knowledge of the technical and mandatory requirements regarding the application of our products.

If you would like a visit to discuss a project - or if you require some advice on the latest standards - please give us a call.

This catalogue gives a brief outline of our products and services. More comprehensive information on the latest legislation, applications, etc. is available on our website at medem.co.uk.

Our production lines include the very latest technology including a Europlacer Ineo Surface mount unit (medem.co.uk/production) to ensure our products are manufactured to last years and are extremely reliable, enabling our industry leading warranties.



Confidence is built-in.

10-Year warranty

When our systems are commissioned by our own engineers, we offer a ten-year warranty on main panels and sender units. At the time of commissioning, we photograph the installation and record the gas pressures as well as any fan details. The panel is marked with a ten-year warranty pass and our 24-hour helpline number is placed with it. We also upload all relevant details and pictures of the site onto our 'in-Feld systems' database. This allows us to access all information immediately in the event of you needing to contact us.



- » All our design skills are within the company – we manufacture in our own factory using the latest production methods.
- » Non-assumptive, true differential gas pressure proving through measuring using micro transducers (patented by Medem™ UK) across both sides of a solenoid valve simultaneously.
- » Gas proving models monitor the operation of connected gas valves and relays ensuring full fail-safe operation (patent applied).
- » The Medem™ brand is the benchmark in our sector for reliability and longevity as demonstrated by ten-year warranty and our solid financial base.
- » We hold ISO 9001 certification for the design and manufacture of electronic control systems for use within commercial and public buildings.
- » As part of our commitment to provide the very best service we operate a 24-hour helpline for end users, installers and maintenance engineers.
- » All proving systems have an LCD read out to make them very easy to use. The LCD displays step-by-step instructions as well as current status and suggestions to resolve any situations concerning inadequate ventilation or gas issues.
- » As an informed manufacturer, we can deliver CPD seminars – complete with points towards mandatory training. We are specialists in mandatory requirements advice, as well as guidance, best practice and interpretation of such.
- » As part of our design and prototyping process our systems are tested independently by a government-approved testing house.
- » We are members of the British Standards Institute, the Chartered Institute of Building Services Engineers, the Institute of Gas Engineers & Managers and Gas Safe.
- » On commissioning of our products, we add each site to our database for use to ensure information is instantly to hand whenever a call is received. This includes not just our system type but also details on any fans, power usage, gas installation and pressures - as well as site images for easier communication.

Professional and on-going training and support.

Helping you to expand your knowledge with Continuing Professional Development (CPD).

As registered members of the Chartered Institute of Building Services Engineers, we conduct CPD seminars including the popular module, 'The Safe Use of Gas in Education Buildings', we hold these seminars at regular intervals across the country and details of upcoming events will be posted on the news page of our website. If you are unable to attend any of our scheduled presentations, please contact us and we'll endeavour to present to you and your colleagues at your office or another suitable location - **'We'll even provide the sandwiches'**.



Book a course

To register on a course please visit:
medem.co.uk/cpd

Information Standards

medem.co.uk/standards

Join our webinars

medem.co.uk/support/webinars

Get our support 24/7

24hr helpline (Supplied on commissioning)
medem.co.uk/support

24-hour helpline

Experts on Medem™ products are on hand, should you need to call us for any reason. Using our database combined with the advanced diagnostics of our control panels, we will guide the caller through a quick series of checks. Whenever possible, we'll resolve the issue there and then. If the problem is external to our system, we'll inform you of the relevant persons/trades required to take care of it.

With Medem™, it's not just confidence built in - it's reassurance too.



Systems that
perform in any
location.



Education

Classroom gas safety and gas proving
Multi-service isolation
CO₂ monitoring
Demand-based ventilation control



