

# SHIELD-CELL™ & OMNI-CELL™ Shielded Vent Panels

## Customer Value Proposition:

### SHIELD-CELL and OMNI-CELL

EMI Shielded Ventilating Panels Ready-to-install SHIELD CELL and OMNI CELL panels provide maximum EMI shielding with minimum pressure drop (air flow resistance) for ventilating air. All styles are composed of metal honeycomb shielding panels in EMI gasketed frames of like material. Panels are ready-to-mount, in such a manner that the frame gasketing is compressed firmly against the shielded housing to maximize shielding performance. Standard framing for all panel designs includes both an EMI shielding gasket and a seal, from a combination of monel knitted wire mesh and sponge neoprene. Panels larger than 12 x 24 in. (305 x 610mm) are equipped with cross braces.

### SHIELD CELL Panels

Standard SHIELD CELL panel construction is all-aluminum, with 1/8 in. (3.2 mm) cells, 1/2 in. (12.7 mm) thick. The complete frame/honeycomb assemblies are chromate conversion coated. Additional sizes available include: 3/16 in. (4.7 mm) cells, 3/4 in. (19 mm) thick; and 1/4 in. (6.4 mm) cells, 1 in. (25.4 mm) thick. Standard aluminum honeycomb is recommended for applications where shielding requirements are not severe.

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For improved shielding effectiveness and environmental protection, these lightweight aluminum ventilation panels are available tin plated. However, in applications requiring maximum shielding levels and greater weight support, either steel or brass honeycomb shielded vents are recommended. (Refer to page 164, Steel and Brass Honeycomb Shielded Vents, for specifications.)

### OMNI CELL Panels

OMNI CELL ventilating panels are high performance aluminum honeycomb units in Chomerics unique configuration. The OMNI CELL configuration eliminates the normal polarized shielding characteristics of conventional aluminum honeycomb, as do brass and steel panels. In place of the single honeycomb, two parallel honeycomb panels, each half the thickness of standard SHIELD CELL honeycomb, are contained in a single frame of standard thickness. Foil directions of the two honeycomb layers are at right angles to each other to eliminate non-symmetrical shielding effects. Each honeycomb layer contains 1/8 in. (3.2 mm) cells, 1/4 in. (6.4 mm) thick, for a total thickness of 1/2 in. (12.7 mm).

The finished panel assemblies are chromate conversion coated. OMNI CELL construction is usually the best general purpose honeycomb vent. It provides significantly more shielding than conventional SHIELD CELL aluminum honeycomb, at only nominally higher cost.

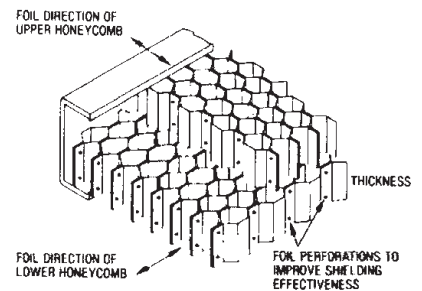


Figure 1 OMNI CELL Honeycomb Construction

### Drip- Resistant OMNI CELL Panels

In this construction, the outer layer of aluminum honeycomb is slanted down and out at 30° 45° or 60° from the horizontal. This drip-resistant construction results in a somewhat increased air flow resistance (Figure 4).

# SHIELD-CELL & OMNI-CELL Shielded Vent Panels - Product Information

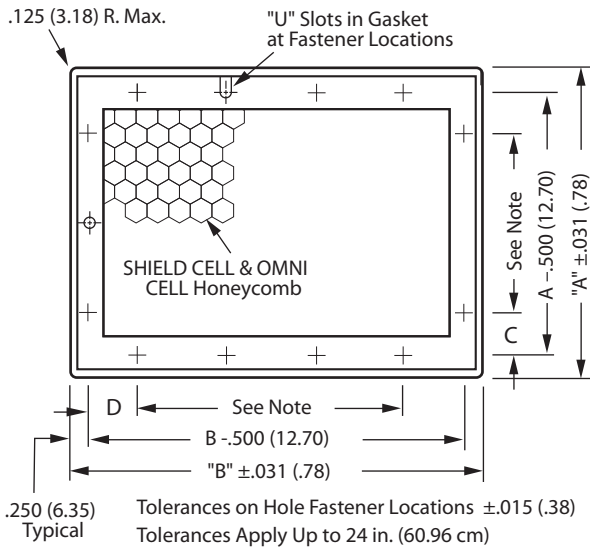
## Round SHIELD CELL and OMNI CELL Panels

All honeycomb panels can be supplied in circular frames, for which two common designs are recommended in Figure 5. These are of spun metal or circular tubing. Minimum flange width is 0.375 in. (9.5 mm), with 0.500 in. (12.7 mm) preferred.

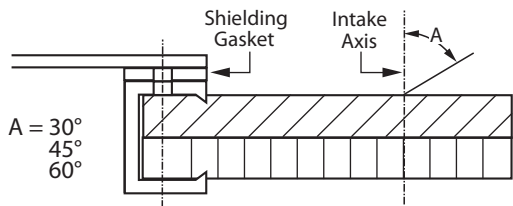
## Ordering Procedure:

Standard aluminum honeycomb size: 0.500 in. (12.7 mm) thick. Select SHIELD CELL or OMNI CELL part number from Table 1, page 167. Note: Please specify angle orientation relative to the outside length and width dimensions of OMNI CELL panel.

