

# DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC	OFFICE USE ONLY
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSP-0495
HCAI Special Seismic Certification Preapproval (OSP)	
Type: New X 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@amo	etek.com
Product Information	MD.
Product Name: UPS and Batteries	1
Product Type: UPS	12
Product Model Number: See Attachment	ī
General Description: Enclosures contain circuit breakers, circuit breaker	accessories, transformers, receptacles and batteries.
Mounting Description: Rigid, Floor/Wall Mounted	
Tested Seismic Enhancements: None DATE: 02/01/2023	No.
Applicant Information	Les .
Applicant Company Name: Dynamic Certification Laboratories	
Contact Person: Kelly Laplace	
Mailing Address: 1315 Greg Parkway #109, Sparks, NV 89431	
Telephone:       (775) 358-5085       Email:       kelly@shaketest.	.com
Title: Business Manager	



HCA



# DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Respo	nsible 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, Sacramen	to, CA 95814
Telephone: (832) 627-2214 Em	ail: ken.tarlow@thevmcgroup.com
Certification Method	
GR-63-Core X ICC-ES AC156	☐ IEEE 344
Other (Please Specify):	
-0	RCODECO
Testing Laboratory	Mp
Company Name: DYNAMIC CERTIFICATION LABOR	ATORY (DCL)
Contact Person: Kelly Laplace	2
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 8	9431
Telephone: (775) 358-5085	ail: Kelly@shaketest.com
	: 02/01/2023
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RNIA	
	BUILDING

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





# DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

### Seismic Parameters

Design Basis of Equipment or Components	(Fp/Wp) = 1.88 (MBS and Stepdov Transformer Cabinets);	vn Transformer with MBS); 1.13 (Dual 0.94 (Battery Cabinets)
SDS (Design spectral response accel	eration at short period, g) = 2.5 (MBS (Dual Tra	and Stepdown Transformer with MBS); 1.5
ap (Amplification factor) =	2.5	
Rp (Response modification factor) =	6.0	
$\Omega_0$ (System overstrength factor) =	2.0	
lp (Importance factor) =	1.5	
z/h (Height ratio factor) =	1	
Natural frequencies (Hz) =	See Attachment	
Overall dimensions and weight =	See Attachment	
II.	HCAI	· Fr
HCAI Approval (For Office Use Only) -	Approval Expires on 02/01/2029	
Date: 02/01/2023		Ē
Name: Mohammad Karim	BY: Mohammad Karim	Title: Supervisor, Health Facilities
Special Seismic Certification Valid <mark>Up to:</mark> Si	DS (g) = See Above	z/h = 1
Condition of Approval (if applicable):	DAIE: 02/01/2023	22
	PRIVIA BUILDING COD	L.

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STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

