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Engineering MAINTENANCE solutions

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Condition Monitoring | Predictive Maintenance | IR | Asset Management | Facilities | Test & Measurement



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Stronger, Sustainable Packaging With Hot-Melt Glue Inspection

The global drinks industry produces millions of products every single day. Open or damaged packs can be a serious safety issue, as well as the cause of customer complaints or product recalls.

As sustainability efforts gather pace, and more manufacturers move to reduce plastic from production, the challenge of ensuring pack and pallet stability with sustainable alternatives requires a new approach to automated quality control.

The UK-based integrator Bytronic recently installed a new automated vision inspection system on a plastic-free multipack assembly line at a global brewing company using Teledyne FLIR thermal imaging cameras.

Preventing downtime and defective packaging while helping to eliminate plastic wrapping was the big challenge.

The system - called Hotspot - combines the Teledyne FLIR A50 (previously A35) smart sensor thermal imaging camera with smart software programming to inspect the application of hot melt glue beads on cardboard multipacks.

Guaranteeing plastic-free pack stability with thermal inspection

The Teledyne FLIR A50 (previously A35) Smart Sensor camera is designed for condition monitoring. With built-in, on-camera analytics, temperature measurement and analysis can be easily done without a PC.

By capturing a thermal image through the cardboard, the HotSpot system identifies glue position to show if glue has been applied correctly; the right amount, in the right place and at the right temperature.

It alerts operators to any deviation in glue application, so defects can be spotted before leaving the line, preventing collapsing packs or breakages on-site or during transportation.

Preventing product recalls

Bottling lines will often be running continuously - in this case producing up to 60 multipacks every minute. Such high-speed operations require the latest high-speed inspection methods.

Traditional manual checks at timed intervals leave space for product escapes through natural human error.

Using Teledyne FLIR thermal cameras placed above the line to inspect every seal on every pack, HotSpot provides a fast and non-destructive in-line test of pack integrity.

Such is its success, that HotSpot has been expanded from a single trial to five production lines - both new and retrofitted - in under two years. The system is now being installed as standard with every new line.

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Setting New Standards in the Machining of Long and Heavy Workpieces – Nagel Vertical Honing Machines VL 15 and VL 30

Nagel introduces the high-performance vertical honing machines VL 15 and VL 30, designed specifically for machining long steel tubes, piston rods, and other heavy workpieces with standard lengths of up to 3,800 mm and diameters of up to 350 mm. Custom stroke lengths are also available upon thorough evaluation. These machines establish new benchmarks in precision and machining efficiency.

The Nagel VL series combines user-friendly operation, powerful drives, and a stable, robust design. Installed over a working trench, the machines enable workpieces to be accessed both above and below floor level. This ensures ground-level accessibility to the working areas, enhancing workshop flexibility.

With the VL 15 and VL 30, high material removal rates can be achieved in short cycle times while maintaining tight dimensional tolerances and geometrically precise bore shapes. These machines also deliver exceptional surface finishes, even on workpieces with rough pre-machining, meeting the stringent quality demands of various industries.
The VL series is also suitable for external machining, where the workpiece is mounted on the honing spindle, which performs both vertical and radial honing movements. This significantly extends the lifespan of sleeves and sealing elements, as the machining marks are oriented axially.

Equipped with an advanced automatic measurement system, the machines

achieve shut-off accuracy of 0.01 mm, even when machining long tubes with material allowances of up to 1.0 mm. This ensures consistently high manufacturing quality while minimizing operator effort.

Nagel honing machines are indispensable for companies prioritizing top precision and efficiency. The compact design of the VL series saves valuable floor space while delivering the stability required for machining large and heavy workpieces. They are the perfect solution for industries relying on cutting-edge technology in heavy machining.

With the VL 15 and VL 30 vertical honing machines, Nagel offers a forward-thinking solution that not only enhances production quality but also reduces production costs—a clear competitive advantage in an increasingly demanding market.

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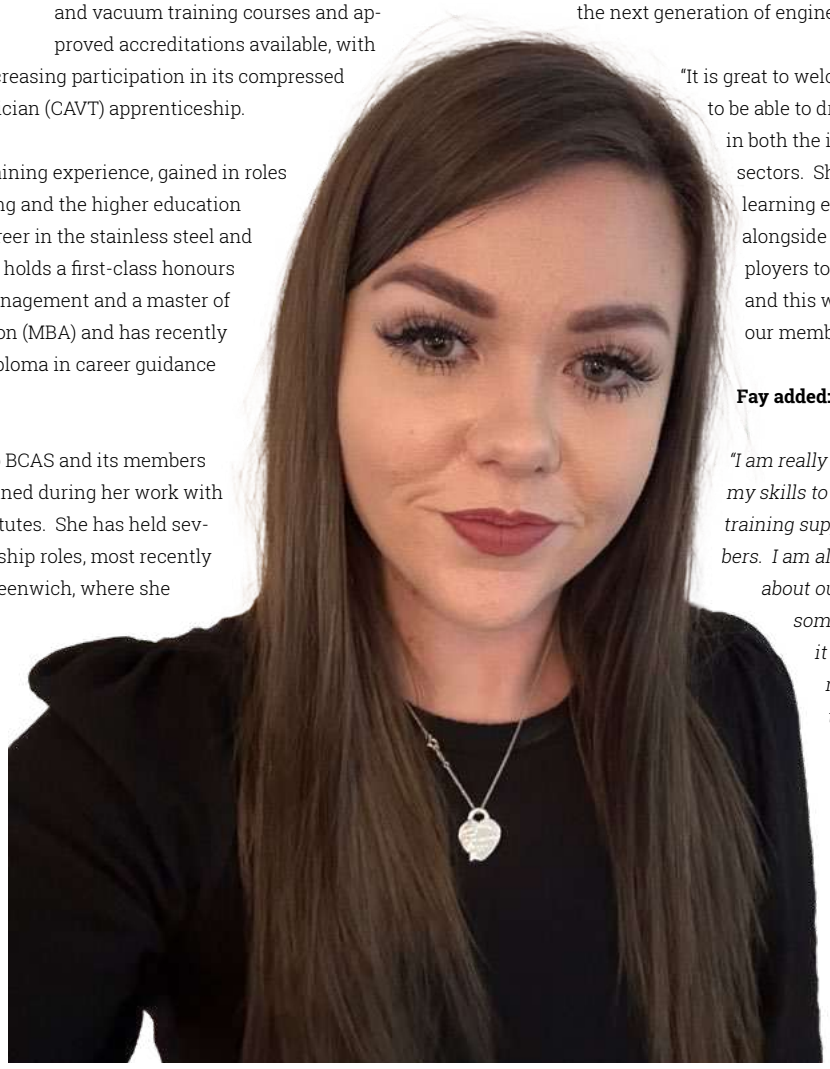
BCAS Appoints New Learning Support Officer To Further Enhance Training Offer

Fay Hutchinson has joined the British Compressed Air Society (BCAS) in the newly created role of Learning Support Officer.

Working alongside Terry Collier, BCAS's Learning and Development Officer, the new role will see BCAS further enhance the breadth and range of compressed air and vacuum training courses and approved accreditations available, with particular focus on increasing participation in its compressed air and vacuum technician (CAVT) apprenticeship.

Fay has a wealth of training experience, gained in roles both within engineering and the higher education sector. Starting her career in the stainless steel and aluminium sector, Fay holds a first-class honours degree in business management and a master of business administration (MBA) and has recently completed a level 6 diploma in career guidance and development.

Of particular benefit to BCAS and its members is Fay's experience gained during her work with higher education institutes. She has held several employer relationship roles, most recently at the University of Greenwich, where she has secured successful industrial work placements for students during their university studies. She has also been actively involved in encouraging businesses to offer degree apprenticeships, using their apprenticeship levy where appropriate to either bring new talent into the business or to upskill existing members of staff.



Commenting on the appointment, Ashley Quarterman, BCAS Executive Director said:

"The industry is only too aware that recruiting and retaining skilled staff into the compressed air and wider engineering sector is challenging. Offering high-quality training, whether through our apprenticeship scheme or one of our many CPD-approved courses, can help to deliver the next generation of engineers that our sector needs.

"It is great to welcome Fay to the team and to be able to draw on all her experience in both the industrial and education sectors. She understands how effective learning environments can be created, alongside the pressures faced by employers to continually train their teams and this will be of genuine benefit to our members."

Fay added:

"I am really looking forward to using my skills to help further enhance the training support available to our members. I am already speaking to members about our CAVT apprenticeship and some of the ways we can refine it further through progression routes, as well as being able to advise on the range of bursaries and levy funding that could be available."

For further information about the British Compressed Air Society please visit https://www.bcas.org.uk

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A guide to civil, structural and building asset management in process, industrial and production environments
Publication 238
Edition 1



Alarm systems
A guide to design, management and procurement
Publication 191
Edition 4



FastMaint CMMS Software v.12 for Facility & Equipment Maintenance

SMGlobal has released FastMaint CMMS software v.12. It is a computerized maintenance management software program for equipment and facilities maintenance. FastMaint CMMS lets maintenance managers schedule both preventive maintenance and corrective maintenance work, send work orders to the maintenance staff on their mobile phones, receive feedback from the maintenance workers, and track the progress of all outstanding and completed jobs. It can be used for on-site maintenance or field service management.

The software has enterprise asset management features to track equipment and facilities, inventory management, and maintain supplier records for ordering spares and equipment. FastMaint automatically schedules maintenance activities based upon dates, meter readings, emergency conditions, or any criteria that the maintenance planner specifies. It is easy to create work order templates for planned maintenance, and to deal with breakdowns and other emergencies. Users can insert pictures, and link their work orders to outside supporting documents.

New features in version 12 include wizards to enter new equipment, task templates, parts and more, the ability to remove old data, more work order creation options and user interface improvements.

Frank Siepel an engineer at Vertex Energy says "I have been thoroughly satisfied with FastMaint, it continues to meet our needs, we are now using it at two facilities. It is simple to install and use and we have been pleased with the customer support and updates received over the years. We've been using it around a decade at this site."

Matt Sam, Facility Supervisor at Father Sam's Bakeries says "FastMaint helped our maintenance staff stay on task daily and make sure all the big tasks were being scheduled and getting done. It took a lot of the remembering off of the maintenance team and the maintenance manager. We used to put out fires as a maintenance team, now we can catch them before they start."

FastMaint CMMS software is available in four editions. This allows customers to upgrade the software as their companies grow in size and complexity.

The Standard edition is suited for a single user managing the maintenance process.

The Professional and Web editions allow multiple users to use the system at the same time. Cloud edition is the Web edition hosted by SMGlobal. Unlike the other editions, it does not need to be installed in the customer's site.

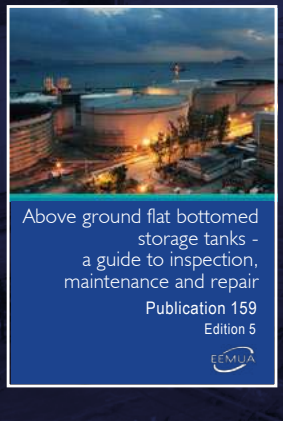
Standard edition is US $1,600. The Professional and Web editions start at US $4,000. These prices are for downloaded software that customers install on their own systems and are not monthly subscriptions.

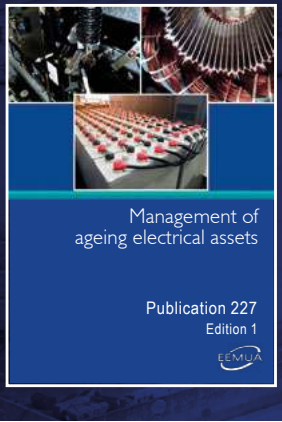
The Standard, and Professional editions need Microsoft Windows 8 or later. The Web edition needs Microsoft Windows 2012 or later for the server.
The Web and Cloud editions allow client access using a Desktop, Laptop, Netbook, Tablet or Smart Phone with a HTML 5 compliant browser such as Microsoft Edge, Google Chrome, Mozilla FireFox or Apple Safari.

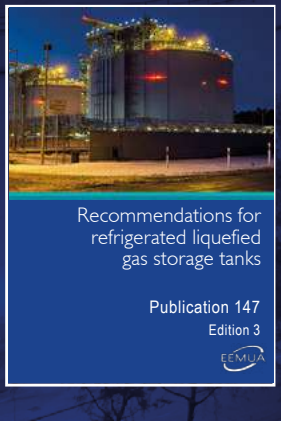
For more information or to get a trial, contact SMGlobal Inc., 5448 Apex Peakway #308, Apex, NC 27502 USA Phone: (919) 647-9440 Email: sales@smglobal.com Website: www.smglobal.com



Competency training, and Professional networking









The Tp2 Temperature Plug And The Tsm Clamp On Temperature Sensor Module

ifm, a leader in sensor technology and automation solutions, is excited to introduce two innovative products: the TP2 Temperature Plug and the TSM clamp on Temperature Sensor Module. These advancements are specifically designed to meet the stringent hygiene standards of various industries, offering exceptional reliability and performance.

The TP2 Temperature Plug marks a significant advancement in hygienic process monitoring. Designed with a focus on precision and durability, it boasts a robust all stainless-steel housing that provides maximum resistance to corrosion and contamination. Its compact design facilitates seamless integration into existing systems either via standard 4-20mA output or IO-Link without compromising measurement performance.

