



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-0344

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Generac Power Systems

Manufacturer's Technical Representative: Richard Ansley

Mailing Address: S45 W29290 Hwy. 59, Waukesha, WI 53189

Telephone: (262) 544-4811

Email: Richard.Ansley@generac.com

Product Information

Product Name: Diesel / Bi-Fuel Generators and Controllers

Product Model Number(s): See Table 1

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Generators

General Description: 10 to 30kW and 400 to 750 kW Diesel / Bi-Fuel Generators with or without factory supplied sound enclosures, and/or UL142 base fuel tanks. Wall Mounted Remote Controllers.

Mounting Description: See Table 1

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: Buehler Engineering, Inc

Contact Person: Gillian Montgomery

Mailing Address: 600 Q Street, Suite 200, Sacramento, CA 95811

Telephone: (916) 443-0303

Email: gmontgomery@buehlerengineering.com

Title: Associate Principal



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

Company Name: BUEHLER ENGINEERING, INC.

Name: Gillian Montgomery

California License Number: S6852

Mailing Address: 600 Q Street, Sacramento, CA 95811

Telephone: (916) 443-0303

Email: gmontgomery@buehlerengineering.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER, CONSTRUCTION ENGINEERING RESEARCH LABORATORY (CERL)

Contact Person: James Wilcoski

Mailing Address: 2902 Newmark Dr., Champaign IL 61822-1076

Telephone: (217) 373-4565

Email: james.wilcoski@usace.army.mil

Company Name: UNIVERSITY OF BUFFALO (SEESL)

Contact Person: Yushan Fu

Mailing Address: 212 Ketter Hall, Buffalo NY 14260

Telephone: (716) 645-4377

Email: yushanfu@buffalo.edu



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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.13 (Controllers); 1.88 (Generators 10 to 30 kW); 1.69 (Generators 400 to 750 kW)

SDS (Design spectral response acceleration at short period, g) = 2.5 (Controllers); 2.5 (Generators 10 to 30 kW); 2.25 (Generators 400 to 750 kW)

a_p (Amplification factor) = 1.0 (controller); 2.5 (Generator - Internally Isolated)

R_p (Response modification factor) = 2.5 (Controller); 2.0 (Generator-Internally Isolated)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 04/18/2031

Date: 4/18/2025

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = See above z/h = 0

Condition of Approval (if applicable):

Table 1. Certified Product List

Table 1A: Generac Controllers - Rigid Wall Mount

Model Number	Dimensions (mm)			Max Operating Weight	Tested/ Interpolated
	Width	Depth	Height		
004975	24	9	30	90	UUT-1
005047	24	9	30	90	UUT-2

Table 1B: Generac Industrial Generators 10kW to 30kW - Rigid Base Mount

Model Number	Capacity (kW)	Fuel Tank (gal)	Dimensions (mm)						Max Operating Weight (lbs)	Tested/ Interpolated
			Max Width	Overall Length (OPEN)	Overall Length (STD)	Overall Length (L1)	Overall Length (L2)	Max Height		
SD0010*	10	n/a	888	2123	2123	2123	2123	1180	1332	interpolated
SD0010AG222.2D18DDYY2	10	52	888	n/a	2123	n/a	n/a	1515	2376	UUT-3
SD0010*	10	52	888	2438	2438	2438	2438	1515	2376	interpolated
SD0010*	10	52 ext	888	2438	2438	2438	2438	1515	2270	interpolated
SD0010*	10	96	888	2123	2123	2123	2123	1815	2630	interpolated
SD0010*	10	111 ext	888	2438	2438	2438	2438	1815	2834	interpolated
SD0010*	10	145	888	2123	2123	2123	2123	1815	3119	interpolated
SD0010*	10	158 ext	888	2438	2438	2438	2438	1815	3307	interpolated
SD0015*	15	n/a	888	2123	2123	2123	2123	1180	1332	interpolated
SD0015*	15	52	888	2123	2123	2123	2123	1515	2178	interpolated
SD0015*	15	52 ext	888	2438	2438	2438	2438	1515	2270	interpolated
SD0015*	15	96	888	2123	2123	2123	2123	1815	2630	interpolated
SD0015*	15	111 ext	888	2438	2438	2438	2438	1815	2834	interpolated
SD0015*	15	145	888	2123	2123	2123	2123	1815	3119	interpolated
SD0015*	15	158 ext	888	2438	2438	2438	2438	1815	3307	interpolated
SD0020*	20	n/a	888	2123	2123	2123	2123	1180	1332	interpolated
SD0020*	20	52	888	2123	2123	2123	2123	1515	2178	interpolated
SD0020*	20	52 ext	888	2438	2438	2438	2438	1515	2270	interpolated
SD0020*	20	96	888	2123	2123	2123	2123	1815	2630	interpolated
SD0020*	20	111 ext	888	2438	2438	2438	2438	1815	2834	interpolated
SD0020*	20	145	888	2123	2123	2123	2123	1815	3119	interpolated
SD0020*	20	158 ext	888	2438	2438	2438	2438	1815	3307	interpolated

Max operating weight includes heaviest enclosure, and the tank and full tank contents if applicable.

