TECHNICAL GUIDE

DRYWALL
Grid Systems

Hanging and Framing
Curved Ceilings
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Features and Benefits

**Performance**

- **PeakForm**™ patented profile increases strength and stability for improved performance during installation

- **SuperLock™** 2 main beam clip is engineered for a strong secure connection and fast accurate alignment confirmed with an audible click; easy to remove and relocate

- **ScrewStop™** reverse hem prevents screw spin off on 1-1/2" wide face

- **Faceted main beam** – pre-notched main beam to simplify assembly of curved sections; all notched locations along main beam require installation of RC2 clip
  
  HD8906F08 – Prenotched 8” O.C.  
  HD8906F16 – Prenotched 16” O.C.

- **Rotary-stitched** – Greater torsional strength and stability

- **1-1/2” wide face** main beams and cross tees – easy installation of screw applied gypsum wallboard

- **G40 Hot dipped galvanized coating** – corrosion resistance

- **G90 Hot dipped galvanized coating** – superior corrosion resistance for exterior applications (HD8906F08 and HD8906F16 not available in G90 coating)

- **Cross tee spacing:**  
  
  24” O.C. for 5/8” drywall  
  16” O.C. for 1/2” drywall  
  8” O.C. for tight radius

**Code Compliance**

- Meets:
  
  - ASTM C635
  - ASTM C645
  - ASTM C840
  - ASTM C754

  - City of LA – RR 25348

  - International Building Code, Continuous Membrane, One Level. Per Section 25.210 single level drywall ceilings do not require lateral bracing when walls are more than 50 feet apart. When walls are more than 50 feet apart, the ceiling should be examined for bracing requirements

  - IBC categories D, E and F single layer drywall ceilings are exempt from lateral force bracing requirements, regardless of room size.

  - Consult local codes for specific requirements.
## Main Beams

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length</th>
<th>Face Dimension</th>
<th>Profile Height</th>
<th>Duty Load</th>
<th>Fire Rated</th>
<th>Routes</th>
<th>Load Test Data (Lbs./LF)</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906F08</td>
<td>144&quot;</td>
<td>1-1/2&quot;</td>
<td>1-11/16&quot;</td>
<td>Heavy Duty</td>
<td>Yes</td>
<td>51 routs – starting 2-1/4&quot; from each end†</td>
<td>95.5 35.8 18.76 143.0 57.3 28.14</td>
<td></td>
</tr>
<tr>
<td>HD8906F16*</td>
<td>144&quot;</td>
<td>1-1/2&quot;</td>
<td>1-11/16&quot;</td>
<td>–</td>
<td>No</td>
<td>HD8906F08 51 Routs HD8906F16 42 Routs starting 2-1/4&quot; from each end†</td>
<td>12.3 18.4</td>
<td></td>
</tr>
</tbody>
</table>

* Tested flat per ASTM C635 with RC2 clips at each faceted location
† Type “F” fixture compatible

## Cross Tees

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length</th>
<th>Face Dimension</th>
<th>Profile Height</th>
<th>Fire Rated</th>
<th>Routes</th>
<th>Load Test Data (Lbs./LF)</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL8965</td>
<td>72&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>No</td>
<td>6 routs – starting 24&quot; from each end†</td>
<td>4.27 6.4</td>
<td></td>
</tr>
<tr>
<td>XL8947P</td>
<td>50&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>Yes</td>
<td>8 routs – starting 10&quot; from each end†</td>
<td>13.0 19.5</td>
<td></td>
</tr>
<tr>
<td>XL8945P</td>
<td>48&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>Yes</td>
<td>9 routs – center rout and starting 10&quot; from each end†</td>
<td>15.0 22.5</td>
<td></td>
</tr>
<tr>
<td>XL8341</td>
<td>48&quot;</td>
<td>15/16&quot;</td>
<td>1-11/16&quot;</td>
<td>Yes</td>
<td>3 routs – starting 12&quot; from each end</td>
<td>16.59 24.8</td>
<td></td>
</tr>
<tr>
<td>XL7936G90</td>
<td>36&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>No</td>
<td>3 routs – starting 12&quot; from each end</td>
<td>16.59 24.8</td>
<td></td>
</tr>
</tbody>
</table>

† Type “F” fixture compatible
Drywall Grid Systems
Components and Moldings

Corrosion prevention is an essential factor in the economical utilization of galvanized sheet metal for ceiling grid. Armstrong provides G40 for interior construction per ASTM C645. When conditions include exposure to extreme moisture and salt water, G90 is available per ASTM A653.

