FASTER. EASIER. BETTER.

Armstrong® Drywall Framing Systems install faster than traditional methods, which helps you complete jobs under cost and ahead of schedule.

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.

We provide pre-engineered solutions for direct-to-deck installations, vertical drops, and short spans. This makes Armstrong ShortSpan® Drywall Framing perfect for use in corridors, small room configurations, restrooms, and storage closets.

DRYWALL Grid Systems

Code Compliance You Can Trust

- Meets ASTM C645
- Meets ASTM C840
- Meets ASTM C841
- Meets ASTM C842
- Meets ASTM C926
- Meets ASTM C1063
- Meets ASTM C754
- ICC Evaluation Report Number ESR-1289
- City of LA – RR 25348
- Miami/Dade wind uplift – NOA #12 – 0314.05 – 03/17/15
- Miami/Dade Impact – NOA #12-0314.04 – 10/07/14
- Consult local codes for specific requirements

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 spin-off on 1-1/2” wide face
Corrosion Prevention

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

**STUCCO/PLASTER 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
- **G90 hot dipped galvanized coating** — Superior corrosion resistance for exterior applications
- **Heavy-duty load rating** — Minimum 16 lbs./LF on main beams and cross tees

- **Wind Load** construction available, including Miami Dade/Broward County, Florida
- **Pre-engineered** stucco products space tees to match lath dimensions

**TABLE OF CONTENTS**

2 Code Compliance
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11 Exterior Wind Load Bracing to Concrete Slab
12-14 Exterior Wind Load Bracing to Meet Metal Bar Joists
15-16 Making a Template
16 Wind Load and Impact
17 Radius Chart

For more information, call 1 877 276 7876
### COMPONENTS

#### 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>Fire Rated</th>
<th>Routes</th>
<th>L/360 wires at</th>
<th>L/240 wires at</th>
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<td>43.19</td>
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† Type "F" fixture compatible

#### CROSS TEES

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<th>Profile Height</th>
<th>Fire Rated</th>
<th>Fire Rated</th>
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<td>4'</td>
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Note: All items available in High Recycled Content (HRC) as special order.

† Type "F" fixture compatible
### WALL MOLDING

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<th>Item Number</th>
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<th>Description</th>
<th>Profile</th>
<th>Perspective</th>
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<td>7858</td>
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<td>Reverse Angle Molding nominal 1-9/16&quot; x 15/16&quot;</td>
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<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>
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<td>KAM10</td>
<td>120&quot;</td>
<td>Knurled Angle Molding nominal 1-1/4&quot; x 1-1/4&quot;</td>
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</tr>
<tr>
<td>KAM1510</td>
<td>120&quot;</td>
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<tr>
<td>KAM151020</td>
<td>144&quot;</td>
<td>Knurled Angle Molding nominal 1-1/2&quot; x 1-1/2&quot;</td>
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<tr>
<td>KAM151020EQ</td>
<td></td>
<td>(KAM1510 &amp; KAM1512 - 25g.; KAM151020 - 20g.; KAM151020EQ - 22g)</td>
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<td></td>
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<tr>
<td>KAM21020</td>
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<td>Knurled Angle Molding nominal 2&quot; x 2&quot; (20 gage)</td>
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<td>KAM21025</td>
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<td>(KAM21020 - 20g.; KAM21025 - 25g.; KAM21020EQ 22g)</td>
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<td>Locking Angle Molding nominal 1-1/4&quot; x 1-1/4&quot;</td>
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**NOTE:** All items available in High Recycled Content (HRC) as special order.

### ACOUSTICAL TO DRYWALL TRANSITION MOLDING

Transition moldings make it easier to detail and build a wide variety of acoustical to drywall transitions.

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<tr>
<th>Item Number</th>
<th>Description</th>
<th>Profile</th>
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<tbody>
<tr>
<td>7901</td>
<td>9/16&quot; Shadow Reveal Transition Molding</td>
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<td>7902</td>
<td>15/16&quot; Shadow Reveal Transition Molding</td>
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<td>7903</td>
<td>1&quot; Flush T Transition Molding</td>
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<tr>
<td>7904</td>
<td>15/16&quot; Flush Transition Molding</td>
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MOLDINGS continued
and WIRE LOAD

ACOUSTICAL TO DRYWALL TRANSITION MOLDING (continued)

