



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

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

OFFICE USE ONLY

**APPLICATION #: OSP-0181**

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: AAON, Inc.

Manufacturer's Technical Representative: James Velde

Mailing Address: 203 Gum Springs Road, Longview, TX 75602

Telephone: (903) 247-9263

Email: jvelde@aaon.com

**Product Information**

Product Name: Air Conditioning Units

Product Type: Air Conditioning Units - Packaged

Product Model Number: CB/CC Packaged Condensing Units

General Description: Galvanized steel panel cabinets w/internal & external components.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

**Applicant Information**

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

Contact Person: Galen Reid

Mailing Address: 233 SW Wilson Ave., Suite 101, Bend, OR 97702

Telephone: (541) 604-7225

Email: greid@structint.com

Title: Director, TRU Compliance





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

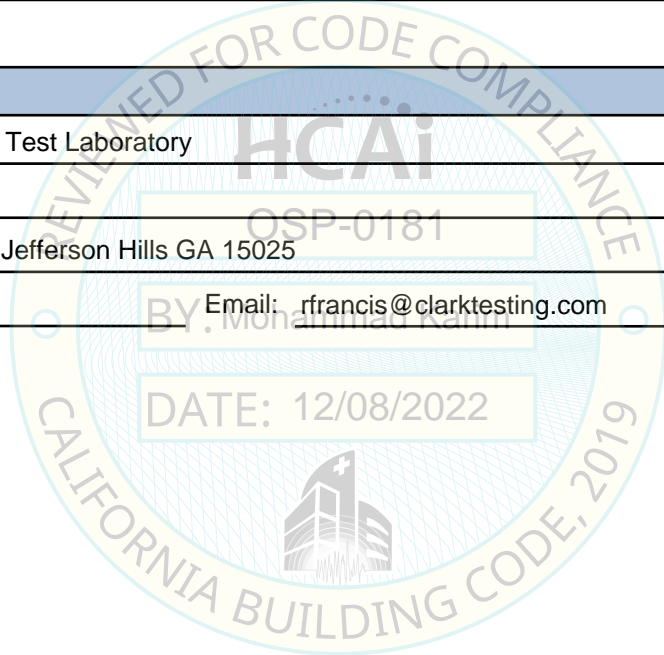
Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.  
Name: Andrew Coughlin California License Number: S6082  
Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025  
Telephone: (415) 635-8461 Email: acoughlin@structint.com

**Certification Method**

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

**Testing Laboratory**

Company Name: Clark Dynamics Test Laboratory  
Contact Person: Robert Francis  
Mailing Address: 1801 Route 51, Jefferson Hills GA 15025  
Telephone: (412) 387-1001 Email: rfrancis@clarktesting.com





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**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.44

SDS (Design spectral response acceleration at short period, g) = 2.00

$a_p$  (Amplification factor) = 1.0

$R_p$  (Response modification factor) = 2.5

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

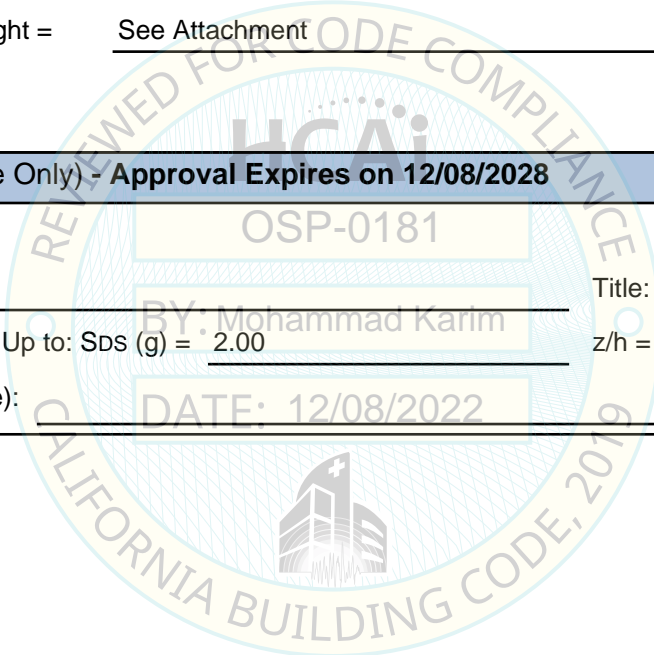
**HCAI Approval (For Office Use Only) - Approval Expires on 12/08/2028**