*available in multiple generator types. See Table 2 for certified subcomponents and nomenclature sheet.

"OPEN" indicates an open generator set, "STD" indicates a unit with standard enclosure, "L1" indicates a unit with Level 1 enclosure, and "L2" indicates a unit with Level 2 enclosure. Reference attached for representative figures of the configuration.

Table 1: Certified Product List Cont.

Table 1B: Generac Industrial Generators 10kW to 30kW - Rigid Base Mount

Model Number	Capacity (kW)	Fuel Tank (gal)	Dimensions (mm)						Max Operating Weight (lbs)	Tested/ Interpolated
			Max Width	Overall Length (OPEN)	Overall Length (STD)	Overall Length (L1)	Overall Length (L2)	Max Height		
SD0025*	25	n/a	888	2123	2123	2123	2123	1180	1332	interpolated
SD0025*	25	52	888	2123	2123	2123	2123	1515	2178	interpolated
SD0025*	25	52 ext	888	2438	2438	2438	2438	1515	2270	interpolated
SD0025*	25	96	888	2123	2123	2123	2123	1815	2630	interpolated
SD0025*	25	111 ext	888	2438	2438	2438	2438	1815	2834	interpolated
SD0025*	25	145	888	2123	2123	2123	2123	1815	3119	interpolated
SD0025*	25	158 ext	888	2438	2438	2438	2438	1815	3307	interpolated
SD0030*	30	n/a	888	2123	2123	2123	2123	1180	1482	interpolated
SD0030*	30	52	888	2123	2123	2123	2123	1515	2328	interpolated
SD0030*	30	52 ext	888	2438	2438	2438	2438	1515	2420	interpolated
SD0030*	30	96	888	2123	2123	2123	2123	1815	2780	interpolated
SD0030*	30	111 ext	888	2438	2438	2438	2438	1815	2984	interpolated
SD0030*	30	145	888	2123	2123	2123	2123	1815	3269	interpolated
SD0030AG2222D18DPLY2	30	158 ext	888	2438	n/a	n/a	2438	1815	3193	UUT-4
SD0030*	30	158 ext	888	2438	2438	2438	2438	1815	3193	interpolated

Max operating weight includes heaviest enclosure, and the tank and full tank contents if applicable.

*available in multiple generator types. See Table 2 for certified subcomponents and nomenclature sheet.

"OPEN" indicates an open generator set, "STD" indicates a unit with standard enclosure, "L1" indicates a unit with Level 1 enclosure, and "L2" indicates a unit with Level 2 enclosure. Reference attached for representative figures of the configuration.

Table 1. Certified Product List Cont.

Table 1C: Generac Industrial Generators 400kW to 750kW - Rigid Base Mount

Model Number	Capacity (kW)	Fuel Tank (gal)	Dimensions (mm)						Max Operating Weight (lbs)	Tested/ Interpolated
			Max Width	Overall Length (OPEN)	Overall Length (STD)	Overall Length (L1)	Overall Length (L2)	Max Height		
SD0400GG22125D18HPNN3	400	n/a	1,473	3454	n/a	n/a	n/a	1,651	7,250	UUT-5A
SD0400GG22125D18HPSY3	400	183	1,473	n/a	n/a	5,080	n/a	3,048	11,600	UUT-5C
SD0400*	400	183	1,473	3,454	4,445	5,080	4,445	3,048	11,600	interpolated
SD0400KG22125D18CPSY3	400	664	1,473	n/a	n/a	5,080	n/a	3,658	16,644	UUT-7
SD0400*	400	664	1,473	n/a	n/a	5,080	n/a	3,658	16,644	interpolated
SD0400*	400	693	1,473	3,454	4,445	5,080	4,445	3,658	16,334	interpolated
SD0400*	400	708 ext	1,473	5,355	5,355	5,990	5,355	3,353	17,089	interpolated
SD0400*	400	946 ext	1,473	5,283	5,283	5,944	5,283	3,734	19,894	interpolated
SD0400*	400	1325 ext	1,473	7,061	7,061	7,722	7,061	3,734	23,494	interpolated
SD0400*	400	1514 ext	1,473	5,355	5,355	5,990	5,355	3,941	25,290	interpolated
SD0500*	500	n/a	1,804	3,937	n/a	n/a	n/a	1,758	8,152	interpolated
SD0500*	500	334	1,804	3,937	5,258	6,274	5,258	3,226	15,895	interpolated
SD0500*	500	703	1,804	4,025	5,258	6,274	5,258	2,967	19,836	interpolated
SD0500*	500	703 ext	1,804	5,842	5,842	6,858	5,842	2,967	20,500	interpolated
SD0500*	500	910	1,804	4,025	5,258	6,274	5,258	3,813	21,123	interpolated
SD0500*	500	996 ext	1,804	6,520	6,520	7,536	6,520	3,531	21,500	interpolated
SD0500*	500	1001	1,804	3,937	5,258	6,274	5,258	3,785	21,689	interpolated
SD0500*	500	1001 ext	1,804	5,791	5,791	6,833	5,791	3,708	22,257	interpolated
SD0500*	500	1743 ext	1,804	6,520	6,520	7,536	6,520	3,813	28,920	interpolated
SD0500*	500	2002 ext	1,804	7,366	7,366	8,382	7,366	3,785	31,247	interpolated
SD0500*	500	2329 ext	1,804	6,520	6,520	7,536	6,520	4,144	34,183	interpolated

