

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 Surtec 650 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 louvres 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).

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:

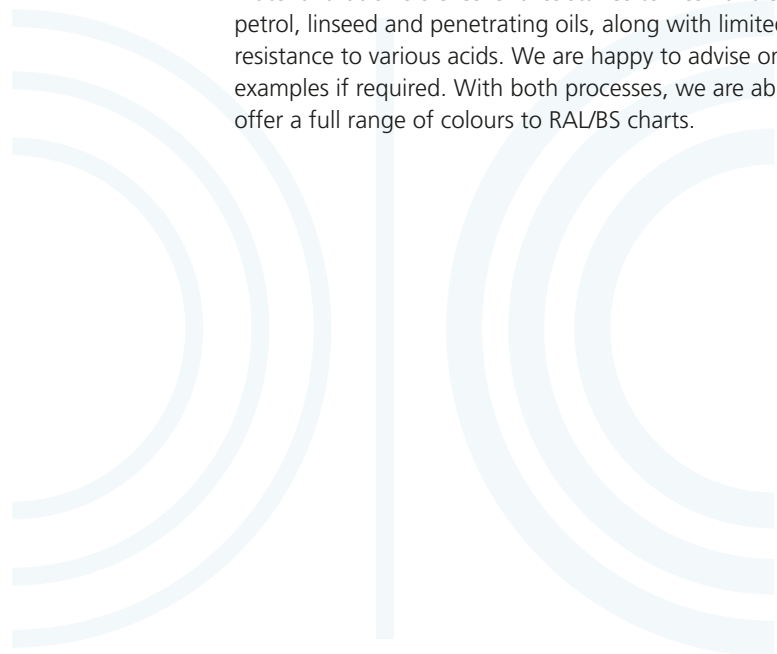
- Surtec 650 – Trivalent Chromium
- Electro less plated Tin or Nickel
- Painted (frame only for dust panels)
- Achrom 1200 – Hexavalent chromium.

Kemtron's standard finish (Surtec 650) for aluminium vent panels fully meets the RoHS directive.

Kemtron's in-house process applies a trivalent chromium passivation. The surface finish is conductive with a low contact resistance and meets all requirements of MIL-DTL-5541F Type II Class 3 for corrosion resistance and electrical conductivity. We are also able to offer a comprehensive range of painted finishes to complement our standard Surtec 650 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.



Tolerances

- Standard tolerances for overall finished vent dimensions are $\pm 0.8\text{mm}$.
- Standard tolerances on hole centres are $\pm 0.4\text{mm}$.

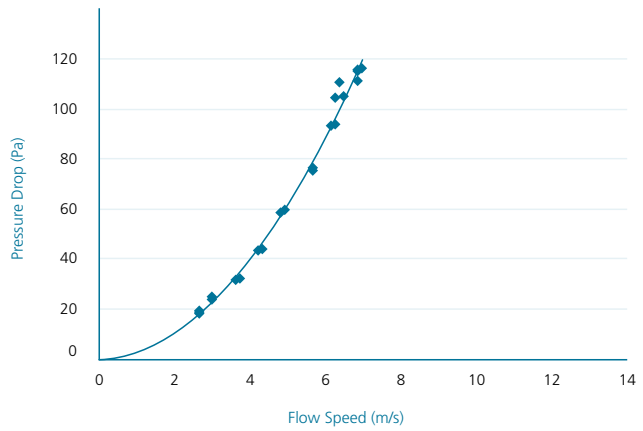
Specifications

Aluminium Frame	6063-T6
Monel Wire	BS3075 NA13

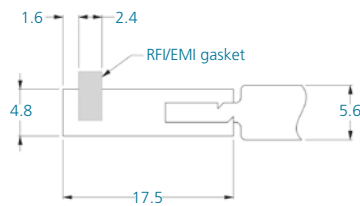
EMC Performance (dB)

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

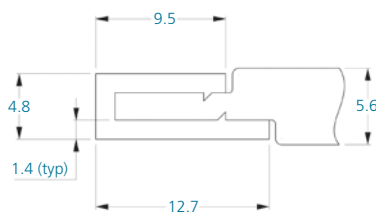
Air Flow Results Graph



Frame style: 1721



Frame style: 1722



Notice

Information supplied in these data sheets is based on independent and laboratory tests which Kemtron believes to be reliable. Kemtron has no control over the design of customer's product which incorporates Kemtron's products, therefore it is the responsibility of the user to determine the suitability for his particular application and we recommend that the user make his own test to determine suitability.

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