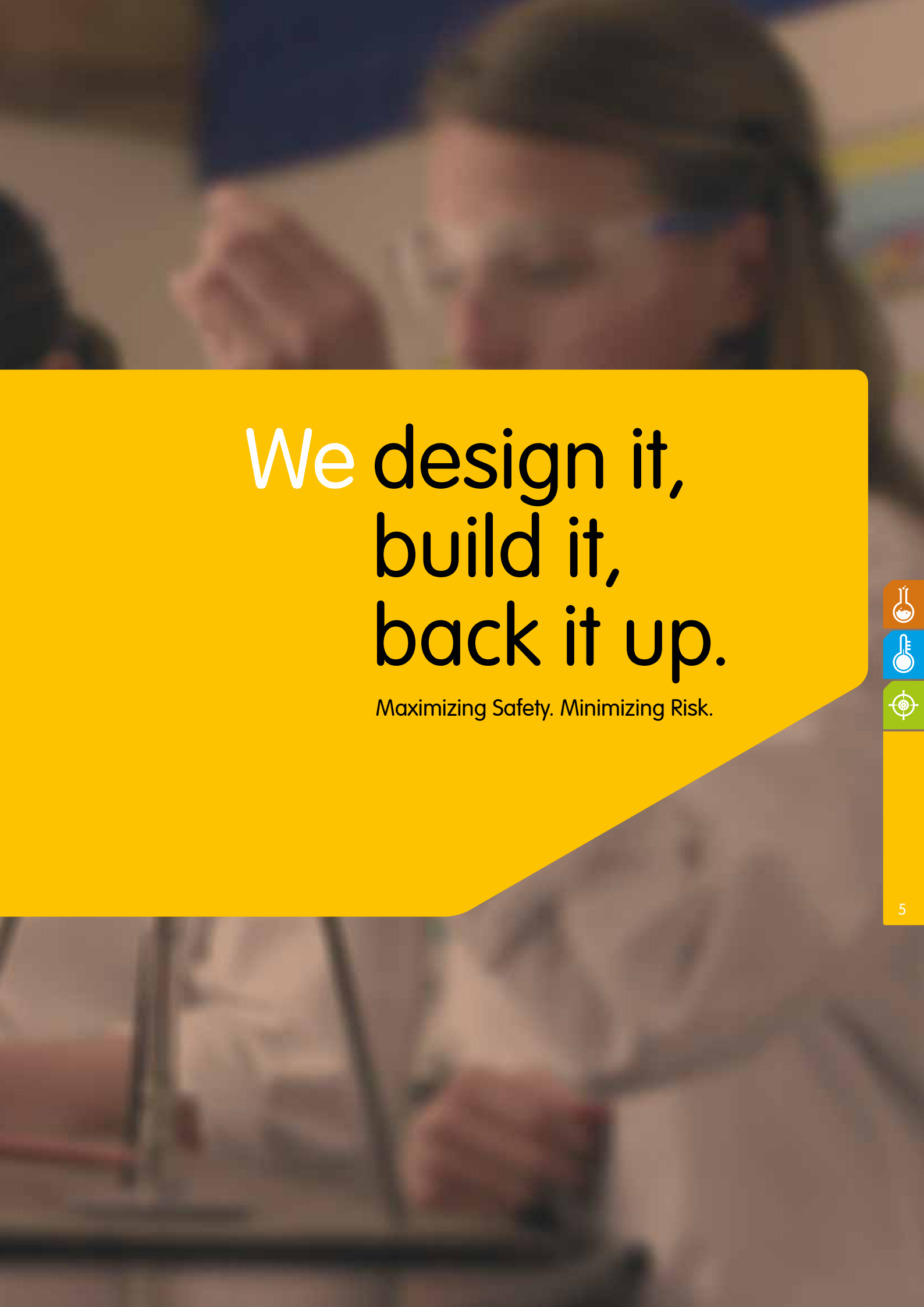
Gas detection

Boiler rooms
Gas proving
Gas detection auto restart
Fire alarm restart
Specialist target gas detection



Commercial kitchens

Ventilation interlock
Gas proving
CO₂ monitoring
Demand-based ventilation control



We design it,
build it,
back it up.

Maximizing Safety. Minimizing Risk.



Intelligent solutions for educational establishments.

Perfect for school laboratories

Medem's education systems are specifically designed for education laboratories and can offer single point control over all the services within the teaching environment. They can also incorporate CO₂ monitoring to enable compliance with the latest legislation.

Each gas pressure proving system employs our patented technology to measure pressure and differential pressure across the solenoid valve, when performing a downstream integrity check. This prevents nuisance tripping of the gas supply that can occur with other methods.

An automatic valve relay test function is an exclusive feature on Medem™ proving systems as is the optional valve check system.

Individual laboratory control

There are three main areas of gas control in education buildings:

- » Boiler room
- » Production kitchen
- » Teaching areas - including laboratories, food technology, resistant material, etc.

Unlike a boiler room or kitchen, students can have access to gas outlets in teaching areas, rather than it being limited to authorised or trained personnel.

Therefore, control of gas is paramount for the safety of the building and its occupants. It's important that each teaching area is designed as an individual unit with separate gas safety controls for each one - and this includes preparation rooms.

When looking at designing or implementing gas safety control measures for a classroom, consideration should be given to the user, equipment/appliances installed and the potential for risk.

You can find out more on our website: medem.co.uk/labcontrol



Building Bulletin 80 Science Accommodation in Secondary Schools

The BB80 document offers guidance relating to the new design and refurbishment of science accommodation:

"SERVICES - All services should have a master control panel, which should be located near the main teaching (demonstration position). This allows the teacher to control access to services as required and also to shut-off any or all in the event of an accident."

Read more on our website:
medem.co.uk/bb80



Building Bulletin 101 Ventilation of School Buildings

Regulations, standards and guidance for ventilation air quality within for school buildings. It replaces Building Bulletin 101, "Ventilation of School Buildings", 2006.

This document provides information for ventilation levels within teaching classrooms. Information is provided for the use of Carbon Dioxide detectors to monitor for these levels including when gas is being used for teaching.

Read more on our website:
medem.co.uk/bb101

Education

Intelligent solutions for educational establishments

Not just for school laboratories.

We manufacture systems for all areas of gas safety within education buildings, please see Gas Detection and the Commercial Kitchen sections for additional information.

Medem™ gas safety systems are ideal for use in commercial and university laboratories where gas type and usage can provide issues relating to gas safety and control.

Medem™ gas proving systems can monitor for natural gas at standard low operating pressures but also at mid and high pressure up to 10bar.

These can be used for specialist gas lines such as oxygen (degassed), Argon, nitrogen, CO₂ and many more.

Please don't hesitate to contact us for more information on our high pressure gas proving and detection solutions.

We can also gas prove up to four different gases on a single panel using our new SEC-elite system.



We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.



- » Multi-gas line gas pressure proving
- » Gas detection (1-16 detectors)
- » Electrical and water isolation
- » CO₂ based ventilation control
- » Fan interlocking
- » Fire test isolation mode
- » Over pressure and low pressure monitoring
- » Event log

SEC-elite v1 features

- » Fully programmable
- » High pressure proving
- » Suitable for oxygen proving
- » Fail-safe valve relay monitoring
- » Auto-stop timer laboratory
- » Engineer functions
- » Multiple BMS relay outputs
- » Hidden until required buttons and features

Multi-Gas proving

Using the patented differential pressure proving method, the SEC-elite can pressure prove up to four individual gas lines in a room from a single panel.

