DRYWALL GRID SYSTEMS
HANGING & FRAMING FLAT CEILINGS

Inspiring Great Spaces®

Armstrong
CEILING SOLUTIONS
WORK SMARTER

Eliminate the labor-intensive cutting, tying, and spacing of track and channel framing. Our systems are engineered with rout locations and cross tees to maintain precise module spacing. Main beams have 51 rout locations and cross tee lengths of 50”, 26”, and 14” to accommodate type F fixtures without field modifications or accessories. Pre-notched main beams simplify curved drywall installations.

Our Drywall Systems are manufactured to meet or exceed ASTM standards and code requirements, and are engineered to provide economical alternatives to stud and track construction.

The vertical load carrying capacity for main beam and cross tee members is determined in accordance with ASTM test method E3090. Suspended ceiling systems constructed of screw-attached gypsum board panels may be installed in accordance with ASTM C1858 and are exempt from code prescribed requirements of acoustical or lay-in panel ceilings. This standard practice is limited to framing that supports a single level ceiling and is surrounded by and attached to laterally braced walls or soffits.

DRYWALL Grid Systems

Code Compliance You Can Trust

Meets:
- ASTM C1858
- ASTM C635
- ASTM C645
- ASTM C754
- ASTM C840
- ASTM E3090
- ICC Evaluation Service Report ESR-1289
- City of LA – RR 25348
- IBC categories D, E, and F single layer drywall ceilings are exempt from lateral force bracing requirements, regardless of room size
- Miami-Dade County, Florida wind uplift – NOA No. 15-0127.04 – 03/17/2020
- Miami-Dade County, Florida impact testing – NOA No. 14-1204.05 – 10/07/2019
- Consult local codes for specific requirements
- Locking Angle Mechanism creates repeatable accurate spacing for corrections to molding
- ScrewStop™ reverse hem prevents screw spinoff on 1-1/2” wide face

Performance

- PeakForm® patented profile increases strength and stability for improved performance during installation
- SuperLock™ 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 spinoff on 1-1/2” wide face
DRYWALL GRID SYSTEMS

- 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, G90 hot dipped galvanized coating – Corrosion resistance
- G90 hot dipped galvanized coating – Superior corrosion resistance for exterior applications

- Heavy-duty load rating – Minimum 16 Lbs/LF on main beams
- Heavy-duty load rating – Minimum 16 Lbs/LF on main beams

Wind uplift and impact testing construction available, including Miami Dade/Broward County, Florida
- Cross tee spacing: 24" O.C. for 5/8" drywall
- 16" O.C. for 1/2" drywall

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## MAIN BEAMS

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<th>Item Number</th>
<th>Length</th>
<th>Face Dimension</th>
<th>Profile Height</th>
<th>Duty Load</th>
<th>Fire Rated</th>
<th>Routs</th>
<th>L/240 Simple Span</th>
<th>L/360 Simple Span</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906</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>143.00</td>
<td>57.30</td>
<td>28.14</td>
</tr>
<tr>
<td>HD8908IC</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>143.00</td>
<td>57.30</td>
<td>28.14</td>
</tr>
<tr>
<td>HD890610</td>
<td>120&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>143.00</td>
<td>57.30</td>
<td>28.14</td>
</tr>
</tbody>
</table>

† 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>Routs</th>
<th>L/240 Simple Span</th>
<th>L/360 Simple Span</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>Yes</td>
<td>6 routs – starting 24&quot; from each end†</td>
<td>6.87</td>
<td>4.58</td>
<td>72&quot;</td>
</tr>
<tr>
<td>XL8965HRC</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>19.5</td>
<td>12.79</td>
<td>50&quot;</td>
</tr>
</tbody>
</table>

† Type F fixture compatible

## Metric

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length</th>
<th>Face Dimension</th>
<th>Profile Height</th>
<th>Fire Rated</th>
<th>Routs</th>
<th>600mm</th>
<th>900mm</th>
<th>1200mm</th>
<th>600mm</th>
<th>900mm</th>
<th>1200mm</th>
</tr>
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<tbody>
<tr>
<td>HD7940</td>
<td>3600mm</td>
<td>30mm</td>
<td>38mm</td>
<td>Yes</td>
<td>200mm O.C.</td>
<td>150.0</td>
<td>68.3</td>
<td>29.34</td>
<td>100.0</td>
<td>45.35</td>
<td>19.56</td>
</tr>
<tr>
<td>7940G</td>
<td>3600mm</td>
<td>30mm</td>
<td>38mm</td>
<td>Yes</td>
<td>150mm O.C. – starting 75mm from each end†</td>
<td>114.0</td>
<td>51.92</td>
<td>22.40</td>
<td>76.39</td>
<td>34.61</td>
<td>14.93</td>
</tr>
</tbody>
</table>