This device offers high-precision temperature measurement for challenging environments, features an IP69K-rated enclosure for superior protection against high-pressure washdowns, and enables easy plug-and-play installation to minimise downtime.

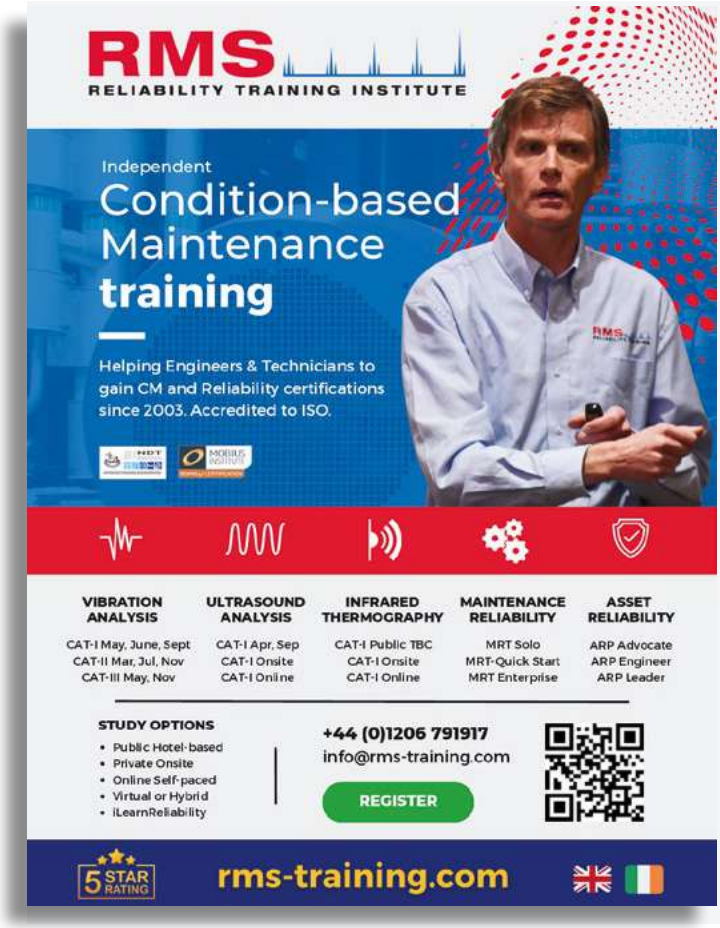
The clamp on TSM Temperature Sensor Module sets new benchmarks in temperature management for non-invasive applications. Equipped with cutting-edge sensing technology, the TSM delivers rapid response times and unmatched accuracy, making it ideal for industries such as food and beverage, pharmaceuticals, and biotechnology.

Key features include advanced temperature sensing across a wide measurement range, swift response times for real-time process control, and a modular design that allows for flexible configuration and system expansion.

Both the TP2 and TSM are engineered to meet the market's demand for enhanced process safety and efficiency. These products address common challenges in industries that require strict hygiene protocols, including minimising contamination risks and ensuring consistent product quality. By integrating these technologies, businesses can elevate their operational standards and more efficiently comply with regulatory requirements.

The TP2 and TSM are suitable for a wide array of applications where intrusion into the pipework is not viable. This includes monitoring temperatures in food production, pharmaceutical manufacturing and maintaining precise conditions in biotechnology facilities.





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Motion Amplification, Thermography, Oil, Balancing, Laser Alignment, Ultrasonic and Motor Analysis. Our partnership with industry OEM's highlights the commitment we make to showcasing innovative technologies. One such example is RDI Technologies. Their revolutionary technology, Motion Amplification, is a video-processing product and software package that detects subtle motion and amplifies it to a level visible with the naked eye. RMS is also a UK approved distributor of Emerson/CSi Machinery Health Manager products and solutions.

The Reliability Training Institute is a UK & Ireland accredited Training Organisation for both Mobius Institute (MIBoC) and The British Institute of Non-destructive Testing (BINDT). Professional training courses in Vibration Analysis, Ultrasound and Asset Reliability prepare students to take the ISO certified examination. We use the very latest computer-based simulations and animations to help make even the most complex subjects understandable. Study options include Onsite, Hotelbased, Hybrid, Virtual Instructor-led and Self-paced courses."

www.rms-reliability.com

Optimized Surfaces For High-Performance And Long-Lasting Components

The choice of the right machining process significantly impacts the quality and lifespan of technical components. In many industrial applications—ranging from automotive and aerospace to energy generation—precisely machined components are essential for minimizing friction and wear. Optimized surface characteristics can make components more compact, efficient, and durable.

The Impact of Machining on Friction and Wear

A comparison of turning, grinding, and superfinishing reveals significant differences in frictional properties, wear behavior, and surface topography.

Turning is a conventional cutting process with defined cutting edges, allowing for efficient material removal. However, it tends to leave a relatively rough surface structure. This can be problematic in sliding and rolling contacts, as the load-bearing surface area is often only around 40%.

Grinding significantly improves surface structure, increasing the load-bearing ratio to approximately 70%. However, the high temperatures generated in the grinding zone—where coolant is often ineffective—can induce tensile residual stresses in the surface. Additionally, the formation of a "soft skin" (temperature-induced material property alteration) may counteract the advantages of a better load-bearing surface, ultimately accelerating component wear.

Superfinishing addresses these challenges by combining high surface quality with minimal thermal stress. Operating at very low cutting speeds, this process raises the workpiece temperature by only a few degrees. The tools maintain continuous contact with the workpiece surface, creating an exact topography with a high load-bearing ratio through overlapping movements. Surfaces with a plateau structure offer particular advantages, forming oil retention pockets that enhance sliding and rolling friction properties.

Superfinishing: Precision Meets Cost-Effectiveness

Superfinishing offers numerous advantages but does not achieve the high material removal rates of hard turning or grinding. Consequently, it is primarily used as a finishing process. To maximize cost efficiency while ensuring outstanding component quality, parameters such as feed rates, dressing cycles, and tool change intervals can be optimized, and surface roughness can be adjusted. Additionally, superfinishing significantly reduces the geometric accuracy requirements of prior machining steps—a crucial advantage in production workflows.
A standout feature of superfinishing is its robustness against fluctuating input tolerances. This ensures consistent process reliability and top-tier surface quality. The results speak for themselves: reduced friction losses, lower heat generation during operation, and extended component lifetimes. This not only translates to reduced maintenance and lower operational costs but also enhances reliability—a critical factor in industries where downtime is costly.

Practical Applications: Energy and Medical Technology

The benefits of superfinishing are particularly evident in applications demanding maximum efficiency and durability. In energy generation, such as offshore wind farms, components must operate reliably for decades under extreme conditions. A prime example is large rolling bearing components, where superfinishing achieves roundness values of 1 µm and surface roughness below Ra < 0.2 µm. Such precision minimizes maintenance requirements and prevents costly downtime.

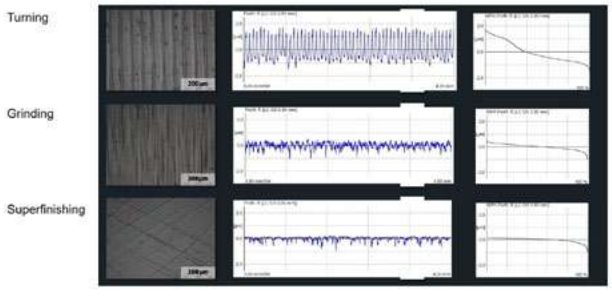
In medical technology, implants like artificial hip joints benefit from highly polished, finely machined surfaces. These reduce deposits, facilitate cleaning, and lower infection risks. For instance, roundness values of 0.5 µm are achieved, and surface structures become measurable only through advanced reflection systems.

Striking the Right Balance Between Technology and Cost Efficiency

"The selection of optimal superfinishing parameters, tool types, and processing solutions depends on the preceding machining process and the specific application requirements. Our goal is to work closely with customers to find the ideal balance between technical feasibility and economic efficiency," explains Christian Feuchter, Project Manager & Technical Sales. To achieve this, modern machines, precise measuring instruments, and experienced specialists are at their disposal.

Thanks to superfinishing technology, friction losses are minimized, heat generation is reduced, and component lifetimes are significantly extended. In industries where maximum precision is essential, this process provides a decisive competitive advantage.

Author: PressCo., Yvonne Nagel, www.pressco.de





A New Chapter For Rotork's Service Business

Rotork is excited to announce that Rotork Site Services is now officially Rotork Service.

The decision to rebrand reflects its commitment to growth and ambition to become a stronger, more unified global service provider.

The goal is to evolve beyond traditional site-based services and offer a Full Lifecycle Experience encompassing all stages of the customer journey, from installation and upgrades to ongoing support and predictive maintenance.

This new identity aligns with industry terminology and showcases the full range of services. Rotork Service is focusing on enhancing the value it brings to customers by expanding its capabilities, embracing digital solutions, and delivering higher-margin services.

Rotork Service will continue to deliver the same high-quality service and support customers have come to expect. The rebranding is about evolving its approach and expanding its offerings, not changing the exceptional customer service people know and trust.

With the new focus on a Full Lifecycle Experience, it is integrating more digital services, including predictive maintenance and enhanced service solutions, to optimise customer operations.

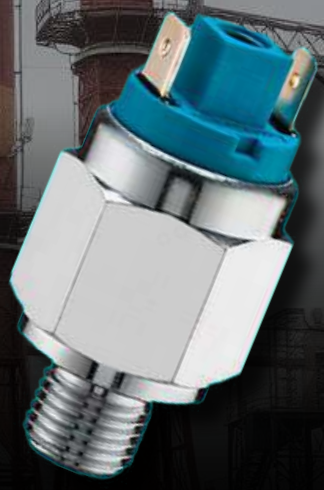
As part of its ongoing commitment to service excellence, it is enhancing its service capabilities across all regions, backed by a network of over 300 skilled Field Service Engineers.

The offering will now be organised into four key areas: Connected Services, Field Services, Reliability Services, and Support Services. This will enable more targeted, tailored solutions for customer needs.

As Rotork Service continues to grow and innovate, it will remain focused on providing customers with the highest standard of service and support.

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In the last five years, we have successfully supplied over five million Model 41 and Model 31 Euroswitch Switches to customers across the hydraulic, pneumatic, and processing industries. This is a testament to our commitment to quality and reliability. - *Lorenzo Fumaneri - Export Sales Manager Euroswitch*

Model 41 Pressure Switch

The Model 41 is a highly functional diaphragm pressure switch designed for versatility. It offers a choice between normally open or normally closed contacts and has an adjustable switching pressure range of up to 50 bar. With its Viton diaphragm, it ensures durability and reliability. It's available in various materials: zinc-plated steel, brass, or stainless steel, accommodating different operational needs, all while handling a maximum working pressure of 150 bar.

Model 31 Pressure Switch

The Model 31 Pressure Switch is engineered for switching pressure ranges of up to 50 bar. It also provides options for normally open or normally closed contacts (SPST) and a range of adjustment settings: 0.1 – 1 bar, 0.2 – 2 bar, 1 – 5 bar, 1 – 10 bar, 10 – 20 bar, or 20 – 50 bar. With the ability to withstand a maximum working pressure of 150 bar and an overpressure limit of 300 bar, this switch is both robust and adaptable. It has a maximum switching voltage of 250 volts, an operating temperature range of -10°C to 120°C, and offers a Viton diaphragm as a standard option, although other diaphragm materials are available.

Customers can choose from zinc-plated steel, brass, or stainless steel to fit their requirements.

Considering a New Application?

If you're leveraging our high-quality switches and have a new application under consideration, we invite you to reach out to us. Our team is prepared to assist you in finding the right fit for your needs.

Switching from Another Supplier?

If you're currently using switches from a different supplier, we encourage you to connect with one of our knowledgeable technical sales engineers. They will assess your specifications and provide you with a free sample for testing, making it easy to evaluate our products.

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Since our inception in 1993, we have been proud to offer a complimentary adjustment service for pressure and vacuum switches. Simply share your desired settings in bar, psi, or mbar, and we'll ensure the adjustments are made for you. Our goal is to support you in achieving optimal performance with our products.

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Speedor Storm, The High-Speed Door Ready For Large External Openings

Hart Door System's wind-resistant, high-speed, industrial rolling door, Speedor Storm, is ready for business be it a factory, warehouse, storage facility or any kind of plant operation that has one or more large external openings which must be opened frequently for people and traffic.

With wind resistance available up to 'wind class 5', as defined by DIN EN 12424, in the closed position this high-speed door is ready for openings to a maximum 8 metres width or height subject to 48 square metres.

The ability to withstand substantial wind pressure means major entrances open/close automatically so avoiding a less than optimal working environment and the escape of heated air.

Speedor Storm is designed specifically to help with several areas of business notably:

• Productivity – because entering and leaving a building can be done rapidly.

• Creating a better environment in which to work because of the high-speed operation, even on large doors means there are no unnecessary open periods.

• Delivering maintenance of temperature and environment by door preventing penetration by wind born debris.

• By saving on the substantial cost of heating – important as the cost of energy shows little sign of improving.

• Low cost of ownership because this is a robust design and construction

• Made in the UK at Hart's Newcastle factory from where its teams of engineers are available throughout the UK for installation of Speedor Storms and reliable servicing and maintenance thereafter.

• The benefits of Speedor Storms come from its unique guide system in combination with other carefully designed features.

