The inside front cover is intentionally left blank.
For decades, USG exterior ceiling systems have been utilized in a wide variety of exterior applications because they not only satisfy stringent performance requirements and design criteria but also provide beauty and durability.
Introduction

USG provides six systems for use in exterior environments that are not directly exposed to the weather, such as under soffits, parking garages, covered entrances, or drive-throughs:

- Paraline® II Linear Metal Ceiling System
- Paraline® Plus Linear Metal Ceiling System
- Celebration™ Snap-In Metal Panel Ceiling System
- Celebration™ Torsion Spring Metal Panel Ceiling System
- ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel
- USG Drywall Suspension System

These ceiling systems combine traditional modules, elegant linear pans, or metal panels with a specially engineered suspension system to create dynamic ceilings featuring clean, contemporary planes.

These guidelines outline the design considerations, test results, and construction details for the installation of each USG exterior ceiling system. USG exterior assemblies were tested per UL 580, UL 1897, TAS 202, and TAS 203, and listed in PEI Evaluation Report, PER-12055.

For more information about UL Standards, please visit www.UL.com.

For more information about Florida Building Code Testing Application Standards (TAS), please visit www.floridabuilding.org.

Celebration

---

1 The Paraline II closed-reveal linear metal ceiling is the Paraline system appropriate for exterior ceiling applications.
## SYSTEMS OVERVIEW

### Performance Selector

#### Linear Metal Ceiling Systems

<table>
<thead>
<tr>
<th>Main Tee / Carrier System</th>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating¹ (w)</th>
<th>Equivalent Wind Speed² (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraline II</td>
<td>Symmetrical Carrier</td>
<td>48 in.</td>
<td>N/A</td>
<td>N/A</td>
<td>UL 1897</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>N/A</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 580</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>N/A</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
</tr>
<tr>
<td></td>
<td>Paraline Plus Carrier</td>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>UL 580</td>
</tr>
<tr>
<td></td>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>30 in.</td>
<td>Class 60</td>
<td>UL 580</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>NOA No. 15-1223.05</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
</tr>
</tbody>
</table>

¹Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

²Calculated using the simplified formula on page eight.
### Metal Panel Ceiling Systems

<table>
<thead>
<tr>
<th>Main Tee / Carrier System</th>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating¹ (w)</th>
<th>Equivalent Wind Speed² (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Celebration Snap-In Ceiling System with Fineline® DXFEV</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DXFEVH 2924</td>
<td>48 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>25 psf (downward load)</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>90 psf</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>102 psf</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>NOA No. 15-1223.04</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>+80 / -70 psf 176 mph</td>
</tr>
<tr>
<td>DXFEVH 2930</td>
<td>30 in.</td>
<td>30 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>51 psf (downward load)</td>
</tr>
<tr>
<td></td>
<td>30 in.</td>
<td>30 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>68 psf</td>
</tr>
<tr>
<td></td>
<td>30 in.</td>
<td>30 in.</td>
<td>Class 60</td>
<td>UL 580</td>
<td>60 psf</td>
</tr>
<tr>
<td><strong>Celebration Torsion Spring Metal Panel Ceiling System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZXLA26</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>90 psf</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>133 psf</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>NOA No. 16-0404.02</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>73.3 psf 170 mph</td>
</tr>
<tr>
<td></td>
<td>48 in.</td>
<td>24 in.</td>
<td>Class 30</td>
<td>UL 580</td>
<td>30 psf 108 mph</td>
</tr>
<tr>
<td></td>
<td>72 in.</td>
<td>24 in.</td>
<td>Class 30</td>
<td>UL 580</td>
<td>30 psf 108 mph</td>
</tr>
<tr>
<td></td>
<td>48 in.</td>
<td>48 in.</td>
<td>Class 15</td>
<td>UL 580</td>
<td>15 psf 77 mph</td>
</tr>
<tr>
<td></td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>13 psf (downward load)</td>
</tr>
</tbody>
</table>

¹Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

²Calculated using the simplified formula on page eight.
## Performance Selector

### USG Sheetrock® Brand Lay-In Ceiling Panel

<table>
<thead>
<tr>
<th>Main Tee / Carrier System</th>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating¹ (w)</th>
<th>Equivalent Wind Speed² (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZXLA26</td>
<td>48 in. 24 in. 24 in. N/A UL 1897 26 psf 101 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 48 in. 24 in. N/A UL 580 30 psf 108 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 48 in. 24 in. N/A UL 1897 85 psf 182 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>48 in. 24 in. 24 in. N/A UL 1897 21 psf 91 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

²Calculated using the simplified formula on page eight.

### USG Drywall Suspension System

<table>
<thead>
<tr>
<th>Main Tee / Carrier System</th>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating¹ (w)</th>
<th>Equivalent Wind Speed² (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGLW26</td>
<td>48 in. 24 in. 24 in. Class 15 UL 580 15 psf 77 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>48 in. 16 in. 30 in. Class 15 UL 580 15 psf 77 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>48 in. 24 in. 30 in. Class 15 UL 580 15 psf 77 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 24 in. 30 in. Class 30 UL 580 30 psf 108 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 24 in. 42 in. Class 60 UL 580 60 psf 153 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 24 in. 30 in. Class 90 UL 580 90 psf 188 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 16 in. 24 in. Class 90 UL 580 90 psf 188 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 in. 16 in. 24 in. NOA No. 15-0618.06 Miami-Dade TAS 202 &amp; 203 +75/-75 psf 171 mph</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

²Calculated using the simplified formula on page eight.
**Wind Design Notes**

ASCE 7-10, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI), contains a formula that converts wind speed into static pressure. The formula is a comprehensive approach to include factors such as height or location of the building or directionality of wind loads affecting the structure expressed as:

\[ q_z = 0.00256 K_z K_{zt} K_d V^2 \]

- \( q_z \) = velocity pressure evaluated at height \( z \) above the ground
- \( K_z \) = velocity pressure exposure coefficient
- \( K_{zt} \) = topographic factor
- \( K_d \) = wind directionality factor
- \( V \) = basic wind speed

All the test results presented in this guide were achieved by measuring the maximum pressure that the system can withstand. The formula above provides guidance on how to estimate the wind speed correlating to the particular pressure. Because the factors \((K_z, K_{zt}, K_d)\) are project specific, they were conservatively estimated to be equal to one. Therefore, the simplified formula to estimate wind speed based on given pressures is as follows:

\[ V = \sqrt{q_z / 0.00256} \]

Wind load provisions of ASCE 7-10 are recognized in the 2015 International Residential Code (IRC) and the 2015 International Building Code (IBC). The information presented is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with a local official prior to designing and installing a ceiling system. Other restrictions and exemptions may apply.

**Wind Pressure Test Methods**

USG exterior assemblies were tested for both uplift (positive) and downward (negative) pressures. Testing for both positive and negative pressures offers a more complete assessment of the performance of USG assemblies. It also allows USG to evaluate and certify the comparative resistance of USG assemblies to both positive and negative pressures. With the publication of this thorough wind load assessment, design professionals can be assured USG exterior assemblies satisfy the most stringent performance requirements and design criteria.
## LINEAR METAL CEILING SYSTEMS

### Paraline® II
### Paraline® Plus

## TECHNICAL DATA

<table>
<thead>
<tr>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating (w)</th>
<th>Equivalent Wind Speed (v)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paraline II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 in. N/A 24 in. N/A 24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>46 psf</td>
<td>134 mph</td>
<td>page 14</td>
</tr>
<tr>
<td>24 in. N/A 24 in. N/A 24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>90 psf</td>
<td>188 mph</td>
<td>page 15</td>
</tr>
<tr>
<td>24 in. N/A 24 in. N/A 24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>106 psf (downward load)</td>
<td>203 mph</td>
<td>page 16</td>
</tr>
<tr>
<td><strong>Paraline Plus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 in. 24 in. 24 in. 24 in.</td>
<td>Class 30</td>
<td>UL 580</td>
<td>30 psf</td>
<td>108 mph</td>
<td>page 20</td>
</tr>
<tr>
<td>48 in. 24 in. 24 in. 24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>55 psf</td>
<td>147 mph</td>
<td></td>
</tr>
<tr>
<td>24 in. 24 in. 24 in. 30 in.</td>
<td>Class 60</td>
<td>UL 580</td>
<td>60 psf</td>
<td>153 mph</td>
<td>page 21</td>
</tr>
<tr>
<td>24 in. 24 in. 24 in. 24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>90 psf</td>
<td>188 mph</td>
<td>page 22</td>
</tr>
<tr>
<td>24 in. 24 in. 24 in. 24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>102 psf</td>
<td>200 mph</td>
<td></td>
</tr>
<tr>
<td>24 in. 24 in. 24 in. 24 in.</td>
<td>NOA No. 15-1223.05</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>+75 / -35 psf</td>
<td>171 mph</td>
<td></td>
</tr>
<tr>
<td>24 in. 24 in. 24 in. 24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>17 psf (downward load)</td>
<td>81 mph</td>
<td>page 23</td>
</tr>
</tbody>
</table>
PARALINE® II AND PARALINE® PLUS

Wind Resistance

USG Paraline® ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. The Paraline II and Paraline Plus systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by the methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).