† Type F fixture compatible

## NOTE: All items available in High Recycled Content (HRC) as special order.
<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</td>
<td>1-9/16&quot; x 15/16&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM10</td>
<td>120&quot;</td>
<td>Knurled Angle Molding nominal</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM12</td>
<td>144&quot;</td>
<td>Knurled Angle Molding nominal</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM12G90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAM12HRC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAM1510</td>
<td>120&quot;</td>
<td>Knurled Angle Molding nominal</td>
<td>1-1/2&quot; x 1-1/2&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM1512</td>
<td>144&quot;</td>
<td>Knurled Angle Molding nominal</td>
<td>1-1/2&quot; x 1-1/2&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM151020</td>
<td></td>
<td>(KAM1510 &amp; KAM1512 - 25 ga.; KAM151020 - 20 ga.;)</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>KAM151020EQ</td>
<td></td>
<td>KAM151020EQ - 22 ga.)</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>KAM21020</td>
<td>120&quot;</td>
<td>Knurled Angle Molding nominal 2&quot; x 2&quot; (20 ga.)</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM21025</td>
<td>144&quot;</td>
<td>Knurled Angle Molding nominal 2&quot; x 2&quot; (20 ga.)</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>KAM21020EQ</td>
<td></td>
<td>(KAM21020 - 20 ga.; KAM21025 - 25 ga.;)</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>LAM12</td>
<td>144&quot;</td>
<td>Locking Angle Molding nominal</td>
<td>1-1/4&quot; x 1-1/4&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>LAM12G90</td>
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<td></td>
<td></td>
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<tr>
<td>LAM12HRC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAM151220E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC151220EQ</td>
<td>148&quot;</td>
<td>SimpleCurve™ Knurled Angle Molding</td>
<td>1-1/2&quot; x 1-1/2&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>SC151225</td>
<td>148&quot;</td>
<td>SimpleCurve™ Knurled Angle Molding</td>
<td>1-1/2&quot; x 1-1/2&quot;</td>
<td>90°</td>
</tr>
<tr>
<td>SC21220EQ</td>
<td>148&quot;</td>
<td>(SC151220EQ 12&quot; x 1.5&quot; &amp; SC21220EQ 12&quot; x 2&quot; – 20 ga.; SC151225 12&quot; x 1.5&quot; &amp; SC21225 12&quot; x 2&quot; – 25 ga.)</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>SC21225</td>
<td>148&quot;</td>
<td></td>
<td>90°</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: All items available in High Recycled Content (HRC) as special order.
Corrosion prevention is an essential factor in the economical utilization of galvanized sheet metal for ceiling suspension systems. Armstrong Ceilings provides G40 for standard construction per ASTM C645. When conditions include exposure to extreme moisture and salt water, G90 is available per ASTM A653.

Material: Commercial-quality cold rolled hot dipped galvanized steel

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length/Item Description</th>
<th>Face Dimension</th>
<th>Flange</th>
<th>Profile Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>7901</td>
<td>120&quot; Shadow Reveal Molding</td>
<td>3/8&quot; shadow reveal</td>
<td>9/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7902</td>
<td>120&quot; Shadow Reveal Molding</td>
<td>3/8&quot; shadow reveal</td>
<td>15/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7903</td>
<td>120&quot; Inverted T Molding</td>
<td>1&quot; inverted T</td>
<td>–</td>
<td>1-1/2&quot;</td>
</tr>
<tr>
<td>7904</td>
<td>120&quot; Flush Transition Molding</td>
<td>15/16&quot; horizontal</td>
<td>15/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7905</td>
<td>120&quot; Flush Transition Molding</td>
<td>9/16&quot; horizontal</td>
<td>9/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7906</td>
<td>120&quot; F Molding</td>
<td>120&quot; vertical transition</td>
<td>1/2&quot;</td>
<td>1-7/16&quot;</td>
</tr>
<tr>
<td>7907</td>
<td>120&quot; Tegular Transition Molding</td>
<td>9/16&quot; horizontal</td>
<td>9/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7908</td>
<td>120&quot; Tegular Transition Molding</td>
<td>15/16&quot; horizontal</td>
<td>15/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>7909</td>
<td>15/16&quot; 1&quot; Step Transition Molding</td>
<td>15/16&quot; horizontal</td>
<td>15/16&quot;</td>
<td>1-7/8&quot;</td>
</tr>
<tr>
<td>7910</td>
<td>9/16&quot; 1&quot; Step Transition Molding</td>
<td>9/16&quot; horizontal</td>
<td>9/16&quot;</td>
<td>1-7/8&quot;</td>
</tr>
<tr>
<td>7911</td>
<td>9/16&quot; Shadow Reveal Transition Molding</td>
<td>3/8&quot; x 1/4&quot; shadow reveal</td>
<td>9/16&quot;</td>
<td>1-1/8&quot;</td>
</tr>
<tr>
<td>7912</td>
<td>15/16&quot; Shadow Reveal Transition Molding</td>
<td>3/8&quot; x 1/4&quot; shadow reveal</td>
<td>15/16&quot;</td>
<td>1-1/4&quot;</td>
</tr>
</tbody>
</table>

* 7904PF and 7905PF feature protective film on the acoustical wall angle flange for faster, easier finishing.
AXIOM DRYWALL TRANSITIONS

Material: Extruded aluminum, alloy 6063

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Length/Item Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AXTRVESTR</td>
<td>Straight Transition for Vector® Ceiling</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>AXBTSTR</td>
<td>Drywall Bottom Trim</td>
<td>120 x 1-1/8 x 27/32&quot;</td>
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</tbody>
</table>

ACCESSORIES

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>AX4SPLICEB</td>
<td>Splice Plate</td>
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<tr>
<td>AXTBC</td>
<td>T-Bar Connector Clip</td>
</tr>
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</table>
AXIOM® TRIM

AXIOM ONE-PIECE DRYWALL TRIM

*For use with 5/8" drywall only

Material: Commercial-quality extruded aluminum alloy 6063

<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 877 276-7876
For more information, visit our website at armstrongceilings.com/axiom or download BPCS-3911 Axiom® Building Perimeter System Brochure or BPCS-3923 Axiom Building Perimeter Data Page.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AXP355LC</td>
<td>3-Sided Lutron Compatible Shade Pocket with Connection to Extension/Face Plate Piece</td>
</tr>
<tr>
<td>AXPCC2</td>
<td>2&quot; Shade Closure Clip</td>
</tr>
<tr>
<td>AXPCC3</td>
<td>3&quot; Shade Closure Clip</td>
</tr>
<tr>
<td>AXPDFP4DTSLA</td>
<td>4&quot; Axiom Perimeter Face Plate with Drywall Flange – 2 Slot Pattern</td>
</tr>
<tr>
<td>AXPDFP4DTSLB</td>
<td>4&quot; Axiom Perimeter Face Plate with Drywall Flange – 1 Slot Pattern</td>
</tr>
<tr>
<td>AXPDFP7DT</td>
<td>7&quot; Axiom Perimeter Face Plate with Drywall Flange – Unslotted</td>
</tr>
<tr>
<td>AXPDFP7DTSLA</td>
<td>7&quot; Axiom Perimeter Face Plate with Drywall Flange – 2 Slot Pattern</td>
</tr>
<tr>
<td>AXPDFP7DTSLB</td>
<td>7&quot; Axiom Perimeter Face Plate with Drywall Flange – 1 Slot Pattern</td>
</tr>
</tbody>
</table>
Imperial