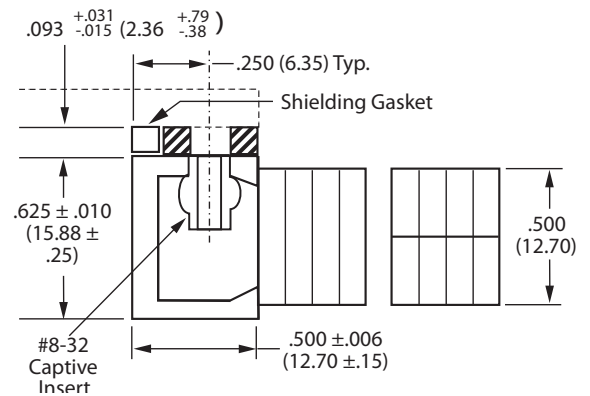
Other sizes, or round: Supply a drawing in accordance with Figure A (as shown on this page). For alternative frame designs or round panels, supply a sketch in accordance with figures 4, 5, or 6. Part numbers will be assigned by Parker Chomerics.



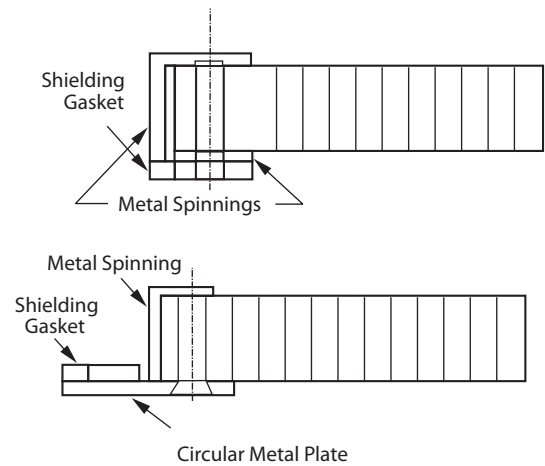
**Figure 2** Dimensions for SHIELD-CELL and OMNI-CELL Vent Panels



**Figure 4** OMNI-CELL Drip-Resistant Construction



**Figure 3** Standard SHIELD-CELL and OMNI-CELL Frame Construction Frames Design 61-118

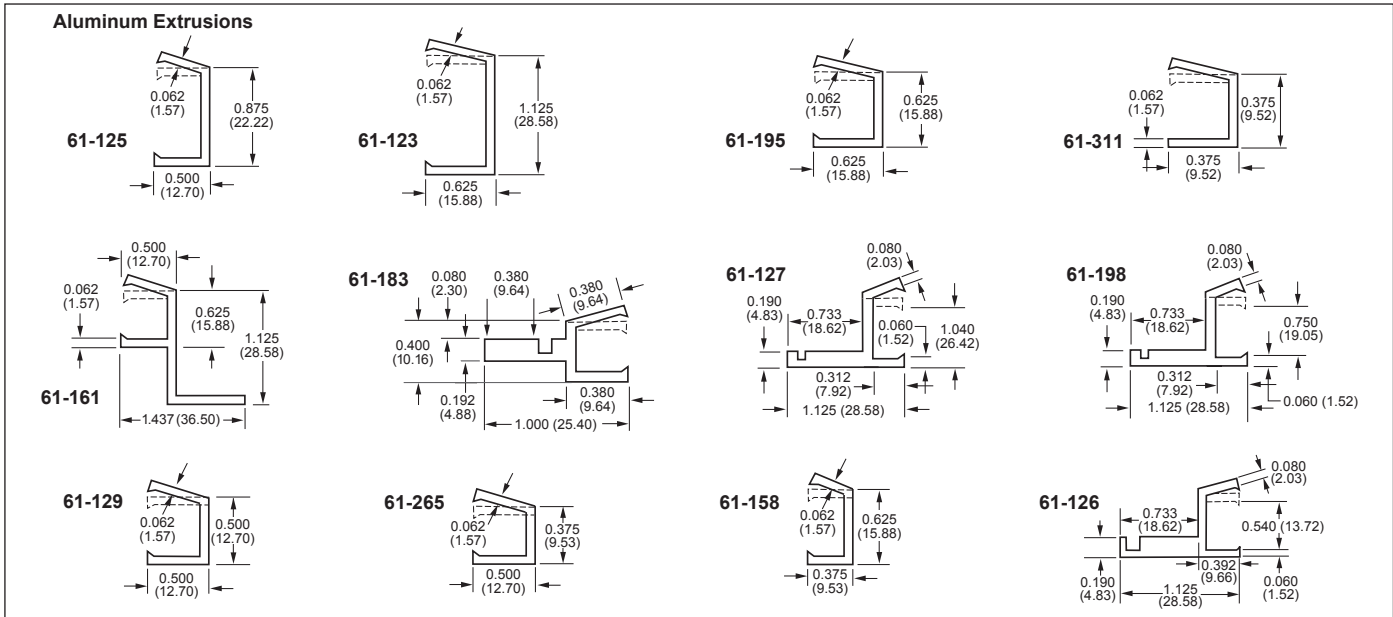


**Figure 5** Circular Panels

# SHIELD-CELL & OMNI-CELL Shielded Vent Panels - Product Information

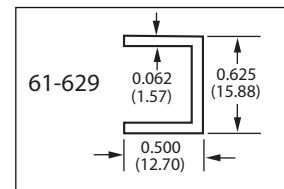
Non-standard honeycomb, or brass or steel requirements: Contact Parker Chomerics Applications Engineering Department.

See Shielded Vents and Filter Performance Data Sheet for Shielding Effectiveness and Airflow Information.



**Figure 6** Alternate Extrusions for SHIELD-CELL and OMNI-CELL Typical Construction, in. (mm). Others available, please inquire.

**Figure 7** Steel Closed Jaw Extension



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