It can pressure prove a variety of gas delivery lines including natural/LPG and oxygen up to 10bar when supplied with the appropriate pressure sender unit.

Low and high incoming pressure issues are monitored and reported on the LCD display.

Gas detection

Multiple gas detectors (up to a maximum of sixteen) can be monitored, including CO₂ natural and LPG gases, carbon monoxide as well as oxygen depletion. Isolation of gas will occur upon detection of the target gases at prescribed levels.

Demand controlled ventilation

The SEC-elite can monitor the carbon dioxide level and temperature to control area ventilation in the laboratory. Where the CO₂ level rises above prescribed limits, the system can isolate a gas supply.

The limit is variable to accommodate current legislation and guidance.

SEC-elite v1





- » Gas pressure proving
- » Gas detection (1-16 detectors)
- » CO₂ based ventilation control
- » Electrical and water isolation
- » Fan interlocking
- » Over pressure and low pressure monitoring
- » Event Log

SEC-L v5 features

- » Auto-stop timer laboratory
- » High pressure options (up to 10bar)
- » Engineer functions
- » Multiple BMS relay outputs
- » Fail-safe valve relay monitoring
- » Fire test isolation mode

Gas proving

Using the patented differential pressure proving method, the SEC-L v5 can pressure prove a variety of gas delivery lines including oxygen up to 10bar when supplied with the appropriate presser sender unit.

Low and high incoming pressure issues are monitored and reported on the LCD display.

Gas detection

The SEC-L v5 has been designed to accept multiple gas detectors, including CO₂ natural and LPG gases, carbon monoxide as well as oxygen depletion and enrichment. Isolation of gas will occur upon detection of the target gases at prescribed levels.

Demand controlled ventilation

The SEC-L v5 can monitor the carbon dioxide level and temperature to control area ventilation in the laboratory. When CO₂ detectors are installed, the monitored level can be used to control the ventilation rate. Where the CO₂ level rises above prescribed limits, the system can isolate a gas supply.

The limit is variable to accommodate current legislation and guidance. See BB101 for more information.

SEC-L v5



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- » Gas pressure proving
- » Gas detection (1-16 detectors)
- » Over pressure and low pressure monitoring
- » Event log

- » High pressure options (up to 10bar)
- » Auto-stop timer
- » Fail-safe valve relay monitoring
- » Engineer functions
- » Warranty

GPPS-evo v4 features

Gas proving

Using the patented differential pressure proving method, the GPPS-evo v4 can test natural/LPG gas pipe work. It can also pressure prove a variety of gas delivery lines including oxygen up to 10bar when supplied with the appropriate sender unit.

Low and high incoming pressure issues are monitored and reported on the LCD display.

Gas detection

The GPPS-evo v4 can monitor up to sixteen gas detectors, including natural gas, oxygen, carbon monoxide and dioxide.

The detectors types along with the current levels can be viewed on the LCD at the press of a button. Should the level rise above prescribed limits, the system will advise clearly that on the LCD and if necessary isolate the as supply

The requirement for CO₂ monitoring and the limits is determined by current legislation and guidance. See BB101 for more information.

GPPS-evo v4





- » Clear CO₂ PPM display
- » Traffic light LCD indication
- » Auto calibrates
- » Meets new BB101 monitoring levels
- » Selectable range for mechanical/ naturally ventilated rooms
- » Available with temperature monitoring

Medem™ Inair v2 features

Room based carbon dioxide level monitoring

The Medem™ Inair v2 monitoring system has the ability to view the minimum, maximum and average CO₂ levels and has a colour-changing LCD for "traffic light" style indications, it provides quick and easy monitoring of the air quality.

CO₂ is considered the primary indicator of air quality, with legislation setting maximum levels within education facilities.

Increased levels of CO₂ have a detrimental effect on students' ability to learn and elevated levels over a sustained period can significantly impair decision-making and performance. Most CO₂ in buildings is from exhaled air and with buildings becoming increasingly airtight due to improvements in energy efficiency, air quality can fall below minimum acceptable standards unless adequate ventilation is maintained.

With the update to BB101 the allowable levels of CO₂ are now dependent on whether a classroom is mechanically or naturally ventilated.

Naturally Ventilated

High level alarm of 2000ppm for 20 minutes. Daily average (8hrs) should be less than 1500ppm.

Mechanically Ventilated

High level alarm of 1500ppm for 20 minutes. Daily average (8hrs) should be less than 1000ppm.

With a simple internal selection, the Inair can be set to monitor for these two operating levels and have the traffic light LED operate accordingly.

Standalone or Interconnected

Will typically be used as a standalone system, the InAir v2 has the option to be connected to any of our existing panels extending the system capabilities.

Medem™ Inair v2

CO₂ MONITORING



Have a question or need some help?

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Systems that work great under pressure in boiler rooms.

Gas detection or gas detection with gas pressure proving

We design and manufacture gas detection systems to ensure you have the best possible solution for your project.

Our designs are developed from an understanding of current legislation and guidance which has led us to be the industry leaders and innovators in gas detection systems that incorporate gas pressure proving.

Medem™ systems have been designed to meet the latest legislation and best design practice to allow sites to quickly operate efficiently and safely after a gas isolation, reducing site downtime.

The inclusion of gas pressure proving allows automatic restarting after a power cut (as per BB100) and a fire alarm by checking against a pressure loss, as stated in IGE/UP/1A Edition.

Additionally, fail-safe gas valve and relay checking, time delay restart and CPI monitoring are just some of the new developments making Medem™ systems continue to be the most reliable, safest and flexible available today.

