



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0867

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Dimplex Thermal Solutions

Manufacturer's Technical Representative: Ben Post

Mailing Address: 2625 Emerald Drive, Kalamazoo, MI 49001

Telephone: (800) 968-5665 Email: bpost@dimplexthermal.com

Product Information

Product Name: 36-94kW D-Frame Chillers

Product Model Number(s): See attached

Product Category: Chillers

Product Sub-Category: Chillers - Air Cooled

General Description: Cataloged, air cooled condensing process chillers acceptable for indoor or outdoor use.

Mounting Description: Base Mounted Rigid and Spring Vibration Isolated

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: DCL Labs, LLC

Contact Person: Nastya Veyngerova

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431

Telephone: (775) 358-5085 Email: nastya.veyngerova@shaketest.com

Title: Seismic Test Engineer



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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: Josh Sailer

Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431

Telephone: (775) 358-5085 Email: josh@shaketest.com

BY: Mohammad Karim

DATE: 09/24/2025



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Seismic Parameters

Certified Response Spectral Acceleration Factors: (F_p/W_p)

Horizontal (A Flx-H), $g =$ 3.20 (A Rig-H), $g =$ 2.15

Vertical (A Flx-V), $g =$ 1.67 (A Rig-V), $g =$ 0.67

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

H_f (Force amplification height factor) = 3.5 at $z/h = 1.0$; 1.0 at $z/h = 0$

R_u (Structure ductility reduction factor) = 1.3 at $z/h = 1.0$; 1.0 at $z/h = 0$

I_p (Importance factor) = 1.5

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

HCAI Approval (For Office Use Only) - Approval Expires on 09/23/2031

Date: 9/24/2025

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Condition of Approval (if applicable): _____

OSP-0867

BY: Mohammad Karim

DATE: 09/24/2025

Special Seismic Certification

Table 1 - Certified Components



DCL Project Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

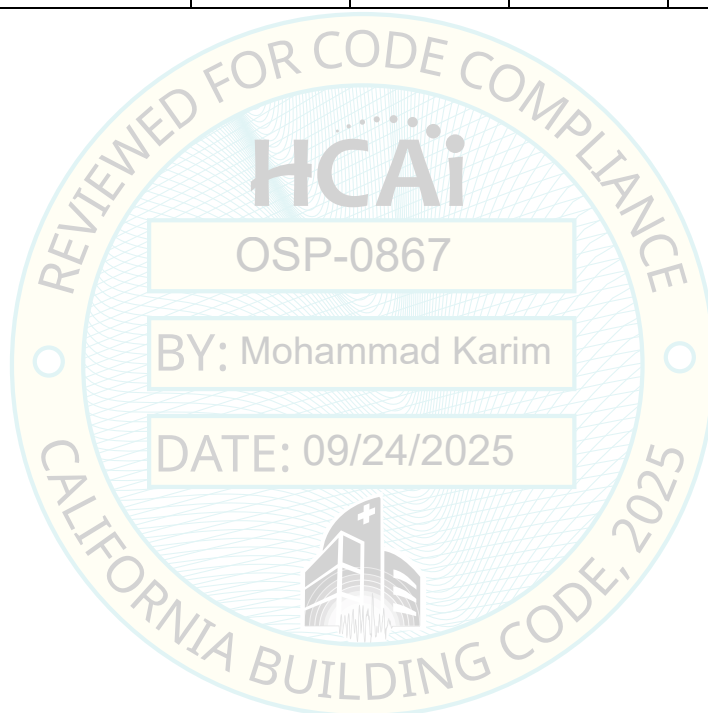
Product Line: 36-94kW D-Frame Chillers

Mounting: Rigid and Isolated Base Mount

Certified Seismic Levels: Sds=2.0g at z/h=1.0; Sds=2.5g at z/h=0.0

Factors for Force Amplification and Structure Ductility Reduction: $H_f = 3.5$ at z/h=1.0; 1.0 at z/h=0 and $R_\mu = 1.3$ at z/h=1.0; 1.0 at z/h=0

