
medem™
Maximizing Safety. Minimizing Risk.

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

British Designed and manufactured by Medem™

Committed to improvement

bsi. ISO 9001:2015 Quality Management

FM 695005

10 year warranty | Confidence built-in

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 to visit us 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 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 our 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 a 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 readout 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 Service 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/**training**

Information Standards
medem.co.uk/**downloads**

Join our webinars
medem.co.uk/**webinar**

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

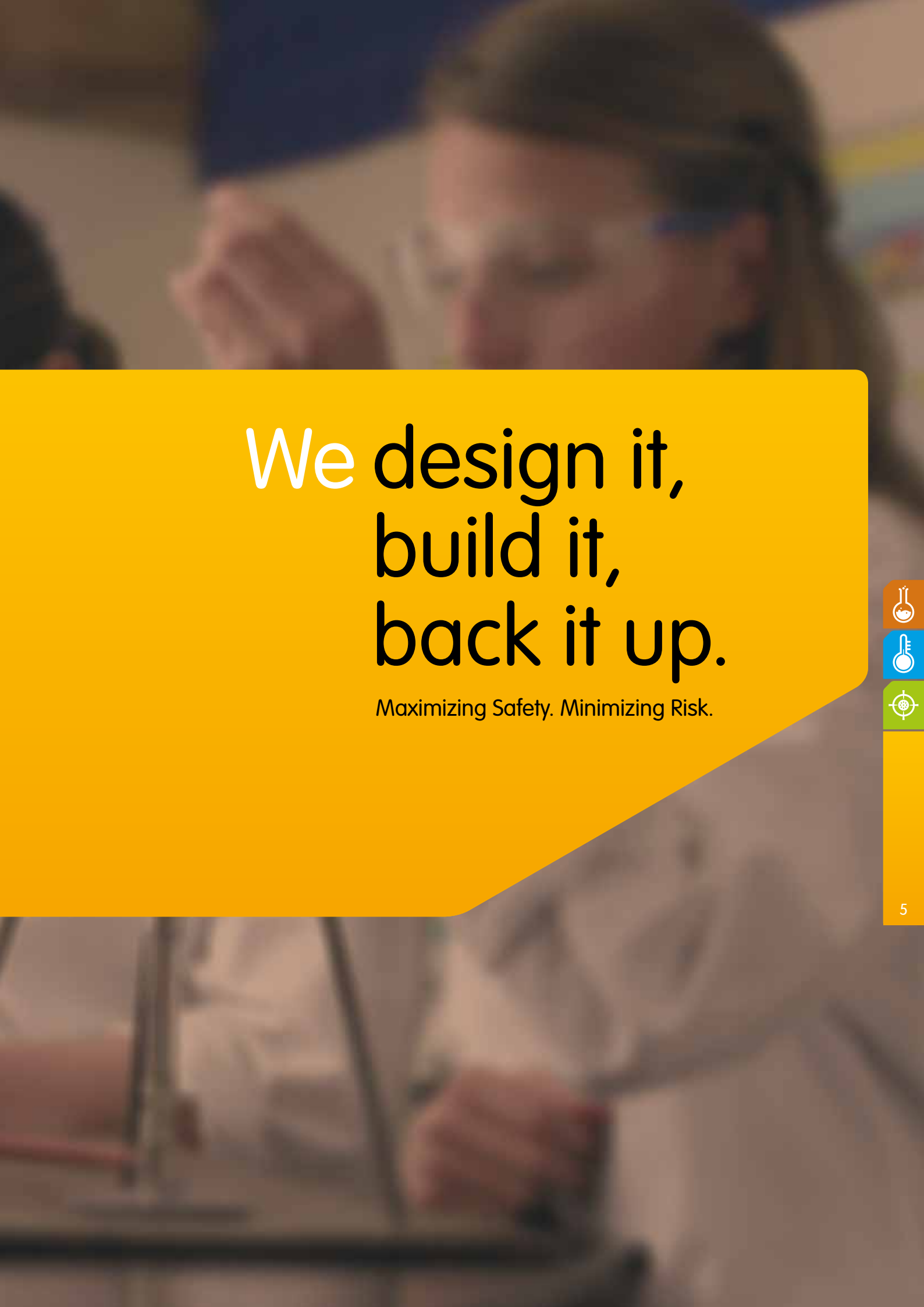
Classroom gas safety and gas proving
Multi-service isolation
CO_2 monitoring
Demand-based ventilation control