HD8906 (HRC)/HD890610*

51 Routs starting 2" from end
144"

* HD890610 is 120" in length

HD8906HIC

XL8965 (HRC) (Type F Compatible)

XL8947P (Type F Compatible)

XL8945HRC/XL8945P (Type F Compatible)
Imperial

XL7930

XL8926

Metric

HD7940

7940G

XL7961

XL7930

XL7925

XL7920

Note: All dimensions are nominal
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 BPCS-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>Drywall Attachment Clip 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="image1.png" alt="Perspective" /></td>
<td><img src="image2.png" alt="Application" /></td>
</tr>
<tr>
<td>DW30C</td>
<td>250</td>
<td>30-, 45-, 60-, and 90-degree Drywall Angle Clips are used to create positive and secure angles for drywall and ceiling installations on either main beams or cross tees.</td>
<td><img src="image3.png" alt="Perspective" /></td>
<td><img src="image4.png" alt="Application" /></td>
</tr>
<tr>
<td>DW45C</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DW60C</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DW90C</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT10</td>
<td>30</td>
<td>Partition Top Trim is used to finish the top of a drywall partition for a continuous drywall/acoustical ceiling interface.</td>
<td><img src="image5.png" alt="Perspective" /></td>
<td><img src="image6.png" alt="Application" /></td>
</tr>
<tr>
<td>DW58LT</td>
<td>125</td>
<td>DW58LT – Transition Clip for 5/8” Drywall with Locking Tabs; facilitates transition from drywall to acoustical ceiling; one-sided hold down clip; eliminates need for drywall bead. Locking tabs provide secure location for Drywall Grid System tees.</td>
<td><img src="image7.png" alt="Perspective" /></td>
<td><img src="image8.png" alt="Application" /></td>
</tr>
<tr>
<td>DW50LT</td>
<td>125</td>
<td>DW50LT – Transition Clip for 1/2” Drywall with Locking Tabs; 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 Drywall Grid System tees.</td>
<td><img src="image9.png" alt="Perspective" /></td>
<td><img src="image10.png" alt="Application" /></td>
</tr>
<tr>
<td>IIC</td>
<td>36</td>
<td>Impact Isolation Clip for use with HD8906IIC drywall grid main beam. Provides up to 8 points of IIC improvement to ensure your project meets IBC requirements.</td>
<td><img src="image11.png" alt="Perspective" /></td>
<td><img src="image12.png" alt="Application" /></td>
</tr>
<tr>
<td>MBSC2</td>
<td>200</td>
<td>Main Beam Spacer Clip (2” in length) is used to space two parallel main beams 2” O.C. for air supply or return.</td>
<td><img src="image13.png" alt="Perspective" /></td>
<td><img src="image14.png" alt="Application" /></td>
</tr>
<tr>
<td>GSC9</td>
<td>100</td>
<td>Adjustable Grid Spacer Clip is used to space two parallel main beams for light fixtures, air diffusers, etc.; allows for 1/4” adjustments with three different clips.</td>
<td><img src="image15.png" alt="Perspective" /></td>
<td><img src="image16.png" alt="Application" /></td>
</tr>
</tbody>
</table>
### DRYWALL GRID ACCESSORIES (continued)

<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><img src="image1.png" alt="Cross Tee Adapter Clip" /></td>
<td><img src="image2.png" alt="Application Image" /></td>
</tr>
<tr>
<td>DDC</td>
<td>250</td>
<td>Double Drywall Clip is used 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><img src="image3.png" alt="Double Drywall Clip" /></td>
<td><img src="image4.png" alt="Application Image" /></td>
</tr>
<tr>
<td>DLCC</td>
<td>250</td>
<td>Direct Load Ceiling Clip is used 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><img src="image5.png" alt="Direct Load Ceiling Clip" /></td>
<td><img src="image6.png" alt="Application Image" /></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><img src="image7.png" alt="Drywall Clip" /></td>
<td><img src="image8.png" alt="Application Image" /></td>
</tr>
<tr>
<td>MBAC</td>
<td>70</td>
<td>Main Beam Adapter Clip attaches to web of suspension system section; provides larger surface for screw attachments; used as a hold down clip for thin material (metal or plastic lay-in panels); fastens drywall track to underside of exposed suspension system with lay-in panels, leaving suspension system face free of screw holes.</td>
<td><img src="image9.png" alt="Main Beam Adapter Clip" /></td>
<td><img src="image10.png" alt="Application Image" /></td>
</tr>
</tbody>
</table>
The grid system is comprised of main beams and cross tees that are suspended by hanger wires to the structural deck. Sections of main beams lock together end-to-end while cross tees span between the main beams. The ends of the main beams and cross tees rest on the wall channel or angle molding that run around the perimeter of the space.

Once you’ve hung your first two main beams and border cross tees, install two full cross tees between the main beams in line with the first two border cross tees. To square up the system, simply measure across the diagonals of the opening. The measurements will be the same if the grid is square. If the grid is not square, shorten one of the main beams until the diagonals are equal.
Type F fixtures, access panels, and air diffusers require a full 12”, 24”, or 48” opening dimension. The Armstrong Drywall Grid System main beams and cross tees have additional routs in the web to accommodate this larger opening for type F fixtures. Using our 14”, 26”, 50”, and 72” cross tees, type F fixtures fit perfectly without field cutting or special accessories.

