

# Drywall Suspension Systems Technical Guide



**A COMPLETE LINE OF ESSENTIAL GRID PRODUCTS  
ENGINEERED FOR STRENGTH, EFFICIENCY AND SPEED.**

- 1-1/2" Drywall System
- QuickSpan™ Locking Drywall Grid System

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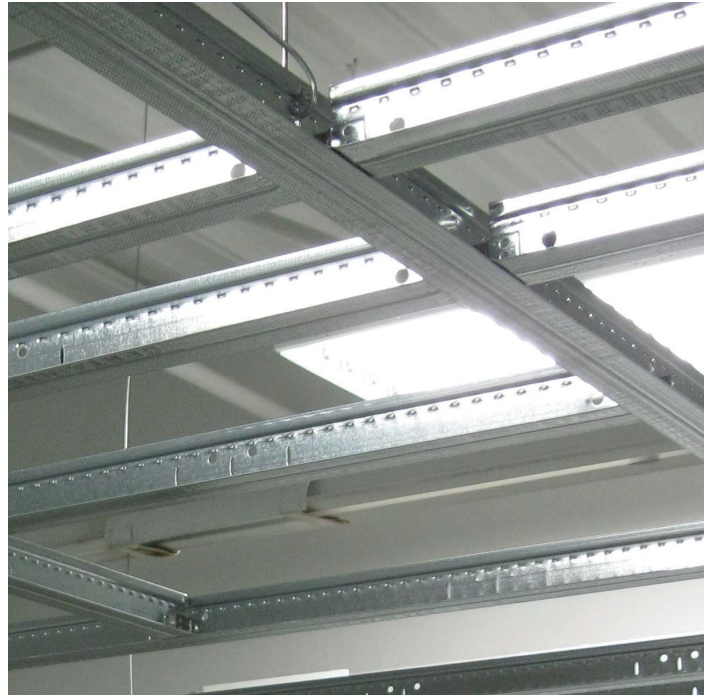


Visit [certainteed.com/architectural](https://certainteed.com/architectural) for more on our suspension system accessories, wall angles and shadow molding.

# DRYWALL SUSPENSION SYSTEMS

## PERFORMANCE

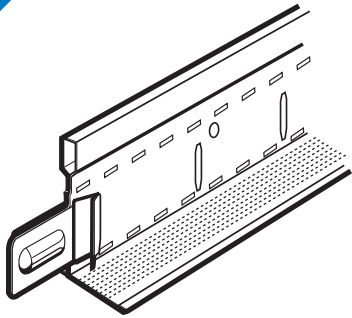
- **1-1/2" wide face** on main runners and cross tees
- **Knurled and uncapped face** — allows for easy screw installation and helps to prevent screw spin off
- **Manufactured in accordance with ASTM C635 and in compliance with ASTM C645**
- **Heavy-duty load rating** — Minimum of 16 lbs./LF on main runners
  - 0.018-inch metal thickness on main runners and cross tees for heavy duty strength
  - Rotary stitched web for increased stability
  - 1.6-inch profile height for increased load capacity
- **Heavy-duty - All system components minimum .018" steel thickness with lower insertion effort and audible click**
- **G40 hot dipped galvanized coating** — Corrosion resistance for all main runners, cross tees, and wall angle
- **G90 hot-dipped galvanized coating** — Superior corrosion resistance (severe environment applications) available on all main runners, cross tees and wall angles
- **Fire-rated** — Multiple UL time rated designs available for up to 6' cross tees.
- **Cross tee spacing:**
  - up to 24-inches O.C. max. for 1/2-inch and 5/8-inch drywall
- **Main runner features 54 slots for flexibility to easily integrate Type F / Type G fixtures**



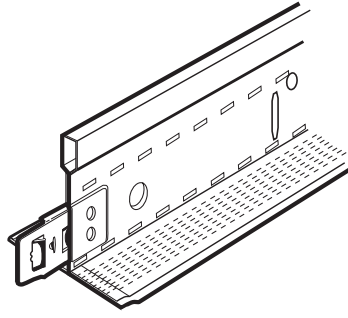
## CODE COMPLIANCE

- Meets ASTM C635
- Meets ASTM C645
- Installation per ASTM C636
- Installation per ASTM C754
- ICC Evaluation Service Report (ESR-3336)
- City of Los Angeles Building Code compliant via ESR-3336 LABC Supplement
- Uniform Building Code, Continuous Membrane, One Level. Per Section 25.210 single level drywall ceilings are exempt from lateral force bracing requirements when walls are not over 50 feet apart. When walls are over 50 feet apart, the ceiling should be examined for bracing requirements
- IBC categories D, E, and F drywall ceilings that are on one level and connected on all sides to walls that are braced to the structure above
- Consult local authorities having jurisdiction for local code requirements

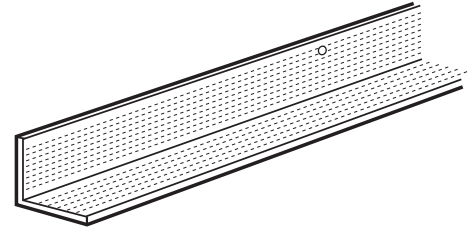
# COMPONENTS



Main Runner



Cross Tees



Wall Angle

	DESCRIPTION	DIMENSIONS (IN)	SLOT SPACING	ASTM C635 RATING	FIRE RATED	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON
<b>Main Runners</b>									
<b>DWS12-13-20</b>	HD FR Main Runner G40	144" x 1.6" x 1.5"	54 slots starting 2.25" from each end; each slot spaced 8" on center	Heavy Duty	Yes	88%	19%	69%	16
<b>DWS12-13-20 G90</b>	HD FR Main Runner G90	144" x 1.6" x 1.5"		Heavy Duty	Yes	88%	19%	69%	16

	DESCRIPTION	DIMENSIONS (IN)	SLOT SPACING	FIRE RATED	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON
<b>Cross Tees</b>								
<b>DWS1.16-13-20</b>	14" Cross Tee G40	14" x 1.6" x 1.5"	No slots	Yes	87%	19%	68%	48
<b>DWS2-13-20</b>	24" Cross Tee G40	24" x 1.6" x 1.5"	10", 12", 14"	Yes	87%	19%	68%	48
<b>DWS2.16-13-20</b>	26" Cross Tee G40	26" x 1.6" x 1.5"	12", 14"	Yes	87%	19%	68%	48
<b>DWS3-13-20</b>	36" Cross Tee G40	36" x 1.6" x 1.5"	No slots	Yes	87%	19%	68%	48
<b>DWS4-13-20</b>	48" Cross Tee G40	48" x 1.6" x 1.5"	10", 12", 14", 22", 24", 26", 34", 36", 38"	Yes	87%	19%	68%	48
<b>DWS4.16-13-20</b>	50" Cross Tee G40	50" x 1.6" x 1.5"	10", 12", 14", 24", 26", 36", 38", 40"	Yes	87%	19%	68%	48
<b>DWS6-13-20</b>	72" Cross Tee G40	72" x 1.6" x 1.5"	22", 24", 26", 46", 48", 50"	Yes	87%	19%	68%	36

	DESCRIPTION	DIMENSIONS (IN)	SLOT SPACING	FIRE RATED	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON
<b>Cross Tees</b>								
<b>DWS1.16-13-20 G90</b>	14" Cross Tee G90	14" x 1.6" x 1.5"	No slots	Yes	87%	19%	68%	48
<b>DWS2-13-20 G90</b>	24" Cross Tee G90	24" x 1.6" x 1.5"	10", 12", 14"	Yes	87%	19%	68%	48
<b>DWS2.16-13-20 G90</b>	26" Cross Tee G90	26" x 1.6" x 1.5"	12", 14"	Yes	87%	19%	68%	48
<b>DWS3-13-20 G90</b>	36" Cross Tee G90	36" x 1.6" x 1.5"	No slots	Yes	87%	19%	68%	48
<b>DWS4-13-20 G90</b>	48" Cross Tee G90	48" x 1.6" x 1.5"	10", 12", 14", 22", 24", 26", 34", 36", 38"	Yes	87%	19%	68%	48
<b>DWS4.16-13-20 G90</b>	50" Cross Tee G90	50" x 1.6" x 1.5"	10", 12", 14", 24", 26", 36", 38", 40"	Yes	87%	19%	68%	48
<b>DWS6-13-20 G90</b>	72" Cross Tee G90	72" x 1.6" x 1.5"	22", 24", 26", 46", 48", 50"	Yes	87%	19%	68%	36

	DESCRIPTION	DIMENSIONS (IN)	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON
<b>Wall Angle</b>						
<b>DWA1.5-1.5</b>	1.5" WA G40	144" x 1.5" x 1.5"	88%	19%	69%	20
<b>DWA1.5-1.5 G90</b>	1.5" WA G90	144" x 1.5" x 1.5"	88%	19%	69%	20
<b>DWA2-2</b>	2" WA G40	144" x 2" x 2"	88%	19%	69%	36
<b>DWA2-2 G90</b>	2" WA G90	144" x 2" x 2"	88%	19%	69%	36

