RF Filter Installation Guidelines

European EMC Products

Technical Datasheet

For optimum EMI performance, proper mounting of any filter is essential. It is important to ensure as low as possible earth bond impedance to the unpainted base or mounting flange of the filter. This is necessary to obtain the best insertion loss from the filter, and also to carry away high pulse currents in transient suppressed filters.

It is normally recommended that the filters are mounted on a steel surface which has been electroplated with tin or zinc. This should be unpainted and must be flat or smooth. Whilst other materials and finishes may be acceptable, the user should give consideration to the shielding and earth bonding properties and possible galvanic corrosion effects of any materials used. In most cases, “conductive paint” finishes are unacceptable as they do not permit a sufficiently good earth bond to be made.

Penetration tubes are used to pass cables through the base of the filter and the mounting surface. These must provide a complete RF seal. EEP supply dedicated fixings kits.

Filter sizes and cable entries are designed to be a minimum for the filter current rating. The user is advised to verify that the standard filter terminal compartment and cable entry sizes are suitable for this application, especially where oversize cables may be used to minimise cable volt drop.

Proper fitting of terminal compartment lids and gaskets is important, as shown on detail above. Gaskets must be fitted in the specified positions, ensuring all lid screws are fitted and tightened to the specified torque.

Where several filters are installed together, it is recommended that they are installed vertically with at least 25mm spacing to assist with convection cooling.

All conductors should pass through single cable entries in accordance with the IEE regulations to avoid eddy current heating effects.

Recommended Torque Tightening Gauge:

M5 - 2 Nm
M6 - 2.5 Nm
M8 - 5 Nm
M10 - 8 Nm
M12 - 11 Nm
M16 - 20 Nm

For Further Information Visit: www.eep-filters.com
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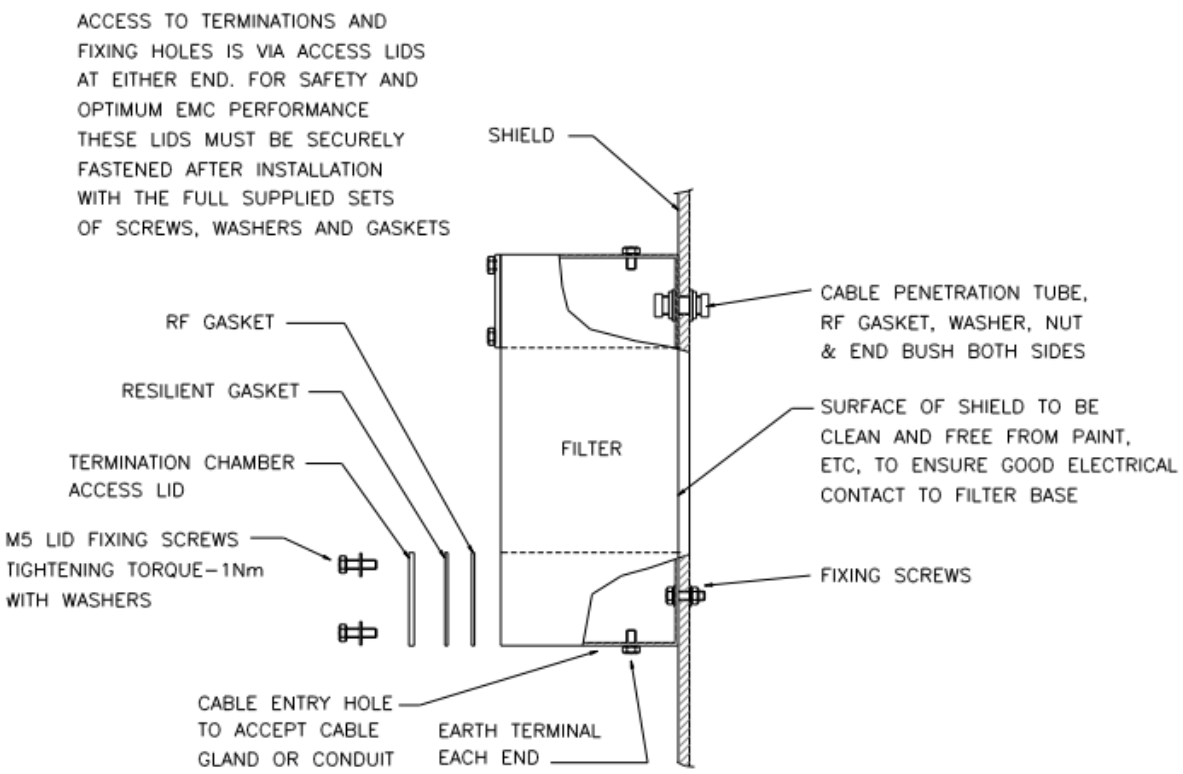

About Us

Established in 1996, European EMC Products (EEP) are an established British company whose experience and understanding of the science of shielding makes it an ideal partner in whom you can place your trust with confidence. The purpose of installing EEP shielding systems is to protect people and equipment against the threats posed by electromagnetic and radio frequency (RF) interference, radiation, magnetic fields and electromagnetic pulses. Our diverse range of turnkey products and services, including design, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Quality

European EMC Products Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.
Registered Scope: The design, assembly, installation, servicing and testing of RF Shielded Structures and equipment including EMI Shielding, Blast Doors, Gas Tight Doors and specialised mobile Electromagnetic Pulse Protection (EMPP) containers.
Radio Frequency, Magnetic Shielding and Quench systems for MRI (Magnetic Resonance Imaging) scanners.
The design, assembly and installation of Ionising Radiation Protection facilities.
The design, manufacture and installation of LED lighting systems for medical applications.
EEP Filters Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.
Registered Scope: The design, manufacture, management of installation and testing of high performance EMC and EMP Power and Data Line Filters.

Disclaimer

NB: All the information provided within this datasheet is for reference only. Product specifications are subject to change without notice.