When installing type F fixtures parallel to the main beams, use a 72” and 48” cross tee for easy placement of fixtures without field modifications.

When installing fixtures perpendicular to the main beams, use 72” cross tees for virtually limitless fixture placement.

### Main Beams

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Fixture Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGSLLTK24</td>
<td>2’ Linear Light Trim Kit</td>
<td>24” x 4”</td>
</tr>
<tr>
<td>DGSLLTK30</td>
<td>2’ – 6’ Linear Light Trim Kit</td>
<td>30” x 4”</td>
</tr>
<tr>
<td>DGSLLTK48</td>
<td>4’ Linear Light Trim Kit</td>
<td>48” x 4”</td>
</tr>
<tr>
<td>DGSLLTK60</td>
<td>5’ Linear Light Trim Kit</td>
<td>60” x 4”</td>
</tr>
<tr>
<td>DGSLLTK72</td>
<td>6’ Linear Light Trim Kit</td>
<td>72” x 4”</td>
</tr>
<tr>
<td>DGSLLTK90</td>
<td>7’ – 6’ Linear Light Trim Kit</td>
<td>90” x 4”</td>
</tr>
<tr>
<td>DGSLLTK96</td>
<td>8’ Linear Light Trim Kit</td>
<td>96” x 4”</td>
</tr>
<tr>
<td>DGSLLTK120</td>
<td>10’ Linear Light Trim Kit</td>
<td>120” x 4”</td>
</tr>
<tr>
<td>DGSLLTKCON</td>
<td>10’ Continuous Linear Light Trim Kit</td>
<td>10’</td>
</tr>
</tbody>
</table>

*Linear Light Trim Kits designed to work with 5/8” drywall*
SUSPENDED DRYWALL
GRID SYSTEMS

SUSPENDED DRYWALL GRID SYSTEM DETAILS

1 Butt Joint

2 Gypsum Board

3 Type F Fixture

4 Access Door by Others

5 Access Door

6 Butt Joint

7 Type F Fixture

8 Access Door by Others

9 Butt Joint

10 Gypsum Board

11 Type F Fixture

12 Access Door by Others

13 Butt Joint

14 Gypsum Board

15 Type F Fixture

16 Access Door by Others

17 Butt Joint

18 Gypsum Board

19 Type F Fixture

20 Access Door by Others

21 Butt Joint

22 Gypsum Board

23 Type F Fixture

24 Access Door by Others

25 Butt Joint

26 Gypsum Board

27 Type F Fixture

28 Access Door by Others

29 Butt Joint

30 Gypsum Board

31 Type F Fixture

32 Access Door by Others

33 Butt Joint

34 Gypsum Board

35 Type F Fixture

36 Access Door by Others

37 Butt Joint

38 Gypsum Board

39 Type F Fixture

40 Access Door by Others

41 Butt Joint

42 Gypsum Board

43 Type F Fixture

44 Access Door by Others

45 Butt Joint

46 Gypsum Board

47 Type F Fixture

48 Access Door by Others

49 Butt Joint

50 Gypsum Board

51 Type F Fixture

52 Access Door by Others

53 Butt Joint

54 Gypsum Board

55 Type F Fixture

56 Access Door by Others

57 Butt Joint

58 Gypsum Board

59 Type F Fixture

60 Access Door by Others

5 For more information, call 877 276-7876
SUSPENDED DRYWALL GRID SYSTEM DETAILS

2. Expansion Joint*

3. Wood Trim

4. Control Joint

6. Air Bar

7. High Hat Fixture

8. Vertical Brace

10. Securing a Single Cross Tee

11. Channel and Angle Molding

12. Angle Clip

For more information, call 877 276-7876
SUSPENDED DRYWALL GRID SYSTEMS

SUSPENDED DRYWALL GRID SYSTEM DETAILS

13 Triple Layer with Security Lath

16 Transition

19 Drywall Vertical

NOTE: Brace as required by code
SUSPENDED DRYWALL GRID SYSTEMS

SUSPENDED DRYWALL GRID SYSTEM DETAILS

14 Double Layer with Security Lath

15 Double Hung Ceiling

17 Axiom® Perimeter Trim

18 Alternate Finishes

20 Surface Mount Fixture

21 Triple Layer with Sound Isolators

22 HD8906 with IIC Clip
Objects in the plenum may obstruct placement of vertical hanger wires and require splayed wires to support the load. When this occurs, a second counter splayed wire must be added. Install counter splayed wires at an angle equal and opposite to the first wire, but not greater than 45° from vertical. The load capacity of the main beam remains unchanged (refer to ASTM C636).
Another method to install hanger wires around an object in the plenum is to utilize a single or double yoke wire technique.

**Rule:** To form the 45-degree angle, the vertical location of the tension ring is always half the distance of the span at the structure.

**Single Yoke**

**Double Yoke**

5/8" Type USS Flat Washer or Equivalent

NOTE: Maintain wire spacing at a maximum 4' O.C.
Installing a trapeze is a technique to support multiple hanger wires under obstructions, such as trunk lines, cable trays, or other objects in the plenum. In some cases, the trapeze may affect the ceiling height and must be kept small. In other cases, steel studs may be used to span the distance required.
A suspended ceiling not only carries the load of the applied finish, but can also act as a load carrying structure or membrane that supports another ceiling at a lower level. The DDC clip is used at hanger wire locations to allow for connecting the second and even third ceiling. This method of hanging and framing is used in multi-layer ceilings with long vertical drops—eliminating the use of long stud drops.

