



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0627

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Price Industries Ltd.

Manufacturer's Technical Representative: David Surminski

Mailing Address: 638 Raleigh Street, Winnipeg, MB R2K 3Z9

Telephone: 204.661.7866

Email: DavidS@priceindustries.com

Product Information

Product Name: ULTRASUITE® (Diffuser with Integrated LED Lighting)

Product Type: Air Terminal Device

Product Model Number: Varies (See attachment)

(List all unique product identification numbers and/or part numbers)

General Description: Modular diffuser panel with lighting drivers. Seismic enhancement and modifications made to test units to address anomalies observed during testing shall be incorporated into production units.

Mounting Description: Ceiling suspended (See attached)

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Contact Person: Katie Braman

Mailing Address: 5215 Hellyer Ave., Suite 210, San Jose, CA 95138

Telephone: 844-878-0200

Email: kbraman@structint.com

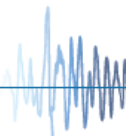
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: *Katie U Braman*

Date: 11/13/2019

Title: Program Manager

Company Name: TRU Compliance, by Structural Integrity Associates, Inc.





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Name: Andrew M. Coughlin, SE California License Number: S6082

Mailing Address: 5215 Hellyer Ave., Suite 210, San Jose, CA 95138

Telephone: 844-878-0200 Email: acoughlin@structint.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

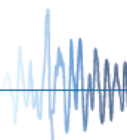
Testing Laboratory

Company Name: Environmental Testing Laboratory

Contact Name: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas, TX 75229

Telephone: (972) 247-9657 Email: jeremy@etldallas.com





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FACILITIES DEVELOPMENT DIVISION**

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 1.50 ($S_{DS} = 2.00g @ z/h = 1.0$); 1.13 ($S_{DS} = 2.50 @ z/h = 0.0$)

S_{DS} (Design spectral response acceleration at short period, g) = 2.00g ($z/h = 1.0$), 2.50g ($z/h = 0.0$)

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0 ($S_{DS} = 2.00g$), 0 ($S_{DS} = 2.50g$)

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Product Matrices

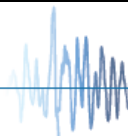
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025

Signature: M. Aliari Date: June 24, 2020

Print Name: Mohammad Aliari Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above z/h = See Above

Condition of Approval (if applicable): _____



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1900461-CR-001 R3



Manufacturer: Price Industries Ltd.	TABLE 1
Model Line: ULTRASUITE	

Certified Product Construction Summary:
14 GA. Aluminum Plenum, extruded aluminum outer frame, tig welded plenum, diffuser face and outer frame.

Certified Options Summary:
Remote driver

Mounting Configuration^{1,2,3}:
Ceiling suspended/mounted - rigid
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.0 g$ $z/h = 1.0$ $I_P = 1.5$
 $S_{DS} = 2.5 g$ $z/h = 0.0$

Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
ULTRASUITE	UltraSuite Modular System	24	24	12	28	lower limit	Extrap.
		24	24	18	54	Single module w/ vertical and horizontal Remote Driver, 84lbs. weight with mounting hardware	1
		...	...	...	...	Single module	Interp.
		48.5	24	18	109	Single module	Interp.
		...	...	...	6.85 psf	Array module	Interp.
		170.5	97.75	18	793	Unit array w/ horizontal and vertical Remote Driver, Seven (7) 18"x24"x48 modules and four (4) 18"x24"x24" modules, 959lbs. weight with mounting hardware	2
		no limit	no limit	18	6.85 psf	upper limit	Extrap.

Notes:
¹No portion of the configured unit shall be more than 4 feet from a seismic brace.
²Arrays shall use Price Industries Ltd.'s Hospital Grade Ceiling System (HGWC), see UUT 2 for installation details.
³See UUT Summaries for mounting details.

**SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX**

1900461-CR-001 R3



Manufacturer: Price Industries Ltd.		Table Description: Modular Light Panels and Driver Panel				TABLE 2		
Model Line: ULTRASUITE								
Building Code: CBC 2019		Seismic Certification Limits:		$S_{DS} = 2.0 g \quad z/h = 1.0$		$I_P = 1.5$		
				$S_{DS} = 2.5 g \quad z/h = 0.0$				
Model Line (Manufacturer)	Model	Dimension (in)			Weight (lb)	Material	Notes	UUT
		Depth	Width	Height				
ULTRASUITE (Price)	2x2x12	24.25	24.25	12	28	Aluminum with Polymer Perforated Diffuser Face	UUT1: standalone, UUT2: four (4) unit arrays	Extrap.
	2x2x18	24.25	24.25	18	28			1,2
	2x4x12	48.5	24.25	12	56		UUT2: seven (7) unit arrays	Interp.
	2x4x18	48.5	24.25	18	56			2
Remote Driver (Price)	2 Drivers-H	11.4	15.5	5	15	Carbon steel panel	Horizontal mount	Extrap.
	4 Drivers-H	22.6	15.5	5	29			1
	6 Drivers-H	33.7	15.5	5	43			Interp.
	8 Drivers-H	44.8	15.5	5	57			Interp.
	10 Drivers-H	55.9	15.5	5	71			Interp.
	12 Drivers-H	67.1	15.5	5	85			2
	2 Drivers-V	11.4	15.5	5	15	Carbon steel panel	Vertical Mount	Extrap.
	4 Drivers-V	22.6	15.5	5	29			1
	6 Drivers-V	33.7	15.5	5	43			Interp.
	8 Drivers-V	44.8	15.5	5	57			Interp.
	10 Drivers-V	55.9	15.5	5	71			Interp.
	12 Drivers-V	67.1	15.5	5	85			2

**SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX**

1900461-CR-001 R3



Manufacturer: Price Industries Ltd. Model Line: ULTRASUITE		Table Description: Controls				TABLE 3		
Building Code: CBC 2019		Seismic Certification Limits:				$S_{DS} = 2.0g \quad z/h = 1.0$ $S_{DS} = 2.5g \quad z/h = 0.0$		
Model Line (Manufacturer)	Model	Dimension (in)			Weight (lb)	Material	Notes	UUT
		Depth	Width	Height				
Low Voltage Terminal Block (Magnum)	KT3	1.22	1.87	1.25	<1	Plastic housing		1,2
High Voltage Terminal Block (Bussman)	TB300-02QC6	2.13	1.33	0.81	<1	Plastic housing		1
	TB300-03QC6	2.69	1.33	0.81	<1		factory-wired with TB300-02QC6	2
	TB300-04QC3	3.25	1.33	0.81	<1		low voltage field connections	Interp.
	TB300-04QC16	3.25	1.33	0.81	<1		low voltage field connections	2
LED Drivers (Mean Well)	HLG-100H24B	8.7	2.7	1.5	2.5	Carbon steel housing		1,2
Solid State Relay (Kudom)	KSI600D60-L	2.3	1.9	0.8	0.2	Plastic housing		1,2

UNIT UNDER TEST (UUT) SUMMARY SHEET

1900461-CR-001 R3



Manufacturer:		Price Industries Ltd.				
Model Line:		ULTRASUITE				
UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _p
1	Stand Alone Modular Unit 18"x24"x24"	15437, Rev. 1	Environmental Testing Laboratory (ETL)	2.0 2.5	1 0	1.5
2	Ganged Modular Units 18"x97.75"x170.5"	15437, Rev. 1	Environmental Testing Laboratory (ETL)	2.0 2.5	1 0	1.5

Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET



1900461-CR-001 R3

Manufacturer: Price Industries Ltd.	UUT 1
Model Line: ULTRASUITE	
Model Number: ULTRASUITE - Stand Alone Modular Unit Serial Number: N/A	

Product Construction Summary:
Aluminum with polymer perforated diffuser face

Options/Subcomponent Summary:
Single module (18"x24"x24"), 4 Driver-H, 4 Driver-V, Low voltage terminal block (KT3), High Voltage Terminal Block (TB300-02QC6), LED Drivers (HLG-100H24B), Solid State Relay (KSI600D60-L)

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
54	24	24	18	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2018)	2.0	1.0	1.5	3.2	2.4	1.67	0.67
		2.5	0.0					

Test Mounting Details:



Unit was mounted to the ceiling mount test fixture using four (4) 3/8" -A307 threaded rods and Mason UCC 1 rod, two (2) per 3" threaded rod/Unistrut assembly. Each rod/Unistrut assembly attached to the fixture with two (2) 3/8" nuts and two (2) 3/8" washers. Two (2) Mason SCB-0/SCBH-0 cable assemblies (pre-stretched gal. aircraft cable 3/32"ø) were used to support the unit. Cables were hung at 45° (±15°).