Gas detection

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

Commercial kitchens

Ventilation interlock
Gas proving
CO_2 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 CO_2 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, thermal comfort and indoor air quality 2018

Regulations, standards and guidance for ventilation air quality within 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 (degreased), Argon, nitrogen, CO_2 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
- CO_2 based ventilation control
- Engineer functions
- Fan interlocking
- Fire test isolation mode
- Over pressure alert
- 10-Year Warranty
- Multi-service isolation

SEC-elite features

- Multi-gas Gas Pressure proving
- CO_2 and Gas detection
- Electric and water isolation
- Demand controlled ventilation
- Fail-safe valve relay monitoring
- Over pressure and low pressure monitoring
- Auto-stop timer laboratory
- Engineer functions
- Multiple BMS relay outputs
- Hidden until required buttons and features

SEC-elite

NEW PRODUCT

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 presser 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 eight can be monitored, including CO_2 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 CO_2 level rises above prescribed limits, the system can isolate a gas supply.

The limit is variable to accommodate current legislation and guidance.

SEC-L

SEC-L features

- CO_2 based ventilation control
- Engineer functions
- Fan interlocking
- Fire test isolation mode
- Over pressure alert
- Warranty
- Multi-service isolation

- Gas pressure proving
- CO_2 and Gas detection
- Electrical and water isolation
- Demand controlled ventilation
- Fail-safe valve relay monitoring
- Over pressure and low pressure monitoring
- Auto-stop timer laboratory
- Engineer functions
- Multiple BMS relay outputs
- Warranty

Gas proving

Using the patented differential pressure proving method, the SEC-L 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 presser sender unit.

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

Gas detection

The SEC-L has been designed to accept multiple gas detectors, including CO_2 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-L can monitor the carbon dioxide level and temperature to control area ventilation in the laboratory. Where the CO_2 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.

If a service isolation is not required the SEC-L can be configured to suit the site by using one of the alternative versions. SEC-Le (Gas & Electric), SEC-Lw (Gas & Water) and SEC-Lg (Gas only).

Have a question or need some help?
0161 233 0600 medem.co.uk
enquiries@medem.co.uk

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

- Gas pressure proving
- CO_2 monitoring with PPM display
- Engineer functions
- Over pressure alert
- Long Warranty

GPPS-evo features

- Gas pressure proving
- Carbon dioxide level monitoring
- Fail-safe valve relay monitoring
- Over pressure and low pressure monitoring
- Auto-stop timer
- Engineer functions
- Warranty

Gas proving

Using the patented differential pressure proving method, the GPPS-evo 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.

Carbon dioxide level monitoring

The GPPS-evo can monitor up to four AD-MED-CO_2 detectors with the CO_2 level displayed on the LCD at the press of a button. Should the CO_2 level rise above prescribed limits, the system will advise clearly on the LCD that increased ventilation is required.

The requirement for CO_2 monitoring and the limits is determined by current legislation and guidance. See BB101 for more information.

GPPS-evo

- Clear CO_2 PPM display
- Traffic light LED indication
- Auto calibrates
- Meets new BB101 monitoring levels
- Selectable range for mechanical/ naturally ventilated rooms
- Available with temperature monitoring

Medem™ Inair features

Medem™ Inair

CO_2 MONITORING

Room based carbon dioxide level monitoring

The Medem™ Inair is the only CO_2 monitoring system capable of displaying the minimum, maximum and average CO_2 levels in a classroom.

CO_2 is considered the primary indicator air quality, with legislation setting maximum levels within education facilities.

Increased levels of CO_2 have a detrimental effect on students' ability to learn and elevated levels over a sustained period can significantly impair decision-making and performance. Most CO_2 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.

Building Bulletin 101 (BB101) stated a maximum level of CO_2 within a classroom should be no more than 1,500 parts per million (ppm) averaged across the day.

With the update to BB101 due for release in summer 2017, allowable levels of CO_2 will now be 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.

Have a question or need some help?
0161 233 0600 medem.co.uk
enquiries@medem.co.uk

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
Ventilation of School Buildings

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.

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

- Auto restart on power failure
- Engineer functions
- Fire test isolation mode
- Over pressure alert
- Warranty
- Fan interlocking
- Auto restart after fire alarm
- BMS relay outputs

SEC-B features

SEC-B

- Gas pressure proving
- Gas detection
- Auto restart after power failure and fire alarm reset
- Fail-safe valve relay monitoring
- Delayed auto restart to allow for downstream appliance isolation
- Electrical isolation
- Fire test isolation mode
- Low and Over pressure protection
- Multiple relay options for BMS or alarm signalling

Gas detection

The SEC-B 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 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 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.

