



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0670

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [X] New [] Renewal

Manufacturer Information

Manufacturer: AMETEK Powervar

Manufacturer's Technical Representative: Peter Huss

Mailing Address: 1450 Lakeside Drive, Waukegan, IL 60085

Telephone: (847) 596-7040 Email: peter.huss@ametek.com

Product Information

Product Name: UPS and Batteries

Product Type: UPS

Product Model Number: 3300 UPS

General Description: The UUTs are enclosures that contain a Main Board/IGBT, Battery, Control Board, Fuse PCB, Fan, Inductor.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

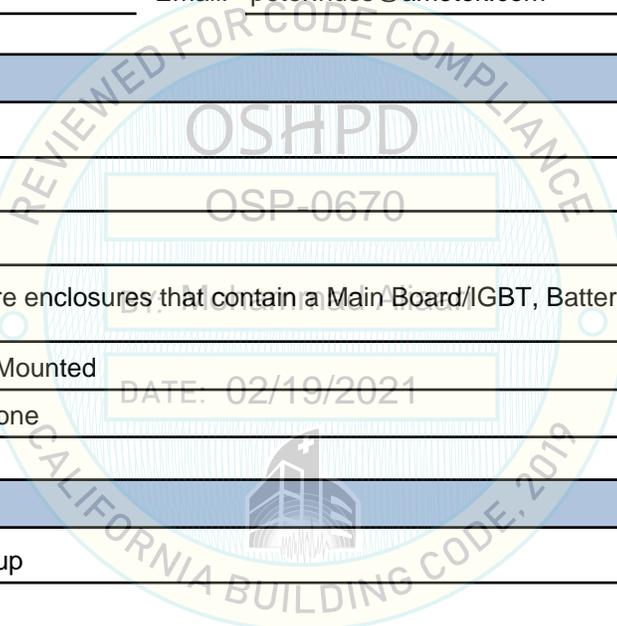
Applicant Company Name: VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thvmcgroup.com

Title: President





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

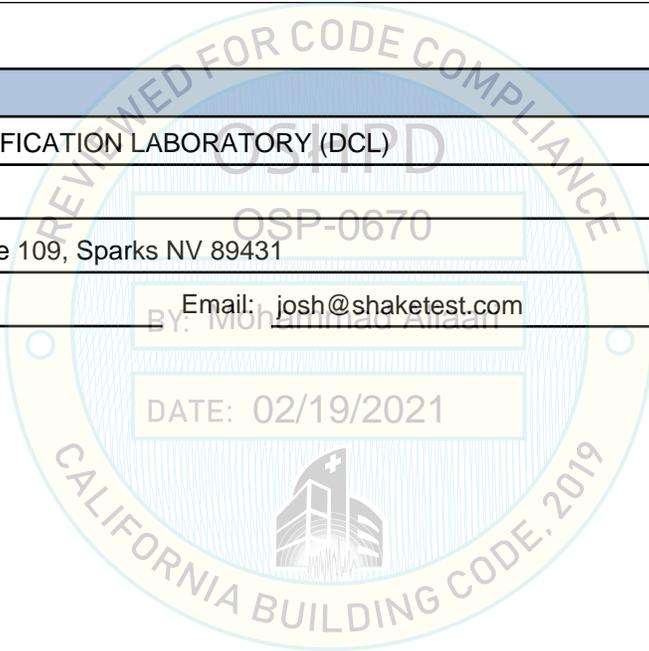
Company Name: THE VMC GROUP
Name: Kenneth Tarlow California License Number: S2851
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

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: Joshua Sailer
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431
Telephone: (775) 358-5085 Email: josh@shaketest.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) = 2.0

a_p (Amplification factor) = 1

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

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 2/19/2021

Name: Mohammad Aliaari Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 2.0 z/h = 1

Condition of Approval (if applicable): DATE: 02/19/2021



Table 1 - Certified Components

Mounting Configuration: Rigid Base Mounted
Test Levels: SDS = 2.0g, z/h=1.0; SDS=2.5g, z/h=0.0
Manufacturer: Ametek Powervar
Product Type: Uninterruptable Power Supply (UPS)
Product Line: 3300 UPS



Model Number	Max. Dimensions (in)			Max. Weight (lb)	Unit
	Depth	Width	Height		
33010-XX	24.8	9.8	32.5	220	UUT1
33015-XX	32.9	11.8	40.0	397	Interpolated
33020-XX	30.8	12.0	40.3	520	UUT2
33030-XXR	32.0	16.5	47.3	240	Interpolated ¹
33040-XXR	31.5	16.5	47.5	280	UUT3 ¹

Notes:

1 Units operate with external battery cabinets only, these units have an R in the model number indicating RoHS compliance.