HCA

and Stepdown	Transformers					``	CERT	NAM IFICATI RATORIES,
DCL Project Number: 32	193-2201							
Manufacturer: C&C Pow	ver for Ametek Powervar							
Product Line: Wall Mour	nted Maintenance Bypass S	Systems (30/40 kVA), St	tepdown Transf	ormer with N	laintenance E	Bypass System		
Certified Product Constru	iction: Powder-coated gal	vanized carbon steel er	closures					
Mounting Description: R	igid wall mount or rigid ba	se mount, as indicated	KCOD	F(O)				
Certified Seismic Levels:	S <sub>DS</sub> =2.50g, z/h=1.0	10			3.			
			Dir	mensions (in				
Model Number	Туре	Manufacturer	Depth	Width	Height	Weight (lb)	Mounting	Unit
32010-MB3WM18		TI A		0530	36	120	Rigid wall mount	Extrapola
32020-MB3WM18	Wall Mounted MBS		10	30	36	120	Rigid wall mount	Extrapola
32030-MB3WM22	(30/40 kVA)	C&C Power	10	30	36	120	Rigid wall mount	Extrapola
32040-MB3WM22		O BY:№	lohama	d Kaorim	36	120	Rigid wall mount	UUT1
32010-2FX2MB3			33	30	48	660	Rigid base mount	Extrapola
32020-2FX2MB3			<u> </u>	/20 <u>30</u> 3	48	660	Rigid base mount	Extrapola
32030-2FX2MB3			33	30	60	810	Rigid base mount	Extrapola
32040-2FX2MB3			33	30	60	810	Rigid base mount	Extrapola
32010-4FX2MB3			33	30	48	660	Rigid base mount	Extrapola
32020-4FX2MB3	Stepdown		33	30	48	660	Rigid base mount	UUTS
32030-4FX2MB3	Transformer with MBS	C&C Power	SI 133 DT	30	60	810	Rigid base mount	Interpola
32040-4FX2MB3			33	30	60	810	Rigid base mount	UUT
32010-6FX2MB3			33	30	48	660	Rigid base mount	Extrapola
32020-6FX2MB3			33	30	48	660	Rigid base mount	Extrapola
32030-6FX2MB3			33	30	60	810	Rigid base mount	Extrapola
32040-6FX2MB3			33	30	60	810	Rigid base mount	Extrapola
same. Manufacturing	lounted MBS are identic process is ISO 9001 certi wn Transformer Units a	ified.	-			-	es. All physical aspe	cts are the



Extrapolated <sup>1</sup>

Extrapolated<sup>1</sup> Extrapolated <sup>1</sup>

UUT1

Extrapolated<sup>2</sup>

Extrapolated<sup>2</sup>

Extrapolated<sup>2</sup>

Extrapolated <sup>2</sup>

Extrapolated<sup>2</sup>

UUT3

Interpolated

UUT5

Extrapolated<sup>2</sup>

Extrapolated<sup>2</sup>

Extrapolated<sup>2</sup>

Extrapolated<sup>2</sup>

Table 1 - Special Seismic Certification

**Certified Components - Maintenance Bypass Systems (MBS)** 

Table 2 - Special Seismic Certification
<b>Certified Components - Dual Transformer Cabinets</b>



DCL Project Number: 32193-2201

*Manufacturers:* C&C Power for Ametek Powervar

**Product Line:** Dual Transformer Cabinets

Certified Product Construction: Powder-coated galvanized carbon steel enclosures

Mounting Description: Rigid base mount

Certified Seismic Levels: S<sub>DS</sub>=1.50g, z/h=1.0

Model Number Type	Turne	Manda	Dimensions (in)			Maisht (lb)	Manuatina	11	
woder Number	Туре	Manufacturer	Depth	Width	Height	Weight (lb)	Mounting	Unit	
32800-04		C&C Power	33	30	60	1120	Rigid base mount	UUT4	
32800-07	Dual Transformer		CRC Downer	$05_{33}-04$	9530	60	1120	Rigid base mount	Extrapolated <sup>1</sup>
32800-10	Cabinet		33	30	60	1120	Rigid base mount	Extrapolated <sup>1</sup>	
32800-12	1	BY:	loha <b>³</b> βma	d K30 im	60	1120	Rigid base mount	Extrapolated <sup>1</sup>	
ote:									

1. Extrapolated Dual Transformer Cabinets are identical to the tested 32800-04, except configured with different primary taps. Manufacturing process is ISO 9001 certified.