NOTE: High Recycled Content (HRC) grid items are available as a special order.

Cross Tees

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length</th>
<th>Face Dimension</th>
<th>Profile Height</th>
<th>Fire Rated</th>
<th>Load Test Data (Lbs./LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL8925</td>
<td>26&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>Yes</td>
<td>2 routs – 12&quot; from each end†</td>
</tr>
<tr>
<td>XL8926</td>
<td>24&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>Yes</td>
<td>3 routs – center rout and 10” from each end†</td>
</tr>
<tr>
<td>XL7918</td>
<td>14&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>Yes</td>
<td>none†</td>
</tr>
</tbody>
</table>

† Type “F” fixture compatible

Wall Molding

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length</th>
<th>Description</th>
<th>Profile</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>7858</td>
<td>144&quot;</td>
<td>Reverse Angle Molding nominal 1-9/16&quot; x 15/16&quot;</td>
<td>1-9/16&quot; x 1-11/16&quot;</td>
<td></td>
</tr>
<tr>
<td>7838</td>
<td>120&quot;</td>
<td>Unhemmed Channel Molding nominal 3/4&quot; x 1-9/16&quot; x 1-1/4&quot;</td>
<td>3/4&quot; x 1-1/4&quot;</td>
<td></td>
</tr>
<tr>
<td>KAM10</td>
<td>120&quot;</td>
<td>Knurled Angle Molding nominal 1-1/4&quot; x 1-1/4&quot;</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td></td>
</tr>
<tr>
<td>KAM12</td>
<td>144&quot;</td>
<td>Knurled Angle Molding nominal 1-1/2&quot; x 1-1/2&quot;</td>
<td>1-1/2&quot; x 1-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>KAM1510</td>
<td>120&quot;</td>
<td>20 gage</td>
<td>22 gauge</td>
<td></td>
</tr>
<tr>
<td>KAM1512</td>
<td>144&quot;</td>
<td>22 gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAM151020</td>
<td>120&quot;</td>
<td>20 gage</td>
<td>22 gauge</td>
<td></td>
</tr>
<tr>
<td>KAM151020EQ</td>
<td>144&quot;</td>
<td>22 gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAM21020</td>
<td>120&quot;</td>
<td>20 gage</td>
<td>22 gauge</td>
<td></td>
</tr>
<tr>
<td>KAM21025</td>
<td>144&quot;</td>
<td>22 gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAM21025EQ</td>
<td>144&quot;</td>
<td>22 gauge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: All items available in High Recycled Content (HRC) as special order.
Axiom Transitions Trim

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AXTRVESTR</td>
<td>Straight Transition for Vector</td>
<td>120 x 2-9/16 x 1-11/16&quot;</td>
</tr>
<tr>
<td>AXTRTECUR</td>
<td>Curved Transition for Tegular</td>
<td>120 x 2-9/16 x 1-11/16&quot;</td>
</tr>
<tr>
<td>AXTR2STR</td>
<td>2&quot; Straight Transition</td>
<td>120 x 2 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR2CUR</td>
<td>2&quot; Curved Transition</td>
<td>120 x 2 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR4STR</td>
<td>4&quot; Straight Transition</td>
<td>120 x 4 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR4CUR</td>
<td>4&quot; Curved Transition</td>
<td>120 x 4 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR6STR</td>
<td>6&quot; Straight Transition</td>
<td>120 x 6 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR6CUR</td>
<td>6&quot; Curved Transition</td>
<td>120 x 6 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AXTR8STR</td>
<td>8&quot; Straight Transition</td>
<td>120 x 8 x 1-1/2&quot;</td>
</tr>
<tr>
<td>AX4SPLICEB</td>
<td>Splice Plate</td>
<td>–</td>
</tr>
<tr>
<td>AXTBC</td>
<td>T-Bar Connector Clip</td>
<td>–</td>
</tr>
<tr>
<td>AX8TSTR</td>
<td>Drywall Bottom Trim</td>
<td>120 x 1-1/8 x 27/32&quot;</td>
</tr>
</tbody>
</table>