Limitations: The Paraline finish is not UV-resistant; therefore, these ceiling systems should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. These ceiling systems are not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of these products. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record. For more information refer to Paraline® Linear Metal Ceiling Systems IC463.

Technical Data

- The wind pressure is presented in accordance with applicable test standards.
- Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).

Guidelines

- The building structure from which the Paraline system is suspended and spaced, as well as hanger wire and compression post attachment methods, must be capable of withstanding the loads applied during wind conditions.
- The compression post shall be positively attached to the structure. For further information on the USG Compression Post, see page 57.
- Other materials can be used for compression posts, provided the compressive strength and attachment method are approved for use by a local structural engineer.
- The architect’s details must cover the design and location of expansion joints and meet all applicable building code requirements.

Panel Sizes

The Paraline and Paraline Plus systems presented in this guide can accommodate all available panel sizes. The performance values are not limited to a particular panel size. All available panel sizes will meet the performance values presented.

¹ The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project. For more information about Paraline linear metal ceiling systems, visit usg.com
# PARALINE® II

## System Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perimeter Molding</strong></td>
<td>U-2-3/32</td>
<td>7/8&quot; x 2 3/32&quot;</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>U-2-3/32 Hold-Down Clip</td>
<td>3/32&quot; x 2 3/32&quot;</td>
</tr>
</tbody>
</table>

![Perimeter Molding Diagram](image)

![Accessories Diagram](image)
**PARALINE® II**

**Application Details**

**General Layout**

The product layout and spacing will vary based on the load rating and uplift class. Refer to the technical data and associated reference pages for details.

**USG Symmetrical Carrier Run**

**Compression Post Detail**

- USG compression post min. $1\frac{1}{2}$", 20-ga. steel stud (USG compression post shown.)
- Spring clip
- Hanger reinforcement clip
- Compression post adapter
- Symmetrical carrier

- Maximum 48" o.c. compression posts and hanger wires
- 12-ga. hanger wire
- USG compression post adapter
- Hanger reinforcement clip
- Symmetrical carrier
## PARALINE® II

### Application Details

<table>
<thead>
<tr>
<th>Wall Intersection</th>
<th>Pans Perpendicular to Wall</th>
<th>Pans Parallel to Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>USG compression post min. 1-5/8&quot;, 20-ga. steel stud (USG compression post shown.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>symmetrical carrier</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hanger reinforcement clip</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paraline II pan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U-2-3/32 perimeter molding and hold-down clip</td>
</tr>
<tr>
<td></td>
<td>12&quot; maximum</td>
<td>12&quot; maximum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>USG compression post min. 1-5/8&quot;, 20-ga. steel stud (USG compression post shown.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>symmetrical carrier</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hanger reinforcement clip</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paraline II pan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U-2-3/32 perimeter molding and hold-down clip</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12-ga. hanger wire</td>
</tr>
</tbody>
</table>

**Note:** Pop rivets are suitable for exterior use. USG compression posts or min. 1-5/8", 20-ga. steel studs may be used. A USG compression post is shown.
PARALINE® II

UL 1897
46 psf

Main Tees: 48 in. o.c.
Compression Posts: 24 in. o.c.

Hanger & Compression Post
Paraline Symmetrical Carrier

Paraline II Assembly
**PARALINE® II**

**UL 580**
**Class 90**

**Main Tees:** 24 in. o.c.

**Compression Posts:** 24 in. o.c.

- Hanger & Compression Post
- Paraline Symmetrical Carrier

---

**Paraline II Assembly**

1. 12-ga. hanger wire
2. USG compression post or min. 1 1/4", 20-ga. steel stud (USG compression post shown.)
3. Paraline II pan
4. Symmetrical carrier
5. Hanger reinforcement clip
6. U-2-3/32 perimeter molding
7. Paraline II pan

---

15 SYSTEMS GUIDE  USG Exterior Ceiling Systems  Linear Metal Ceiling Systems  Paraline II
PARALINE® II

UL 1897
106 psf (Downward Load)

Main Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.

- Hanger & Compression Post
- Paraline Symmetrical Carrier

Paraline II Assembly

12-ga. hanger wire

USG compression post or min. 1\(\frac{1}{4}\)”, 20-ga. steel stud (USG compression post shown.)

Symmetrical carrier

Paraline II pan

Paraline II pan

Symmetrical carrier

USG compression post or min. 1\(\frac{1}{4}\)”, 20-ga. steel stud (USG compression post shown.)

U-2-3/32 perimeter molding
# PARALINE® PLUS

## System Components

<table>
<thead>
<tr>
<th>Perimeter Molding</th>
<th>U-2-5/8</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Perimeter Molding Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>U-2-5/8 Hold-Down Clip</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image2" alt="Accessories Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>
Application Details

General Layout

The product layout and spacing will vary based on the load rating and uplift class. Refer to the technical data and associated reference pages for details.

Paralock Carrier Run

Post Detail
### Application Details

#### Wall Intersection

<table>
<thead>
<tr>
<th>Pans Perpendicular to Wall</th>
<th>Pans Parallel to Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG compression post or min. 1 1/8&quot;, 20-ga. steel stud (USG compression post shown.)</td>
<td>USG compression post or min. 1 1/8&quot;, 20-ga. steel stud (USG compression post shown.)</td>
</tr>
<tr>
<td>cross tee</td>
<td>12&quot; maximum</td>
</tr>
<tr>
<td>Snap-Loc insert</td>
<td>12-ga. hanger wire</td>
</tr>
<tr>
<td>Paralock Plus main tee</td>
<td>U-2-5/8 perimeter molding and U-2-5/8 hold-down clip</td>
</tr>
<tr>
<td>Paraline Plus pan</td>
<td>Paraline Plus pan</td>
</tr>
</tbody>
</table>

### Notes:
- Pop rivets are suitable for exterior use. Field notch the top flange of the molding at the grid intersection. USG compression posts or min. 1-5/8", 20-ga. steel studs may be used. A USG compression post is shown.
PARALINE\textsuperscript{®} PLUS

UL 580
Class 30
UL 1897
55 psf

Main Tees: 48 in. o.c.
Compression Posts: 24 in. o.c.
Cross Tees: 24 in. o.c.

- 12-ga. hanger wire
- 12-ga. hanger wire
- Snap-Loc insert
- Snap-Loc insert
- Paraline Plus pan
- Paraline Plus pan
- USG compression post or min. 1 5/8", 20-ga. steel stud (max. length 24") (USG compression post shown.)
- USG compression post or min. 1 5/8", 20-ga. steel stud (max. length 24") (USG compression post shown.)

Paraline Plus Assembly
PARALINE® PLUS

UL 580
Class 60

Main Tees: 24 in. o.c.
Compression Posts: 30 in. o.c.
Cross Tees: 24 in. o.c.

Paraline Plus Assembly

Paraline Plus pan
Paralock Plus main tee
Snap-Loc insert

Paraline Plus pan
USG compression post or min. 1½", 20-ga. steel stud (max. length 24") (USG compression post shown.)
12-ga. hanger wire
USG compression post or min. 1½", 20-ga. steel stud (max. length 24") (USG compression post shown.)

U 2-5/8 perimeter molding
Paraline Plus pan
Snap-Loc insert

ZXLA 2 ft. cross tee
Paraline Plus main tee

12-ga. hanger wire
PARALINE® PLUS

UL 580  
90 psf

UL 1897  
102 psf

Miami-Dade NOA No. 15-1223.05  
171 mph

Main Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.
Cross Tees: 24 in. o.c.

