



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0116

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Daikin Applied

Manufacturer's Technical Representative: Art Rizoli

Mailing Address: 207 Laurel Hill Rd. Verona, VA 24482

Telephone: (540) 248-9539

Email: Art.rizoli@daikinapplied.com

Product Information

Product Name: Chillers

Product Type: Chillers - Water Cooled

Product Model Number: See Attachment A for a complete listing of models included in this application.

General Description: Centrifugal Chillers.

Mounting Description: Rigid or Neoprene Pad Isolated, 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.

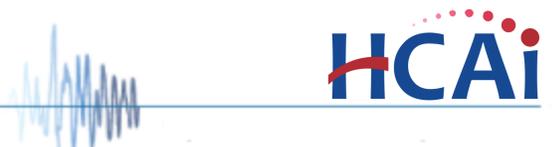
Contact Person: Galen Reid

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

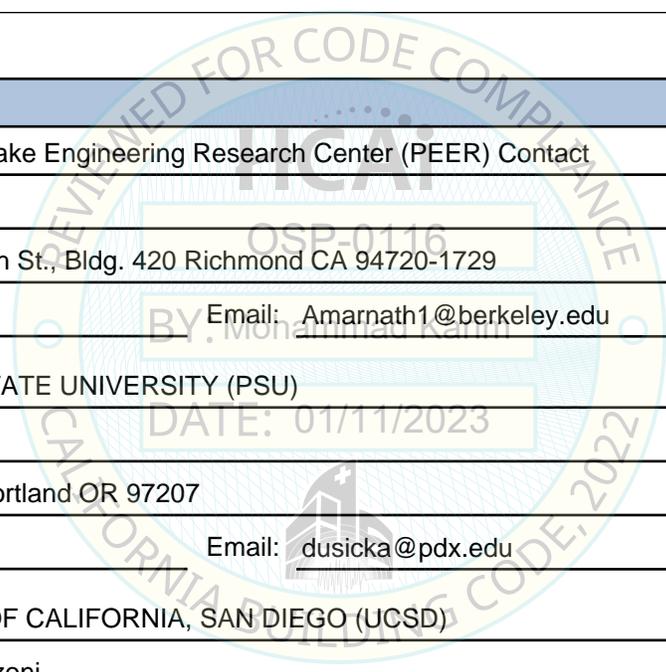
GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: Pacific Earthquake Engineering Research Center (PEER) Contact
Person: Amarnath Kasalanati
Mailing Address: 1301 South 46th St., Bldg. 420 Richmond CA 94720-1729
Telephone: (510) 642-3437 Email: Amarnath1@berkeley.edu

Company Name: PORTLAND STATE UNIVERSITY (PSU)
Contact Person: Peter Dusicka
Mailing Address: PO Box 751, Portland OR 97207
Telephone: (503) 725-9558 Email: dusicka@pdx.edu

Company Name: UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD)
Contact Person: Gianmario Benzoni
Mailing Address: 9500 Gilman Drive, #0826 La Jolla CA 92093-0826
Telephone: (858) 534-1432 Email: benzoni@ucsd.edu





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) =	1.15 (Rigid: $SDS = 1.6, z/h = 1$); 3.60 (Neoprene Pad Isolated: $SDS = 2.0, z/h = 1$)
SDS (Design spectral response acceleration at short period, g) =	1.6 (Rigid); 2.0 (Neoprene Pad Isolated)
a_p (Amplification factor) =	1.0 (Rigid); 2.5 (Neoprene Pad Isolated)
R_p (Response modification factor) =	2.5
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 01/11/2029

Date:	<u>1/11/2023</u>		
Name:	<u>Mohammad Karim</u>	Title:	<u>Supervisor, Health Facilities</u>
Special Seismic Certification Valid Up to: SDS (g) =	<u>See Above</u>	z/h =	<u>See Above</u>
Condition of Approval (if applicable):	<u>DATE: 01/11/2023</u>		