Material: Extruded aluminum, alloy 6063

Axiom Transitions with Vector panel to drywall perimeter (AXTRVESTR)

Axiom Transitions with Tegular panel to drywall perimeter (AXTRTECUR)
**Axiom One-Piece Drywall Trim**  
Material: Commercial-quality, hot dipped galvanized steel

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length/ Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AX1PC2STR</td>
<td>2.5&quot; One-Piece Straight Drywall Trim</td>
</tr>
<tr>
<td>AX1PC2CUR</td>
<td>2.5&quot; One-Piece Curved Drywall Trim</td>
</tr>
<tr>
<td>AX1PC4STR</td>
<td>4&quot; One-Piece Straight Drywall Trim</td>
</tr>
<tr>
<td>AX1PC4CUR</td>
<td>4&quot; One-Piece Curved Drywall Trim</td>
</tr>
<tr>
<td>AX1PC6STR</td>
<td>6&quot; One-Piece Straight Drywall Trim</td>
</tr>
<tr>
<td>AX1PC6CUR</td>
<td>6&quot; One-Piece Curved Drywall Trim</td>
</tr>
</tbody>
</table>

For more information call 1 877 ARMSTRONG
A variety of drywall grid accessories are available to provide problem-solving solutions that save time, labor and money. For a complete list of accessories, request submittal CS-3082.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Quantity</th>
<th>Description</th>
<th>Perspective</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWACS</td>
<td>100</td>
<td><strong>Drywall Attachment Clip</strong> facilitates transition from drywall to acoustical ceiling; locks under bulb of grid section to prevent upward movement and provide secure attachment surface on one side of exposed grid.</td>
<td><img src="image" alt="30° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DW3OC</td>
<td>250</td>
<td><strong>30°, 45°-60°-90° Drywall Angle Clips</strong> are used to create positive and secure angles for drywall and ceiling installations on either main beams or cross tees.</td>
<td><img src="image" alt="45° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DW45C</td>
<td>250</td>
<td><strong>30°, 45°-60°-90° Drywall Angle Clips</strong> are used to create positive and secure angles for drywall and ceiling installations on either main beams or cross tees.</td>
<td><img src="image" alt="60° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DW60C</td>
<td>250</td>
<td><strong>30°, 45°-60°-90° Drywall Angle Clips</strong> are used to create positive and secure angles for drywall and ceiling installations on either main beams or cross tees.</td>
<td><img src="image" alt="90° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DW90C</td>
<td>250</td>
<td><strong>30°, 45°-60°-90° Drywall Angle Clips</strong> are used to create positive and secure angles for drywall and ceiling installations on either main beams or cross tees.</td>
<td><img src="image" alt="Application" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>TT10</td>
<td>30</td>
<td><strong>Partition Top Trim</strong> is used to finish the top of a drywall partition for a continuous drywall/acoustical ceiling interface.</td>
<td><img src="image" alt="30° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DWS8LT</td>
<td>125</td>
<td><strong>DWS8LT-transition Clip for 5/8&quot; Drywall with Locking Tabs</strong>; facilitates transition from drywall to acoustical ceiling; one-sided hold-down clip; eliminates need for drywall bead. Locking tabs provide secure location for DGS tees.</td>
<td><img src="image" alt="45° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>DWS5LT</td>
<td>125</td>
<td><strong>DWS5LT-transition Clip for 1/2&quot; Drywall with Locking Tabs</strong>; facilitates transition from drywall to acoustical ceiling; one-sided hold-down clip; eliminates the need for a drywall bead. Locking tabs provide secure location for DGS tees.</td>
<td><img src="image" alt="60° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>MBAC</td>
<td>70</td>
<td><strong>Main Beam Adapter Clip</strong> attaches to web of grid section; provides larger surface for screw attachment; used as a hold-down clip for thin material (metal or plastic lay-in panels); fastens drywall track to underside of exposed grid with lay-in panels, leaving grid face free of screw holes.</td>
<td><img src="image" alt="90° Perspective" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>MBSC2</td>
<td>200</td>
<td><strong>Main Beam Spacer Clip</strong> (2&quot; in length) is used to space two parallel main beams 2&quot; O.C. for air supply or return.</td>
<td><img src="image" alt="Application" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>GSC0</td>
<td>100</td>
<td><strong>Adjustable Grid Spacer Clip</strong> is used to space two parallel main beams for light fixtures, air diffusers, etc.; allows for 1/4&quot; adjustments with three different clips.</td>
<td><img src="image" alt="Application" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>GSC12</td>
<td>100</td>
<td><strong>Adjustable Grid Spacer Clip</strong> is used to space two parallel main beams for light fixtures, air diffusers, etc.; allows for 1/4&quot; adjustments with three different clips.</td>
<td><img src="image" alt="Application" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
<tr>
<td>GSC16</td>
<td>100</td>
<td><strong>Adjustable Grid Spacer Clip</strong> is used to space two parallel main beams for light fixtures, air diffusers, etc.; allows for 1/4&quot; adjustments with three different clips.</td>
<td><img src="image" alt="Application" /></td>
<td><img src="image" alt="Application" /></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Item Number</th>
<th>Quantity</th>
<th>Description</th>
<th>Perspective</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTAC</td>
<td>100</td>
<td>Cross Tee Adapter Clip - is used to attach field cut cross tees to main beams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DDC</td>
<td>250</td>
<td>Double Drywall Clip to hang suspension system below existing 1-1/2&quot; grid face, transferring weight directly to hanger wire; may be used to preserve the fire rating of an existing ceiling and to support heavy accessories; allows for double layer of 5/8&quot; gypsum board.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DLCC</td>
<td>250</td>
<td>Direct Load Ceiling Clip to hang suspension system below existing 15/16&quot; grid face, transferring weight directly to hanger wire; may be used to preserve the fire rating of an existing ceiling and to support heavy accessories.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DWC</td>
<td>250</td>
<td>Drywall Clip allows for a “second” ceiling to be installed below a drywall ceiling; attach through installed drywall to supporting structure.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Creating curved framing for drywall is easy and offers unlimited possibilities.