Speedor Storm's strength and wind resistance comes from its multi-layer PVC and textile, both long-lasting and tear-resistant and its inbuilt horizontal curtain braces and no external cumbersome and noisy external wind bars.

There is a colour choice as well as 'a with or without vision panel ' which combine to deliver a good appearance, operational effectiveness and a performance product.

Speedor Storm is in particular demand from waste processing plants and renewable energy facilities such as Anaerobic Digestion (AD) plants that produce energy from waste. The ability to limit the escape of odour and noise and prevent pests entering is highly valued by such companies. Speedor Storms have also proved to be a great asset for ports, notably for grain tipping bays.

Safety features are of course paramount, and here they include a state of the art safety light curtain, anti-fall protection and sensors to activate the door. There is a range of operating methods that include hands free, floor loops, radar, photo beam, radio operation, movement sensors, handheld or vehicle-mounted radio transmitters, or simple push button and pull cords.

The automatic operation can be set to include or exclude pedestrians as desired. If warning lights or klaxons are required, these can be incorporated in a complete door system and control panel which are designed for any conceivable need including integration into a Building Management System if necessary. This is delivered via its unique guide system in combination with other carefully designed features.
Little wonder Speedor Storms are so highly regarded.

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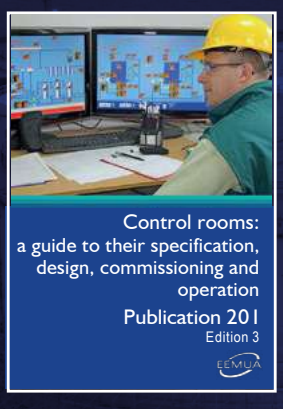
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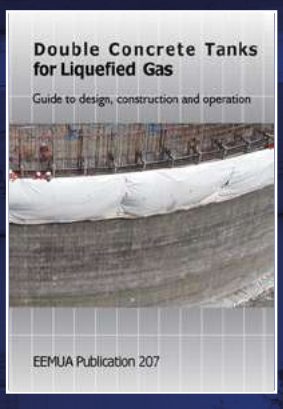
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Enerpac Announces Fast Retraction RC-Trio Hydraulic Cylinders

Enerpac announces the RC-Trio hydraulic cylinders range featuring a enhanced durability bearing system and hybrid spring-return system for up to 3x faster retraction. The general purpose RC-Trio range is the latest evolution of the Enerpac RC-Series cylinders; the company's most popular cylinder and used every day in thousands of engineering and construction projects.

Durability

The driving force of the Enerpac RC-Trio cylinder range is the new Trio bearing system. The system includes up to four high-performance wear bands, offering increased resistance to damage, reduced bearing load, and longer cylinder lifespan. The hardened composite material of these bands increases bearing surface area for greater side load resistance, significantly improving cylinder life. Durability is also on display in new high-performance polyethylene seals that last longer than ever.

Another part of the Trio bearing system is the Trio stop ring, which includes an additional wear band to absorb greater side load. The stop ring can take full cylinder extension force and, depending upon cylinder size, is manufactured in Nitrided Steel or High-Resistance Bronze, for increased durability. It also features a durable wiper to help prevent contamination from entering the cylinder during retract cycles.

Productivity

To enhance productivity, the RC-Trio features a new Trio spring system designed to reduce retraction time. This pre-tensioned return spring system provides up to 3X faster retraction (available on 50-, 75-, and 100-ton models). It uses high-strength steel wire to improve spring life. The spring retention design improves serviceability, while allowing higher pre-load during assembly. Additionally, the spring is easily removed without special tools.

Versatility

The RC-Trio is a general-purpose cylinder available in 41 models and is designed for use in all positions. Versatile features include collar and plunger threads and base mounting holes that enable easy fixturing (on most models), new base holes on 30- and 75-ton models, hardened plunger saddle that protects plunger end during all lifting operations, and optional tilt and smooth saddles as accessories. Plus, the RC-Trio maintains the same dimensions and connection threads, providing full compatibility with existing RC-Series units in the field.

To learn more about the Enerpac RC-Trio cylinder range, visit

www.enerpac.com.

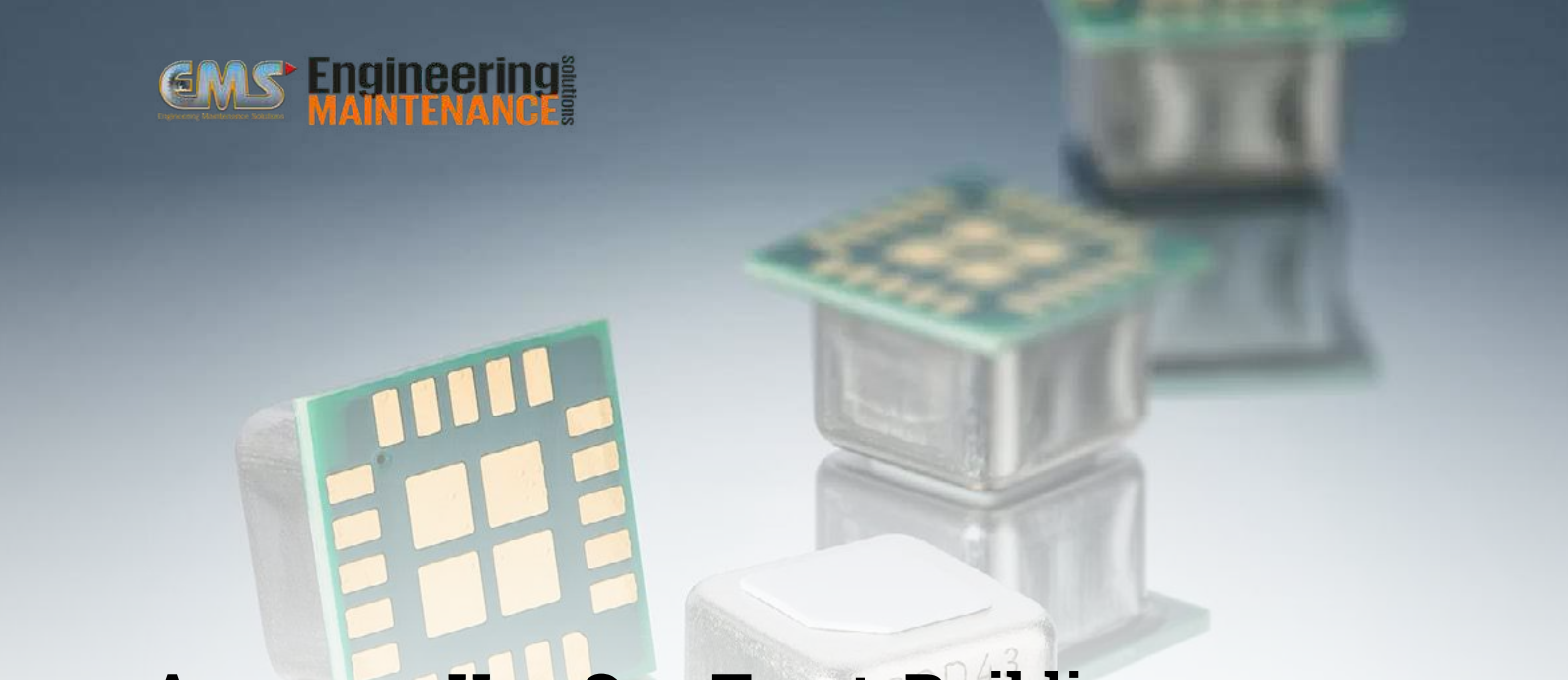
Competency training, and Professional networking


A practitioner's handbook for potentially explosive atmospheres
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Specifying, procuring and managing 3rd party inspection services
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Statistical analysis of in-service tank floor inspections
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EEMUA – CELEBRATING 75 YEARS 1950-2025



Accuracy You Can Trust, Building Standard Compatibility You Need: Sensirion Launches Upgraded Photoacoustic Co2 Sensor

We are excited to announce the upcoming launch of SCD43, the latest Photoacoustic NDIR CO2 sensor from Sensirion. SCD43 is compatible with ASHRAE 62.1 Draft Addendum d and will be available to customers and via Sensirion's distribution partners in summer of 2025. Stäfa, Switzerland – SCD43 is a drop-in upgrade based on Sensirion's market-proven SCD4x platform.

The sensor will offer customers a compact, high-accuracy CO2 sensor that fulfills the requirements of the most stringent building standards. This includes the requirements of the current draft of Addendum d to the American ASHRAE 62.1 standard for demand-controlled ventilation (DCV) systems. SCD43 CO2 sensor (Source: Sensirion AG) SCD43 is the result of many years of experience with and continued research and development efforts into the SCD4x Photoacoustic NDIR CO2 sensor platform.

Refined manufacturing and calibration processes enable a sensor specified to the industry's "best-in-class" measurement accuracy of +-(30ppm + 3% m.v.). For more information, please visit the SCD43 product page Key features of SCD43:

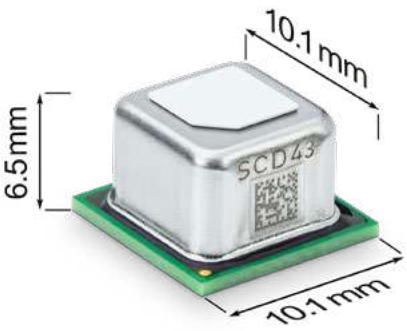
- Comprehensive building standard compatibility
- "Best-in-class" accuracy specification of ±(30ppm + 3% m.v.)
- Drop-in upgrade for SCD4x sensors
- SMD solderable
- Compact form factor of 10.1 x 10.1 x 6.5 mm 1/2 AG

About Sensirion – Experts for Environmental and Flow Sensor Solutions Sensirion is one of the world's leading developers and manufacturers of sensors and sensor solutions that improve efficiency, health, safety, and comfort. Founded in 1998, Sensirion now employs around 1'200 people at its headquarters in Stäfa, Switzerland and in numerous international subsidiaries.

Sensirion sensors can be used to measure a wide range of environmental parameters and flow rates precisely and reliably. The company's aim is to make the world smarter with advanced sensor technology. As a pioneer in innovation, Sensirion develops solutions for the specific needs of customers and partners from the automotive, industrial, medical technology and consumer electronics markets, as well as high quality products for cost-efficient mass production.

More information and current key figures are available at

www.sensirion.com.



Danfoss Power Solutions To Showcase System Solutions For Construction, Mining Machinery At Bauma 2025

Danfoss Power Solutions will exhibit products and solutions that pave the way to more sustainable construction at bauma 2025, April 7-13, in Munich, Germany. At its booth — Hall A3, Stand 125 — Danfoss will highlight its capabilities in hydraulics, eHydraulics, electrification, digitalization, autonomy, and software, emphasizing the company's innovation and application know-how.

The Danfoss booth will feature more than 60 of the company's products, organized by the subsystems common to construction and mining machinery: propel, steering, work function, and controls. Additional stations will be dedicated to electrification and eHydraulics as well as Danfoss' PLUS+1® Platform. The company will demonstrate how its scalable, modular solutions can be tailored to specific customer requirements and seamlessly integrated into a wide range of applications and machine sizes.

Danfoss will launch several new products during the event, including the X1P family of open-circuit piston pumps built on the all-new X1 platform, additions to the Thorx™ line of cam lobe motors, and a thermoplastic hose for material handling applications. In addition, key solutions and recently launched products will be showcased throughout the booth, including the Digital Displacement pump and controller, the Editron ED3 onboard charger and ePTO, electrohydraulic steering subsystem solutions, and an industrial cam lobe motor for large stationary machinery.

eHydraulics, or electrified hydraulics, and electrification will be particular focus areas. Ondřej Aulich, a subsystem engineer with the company's Controls division, will present during the bauma Forum on the impact of electrification on work hydraulics. His lecture — Monday, April 7, at 10 am in Hall B0 — will cover the technological advancements required to improve efficiency while maintaining high functionality and reliability in electrified mobile machines. Markus Plassmann, Head of Growth and Sales Operations with the Editron division, will join Carraro's Enrico Tracanzan, Group R&D Director, for a presentation on the companies' two-speed driveline solution. Their lecture — Wednesday, April 9, at 3:30 pm in Hall B0 — will detail how the solution enables OEMs to switch between hydrostatic and electric propel systems without chassis modifications, streamlining vehicle design. The electric propel system will be on display in the Danfoss booth, along with the Danfoss eHydraulic Power Module, highlighting the advantages of packaged solutions.

"The theme of our booth is 'Set your vision in motion. From idea to reality.' This reflects our aspiration to help our customers solve their greatest machine challenges and achieve their vision," said Steen Rohleder, Vice President, EMEA Sales, Danfoss Power Solutions. "Danfoss has the technologies and the know-how to transform construction machinery. Our solutions improve productivity and precision, enhance safety, increase efficiency, and reduce or eliminate emissions, paving the way to more sustainable construction. We look forward to sharing these solutions with visitors at our booth."

For more information on Danfoss solutions for construction and mining, visit the company at bauma in Hall A3, Stand 125, or online at Danfoss.com/bauma25.

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EEMUA 231 Mechanical Integrity Basics – Blended, online learning – Basic application competency level – with a flexible 4 hours of learning each week for 3 weeks – 15 hours CPD – certificated via exam – next course **starts 29 September 2025.**

EEMUA 231 Mechanical Integrity e-learning – Awareness level – with 1 hour of CPD – immediately available – **on-demand**.