# COMPONENTS - METRIC



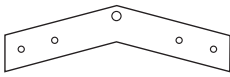
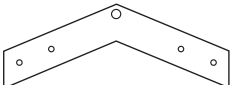
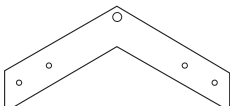
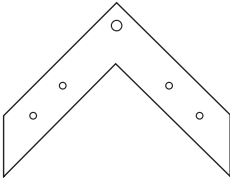
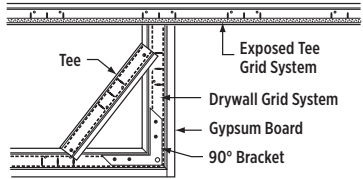

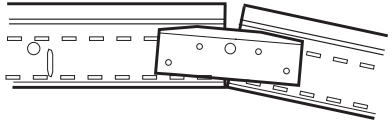
DESCRIPTION	DIMENSIONS (MM)	SLOT SPACING	ASTM C635 RATING	FIRE RATED	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON	
<b>Main Runners - Metric</b>									
<b>DWS3600MM-13-20 G40</b>	HD FR Main Runner	3600 x 41 x 38	150, starting 75mm from each end	Heavy Duty	Yes	62%	28%	34%	16

DESCRIPTION	DIMENSIONS (MM)	SLOT SPACING	FIRE RATED	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON	
<b>Cross Tees - Metric</b>								
<b>DWS1500MM-13-20 G40</b>	1500 mm Cross Tee	1500 x 41 x 38	150, 350, 250, 250, 350, 150	Yes	62%	28%	34%	36
<b>DWS1200MM-13-20 G40</b>	1200 mm Cross Tee	1200 x 41 x 38	300	Yes	62%	28%	34%	48
<b>DWS750MM-13-20 G40</b>	750 mm Cross Tee	750 x 41 x 38	No slots	Yes	62%	28%	34%	48
<b>DWS900MM-13-20 G40</b>	900 mm Cross Tee	900 x 41 x 38	No slots	Yes	62%	28%	34%	48
<b>DWS600MM-13-20 G40</b>	600 mm Cross Tee	600 x 41 x 38	No slots	Yes	62%	28%	34%	48

DESCRIPTION	DIMENSIONS (MM)	RECYCLED CONTENT TOTAL	RECYCLED CONTENT PRE	RECYCLED CONTENT POST	PIECES PER CARTON	
<b>Wall Angle - Metric</b>						
<b>DWA1.5-1.5</b>	38 mm Wall Angle	3658 x 38 x 38	88%	19%	69%	20
<b>DWA2-2</b>	51 mm Wall Angle	3658 x 51 x 51	88%	19%	69%	20


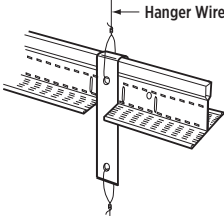
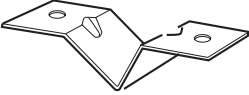
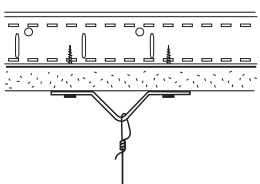
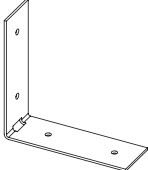
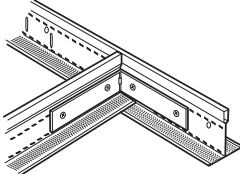
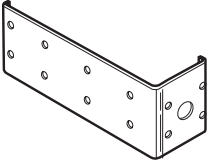
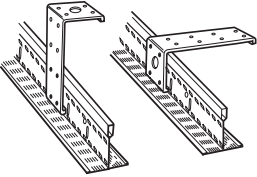
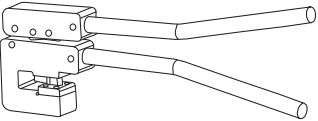
# DRYWALL INSTALLATION ACCESSORIES



	ITEM NUMBER	DESCRIPTION	PIECES PER CARTON	APPLICATION
	<b>B30</b>	<b>30-DEGREE ANGLE BRACKET</b>	250	
	<b>B45</b>	<b>45-DEGREE ANGLE BRACKET</b>	250	
	<b>B60</b>	<b>60-DEGREE ANGLE BRACKET</b>	250	
	<b>B90</b>	<b>90-DEGREE ANGLE BRACKET</b> The 90, 60, 45 and 30-degree Angle Brackets are used to create angled walls and ceilings. Features holes for screws and hanger wire.	250	
	<b>DWSC</b>	<b>SPLICE CLIP</b> The Splice Clip is used to connect cut ends of grid components. It can also be used to create a radius.	200	

# INSTALLATION ACCESSORIES



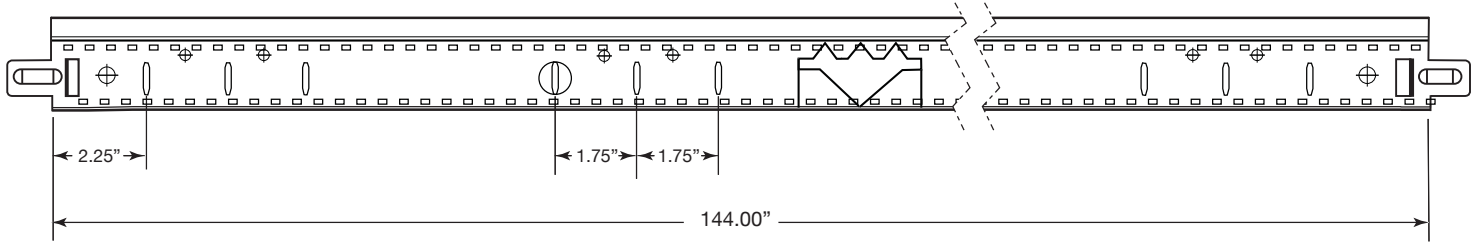
	ITEM NUMBER	DESCRIPTION	PIECES PER CARTON	APPLICATION
	2LC	<p><b>2-LAYER DRYWALL CLIP*</b></p> <p>The 2-Layer Drywall Clip is used to suspend a grid system below an existing ceiling. It is designed to transfer the load from the grid directly to the clip.</p>	150	
	DFC	<p><b>DRYWALL FASTENER CLIP*</b></p> <p>The Drywall Fastener Clip is screw-attached through an existing drywall ceiling to the framing member in order to suspend a second ceiling below.</p>	150	
	LBRC	<p><b>L-BRACKET*</b></p> <p>The L-Bracket is used to screw-attach cut cross tees to main runners.</p>	200	
	DFB	<p><b>DIRECT FIXING BRACKET*</b></p> <p>The Direct Fixing Bracket is used to attach the main runners to the structure in application with shallow plenums.</p>	75	
	SLOTTER1	<p><b>SLOT PUNCH (ROUT PUNCH)</b></p> <p>The Slot Punch is used to add a rout hole wherever one is needed on a main runner or cross tee. Compatible with Classic Stab, Elite Narrow Stab and Drywall Grid.</p>	1	

\*Contact CertainTeed Technical Services for accessory performance data

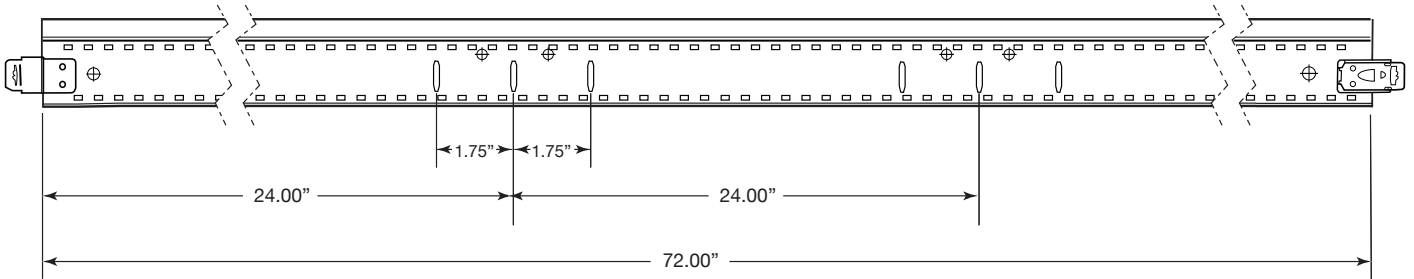
# SLOT POSITIONS



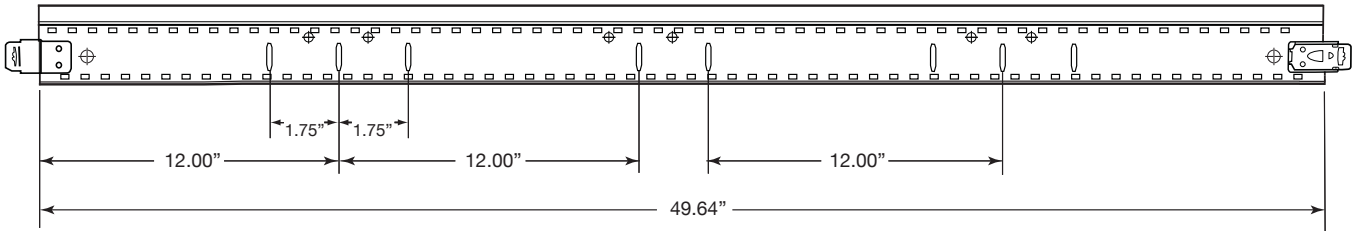
Main Runner DWS12-13-20 / DWS12-13-20 G90