- Hanger & Compression Post
- Paralock Plus Main Tee
- ZXLA224 (24 in. Cross Tee)

Paraline Plus Assembly

12-ga. hanger wire
Paralock Plus main tee
Snap-Loc insert
Paraline Plus pan

USG compression post or min. 1 5/8", 20-ga. steel stud (max. length 24") (USG compression post shown.)

12-ga. hanger wire
USG compression post or min. 1 5/8", 20-ga. steel stud (max. length 24") (USG compression post shown.)

U 2-5/8 perimeter molding
Paraline Plus pan
Snap-Loc insert
ZBXA 2 ft. cross tee
Paraline Plus main tee
**PARALINE® PLUS**

**UL 1897**

**17 psf (Downward Load)**

**Main Tees:** 24 in. o.c.

**Compression Posts:** 24 in. o.c.

**Cross Tees:** 24 in. o.c.

- Hanger & Compression Post
- Paralock Plus Main Tee
- ZXLA224 (24 in. Cross Tee)

Paraline Plus Assembly

- 12-ga. hanger wire
- USG compression post or min. 1 5/8"; 20-ga. steel stud (max. length 24") (USG compression post shown.)
- Paralock Plus main tee
- Snap-Loc insert
- Paraline Plus pan
- ZXA 2 ft. cross tee
- Paraline Plus main tee
- USG compression post or min. 1 5/8", 20-ga. steel stud (max. length 24") (USG compression post shown.)
- U 2-5/8 perimeter molding
- Paraline Plus pan
- Snap-Loc insert
Page 24 intentionally left blank.
# METAL PANEL CEILING SYSTEMS

## Celebration™ Snap-In

### Technical Data

<table>
<thead>
<tr>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating (w)</th>
<th>Equivalent Wind Speed (v)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fineline DXFEVH 2924</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>25 psf (downward load)</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>90 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>102 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>NOA No. Miami-Dade 15-1223.04</td>
<td>NOA No. Miami-Dade TAS 202 &amp; 203</td>
<td>+80/-70 psf</td>
</tr>
</tbody>
</table>

| **Fineline DXFEVH 2930** | | | | | |
| 30 in. | 30 in. | 30 in. | N/A | UL 1897 | 51 psf (downward load) | 141 mph | page 30 |
| 30 in. | 30 in. | 30 in. | N/A | UL 1897 | 68 psf | 163 mph | page 31 |
| 30 in. | 30 in. | 30 in. | Class 60 | UL 580 | 60 psf | 153 mph | |

| **Celebration Torsion Spring** | | | | | |
| **ZXL26** | | | | | |
| 24 in. | 24 in. | 24 in. | Class 90 | UL 580 | 90 psf (downward load) | 188 mph | page 33 |
| 24 in. | 24 in. | 24 in. | Class 90 | UL 580 | 133 psf | 228 mph | |
| 24 in. | 24 in. | 24 in. | Class 90 | UL 580 | 73.3 psf (downward load) | 170 mph | |
| 48 in. | 24 in. | 24 in. | Class 30 | UL 580 | 30 psf | 108 mph | |
| 72 in. | 24 in. | 24/48 in. | Class 30 | UL 580 | 30 psf | 108 mph | |
| 48 in. | 24 in. | 48 in. | Class 15 | UL 580 | 15 psf | 77 mph | |
| 24 in. | 24 in. | 24 in. | N/A | UL 1897 | 13 psf (downward load) | 71 mph | |

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25 SYSTEMS GUIDE

USG Exterior Ceiling Systems

Metal Panel Ceiling Systems
CELEBRATION™ SNAP-IN

CELEBRATION™ TORSION SPRING

Wind Resistance

Both USG Celebration™ Snap-In and Torsion Spring metal panel ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. Celebration Snap-In and Torsion Spring metal panel ceiling systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).¹

Limitations: The Celebration finish is not UV-resistant; therefore, the Celebration Snap-In and Torsion Spring metal panel ceiling systems should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. These systems are not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of these products. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record. For more information refer to Celebration™ and Panz™ Metal Ceiling Systems, IC415.

<table>
<thead>
<tr>
<th>Technical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The wind pressure is presented in accordance with applicable test standards.</td>
</tr>
<tr>
<td>• Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The building structure from which the Celebration Snap-In or Torsion Spring ceiling system is suspended and spaced, as well as the hanger wire, compression posts, or studs used in the assembly, must be capable of withstanding the loads applied during wind conditions.</td>
</tr>
<tr>
<td>• Posts or studs shall be positively attached to the structure. For further information on the USG Donn Brand Compression Post, see page 57.</td>
</tr>
<tr>
<td>• Heavy duty main tees shall be used.</td>
</tr>
<tr>
<td>• Other materials can be used for compression posts if the compressive strength and attachment method are approved for use by a local structural engineer.</td>
</tr>
<tr>
<td>• The architect’s details must cover the design and location of expansion joints and meet all applicable building code requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Celebration Snap-In systems presented in this guide can accommodate all available panel sizes. The performance values are not limited to a particular panel size. All available panel sizes will meet the performance values presented.</td>
</tr>
</tbody>
</table>

The Celebration Torsion Spring systems presented in this guide can accommodate the following panel sizes: 2 ft. x 2 ft., 2 ft. x 4 ft., 2 ft. x 6 ft., 2 ft. x 8 ft., and 4 ft. x 4 ft.

¹ The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project. For more information about Celebration metal panel ceiling systems, visit usg.com.
CELEBRATION™ SNAP-IN

System Components

<table>
<thead>
<tr>
<th>Perimeter Molding</th>
<th>U-2-3/32</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/16&quot;</td>
</tr>
<tr>
<td></td>
<td>2 3/32&quot;</td>
</tr>
<tr>
<td></td>
<td>7/8&quot;</td>
</tr>
<tr>
<td></td>
<td>11/8&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>U-2-3/32 Hold-Down Clip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9/32&quot;</td>
</tr>
<tr>
<td></td>
<td>2 3/32&quot;</td>
</tr>
<tr>
<td></td>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CA1 Arrowhead Reveal Spacer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
</tr>
<tr>
<td>1/4&quot;</td>
</tr>
</tbody>
</table>
**CELEBRATION™ SNAP-IN**

**UL 1897**
25 psf (Download Load)

**Main Tees:** 48 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

- Hanger & Compression Post  
  - DXFEVH2924 (Heavy Duty Main Tee)  
  - DXFEV429N (48 in. Cross Tee)  
  - DXFEV229 (24 in. Cross Tee)

**Note:** Celebration Snap-In panels cannot be installed across a main tee and a 4 ft. cross tee.

**Perimeter Conditions**

- 12-ga. hanger wire  
- DXFEVH Fineline main tee  
- USG compression post or min. 1 1/8”, 20-ga. steel stud (USG compression post shown.)  
- U-2-3/32 molding  
- Arrowhead spacer for cut perimeter panels into first reveal row  
- Celebration Snap-In perimeter panel  
- U-2-3/32 hold-down clip, min. two per perimeter panel

**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle.  
Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Commodity Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold-Down Clip</td>
<td>U-2-3/32HDC</td>
<td>903046</td>
</tr>
<tr>
<td>Channel Molding</td>
<td>U-2-3/32</td>
<td>907947</td>
</tr>
</tbody>
</table>
**CELEBRATION™ SNAP-IN**

**Main Tees:** 24 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

- **Hanger & Compression Post**  
- **DXFEVH2924 (Heavy Duty Main Tee)**  
- **DXFEV229 (24 in. Cross Tee)**

**Note:** Celebration Snap-In panels cannot be installed across a main tee.

**UL 580**  
Class 90

**UL 1897**  
102 psf

**Miami-Dade NOA No. 15-1223.04**  
176 mph

---

**Perimeter Conditions**

- **24" o.c.**  
- **12" max.**

**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Commodity Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold-Down Clip</td>
<td>U-2-3/32HDC 903046</td>
</tr>
<tr>
<td>Channel Molding</td>
<td>U-2-3/32 907947</td>
</tr>
</tbody>
</table>
CELEBRATION™ SNAP-IN

UL 1897
51 psf (Downward Load)

Main Tees: 30 in. o.c.
Cross Tees: 30 in. o.c.
Compression Posts: 30 in. o.c.