-	ecial Seismic ( mponents - B	Certification attery Cabin	ets			((	CERT	IAMIC
DCL Project Numbe	er: 32193-2201						LABOR	ATORIES,LLC
Manufacturers: C8	&C Power for Ametel	<pre></pre>						
Product Line: Batte	ery Cabinets							
Certified Product Co	onstruction: Powder	-coated galvanized	carbon steel enclosu	res				
Mounting Descript	ion: Rigid base mour	nt E	ORCODE	6				
Certified Seismic Le	evels: S <sub>DS</sub> =1.25g, z/h=	=1.0		M				
	<u> </u>			Dimensions (in)				L Lucit
Madal Number	Turne	Cohagony	Manufacturer			()	Maight (lb)	1 1
Model Number	Туре	Category	Manufacturer	Depth	Width	Height	Weight (lb)	Unit
Model Number 32020-BC57	Туре	Category 32010-32020	Manufacturer			<u> </u>	Weight (lb) 1,870	Unit UUT7
	Туре		Manufacturer OSP-049	Depth	Width	Height		UUT7
32020-BC57	Туре		Manufacturer OSP-049	Depth 32	Width 29	Height 48	1,870	
32020-BC57 32030-BC13	Туре		Manufacturer OSP-049 Mohammad	Depth 32 32 32	Width 29 29	<b>Height</b> 48 60	1,870 875	UUT7 Extrapolate
32020-BC57 32030-BC13 32030-BC15			OSP-049 Mohammad	Depth 32 32 32 32	Width           29           29           29           29           29	Height           48           60           60	1,870 875 1,091	UUT7 Extrapolate Extrapolate UUT10
32020-BC57 32030-BC13 32030-BC15 32040-BC11	Type Battery Cabinets		OSP-049	Depth 32 32 32 32 32 Ka32m	Width 29 29 29 29 29 29 29	Height           48           60           60           60           60	1,870 875 1,091 1,180	UUT7 Extrapolate Extrapolate UUT10 Interpolate
32020-BC57 32030-BC13 32030-BC15 32040-BC11 32030-BC25		32010-32020	OSP-049 Mohammad	Depth 32 32 32 Kasim 32	Width 29 29 29 29 29 29 29 29 29 29	Height           48           60           60           60           60           60           60	1,870 875 1,091 1,180 1,559	UUT7 Extrapolate Extrapolate UUT10 Interpolate
32020-BC57 32030-BC13 32030-BC15 32040-BC11 32030-BC25 32040-BC18		32010-32020	OSP-049 Mohammad	Depth 32 32 32 32 (AB2) 32 32 02 <sup>32</sup>	Width 29 29 29 29 29 29 29 29 29 29 29 29 29	Height           48           60           60           60           60           60           60           60           60           60           60           60           60           60           60	1,870 875 1,091 1,180 1,559 1,559	UUT7 Extrapolate Extrapolate
32020-BC57 32030-BC13 32030-BC15 32040-BC11 32030-BC25 32040-BC18 32040-32		32010-32020	OSP-049 Mohammad	Depth 32 32 32 32 32 (32 32 32 32 32 32	Width           29           29           29           29           29           29           29           29           29           29           29           29           29           29           29           29           29           29	Height           48           60           60           60           60           60           60           60           60           60           60           60           60           60           60           60           60           60           60	1,870 875 1,091 1,180 1,559 1,559 1,883	UUT7 Extrapolated Extrapolated UUT10 Interpolated Interpolated

# Table 4 - Special Seismic CertificationProduct Nomenclature Guide



Manufacturer: C&C Power for Ametek Powervar

Product Line: Wall Mounted MBS and Stepdown Transformer with MBS

Wall Mounted Maintenance Bypass Systems (MBS)									
A-B-C									
Definition	Allowable Value	Allowable Value Description	Unit						
	32010	10kVA	Extrapolated <sup>1</sup>						
A Bypass rating	32020		20kVA	Extrapolated <sup>1</sup>					
	32030	30kVA	Extrapolated <sup>1</sup>						
	32040	40kVA	UUT1						
Unit type	MB3WM	3 breaker Maintenace Bypass / Wall mount	UUT1						
Prosker rating	18	18kAIC breaker rating	Extrapolated <sup>1</sup>						
C Breaker rating		22kAIC breaker rating	UUT1						
	Bypass rating	A-B-CDefinitionAllowable Value32010Bypass rating320203203032040Unit typeMB3WM18	A-B-C       Definition     Allowable Value     Allowable Value Description       Bypass rating     32010     10kVA       32020     20kVA       32030     30kVA       32040     40kVA       Unit type     MB3WM     3 breaker Maintenace Bypass / Wall mount       Breaker rating     18     18kAIC breaker rating						