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1700688-CR-002-R0



Manufacturer: Daikin Applied						TABLE 2	
Model Line: HSC, TSC, WDC and WSC Centrifugal Compressor Water Chillers							
Certified Product Construction Summary: Carbon Steel							
Certified Options Summary: Subcomponents and options are summarized in Table 4.							
Mounting Configuration: Base mounted - rigid or neoprene isolated Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2022		Seismic Certification Limits:			$S_{DS} = 1.6g$	$z/h = 1.0$	$I_P = 1.5$
					$S_{DS} = 1.6g$	$z/h = 0.0$	
Model Line	Model	Dimensions (in)			Weight (lb.)	Notes	UUT
		Depth	Width	Height			
Heat Recovery Centrifugal Compressor Chillers, HSC (200-1250 tons)	HSC063	175.0	53.0	90.0	9,170	HSC, TSC and WSC Model lines are the same except for software	5
	HSC079	175.0	80.0	105.0	22,007		Interp.
	HSC087	175.0	80.0	105.0	24,999		Interp.
	HSC100	181.0	104.0	106.0	38,823		Interp.
	HSC113	181.0	104.0	106.0	43,017		Interp.
	HSC126	181.0	104.0	106.0	43,017		Interp.
Templifier Centrifugal Compressor Heat Pump Water Heaters, TSC (5,000 to 19,000 MBH)	TSC063	175.0	53.0	90.0	9,170	HSC, TSC and WSC Model lines are the same except for software	5
	TSC079	175.0	80.0	105.0	22,007		Interp.
	TSC087	175.0	80.0	105.0	24,999		Interp.
	TSC100	181.0	104.0	106.0	38,823		Interp.
	TSC113	181.0	104.0	106.0	43,017		Interp.
	TSC126	181.0	104.0	106.0	43,017		Interp.
Double Centrifugal Compressor Chillers, WDC (400-2500 tons)	WDC063	224.0	75.0	106.0	37,515		Interp.
	WDC079	224.0	93.0	106.0	54,197		Interp.
	WDC087	224.0	93.0	106.0	54,197		Interp.
	WDC100	231.0	118.0	115.0	78,781		Interp.
	WDC113	231.0	118.0	115.0	78,781		Interp.
	WDC126	231.0	118.0	115.0	78,781		2
Single Centrifugal Compressor Chillers, WSC (200-1250 tons)	WSC063	175.0	53.0	90.0	9,170	HSC, TSC and WSC Model lines are the same except for software	5
	WSC079	175.0	80.0	105.0	22,007		Interp.
	WSC087	175.0	80.0	105.0	24,999		Interp.
	WSC100	181.0	104.0	106.0	38,823		Interp.
	WSC113	181.0	104.0	106.0	43,017		Interp.
	WSC126	181.0	104.0	106.0	43,017		Interp.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1700688-CR-002-R0



Manufacturer: Daikin Applied Model Line: TMC and WMC, Magnetic Bearing Centrifugal Chillers		Table Description: Compressors, Evaporators, & Condensers			TABLE 3	
Building Code: CBC 2022		Seismic Certification Limits:			$S_{DS} = 2.0g \quad z/h = 1.0$ $S_{DS} = 2.0g \quad z/h = 0.0$	
Component Type	Manufacturer	Model	Description	Notes	UUT	
Compressor	Danfoss/Turbocor	TT300	Magnetic Bearing Compressor with Integral Motor and Variable Frequency Drive (Carbon Steel)		1	
		TT350			Interp.	
		TT400			Interp.	
		TT500			Interp.	
		TT700			3	
Evaporator	Daikin	E2209	Carbon Steel ASME Shell with Copper Tubes		1	
		E2212			5	
		E2609			Interp.	
		E2612			Interp.	
		E3009			3	
Condenser	Daikin	C2009	Carbon Steel ASME Shell with Copper Tubes		1	
		C2012			Interp.	
		C2209			Interp.	
		C2212			5	
		C2609			3	
Controllers	Benshaw/Carel	Part 332830705	MicroTech II, Carel based, Carbon Steel	Unit Controller	1, 3	
Operator Interface	Tru-Vu	Part 331670401	OITS, 21" Touch Screen, Plastic		3, 5	
	AxiomTech	Part 330276502	OITS, 15" Touch Screen, Plastic		1	

