

PRODUCT ANNOUNCEMENT MAJR SHIELDED HONEYCOMB VENT PANELS

A shielding honeycomb ventilation panel is a product that lets air flow into and out of an EMI/RFI shielded enclosure. The entering fresh air may be either cooled, heated, or at ambient temperature depending on the shielded enclosure environment and contents. For electronic equipment, the primary reason for airflow is usually to cool the electronics; if a manned military shelter, the reason might be to circulate fresh air and to either cool or heat the air depending on the external environment.

Enclosures that incorporate a shielded honeycomb vent panel can range from portable electronic instruments to electronic rack systems (Figure #1), to mobile manned or unmanned military shelters (figure #2), and up to large fixed EMC shielded test facility enclosures with the ability to test aircraft. In addition, the enclosure does not have to be rigid; shielded honeycomb vent panels are widely used in manned or unmanned shielded tents that house electronic equipment (Figure #3). Shielded tents are used for a variety of reasons such as: EMC product testing, sensitive military surveillance operations, environmental monitoring, etc... Since there are a multitude of applications for honeycomb ventilation panels in a variety of enclosures, there needs to be a multitude of shielded honeycomb ventilation panel configurations available to meet these needs.



Figure #1
Electronic Equipment Rack



Figure #2
Military Shelter System



Figure #3
Conductive Tent

Product Applications

- Custom honeycomb panels are designed to meet specific shielding, airflow, and mounting requirements.
- Available in chromate aluminum, tin plated aluminum, or tin plated steel honeycomb to meet specific attenuation and environmental requirements of MIL-STD-461 and MIL-STD 810
- High permeability steel honeycomb available for magnetic (H-Field) shielding to 60 dB attenuation levels. (>80 dB attenuation using 1 in. thick steel honeycomb)
- Standard sizes and mounting configurations available.
- An EMI/RFI gasket is always supplied as an integral part of the honeycomb vent panel assembly.

Mounting is accomplished with either frame thru-holes or captive fasteners located and installed to standard or custom dimensions.

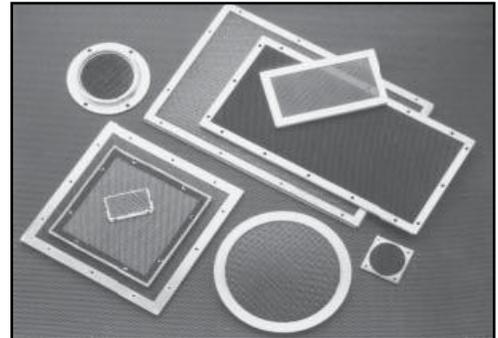
MAJR Products Corporation manufactures ready-to-install EMI/RFI shielded honeycomb ventilation panels designated as their 3000 Series. The panels provide optimum EMI/RFI shielding with minimum static pressure drop for ease of airflow. Shielded honeycomb panels accomplish high shielding effectiveness utilizing waveguide design principles to effectively reduce “cut off” the energy of the electromagnetic wave. The thin 0.004 in. conductive walls of the honeycomb waveguide cells allows air to flow freely with very low static pressure drop (resistance to air flow). Dust filter media, either integrated into the honeycomb frame or as a stand alone panel attachment are available upon request.



3000 Series Honeycomb Panel



MAJR Shield - High Airflow Panel



Variety of Custom Honeycomb Panels

Standard Fan Ventilation Panels

In addition to MAJR’s 3000 series shielded honeycomb vent panels, MAJR also offers fan ventilation panels manufactured to meet the commercial market’s requirements for a low-cost, high-quality EMI/RFI shielded ventilation panel. These units are available in five standard sizes using a 0.250” thick honeycomb material and have an overall thickness with gasket of 0.407”. Standard shielding gasket is a Monel wire embedded in solid silicone with an optional gasket of a beryllium copper fingerstock. Tin plate (MIL-T-10727), nickel plate (MIL-C-26074A) or an RoHS compliant coating available upon request. Shielding effectiveness is in the 50-60 dB range at 1 GHz, depending on the gasket material used. Standard lead times are in the two-to-three week range for most sizes with quicker deliveries available based on plating and quantities required.

Below is a table that identifies the MAJR Product Corporation standard shielded fan ventilation panels.

Dimensions		Part Numbers
+0.015"	(038 mm)	
1.57" x 1.57"	(40mm x 40mm)	3031-04040-32
1.97" x 1.97"	(50mm x 50mm)	3031-05050-32
2.36" x 2.36"	(60mm x 60mm)	3031-06060-32
3.15" x 3.15"	(80mm x 80mm)	3031-08080-32
4.72" x 4.72"	(120 mm x 120mm)	3031-12012-32

Table #1 Standard Shielded Fan Ventilation Panels