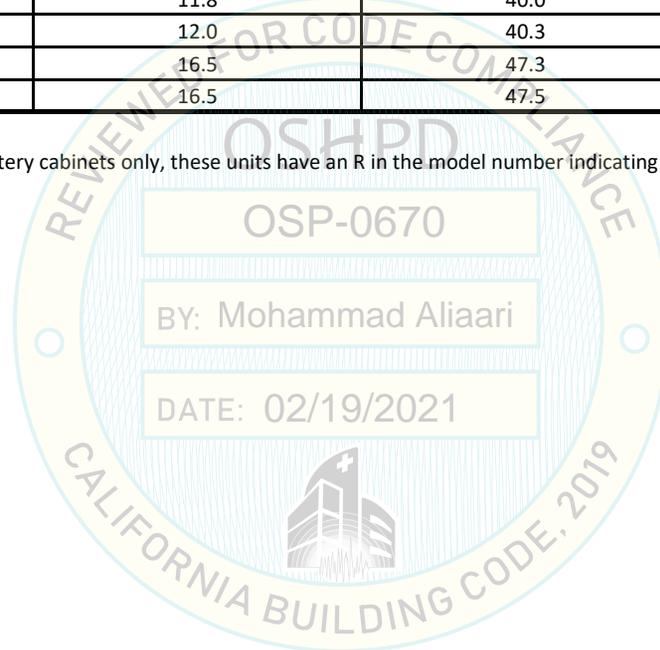


Table 2 - Certified Subcomponents

Mounting Configuration: Rigid Base Mounted
Test Levels: SDS = 2.0g, z/h=1.0; SDS=2.5g, z/h=0.0
Manufacturer: Ametek Powervar
Product Type: Uninterruptable Power Supply (UPS)
Product Line: 3300 UPS



Subcomponent	Part number	Description	Material	Weight (lb)	Unit
Main Board / Insulated Gate Bipolar Transistor (IGBT)	A26-00325	PCBA, MAIN, 10K/20K/40K, 3300, SRV	PCBA	18	UUT1, UUT2, UUT3
	A26-00326	PCBA, MAIN, 15K/30K, 3300, SRV	PCBA	18	Same As Tested ¹
Battery	A14-00015	VRLA Battery, 12V 460w (UUT1 qty. = 20, UUT2 qty. = 60)	ABS Flame retardant	6	UUT1, UUT2
Control Board	A26-00320	PCBA, CONTROL, 15K/20K/30K/40K	PCBA	2	UUT1, UUT2, UUT3
Fuse PCB	A26-00329	PCBA, BAT FUSE EMI, 10K, 3300, SRV	PCBA	<1	UUT1
	A26-00328	PCBA, BAT FUSE EMI, 15K/30K, 3300, SRV	PCBA	<1	Interpolated
	A26-00327	PCBA, BAT FUSE EMI, 20K/40K, 3300, SRV	PCBA	<1	UUT2, UUT3
Enclosure	33010-XX-E	Steel chassis w/ 2 inner shelves; two steel side panels	Carbon Steel	105	UUT1
	33015-XX-E	Steel chassis w/ 3 inner shelves; two steel side panels	Carbon Steel	181	Interpolated
	33020-XX-E	Steel chassis w/ 3 inner shelves; two steel side panels	Carbon Steel	185	UUT2
	33030-XXR-E	Steel chassis w/ 1 inner shelf; two steel side panels	Carbon Steel	297	Interpolated
	33040-XXR-E	Steel chassis w/ 1 inner shelf; two steel side panels	Carbon Steel	304	UUT3
Fan	A37-00065	FAN, FAN 1 (CN3), 10K, 3300, SRV	Poly Butylene	<1	UUT1
	A37-00066	FAN, FAN 2 (CN7), 10K, 3300, SRV	Poly Butylene	<1	UUT1
	A37-00067	FAN, FAN 1 (CN3), 15K/20K/40K, 3300, SRV	Poly Butylene	<1	UUT2, UUT3
	A37-00068	FAN, FAN 3 (CN4), 15K/20K, 3300, SRV	Poly Butylene	<1	UUT2
	A37-00069	FAN, FAN 2 (CN7), 15K/20K, 3300, SRV	Poly Butylene	<1	UUT2
	A37-00070	FAN, FAN 4 (CN2), 15K/20K, 3300, SRV	Poly Butylene	<1	UUT2
	A37-00071	FAN 1, FAN 4 (CN2), 30K/40K, 3300, SRV	Poly Butylene	<1	Interpolated
	A37-00073	FAN, FAN 3 (CN4), 30K, 3300, SRV	Poly Butylene	<1	Interpolated
	A37-00074	FAN, FAN 1 (CN3), 30K, 3300, SRV	Poly Butylene	<1	Interpolated
	A37-00076	FAN, FAN 3 (CN4), 40K, 3300, SRV	Poly Butylene	<1	UUT3
	A37-00077	FAN, FAN 2 (CN7), 40K, 3300, SRV	Poly Butylene	<1	UUT3
	A37-00072	FAN 2, FAN 4 (CN2), 30K/40K, 3300, SRV	Poly Butylene	<1	UUT3
Inductor	A26-00331	PCBA, INDUCTOR, 15K/20K/30K/40K, 3300, SRV	PCBA	18	UUT1, UUT2, UUT3
	A26-00348	PCBA, INV, 10K, 3300, SRV	PCBA	<1	UUT1

