Curved Dome Ceiling

DESIGN AND SPECIFICATIONS

Description
Decoustics dome panels address the problems of sound focusing and reflection normally associated with traditional hard surface finishes. Dome shaped panels consist of compound, three-dimensional factory pre-curved units using one radius in all directions throughout the curve. Domed ceilings are made up of multiple, precisely engineered panel sections.

Several mounting methods can be used depending on plenum access requirements, available substrate, plenum clearance, and panel joint preference e.g. closed reveal or open reveal only.

Panels
All Decoustics panels are custom fabricated and offered in a variety of types, sizes, thicknesses, and finishes.

Limitations
Minimum radius is 10" (3050mm). Panel sizes are limited depending on radius of dome.

Design Considerations
The panels alone can form the dome without the need for a domed substrate. If a domed substrate already exists, panels can be directly mounted to it. Dome shaped panels are only available with a fabric finish. Decoustics recommends 2" (50mm) thick panels to be used in all dome areas. Providing the minimum radius requirement is met, it is possible to manufacture Dome Shaped panels consisting of more than one radius, e.g. elliptical.

Depending on panel radius and thickness, exposed darting along edges may result with some fabric finishes. However, darting is minimized when using Decoustics standard fabrics.

Although rare, some ridge lines may be visible. This depends on radius, finish and lighting conditions. It is caused by inherent density variations in the core material and may be unavoidable. Consult Decoustics for specific information on fabrics.

Standards, Tests and Approvals
Surface Burning Characteristics (ASTM E-84): All panel components have a Flame Spread rating of less than 25.
Note: Building code requirements may necessitate composite panel testing based on specified finish.

A panel comprised of “Class A” (Flame Spread of 25 or less) components does not necessarily produce a composite panel meeting the “Class A” requirement. Decoustics has a considerable number of composite panel tests on file.

Acoustical Data (ASTM C423: Type F5 Mounting as per ASTM E795).
Panels were tested with 3/16" (5mm) clip mounting.

Mounting Methods
Dome panels can be installed using the following Decoustics ceiling systems:

1. Direct Mount (progressively accessible, with closed reveal or open reveal panel joints).
2. Direct To Suspended Frame/Grid (individually or progressively accessible with closed reveal or open reveal panel joints).
3. Suspended Reveal (progressively accessible, with closed reveal or open reveal.)

Note: Field cutting of panels is possible but not recommended.
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Performance Data

<table>
<thead>
<tr>
<th>FINISH</th>
<th>EDGE OPTIONS</th>
<th>SIZES</th>
<th>CONSTRUCTION</th>
<th>THICKNESS</th>
<th>NRC</th>
<th>WEIGHT</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric</td>
<td>Resin: - square</td>
<td>Fabric: Up to 48” x 48” (1220mm x 1220mm) or 60” x 30” (1525mm x 762mm)</td>
<td>Finish width must be sufficient to cover panel, panel thickness, and wrap minimum 1” (25mm) on back side. Panel consists of a 6 to 7 pcf (96 to 112 kg/m³) core. Fabric corners are fully tailored (no exposed darting). A 1 mil clear vapor barrier is adhered to panel back.</td>
<td>2” (50mm)</td>
<td>1.10</td>
<td>1.75 psf (8.55 kg/m²)</td>
<td>As per finish selected</td>
</tr>
</tbody>
</table>

Note: Consult factory when selecting / specifying finish.

Note: The information provided in this Data Sheet is accurate to the best of our knowledge at the time of printing. However, we reserve the right to make changes when necessary without further notification. Suggested applications may need to be modified to conform with local building codes and conditions. We cannot accept responsibility for products that are not used, or installed to our specifications. Please refer to our website for most current data.

Note: Only handle panels wearing clean, lightweight, white gloves during installation. Follow manufacturer's printed instructions for installation as well as field cutting of panels.