- Modular system
- Event logging
- Peak and time waited monitoring
- Highly adaptable
- 10-Year panel warranty
- Service contracts available including detector exchange every 5 years

AGDS-elite features

- Modular Gas detection from 1-32 detectors
- Peak and time weighted alarm level monitoring
- 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. With extender panels, monitoring of up to 32 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

1-32 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

NEW PRODUCT

Have a question or need some help?
0161 233 0600 medem.co.uk
enquiries@medem.co.uk

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

- Available as valve control or monitoring only model AGDS-M
- Two Mains rated relays
- Solid fuel monitoring for kitchen use

AGDS-V features

The AGDS-V is a four-channel gas detection system, it can be used to control a gas solenoid valve or as a gas monitoring only (AGDS-M). Both systems feature a clear OLED screen.

Up to four low voltage sensors for the detection of natural gas, LPG, carbon monoxide, carbon dioxide and oxygen depletion can be connected to the panel.

In the event of a high alarm from one of the sensors, the system will isolate any connected valve.

Panel controls include a key-switch and a panel mounted 'Emergency Stop' button for the valve control version with remote emergency stop buttons, thermal links and a fire alarm can be monitored to close the gas valve when activated.

There are two selectable potential free relays which can be used to operate a fan, beacon or signal a BMS.

Changeover states are:

- Low alarm
- Detector fault
- Emergency stop
- Gas on

When the AGDS-M is used for monitoring only and not valve control, the panel will automatically restart after a power cut.

This makes it an excellent choice for cellar or store room monitoring.

It can also be installed to monitor for CO when solid fuel cooking has taken place, the panel will monitor for an out-of-hours CO increase and using the potential free relays turn on any connected mechanical ventilation.

AGDS-V

NEW PRODUCT

- Four channel gas detection
- Optional fan interlock
- Can be set to auto restart

Safespace V features

The SafeSpace V is a four-channel gas detection system designed to control a connected gas solenoid valve featuring a clear OLED screen.

Up to four low voltage sensors for the detection of natural gas, LPG or carbon monoxide, carbon dioxide and oxygen depletion can be connected to the panel.

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

Panel controls include a key-switch and a panel mounted 'Emergency Stop' button. Remote emergency stop buttons, thermal links and a fire alarm can be monitored to close the gas valve when activated.

Ventilation can also be monitored with an interlock of the gas supply, if required.

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

Changeover states are:

- High alarm
- Detector fault
- Emergency stop
- Gas on

Safespace V

NEW PRODUCT

We design it, build it, back it up.

Maximizing Safety. Minimizing Risk.

- Four channel gas monitoring
- Auto restart
- Mute function
- Compact design

SafeSpace M features

The SafeSpace M is a four-channel gas detection system featuring a clear OLED screen, it is designed to monitor for gas escape or build-up in a cellar, or store, etc.

Up to four low voltage sensors for the detection of natural gas, LPG or carbon monoxide, carbon dioxide and oxygen depletion can be connected to the panel.

In the event of a high alarm from one of the sensors, the panel will operate an internal sounder and activate a relay output.

Panel controls include a 'Mute' button.

As the system is for signalling only and not valve control, the panel will automatically restart after a power cut.

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

Changeover states are:

- High alarm
- Detector fault
- Emergency stop

SafeSpace M

NEW PRODUCT

» Sixteen channel gas detection
» Valve control
» BMS outputs

ADGS-MC features

The ADGS-MC is a multi-channel gas detection system that has been designed for variety of applications. Up to 16 low voltage sensors for the detection of natural gas, oxygen depletion, LPG or carbon monoxide can be connected to the panel.

In the event of a high alarm from one of the sensors, 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.

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

Also, available in a 'non-latching' mode for the control of ventilation systems - i.e. for carbon monoxide detection inside indoor car parks - AGDS-MCM.

ADGS-MC v2

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Maximizing Safety. Minimizing Risk.

AGDS-2

The AGDS-2 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. A high alarm relay can be used to control remote indications or connect to a BMS system.

AGDS-4

AGDS-4 is a four channel gas detection system designed for use in boiler houses and plant rooms. Up to four low voltage sensors for the detection of natural gas, LPG or carbon monoxide can be connected to the panel.

