

Hazardous Engineering Solutions



Incorporating Health & Safety

The International Magazine For
Hazardous Area Professionals

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**Everything you need to know
about explosion safety in the
pharmaceutical industry**

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Flash 2 Explosion Suppression System

The latest version of the industry leading StuvEx Flash suppression system has many advanced features.



- Single and multipoint injection suppressors capable of handling 4 ducts from one suppression bottle.
- New Master Control Unit can handle up to 16 Zones.
- A range of explosion detectors for various applications.
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There are two Earthing Monitors within the StuvEx range for Gas and Dust applications.



Gas Version



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Explosion Isolation

Isolating an explosion is vital. There are five different explosion isolation devices in the StuvEx range.



- NOVEX valve. Designed for filter inlet ducts, though can be used elsewhere.
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- Ventex Valve. For installation to a filter air intake.
- Fast Shutting Gate Valve. The most efficient way to isolate an explosion.
- Diverter Valve. Used to divert a potential ignition source to a safe area.
- Fire Trap Valve. Protects 'Down-Stream' machinery in the event of a fire or explosion.

Explosion Venting

StuvEx supplies a range of explosion venting devices.



- StuvEx Explosion Vent. A 100% efficient vent for silos, bins, filters etc.
- StuvEx DQS. A maintenance free, flameless vent for installation to an internally located vessel.
- StuvEx Flameless Indoor Vent. Allows an explosion to safely occur inside a building.



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Everything you need to know about explosion safety in the pharmaceutical industry

Explosion safety is a safety-critical topic in every pharmaceutical company. This article gives you brief but comprehensive information about the fundamental questions and pharmaceutical safety systems.

Assessment of the risk of explosion

Whether it is screens, dryers, mills or filters whenever a production process generates dust, the relevant plant is potentially at risk of a dust explosion. This means that preventive and protective measures are needed in order to reduce such a hazard.

To decide whether and to what extent precautions are required, you would first conduct a systematic risk assessment. The first stage is to gauge the probability that an explosive atmosphere might be created and whether there are any potential sources of ignition. After that, you need to classify the effect that an explosion might have.

Both assessments can be merged into a matrix. The resulting indicators tell you whether and to what extent you need to protect the plant or parts of it.

Explosion safety measures

The hazard and risk assessment determines the use of the necessary protective measures. They are divided into explosion prevention and explosion protection. Preventive measures are designed to prevent an explosive atmosphere and therefore to reduce the probability of an explosion. Wherever this is possible, combustible substances are replaced by substances that cannot produce an explosive mix.

This includes, for instance, the use of suitable equipment, protecting the product flow from impurities and monitoring the earthing of the system with a view to preventing electronic discharge.

Explosion protection involves reducing the impact of a possible explosion to a more moderate level, so that the resulting damage is less severe. This

includes conventional explosion venting through the use of explosion vents, flameless venting, explosion isolation and explosion suppression. This kind of explosion safety is a vital necessity in virtually all plants, because...

- It is in the nature of the relevant processes that there can almost never be any absolute or complete avoidance of effective sources of ignition.
- Inerting tends to be too expensive and/or impossible due to the nature of the processes involved.
- Other explosion prevention measures may be helpful in parts, but cannot usually eliminate the risk of an explosion completely.

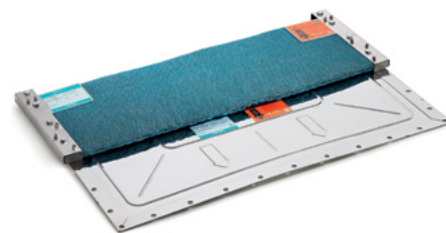
Dryers and coaters

You will also find all of the requirements for an explosion in dryers and coaters. If the (spray) dryer is only enclosed or located inside the building close to a building wall, venting is possible by using explosion vents. Like flameless venting for dryers inside buildings, this is only possible if no toxic or otherwise critical media are processed. If this is the case, explosion suppression is used. However, the selection of the protection system is defined not only by its positioning, but also by its strength, the volume to be protected and other parameters.

If flameless venting or explosion vents are used, they must meet hygienic requirements. Certifications such as the EHEDG cleanability test are good indications of this.

Mixers

Whether a mixer has to be protected against explosions depends on a variety of factors. These include the speed of the stirrer and the risk of ignition sources. The links to other parts of the



Above: Explosion Vent EGV with opening angle limiter TARGO-VENT

system and the type of connection are important factors for the design of mixers as well as the type of filling. Through this, for example, the vent area is reduced in accordance with EN 14491 during pneumatic filling.

Grinding Plants

Inherently, every mill has metallic parts that approach and touch each other at high velocities - a high probability for the creation of potential ignition sources.

Whether a mill needs to be protected largely depends on whether the mill has a cone. This is crucial for design according to national and international standards.

Aspiration Systems / Dust Collectors

As many filters in the pharmaceutical industry are relatively tall and narrow, they are usually protected with an active explosion suppression system or flameless venting.

Filters can also be equipped with explosion vents, provided they offer venting in closed-off safety areas. These can, in turn, be reduced using opening angle limiters.

In order to prevent the explosion from propagating, the raw gas line is usually isolated with passive protection systems.

For more information visit:
www.rembe.com

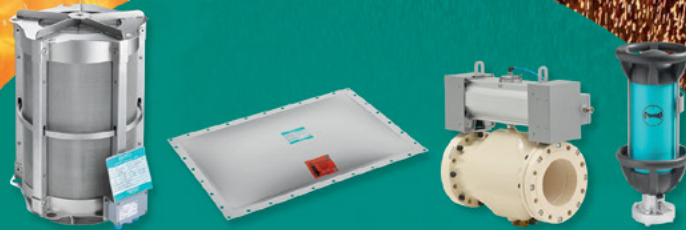


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AX60 - a new member of the Glamox AL60 family

AX60 is a new luminaire certified for use in Zone 1 hazardous areas.
It completes the AL60 family of decorative luminaires.

Glamox sets a new standard for reduced installation- and operational cost with the explosion proof luminaire AX60. The sturdy, functional and slim design luminaire simplifies installation and reduces operation- and maintenance costs. AX60 offers light quality built on generations of experience in the field of light installations and systems for marine – and offshore applications.



A perfect solution for indoor offshore applications

AX60 together with the rest of the AL family is surface mounted, to reduce time spend on installations. Thanks to a robust design that has been thoroughly tested, the luminaire has a high tolerance for vibrations and shock. It also comes with the option of integrated emergency light with 1.5- or 3-hour battery time.

www.glamox.com/uk

Simple Control in Hazardous Areas ...more than a Display



BEKA is renowned for high quality indicators and displays but did you know that simple elements of control can be achieved with our products to simplify system design, minimise wiring and reduce costs?

Modbus Display 2 isolated switch outputs as standard

Fieldbus Alarm Outputs optional 6 channel alarm cards for our Profibus and Foundation Fieldbus displays

Batch Controller a dedicated controller

Set Point Generator 4-20mA control output

Re-Transmitted Data standard and optional features on all our pulse input products...pulse or 4-20mA output

Dual Alarm Outputs an option on nearly all products



BEKA www.beka.co.uk
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Customised flange seals to the highest hygiene standards

To suit every individual application, Freudenberg Sealing Technologies can offer bespoke flange seals that meet the highest standards in hygiene.

Developed for customer-specific sealing grooves in the food, beverage, pharmaceutical and chemical industries, the customised flange seals are available via authorised distributor Dichtomatik Ltd, the exclusive provider for Freudenberg's food and beverage related products in the UK.

For each customer requirement, Freudenberg experts can set about developing a completely new design of flange seal. Factors such as prevailing pressures and temperatures, the product and cleaning media, as well as the dimensions and process-related variance of the sealing groove, have a role to play. Importantly, the company's tailor-made solutions enable hygienic sealing, flush with the product – the flange seal neither protrudes into the product area, nor does it rebound.

Of particular note, Freudenberg Sealing Technologies

can offer a proven design for special housings in the process industry. Thanks to unique FEM analyses, the company's design provides optimised hygienic sealing that surpasses conventional flange seals.

This high-performance seal also provides an easily cleanable solution in non-rotationally symmetric systems and standard housings. The material variants deployed, such as EPDM or HNBR, show high resistance to CIP/SIP (cleaning-in-place/sterilisation-in-place) media and meet the requirements of the American FDA (Food and Drug Administration). As a result, the solution is ideal for use in the demanding operating conditions typical of food, beverage, pharmaceutical and chemical applications.

Experts at Freudenberg Sealing Technologies can also offer advice on the design of the seal groove. After all, with the proper seal groove, the seal can be installed in a way that prevents leakage. Here, it is



important to pay attention to factors such as metallic compression limitation and centring.