<table>
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<td>7906</td>
<td>“F” Vertical Transition Molding</td>
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<td>7907</td>
<td>9/16” Tegular Transition Molding</td>
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<td>7908</td>
<td>15/16” Tegular Transition Molding</td>
<td><img src="image4.png" alt="Profile" /></td>
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WIRE LOAD DETAILS

9-Gauge Wire Breaking Strength and Technical Data

3 Turns in 3”
Per ASTM C636

203 lbs. Maximum
Load on Main Runner at Hanger Wire Connection

9 Gauge Wire
Diameter .148”
Galvanized Steel

645 lbs. Maximum
Safe Wire Load

Note: Per ASTM C1063
wires must be plumb and straight
1 Install the main beams with 9-gauge wires. Space main beams 36" on center. Hanger wire and compression post spacing as required for specific wind load and plenum depth.

2 Install 36” cross tee to required on-center spacing.

3 Isolation at perimeters is mandatory when installing any stucco system. Install perimeter channel molding at wall/ceiling junctures to support tees independent of walls. Use main beam at cut cross tee perimeters and galvanized track on main beam perimeters.

4 Install 3.4 Lb. 3/8” galvanized diamond mesh lath with wafer head sharp point screw to cross tees (use cadmium coated screws on exterior applications). Lath options:
   a. 3/8”, 3.4# flat rib diamond mesh lath 27” x 8’-0”
   b. 3/8”, 3.4# rib diamond mesh lath 27” x 8’-0”
   c. 3/8”, 3.4# high back rib diamond mesh lath 27” x 8’-0”
   d. 3/8”, 3.4# paper back diamond mesh lath 27” x 8’-0”

5 Expansion Joints – Installed in accordance with Metal Lath/Steel Framing Association Specifications/Standards.

6 Control Joints – Installed in accordance with MetalLath/Steel Framing Association Specifications Standards.

7 Plaster stops, grounds, and corner pieces are attached to system with wafer head screws and/or 18 gauge tie wire.

8 Plaster or stucco mixture and thickness to be in accordance with manufacturer’s recommendations and applied:
   - ASTM C842 – For Gypsum Plaster

9 For exterior application use steel studs for vertical bracing (see page 10 for wind load).

For further information, contact your local representative or TechLine at 877 276 7876.
Rock Lath and Plaster

Security Metal Lath and Plaster
STUCCO SYSTEM EXTERIOR WIND LOAD & IMPACT RESISTANT 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>Membrane Substrate: 3/8” Ribbed Sheet Lath 3.4 lbs/Sq.Yrd., Per ASTM C-847</th>
<th>Compression Post Spacing (ft. - in.)</th>
<th>Main Runner 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 Design Load (Lbs.)</th>
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<tr>
<td>10’ 3” **</td>
<td>15</td>
<td>0.507</td>
<td>2 1/2” CWN</td>
<td>18</td>
<td>See NOA 12-0314.05 Design</td>
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<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
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<td>452</td>
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<td>15’ 0” **</td>
<td>15</td>
<td>0.507</td>
<td>2 1/2” C2SJ</td>
<td>18</td>
<td>See NOA 12-0314.04 Design</td>
<td>2’</td>
<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
<td>3</td>
<td>565</td>
</tr>
<tr>
<td>20’ 0” **</td>
<td>15</td>
<td>0.507</td>
<td>3 5/8” CSJ</td>
<td>18</td>
<td>See NOA 12-0314.04 Design</td>
<td>2’</td>
<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
<td>3</td>
<td>565</td>
</tr>
<tr>
<td>25’ 3” **</td>
<td>15</td>
<td>0.507</td>
<td>3 5/8” CSJ</td>
<td>18</td>
<td>See NOA 12-0314.04 Design</td>
<td>2’</td>
<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
<td>3</td>
<td>565</td>
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<tr>
<td>30’ 0” **</td>
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<td>0.507</td>
<td>3 5/8” CSJ</td>
<td>18</td>
<td>See NOA 12-0314.04 Design</td>
<td>2’</td>
<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
<td>3</td>
<td>565</td>
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<tr>
<td>35’ 3” **</td>
<td>15</td>
<td>0.507</td>
<td>3 5/8” CSJ</td>
<td>18</td>
<td>See NOA 12-0314.04 Design</td>
<td>2’</td>
<td>36</td>
<td>13.5</td>
<td>2’ - 6’</td>
<td>3</td>
<td>565</td>
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</table>

Ceiling System = SP135-690 Main Runner 11.25 ft. / XL 7936-690 Cross Runner 3 ft. / XL 8926-690 Cross Runner 2 ft. # 9 Ga. H.D.G. Hanger Wire

* Note 1-1/2” 16ga. U-Channel Bridging required at Mid Span for 10’ 4” up to 15’ 0”.
** Note 1-1/2” 16ga. U-Channel Bridging required at 1/3rd 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.