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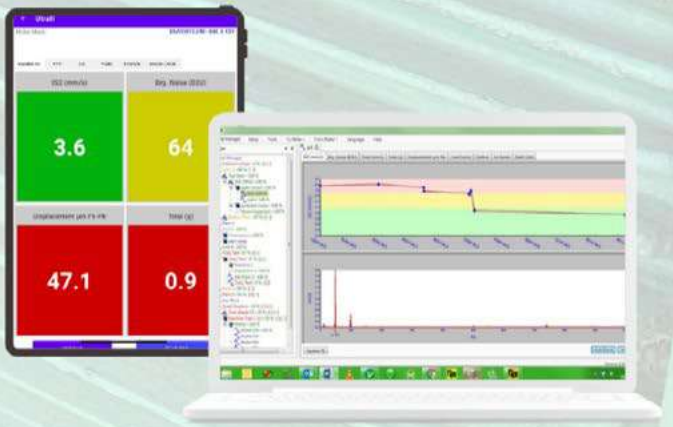
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Decoupling The Instrument Display

A significant proportion of the cost of a portable instrument is taken up by its built-in display. Even with modern developments in display technologies such as high-resolution OLED touch screens, this often results in a trade-off between cost and display capability that inevitably imposes limitations on instrument usage. A good solution is to deliberately decouple the display from the instrument, resulting in a rugged instrument head that communicates wirelessly (e.g. Bluetooth) with an App running on a tablet PC or smartphone. All too often the display is the Achilles' heel of an instrument, with a significant proportion of write-offs involving display damage. By decoupling the display, the instrument can be further ruggedised making it even more suitable for use in hostile environments.

This approach not only brings significant benefits such as improved display capability (high res, colour, touch screen, zooming), data sharing (Internet, email, Cloud), easier and safer physical access to measurement points (through safety guards/gates etc.) but also reduces the cost! The cost reduction coming about through the economies of scale achieved by the tablet PC and smartphone manufacturers. These ubiquitous devices are produced in vast quantities for consumer markets, hence significantly lowering their cost. In fact, by implementing the instrument's control and display as a graphical user interface (GUI) running as an Android or iOS App, most users will find they already own the instrument's GUI hardware!

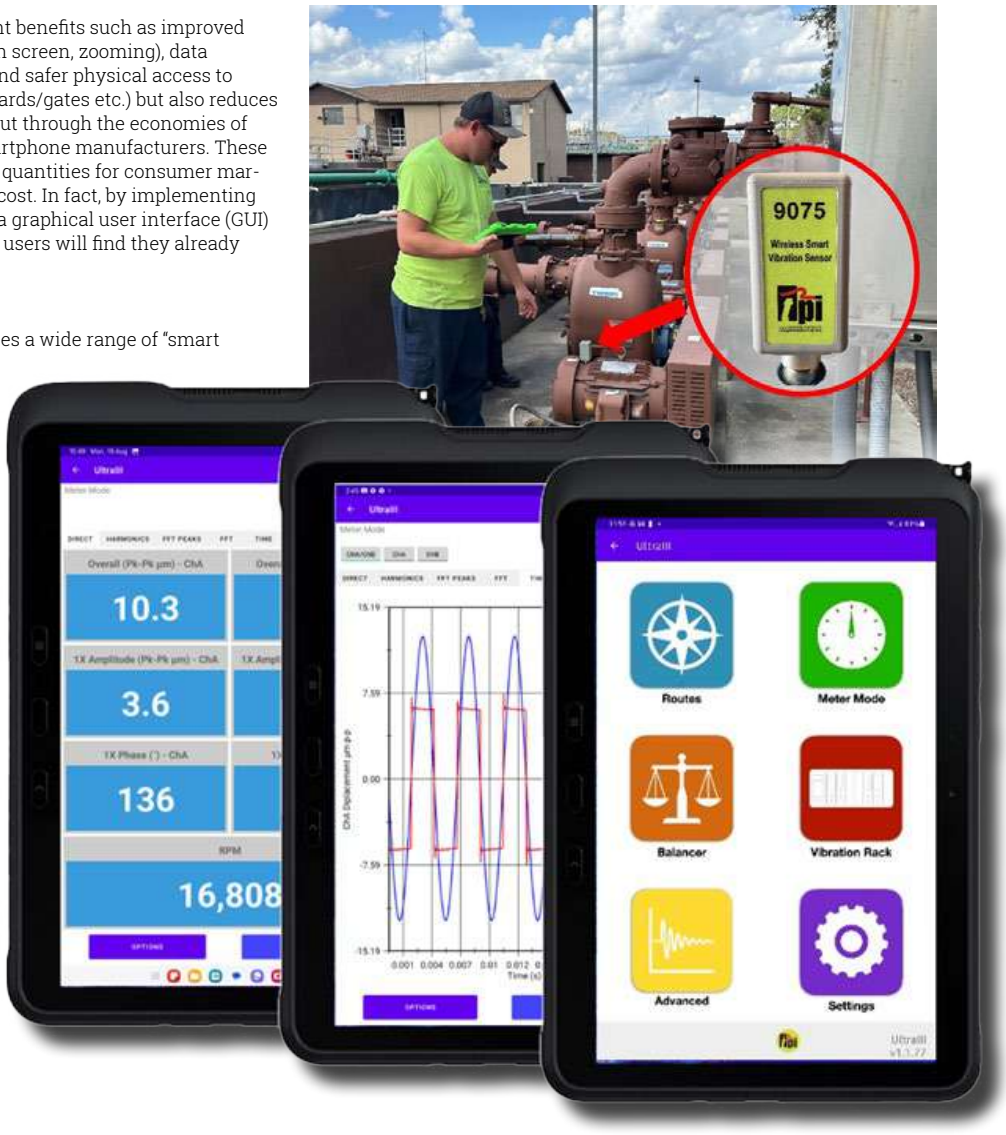
Test Products International (TPI) produces a wide range of "smart instruments" that exploit this strategy through the FREE TPI View App for Android/iOS platforms. Recent additions to the range include the TPI 9043 Wireless Vibration Analyser and the TPI 9075 Wireless Smart Vibration Sensor. Both devices, which also incorporate wireless charging, are designed to work with the TPI Ultra III App running on Android/iOS platforms and feature very high spectral resolution (up to 51,200 lines) with 24-bit ADC sampling to enable condition monitoring of a wide range of machinery, including both high speed and very low speed bearings.

The TPI 9043 Wireless Vibration Analyser with its 3 simultaneously sampled +/- 30 volt general purpose inputs can be used with a wide range of sensors, including IEPE accelerometers, proximity probes, tachometers, temperature sensors etc. Coupled with Ultra III, in addition to top-of-the-range vibration analysis for the detection of unbalance, misalignment, looseness and bearing wear, the TPI 9043 includes the full range of high-end analyser benefits such as envelope demodulation, phase and orbit analysis, single and dual plane balancing etc.

The TPI 9075 Wireless Smart Vibration Sensor with its built-in accelerometer can also be used with the FREE TPI View App to implement a wireless vibration analyser from £1250.

Ultra III in combination with the TPI 9043 or TPI 9075 is also available with C-Trend II PC-based trending and reporting software featuring everything needed to implement a full condition-based maintenance strategy, including automatic email notification of alarms and report generation. Measurement routes and readings can also be transferred to/from Ultra III via the Internet, allowing service personnel to be sent routes and return readings no matter where they are in the world.

For more information please contact TPI Europe's head office on +44 1293 530196 or take a look on the website at www.tpieurope.com or email sales@tpieurope.com





Southern Manufacturing & Electronics 2025 Breaks Records For Exhibitor And Visitor Attendance

Southern Manufacturing & Electronics 2025, the UK's premier annual trade fair serving manufacturing in the mechanical and electronic engineering sectors, concluded its most successful show to date in early February. Celebrating its 27th anniversary this year, the international event saw a significant surge in visitor attendance and exhibitor participation, solidifying its position as a vital business hub for industry professionals. In addition to the bustling showground featuring everything from cutting-edge technology to more everyday items essential for factory operations, the expo featured 53 independently-approved, open-format seminars including a keynote address from Ben Fletcher, COO at Make UK.

The number of attendees reached 10,204, a 14% increase compared to 2024. This year's visitor profile reflected the perennially diverse nature of the show. The biggest cohort was from the aerospace manufacturing sector, which plays a crucial role in the South East of England, employing thousands of highly skilled engineers. More than 72% of visitors had purchasing influence, underlining the event's importance as a platform for business growth. The number of exhibitors also grew, by an impressive 12%, with 535 companies showcasing their latest products and innovations, breaking the notional 500 barrier for the first time.

Southern Manufacturing & Electronics 2025 marked a significant step forward in enhancing the visitor experience. People were provided with new smart badges that enabled seamless information collection via an EasyGo reader on each stand. The innovative system eliminated the need to carry brochures around, while simultaneously providing exhibitors with valuable data on who had expressed interest. On average, each stand collected 60 EasyGo leads, demonstrating very positive engagement. The show also launched Southern Connect, a dedicated app designed to expedite networking and matchmaking between attendees. It saw excellent uptake, with 41% of visitors utilising its features alongside the printed guide. The app facilitated 31,191 actions, 1,974 connections between 3,948 participants, and 85 meetings arranged directly through the platform.

Simon Farnfield, a director at Easyfairs, the new proprietor of the event enthused, "We are thrilled with the resounding success of the exhibition in this our first year of ownership. The record-breaking number of visitors, increased exhibitor participation and enthusiastic adoption of our new networking technology demonstrate the show's continued importance to a broad spectrum of manufacturing. The positive feedback we have received, particularly regarding EasyGo and Southern Connect, underscores our commitment to providing a valuable and engaging experience for everyone involved."

An interesting meeting between two companies underlined the collaborative initiatives that exhibiting at the show presents. A regular returnee that takes the same stand space every year, British CMM (coordinate measuring machine) manufacturer LK Metrology met with a fellow exhibitor, bearing manufacturer Bowman International, which was promoting its 3D printing expertise. The company discovered LK when visiting the 2024 show and within eight weeks had bought a measuring machine from them. What appealed in particular to Bowman was the Made-in-Britain graphics on the CMM manufacturer's stand. LK's sales and marketing director commented, "It is very worthwhile for us as a business to be here year in year out, in the same place, in a great location to help us push and advertise our UK brand."

Several other companies attributed sales directly to their presence at the show, highlighting the event's effectiveness in connecting suppliers with buyers. Many praised the high quality of leads from a diverse range of industries, indicating strong potential for future business. The networking technology was frequently mentioned for helping to stream-

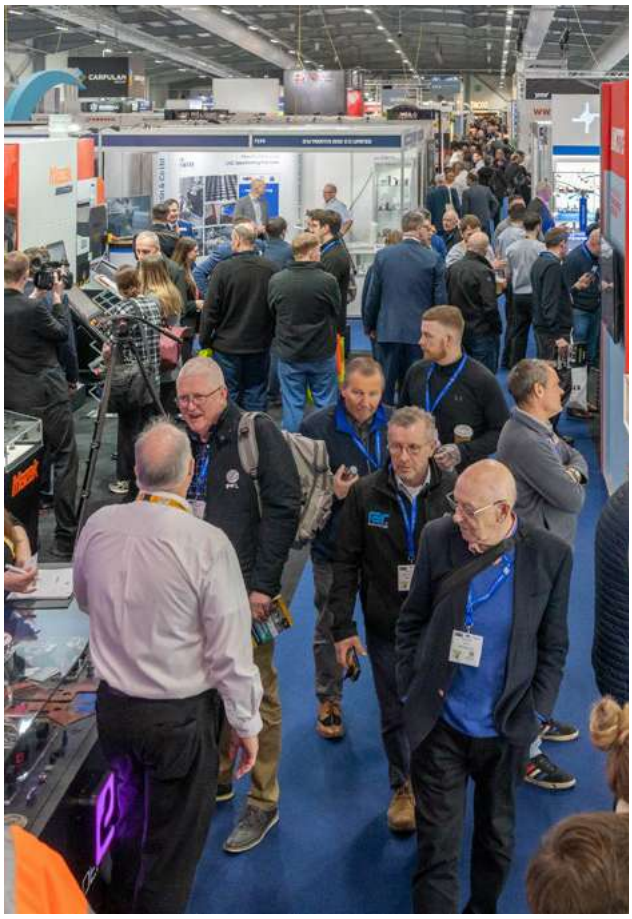
line lead capture. The overall organisation, including setup and venue facilities, was also singled out for being smooth, well-managed and very accessible. Exhibitors described a buzz on the show floor, with strong attendance and a positive atmosphere contributing to a successful experience.

Visitors were similarly enthusiastic. A design engineer from Rolls-Royce said, "I have found the exhibition very useful and good for getting ideas and contacts. It's really useful to come across lots of technology and products that I hadn't seen before and it's good to attend and keep up to date with the latest trends. I would definitely recommend this show - there's so much to see and I am looking forward to attending the seminars!"

Other visitors liked the show's comprehensive range of products and services, valuable networking opportunities with both new and existing contacts, and the chance to discover the latest industry trends and technologies, particularly in areas like additive manufacturing, AI and digitalisation. Many of those canvassed appreciated the informative seminars and commended the professional atmosphere and organisation of the event, including the helpful app and spacious layout of the hall.

The high footfall and lively atmosphere were also frequently mentioned, with many visitors highlighting the value of face-to-face interactions and the ease of finding relevant suppliers. Overall, the show was considered a worthwhile and enjoyable three days, with many attendees expressing their intention to return every year.