Model Number	Thermal Capacity [kW]	Max. Dimensions [in.]			Max. Operating Weight [lb.]	Unit
		Depth	Width	Height		
GO2-7500	36	37	89	89	2500	Extrapolated
GO2-2-5000	49	37	89	89	2869	UUT-01a,b
GO2-2-10000	94	46	109	92	3739	UUT-02a,b



Special Seismic Certification

Table 2 - Certified Subcomponents



DCL Project Number: 93122-2501

Product Line: 36-94kW D-Frame Chillers

Subcomponent Type	Model Number or Size	Description	Manufacturer	Material	Weight [lb.]	Unit
Enclosures	Small Frame Cabinet	Structural Frame	Dimplex Thermal Solutions	Galvanized Carbon Steel	1100	UUT-01a,b
	Large Frame Cabinet				1500	UUT-02a,b
Subcomponent Type	Model Number	Description	Manufacturer	Material	Weight [lb.]	Unit
Compressors	9CE069LA04	Scroll Compressor 6HP	Panasonic	Carbon Steel	80	UUT-01a,b
	9CC089LA04	Scroll Compressor 8HP			155	Interpolated
	9CC120LA04	Scroll Compressor 11HP			165	UUT-02a,b
Pumps	CM5-5	Horizontal Centrifugal 3.35 HP	Grundfos	Stainless Steel	55	Extrapolated
	CM5-6	Horizontal Centrifugal 3.35 HP			56	UUT-01a,b
	CM10-3	Horizontal Centrifugal 5.5 HP			78	UUT-02a,b
Fans	FN063	Axial Fan, 3.7kW	Ziel Abegg	Aluminum, Plastic	80	UUT-01a,b
	FN910	Axial Fan, 5.0kW			138	UUT-02a,b
Condenser	DD0041	Microchannel Condenser	Danfoss	Aluminum	40	UUT-01a,b
	DD0021				50	UUT-02a,b
Evaporators	C62L-E-28	Braze Plate Heat Exchanger	Danfoss	Stainless Steel, Copper	17	Extrapolated
	C62L-E-36				20	Extrapolated
	C62L-E-46				25	UUT-01a,b
	C62L-E-66				30	Interpolated
	C62L-E-88				38	UUT-02a,b
Tank	33" x 20" x 27"	65 Gallon Tank	Myers Industries	Polyethylene	45	UUT-01a,b, UUT-02a,b
Controller	c.PCO	Controller	Carel	Plastic	1	UUT-01a,b, UUT-02a,b
Air Filter	30-5/8" x 42-7/8"	Air Intake Filter	Dust Free	Galvanized Stainless Steel, Aluminum	1	UUT-01a,b, UUT-02a,b