- Custom radii to suit any design installation.
- You control the curve.
- Not limited to a pre-selected or pre-determined curved radius.
- Full range of clips and accessories make installation easier than bending stud and track.

Radius and drywall thickness will determine on-center spacing of cuts. Refer to “Establishing An Arc” on page 9 for creating a curved template.

RC2 Clip must be installed at all knockout locations when used to frame a flat or curved ceiling.

When installing a vault, cross tees should be placed between RC2 clips.

When installing a valley, cross tees should be placed at the RC2 clips.
Establishing an Arc

How to draw a radius on a template (plywood, gypsum board, etc.)

1. Establish a center line.
2. Mark 2’ increments on line perpendicular to center line.

Example: 43° arc using chart on page 16.

1. Cut along the arc and remove section of template
2. Cut main beam as required and position along the cut radius on the template (use the chart on page 20).

3. At 2’ marks, identify points of arc below perpendicular line (maintain consistent spacing of point). See radius charts on page 20.
4. Connect points to form a smooth arc.

Completing the Template – Option 1

1. Cut along the arc and remove section of template
2. Cut main beam as required and position along the cut radius on the template (use the chart on page 20).

3. Screw RC2 clips to faceted main beam at all knockout locations.*
4. On the template, mark a rout location reference point to maintain consistent rout location.

* RC2 Clip placement
Vaults – Cross tee placement in routs between cuts.
Valleys – Cross tee lock into rout on RC2 clip (tight radius installations may require bending up of the flange at ends of cross tees).

