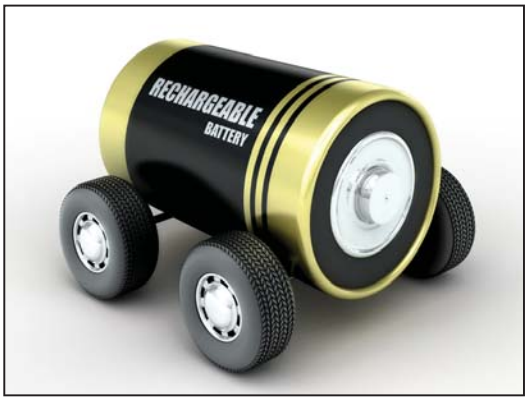
The BW Technologies Monitor

BW Technologies by Honeywell

A quarterly newsletter to keep BW's customers up-to-date on our products and our presence in the industry. Vol. 3 : Issue 3 : September 2009

Rechargeable Batteries

When it comes to power options in gas detection, the choice comes down to rechargeable versus disposable batteries. While disposable batteries are always convenient, rechargeable batteries are a popular choice.



Lower costs, eliminate downtime Rechargeable batteries are a great cost saving initiative, especially with frequently used items like your gas detectors. While the initial expenditure for the rechargeable batteries and chargers can be more expensive, the need to continually purchase disposable batteries is eliminated.

Having extra rechargeable batteries on hand means no downtime. The additional batteries can be charged and conveniently waiting for quick replacement. Always remember to dispose of your batteries properly and safely in the interest of being environmentally friendly.

The GasAlertMax XT, GasAlertMicro 5 Series and GasAlertMicroClip all use lithium polymer batteries. With the highest energy density of any rechargeable battery, instrument size can be reduced. As Clive Kennard, Senior Industrial Designer at BW Technologies, concisely puts it, "Smaller instruments, smaller battery packs!"

Lithium polymer batteries used in BW Technologies instruments do not have any memory. "You never have to worry about completely depleting the battery prior to charging," says Kennard.

New technologies

So, what does the future hold for rechargeable batteries and gas detectors? "As new technologies emerge and develop into reliable power sources, BW Technologies will definitely explore incorporating them into our gas detectors. Fuel cell technology, solar cells and energy harvesting are just a few of the exciting, new prospects," according to Kennard.

"Silver-zinc rechargeable batteries are an interesting new option that we will likely start to see in gas detectors when the technology matures. Since both silver and zinc are non-toxic and recyclable, it is a very green technology. The biggest benefit to silver-zinc batteries are their ability to offer 40% more energy that a lithium ion."

Regardless of the technology, rechargeable batteries are a reliable gas detection power option. To learn more about power options and charging accessories, please contact your local BW Technologies sales representative or visit www.gasmonitors.com today.

Rechargeables and BW

What BW Technologies gas detectors use rechargeable batteries?

- GasAlertMax XT
- GasAlertMicro 5 Series
- GasAlertMicro
- GasAlertMicroClip

INSIDE THIS ISSUE

Notes from the Editor

The GasAlertMicro 5 Series is now shipping with a variety of improvements. Please read the feature article, *Good is not good enough*, to learn more. The GasAlertMicro 5 Series is not just about improved PID, battery and pump performance. The enhancements made with Honeywell processes and engineering are focused on keeping you, your team and your site safe.

Sarah Ursulan

Non-pricing order information

A non-pricing version of 2009 BW order information is available for download. Click here to download or visit www.gasmonitors.com.