You can find out more on our website: medem.co.uk/boiler-rooms



Building Bulletin 100 Science Accommodation in Secondary Schools

Design for Fire Safety in Schools. This is a comprehensive document, so our website includes the sections we feel are relevant for the application of our systems in a boiler house.

Read more on our website:
medem.co.uk/bb100



IGEM/UP/1A/ Edition 2 Strength testing, tightness testing

Standards for strength testing, tightness testing and direct purging of small, low pressure industrial and commercial natural gas installations.

Read more on our website:
medem.co.uk/igem

Boiler Rooms & Gas Detection

Gas detectors for use with Medem™ systems

Boiler rooms and beyond.

Our gas detection range is continually developing providing coverage for car parks, cellars, factories, chemical and battery stores, water treatment plants and many more.

New detector types are regularly being developed and released so, please don't hesitate to contact us to discuss any site requirement you may have.

Service and support is directly provided by Medem™ engineers.

With options of yearly tests and inspections or ongoing service contracts available to ensure continual precision monitoring and quality service.



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- » Gas detection (1-16 detectors)
- » Gas pressure proving
- » Auto restart on power failure and fire alarm reset
- » Electrical isolation
- » Fan interlocking
- » Event log
- » Low and over pressure alert

SEC-B v5 features

- » High pressure options (up to 10 bar)
- » Fail-safe valve relay monitoring
- » Delayed auto restart to allow for downstream appliance isolation
- » Fire test isolation mode
- » Multiple relay options for BMS or alarm signaling
- » Engineer functions

Gas detection

The SEC-B v5 has been designed to accept multiple gas detectors including natural and LPG gases, carbon monoxide. Isolation of gas will occur upon detection of the target gases at prescribed levels.

Gas pressure proving

Using the patented differential pressure proving method, the system checks the gas pipe work and appliances for gas leaks. It also monitors for low pressure and over pressure without opening the solenoid valve - making it the only truly safe method of proving available.

Auto restart

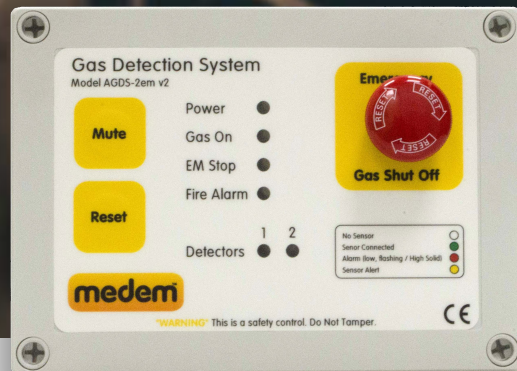
The SEC-B v5 can auto reset after electricity supply failure and a fire alarm reset when used in boiler room applications. This enables a building heating system to restart without manual intervention - minimising the risk of frozen pipes and a cold building.

Closed Valve Position indication and fail-safe valve relay monitoring

The SEC-B v5 features industry leading fail-safe valve relay monitoring, ensuring that the valve relay position is monitored. With the installation of a CPI switch the system can also monitor and confirm the physical valve position as required in many site specifications.

SEC-B v5





- » Gas Detection (1-2 Detectors)
- » Multiple gas types
- » Latching high alarm
- » EM Stop, fire alarm and thermal link monitoring
- » Panel mounted EM stop button
- » Settable main rated relay for use with BMS or remote indicators

AGDS-2em v2 features

- » Clear LED indications
- » Mutable toner
- » Simple to operate

Gas detection

The AGDS-2em v2 is a single or two channel gas detection system designed for use in boiler houses. Up to two low voltage sensors can be connected for the detection of natural gas, LPG or carbon monoxide.

In the event of a high alarm from one of the sensors, the system will isolate a connected control valve. Low alarm indication is also given.

Panel controls included 'Mute' and 'Reset' buttons. Remote emergency stop buttons and thermal links can be fitted and a fire alarm monitored to close the gas valve when activated.

V2 update of the AGDS-2 system brings with it additional relays for indication of the system state, these can be used to control remote indications or connect to a BMS system.

AGDS-2em v2



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- » Gas detection (1-16 detectors)
- » Valve isolation control
- » BMS outputs
- » Event log

AGDS-MC v2 features

The AGDS-MC v2 is a multi-channel gas detection system that has been designed for valve isolation. Up to 16 low voltage detectors for the detection of combustible gases, oxygen depletion/enrichment or carbon monoxide can be connected to the panel.

In the event of a high alarm from one of the detectors, the system will isolate the gas supply by closing a connected valve. A pre-alarm indication is also given. The LCD will display appropriate information about alarm situations, detector status, etc.

The system now has five settable changeover relays which can be used to control remote indications or connect to a BMS system.

There are two mains rated and three AUX (SELV only) relays fitted which can operate on user selections.

Changeover states are:

- » High alarm
- » low alarm
- » Detector fault
- » Emergency stop

AGDS-MC v2





- » Gas detection (1-16 detectors)
- » Gas monitoring system
- » "Out of hours" CO & CO2 Monitoring
- » BMS outputs
- » Event log

ADGS-MCM v2 features

The ADGS-MCM v2 is a multi-channel gas detection system that has been designed for gas monitoring and alerts. Up to 16 low voltage detectors for the detection of combustible gases, oxygen depletion/enrichment or carbon monoxide can be connected to the panel.

In the event of a high alarm from one of the detectors, the system will activate remote sounders and beacons. A pre-alarm indication is also given. The LCD will display appropriate information about alarm situations, detector status, etc.

High alarm changeover relay can be used to control remote indications or connect to a BMS system.