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

1900461-CR-001 R3

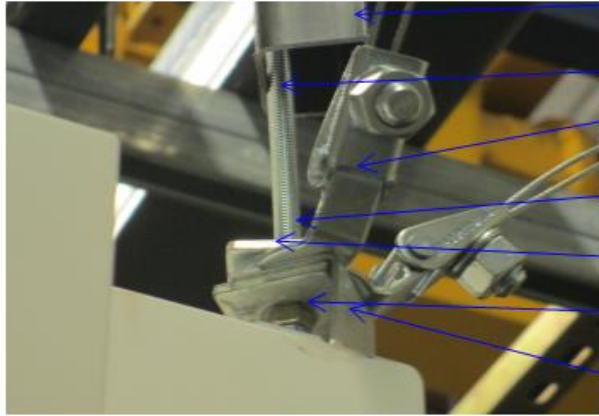


Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Stand Alone Modular Unit **Serial Number:** N/A

UUT 1


Mounting Details:

Mounting Hardware



- 3' x 1-5/8" x 1-5/8" 12 ga plain steel half slot strut channel
- 3/8" A307 threaded rod
- (2) Mason SCB-0/SCBH-0 Cable Assemblies
- 3/8" nut, not visible in picture. Installed on top of plate washer
- 3/8" plate washer
- 3/8" nut
- (2) Price mounting bracket(PN: 272272-001), Bracket constructed of 0.110' carbon steel.

Mounting Hardware at Fixture



- Top of channel: 3/8" washer and nut
- Bottom of channel: 3/8" washer and nut
- 1-5/8" x 1-5/8" 12 ga plain steel half slot strut channel
- 3/8" A307 threaded rod
- Mason UCC 1 Rod Clamps
- (2) Mason SCB-0/SCBH-0 Cable Assemblies

UNIT UNDER TEST (UUT) SUMMARY SHEET

1900461-CR-001 R3



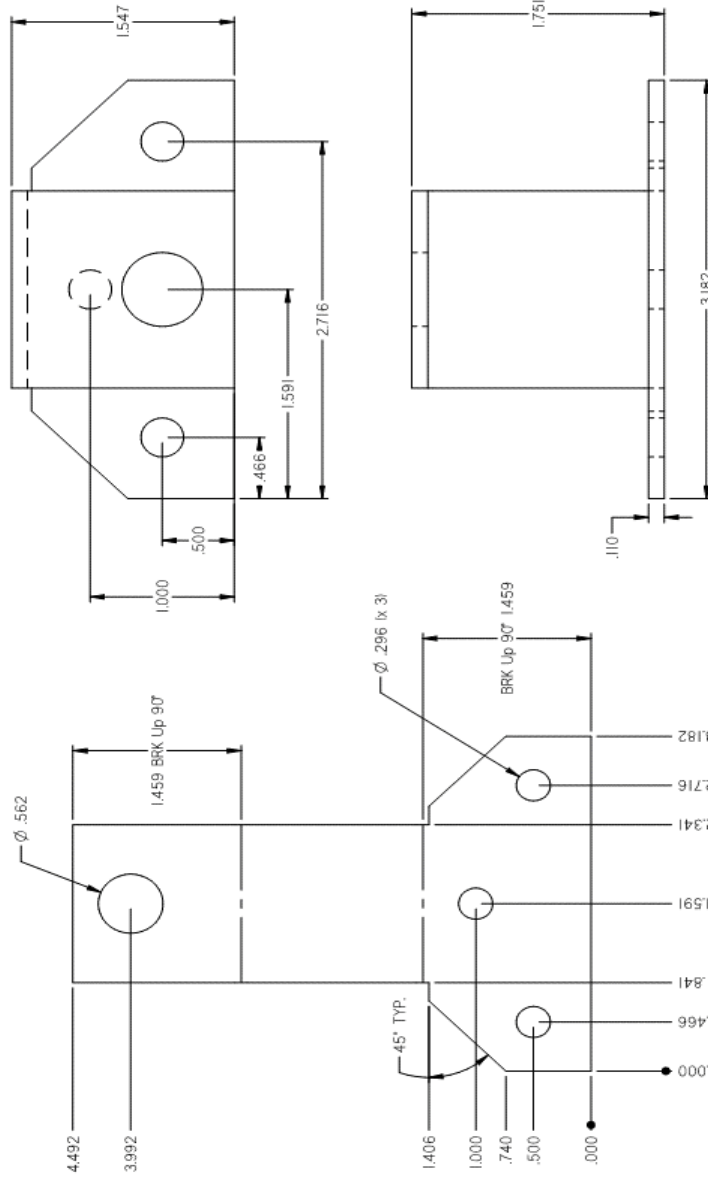
Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Stand Alone Modular Unit