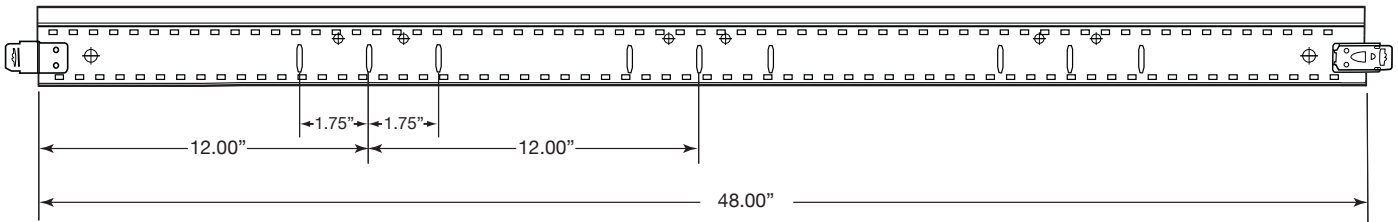
72" Cross Tee DWS6-13-20 / DWS6-13-20 G90



50" Cross Tee DWS4.16-13-20



48" Cross Tee DWS4-13-20

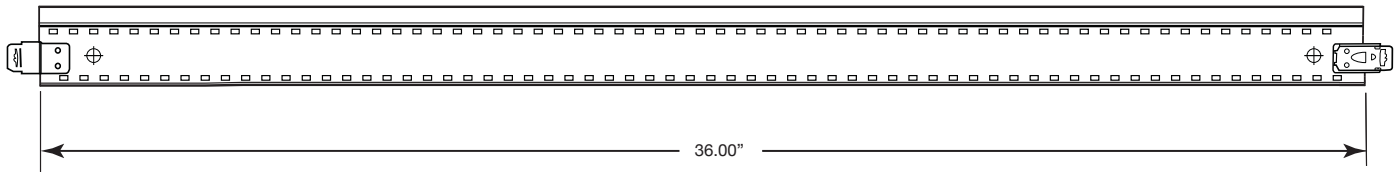




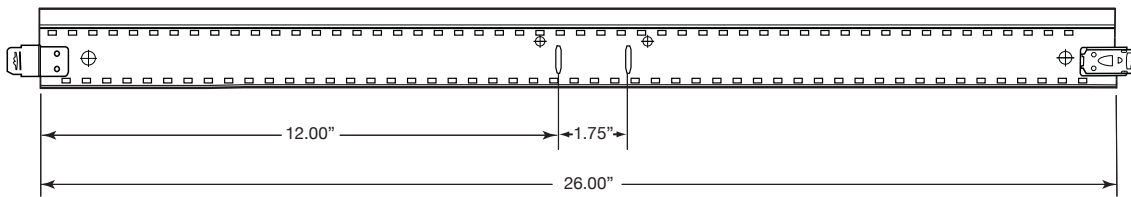
# SLOT POSITIONS



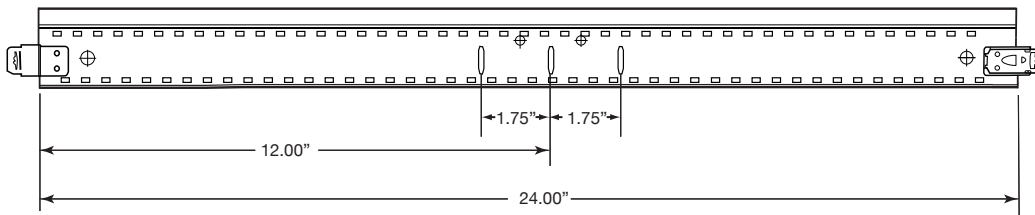
36" Cross Tee DWS3-13-20 / DWS3-13-20 G90



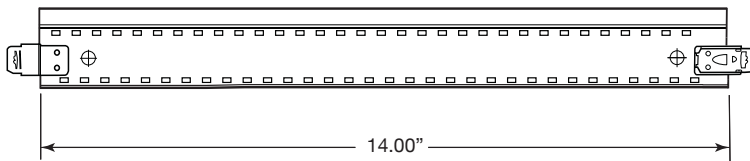
26" Cross Tee DWS2.16-13-20



24" Cross Tee DWS2-13-20

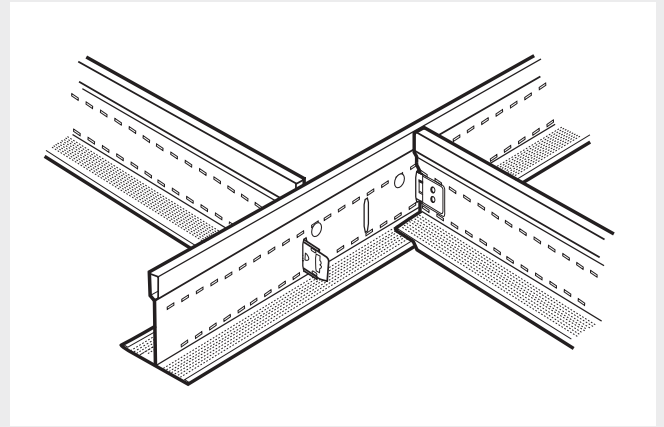


14" Cross Tee DWS1.16-13-20



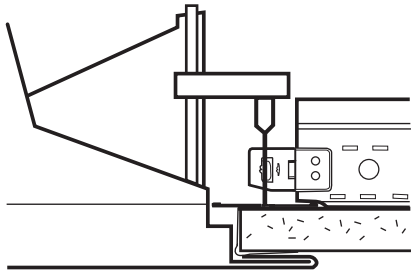
## LIGHTING INTEGRATION - OFFSET SLOTS

CertainTeed Drywall Suspension System main runners provide slots 8" on center. Each slot has two additional offset slots — each is 1-3/4" from the center slot. These additional offset slots allow for integration with Type F fixtures. Use the center slot for typical cross tee installation.



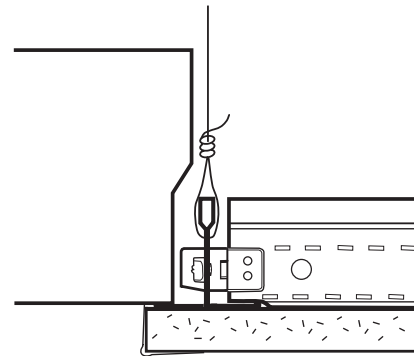
## TYPE F VS. TYPE G FIXTURES

### Type F Fixtures



1. Install from below the grid
2. Fixture has integral flange (or separate flange kit) to finish the drywall board
3. Fixture rests on bulb of grid and/or is suspended from flange kit
4. Fixture is level with drywall
5. Requires actual 48-inch opening

### Type G Fixtures

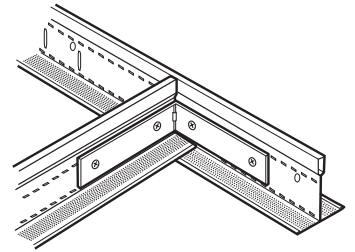


1. Install from above the grid
2. Fixture trim is required for finishing drywall
3. Fixture rests on flange of grid
4. Fixture is recessed the thickness of the drywall
5. Requires nominal 48-inch opening