Max operating weight includes heaviest enclosure, and the tank and full tank contents if applicable.

*available in multiple generator types. See Table 2 for certified subcomponents and nomenclature sheet.

"OPEN" indicates an open generator set, "STD" indicates a unit with standard enclosure, "L1" indicates a unit with Level 1 enclosure, and "L2" indicates a unit with Level 2 enclosure. Reference attached for representative figures of the configuration.

Table 1. Certified Product List Cont.

Table 1C: Generac Industrial Generators 400kW to 750kW - Rigid Base Mount

Model Number	Capacity (kW)	Fuel Tank (gal)	Dimensions (mm)						Max Operating Weight (lbs)	Tested/ Interpolated
			Max Width	Overall Length (OPEN)	Overall Length (STD)	Overall Length (L1)	Overall Length (L2)	Max Height		
MB0600KG22181B18GPLY2	600	n/a	1,804	3937	n/a	n/a	n/a	2,083	10,200	UUT-6A
SD0600*	600	334	1,804	4,025	5258	6274	5258	3,226	16,438	interpolated
SD0600*	600	1001	1,804	4,025	5258	6274	5258	3,785	22,142	interpolated
SD0600*	600	1001 ext	1,804	5,791	5791	6833	5791	3,708	22,710	interpolated
SD0600*	600	1220 ext	1,804	7,043	7043	8059	7043	3,531	24,676	interpolated
SD0600*	600	1373	1,804	4,025	5,258	6,274	4,025	4,144	25,325	interpolated
SD0600*	600	2002 ext	1,804	7,366	7,366	8,382	7,366	3,785	31,700	interpolated
MB0600KG22181B18GPLY2	600	2,002	1,804	n/a	7,366	n/a	7,366	3,785	31,700	UUT-6C
SD0600*	600	2329 ext	1,804	6,520	6,520	7,536	6,520	4,144	34,636	interpolated
SD0750*	750	n/a	1,804	3,937	n/a	n/a	n/a	1,720	12,538	interpolated
SD0750*	750	1220 ext	1,804	7,043	7,043	8,059	7,043	3,531	25,344	interpolated
SD0750*	750	1,373	1,804	4,025	5,258	6,274	4,025	4,144	25,993	interpolated
SD0750*	750	2329 ext	1,804	6,520	6,520	7,536	6,520	4,144	36,645	interpolated
SD0750KG22181D18CPY2	750	2329 ext	1,804	n/a	n/a	n/a	6,520	4,144	36,645	UUT-8

Max operating weight includes heaviest enclosure, and the tank and full tank contents if applicable.

*available in multiple generator types. See Table 2 for certified subcomponents and nomenclature sheet.

"OPEN" indicates an open generator set, "STD" indicates a unit with standard enclosure, "L1" indicates a unit with Level 1 enclosure, and "L2" indicates a unit with Level 2 enclosure. Reference attached for representative figures of the configuration.

Table 2. Certified Sub-Component List

Pursuant to section 4.5 of AC 156, below is a list and rationale of major subassemblies/ component.

Table 2A: Generac Controllers - Rigid Wall Mount

Controllers				
ID	Description	Mfr	Material	Tested / Interpolated
004975	PM-SC (Nema 1)	Generac	Carbon Steel w/ Electrical Components	UUT-1
005047	PM-SC (Nema 3R)	Generac	Carbon Steel w/ Electrical Components	UUT-2

Table 2B: Generac Industrial Generators 10kW to 30kW - Rigid Base Mount

Motor				
Nominal capacity	Generator kW Range	Mfr	Material	Tested / Interpolated
2.2L	10 thru 30	Perkins	Cast Iron	UUT-3, UUT-4

Alternator			
Generator kW Range	Mfr	Material	Tested / Interpolated
10	Generac	Steel (Laminations) & Copper (Windings)	UUT-3
15	Generac	Steel (Laminations) & Copper (Windings)	Interpolated
20	Generac	Steel (Laminations) & Copper (Windings)	Interpolated
25	Generac	Steel (Laminations) & Copper (Windings)	Interpolated
30	Generac	Steel (Laminations) & Copper (Windings)	UUT-4