Cut Main Beam(s) to Fit Template

Radius of Vault Plus Thickness of Gypsum Board (Can Be Partial Radius of Large Spans)

Span of Vault

Cut

Radius
Component
Up to 15° HD8906F08
Over 15° HD8906F16

For more information call 1 877 ARMSTRONG
Completing the Template – Option 2

1. Draw radius on board.
2. Screw flex track to board along radius line.
3. Cut main beams as required and position along the flex track on the template.
4. Screw RC2 clips to faceted main beam at all knockout locations.
5. On the template, mark a rout location reference point to maintain consistent rout location.

Contractors’ efficiency and understanding of the suspended grid system construction provides performance benefits and cost savings.

- An unlimited range of vaults and valleys can be constructed using faceted main beams made on the job to meet design needs.
- Single and multiple curved ceilings can be framed quickly and easily.
1. Hanger wires must be minimum 12 gauge and spaced along the main beams not more than 4’ on-center for gypsum board construction and not more than 3’ on-center for plaster work (spaced as required to support load).

2. Add vertical braces as required to stabilize the frame.

3. Thickness of the sheeting material is determined by its plasticity. Refer to table titled “Drywall Bending Radius” on page 19.

4. For vaults, space the main beams 4’ on-center for gypsum board construction and 3’ on-center for plaster. Angle or channel molding is used to frame the ends of the structure.
Ceiling Cloud
Domes, like arches, have many variable characteristics that make each design unique. With a suspended drywall grid system, you can easily create the desired look of domes ranging from simple to complex.

1. Determine the starting point at the top and bottom of the dome.
2. Prepare a sheet metal disk or donut for the top of the dome. The disk should be one to two feet in diameter and should be fabricated from steel with a thickness of at least 25-gauge thickness. Note that the center of the dome may need to be open to receive an electrical box, pole, or some other architectural detail. Refer to “Options for Top of Dome” on page 15.
3. Prepare a ring for the base of the dome from rolled angle or channel.
4. Attach curved main beams to the disk at the top of the dome and to the ring at the bottom with sharp point pan or wafer head screw (by others).
5. Mains should be spaced no greater than 4’ on-center (measured at the bottom ring). Install main beams 2’ on-center for a radius of 15’ or less. (Refer to Radius Chart on page 20.)
6. Use cross tees cut to the appropriate length and screwed to the flange of the main beams to complete the dome frame structure.
7. Cross tees are not required near the top of the dome when the space between mains becomes less than 16”.
8. The sheathing must be cut into pie shaped sections and screw attached to the framework.

For more information call 1 877 ARMSTRONG
Options for Top of Dome

- Sheet Metal Disk Positive Attachment Top (by others)
- Threaded Rods (by others)
- Light Fixture
- Cone

For more information call 1-877-ARMSTRONG
Sheet Metal Disk with Hole (by others)

Sheet Metal Disk with Electric Box in Center (by others)

Electrical Box

Electrical Chain

Self Supporting Tee Top

Pan Head Screw

Pan Head Screw
DOME Wall Grid Systems

Domes

Dome with Skylight

Typical Details

- Hanger Wire 4’ O.C. or less
- Radius Gypsum Wall Board
- Curved Angle Molding
- Gypsum Wall Board
- Main Beam
- Radius Gypsum Wall Board
- RC2 Radius Clips

See page 15 for Bending Radius of gypsum board.

For more information call 1 877 ARMSTRONG 17
Drywall Grid Systems

Finishing and Exterior Application

Drywall Bending Radius

<table>
<thead>
<tr>
<th>Material</th>
<th>Minimum Radius (dry)</th>
<th>Maximum Cross Tee Spacing (dry)</th>
<th>Minimum Radius (wet)</th>
<th>Maximum Cross Tee Spacing (wet)</th>
<th>Water Required Per Panel (oz.)</th>
</tr>
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<tbody>
<tr>
<td>1/4” Hi-flex Gypsum</td>
<td>32”</td>
<td>9”</td>
<td>20” concave 14” convex</td>
<td>6” concave 6” convex</td>
<td>30 ounces</td>
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<td>1/4” Gypsum</td>
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<td>6”</td>
<td>2”</td>
<td>6”</td>
<td>30 ounces</td>
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<td>3/8” Gypsum</td>
<td>7-1/2”</td>
<td>8”</td>
<td>3”</td>
<td>8”</td>
<td>35 ounces</td>
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<tr>
<td>1/2” Gypsum</td>
<td>20”</td>
<td>16”</td>
<td>4”</td>
<td>12”</td>
<td>45 ounces</td>
</tr>
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<td>5/8” Gypsum</td>
<td>28”</td>
<td>24”</td>
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</table>

NOTE: Refer to gypsum wallboard manufacturer for additional information.

