



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0705

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Carel USA

Manufacturer's Technical Representative: Bryan Bomberger

Mailing Address: 385 S Oak Street, Manheim, PA 17545

Telephone: (717) 664-0500

Email: bryan.bomberger@carel.com

Product Information

Product Name: Air Conditioning Units

Product Type: Humidification Systems

Product Model Number: HeaterSteam and UltimateSAM

General Description: HeaterSteam Boilers and UltimateSAM Distribution Grids
REQUIREMENT FOR ACU INSTALLATIONS: Cross braces required in rigid base mounted ACUs.
See Line Drawings.

Mounting Description: Wall Mounted Boilers, Floor and Ceiling Mounted Distribution Grids in Suspended Ducts, Distribution
Grids Mounted in Rigid Base Mounted AHU. See UUT Sheets for seismic mounting kits.

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: VMC Group

Contact Person: John Giuliano

Mailing Address: Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: john.giuliano@thvmcgroup.com

Title: President





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

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

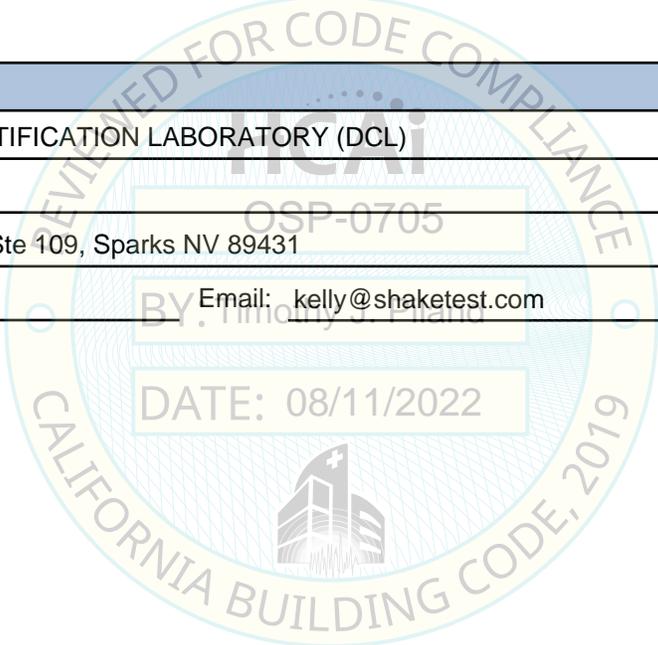
Company Name: THE VMC GROUP
Name: Kenneth Tarlow California License Number: S2851
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)
Contact Person: Kelly LaPlace
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431
Telephone: (775) 358-5085 Email: kelly@shaketest.com





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = $z/h = 1$ [Boilers/Grids in AHU (1.44); Grids in Suspended Duct (1.50)];
 $z/h = 0$ (1.13)

SDS (Design spectral response acceleration at short period, g) = 2.00 ($z/h = 1$) & 2.50 ($z/h = 0$)

a_p (Amplification factor) = 1.0 (Wall Mounted Boilers; Grids Installed in Base Mounted AHUs); 2.5 (Grids Installed in Suspended Ducts)

R_p (Response modification factor) = 2.5 (Wall Mounted Boilers; Grids Installed in Base Mounted AHUs); 6.0 (Grids Installed in Suspended Ducts)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment



HCAI Approval (For Office Use Only) - Approval Expires on 08/11/2028

Date: 8/11/2022

Name: Timothy Piland

BY: Timothy J. Piland

Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = See Above

$z/h =$ See Above

Condition of Approval (if applicable):



Table 1a - heaterSteam Humidifer Boiler Cabinets

Model	Max Rating [kg/h]	Max Package Dimensions [in]			Max Weight [lb]	Mounting Configuration	Required Seismic Mounting Kit	UUT					
		Width	Depth	Height									
UR002HU1U4	2	14	11	28	77	URKWBS0000	Extrapolated						
UR002HD1U4													
UR004HU1U4	4												
UR004HD1U4													
UR006HU1U4	6												
UR006HD1U4													
UR006HW1U4													
UR006HK1U4													
UR006HL1U4													
UR006HM1U4													
UR006HN1U4	10												
UR010HW1U4													
UR010HK1U4													
UR010HL1U4													
UR010HM1U4													
UR010HN1U4													
UR013HK1U4	13												
UR013HL1U4													
UR013HM1U4		UUT-1											
UR013HN1U4													
UR020HW1U4	20	27.00	18.00	35.00	263	URKWBL0000	Interpolated						
UR020HK1U4													
UR020HL1U4													
UR020HM1U4													
UR020HN1U4													
UR027HK1U4	27												
UR027HL1U4													
UR027HM1U4													
UR027HN1U4													
UR040HL1U4	40							35.00	18.00	35.00	360	URKWBL0000	UUT-2
UR040HM1U4													
UR040HN1U4	53	35.00	18.00	35.00	360	URKWBL0000	Interpolated						
UR053HL1U4													
UR053HM1U4													
UR053HN1U4													
UR060HL1U4	60												
UR060HM1U4													
UR060HN1U4													
UR080HL1U4	80							35.00	18.00	35.00	360	URKWBL0000	UUT-3
UR080HM1U4													
UR080HN1U4													Interpolated

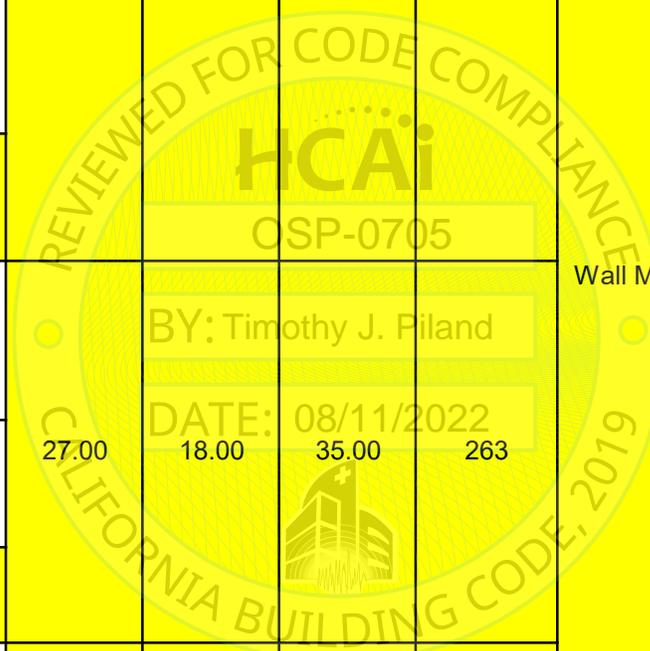


Table 1b - heaterSteam Enclosure Matrix

Part Number	Description	Max Package Dimensions [in]			Max Weight [lb]	Material	UUT
		Width	Depth	Height			
18C731A730 (top) 18C731A719 (base) 14C731A700 (back) 14C615A310 (front)	Small	14	11	28	34	Carbon Steel	UUT-1
14C731A754	Medium	27	18	35	62	Carbon Steel	UUT-2
14C731A755	Large	35	18	35	78	Carbon Steel	UUT-3



Table 2a: Steam Distributor Humidifiers Models, Suspended in Duct

Model	Pipe Type ⁴	Model No. ¹	Width [in]	Length [in]	Max Height [in]	Max Weight [lb]	Steam Capacity [lb/hr]	Material	MFR	UUT	
SAB	S	SABAASI ₂ U0	18	5	60	24	19	44	AISI 304	Carel USA	Interpolated
		SABA* ₂ SI* ₄ U0 SABAASI* ₄ U0 to SABAGSI* ₄ U0				28					
		SABB* ₂ SI* ₄ U0 SABBASI* ₄ U0 to SABBGSI* ₄ U0				36	66				
		SABC* ₂ SI* ₄ U0 SABCASI* ₄ U0 to SABCGSI* ₄ U0				44	88				
		SABD* ₂ SI* ₄ U0 SABDASI* ₄ U0 to SABDGI* ₄ U0				52	110				
		SABE* ₂ SI* ₄ U0 SABEASI* ₄ U0 to SABEGSI* ₄ U0				60	132				
		SABF* ₂ SI* ₄ U0 SABFASI* ₄ U0 to SABFGSI* ₄ U0				68	154				
		SABG* ₂ SI* ₄ U0 SABGASI* ₄ U0 to SABGGSI* ₄ U0				76	176				
		SABH* ₂ SI* ₄ U0 SABHASI* ₄ U0 to SABHGI* ₄ U0				84	198				
	L	SABA* ₂ LI* ₄ U0 SABAALI* ₄ U0 to SABAGLI* ₄ U0	18	5	60	29	73				
		SABB* ₂ LI* ₄ U0 SABBALI* ₄ U0 to SABBGLI* ₄ U0	24			38	110				
		SABC* ₂ LI* ₄ U0 SABCALI* ₄ U0 to SABCGLI* ₄ U0	30			47	147				
		SABD* ₂ LI* ₄ U0 SABDALI* ₄ U0 to SABDGLI* ₄ U0	36			55	183				
		SABE* ₂ LI* ₄ U0 SABEALI* ₄ U0 to SABEGLI* ₄ U0	42			64	220				
		SABF* ₂ LI* ₄ U0 SABFALI* ₄ U0 to SABFGLI* ₄ U0	48			73	257				
		SABG* ₂ LI* ₄ U0 SABGALI* ₄ U0 to SABGGI* ₄ U0	54			82	293				
		SABH* ₂ LI* ₄ U0 SABHALI* ₄ U0 to SABHGLI* ₄ U0	60			91	330				
	H	SABA* ₂ HI* ₄ U0 SABA* ₂ HI* ₄ U0 to SABAGHI* ₄ U0	18	5	60	33	66				
		SABB* ₂ HI* ₄ U0 SABB* ₂ HI* ₄ U0 to SABBGHI* ₄ U0	24			44	110				
		SABC* ₂ HI* ₄ U0 SABC* ₂ HI* ₄ U0 to SABCGHI* ₄ U0	30			56	154				
		SABD* ₂ HI* ₄ U0 SABD* ₂ HI* ₄ U0 to SABDGI* ₄ U0	36			68	198				
		SABE* ₂ HI* ₄ U0 SABE* ₂ HI* ₄ U0 to SABEGHI* ₄ U0	42			80	242				
		SABF* ₂ HI* ₄ U0 SABF* ₂ HI* ₄ U0 to SABFGHI* ₄ U0	48			91	286				
		SABG* ₂ HI* ₄ U0 SABG* ₂ HI* ₄ U0 to SABGGHI* ₄ U0	54			103	330				
		SABH* ₂ HI* ₄ U0 SABH* ₂ HI* ₄ U0 to SABHGI* ₄ U0	60			115	374				

1) Refer to Figure 1 for description of model number characters.
² refers to the allowable height of grid, designated by A through G
⁴ refers to whether the grid is provided by the manufacturer assembled or unassembled, designated by 2 or 3
2) Refer to Table 2c for required seismic mounting kits
3) Dimensions do not include seismic mounting kits
4) Refer to Figure 1, Model Number Nomenclature, for description of Pipe Types (Uprights)

Table 2a: Steam Distributor Humidifiers Models, Suspended in Duct (Continued)

Model	Pipe Type ⁴	Model No. ¹	Width [in]	Length [in]	Max Height [in]	Max Weight [lb]	Steam Capacity [lb/hr]	Material	MFR	UUT
SAT	S	SATA* ₂ SI* ₄ U0 SATAASI* ₄ U0 to SATAFSI* ₄ U0	18	5	60	31	132	AISI 304	Carel USA	Interpolated
		SATB* ₂ SI* ₄ U0 SATBASI* ₄ U0 to SATBFSI* ₄ U0	24			40	198			
		SATC* ₂ SI* ₄ U0 SATCASI* ₄ U0 to SATCFSI* ₄ U0	30			48	264			
		SATD* ₂ SI* ₄ U0 SATDASI* ₄ U0 to SATDFSI* ₄ U0	36			57	330			
		SATE* ₂ SI* ₄ U0 SATEASI* ₄ U0 to SATEFSI* ₄ U0	42			65	396			
		SATF* ₂ SI* ₄ U0 SATFASI* ₄ U0 to SATFFSI* ₄ U0	48			74	462			
		SATG* ₂ SI* ₄ U0 SATGASI* ₄ U0 to SATGFSI* ₄ U0	54			83	528			
		SATH* ₂ SI* ₄ U0 SATHASI* ₄ U0 to SATHFSI* ₄ U0	60			91	594			
	L	SATA* ₂ LI* ₄ U0 SATAALI* ₄ U0 to SATAFLI* ₄ U0	18	5	60	32	220			
		SATB* ₂ LI* ₄ U0 SATBALI* ₄ U0 to SATBFLI* ₄ U0	24			41	330			
		SATC* ₂ LI* ₄ U0 SATCALI* ₄ U0 to SATCFLI* ₄ U0	30			51	440			
		SATD* ₂ LI* ₄ U0 SATDALI* ₄ U0 to SATDFLI* ₄ U0	36			60	550			
		SATE* ₂ LI* ₄ U0 SATEALI* ₄ U0 to SATEFLI* ₄ U0	42			69	660			
		SATF* ₂ LI* ₄ U0 SATFALI* ₄ U0 to SATFFLI* ₄ U0	48			78	770			
		SATG* ₂ LI* ₄ U0 SATGALI* ₄ U0 to SATGFLI* ₄ U0	54			87	880			
		SATH* ₂ LI* ₄ U0 SATHALI* ₄ U0 to SATHFLI* ₄ U0	60			97	990			
	H	SATA* ₂ HI* ₄ U0 SATAAHI* ₄ U0 to SATAFHI* ₄ U0	18	5	60	35	198			
		SATB* ₂ HI* ₄ U0 SATBAHI* ₄ U0 to SATBFHI* ₄ U0	24			47	330			
		SATC* ₂ HI* ₄ U0 SATCAHI* ₄ U0 to SATCFHI* ₄ U0	30			59	462			
		SATD* ₂ HI* ₄ U0 SATDAHI* ₄ U0 to SATDFHI* ₄ U0	36			71	594			
		SATE* ₂ HI* ₄ U0 SATEAHI* ₄ U0 to SATEFHI* ₄ U0	42			82	726			
		SATF* ₂ HI* ₄ U0 SATFAHI* ₄ U0 to SATFFHI* ₄ U0	48			94	858			
		SATG* ₂ HI* ₄ U0 SATGAHI* ₄ U0 to SATGFHI* ₄ U0	54			106	990			
		SATH* ₂ HI* ₄ U0 SATHAHI* ₄ U0 to SATHFHI* ₄ U0	60			117	1122			
SATHFHI2U0			122							

1) Refer to Figure 1 for description of model number characters.
² refers to the allowable height of grid, designated by A through G
⁴ refers to whether the grid is provided by the manufacturer assembled or unassembled, designated by 2 or 3

2) Refer to Table 2c for required seismic mounting kits
3) Dimensions do not include seismic mounting kits
4) Refer to Figure 1, Model Number Nomenclature, for description of Pipe Types (Uprights)

Table 2b: Steam Distributor Humidifiers Models, Base Mounted in AHU

Model	Pipe Type ⁴	Model No. ¹	Width [in]	Length [in]	Max Height [in]	Max Weight [lb]	Steam Capacity [lb/hr]	Material	MFR	UUT
SAB	S	SABA* ₂ SI* ₄ U0	18	5	96	39	44	AISI 304	Carel USA	Extrapolated
		SABAASI* ₄ U0 to SABAMSI* ₄ U0								
		SABB* ₂ SI* ₄ U0	24			50	66			
		SABBASI* ₄ U0 to SABBMSI* ₄ U0								
		SABC* ₂ SI* ₄ U0	30			61	88			
		SABCASI* ₄ U0 to SABCMSI* ₄ U0								
		SABD* ₂ SI* ₄ U0	36			73	110			
		SABDASI* ₄ U0 to SABDMSI* ₄ U0								
		SABE* ₂ SI* ₄ U0	42			84	132			
		SABEASI* ₄ U0 to SABEMSI* ₄ U0								
		SABF* ₂ SI* ₄ U0	48			96	154			
		SABFASI* ₄ U0 to SABFMSI* ₄ U0								
		SABG* ₂ SI* ₄ U0	54			107	176			
		SABGASI* ₄ U0 to SABGMSI* ₄ U0								
		SABH* ₂ SI* ₄ U0	60			118	198			
		SABHASI* ₄ U0 to SABHMSI* ₄ U0								
		SABI* ₂ SI* ₄ U0	66			130	220			
SABIASI* ₄ U0 to SABIMSI* ₄ U0										
SABJ* ₂ SI* ₄ U0	72	141	242							
SABJASI* ₄ U0 to SABJMMSI* ₄ U0										
SABK* ₂ SI* ₄ U0	78	153	264							
SABKASI* ₄ U0 to SABKMSI* ₄ U0										
SABL* ₂ SI* ₄ U0	84	164	286							
SABLASI* ₄ U0 to SABLMSI* ₄ U0										
SABM* ₂ SI* ₄ U0	90	175	308							
SABMASI* ₄ U0 to SABMMSI* ₄ U0										
SABN* ₂ SI* ₄ U0	96	187	330							
SABNASI* ₄ U0 to SABNMSI* ₄ U0										
SAB	L	SABA* ₂ LI* ₄ U0	18	5	96	41	73	AISI 304	Carel USA	UUT-6
		SABAALI* ₄ U0 to SABAMLI* ₄ U0								
		SABB* ₂ LI* ₄ U0	24		54	110				
		SABBALI* ₄ U0 to SABBMLI* ₄ U0								
		SABC* ₂ LI* ₄ U0	30		66	147				
		SABCALI* ₄ U0 to SABCMLI* ₄ U0								
		SABDGLI2U0	36		60	57	183			
		SABD* ₂ LI* ₄ U0	36		79	183				
		SABDALI* ₄ U0 to SABDMLI* ₄ U0								
		SABE* ₂ LI* ₄ U0	42		91	220				
		SABEALI* ₄ U0 to SABEMLI* ₄ U0								
		SABF* ₂ LI* ₄ U0	48		104	257				
		SABFALI* ₄ U0 to SABFMLI* ₄ U0								
		SABG* ₂ LI* ₄ U0	54		117	293				
		SABGALI* ₄ U0 to SABGMLI* ₄ U0								
		SABH* ₂ LI* ₄ U0	60		129	330				
		SABHALI* ₄ U0 to SABHMLI* ₄ U0								
SABI* ₂ LI* ₄ U0	66	142	367							
SABIALI* ₄ U0 to SABIMLI* ₄ U0										
SABJ* ₂ LI* ₄ U0	72	154	403							
SABJALI* ₄ U0 to SABJMLI* ₄ U0										
SABK* ₂ LI* ₄ U0	78	167	440							
SABKALI* ₄ U0 to SABKMLI* ₄ U0										
SABL* ₂ LI* ₄ U0	84	180	477							
SABLALI* ₄ U0 to SABLMLI* ₄ U0										
SABM* ₂ LI* ₄ U0	90	192	513							
SABMALI* ₄ U0 to SABMMLI* ₄ U0										
SABN* ₂ LI* ₄ U0	96	205	550							
SABNALI* ₄ U0 to SABNMLI* ₄ U0										
SAB	H	SABA* ₂ HI* ₄ U0	18	5	96	47	66	AISI 304	Carel USA	Interpolated
		SABAAHI* ₄ U0 to SABAMHI* ₄ U0								
		SABB* ₂ HI* ₄ U0	24			65	110			
		SABBAHI* ₄ U0 to SABBMHI* ₄ U0								
		SABC* ₂ HI* ₄ U0	30			84	154			
		SABCAHI* ₄ U0 to SABCMI* ₄ U0								
		SABD* ₂ HI* ₄ U0	36			102	198			
		SABDAHI* ₄ U0 to SABDMHI* ₄ U0								
		SABE* ₂ HI* ₄ U0	42			121	242			
		SABEAHI* ₄ U0 to SABEMHI* ₄ U0								
		SABF* ₂ HI* ₄ U0	48			139	286			
		SABFAHI* ₄ U0 to SABFMHI* ₄ U0								
		SABG* ₂ HI* ₄ U0	54			158	330			
		SABGAHI* ₄ U0 to SABGMHI* ₄ U0								
		SABH* ₂ HI* ₄ U0	60			176	374			
		SABHAHI* ₄ U0 to SABHMHI* ₄ U0								
		SABI* ₂ HI* ₄ U0	66			194	418			
SABIAHI* ₄ U0 to SABIMHI* ₄ U0										
SABJ* ₂ HI* ₄ U0	72	213	462							
SABJAH* ₄ U0 to SABJMHI* ₄ U0										
SABK* ₂ HI* ₄ U0	78	231	506							
SABKAHI* ₄ U0 to SABKMHI* ₄ U0										
SABL* ₂ HI* ₄ U0	84	250	550							
SABLAHI* ₄ U0 to SABLMI* ₄ U0										
SABM* ₂ HI* ₄ U0	90	268	594							
SABMAHI* ₄ U0 to SABMMHI* ₄ U0										
SABN* ₂ HI* ₄ U0	96	287	638							
SABNAHI* ₄ U0 to SABNMHI* ₄ U0										

1) Refer to Figure 1 for description of model number characters.
² refers to the allowable height of grid, designated by A through M
⁴ refers to whether the grid is provided by the manufacturer assembled or unassembled, designated by 2 or 3

2) Refer to Table 2d for required seismic mounting kits
 3) Dimensions do not include seismic mounting kits
 4) Refer to Figure 1, Model Number Nomenclature, for description of Pipe Types (Uprights)

Table 2b: Steam Distributor Humidifiers Models, Base Mounted in AHU (Continued)