1. Option physically identical to that tested in UUT1, but with a different breaker trip rating.

Stepdown Transformer with Maintenance Bypass System A-B-C									
									Variable
	0	32010	10kVA	Extrapolated <sup>1</sup>					
٨	A cabinet for 20 and 40kVA UPS	A cabinet for 20 and				32020	20kVA	UUT3	
A			32030	30kVA	Interpolated <sup>2</sup>				
		32040	40kVA	UUT5					
		2FX2	208/208	Extrapolated <sup>3</sup>					
В	Transformer	4FX2	480/208	UUT3, UUT5					
		6FX2	600/208	Extrapolated <sup>3</sup>					
С	Unit type	MB3	3 Breaker Maintenace Bypass	UUT3, UUT5					

1. Extrapolated cabinet is identical to that tested in UUT3 - marketing change only.

2. Interpolated cabinet is idential to that tested in UUT5 - marketing change only.

2-

3. Extrapolated transformer option is the same as tested in UUT3 and UUT5, but without bypass breakers.

# Table 4 - Special Seismic Certification Product Nomenclature Guide (Continued)

Manufacturer: C&C Power for Ametek Powervar

Product Line: Dual Transformer Cabinets and Battery Cabinets

Dual Transformer Cabinets									
	A-B								
Variable	Definition	Allowable Value	Allowable Value Description	Unit					
А	Unit Type	32800	Dual transformer cabinet	UUT4					
		04	480/208 and 208/480	UUT4					
В	Custom	07	400/208 and 208/400	Extrapolated <sup>1</sup>					
В	configuration 10		480/208 and 208/400	Extrapolated <sup>1</sup>					
		12	600/208 and 208/600	Extrapolated <sup>1</sup>					

1. Extrapolated configurations are identical to the tested one, except different voltage taps are utilized.

	Battery Cabinets								
A-B-C									
Variable	Definition	Allowable Value	Allowable Value Description	Unit					
	Matching battery	32020SP-049	5 Battery cabinet 20	UUT7					
А	cabinet for 20 and	32030	Battery cabinet 27	Interpolated <sup>1</sup>					
	40kVA UPS B Unit Type	BV 32040 ammad	Battery cabinet 27	UUT10, UUT11					
В	Unit Type	BC	Battery Cabinet	UUT7, UUT10, UUT11					
				DAT <sub>15</sub> 02/01/2	023 HX-100 batteries	Extrapolated <sup>2</sup>			
		11	HX-100 batteries	UUT10					
		18	HX-150 batteries	Interpolated					
	Custom	25	HX-150 batteries	Interpolated					
С	configuration	32	HX 205 batteries	Interpolated					
	conngulation	45 11 01	HX 205 batteries	Interpolated					
		57	HX 205 batteries	UUT7					
		65	HX 300 batteries	Interpolated					
		44	HX 300 batteries	UUT11					
-	d cabinet option is ide sted in UUT10, but wit	entical to that tested in UUT11 (m h fewer batteries.	narketing change only).						

2-

DYNAMIC CERTIFICATION LABORATORIES,LLC

-	cial Seismic Certific components - Wall		lainte	enance	Bypass	s Syste	ms	((	)) DC	MIC
DCL Project Number:	32193-2201									
Product Line: Wall N	Nounted Maintenance Bypass	Systems								
Certified Subcompon	ents: Enclosures and circuit b	reakers								
Certified Seismic Leve	els: S <sub>DS</sub> =2.50g, z/h=1.0									
		/	OR	Enclos	ures					
	Manufacturer	Description	Y	Dim	nensions	(in.)	Max Loaded	NEMA	Matarial	Unit
Model Number	Manufacturer	Descriptio	n	Width	Height	Depth	Weight (lb.)	Rating	Material	
90880	C&C Power, Inc.	90880 Type End	losure	30 SP-0	36 495	10	120	1	Powder-coated galvanized carbon steel	UUT1
							חיו			
		D)	/• N/a	Circuit Br	eakers	im				
Model Number	Manufacturer		, IVIO	Dim	nensions	(in.)	Moight (lb.)		Material	Unit
woder Number	Wanuracturer	Amperage (A)	Poles	Width	Height	Depth	Weight (lb.)		wateria	Unit
C-F Frame	Eaton / Cutler Hammer	40 - 150DA	3	02/0	1/26023	В з	~ 5	Pla	stic Body/Case	UUT1