Solid Fuels

Even with the system switched off it can still be used to monitor for carbon monoxide and carbon dioxide via its 0-10v output and BMS relays. Should there be an issue from a solid fuel appliance it can raise an alarm or switch ventilation on via a relay.

There are two mains rated and three AUX (SELV only) relays fitted which can operate on user selections.

Changeover states are:

- » High alarm
- » Detector fault
- » Emergency stop

ADGS-MCM v2



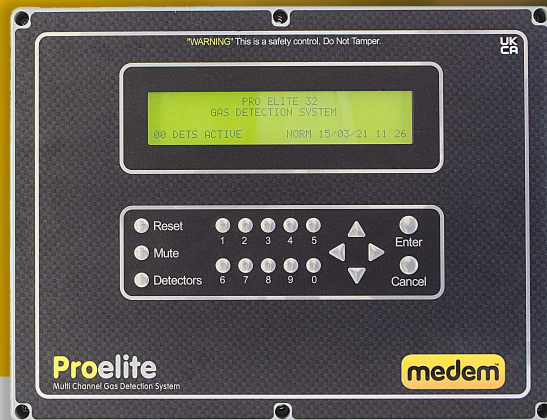
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We design it, build it, back it up.

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- » 1-32 Gas Detectors
- » Common and exotic gases
- » Latching or Non-latching
- » Peak or time weighted alarms
- » Event logging
- » Detector log
- » Optional battery backup
- » Service contracts available including detector exchange

Pro-elite features

- » Modular & programmable
- » Programmable detector location ID's
- » Additional programmable relays
- » 4-20mA options
- » Digital input/output

Gas detection

The Pro-elite is a modular, programmable, gas detection system capable of accepting up to 32 detectors for the monitoring of common and exotic gases with settable alarm for peak and time-weighted levels.

Universities, multi-room gas monitoring, car parks, battery stores, battery charging rooms, food processing, agricultural buildings, banks and secure buildings are all examples of where the Pro-elite has been installed to provide a comprehensive level of gas detection.

Flexibility

The Pro-elite has been designed to be as flexible as possible, whether it's a simple installation requiring just one detector or a large distributed system with a mix of gas detector types, alarm settings and remote indications. The system will be preconfigured before supply and require fully commissioning by Medem engineers.

Optional programmable relay panels

Optional relay panels can be connected to the main panel. Depending on the number of detectors and relay panels connected each detector could have one relay set to indicate status (either high, low or fault), or could have multiple relays set to indicate multiple conditions. There is also a double knock relay to indicate if any two detectors on this panel (main or extender) enter a high alarm state.

Pro-elite

NEW PRODUCT





- » 1-8 Detectors
- » Common and exotic gases
- » Latching or Non-latching
- » Peak and time waited monitoring
- » Event logging
- » Detector log
- » Service contracts available including detector exchange every 5 years

AGDS-elite features

- » Modular and programmable
- » Multiple relay options for BMS or alarm signalling
- » Status and alarm logging

Gas detection

AGDS-elite has been designed to be a modular gas detection system and can accept multiple gas detectors. Monitoring of up to 8 detectors of different gas types can be achieved.

It has been designed to be flexible so, whether it's a simple installation requiring one detector or a large system with a mix of gas detector types, alarm settings and remote indications.

Modular

1-8 detectors of different gas types with adjustable levels.

Optional programmable relay panels providing Alarms & Fault conditions.

For sensitive sites, there is a 'double knock' relay to only indicate if any two detectors in a particular zone enter a high alarm state.

Adjustability

Detectors can be set to monitor a peak alarm or a time weighted average with these levels adjustable at commissioning. Each alarm can also be set as latching or non-latching.

Logging

A downloadable detector log of minute average data for each detector can be downloaded by a Medem™ engineer and plotted to a graph for site analysis.

The system will be preconfigured before supply and require full commissioning by Medem™ engineers.

AGDS-elite

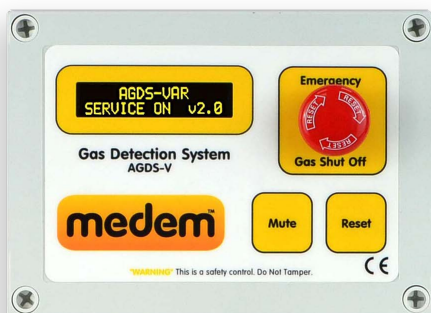


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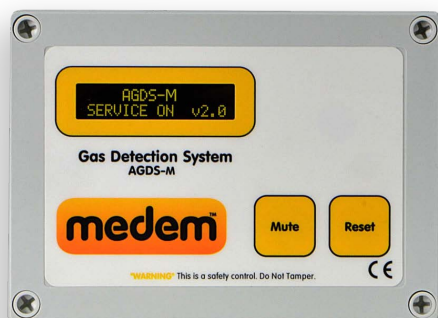


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AGDS-V



AGDS-M



The AGDS-V is a four channel gas detection system with valve isolation designed for use in boiler houses, plant rooms and areas with a risk of gas build up.

Up to four low voltage detectors can be connected for the detection of natural gas, LPG carbon monoxide, oxygen.

In the event of a high alarm from one of the sensors, the system will isolate a connected control valve. Low alarm indication is also given.

Panel controls included 'Mute' and 'Reset' buttons.

Remote emergency stop buttons and thermal links can be fitted and a fire alarm monitored to close the gas valve when activated. A high alarm relay can be used to control remote indications or connect to a BMS system.

The AGDS-M is a four channel gas detection system designed for environmental monitoring, often used in areas such as pub/hotel cellars. Up to four low voltage detectors for the detection of natural gas, LPG, carbon monoxide, or oxygen can be connected to the panel.