Date: 12/8/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.00 z/h = 1

Condition of Approval (if applicable): DATE: 12/08/2022





















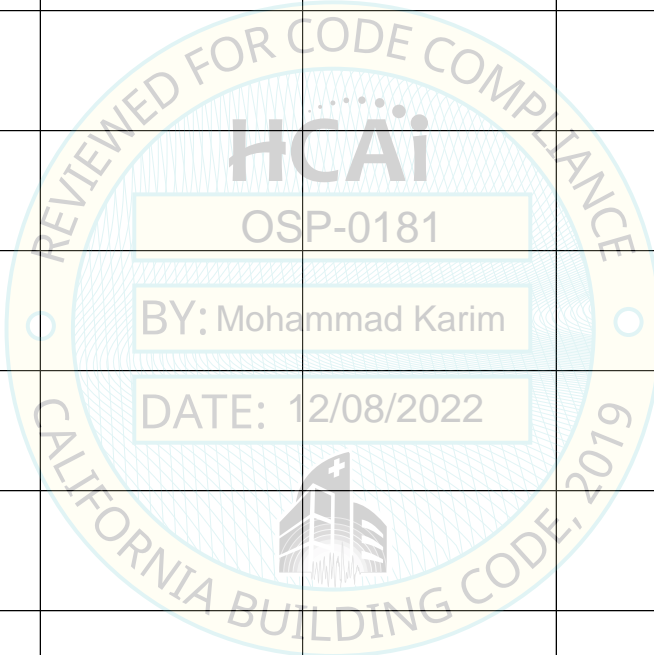
# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 1700667



**Manufacturer:** AAON  
**Model Line:** CB/CC Packaged Condensing Units

UUT	Unit Description (Coils)	Report Number (UUT #)	Testing Lab	Year Tested	ISO 17025 Accredited?	S <sub>DS</sub>	z/h	I <sub>p</sub>
9	CC-B-002-1-B-1 (Tube & Fin Coil)	EL: 9814 (UUT9)	Clark Dynamic Test Laboratory, Inc.	2011	No <sup>1</sup>	2.0	1.0	1.5
10	CC-B-005-3-B-1 (Microchannel Coil)	EL: 9814 (UUT10)	Clark Dynamic Test Laboratory, Inc.	2011	No <sup>1</sup>	2.0	1.0	1.5



**Notes:**  
1. Clark was not ISO 17025 accredited at the time of testing but has been reviewed by TRU Compliance and found to meet the requirements for ICC-ES AC156 testing. Review form is on file with TRU Compliance.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 1700667



<b>Manufacturer:</b> AAON	<b>UUT 9</b>
<b>Model Line:</b> CB/CC Packaged Condensing Units	
<b>Model Number:</b> CC-B-002 (CC-B-002-1-B-1:BG00000)	
<b>Serial Number:</b> 201107-CHCT03423	

**Product Construction Summary:**  
Painted Carbon Steel Enclosure

**Options/Subcomponent Summary:**  
**Compressor:** Copeland (ZPS20K4E); **Fan Motors:** GE (48); **Fans:** LAU (T12E07A);  
**Tube & Fin Coils:** AAON (Custom Coils); **Sensors:** Johnson Controls (P352PN-4C); **Expansion Valves:** Sporlan (CBBIZE-2)