This year's Southern Manufacturing & Electronics, held at the world-class Farnborough International Exhibition and Conference Centre, was such a success that it has been shortlisted by the trade magazine Exhibition News for a coveted EN Award in the category 'Best Trade Show 5,000 to 10,000sqm' at a dinner in London at the end of March 2025.







ERIKS Unveils New Reliability Service Offering To Optimise Manufacturing Efficiency

ERIKS Industrial Services has launched a new, multi-tiered reliability service designed to help manufacturers reduce downtime, enhance asset performance, and streamline maintenance strategies. This new offering provides scalable solutions, combining advanced condition monitoring, real-time data insights, and proactive maintenance support, tailored to businesses at various stages of their reliability journey.

The Standard tier is for businesses seeking a straightforward off the shelf solution to monitor for anomalies in critical or difficult to access assets. This entry-level includes self-installed sensors and app-based monitoring, delivering anomaly notifications with regular data collection. Customers purchase the sensors and receive five years of access to an online platform available through the app. Designed for companies needing basic condition monitoring, this service provides reliable insights without the need for full platform integration.



The Advanced tier builds upon the Standard service by offering more sophisticated data collection and analysis through ERIKS' award-winning Smart Asset Management (SAM) platform. Customers can manage their own systems, using the platform to collect and analyse high frequency (e.g., flow, pressure, multi-axis vibration), with readings taken every few seconds to prevent potential equipment failures.

Starting with a minimum of 20 sensors, this level includes onboarding and training to help customers fully utilise the platform's capabilities.
For businesses where uptime is critical, the Professional tier offers the most comprehensive level of support. Fully managed by ERIKS, this service includes installation, proactive monitoring, and continuous support. The system provides real-time data collection and detailed analysis, ensuring that any potential issues are addressed swiftly. ERIKS engineers monitor status alerts, analyse data as needed, and work with the customer to develop and execute a plan of action, minimising dis-

ruption and ensuring operational efficiency.

The Advanced and Professional tiers leverage the ERIKS Smart Asset Management (SAM) platform, a cloud-based tool that combines advanced analytics with an intuitive dashboard displaying actionable insights. SAM continuously monitors equipment health, assigning colour-coded condition scores and providing timely alerts for proactive maintenance. With a centralised repository for asset data, SAM allows users to track maintenance needs in real-time, empowering them to make data-driven decisions that enhance operational efficiency and asset reliability.

Pamela Bingham, CEO of ERIKS, emphasises the importance of this new offering within the context of what ERIKS calls the Reliability Journey. "The launch of our new reliability services marks a major milestone in supporting manufacturers to achieve operational excellence," said Bingham. "Every business is at a different stage in this journey, and our goal is to meet them where they are. Whether they are just beginning to explore condition monitoring or looking to adopt advanced condition based predictive maintenance strategies, our new services provide the flexibility and expertise to drive continuous improvement."

Bingham continued, "The Reliability Journey reflects a shift in mindset—from reactive to proactive maintenance. It's about embedding reliability into daily operations, reducing unplanned downtime, extending the life of critical equipment, and supporting sustainability efforts by lowering energy consumption. This strategic approach not only improves productivity but also helps manufacturers build resilience in the face of today's operational challenges."

With its comprehensive reliability service, ERIKS is helping manufacturers future-proof their operations by optimising asset performance and reducing downtime.

For more information about how ERIKS can support your business on its reliability journey, visit: https://ow.ly/QKbP50UGQ7m





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New Emerson Pressure Valves Ensure Flexible, Accurate Control For High-Precision Manufacturing

AVENTICS Series 625 Sentronic electronic proportional pressure control valves and data acquisition software enable quick startup, monitoring and control directly on a PC

Emerson today announced the new AVENTICSTM Series 625 Sentronic Proportional Pressure Control Valves. With a control deviation of less than 0.5%, the new valves are designed to deliver highly accurate, electronic proportional pressure control and provide the flexibility needed to support sophisticated pneumatic control engineering applications. Data acquisition software (DaS) software included with Series 625 Sentronic valves also make it possible to quickly startup, monitor and control valves directly on a PC.

"In high-precision equipment, such as that used for flame cutting and laser eye surgery, accuracy and control are critical," said Nicolas Jacquet, director of product management for Emerson's discrete automation business. "Series 625 Sentronic valves are engineered to precisely control pressure, flow rate, power, speed, distance and angular positions. As part of the extensive AVENTICS portfolio of cylinders, valves, air preparation and pressure regulators, the Series 625 Sentronic is a core technology for factory automation."

Four valve sizes from 1 millimeter up to 20 mm support a comprehensive range of flow rates, from 55 liters per minute to 4,700 l/min. Pressure capabilities range from vacuum levels up to 50 bar, which can reduce the overall number of valves required for a machine design. Housing material is available in brass, aluminum or stainless steel and sealing material in nitrile (NBR) or fluoroelastomer (FKM) options. There are also three sets of connectors, M12 5-pin, M12 8-pin and M16 7-pin.

As development and manufacturing phases continue to get shorter, fast startup procedures and reliable, controllable manufacturing processes are more important than ever. Using the DaS software, operators can diagnose, control, repair or individually configure valves. They can also perform cascade controls when applications require exceptional precision and other complex control loops. The expanded range of diagnostic and monitoring functions include input pressure, commanded pressure, internal temperature and ethernet communication.



To learn more about AVENTICS Series 625 Sentronic Proportional Pressure Control Valves, please visit www.emerson.com/en-us/catalog/automation/industrial-factory-automation/proportional-pressure-control-valves/aventics-625-en-gb.

https://www.emerson.com/en-us/news/2024/05-aventics-625-sentronic-proportional-pressure-control-valves

Michael Kaye Appointed General Manager Of The Combustion Engineering Association

The Combustion Engineering Association (CEA) is pleased to announce Michael Kaye as its new General Manager. With a strong background in mechanical and design engineering, coupled with years of industry leadership, Michael brings both expertise and a fresh perspective to this long-standing trade association and educational charity.

Graduating from Nottingham Trent University with a degree in mechanical engineering, Michael began his career as a design engineer at APV Baker PMC where he honed his technical skills before moving into leadership roles across various industries. His career spans sectors including textile testing instrumentation and bulk materials handling, where he earned a reputation for fostering innovation, building effective teams, and driving business growth. At Flexco, where he also served as General Manager, Michael led initiatives that not only grew the business but also set new benchmarks for industry standards.

In addition to his professional achievements, Michael has also been deeply involved in association work where, as a long-time member and former president of the Materials Handling Engineers Association (MHEA), he gained valuable experience in bringing members together, organising impactful events, and promoting technical excellence, skills that align perfectly with the CEA's mission.

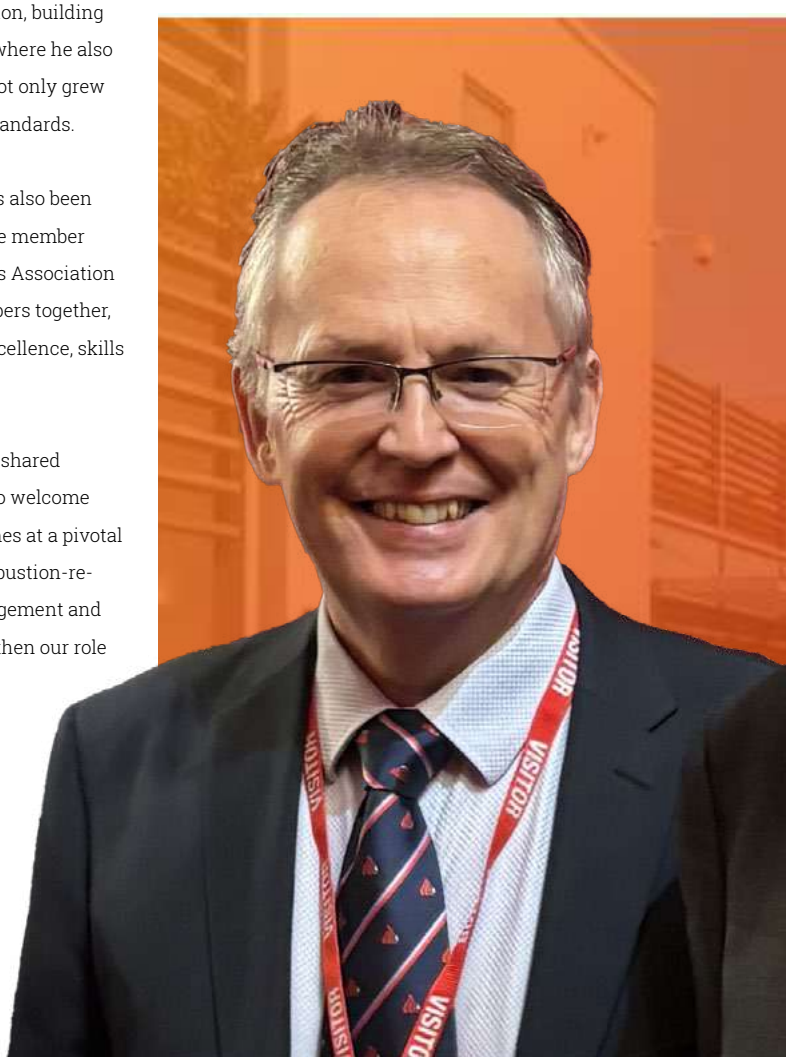
Commenting on behalf of the CEA, President Mick Casey shared his thoughts on Michael's appointment: "We are thrilled to welcome Michael as our new General Manager. His leadership comes at a pivotal time for the CEA as we navigate changes across the combustion-related sectors, and his vision for enhancing member engagement and promoting sustainable practices will undoubtedly strengthen our role in the industry.".

Michael himself expressed enthusiasm for his new role: "The energy sector is undergoing significant transformation as we tackle challenges including the adoption of alternative fuels, decarbonisation and achieving net-zero goals. I see the CEA playing a key role in driving these conversations and supporting our members with practical solutions. Together, we'll focus on alternative fuels, energy efficiency, and sustainable practices.".

One of Michael's immediate priorities is overseeing the CEA's transition into a Charitable Incorporated Organisation (CIO). He also aims to expand training programs such as the Boiler Operation Accreditation Scheme (BOAS) while building stronger connections with academic institutions to nurture future talent in combustion engineering.

Under his leadership, the CEA also plans to reinvigorate its events calendar with site visits, networking opportunities, and conferences designed to deliver real value to members. The first of these initiatives – a site visit to James Cropper's paper mill scheduled for February 2025 – will combine technical insights with opportunities for collaboration.

For further information on CEA initiatives or membership opportunities, visit www.cea.org.uk, email info@cea.org.uk, or call 01740 625538.





Steam Network Uk, Is A New Venture To Promote Services To The Steam Industry

We aim to establish a directory of businesses supporting the steam industry, providing end users with a centralised resource for services, products and expertise. Our easy to navigate website features categorised sections which enables services to be located with ease. Additionally we utilise social media to share members services, products and case studies with a wide audience.

Our mission is to support business and end users of steam and boiler systems across manufacturing, process and industrial environments. By fostering a network that facilitates business to business interactions, we aim to address the growing scarcity of engineering disciplines in todays industrial sectors.

Our platform is broken down into key elements supporting the generation and distribution of steam. The main categories being:

- Burner Manufactures
- Boiler Manufacturers
- Consultancy Services
- Training Providers
- Components and Ancillaries
- Control and Automation
- Temporary Solutions
- Water Treatment
- Chimneys and Flues
- Emissions

So how can Steam Network benefit me?

If you're a Businesses supplying products, service into the steam industry:

By becoming a member of Steam Network UK offers businesses a unique opportunity to be listed under categories specific to their services and products. We will actively promote your business to our extensive network and end users. As the only directory dedicated to supporting the steam industry, Steam Network UK ensures that your services are showcased to key stakeholders in need of your expertise.

If you are an end user of Steam and boiler systems:

In need of a boiler service engineer, Combustion Engineer, new Water treatment? Then look no further, Steam Network UK has all the contacts you need at your finger tips.

Our website allows for individuals to search the directory for relevant services that they may require. Whether you work in Engineering, Procurement, Management or Health and Safety, you're sure to find a member that can support your needs.

Whether you are on the look out for a new Boiler, Water treatment services or stack emissions testing, then Steam Network can put you in contact direct with a reputable business to support you and your asset base. Partnering with one of our members provides peace of mind that your assets are in the capable hands of the UK's leading specialist in their field of expertise.

Visit www.steamnetwork.co.uk today, to find the support you need.

Please contact admin@steamnetwork.co.uk should you have any further questions.

Images courtesy of Steam Network UK members: Cochran Boilers and Excel Water.



HVTS® Cladding Delivers Biomass Boiler Protection at Vattenfall Plant

The Idbäcksverket combined heat and power (CHP) plant, operated by Vattenfall since 1997, is a vital energy facility in Nyköping, Sweden. The plant plays a crucial role in the region's energy infrastructure, providing approximately 95 percent of the Nyköping urban area with district heating and electricity. Aligned with Vattenfall's commitment to fossil freedom, the facility primarily utilizes renewable fuel sources, with the majority consisting of industrial and forestry waste.