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

Panel controls include 'Mute' and 'Reset' it also features a panel mounted 'Emergency Stop' button. Remote emergency stop buttons, thermal links and a fire alarm can be monitored to close the gas valve when activated.

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 CH_4 (natural gas)
- Propane C H 38 (LPG)
- Carbon monoxide (CO)
- Carbon dioxide (CO_2)
- Oxygen (O_2) (both for enrichment and depletion)

We are also continually expanding our detection range and are developing additional sensor types for the AGDS-Elite system which will include:

- Hydrogen (H)
- Acetylene (C_2H_2)
- Ammonia (NH_3)
- Nitrogen Dioxide (NO_2)
- Chlorine, (Cl)
- Hydrogen Sulphide (H_2S)

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.

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 IGEM 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.

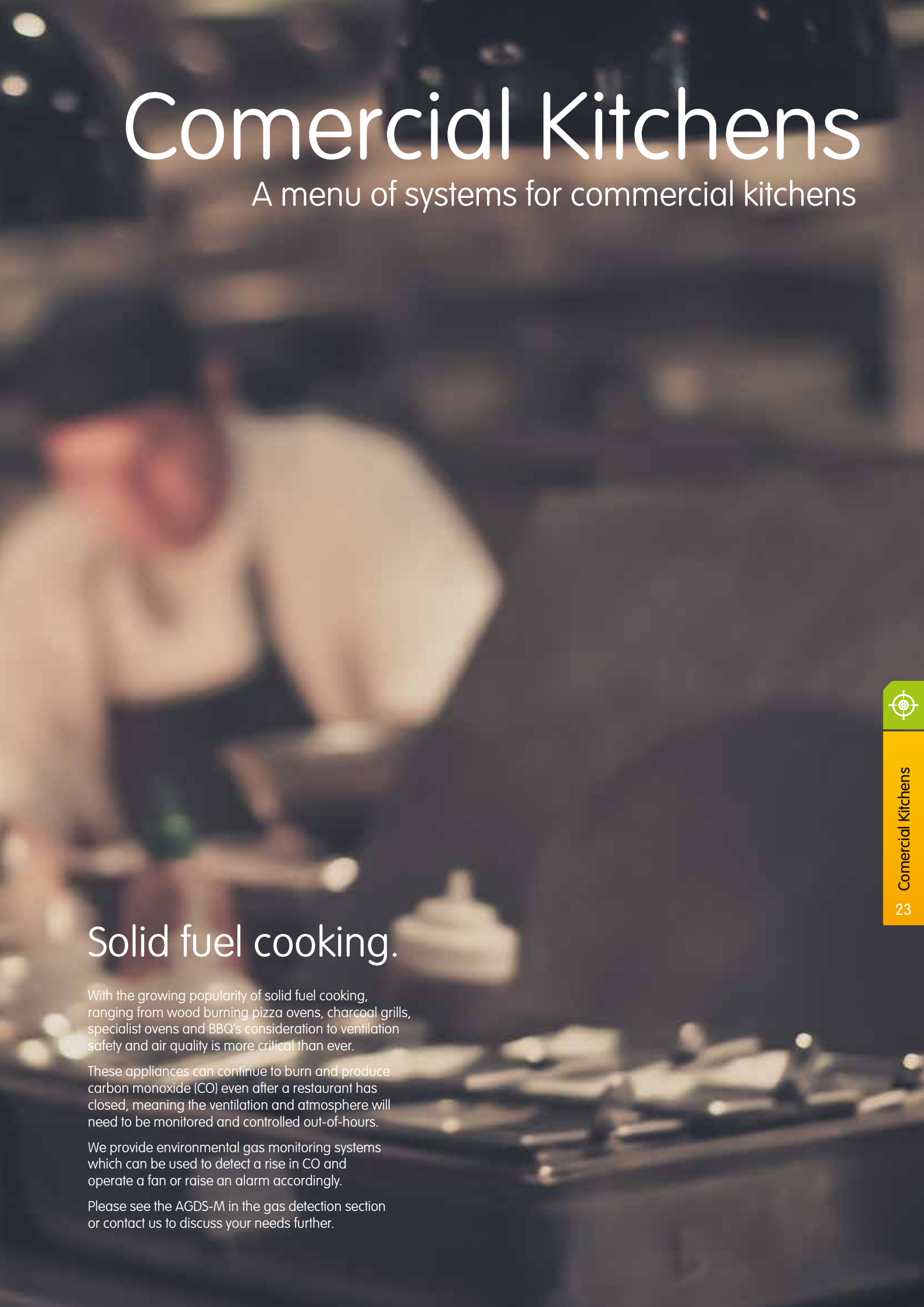
Read more on our website: **medem.co.uk/gpp**

IGEM/UP/19 Edition 1
'Design and application of interlock devices and associated systems used in association with gas appliance installations in commercial catering establishments'. 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 CO_2 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-M 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.

