

0

USG Exterior Ceiling Systems

SYSTEMS GUIDE

USG CGC IT'S YOUR WORLD. BUILD IT.

The Calyx, Royal Botanical Gardens, Sydney, Australia Celebration™ Snap-In Metal Panels, Custom Size and Finish Architect: PTW Architects, Photo: ©Sam Grant

USG EXTERIOR CEILING SYSTEMS SYSTEMS GUIDE

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	4	SYSTEMS OVERVIEW
	-	Exterior Ceiling Applications
		Performance Selector
Exterior Ceiling	9	LINEAR METAL CEILING SYSTEMS
Applications		Paraline [®] II
		Paraline [®] Plus
		Planx™ Universal
	34	METAL PANEL CEILING SYSTEMS
		Celebration™ Snap-In
		Celebration™ Torsion Spring
	48	LAY-IN PANELS
		USG Sheetrock® Brand Gypsum Lay-In Panels (GLIP)
	54	CONTINOUS CEILINGS
		USG Sheetrock $^{\circ}$ Brand Drywall with USG Drywall Suspension System (DWSS)
Other Considerations	56	Finishes
		Compression Posts
		Seismic Perimeter Applications
For More Information		Technical Service: 800.USG.4YOU
		Website: usg.com

USG EXTERIOR CEILING SYSTEMS SYSTEMS GUIDE

Ceiling Product Data Sheets

LINEAR METAL CEILING SYSTEMS

<u>Paraline® II</u>

<u>Paraline[®] Plus</u> <u>Planx[™] Universal</u>

METAL PANEL CEILING SYSTEMS

Celebration[™] Snap-In

Celebration[™] Torsion Spring

LAY-IN PANELS

USG Sheetrock® Brand Gypsum Lay-In Panels (GLIP)

CONTINOUS CEILINGS

USG Sheetrock® Brand Drywall with USG Drywall Suspension System (DWSS)

SYSTEMS OVERVIEW

Exterior Ceiling Applications

INTRODUCTION

USG provides seven 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
- Planx[™] Universal Linear Metal Panel System
- Celebration[™] Snap-In Metal Panel Ceiling System¹
- Celebration™ Torsion Spring Metal Panel Ceiling System
- ZXLA™ with USG Sheetrock[®] Brand 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.

This guide covers flat ceilings attached to perimeter walls on all sides. installed per ASTM C636. For other installations including sloped or curved ceilings consult USG architectural Representative.

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.

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.



¹ USG Celebration[™] Snap-In system appropriate for exterior ceiling applications.

SYSTEMS OVERVIEW

Exterior Ceiling Applications

WIND DESIGN NOTES

Miles Per Hour (mph) versus Pounds Per Square Foot (psf)

ASCE 7-22, 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:

 $q_z = 0.00256 K_z K_{zt} K_e V^2$

- q_z = velocity pressure evaluated at height z above the ground (psf)
- K_z = velocity pressure exposure coefficient
- K_{zt} = topographic factor
- K_{a} = ground elevation factor
- V = basic wind speed (mph)

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 (Kz, Kzt, Ke) are project specific, they were assumed 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 7-22 are recognized in the 2024 International Residential Code (IRC) and the 2024 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. The positive values represent uplift capacity and the negative values represent downward capacity. 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



PRODUCT PERFORMANCE RANGES							
Pressure	Wind						
(kPa	speed						
Up	Down	mph (Kph)					
46 to 102	-106	135 to 200					
(2.20 to 4.88)	(-5.08)	(217 to 322)					

STANDARD PAINTED METALS



• One part system - pans with integral closed reveal.

- Pans can be removed for plenum access.
- 3-1/4" wide pans, 3/4" integral closed reveal, 12' long pans.



- 2 part system pans with Snap-Loc inserts to close reveal between pans.
- Snap-Loc inserts and pans can be removed for plenum access.
- 3", 7" & 11" wide, 1" reveal, 12' long pans.
- Approved for installation in seismic category C, D, E, & F.
- Notice of Acceptance (NOA) issued by Miami Dade County.



PARALINE® PLUS (See page 11)

PARALINE® II

(See page 11)

Linear Metal Ceiling Systems

PLANX[™] UNIVERSAL -

OPTIONAL REVEAL

(See page 11)



- 2-part system Aluminum panels with Snap-Loc inserts to close reveal between panels.
- Snap-Loc inserts and panels can be removed for plenum access.
- 4", 6", 8", 10" & 12" modular width, 15/16" reveal, 12' long panels.