Plant Facts

Country	Sweden
Electrical power	35 MWe
Heating effect	234 MWth
Technique	CHP power plant
Main fuel	Biomass

At this power facility, a biomass-fired Bubbling Fluidized Bed (BFB) boiler that processes waste wood was facing erosion and corrosion wastage, particularly affecting the waterwall surfaces, a common challenge in biomass boiler operations. As a major energy producer in the region, maintaining reliable operations at this renewable energy facility is crucial. This degradation posed a significant risk to operational reliability and could potentially lead to unplanned outages due to tube leaks.

The Solution

The plant approached Integrated Global Services' (IGS) European division for a solution to stop the metal wastage issues. To address the issue, IGS deployed its proprietary High Velocity Thermal Spray (HVTS) cladding technology, a proven solution for protecting biomass boilers against aggressive operating conditions. This solution focused on the lower section of the furnace, treating approximately 100m² of surface area to protect and extend the lifetime of the aging weld overlay.
The project scope also included the protection of the carbon steel waterwalls in the upper furnace section and the connecting roof area between the furnace and second pass, ensuring comprehensive protection throughout critical areas of the boiler.



HVTS is applied at a nominal thickness of 500 microns. The technology works by creating dense protective layers while minimizing internal stresses. The process applies ultra-fine particles in a dense pattern, creating longer pathways from surface to substrate that effectively prevent permeation. This corrosion-resistant alloy (CRA) cladding creates a robust barrier against further material degradation.

A key advantage of HVTS is its ability to protect and extend the life of existing panels with minimal remaining thickness, eliminating the need for intensive panel replacements. In areas with existing Inconel protection, HVTS provides an effective method to further extend the operational life of these critical boiler components, offering a cost-effective alternative to complete panel replacement.

Implementation Timeline



The plant has implemented a systematic biomass boiler protection program over several years:

• 2020: Initial application covering 35.0 m²
• 2022: Major expansion to 158.0 m²
• 2023: Additional 80.0 m² coverage
• 2024: Latest refurbishment of 17.0 m²

All projects were completed on time with zero safety incidents.
Inspection Results

Regular inspections were conducted to verify the cladding's performance. Thickness measurements were taken every 300mm and detailed mapping of application areas was conducted.
Inspection results showed that the cladding was in excellent condition with consistent thickness readings above 400 microns.
Benefits of the Project

Enhanced Protection

• The HVTS cladding successfully prevented further erosion and corrosion of the biomass boiler surfaces.

Minimal Operational Disruption
• Can be applied simultaneously with other maintenance tasks such as tube replacements in other boiler sections, as the process doesn't generate heat-induced distortion. This enables efficient maintenance planning and reduced outage time.

Non-Invasive Application

• No heat-related distortion, making it ideal for sensitive components like hanger panels and dividing walls.
• No pressure testing required for the protected area.
Flexible and Customizable
• Possibility to customize the alloy for specific wear mechanisms
• Repairable unlike other protection processes
• Can extend the life of existing panels, including those previously protected with Inconel

Quality Assurance

• Post-application inspections confirmed uniform coverage and quality, ensuring long-term protection.

Safety Excellence

• Zero safety incidents throughout the project execution. IGS Europe is ISO 45001:2018 certified and follows OSHA best practices and all local safety regulations, whichever is stricter.

Future Recommendations



Based on the successful implementation and monitoring results, the following recommendations were made:

1. Regular inspections during scheduled outages to monitor cladding performance
2. Proactive identification of additional areas requiring protection
3. Continued monitoring of existing applications to optimize future maintenance schedules

Conclusion

The systematic application of HVTS cladding technology has proven to be an effective solution for protecting biomass boiler surfaces against erosion and corrosion.

IGS has performed over 4,000 site projects and installed millions of square feet of reliable surface protection across the globe. IGS enables plants to avoid costly equipment replacements without sacrificing long-term reliability of boilers and vessels.

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Fluke EV Survey Highlights OEM and Technician Confidence Despite 68% citing a Gap in Industry Adoption

A new Fluke survey released today reveals that while 68% of respondents feel the EV industry is behind the adoption curve, 92% remain confident that current standards and regulations will pave the way for long-term success in EV charging infrastructure.

The Fluke commissioned survey gleaned insights from more than 400 EV charger original equipment manufacturers and technicians in the UK, USA, Germany, and the Netherlands. Survey results also demonstrated that despite incentives throughout the US and Europe, and with strong consumer demand driving EV adoption, 47% of respondents believe the industry is 25–50% behind the adoption curve, while 17% believe it to be more than 50% behind. Notably, 40% of U.S. respondents predict that widespread charger availability won't meet demand for up to seven years, or longer.

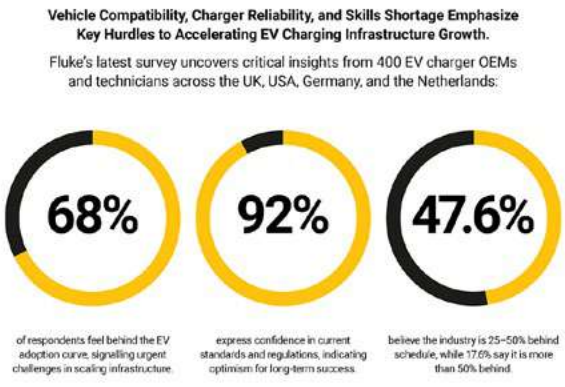
The survey identified charger maintenance as a top concern for the future of the EV industry, with 36% of respondents identifying it as a key challenge. Adding to the complexity, 44% pointed to inoperable chargers as one of the biggest hurdles facing the EV charging infrastructure, closely followed by 40% who cited software incompatibility as a significant obstacle. Compounding these challenges, 88% of respondents highlighted a critical skills gap within the EV workforce, signaling an urgent need for training and development to support the industry's growth.

"I'm encouraged that while 68% of respondents recognize a gap in industry adoption, the survey highlights a strong sense of confidence as industry leaders take proactive steps to address critical challenges," said Alex Chillman, Fluke Vice President of Innovation. "To pave the way for sustained industry growth and innovation, we must prioritize comprehensive worker training and ensure the availability of a reliable, well-maintained charging infrastructure. Charger maintenance also remains a significant concern and addressing it will be essential to meeting the growing demand for electric vehicles."

The survey results underscore Fluke's call for greater emphasis on proactive maintenance strategies and workforce development to address the skills gap and meet the growing demand for reliable EV charging infrastructure. Respondents identified key factors critical to a successful EV charging strategy, with 32% highlighting predictive maintenance and 31% citing artificial intelligence as essential for optimizing performance.

Additionally, resilient infrastructure design, remote monitoring and diagnostics, and the adoption of standardized best practices were identified as vital for ensuring the reliability, efficiency, and adaptability of the evolving EV charging ecosystem.

"The EV industry is at a defining moment—growth is accelerating, and the demand for reliability has never been higher," said Fluke Chief Product Officer Vineet Thuvara. "Our research reveals a critical need to close maintenance gaps, upskill technicians, and ensure every charging point delivers peak performance. As PDMs (Power Distribution Modules) expand, power quality at every node becomes mission-critical. The path to a sustainable future depends on a smarter, more resilient infrastructure."







MC Global Solutions and IFS Ultimo Partner to Deliver Real-Time Maintenance for Industrial Businesses

More businesses in Australia, New Zealand and the UK are set to benefit from Ultimo's Cloud-based enterprise asset management (EAM) platform thanks to a new partnership with EAM consultancy, MC Global Solutions. The company specializes in third-party software integration to automate processes, enhance efficiency and reduce costs. Working for customers such as News Corp Australia and Devro, MC Global Solutions provides an integrated set of software applications backed with superior expertise, to make business systems more efficient and effective.

Steve Martin, Managing Director of MC Global Solutions, emphasizes the importance of EAM as a strategic goal for companies aiming to optimize their maintenance and operational workflows, "Our collaboration with IFS Ultimo enhances the accessibility of asset decision-making within the EAM industry, empowering organizations to manage operations more efficiently, minimize equipment downtime, and ultimately drive improved performance."

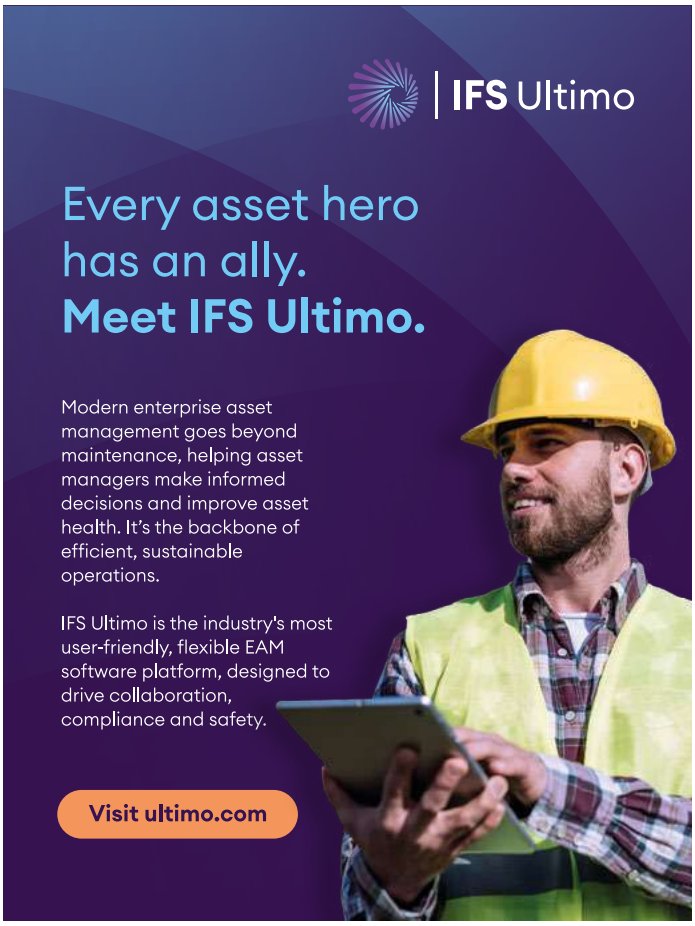
James Mansfield, Channel Sales Director at IFS Ultimo adds, "This partnership is about leveraging the strengths of both companies to bring a truly innovative solution to the markets of MC Global. By combining MC Global Solutions' expertise in EAM and FM software consultancy with our cutting-edge platform, we are creating a solution that transforms asset management from a cumbersome process into an efficient operation."

With 90 percent of industrial companies acknowledging that improved EAM software is pivotal to their future maintenance strategies, and only 60 percent having adopted it, the collaboration between IFS Ultimo and MC Global Solutions is an important step towards providing the tools they need.

The partnership is expected to drive significant efficiency, cost, and safety improvements for organizations navigating the rapidly evolving digital landscape.

- Facilities management use cases suggest that enhanced building maintenance efficiency, with task resolution rates increasing by 40 percent can be achieved
- For manufacturers, decreased unplanned downtime, can lead to improved machinery uptime. In some cases, the solution has sped up quality checks on more than 1,500 assets, achieving time savings of 60-70 percent
- Healthcare organizations can expect accelerated diagnostics for medical equipment.

To find out more about the joint offering, or to see the industry use cases, contact the companies here:
https://www.ultimo.com/request-a-demo/



Warrington's Own Buses Go Fully Electric With Freeway



Warrington's Own Buses has overhauled its fleet management with the introduction of a new digital system from Freeway Fleet Systems. Used to manage a new fleet of Volvo electric buses, the system has replaced a largely manual, paper-based system used in engineering.

The company has retired its entire diesel fleet, replacing it with 105 electric vehicles (EVs)—one of the largest orders for electric buses in the UK. Powered by renewable electricity, the initiative is designed to be as green and carbon-neutral as possible. A brand-new electrified depot has also been built, with upgraded facilities and IT infrastructure to enhance bus maintenance, reliability, and customer service.

Freeway was introduced specifically for the new EV fleet, playing a key role in commissioning the buses. Technicians have been equipped with rugged tablets running a mobile web app, eliminating the need for traditional paperwork.



Karl Hutchison, Engineering Director, commented: "We are always looking to improve our systems, and we aligned this with the introduction of the new buses. The support from Freeway has been excellent throughout."

Warrington's Own Buses has also integrated all electric bus parts into Freeway. By the time the final diesel bus is retired, stores and purchasing operations will benefit from automated processes, including barcoded bins, auto-replenishment, and real-time tracking of parts performance and costs.

"Freeway drives improved compliance, and the standout benefit is quality control," Karl added. "We can instantly see what has been done, supported by photographic evidence. The system ensures every job is completed thoroughly, with digital proof to back it up."

ABOUT FREEWAY

Freeway Fleet Systems is a global provider of digital solutions for managing vehicles and assets and works seamlessly across different locations and on different platforms. Freeway's software provides an all-in-one solution to manage workshops, defects, stores, purchasing and compliance. Enabling the transition to paperless digital working, Freeway interchanges freely with other systems to provide enterprise-wide visibility of the status of the fleet.

Freeway has become popular with transport and bus operators across the UK. Users include Gregory, McBurney, Elddis, Bartrums, Suttons and Sons, Abbey Logistics and MAXI Haulage, with bus operators including Transdev, Lothian Buses, Abellio, RATP, Nottingham City Transport, Cardiff Bus and McGill's Bus Group.



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AROUND THE CLOCK, AGAINST THE CLOCK!



Explosion-Proof Compressor Motor For Oil Refinery

Producing a customized explosion-proof high-voltage motor within just 12 calendar days, Menzel Elektromotoren saved an oil refinery a considerable amount of money.

