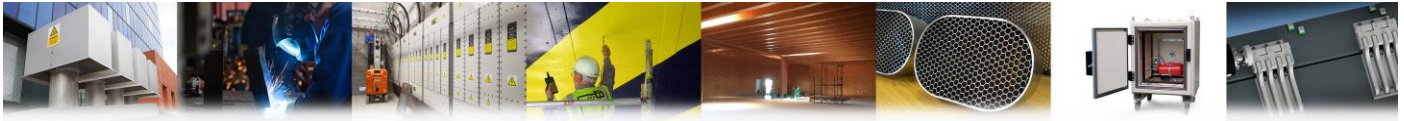


RF Shielded Aluminium Waveguide Vents



Our range of RF (radio frequency) Shielded Waveguide Vents consist of aluminium honeycomb which allows air to pass through, but attenuates radiated interference. They are designed for use in RF shielding applications requiring a robust, lightweight and low-profile vent.

Technical Specification

Material:

Hexagonal cell honeycomb material of a fully hard H191 temper 2.5% magnesium alloy conforming to MIL-A-81596. The foil is treated against corrosion using a chromate conversion coating process.

It is available in a wide range of cell sizes and densities allowing versatility in design of sandwich structures and other applications.

Dimensions:

12.7mm or 25.4mm thick aluminium honeycomb with 3.2mm cell width. Bespoke sizes are available upon request.

RF Performance for Aluminium Honeycomb

Test carried out to Mil Std 285 by an independent NAMAS accredited test house on a Waveguide 350mm x 350mm. Full results available.

Frequency (Hz)	Mode	Attenuation for 25.4 x 3.2mm cell
100 k	E	40 dB
200 k	E	40 dB
1 M	E	40 dB
10 M	E	40 dB
40 M	E	40 dB
100 M	E	40 dB
400 M	P	40 dB
1 G	P	40 dB

Shielding Effectiveness

The shielding effectiveness (SE) of an RF shield is defined by the ratio of signals strengths inside and outside of the shield, i.e. how much does the shield reduce the signal. To make this easier to use it is expressed as a ratio in dB (decibels).

$$\text{Shielding effectiveness (dB)} = 20 \log V1/V2.$$

V1 is the signal strength outside the shielding and V2 the signal strength inside the shield.

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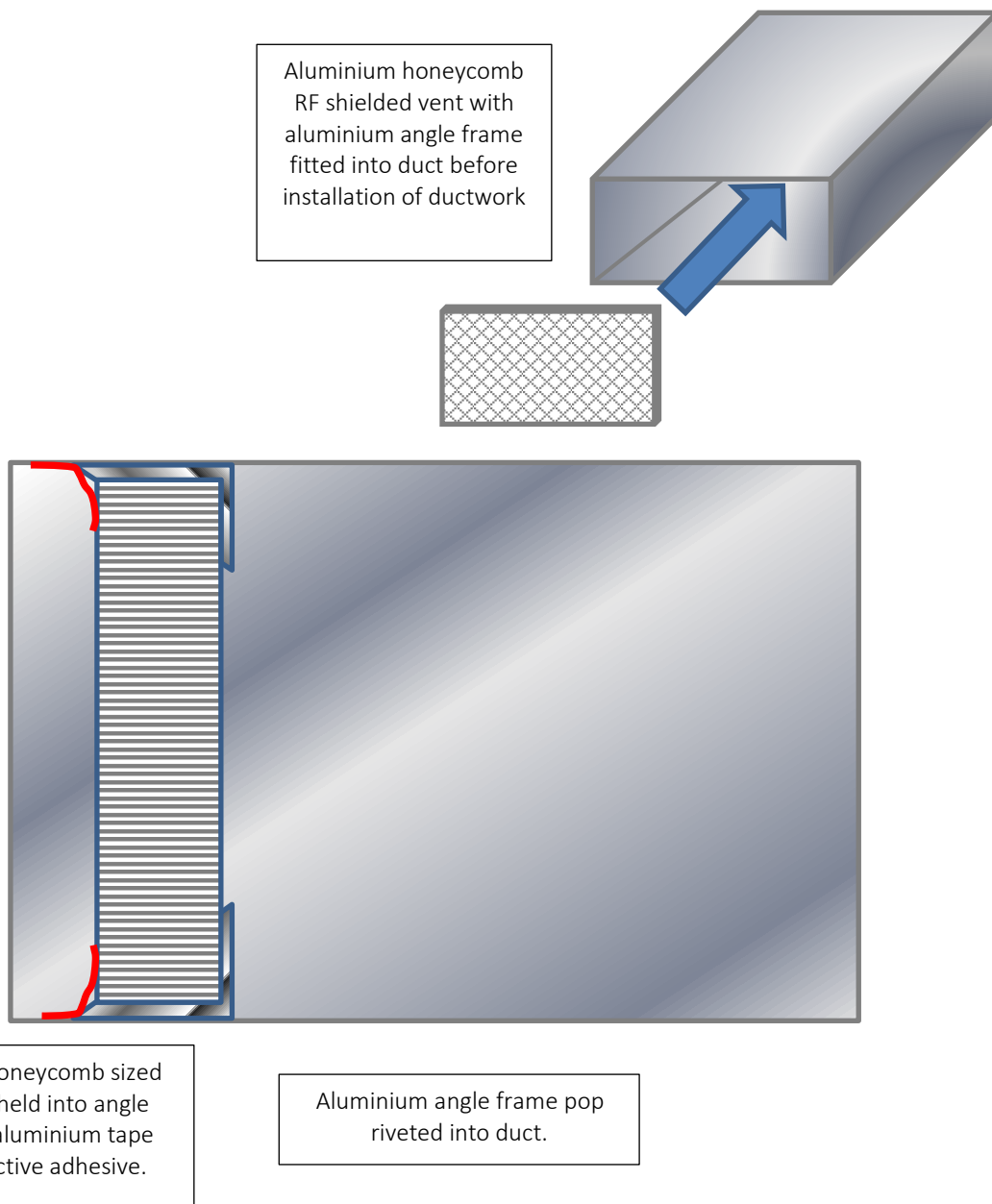
As SE is expressed logarithmically it is important to note these ratios:

20dB is a reduction by a factor of 10

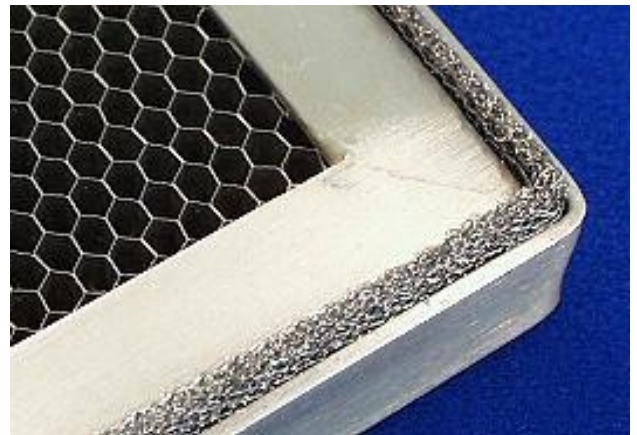
40 dB is a reduction by a factor of 100

60 dB is a reduction by a factor of 1,000

Fitting Radio Frequency Shielding Honeycomb into Ductwork



RF Shielded Aluminium Waveguide Vents



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.