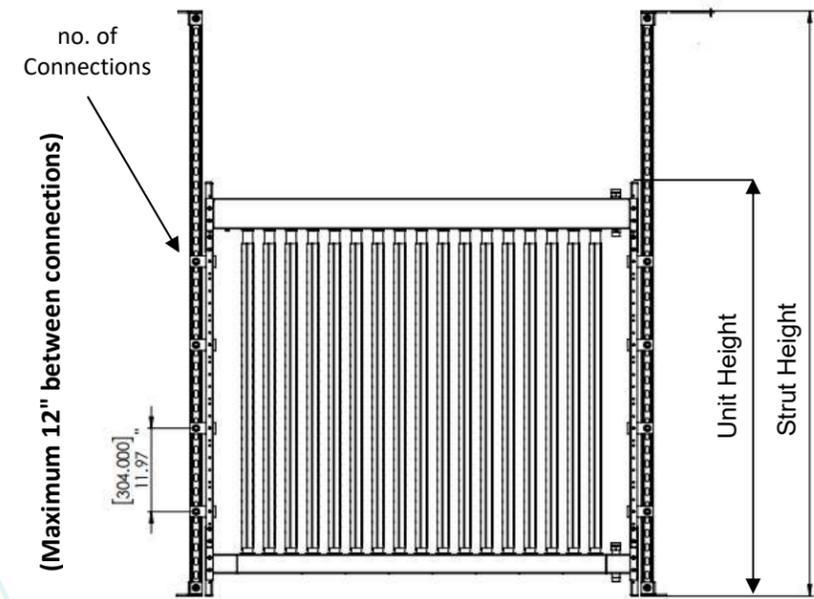
Model	Pipe Type ⁴	Model No. ¹	Width [in]	Length [in]	Max Height [in]	Max Weight [lb]	Steam Capacity [lb/hr]	Material	MFR	UUT
SAT	S	SATA* ₂ SI* ₄ U0	18	5	96	42	132	AISI 304	Carel USA	Interpolated
		SATAASI* ₄ U0 to SATALSI* ₄ U0								
		SATB* ₂ SI* ₄ U0	24			54	198			
		SATBASI* ₄ U0 to SATBLSI* ₄ U0								
		SATC* ₂ SI* ₄ U0	30			66	264			
		SATCASI* ₄ U0 to SATCLSI* ₄ U0								
		SATD* ₂ SI* ₄ U0	36			78	330			
		SATDASI* ₄ U0 to SATDLSI* ₄ U0								
		SATE* ₂ SI* ₄ U0	42			90	396			
		SATEASI* ₄ U0 to SATELSI* ₄ U0								
		SATF* ₂ SI* ₄ U0	48			102	462			
		SATFASI* ₄ U0 to SATFLSI* ₄ U0								
		SATG* ₂ SI* ₄ U0	54			113	528			
		SATGASI* ₄ U0 to SATGLSI* ₄ U0								
		SATH* ₂ SI* ₄ U0	60			125	594			
		SATHASI* ₄ U0 to SATHLSI* ₄ U0								
		SATI* ₂ SI* ₄ U0	66			137	660			
SATIASI* ₄ U0 to SATILSI* ₄ U0										
SATJ* ₂ SI* ₄ U0	72	149	726							
SATJASI* ₄ U0 to SATJLSI* ₄ U0										
SATK* ₂ SI* ₄ U0	78	161	792							
SATKASI* ₄ U0 to SATKLSI* ₄ U0										
SATL* ₂ SI* ₄ U0	84	173	858							
SATLASI* ₄ U0 to SATLLSI* ₄ U0										
SATM* ₂ SI* ₄ U0	90	185	924							
SATMASI* ₄ U0 to SATMLSI* ₄ U0										
SATN* ₂ SI* ₄ U0	96	197	990							
SATNASI* ₄ U0 to SATNLSI* ₄ U0										
SAT	L	SATA* ₂ LI* ₄ U0	18	5	96	44	220	AISI 304	Carel USA	Interpolated
		SATAALI* ₄ U0 to SATALLI* ₄ U0								
		SATB* ₂ LI* ₄ U0	24			57	330			
		SATBALI* ₄ U0 to SATBLLI* ₄ U0								
		SATC* ₂ LI* ₄ U0	30			70	440			
		SATCALI* ₄ U0 to SATCLLI* ₄ U0								
		SATD* ₂ LI* ₄ U0	36			83	550			
		SATDALI* ₄ U0 to SATDLLI* ₄ U0								
		SATE* ₂ LI* ₄ U0	42			96	660			
		SATEALI* ₄ U0 to SATELLI* ₄ U0								
		SATF* ₂ LI* ₄ U0	48			109	770			
		SATFALI* ₄ U0 to SATFLLI* ₄ U0								
		SATG* ₂ LI* ₄ U0	54			122	880			
		SATGALI* ₄ U0 to SATGLLI* ₄ U0								
		SATH* ₂ LI* ₄ U0	60			135	990			
		SATHALI* ₄ U0 to SATHLLI* ₄ U0								
		SATI* ₂ LI* ₄ U0	66			148	1100			
SATIALI* ₄ U0 to SATILLI* ₄ U0										
SATJ* ₂ LI* ₄ U0	72	161	1210							
SATJALI* ₄ U0 to SATJLLI* ₄ U0										
SATK* ₂ LI* ₄ U0	78	174	1320							
SATKALI* ₄ U0 to SATKLLI* ₄ U0										
SATL* ₂ LI* ₄ U0	84	188	1430							
SATLALI* ₄ U0 to SATLLLI* ₄ U0										
SATM* ₂ LI* ₄ U0	90	201	1540							
SATMALI* ₄ U0 to SATMLLI* ₄ U0										
SATN* ₂ LI* ₄ U0	96	214	1650							
SATNALI* ₄ U0 to SATNLLI* ₄ U0										
SAT	H	SATA* ₂ HI* ₄ U0	18	5	96	49	198	AISI 304	Carel USA	Interpolated
		SATAAHI* ₄ U0 to SATALHI* ₄ U0								
		SATB* ₂ HI* ₄ U0	24			68	330			
		SATBAHI* ₄ U0 to SATBLHI* ₄ U0								
		SATC* ₂ HI* ₄ U0	30			86	462			
		SATCAHI* ₄ U0 to SATCLHI* ₄ U0								
		SATD* ₂ HI* ₄ U0	36			105	594			
		SATDAHI* ₄ U0 to SATDLHI* ₄ U0								
		SATE* ₂ HI* ₄ U0	42			123	726			
		SATEAHI* ₄ U0 to SATELHI* ₄ U0								
		SATF* ₂ HI* ₄ U0	48			142	858			
		SATFAHI* ₄ U0 to SATFLHI* ₄ U0								
		SATG* ₂ HI* ₄ U0	54			160	990			
		SATGAHI* ₄ U0 to SATGLHI* ₄ U0								
		SATH* ₂ HI* ₄ U0	60			179	1122			
		SATHAHI* ₄ U0 to SATHLHI* ₄ U0								
		SATI* ₂ HI* ₄ U0	66			197	1254			
SATIAHI* ₄ U0 to SATILHI* ₄ U0										
SATJ* ₂ HI* ₄ U0	72	215	1386							
SATJAH* ₄ U0 to SATJLHI* ₄ U0										
SATK* ₂ HI* ₄ U0	78	234	1518							
SATKAHI* ₄ U0 to SATKLHI* ₄ U0										
SATL* ₂ HI* ₄ U0	84	252	1650							
SATLAHI* ₄ U0 to SATLLHI* ₄ U0										
SATM* ₂ HI* ₄ U0	90	271	1782							
SATMAHI* ₄ U0 to SATMLHI* ₄ U0										
SATN* ₂ HI* ₄ U0	96	289	1914							
SATNAHI* ₄ U0 to SATNLHI* ₄ U0										
		SATNLHI2U0				291	1914			UUT-7

1) Refer to Figure 1 for description of model number characters.
^{*}₂ refers to the allowable height of grid, designated by A through L
^{*}₄ refers to whether the grid is provided by the manufacturer assembled or unassembled, designated by 2 or 3

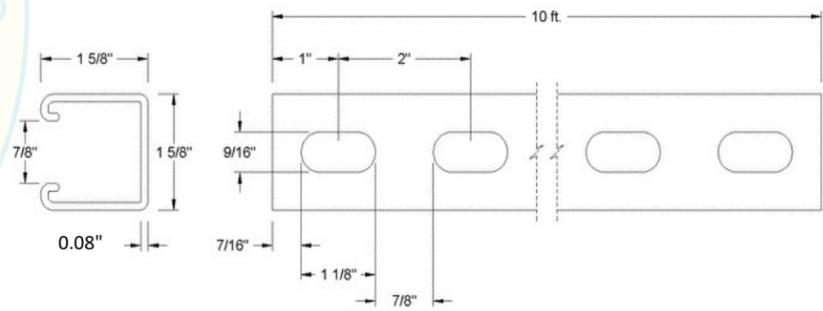
2) Refer to Table 2c for required seismic mounting kits
 3) Dimensions do not include seismic mounting kits
 4) Refer to Figure 1, Model Number Nomenclature, for description of Pipe Types (Printed)

Table 2c: Required Seismic Mounting Kits for Steam Distributor Humidifiers

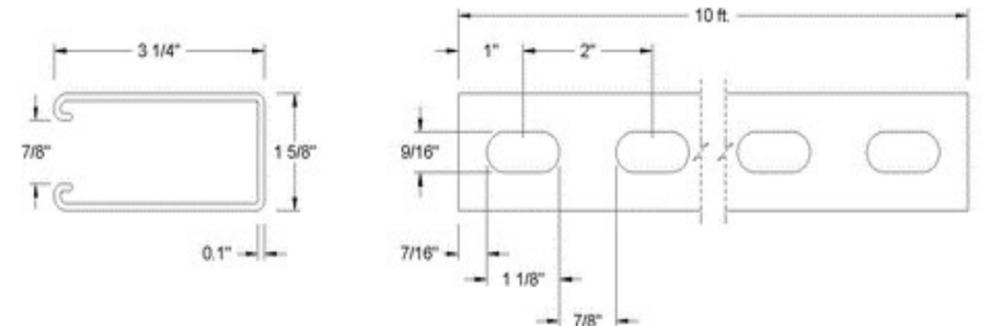
Model No. ¹	Mounting Method	Unit Height [in]	Seismic Mounting Kit Number	Strut Height [in]	Strut Cross Section Type	No. of Connections	UUT		
SABAASI2U0	Suspended in Duct	24	SAKSM01000	48	Standard	4	UUT-4		
SAB [*] ₁ A [*] ₃ I [*] ₄ U0		24	SAKSM01000	48		4	Interpolated		
SAB [*] ₁ B [*] ₃ I [*] ₄ U0		30	SAKSM02000	54		4			
SAB [*] ₁ C [*] ₃ I [*] ₄ U0		36	SAKSM03000	60		4			
SAB [*] ₁ D [*] ₃ I [*] ₄ U0		42	SAKSM04000	66		6			
SAB [*] ₁ E [*] ₃ I [*] ₄ U0		48	SAKSM05000	72		6			
SAB [*] ₁ F [*] ₃ I [*] ₄ U0		54	SAKSM06000	78		8			
SAB [*] ₁ G [*] ₃ I [*] ₄ U0		60	SAKSM07000	84		8			
SAT [*] ₁ A [*] ₃ I [*] ₄ U0		30	SAKSM02000	54	Standard	4		Interpolated	
SAT [*] ₁ B [*] ₃ I [*] ₄ U0		36	SAKSM03000	60		4			
SAT [*] ₁ C [*] ₃ I [*] ₄ U0		42	SAKSM04000	66		4			
SAT [*] ₁ D [*] ₃ I [*] ₄ U0		48	SAKSM05000	72		6			
SAT [*] ₁ E [*] ₃ I [*] ₄ U0		54	SAKSM06000	78		6			
SAT [*] ₁ F [*] ₃ I [*] ₄ U0		60	SAKSM07000	84		8			
SATHFHI2U0			60	SAKSM07000	84		8	UUT-5	
SAB [*] ₁ A [*] ₃ I [*] ₄ U0		Base Mounted AHU	24	SAKSM01000	48	Standard	4	Extrapolated	
SAB [*] ₁ B [*] ₃ I [*] ₄ U0			30	SAKSM02000	54		4		
SAB [*] ₁ C [*] ₃ I [*] ₄ U0	36		SAKSM03000	60	4				
SAB [*] ₁ D [*] ₃ I [*] ₄ U0	42		SAKSM04000	66	6				
SAB [*] ₁ E [*] ₃ I [*] ₄ U0	48		SAKSM05000	72	6				
SAB [*] ₁ F [*] ₃ I [*] ₄ U0	54		SAKSM06000	78	8				
SABDGLI2U0			60	SAKSM07000	84		8	UUT-6	
SAB [*] ₁ G [*] ₃ I [*] ₄ U0	60		SAKSM08000	84	Double	8	Interpolated		
SAB [*] ₁ H [*] ₃ I [*] ₄ U0	66		SAKSM09000	90		10			
SAB [*] ₁ I [*] ₃ I [*] ₄ U0	72		SAKSM10000	96		10			
SAB [*] ₁ J [*] ₃ I [*] ₄ U0	78		SAKSM11000	102		12			
SAB [*] ₁ K [*] ₃ I [*] ₄ U0	84		SAKSM12000	108		12			
SAB [*] ₁ L [*] ₃ I [*] ₄ U0	90		SAKSM13000	114		14			
SAB [*] ₁ M [*] ₃ I [*] ₄ U0	96		SAKSM14000	120		14			
SAT [*] ₁ A [*] ₃ I [*] ₄ U0	30		SAKSM02000	54		Standard		4	Interpolated
SAT [*] ₁ B [*] ₃ I [*] ₄ U0	36		SAKSM03000	60				4	
SAT [*] ₁ C [*] ₃ I [*] ₄ U0	42		SAKSM04000	66				4	
SAT [*] ₁ D [*] ₃ I [*] ₄ U0	48		SAKSM05000	72	6				
SAT [*] ₁ E [*] ₃ I [*] ₄ U0	54		SAKSM06000	78	6				
SAT [*] ₁ F [*] ₃ I [*] ₄ U0	60		SAKSM08000	84	8				
SAT [*] ₁ G [*] ₃ I [*] ₄ U0	66	SAKSM09000	90	8					
SAT [*] ₁ H [*] ₃ I [*] ₄ U0	72	SAKSM10000	96	10					
SAT [*] ₁ I [*] ₃ I [*] ₄ U0	78	SAKSM11000	102	10					
SAT [*] ₁ J [*] ₃ I [*] ₄ U0	84	SAKSM12000	108	12					
SAT [*] ₁ K [*] ₃ I [*] ₄ U0	90	SAKSM13000	114	12					
SAT [*] ₁ L [*] ₃ I [*] ₄ U0	96	SAKSM14000	120	14					
SATNLHI2U0		96	SAKSM14000	120		14	UUT-7		



Standard cross-section strut



Double cross-section strut channel



1) Refer to Figure XX for description of model number characters.

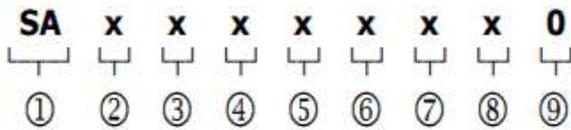
^{*}₁ refers to the allowable width of grid, designated by A through H for suspended in duct mounting, and A through N for base mounted AHU mounting

^{*}₃ refers to the allowable pipe/uprights sizing, designated by S, L, or H

^{*}₄ refers to whether the grid is provided by the manufacturer assembled or unassembled, designated by 2 or 3

Bolded character is the height designator which determines the necessary mounting kit

Figure 1: Certified Steam Distributor Humidifier Model Number Nomenclature



①	ID prefix			
②	Feed type:	B= Bottom feed T=Top feed		
③	Width:	Code	Dimension "X" mm (in)	No. of uprights
				152mm (6") spacing 76mm (3") spacing
		A=	447(17.75)	2 3
		B=	599(23.75)	3 5
		C=	751(29.75)	4 7
		D=	903(35.75)	5 9
		E=	1055(41.75)	6 11
		F=	1207(47.75)	7 13
		G=	1359(53.75)	8 15
		H=	1511(59.50)	9 17
		I=	1663(65.50)	10 19
		J=	1815(71.50)	11 21
		K=	1967(77.50)	12 23
		L=	2119(83.50)	13 25
		M=	2271(89.50)	14 27
		N=	2423(95.50)	15 29
		O=	2575(101.50)	16 31
		P=	2727(107.50)	17 33
		Q=	2879(113.50)	18 35
		R=	3031(119.50)	19 37
④	Height:	Code	Dimensions "Y" mm (in)	
			Bottom feed	Top feed
		A=	598(23.75)	749(29.50)
		B=	750(29.75)	901(35.50)
		C=	902(35.75)	1053(41.50)
		D=	1054(41.50)	1205(47.50)
		E=	1206(47.50)	1357(53.50)
		F=	1358(53.50)	1509(59.50)
		G=	1510(59.50)	1661(65.50)
		H=	1662(65.50)	1813(71.50)
		I=	1814(71.50)	1965(77.50)
		J=	1966(77.50)	2117(83.50)
		K=	2118(83.50)	2269(89.50)
		L=	2270(89.50)	2421(95.50)
		M=	2422(95.50)	2573(101.50)
		N=	2574(101.50)	2725(107.50)
		O=	2726(107.50)	2877(113.50)
		P=	2878(113.50)	3029(119.50)
		Q=	3030(119.50)	3181(125.25)
⑤	Uprights:	Code	Spacing mm (in)	Outer diameter mm (in)
		S=	152 (6.00)	35 (1.38)
		L=	152 (6.00)	45 (1.75)
		H=	76 (3.00)	35 (1.38)
⑥	Insulation:	I= insulated uprights w/ nozzles N= uninsulated uprights w/o nozzles		
⑦	Frame:	0= no frame, unassembled 1= no frame, assembled 2= with frame, unassembled 3= with frame, assemble		
⑧	Drain:	U= 3/4" Male NPT O= 3/4" Male Gas		
⑨				



UNIT UNDER TEST (UUT) Summary Sheet

UUT-1

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
heaterSteam Humidifier Boiler Cabinets	UR013HM1U4 with Seismic Mounting Kit URKWBS0000	Carel USA

Product Construction Summary

Carbon Steel Cabinet and Mounting Brackets

Options / Subcomponent Summary

Enclosure: Carel; Boiler: TUBILASER; Boiler Cover: DIFFEPLAST Heating Elements: IRCA - DIVISIONE RICA; Drain Pump: NEWA TECNO INDUSTRIA; Transformer: MARINI TRASFORMATORI; Temperature Probe: ITALCOPPIE; Safety Thermostat: CAMPINI; Display: Carel; Control Board: Carel; Contactor: ABB; Fill & Tempering Solenoid Valves: RPE SRL; Fan: SUNON; SSR: CARLO GAVAZZI; Fuses: LITTELFUSE, BUSSMANN; Fuseholders: ETI; AC/DC Converter: Carel; PTC Probe: SACET; Relays: FINDER, Carel; Switch: MOLVENO; Level Sensor: Carel; Conductivity Sensor: DIFFEPLAST

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
77	11.0	14.0	28.0	N/A	N/A	N/A