- Hanger Wire & Compression Post
  - DXFEVH2930 (Heavy Duty Main Tee)
  - DXFEV30 (30 in. Cross Tee)
- U-2-3/32 molding
- DXFEVH Fineline main tee
1 Special Order

Note: Celebration Snap-In panels cannot be installed across a main tee.

Perimeter Conditions

12-ga. hanger wire

USG compression post or min. 1 1/4", 20-ga. steel stud (USG compression post shown.)

U-2-3/32 molding

arrowhead spacer for cut perimeter panels into first reveal row

Celebration Snap-In perimeter panel

U-2-3/32 hold-down clip, min. two per perimeter panel

Note: U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.
CELEBRATION™ SNAP-IN

Main Tees: 30 in. o.c.
Cross Tees: 30 in. o.c.
Compression Posts: 30 in. o.c.

- Hanger Wire & Compression Post
- DXFEVH2930 (Heavy Duty Main Tee)
- DXFEV30 (30 in. Cross Tee)

Note: Celebration Snap-In panels cannot be installed across a main tee.

Perimeter Conditions

- 12-ga. hanger wire
- DXFEVH Fineline main tee
- USG compression post or min. 1 1/4", 20-ga. steel stud (USG compression post shown.)
- U-2-3/32 molding
- Arrowhead spacer for cut perimeter panels into first reveal row
- Celebration Snap-In perimeter panel
- U-2-3/32 hold-down clip, min. two per perimeter panel

Note: U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Commodity Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold-Down Clip</td>
<td>U-2-3/32HDC</td>
</tr>
<tr>
<td>Channel Molding</td>
<td>U-2-3/32</td>
</tr>
</tbody>
</table>
**CELEBRATION™ TORSION SPRING**

**System Components**

<table>
<thead>
<tr>
<th>Perimeter Molding</th>
<th>Option 1 Two Layers of M7Z</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1" alt="Diagram of Option 1" /></td>
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<tr>
<td></td>
<td>Main tee or cross tee</td>
</tr>
<tr>
<td></td>
<td>M7Z wall molding</td>
</tr>
<tr>
<td></td>
<td>1/8&quot; rivet (two per tee end)</td>
</tr>
<tr>
<td></td>
<td>T15 hold-down clip</td>
</tr>
<tr>
<td></td>
<td>M7Z wall molding</td>
</tr>
<tr>
<td></td>
<td>Panel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perimeter Molding</th>
<th>Option 2 CTS15AL Perimeter Molding</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><img src="image2" alt="Diagram of Option 2" /></td>
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<tr>
<td></td>
<td>Main tee or cross tee</td>
</tr>
<tr>
<td></td>
<td>CTS15AL perimeter molding</td>
</tr>
<tr>
<td></td>
<td>1/8&quot; rivet (two per tee end)</td>
</tr>
<tr>
<td></td>
<td>T15 hold-down clip</td>
</tr>
<tr>
<td></td>
<td>Panel</td>
</tr>
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</table>

**Accessories**

<table>
<thead>
<tr>
<th>Accessories</th>
<th>T15 Hold-Down Clip</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Diagram of T15 Hold-Down Clip" /></td>
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</tr>
</tbody>
</table>
**CELEBRATION™ TORSION SPRING**

Main Tees: 24 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.
Panel Sizes: 2 ft. x 2 ft. and 2 ft. x 4 ft.

- Hanger & Compression Post
  - ZXLA26 (Heavy Duty Main Tee)
  - TSCT22ZXA (24 in. Cross Tee)

**Compression Post Details**

- min. 1 1/8", 20-ga. steel stud (max. length 24") or USG compression post (Steel stud shown.)
- 1 1/8", screws

**UL 580**
Class 90
**UL 1897**
133 psf
**Miami-Dade NOA No. 16-0404.02**
170 mph
CELEBRATION™ TORSION SPRING

UL 580
Class 30

Main Tees: 48 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 48 in. o.c.
Panel Sizes: 2 ft. x 4 ft. and 2 ft. x 8 ft.

Compression Post Details

- Hanger & Compression Post
  - ZXLA26 (Heavy Duty Main Tee)
  - TSCT44ZXA (48 in. Cross Tee)
CELEBRATION™ TORSION SPRING

UL 580
Class 30

Main Tees: 72 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.
Panel Size: 2 ft. x 6 ft.

- Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT66ZXA (72 in. Cross Tee)
- ZXLA224 (24 in. Cross Tee)

Compression Post Details

Minimum 1 1/2", 20-ga. steel stud (max. length 24") or USG compression post (Steel stud shown.)

Main Tee Screws

Cross Tee Hanger Wire

1 1/8" x 5/8" Screws

Panel Size: 2 ft. x 6 ft.

24" o.c.
12" max.

24" 72" 24"

12" max.
CELEBRATION™ TORSION SPRING

UL 580
Class 15

Main Tees: 48 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 48 in. o.c.
Panel Size: 4 ft. x 4 ft.

- Hanger & Compression Post
  - ZXLA26 (Heavy Duty Main Tee)
  - TSCT44ZXA (48 in. Cross Tee)

Compression Post Details

- min. 1½", 20-ga. steel stud (max. length 24") or USG compression post (Steel stud shown.)
- screws
- cross tee
- hanger wire
- main tee
- screws
- cross tee
- 24" o.c.
- 12" max.
- 48" o.c.
- 12" max.
CELEBRATION™ TORSION SPRING

UL 1897
13 psf (Downward Load)

Main Tees: 24 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.
Panel Sizes: 2 ft. x 2 ft.

- Hanger & Compression Post
  - ZXLA26 (Heavy Duty Main Tee)
  - TSCT2ZXA (24 in. Cross Tee)

Compression Post Details:

main tee screws min. 1 1/8", 20-ga. steel stud (max. length 24") or USG compression post (Steel stud shown.)

main tee screws hanger wire cross tee

1 1/8"
13/16"
Page 38 intentionally left blank.
## TECHNICAL DATA

<table>
<thead>
<tr>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Maximum Load Rating (w)</th>
<th>Equivalent Wind Speed (v)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>26 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>48 in.</td>
<td>24 in.</td>
<td>Class 30</td>
<td>UL 580</td>
<td>30 psf</td>
</tr>
<tr>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>21 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>48 in.</td>
<td>24 in.</td>
<td>N/A</td>
<td>UL 1897</td>
<td>85 psf</td>
</tr>
</tbody>
</table>
ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL
2 ft. x 4 ft. SYSTEM

Wind Resistance

USG ZXLA™ Suspension Systems with USG Sheetrock™ Lay-In Ceiling Panels may be used for sheltered exterior applications not directly exposed to the weather. These systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).¹

Limitations: This system should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. This system is not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of the product. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record.

Technical Data

- The wind pressure is presented in accordance with applicable test standards.
- Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).

Available Panels

<table>
<thead>
<tr>
<th>Edge</th>
<th>Panel Size</th>
<th>Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG Sheetrock® Lay-In Ceiling Panel, Vinyl</td>
<td>Square 2’ x 2’ x 1/2”</td>
<td>3260</td>
</tr>
<tr>
<td></td>
<td>Square 2’ x 4’ x 1/2”</td>
<td>3270</td>
</tr>
</tbody>
</table>

Guidelines

- The building structure from which the USG Sheetrock® Lay-In Ceiling Panel system is suspended and spaced, as well as hanger wire and compression post attachment methods, must be capable of withstanding the loads applied during wind conditions.
- Other materials can be used for compression posts if the compressive strength and attachment method are approved for use by a local structural engineer.
- A minimum of 6d common hold-down nails or similar devices shall be installed at regular intervals to prevent uplift. A minimum of six for each 2 ft. x 4 ft. panel module and a minimum of four for each 2 ft. x 2 ft. panel module are required.
- A minimum of 6d common hold-down nails or similar devices shall be inserted in alternating directions.
- A minimum of 6d common hold-down nails or similar devices may be installed through the hanger wire holes, cross tee clip holes, and through a field-punched hole in the web of the tee.
- The architect's details must cover the design and location of expansion joints and meet all applicable building code requirements.

¹ The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project.
ZXLATM WITH USG SHEETROCK® LAY-IN CEILING PANEL
2 ft. x 4 ft. SYSTEM

UL 1897
26 psf

Main Tees: 48 in. o.c.
Cross Tees: 24 in. o.c.
Compression Posts: 24 in. o.c.