PRODUCT PERFORMANCE RANGES

Pressu	Wind	
(kl	speed	
Up	mph (Kph)	
103	-77	173 to 200
(4.91)	(-3.68)	(279 to 322)

STANDARD



Mahogany 4015

Driftwood 4199

Linear Metal Ceiling Systems



PRODUCT PERFORMANCE RANGES

Pressu (kF	Wind speed	
Up	mph (Kph)	
	-73 (-3.48)	168 (271)

REFER TO PAGE 7 FOR ALL PLANX™ UNIVERSAL FINISHES

- One part system Aluminum panels with integral closed reveal.
- Panels can be removed for plenum access.
- 4", 6", 8" & 10" modular width, 15/16" integral closed reveal, 12' long panels.



PRODUCT PERFORMANCE RANGES
Pressure psf Wind

(kF	speed	
Up	Down	mph (Kph)
	-51	142
	(-2.46)	(228)

REFER TO PAGE 7 FOR ALL PLANX™ UNIVERSAL FINISHES

PLANX[™] UNIVERSAL -INTEGRAL REVEAL (See page 11)

PLANX[™] UNIVERSAL -NO REVEAL (See page 11)



- Panels can be removed for plenum access.
- 4", 6", 8" & 10" wide, with no reveal, 12' long panels.

Metal Panel Ceiling Systems



- Aluminum panels provide a monolithic appearance.
- Spring clip design provides superior panel alignment.
- Full 90-degree swing-down motion.
- Downward panel access is excellent for shallow plenum areas.
- Available panel sizes: 2' x 2', 2' x 4', 2' x 6', 2' x 8' & 4' x4'.
- Approved for installation in seismic category C, D, E, & F.
- NOA issued by Miami Dade County.

Red Oak 3814

4182

Light

Bamboo

3809

Satin Chrome PM614

 $(2' \times 2' \text{ only})$

Walnut 3815

Flat White Silver Satin Blanco Mat

002

Dark

Bamboo

3808

Maple 3813

050

Beech 3810

Light

Cherry 3812

WOOD TONES

Lay-In Panels



- Washable and scrubbable finish-impact and scratch resistant.
- Recommended for garage applications.
- Available panel sizes: 2' x 2' & 2' x 4'.
- Approved for installation in seismic category C, D, E, & F.

Continuous Ceilings



PRODUCT PERFORMANCE RANGES

Pressu	Wind	
(kl	speed	
Up	Down	mph (Kph)
21 to 85	-68	90 to 182
(1.01 to 4.07)	(-3.25)	(145 to 293)

STANDARD PAINTED METALS



PRODUCT PERFORMANCE RANGESPressure psf
(kPa)Wind
speed
mph (Kph)UpDownmph (Kph)15 to 90
(0.72 to 4.31)77 to 188
(124 to 302)

FIELD PAINTED



- Must be finished for exterior application. See documment WB2451 for additional information.
- Apply a synthetic-type direct-applied finish system in accordance with finish manufacturer's recommendations.
- Approved for installation in seismic category C, D, E, & F
- NOA issued by Miami Dade County

USG SHEETROCK® BRAND LAY-IN PANELS (GLIP) (WITH HEAVY DUTY ZXLA[™]) (See page 48)

DRYWALL SUSPENSION SYSTEM (See page 54)