Muffler					
Part Number	Generator kW Range	Type	Mfr	Material	Tested / Interpolated
D2.2L Exhaust	10	Diesel	Generac	Steel	UUT-3
D2.2L Exhaust	15	Diesel	Generac	Steel	interpolated
D2.2L Exhaust	20	Diesel	Generac	Steel	interpolated
D2.2L Exhaust	25	Diesel	Generac	Steel	interpolated
D2.2L Exhaust	30	Diesel	Generac	Steel	UUT-4

Radiator			
Generator kW Range	Mfr	Material	Tested / Interpolated
10	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)	UUT-3
15	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)	Interpolated
20	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)	Interpolated
25	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)	Interpolated
30	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)	UUT-4

Table 2. Certified Sub-Component List

Pursuant to section 4.5 of AC 156, below is a list and rationale of major subassemblies/ component.

Table 2B: Generac Industrial Generators 10kW to 30kW - Rigid Base Mount

Control Panel			
Type / Description	Mfr	Material	Tested / Interpolated
Generac Control Panel	Generac	Carbon Steel Enclosure w/ Electrical Components	UUT-3, UUT-4

Battery				
ID	Description	Mfr	Material	Tested / Interpolated
12V	31	Exide	Carbon Steel, Aluminum, Copper & Plastic	UUT-3 & UUT-4

Enclosure					
Generator kW Range	Mfr	Type	Material	Weight (lbs)	Tested / Interpolated
10 thru 30	Generac	Standard	Aluminum	186	UUT-3
10 thru 30	Generac	Level 1	Aluminum	190	interpolated
10 thru 30	Generac	Level 2	Aluminum	191	UUT-4

Fuel Tank					
Generator kW Range	Type	Usable Tank Capacity (gallons)	Mfr	Material	Tested / Interpolate
10 thru 30	1 ft tall	52	Generac	Carbon Steel	UUT-3
10 thru 30	1 ft tall extended	52	Generac	Carbon Steel	interpolated
10 thru 30	2 ft tall	96	Generac	Carbon Steel	interpolated
10 thru 30	2 ft tall extended	111	Generac	Carbon Steel	interpolated
10 thru 30	2 ft tall	145	Generac	Carbon Steel	interpolated
10 thru 30	2 ft tall extended	158	Generac	Carbon Steel	UUT-4

Table 2C: Generac Industrial Generators 400kW to 750kW - Rigid Base Mount

Motor				
Nominal capacity	Generator kW Range	Mfr	Material	Tested / Interpolated
12.5L	400	Perkins	Cast Iron	UUT-5A & C, UUT-7
15.2L	500	Perkins	Cast Iron	Interpolated
18.1L	500 thru 750	Perkins	Cast Iron	UUT-6A & C, UUT-8

Fuel Systems				
Generator kW Range	System #	Mfr	Material	Tested / Interpolated
400	0K1643020R	Generac	Steel/Aluminum	UUT-5C
500	0K1644020R	Generac	Steel/Aluminum	Interpolated
600	0J8127020R	Generac	Steel/Aluminum	UUT-6C

Control Panel			
Type / Description	Mfr	Material	Tested / Interpolated
Generac Control Panel	Generac	Carbon Steel Enclosure w/ Electrical Components	UUT-5A, 5C, 6A, 6C, 7 & 8

Table 2. Certified Sub-Component List

Pursuant to section 4.5 of AC 156, below is a list and rationale of major subassemblies/ component.

Table 2C: Generac Industrial Generators 400kW to 750kW - Rigid Base Mount

Alternator			
Generator kW Range	Mfr	Material	Tested / Interpolated
400	WEG	Steel (Laminations) & Copper (Windings)	UUT-5A & C
500	WEG	Steel (Laminations) & Copper (Windings)	Interpolated
600	WEG	Steel (Laminations) & Copper (Windings)	UUT-6A & C
400	LSA	Steel (Laminations) & Copper (Windings)	UUT-7
500	LSA	Steel (Laminations) & Copper (Windings)	Interpolated
600	LSA	Steel (Laminations) & Copper (Windings)	Interpolated
750	LSA	Steel (Laminations) & Copper (Windings)	UUT-8

Muffler					
Part Number	Generator kW Range	Type	Mfr	Material	Tested / Interpolated
D12.5L Exhaust	400	Diesel	Generac	Steel	UUT-5C & 7
D15.2L Exhaust	500	Diesel	Generac	Steel	interpolated
D18.1L Exhaust	600	Diesel	Generac	Steel	interpolated
D18.1L Exhaust	600	Bifuel	Generac	Steel	UUT-6C
D18.1L Exhaust	750	Diesel	Generac	Steel	UUT-8

Radiator			
Generator kW Range	Mfr	Material	Tested / Interpolated
400	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)	UUT-5A & 5C
500	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)	Interpolated
600	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)	UUT-6A & 6C
400	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)	UUT-7
500	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)	Interpolated
600	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)	Interpolated
750	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)	UUT-8

Table 2. Certified Sub-Component List



Pursuant to section 4.5 of AC 156, below is a list and rationale of major subassemblies/ component.