## 48", 50", 72" ON CENTER SPACING

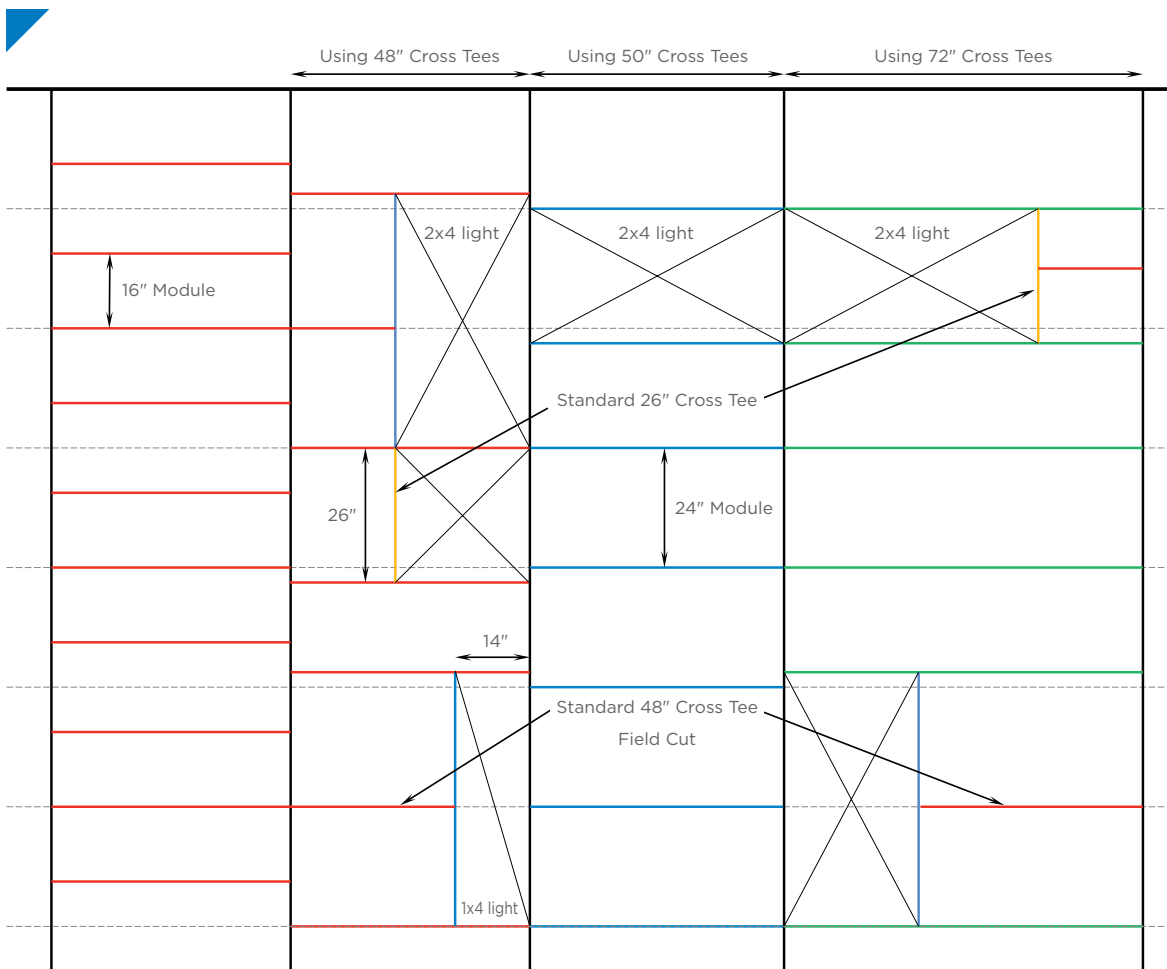
Type F fixtures, air diffusers and access hatches require actual 12", 24", and 48" openings in the suspension system. Type F fixtures can be installed both parallel and perpendicular to the main runners using 48", 50" or 72" cross tees. The additional slots in the main runners and cross tees allow for integration with type F fixtures, while the availability of seven cross tees allows for framing without cutting and field modifications.

There are a multitude of fixture placement options when installing Type F fixtures 72" on center and perpendicular to the main runners. Cut the clips off the 26" cross tee and use the CertainTeed L-bracket (LBRC) to fasten the tee in place. Type G fixtures can also be installed by cutting cross tee clips and using the LBRC to create the module size required instead of 15/16" wide face tees.



The combination of CertainTeed offset main runner slots and availability of 48", 50", and 72" cross tees allows for type F fixture installations on 48", 50", and 72" centers.

## STANDARD CROSS TEE INSTALLATION OPTIONS



**Color Key:**

- Red ..... 48" Cross Tees DWS4-13-20
- Blue ..... 50" Cross Tees DWS4.16-13-20
- Yellow ..... 26" Cross Tees DWS2.16-13-20
- Green ..... 72" Cross Tees DWS6-13-20

# UL FIRE RESISTIVE ASSEMBLIES (DRYWALL SUSPENSION SYSTEMS ONLY)

Fire Ratings specified in this section pertain to UL Classifications which are based on standard test methods ANSI/UL263, ASTM E119, UBC 7-1, NFPA 251, CAN/ULC - S101M

## Floor / Ceiling Drywall Assemblies

TYPE OF CONSTRUCTION	MAXIMUM TIME RATING (HRS)	UL DESIGN NUMBER	CONCRETE THICKNESS	NUMBER OF DRYWALL LAYERS	MINIMUM DRYWALL THICKNESS	MAXIMUM FIXTURE PENETRATION (FT <sup>2</sup> / 100 FT <sup>2</sup> )	MAXIMUM DUCT PENETRATION (IN <sup>2</sup> / 100 FT <sup>2</sup> )	DRYWALL GRID SYSTEM
<b>Floor / Ceiling Drywall Assemblies</b>								
Concrete on metal lath or corrugated steel deck, steel joists	2	D501	2-1/2"	1	1/2"	N/A	N/A	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	D502	2-1/2"	1	1/2"	24	144	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	D503	2-1/2"	1	1/2"	One 6" diameter fixture per 25 ft <sup>2</sup>	N/A	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G041	2-1/2"	1	1/2"	15.3	54	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	1	G041	2-1/2"	1	1/2"	15.3	54	CertainTeed DWS (max 72" cross tee)
Concrete on metal lath or corrugated steel deck, steel joists	2	G523	2-1/2"	1	1/2"	24	144	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G524	2-1/2"	1	1/2"	One fixture per 100 ft <sup>2</sup>	144	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G526	2-1/2"	1	1/2"	24	56.5	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G527	2-1/2"	1	1/2"	N/A	N/A	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	1-1/2	G528	2-1/2"	1	1/2"	N/A	N/A	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G529	2-1/2"	1	1/2"	24	57	CertainTeed DWS <sup>1</sup>
Concrete on metal lath or corrugated steel deck, steel joists	2	G553	2-1/2"	1	1/2"	N/A	N/A	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L502	—	1	1/2"	N/A	99	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L508	—	1	1/2"	N/A	99	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L513	—	1	1/2"	N/A	99	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L515	—	1	1/2"	N/A	99	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L525	—	1	1/2"	24	113	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L526	—	1	1/2"	24	100	CertainTeed DWS <sup>1</sup>
Wood Deck	1	L529	—	1	1/2"	24	113	CertainTeed DWS <sup>1</sup>

1. Maximum 50" cross tee

## Roof / Ceiling Drywall Assemblies

TYPE OF CONSTRUCTION	MAXIMUM TIME RATING (HRS)	UL DESIGN NUMBER	CONCRETE THICKNESS	NUMBER OF DRYWALL LAYERS	MINIMUM DRYWALL THICKNESS	MAXIMUM FIXTURE PENETRATION (FT <sup>2</sup> / 100 FT <sup>2</sup> )	MAXIMUM DUCT PENETRATION (IN <sup>2</sup> / 100 FT <sup>2</sup> )	DRYWALL GRID SYSTEM
<b>Roof / Ceiling Drywall Assemblies</b>								
BUR, modified or single-ply over steel deck, steel joists	1-1/2	P506	—	1	5/8"	24	113	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	1	P508	—	1	5/8"	24	144	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	1	P509	—	1	5/8"	24	144	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	1-1/2	P510	—	1	5/8"	24	144	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	1-1/2	P513	—	1	5/8"	24	144	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	2	P514	—	1	5/8"	24	225	CertainTeed DWS <sup>1</sup>
BUR, modified or single-ply over steel deck, steel joists	2	P560	—	1	5/8"	15.3	54	CertainTeed DWS <sup>1</sup>

The information contained in this table is intended only to be used as a guide. For detailed time-rated assembly information, refer to the latest Underwriters Laboratories Inc. Fire Resistance Directory (ul.com).

1. Maximum 50" cross tee

## ULC FIRE RESISTIVE ASSEMBLIES (DRYWALL SUSPENSION SYSTEMS ONLY)

### Floor / Ceiling Drywall Assemblies

TYPE OF CONSTRUCTION	MAXIMUM TIME RATING (HRS)	ULC DESIGN NUMBER	CONCRETE THICKNESS	NUMBER OF DRYWALL LAYERS	MINIMUM DRYWALL THICKNESS	MAXIMUM FIXTURE PENETRATION (FT <sup>2</sup> / 100 FT <sup>2</sup> )	MAXIMUM DUCT PENETRATION (IN <sup>2</sup> / 100 FT <sup>2</sup> )	DRYWALL GRID SYSTEM
<b>Floor / Ceiling Drywall Assemblies</b>								
Concrete on metal lath or corrugated steel deck, steel joists	2	G021	2.5"	1	1/2"	15.3	54	CertainTeed DWS (max. 50" cross tee)
Concrete on metal lath or corrugated steel deck, steel joists	1	G021	2.5"	1	1/2"	15.3	54	CertainTeed DWS (max. 72" cross tee)

### Roof / Ceiling Drywall Assemblies

TYPE OF CONSTRUCTION	MAXIMUM TIME RATING (HRS)	ULC DESIGN NUMBER	CONCRETE THICKNESS	NUMBER OF DRYWALL LAYERS	MINIMUM DRYWALL THICKNESS	MAXIMUM FIXTURE PENETRATION (FT <sup>2</sup> / 100 FT <sup>2</sup> )	MAXIMUM DUCT PENETRATION (IN <sup>2</sup> / 100 FT <sup>2</sup> )	DRYWALL GRID SYSTEM
<b>Roof / Ceiling Drywall Assemblies</b>								
BUR, modified or single-ply over steel deck, steel joists	2	R503	—	1	5/8"	15.3	54	CertainTeed DWS (max. 50" cross tee)

# SYSTEM LOAD VALUE



## Load Data (Drywall Suspension Systems Only)

DESCRIPTION	DIMENSIONS (LENGTH/HEIGHT)	DIMENSION (FACE)	METAL THICKNESS	SIMPLE SPAN, DEFLECTION (POUNDS PER LF)						
				4-FT		3-FT		2-FT		
				L/360	L/240	L/360	L/240	L/360	L/240	
<b>Main Runners</b>										
<b>DWS12-13-20</b>	Main Runner / G40	144" x 1.6"	1.5"	0.02"	19.21	27.36	45.53	64.85	153.68	198.60*
<b>DWS12-13-20 G90</b>	Main Runner / G90	144" x 1.6"	1.5"	0.02"	19.21	27.36	45.53	64.85	153.68	198.60*