Notes:

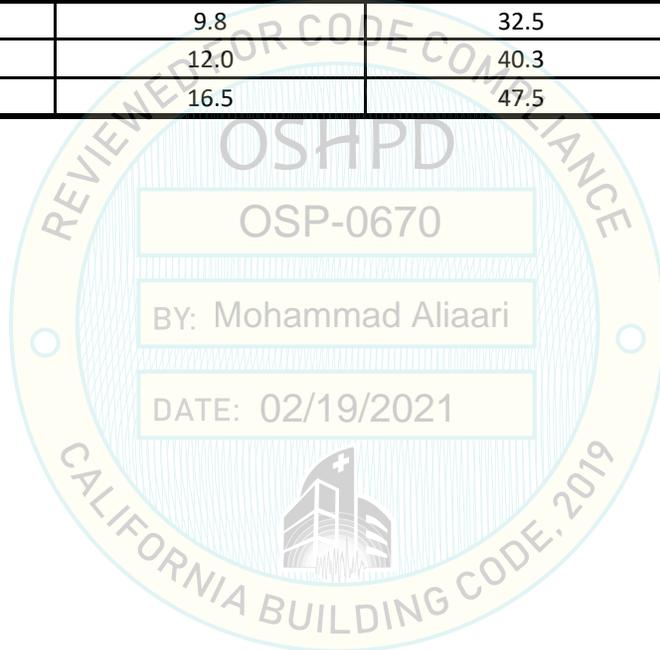
1 Product is same as tested in IGBT category with different part number.

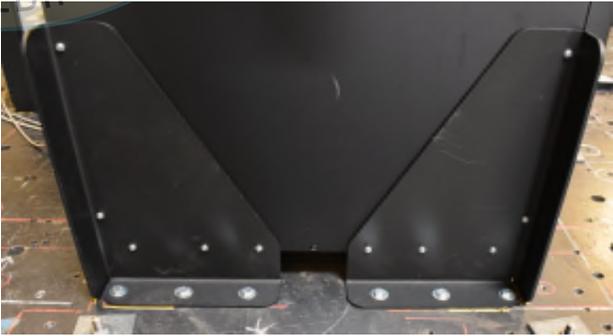
Table 3 - Tested Units

Mounting Configuration: Rigid Base Mounted
Test Levels: SDS = 2.0g, z/h=1.0; SDS=2.5g, z/h=0.0
Manufacturer: Ametek Powervar
Product Type: Uninterruptable Power Supply (UPS)
Product Line: 3300 UPS



Model Number	Dimensions (in)			Weight (lb)	Unit
	Depth	Width	Height		
33010-XX	24.8	9.8	32.5	220	UUT1
33020-XX	30.8	12.0	40.3	520	UUT2
33040-XXR	31.5	16.5	47.5	280	UUT3



UNIT UNDER TEST - Summary Sheet								
UUT1								
Manufacturer:	AMETEK Powervar							
Product Type:	Uninterruptible Power Supply (UPS)							
Product Line:	3300 UPS							
Model Number:	33010-XX							
Mounting:	Rigid Base Mount with Manufacturer Provided Brackets							
Construction Summary:	Painted Carbon Steel							
Options / Subcomponent Summary:								
Main Board, Battery, Control Board, Fuse, Enclosure, Fans, Power Factor Correction Inductor, Invertor Inductor								
Interface Connections:								
<p>UUT1 was mounted to the table interface plate with (12) 3/8" grade 5 bolts and washers via (4) manufacturer provided brackets with (3) bolts per bracket to the shake table. The bolts are spaced depthwise from the front 3.5", 3.5", 7", 3.5", and 3.75". The bolts were spaced widthwise 12.5".</p> <p>UUT1 was mounted with (4) manufacturer provided 7 gauge painted carbon steel brackets, each mounted to the UUT utilizing (5) M8-1.25 x 16mm Class 8.8 bolts. Model numbers for the brackets are A05-01002 and A05-01003. There were (2) of each bracket model.</p>								
UUT Properties								
UUT1	Operating Weight (lb.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			
		Depth	Width	Height	Front-Back	Side-Side	Vertical	
	220	24.8	9.8	32.5	>33.3	>33.3	>33.3	
Seismic Test Parameters								
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.0	1.5	N/A	NA	1.67	0.67
								