LINEAR METAL CEILING SYSTEMS PARALINE® II, PARALINE® PLUS AND PLANX™ UNIVERSAL

	Technical Data										
	Main Tee	All Acceptable Panel Sizes	Main Tee Spacing	Cross Tee Spacing	Compression Post Spacing	Test Standard	Maximum Load Rating (psf)		Equivalent Wind Speed		
		(Inch)	(Inch)	(Inch)	(Inch)		Uplift psf (kPa)	Downward psf (kPa)	mph (kph)		
PARALINE [®] II	Symmetrical	3-1/4	24	N/A	24	UL 1897 ¹	102 (4.88)	-106 (-5.08)	200 (322)		
	Carrier	3-1/4	24	N/A	24	UL 580 ²	90 (4.31)		188 (302)		
		3-1/4	48	N/A	24	UL 1897 ¹	46 (2.20)		135 (217)		
PARALINE® PLUS	Paralock Plus	3, 7, 11	48	24	24	UL 580 ²	30 (1.44)		98 (158)		
		3, 7, 11	48	24	24	UL 1897 ¹	55 (2.63)		147 (237)		
		3	24	24	24	UL 1897 ¹	127 (6.08)	-38 (-1.82)	222 (357)		
		7, 11	24	24	24	UL 1897 ¹	127 (6.08)	-25 (-1.20)	222 (357)		
		3, 7, 11	24	24	24	UL 580 ²	90 (4.31)		188 (302)		
		3, 7, 11	24	24	30	UL 580 ²	60 (2.87)		153 (246)		
		3 and 7	24	24	24	Miami Dade NOA TAS 202 & 203 ³	75 (3.59)	-35 (-1.68)	171 (275)		
PLANX [™] UNIVERSAL OPTIONAL REVEAL (OR) Ass	Main Tee	4", 6", 8",	48	24	24	UL 1897 ¹		-77 (-3.68)	173 (279)		
	Assembly	10" and 12"	24	24	24	UL 1897 ¹	103 (4.91)		200 (322)		
INTEGRAL REVEAL (IR)		4", 6", 8" and 10"	48	24	24	UL 1897 ¹		-73 (-3.48)	168 (271)		
NO REVEAL (NR)		4", 6", 8" and 10"	24	24	24	UL 1897 ¹		-51 (-2.46)	142 (228)		

1. Factor of safety of 1.17 is included

2. Factor of safety of 1.5 for 30 psf; 1.3 for 60 psf; 1.17 for 90 psf is included per test standard

3. Factor of safety of 1.5 is included per test standard

LINEAR METAL CEILING SYSTEMS PARALINE® II, PARALINE® PLUS AND PLANX™ UNIVERSAL

ne® ceiling systems and USG Planx™ Universal may be used for protected exterior s not directly exposed to the weather. The Paraline® II, Paraline® Plus and Planx™ ystems have been tested for wind, load resistance. The two units of measure						
USG Paraline® ceiling systems and USG Planx [™] Universal may be used for protected exterior applications not directly exposed to the weather. The Paraline® II, Paraline® Plus and Planx [™] Universal 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). ¹						
s: The Paraline® and Planx [™] Universal finish is not UV-resistant; therefore, these ems should not be installed where direct exposure to sun or weather will occur, cias or facades. These ceiling systems are not suitable for areas subject to high ions of acid rain. Indirect exposure to severe environmental conditions may shorten in of these products. The specific design of exterior ceiling installations requires and approval of the architect or engineer of record. For more information refer to <i>inear Metal Ceiling Systems</i> IC463 and Planx [™] Universal Install Guide IC349054.						
pressure is presented in accordance with applicable test standards.						
pression posts used for the tests were minimum 1-5/8", 20-gauge steel studs. m length of 24")						
ine® II tests, EMT conduit with USG top and bottom clips were used.						
ling structure from which the Paraline® and Planx™ Universal systems are ed, as well as hanger wire and compression post attachment connections must le of withstanding the design loads connections. For further information on the sion post, see page 59.						
aterials can be used for compression posts, provided the capacity and attachment ons are approved for use by a structural engineer of record.						
tect's details must cover the design and location of expansion joints and meet all e building code requirements.						
e [®] II and Paraline [®] Plus systems presented in this guide can accommodate 3-1/4" for Paraline [®] II and 3", 7" & 11" wide Paraline [®] Plus pan sizes.						
Universal No Reveal & Integral Reveal can accommodate 4", 6", 8" & 10" s. The Planx Universal Optional Reveal can accommodate 4", 6", 8", 10" & 12" s.						
n shall comply with local wind load requirements. The engineer of record shall determine the final dation for the design wind pressure requirements of each project.						

PARALINE® II

System Components



PARALINE[®] II

Application Details



Application Details

Pans Perpendicular to Wall



Pans Parallel to Wall



WALL INTERSECTION

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



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



UL 1897 106 psf (Downward)



Paraline® II Assembly



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

Hanger & Compression Post
 Paraline[®] Symmetrical Carrier

PARALINE® PLUS

System Components



PARALINE® PLUS

Application Details



Application Details

WALL INTERSECTION

Pans Perpendicular to Wall

Pans Parallel to Wall



21

PARALINE® PLUS



UL 1897 55 psf



Paraline® Plus Assembly

Main Tees: 48 in. o.c.