The failure of the previously installed compressor motor was causing enormous financial damage. The team of the German family business Menzel worked on this project with considerable commitment, including weekend shifts, and thus completed all necessary works in record time. An in-stock ME-BKSW-type three-phase squirrel-cage induction motor in size 710 was enabled for ignition protection type Ex ec, increased safety, with purging.

Menzel's certified explosion protection experts gave it the ATEX marking II 3G Ex ec IIA T3 Gc and prepared the extensive documentation required by the customer within the tight time frame. The motor generates an output of 10 MW and 64132 Nm rated torque at 6600 V rated voltage. It features IP55 protection and IC 81W cooling (air-to-water heat exchanger) and is suitable for outdoor installation and the increased ambient temperature range of -20 °C ... 48 °C.

To ensure a smooth installation in the existing plant environment, Menzel made various mechanical adaptations such as machining the motor shaft, manufacturing a new base frame and providing flanges for the purging device.

More about electric motors with ignition protection type Ex ec, increased safety: https://www.menzel-motors.com/ex-na/



Revolutionizing Air Compressor Operation

In a significant leap forward for industrial air compression, Elgi Equipments (BSE: 522074 NSE: ELGIEQUIP), one of the world's leading air-compressor manufacturers with over 64 years of compressed air excellence, today announced the introduction of its pioneering compressed air stabilization technology. Designed to revolutionize the way compressors operate in plants with dynamic air demand, the STABILISOR system aims to address the long-standing challenges of unstable compressor performance, inefficiency, and excessive wear caused by frequent load/unload cycles.

In industrial settings, the gap between compressor capacity and plant air demand is inherently dynamic. This variability leads to frequent cut-in and cut-out operations, which destabilize the compressor and impair critical flow and kinematic components.

Traditional solutions, such as increasing reservoir volume, altering cut-in/cut-out pressures, or adding variable frequency drives (VFDs), often



fall short, introducing new inefficiencies or higher operational costs.

"The STABILISOR system employs a first of its kind "Recirculate and Recover" principle, seamlessly aligning compressor capacity with plant air demand through controlled recirculation and recovery techniques.

By stabilizing airflows within the system, the STABILISOR system minimizes load/unload cycles, ensuring extended equipment lifespan, optimizes energy use, achieving up to 15% energy savings in typical applications, while reducing system inefficiencies, maintaining superior performance across varying demand patterns.

With its energy-efficient design and potential to reduce wear-and-tear, the STABILISOR aligns with global sustainability goals. Its implementation in industrial plants represents a shift towards greener, more cost-effective manufacturing processes" said Dr. Jairam Varadaraj, Managing Director, Elgi Equipments Ltd.

Dr. Venu Madhav, Director Technology, Elgi Equipments Ltd said "The STABILISOR system utilizes precision-engineered progressive and on-off valves to recirculate excess capacity within the system.

This system leverages stabilization zones and low-pressure recovery techniques to - balance airflow demands dynamically, minimize energy losses by targeting pressure points with minimal differences all while maximizing overall system reliability."

To meet diverse operational needs, the STABILISOR system, will be available in India and across the globe, in 2025, in two versions:

• Light Version: Designed for field fitment, energy savings and enhanced reliability.

• Heavy Version: Factory-fitted for superior energy savings and comprehensive stability.

The STABILISOR's innovative design and control methodology has been patented worldwide, marking it as a pioneering advancement in compressed air technology.

To learn more about ELGi's advanced compressed air solutions,
visit www.elgi.com.





Bearings With Optimized Coating For Improved Protection Against Current Passage

Whether in traction motors for rail transport, wind energy systems, or drive technology, the use of electric motors or generators with frequency converters is increasingly becoming the norm. However, this trend also introduces the risk of electrical voltage developing between the inner and outer rings of rolling bearings. Current passage can significantly damage lubricants, rolling elements, and raceways, leading to premature bearing failure. As a result, implementing measures to prevent such damage and failures is advisable at the early planning stage. Schaeffler has now introduced improved current-insulated bearings from the J20G series to mitigate this risk.

The new J20G series bearings from Schaeffler have an optimized Insutect A coating, offering even greater protection against the risk of current passage. "Wherever current can flow through bearings, robust insulation is essential. Without it, parasitic currents can cause significant damage and wear to rolling bearings and lubricants, resulting in unplanned downtime and high maintenance costs," explains Manuela Baerthlein from Global Product Management for current-insulated bearings at Schaeffler. "With these new bearings, our customers benefit from our long-standing experience in current insulation and can significantly enhance the reliability of their systems."

New coating process provides enhanced insulation protection

The outer surfaces of the outer and inner rings are coated with Insutect A, an insulating aluminum oxide coating applied using plasma spraying. Schaeffler has refined the bearing coating process for enhanced reliable protection against current passage to provide a more efficient insulation protection, even under challenging operating conditions such as high humidity. The result is reduced maintenance costs, increased machine availability and operational safety, and an extended grease service life.

The bearings can withstand direct voltages of at least 3,000 volts and exhibit a higher impedance and an ohmic resistance of at least 250 megaohms. The aluminum oxide coating is extremely hard, resistant to wear, and a good conductor of heat. The bearings are available as standard in

the J20GA, J20GB, and J20GI variants to meet diverse requirements. The J20GB coating thickness provides enhanced protection for higher electrical currents, such as those encountered in the rail sector. The highest level of protection is achieved with bearings featuring a coated inner ring (J20GI). Other variants are available upon request.

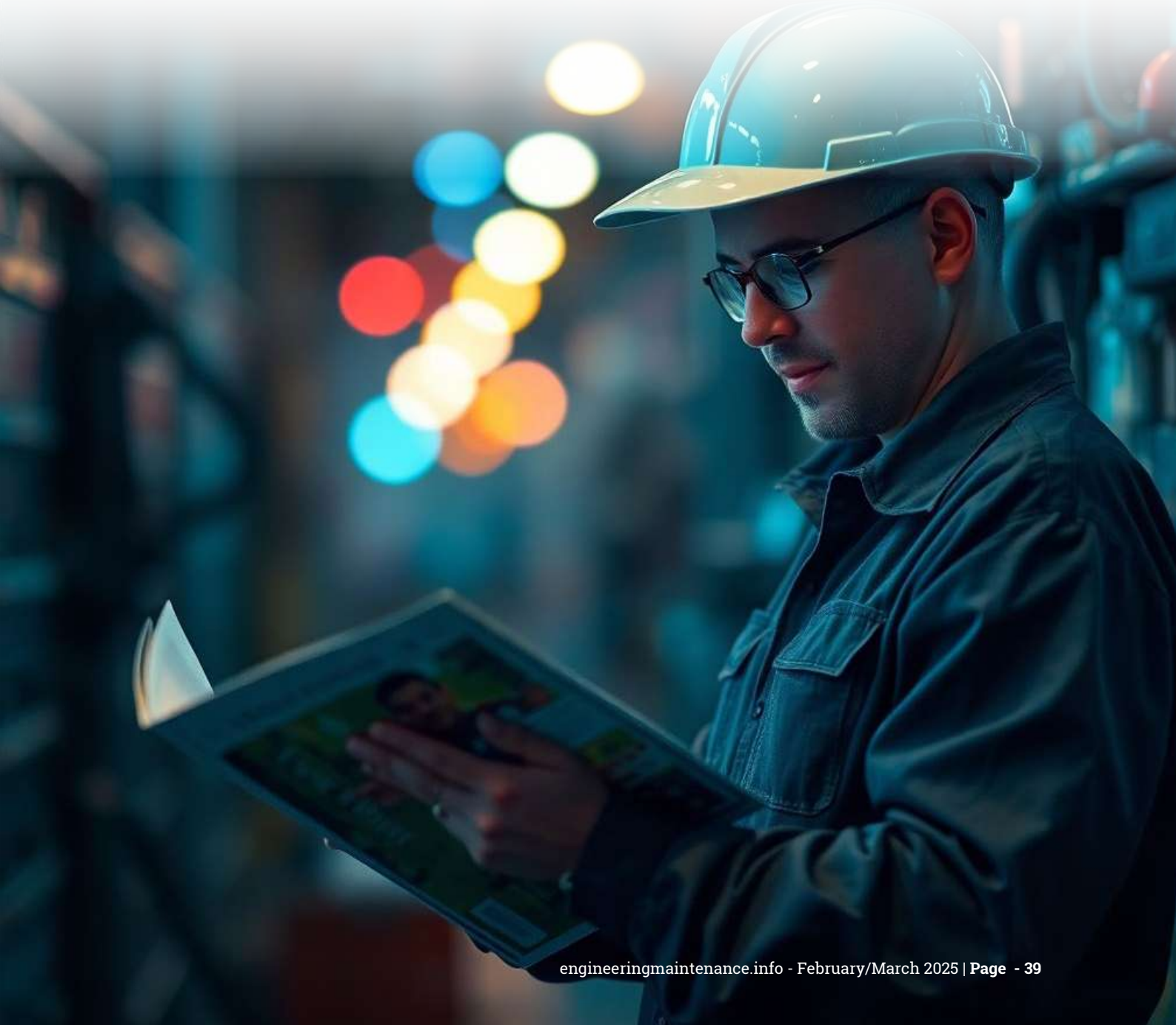
Dimensions according to DIN 616 for maximum flexibility

The external dimensions of the bearings conform to the dimensions specified in DIN 616 standards, meaning that they have the same dimensions and tolerances as standard bearings and offer seamless interchangeability. Deep groove ball bearings and cylindrical roller bearings are most commonly used with aluminum oxide coatings, though other bearing designs are also available with the coating by agreement. Insutect A-coated bearings from Schaeffler meet all requirements relating to service life, maintenance intervals, operational safety, and cost-efficiency.

In addition to bearings with coated rings, Schaeffler offers hybrid bearings with ceramic rolling elements, which offer the highest resistance to current passage. For applications with elevated requirements or outside diameters measuring less than 120 mm, Schaeffler experts recommend the use of hybrid bearings. Schaeffler's comprehensive portfolio ensures customers can find the right solution for every application.

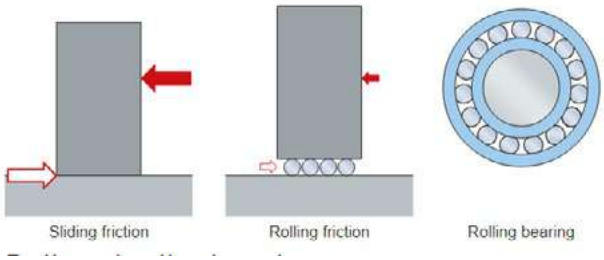
www.schaeffler.com





Why Rolling Bearings?

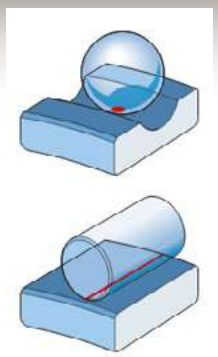
Rolling bearings are essential components that support and guide rotating or oscillating machine elements—such as shafts, axles, or wheels—while minimizing friction and effectively transferring loads between machine parts. They offer high precision and low friction, enabling high rotational speeds while reducing noise, heat, energy consumption, and wear. Additionally, rolling bearings are cost-effective and interchangeable, typically adhering to national or international dimensional standards.



Types of Rolling Bearings: Ball and Roller Bearings

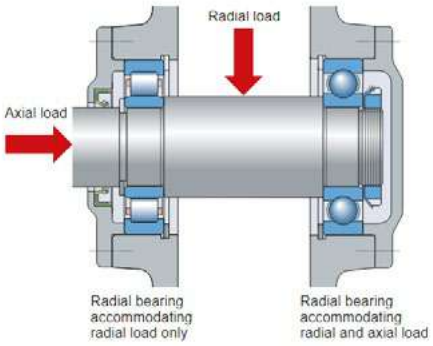
Rolling bearings can be classified into two primary types based on the rolling elements used:

1. Ball Bearings: In ball bearings, small spherical balls make point contact with the raceway rings. As the load increases, this contact point transitions to an elliptical shape. The small contact area results in low rolling friction, allowing ball bearings to achieve high speeds, but limits their load-carrying capacity.



2. Roller Bearings: Roller bearings use cylindrical rollers that make line contact with the raceway rings. When subjected to increased loads, the contact area becomes more rectangular. While roller bearings can support heavier loads due to this larger contact area, they are better suited for lower speeds compared to similarly sized ball bearings.

Classification of Bearings: Radial and Thrust Bearings



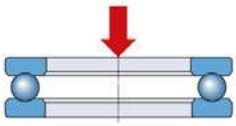
Rolling bearings are also categorized based on the direction of the loads they primarily support:

Radial Bearing: These bearings accommodate loads that act mostly perpendicular to the shaft. Some radial bearings are designed to handle only pure radial loads, while most can also manage some axial loads in one direction or, in certain cases, both directions.

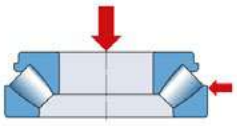
Thrust Bearings: Thrust bearings are designed to support loads that act

primarily along the axis of the shaft. Depending on their specific design, thrust bearings can accommodate pure axial loads in one or both directions, and some can also manage radial loads (known as combined loads). However, thrust bearings typically cannot sustain speeds as high as similarly sized radial bearings.