In the event of a high alarm from one of the detectors, the system will activate any connected sounders and beacons.

Panel controls include 'Mute' and 'Reset'.

High alarm changeover relays can be used to control remote indications or connect to a BMS system.

Additionally an AUX relay is also fitted (SELV only) which can operate on user selections.

Changeover states are:

- » Low alarm
- » Detector fault
- » Emergency stop
- » Gas on
- » High Alarm

Gas Detectors for use with Medem™ systems

We produce a range of gas detectors for use with our various control systems. Currently they include:

- » Methane CH₄ (natural gas)
- » Propane C₃H₈ (LPG)
- » Carbon monoxide (CO)
- » Carbon dioxide (CO₂)
- » Oxygen (O₂) (both for enrichment and depletion)
- » Hydrogen (H)
- » Acetylene (C₂H₂)
- » Ammonia (NH₃)
- » Chlorine (CL)
- » Nitric Oxide (NO)
- » Nitrogen Dioxide (NO₂)
- » Chlorine, (CL)
- » Hydrogen Sulphide (H₂S)
- » Sulfur Dioxide (SO₂)
- » Refrigerants

We are also continually expanding our detection range for anything not listing please see our website or enquire.

Detector siting, when considering the placement of fixed point gas detectors several factors must be taken into consideration, including (but not limited to):

- » The gas type
- » What the potential source is
- » Shape of the area - i.e. roof peaks or sunken areas
- » Obstructions that could lead to 'dead spaces'
- » Airflow - either natural or mechanical.

The underlying point is that the gas must reach the detector for it to be detected. Therefore, each installation must be considered on its own merits and the information here is intended as a guide.

For further guidance please see our "Detector location guide" available on our website.



Safe Zones

We have several options to meet safe zone requirements including ATEX certified and aspirated detectors.



Have a question or need some help?
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Ensuring kitchen air quality.

Any kitchen not within a home or a dwelling such as a B&B is considered to be a commercial kitchen. It is a requirement of all new and refurbished commercial kitchens to have their ventilation system interlocked to the gas supply to ensure the air quality in the working environment. This has been a requirement since the publication of BS6173, which was updated in 2009.

Additional HSE catering sheets and IGEN publications have been released, providing guidance and support for the installation of carbon dioxide detectors to ensure adequate levels of ventilation are maintained.

Why fit gas pressure proving in a commercial kitchen?

Occasionally, we are asked to supply a system that performs ventilation interlock alone with no gas pressure proving. Although we do have such a system (it was one of our first in fact), we don't consider it to be best practice and we would always recommend a combined gas pressure proving and ventilation interlock system.

Experience shows that most leaks identified in a kitchen occur on the flexible hose connections or appliances themselves. Using a gas proving system can quickly identify the location of the leak so, it can be isolated and the kitchen can continue to operate with an out-of-hours repair minimising site downtime.

Read more on our website: medem.co.uk/gpp

IGEM/UP/19 Edition 2

'Design and application of interlock devices and associated systems in gas appliance installations in catering'. This snappily titled document offers guidance to engineers involved in the design and maintenance of commercial kitchens. It also provides further support for the monitoring of CO₂ levels to determine adequate ventilation and the control of ventilation and gas supplies accordingly.

You can find out more on our website: medem.co.uk/kitchens

Comercial Kitchens

A menu of systems for commercial kitchens



Solid fuel cooking.

With the growing popularity of solid fuel cooking, ranging from wood burning pizza ovens, charcoal grills, specialist ovens and BBQ's consideration to ventilation safety and air quality is more critical than ever.

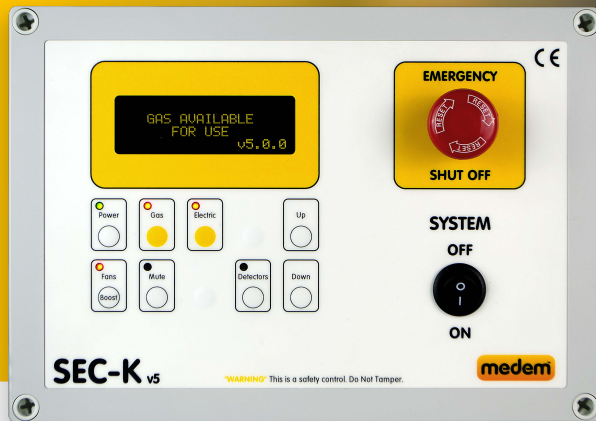
These appliances can continue to burn and produce carbon monoxide (CO) even after a restaurant has closed, meaning the ventilation and atmosphere will need to be monitored and controlled out-of-hours.

We provide environmental gas monitoring systems which can be used to detect a rise in CO and operate a fan or raise an alarm accordingly.

Please see the AGDS-MCM in the gas detection section or contact us to discuss your needs further.

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.



- » Gas pressure proving
- » Ventilation interlocking
- » Gas detection (1-16 detectors)
- » Electrical isolation
- » Out of hours monitoring for solid fuels
- » Occupancy based ventilation control
- » Low and High pressure alert
- » Fire test isolation mode
- » Event log

SEC-K v5 features

- » Current monitor or airflow switches
- » Fan boost (0-10v)
- » Engineer functions
- » BMS and signal alarm relays
- » Built-in fire test isolation control

Gas pressure proving

Using the patented differential pressure proving method, the system checks the gas pipe work and appliances in a kitchen for gas leaks. It also monitors for low pressure and over pressure without opening the solenoid valve - making it the only truly safe method of proving available.