Table 2C: Generac Industrial Generators 400kW to 750kW - Rigid Base Mount



Battery					
ID	Description	Mfr	Material	Tested / Interpolated	
24V	8D	Exide	Carbon Steel, Aluminum, Copper & Plastic	UUT-5A & 5C, UUT-6A & 6C	
24V	8D	Remy	Carbon Steel, Aluminum, Copper & Plastic	UUT-7 & UUT-8	



Enclosure					
Generator kW Range	Mfr	Type	Material	Weight (lbs)	Tested / Interpolated
400	Generac	Standard	Aluminum	764	interpolated
400	Generac	Level 1	Aluminum	963	UUT-7
400	Generac	Level 2	Aluminum	1120	interpolated
500 thru 750	Generac	Standard	Aluminum	1151	interpolated
500 thru 750	Generac	Level 1	Aluminum	1583	interpolated
500 thru 750	Generac	Level 2	Aluminum	1726	interpolated
600	Generac	Level 2	Aluminum	1760	UUT-6C
750	Generac	Level 2	Aluminum	1955	UUT-8



Fuel Tank					
Generator kW Range	Type	Usable Tank Capacity (gallons)	Mfr	Material	Tested / Interpolate
400	1 ft tall	183	Generac	Carbon Steel	UUT-5C
400	2 ft tall	438	Generac	Carbon Steel	interpolated
400	3 ft tall	664	Generac	Carbon Steel	UUT-7
400	3 ft tall	693	Generac	Carbon Steel	interpolated
400	2 ft tall extended	708	Generac	Carbon Steel	interpolated
400	3 ft tall extended	946	Generac	Carbon Steel	interpolated
400	3 ft tall extended	1325	Generac	Carbon Steel	interpolated
400	4 ft tall extended	1514	Generac	Carbon Steel	interpolated
500	3 ft tall	703	Generac	Carbon Steel	interpolated
500	3 ft tall	910	Generac	Carbon Steel	interpolated
500	2 ft tall extended	996	Generac	Carbon Steel	interpolated
500	3 ft tall extended	703	Generac	Carbon Steel	interpolated
500	3 ft tall extended	1743	Generac	Carbon Steel	interpolated
500	4 ft tall extended	2329	Generac	Carbon Steel	interpolated
600 thru 750	2 ft tall extended	1220	Generac	Carbon Steel	interpolated
600 thru 750	4 ft tall	1373	Generac	Carbon Steel	interpolated
750	4ft tall extended	2329	Generac	Carbon Steel	UUT-8
500	1 ft tall	334	United Alloy	Carbon Steel	interpolated
500	3 ft tall	1001	United Alloy	Carbon Steel	interpolated
500	3 ft tall extended	1001	United Alloy	Carbon Steel	interpolated
500	1 ft tall	334	United Alloy	Carbon Steel	interpolated
500	3 ft tall	1001	United Alloy	Carbon Steel	interpolated
600	1 ft tall	334	United Alloy	Carbon Steel	interpolated
600	3 ft tall	1001	United Alloy	Carbon Steel	interpolated
600	3 ft tall extended	1001	United Alloy	Carbon Steel	interpolated
600	3ft tall extended	2002	United Alloy	Carbon Steel	UUT-6C

UUT-1 Test Summary											
Testing Lab: US Army Corp Lab					Excitation Direction						
Testing Report: 2012-0262 rev1					X	Front-Back		n/a			
Testing Unit Num: UUT-7					Y	Side-Side		n/a			
					Z	Vertical		n/a			
Model Number	Manufacturer	Measured Operating Weight (lbs)	Mounting	Overall Width (in)	Overall Depth (in)	Overall Height (mm)					
004975	Generac	90	Wall Rigid Mount	24	9	30					
Attachment Method				Seismic Parameters							
Wall mounted with four (4)-3/8"Ø bolts to steel cantilever fixture. Steel fixture attached to shake table with four (4) - 1 1/4"Ø bolts.				Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				CBC 2022	AC 156	2.50	0.0	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
								2.50	1.00	1.68	0.68
											
Figure 1.1: Unit on the shake table				Figure 1.2: Mounting Detail							
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after test.											
UUT-1 Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Controller box	90	004975	Generac	Steel/Aluminum w/electrical components							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											