**Double Hung Ceilings**

**Hanging & Framing**

**Gusset Hung Ceiling**
### EXTERIOR WIND LOAD DATA

#### EXTERIOR WIND LOAD CEILING DESIGN FOR NORTH AMERICA

<table>
<thead>
<tr>
<th>Plenum Height (ft.-in.)</th>
<th>Design Wind Velocity (MPH)</th>
<th>Design Wind Pressure (PSF)</th>
<th>Compression Post Size (Inch)</th>
<th>Compression Post Gauge (Ga. No.)</th>
<th>Sheathing Membrane Substrate</th>
<th>Compression Post Spacing (ft.-in.)</th>
<th>Main Beam Spacing (Inch)</th>
<th>Cross Tee Spacing (Inch)</th>
<th>Hanger Wire Spacing (ft.-in.)</th>
<th>Cross Tee Length (Feet)</th>
<th>Compression Post Load Design Load (Lbs.)</th>
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</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6' 1'</td>
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<td>10' 4'</td>
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</tr>
</tbody>
</table>

*1-1/2" 16 gauge U-Channel Bridging required at mid span for 10’4” up to 15’0”*

**1-1/2" 16 gauge U-Channel Bridging required at one-third points for 15’1” up to 20’0”*

*** Compression Post and Ceiling System tested at the plenum design depth shown here for positive and negative wind speed pressure loads as listed

**** Compression Post Assemblies at this plenum design depth calculated by Dietrich Design Group

NOTE: For building heights over 20 feet, refer to ASCE 7-10 Chapter 6 Wind Loads
<table>
<thead>
<tr>
<th>Deck Construction Type</th>
<th>UL® Design Number</th>
<th>Concrete Thickness</th>
<th># Drywall Layers</th>
<th>Minimum Drywall Thickness</th>
<th>Maximum Fixture Penetration (Ft²/100 Ft²)</th>
<th>Maximum Duct Penetration (In²/100 Ft²)</th>
<th>Drywall Grid System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLOOR/CEILING DRYWALL ASSEMBLIES</strong></td>
<td></td>
<td></td>
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<tr>
<td>Concrete on Composite Flat Cellular, Fluted, or Blend Deck</td>
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<tr>
<td>2-Hour</td>
<td>D501</td>
<td>2-1/2”</td>
<td>1</td>
<td>5/8”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
</tr>
<tr>
<td></td>
<td>D502**</td>
<td>2-1/2”</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>144</td>
<td>DFR 8000</td>
</tr>
<tr>
<td>Concrete on Metal Lath, Corrugated, and Ribbed Deck</td>
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</tr>
<tr>
<td>3-Hour</td>
<td>G523**</td>
<td>3”</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>144</td>
<td>DFR 8000</td>
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<td></td>
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<tr>
<td></td>
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<td>1/2”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
</tr>
<tr>
<td></td>
<td>G529</td>
<td>2-3/4”</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
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<tr>
<td>2-Hour</td>
<td>G523</td>
<td>2-1/2”</td>
<td>1</td>
<td>1/2” or 5/8”</td>
<td>24</td>
<td>144</td>
<td>DFR 8000</td>
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<td></td>
<td>G524***</td>
<td>3-1/2”, 3-3/4”</td>
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<td>1/2”</td>
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<td>None</td>
<td>DFR 8000</td>
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<tr>
<td></td>
<td>G529</td>
<td>2-1/2”</td>
<td>1</td>
<td>1/2”</td>
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<td>57</td>
<td>DFR 8000</td>
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<tr>
<td>1-1/2-Hour</td>
<td>G528</td>
<td>2-1/2”</td>
<td>1</td>
<td>1/2” or 5/8”</td>
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<td>None</td>
<td>DFR 8000</td>
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<tr>
<td></td>
<td>G524</td>
<td>2-3/4” – 3”</td>
<td>1</td>
<td>1/2” or 5/8”</td>
<td>***</td>
<td>***</td>
<td>DFR 8000</td>
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<tr>
<td>Precast Concrete Slab</td>
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<td>3-Hour</td>
<td>J502</td>
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<td>None</td>
<td>DFR 8000</td>
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<td>2-Hour</td>
<td>J502</td>
<td>2”</td>
<td>1</td>
<td>5/8”</td>
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<td>None</td>
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<tr>
<td><strong>WOOD DECK/CEILING DRYWALL ASSEMBLIES</strong></td>
<td></td>
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<tr>
<td>Plywood 2 x 10 Wood Joists</td>
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<td></td>
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<td>1-Hour</td>
<td>L502</td>
<td>NA</td>
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<td>1/2”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
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<td>L513</td>
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<td>L515</td>
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<tr>
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<td>L525</td>
<td>NA</td>
<td>1</td>
<td>1/2” or 5/8”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
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<tr>
<td></td>
<td>L526**</td>
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<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>114</td>
<td>DFR 8000</td>
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<td>Plywood (2) 2 x 10 or (1) 4 x 10 Wood Joists</td>
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<tr>
<td>1-Hour</td>
<td>L508</td>
<td>NA</td>
<td>1</td>
<td>5/8”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
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<tr>
<td>Plywood with Wood Trusses</td>
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</tr>
<tr>
<td>1-Hour</td>
<td>L529</td>
<td>NA</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
</tr>
</tbody>
</table>

* Depends on rating, manufacturer.
** Optional acoustical tile may be glue-applied to gypsum board.
*** Concrete thickness depends on joist depth used.
### DEITRICK TRADEREADY® FLOOR SYSTEM/CEILING DRYWALL ASSEMBLIES

<table>
<thead>
<tr>
<th>Deck Construction Type</th>
<th>UL Design Number</th>
<th>Concrete Thickness</th>
<th># Drywall Layers</th>
<th>Minimum Drywall Thickness</th>
<th>Maximum Fixture Penetration (Ft²/100 Ft²)</th>
<th>Maximum Duct Penetration (In²/100 Ft²)</th>
<th>Drywall Grid System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Hour</td>
<td>P564</td>
<td>3/4” Cement Fiber Units</td>
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<td>None</td>
<td>None</td>
<td>DFR 8000</td>
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<td>1-Hour Corrugated Decking</td>
<td>G553</td>
<td>3/4”</td>
<td>1</td>
<td>5/8”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
</tr>
</tbody>
</table>