Thanks to the wide range of research and development capabilities at Freudenberg, as well as the company's extensive product and materials expertise, the respective sealing solution can be tailored to meet the exact application, including where hygienic flange seals are required.

Further information is available at:
foodandbeverage.fst.com/products-en/static-seals

Need High-Quality Compressed Air Fast?

Hi-Line's Dryer Rental Scheme Provides The Answer

Hi-line Industries, a leading UK supplier to the compressed air sector, has a solution for all companies seeking a temporary way of delivering high-quality, dry compressed air. An affordable and responsive rental scheme is now in place at the company, covering Hi-line's comprehensive range of class leading compressed air dryers.



Although hiring a compressor is easy enough for short-batch emergency runs or exceptionally busy periods, finding specialist drying equipment is not so straightforward. And yet air quality is just as important in temporary periods as it is during long-term regular operations.

Hi-line overcomes this issue by offering hire options on a vast range of compressed air dryers, including refrigerant, heatless, heat-regenerative and point-of-use models. High-quality, competitive filtration packs can also be provided.

The company's market-leading Tundra refrigerant air dryers, for example, are renowned for their robust and reliable performance. Moreover, the newly improved single-cell heat exchanger gives the most efficient transfer of heat at the lowest energy cost.

For those seeking heatless dryers, Hi-line can offer its proven HPSA (Heatless Pressure Swing Adsorption) units, which come in 'plug and play' format mounted on skids with their own filtration package as standard. Class-leading performance is assured with HPSA range, as it is with Hi-line's



series of heat-regenerative adsorption dryers, as well as its point-of-use desiccant adsorbers. The latter are ideal for the small-scale separation of humidity from compressed air systems.

From as little as £50 per week, Hi-line can supply from a huge stock of ready-to-go compressed air dryers, including Class O, Class 4 (+3°C PDP) and standard -40°C PDP desiccant units. Offering capacity from 5 to 5000 cfm, both short and long-term hire requirements can be fulfilled.

Importantly, control packages are available to suit every application, including heatless, heat regenerative, pneumatic, 24V, 240V, dewpoint and AEMS (automatic energy management systems).

Regardless of what type of dryer is required, delivery to site includes set-up by a fully qualified Hi line compressed air engineer, providing both convenience and peace of mind. If desired, a smart controller can be added to all makes of dryer as an energy-saving option, while N2 and O2 generators are also available.

Further information is available from:
Hi-line Industries Ltd,
Telephone: 01283 533377
www.hilineindustries.com

The Snickers Workwear Family – Bringing You The Best Solid Gear Safety Shoe Technology.

Incorporating some of the most advanced technical features in safety shoe design.

With all the Hallmarks you find in Snickers Workwear – quality, comfort, durability and street-smart style, Solid Gear safety shoes and boots are fast becoming one of the most popular brands chosen by discerning tradesmen and women.

With a wide range to choose from that integrate the type of modern technical designs you'll find in outdoor and athletic footwear, Solid Gear safety footwear combines best in class materials for comfort, protection and durability.

There's a host of first-to-market features like GORE-Tex Surround Technology for unrivalled and all-round breathability. Plus ETPU sports footwear performance that delivers unrivalled footbed

energy return that really puts a spring in your step.

Added to the Vibram outsoles and Cordura Rip-Stop fabric in other styles, you'll get rugged protection all day long. What's more, the GORE-Tex Fabric Technology also makes the footwear water repellent and waterproof to keep your feet dry. Added to which, the unique BOA Closure System on certain styles, distributes the pressure evenly across your feet to ensure a glove-like fit.

Overall, this combination of market-leading materials, fabrics, linings and high-tech features provides the kind of insulation and protection that will keep your feet warm and comfortable all day long.



To get more information on Solid Gear and Toe Guard - the Next Generation of Safety Footwear, visit the website at www.solidgearfootwear.com alternatively, call the Snickers Helpline on 01484 854788.

Safer Bolting at Height: Enerpac Introduces DSX-Series Torque Wrenches

Carrying out bolting operations at height runs the risk of danger to those working beneath dropped objects. Enerpac introduces a lightweight solution with industry-first patented safety features. The Enerpac DSX-Series Aluminium Square Drive Torque Wrenches are safe, easy to use, tools designed for medium duty use when working at height.

To help to reduce dropped-object incidents when working at height, the five models in the series feature a built-in connection point to safely tether the tool to a work belt or bag. A standard ergonomic safety handle also helps to prevent injuries or near misses from loss of tool. When it comes to operator protection, a fully enclosed drive prevents operator contact with moving parts inside the tool.

Made with a high-strength aluminium body, the CE Approved Enerpac DSX-Series Aluminium Torque Wrenches are lightweight and easy to

use—important factors when working at height.

Another feature that makes the tool simple to use is a multi-direction 360 x 180° high flow aluminium swivel that helps prevent twisted and tangled hydraulic hoses. To help make operators more efficient on-site, the wrenches feature a fine-tooth ratchet that prevents the tool from locking on, a 35-degree rotation angle that assists with repetitive bolt tightening tasks, and a retained push-button quick release.

Additional key features include torque output ranging from 191 to 32.617 Nm, compact nose



radius for tight locations, tool accuracy +/- 3% and ATEX approval for bolting projects in explosive atmospheres.

The Enerpac DSX-Series Aluminium Square Drive Torque Wrenches are now available through Enerpac distributors. For more information visit www.enerpac.com.

Upgraded Hi-Line Adsorption Dryers Ideal For Breathing Air Applications

Atacama-CT Plus adsorption dryers from Hi-line Industries, a leading UK supplier to the compressed air sector, now feature upgraded diaphragm valves that are helping these point-of-use units prove even more reliable for Class '0' breathing air applications in the medical and hospital sectors.



Hi-line Industries will remain open throughout the COVID-19 pandemic to help serve the medical and healthcare industry, as well as those involved in food production. The company's service and main reception numbers, as well as the mobile numbers of key staff, remain available to support customers.

Based on a heavier duty specification, the new valves in the Atacama-CT Plus range now feature a tougher diaphragm that is resistant to both oil and aggressive condensate. This robust engineering is matched by other sturdy features on the valves, such as 100% rated anti-vibrating coils, special locating lugs and a machined pilot hole in place of an O-ring.

The Atacama-CT Plus series offers corrected flow rates from 0.2 to 2.83 m³/min. Importantly, this three-stage unit features a CT (Carbon Tower) located after the adsorption dryer. Clean, dry air passes through the third CT stage and adsorbs gases and aerosols depending on requirements and which zeolites are selected. To attain Class '0' for medical and food production applications the air needs to be oil-free, which can be achieved thanks to the use of high-quality carbon. Even working with a fully oil lubricated screw, vane or piston compressor, the Atacama-CT Plus will achieve better than ISO8573-1:2010 Class 1, giving a total oil concentration of less than 0.003 mg/m³, which is significantly less than that found in normal atmospheric air at home or in the workplace.



Also featuring the newly upgraded diaphragm valves is Hi-line's off-the-shelf model, the Atacama Plus. As standard, this unit dries air to a dewpoint of -40°C and comes with pre and after filtration. All Atacama Plus dryers, including the CT model, feature an energy-saving digital controller and dewpoint control function.

Atacama Plus is available for next-day delivery and offers capacity from 5 to 100cfm. The unit features aluminium top and bottom valve blocks and extruded aluminium chambers filled with desiccant. Air is dried as it passes through the desiccant bed in one of the chambers, while the other chamber regenerates using the PSA (Pressure Swing Adsorption) principle. The change is automatic and controlled by the digital controller. These popular and environmentally-friendly compressed air dryers are suited to sectors that include pharmaceutical, dairy, brewing and general manufacturing, to list but a few.

Further information is available from:

Hi-line Industries Ltd,
Green Street, Burton on Trent,
Staffordshire DE14 3RT
Telephone: 01283 533377
Visit: www.hilineindustries.com



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Safe & Efficient Drum Handling In Hazardous Areas

Do you have a need to lift or move drums, de-palletise or just generally move drums around a workshop or factory site in Hazardous Areas.

The St Clare Engineering range of Grab-O-Matic ATEX fork attachment and pedestrian drum handlers will provide a safe and efficient solution for you.

The Grab-O-Matic DLR range of rim grip fork attachment drum handlers are suitable for all types of steel drums, plastic 'L' ring drums and most fibre drums.

The extensive drum handling range includes the SC10 for lifting and rotating drums to dispense the contents, scissor grabs, base gripping units and waist grippers, the whole range can also be fitted to pedestrian stackers. Bespoke units can be manufactured to suit customer specification.

We have also developed a Quick Attach/Release drum handler fork attachment for use in ATEX hazardous areas.