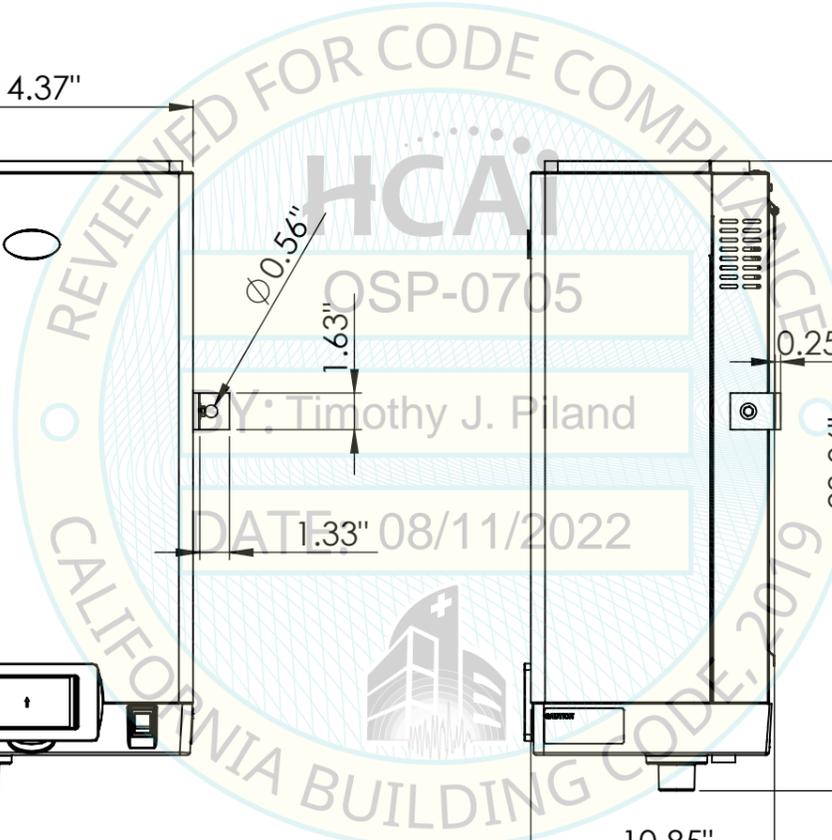
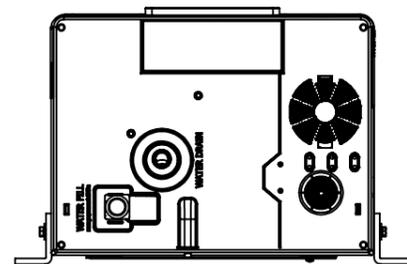
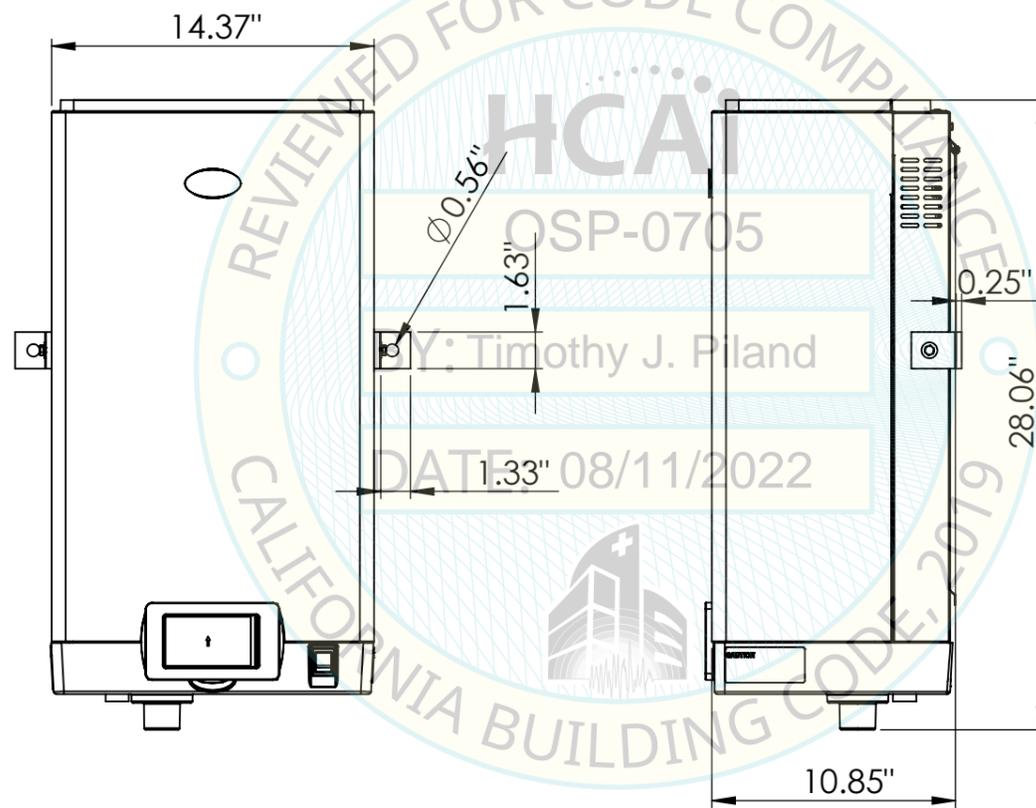
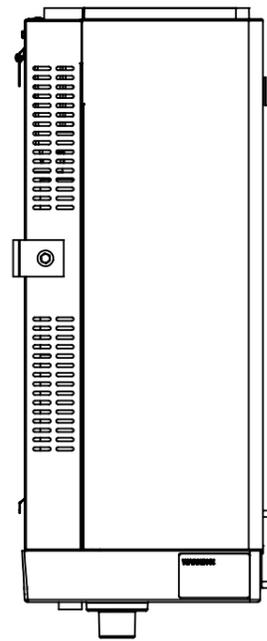
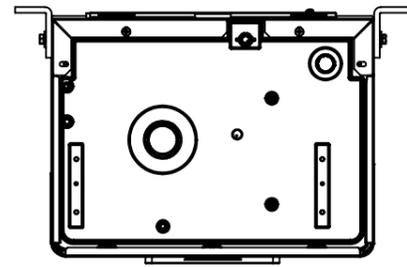
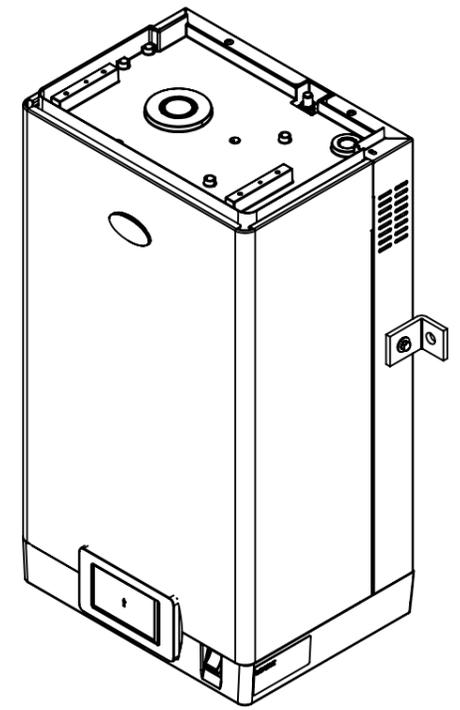
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

Test Mounting Details

UUT mounted to rigid wall fixture using (2) 3/8" Grade 5 bolts from seismic mounting brackets kit URKWBS0000, (1) #10-24 Grade 8 bolt from the bottom of the unit to the wall fixture, and (3) hooks at the top of the back panel of the cabinet which hang on a mounting bracket that is attached to the wall fixture with (4) #10-24 Grade 8 bolts. The (2) seismic mounting brackets are each attached to the side of the unit with (1) M6 A2 bolt. Unistrut seen is part of wall fixture.
Required Seismic Mounting Bracket/Kit Part Number: URKWBS0000



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



-	-	-	-	-	-
R0	FIRST PUBLICATION - PRIMA EMISSIONE	E. KHAIRALLAH	-	-	05/17/21
REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
DESCRIPTION - DESCRIZIONE UUT1: UR013HM1U4 + URKWBS0000 (Mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV. R-	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE ---	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO	PAGE - FOGLIO 1/1
ITEM CODE - CODICE ARTICOLO	PROJ - PROG J001	OTHER MATERIALS - ALTRI MATERIALI VEDI TABELLA - SEE TABLE	EQUIP - ATTREZZ -	()	SCALE - SCALA 1:8
					SIZE - DIM A3



UNIT UNDER TEST (UUT) Summary Sheet

UUT-2

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
heaterSteam Humidifier Boiler Cabinets	UR040HM1U4 with Seismic Mounting Kit URKWBL0000	Carel USA

Product Construction Summary

Carbon Steel Cabinet and Mounting Brackets

Options / Subcomponent Summary

Enclosure: Carel; Boiler: 4EMME; Boiler Cover: 4EMME Heating Elements: IRCA - DIVISIONE RICA; Drain Pump: NEWA TECNO INDUSTRIA; Transformer: MARINI TRASFORMATORI; Temperature Probe: ITALCOPPIE; Safety Thermostat: THERMODISC; Display: Carel; Control Board: Carel; Contactor: ABB; Fill & Tempering Solenoid Valves: RPE SRL, T&P; Fan: SAN JUN; SSR: CARLO GAVAZZI; Heat Sink: 2F ELETTRONICA; Fuses: LITTELFUSE, BUSSMANN; Fuseholders: ETI; AC/DC Converter: Carel; PTC Probe: SACET; Relays: FINDER, Carel; Switch: MOLVENO; Level Sensor: Carel; Conductivity Sensor: DIFFEPLAST; Foam Sensor: BIBETECH

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
263	18.0	27.0	35.0	N/A	N/A	N/A

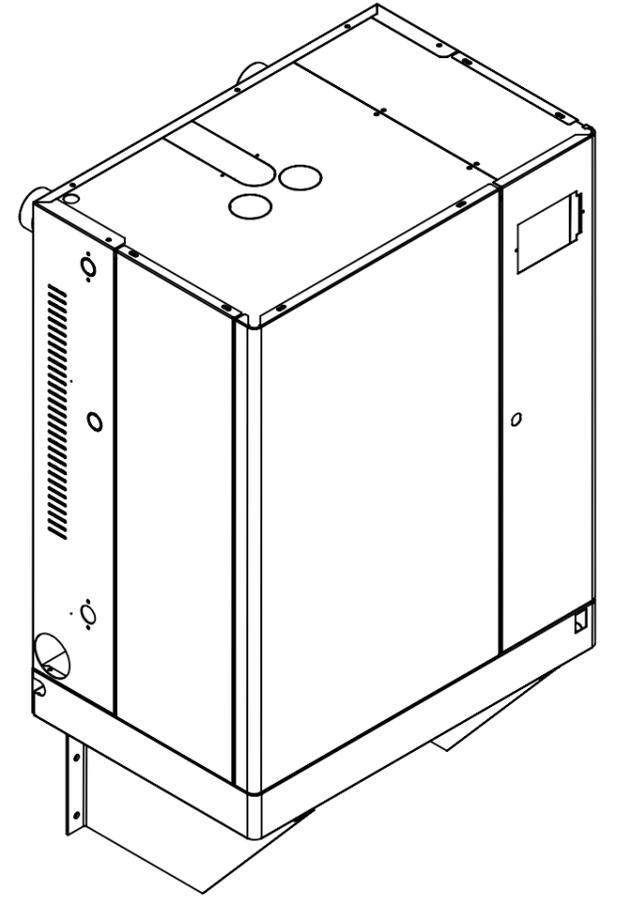
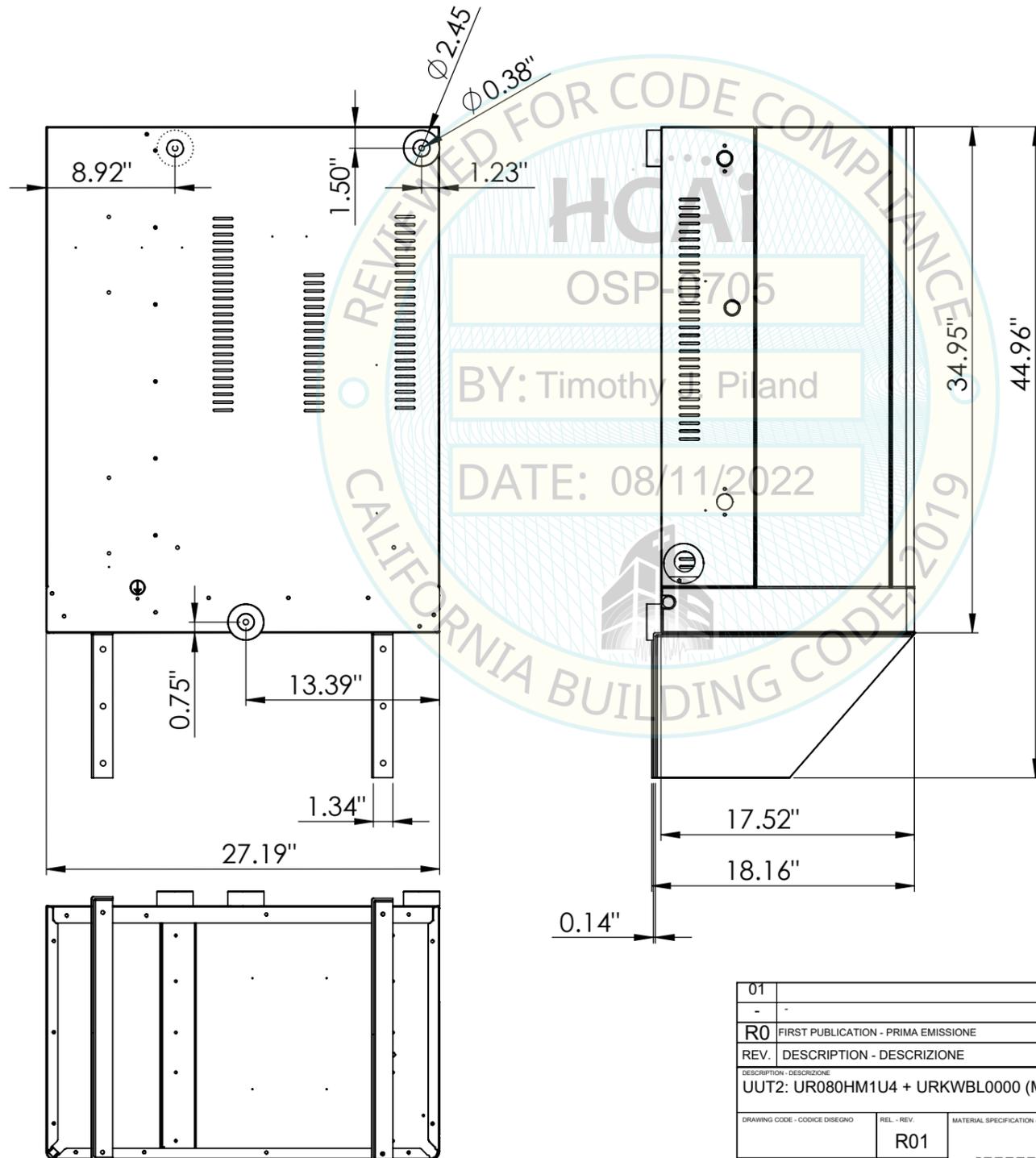
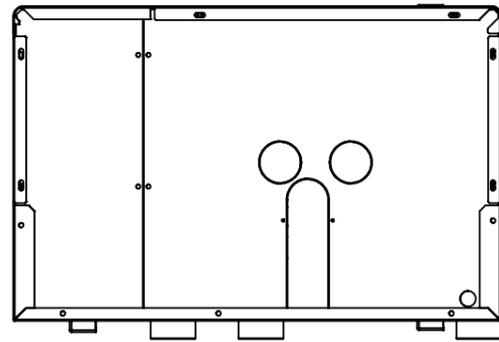
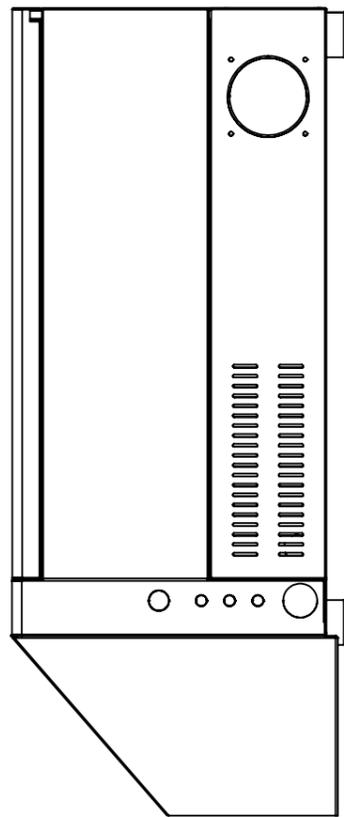
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

Test Mounting Details

UUT mounted to rigid wall fixture using (6) 3/8" Grade 5 bolts from seismic mounting brackets kit URKWBL0000, and (3) 3/8" Grade 5 bolts with rubber vibration spacers from the back panel of the unit to the wall fixture. The (2) seismic mounting brackets are each attached to the bottom of the unit with (2) M6 A2 bolts. Unistrut seen is part of wall fixture.
Required Seismic Mounting Bracket/Kit Part Number: URKWBL0000



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



01					
R0	FIRST PUBLICATION - PRIMA EMISSIONE				05/17/21
REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
DESCRIPTION - DESCRIZIONE UUT2: UR080HM1U4 + URKWBL0000 (Mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO	
	R01			1/1	CAREL
ITEM CODE - CODICE ARTICOLO	PROJ - PROG	OTHER MATERIALS - ALTRI MATERIALI	EQUIP - ATTREZZ	SCALE - SCALA	SIZE - DIM
	J001			1:10	A3



UNIT UNDER TEST (UUT) Summary Sheet

UUT-3

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
heaterSteam Humidifier Boiler Cabinets	UR080HM1U4 with Seismic Mounting Kit URKWBL0000	Carel USA

Product Construction Summary

Carbon Steel Cabinet and Mounting Brackets

Options / Subcomponent Summary

Enclosure: Carel; Boiler: 4EMME; Boiler Cover: 4EMME Heating Elements: IRCA - DIVISIONE RICA; Drain Pump: NEWA TECNO INDUSTRIA; Transformer: MARINI TRASFORMATORI; Temperature Probe: ITALCOPPIE; Safety Thermostat: THERMODISC; Display: Carel; Control Board: Carel; Contactor: ABB; Fill & Tempering Solenoid Valves: RPE SRL, T&P; Fan: SAN JUN; SSR: CARLO GAVAZZI; Heat Sink: 2F ELETTRONICA; Fuses: LITTELFUSE, ETI, BUSSMANN; Fuseholders: ETI, BUSSMANN; AC/DC Converter: Carel; PTC Probe: SACET; Relays: FINDER, Carel; Switch: MOLVENO; Level Sensor: Carel; Conductivity Sensor: DIFFEPLAST; Foam Sensor: BIRETECH

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
360	18.0	35.0	35.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

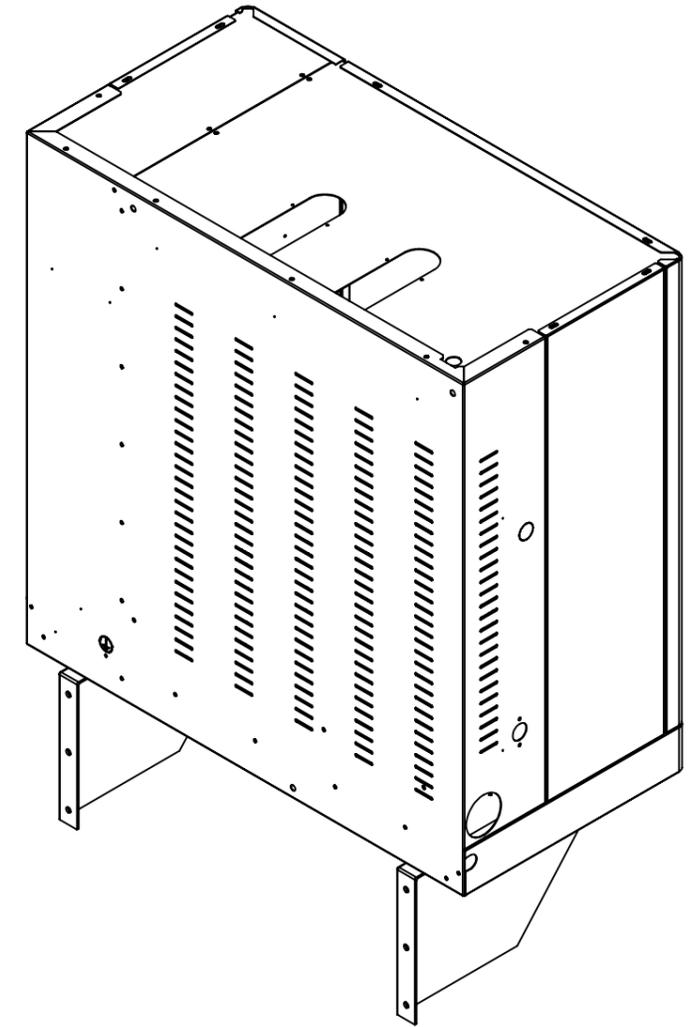
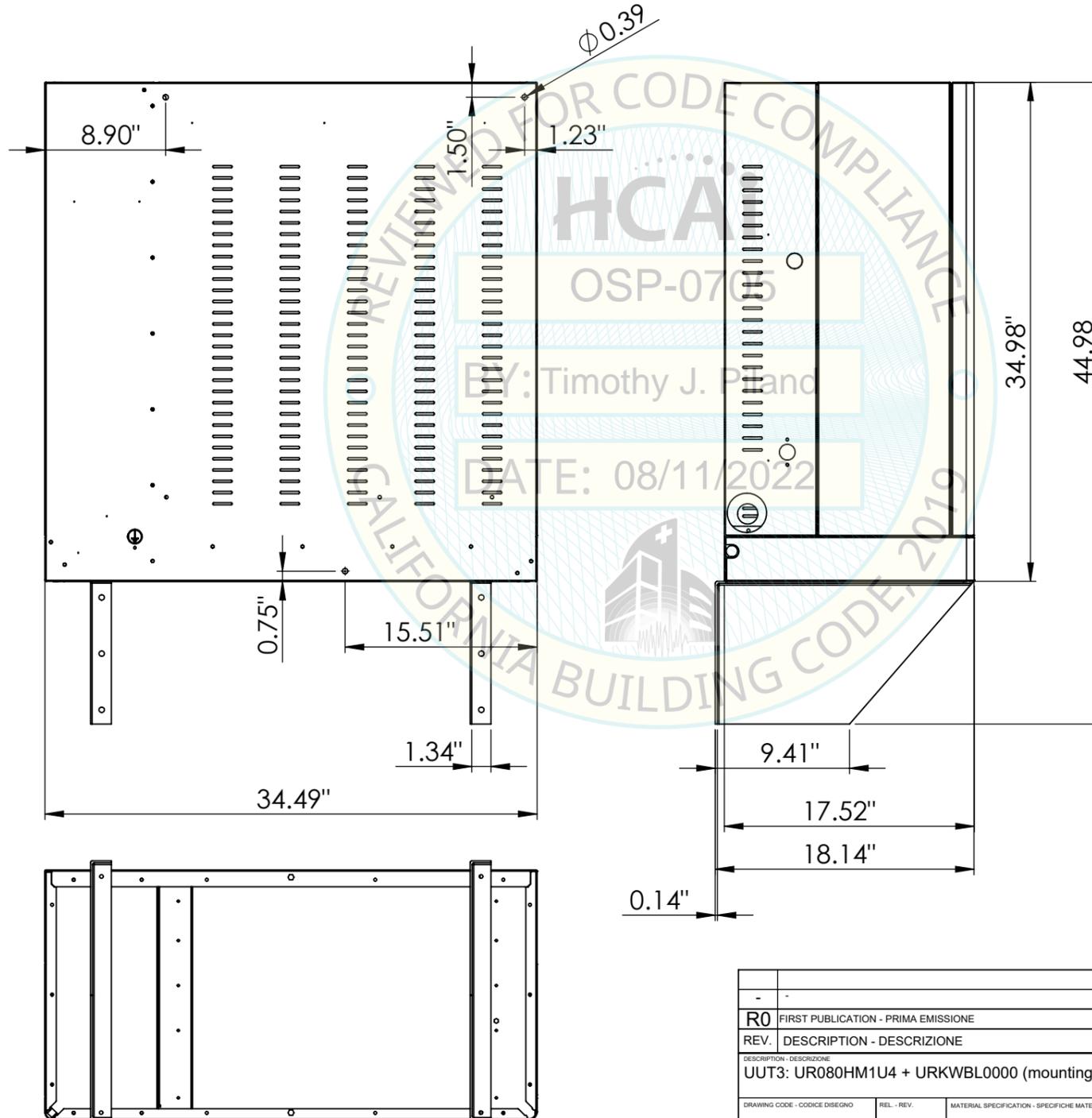
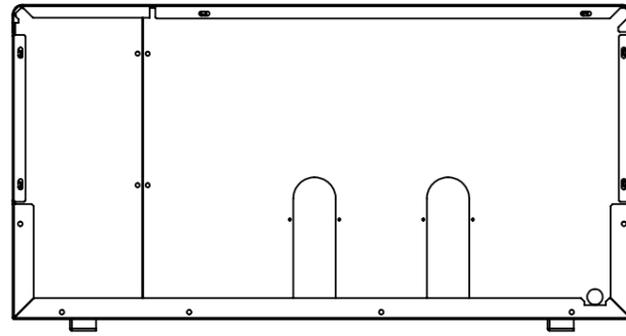
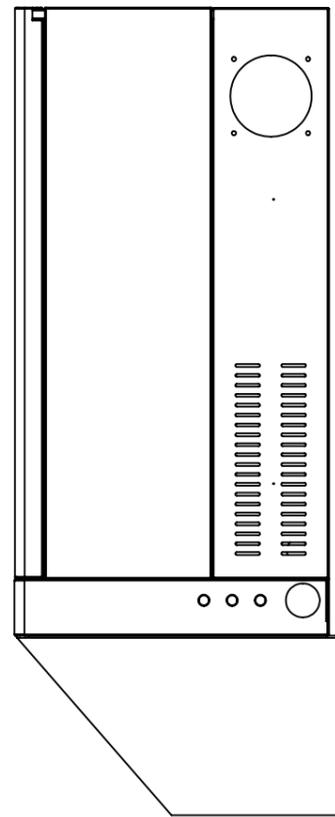
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-
		2.50	0.0	1.5	-	-	1.68	0.68