UUT-2 Test Summary											
Testing Lab: US Army Corp Lab Testing Report: 2012-0262 rev1 Testing Unit Num: UUT-8					Excitation Direction						
					X	Front-Back	n/a				
					Y	Side-Side	n/a				
					Z	Vertical	n/a				
Model Number	Manufacturer	Measured Operating Weight (lbs)	Mounting	Overall Width (in)	Overall Depth (in)	Overall Height (mm)					
005047	Generac	90	Wall Rigid Mount	24	9	30					
Attachment Method											
Wall mounted with four (4)-3/8"Ø bolts to steel cantilever fixture. Steel fixture attached to shake table with four (4) - 1 1/4"Ø bolts.				Seismic Parameters							
				Building Code	Test Criteria	S_{DS} (g)	z/h	Horizontal		Vertical	
								A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022				AC 156	2.50	0.0	2.50	1.00	1.68	0.68	
<div><div><p>Figure 2.1: Unit on the shake table</p></div><div><p>Figure 2.2: Mounting Detail</p></div></div>											
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after test.											
UUT-2 Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Controller box	90	005047	Generac	Steel/Aluminum w/ electrical components							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-3 Test Summary											
Testing Lab: SEESL, SUNY at Buffalo Testing Report: 2024.14_R1 Testing Unit Num: UUT-3					Excitation Direction						
					X	Front-Back	9.1				
					Y	Side-Side	7.4				
					Z	Vertical	14.3				
Model Number (Manufacturer)	Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)					
SD0010AG222.2D18DDYY2 (Generac)	10kW	2,376	Base Rigid Mount	888	2,123	1,515					
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method				Seismic Parameters							
Unit base to tank w/(8) 5/8"Ø SAE J429 Grade 8 bolts. Base tank w/(8) 5/8"Ø SAE J429 Grade 8 bolts.				Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				CBC 2022	AC 156	2.50	0.0	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
								2.50	1.00	1.67	0.67
											
Figure 3.1: Unit on the shake table				Figure 3.2: Mounting Detail							
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-3 Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Motor	415	D2.2L	Perkins	Cast Iron							
Alternator	368	1R 10kW D2.2L	Generac	Steel (Laminations) & Copper (Windings)							
Radiator	106	10R D2.2L	Generac	Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes) Plates & Tubes), Plastic (Tanks)							
Control Panel	6	97R D2.2L	Generac	Carbon Steel Enclosure w/ Electrical Components							
Battery	60	GRP 31	Exide	Carbon Steel, Aluminum, Copper & Plastic							
Muffler	20	24R D2.2L STD	Generac	Steel							
Enclosure	199	23R - D2.2L STD	Generac	Aluminum							
Fuel Tank	870	1 ft tall 52 Gal	Generac	Carbon Steel							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-4 Test Summary										
Testing Lab: SEESL, SUNY at Buffalo Testing Report: 2024.14_R1 Testing Unit Num: UUT-4						Excitation Direction				
						X	Front-Back	9.0		
						Y	Side-Side	7.4		
						Z	Vertical	32.0		
Model Number (Manufacturer)	Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
SD0030AG222.2D18DPLY2 (Generac)	30kW	3,193	Base Rigid Mount	888	2,438	1,815				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.										
Attachment Method			Seismic Parameters							
Unit base to tank w/(8) 5/8"Ø SAE J429 Grade 8 bolts. Base tank w/(8) 5/8"Ø SAE J429 Grade 8 bolts.			Building Code	Test Criteria	S_{DS} (g)	z/h	Horizontal		Vertical	
							A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
			CBC 2022	AC 156	2.50	0.0	2.50	1.00	1.67	0.67
<div><div></div><div></div></div>										
Figure 4.1: Unit on the shake table										
Figure 4.2: Mounting Detail										
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test										
UUT-4 Summary Tested Sub-Component										
<i>Sub-Component</i>	<i>Weight</i>	<i>Part Number</i>	<i>Manufacturer</i>		<i>Material</i>					
Motor	415	D2.2L	Perkins		Cast Iron					
Alternator	507	1R 30kW D2.2L	Generac		Steel (Laminations) & Copper (Windings)					
Radiator	106	10R D2.2L	Generac		Aluminum (Fins), Steel (Mounting Flanges & Support Plates) & Aluminum (Tanks & Tubes)					
Control Panel	6	97R D2.2L	Generac		Carbon Steel Enclosure w/ Electrical Components					
Battery	60	GRP 31	Exide		Carbon Steel, Aluminum, Copper & Plastic					
Muffler	20	24R D2.2L L2A	Generac		Steel					
Enclosure	237	23R - D2.2L L2A	Generac		Aluminum					
Fuel Tank	1917	2 ft tall extended 158 Gal	Generac		Carbon Steel					
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs										