### ROOF/CEILING DRYWALL ASSEMBLIES

#### Standing Seam Exposed Metal Roof With Batts/Blankets

<table>
<thead>
<tr>
<th>Deck Construction Type</th>
<th>UL Design Number</th>
<th>Concrete Thickness</th>
<th># Drywall Layers</th>
<th>Minimum Drywall Thickness</th>
<th>Maximum Fixture Penetration (Ft²/100 Ft²)</th>
<th>Maximum Duct Penetration (In²/100 Ft²)</th>
<th>Drywall Grid System</th>
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<tbody>
<tr>
<td>1-Hour</td>
<td>P516</td>
<td>NA</td>
<td>2</td>
<td>5/8”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
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</table>

#### Mineral Fiber, Foam on Cellular, Fluted, Corrugated Metal Deck

<table>
<thead>
<tr>
<th>Deck Construction Type</th>
<th>UL Design Number</th>
<th>Concrete Thickness</th>
<th># Drywall Layers</th>
<th>Minimum Drywall Thickness</th>
<th>Maximum Fixture Penetration (Ft²/100 Ft²)</th>
<th>Maximum Duct Penetration (In²/100 Ft²)</th>
<th>Drywall Grid System</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Hour</td>
<td>P501</td>
<td>NA</td>
<td>1</td>
<td>5/8”</td>
<td>None</td>
<td>None</td>
<td>DFR 8000</td>
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<tr>
<td></td>
<td>P514</td>
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<td>1-1/2-Hour</td>
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<td>5/8”</td>
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<td>P513**</td>
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<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>144</td>
<td>DFR 8000</td>
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<tr>
<td></td>
<td>P509**</td>
<td>NA</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>144</td>
<td>DFR 8000</td>
</tr>
<tr>
<td></td>
<td>P510</td>
<td>NA</td>
<td>1</td>
<td>1 1/2”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
</tr>
</tbody>
</table>

#### Mineral Fiber/Laminated Gypsum Planks

<table>
<thead>
<tr>
<th>Deck Construction Type</th>
<th>UL Design Number</th>
<th>Concrete Thickness</th>
<th># Drywall Layers</th>
<th>Minimum Drywall Thickness</th>
<th>Maximum Fixture Penetration (Ft²/100 Ft²)</th>
<th>Maximum Duct Penetration (In²/100 Ft²)</th>
<th>Drywall Grid System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2-Hour</td>
<td>P506</td>
<td>NA</td>
<td>1</td>
<td>5/8”</td>
<td>24</td>
<td>57</td>
<td>DFR 8000</td>
</tr>
</tbody>
</table>

* Depends on rating, manufacturer.
* Optional acoustical tile may be glue-applied to gypsum board.
** Concrete thickness depends on joist depth used.

For more information, call 877 276-7876

---

**FIRE RATED EXPANSION JOINT**

*Fire expansion notch*

*Collapsed fire expansion notch*
# LOAD DATA

## MAIN BEAM — TECHNICAL LOAD TEST DATA

### Imperial

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Flange Width (in.)</th>
<th>Length (in.)</th>
<th>Web Height (in.)</th>
<th>Simple Span (Lbs/LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L/240</td>
</tr>
<tr>
<td>HD8906</td>
<td>1-1/2&quot;</td>
<td>144&quot;</td>
<td>1-11/16&quot;</td>
<td>28.14</td>
</tr>
<tr>
<td>HD8906IC</td>
<td>1-1/2&quot;</td>
<td>144&quot;</td>
<td>1-11/16&quot;</td>
<td>28.14</td>
</tr>
<tr>
<td>HD890610</td>
<td>1-1/2&quot;</td>
<td>120&quot;</td>
<td>1-11/16&quot;</td>
<td>28.14</td>
</tr>
</tbody>
</table>

### Metric

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Flange Width (mm)</th>
<th>Length (mm)</th>
<th>Web Height (mm)</th>
<th>Simple Span (KG/LM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L/240</td>
</tr>
<tr>
<td>HD7940</td>
<td>38mm</td>
<td>3600mm</td>
<td>43mm</td>
<td>41.65</td>
</tr>
<tr>
<td>79405</td>
<td>38mm</td>
<td>3600mm</td>
<td>38mm</td>
<td>31.85</td>
</tr>
</tbody>
</table>

### CROSS TEES — TECHNICAL LOAD TEST DATA

### Imperial

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Flange Width (in.)</th>
<th>Length (in.)</th>
<th>Web Height (in.)</th>
<th>Simple Span (Lbs/LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L/240</td>
</tr>
<tr>
<td>XL8965</td>
<td>1-1/2&quot;</td>
<td>72&quot;</td>
<td>1-1/2&quot;</td>
<td>6.87</td>
</tr>
<tr>
<td>XL8947P</td>
<td>1-1/2&quot;</td>
<td>60&quot;</td>
<td>1-1/2&quot;</td>
<td>19.5</td>
</tr>
<tr>
<td>XL8945P</td>
<td>1-1/2&quot;</td>
<td>48&quot;</td>
<td>1-1/2&quot;</td>
<td>22.5</td>
</tr>
<tr>
<td>XL7965G90</td>
<td>1-1/2&quot;</td>
<td>36&quot;</td>
<td>1-1/2&quot;</td>
<td>50.0</td>
</tr>
<tr>
<td>XL8926</td>
<td>1-1/2&quot;</td>
<td>24&quot;</td>
<td>1-1/2&quot;</td>
<td>158.0</td>
</tr>
</tbody>
</table>