Test Mounting Details

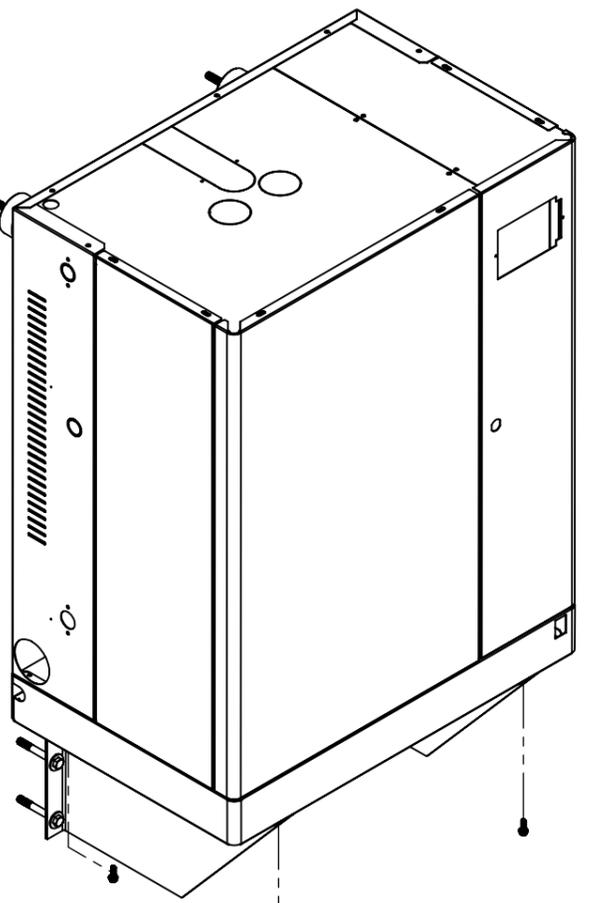
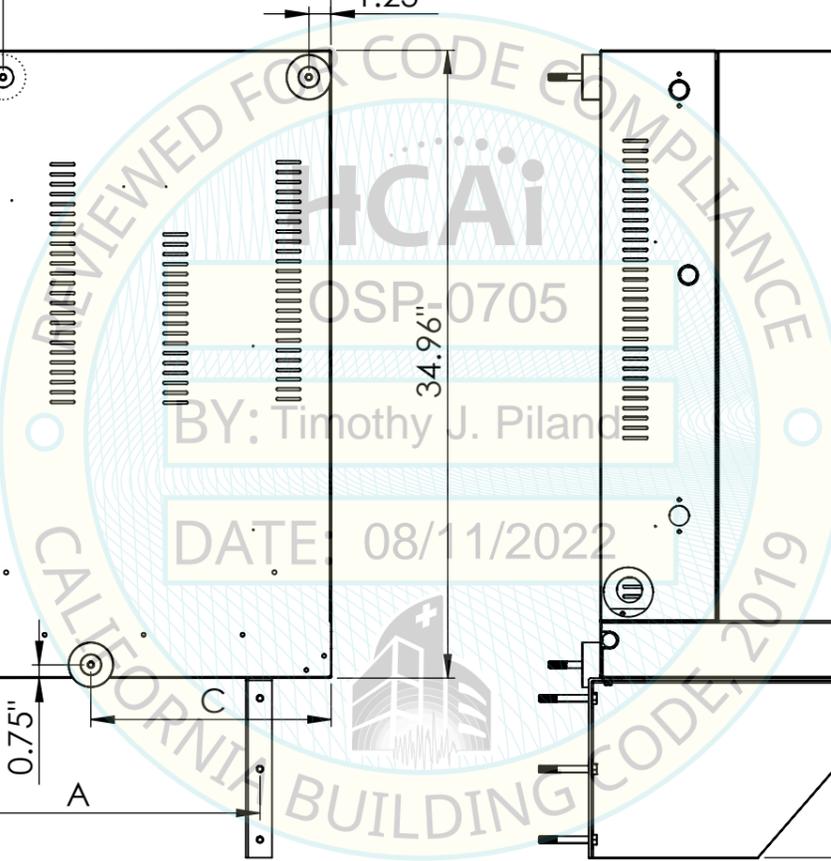
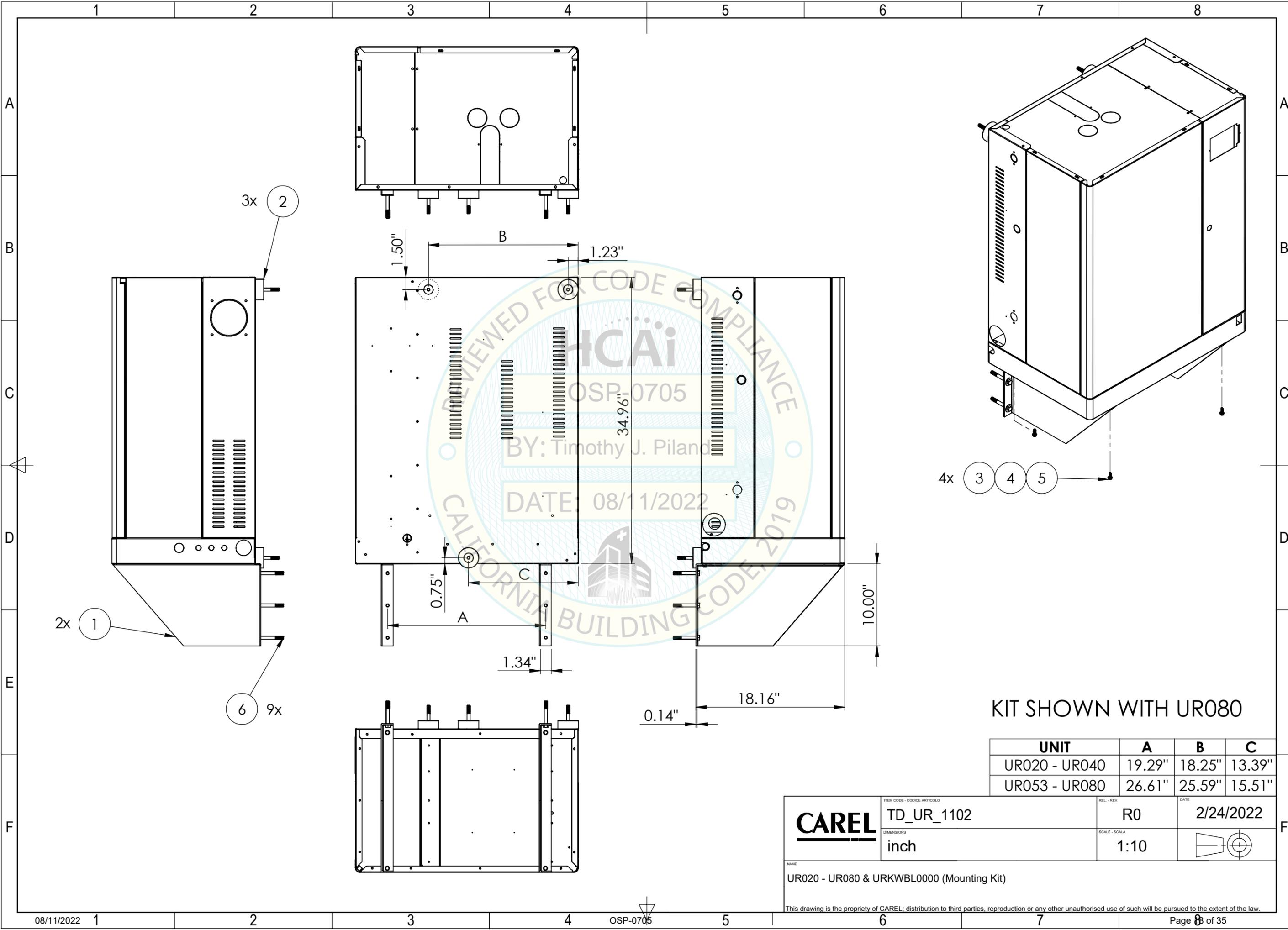
UUT mounted to rigid wall fixture using (6) 3/8" Grade 5 bolts from seismic mounting brackets kit URKWBL0000, and (3) 3/8" Grade 5 bolts with rubber vibration spacers from the back panel of the unit to the wall fixture. The (2) seismic mounting brackets are each attached to the bottom of the unit with (2) M6 A2 bolts. Unistrut seen is part of wall fixture.
Required Seismic Mounting Bracket/Kit Part Number: URKWBL0000



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



R0 FIRST PUBLICATION - PRIMA EMISSIONE		E.KHAIRALLAH		05/17/21	
REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
DESCRIPTION - DESCRIZIONE UUT3: UR080HM1U4 + URKWBL0000 (mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV R01	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE		COLOUR - COLORE	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO
ITEM CODE - CODICE ARTICOLO	PROJ - PROG	OTHER MATERIALS - ALTRI MATERIALI		EQUIP - ATTREZZ	()
			SCALE - SCALA		1:10
			SIZE - DIM		A3
			PAGE - FOGLIO		1/1
			CAREL		



KIT SHOWN WITH UR080

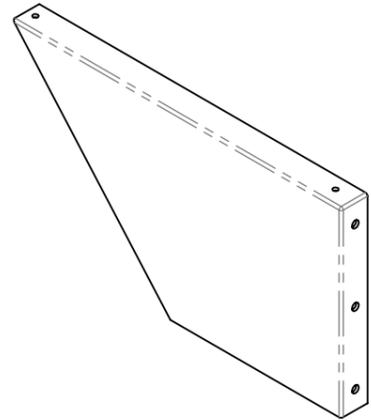
UNIT	A	B	C
UR020 - UR040	19.29"	18.25"	13.39"
UR053 - UR080	26.61"	25.59"	15.51"

CAREL	ITEM CODE - CODICE ARTICOLO TD_UR_1102	REL. - REV. R0	DATE 2/24/2022
	DIMENSIONS inch	SCALE - SCALA 1:10	

NAME
UR020 - UR080 & URKWBL0000 (Mounting Kit)

This drawing is the propriety of CAREL; distribution to third parties, reproduction or any other unauthorised use of such will be pursued to the extent of the law.

Parts Included In Kit



2x Wall Bracket

1



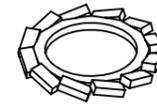
3x Rubber Spacer

2



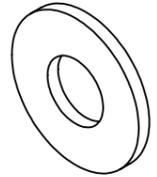
4x M6x25 Hex Bolt A2

3



4x M6 Lock Washer

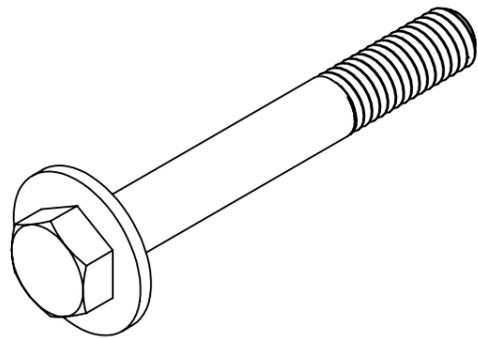
4



4x M6x18 Washer

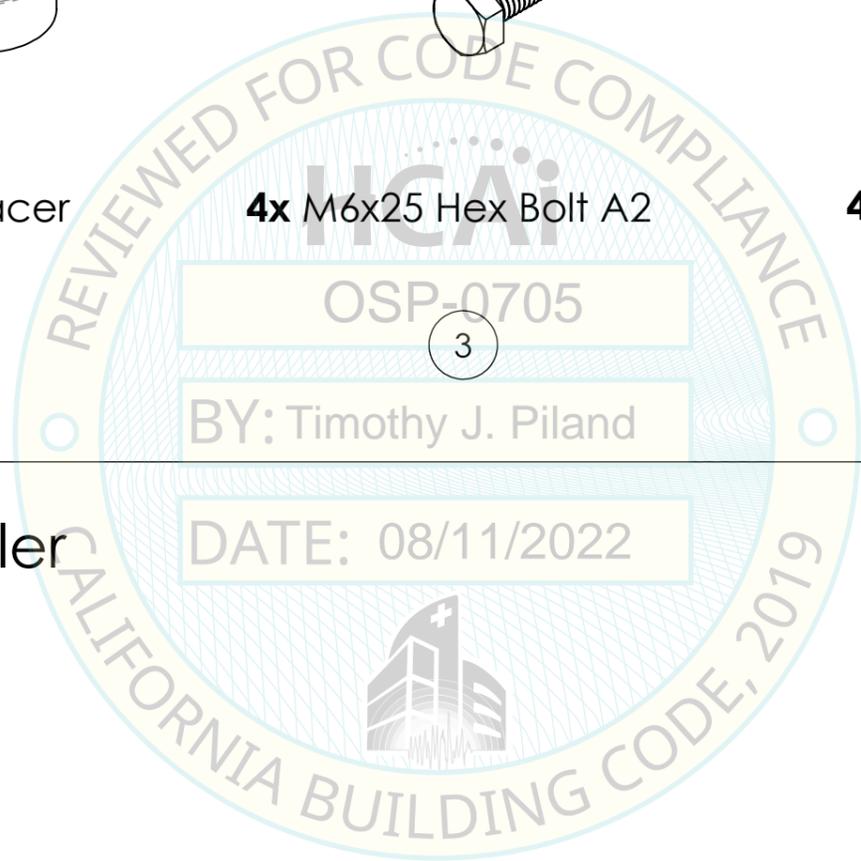
5

Parts To Be Supplied By Installer



9x 3/8"-16 bolt or screw grade 5 or higher, lock washers, and washers for structural wall (Length depending on mounting location/surface)

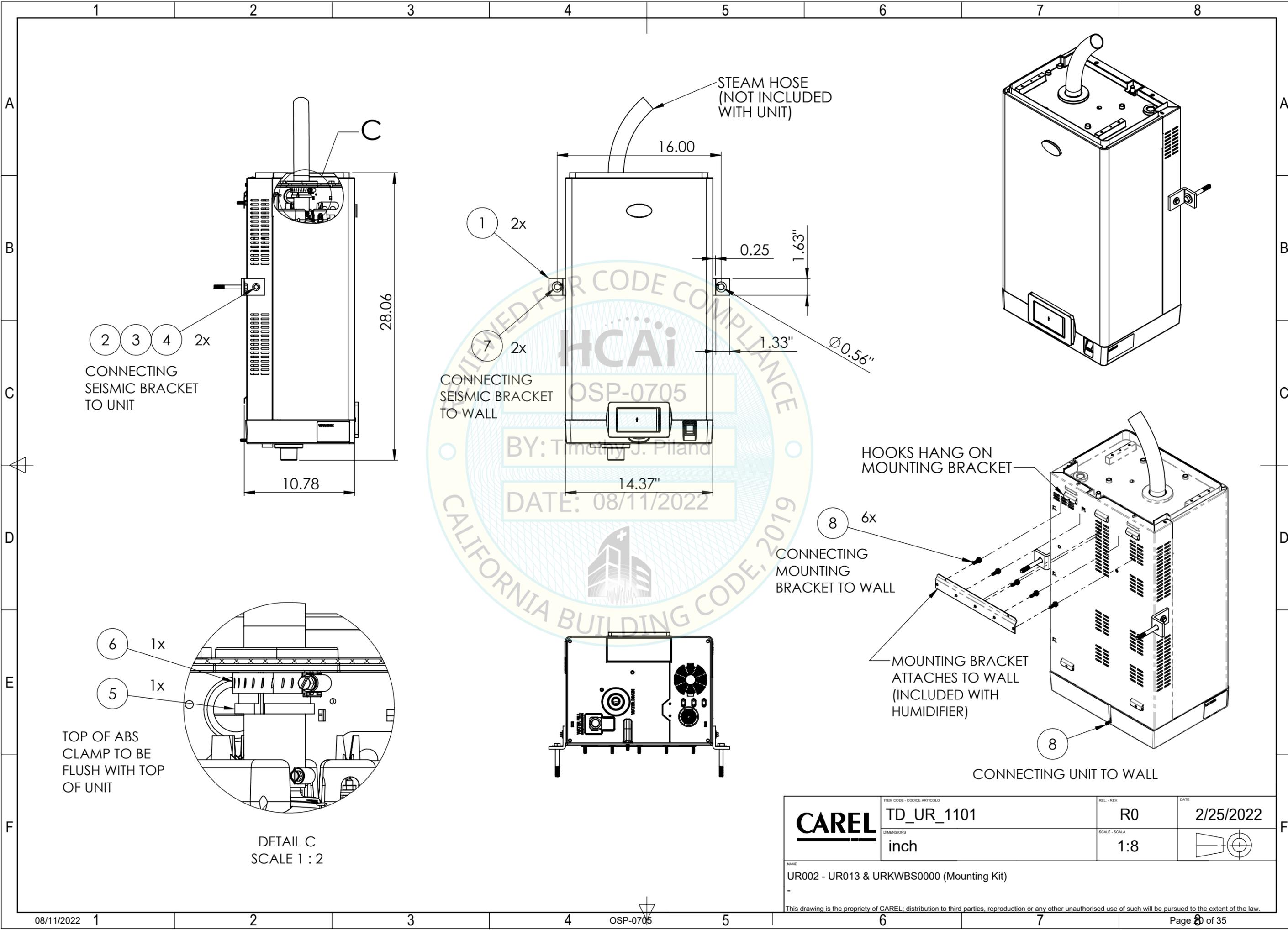
6



CAREL	ITEM CODE - CODICE ARTICOLO TD_UR_1102	REL. - REV. R0	DATE 2/24/2022
	DIMENSIONS inch	SCALE - SCALA 1:5	

NAME
UR020 - UR080 & URKWBL0000 (Mounting Kit)

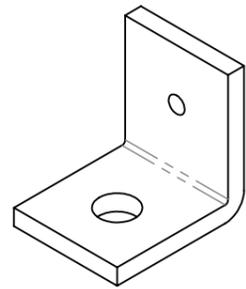
This drawing is the propriety of CAREL; distribution to third parties, reproduction or any other unauthorised use of such will be pursued to the extent of the law.



CAREL	ITEM CODE - CODICE ARTICOLO	REL. - REV.	DATE
	TD_UR_1101	R0	2/25/2022
DIMENSIONS		SCALE - SCALA	
inch		1:8	

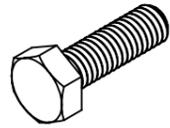
NAME
UR002 - UR013 & URKWBS0000 (Mounting Kit)

Parts Included In Kit



2x Wall Bracket

1



2x M6x25 Hex Bolt A2

2



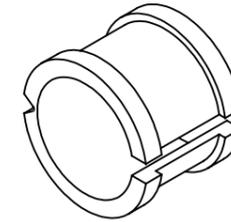
2x M6 Lock Washer

3



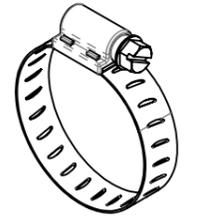
2x M6x18 Washer

4



1x ABS Clamp

5

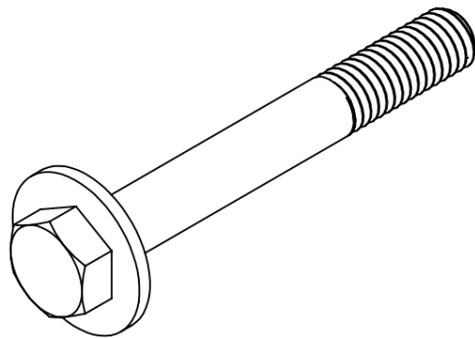


1x Hose Clamp

6



Parts To Be Supplied By Installer



2x 3/8"-16 bolt or screw grade 5 or higher, lock washers and washers for structural wall (Length dependant on mounting location/surface)

7



6x 10-24 bolt or screw grade 5 or higher, lock washers and washers for structural wall (Length dependant on mounting location/surface)

8

CAREL	ITEM CODE - CODICE ARTICOLO TD_UR_1101	REL. - REV. R0	DATE 2/25/2022
	DIMENSIONS inch	SCALE - SCALA 1:1	

NAME
UR002 - UR013 & URKWBS0000 (Mounting Kit)

This drawing is the propriety of CAREL; distribution to third parties, reproduction or any other unauthorised use of such will be pursued to the extent of the law.



