



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 34

MPE ACTIVITY & TECHNOLOGY



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MPE DISTRIBUTORS

MPE announces New Distributors

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MPE IN DEPTH VIEW



Protecting Europe's Critical Infrastructure with New Directive

In January 2023, the EU member states published the Critical Infrastructure Resilience Directive, which ensures critical entities can prevent, resist, absorb and recover from disruptive incidents, including those caused by natural hazards, terrorism, insider threats, sabotage, or public health emergencies . . . [Read More >](#)

FAST FACTS ON MPE LTD

- Trading for over 99 years, MPE employs more than 60 people.
- MPE has designed and manufactured in excess of 10,000,000 high-performance protection filters and feedthrough capacitors across the last 30 years.

- Many products in continuous service for more than 25 years.
- MPE's portfolio spans over 20,000 custom designs.
- MPE is certified to the ISO 9001:2015 quality standard, and its products meet all applicable defence, safety and regulatory standards.



For comprehensive information about MPE's products and services, contact the Sales and Marketing Department, MPE Ltd, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7UL, U.K.
Tel +44 (0)151 632 9100. Email sales@mpe.co.uk. Website www.mpe.co.uk
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Lord-Lieutenant of Merseyside presents King's Award

MPE held a presentation ceremony on Wednesday, June 5th, for the King's Award for Enterprise. The Lord-Lieutenant of Merseyside, Mr Mark Blundell, presented the award on behalf of His Majesty King Charles III.

MPE initially applied for The Queen's Award for Enterprise in September 2022, and the subsequent sad passing of Her Majesty Queen Elizabeth II led to MPE being awarded The King's Award for Enterprise. This change of Monarch required the amendment of Royal Warrants to reflect today's laws and legal terminology, delaying presentations.



MPE's Directors, The Lord-Lieutenant Mr Mark Blundell, Deputy Lieutenant Lesley Martin-Wright, Sir George Howarth

MPE hosted the Lord-Lieutenant of Merseyside Mr, Mark Blundell, Deputy-Lieutenant Lesley Martin-Wright, Clerk to the Lieutenancy Helen Tanzey, and The Rt Honourable Sir George Howarth.

Following a cordial introduction to our directors, Marcus Wright and John Hughes led the esteemed guests on an enlightening tour of our factory, where they witnessed the manufacturing process. The culminating moment was the King's Award for Enterprise presentation, held on the shop floor, a symbolic testament to our company's excellence.

"I was delighted to be able to present MPE Ltd with the King's Award for Enterprise today. This is the first KAE to be presented to a company in Merseyside, and MPE Ltd has received the award for Innovation. They have proven themselves to be an outstanding company, and this award is clearly well deserved. My congratulations go out to all concerned." said Lord-Lieutenant Mr Mark Blundell.



Production Operative Helen Beach explains the production process to the Lord-Lieutenant

Marcus Wright, Manufacturing Director, gave the opening and closing speeches and accepted the award on behalf of MPE. In his remarks, Marcus paid tribute to the previous owners, David Seabury and Paul Currie, under whose guidance MPE made significant strides in innovation.

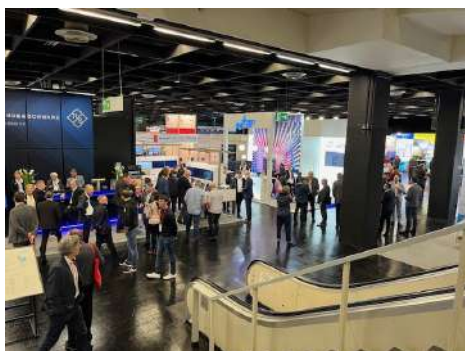
The Lord-Lieutenant and Deputy Lieutenant both took turns emphasising the importance of the awards, their history, and the rigorous selection process that MPE successfully navigated to be considered for such an award.

MPE was bestowed with the prestigious King's Award for Enterprise: Innovation, a profound recognition of the revolutionary new range of Mil-Std-188-125-1A HEMP Filters. This achievement is a testament to MPE's unwavering commitment to innovation and excellence, filling the team with pride and accomplishment.