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

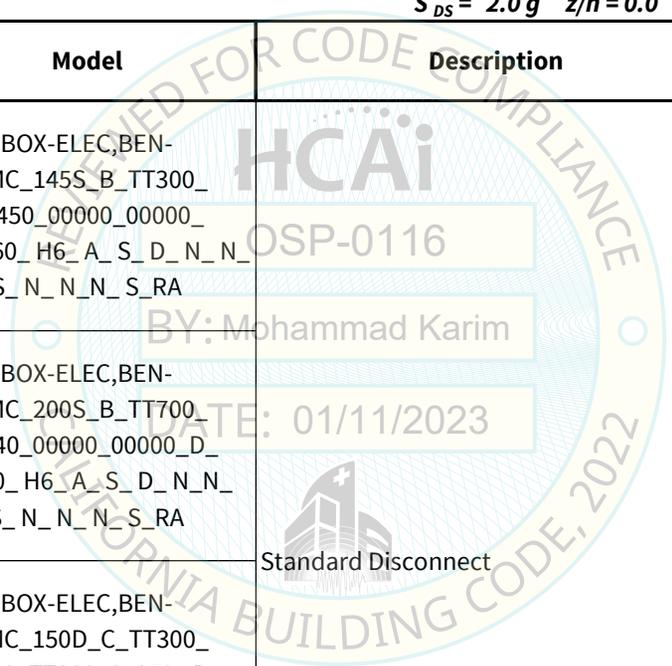
1700688-CR-002-R0



Manufacturer: Daikin Applied	Table Description: Compressors, Evaporators, & Condensers	TABLE 3
Model Line: TMC and WMC, Magnetic Bearing Centrifugal Chillers		

Building Code: CBC 2022	Seismic Certification Limits:	$S_{DS} = 2.0 g$ $z/h = 1.0$	$I_p = 1.5$
		$S_{DS} = 2.0 g$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
Power Panel	Benshaw	BOX-ELEC,BEN- WMC_145S_B_TT300_ 01450_00000_00000_ D_00460_H6_A_S_D_N_N_ S_N_N_N_S_RA	Standard Disconnect	WMC048S	1
		BOX-ELEC,BEN- WMC_200S_B_TT700_ 01640_00000_00000_D_ 00460_H6_A_S_D_N_N_ S_N_N_N_S_RA	Standard Disconnect	WMC060S	Interp.
		BOX-ELEC,BEN- WMC_150D_C_TT300_ 01350_TT300_01350_D_ 00460_H6_A_S_D_N_N_ S_N_N_N_S_RA	Standard Disconnect	WMC036D	Interp.
		BOX-ELEC,BEN- WMC_275D_C_TT350_ 02160_TT350_02160_D_ 00460_H6_A_S_D_N_N_ S_N_N_N_S_RA	Standard Disconnect	WMC044D	Interp.