Ventilation interlock

It is a requirement (see BS 6173/2009 & UP19) that any mechanical ventilation within a kitchen environment (supply and extract) is switched on and running before the use of any gas appliances can take place. If the ventilation is not switched on, the LCD display informs the operator of the fans that are off. It then advises to switch them on and reset the panel.

Gas detection

Detectors for CO₂, CO and natural gas can be monitored. CO₂ detection is used to confirm adequate levels of ventilation are maintained. Should the CO₂ rise to a level where there is a risk from carbon monoxide (CO) or from by-products of the cooking process, then the gas will be isolated.

24-hour CO monitoring with alarm and fan activation for out of hours protection of solid fuel appliances.

Demand controlled ventilation

When installed carbon dioxide or temperature detectors can be used to control the ventilation rate.

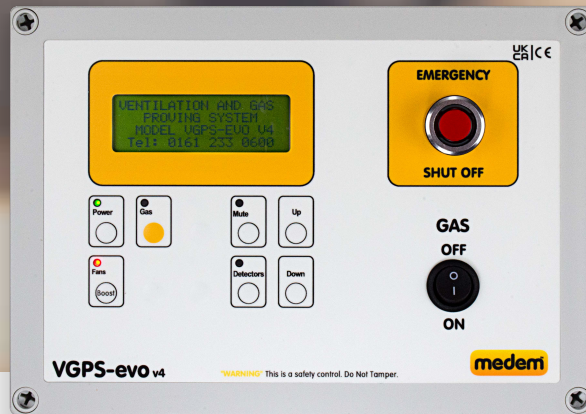
This enables energy and cost savings because the ventilation rate is adjusted in relation to demand.

Electrical Isolation

The SEC-K can also provide electric isolation, this makes it a single point of control for both gas and electrical appliances. Meaning only a single emergency circuit is required, although both services can be selected individually.

SEC-K v5





- » Gas pressure proving
- » Ventilation interlocking
- » Gas detection (1-16 detectors)
- » Low and High pressure alert
- » Event log

VGPS-evo v4 features

- » Current monitor or airflow switches
- » Fan boost (0-10v)
- » Engineer functions
- » BMS and signal alarm relays
- » Built-in fire test isolation control

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VGPS-evo v4



Have a question or need some help?

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SafeAir CM - Extra Features

- » Inbuilt two-channel current monitoring
- » Simple button press current monitoring setup

SafeAir CM
& SafeAir CM (GP)



SafeAir
& SafeAir (GP)

SafeAir Product Overview

The SafeAir range of kitchen interlock systems are designed and manufactured to offer a cost-effective solution for commercial kitchens.

They can be supplied with or without gas pressure proving, inbuilt two-channel current monitoring, carbon dioxide and carbon monoxide detectors, air flow switches and remote EM stop buttons to ensure all parts of the current standards would be covered.

The SafeAir range of ventilation interlock systems are designed to offer the best features and warranty at low prices.

5 year warranty

Confidence built-in

- » Ventilation interlock
- » Available with gas proving (GP models)
- » Carbon dioxide level monitoring
- » Gas detection/carbon monoxide monitoring
- » Quick and easy to install
- » Compact design

SafeAir features

Gas detectors

Gas detectors are available for Carbon Monoxide, Carbon Dioxide including a combined detector and for Natural gas and LPG.



Ventilation interlock

It is a requirement under BS6173:2009 and IGE M UP19 that any mechanical ventilation within a commercial kitchen environment (both supply and extract) is switched on and running before the use of any gas appliances can take place. With the SafeAir range of interlock systems, if the ventilation is not switched on, the OLED display informs the operator that the fans are off and to switch on the fans and restart the panel.

Inbuilt Current Monitoring (CM models)

Using a simple button press the inbuilt two-channel current monitor can monitor between 28mA and 20 Amps, the operating current is then displayed. This information helps with setup during installation and can be used to identify potential fan faults during operation.

Gas pressure proving

When supplied with gas pressure proving (GP Models) we use the Medem™ patented differential pressure proving method, the system checks the gas pipework and appliances in a kitchen for gas leaks. It also monitors for low pressure and over-pressure without opening the solenoid valve - making it the only truly safe method of proving available.

Carbon dioxide monitoring

When fitted with a Medem™ carbon dioxide detector (CO₂) it monitors the CO₂ level to ensure that HSE set levels are not exceeded with the PPM levels clearly displayed.

Should the carbon dioxide level rise above the set low alarm level the panel OLED will advise staff to 'increase the ventilation.' If the maximum allowed level of CO₂ is reached the system will isolate the gas and advise the staff to ventilate the kitchen.

The carbon dioxide levels are set out by the HSE and supported in IGE MUP19.

Carbon monoxide and natural gas detectors can also be supplied and monitored.

Have a question or need some help?
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We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.



- » Ventilation Interlock
- » Fan activation
- » Compact design

Vent Tester features

Ventilation interlock

It is a requirement (see BS 6173 & UP19) that any mechanical ventilation within a kitchen environment (supply and extract) is switched on and running before the use of any gas appliances can take place. If the ventilation is not switched on, the fan LED will flash and the gas supply will remain isolated.

Interlocking can be by current monitoring, air-flow or a combination of both.

Operation

In single-switch mode, turning the key-switch will energise the fan relay.

The voltage will be supplied to the fans for them to start.

The panel will then monitor the running operation of the fans via the interlock terminals, either by current monitoring or airflow. There is a 10-second delay to allow the fans to reach the correct speed, after the 10 seconds the connected gas solenoid valve is energised.

Should the ventilation not be operating or stop running for 10 continual seconds in operation the gas will isolate.