UNIT UNDER TEST (UUT) Summary Sheet

UUT-4

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
uSAM Steam Distribution Grids	SABAASI2U0 with Seismic Mounting Kit SAKSM01000	Carel USA

Product Construction Summary

Stainless Steel Distribution Grid and Mounting Struts/Brackets

Options / Subcomponent Summary

Steam Distributors: Carel

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
19	5.0	18.0	24.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

Test Mounting Details

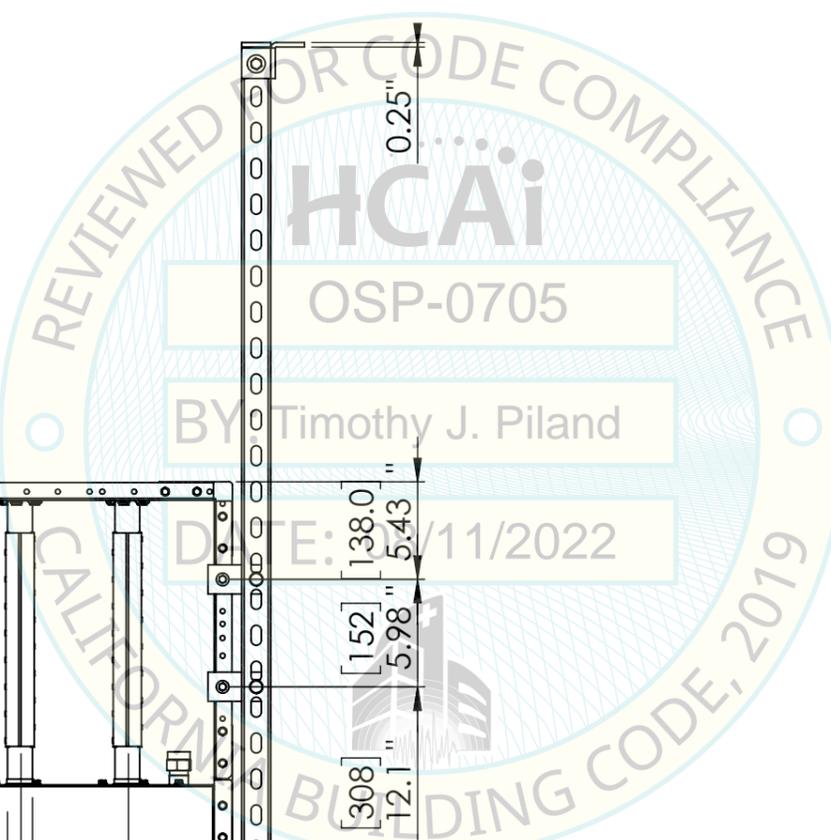
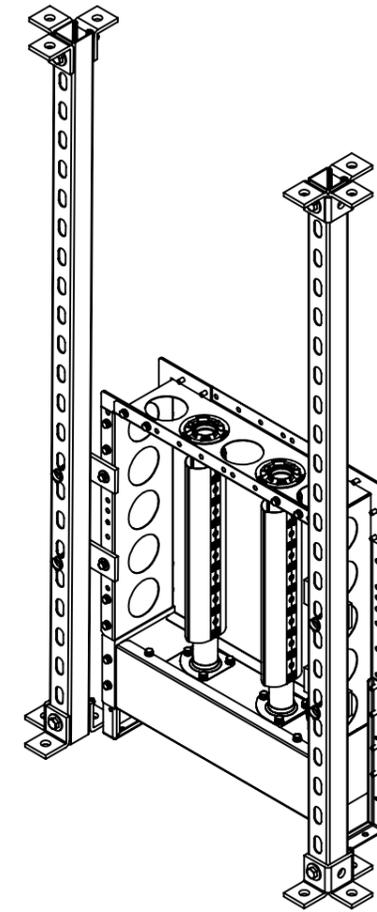
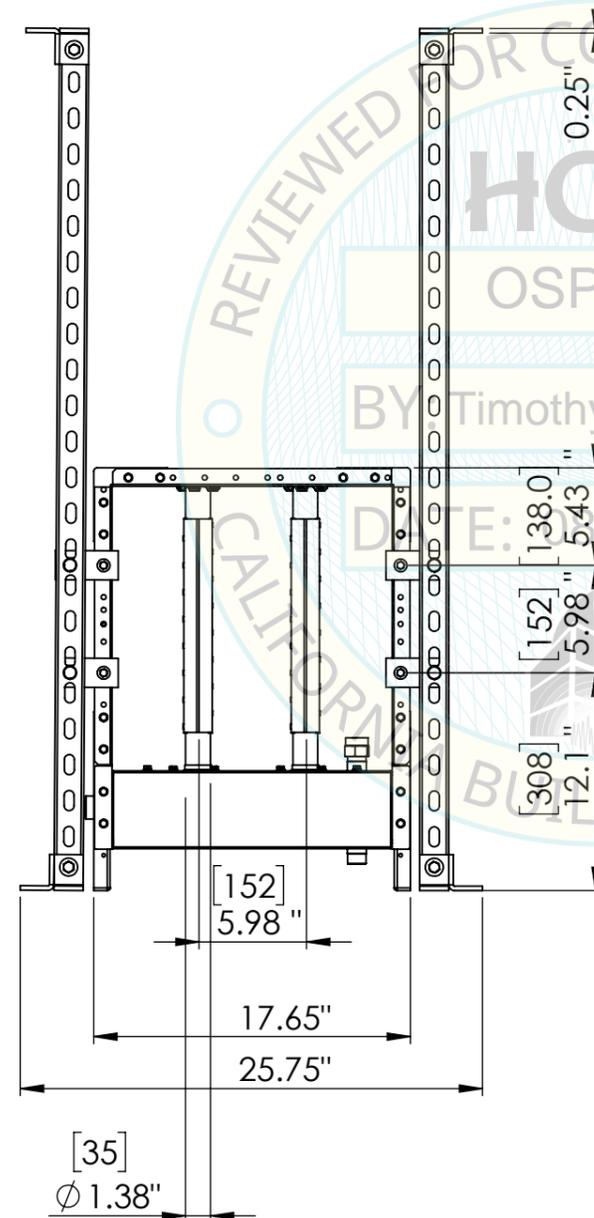
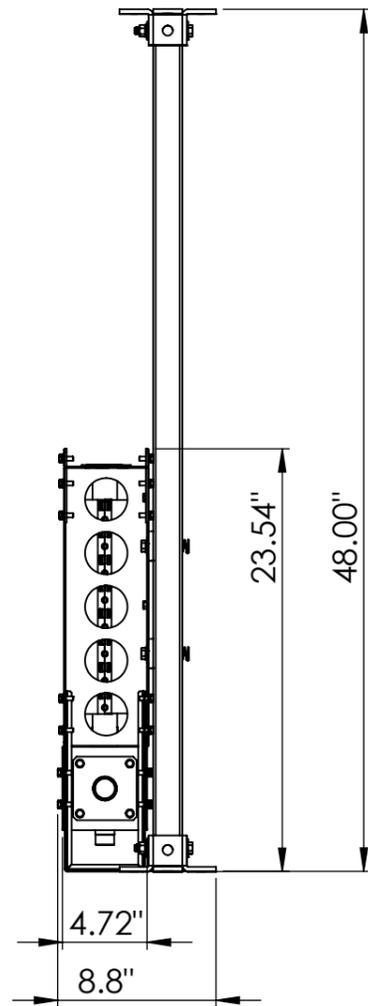
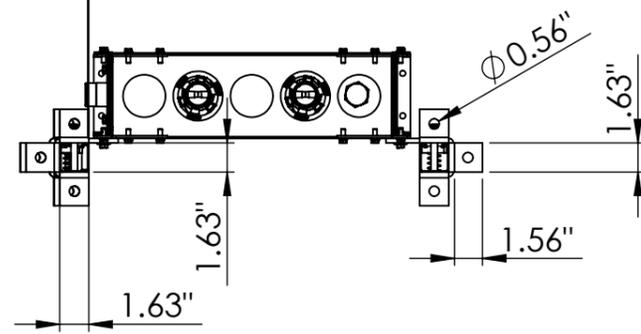
UUT mounted into suspended duct using (4) TEK14 self-tapping screws from bottom of distribution grid frame, and (12) 3/8" Grade 5 bolts from mounting struts kit SAKSM01000. Distribution grid is attached to (2) mounting struts (48" 1-5/8"x1-5/8" Anvil 14 ga strut) using (4) M6 Class 8.8 bolts. Mounting struts attached to both the bottom and top of the duct. Duct suspended from ceiling fixture using (6) 3/8" A307 threaded rods, each stiffened with 14" unistrut and VMC Snap-Brace rod stiffeners. Duct seismically restrained with (8) VMC SB-125 seismic brackets and (8) 3/16" cables.

Required Seismic Mounting Bracket/Kit Part Number: SAKSM01000, with 4 total connections from both struts



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

0.08" (14GA. Strut Thickness)



REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
R0	FIRST PUBLICATION - PRIMA EMISSIONE	E.KHAIRALLAH	-	-	05/27/2021
DESCRIPTION - DESCRIZIONE UUT4: SABAASI2U0 with SAKSM01000 (Seismic Mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO	
SEE TABLE VEDI TABELLA	R-	---	EQUIP - ATTREZZ	1/1	CAREL
				SCALE - SCALA	SIZE - DIM
				1:10	A3

File Name: SABAASI2U0.seismic.mount.R2 (14ga)



UNIT UNDER TEST (UUT) Summary Sheet

UUT-5

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
uSAM Steam Distribution Grids	SATHFHI2U0 with Seismic Mounting Kit SAKSM07000	Carel USA

Product Construction Summary

Stainless Steel Distribution Grid and Mounting Struts/Brackets

Options / Subcomponent Summary

Steam Distributors: Carel

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
122	5.0	60.0	60.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

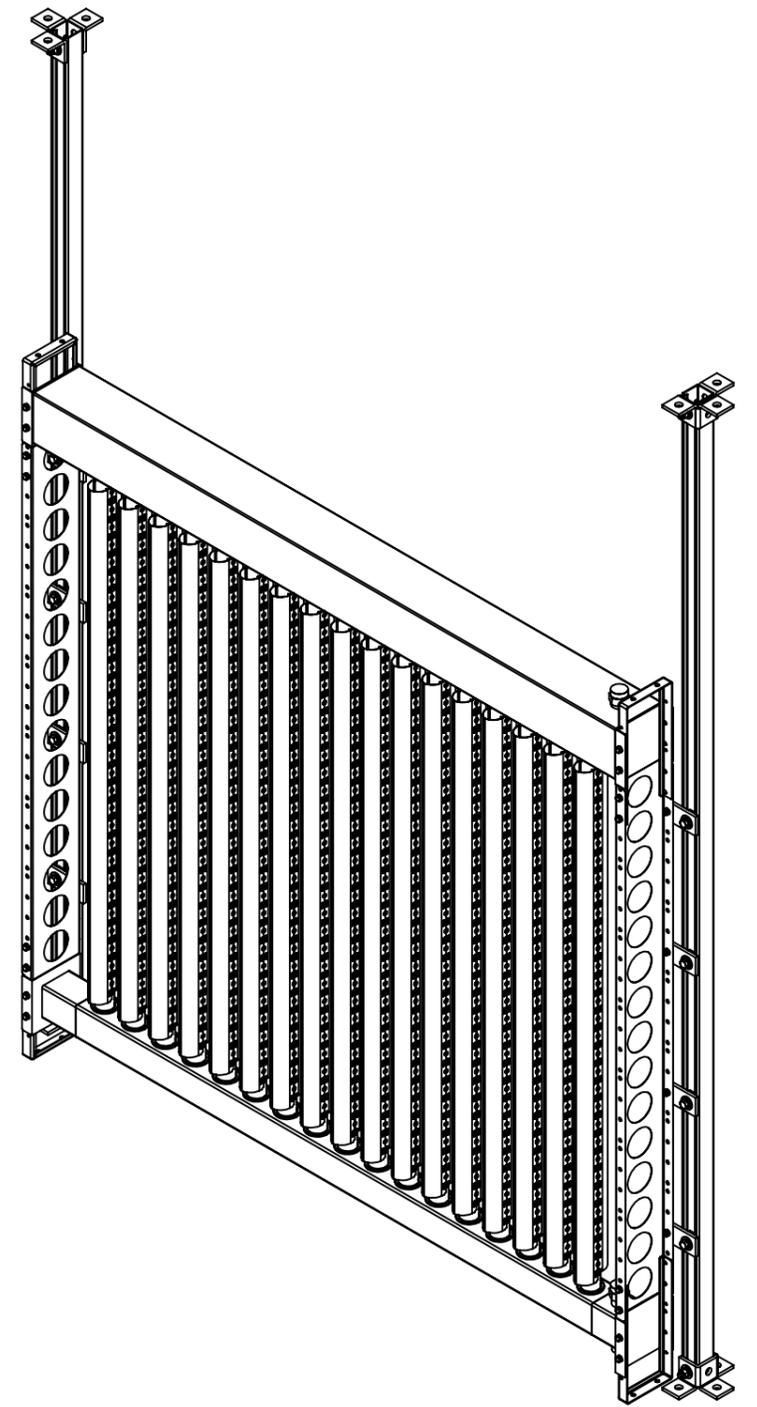
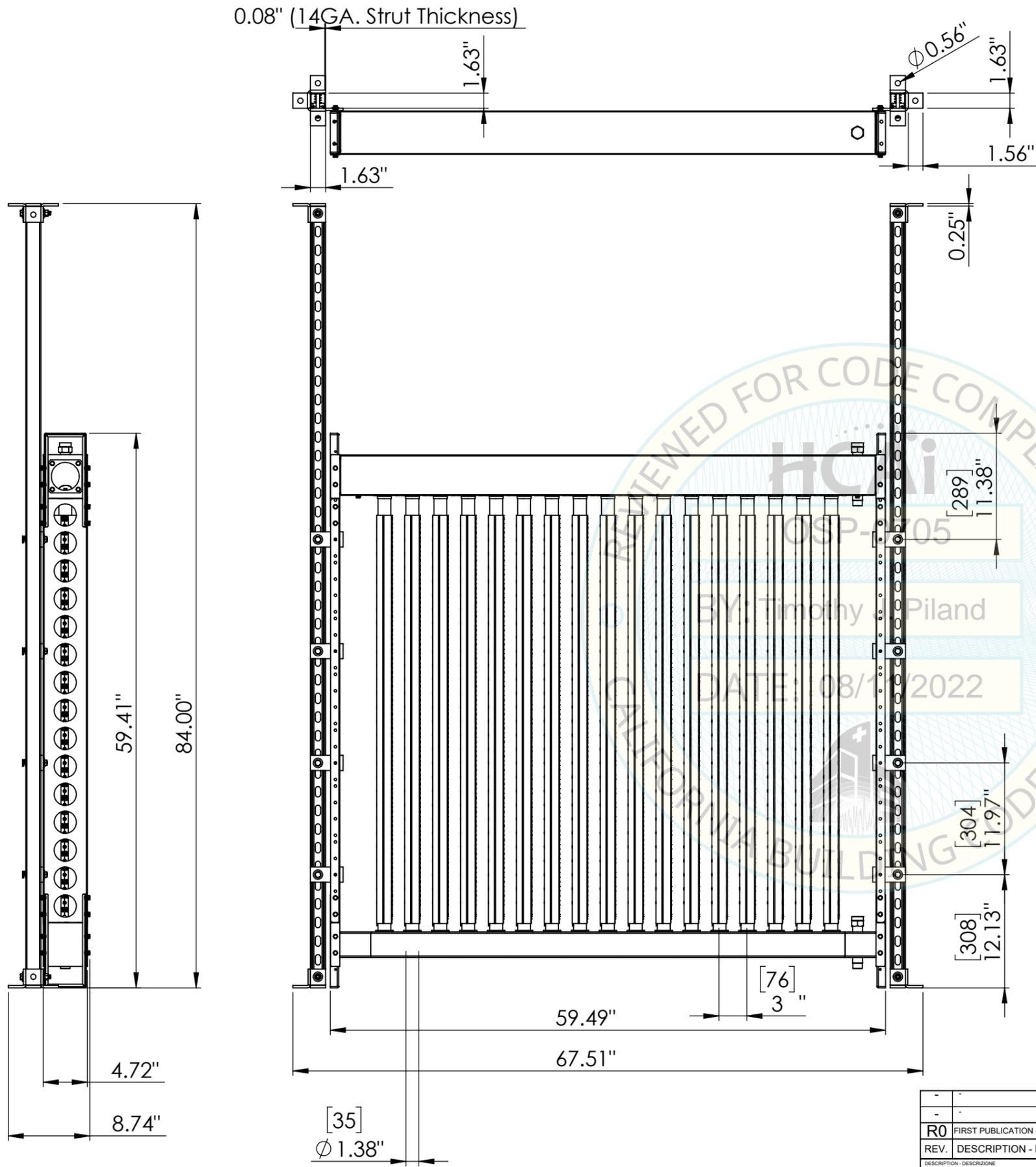
Test Mounting Details

UUT mounted into suspended duct using (4) TEK14 self-tapping screws from bottom of distribution grid frame, and (12) 3/8" Grade 5 bolts from mounting struts kit SAKSM07000. Distribution grid is attached to (2) mounting struts (84" 1-5/8"x1-5/8" Anvil 14 ga strut) using (8) M6 Class 8.8 bolts. Mounting struts attached to both the bottom and top of the duct. Duct suspended from ceiling fixture using (6) 5/8" A307 threaded rods, each stiffened with 1-1/4"x1-1/4"x1/4" steel angle and VMC 1-1/4" rod stiffeners. Duct seismically restrained with (8) VMC SB-250 seismic brackets and (8) 1/4" cables.

Required Seismic Mounting Bracket/Kit Part Number: SAKSM07000, with 8 total connections from both struts



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



REVIEWED FOR CODE COMPLIANCE
 HCA
 OSP-0705
 BY: Timothy Piland
 DATE: 08/11/2022
 HAZARDOUS BUILDING CODE, 2019

REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
R0	FIRST PUBLICATION - PRIMA EMISSIONE	E.KHAIRALLAH	-	-	05/26/2021
DESCRIPTION - DESCRIZIONE: UUT5: SATHFH12U0 with SAKSM07000 (Seismic Mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO	
SEE TABLE VEDI TABELLA	R-		EQUIP - ATTREZZ	1/1	CAREL
				1:12.5	A3

File Name: SATHFH12U0(w-brace)



UNIT UNDER TEST (UUT) Summary Sheet

UUT-6

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
uSAM Steam Distribution Grids	SABDGLI2U0 with Seismic Mounting Kit SAKSM07000	Carel USA

Product Construction Summary

Stainless Steel Distribution Grid and Mounting Struts/Brackets

Options / Subcomponent Summary

Steam Distributors: Carel

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
57	5.0	36.0	60.0	7.5	8.0	>33.3