Table 6 - Special Seismic Certification

## Certified Subcomponents - Stepdown Transformers with Maintenance Bypass System

(()) DCL DYNAMIC CERTIFICATION LABORATORIES,LLC

DCL Project Number: 32193-2201

Product Line: Stepdown Transformer with Maintenance Bypass System

Certified Subcomponents: Enclosures, circuit breakers, and transformers

Certified Seismic Levels: S<sub>DS</sub>=2.50g, z/h=1.0

				AL.	Encl	osures				
Model Number	Manufacturer	Descript	tion		ensions		Max Loaded	NEMA	Material	Unit
99726	C&C Power, Inc.	90855 T Enclosi		30	Height 36	Depth 10	Weight (lb.) 120	Rating 1	Powder-coated galvanized carbon steel	UUT3, UUT5
						0.4.01				
		6		C	Circuit	Breaker	The second second	-		
Model Number	Manufacturer	Amperage (A)	Poles		ensions Height		Weight (lb.)		Material	Unit
C-F Frame	Eaton / Cutler Hammer	30 <mark>- 175</mark>	3	4	6	3	5		Plastic Body/Case	UUT3, UUT
		C	D,	ALE	: 02/	01/2	023			
					Trans	formers		5		
Model Number	Manufacturer		Desc	ription			Weight (lb.)		Material	Unit
051-00048		22	KVA 480	D-208Y/	120V		480			UUT3
051-00047		22	2KVA 208D-208Y/120V			480			Interpolate	
051-00049		22	KVA 600	D-208Y/	′120V	JIN	480			Interpolate
051-00091		22	KVA 208	D-208Y/	′120V		480			Interpolate
051-00092		22	KVA 480	D-208Y/	′120V		480			Interpolate
051-00093	C&C Power, Inc.	22	KVA 600	D-208Y/	′120V		480		Copper core	Interpolate
051-00053	eder ower, me.	44	KVA 208	D-208Y/	′120V		590			Interpolate
051-00055		44	KVA 600	D-208Y/	′120V		590			Interpolate
051-00086		44	KVA 480	D-208Y/	′120V		590			Interpolate
051-00094			KVA 208	,			590			Interpolate
051-00095			KVA 600				590			Interpolate
051-00054		44	KVA 480	D-208Y/	′120V		590		UUT5	

Table 7 - Special Seismic Certification
Certified Subcomponents - Dual Transformer Cabinets



DCL Project Number: 32193-2201

Product Line: Dual Transformer Cabinets

Certified Subcomponents: Enclosures, circuit breakers, and transformers

Certified Seismic Levels: S<sub>DS</sub>=1.50g, z/h=1.0

			D En	closures						
Model Number	Manufacturer	Description	Dim Width	ensions Height		Max Loaded Weight (lb.)	NEMA Rating	Material	Unit	
99726	C&C Power, Inc.	90856 Type Enclosure	30	60	33	1,120	1	Powder-coated galvanized carbon steel	UUT4	
		2	035	-049	0					
			Circu	it Breake	ers					
Model Number	Manufacturer	Amperage (A) Broles	<u>onan</u>	ensions Height	1 COLLIN	Weight (lb.)		Material		
		40		10110	000				Extrapolate	
	C-F Frame Eaton / Cutler Hammer	60 PAI	E: U2	/01/2	UZJ			Extrapolate		
C-F Frame		70 3	4	6	3	50	Plas	UUT4		
	папппег	80			ANN -			Plastic Body/Case	Interpolate	
		150			RADD				UUT4	
			NOL NO	MMANNAS		9.				
			S ( <b>Tr</b> ar	sformer	s					
Model Number	Manufacturer	Descri	otion			Weight (lb.)		Material	Unit	
051-00101		40kVA 208DI	D-480/27	77Y		571			UUT4	
051-0095		44KVA 208D-	600Y/34	5V		590			Interpolate	
051-00054	C&C Power, Inc.	Copper core				UUT4				
051-0055	]	44KVA 600D-	208Y/12	0V		590			Extrapolate	