All Grab-O-Matic models can be Quick Attach/Release units and are securely attached to the forks and released without the need for the truck driver to dismount from his cab.

How Does it Work:

A Carriage Hook Plate is bolted to the centre of the fork truck carriage, this then stays in place permanently as it does not interfere with the normal lifting and moving of pallets and is only 300mm wide.

The forks are inserted fully into the fork pockets and when raised a sprung loaded lever locks behind the Carriage Hook Plate and will only release when the unit is lowered to the ground, this reverses the action and the forks can be withdrawn from the unit.

The drum handlers can be manufactured completely



from stainless steel or part stainless steel to suit customer requirements and the spark proof area the units are operating in.

All Grab-O-Matic fork attachments are issued with Test Certificates, CE marked and manufactured entirely in the UK to ISO 9001:2008 and will be certified for use in ATEX spark proof areas.

For more information on our extensive range of drum and materials handling equipment please contact Andy Bow on 02380 643402 or email sales@stclare-engineering.co.uk

Goodfellow's 'Mr. Material' app tests scientific knowledge during lockdown

Looking for new ways to test your knowledge during the lockdown? Leading global supplier of research materials, Goodfellow, has recently updated its Mr. Material game, a free educational app which tests the extent of your periodic table knowledge.

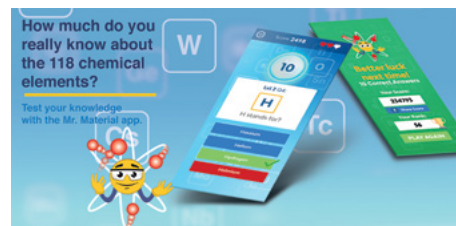
Mr. Material was originally created to celebrate the 150th anniversary of Mendeleev's periodic table, an iconic and vital tool for anybody in the scientific community, whether you're a student, researcher, teacher or just have a general interest in science. It's an interactive, fun and free game aimed at testing the user's scientific knowledge on the periodic table and all 118 elements.

The aim of the game is to answer questions as quickly as possible and rank on the leaderboard. The more quickly players answer each question, the higher the score. There are 20 different levels which have a mixed set of questions relating to various aspects of the periodic table, with an additional 20 new levels being added every few months. Each player has three lives at the start of every level, however if they fail to answer a question correctly or take too long, a life will be lost. Lose all three lives and you'll have to restart the level, losing all your points.

There's also a 'share your score' feature which enables each user to share their best score via Facebook and spark a competitive streak amongst friends and colleagues to get the highest rank.

Goodfellow's Marketing Manager, Joel Aleixo commented, "In celebration of the recent 150th anniversary, we wanted to create a fun and interactive game for users of all ages to enjoy and test their knowledge on the periodic table. The new updates will provide an even greater challenge."

And according to Goodfellow Technical Manager Dr. Aphrodite Tomou, the game is based around using the periodic table as a source of innovation, which is so central to the company's relationship with its customers. "To be competitive in the marketplace, customers are constantly looking for new, innovative ways of dealing with the challenges of today, whether through new material applications or entirely new



products and materials. The Goodfellow technical team and its wide range of digital tools, such as the Mr. Material app, is set up to assist them in that pursuit."

Mr. Material is available to download for free either through the App Store or Google Play.

App Store - <https://apps.apple.com/us/app/mr-material/id1468123298>

Google Play - https://play.google.com/store/apps/details?id=com.goodfellow.mrmaterial&hl=en_GB

Composite Materials Manufacturer Partners With Empteezy To Specify A Customised Flammable Liquids Storage Unit

Hereford Glass Fibre was founded in 1986 and began by manufacturing seagoing expedition and sprint racing kayaks. Since then the company has continued to diversify into closed mould technology including resin transfer moulding (RTM) processes, Vacuum Assist Resin Injection (VARI), Vacupress (vacuum closed moulding) and polyurethane foam systems.

Due to the nature of their work, HGF use a range of flammable liquids and resins in the manufacturing processes and because of risks associated with these liquids, they went to the market and sought suppliers with the credentials to provide a fully compliant storage unit to meet their specific requirements, and to that end chose Empteezy.

Following an initial consultation and site survey, it became apparent that HGF would require a customised bunded storage unit that would fully comply with Dangerous Substances and Explosive

Atmospheres Regulations (DSEAR) 2002; ensure the liquids and resins are fully bunded when in storage and also satisfy the requirements of their insurance company.

Empteezy's customised solution included; shelving specifically designed to hold the different sizes of containers used on-site and specialist pipework connection points to allow for the transference of resins from stored IBCs to an external collection point. Over and above the customisation work, the unit was also fitted with explosion relief panels and an earthing kit.



Managing Director, Dillon Muir stated "I am extremely happy with the unit and levels of customisation Empteezy were able to provide, the unit ensures we are working to the highest standards of health and safety when storage flammables."

For more information visit:
www.empteezy.co.uk

Goodfellow Donates Essential Materials To Companies Supporting Frontline Workers

Leading research materials supplier, Goodfellow, is showing support to several initiatives in the fight against COVID-19, supplying materials that are being used to make protective equipment for frontline workers.



Their latest donation has seen the company donate 130 kilos of polypropylene coil to Stamford School in Lincolnshire, UK, where Design Technology teachers are voluntarily manufacturing 1,000 protective face masks a day. The school is contributing to the national effort to increase the availability of PPE for frontline NHS (UK National Health Service) staff.

Goodfellow has also donated to a number of other companies that are supplying protective equipment to hospitals, such as supplying PET sheet to Plastic Jesus Fabrication, an LA artist who has adapted his studio to make medical PPE

to donate to local hospitals. Other companies receiving donations include Royal Mint, Brammer, TJ Morgan and Safran Aero Boosters.

Stephen Aldersley, CEO at Goodfellow commented on the donations: "It's incredibly important that we come together to support each other in times like these, both industry and individuals alike.

"It just so happens that in this instance, Goodfellow has the ability to help frontline workers with the specialist materials used to make PPE – so it was a clear opportunity for us to start

contributing on a local level to this global crisis. We'd actively encourage other companies to do the same where possible.

"We know how hard our partners are working to make a positive difference amid this pandemic and we were particularly impressed with the efforts made by the teachers at Stamford School, who are showing solidarity and commitment in such uncertain times."

Teachers at the Stamford Endowed Schools originally trialled using the Schools' 3D printers to manufacture visors for NHS staff, but the process was too slow to meet demand. Instead, staff worked over a weekend to prototype and refine a design for creating face masks using laser cutters. This was then used to create the first delivery of 100 masks, manufactured in just six hours, which was sent to the ICU team at Peterborough City Hospital.

Mr Newton, Head of Design Technology at Stamford School, added: "We are extremely fortunate to have the equipment and skill set to make a real difference to members of our NHS. We will keep manufacturing as long as we have materials, which Goodfellow are supporting us with, and a demand for the product - we're just glad we are able to help our amazing NHS workers."

For more information about Goodfellow materials, visit www.goodfellow.com, or contact info@goodfellow.com.

Safety slip-ups: how to maintain a safe site

Site managers up and down the country share many of the same concerns, and safety is one of the main ones. Unfortunately, and despite everyone's best intentions, accidents can happen. A leak can inform you there was damaged equipment, and a spill can often be attributed to human error. Both leaks and spills can spread quickly and present immediate hazards for slips and falls.

Measures to combat this can be put into two broad categories: prevention and remedy. Prevention is always the preferred option as it ensures safety, simultaneously saving you considerable time and expense. But even the best made plans can go awry and whether through accident, mistake or bad luck, you could have a liquid on your site presenting a risk. The most appropriate response is therefore to include both prevention and remedy in your plan, and there are three areas that warrant the most attention to keep your site safe.

Training: the cornerstone of health and safety

If you want to maintain a safe site, training must be a priority. You can have the best products in the world on hand but if the team doesn't know how to use them, they won't be effective. Training will provide practical skills and raise awareness amongst the entire team of how to stay safe, to work with due diligence and take appropriate care. It should include how to use the products safely, proper storage of materials so they aren't trip hazards, and stopping a spill becoming a slipping risk. Training will also inform staff what to do when something goes wrong, ensuring they know the difference between an oil absorbent and chemical absorbent, how to dispose of used equipment, and critical minutes aren't wasted by trying to locate the clean-up materials or learning how to use them.

Every moment counts when preventing a problem becoming a disaster, and something as simple as knowing where the spill kits are located should never be a barrier to action.

The role of essential materials

There are countless reasons why a leak or spill can occur, so absorbents are as important on a site as a fire extinguisher. The selection is extensive, with an absorbent for every type of spill imaginable, including oil, chemical, and aqueous liquids. There should be an absorbent or spill kit for each type of liquid kept on site. However, emergency spill kits need to be designated for emergencies only; many teams have learned the hard way that using these kits to clean up minor drips and leaks results in a depleted kit for when it's truly needed. Instead, strategically placed absorbent stations should be used for the drips and leaks, and spill kits with visible tamper tacks reserved for an emergency.