DESCRIPTION	DIMENSIONS (LENGTH/ HEIGHT)	DIMENSION (FACE)	METAL THICKNESS	SIMPLE SPAN, DEFLECTION (POUNDS PER LF)													
				14-INCH		24-INCH		26-INCH		36-INCH		48-INCH		50-INCH		72-INCH	
				L/360	L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360	L/240	L/360	L/240
<b>Cross Tees</b>																	
<b>DWS1.16-13-20</b>	Cross Tee / G40 & G90 / 14"	14" x 1.6"	1.5"	0.02"	199*	199*											
<b>DWS2-13-20</b>	Cross Tee / G40 & G90 / 24"	24" x 1.6"	1.5"	0.02"			131.2	145.4									
<b>DWS2.16-13-20</b>	Cross Tee / G40 & G90 / 26"	26" x 1.6"	1.5"	0.02"					93.7	126.2							
<b>DWS3-13-20</b>	Cross Tee / G40 & G90 / 36"	36" x 1.6"	1.5"	0.02"						42.9	62.3						
<b>DWS4-13-20</b>	Cross Tee / G40 & G90 / 48"	48" x 1.6"	1.5"	0.02"								19.32	27				
<b>DWS4.16-13-20</b>	Cross Tee / G40 & G90 / 50"	50" x 1.6"	1.5"	0.02"										16.6	24		
<b>DWS6-13-20</b>	Cross Tee / G40 & G90 / 72"	72" x 1.6"	1.5"	0.02"											5.9	8.6	

\*Failure limited

NOTE: Allowable loads tested per ASTM C635 for deflection limited to L/360 and complies with ASTM C645 for deflection limited to L/240.

# SYSTEM LOAD VALUE

**CEILING LOAD LIMITS (PSF) FOR DIFFERENT CONFIGURATIONS OF DRYWALL SYSTEMS AT L/360 WITH CROSS TEES AT 24 INCHES ON CENTER**

		Hanger Spacing on Main Runner (inches) <sup>1</sup>		
		48	32	16
Main Runner Spacing (inches on center)	72	2.9	2.9	2.9
	50	4.5	8.3	8.3
	48	4.7	9.2	9.2
	36	6.2	10.0	10.0
	24	9.3	10.0	10.0

For SI: 1 inch = 25.4 mm; 1 psf = 574.6 Pa.

<sup>1</sup> Hanger wires must comply with Section 3.3.2 of ICC ES ESR-3336.

**CEILING LOAD LIMITS (PSF) FOR DIFFERENT CONFIGURATIONS OF DRYWALL SYSTEMS AT L/240 WITH CROSS TEES AT 24 INCHES ON CENTER**

		Hanger Spacing on Main Runner (inches) <sup>1</sup>		
		48	32	16
Main Runner Spacing (inches on center)	72	3.8	4.4	4.4
	50	5.5	10.0	10.0
	48	5.7	10.0	10.0
	36	7.6	10.0	10.0
	24	10.0	10.0	10.0

For SI: 1 inch = 25.4 mm; 1 psf = 574.6 Pa.

<sup>1</sup> Hanger wires must comply with Section 3.3.2 of ICC ES ESR-3336.

**CEILING LOAD LIMITS (PSF) FOR DIFFERENT CONFIGURATIONS OF DRYWALL SYSTEMS AT L/360 WITH CROSS TEES AT 16 INCHES ON CENTER**

		Hanger Spacing on Main Runner (inches) <sup>1</sup>		
		48	32	16
Main Runner Spacing (inches on center)	72	3.1	4.4	4.4
	50	4.5	10.0	10.0
	48	4.7	10.0	10.0
	36	6.2	10.0	10.0
	24	9.3	10.0	10.0

For SI: 1 inch = 25.4 mm; 1 psf = 574.6 Pa.

<sup>1</sup> Hanger wires must comply with Section 3.3.2 of ICC ES ESR-3336.

**CEILING LOAD LIMITS (PSF) FOR DIFFERENT CONFIGURATIONS OF DRYWALL SYSTEMS AT L/240 WITH CROSS TEES AT 16 INCHES ON CENTER**

		Hanger Spacing on Main Runner (inches) <sup>1</sup>		
		48	32	16
Main Runner Spacing (inches on center)	72	4.7	6.5	6.5
	50	6.7	10.0	10.0
	48	7.0	10.0	10.0
	36	9.3	10.0	10.0
	24	10.0	10.0	10.0

For SI: 1 inch = 25.4 mm; 1 psf = 574.6 Pa.

<sup>1</sup> Hanger wires must comply with Section 3.3.2 of ICC ES ESR-3336.

# WIRE DATA (9-GAUGE AND 12-GAUGE)

**9-Gauge Wire Breaking Strength and Technical Data**

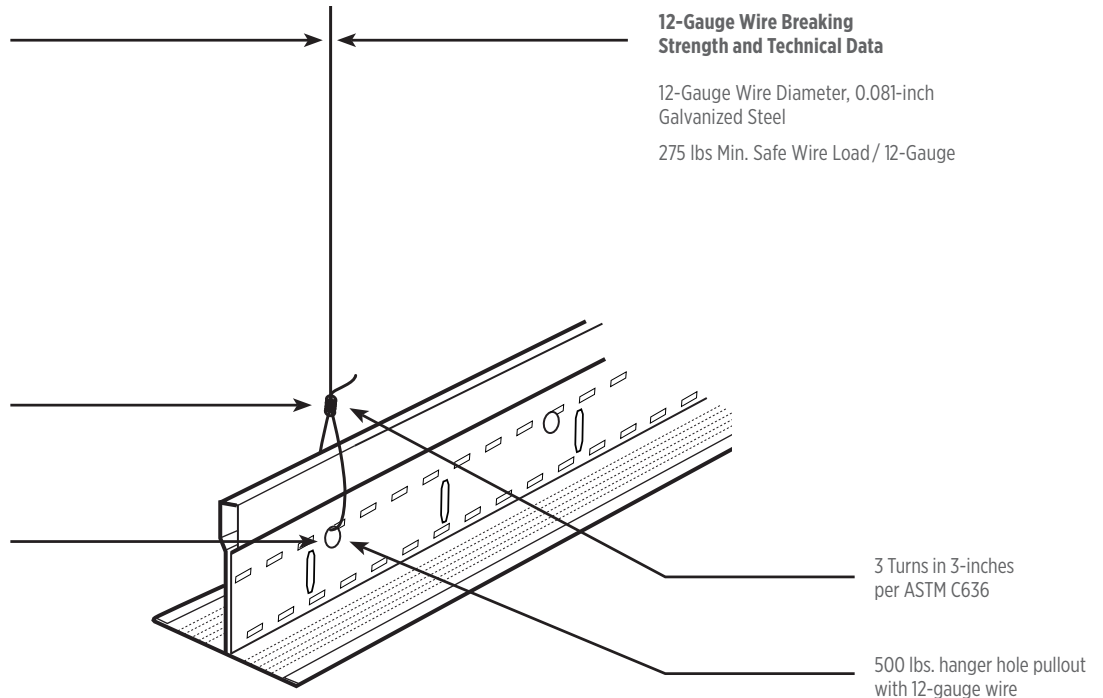
9-Gauge Wire Diameter, 0.114-inch  
Galvanized Steel  
645 lbs Min. Safe Wire Load / 9-Gauge

**12-Gauge Wire Breaking Strength and Technical Data**

12-Gauge Wire Diameter, 0.081-inch  
Galvanized Steel  
275 lbs Min. Safe Wire Load / 12-Gauge

3 Turns in 3-inches per ASTM C636

450 lbs. hanger hole pullout with 9-gauge wire



3 Turns in 3-inches per ASTM C636

500 lbs. hanger hole pullout with 12-gauge wire

NOTE: CertainTeed Drywall Grid System can be used with either 9-gauge or 12-gauge hanger wire. Consult local authorities having jurisdiction for local code requirements.