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

➢ Hanger & Compression Post
 Paralock[™] Plus Main Tee
 ZXLA[™]424 (48 in. Cross Tee)



UL 580 Class 60



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

🚫 Hanger & Compression Post

— Paralock™ Plus Main Tee

ZXLA™224 (24 in. Cross Tee)

Paraline® Plus Assembly



PARALINE® PLUS



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

ZXLA™224 (24 in. Cross Tee)

Paraline® Plus Assembly



PARALINE[®] PLUS

UL 1897 17 psf (Downward Load)



Paraline® Plus Assembly

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 ZXLA™224 (24 in. Cross Tee)



PLANX[™] UNIVERSAL

System Components



LINEAR METAL CEILING SYSTEMS PLANX™ UNIVERSAL

Application Details



LINEAR METAL CEILING SYSTEMS PLANX™ UNIVERSAL

Application Details

Optional Reveal (Shown)





OTHER DETAILS

WALL INTERSECTION

Optional Reveal







No Reveal



LINEAR METAL CEILING SYSTEMS PLANX™ UNIVERSAL - OPTIONAL REVEAL

UL 1897 -77 psf (Downward Load)



Planx[™] Universal - Optional Reveal Assembly

Main Tees: 48 in. o.c.

Cross Tees: 24 in o.c.

max. screws)

Compression Posts: 24 in. o.c.

 Hanger & Compression Post
 Exterior Main Tee Universal Carrier Assembly. (Field modified 9 in. o/c

ZXLA™424 (48 in. Cross Tee)



LINEAR METAL CEILING SYSTEMS PLANX™ UNIVERSAL - OPTIONAL REVEAL

UL 1897 103 psf

Y R R ጽ X R Ø ∞ X x 24" o.c. \otimes х ⊗ α ∞ 12" max. Ā ← 24″ o.c. → 12″ max.

Planx™ Universal - Optional Reveal Assembly



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



 Exterior Main Tee Universal Carrier Assembly.
 (Field modified 9 in. o/c max. screws)



LINEAR METAL CEILING SYSTEMS PLANX™ UNIVERSAL - INTEGRAL REVEAL

UL 1897 -73 psf (Downward Load)



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

- 🚫 Hanger & Compression Post
- Exterior Main Tee Universal Carrier Assembly.
 (Field modified 9 in. o/c max. screws)
- ZXLA™424 (48 in. Cross Tee)





LINEAR METAL CEILING SYSTEMS PLANX[™] UNIVERSAL - NO REVEAL

UL 1897 -51 psf (Downward Load)



Planx[™] Universal - No Reveal Assembly



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

- 🚫 Hanger & Compression Post
- Exterior Main Tee Universal Carrier Assembly.
 (Field modified 9 in. o/c max. screws)
- ZXLA™224 (24 in. Cross Tee)

PAGE 24 INTENTIONALLY LEFT BLANK.

METAL PANEL CEILING SYSTEMS CELEBRATION[™] SNAP-IN CELEBRATION[™] TORSION SPRING

	Technical Dat	a							
	Main Tee	All Acceptable Panel Sizes (Inch)	Main Tee Spacing	Cross Tee Spacing	Compression Post Spacing	Test Standard	Maximum Load Rating (psf)		Equivalent Wind Speed
			(Inch)	(Inch)	(Inch)		Uplift psf (kPa)	Downward psf (kPa)	mph (kph)
CELEBRATION™ SNAP-IN	DXFEVH2924	12 x 24, 12 x 48 24 x 24, 24 x 48	48	24	24	UL 1897 ¹	30 (1.44)	-25 (-1.20)	98 (158) ⁴
		24 x 24, 24 x 48 24 x 72, 24 x 96	24	24	24	UL 580 ²	90 (4.31)		188 (302)
		24 x 24, 24 x 48 24 x 72, 24 x 96	24	24	24	UL 1897 ¹	102 (4.88)		200 (321)
		24 x 24, 24 x 48	24	24	24	Miami Dade NOA TAS 202 & 203 ³	80 (3.83)	-70 (-3.35)	165 (266) ⁴
	DXFEVH2930	30 x 30, 30 x 60	30	30	30	UL 1897 ¹	72 (3.45)	-51 (-2.44)	141 (227) 4
CELEBRATION™		30 x 30, 30 x 60	30	30	30	UL 580 ²	60 (2.87)		153 (246)
FORSION SPRING	ZXLA™26	24 x 24, 24 x 48	24	24	24	UL 580 ²	90 (4.31)		188 (302)
		24 x 24, 24 x 48	24	24	24	UL 1897 ¹	133 (6.37)		228 (367)
		24 x 24	24	24	24	Miami Dade NOA TAS 202 & 203 ³	73.3 (3.51)	-13.3 (-0.64)	170 (274)
		24 x 72	72	24	48/24	UL 580 ²	30 (1.44)		98 (158)
		48 x 48	48	24	48	UL 580 ²	15 (0.72)		77 (124)
		24 x 48, 24 x 96	48	24	24	UL 580 ²	30 (1.44)		98 (158)