The Rt Honourable Sir George Howarth, who was present throughout and a longstanding supporter of MPE, said, "As the former MP for Knowsley, it was a great honour to attend the presentation of the King's Award for Innovation to MPE. It was a richly deserved recognition of the great success of the company and warm congratulations to the management and workforce for all of the effort that has gone into achieving this prestigious award."

It is a momentous occasion for MPE and is a great starting point as preparations for the 100th Anniversary progress.





EMV 2024, Cologne



EMC & Compliance International, Newbury Racecourse

MPE Sales Team out in Force

MPE's Sales Team has been at various events over the last couple of months, meeting with distributors and customers.

The first event, EMV, in Cologne, boasted 4500 sqm of exhibitors, presentations and workshops, attended by 2538 visitors over three days in March. Both John Jephcott and John Mula visited on the 13th and 14th. John Jephcott had the opportunity to catch up with MPE's German distributor, Electrade, and to visit several customers. John Mula also took the opportunity to meet up with a few of MPE's clients and introduce himself to several prospective clients specialising in turntables for eV chambers, highlighting our range of 1500VDC filters suitable for such applications.

The next event, DPRTE, was held at Farnborough in March and is a significant defence procurement and supply chain event. This show, frequented by the MOD, BAE Systems, Babcock, Leonardo, and QinetiQ, among others, provided a unique opportunity for suppliers to meet and network with the procurement teams within these companies. It was a platform to understand the defence market needs. John Mula, attended this event, meeting several clients and introducing himself to new ones. This event was a key step in our strategy to expand our presence in the defence sector, a strategic focus that we are confident will lead to significant growth for MPE.

Finally, John Mula, as the UK Sales Engineer, attended EMC & CI for the second year in a row, meeting with several clients in the RF Shielded room and Test & Measurement industries, a relatively small affair compared to EMV, held at Newbury Racecourse each year, the exhibition had 26 exhibitors, 18 expert speakers and six conference themes.

John Mula said of the event 'EMC & CI, which is a two-day event provides access to expertise on new EMC directives, components, test techniques and equipment and the latest EMC modelling, with a full schedule of training and conference sessions delivered by world-renowned EMC experts. This year, they broke with tradition and held some of the talks in the exhibition hall which allowed visitors to benefit from the talk sessions.'

Throughout the rest of the year, the sales team will be attending further exhibitions and conferences. John Jephcott, in support of MPE's distributors, Michelle Lepage, Regional Sales Manager - North America, will be attending Global EM, and John Mula will participate in several MAKE UK Defence networking events.

Check out MPE's event page on the website for more information on the events MPE will attend. If you require further information about MPE's activities, please get in touch with sales@mpe.co.uk.



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 34



Senior Design Engineer Tobias Okech



AT&T Conference Center | University of Texas at Austin

MPE to Present Paper at GlobalEM

GlobalEM, the largest biennial conference on High-Power Electromagnetics, will be held in Austin, Texas, USA, from 14th July to 19th. MPE's Senior Design Engineer, Tobias Okech, will present his paper 'HEMP & The New Grid' on 15th July.

With its origins dating back to 1978 as the Nuclear Electromagnetic Pulse Meeting (NEM) in Albuquerque, GlobalEM has a long-standing reputation as a premier platform for exchanging cutting-edge research in High-Power Electromagnetics. The fact that MPE was selected to present their paper, 'HEMP & The New Grid,' at this esteemed event is a testament to the quality and significance of MPE's work.

The five-day conference is a comprehensive platform that caters to all aspects of High-Power Electromagnetics. It includes plenary sessions, paper presentations, tutorials, social events, and a technical tour of ETS-Lindgren. Among the seventeen topics the conference covers, IEMI Threats/Effects/Protection and Evaluation of HEMP/IEMI Impacts on Critical Infrastructures are rooted in MPE's DNA.

Tobias Okech will present his paper 'HEMP & The New Grid' on Monday 15th July in the afternoon session between 4.00-5.30 pm in Ballroom D. In addition, Engineering Director John Hughes will be in attendance supporting Tobias and available to discuss MPE's range of HEMP filters. Michelle Lepage, Regional Sales Manager, North America, will be helping with the proceedings and will be available to discuss critical infrastructure protection and the range of Mil-Std-188-125-1A HEMP filters.