- Fan interlocking - Current monitoring or airflow
- Low and High pressure alert
- Occupancy based ventilation control
- Fire test isolation mode
- Electrical isolation
- Engineer functions
- BMS and signal alarm relays
- Long warranty

SEC-K features

- Gas pressure proving
- Ventilation Interlock
- Carbon dioxide level monitoring
- Gas detection/carbon monoxide
- Demand controlled ventilation
- 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.

Carbon dioxide monitoring

CO_2 detection is to confirm adequate levels of ventilation are maintained. Should the CO_2 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. Detectors for CO and natural gas can also be monitored.

Demand controlled ventilation

When installed with carbon dioxide or temperature detectors ventilation can be controlled above the interlocked set minimum. 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

- Engineer functions
- CO_2 monitoring
- Warranty
- Fan interlocking
- Over pressure alert

VGPS-evo features

- VGPS-evo
- Gas pressure proving
- Ventilation interlock
- Carbon dioxide level monitoring
- Over pressure protection

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.

Carbon dioxide monitoring

The inclusion of CO_2 detection is to confirm that prescribed levels of CO_2 are not exceeded. Should the CO_2 rise to a level where there is a risk from carbon monoxide or from by-products of the cooking process, then the gas will be isolated.

VGPS-evo

Laboratories gas pressure proving

SEC-Elite	Multi-Gas pressure proving with water and electric isolation and carbon dioxide monitoring.
SEC-L	Gas pressure proving with gas, water and electric isolation and carbon dioxide monitoring.
SEC-Le	Gas pressure proving with gas and electric isolation and carbon dioxide monitoring.
SEC-Lw	Gas pressure proving with gas and water isolation and carbon dioxide monitoring.
SEC-Lg	Gas pressure proving carbon dioxide monitoring and vent interlocking.
GPPS-evo	Gas pressure proving with carbon dioxide monitoring.

Kitchen interlock

SEC-K	Ventilation interlock with gas pressure proving, electrical isolation, carbon dioxide monitoring and occupancy based ventilation control.
VGPS-evo	Ventilation interlock with gas pressure proving, carbon dioxide monitoring.
CM2M-K	Two channel current monitor.
SW-AF-KIT	Air flow pressure differential switch.

Gas detection panels

SEC-B	Ventilation interlock with gas pressure proving, electrical isolation, carbon dioxide monitoring, automatic restart after a power cut and fire alarm reset.
AGDS-Elite	Up to 32 channel addressable gas detection with multiple relay and signal outputs.
AGDS-2	One or two channel addressable gas detection.
AGDS-4	Up to four channel addressable gas detection.
AGDS-V	Four channel addressable gas detection.
AGDS-V	Up to four channel addressable gas monitoring and fan control.
SafeSpace V	Up to four channel addressable gas detection including CO_2 with valve control.
SafeSpace M	Up to four channel addressable gas detection including CO_2.
AGDS-MC	Up to sixteen channel addressable gas detection.
AD-PP	Transformer pack for use with SEC and AGDS-MC when additional detectors are required.
Medem™ Inair	Carbon dioxide monitor with LCD and daily average display and ventilation control.
SACO$_2$	One or two channel carbon dioxide monitor with ventilation control.

Gas detectors

AD-MED-CO$_2$	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

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.
BRLY-1	Extra relay board for additional output, factory fit gas proving and detection panels.
RLY-2	Mains rated relay box.
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.

Superseded panels

GPPS-L	Superseded by the GPPS-evo.
GPPS-L-CO_2	Superseded by the GPPS-evo.
GPPS-LE	Superseded by the SEC-Le.
GPPS-TI	Superseded by the SEC-L.
VGPS-K	Superseded by the VGPS-evo.
VGPS-K-CO_2	Superseded by the VGPS-evo.
APS-3	Superseded by the SEC-B.

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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