In addition to the absorbents, necessary materials include PPE such as gloves and goggles to keep the team safe, and disposal equipment so the absorbents can be safely discarded and not become a hazard of their own. Perhaps most important is where all of this equipment is kept: it needs to be accessible at all times, with absorbents kept in close proximity to the liquids they would be applied to.



Maintaining spill containment

With staff trained and a well-equipped site, the final piece is your storage solution. Thorough checks should be conducted regularly, ensuring that quality control standards are being met. Ultimately you're checking that the integrity of the equipment has not been compromised, which includes removing drain water to ensure full capacity, valves are operational, no foreign objects have found their way in, and there are no leaks. This routine monitoring will ensure you're alerted to issues before they become a problem.

Prepare for the worst

The only thing worse than a disaster occurring is not being able to handle it. There are no guarantees on a site, so the training and preventative measures won't make you immune to leaks and spills. But appropriate preparation will put you in the best possible position. Investing in prevention and remedy will significantly reduce the likelihood of a spill or leak occurring in the first place, while also putting you in a strong position to react swiftly if something does go wrong. In so doing, site managers around the country can feel a lot more prepared and less concerned.

For more information visit:
www.thedarcycgroup.co.uk

NexSys® ATEX batteries bring advantages of Thin Plate Pure Lead (TPPL) technology to materials handling vehicles operating in hazardous areas

NexSys® ATEX batteries, available from EnerSys®, allow materials handling vehicles to work safely in hazardous areas where there is an explosion risk. They conform to ATEX standards, which are compulsory and a legal requirement in Europe and NexSys® batteries are also available world-wide certified in compliance with IECx standards.

The new batteries, available in nearly all DIN sizes and capacities, offer significant advantages over both Valve Regulated Lead Acid (VRLA) gel and flooded lead-acid solutions. These advantages result from the Thin Plate Pure Lead (TPPL) technology used in the batteries' construction. Accordingly, they offer outstanding Amp-hour (Ah) capacity.

NexSys® ATEX batteries require much lower maintenance than flooded types, with no need for topping-up. Critically for hazardous environments, the batteries' electrolytes are non-spillable, as they are absorbed into the Absorbent Glass Mat (AGM) separator material. They also recharge faster than gel and flooded batteries, with opportunity charging being possible. This increases productivity and reduces costs. Additionally, service life is longer than for gel batteries.

The term 'ATEX', derived from the French 'Atmosphères Explosives', applies to atmospheres made potentially explosive by the possible presence of dust or gases likely to ignite or explode, for example in oil and gas, mining and chemicals industries during handling and logistics operations. ATEX product certification verifies the design specification of a manufacturer's product to a series of relevant standards. The certification process includes testing and assessment of the product, with ATEX and IECEx certificates and reports being issued for conforming product.

The NexSys® batteries' ATEX certification was granted by CSA Group SIRA, which is an independent body. SIRA certificate number 01ATEX3022X relates to the complete batteries, while 03ATEX3090U applies to individual cells. It is also available the certification in compliance with

IECEx standard– with certificate number IECEx SIR 07.0065X for battery and certificate number IECEx SIR 07.0064U for cells. The company's technical know-how and experience result from many years spent supplying various ATEX battery product ranges to explosion protection solution specialists, material handling equipment manufacturers and other customers.

The battery products and process fulfil ATEX Directive 2014/34/EU, with the production process being externally audited at regular intervals to ATEX standards. The batteries are designed for use in ATEX Zones 1 and 2 (Gases) as well as 21 and 22 (Gas and Dust) and Mining.

Each battery is engineered to specific customer requirements. These include specially designed trays and lids for Zone 1 and increased protection and testing for zone 21 and 22 batteries.

While Zone 2 product does differ from standard batteries, lids are typically not fitted, as cover protection is usually provided by the equipment/application. Additionally, ATEX-certified plugs can be supplied and installed on request.

The main issue with the special trays is the loss of capacity due to the different fit form. NexSys® batteries, with its higher energy density solves this problem. TPPL plate thickness down to 0.8mm (3x more plates than gel and flooded in same volume) provide an higher energy density and a greater Ah capacity than a VRLA gel battery of the same physical size, together with greater or equal Ah capacity than a flooded battery of the same physical size. NexSys® ATEX batteries can provide 10% more energy and power than standard flooded products and 15% more than standard gel products.



The batteries can be used over a temperature range of 0°C to 40°C, in low and normal duty applications working six days a week. Up to eight hours or more utilisation may be achieved, with a depth of discharge (DoD) to 80 per cent of C5, if recharge times are met. Cycle life can be improved by reducing DoD.

The batteries can be charged using NexSys® or NexSys®+, efficient modular high-frequency chargers. Charging time from 20 per cent state of charge to full charge is typically 6.25 hours or faster.

"In NexSys® ATEX batteries, we have a solution that combines many benefits of flooded and VRLA gel batteries", comments Mattia Bianconi, Application Manager Motive Power EMEA at EnerSys®, "and this is based on our standard NexSys® batteries, which have proven to be a product of choice in regular motive power applications since 2011. The ATEX batteries extend the same advantages, and product confidence, to users in hazardous environments. These are found in many sectors, from mining and tunnelling, chemical and pharmaceutical plants, oil and gas, military and aviation, to food and drink, waste management, printing and paper and many others."

For more information visit:
www.enersys.com

More airport work for Hart

Working through Vanderlande, the market's largest original equipment manufacturer (OEM) and supplier of logistic process automation for airports, Hart Doors has won a contract to supply 60 high-speed screens for a new baggage handling system at Manchester International airport.

Hart's managing director, Nick Hart, says by working with the airport and Vanderlande they were able to agree the detailed specification required. "We built test / prototype units and had more meetings at our factory after which the contract was agreed," says Nick.

"The high-speed screens are to operate with every bag that is checked into the airport. The door system communicates with both the baggage

handling and the security systems so that it can be interrogated remotely from anywhere in the world."

The three-phase contract is well underway with the final phase due to be finished and despatched by mid-July.

Mr Hart adds: "This type of contract, which requires developing the right solution to match specific needs of the client, is exactly what we



can do. We have a first-class team that is capable of planning the solution and taking it through prototyping to delivery. It's a good contract for us, it's been a typical Hart team effort."

www.hartdoors.com

0191 214 0404

SOCOTEC Introduces New Environmental Swabbing Method for COVID-19 Detection

SOCOTEC, the UK's leading provider of testing, inspection and compliance services, has introduced a new environmental swabbing procedure to determine the presence of SARS-CoV-2 (Coronavirus) on surfaces across a range of workplace environments.

The new method has been adopted in light of preliminary research which indicates that the COVID-19 virus has prolonged tenacity on surfaces, with contact via contaminated surfaces suggested as a possible cause of infection.

This swabbing procedure can be applied across a variety of workplace environments, including offices, factories, communal/public areas and public transportation, testing such surfaces as door/grab handles, light switches, HVAC vents, table/desk tops, office equipment, control panels, seat backs, sinks and toilet cubicles amongst others.

To carry out the test, sterile swabs will be gently rubbed and rolled over a set area of the surface to

be sampled. This process is repeated using fresh swabs for all other areas and locations that require sampling. Analysis is carried out by a specialist partner laboratory using Ribonucleic acid (RNA) testing, which detects the presence of SARS-CoV-2 viral RNA fragments.

Results will be reported in a comprehensive format comprising observations, salient points and recommendations for improvement, ensuring full compliance with relevant legislation. Photographic evidence will also be compiled within the report to indicate precisely where samples were taken.

"As certain Government restrictions surrounding the COVID-19 pandemic begin to ease, many

organisations are now facing the overwhelming task of returning their buildings to full occupancy. SOCOTEC is committed to guiding and supporting its clients as they prepare to resume business operations, ensuring that they remain safe and compliant while doing so," said Norman Sleeth, managing director, Environment & Safety, SOCOTEC UK.

"Our new environmental swabbing method forms just one of SOCOTEC's wide range of testing, inspection and compliance services that aims to get buildings 'business ready', instilling employers with confidence and reassurance regarding occupational health, safety and hygiene as they continue to operate through these uncertain times."