Hold-Down Nail

Perimeter Conditions

Note: Pop rivets are suitable for exterior use.
**ZXLATM WITH USG SHEETROCK® LAY-IN CEILING PANEL**

**2 ft. x 4 ft. SYSTEM**

**UL 580**

**Class 30**

**Main Tees:** 24 in. o.c.

**Cross Tees:** 48 in. o.c.

**Compression Posts:** 24 in. o.c.

- **Hanger & Compression Post**
- **ZXLAT26 (Heavy Duty Main Tee)**
- **ZXLAT244 (24 in. Cross Tee)**
- **Hold-Down Nail**

---

**Perimeter Conditions**

- 12-ga. hanger wire
- USG compression post or min. 1 5/8", 20-ga. steel stud (USG compression post shown.)
- hold-down nail to prevent panel uplift (See accompanying section detail.)
- screw-attached wall molding
- ZXLAT main tee
- USG Lay-In Ceiling Panel
- M7Z molding
- pop rivet or MAC2 molding attachment clip
- Min. 6d common hold-down nails or similar device shall be inserted in alternating directions.

**Hold-Down Nail**

**Note:** Pop rivets are suitable for exterior use.
**ZXLATM WITH USG SHEETROCK® LAY-IN CEILING PANEL**
2 ft. x 2 ft. SYSTEM

**UL 1897**
21 psf

**Main Tees:** 48 in. o.c.
**Cross Tees:** 24 in. o.c.
**Compression Posts:** 24 in. o.c.

- **Hanger & Compression Post**
  - ZXLAT26 (Heavy Duty Main Tee)
  - ZXLAT424 (48 in. Cross Tee)
  - ZXLAT224 (24 in. Cross Tee)
  - Screw-attached wall molding

**Hold-Down Nail**
Min. 6d common hold-down nails or similar device shall be inserted in alternating directions.

**Note:** Pop rivets are suitable for exterior use.

Perimeter Conditions

**Hold-Down Nail**
Min. 6d common hold-down nails or similar device shall be inserted in alternating directions.

**Perimeter Conditions**

- **Hold-Down Nail**
  - USG compression post or min. 15/16", 20-ga. steel stud
  - M7Z molding
  - USG Sheetrock® Lay-In Ceiling Panel
  - Screw-attached wall molding
  - ZXLAT main tee
  - Pop rivet or MAC2 molding attachment clip

**Main Tees:** 48 in. o.c.
**Cross Tees:** 24 in. o.c.
**Compression Posts:** 24 in. o.c.
ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL
2 ft. x 4 ft. SYSTEM

UL 1897
85 psf

**Main Tees:** 24 in. o.c.
**Cross Tees:** 48 in. o.c.
**Compression Posts:** 24 in. o.c.

- **Hanger & Compression Post**
- **ZXLA26 (Heavy Duty Main Tee)**
- **ZXLA224 (24 in. Cross Tee)**
- **Hold-Down Nail**

**Perimeter Conditions**

- **12-ga. hanger wire**
- **USG compression post or min. 1 1/8", 20-ga. steel stud (USG compression post shown.)**
- **Hold-down nail to prevent panel uplift (See accompanying section detail.)**
- **USG Sheetrock® Lay-In Ceiling Panel**
- **M7Z molding**
- **pop rivet or MAC2 molding attachment clip**

**Hold-Down Nail**

- **Min. 6d common hold-down nails or similar device shall be inserted in alternating directions.**

**Note:** Pop rivets are suitable for exterior use.
### TECHNICAL DATA

<table>
<thead>
<tr>
<th>Spacing</th>
<th>Uplift Class</th>
<th>Test Standard</th>
<th>Test Record</th>
<th>Maximum Load Rating (w)</th>
<th>Equivalent Wind Speed (v)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGLW26E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 in.</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Class 15</td>
<td>UL 580</td>
<td>UL 526</td>
<td>15 psf</td>
</tr>
<tr>
<td>48 in.</td>
<td>16 in.</td>
<td>30 in.</td>
<td>Class 15</td>
<td>UL 580</td>
<td>UL 526A</td>
<td>15 psf</td>
</tr>
<tr>
<td>48 in.</td>
<td>24 in.</td>
<td>30 in.</td>
<td>Class 15</td>
<td>UL 580</td>
<td>UL 526B</td>
<td>15 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>30 in.</td>
<td>Class 30</td>
<td>UL 580</td>
<td>UL 526C</td>
<td>30 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>42 in.</td>
<td>Class 60</td>
<td>UL 580</td>
<td>UL 526D</td>
<td>60 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>24 in.</td>
<td>30 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>UL 526E</td>
<td>90 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>16 in.</td>
<td>24 in.</td>
<td>Class 90</td>
<td>UL 580</td>
<td>UL 526F</td>
<td>90 psf</td>
</tr>
<tr>
<td>24 in.</td>
<td>16 in.</td>
<td>24 in.</td>
<td>NOA No. 15-0618.06</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>NOA No. 15-0618.06</td>
<td>75 psf</td>
</tr>
</tbody>
</table>
USG DRYWALL SUSPENSION SYSTEM

Wind Uplift Resistance for Exterior Soffits

The USG Drywall Suspension System accommodates the wind loads for most applications. The system has been tested using applicable industry standards for wind uplift resistance when installed in exterior soffits and canopies. For more information regarding test standards and online resources, please refer to the Systems Overview section of this guide.

Only USG Sheetrock® Brand Exterior Ceiling Board, Durock® Cement Board, and Securock® Glass-Mat Sheathing are suitable for exterior applications. Specific information for gypsum panel applications can be found at usg.com and usgdesignstudio.com.

The following pages detail the components and spacing necessary to achieve the different uplift classifications, including compression post spacing, limiting plenum depths, and construction details for the installation. The structure that the USG Drywall Suspension System is attached to shall be designed to withstand the applicable wind loads and carry the soffit system’s total weight.

Note: Design wind loads vary with geographic region and building conditions and must be determined by a professional engineer or architect of record.
# USG DRYWALL SUSPENSION SYSTEM

## Wind Uplift Resistance for Exterior Soffits

![Diagram of component spacing and uplift resistance](image)

<table>
<thead>
<tr>
<th>Test Record</th>
<th>UL Class</th>
<th>Maximum Uplift Load (psf)</th>
<th>Equivalent Wind Speed (mph)</th>
<th>Main Runner</th>
<th>Cross Tee</th>
<th>12-Gauge Hanger Wire</th>
<th>Compression Post</th>
<th>Exterior Soffit Panels</th>
<th>Plenum Height¹ (in.)</th>
<th>Maximum Compression Post Load (lb.)</th>
<th>Test Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL 526</td>
<td>15</td>
<td>15</td>
<td>77</td>
<td>48</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>single layer 5/8 in. gypsum panels</td>
<td>141</td>
<td>183.2</td>
<td>UL 580</td>
</tr>
<tr>
<td>UL 526A, B</td>
<td>15</td>
<td>15</td>
<td>77</td>
<td>48</td>
<td>16 (526A)</td>
<td>48</td>
<td>30</td>
<td>single layer 1/2 in. gypsum panels</td>
<td>128</td>
<td>229</td>
<td>UL 580</td>
</tr>
<tr>
<td>UL 526C</td>
<td>30</td>
<td>30</td>
<td>108</td>
<td>24</td>
<td>24</td>
<td>48</td>
<td>30</td>
<td>single layer 1/2 in. gypsum panels</td>
<td>130</td>
<td>225</td>
<td>UL 580</td>
</tr>
<tr>
<td>UL 526D</td>
<td>60</td>
<td>60</td>
<td>153</td>
<td>24</td>
<td>24</td>
<td>48</td>
<td>42</td>
<td>double layer 5/8 in. gypsum panels</td>
<td>76</td>
<td>525</td>
<td>UL 580</td>
</tr>
<tr>
<td>UL 526E</td>
<td>90</td>
<td>90</td>
<td>188</td>
<td>24</td>
<td>24</td>
<td>48</td>
<td>30</td>
<td>double layer 5/8 in. gypsum panels</td>
<td>76</td>
<td>525</td>
<td>UL 580</td>
</tr>
<tr>
<td>UL 526F</td>
<td>90</td>
<td>90</td>
<td>188</td>
<td>24</td>
<td>16</td>
<td>48</td>
<td>24</td>
<td>single layer 5/8 in. gypsum panels, single layer 3/8 in. plywood</td>
<td>76</td>
<td>525</td>
<td>UL 580</td>
</tr>
<tr>
<td>NOA No. 15-0618.06</td>
<td>N/A</td>
<td>+75, -75</td>
<td>171</td>
<td>24</td>
<td>16</td>
<td>24</td>
<td>24</td>
<td>single layer 1/2 in. or 5/8 in. glass-mat sheathing with direct applied EFIS</td>
<td>24</td>
<td>300</td>
<td>TAS 202 &amp; TAS 203</td>
</tr>
</tbody>
</table>