Serial Number: N/A

UUT 1

Price Mounting Bracket Details:

Issued date	Blank qty	Part qty	Factory order no	Completion date	Scr date	Comment Tag	Operator initials



FORMED VIEWS

FLAT PATTERN

Material Description: GALV SH: .110(.099-.117) 48" X 96"				Description: SEISMIC BRACKET OSHPD			
Part No: 012170-001				Drawn by: JS			
Atlanta				Scale: 1:1.25			
Casa Grande				Date Issued: 8/15/2019			
Part No:				Status:			
Part No:				Drawing no: 272272			
Part No:				Revision: 0			
Part No:				Sheet 1 of 1			
Part No:				Solid Edge			
Rev Description				ECN Date (y/m/d) By			

Print Date: 8/15/2020 - 272272.rfl

Engineering Request No:

UNIT UNDER TEST (UUT) SUMMARY SHEET



1900461-CR-001 R3

Manufacturer: Price Industries Ltd.	UUT 2
Model Line: ULTRASUITE	
Model Number: ULTRASUITE - Ganged Modular Units Serial Number: N/A	

Product Construction Summary:
Aluminum with Polymer Perforated Diffuser Face, array installation with 18"x 24" x 24" and 18" x 48" x 24" lighting modules.

Options/Subcomponent Summary:
Subcomponents: Four (4) modules (18"x24"x24") and seven (7) modules (18"x48"x24") array, 12 Driver-H, 12 Driver-V, Low voltage terminal block (KT3), High Voltage Terminal Block (TB300-03QC6), High Voltage Terminal Block (TB300-04QC16), LED Drivers (HLG-100H24B), Solid State Relay (KSI600D60-L)

Option: Price Industry Hospital Grade Welded Ceiling System (HGWC) used at all array voids. (PN: 5116 & 5117, 6060-T5 Al)

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
793	170.5	97.75	18	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156 (2018)	2.0	1.0	1.5	3.2	2.4	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



UUT was mounted to ceiling mount test fixture with sixteen (16) 1/2" A307 threaded rod and Mason UCC-1 rod clamps, two (2) used per 3' threaded rod/Unistrut assembly. Each rod/Unistrut assembly attached to the fixture with two (2) 1/2" nuts and two (2) 1/2" washers. Sixteen (16) Mason SCB-2/SCBH-2 cable assemblies (pre stretched gal. aircraft cable 3/16"Ø) were used to support the unit. Cables were hung at 45° (±15°). See mounting details on page two for mounting detail specifics. Unit maintained structural integrity and remained functional per manufacturer requirement. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET



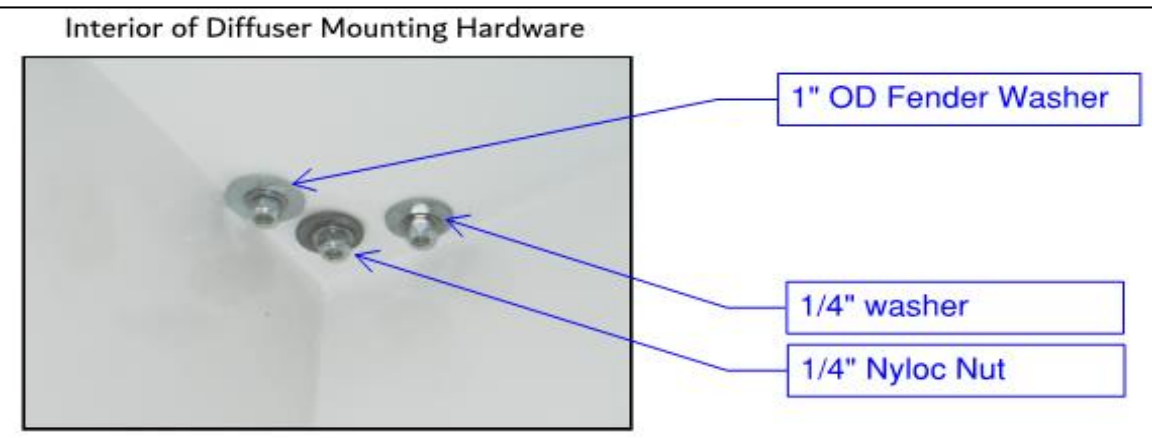
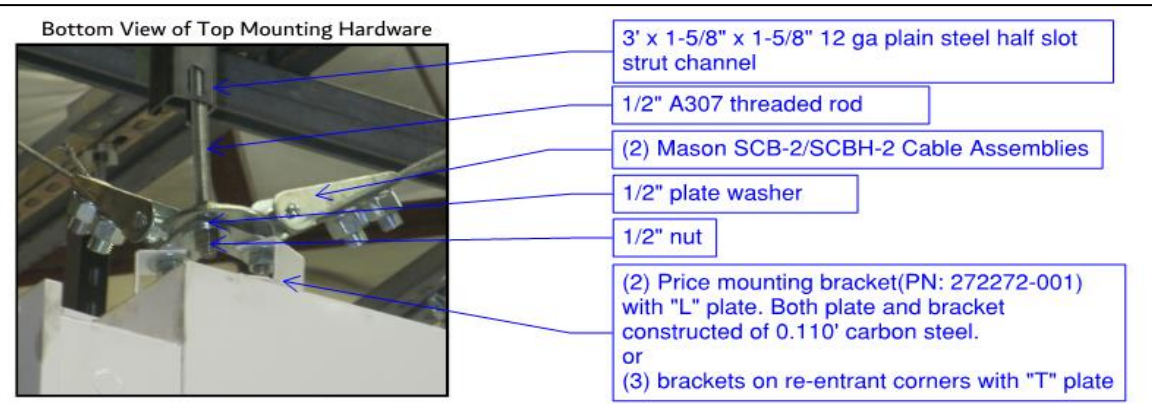
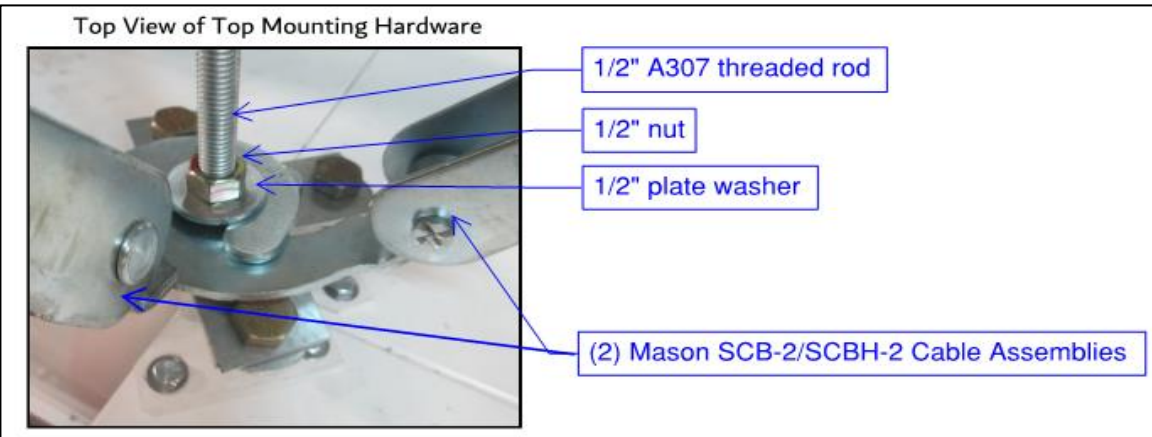
1900461-CR-001 R3

Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Ganged Modular Units **Serial Number:** N/A

UUT 2

Mounting Details:

Mounting brackets, carbon steel - 0.110" thick (Price PN: 272272-001), shall be installed with (3) 1/4" bolts with 1" OD fender washers. Re-entrant corners will use (3) brackets connected with "T" top plate and (2) brackets at braced corners connected with "L" plate. Detail for "T" and "L" brackets shown below. No portion of the configured test unit was more than 4 feet from a seismic brace. HGWC used in all array voids, details for HGWC shown below.