If required, apply water to the side of the panel that will be in compression. Apply the water uniformly over the surface of the boards. Stack moistened boards on a flat surface and cover with plastic sheeting. Allow water to soak into the panels for at least 1 hour before application to the frame. Allow installed panels to dry for 24 hours before finishing.

Control Joints

Please refer to ASTM C840 Section 20.3.3 - 20.4 for control requirements.

Expansion Joints

Ceiling expansion joints are installed to separate the metal suspension system when expansion joints occur in buildings, when span is over 100’ or when metal changes direction. Expansion joints are required to separate a system in T-, H-, L- and U- or Circle-shaped buildings to eliminate cracking from expansion. Expansion and control joints look similar but perform different functions.

Non-Module Cut and Screw Application, Meta-to-Meta
<table>
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<tr>
<th>Radius Dimension</th>
<th>10’ 0”</th>
<th>11’ 0”</th>
<th>12’ 0”</th>
<th>13’ 0”</th>
<th>14’ 0”</th>
<th>15’ 0”</th>
<th>16’ 0”</th>
<th>17’ 0”</th>
<th>18’ 0”</th>
<th>19’ 0”</th>
<th>20’ 0”</th>
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</table>

For more information call 1 877 ARMSTRONG
Drywall Grid Systems

Estimating Materials

For more information call 1 877 ARMSTRONG

**Dimensions are nominal.**

<table>
<thead>
<tr>
<th>Item number</th>
<th>Length</th>
<th>Pcs/Ctn.</th>
<th>LF/Ctn.</th>
<th>Lbs./Ctn.</th>
<th>Area of ceiling completed by one carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8901</td>
<td>144&quot;</td>
<td>20</td>
<td>240</td>
<td>71</td>
<td>480 720 960 1000 sq.ft.</td>
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<tr>
<td>HD8906/HD8906G80</td>
<td>144&quot;</td>
<td>12</td>
<td>144</td>
<td>53</td>
<td>288 432 576 600 sq.ft.</td>
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<tr>
<td>HD8906G08/HD8906G16</td>
<td>144&quot;</td>
<td>12</td>
<td>144</td>
<td>53</td>
<td>sq.ft.</td>
</tr>
</tbody>
</table>

**Estimating Lineal Feet of Grid Based on Square Footage of Ceiling**

<table>
<thead>
<tr>
<th>On-Center Spacing</th>
<th>Percent of Square Footage</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot;</td>
<td>108%</td>
</tr>
<tr>
<td>12&quot;</td>
<td>100%</td>
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<td>16&quot;</td>
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</tr>
<tr>
<td>48&quot;</td>
<td>25%</td>
</tr>
<tr>
<td>60&quot;</td>
<td>20%</td>
</tr>
</tbody>
</table>

Example calculation based on 5,100 SF ceiling:

- **Main beam at 48" O.C.**
  5,100 SF x .25 = 1,275 LF
  1,275 LF ÷ 144 LF/Ctn = 9 cartons needed

- **Cross tee at 16" O.C.**
  5,100 SF x .76 = 3,876 LF
  3,876 LF ÷ 144 LF/Ctn = 27 cartons needed
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  8:00 a.m. to 5:30 p.m. EST, Monday through Friday
  FAX 1-800-572-8324 or email: techline@armstrong.com
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  Express service or regular delivery
- Request a personal copy of the
  Armstrong Ceiling Systems catalog

armstrong.com/drywallgrid

- Latest product and program news
- Real time selection and technical information
- Contacts – reps, where to buy, how to install
- Submittal pages
- Literature and samples information
- CAD renderings

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