¹ Larger plenum heights require the compression post size and gauge to be determined by a qualified structural engineer.
## USG DRYWALL SUSPENSION SYSTEM

### Test Record UL 526
**Class 15 Uplift**

### System Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Runners</strong></td>
<td>DGLW26E</td>
</tr>
<tr>
<td><strong>Cross Tees</strong></td>
<td>DGLW424E</td>
</tr>
<tr>
<td><strong>Perimeter Molding</strong></td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
<tr>
<td></td>
<td>When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.</td>
</tr>
<tr>
<td><strong>Gypsum Panels</strong></td>
<td>- 5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</td>
</tr>
<tr>
<td></td>
<td>- Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of each cross tee and with additional screws located 12 in. o.c. beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.</td>
</tr>
<tr>
<td></td>
<td>- At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.</td>
</tr>
<tr>
<td></td>
<td>- End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</td>
</tr>
<tr>
<td></td>
<td>- Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.</td>
</tr>
</tbody>
</table>

### Accessories

Accessories: Please refer to page 57 for more information on USG compression posts.
# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526A and UL 526B

### Class 15 Uplift

## System Components

<table>
<thead>
<tr>
<th>Main Runners</th>
<th>DGLW26E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Tees</td>
<td>DGLW424E</td>
</tr>
<tr>
<td>Perimeter Molding</td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
</tbody>
</table>

When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.

### Gypsum Panels

- 1/2 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.

- Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of each cross tee and with additional screws located 12 in. o.c., beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.

- At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.

- End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.

- Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.

### Accessories

Please refer to page 57 for more information on USG compression posts.
USG DRYWALL SUSPENSION SYSTEM

Test Record UL 526C
Class 30 Uplift

System Components

<table>
<thead>
<tr>
<th>Main Runners</th>
<th>DGLW26E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Tees</td>
<td>DGLW424E</td>
</tr>
<tr>
<td>Perimeter Molding</td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
<tr>
<td></td>
<td>When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.</td>
</tr>
</tbody>
</table>

Gypsum Panels

- 5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints centered along 1/2 in. thick, 4 ft. wide cross tees shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.

- Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws located 12 in. o.c., beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.

- At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.

- End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.

- Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.

Accessories

Please refer to page 57 for more information on USG compression posts.
## USG DRYWALL SUSPENSION SYSTEM

### Test Record UL 526D
**Class 60 Uplift**

### System Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Runners</strong></td>
<td>DGLW26E</td>
</tr>
<tr>
<td><strong>Cross Tees</strong></td>
<td>DGLW424E</td>
</tr>
<tr>
<td><strong>Perimeter Molding</strong></td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
<tr>
<td></td>
<td>When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.</td>
</tr>
<tr>
<td><strong>Gypsum Panels</strong></td>
<td>• Two layers of 5/8 in. thick, 4 ft. wide gypsum panels are required. The inner layer shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</td>
</tr>
<tr>
<td></td>
<td>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws spaced 12 in. o.c., beginning from the center screw with screws located 1-1/2 in. from the gypsum panel side joint.</td>
</tr>
<tr>
<td></td>
<td>• At butt ends, a total of seven screws shall be used with one screw located at the midspan of the cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from side joints. All screws shall be located 1/2 in. from the edge.</td>
</tr>
<tr>
<td></td>
<td>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</td>
</tr>
<tr>
<td></td>
<td>• The outer layer shall be rotated 90 degrees from the inner layer and attached to cross tees and main runners through the inner layer using 1-5/8 in. long screws spaced 8 in. o.c. along the butt ends and 12 in. o.c. in the field. (Same spacing as the inner layer.)</td>
</tr>
<tr>
<td></td>
<td>• Butt joints shall be centered along main runners and staggered a minimum of 4 ft.</td>
</tr>
<tr>
<td></td>
<td>• Gypsum panels shall be attached to the lower leg of the wall channel with fasteners spaced 12 in. o.c. for both layers.</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Please refer to page 57 for more information on USG compression posts.</td>
</tr>
</tbody>
</table>

---

51  SYSTEMS GUIDE  USG Exterior Ceiling Systems  USG Drywall Suspension System
USG DRYWALL SUSPENSION SYSTEM

Test Record UL 526E
Class 90 Uplift

System Components

<table>
<thead>
<tr>
<th>Main Runners</th>
<th>DGLW26E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Tees</td>
<td>DGLW424E</td>
</tr>
<tr>
<td>Perimeter Molding</td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
<tr>
<td></td>
<td>When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.</td>
</tr>
</tbody>
</table>

Gypsum Panels

- Two layers of 5/8 in. thick, 4 ft. wide gypsum panels are required. The inner layer shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.

- Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws spaced 12 in. o.c., beginning from the center screw with screws located 1-1/2 in. from the gypsum panel side joint.

- At butt ends, a total of seven screws shall be used with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from side joints. All screws shall be located 1/2 in. from the edge.

- End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.

- The outer layer shall be rotated 90 degrees from the inner layer and attached to cross tees and main runners through the inner layer using 1-5/8 in. long screws spaced 8 in. o.c. along the butt ends and 12 in. o.c. in the field. (Same spacing as the inner layer.)

- Butt joints shall be centered along main runners and staggered a minimum of 4 ft.

- Gypsum panels shall be attached to the lower leg of the wall channel with fasteners spaced 12 in. o.c. for both layers.

Accessories

Please refer to page 57 for more information on USG compression posts.
# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526F

Class 90 Uplift

## System Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Runners</strong></td>
<td>DGLW26E</td>
</tr>
<tr>
<td><strong>Cross Tees</strong></td>
<td>DGLW424E</td>
</tr>
<tr>
<td><strong>Perimeter Molding</strong></td>
<td>DGWM24E angle mold or DGCM27E channel mold</td>
</tr>
<tr>
<td></td>
<td>When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.</td>
</tr>
<tr>
<td><strong>Plywood</strong></td>
<td>4 ft. wide by 8 ft. long by nominal 3/8 in. thick (11/32 in.), B-C Group 1 exterior grade plywood sheets are required.</td>
</tr>
<tr>
<td></td>
<td>The plywood shall be installed with the long dimension perpendicular to the main runner and centered along cross tees with end joints centered along main runners.</td>
</tr>
<tr>
<td></td>
<td>Plywood shall be fastened to cross tees and main runners with 1-1/4 in. long steel screws spaced 8 in. o.c.</td>
</tr>
<tr>
<td></td>
<td>End joints of adjacent plywood sheets shall be staggered not less than 2 ft. o.c.</td>
</tr>
<tr>
<td></td>
<td>Plywood sheets shall be screw attached to the lower leg of the wall channel with screws spaced 12 in. o.c.</td>
</tr>
<tr>
<td><strong>Gypsum Panels</strong></td>
<td>5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension parallel with main runners, with end joints centered along cross tees, and with side joints centered along main runners.</td>
</tr>
<tr>
<td></td>
<td>Gypsum panels shall be fastened to each cross tee and main runner through plywood with 1-5/8 in. long #8 bugle-head steel screws spaced 8 in. o.c.</td>
</tr>
<tr>
<td></td>
<td>One screw shall be located at the midspan of the cross tee, with screws spaced 8 in. o.c. from each side of the cross tee midspan with screws located 1-1/2 in. from each gypsum panel side joint.</td>
</tr>
<tr>
<td></td>
<td>At butt ends, adjacent panel joints shall be staggered 48 in.</td>
</tr>
<tr>
<td></td>
<td>Gypsum panels shall be fastened to cross tees with 14 wallboard screws, with seven at the end of each wallboard.</td>
</tr>
<tr>
<td></td>
<td>Gypsum panels shall be screw attached to the lower leg of the wall channel with wallboard screws spaced 12 in. o.c.</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Please refer to page 57 for more information on USG compression posts.</td>
</tr>
</tbody>
</table>
## USG DRYWALL SUSPENSION SYSTEM