Special Seismic Certification

Table 3 - Tested Units



DCL Project Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

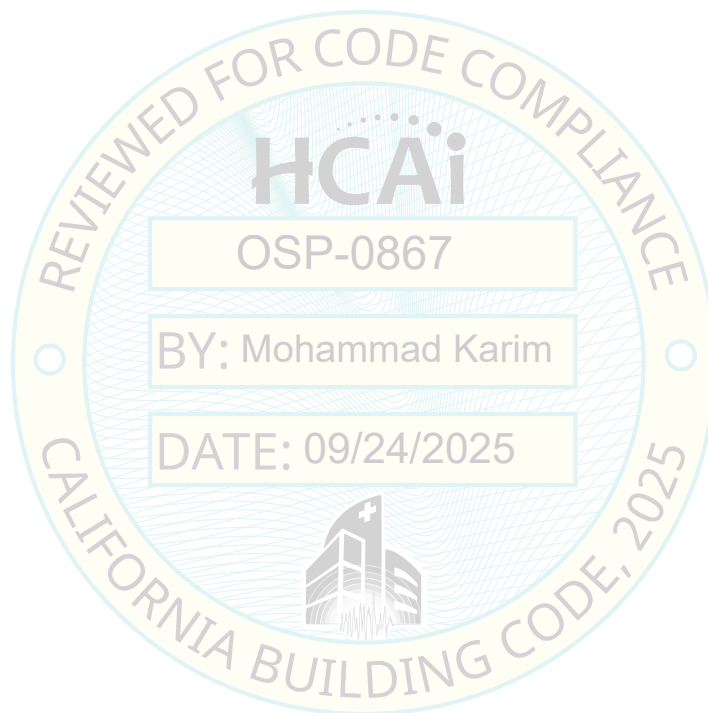
Product Line: 36-94kW D-Frame Chillers

Mounting: Rigid and Isolated Base Mount

Certified Seismic Levels: Sds=2.0g at z/h=1.0; Sds=2.5g at z/h=0.0

Factors for Force Amplification and Structure Ductility Reduction: Hf = 3.5 at z/h=1.0; 1.0 at z/h=0 and Rμ = 1.3 at z/h=1.0; 1.0 at z/h=0

Model Number	Thermal Capacity [kW]	Dimensions [in.]			Operating Weight [lb.]	Unit
		Length	Width	Height		
GO2-2-5000	49	37	89	89	2869	UUT-01a,b
GO2-2-10000	94	46	109	92	3739	UUT-02a,b



UNIT UNDER TEST (UUT) Summary Sheet



UUT-01a

Test Dates: 8/25/25 - 8/29/25

DCL Repot Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

Product Line: 36-94kW D-Frame Chillers

Model Number: GO2-2-5000

Product Construction Summary: Galvanized Carbon Steel Enclosure

Options / Component Summary: Enclosure, compressors, pumps, fans, condenser, evaporator, tank, controller, air filter

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

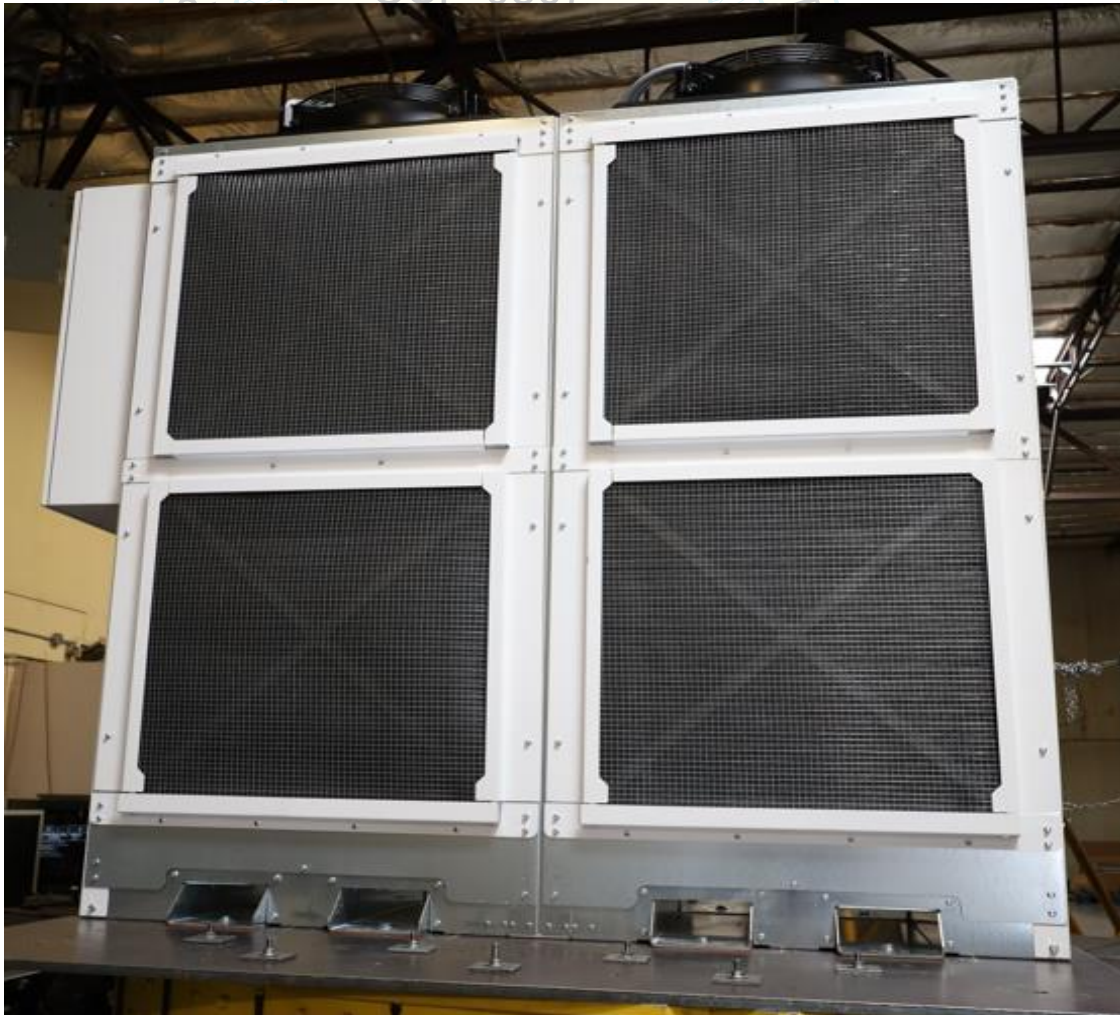
UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2,869	37	89	89	7.25	>33.3	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _f	R _μ	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES AC156	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
		2.50	0.0	1.0	1.0		N/A	N/A	1.67	0.67