Gas facts: oxygen

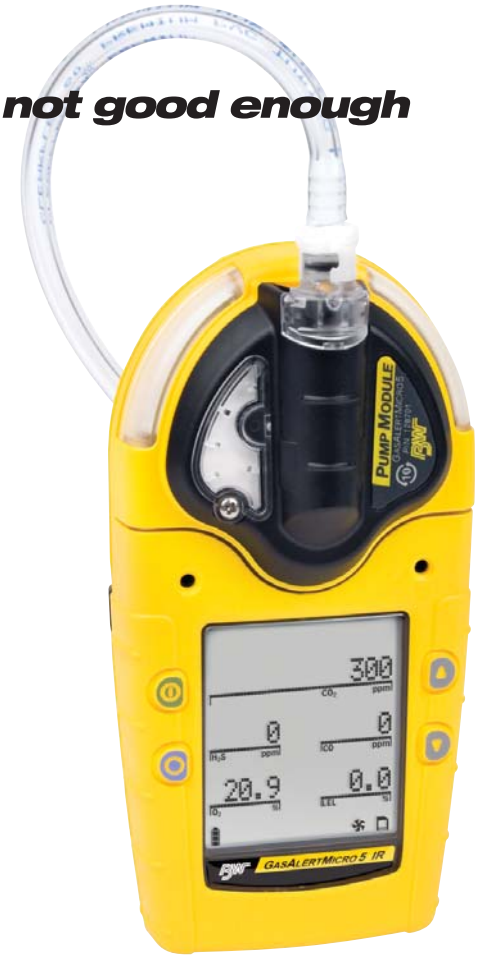
- Oxygen is colorless and tasteless but is blue in both liquid and solid forms.
- The concentration of oxygen in our blood is about 60-70% on an average, at which level we function well, with average brain activity and energy. However, if the oxygen levels drop lower than 60%, the cells are overwhelmed with pathogens, leading to diseases taking over. The lowest concentration of oxygen required to maintain life is around 52%, however, at this level, one is hardly alive.
- Oxygen-rich atmospheres increase the possibility that materials that would not normally ignite at typical oxygen levels would be prone to combustion.
- Oxygen is capable of combining with all elements except inert gases.

Feature Article

GasAlertMicro 5: Good is not good enough

The GasAlertMicro 5 Series has been taken back to the drawing board and re-examined using proven Honeywell processes. Enhancements include:

- ***Improved PID performance***
- ***Better battery performance***
- ***Innovative pump filter***
- ***New firmware***
- ***Surecell sensors***



BW Technologies by Honeywell first released the GasAlertMicro 5 in 2005, followed with the GasAlertMicro 5 PID later that year. In 2007, the series was complete with the release of the GasAlertMicro 5 IR. Together the GasAlertMicro 5 Series instruments are the versatile solution for your multi-gas needs.

Rugged and durable, the GasAlertMicro 5 Series instruments simultaneously monitor and display up to five potential atmospheric hazards. Available as a standard toxic gas model, a PID model for the detection of PID detectable volatile organic compound (VOCs) or an IR model to monitor carbon dioxide (CO2) levels. In addition to VOCs and CO_2, GasAlertMicro 5 Series instruments detect:

- Combustible gases (LEL)
- Hydrogen sulphide (H_2S)
- Carbon monoxide (CO)
- Oxygen (O_2)
- Sulphur dioxide (SO_2)
- Phosphine (PH_3)
- Ammonia (NH_3)
- Nitrogen dioxide (NO_2)

Featuring a dust and water resistant design with IP 65/67 rating and a built-in, concussion-proof boot, the GasAlertMicro 5 Series is ready for the harshest environments. Plus, the selection of models, power options and user options make the GasAlertMicro 5 Series adaptable to a variety of industries and applications.

The GasAlertMicro 5 Series' extensive selection of user-settable field options include the passcode protect function. Enabling this option prevents unauthorized modifications of the instrument's settings. Other options include selectable ppm resolution, combustible/PID correction factor options and multi-language support. The datalogging option provides up to two months of continuous datalogging, at five second intervals, with wraparound memory.

Flexible power options mean the GasAlertMicro 5 Series are always ready for your shift. Choose between AA alkaline or rechargeable, hot-swappable battery packs. Recent upgrades have been made to the GasAlertMicro 5 Series batteries. Rechargeable and alkaline battery packs can now be swapped freely between all GasAlertMicro 5 Series instruments. GasAlertMicro 5 Series instruments are compatible with:

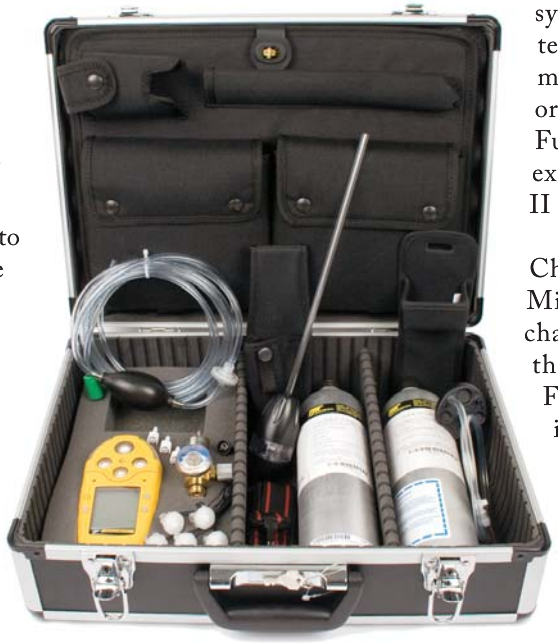
- Rechargeable battery packs (M5-BAT08)
- Alkaline battery packs (M5-BAT05)

Customers with older units must still order older-style batteries.