UUT-5A Test Summary											
Testing Lab: US Army Corp Lab Testing Report: 2012-0262.00 Testing Unit Num: 5A					Excitation Direction						
					X	Front-Back	7.0				
					Y	Side-Side	5.1				
					Z	Vertical	13.0				
Model Number (Manufacturer)		Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
SD0400GG22125D18HPNN3 (Generac)		400kW	7,250	Base Rigid Mount	1,473	3,454	1,651				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method Ten (10) 5/8" dia SAE J429 Grade 8 bolts (Generac)				Seismic Parameters							
				Building Code	Test Criteria	S_{DS} (g)	z/h	Horizontal		Vertical	
								A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
				CBC 2022	AC 156	2.50	0.0	2.50g	1.00g	1.67g	0.67g
<div></div>											
Figure 5A.1: Unit on the shake table											
Figure 5A.2: Mounting Detail											
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-5A Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Engine - D12.5L	n/a	0J9048008R	Perkins	Cast Iron							
Alternator - 400kW 120/208 3ph	n/a	0H9457001R	WEG	Steel (Laminations) & Copper (Windings)							
Radiator	n/a	0J9050010R	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)							
Generac Control Panel	50	0K1053095R	Generac	Carbon Steel							
Battery - 8D Battery	n/a	082951051R	Exide	Carbon Steel, Aluminum, Copper & Plastic							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-5C Test Summary											
Testing Lab:		US Army Corp Lab					Excitation Direction				
Testing Report:		2012-0262.00					X	Front-Back	5.8		
Testing Unit Num:		5C					Y	Side-Side	4.7		
							Z	Vertical	12.0		
Model Number (Manufacturer)		Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
SD0400GG22125D18HPSY3 (Generac)		400kW	11,600	Base Rigid Mount	1,473	5,080	3,048				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method				Seismic Parameters							
Unit base to tank w/Ten (10) 5/8" dia SAE J429 Grade 8 bolts. Base tank w/ten (10) 5/8" dia SAE J429 Grade 8 bolts.				Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
								A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
								CBC 2022	AC 156	2.50	0.0
<div><div></div><div></div></div>											
Figure 5C.1: Unit on the shake table											
Figure 5C.2: Mounting Detail											
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-5C Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Engine - D12.5L	n/a	0J9048008R	Perkins	Cast Iron							
Alternator - 400kW 120/208 3ph	n/a	0H9457001R	WEG	Steel (Laminations) & Copper (Windings)							
Radiator	n/a	0J9050010R	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)							
Generac Control Panel	50	H	Generac	Carbon Steel							
Battery - 8D Battery	n/a	082951051R	Exide	Carbon Steel, Aluminum, Copper & Plastic							
Enclosure - Level 1 Sound	n/a	0K1053095R	Generac	Carbon Steel							
Muffler	n/a	0J9844024R	Generac	Steel							
Fuel Tank - 1 ft tall 183 gallon	n/a	0J1155076R	Generac	Carbon Steel							
Fuel System	n/a	0K1643020R	Generac	Steel & Aluminum							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-6A Test Summary											
Testing Lab: US Army Corp Lab Testing Report: 2012-0262.00 Testing Unit Num: 6A					Excitation Direction						
					X	Front-Back	6.4				
					Y	Side-Side	5.1				
					Z	Vertical	13.0				
Model Number (Manufacturer)		Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
MB0600KG22181B18GPNN2 (Generac)		600kW	10,200	Base Rigid Mount	1,804	3,937	2,083				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method Twelve (12) 5/8" dia SAE J429 Grade 8 bolts				Seismic Parameters							
				Building Code	Test Criteria	S_{DS} (g)	z/h	Horizontal		Vertical	
								A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
				CBC 2022	AC 156	2.50	0.0	2.50g	1.00g	1.67g	0.67g
<div><div></div><div></div></div>											
Figure 6A.1: Unit on the shake table											
Figure 6A.2: Mounting Detail											
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-6A Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Engine - D18.1L	n/a	0J7962008R	Perkins	Cast Iron							
Alternator - 600kW 277/480 3ph	n/a	0K0869001R	WEG	Steel (Laminations) & Copper (Windings)							
Radiator	n/a	0K0478010R	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)							
Generac Control Panel	50	0K1061094R	Generac	Carbon Steel							
Battery - 8D Battery	n/a	082951051R	Exide	Carbon Steel, Aluminum, Copper & Plastic							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-6C Test Summary				
Testing Lab:	US Army Corp Lab	Excitation Direction		
		X	Front-Back	5.7
		Y	Side-Side	5.1
		Z	Vertical	12.0
Testing Report:	2012-0262.00			
Testing Unit Num:	6C			

Model Number (Manufacturer)	Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)
MB0600KG22181B18GPLY2 (Generac)	600kW	31,700	Base Rigid Mount	1,804	7,366	3,785

Notes: Frequencies are for units prior to ICC ES AC-156 testing.
Overall unit height includes base and tank height, as applicable.
Unit dimensions include tank, as applicable.