# Table 8 - Special Seismic Certification Certified Subcomponents - Battery Cabinets



DCL Project Number: 32193-2201

Product Line: Battery Cabinets

Certified Subcomponents: Enclosures, batteries, circuit breakers, and circuit breaker accessories

Certified Seismic Levels: S<sub>DS</sub>=1.25g, z/h=1.0

			Enclosure	S					
Model Number	Manufacturer	Description	Dim	ensions	(in.)	Max Loaded	NEMA	Material	Unit
woder Number	Wanuacturer	Description	Width	Height	Depth	Weight (lb.)	Rating	Widteria	Unit
91420		BC20 Type Enclosure	29	48	32	1,870	1	Powder-coated galvanized	UUT7
91427	C&C Power, Inc.	BC27 Type Enclosure	29	60	32	2,570	1	carbon steel	UUT10
						~			•
			Batteries			Z			
Model Number	Manufacturer	Description		05		Weight (lb.)		Material	Unit
12HX100		Enersys HX Series	Battery	99		22			UUT10
12HX150	Enersys	Enersys HX Series	Enersys HX Series Battery 32					lacid harmatically cooled	Interpolate
12HX205	Ellersys	Enersys HX Series Battery         32           Enersys HX Series Battery         43					i aciu, hermetically sealeu	UUT7	
12HX300		Enersys HX Series				60			UUT11
		Cir	cuit Brea	ors					
Model Number	Manufacturer	DA Description	0104		3	Weight (lb.)		Material	Unit
HFDDC3070L		C-Frame Breaker	Frame	11001	ANA	6			UUT7
JGEDC3250NN	1	G JG-Frame Circuit Bre	aker Fran	ne	ATT				UUT10
JT3100FA	Eaton / Cutler Hammer	G JG-Frame Thermal Magne	tic Trip U	nit 100A	HA	< 1 1		Plastic body/case	Extrapolate
JT3150FA		G JG-Frame Thermal Magne	tic Trip U	nit 150A		1		Plastic Douy/case	UUT10
JGEDC3100FAG		G JG-Frame Circuit Bre	eaker 100	Α	$\left( O \right)$	7			Extrapolate
JGEDC3150FAG		G JG-Frame Circuit Bro				7			UUT10
			LDI						
			reaker Ac	cessorie	S				
Model Number	Manufacturer		cription					Material	Unit
A1X1PK	Eaton / Cutler Hammer	Series C F-	Frame Au witch 1	xiliary				Plastic body/case	UUT7
SNT1RP03K	Eaton / Cutler Hammer	Series C F-Frame Shur	Series C F-Frame Shunt Trip 12-24VAC/VDC Right Plastic body/case						UUT7
AUX1A1BPK	Eaton / Cutler Hammer	Series G EG, JG, & LG Frame Auxiliary Switch 1A/1B Plastic body/case						Plastic body/case	UUT10
SNT024CPK	Eaton / Cutler Hammer	Series G EG, JG, & LG F	rame Shu	nt Trip 2	4VAC/VI	DC O		Plastic body/case	UUT10

# Table 9 - Special Seismic CertificationTested Units



DCL Project Number: 32193-2201

Manufacturers: C&C Power for Ametek Powervar

Product Lines: Wall Mounted Maintenance Bypass Systems (30/40 kVA), Stepdown Transformer with Maintenance Bypass System, Dual Transformer Cabinets, and Battery Cabinets