### Metric

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Flange Width (mm)</th>
<th>Length (mm)</th>
<th>Web Height (mm)</th>
<th>Simple Span (KG/LM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L/240</td>
</tr>
<tr>
<td>XL7961</td>
<td>38mm</td>
<td>1600mm</td>
<td>38mm</td>
<td>0.00</td>
</tr>
<tr>
<td>XL7930</td>
<td>38mm</td>
<td>1200mm</td>
<td>38mm</td>
<td>0.00</td>
</tr>
<tr>
<td>XL7925</td>
<td>38mm</td>
<td>900mm</td>
<td>38mm</td>
<td>142.12</td>
</tr>
<tr>
<td>XL7920</td>
<td>38mm</td>
<td>600mm</td>
<td>38mm</td>
<td>153.78</td>
</tr>
</tbody>
</table>

### MEMBRANE LOAD VALUES

### Imperial

**Component Combinations**

<table>
<thead>
<tr>
<th>Main Component</th>
<th>Cross Tee</th>
<th>Maximum Load in lbs./ft.² at Hanger Wire/Cross Tee Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906 – XL8965</td>
<td>L/240</td>
<td>3.20</td>
</tr>
<tr>
<td>HD8906 – XL8947P</td>
<td>L/240</td>
<td>6.78</td>
</tr>
<tr>
<td>HD8906 – XL8945P</td>
<td>L/240</td>
<td>7.03</td>
</tr>
<tr>
<td>HD8901 – XL8945P</td>
<td>L/240</td>
<td>6.18</td>
</tr>
<tr>
<td>HD8906 – XL7936G90</td>
<td>L/240</td>
<td>21.77</td>
</tr>
<tr>
<td>HD8901 – XL7936G90</td>
<td>L/240</td>
<td>21.77</td>
</tr>
<tr>
<td>HD8906 – XL9026</td>
<td>L/240</td>
<td>26.13</td>
</tr>
</tbody>
</table>

### Metric

<table>
<thead>
<tr>
<th>Component Combinations</th>
<th>Maximum Load in kg/m² at Hanger Wire/Cross Tee Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD7940 – XL7961</td>
<td>24.51</td>
</tr>
<tr>
<td>HD7940 – XL7930</td>
<td>36.37</td>
</tr>
<tr>
<td>HD7940 – XL7925</td>
<td>4.69</td>
</tr>
<tr>
<td>HD7940 – XL7920</td>
<td>21.77</td>
</tr>
<tr>
<td>7940G – XL7961</td>
<td>20.07</td>
</tr>
<tr>
<td>7940G – XL7936G90</td>
<td>27.78</td>
</tr>
<tr>
<td>7940G – XL7925</td>
<td>85.93</td>
</tr>
<tr>
<td>7940G – XL7920</td>
<td>128.70</td>
</tr>
</tbody>
</table>

For more information, call 877 276-7876
**BASIC PRODUCTS**

### BASIC PRODUCTS USED ON SUSPENSION SYSTEMS

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight Lbs/SF</th>
<th>Maximum Main Beam Spacing</th>
<th>Maximum Cross Tee Spacing</th>
<th>Maximum Wire Spacing</th>
<th>Load on Wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSB 1/4&quot;</td>
<td>0.9</td>
<td>48&quot;</td>
<td>8&quot; – 16&quot;</td>
<td>48&quot;</td>
<td>14.4 Lbs.</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>1.3</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>20.8 Lbs.</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>1.7</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>27.2 Lbs.</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>2.2</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>35.2 Lbs.</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2.5</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>40.0 Lbs.</td>
</tr>
<tr>
<td>Plywood 1/4&quot;</td>
<td>0.075</td>
<td>48&quot;</td>
<td>8&quot; – 16&quot;</td>
<td>48&quot;</td>
<td>12.0 Lbs.</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>1.1</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>17.6 Lbs.</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>1.5</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>24.0 Lbs.</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>1.8</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>28.8 Lbs.</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2.2</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>35.2 Lbs.</td>
</tr>
<tr>
<td>Gypsum Board 1/4&quot;</td>
<td>1.2</td>
<td>48&quot;</td>
<td>8&quot; – 16&quot;</td>
<td>48&quot;</td>
<td>19.2 Lbs.</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>1.4</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>22.4 Lbs.</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2.0</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>32.0 Lbs.</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>2.4</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>38.4 Lbs.</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>4.2</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>67.2 Lbs.</td>
</tr>
<tr>
<td>Cement Board 1/2&quot;**</td>
<td>3.0</td>
<td>48&quot;</td>
<td>24&quot;</td>
<td>48&quot;</td>
<td>48.0 Lbs.</td>
</tr>
<tr>
<td>Cement Siding 5/8&quot;**</td>
<td>1.9</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>30.4 Lbs.</td>
</tr>
<tr>
<td>Hard Board Siding 1/2&quot;**</td>
<td>2.0</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>32.0 Lbs.</td>
</tr>
<tr>
<td>Water-Resistant Gypsum Board 5/8&quot;**</td>
<td>3.42</td>
<td>48&quot;</td>
<td>16&quot; or 24&quot;</td>
<td>48&quot;</td>
<td>57.7 Lbs.</td>
</tr>
<tr>
<td>Water-Resistant Gypsum Board 1/2&quot;**</td>
<td>2.8</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>44.8 Lbs.</td>
</tr>
<tr>
<td>Expanded Steel Lath</td>
<td>3.4</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>54.4 Lbs.</td>
</tr>
<tr>
<td>12 Gauge Sheet Steel</td>
<td>4.5</td>
<td>48&quot;</td>
<td>16&quot;</td>
<td>48&quot;</td>
<td>72.0 Lbs.</td>
</tr>
</tbody>
</table>

**NOTES:**

- All framing on the exterior should be 16" O.C. or less.
- Some manufacturers make 1/2" gypsum board with special core to span 24" framing on interior ceiling installations (available on request).
- All steel product on exterior made from G90 galvanized finish.
- Data based on manufacturer’s published data.
- * Use lower RPM (1,000-2,500) screw gun to install cement board screws with intermittent pressure.