UNIT UNDER TEST (UUT) SUMMARY SHEET

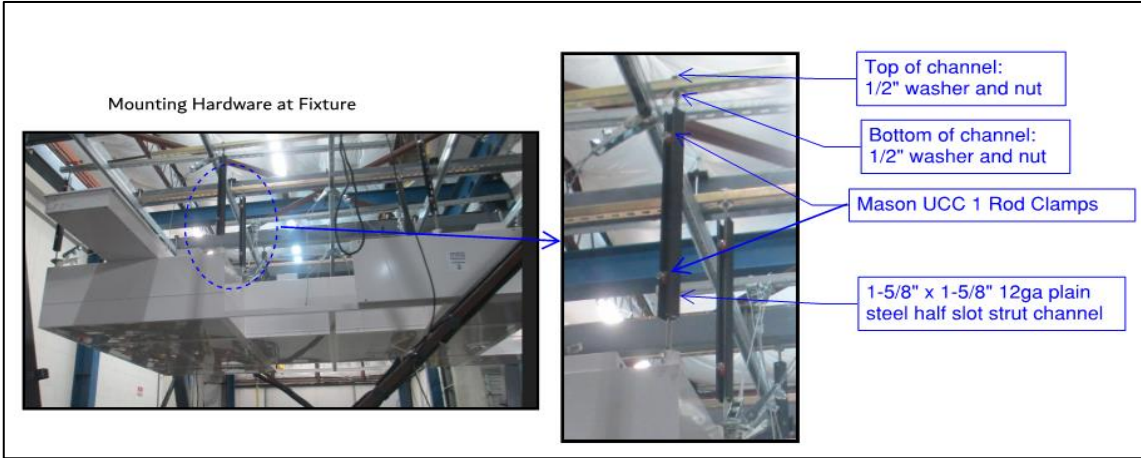


1900461-CR-001 R3

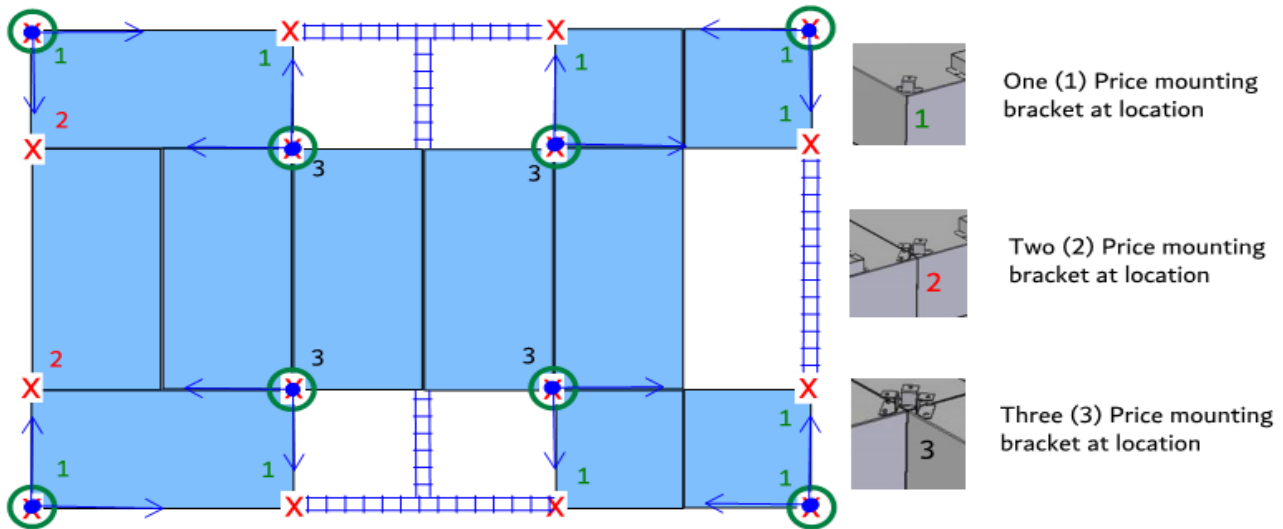
Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Ganged Modular Units
Serial Number: N/A