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

Test Mounting Details

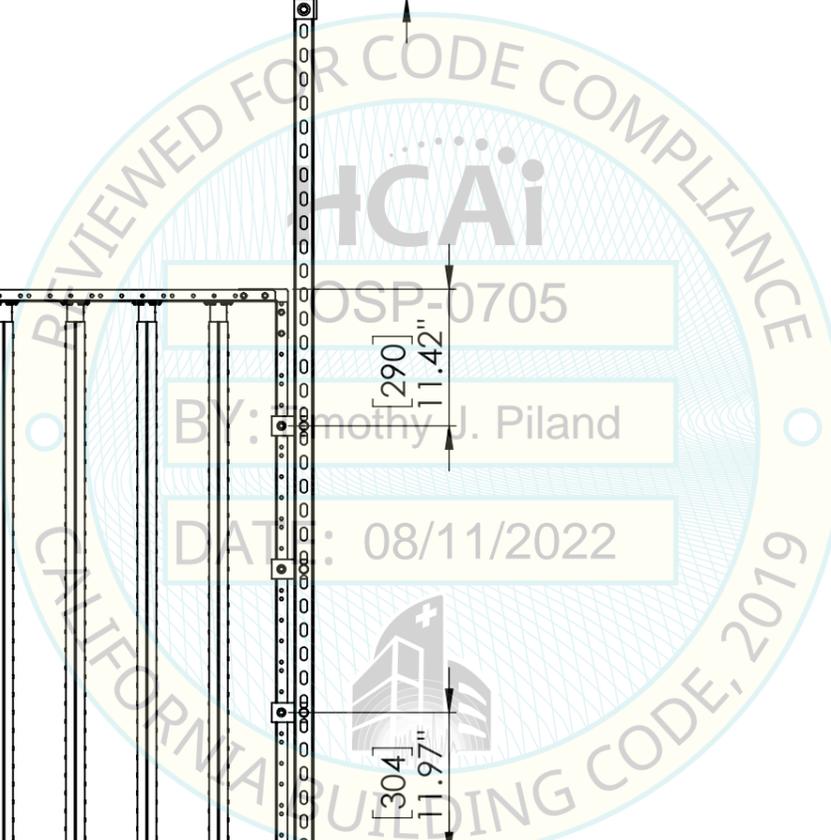
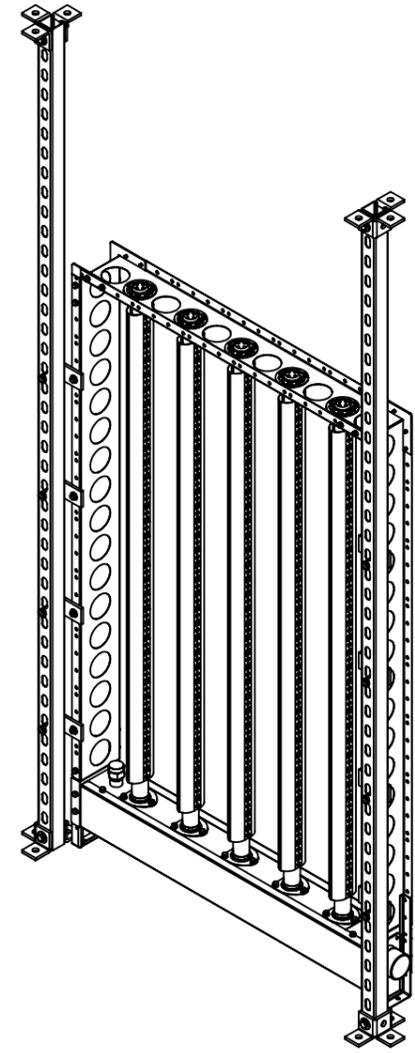
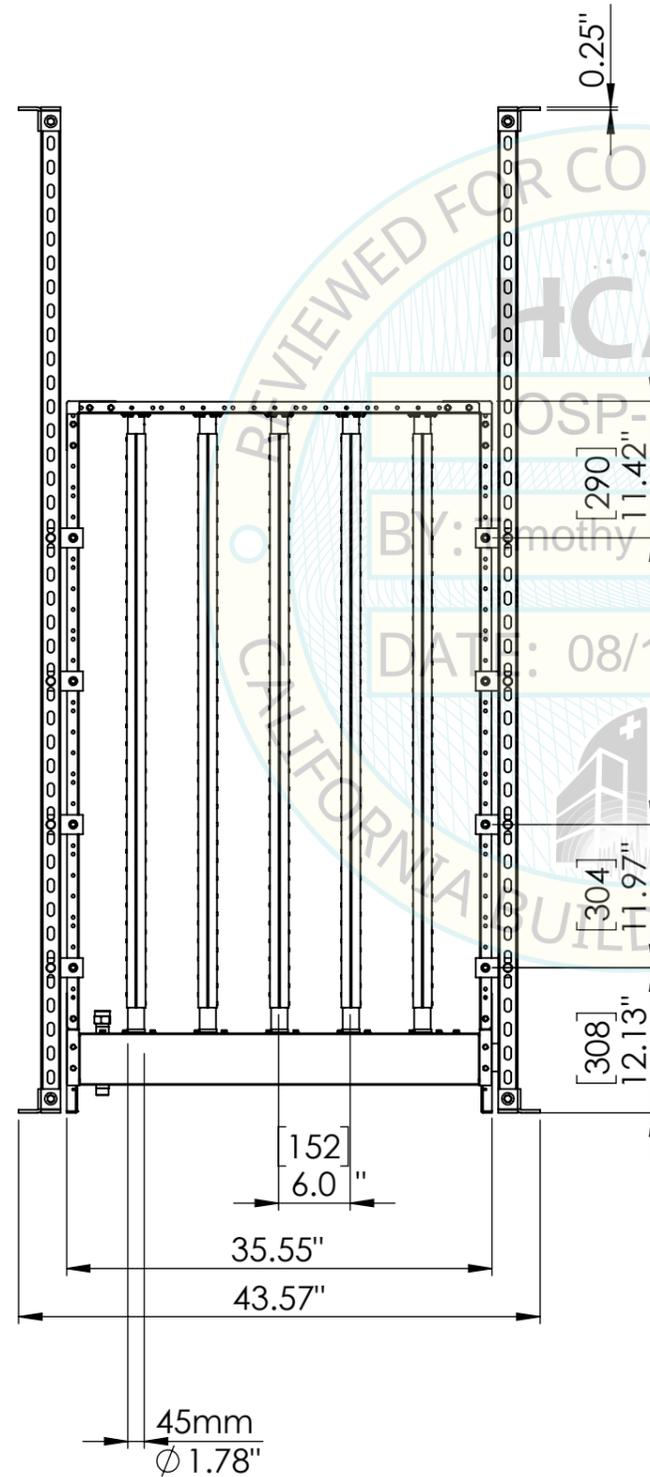
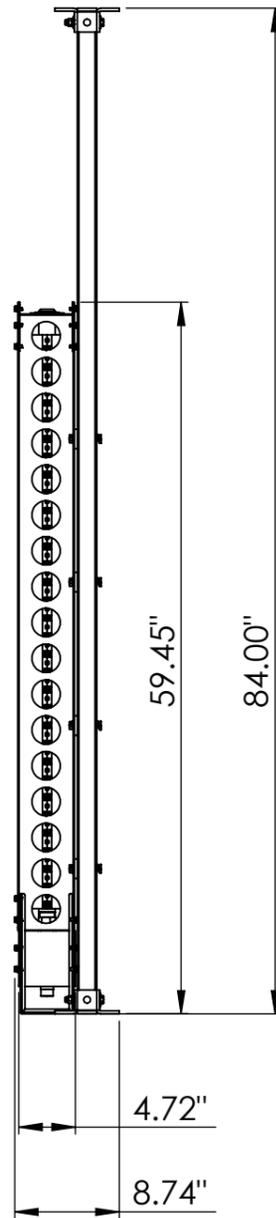
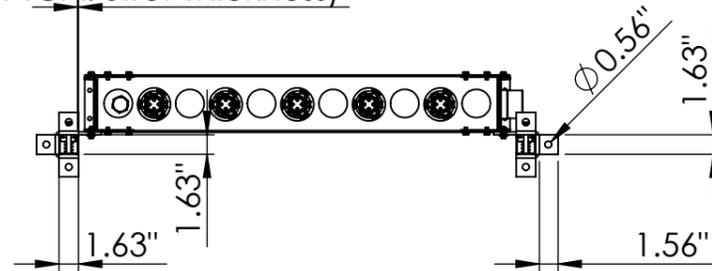
UUT mounted into base mounted AHU using (4) TEK14 self-tapping screws from bottom of distribution grid frame, and (12) 3/8" Grade 5 bolts from mounting struts kit SAKSM07000. Distribution grid is attached to (2) mounting struts (119" 1-5/8"x1-5/8" Anvil 14 ga strut) using (8) M6 Class 8.8 bolts. Mounting struts attached to both the bottom and top of the AHU. Open ended sections of AHU braced with 3/4" diameter rod X-bracing.

Required Seismic Mounting Bracket/Kit Part Number: SAKSM07000, with 8 total connections from both struts



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

0.08" (14GA. Strut Thickness)



REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA	DATE DATA
R0	FIRST PUBLICATION - PRIMA EMISSIONE	E. KHAIRALLAH	-	-	05/26/2021
DESCRIPTION - DESCRIZIONE UUT6: SABDGLI2U0 with SAKSM07000 (Seismic Mounting Kit)					
DRAWING CODE - CODICE DISEGNO	REL - REV	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO	
SEE TABLE VEDI TABELLA	R-		EQUIP - ATTREZZ	PAGE - FOGLIO 1/1	CAREL
				SCALE - SCALA 1:15	SIZE - DIM A3



UNIT UNDER TEST (UUT) Summary Sheet

UUT-7

Test Report: 31499-2001

Model Line	Model Number	Manufacturer
uSAM Steam Distribution Grids	SATNLHI2U0 with Seismic Mounting Kit SAKSM14000	Carel USA

Product Construction Summary

Stainless Steel Distribution Grid and Mounting Struts/Brackets

Options / Subcomponent Summary

Steam Distributors: Carel

UUT Properties						
Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]		
	Length	Width	Height	F-B	S-S	V
291	5.0	96.0	96.0	10.5	5.5	21.0

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-	
		2.50	0.0	1.5	-	-	1.68	0.68	

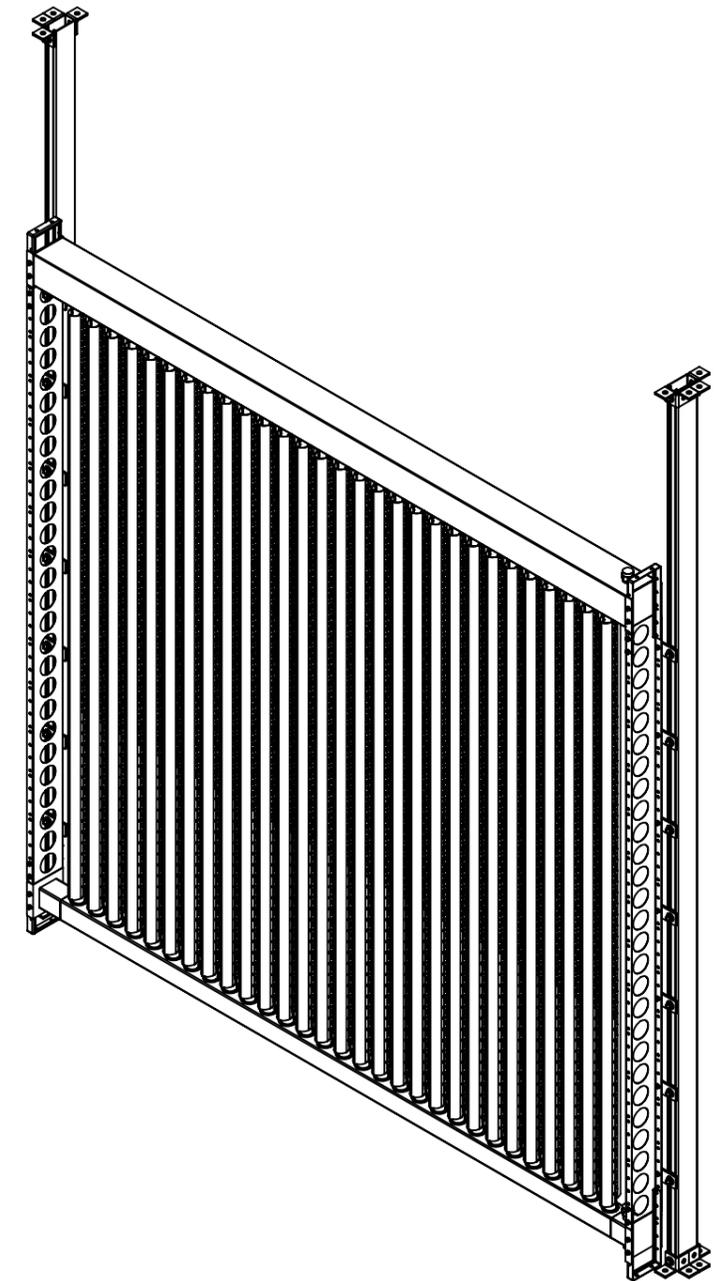
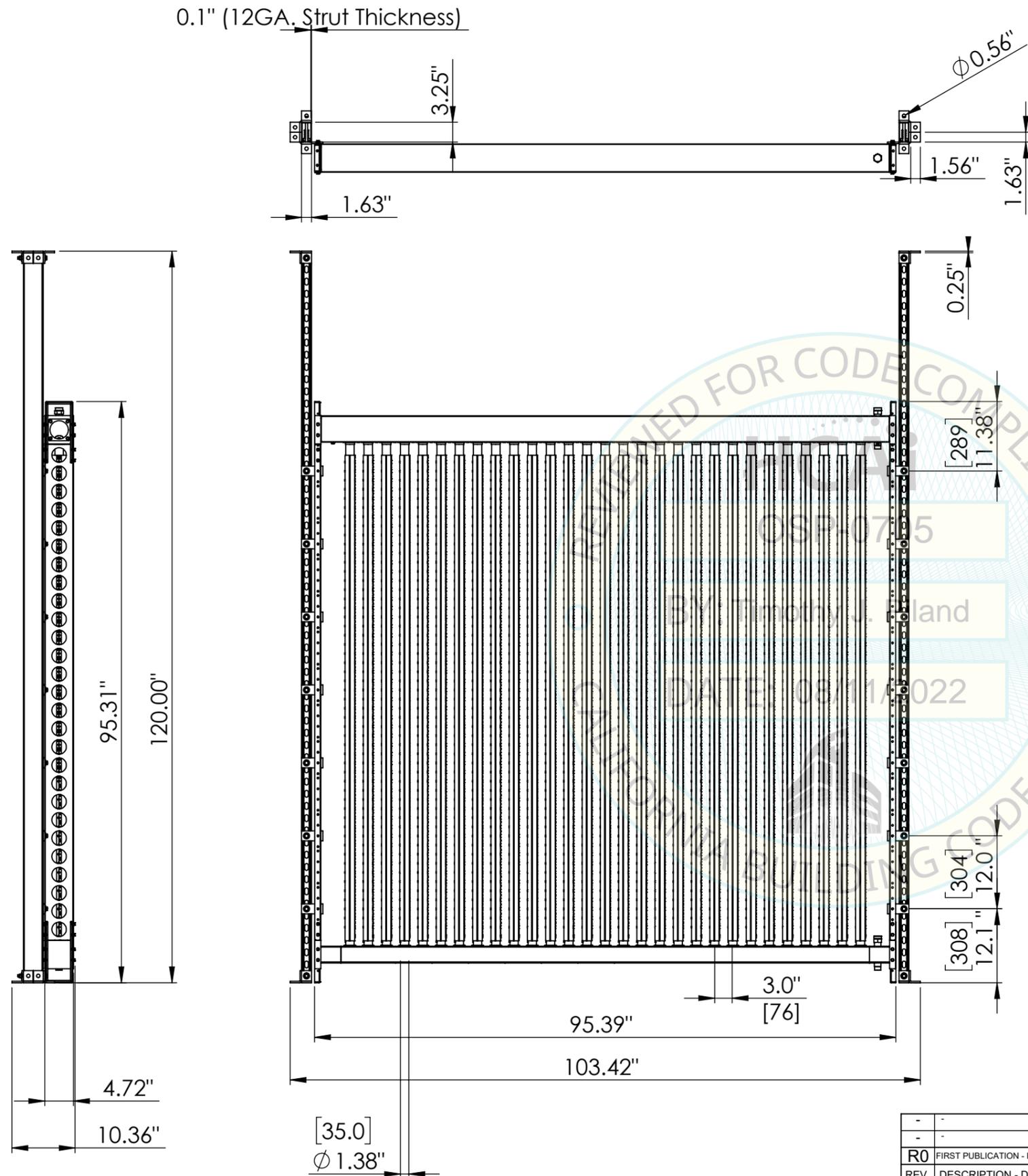
Test Mounting Details

UUT mounted into base mounted AHU using (4) TEK14 self-tapping screws from bottom of distribution grid frame, and (16) 3/8" Grade 5 bolts from mounting struts kit SAKSM14000. Distribution grid is attached to (2) mounting struts (119" P5000T Unistrut) using (14) M6 Class 8.8 bolts. Mounting struts attached to both the bottom and top of the AHU. Open ended sections of AHU braced with 3/4" diameter rod X-bracing.

Required Seismic Mounting Bracket/Kit Part Number: SAKSM14000, with 14 total connections from both struts



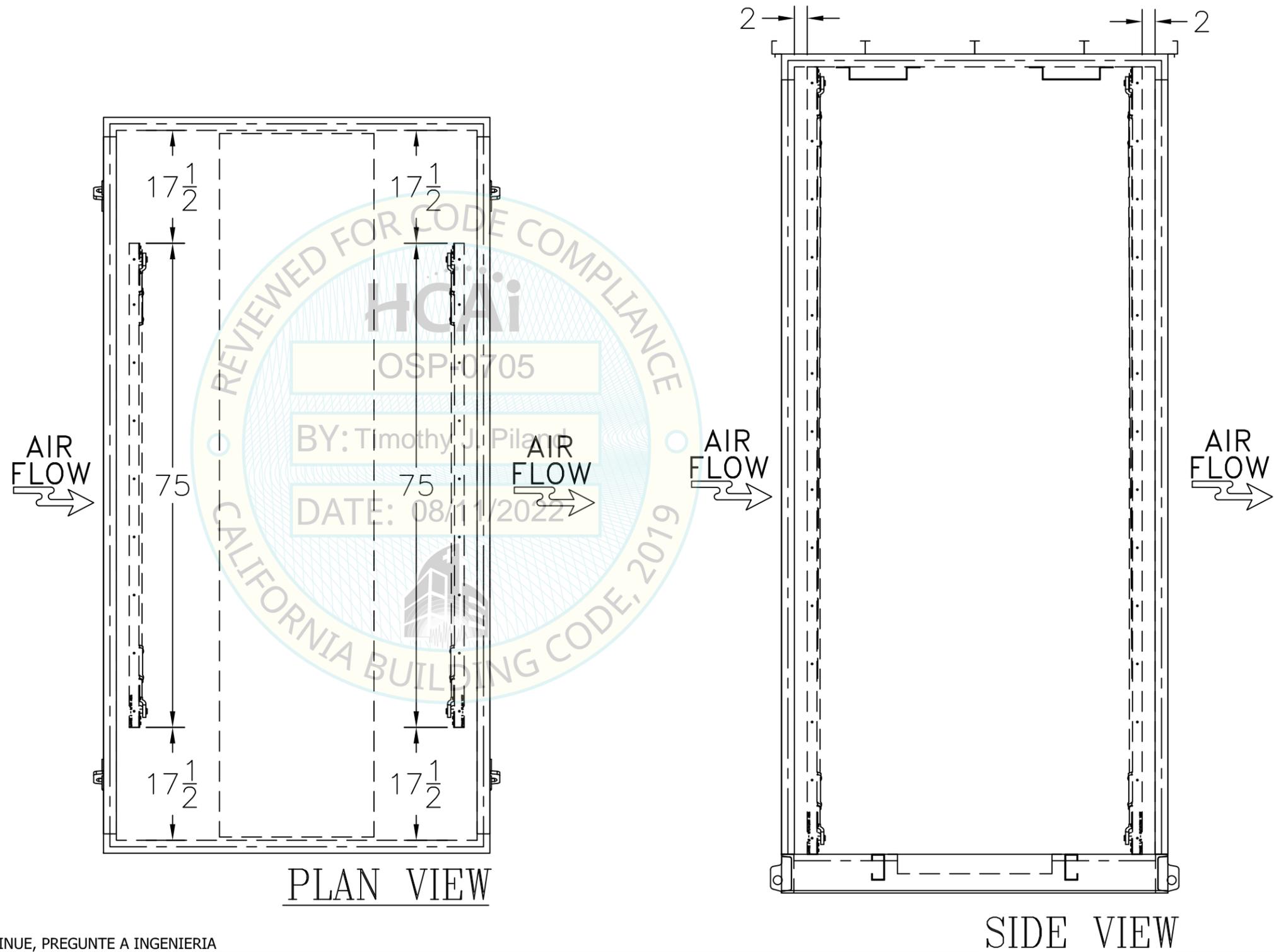
All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



FOR CODE COMPLIANCE
 OSP 0705
 By Timothy J. Land
 DATE: 08/11/2022
 AUTHORITY: BUILDING CODE, 2019

-	-	-	-	-
R0	FIRST PUBLICATION - PRIMA EMISSIONE	E. KHAIRALLAH	-	05/25/2021
REV.	DESCRIPTION - DESCRIZIONE	DESIGNED / MODIFIED BY CREATO / MODIFICATO DA	VERIFIED BY VERIFICATO DA	APPROVED BY APPROVATO DA
DESCRIPTION - DESCRIZIONE UUT7: SATNLHI2U0 with SAKSM14000 (Seismic Kounting Kit)				
DRAWING CODE - CODICE DISEGNO	REL - REV. R-	MATERIAL SPECIFICATION - SPECIFICHE MATERIALE	COLOUR - COLORE -	INDICATIVE INFORMATION WEIGHT and EXTERNAL SPACE SIZE PESO e DIMENSIONI INGOMBRO ESTERNO
ITEM CODE - CODICE ARTICOLO	PROJ - PROG	OTHER MATERIALS - ALTRI MATERIALI	EQUIP - ATTREZZ	PAGE - FOGLIO 1/1 SCALE - SCALA 1:20 SIZE - DIM A3

DETALLE DE UBICACION DE CROSSBRACE



PLAN VIEW

SIDE VIEW

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO.- CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RETRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR ± 2°		

