



Product Focus

MPE Custom military filters

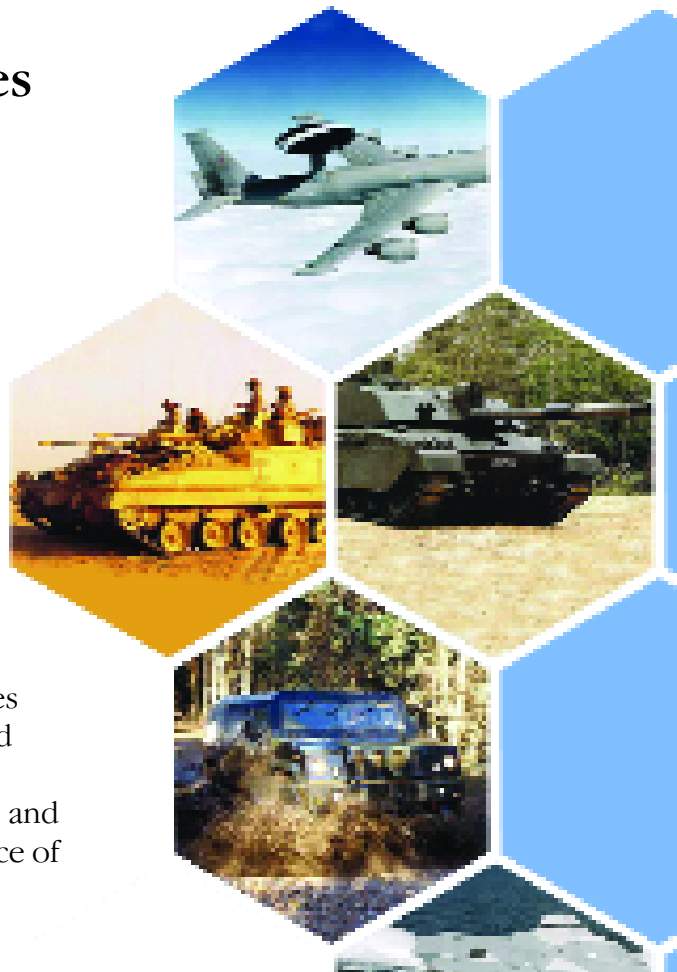
Modern sophisticated military hardware requires hardening from the potential threats of EMP & EMI not only on the battle field but also away from the theatre of conflict. In the past it has been necessary for defence contractors to retrofit custom built filters and capacitors to military hardware. MPE's custom design capability makes us first choice when selecting a partner to develop custom solutions to EMI problems.

Custom military filters design issues

- Protect against NEMP/LEMP/HAEMP threats
- Achieve Tempest requirements
- Provide maximum protection in the minimum of space
- Minimal filter heat dissipation
- Reduce filter leakage currents
- Reduce filter maintenance requirements
- Optimal cost/protection criteria
- Maintainable & replaceable surge protectors
- Low acoustic signature

Solutions

- Modern choke design, line filters minimise weight, size heat dissipation and leakage current
- Integrate connectors into filters to increase functionality
- Innovative multi-line construction on Data / telephone lines
- Plastic film feed through capacitors with high reliability and self healing failure modes
- MPE offer confidence as a supplier who can design and manufacture key components and have extensive experience of your application



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MPE



Background, experience & capabilities

MPE's reputation as one of Europe's leading filter specialists is based on over 80 years of experience in the design, development and production of high performance RFI/EMC/NEMP/Tempest filters. Our commitment to a policy of continuous product development and innovation has resulted in one of the most comprehensive ranges of filter products available from a single manufacturer. All our manufacturing is done on site and we are approved to BS EN ISO 9001:2000. Our unrivalled capability and experience enables us to design and build filters to satisfy the exacting requirements of Military customers and we have extensive experience of Mobile and Deployable Shelter applications. Within our numerous proprietary designs, many have been: N.A.T.O. listed; Fighting Vehicle (FV) registered; or adopted as Defence Standards.

Standard products manufactured by MPE range from power filters with full spectrum performance up-to 2400 Amps through to telephone/data and control filters in multi-line packages. It should be noted that many of the filter ranges available offer 100dB performance from 10kHz. to well above 10GHz. Non-standard requirements can be fulfilled by a custom designed filter and members of our design team are available to offer technical support. We draw on a database of over 20,000 custom designs to reduce design time and extensive use is made of our own capacitor and filter design software. Our development test laboratory is well equipped with specialist facilities and is capable of carrying out a variety of special tests including high energy EMP pulse injection testing.

Mini case Study British Main Battle Tank, Challenger



The Challenger 1 & 2 have been Britain's main battle tank for over twenty years. Successfully serving in Iraq, Bosnia and Kosovo the Challenger built a reputation as a formidable fighting vehicle.

MPE provided EMC solutions for Challengers predecessor the Chieftan MBT and as a consequence provided the EMC solutions for Challenger 1 & 2.

The installation of more sophisticated equipment, made the EMC problems more challenging and complex. MPE subsequently designed a number of new filters to successfully solve these problems.

Although MPE has an extensive range of catalogued products, many of which can form an excellent basis for addressing the above design issues, we suggest you contact MPE with details of your project for specific technical advice.