### NOA No. 15-0618.06
75 psf Uplift, for High Velocity Hurricane Zones

### System Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Runners</td>
<td>DGLW26E</td>
</tr>
<tr>
<td>Main Runner Splice</td>
<td>DGSC-180 shall be attached to the main runner on each side with two #8, S12 screws. Hanger wire and a compression post shall be located within 6 in. of the splice.</td>
</tr>
<tr>
<td>Cross Tee</td>
<td>DGLW224E</td>
</tr>
<tr>
<td>Perimeter Channel</td>
<td>DGCM2 shall be fastened to the structure with #8 screws (or equivalent) at 8 in. o.c.</td>
</tr>
<tr>
<td>Molding</td>
<td>The size and gauge must be determined by a qualified structural engineer; the engineer’s determination will be based on the project’s conditions, such as plenum height and supporting structure type.</td>
</tr>
<tr>
<td>Compression Posts</td>
<td>The acrylic finish is a fiberglass-reinforced mesh embedded with an acrylic-modified cementitious basecoat.</td>
</tr>
<tr>
<td>Sheathing Panels</td>
<td>One layer of USG Securock® Brand Glass-Mat Sheathing panels, 1/2 in. or 5/8 in. thick, shall be installed with long dimensions parallel with main runners. The panels shall be attached to main runners and cross tees with 1-1/4 in. #8 truss-head screws spaced 8 in. o.c., with end joints staggered.</td>
</tr>
</tbody>
</table>

For complete installation details, see Miami-Dade County Notice of Acceptance no. 12-0924.3 at miamidade.gov/building.
OTHER CONSIDERATIONS

Finishes
Compression Posts
Seismic Perimeter Applications
Miami-Dade Applications
FINISHES

USG offers a wide selection of colors and finishes suitable for linear metal and metal panels in exterior applications. Available in painted, anodized, and wood-tone finishes.

**Painted:** Flat White, Silver Satin, Metallic Oyster

**Anodized:** Satin Chrome

**Wood Tone:** Beech, Dark Bamboo, Dark Cherry, Light Bamboo, Light Cherry, Maple, Red Oak, Walnut

Additional finish options may be available to meet specific project requirements or coating specifications. Contact your USG representative for more information.
USG Donn® Brand Compression Posts provide rigid support for ceiling suspension systems in exterior applications. The telescoping compression posts attach to the main tees and to the Paraline® symmetrical carriers,¹ preventing upward movement of the system.

**Features**

- Factory-engineered solution provides rigid support for ceiling suspension systems in exterior applications and offers quick installation, thus reducing field-labor time.
- Fast delivery included.
- Available in six different telescoping sizes that meet a variety of size requirements:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSA 18/30</td>
<td>18 in. to 30 in.</td>
</tr>
<tr>
<td>VSA 30/48</td>
<td>30 in. to 48 in.</td>
</tr>
<tr>
<td>VSA 48/84</td>
<td>48 in. to 84 in.</td>
</tr>
<tr>
<td>VSA 84/102</td>
<td>84 in. to 102 in.</td>
</tr>
<tr>
<td>VSA 102/120</td>
<td>102 in. to 120 in.</td>
</tr>
<tr>
<td>VSA 120/144</td>
<td>120 in. to 144 in.</td>
</tr>
</tbody>
</table>

- Injection-molded, high-impact clip snaps onto the bulb of the main tee for a secure, positive connection.
- Heavy-wall galvanized steel tubing, no-rust telescoping post locks into permanent support length.
- Injection-molded guide ring prevents rattling.
- Spring steel top clip provided for attachment to the vertical hanger wire adjacent to the post.
- Adjustable self-locking connection has been tested and certified to a minimum compressive load of 900 lb.
- Meets UL 797.
- When used with Paraline II systems, Paraline compression post adapters² connect the post to the Paraline symmetrical carrier for a secure, positive connection.

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¹,² When used with symmetrical carriers, Paraline II compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paraline II compression post adapter prior to installation. The Paraline II compression post adapter is not included with the compression post and must be purchased separately.
COMPRESSION POSTS

USG Compression Posts

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>End Plug</th>
<th>Top Clip</th>
<th>Hanger Wire Spring Clip</th>
<th>Spring Clip Attachment Holes (Top of Post)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1" alt="End Plug" /></td>
<td><img src="image2" alt="Top Clip" /></td>
<td><img src="image3" alt="Hanger Wire Spring Clip" /></td>
<td><img src="image4" alt="Spring Clip Attachment Holes" /></td>
</tr>
</tbody>
</table>

Note: The end plug, top clip, and hanger wire spring clip are included with each post and cannot be ordered separately.

Application

Step 1  Fit the top clip into the opening of the post.

Step 2  Snap the compression post onto the main tee bulb next to the vertical hanger wire.

Step 3  Bring the compression post to a vertical position with the hanger and extend the post for a snug fit against the structure.

Step 4  Loop the spring clip around the vertical hanger wire and connect the clip to the holes on top of the post.

Step 5  Mechanically fasten the end plug of the post to the main tee bulb.

Step 6  Fasten the compression post to the structure with the appropriate mechanical fastener.

¹When used with symmetrical carriers, Paraline compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paraline compression post adapter prior to installation. The Paraline compression post adapter is not included with the compression post and must be purchased separately.
**COMPRESSON POSTS**

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**Steel Framing Compression Posts**

The USG Donn® Brand compression post is an engineered solution designed to work with USG Exterior Ceiling Systems. The USG Donn Brand compression post is an option for almost every project; however, alternative steel members with sufficient strength are allowed by code and may be suitable for use as a compression post. Below are some common, light-gauge steel members provided by others that are typically used as compression posts.

<table>
<thead>
<tr>
<th>Uplift Class / Maximum Pressure</th>
<th>Maximum Length (in.)</th>
<th>Compression Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 15 &amp; Class 30 / 30 psf</td>
<td>96</td>
<td>Min. 1-5/8 in. — 20-ga. stud</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min. 1-5/8 in. — 20-ga. track</td>
</tr>
<tr>
<td>Class 60 / 60 psf</td>
<td>48</td>
<td>Min. 1-5/8 in. — 20-ga. stud</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min. 1-5/8 in. — 20-ga. track</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>Min. 2-1/2 in. — 20-ga. stud back to back</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min. 2-1/2 in. — 20-ga. track back to back</td>
</tr>
<tr>
<td>Class 90 / 150 psf</td>
<td>48</td>
<td>Min. 1-5/8 in. — 20-ga. stud</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min. 1-5/8 in. — 20-ga. track</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>Min. 2-1/2 in. — 20-ga. stud back to back</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min. 2-1/2 in. — 20-ga. track back to back</td>
</tr>
</tbody>
</table>

**Notes**

1. The information provided is for quick reference only. Other restrictions and exemptions may apply.
2. All struts and allowable lengths should be verified by a design professional before use.
3. A structural engineer should be consulted for lengths greater than 8 ft.
4. Larger posts can be used; however, the compression post properties listed above shall be considered minimums.
5. The compression post must be attached to the grid member with at least four #8 screws.
6. The compression post attachment to the structure shall be determined by the engineer of record. Miami-Dade anchorage details can be found in the Miami-Dade Applications section on page 65.
### SEISMIC PERIMETER APPLICATIONS

**Paraline® II**

#### Perimeter Conditions¹

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floating</td>
<td>USG compression post or min. 1 1/8&quot;, 20-ga. steel stud (USG compression post shown.) 12-ga. hanger wire Paraline II pan symmetrical carrier M20A molding hanger reinforcement clip 8” max. blocking for perimeter ends of tees to prevent uplift.</td>
</tr>
</tbody>
</table>

| Fixed     | USG compression post or min. 1 1/8", 20-ga. steel stud (USG compression post shown.) 12-ga. hanger wire Paraline II pan symmetrical carrier 8” max. U-2-3/32 perimeter molding and hold-down clip hanger reinforcement clip |

**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

¹ Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit usg.com for more information.
SEISMIC PERIMETER APPLICATIONS

Celebration™ Snap-In

Perimeter Conditions

Floating

Fixed

Notes: A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

1 Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit usg.com for more information.
**SEISMIC PERIMETER APPLICATIONS**

**Celebration™ Torsion Spring**

### Floating

- USG compression post or min. 1 1/4", 20-ga. steel stud (USG compression post shown.)
- 12-ga. hanger wire
- ZXL A main or cross tee
- ACM7 clip
- M7Z wall molding
- TIS hold-down clip
- One fastener through center of slot and one through the wing into the wall
- 8" max.