To register for the conference, please visit <https://www.globalemconf.com>.

To discuss MPE's range of Mil-Std-188-125-1A HEMP filters, contact sales@mpe.co.uk or for more information, visit the products page on MPE's website [Products \(mpe.co.uk\)](https://www.mpe.co.uk/products).



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 34

WAVECONTROL



MPE announces New Distributors

MPE's strategic expansion of the global network has led to the appointment of two new distributors in Europe, Italy and Spain. This strategic move, aimed at bringing territories online where MPE has experienced increased sustainability, saw Spain and Italy as the following key targets, reflecting our commitment to growth and sustainability.

Based in Barcelona, Wavecontrol was appointed Spain's new distributor effective 28 June 2024. Wavecontrol has over 20 years of engineering experience in measuring electromagnetic fields. It supplies components, instruments, and systems for research and production in electromagnetic compatibility (EMC), electric safety, antenna measurement, automatic wiring verification devices, and shielding materials.

APC Technology Group, based in Milan, was appointed effective 28 June 2024 for Italy. Their focus on designing, specifying, and distributing specialist electronic components and systems, property technologies, and connectivity products aligns perfectly with MPE's activities. They target nine industry sectors, specifically EMC, Defence, and Medical, further strengthening the partnership.

Both the newly appointed distributors attended MPE's facility in Knowsley for a day of product training by Distribution Account Manager John Jephcott. Training completed, they toured the factory, learning about the history and leading product lines of TEMPEST and HEMP protection and viewing the upgrades to the facility, cementing MPE as a world-beating producer of EMC/EMP filter protection.

MPE is excited about the prospect of working with APC Technology (Italy) and Wavecontrol (Spain) and that the partnerships will mutually benefit as we expand in those territories. For further information on MPE's distribution network and partners, visit our website, [Distribution Partners & Authorised Representatives \(mpe.co.uk\)](https://mpe.co.uk). For territories not covered by MPE's appointed distributors, contact the sales desk at sales@mpe.co.uk.



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 34



MPE Products draw interest in Okinawa

The EMC JAPAN/APEMC 2024 event, a unique Asia-Pacific International Symposium, was held at the Convention Center in Ginowan, Okinawa, from May 20 to 24. This annual symposium, which rotates between different Asian countries, was last held in Japan in Sapporo in 2019. However, this year marked a special occasion as it was the first time Okinawa hosted the event, adding a new and exciting chapter to its history.

Techno Science Systems (TSS), MPE's respected distribution partner for Japan, had a booth in the Convention Center hall. The booth showcased MPE's filters in various applications, such as test Chambers, with several filters on display.



The Symposium was a platform that brought together delegates from Asia, America, Europe, and other regions. It provided an excellent opportunity for company President Susumu Matsuoka and Junichi Suzuki to engage with university researchers and corporate engineers, fostering a dynamic exchange of ideas. This interaction effectively conveyed the quality, reliability, and performance of MPE's filters. The booth, featuring posters showcasing the build and installation of our higher current Power Line Filters from 1200A to 3000A, attracted over 100 visitors during the 40 technical sessions held over the four days, further enhancing the visibility of TSS's and MPE's filter business.

Next year, APEMC Symposium will take place in Taiwan.



For EMC and EMP product enquiries in the Japanese market, email susumu.matsuoka@tsscorp.co.jp or visit TSS company web pages www.tsscorp.co.jp.

The next exhibition TSS will attend is Techno Frontier 2024 (July 24-26), EMC's most prominent annual exhibition.

<https://www.jma.or.jp/tf/en/index.html>

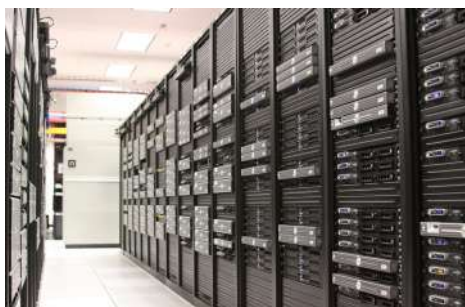




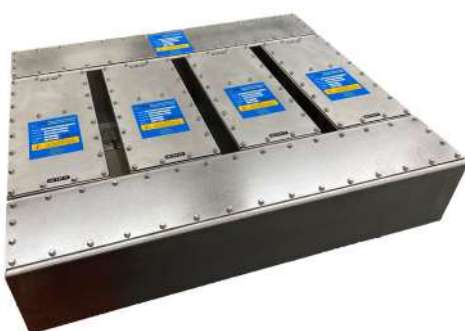
Protecting Europe's Critical Infrastructure with New Directive