For further information on SOCOTEC's new swabbing procedure or to discuss your individual surface testing requirements during the COVID-19 pandemic visit: www.socotec.co.uk

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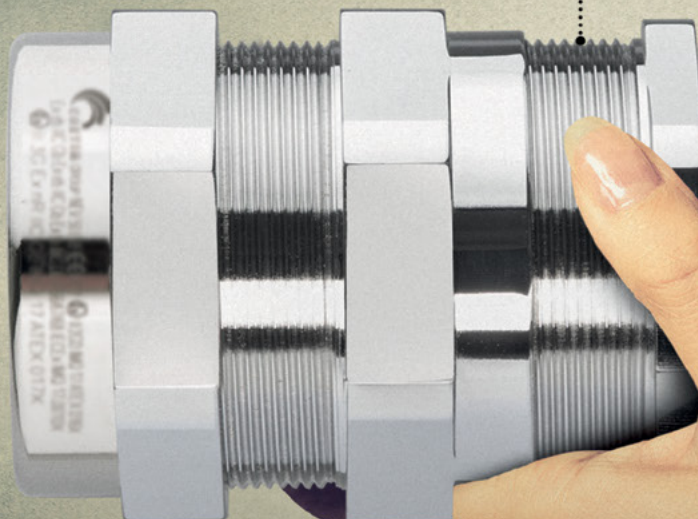
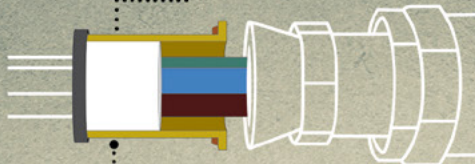
Suitable for different types of cables including lead sheathed,
flat, instrumentation and fiber optic cables



Barrier model supplied with the resin sealing kit



NEVB NAVB



Cortem Group expands the cable glands family and presents the **new barrier version for armoured cables NEVB series and for non-armoured cables NAVB series**. The barrier is shaped around the conductors thanks to the particular mixture that flows through them in the special bushing ensuring a complete seal. The liquid resin used prevents the formation of air pockets or voids between the conductors and the bushing.



cortemgroup.com

Cortem Group new NAVB, NEVB series Barrier cable glands

Cortem Group expands the cable glands family and presents the new barrier version for armoured cables NEVB series and for non-armoured cables NAVB series.



NAVB and NEVB series barrier cable glands are suitable for use in hazardous areas with danger of explosion to enable direct insertion of armoured and non-armoured cables into explosion-proof junction boxes, lighting fixtures, plugs and sockets, etc. Thanks to their structure, they are particularly suitable both in harsh application, such as marine one, and places subjected to

stress and mechanical shock as it often happens in all those places of the "heavy" industry where safety is a top priority.

The barrier is shaped around the conductors thanks to the particular mixture that flows through them in the special bushing ensuring a complete seal. The liquid resin used prevents the formation

of air pockets or voids between the conductors and the bushing. They are supplied with a resin kit made up of a two-component resin bag or a cartridge with resin plus mixer for use with a manual dispenser (optional).

Characterized by an ergonomic design and constructed of materials of the highest quality, the NAVB and NEVB cable glands series can be used with the main electric cables available on the market and in total compliance with all relevant international standards.

NAVB, NEVB series cable glands top features are:

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- Suitable for different types of cables including lead sheathed, flat, instrumentation and fiber optic cables
- Female or male entry
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- Laser marking
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- Ergonomic design
- Available in nickel-plated brass, stainless steel and galvanized steel

For more information visit:
www.cortemgroup.com



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www.abtech.eu

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Flexible Busbar Enclosure for Zone 1 Hazardous Areas

Abtech have launched a high current enclosure that can carry up to 3kA and certified for use in areas where potentially explosive gasses or dust are present.

The SX Busbar is the latest addition to Abtech range of enclosures for high current applications. Gareth Bruce, Marketing Manager for explains the concept behind the design "Our customers have been asking us for an enclosure that could accommodate a both wide variety of cable configurations and to allow the cable layout to be reconfigured if needed. Cable used for high current is often inflexible with restricted bending radii, so the design has to provide flexibility without bending the cables." He continues "as such we developed the SX with a series of tiered busbars that allow unrestricted access and flexibility for installation".

This busbar arrangement is housed within Abtech field proven SX stainless steel enclosure. It is suitable for high current (3000 Amps), medium voltage (up to 5kV) installations. "Due to the many possible combinations of busbar in terms of size and quantity and combined with different cable types, an almost infinite number of configurations are achievable" explains Bruce. "However, to provide a product that can be certified, understood and marketed we needed rationalise". The SX Busbar therefore can accommodate up to five conductors per phase, plus neutral with an optional earth bar facility. All versions are available



in a bottom or top entry only configuration. The maximum full load current.

The SX range is fully ATEX and IECEx compliant for use in Zone 1 and Zone 21 hazardous areas.

For more information and to download a datasheet, please visit:
www.abtech.co.uk

EARTHING CONTROL

There are two Earthing Monitors within the StuvEx range for Gas and Dust applications.

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OR
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Gas Version

StuvEx Safety Systems Ltd, Abbey Studio, Church Walk, Chertsey, Surrey, KT16 8RE - United Kingdom

Tel: +44 (0)1932 571303 - Fax +44 (0)1932 570548 Email: info@stuvex.com - www.stuvexuk.com



Photo: Øyvind Hagen / StatkraftHydro



Please refer to our website
for information about
our 5 year warranty.

www.glamox.com/gmo

Generations of Experience — Technology of Tomorrow

Glamox is the world market leader in the manufacture and supply of lighting solutions for the global marine and offshore markets. The company is involved in lighting studies, design and calculation for large offshore greenfield projects as well as offshore and onshore maintenance and modifications projects.

Enerpac announces complete suite of ATEX Certified Bolting and Pipeline Tools

Enerpac announces a complete suite of ATEX-Certified Tools for engineers working in potentially explosive atmospheres. Suitable for zones 1 and 2 gaseous atmospheres and zones 21 and 22 dust atmospheres, the range includes hydraulic torque wrenches, air pumps, flange spreading tools, hydraulic sealed hand pumps and hoses.

Compliant with EN ISO 80079:2019 parts 36 and 37, the Enerpac certified tools are one of the largest ranges of ATEX-Certified Tools available today. By providing both tools and ATEX-Certified hydraulic hoses, Enerpac enables a safer approach to projects in potentially explosive atmospheres.

The Enerpac ATEX-Certified Tools include the S-Series Square Drive torque wrenches, W-Series low-profile hexagon wrenches, W-Series ultraslim bi-hexagonal cassettes and the aluminium DSX-Series Square Drive torque wrenches. In

addition to the ATP-Series ultra-high-pressure, general purpose air pump, the range features the ZA4T-Series Air Driven torque wrench pump and XA-Series Air Driven foot pump. Other tools in the range are the SWI-Series flange spreading tool kit, HP-Series hand pump kits and 144-Series ATEX hydraulic hoses up to 6 metres.

Right Tool When Needed

The Enerpac ATEX-Certified Tools are included within the general hydraulic tools catalogue and can be used for both ATEX and non-ATEX



related projects. In this way companies faced with occasional ATEX projects are able to respond quickly and effectively without the need to procure additional ATEX tools.

"The new suite of Enerpac ATEX-Certified Tools is a first for the industrial tools industry and consistent with our commitment to offer engineers the most comprehensive range of industrial tools possible," says Maarten Franken, Senior Commercial Director, Enerpac Europe & Sub Sahara Africa.

For more information on the Enerpac ATEX-Certified Tools, visit www.enerpac.com.



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i.safe MOBILE presents Android tablet for robust use in hazardous areas

i.safe MOBILE, a developer of mobile communication devices in the hazardous zone 1/21, has announced the IS930.1. The IS930.1 combines the indestructible robustness of an IP-certified tablet with ATEX and IECEx approvals for safe use in hazardous environments.

It can be used in the oil, petrochemical, pharmaceutical and food industries as well as in mining, public utilities, municipalities and energy suppliers, among others. The IS930.1 comes with an 8" large, capacitive and low-reflection screen made of RugDisplay glass with a maximum resolution of 1,920 x 1,200 pixels, which is easy to read even in direct sunlight.

The tablet is powered by Qualcomm's 2.2 GHz octa-core processor, which is backed up by an 8,400 mAh rechargeable battery that provides ample power even during long periods of use. The device runs on Android 9 and can be updated to the latest Android version without any problems. Support for the LTE band and the current WiFi standards ensures fast internet connections. The robust tablet can also be controlled via Bluetooth 5.0 or NFC. The IS930.1 can easily connect to Industrial Internet of Things (IIoT) devices of today and tomorrow. The IS930.1 has 4 GB RAM and 64 GB (of which 54 GB are available) internal memory, which can be expanded by a further 128 GB via microSD.