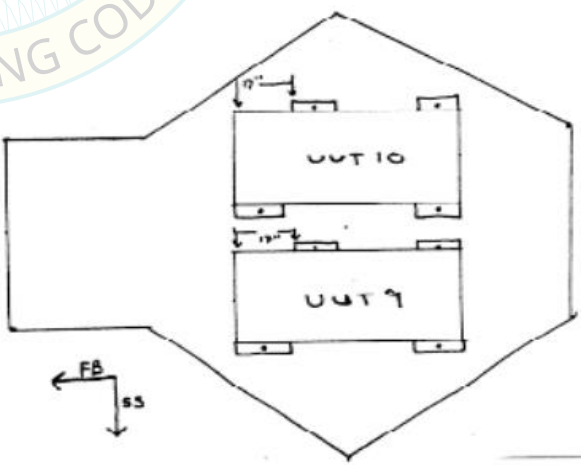
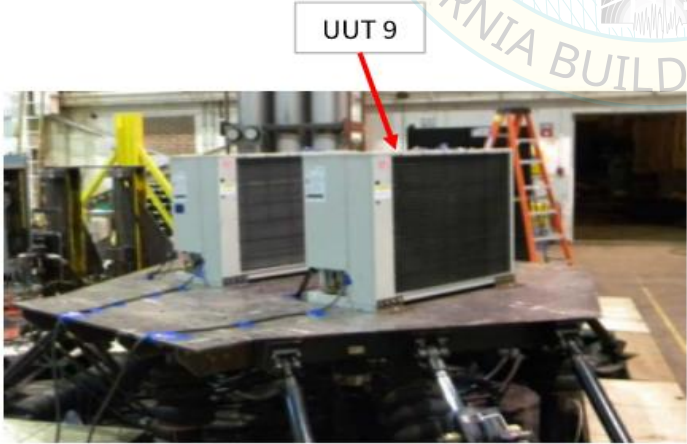
**UUT Properties**

Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
325	20.2	50.1	38.6	25.1	11.8	>33.3

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:** (Test Report: EL: 9814)(UUT9)



UUT9 was base mounted - rigid using standard manufacturer provided brackets using four (4) 2"x2"x 8"x1/4" carbon steel angles. Each angle used four (4) #14 x 1-1/2" zip screws to attach to the unit and four (4) 1/2"-13 Grade 5 bolts with flat and lock washers.  
 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

TRU PROJECT NO. 1700667



<b>Manufacturer:</b> AAON	<b>UUT 10</b>
<b>Model Line:</b> CB/CC Packaged Condensing Units	
<b>Model Number:</b> CC-B-005 (CC-B-005-3-B-1:0DB000X)	
<b>Serial Number:</b> 201107-CHCW03424	

**Product Construction Summary:**  
Painted Carbon Steel Enclosure

**Options/Subcomponent Summary:**  
**Compressor:** Copeland (ZPS51K4E); **Fan Motors:** GE (48); **Fans:** LAU (T5082630); **Microchannel Coils:** Delphi (Custom Coils); **Sensors:** Johnson Controls (P352PN-4C); **Expansion Valves:** Sporlan (CBBIZE-5)

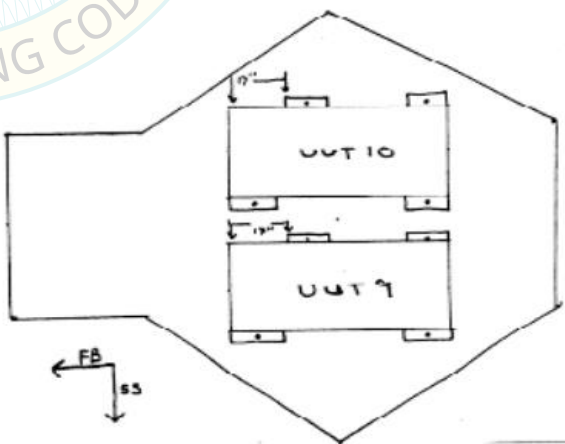
**UUT Properties**

Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
330	20.2	50.1	38.6	15.4	11.2	12.6

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:** (Test Report: EL: 9814)(UUT10)



UUT10 was base mounted - rigid using standard manufacturer provided brackets using four (4) 2"x2"x 8"x1/4" carbon steel angles. Each angle used four (4) #14 x 1-1/2" zip screws to attach to the unit and four (4) 1/2"-13 Grade 5 bolts with flat and lock washers.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.