1. Factor of safety of 1.17 is included.

2. Factor of safety of 1.5 for 30 psf; 1.3 for 60 psf; 1.17 for 90 psf is included per test standard.

3. Factor of safety of 1.5 is included per test standard.

4. Corresponds to the lowest value. Consult to technical representatives for project specific needs.

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 protected 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 <i>Celebration™ and Panz™ Metal Ceiling Systems</i> , IC415.
TECHNICAL DATA	• The wind pressure is presented in accordance with applicable test standards.
	 The compression posts used for the tests were minimum 1-5/8", 20-gauge steel studs. (maximum length of 24")
GUIDELINES	 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 design loads. For further information on the compression posts see page 50.
	Heavy duty main tees shall be used.
	 Other materials can be used for compression posts provided the capacity and attachment connections are approved for use by a structural engineer of record.
	 The architect's details must cover the design and location of expansion joints and meet all applicable building code requirements.
	Arrowhead Reveal Spacers (CA1) shall be installed.
PANEL SIZES	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.
	The Celebration™ Torsion Spring systems presented in this guide can accommodate the following panel sizes: 2ft.x2ft., 2ft.x4ft., 2ft.x6ft., 2ft.x8ft., and 4ft.x4ft.
	 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

CELEBRATION[™] SNAP-IN

System Components



CELEBRATION[™] SNAP-IN

UL 1897 25 psf (Downward Load)



PERIMETER CONDITIONS



Note: A fastener attachment through the top leg of the molding into the tee bulb is required.

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.

CELEBRATION[™] SNAP-IN

UL 580 UL 1897 Class 90 102 psf

176 mph

Miami-Dade NOA No. 24-1011.08



🚫 Hanger & Compression Post

Compression Posts: 24 in. o.c.

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

DXFEVH2924 (Heavy Duty Main Tee)

DXFEV229 (24 in. Cross Tee)

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

PERIMETER CONDITIONS



CELEBRATION[™] SNAP-IN

UL 1897 51 psf

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

- 🚫 Hanger & Compression Post
- DXFEVH2930 (Heavy Duty Main Tee)
- DXFEV30 (30 in. Cross Tee)1
 ¹ Special Order

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



PERIMETER CONDITIONS



CELEBRATION[™] SNAP-IN



UL 580 Class 60

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

 \bigotimes Hanger & Compression Post

 DXFEVH2930 (Heavy Duty Main Tee)

DXFEV30 (30 in. Cross Tee)1
 ¹ Special Order

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



PERIMETER CONDITIONS



METAL PANEL CEILING SYSTEMS CELEBRATION™ TORSION SPRING

System Components



METAL PANEL CEILING SYSTEMS CELEBRATION™ TORSION SPRING

UL 580 Class 90

UL 1897 133 psf

Miami-Dade NOA No. 24-1011.10 170 mph



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
- ZXLA™26 (Heavy Duty Main Tee)
- TSCT22ZXA (24 in. Cross Tee)



15/8"

-11/8"-



METAL PANEL CEILING SYSTEMS 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.

- 🚫 Hanger & Compression Post
- ZXLA™26 (Heavy Duty Main Tee)
- TSCT44ZXA (48 in. Cross Tee)







METAL PANEL CEILING SYSTEMS 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
- ZXLA™26 (Heavy Duty Main Tee)
- TSCT66ZXA (72 in. Cross Tee)
- ZXLA224 (24 in. Cross Tee)







METAL PANEL CEILING SYSTEMS CELEBRATION[™] TORSION SPRING

UL 580 Class 15



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

Main Tees: 48 in. o.c.