Figure 1. Overall UUT		Figure 2. Bracket Mounting						
<p>Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component and attachment system and force-resisting systems were maintained.</p>								

UNIT UNDER TEST - Summary Sheet



UUT2	
Manufacturer:	AMETEK Powervar
Product Type:	Uninterruptible Power Supply (UPS)
Product Line:	3300 UPS
Model Number:	33020-XX
Mounting:	Rigid Base Mount with Manufacturer Provided Brackets
Construction Summary:	Painted Carbon Steel

Options / Subcomponent Summary:
 Main Board, Battery, Control Board, Fuse, Enclosure, Fans, Power Factor Correction Inductor, Invertor Inductor

Interface Connections:

UUT2 was mounted to the table interface with (12) 3/8" grade 5 bolts and washers via (4) manufacturer provided brackets with (3) bolts per bracket. The bolts were spaced depthwise starting from the front of the units 5", 3.5", 10", 3.5", and 5". The bolts were spaced widthwise 15".

UUT2 was mounted with (4) manufacturer provided 7 gauge painted carbon steel brackets, each mounted to the UUT utilizing (5) M8-1.25 x 16mm Class 8.8 bolts. Model numbers for the brackets are A05-01004 and A05-01005. There were (2) of each bracket model.

UUT Properties

UUT2	Operating Weight (lb.)	Dimensions (in.)			Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
	520	30.8	12.0	40.3	22.5	>33.3	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.0	1.5	N/A	NA	1.67	0.67



Figure 1. Overall UUT



Figure 2. Bracket Mounting

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

UNIT UNDER TEST - Summary Sheet



UUT3

Manufacturer:	AMETEK Powervar
Product Type:	Uninterruptible Power Supply (UPS)
Product Line:	3300 UPS
Model Number:	33040-XXR
Mounting:	Rigid Base Mount with Manufacturer Provided Brackets
Construction Summary:	Painted Carbon Steel

Options / Subcomponent Summary:
 Main Board, Control Board, Fuse, Enclosure, Fans, Power Factor Correction Inductor, Invertor Inductor

Interface Connections:
 UUT3 was mounted to the table interface plate with (12) 3/8" grade 5 bolts and washers via (4) manufacturerprovided brackets with (3) bolts per bracket. The bolts were spaced depthwise from the front of the unit 5", 3.75", 8.5", 5" and 5.5". The bolts were spaced widthwise 19.5".

UUT3 was mounted with (4) manufacturer provided 7 gauge painted carbon steel brackets, each mounted to the UUT utilizing (5) M8-1.25 x 16mm Class 8.8 bolts. Model numbers for the brackets are A05-01006, A05-01007, A05-01111, and A05-01112. There were (1) of each bracket model.

UUT Properties

UUT3	Operating Weight (lb.)	Dimensions (in.)			Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
	280	31.5	16.5	47.5	24.0	>33.3	28.5

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	N/A	N/A
		2.50	0.0	1.5	N/A	NA	1.67	0.67



Figure 1. Overall UUT

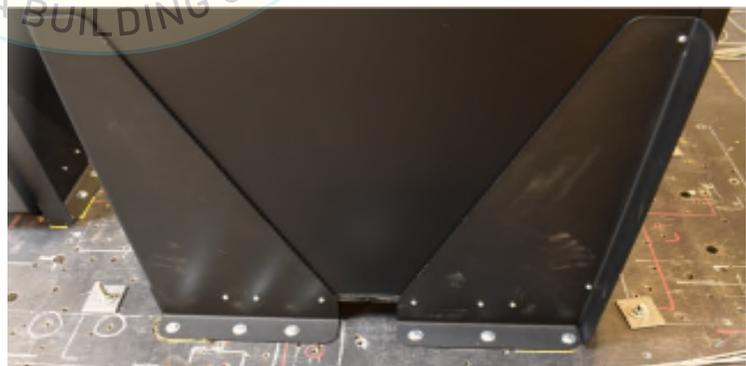


Figure 2. Bracket Mounting

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