Tested Product Construction: Powder-coated galvanized carbon steel enclosures

Tested Mounting Descrip	otion: Rigid wall mount or rigid base mo	unt FOI								
Model Number	Туре	Manufacturer	Di	mensions	(in)	Weight	Mounting	Sds (g),	Unit	
Woder Number	гуре	Wanulacturer	Depth	Width	Height	(lb.)	woulding	z/h=1	Onic	
32040-MB3WM22	Wall Mounted MBS (30/40Kva)	C&C Power	10	30	36	120	Rigid wall mount	2.50	UUT1	
32020-4FX2MB3	Stepdown Transformer with MBS	C&C Power		0530	48	590	Rigid base mount	2.50	UUT3	
32800-04	Dual Transformer Cabinet	C&C Power	33	30	60 77	1,120	Rigid base mount	1.50	UUT4	
32040-4FX2MB3	Stepdown Transformer with MBS	C&C Power	33	30	60	710	Rigid base mount	2.50	UUT5	
32020-BC57	Battery Cabinet	C&C Power	ampaa	l Kagim	48	1,870	Rigid base mount	1.47	UUT7	
32040-BC11	Battery Cabinet	C&C Power	32	29	60	1,180	Rigid base mount	1.75	UUT10	
32040-BC44	Battery Cabinet	C&C Power	023201/	20293	60	2,570	Rigid base mount	1.25	UUT11	



## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

Product Line: Wall Mounted Maintenance Bypass Systems (MBS)

Model Number: 32040-MB3WM22

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

#### Subcomponent Summary:

Eaton C-F Frame circuit breaker

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.

			UU	<b>Properties</b>				
<b>Operating Weight</b>		Dim	nensions (inch	Lowest Natural Frequency (Hz)				
(lb)	UU		Depth	Width	Height	Front-Back	Side-Side	Vertical
120	UUT1		10	30	36	N/A	N/A	N/A
			Seismic	Test Paramete	ers	7	•	
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0 S	P-04595	4.00	3.00	1.67	0.67

#### Unit Mounting Description:

The unit was rigidly attached to the shake table interface wall frame using (6) 3/8-inch diameter Grade 5 bolts, washers, plate washers, and channel nuts.



UUT1 Overall View

## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

**Product Line:** Stepdown Transformer with Maintenance Bypass System

Model Number: 32020-4FX2MB3

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

*Options / Component Summary:* 

Eaton C-F Frame circuit breaker, C&C Power transformer

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.

			UUT	Properties								
<b>Operating Weight</b>		Dim	ensions (inche	Lowest N	Lowest Natural Frequency (Hz)							
(lb)	UUT	υυτ		Width	Height	Front-Back	Side-Side	Vertical				
590	UUT3		32	30	48	9.3	7.5	13.0				
	Seismic Test Parameters											
Building Code	Test Criteria	Sds (g)	z/h		Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)				
CBC 2022	ICC-ES AC156	2.50	1.0	-0495	4.00	3.00	1.67	0.67				

#### Unit Mounting Description:

The unit was rigidly attached to the shake table interface plate using (4) 1/2 inch diameter Grade 5 bolts and washers.



## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

Product Line: Dual Transformer Cabinet

*Model Number:* 32800-04

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

**Options / Component Summary:** 

Eaton C-F Frame circuit breaker, C&C Power transformers

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.

			UU	T Properties									
<b>Operating Weight</b>		Dim	ensions (inch	Lowest N	Lowest Natural Frequency (Hz)								
(Ib)	υυτ		Depth	Width	Height	Front-Back	Side-Side	Vertical					
1,120	UUT4		33	30	60	6.3	5.3	21.0					
	Seismic Test Parameters												
Building Code	Test Criteria	Sds (g)	z/h		Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)					
CBC 2022	ICC-ES AC156	1.50	1.0	-0495	2.40	1.80	1.00	0.40					

#### Unit Mounting Description:

The unit was rigidly attached to the shake table interface plate using (4) 1/2-inch diameter Grade 5 bolts and washers.



