

Product Overview

Aluminium screen EMC & dust filter ventilation panels consist of multi-layer expanded aluminium foil mesh trapped in a rigid extruded aluminium mounting frame, the frame can be supplied in a choice of sizes and profiles. Panels can be treated with a variety of finishes to provide corrosion protection. Air filter oil can be applied to the aluminium filter media to assist in dirt and dust retention.

Panels with a gasket groove have a knitted monel wire mesh gasket as standard. Other frames can be provided with an additional EMI Gasket.

Applications

Ventilation panels are designed for use in commercial electronic enclosures where air flow is required for cooling and ventilation but where EMC compliance and dust filtration must be ensured. Typical commercial applications are:

- Electronic Enclosures
- Air Conditioning Units
- Fan housings
- EMC Racks

Availability

A selection of aluminium, extruded profiles are available from stock offering a variety of fixing and Gasketing options.

Custom sizes manufactured at no additional cost. Frames can be supplied with fixing holes to aid mounting.

Aluminium screen EMC and dust filter ventilation panels can be supplied with a Kempass (RoHS) Aluminium passivation process finish.

Design Considerations

Any environmental conditions such as moisture and dust control including:

- Air Flow requirement (Generally requires assisted air flow)
- External louvers for rain protection
- Any additional Gasketing
- Cleaning: Vacuum or blow clean with an airline for dry panels or easily cleaned in detergent solution prior to re oiling.

Constructional requirements and finishes including:

- Rigidity of vent frame and enclosure so as to prevent bowing of either surface when compressing the gasket
- Fixing requirements e.g. holes ensuring appropriate position and size of hole-centres. (Holes in the corners of the frame should be avoided.)
- Corrosion, electrical conductivity etc, (see Finishes section)

Product Overview (Continued)

Production Capabilities

Kemtron manufacture its range of EMC vent panels using the latest technology and, with the exception of painting and electro less plating, all processes are kept in house, giving us flexibility and total control over quality. Kemtron has invested heavily in this area making us the market leaders for price, delivery, quality and availability.

Fully programmable CNC machines for the notching & cutting of the frame extrusions and drilling of exact and repeatable holes combined with the latest TIG welding equipment allows Kemtron to offer a fast delivery of its competitive range of aluminium vent panels produced to customer designs. This advanced technology also eliminates the need for additional tooling and set-up charges. Kemtron holds a large range of aluminium extrusions. In addition to vent panels, Kemtron manufactures a huge range of EMI shielding products, including gaskets to compliment the vent panels.

Finishes

Vent panels can be supplied with a range of finishes including:

- Painted (frame only for dust panels)
- Electro less plated Tin or Nickel
- Kempass (RoHS) Aluminium Passivation process
- Trivalent chromium (RoHS compliant) or Hexavalent chromium

Kemtron's standard finish (Kempass) for aluminium vent panels fully meets the RoHS directive and replaces Alocrom1200, which is a hexavalent chromium process. Kemtron's in-house process applies a permanganate passivation which is a chromate free, inorganic and non toxic coating. The process produces a dense, uniform coating consisting of aluminium and reduced manganese oxides giving a light yellow colour to the surface. The surface finish is conductive with a low contact resistance equalling Alocrom 1200. It also meets all requirements of MIL-C-5541E for corrosion and electrical conductivity.

We are also able to offer a comprehensive range of painted finishes to complement our standard Kempass finish. Using industry leading wet paint solutions from Trimite, we offer full painting and preparation to DEF STAN specifications including matt and gloss finishes. In addition we can also offer Infra Red Reflecting (IRR) matt finishes complying with DEF STAN 00-23, 80-166 and STANAG 2338.

For less critical / commercial applications requiring a protected finish we recommend polyester powder coating. This is tough material that offers excellent resistance to fresh and saltwater, petrol, linseed and penetrating oils, along with limited resistance to various acids. We are happy to advise on specific examples if required. With both processes, we are able to offer a full range of colours to RAL/BS charts.

Technical Specifications

Tolerances

Standard tolerances for overall finished vent dimensions are +/- 0.8mm

Standard tolerances on hole centres are +/- 0.4mm

Specifications

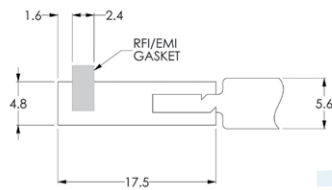
Aluminium frame	6063-T6
Monel wire	BS3075 NA13

EMC Performance (db)

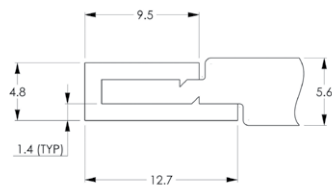
Frequency	db
0.01MHz	31
0.1MHz	49
1.0MHz	67
10.0MHz	116
100MHz	109
1,000MHz	72
10,000MHz	42

Frame Styles

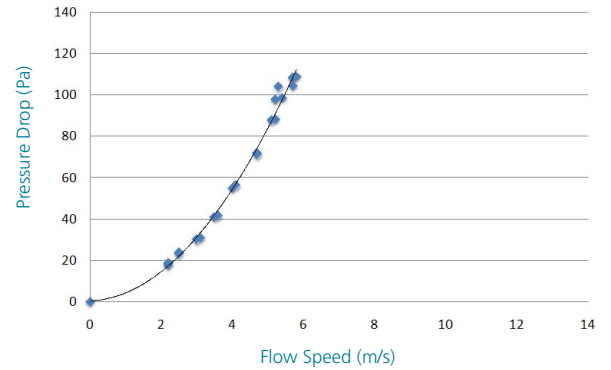
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Air Flow Results Graph



Notice

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