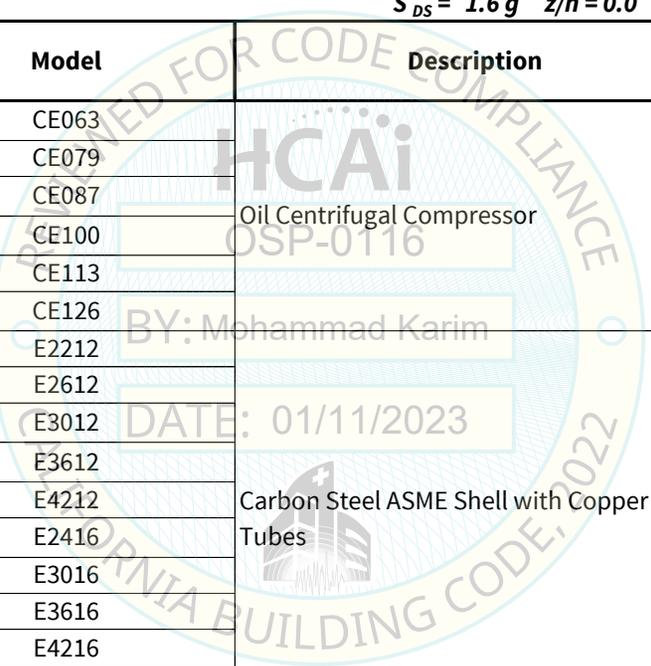


SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1700688-CR-002-R0



Manufacturer: Daikin Applied Model Line: HSC, TSC, WDC and WSC Centrifugal Compressor Water Chillers		Table Description: Compressors, Evaporators, & Condensors			TABLE 4	
Building Code: CBC 2022		Seismic Certification Limits:			$S_{DS} = 1.6g \quad z/h = 1.0$ $S_{DS} = 1.6g \quad z/h = 0.0$	
					$I_p = 1.5$	
Component Type	Manufacturer	Model	Description	Notes	UUT	
Compressor	Daikin	CE063	Oil Centrifugal Compressor		5	
		CE079		Interp.		
		CE087		Interp.		
		CE100		Interp.		
		CE113		Interp.		
		CE126		2		
Evaporator	Daikin	E2212	Carbon Steel ASME Shell with Copper Tubes		5	
		E2612		Interp.		
		E3012		Interp.		
		E3612		Interp.		
		E4212		Interp.		
		E2416		Interp.		
		E3016		Interp.		
		E3616		Interp.		
Oil Pump	Daikin	16	Part 350147201, CE063-CE087 Compressors, 1hp, 120V	Semi-Hermetic Cast Steel Shell	5	
			Part 350147221, CE100-CE126 Compressors, 1hp, 120V		2	
Oil Cooler	Alfa Laval	26	Part 74666413	Stainless Steel Brazed Plate	5	
		48	Part 74666414		2	



SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1700688-CR-002-R0



Manufacturer: Daikin Applied	Table Description: Compressors, Evaporators, & Condensors	TABLE 4
Model Line: HSC, TSC, WDC and WSC Centrifugal Compressor Water Chillers		

Building Code: CBC 2022	Seismic Certification Limits:	$S_{DS} = 1.6g$ $z/h = 1.0$	$I_p = 1.5$
		$S_{DS} = 1.6g$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
Condenser	Daikin	C2212	Carbon Steel ASME Shell with Copper Tubes		5
		C2612		Interp.	
		C3012		Interp.	
		C3612		Interp.	
		C4212		Interp.	
		C2416		Interp.	
		C3016		Interp.	
		C3616		Interp.	
		C4216		Interp.	
		C4816		2	
Controller	Benshaw	Part 333529001	MicroTech II, Carel based, Carbon Steel	Unit Controller	2, 5
		Part 333529201		Compressor Controller	2, 5
Operator Interface	Tru-Vu	Part 331670401	OITS, 21" Touch Screen, Plastic		3, 5
	AxiomTech	Part 330276502	OITS, 15" Touch Screen, Plastic		1, 2
VFD Starter ¹	ABB	VFD015AMA			Extrap.
		VFD018AMA			5
		VFD026AMA			Interp.
		VFD035AMA			Interp.
		VFD045AMA			Interp.
		VFD059AMA			Interp.
		VFD073AMA			Interp.
		VFD081AMA			6, 7

Notes:
1. Wall or unit mounted with seismic upgrade consisting of a ratchet strap around cabinet

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1700688-CR-002-R0



Manufacturer: Daikin Applied	Table Description: Compressors, Evaporators, & Condensors	TABLE 4
Model Line: HSC, TSC, WDC and WSC Centrifugal Compressor Water Chillers		