# QUANTITY ESTIMATING TABLES

DESCRIPTION	DIMENSIONS (LENGTH)	PCs (PER CARTON)	LF (PER CARTON)	LBS./CARTON	AREA OF CEILING COMPLETE BY ONE CARTON (SQ. FT.)							
					8" O.C.	16" O.C.	24" O.C.	36" O.C.	48" O.C.	50" O.C.	72" O.C.	
<b>Main Runners</b>												
DWS12-13-20	Main Runner / G40	144"	16	192	61	—	—	384	576	768	800	1152
DWS12-13-20 G90	Main Runner / G90	144"	16	192	61	—	—	384	576	768	800	1152

DESCRIPTION	DIMENSIONS (LENGTH)	PCs (PER CARTON)	LF (PER CARTON)	LBS./CARTON	AREA OF CEILING COMPLETE BY ONE CARTON (SQ. FT.)			
					8" O.C.	16" O.C.	24" O.C.	
<b>Cross Tees</b>								
DWS1.16-13-20	Cross Tee / G40 & G90 / 14"	14"	48	56	18			
DWS2-13-20	Cross Tee / G40 & G90 / 24"	24"	48	96	31	64		
DWS2.16-13-20	Cross Tee / G40 & G90 / 26"	26"	48	104	33			
DWS3-13-20	Cross Tee / G40 & G90 / 36"	36"	48	144	46			
DWS4-13-20	Cross Tee / G40 & G90 / 48"	48"	48	192	61	96	192	288
DWS4.16-13-20	Cross Tee / G40 & G90 / 50"	50"	48	200	64	133.33	267	400
DWS6-13-20	Cross Tee / G40 & G90 / 72"	72"	36	216	72	144	288	432

DESCRIPTION	DIMENSIONS (LENGTH)	PCs (PER CARTON)	LF (PER CARTON)	LBS./CARTON	
<b>Wall Angle</b>					
DWA1.5-1.5	1.5" WA G40	144"	20	240	45
DWA1.5-1.5 G90	1.5" WA G90	144"	20	240	45
DWA2-2	2" WA G40	144"	20	240	59
DWA2-2 G90	2" WA G90	144"	20	240	59

## ESTIMATING LINEAL FEET OF SUSPENSION SYSTEM BASED SQUARE FOOTAGE OF CEILING

ON-CENTER SPACING	PERCENT OF SQUARE FOOTAGE
8"	150%
12"	100%
16"	75%
20"	60%
24"	50%
30"	40%
36"	33%
48"	25%
60"	20%
72"	17%

### Example calculation:

#### Main Runners at 48" O.C.

6,400 sq. ft. x .25 = 1,600 ln. ft.  
1,600 ln. ft. / 192 ln. ft. / Ctn = 9 cartons required

#### 48" Cross Tees at 24" O.C.

6,400 sq. ft. x .50 = 3,200 ln. ft.  
3,200 ln. ft. / 192 ln. ft. / Ctn = 17 cartons required

#### 48" Cross Tees at 16" O.C.

6,400 sq. ft. x .76 = 4,864 ln. ft.  
4,864 ln. ft. / 192 ln. ft. / Ctn = 26 cartons required



# QUICKSPAN™ LOCKING DRYWALL SUSPENSION SYSTEM

Featuring the QuickSpan™  
Support Clip



## PERFORMANCE



### QuickSpan Locking Channel

- 1-1/2-inch wide bottom flange
- 0.020-inch metal thickness allows for superior rigidity and maximum screw retention
- Tees quickly twist into place for fast installation
- Knurled pattern on back and bottom of flange for easy screw insertion
- No need for screw-attachment of tees
- Integral locking tabs spaced 8-inches O.C. allows for common 8", 16", and 24" tee spacing
- G40 hot dipped galvanized steel for excellent corrosion resistance

### QuickSpan Spanning Tees

- 1.5 inch wide knurled face for easy screw installation and no screw spin off
- Unsupported spans – max. 14ft for 1/2-inch drywall and 11ft 3in for 5/8-inch drywall
- Heavy duty material – 0.020" metal thickness for maximum rigidity and screw grip
- Double-stitched web for added strength
- Sizes – standard and custom lengths available

### QuickSpan Support Clip

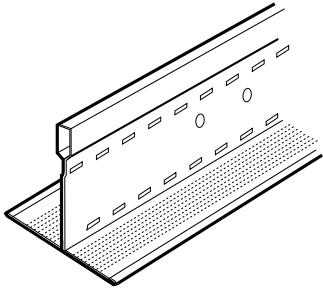
- Snap and fasten to carrying tee for support of spans up to 16'
- Allows for wire spacing up to 6' 6"

## CODE COMPLIANCE

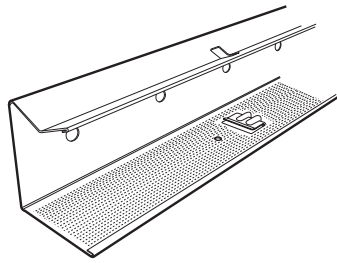


- Meets ASTM C635
- Meets ASTM C645
- Installation per ASTM C636
- Installation per ASTM C754
- ICC Evaluation Service Report (ESR 3941)
- IBC categories D, E and F single layer drywall ceilings are exempt from lateral force bracing requirements, regardless of room size
- Consult local authorities having jurisdiction for local code requirements

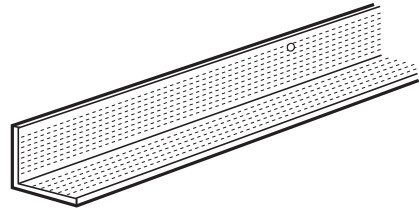
# COMPONENTS



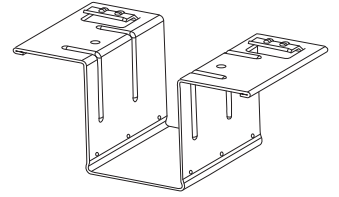
QuickSpan™ Tees



QuickSpan™ Locking Channel



Wall Angle



QuickSpan™ Support Clip

	DESCRIPTION	DIMENSIONS L x H x W (IN.)	HANGER/LOCK SPACING (IN.)	PIECES/ BUNDLE	LIN. FT./ BUNDLE	LBS./ BUNDLE	RECYCLED CONTENT TOTAL
<b>Spanning Tees</b>							
<b>QST6-13-20</b>	6' QuickSpan Tee G40	72 x 1-9/16 x 1-1/2	4" O.C.	12	72	25	87%
<b>QST8-13-20</b>	8' QuickSpan Tee G40	96 x 1-9/16 x 1-1/2	4" O.C.	12	96	34	87%
<b>QST10-13-20</b>	10' QuickSpan Tee G40	120 x 1-9/16 x 1-1/2	4" O.C.	12	120	42	87%
<b>QST12-13-20</b>	12' QuickSpan Tee G40	144 x 1-9/16 x 1-1/2	4" O.C.	12	144	50	87%
<b>QST14-13-20</b>	14' QuickSpan Tee G40	168 x 1-9/16 x 1-1/2	4" O.C.	12	168	59	87%
<b>QST16-13-20</b>	16' QuickSpan Tee G40	192 x 1-9/16 x 1-1/2	4" O.C.	12	192	67	87%
<b>CUSTOM</b>	Custom Length (Max = 16')	TBD x 1-9/16 x 1-1/2	4" O.C.	—	—	—	87%
<b>Wall Angle</b>							
<b>DWA1.5-1.5</b>	1-1/2" Knurled Wall Angle G40	144 x 1-1/2 x 1-1/2		20	240	45	88%
<b>DWA2-2</b>	2" Knurled Wall Angle G40	144 x 2 x 2		20	240	59	88%
<b>Locking Channel</b>							
<b>QSLC12-14-20</b>	12' QuickSpan Locking Channel G40	144 x 1-3/4 x 1-9/16	8" O.C.	12	144	40	87%
<b>Support Clip</b>							
<b>QSSC1</b>	QuickSpan Support Clip	3.83 x 1.61 x 2	N/A	100	N/A	N/A	87%

QuickSpan tees and locking channel must be used together.  
G-90 galvanization is available for extreme corrosion resistance and exterior applications.



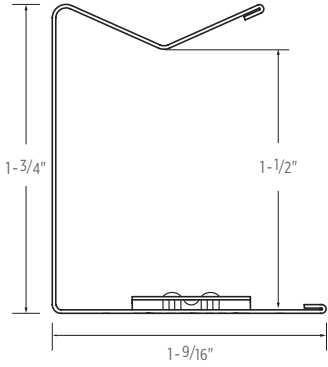
**No Cardboard Cartons** Reduced waste / Easy open

# PROFILE AND SPACING

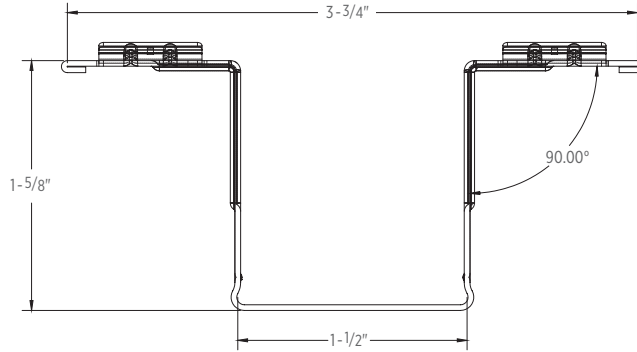


## Locking Channel QSLC12-14-20

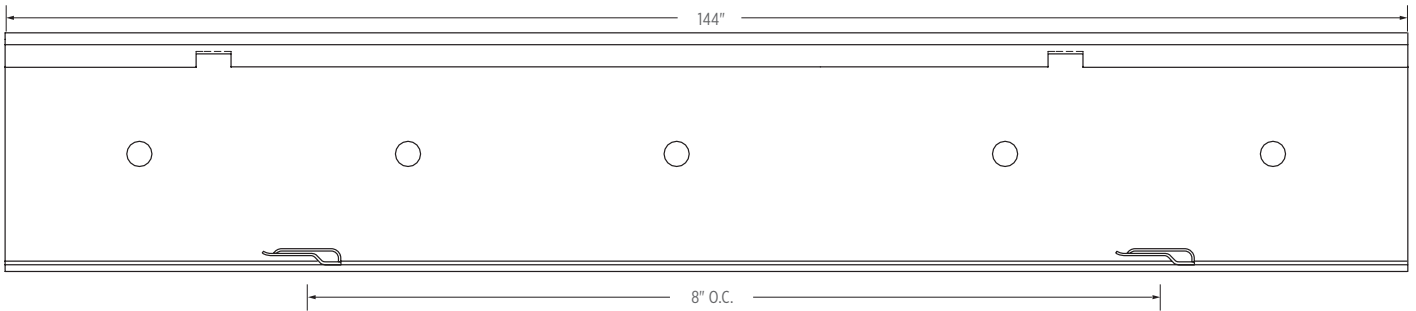
Profile (end view)