Explosion-proof and rugged

The IS930.1 is IP68-rated and therefore resistant to dust, microparticles, water (up to 1 hour at a depth of 2 metres), shocks and temperatures between -20 °C and +60 °C. The tablet has an extremely robust polycarbonate plastic frame

with rounded corners. The LTE module integrated in the new IS930.1 allows circuit diagrams, order forms or spare parts orders to be opened quickly and reliably. In addition, pictures and videos taken with the 13 MP main camera or the 5 MP front camera can be easily sent to the head office or the customer. Various sensors for location, acceleration, gravity, gyroscope, ambient light, humidity, temperature and air pressure as well as the magnetic sensor complete the equipment package.

Despite its robust housing, the IS930.1 offers almost the same dimensions (237 x 156 x 22 mm) as a regular tablet and is easy to use. The weight of 890 grams gives the device the necessary stability. The display of the IS930.1 can also be operated with gloves.

The new tablet can process 802.11 a/b/g/n/ac/e/k/r/h on WLAN standards. For data acquisition, the ergonomically placed NFC reader and the rear camera with an additional app (e.g. Mobxscan) are available. GPS (GPS, A-GPS, Glonass, A-Glonass, Beidou, Galileo) is integrated for positioning and smooth route guidance. The IS930.1 is Push-to-Talk (PTT)-Ready and has



a sole operator protection function (third party application required).

Scope of delivery and availability

The IS930.1 is supplied with the USB cable i.safe PROTECTOR, charger, magnetic charging cable i.safe PROTECTOR, QuickStart Guide and safety instructions. The IS930.1 is available at leading retailers. The following accessories are available as options: car cradle, desktop charging station, display protection foil headset, hand strap and leather case in black/yellow.

For further information, visit:
www.isafe-mobile.com

Bacharach Releases Monoxor XR High Range CO Exhaust Gas Analyzer

Ideal for OSHA safety compliance and engine efficiency testing for forklifts and other equipment

Bacharach, an industry expert in gas detection and analysis instrumentation, introduces the Monoxor XR (extended range) hand-held exhaust gas analyzer for measuring CO (carbon monoxide) in ambient air or directly from the exhaust pipe of forklifts, floor burnishers or other equipment burning propane, gasoline, diesel, or CNG (compressed natural gas).

The Monoxor XR is the ideal instrument for verifying worker safety and achieving compliance with OSHA air quality regulations. It can also be used for engine tuning and diagnostics, resulting in improved equipment efficiency and fuel savings.

The Monoxor XR provides visual and audible alarming for instant alerting of personnel to dangerous CO levels.

The expanded measuring range of 80,000 ppm allows technicians to test even the most poorly maintained equipment without risking damage to the gas sensor. Bacharach's Combustion mobile app allows the user to quickly and easily create and send customizable emissions reports from their smartphones or tablets.

A specialized exhaust probe kit is available for direct connection to various exhaust pipe

designs, and a magnetic rubber boot is available to provide a non-slip, secure grip for hands-free testing.

The Monoxor XR employs Bacharach's B-SMART® sensor technology for pre-calibrated sensor replacement in the field - minimizing downtime, maintenance costs, and overall cost of ownership.



For more information visit:
www.mybacharach.com/b-smart-registration/

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Hi-Line Support NHS In Medical Gas Dryer Production

Hi-line Industries, the UK's leading designer, manufacturer and installer of air/gas dryers and nitrogen generators, is lending its support to the NHS in combating the current COVID-19 pandemic.



respond to the biggest global health emergency since the Spanish Flu pandemic over a century ago (1918-19).

Hi-line's expertise has also been of paramount importance at the St Thomas' Hospital in Lambeth. Supplying the facility that recently treated Prime Minister Boris Johnson in his fight against the virus, Hi-line has provided both sterile medical air dryers and standard air dryers. This same combination has also been supplied to the new Nightingale Hospital North West, a 1000-bed facility located at Manchester's Central Conference Centre (formerly known as G-MEX), and the new Nightingale Hospital North East, which houses 460 beds at the Centre of Excellence for Sustainable Advanced Manufacturing (CESAM) in Washington.

In all cases, Hi-line's dedicated fabrication team has been working night and day to provide the necessary equipment in time for the opening of each Nightingale Hospital. The company's service and main reception numbers, as well as the mobile numbers of key staff, have remained available throughout the crisis to support the NHS.

The company's fabrication department have been working round the clock to build and despatch medical gas dryers for a number of new NHS Nightingale and existing hospitals, supplying equipment against stringent deadlines. As key workers in the crisis, their service department is remaining open to support the NHS and customers in essential industries such as medical, healthcare and food manufacturing.

Hi-line Industries, founded in 2000, has established an enviable reputation in energy-efficient air/gas purification equipment. The ISO9001-certified company, which is a member of the British Compressed Air Society, is based in Burton-upon-Trent and supports the 'Made in Britain' campaign. Solutions from Hi-line, including critical medical gas equipment, are designed and built to the highest quality standards, and backed by a five-year warranty.

These factors proved pivotal in the company's selection to help combat the current pandemic. For instance, at the new 500-bed Birmingham Nightingale Hospital, Hi-line has supplied critical nitrogen generators and medical gas dryers. The company's medical gas dryers are built as duplex units, so that in the extremely unlikely case of failure, a second dryer comes on stream. Such failsafe operation is paramount in medical industry applications, where any issues can potentially be a matter of life and death. Furthermore, every medical gas dryer manufactured by Hi-line features dewpoint control at all load levels to deliver continuous dry gas performance, unlike thermal/chilled mass dryers.

The Birmingham Nightingale Hospital, which is located at the National Exhibition Centre, is one of seven Nightingale hospitals being set up around the country as part of a massive NHS effort to

Further information is available from:

Hi-line Industries Ltd

01283 533377

enquiries@hilineindustries.com

www.hilineindustries.com

Are you ready to re-open after lockdown?

With the government announcement on 10th May of its 'road map out of lockdown', in England at least, if you work in manufacturing, engineering or construction, or can't do your job from home, you'll now be able to return to work providing you can maintain social distancing. This is the first step in a phased process with 100% 'normality' still some months down the line.

- Training requirements to cover any temporarily reduced staff numbers.

Consideration will also need to be given to lead times for any equipment that needs to be ordered.



During shutdown there is also a real probability that some fixed gas detection systems will not have been maintained, calibrated or serviced according to schedule. While this won't prevent the system from working, the accuracy of the system may be compromised or some key element may need updating or replacing, such as a gas sensor. This could potentially affect the system's ability to detect the gas/es it's looking for.

In this situation a simple bump test using a calibration gas with a known concentration will demonstrate that the system is operational until an engineer can conduct a full inspection.

The types of workplaces now permitted to re-open are sites where health and safety and environmental monitoring are key considerations. As well as arrangements for PPE, hand sanitisation, social distancing and effective cleaning regimes, a large number of sites will have environmental monitoring needs, many of which may be uniquely linked to the lockdown circumstances.

To ensure the workplace is safe for employees to return, assessments may be needed for various potential risks including gas build-up, air quality, noise, accumulation of dust, cleaning and ventilation.

The Shawcity team is available now to assist businesses to deliver site re-openings following shutdowns to help ensure they are fully compliant, especially with the relatively short notice permitting them to open their doors to employees

again. Speed will now be of the essence for businesses to remain competitive while ensuring the work environment is safe to return to.

One consideration is that many companies may have closed their operations in a time frame which didn't allow for a complete switch-off or hibernation of all monitoring devices. This may result in instruments not being in a 'ready to use' state.

Depending on the range within a fleet, an instrument restart checklist might include:

- Battery check
- Boot-up and bump test
- Calibration and service due dates check
- Spares and accessories stock check
- Hires for specific restart tasks

Here at Shawcity we can offer video calls and surveys, phone or email technical support on all of the health and safety issues above. Site visits are also possible where remote advice is not adequate or there is an emergency, providing social distancing guidelines can be maintained.

Our team is ready to help any organisation seeking advice on how to re-open effectively and avoid any unnecessary or costly delays which could put your business at a disadvantage.

Contact us via the following details for further information and to start the conversation.

Email: info@shawcity.co.uk
Call: 01367 899419

Dynamic Duo for Protection in Hazardous Areas Panels & Enclosures

STEGO Heater CREx 020, Compact Thermostat REx 011:

Air as a medium can be malicious to electrical and electronic appliances. Absorption and release of water in the air within control cabinets creates the potential for the formation of condensate.

Condensate, in turn, carries out corrosion processes on sensitive components and can freeze at minus degrees. Thermal Management specialist STEGO also offers the right answer for hazardous environments.

With the proven expertise as heating manufacturer for panels & enclosures, STEGO meets the requirements of the Ex industry. The Ex heater series CREx 020 safeguards heating of switchgear and control cabinets as well as measuring devices in explosive atmospheres of zone 1 (gas atmospheres) and zone 21 (dust atmospheres) according to Ex protection class Ex II 2 GD. The maintenance-free convection heaters are available in three temperature classes (T3/T200 °C, T4/T135 °C and T5/T100 °C) and reliably prevent the harmful formation of condensate, temperature fluctuations and frost in explosive atmospheres. The CREx 020 series achieves dust and splash protection according to protection type IP66.