In January 2023, the EU member states published the Critical Infrastructure Resilience Directive, which ensures critical entities can prevent, resist, absorb and recover from disruptive incidents, including those caused by natural hazards, terrorism, insider threats, sabotage, or public health emergencies. The Directive covers eleven key sectors:

- Energy
- Transport
- Banking
- Financial market infrastructure
- Health
- Drinking water
- Wastewater
- Digital infrastructure
- Public administration
- Space
- Production, processing and distribution of food



Datacentres form part of critical infrastructure and as such fall under the Directive's requirements for protection



MPE's award winning HEMP filters will play a vital role in protecting critical entities from attack

From October, Governments will adopt the Directive into their legislation. Critical Infrastructure industries must publish plans on how they intend to protect and improve the resilience of critical entities operating any infrastructure, which is vital for modern societies. Without reliable energy supplies, safe drinking water, health services, banking and financing services, or predictable transportation, life would not be able to continue as it does now. For this reason, the European Commission has been supporting the protection of critical infrastructure and the resilience of critical entities, aiming to reduce vulnerabilities and strengthen physical resilience.

One such threat to critical infrastructure is an Electromagnetic pulse (EMP). For decades, Electromagnetic pulse (EMP) attacks have been an enduring and severe menace to the operation of Critical Infrastructure systems for military and government facilities designed for Command, Control, Communications, Computer and Intelligence (C4I). However, with 80% of Europe's Critical Infrastructure privately owned, the impetus for these industries to adopt a national framework for the protection, improvement and safeguarding of such has led to the publication of the Directive.

Electromagnetic pulses (EMPs) can inflict extensive damage across various sectors of society. These high-energy bursts of electromagnetic radiation can wreak havoc on electronic devices and infrastructure, rendering them dysfunctional or permanently impaired.



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 34

In the event of a significant EMP event, through one of three primary sources:

- Natural Threats, including Solar Storms and Atmospheric Electrical Storms.
- A High-altitude electromagnetic pulse (HEMP) is emitted from a nuclear detonation approximately 30 km above sea level and covers a large area.
- Intentional electromagnetic interference (IEMI) is the malicious generation of electromagnetic energy that introduces noise or signals into electric and electronic systems, thus disrupting, confusing, or damaging them for terrorist or criminal purposes.

Vital systems, including communication networks, power grids, and transportation systems, could suffer crippling disruptions. This disruption could lead to widespread power outages, communication breakdowns, loss of data, and logistical challenges, severely hampering emergency response efforts and exacerbating social and economic instability. Moreover, the damage inflicted by EMPs may extend beyond immediate technological failures, impacting critical services such as healthcare, financial systems, and national defence. Understanding the potential consequences of EMPs and implementing robust mitigation strategies are imperative to safeguarding against the far-reaching devastation they can cause.

How are these risks mitigated? In the first instance, most engineers and architects would consider shielded environments; metallic structures dissipate EMP across the structure and down a ground connection. For effective shielding, there cannot be gaps or openings allowing the electromagnetic pulse to travel across into the interior.

However, in an everyday societal situation, there are more practical solutions than this, as specialist equipment is required, and wiring, HVAC, personnel, and equipment must be able to enter for it to be helpful.

MPE's range of HEMP powerline and control filters is designed for the protection of critical infrastructure. Originally, designed for military facilities, the filters are being adopted by power plants and data centres. They are designed with three main components:

Varistors, Capacitors, and Inductors.

Varistors divert pulse energy to the ground, while inductors delay the pulse. Finally, capacitors divert unwanted frequencies to the ground.

For more information on MPE's world leading range of HEMP filters, please visit our website's HEMP product range www.mpe.co.uk. To discuss requirements, please get in touch with sales@mpe.co.uk.