UUT 2

Mounting Details:



Mounting Parameters for Test Unit:



- X** 1/2 " A307 THREADED ROD/ 2.5" UNISTRUT ASSEMBLY AND MOUNTING BRACKET
- (X)** MASON SCB2/SCBH2 CABLE BRACES. Max distance from any portion of unit to cables = 4'
- PRICE INDUSTRIES (PN: 5116-Full Tee, 5117-Half Tee), 6060-T5 Aluminum HOSPITAL GRADE WELDED CEILIN SYSTEM (HGWC)
- Bracing Direction for tested unit
- Attachment to ceiling fixture
- Attachment to test unit

UNIT UNDER TEST (UUT) SUMMARY SHEET

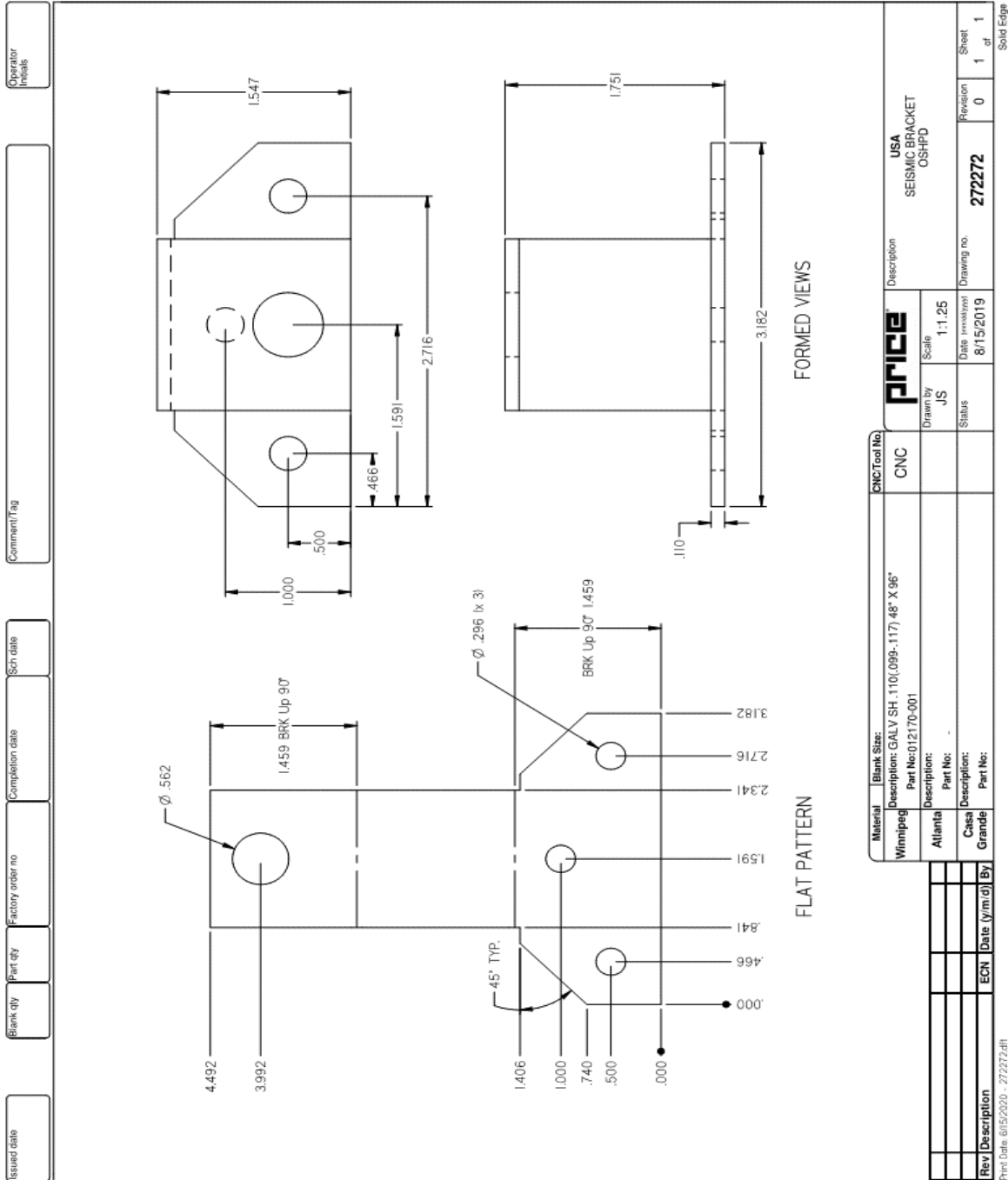
1900461-CR-001 R3



Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Ganged Modular Units
Serial Number: N/A