The aluminium profile heating body in anodised silver is equipped with a high-performance heating cartridge. CREx 020 models are available with heating capacities from 50 W up to 250 W. The aluminium heating body features a sophisticated geometry of the convection surface which ensures

perfect temperature distribution to avoid local overheating. The CREx 020 heaters are designed with minimal width and are ideal for conventional heating installation. The overall size is perfectly matched to the performance and therefore only as big as absolutely necessary.

CREx 020 heaters can be mounted by means of a clip for 35 mm DIN rails according to EN 60715 or anchored firmly with screw flanges. The universal screw flanges fit all heater sizes and can be inserted tool-free into the heaters' profile. This enables sideways mounting in addition to the standard mounting position, giving room for optimal placement in the application.

STEGO's Ex thermostat REx 011 is the fitting partner for control of the convection heater CREx 020 in hazardous areas. With temperature class T6/T85 °C the mechanical compact thermostat is the standard solution for temperature control in explosive environments of protection class Ex II 2

GD. The REx 011 is available in versions with two different switch-off temperatures (+15 °C or +25 °C). Technically sophisticated, the Ex thermostat has a high response accuracy and response speed, a low switching temperature difference (5 K) and a very long service life. The maximum switching capacity of up to 10 A ensures high reserves for direct control of more than one device with one Ex thermostat. Compact in its construction, the REx 020 can be installed in small niches. It mounts by means of screw flanges or DIN clip. In addition to its standard mounting position the REx 020 can also be mounted sideways. So, finding a neutral and stand-alone position becomes an easy task. Connection via PE cable according to DIN EN 60079 is simplified with a universal screw terminal, which is suitable for almost all types of conductors (up to 2.5 mm² diameter).

STEGO Ex products have the industry-specific approvals ATEX (according to Directive 2014/34 / EU) and IECEx, offering comprehensive, certified security for applications in hazardous environments.

For more information visit:
www.stego.co.uk



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Convection heater
CREx 020

High-performance thermostat
REx 011



What will get us to the other side of this pandemic?

There are a few things that will (eventually) get us all to the other side of the COVID-19 pandemic. Across the globe, everyone is hoping for an effective treatment or vaccine. The possibility of a viable vaccine that can be licensed and mass produced remains a distant prospect for the coming year. There is hope that ongoing trials and research into potential treatments may produce successful drug therapy within a few months. Nevertheless, there are non-pharmaceutical interventions that will have an impact on when we will emerge from “quarantine fog,” and what it will be like when we do.



*Dr. Adrian Hyzler, Chief Medical Officer,
Healix International/HX Global*

Social Distancing

The first measure—and we cannot stress this enough, is continuing to adhere to local government guidelines. Stay home unless you absolutely need to go out for food, supplies or medication. When you do leave the house, recommendations are shifting to say that people should wear a cloth face covering. This instruction for people without symptoms to wear masks or scarves over their face when they are out and among other people would be to prevent the unintentional spread of the virus during an asymptomatic period, rather than act as a primary barrier for protection against transmission.

But as much as you can, do stay home. The more time you spend at home, the less you are exposed to the virus, and the less you risk exposing others—especially those most vulnerable among us; people who are 65 and older or those that may have pre-existing conditions or be immunocompromised. If these individuals become infected with the virus, they are more likely to suffer severe symptoms and require hospitalization. The more COVID-19 patients that are admitted to the hospital, the more exposure

healthcare workers have to positive cases and a greater strain is placed on the limited resources of an overwhelmed healthcare infrastructure. We must also remember that it's not just those with COVID-19 that are affected by limited resources in medical facilities. The impact extends to anyone with other routine medical and surgical needs such as cardiac issues, injuries from motor vehicle accidents and pregnant women—and that's just to name a few.

Personal Protective Equipment (PPE)

One of the major resource issues that must be addressed in the midst of this pandemic is the production and procurement of personal protective equipment (PPE) for all healthcare workers. While manufacturers have ramped up production, the demand for PPE in the hardest hit countries is not being met. Healthcare workers have been required to re-use items like masks—something that would have been unthinkable just a few months ago. Manufacturing companies like General Motors and fashion retailers like Gap, Inc. have pivoted their supply chain in recent weeks in order to assist in the production of these critical materials.

Testing

There's one more thing that's going to make a tremendous impact on how and when this pandemic will come to an end, and that is testing. Currently, the testing in some of the most developed countries in the world is lagging woefully behind. This has resulted in backlogs and delays and the spread of the virus by those who couldn't access a test or were told they didn't meet the current parameters to be tested.

There are two distinct tests for COVID-19. The current PCR test that was approved and distributed by the WHO in January requires nasal and throat swab samples and tests for a particular strand of the viral RNA. This test is the gold standard for diagnosing a pathogen, but the testing is complex and mainly carried out at large reference laboratories. Tests typically take 4–6 hours to complete, but the logistical requirement to ship clinical samples means the turnaround time is 48 hours at best, and in many countries can take up to 5 days. But there is hope for minimizing the waiting period. Last week the US Food and Drug Administration (FDA) approved a COVID-19 test from Abbott Labs that delivers positive results

in as little as five minutes and negative results in 13 minutes.

The potential development of a rapid COVID-19 test would revolutionize the protocols for self-isolation and quarantining. The other test that is being trialed in many countries, prior to an expected roll-out in the coming weeks, is an immunoassay test, also known as an "antibody test." This test provides historical information about the virus, as well as confirming a diagnosis. It requires two drops of blood from a pinprick and gives results within a few minutes. It is essentially a home test that requires no medical skills for sampling and no laboratory expertise for analysis. These tests are cheap, but not as accurate as

PCR testing. On March 25, a UK government official said that the country had ordered 3.5 million of these "finger-prick" antibody tests that would allow people to perform the test at home. The test would show whether the individual had been previously exposed to COVID-19 and help researchers to determine what kind of immunity those with such exposure might have. Further, these kinds of tests would show how many people may have contracted the virus without their knowledge—some people could have had the virus with no symptoms, others could have had it and assumed it was a cold or perhaps the flu. In the case of high numbers of healthcare workers who are having to self-isolate because of potential exposure, they would be able to return to work if tests show that they have been exposed and have antibodies. The same is true for essential workers in food distribution, transportation and other vital services. These tests would mean that we can gradually get people back to work safely.

Antibody testing will also provide a more accurate idea of how deadly COVID-19 really is. The deaths caused by this pandemic are tragic—but the true mortality rate will never be known until there is a more accurate idea of how many people have had the virus. This, along with treatments and a vaccine, will eventually lower the calculated mortality rate and allow this coronavirus to assume its position as yet another pathogen in history that posed a threat to humanity.

By Dr. Adrian Hyzler, Chief Medical Officer, Healix International/HX Global

Healix International/HX Global works with multi-national corporations, NGOs and governments around the world to provide medical, security and travel assistance and help fulfil duty of care obligations.

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First Mile launches safe and simple waste disposal solution for used business PPE

Businesses throughout London and Birmingham can now easily and responsibly dispose of face masks, gloves and other forms of workplace personal protective equipment (PPE), thanks to a new dedicated PPE disposal service from leading waste and recycling company, First Mile.

recycling services, which are still in full operation throughout London and Birmingham.

Checklist for effective Covid-19 business waste management

First Mile has the following advice for businesses operating (or planning to reopen) during the Covid-19 pandemic:

1. Share your risk assessment with your waste provider so they can support you
2. Ensure bins and bin areas have been thoroughly cleaned before your teams return to work
 - Arrange a deep clean for bins and bin areas
3. Avoid leaving waste on site for extended periods
 - Ensure cleaners are briefed to empty and change office bins on a daily basis (or more regularly depending on the size of your business)
 - Switch to more regular flexible services like sack collections instead of infrequent wheelie bin collections
4. Restrict external companies and visitors from entering the building/floor-walking
 - If necessary, agree a new pick-up point with your waste collector
 - Brief cleaners or facilities staff to service internal bins (including confidential waste) and deliver the sacks to the pre-agreed pick-up point
5. Make GDPR-compliant arrangements for confidential waste at employee's homes
 - Use an 'at-home' shredding service for confidential waste
6. Single-use PPE should be handled separately from other waste streams to limit contamination risk
 - Ask your waste collector to provide a dedicated PPE service



Many businesses will be using PPE to minimise the risk of Covid-19 transmission to both staff and customers, and it's likely this will continue to rise as more and more businesses open. Often these PPE items will be disposed of within the workplace, requiring a proper disposal route to complete the Covid-secure chain.