UUT4 Overall View

## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

**Product Line:** Stepdown Transformer with Maintenance Bypass System

Model Number: 32040-4FX2MB3

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

*Options / Component Summary:* 

Eaton C-F Frame circuit breaker, C&C Power transformer

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.

			UU	T Properties				
<b>Operating Weight</b>		Dim	ensions (inch	Lowest N	Lowest Natural Frequency (Hz)			
(Ib)	UUT		Depth	Width	Height	Front-Back	Side-Side	Vertical
710	UUT5		33	30	60	13.5	10.5	27.8
		S.	Seismic	Test Paramet	ers	7		
Building Code	Test Criteria	Sds (g)	z/h		Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	-0 <u>4</u> 95	4.00	3.00	1.67	0.67

#### Unit Mounting Description:

The unit was rigidly attached to the shake table interface plate using (4) 1/2-inch diameter Grade 5 bolts and washers.



## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

Product Line: Battery Cabinet

Model Number: 32020-BC57

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

*Options / Component Summary:* 

Enersys batteries, Eaton circuit breaker and accessories

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.

			UU	T Properties				
<b>Operating Weight</b>		Dim	ensions (inche	Lowest N	Lowest Natural Frequency (Hz)			
(lb)	υυτ		Depth	Width	Height	Front-Back	Side-Side	Vertical
1,870	UUT7		29	30	48	8.8	13.8	22.5
		S.	Seismic	Test Paramet	ers	2	-	
Building Code	Test Criteria	Sds (g)	z/h		Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	1.47	1.0	-0495	2.35	1.76	0.98	0.39

#### Unit Mounting Description:

The unit was rigidly attached to the shake table interface plate using (6) 1/2-inch diameter Grade 5 bolts and washers.



## DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



#### DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

Product Line: Battery Cabinet

Model Number: 32040-BC11

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

*Options / Component Summary:* 

Enersys batteries, Eaton circuit breaker and accessories

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.

			UUI	<b>Properties</b>				
<b>Operating Weight</b>		Dim	ensions (inche	Lowest N	Lowest Natural Frequency (Hz)			
(lb)	υυτ		Depth	Width	Height	Front-Back	Side-Side	Vertical
1,180	UUT1	0	32	29	60	14.8	8.8	31.3
		SI	Seismic	Test Paramete	ers	7		
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	1.75	1.0 SI	P-0 <u>1.5</u> 95	2.80	2.10	1.17	0.47

#### Unit Mounting Description:

UUT10 was rigidly attached to the shake table interface plate using (4) 1/2-inch diameter Grade 5 bolts and washers.



**UUT10** Overall View

## **UUT11** DCL Test Report 96377-1601 UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 32193-2201

Manufacturer: C&C Power for Ametek Powervar

Product Line: Battery Cabinet

Model Number: 32040-BC44

Product Construction Summary:

Powder coated galvanized carbon steel enclosure, NEMA 1

**Options / Component Summary:** 

Enersys batteries, Eaton circuit breaker and accessories

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.

			UU	T Properties				
<b>Operating Weight</b>		Dim	nensions (inch	Lowest Natural Frequency (Hz)				
(lb)	דטט		Depth	Depth Width Height		Front-Back	Side-Side	Vertical
2,570	UUT1	.1	32	29	60	9.0	3.5	17.3
		E	Seismic	Test Paramete	ers	-		
Building Code	Test Criteria	Sds (g)	z/bSI	P-0495	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	1.25	1.0 V• Moboo	1.5	2.00	1.50	0.83	0.33
Unit Mounting Des	cription:		. wona	mmad Na			•	

### Unit Mounting Description:

The unit was rigidly attached to the shake table interface plate using (4) 1/2-inch diameter Grade 5 bolts and washers.



UUT11 Overall View