PRIMARY DIMENSIONS ARE IN INCHES

 THIRD ANGLE PROJECTION
 1695 CACTUS ROAD,
 SAN DIEGO
 CALIFORNIA 92154



VERTIVTM
 TIJUANA
 OSP-0705

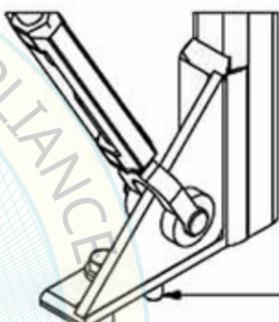
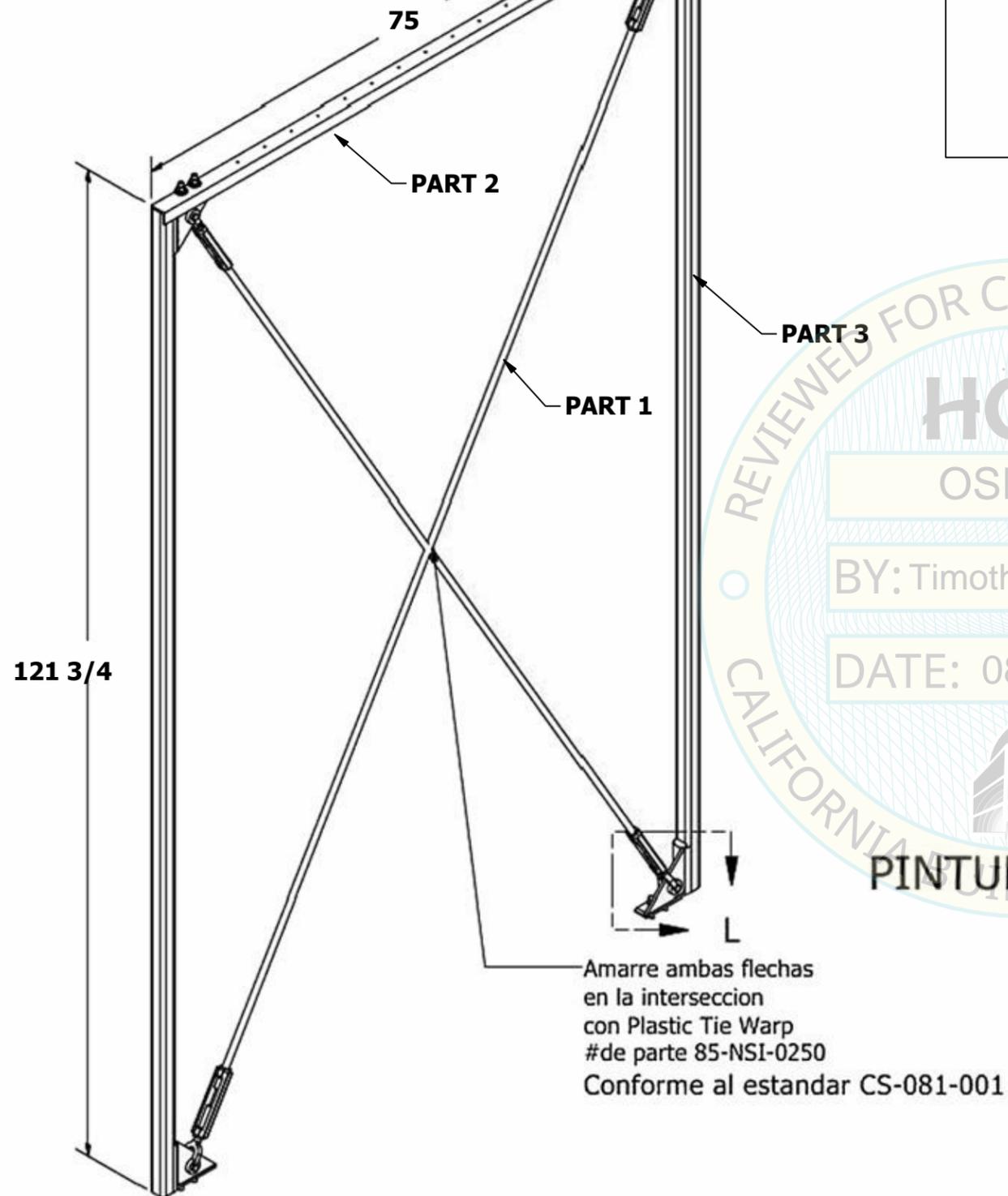
DESCRIPTION: DETALLE DE UBICACION	JOB NAME: Carel OSHPD
DRAWING BY: Luis.O.Villalobos	UNIT TAG: HU-1
DATE: 11/18/2020	JOB NUMBER: 12737

SHEET: 1	
Page 30 of 35	

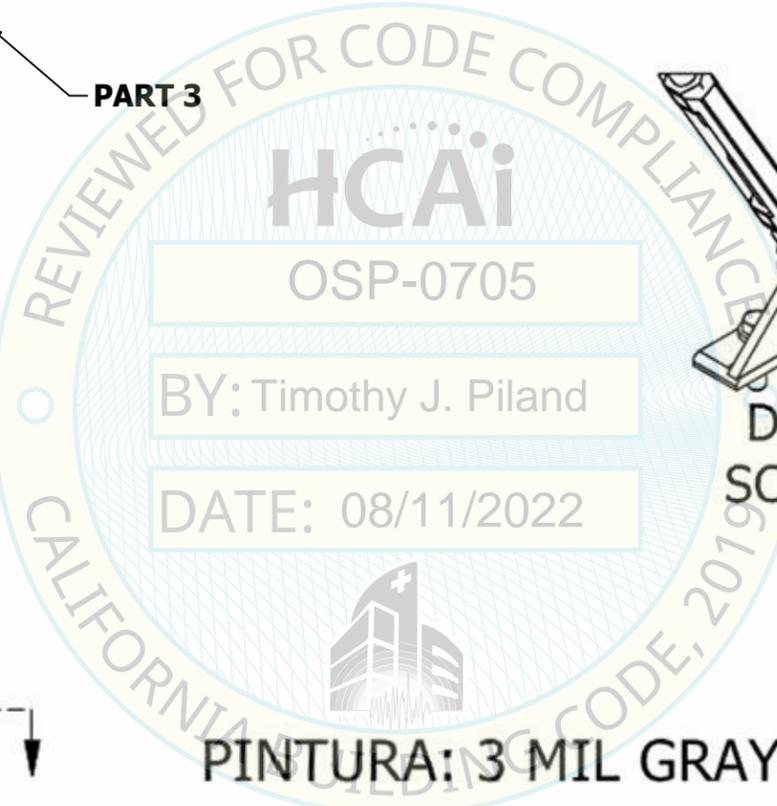
CROSS BRACING REQ: 2

Atornille hacia el techo
Conforme el estandar CS-081-003

CUTLIST				
PART.NO	ELABS PART	DESCRIP	QTY	LEN
1	40-RB-3/4-C	3/4 Round Bar TGP Cold Rolled	4	117 1/8
2	40-AN-211214	2X1 1/2X1/4 Thick HRS ANGLE	2	75
3	40-Tube-0313	2X2X1/4 Square tube	4	121 1/2



DETAIL L
SCALE 1 / 5



Hacer rosca
Conforme el estandar CS-081-003

**E
P**

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO. - CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RETRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR	± 2°	

PRIMARY DIMENSIONS ARE IN INCHES
THIRD ANGLE PROJECTION
1695 CACTUS ROAD,
SAN DIEGO
CALIFORNIA 92154



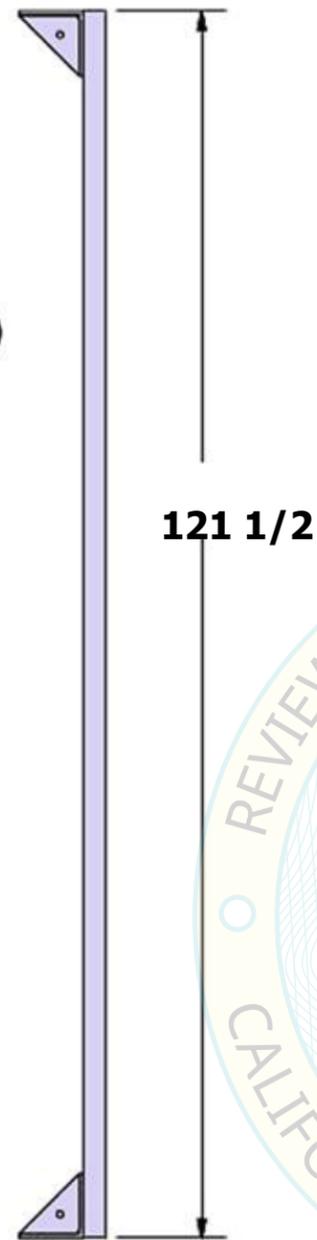
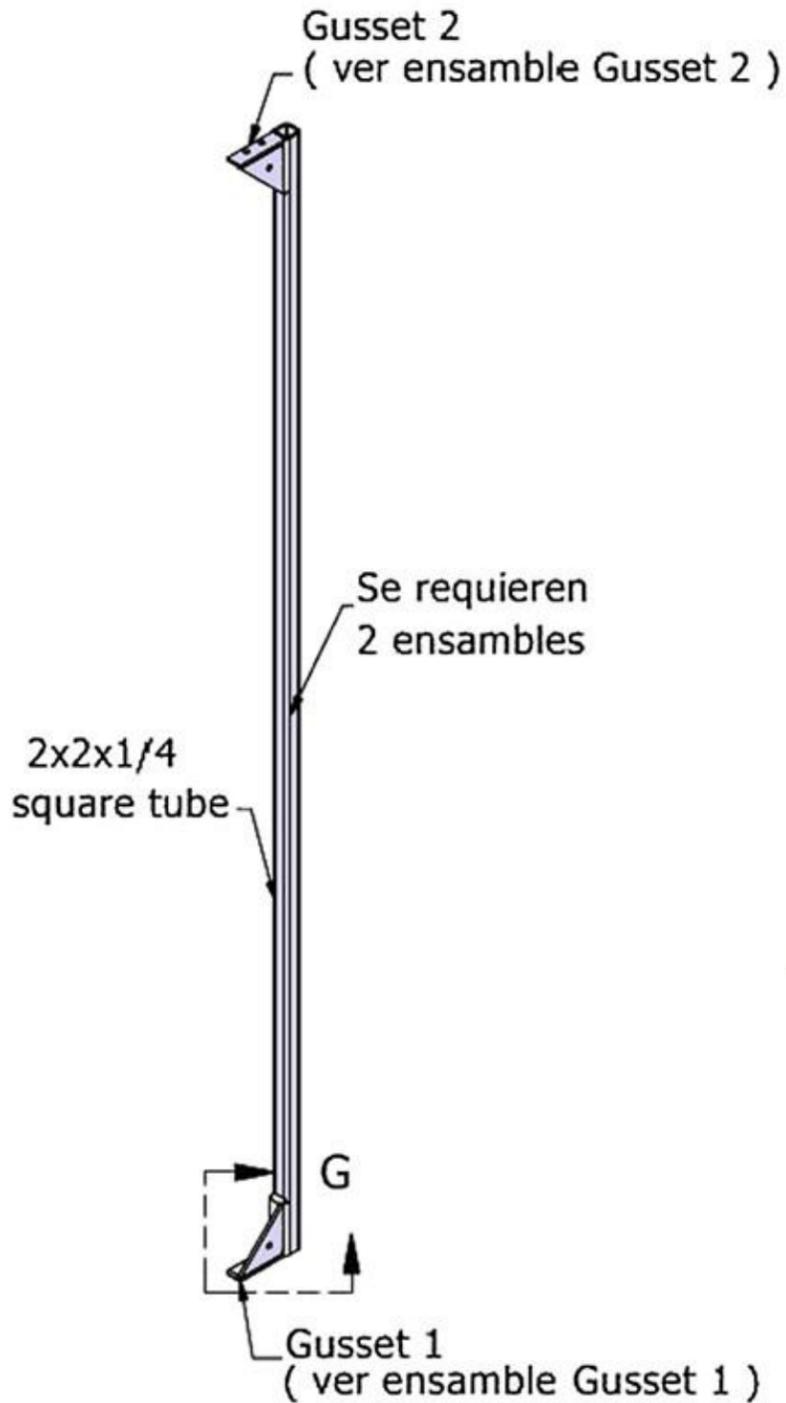
VERTIVTM
TIJUANA
OSP-0705

DESCRIPTION:
CROSSBRACE OSHPD
DRAWING BY:
Luis.O.Villalobos
DATE:
11/18/2020

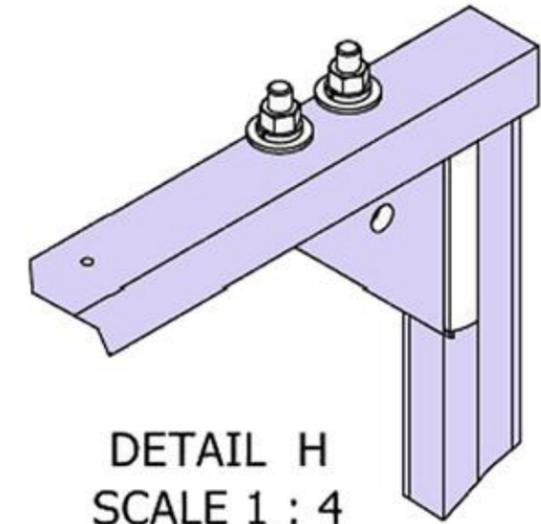
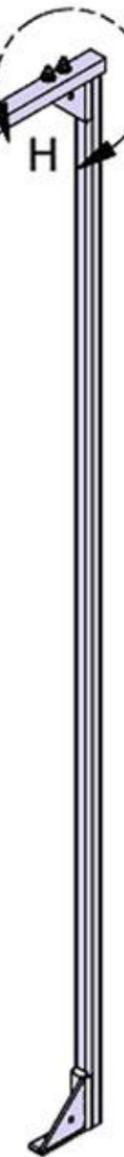
JOB NAME:
Carel OSHPD
UNIT TAG:
HU-1
JOB NUMBER:
12737

SHEET:
1

SOLDADURA DE GUSSETS

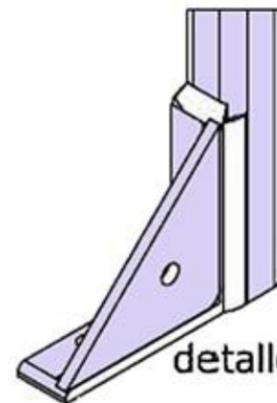


2x1 1/2x1/4 thick HRS angle

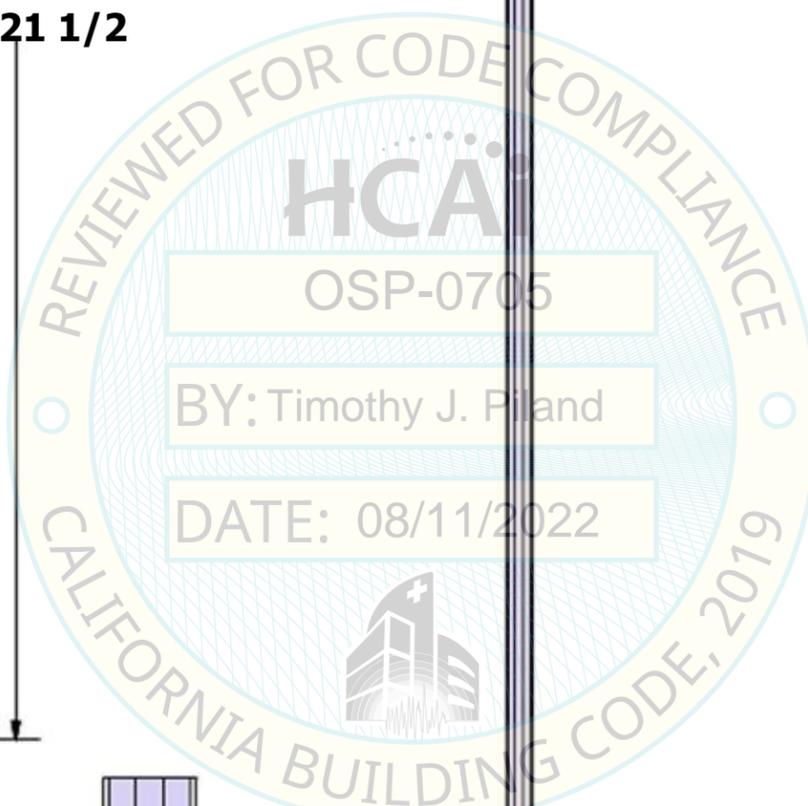


DETAIL H
SCALE 1 : 4

Use tornilleria de 1/2" Ø indicada en el estandar anexo CS-081-001.



DETAIL G
SCALE 1 / 5
detalle de soldadura para los gussets



E

B

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO. - CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RETRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR	± 2°	

PRIMARY DIMENSIONS ARE IN INCHES
THIRD ANGLE PROJECTION
1695 CACTUS ROAD,
SAN DIEGO,
CALIFORNIA 92154

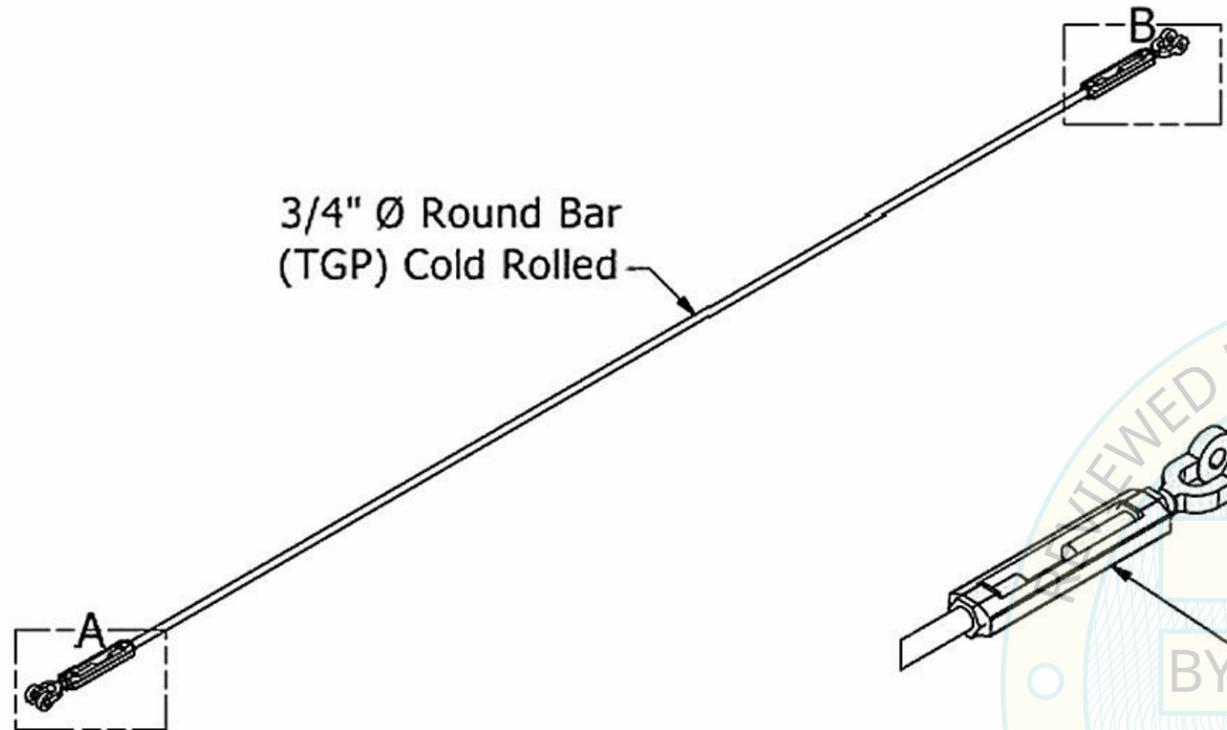


VERTIV™
TIJUANA
OSP-0705

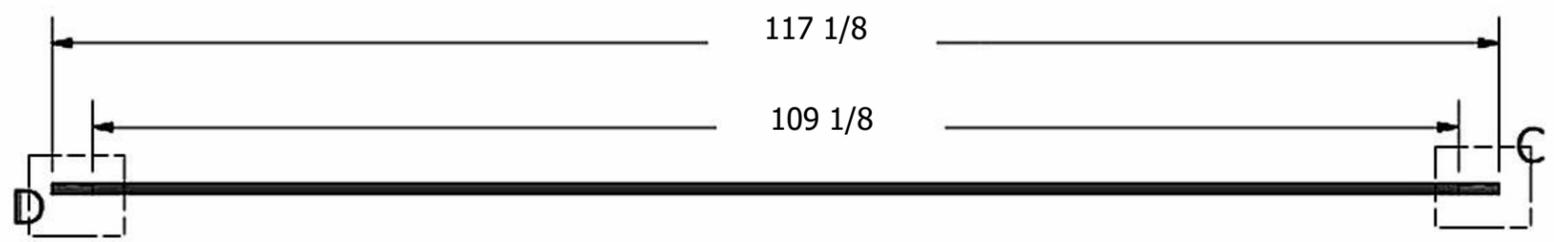
DESCRIPTION: CROSSBRACE OSHPD	JOB NAME: Carel OSHPD
DRAWING BY: Luis.O.Villalobos	UNIT TAG: HU-1
DATE: 11/18/2020	JOB NUMBER: 12737

SHEET: 2	
-------------	--

TENSORES REQ:



3/4" Ø Round Bar
(TGP) Cold Rolled

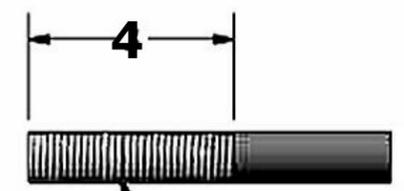


3/4" Ø Round Bar (TGP) Cold Rolled
Material: (TGP) Cold Roll/ R-C1045
de Parte: 40-RB-3/4-C
Cantidad: **4** Piezas

RIGHT END FITTING
#75-TBJAW-RIGHT

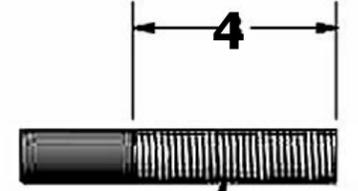
OPEN BODY TURNBUCKLE
#75-TBBD-30045T5

DETAIL B
SCALE 1/6



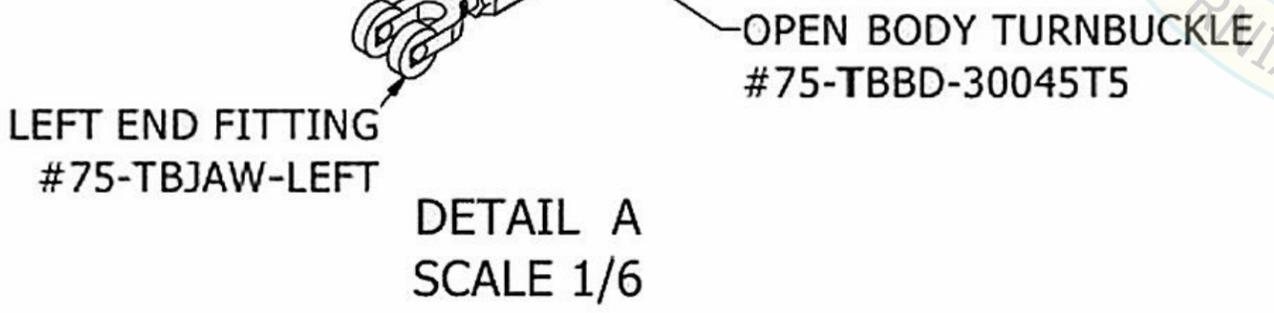
3/4-10 UNC - 2A LH
Rosca Izq

DETAIL D
SCALE 1/3

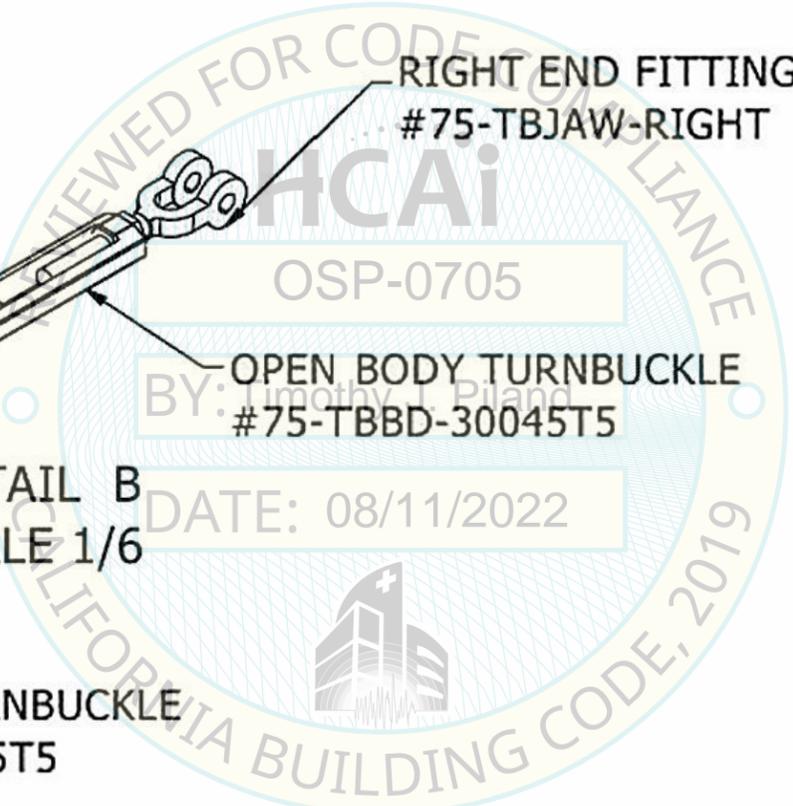


3/4-10 UNC - 2A
Rosca Der

DETAIL C
SCALE 1/3



OPEN BODY TURNBUCKLE
#75-TBBD-30045T5



E MS

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO. - CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RE TRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR ± 2°		