UUT 2

Price Mounting Bracket Details:



UNIT UNDER TEST (UUT) SUMMARY SHEET

1900461-CR-001 R3



Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Ganged Modular Units
Serial Number: N/A

UUT 2

Price "T" Bracket Details:

network File Location: \\pagnis\price\price\environments\usa\manufacturing_usa\stx\AT1994561\2213-UAT

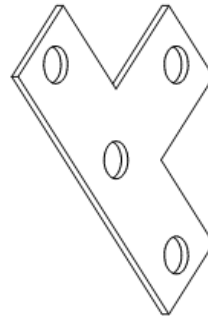
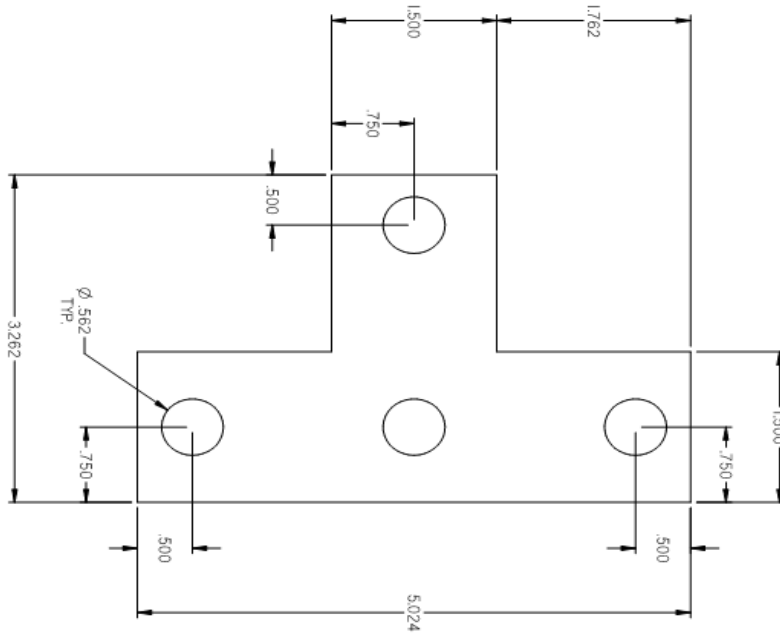
Part Date: 6/15/2020 - 272273.dwg

Rev	Description	ECN	Date (y/m/d)	By

Material	Blank Size:	CNC/Tool No.
Winnipeg	Description: GALV SH - 110(0398-117) 48" X 96"	
Atlanta	Part No: 012170-001	
Grande	Description: -	
	Part No: -	
	Part No: -	

DASH NO.	003	DESCRIPTION	3 BRACKET, T-SHAPED
Drawn by	KYR	Scale	NTS
Date (m/d/y)	6/15/2020	Drawing no.	272273
Status		Revision	0
		Sheet	3 of 4
			Solid Edge

Engineering Request No.:



Issued date	Blank qty	Part qty	Factory order no	Completion date	Start date	Comment/Tag	Operator initials

UNIT UNDER TEST (UUT) SUMMARY SHEET

1900461-CR-001 R3



Manufacturer: Price Industries Ltd.
Model Line: ULTRASUITE
Model Number: ULTRASUITE - Ganged Modular Units
Serial Number: N/A

UUT 2

Price "L" Bracket Details:

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Material	Blank Size:	CNC Tool No.	DASH NO.	001	2 BRACKET, L-SHAPED
Winnipeg	Description: GALV SH .110(.009-.117) 48" X 96"		PRICE	Drawn by	USA
	Part No: 12170-001			KVR	DESCRIPTION
				Scale	SIEMENS BRACKET PLATES
				NTS	
				Date (mm/yy)	Drawing no.
				6/15/2020	272273
				Status	Revision
					0
					Sheet
					1 of 4
					Solid Edge