Non-Impact Miami / Dade County EIFS Exterior Ceiling Design NOA 12-0314.05 Hurricane Zone Approved

Impact Rated EIFS Exterior Ceiling Design with 5/8” F/R plywood added to membrane Miami / Dade County See NOA 12-0314.04 Hurricane Zone Approved

Control 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.

Expansion Joints

Reference section 7.11.4.1-7.11.4.3 for location and spacing of control joints.

Membrane Load Values

<table>
<thead>
<tr>
<th>Component Combinations</th>
<th>Maximum Load in lbs./ft. at Hanger Wire/Cross Tee Spacing</th>
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<tr>
<td></td>
<td>36”/16”</td>
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<tr>
<td>L/360</td>
<td>13.37</td>
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<tr>
<td>HD8906/XL7936690 (mains 36” O.C.)</td>
<td>13.37</td>
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<td>HD8906/XL8926 (mains 24” O.C.)</td>
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<tr>
<td>SP135/XL7936690 (mains 36” O.C.)</td>
<td>13.37</td>
</tr>
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</table>
For maximum wind speed of 172 MPH.

1. Wind Load Brace 2-1/2" 18-Gauge Steel 2' O.C.
2. From 0' to 6' 22-Gauge 2-1/2" Metal Studs Minimum From 6' to 10'-3" 18 Gauge 2-1/2" Metal Studs Minimum.
3. From 10'-4" to 15' 18-Gauge 2-1/2" Metal Studs Minimum 16 Gauge CRC Mid Span.
4. From 15' to 20' 18 Gauge 2-1/2" Metal Studs Minimum 16 Gauge CRC 1/3 Points.
5. Item 3 and 4 above CRC Bracing Shown on Other Drawings.
6. Main Beams 3' O.C. / Cross Tees 16" O.C.
7. Positive Attachment Metal Studs Top and Bottom.
8. #9 Hanger Wire – as shown above
WIND LOAD BRACING

EXTERIOR WIND LOAD BRACING TO METAL BAR JOISTS

Notes:
1. 18-Gauge 2-1/2’ steel studs, 10’-3” vertical drop.
2. Positive Attachment top and bottom.
3. Hanger Wire 2’ O.C.
4. Main Beams 3’ O.C. / Cross Tees 16” O.C 3’ long.

For maximum wind speed of 172 MPH.
Notes:

1 16-Gauge CRC Channel Bracing required at Mid Span for 10' – 15' vertical drop.
2 Positive Attachment top and bottom.
3 18-Gauge 3-5/8” studs 2’ O.C.
4 Main Beams 3' O.C. / Cross Tees 16” O.C 3’ long.
5 #9 Hanger Wire
For maximum wind speed of 172 MPH.

Notes:

1. #16-Gauge CRC Channel Bracing required at 1/3 Point at 20' vertical drop.
2. Positive Attachment top and bottom.
3. 16-Gauge 3-1/2" studs 2' O.C.
### MAKING A TEMPLATE

#### ESTABLISHING AN ARC

1. Draw radius on template (plywood, gypsum board, etc.)
2. Mark 2' increments on line perpendicular to center line.

**Example: 43° arc using chart on page 19**

- **2'-0"**
- **2'-0"**
- **2'-0"**

**Location of First Row at Center Line**

3. At 2' marks, identify points of arc below perpendicular line (maintain consistent spacing of point) See radius charts on page 17.
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 chart on page 19).

**Main Beam**

**Template under Main Beam**

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.

**Main Beam**

**Template under Main Beam**

**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**

* 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)
  - Note: Screw RC2 to cavity side of web
MAKING A TEMPLATE

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.

*Screw RC2 on cavity side of web
### Radius Dimensions

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<th>Radius</th>
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<td>2&quot;</td>
<td>2-1/4&quot;</td>
<td>2&quot;</td>
<td>1-7/8&quot;</td>
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<td>113-7/8&quot;</td>
<td>114-7/8&quot;</td>
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For more information, call 1 877 276 7876