PRIMARY DIMENSIONS ARE IN INCHES
THIRD ANGLE PROJECTION
1695 CACTUS ROAD,
SAN DIEGO,
CALIFORNIA 92154

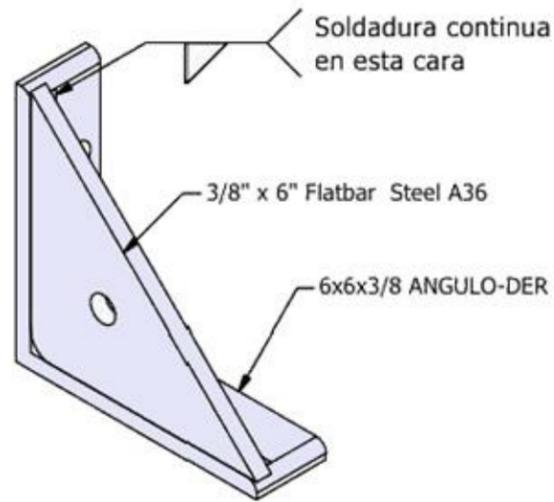


VERTIVTM
TIJUANA
OSP-0705

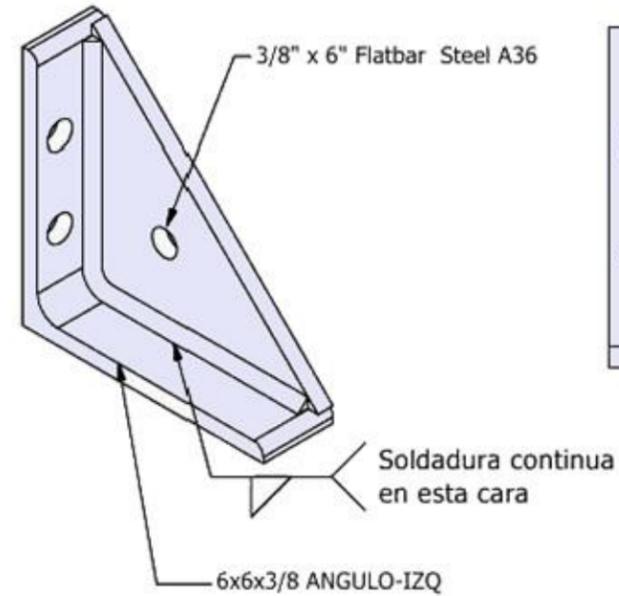
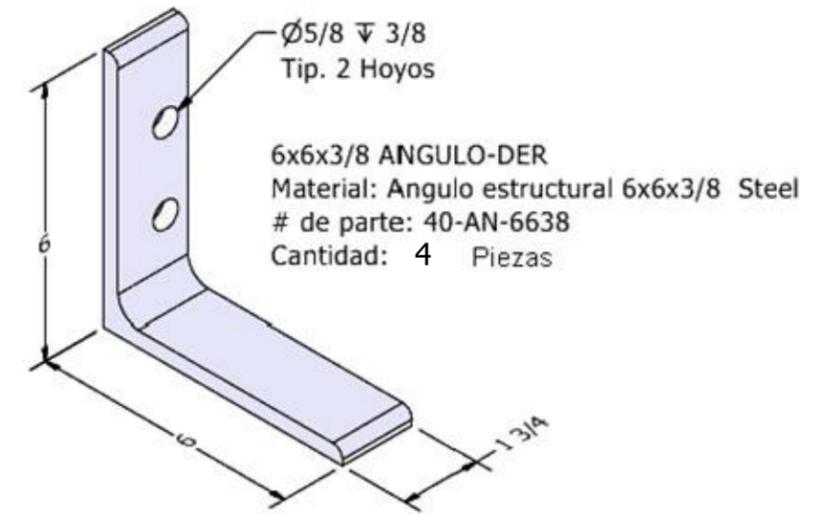
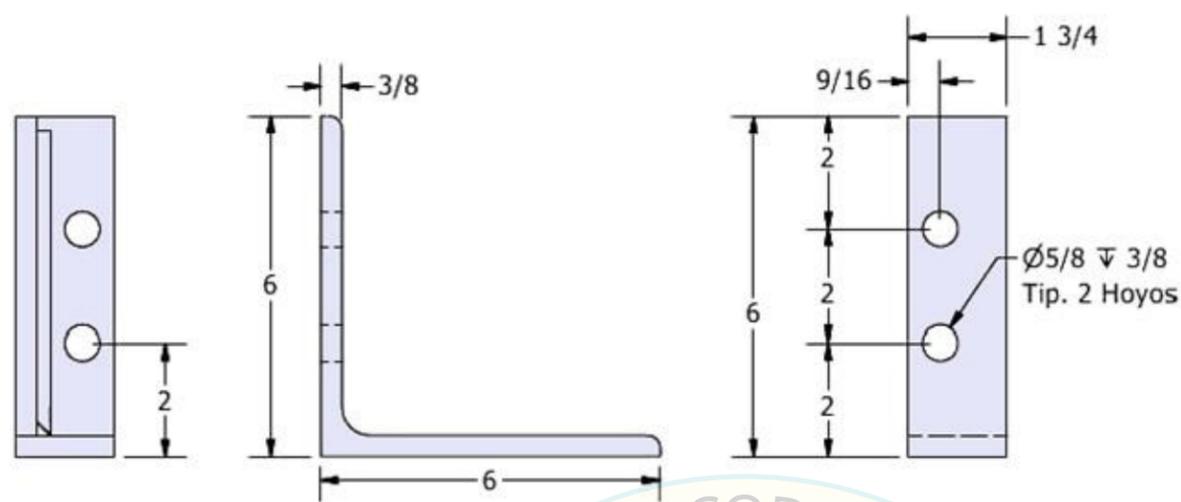
DESCRIPTION:
CROSSBRACE OSHPD
DRAWING BY:
Luis.O.Villalobos
DATE:
11/18/2020

JOB NAME:
Carel OSHPD
UNIT TAG:
HU-1
JOB NUMBER:
12737

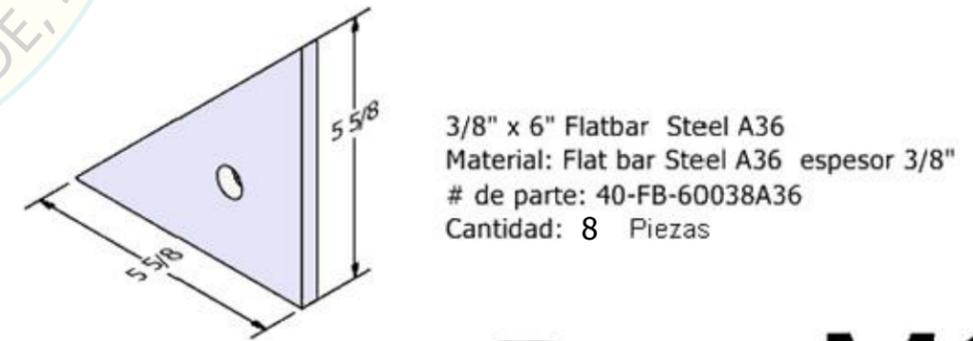
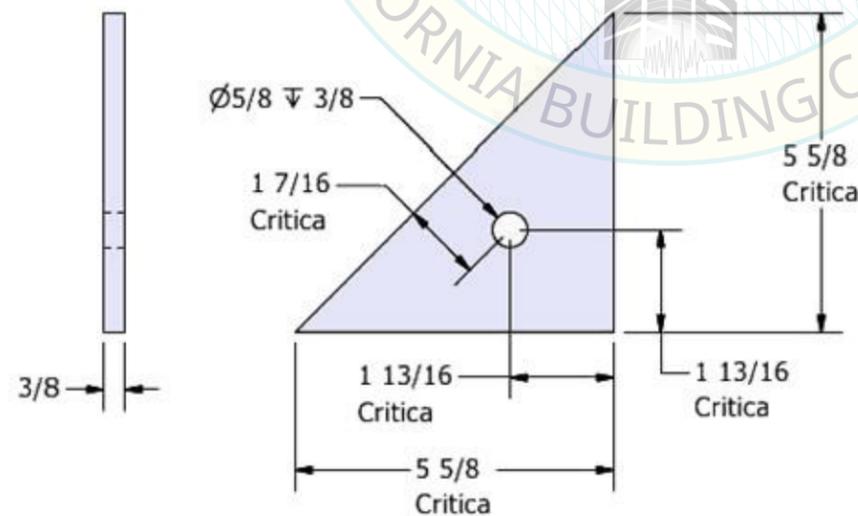
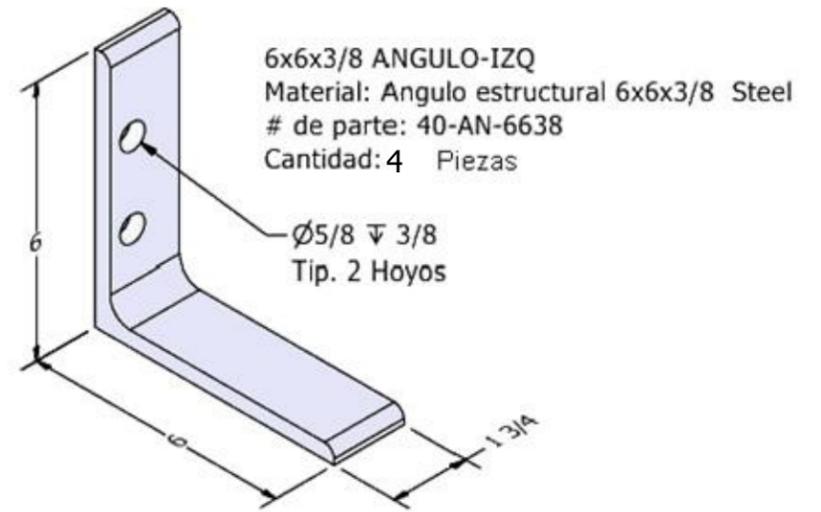
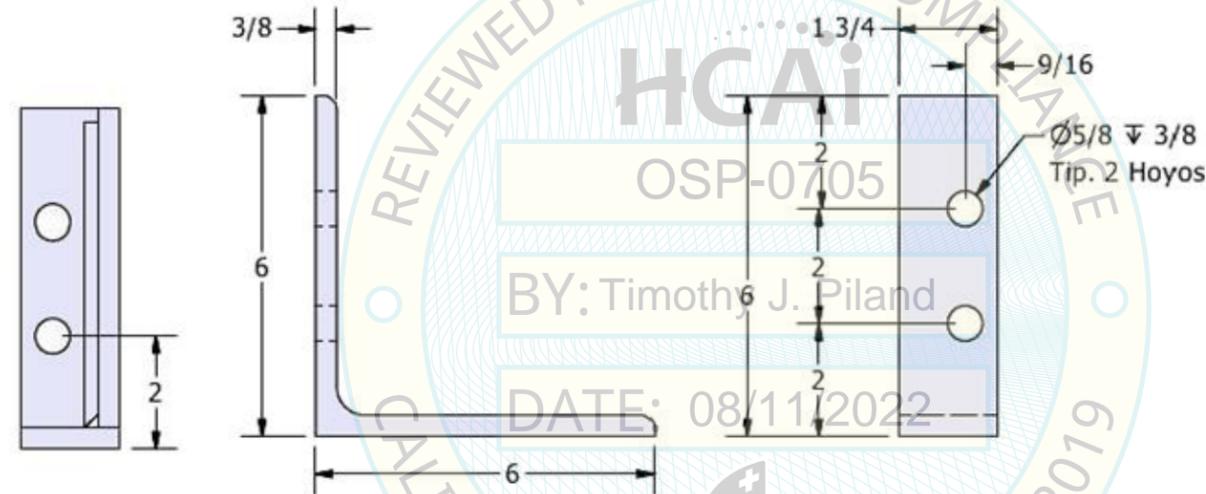
SHEET:
3



ENSAMBLE GUSSET 1



ENSAMBLE GUSSET 2



B MS

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO. - CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RE TRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR	± 2°	

PRIMARY DIMENSIONS ARE IN INCHES
THIRD ANGLE PROJECTION
1695 CACTUS ROAD,
SAN DIEGO,
CALIFORNIA 92154

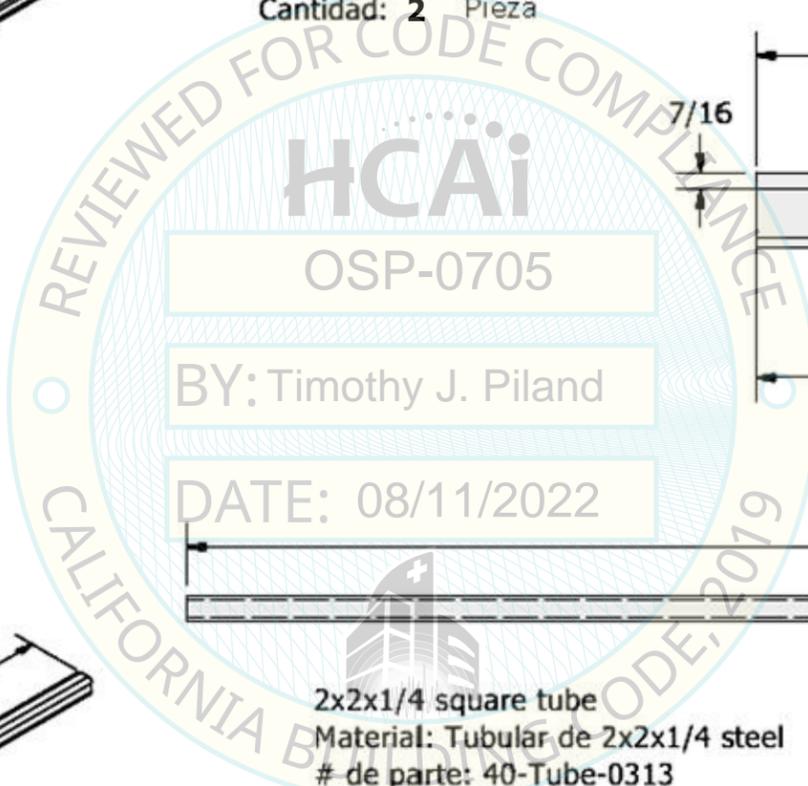
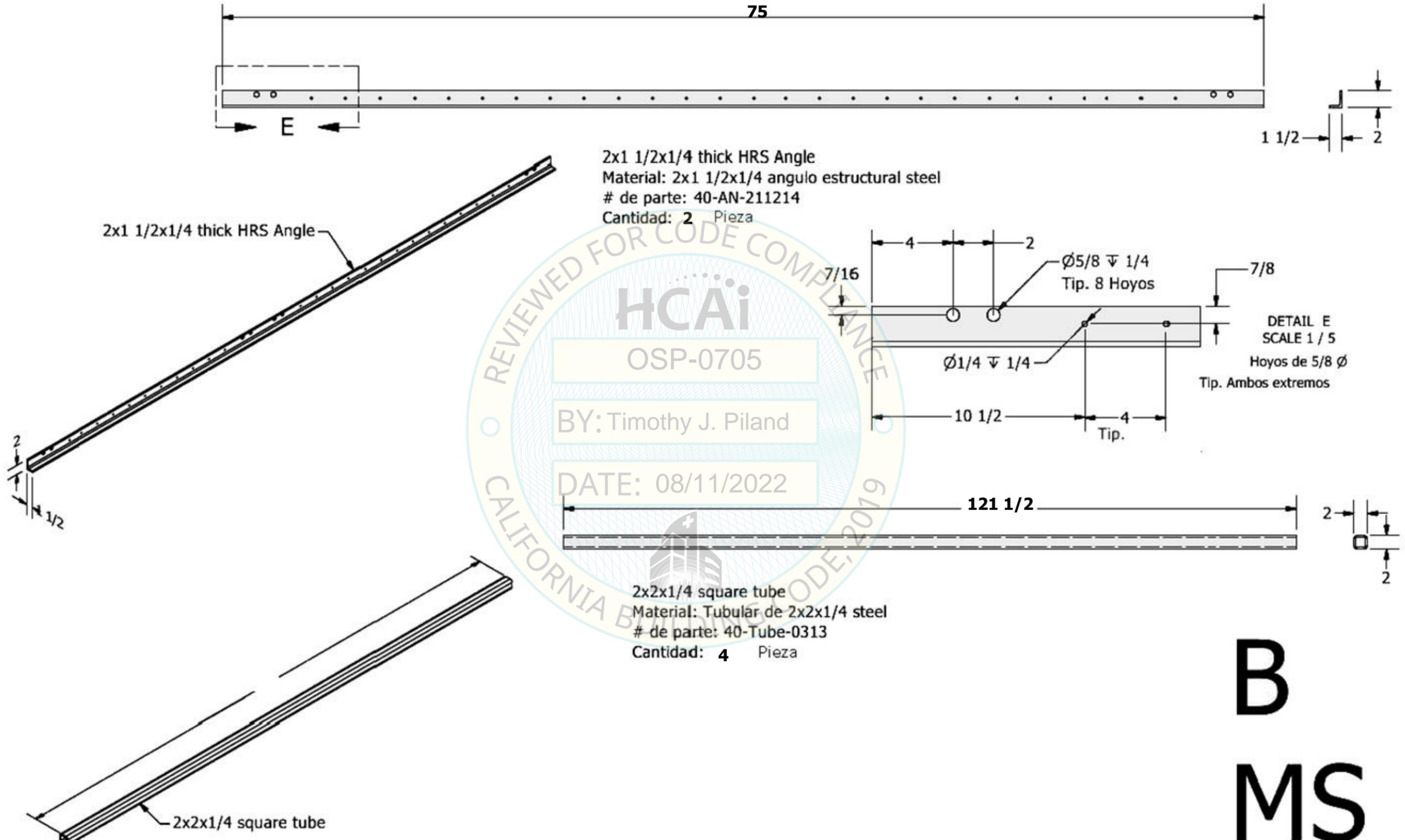


VERTIV
TIJUANA
OSP-0705

DESCRIPTION: CROSSBRACE OSHPD
DRAWING BY: Luis.O.Villalobos
DATE: 11/18/2020

JOB NAME: Carel OSHPD
UNIT TAG: HU-1
JOB NUMBER: 12737
SHEET: 4

CORTE ANGULO Y TUBULAR



B MS

NOTAS: REVISAR NOTAS DE CONSTRUCCION ANTE UNA DUDA NO CONTINUE, PREGUNTE A INGENIERIA

© VERTIV CO. - CONFIDENTIAL AND PROPRIETARY - ALL RIGHTS RESERVED. THIS DOCUMENT (AND THE INFORMATION IT CONTAINS) ARE THE PROPERTY OF VERTIV CO. BY ACCEPTING IT INTO YOUR POSSESSION, YOU AGREE THAT YOU WILL KEEP THIS DOCUMENT, AND ALL INFORMATION CONTAINED HEREIN, IN STRICTEST CONFIDENCE, AND WILL NOT COPY, RE TRANSMIT, USE (EXCEPT SOLELY FOR THE BENEFIT OF VERTIV CO.), SELL, LEND OR OTHERWISE DISPOSE OF THE SAME, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF VERTIV CO., AND THIS DOCUMENT SHALL BE RETURNED TO VERTIV CO. IMMEDIATELY UPON REQUEST.

DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED INCHES (PRIMARY)		
X	± 1/8	± .125
.X	± 1/16	± .0625
.XX	± 1/16	± .0625
.XXX	± 1/32	± .03125
.XXXX	± 1/32	± .03125
ANGULAR	± 2°	

PRIMARY DIMENSIONS ARE IN INCHES

THIRD ANGLE PROJECTION

1695 CACTUS ROAD,
SAN DIEGO,
CALIFORNIA 92154



VERTIVTM
TIJUANA

OSP-0705

DESCRIPTION:	CROSSBRACE OSHPD
DRAWING BY:	Luis.O.Villalobos
DATE:	11/18/2020

JOB NAME:	Carel OSHPD
UNIT TAG:	HU-1
JOB NUMBER:	12737

SHEET:
5