- Hanger & Compression Post
- ZXLA™26 (Heavy Duty Main Tee)
- TSCT44ZXA (48 in. Cross Tee)





METAL PANEL CEILING SYSTEMS CELEBRATION[™] TORSION SPRING

UL 1897 13 psf (Downward Load)

R \otimes \otimes \bigotimes Ø \otimes \otimes \otimes \otimes \otimes х \bigotimes R R Я \bigotimes 24″ o.c. \mathfrak{R} Я R \otimes х 12" max. ¥ — 24″ o.c. — 12″ -> max.

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

- Hanger & Compression Post
- ZXLA™26 (Heavy Duty Main Tee)
- TSCT22ZXA (24 in. Cross Tee)





PAGE 38 INTENTIONALLY LEFT BLANK.

USG SHEETROCK[®] BRAND LAY-IN CEILING PANELS (GLIP) ZXLA™

Technical Data

ZXLA[™] AND GLIP

Main Tee	All Acceptable Panel Sizes	Main Tee Spacing (Inch) Cross Te Spacing (Inch)	Cross Tee Spacing	Compression Post Spacing (Inch)	Test Standard	Maximum Load Rating (psf)		Equivalent Wind Speed
	(Inch)		(Inch)			Uplift psf (kPa)	Downward psf (kPa)	mph (kph)
ZXLA26	24 x 48	48	24	24	UL 1897 ¹	25 (1.20)	-13 (-0.62)	100 (161)
	24 x 24	48	24	24	UL 1897 ¹	21 (1.01)		90 (145)
	24 x 48	24	48	24	UL 1897 ¹	85 (4.07)	-68 (-3.25)	182 (293)

1. Factor of safety of 1.17 is included



USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLATM

2 FT. x 2 FT. AND 2 FT. x 4 FT. SYSTEMS

WIND RESISTANCE	USG ZXLA [™] Suspension Systems with USG Sheetrock® Brand 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 in will occur, such as fascias or facades. Thi concentrations of acid rain. Indirect expo the lifespan of the product. The specific review and approval of the architect or e	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 according of the tests of (maximum length of 24 in.). Refer to Compression Post page 50 	ordance with applica	able test standards. ., 20-gauge steel stu	lds						
AVAILABLE PANELS	USG Sheetrock [®] Brand Lay-In	Edge	Panel Size	Item No.						
	Ceiling Panel, Vinyl	Square	2' x 2' x 1/2"	3260						
		Square	2 ~ 7 ~ 1/2							
GUIDELINES	 The building structure from which the USG Sheetrock[®] Brand 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 compr attachment method are approved for u 	 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 16d 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 16d common hold-down nails or similar devices shall be inserted in alternating directions. 									
	 A minimum of 16d 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. 									
	 The system shall comply with local wind load recommendation for the design wind pressure 	requirements. The engir requirements of each p	neer of record shall deter project.	mine the final						

USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLATM

2 FT. x 4 FT. SYSTEMS

UL 1897 26 psf





HOLD-DOWN NAIL

PERIMETER CONDITIONS

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

- Hold-Down Nail

Compression Posts: 24 in. o.c.

Hanger & Compression Post
 ZXLA26 (Heavy Duty Main Tee)
 ZXLA424 (48 in. Cross Tee)

USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLATM

2 FT. x 4 FT. SYSTEMS

UL 580 Class 30

HOLD-DOWN NAIL

PERIMETER CONDITIONS

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

- Hold-Down Nail

Compression Posts: 24 in. o.c.

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

USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLA[™] 2 FT. x 2 FT. SYSTEMS UL 1897

21 psf

HOLD-DOWN NAIL

PERIMETER CONDITIONS

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

Compression Posts: 24 in. o.c.