Unit Mounting Description: UUT-01a was rigid base mounted to the shake table interface plate using (8) ½" Grade 5 bolts and flat washers. The ½" bolts were spaced 31.0" apart measured on-center in the widthwise direction and 14.0", 26.0" and 14.0" apart measured on-center in the lengthwise direction.



Overall view of UUT-01a

UNIT UNDER TEST (UUT) Summary Sheet



UUT-01b

Test Dates: 8/25/25 - 8/29/25

DCL Repot Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

Product Line: 36-94kW D-Frame Chillers

Model Number: GO2-2-5000

Product Construction Summary: Galvanized Carbon Steel Enclosure

Options / Component Summary: Enclosure, compressors, pumps, fans, condenser, evaporator, tank, controller, air filter

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

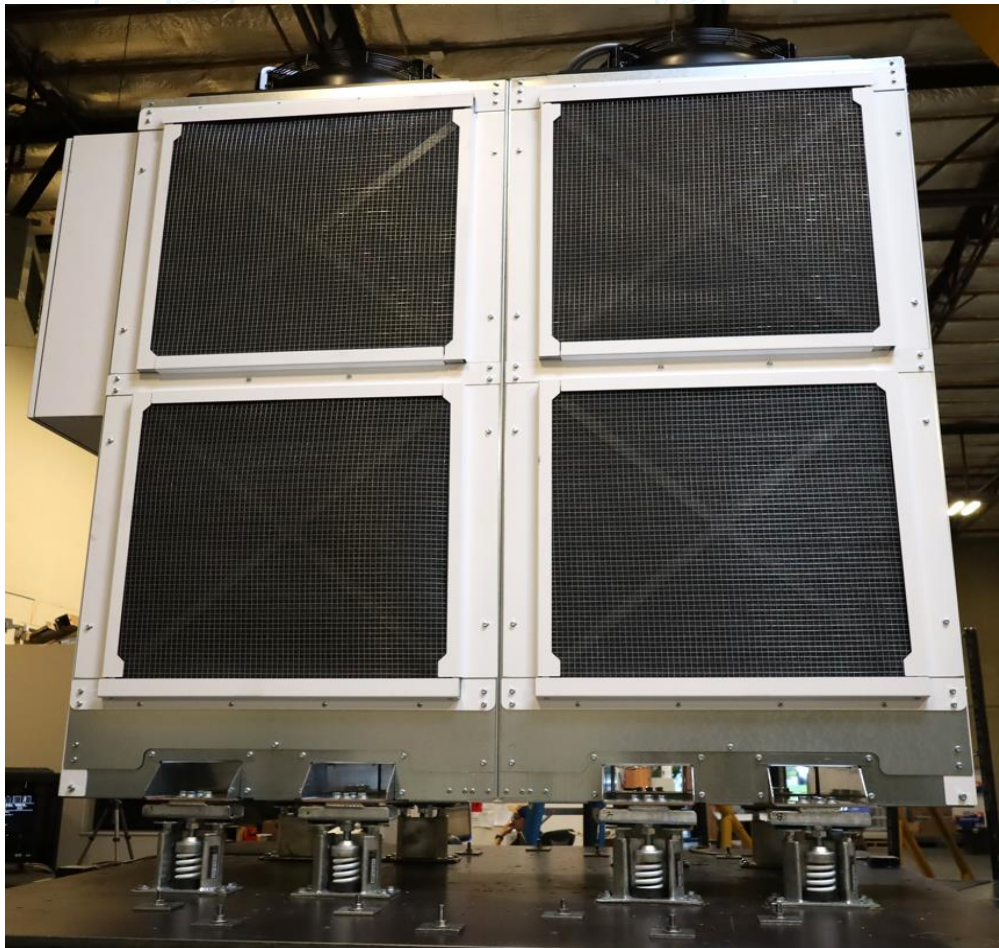
UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2,869	37	89	89	2.25	2.50	6.25