First Mile's PPE waste disposal service is simple, yet highly effective. Visitors and staff simply drop any used masks or gloves into one of First Mile's self-contained sack-lined PPE boxes (available at thefirstmile.co.uk/service/ppe-waste). Once full, the box is easily fastened – without the need to touch or remove the sack after filling – and businesses book a free collection. Boxes are then collected as part of a dedicated PPE pickup service to avoid cross contamination, and taken

for incineration in line with Offensive Waste guidelines.

Speaking about the new service, First Mile founder and CEO, Bruce Bratley, says: "Whatever the exact rules are as we emerge from lockdown, there will undoubtedly be an impact on businesses' waste management, a service which is often left to the last minute. Now is the time and opportunity for companies to integrate end-of-life thinking into their plans. Being Covid-secure is of vital importance, and ensuring that PPE is handled separately to other waste streams should be a key consideration within any risk assessments."

First Mile's PPE waste disposal box costs £25 (including collection). The new service complements First Mile's existing waste and

For more information visit:
thefirstmile.co.uk

Street artist Plastic Jesus is using his creativity... And donations from caring companies ... To fabricate face shields for hospital staff

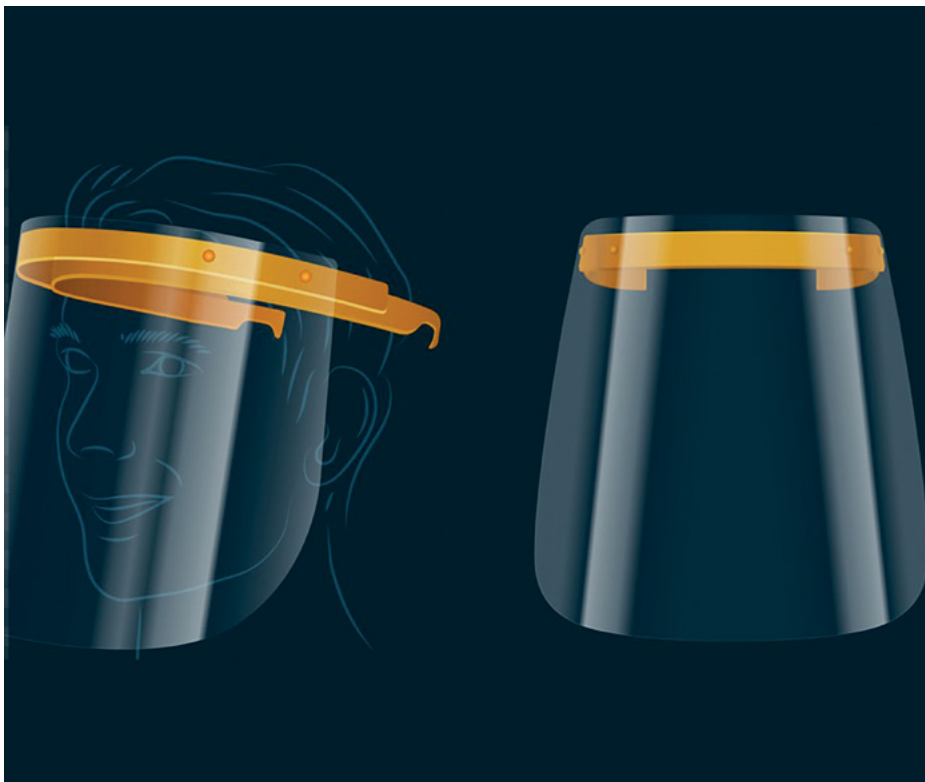
Plastic Jesus is a Los Angeles-based street artist best known for his bold “Stop Making Stupid People Famous” stencil art and biting Academy Award-themed installations. These days, however, he’s turning his attention to the urgent need hospital medical staff have for personal protective equipment (PPE), including face shields.

about the efforts of Plastic Jesus, we gladly offered to supply PET for the project.”

For Plastic Jesus, switching from street art to face shields isn’t as much of a stretch as it might seem. “I have an engineering background,” he says, “and I learned early on that if someone before me has made something, I can probably make it, too. As with my street art, I decide what I want to create, then I figure out how to do it.”

Assisting Plastic Jesus with the face shield fabrication is Laser Gnomes, a Los Angeles company specializing in precision laser cutting and engraving. They expect to cut enough of the PET material for Plastic Jesus to fabricate hundreds of face shields for distribution to hospitals with the greatest need.

Despite his image as a bit of a rebel, Plastic Jesus insists that his work is more about shining a small light in some dark corners of society ... and he believes it’s a calling everyone can participate in. “In a crisis like this, each one of us has a skill that can be used,” he says. “It’s time to pull together and make a difference.”



He’s adapted his 1000 sq. ft. studio to the fabrication of face shields for use by overworked doctors and nurses caring for critically ill patients requiring intubation prior to mechanical ventilation. Although it is standard practice for all members of the care team to wear a face shield during the intubation procedure, a severe shortage of face shields has meant that often only one face shield is available – and that is used by the physician actually doing the intubation.

Enter materials supplier Goodfellow. When the company became aware of Plastic Jesus’ desire to fabricate face shields, they donated PET – a clear, strong and lightweight plastic – required for the project. Says Goodfellow CEO Stephen Aldersley, “Goodfellow has invested heavily in supporting companies combatting Covid-19 and assisting front-line workers by providing materials to aid treatment and research. When we heard

For more information about Goodfellow materials, visit: www.goodfellow.com, or contact info@goodfellow.com.

Belzona 4411 (Granogrip) – For the prevention of slips, trips and falls

Whether in a workplace or public environment, the importance of people's safety should always be a top priority.



There are various areas that can become slippery and dangerous when in contact with water and other liquids such as production floors, ramps, stairs, loading bays and walkways. These areas can present serious injuries and costly repercussions if not treated with proper care and responsibility. In Great Britain alone, there were over 69,208 employee non-fatal injuries reported by employers in 2018/19 (RIDDOR). From that figure, 29% of those incidents were categorized as slips, trips or falls on the same level.

There are of course quick, short-term solutions for dealing with wet or contaminated areas. Flooring areas can be regularly cleaned, effective footwear can be worn, and training and supervision can be given. However, in order to significantly reduce the risks of accidents in the long-term, safety grip systems offer a hard-wearing solution that exhibits exceptional adhesion to a variety of surfaces in comparison to anti-slip tapes.

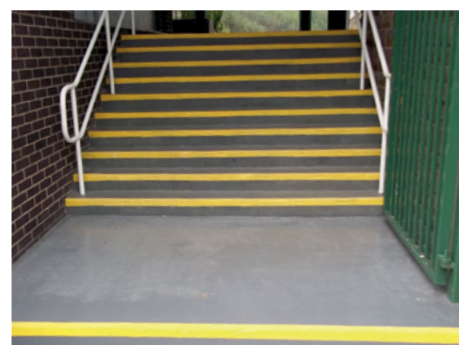
Belzona 4411 (Granogrip) is a two-part, fluid epoxy resin designed for the creation and repair of safety grip systems on walking surfaces. Used

in conjunction with an aggregate, this solvent-free material is ideal where slip reduction, adhesion, chemical or wear resistance are required. When compared to conventional grip systems such as tapes/strips, epoxy systems such as Belzona 4411 offer both performance and application benefits. Aside from the slip reduction, the system demonstrates excellent levels of adhesion, offering a long-term solution that will not peel or wear away. The system also ensures high visibility where required, available in safety yellow or grey. Once installed, the system requires no maintenance, making it a reliable choice. The positive grip system is also easily brush-applied without the need for hot work or specialist tools. The solvent-free and low-odour nature of the system also allows work to be carried out on-site in public areas.

The following example demonstrates the systems ability to not only upgrade an areas appearance and visibility, but to also offer a long-term, non-slip solution. Numerous step nosings at the main entrance of a secondary school had become damaged over time with a loss of surface material.



Before



After

In the original state of the stairs, there was also a lack of visibility. The school wanted the main entrance upgrading and wanted to ensure the steps were safe for its staff, pupils and visitors. Once the concrete step nosings were rebuilt using a Belzona concrete repair composite, Belzona 4411 and aggregate were applied by brush, with the application area taped out to ensure a neat application. The completed application meant there was a drastic reduction in the risk of falls or related injuries due to the increased traction this system offers.

Belzona 4411 (Granogrip) is the ideal solution for creating a safer environment in workplaces and public environments. The system is proven to be long-lasting, providing better performance over conventional methods such as adhesive tapes and strips.

For more information on the system, visit www.belzona.com/4411.

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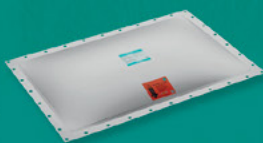


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