Hanger & Compression Post
 ZXLA26 (Heavy Duty Main Tee)
 ZXLA424 (48 in. Cross Tee)
 ZXLA224 (24 in. Cross Tee)
 Hold-Down Nail

USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLA[™] 2 FT. x 4 FT. SYSTEMS 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

HOLD-DOWN NAIL

PERIMETER CONDITIONS

USG DRYWALL SUSPENSION SYSTEM DGLW26E

NOA. No. 24-1011.07

Technical Data

Main Tee	All Acceptable Panel Sizes (Inch)	Main Tee Spacing (Inch)	Cross Tee Spacing (Inch)	Compression Post Spacing (Inch)	Test Standard	Maximum Load Rating (psf)		Equivalent Wind Speed
						Uplift psf (kPa)	Downward psf (kPa)	mph (kph)
DGLW26E	See note 4 below	24	16	24	Miami Dade NOA TAS 202 & 203 ³	75 (3.59)	-75 (-3.59)	171 (275)
	1 layer of 5/8"	48	24	24	UL 580 ²	15 (0.72)		77 (124)
	1 layer of 1/2"	48	16	30	UL 580 ²	15 (0.72)		77 (124)
	1 layer of 5/8"	48	24	30	UL 580 ²	15 (0.72)		77 (124)
	1 layer of 5/8"	24	24	30	UL 580 ²	30 (1.44)		108 (174)
	2 layers of 5/8"	24	24	42	UL 580 ²	60 (2.87)		153 (246)
	2 layers of 5/8"	24	24	30	UL 580 ²	90 (4.31)		188 (302)
	3/8" plywood and 5/8" drywall	24	16	24	UL 580 ²	90 (4.31)		188 (302)

Factor of safety of 1.17 is included
 Factor of safety of 1.5 for 30 psf; 1.3 for 60 psf; 1.17 for 90 psf is included per test standard

3. Factor of safety of 1.5 is included per test standard

4. Min 1/2" Securock® Brand Glass Mat sheathing or Min 1/2" Securock® Brand UltraLight Glass Mat Sheathing

DRYWALL AND DWSS

USG DRYWALL SUSPENSION SYSTEM

WIND RESISTANCE FOR EXTERIOR SOFFITS

The USG Drywall Suspension System may be used for protected exterior applications not directly exposed to weather. The system has been tested using applicable industry standards for wind 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 Securock® Brand UltraLight Glass-Mat Sheathing is suitable for exterior applications. Refer to Securock® Brand submittal and installation instructions for more information.

WIND RESISTANCE FOR EXTERIOR SOFFITS

OTHER CONSIDERATIONS

Finishes Compression Posts Seismic Perimeter Applications

FINISHES

Selector

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			
Anodized:	Satin Chrome			
Wood Tone:	Beech, Dark Bamboo, Dark Cherry, Light Bamboo, Light Cherry, Maple, Red Oak, Walnut			
Timbre™:	Maple, VG Fir, Red Birch, Golden Glow Oak, Walnut, Roasted Chestnut, Cherry, Mahogany, Driftwood			
Sarante®:	CP Maple, Red Birch, Sable Walnut, Natural Walnut			
Additional finish autions may be evailable to maat an aifin puriast us with market or acting				

Additional finish options may be available to meet specific project requirements or coating specifications. Contact your USG representative for more information.

PΑ	INT	'ED	ME.	ΤΑΙ	S
17					

Maple 4010	VG Fir 4011	Red Birch 4012	Golden Glow Oak 4198	Walnut 4014
Roasted Chestnut 4197	Cherry 4013	Mahogany 4015	Driftwood	
			4133	
	-		4155	
			4155	
			4133	

ANODIZED METALS

Paraline^{*} II not available in Satin Chrome (PM614) (2' x 2' panels)

TIMBRE™

(Planx™ Universal, Paraline® Plus and Celebration™ Snap-In)

FINISHES

Selector

SARANTE[®] Planx[™] Universal

WOOD TONES Paraline® II & 11" Paraline® Plus not available in Wood Tones

COMPRESSION POSTS

PARALINE® II COMPRESSION POSTS

EMT conduit is best used with USG Paraline[®] II. USG Paraline[®] II adapter is inserted into EMT conduit and into symmetrical carrier.

Paraline [®] II Compression Post	Paraline® II Compression Post	Paraline® II Compression Post
Adapter	Adapter in Conduit	Application
	- ³ /4" EMT conduit (by others) - compression post adapter (wedge into conduit end)	compression post 12-ga. hanger wire Paraline II pan hanger reinforcement clip

Note

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

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.