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _i	R _μ	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES AC156	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
		2.50	0.0	1.0	1.0		N/A	N/A	1.67	0.67

Unit Mounting Description: UUT-01b was base mounted to the shake table interface plate using (8) Mason SLRS0-B-750 spring isolators. The unit was attached to each isolator using (4) ½" Grade 5 bolts, lock washers and flat washers. The ½" bolts were spaced 2.3" apart measured on-center in the width- and lengthwise directions. Each isolator was attached to the shake table interface plate using (4) 5/8" Grade 5 bolts, nuts, and flat washers. The 5/8" bolts were spaced 7.0" apart measured on-center in the lengthwise direction and 2.3" apart measured on-center in the widthwise direction.



Overall view of UUT-01b

UNIT UNDER TEST (UUT) Summary Sheet



UUT-02a

Test Dates: 8/25/25 - 8/29/25

DCL Repot Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

Product Line: 36-94kW D-Frame Chillers

Model Number: GO2-2-10000

Product Construction Summary: Galvanized Carbon Steel Enclosure

Options / Component Summary: Enclosure, compressors, pumps, fans, condenser, evaporator, tank, controller, air filter

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
3,739	46	109	92	9.25	12.25	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _f	R _μ	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES AC156	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
		2.50	0.0	1.0	1.0		N/A	N/A	1.67	0.67

Unit Mounting Description: UUT-02a was rigid base mounted to the fixture using (8) ½" Grade 5 bolts and flat washers. The ½" bolts were spaced 42.3" apart measured on-center in the widthwise direction and 21.3", 28.5" and 21.3" apart measured on-center in the lengthwise direction.



Overall view of UUT-02a

UNIT UNDER TEST (UUT) Summary Sheet



UUT-02b

Test Dates: 8/25/25 - 8/29/25

DCL Repot Number: 93122-2501

Manufacturer: Dimplex Thermal Solutions

Product Line: 36-94kW D-Frame Chillers

Model Number: GO2-2-10000

Product Construction Summary: Galvanized Carbon Steel Enclosure

Options / Component Summary: Enclosure, compressors, pumps, fans, condenser, evaporator, tank, controller, air filter

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
3,739	46	109	92	2.75	2.50	6.75

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _i	R _μ	I _p	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES AC156	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
		2.50	0.0	1.0	1.0		N/A	N/A	1.67	0.67

Unit Mounting Description: UUT-02b was base mounted to the fixture using (8) Mason SLRS0-B-750 spring isolators. The unit was attached to each isolator using (4) ½" Grade 5 bolts, lock washers and flat washers. The ½" bolts were spaced 2.3" apart measured on-center in the width- and lengthwise directions. Each isolator was attached to the shake table interface plate using (4) 5/8" Grade 5 bolts, nuts, and flat washers. The 5/8" bolts were spaced 7.0" apart measured on-center in the lengthwise direction and 2.3" apart measured on-center in the widthwise direction.



Overall view of UUT-02b