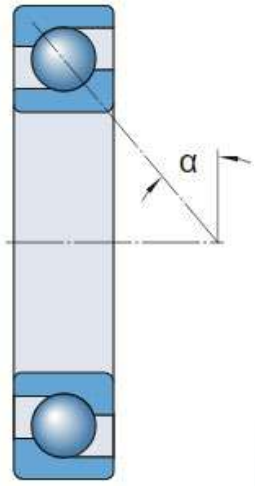
The contact angle of a bearing determines its classification: bearings with a contact angle of 45 degrees or less are considered radial bearings, while those with a larger contact angle are classified as thrust bearings.



Thrust bearing for pure axial load



Thrust bearing for combined load





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Understanding Power Distribution Networks: Challenges And Tools For Mastering The Design Quest

- *by Steven Sandler, founder and CEO of Picotest*

Modern electronic systems require precise and reliable power delivery, yet designing effective Power Distribution Networks (PDNs) presents significant challenges. Issues such as noise, instability, and inappropriate capacitor selection can compromise performance and lead to device failures. How can engineers address these challenges? The key lies in leveraging advanced analysis tools like Vector Network Analyzers (VNAs) from the early stages of design and throughout the development process. These tools are essential for identifying potential issues and preventing instability or other faults in the power distribution system. Whether resolving existing problems or designing advanced systems, using a state-of-the-art analyzer provides the precision and insights needed to optimize designs and ensure robust performance.

PDNs are a critical but often overlooked component of modern electronics. These networks, comprising printed circuit board (PCB) power planes, bulk capacitors, and decoupling capacitors, deliver electrical power from Voltage Regulator Modules (VRMs) to Application-Specific Integrated Circuits (ASICs) and other components that require precise power. Proper PDN design is essential for maintaining device stability and performance, ensuring power delivery is both reliable and free from noise or instability.

A common misconception in PDN design is the oversimplified belief that "lower impedance is always better." While low impedance is generally beneficial, achieving a "flat impedance" profile across the operating frequency range is far more critical. Another frequent error involves assuming that a diverse selection of capacitors automatically leads to optimal performance. Effective PDN design requires meticulous analysis and strategic component placement to meet specific impedance and stability criteria, rather than relying on arbitrary component choices.

Challenges in PDN Design

PDN design for modern devices, particularly those with compact, high-speed circuits, poses numerous challenges. A primary concern is minimizing the distance between VRMs and ASICs to reduce noise and improve power delivery efficiency. Capacitor selection and placement are vital for achieving a flat impedance profile, which mitigates noise and enhances stability. However, insufficient validation during the design phase often results in performance issues, such as excessive noise or instability, especially in circuits with narrow voltage margins.

The interrelation of noise, impedance, and stability further complicates PDN design. Noise is generated by dynamic current changes within the ASIC, and the PDN must counteract these variations effectively. Poorly designed capacitors can destabilize the control loop, leading to uneven impedance and increased noise. Given the tight operating margins of modern ASICs, effective noise mitigation is critical to ensuring device functionality.

Avoiding Common Pitfalls

One of the most frequent mistakes in PDN design is relying on inaccurate capacitor models for simulations. Many engineers also mistakenly assume that the same models can be used interchangeably in SPICE and electromagnetic (EM) simulators, leading to flawed designs. Tools like the Bode 500 Vector Network Analyzer address this issue by providing de-embedded capacitor models tailored for both SPICE and EM simulation environments. Picotest offers both component mounts and component test fixtures that allow accurate micro-Ohm measurements with the Bode 100 and Bode 500 Vektor Network Analyzers, as well as other instruments up to 2GHz and higher.

Another common error is underestimating the importance of thorough validation. Advanced tools, such as the Bode 500 Vector Network Analyzer and Picotest probes, simplify the validation process, allowing engineers to detect and resolve issues early in the design phase. By emphasizing accurate modeling and validation, these tools significantly reduce the risk of noise and instability in PDNs.

The Right Tools for the Job

Advanced tools like OMICRON Lab's Bode 500 Vector Network Analyzer are indispensable for tackling PDN design challenges. This device enables precise impedance measurements across a wide frequency range using the 2-port shunt-through method, a widely recognized standard in PDN analysis. It supports capacitor characterization and the creation of simulation models, facilitating the selection and placement of components. This capability is particularly valuable since vendor-provided capacitor models often lack the precision required for PDN design. The Bode 500 Vector Network Analyzer compensates for this shortfall by generating more accurate models.

The instrument also offers features such as Non-Invasive Stability Measurement (NISM), support for Touchstone file formats, and compatibility with various measurement configurations. These capabilities ensure PDN stability and help minimize noise. By incorporating PDN probes, such as the P2102A and P2105A models, PDN analysis can be further enhanced. Designed for examining PDNs, these probes enable accurate measurements of individual power rails within complex systems. Their advanced shielding and interchangeable heads support diverse use cases, including near-field analysis and step load testing, while minimizing interference.

Conclusion

Excelling in PDN design requires a methodical approach, employing advanced tools for precise measurement and analysis. By focusing on accurate capacitor modeling, achieving flat impedance profiles, and rigorous validation, engineers can overcome the challenges of modern PDN design and ensure the stability and performance of electronic systems. For those new to the field, committing to continuous learning and engaging with expert resources will pave the way for success.

For further information: www.picotest.com



MILWAUKEE® Redefines Power on the Job Site

The new Roll-On 7200 / 3600 W 2.5 kWh Power Supply provides the best power for the toughest jobs. Featuring a non-removable, REDLITHIUM™ integrated 2.5kWh battery, this power supply provides enough power and run time to sustain high-demanding, intermittent applications throughout the day. Delivering 7200 W of starting power, users experience instantaneous peak power and 3600 W of continuous running power to support 2 – 4 operators per unit. As the first battery power supply in its class designed for the job site, Roll-On is equipped with three outlets secured with 16A GFCI (Ground Fault Circuit Interrupter) with circuit breakers, one USB-C, and one USB-A to provide power for two 16A corded tools, or a piece of capital equipment while charging batteries and personal electronics. The pure sine wave inverter delivers a clean power output, protecting sensitive electronics.

Roll-On revolutionises job site efficiency by offering professionals instant set-up, eliminating the frustrations associated with petrol and temporary power.

MILWAUKEE®'s new innovative solution eliminates dangerous emissions, pull-starts, and engine maintenance while also reducing extension cords, ultimately enhancing user safety and productivity. Additional hassles related to temporary power, such as outlet overcrowding and wiring or electrical maintenance, are eliminated with the introduction of Roll-On to the job site, reducing wasted power and spend, and maximising productivity.

With the ability to be powered anywhere, MILWAUKEE®'s new power supply delivers versatility and productivity for the professional job site. Weighing 47 kg, over 36 kg lighter than comparable petrol generators, the Roll-On provides mobility without compromising performance. Designed to withstand tough job site conditions, it can be used for indoor and temporary outdoor work, eliminating emissions and providing quiet operation. The smart HMI (Human Machine Interface) screen provides high visibility showing all relevant data to the used, like pulled wattage, remaining run time or charge level. Featuring 24 cm all-terrain wheels and an IP54 rating, this power supply is built to withstand job site conditions like dirt, dust, and water. Designed with a user-demanded feature set, MILWAUKEE®'s new solution is fully compatible with the PACKOUT™ Modular Storage System. Integrated with ONE-KEY™* technology, users are provided with the ability for tracking, management, and adjustable charge rate options to maximise outlet usage onsite.

*ONE-KEY™ is the first digital platform for tools and equipment. By integrating industry-leading tool electronics with a custom-built cloud-based program, ONE-KEY™ provides a new level of control and access to information that revolutionises the way work gets done. The ability to customise, track, and manage through ONE-KEY™ fundamentally changes the way users interact with their tools.

Specifications

Roll-On 7200 / 3600 W 2.5 kWh Power Supply

IRPSUOP2500

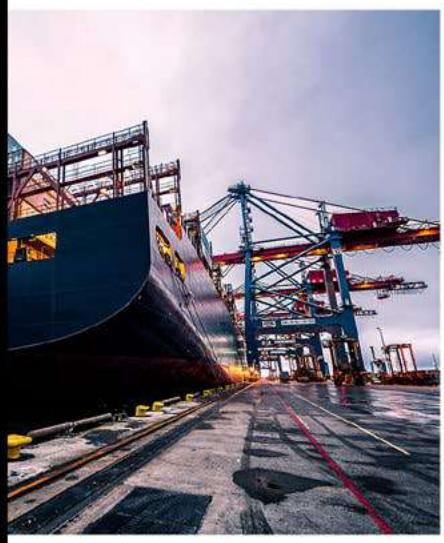
- Battery Type: Lithium-ion
- Charging Time: 180 min
- Continuous Wattage: 3600 W
- Capacity: 2500 W
- Peak Wattage: 7200 W
- Weight: 47 kg

Kit Includes: (1) Roll-On 7200 / 3600 W 2.5 kWh Power Supply

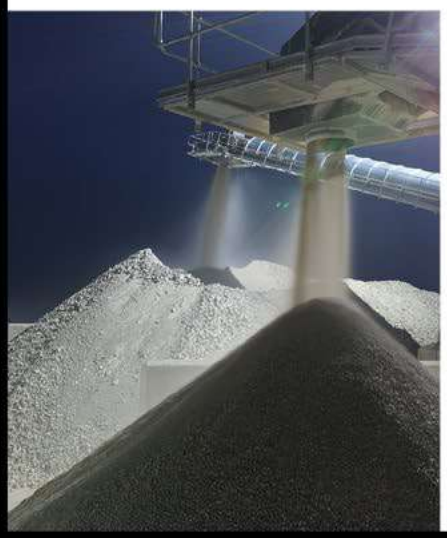
To find out more about Roll-On 7200 / 3600 W 2.5 kWh Power Supply see video footage of it in action or find your nearest store, please visit www.milwaukeetool.eu





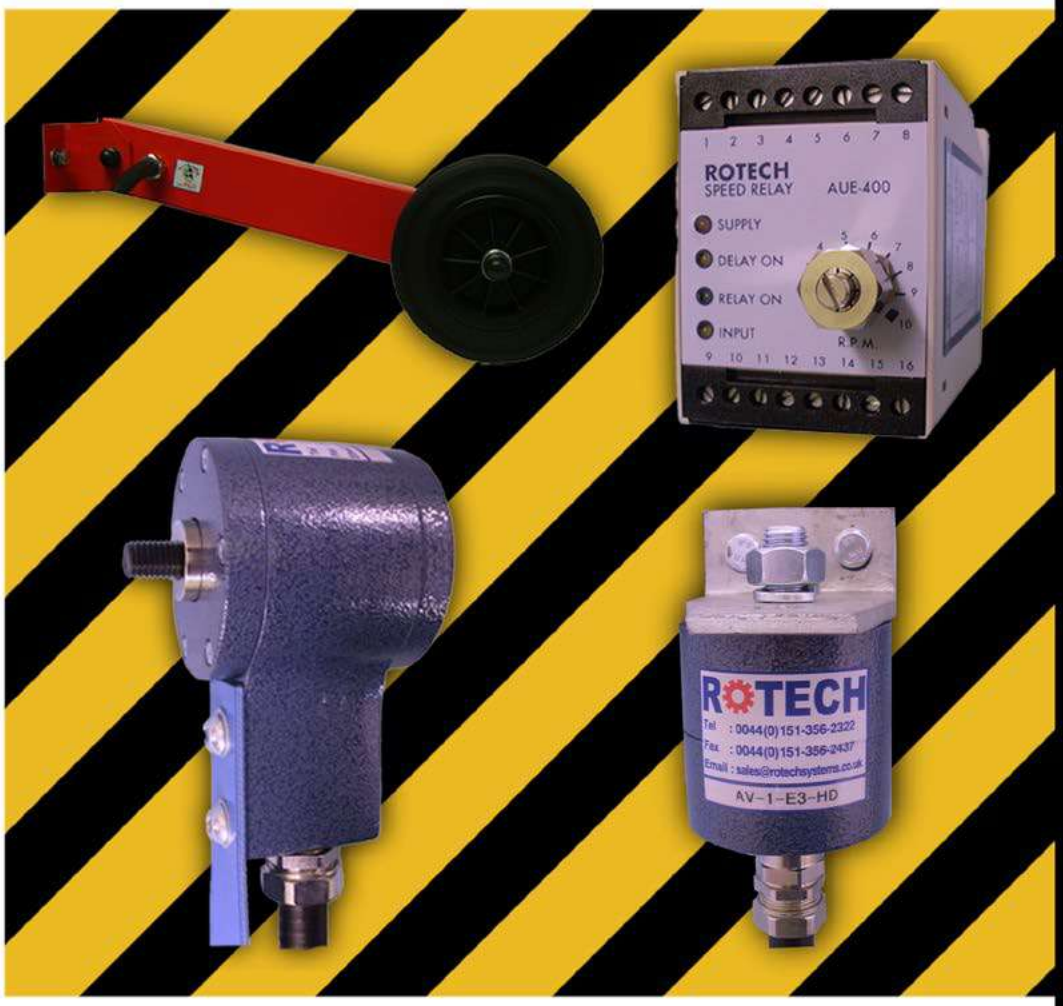






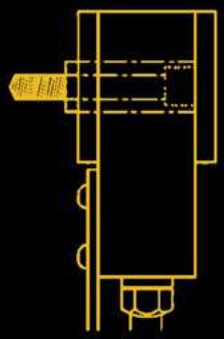
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