Uplift Class / Maximum Pressure	Maximum Length (in.)	Compression Post
Class 15 & Class 30 / 30 psf	96	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
Class 60 / 60 psf	48	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
	96	Min. 2-1/2 in. — 20-ga. stud back to back
		Min. 2-1/2 in. — 20-ga. stud back to back
Class 90 / 150 psf	48	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
	96	Min. 2-1/2 in. — 20-ga. stud back to back
		Min. 2-1/2 in. — 20-ga. stud back to back

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.

STEEL FRAMING COMPRESSION STRUTS

SEISMIC PERIMETER APPLICATIONS PARALINE® II

PERIMETER CONDITIONS¹

Compression post sized by others. Must meet loading and plenum height requirements 12-ga. hanger wire Paraline II pan hanger reinforcement clip

Fixed

Floating

Note: 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.

OPTIONAL REVEAL PERIMETER CONDITIONS¹ Perimeter Floating Side - Along Main Tee

NO REVEAL PERIMETER CONDITIONS¹ Perimeter Floating Side - Along Main Tee

OPTIONAL REVEAL PERIMETER CONDITIONS¹ Perimeter Fixed Side - Along Main Tee

Perimeter Fixed Side - Along Main Tee

NO REVEAL PERIMETER CONDITIONS¹

1. Install as per local code jurisdiction Consult the local code officials or engineer of record having jurisdiction over the project

SEISMIC PERIMETER APPLICATIONS CELEBRATION™ TORSION SPRING

PERIMETER CONDITIONS¹

Fixed

Floating

SEISMIC PERIMETER APPLICATIONS USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLA[™]

FLOATING PERIMITER TREATMENT OPTIONS

2 in. Wall Molding

ACM7 Seismic Clip

HOLD-DOWN NAIL

Note: Min. 16d common hold-down nails or similar devices shall be inserted in alternating directions.

SEISMIC PERIMETER APPLICATIONS USG SHEETROCK[®] BRAND LAY-IN PANEL (GLIP) WITH ZXLA[™]

FIXED PERIMITER TREATMENT OPTIONS

ACM7 Seismic Clip

2 in. Wall Molding

HOLD-DOWN NAIL

Note: Min. 16d common hold-down nails or similar devices shall be inserted in alternating directions.

SEISMIC PERIMETER APPLICATIONS CELEBRATION™ SNAP-IN

PERIMETER CONDITIONS¹

8" max. Compression post two screws into sized by others. wall molding 12-ga. hanger wire Must meet loading ACM7 clip and plenum height requirements **DXFEV** Fineline one screw main or cross teeinto ACM7 slot 0 $\langle \rangle$ fasten a 6 in. piece of wall molding centered on the back of the perimeter arrowhead spacer for cut perimeter panels M77 into first reveal row panel to prevent panel flutter molding Celebration Snap-in perimeter panel

Fixed

Floating

Note: 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.

WEBSITES

usg.com cgcinc.com usgdesignstudio.com cgcdesignstudio.com

PRODUCT INFORMATION

DXFEV Data Sheet AC3304. Celebration™ Torsion Spring Exterior Accessories IC642. Exterior Ceilings Installation Guide SC3212. See usg.com for the most up-to-date product information.

INSTALLATION

Must be installed in compliance with ASTM C636, ASTM E580, CISCA, and standard industry practices. Refer to Exterior Ceilings Installation Guide SC3212.

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.

PURPOSE

This technical quide 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. Trademarks. Terms and conditions and limits of liabilities apply. For all terms and conditions see usg.com/terms-and-conditions.

SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear appropriate personal protective equipment as needed. Read safety data sheets and related literature on products before specification and/or installation.

Notice The information in this document is subject to change without notice. CGC Inc. or USG Corp. assumes no responsibility for any errors that may inadvertently appear in this document.

Manufactured by USG Interiors, LLC 550 West Adams Street Chicago, IL 60661

SC2561/rev 11-24

© 2024 LISG Corporation or its affiliates. All rights reserved The trademarks BLANCO MAT, CELEBRATION, DONN, DFX, DX, FINELINE, PANZ, PARALINE, PARALOCK, PLANX, SARANTE, SECUROCK, SHEETROCK, TIMBRE, ZXLA. USG, CGC, IT'S YOUR WORLD BUILD IT. THE USG LOGO and related marks are trademarks of USG Interiors, LLC or a related company.