Vent Tester



- » LCD Display
- » 24 mAmps to 24 Amps range
- » Fan Run Time displayed
- » Learn feature - sets minimum current load
- » Compatible with any Medem interlock

CM2L-K features

A two-channel current monitor with a simple button press learning feature with clear LCD to help identify intermittent fan faults.

Wide current monitoring range of 24 mAmps to 24 Amps continuous.

CM2M-K current monitor without an LCD is also available.

Both current monitors can be used with any Medem interlock panel.

Differential air flow pressure switches

We supply high-quality air pressure differential switches with range options 20-200Pa or 50-500Pa. Both are supplied with a ducting kit consisting of a PVC hose plus 2 plastic duct adaptors.

CM2L-K current monitor

Have a question or need some help?

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Laboratories gas pressure proving

SEC-elite	Multi-Gas pressure proving with water and electric isolation and carbon dioxide monitoring.
SEC-L v5	Gas pressure proving with gas, water and electric isolation and carbon dioxide monitoring.
GPPS-evo v4	Gas pressure proving with carbon dioxide monitoring.

Kitchen interlock

SEC-K v5	Ventilation interlock with gas pressure proving, electrical isolation, carbon dioxide monitoring and occupancy based ventilation control.
VGPS-evo v4	Ventilation interlock with gas pressure proving, carbon dioxide monitoring.
SafeAir	Ventilation interlock system.
SafeAir CM	Ventilation interlock system with built in current monitor.
CM2M-K	Two channel current monitor.
CM2L-K	Two channel current monitor with LCD screen.
Vent Tester	Ventilation interlocking.
SW-AF-KIT	Air flow pressure differential switch.

Gas detection panels

SEC-B v5	Ventilation interlock with gas pressure proving, electrical isolation, carbon dioxide monitoring, automatic restart after a power cut and fire alarm reset.
Pro-elite	Up to 32 channel addressable gas detection with multiple relay and signal outputs.
AGDS-elite	Up to 8 channel addressable gas detection with multiple relay and signal outputs.
AGDS-2em v2	One or two channel addressable gas detection.
AGDS-V	Four channel addressable gas detection for valve isolation.
AGDS-M	Four channel addressable gas monitoring.
AGDS-MC v2	Up to sixteen channel addressable gas detection and valve isolation.
AGDS-MCM v2	Up to sixteen channel addressable gas monitoring.
AD-PP	Transformer pack for use with SEC and AGDS-MC when additional detectors are required.
Medem™ Inair v2	Carbon dioxide monitor with LCD and daily average display and ventilation control.

Gas detectors

AD-MED-CO₂	Addressable carbon dioxide detector (CO ₂)
AD-MED-M	Addressable natural gas detector (CH ₄)
AD-MED-CO	Addressable carbon monoxide detector (CO)
AD-MED-LPG	Addressable propane detector (LPG)
AD-MED-OXY	Addressable oxygen depletion detector (O ₂)

More detectors types are continually being developed and can be found on the Medem™ website.

TT-70	Thermal link
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Controls

FTIP-1	Fire test isolation panel, allows continual use of gas during a fire alarm test.
SIP-1	Service isolation panel, for control of services (available for Gas, Water, Electric & Oil).

Model BGP-Y

Remote emergency stops can be added to any of the Medem™ gas systems.



Model FTIP-1

The fire test isolation panel can be used with any Medem™ panel and ensures that gas is not isolated during a fire alarm test.



Accessories

- BGP-Y** Remote emergency shut-off button, shielded key reset.
- GP-SEN-HP-2W** High pressure sender unit for use with our gas proving panels.
- GP-SEN-HP-DG** De-greased high pressure sender unit for use with our gas proving panels.

All gas valves we supply are EN161 approved. We recommend that pipe sizes 80mm and above are fitted with electro-hydraulic valves.

Electro-hydraulic valves

- VAL-EL2** 50mm N/C 230v (screwed).
- VAL-EL2½** 65mm N/C 230v (flanged).
- VAL-EL3** 80mm N/C 230v (flanged).
- VAL-EL4** 100mm N/C 230v (flanged).
- VAL-EL6** 150mm N/C 230v (flanged).
- VAL-EL8** 200mm N/C 230v (flanged).
- VAL-EL10** 250mm N/C 230v (flanged).

Gas solenoid valves

- VAL-¾** 22mm N/C 230v rectified solenoid valve (screwed), reducing bushes supplied for smaller pipe sizes.
- VAL-1** 25mm N/C 230v rectified solenoid valve (screwed).
- VAL-1¼** 32mm N/C 230v rectified solenoid valve (screwed).
- VAL-1½** 40mm N/C 230v rectified solenoid valve (screwed).
- VAL-2** 50mm N/C 230v rectified solenoid valve (screwed).
- VAL-2½** 65mm N/C 230v rectified solenoid valve (flanged).
- VAL-3** 80mm N/C 230v rectified solenoid valve (flanged).
- VAL-4** 100mm N/C 230v rectified solenoid valve (flanged).
- VAL-4** 100mm N/C 230v rectified solenoid valve (flanged).

Water solenoid valves are also available on request.

Bespoke equipment

We can also adapt and build panels for particular projects that require something different.

Note

Where gas pressure proving is part of the panel function the pressure sender unit is supplied as part of the system. Please specify if a high pressure sender is required (any project with pressures over 99mbar) or if it is required to be oxygen degreased.



Valve & Sender

Any Medem™ system that features gas pressure proving is supplied with the standard low pressure sender unit (99mbar). Suitable gas solenoid valves and a fitting kit can also be supplied based on-line size requirement.

Our full product range



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