### CONTROL JOINTS

Please refer to ASTM C840, Section 20.3.3 to 20.4 for Control Joint Requirements.

### EXPANSION JOINTS

Ceiling expansion joints are installed to separate the metal suspension system when expansion joints occur in buildings or when metal changes direction. Expansion joints are required to separate a system in T-, H-, I-, and U-, or circle-shaped buildings to eliminate cracking from expansion.
The IBC uses two sound classes to measure sound isolation performance in building construction: Sound Transmission Class (STC) – sound transmitted through the air such as voices and music. Impact Insulation Class (IIC) – sound transmitted through the building structure such as foot traffic and objects dropped on the floor. A rating of 50 or above for both STC and IIC sound tests will satisfy the IBC’s minimum requirements.

Understanding Sound Control Ratings

<table>
<thead>
<tr>
<th>STC/IIC Ratings</th>
<th>Description</th>
<th>Changes in STC/IIC Ratings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Excellent</td>
<td>+ / - 1</td>
<td>Almost perceptible</td>
</tr>
<tr>
<td>50</td>
<td>Loud speech barely audible</td>
<td>+ / - 3</td>
<td>Just perceptible</td>
</tr>
<tr>
<td>45</td>
<td>Some loud speech audible – not understood</td>
<td>+ / - 5</td>
<td>Clearly Perceptible</td>
</tr>
<tr>
<td>30</td>
<td>Loud speech audible – well understood</td>
<td>+ / - 10</td>
<td>Twice (or half) as loud</td>
</tr>
<tr>
<td>25</td>
<td>Regular speech audible and understood through walls</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Satisfy IBC requirements with a rating of 50 or above for STC and IIC sound tests — without two layers of drywall using Armstrong® Drywall Grid.

Traditional Assembly – Field Tested Data

<table>
<thead>
<tr>
<th>Traditional Assembly</th>
<th>Building Structure</th>
<th>STC</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2” Black Iron / 7/8” Channel</td>
<td>Bare Concrete Base 3” Concrete Slab Fluted Steel Decking 8” Bar Joist, 24” O.C.</td>
<td>55</td>
<td>48</td>
</tr>
</tbody>
</table>

Armstrong® Standard Drywall Grid Assembly – Field Tested Data

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Armstrong Assembly</th>
<th>Building Structure</th>
<th>STC</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906</td>
<td>Armstrong Assembly</td>
<td>Bare Concrete Base 3” Concrete Slab Fluted Steel Decking 8” Bar Joist, 24” O.C.</td>
<td>55</td>
<td>47</td>
</tr>
<tr>
<td>XL8945</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Armstrong® IIC Drywall Grid Assembly – Field Tested Data

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Armstrong Assembly</th>
<th>Building Structure</th>
<th>STC</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906IIC</td>
<td>Armstrong Assembly</td>
<td>6” Thick Slab Concrete Base with Vinyl Sheet Flooring</td>
<td>57</td>
<td>66</td>
</tr>
<tr>
<td>XL8945</td>
<td>IIC Clip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIC Clip</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Changes in STC/IIC Ratings Description

- Almost perceptible
- Just perceptible
- Clearly Perceptible
- Twice (or half) as loud
### Estimating Material

#### DRYWALL GRID MAIN BEAM

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HD8906/HD8906G90/HD8906GC</td>
<td>144&quot;</td>
<td>12</td>
<td>144</td>
<td>53</td>
<td>288</td>
<td>432</td>
<td>576</td>
<td>600</td>
<td>864</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HD8906F08/HD8906F16</td>
<td>144&quot;</td>
<td>12</td>
<td>144</td>
<td>53</td>
<td>Varies with radius</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HD890610</td>
<td>120&quot;</td>
<td>12</td>
<td>120</td>
<td>49</td>
<td>288</td>
<td>432</td>
<td>576</td>
<td>600</td>
<td>864</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Dimensions are nominal.

#### DRYWALL GRID 1-1/2" FACE CROSS TEES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>XL8965</td>
<td>72&quot;</td>
<td>36</td>
<td>216</td>
<td>78</td>
<td>144</td>
<td>288</td>
<td>432</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL8947P/XL8947P90**</td>
<td>50&quot;</td>
<td>36</td>
<td>150</td>
<td>56</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL8945P/XL8945P90</td>
<td>48&quot;</td>
<td>36</td>
<td>144</td>
<td>52</td>
<td>96</td>
<td>192</td>
<td>288</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL7936G90</td>
<td>36&quot;</td>
<td>36</td>
<td>108</td>
<td>39</td>
<td>72</td>
<td>144</td>
<td>216</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL8926/XL8926G90</td>
<td>24&quot;</td>
<td>36</td>
<td>72</td>
<td>26</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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

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

<table>
<thead>
<tr>
<th>O.C. Spacing of Component</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>
</tr>
<tr>
<td>16&quot;</td>
<td>76%</td>
</tr>
<tr>
<td>20&quot;</td>
<td>60%</td>
</tr>
<tr>
<td>24&quot;</td>
<td>50%</td>
</tr>
<tr>
<td>30&quot;</td>
<td>40%</td>
</tr>
<tr>
<td>36&quot;</td>
<td>33%</td>
</tr>
<tr>
<td>48&quot;</td>
<td>25%</td>
</tr>
<tr>
<td>60&quot;</td>
<td>20%</td>
</tr>
</tbody>
</table>

For more information, call 877 276-7876
877 276-7876
Customer Service Representatives
7:45 a.m. to 5:00 p.m. EST
Monday through Friday

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