Building Code: CBC 2022	Seismic Certification Limits:	$S_{DS} = 1.6g \quad z/h = 1.0$	$I_p = 1.5$
		$S_{DS} = 1.6g \quad z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
Motor	Regal Beloit	23	230hp, 200V - 575V, 460V tested	Semi-Hermetic Copper windings/Carbon Steel Shell	5
		25	250hp, 2300V-6600V		Interp.
		29	290hp, 200V - 575V		Interp.
		32	320hp, 2300V-6600V		Interp.
		35	350hp, 200V - 575V		Interp.
		40	400hp, 200V - 575V		Interp.
		41	410hp, 200V-6600V		Interp.
		47	450hp, 200V - 575V		Interp.
		49	500hp, 200V - 575V		Interp.
		50	500hp, 2300V-6600V		Interp.
		57	575hp, 200V - 575V		Interp.
		58	580hp, 2300V-6600V		Interp.
		61	600hp, 380V - 6600V		Interp.
		65	650hp, 2300V - 6600V		Interp.
		66	650hp, 200V - 575V		Interp.
					72
		84	850hp, 380V - 6600V	2	

UNIT UNDER TEST (UUT) SUMMARY SHEET

1700688-CR-002-R0



Manufacturer: Daikin Applied	UUT 1
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: WMC145S E2209/C2009	
Serial Number: N/A	

Product Construction Summary:
Carbon Steel

Options/Subcomponent Summary:
Compressor: Danfoss/Turbocor (TT300); **Evaporator:** Daikin (E2209); **Condenser:** Daikin (C2009);
Controllers: Benshaw/Carel (Part 332830705); **Operator Interface:** AxiomTech (Part 330276502);
Power Panel: Benshaw (BOX-ELEC,BEN-WMC_145S_B_TT300_01450_00000_00000_D_00460_H6_A_S_D_N_N_S_N_N_N_S_RA)

UUT Properties

Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
5,920	128.0	35.0	79.0	12.3	10.1	-

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 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	-	-
		2.0	0.0					

Test Mounting Details: (Test Report: iSTAR-1003)(UUT1)



UUT1 was base mounted - isolated in 1/4" neoprene pads with eight (8) 1" Grade 8 bolts.
 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

1700688-CR-002-R0



Manufacturer: Daikin Applied	UUT 2
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: WDC126 E4816/C4816	
Serial Number: N/A	

Product Construction Summary:
Carbon Steel

Options/Subcomponent Summary:
Compressor: Daikin (CE126); **Evaporator:** Daikin (E4816); **Oil Pump:** Daikin (16 - Part 350147221);
Oil Cooler: Alfa Laval (48 - Part 74666414); **Condenser:** Daikin (C4816);
Controller: Benshaw (Part 333529001, Part 333529201); **Operator Interface:** AxiomTech (Part 330276502);
Motor: Regal Beloit (84)

UUT Properties

Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
78,781	231.0	118.0	115.0	8.5	6.3	21.5

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 2022	ICC-ES AC156	1.6	1.0	1.5	2.56	1.92	1.07	0.43
		1.6	0.0					

Test Mounting Details: (Test Report: SRMD-2010-08)(UUT1)



UUT2 was base mounted - isolated on 1/4" neoprene pads with eight (8) 1" Grade 8 bolts.
 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

1700688-CR-002-R0



Manufacturer: Daikin Applied	UUT 3
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: WMC060DC/E3009-HB2CL2V/C2609-GB2CL2V Serial Number: 517A000900	

Product Construction Summary:
Carbon Steel

Options/Subcomponent Summary:
Compressor: Danfoss/Turbocor (TT700); **Evaporator:** Daikin (E3009); **Condenser:** Daikin (C2609);
Controllers: Benshaw/Carel (Part 332830705); **Operator Interface:** Tru-Vu (Part 331670401);
Power Panel: Benshaw (BOX-ELEC,BEN-WMC_350D_C_TT700_01640_TT700_01640_D_00460_H6_A_S_D_N_N_S_N_N_N_S_RA)

<i>UUT Properties</i>						
Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
9,555	168.5	55.2	94.3	14.2	14.3	12.8

<i>UUT Highest Passed Seismic Run Information</i>								
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 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

Test Mounting Details: (Test Report: 15046-TR-001-R1)(UUT3)