## Support Clip

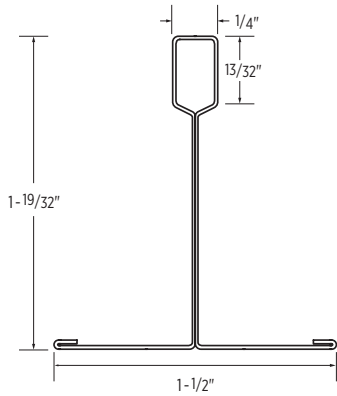


Spacing (side view)

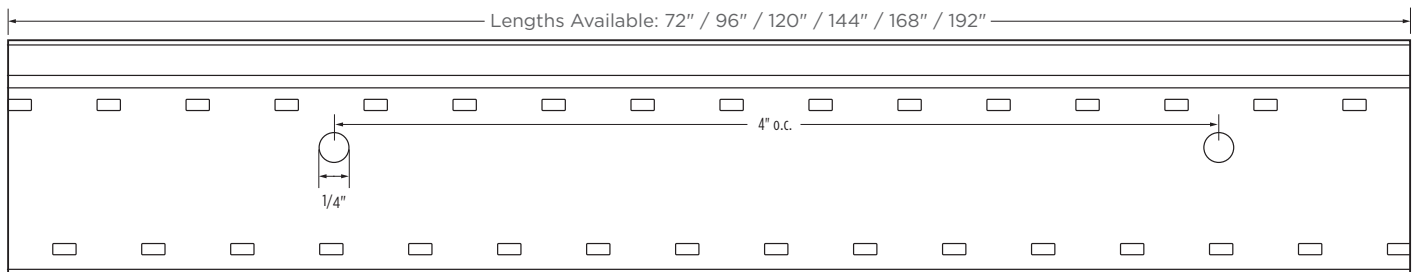


## Spanning Tees QST6-13-20 / QST8-13-20 / QST10-13-20 / QST12-13-20 / QST14-13-20 / QST16-13-20

Profile (end view)



Spacing (side view)



# LOAD DATA (QUICKSPAN™ SYSTEM ONLY)

## LOAD TEST DATA

	SPAN LENGTH																
	4' (48")	4' 6" (54")	5' (60")	5' 6" (66")	6' (72")	6' 6" (78")	7' (84")	7' 6" (90")	8' (96")	8' 6" (102")	9' (108")	9' 6" (114")	10' (120")	10' 6" (126")	11' (132")	12' (144")	14' (168")
<b>Clear Span L/240 No Hangers (lbs/ft)</b>																	
<b>LOAD (lbs/Sq. ft.)</b>	33.86	24.02	17.51	13.16	10.13	7.97	6.38	5.19	4.28	3.60	3.31	2.81	2.41	2.08	1.81	1.51	1.03

## SPAN LOAD TEST DATA (WITHOUT SUPPORT CLIP)

	SPAN LENGTH													
	4' (48")	4' 6" (54")	5' (60")	5' 6" (66")	6' (72")	6' 6" (78")	7' (84")	7' 6" (90")	8' (96")	9' (108")	10' (120")	11' 3" (135")	12' (144")	14' (168")
<b>Spanning Tee Spacing (lbs/sq. ft)</b>														
<b>8" O.C.</b>	50.5	35.85	26.2	19.64	15.2	11.90	9.6	7.75	6.4	5.0	3.6	2.6	2.25	1.54
<b>16" O.C.</b>	25.5	18.06	13.2	9.89	7.6	5.99	4.8	3.9	3.2	2.5	1.81	1.31	1.14	0.77
<b>24" O.C.</b>	16.9	12.01	8.8	6.58	5.1	3.99	3.2	2.6	2.14	1.66	1.21	0.87	0.76	0.52

Note: 5/8" drywall weighs approx. 2.5 lbs/Sq. ft.  
1/2" drywall weighs approx. 2.0 lbs/Sq. ft.

2-ply 5/8" drywall weighs approx. 5.0 lbs/Sq. ft.  
1/2" Easi-Lite weighs approx 1.4 lbs/Sq. ft.

<b>Max Design Span for 5 lbs/Sq. Ft. (Double 5/8" Board)</b>		<b>Max Design Span for 2.5 lbs/Sq. Ft. (5/8" Board)</b>		<b>Max Design Span for 2.0 lbs/Sq. Ft. (1/2" Board)</b>		<b>Max Design Span for 1.4 lbs/Sq. Ft. (Lightweight 1/2" Board*)</b>	
<b>8" O.C.</b>	107.7" (8' 11")	<b>8" O.C.</b>	135.6" (11' 3")	<b>8" O.C.</b>	152.3" (12' 8")	<b>8" O.C.</b>	168" (14')
<b>16" O.C.</b>	82.8" (6' 10")	<b>16" O.C.</b>	107.7" (8' 11")	<b>16" O.C.</b>	116" (9' 7")	<b>16" O.C.</b>	130.6" (10' 5")
<b>24" O.C.</b>	72.3" (6')	<b>24" O.C.</b>	91.1" (7' 7")	<b>24" O.C.</b>	98.2" (8' 2")	<b>24" O.C.</b>	114.1" (9' 5")

CertainTeed Easi-Lite™ Drywall boards weigh between 1.2 and 1.4 lbs/sq ft

## HANGER WIRE SPACING (IN.) FOR QUICKSPAN TEE PERPENDICULAR SUPPORT CLIP AT CENTER

GYPSUM BOARD WEIGHT	FULL SPAN IN FT. (UNSUPPORTED SPAN IN FT.)*									
	7' (3.5)	8' (4)	9' (4.5)	10' (5)	11' (5.5)	12' (6)	13' (6.5)	14' (7)	15' (7.5)	16' (8)
<b>Hanger Spacing (lbs/sq. ft)</b>										
<b>5 LBS/SQ. FT.</b>	60.0	57.4	55.2	53.3	51.6	50.1	48.8	47.6	46.5	45.5
<b>2.5 LBS/SQ. FT.</b>	75.6	72.3	69.5	67.1	65.0	63.2	61.5	60.0	58.6	57.4
<b>2 LBS/SQ. FT.</b>	78.0	78.0	74.9	72.3	70.0	68.0	66.2	64.6	63.2	61.8
<b>1.4 LBS/SQ. FT.</b>	78.0	78.0	78.0	78.0	78.0	76.6	74.6	72.8	71.1	69.6

\*Unsupported span is equal to the distance measured between locking channels and the perpendicular QuickSpan support tee.

### NOTE:

1. Load test data shows uniform load in lbs/lf based on clear span tests in accordance with ASTM deflection limit on L/240
2. Installation per ASTM C636
3. Installation per ASTM C754
4. ESR 3941

### Installation:

Must be installed in compliance with ASTM C636, ASTM E580, CISCA, and standard and industry practices within all applicable code requirements. Alternative assemblies and installation methods may be utilized when approved by the authority having jurisdiction. CertainTeed recommends checking with the authority having jurisdiction prior to designing and installing a suspended ceiling system.

### Code Compliance:

The information is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with local officials prior to designing and installing a ceiling system. Other restrictions and exemptions may apply.

# INSTALLATION METHOD AND INSTRUCTIONS FOR QUICKSPAN™

## Step 1:

Establish the height of your locking c-channel above the finished floor. Be sure to incorporate the thickness of the gypsum board.

## Step 2:

Establish the position of your first spanning tee. Measure and cut the locking c-channel so that the first carpenter's mark is the appropriate distance from the starting point.

## Step 3:

The locking c-channel must be screw-attached to minimum no. 25 gauge steel wall studs spaced at a maximum spacing of 24" on center, with one no. 8 screw by 1-1/4" long, self-tapping screws.

## Step 4:

Repeat steps 1-3 on the opposite wall, making sure that the carpenter lines match up.

## Step 5:

Install hanger wires in the center of the span at the required on center spacing. On the adjacent wall, fasten 24" piece of locking c-channel with carpenter's mark in the center. This piece will receive the carrying tee at the wall.

## Step 6:

Install spanning tees by turning the tee on its side. Insert one end in the channel. On an angle, slide the other end into the channel on the opposite wall. Guide the bulb of the tee into the cut out on the "V" at the top of the channel, and then twist the tee until the flange "clicks" into the locking tab.

## Step 7:

Repeat step 5 at the other end. Repeat 5 and 6 until area is complete.