Attachment Method	Seismic Parameters							
Unit base to tank w/Twelve (12) 5/8" dia SAE J429 Grade 8 bolts Base tank w/ten (18) 3/4" dia SAE J429 Grade 8 bolts.	Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
					A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
	CBC 2022	AC 156	2.50	0.0	2.50g	1.00g	1.67g	0.67g





Figure 6C.1: Unit on the shake table





Figure 6C.2: Mounting Detail

Notes: The UUTs were full of contents during the test.
Unit maintained structural integrity and remained functional per manufacture requirements after shake table test

UUT-6C Summary Tested Sub-Component				
Sub-Component	Weight	Part Number	Manufacturer	Material
Engine - D18.1L	n/a	0J7962008R	Perkins	Cast Iron
Alternator - 600kW 277/480 3ph	n/a	0K0869001R	WEG	Steel (Laminations) & Copper (Windings)
Radiator	n/a	0K0478010R	Generac	Copper (Fins), Steel (Mounting Flanges) & Brass (Tanks, Support Plate & Tubes)
Generac Control Panel	50	0K1061094R	Generac	Carbon Steel
Battery - 8D Battery	n/a	082951051R	Exide	Carbon Steel, Aluminum, Copper & Plastic
Enclosure - Level 2 Sound	1760	0K1208023R	Generac	Aluminum
Muffler	n/a	0K0629024R	Generac	Steel
Fuel Tank - 3 ft tall 2002 gallons	n/a	0K0188080R	United Alloy	Mild Steel
Fuel System	n/a	0J8127020R	Generac	Steel & Aluminum
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs				

UUT-7 Test Summary											
Testing Lab: SEESL, SUNY at Buffalo Testing Report: 2024.14_R1 Testing Unit Num: UUT-7					Excitation Direction						
					X	Front-Back	9.0				
					Y	Side-Side	6.8				
					Z	Vertical	16.5				
Model Number (Manufacturer)		Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
SD0400KG22125D18CPSY3 (Generac)		400kW	16,644	Base Rigid Mount	1,473	5,080	3,658				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method				Seismic Parameters							
Unit base to tank w/ 10x 5/8" dia SAE J429 Grade 8 bolts. Base tank w/ 10x 3/4" dia SAE J429 Grade 8 bolts.				Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
								A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
								CBC 2022	AC 156	2.50	0.0
<div></div>											
Figure 7.1: Unit on the shake table					Figure 7.2: Mounting Detail						
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-7 Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Motor	2990	D12.5L Perkins E	Perkins	Cast Iron							
Alternator	2233	LSA 473B	LSA	Steel (Laminations) & Copper (Windings)							
Radiator	170	10R D12.5L	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)							
Control Panel	50	90R D12.5L	Generac	Carbon Steel Enclosure w/ Electrical Components							
Battery	215	8D	Remy	Carbon Steel, Aluminum, Copper & Plastic							
Muffler	64	24R D12.5L	Generac	Steel							
Enclosure	963	23R - D12.5L L1	Generac	Aluminum							
Fuel Tank	7456	3 ft tall 664 Gal	Generac	Carbon Steel							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											

UUT-8 Test Summary											
Testing Lab: SEESL, SUNY at Buffalo Testing Report: 2024.14_R1 Testing Unit Num: UUT-8					Excitation Direction						
					X	Front-Back	6.8				
					Y	Side-Side	5.8				
					Z	Vertical	11.9				
Model Number (Manufacturer)		Nominal Capacity	Measured Operating Weight (lbs)	Mounting	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)				
SD0750KG22181D18CPY2 (Generac)		750kW	36,645	Base Rigid Mount	1,804	6,520	4,144				
Notes: Frequencies are for units prior to ICC ES AC-156 testing. Overall unit height includes base and tank height, as applicable. Unit dimensions include tank, as applicable.											
Attachment Method				Seismic Parameters							
Unit base to tank w/ 12x 5/8" dia SAE J429 Grade 8 bolts. Base tank w/ 16x 3/4" dia SAE J429 Grade 8 bolts.				Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				CBC 2022	AC 156	2.25	0.0	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
								2.25	0.90	1.5	0.6
<div><div></div><div></div></div>											
Figure 8.1: Unit on the shake table				Figure 8.2: Mounting Detail							
Notes: The UUTs were full of contents during the test. Unit maintained structural integrity and remained functional per manufacture requirements after shake table test											
UUT-8 Summary Tested Sub-Component											
Sub-Component	Weight	Part Number	Manufacturer	Material							
Motor	4161	D18.1L 750kW F	Perkins	Cast Iron							
Alternator	4050	1R 750kW 480V	LSA	Steel (Laminations) & Copper (Windings)							
Radiator	430	10R D18.1L 750l	Generac	Aluminum (Fins), Steel (Mounting Flanges) & Aluminum (Tanks, Support Plates & Tubes)							
Control Panel	50	90R D18.1L 750l	Generac	Carbon Steel Enclosure w/ Electrical Components							
Battery	215	8D	Remy	Carbon Steel, Aluminum, Copper & Plastic							
Muffler	135	24R D18.1L 750l	Generac	Steel							
Enclosure	1398	23R - D18.1L L2	Generac	Aluminum							
Fuel Tank	28443	4 ft tall 2329 Gal	Generac	Carbon Steel							
Does not include listing of minor electrical components (i.e. circuit breakers, switches, modules, etc.) weighing less than 10 lbs											