UUT3 was base mounted - rigid to the table using eight (8) 1" SAE Grade 8 bolts, washers and a 1/4" ribbed neoprene pad under each mounting foot (4).
 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



1700688-CR-002-R0

Manufacturer: Daikin Applied	UUT 5
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: WSC063M/E2212-2RA/C2212-2RA	
Serial Number: STNU161200060	

Product Construction Summary:
Carbon Steel

Options/Subcomponent Summary:
Compressor: Daikin (CE063); **Evaporator:** Daikin (E2212); **Oil Pump:** Daikin (16 - Part 350147201);
Oil Cooler: Alfa Laval (26 - Part 74666413); **Condenser:** Daikin (C2212);
Controller: Benschaw (Part 333529001, Part 333529201); **Operator Interface:** Tru-Vu (Part 331670401);
VFD Starter: ABB (VFD018AMA); **Motor:** Regal Beloit (23)

UUT Properties

Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
9,170	175.0	53.0	90.0	11.0	10.6	10.8

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 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

Test Mounting Details: (Test Report: 15046-TR-001-R1)(UUT5)



UUT5 was base mounted - rigid to the table using eight (8) 1" SAE Grade 8 bolts and 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

1700688-CR-002-R0



Manufacturer: Daikin Applied	UUT 6
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: VFD081AMA	
Serial Number: 21643C0001	

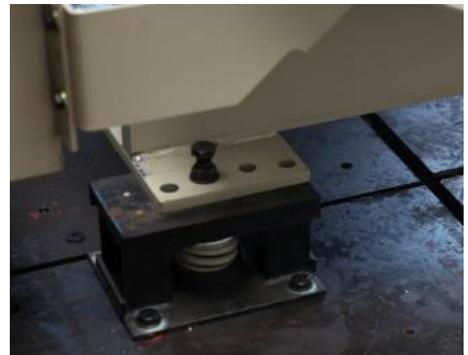
Product Construction Summary:
Carbon Steel Enclosure

Options/Subcomponent Summary:
VFD Starter: ABB (VFD081AMA) - A ratchet strap around the cabinet was included as a seismic upgrade to keep the door closed during testing

<i>UUT Properties</i>						
Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
944	61.0	59.0	80.0	1.5	1.9	4.3

<i>UUT Highest Passed Seismic Run Information</i>									
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 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						

Test Mounting Details: (Test Report: 15046-TR-001-R1)(UUT6)



UUT6 was mounted on a test fixture (total wt. 3,815 lbs.) that was base mounted - isolated on four (4) VMC MSSH-1E-1000 isolators using four (4) 5/8" SAE Grade 8 bolts, each to fasten the isolators to the table and one (1) 3/4" SAE Grade 8 bolt each to fasten the UUT to the isolators.
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

1700688-CR-002-R0



Manufacturer: Daikin Applied	UUT 7
Model Line: HSC, TMC, TSC, WDC, WMC, WSC	
Model Number: VFD081AMA Serial Number: 21643C0001	

Product Construction Summary:
Carbon Steel Enclosure

Options/Subcomponent Summary:
VFD Starter: ABB (VFD081AMA) - A ratchet strap around the cabinet was included as a seismic upgrade to keep the door closed during testing

<i>UUT Properties</i>						
Weight (lb.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
944	61.0	59.0	80.0	4.6	4.7	13.9

<i>UUT Highest Passed Seismic Run Information</i>								
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 2022	ICC-ES AC156	2.0 2.5	1.0 0.0	1.5	3.20	2.40	1.67	0.67

Test Mounting Details: (Test Report: 15046-TR-001-R1)(UUT7)



UUT7 was mounted on a test fixture (total wt. 3,815 lbs.) that was base mounted - rigid on four (4) VMC MSSH-1E-1000 which were locked to simulate rigid mounting. The isolators were fastened to the table using four (4) 5/8" SAE Grade 8 bolts, washers and one (1) 3/4" SAE Grade 8 bolt each to fasten the UUT to the isolators.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.