## Step 8:

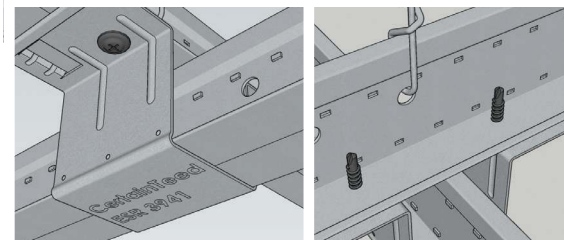
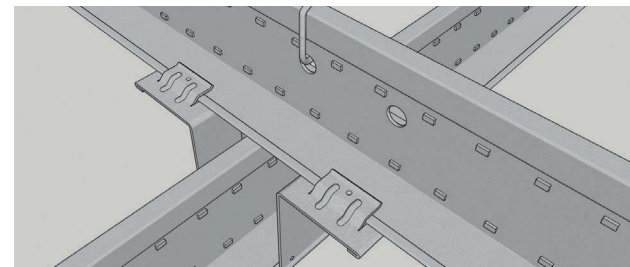
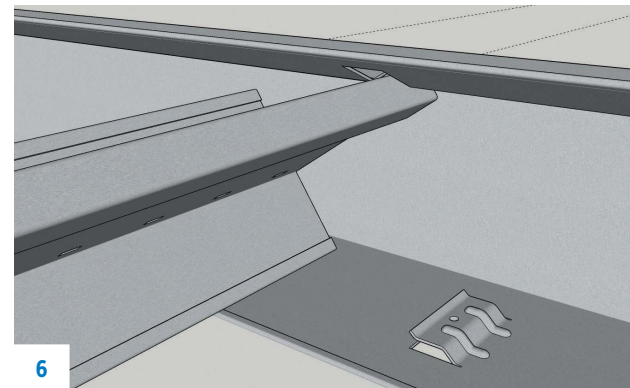
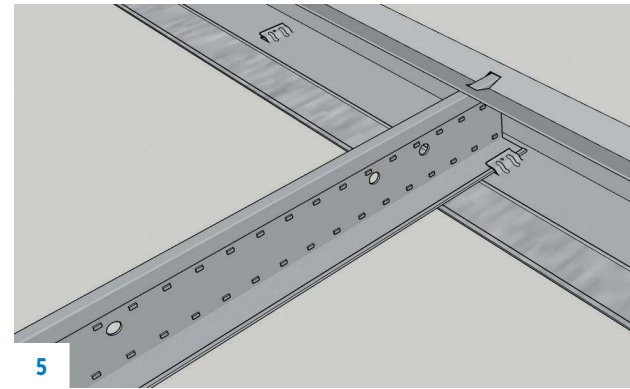
Feed the spanning tee above and perpendicular to the installed cross tees. This will serve as the carrying t-bar. Install one end into the locking c-channel.

## Step 9:

Clip the QuickSpan Support Clip on the spanning tee by snapping the u-shaped area onto flange.

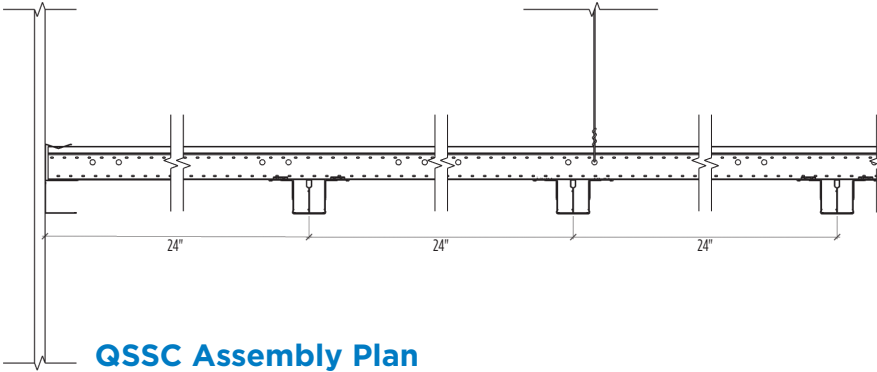
## Step 10:

Slide the clip toward the carrying t-bar and push to engage both locking tabs on the flange of the t-bar. Both tabs should click to be properly seated.



### Step 11:

Measure centers from the wall and spanning tees before fastening two screws into the holes of the QuickSpan Support Clip using no. 7 wafer head Vector®\* screws.



**QSSC Assembly Plan**

### Step 12:

Repeat step 11 alternating the side the locking tabs are on.

### Step 13:

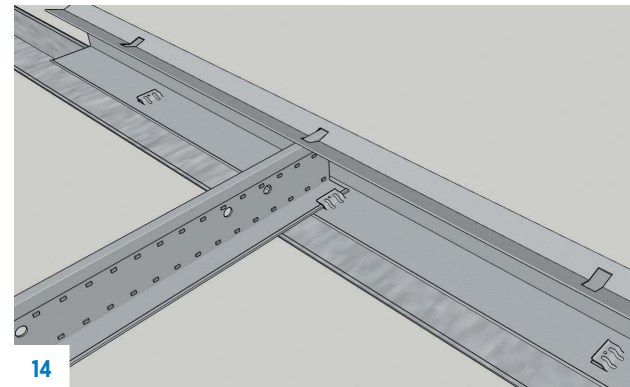
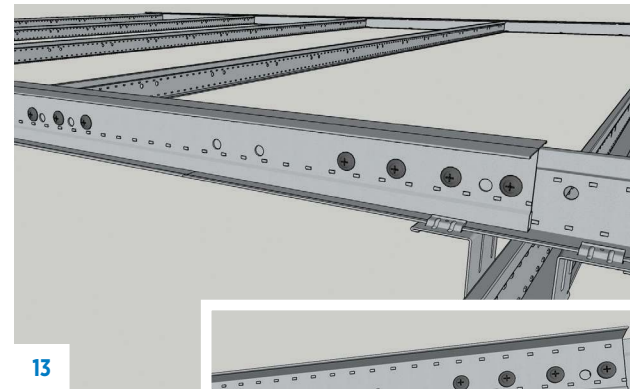
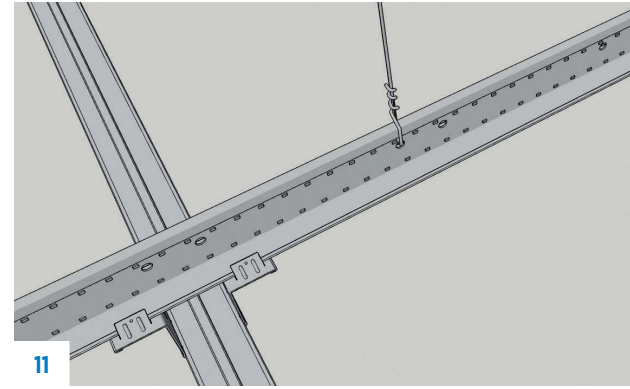
Cut 16" pieces of carrying t-bar for the splice support connection. Make the 8" line of the 16" piece with a marker. Turn this piece upside down and center at the splice of the carrying t-bar. Fasten each side with four no. 7 wafer head Vector® screws.

### Step 14:

Repeat step 13 at each splice until all splices are complete. On the terminating wall, fasten 24" piece of locking c-channel with carpenter's mark in the center using no. 8 by 1-1/4" long, steel-framing, self-tapping screws. This piece will receive the carrying tee at the wall.

### Step 15:

Tie hanger wires through the carrying t-bar, making sure to level the system.



\*Vector® is an owned and registered trademark of Grabber Construction Products, Inc.

# QUANTITY ESTIMATING TABLES (QUICKSPAN™ LOCKING DRYWALL GRID SYSTEM ONLY)



	DIMENSIONS LENGTH	PER BUNDLE			LENGTH OF HALLWAY COMPLETE BY ONE CARTON - 2 SIDES (LF)
		PCs	LF	LBs.	
<b>Locking Channel</b>					
<b>QSLC12-14-20</b>	144"	12	144	40	71

	DIMENSIONS LENGTH	PER BUNDLE			LENGTH OF HALLWAY COMPLETE BY ONE CARTON (LF) WIDTH NOT FACTORED - WILL VARY BY SELECTED CROSS TEE		
		PCs	LF	LBs.	8" O.C.	16" O.C.	24" O.C.
<b>Spanning Tees</b>							
<b>QST6-13-20</b>	72"	12	72	25	96	192	288
<b>QST8-13-20</b>	96"	12	96	34	96	192	288
<b>QST10-13-20</b>	120"	12	120	42	96	192	288
<b>QST12-13-20</b>	144"	12	144	50	96	192	288
<b>QST14-13-20</b>	168"	12	168	59	96	192	288
<b>Custom</b>	TBD	—	—	—	—	—	—

	DESCRIPTION	DIMENSIONS LENGTH (IN.)	PER BUNDLE		
			PCs	LF	LBs.
<b>Wall Angle</b>					
<b>DWA1.5-1.5</b>	1.5" WA (G40/G90)	144	20	192	45
<b>DWA2-2</b>	2" WA (G40/G90)	144	20	192	59

	DESCRIPTION	DIMENSIONS LENGTH (IN.)	PER BUNDLE		
			PCs	LF	LBs.
<b>Support Clip</b>					
<b>QSSC1</b>	QuickSpan Support Clip	3.83	100	N/A	N/A



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