Chargers and MicroDock II GasAlertMicro 5 Series modules are all backwards compatible.

GasAlertMicro 5 con't

In addition to battery upgrades, the GasAlertMicro 5 Series has made recent enhancements to the optional integrated pump due to the effect dirt and debris can have on pump performance. The GasAlertMicro 5 Series pump design now reduces the possibility of particulates being forced into the pump, dramatically improving performance.



A wide variety of accessories and kits are available to further customize your detector to suit specific applications and maximize performance. Simplify confined space entry with the deluxe confined space kit - designed to provide all the accessories necessary to safely sampling and effectively monitor for atmospheric hazards during confined space entry work. Kits include:

- Carrying holster
- Remote sampling kit with 10 ft. / 3 m sample tubing and probe
- Manual aspirator pump
- Regulator
- Fittings
- Foam-lined carrying case

Cost-effectively manage the GasAlertMicro 5 Series with the MicroDock II docking system. Automatically test, calibrate, charge and manage data from single or multiple detectors. Fully portable and easily expandable, the MicroDock II requires no computer.

Charging is easy with the MicroDock II, the cradle charger kit with battery or the 12Vdc vehicle adaptor. Free your hands and increase productivity by using the carrying holster to conveniently attach the detector to your belt. Gain additional protection in extreme environments with the heavy duty concussion-proof boots.

A complete listing of GasAlertMicro 5 Series compatible accessories is available from your local BW Technologies Sales Representative.

Come and visit us at an upcoming tradeshow!

October 1, 2009
Water Sewerage and Waste - Maidstone
Maidstone, United Kingdom

October 5 - 9, 2009
24th World Gas Conference
Buenos Aires, Argentina

October 6 - 7, 2009
Health & Safety Bolton
Bolton, United Kingdom

October 12 - 14, 2009
2nd Annual Water Environment Federation Technical Exhibition and Conference Orlando, Florida, USA

October 13 - 15, 2009
American Petroleum Show 2009
Maracaibo, Venezuela

October 14 - 17, 2009
Oil and Gas Technology Indonesia 2009
Jakarta, Indonesia

October 15, 2009
Water Sewerage and Waste Peterborough
Peterborough, Ontario, Canada

October 15 - 17, 2009
Sapeurs Pompiers
Saint Etienne , France

October 26 - 28, 2009
National Safety Congress 2009
Orlando, Florida, USA

October 27 - 29, 2009
Mining & Energy South Australia Exhibition 2009
Adelaide, Australia

October 27 - 29, 2009
The Safety Show Sydney 2009
Sydney, Australia

October 27 - 30, 2009
Entsorga 2009
Cologne, Germany

October 29, 2009
M & R Namur - Belgium
Namur, Belgium

November 3 - 6, 2009
A+A
Dusseldorf, Germany

National Safety Council Congress & Expo

The National Safety Council (NSC) Congress & Expo delivers access to products, trends, experts, education and networking opportunities. This tradeshow boasts over 800 exhibitors, technical sessions and professional development seminars.

BW Technologies invites you to visit us at Booth 2227 in Orlando, Florida from October 26th to 28th, 2009. Come and see the latest gas detection solutions unveiled. Seeing is believing.

Ask the Expert

The following question was posed by one of BW Technologies' customers:

> I would like to make an inquiry about the GasAlertClip Extreme two year version. My concern with this monitor was not how to test it but the operating capabilities in an ambient air temperature of 50˚ C / 122˚ F. Recently, the temperature around the plant reached above 50˚ C / 122˚ F. The writing on the back of the monitor indicates this is above the operating range. Can the monitor be relied upon above this temperature?

William Ball, former Applications and Training Specialist, who is now a Regional Sales Manager in Eastern Canada, answered the question:

> All personal safety gas detectors have limitations and we advise to operate the equipment within operating specifications. Consistent operation in temperatures that exceed 50˚C can result in desiccation of the electrolyte solution and sensor life would likely be compromised.
>
> Brief excursions into slightly higher temperatures will not likely cause damage, but try to minimize the length of time a detector is operating outside of the specified operating temperature range. Do not leave detectors sitting in vehicles for extended periods, especially on the dashboard or rear window bench in the hot sun. We would recommend frequent bump testing to ensure sensor response.

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