### Fixed

- USG compression post or min. 1 1/4", 20-ga. steel stud (USG compression post shown.)
- 12-ga. hanger wire
- ZXL A main or cross tee
- ACM7 clip
- M7Z wall molding
- TIS hold-down clip
- One fastener through either top hole and one through the wing into the wall
- 8" max.

**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

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1 Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit usg.com for more information.
SEISMIC PERIMETER APPLICATIONS

ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel

Floating Perimeter Treatment Options

1 Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit usg.com or for more information.

ACM7 Seismic Clip

USG compression post or min. 1 1/8", 20-ga. steel stud (USG compression post shown.)

12-ga. hanger wire

ZXL A main or cross tee

Attach ACM7 clip to wall through the top holes of the clip wings.

Screw attach through center of slot.

USG Sheetrock® Lay-In Ceiling Panel

Hold-down nail to prevent panel uplift

(See accompanying section detail.)

ACM7 clip

M7A molding

2 in. Wall Molding

USG compression post or min. 1 1/8", 20-ga. steel stud (USG compression post shown.)

12-ga. hanger wire

ZXL A main or cross tee

8" max. blocking for perimeter ends of tees to prevent uplift

stabilizer bar

USG Sheetrock® Lay-In Ceiling Panel

hold-down nail to prevent panel uplift

(See accompanying section detail.)

M20A molding

8" max.

Notes: A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

Hold-Down Nail

USG Sheetrock® Lay-In Ceiling Panel

Min. 6d common hold-down nails or similar device shall be inserted in alternating directions.

Note: Min. 6d common hold-down nails or similar devices shall be inserted in alternating directions.
SEISMIC PERIMETER APPLICATIONS

ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel

Fixed Perimeter Treatment Options

ACM7 Seismic Clip

Notes:
A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

2 in. Wall Molding

Notes:

Hold-Down Nail

Note:

1 Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit usg.com for more information.
### Miami-Dade Applications

**Performance Selector**

#### Technical Data

<table>
<thead>
<tr>
<th>USG System</th>
<th>Main Tee/ Carrier System</th>
<th>Spacing</th>
<th>Panels</th>
<th>Test Standard</th>
<th>Test Record</th>
<th>Maximum Load Rating (w)</th>
<th>Equivalent Wind Speed (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paraline Plus Linear Metal Ceiling System</strong></td>
<td>Paralock Carrier</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Paraline Plus Linear Metal Panels</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>NOA No. 15-1223.05</td>
<td>+75 / -35 psf</td>
</tr>
<tr>
<td><strong>Celebration Snap-In Metal Panel Ceiling System</strong></td>
<td>Fineline DXFEV</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Celebration Metal Panels</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>NOA No. 15-1223.04</td>
<td>+80 / -70 psf</td>
</tr>
<tr>
<td><strong>Celebration Torsion Spring Metal Panel Ceiling System</strong></td>
<td>ZXLA26</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Celebration Torsion Spring Metal Panels</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>NOA No. 17-0925-01</td>
<td>+73.3 / -13 psf</td>
</tr>
<tr>
<td><strong>USG Drywall Suspension System</strong></td>
<td>DGLW26</td>
<td>24 in.</td>
<td>24 in.</td>
<td>Single layer 1/2 in. or 5/8 in. glass-mat sheathing with direct applied EFIS</td>
<td>Miami-Dade TAS 202 &amp; 203</td>
<td>NOA No. 17-0426.10</td>
<td>75 / -75 psf</td>
</tr>
</tbody>
</table>
PARALINE® PLUS
CELEBRATION™ SNAP-IN
CELEBRATION™ TORSION SPRING

**Anchorage Details**

**Detail 1**
- 12-ga. hanger wire
- expansion anchor
- ceiling clip
- 1/2" max.
- steel deck
- concrete

**Detail 2**
- 12-ga. hanger wire
- steel deck
- concrete
- eyebolt assembly

**Detail 3**
- expansion anchors or PAF
- steel deck
- steel angle
- concrete
- 12-ga. hanger wire

**Detail 4**
- concrete
- steel deck
- PAF ceiling wire
- factory assembly
MIAMI-DADE APPLICATIONS

PARALINE® PLUS
CELEBRATION™ SNAP-IN
CELEBRATION™ TORSION SPRING

Anchorage Details

Detail 5

Detail 6

- powder-actuated fasteners
- structural steel
- steel angle
- steel strut
- 3/4" max.

Detail 7

Detail 8

- expansion anchors or PAF
- concrete
- steel deck
- steel angle
- 12-ga. hanger wire
- 2" min.

- wood joist
- fasteners
MIAMI-DADE APPLICATIONS

PARALINE® PLUS

Wall Mold to Structure

Wood Substrate

- Structural wall panel or sheathing
- U-2-3/32 molding
- Paraline Plus cross tee or main tee
- MAC2 clip
- Wood stud
- U-2-3/32 hold-down clip

Steel Substrate

- Structural wall panel or sheathing
- U-2-3/32 molding
- Paraline Plus cross tee or main tee
- MAC2 clip
- Steel stud
- U-2-3/32 hold-down clip

Concrete Substrate

- Concrete or CMU block
- U-2-3/32 molding
- Paraline Plus cross tee or main tee
- MAC2 clip
- Concrete or CMU block
- U-2-3/32 hold-down clip
CELEBRATION™ SNAP-IN

**Wood Substrate**
- DXFEVH Fineline
- U-2-3/32 molding
- Celebration Snap-In panel
- U-2-3/32 hold-down clip, min. two per perimeter panel
- Structural wall panel or sheathing
- Wood stud

**Steel Substrate**
- DXFEVH Fineline
- U-2-3/32 molding
- Celebration Snap-In panel
- U-2-3/32 hold-down clip, min. two per perimeter panel
- Structural wall panel or sheathing
- Steel stud

**Concrete Substrate**
- DXFEVH Fineline
- U-2-3/32 molding
- Celebration Snap-In panel
- U-2-3/32 hold-down clip, min. two per perimeter panel
- Concrete or CMU block
CELEBRATION™ TORSION SPRING

Wall Mold to Structure

Wood Substrate

Wood stud

structural wall panel or sheathing

Two layers of M7Z or CTS15AL perimeter molding are required. CTS15AL perimeter molding shown.

Steel Substrate

Steel stud

structural wall panel or sheathing

Two layers of M7Z or CTS15AL perimeter molding are required. CTS15AL perimeter molding shown.

Concrete Substrate

Concrete or CMU block

Two layers of M7Z or CTS15AL perimeter molding are required. CTS15AL perimeter molding shown.
PRODUCT INFORMATION

INSTALLATION

CODE COMPLIANCE
The information presented is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with a local official prior to designing and installing a ceiling system. Other restrictions and exemptions may apply. This is only intended as a quick reference.

PROGRESSIVE ENGINEERING INC.
EVALUATION REPORT COMPLIANCE

PURPOSE
This technical guide is intended as a resource for design professionals, to promote more uniform criteria for plan review and jobsite inspection of projects. This technical guide indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered and adopted. The renderings and details provided are for illustrative purposes only and are not a substitute for certified architectural and engineering drawings.

ICC EVALUATION SERVICE, INC.,
REPORT COMPLIANCE
Suspension systems manufactured by USG Interiors, LLC, have been reviewed and are approved by listing in ICC-ES Evaluation Report 1222. Evaluation Reports are subject to reexamination, revision and possible cancellation. Please refer to usgdesignstudio.com or usg.com for current reports.

L.A. RESEARCH REPORT COMPLIANCE
Donn brand suspension systems manufactured by USG Interiors, LLC, have been reviewed and are approved by listing in the following L.A. Research Report number: 25764.

NOTICE
We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and product literature before specification and installation.