



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

**APPLICATION #: OSP-0779**

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Bevco Engineering Company, Inc.

Manufacturer's Technical Representative: Bruce Gallitz

Mailing Address: W222 N5739 Miller Way, Sussex, WI 53089-3988

Telephone: (262) 820-2400

Email: bgallitz@bevcoengineering.com

**Product Information**

Product Name: Electrical Control Panels on Life Safety/Critical Branch

Product Type: Medical System Control Panels

Product Model Number: IECMI480V150Axx

General Description: Integrated Electrical Cabinet with optional UPS. Provides a single point power connection between the facility power and imaging systems.

Mounting Description: Rigid, Wall Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

**Applicant Information**

Applicant Company Name: Dynamic Certification Laboratories

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431-6098

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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

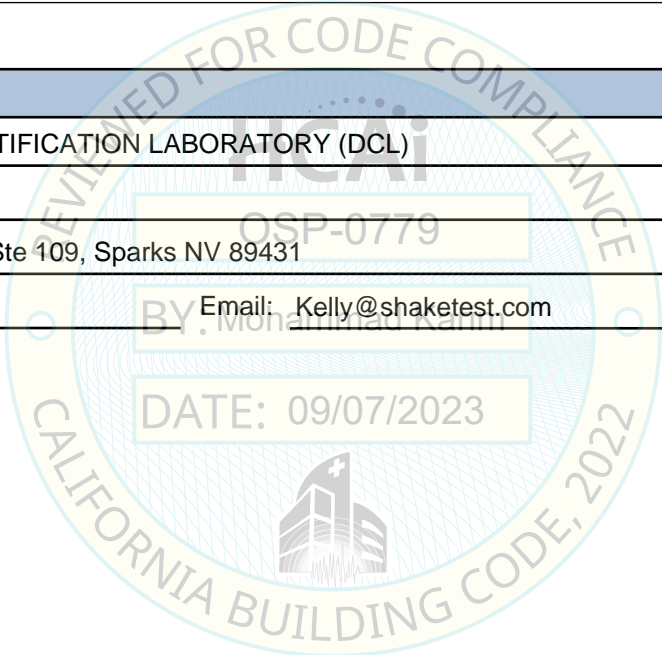
Company Name: THE VMC GROUP  
Name: Kenneth Tarlow California License Number: S2851  
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814  
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

**Certification Method**

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

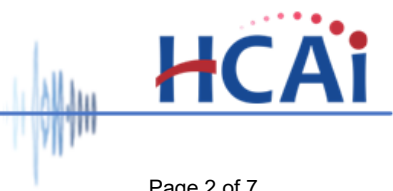
**Testing Laboratory**

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)  
Contact Person: Kelly Laplace  
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431  
Telephone: (775) 358-5085 Email: Kelly@shaketest.com



*"A healthier California where all receive equitable, affordable, and quality health care"*

**STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY**





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**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.50 (SDS = 2.0 at z/h =1); 1.13 (SDS = 2.5 at z/h =0)

SDS (Design spectral response acceleration at short period, g) = 2.0 @ z/h = 1.0; 2.5@z/h=0

$a_p$  (Amplification factor) = 2.5

$R_p$  (Response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.0

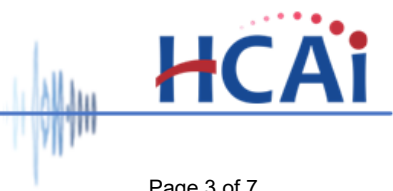
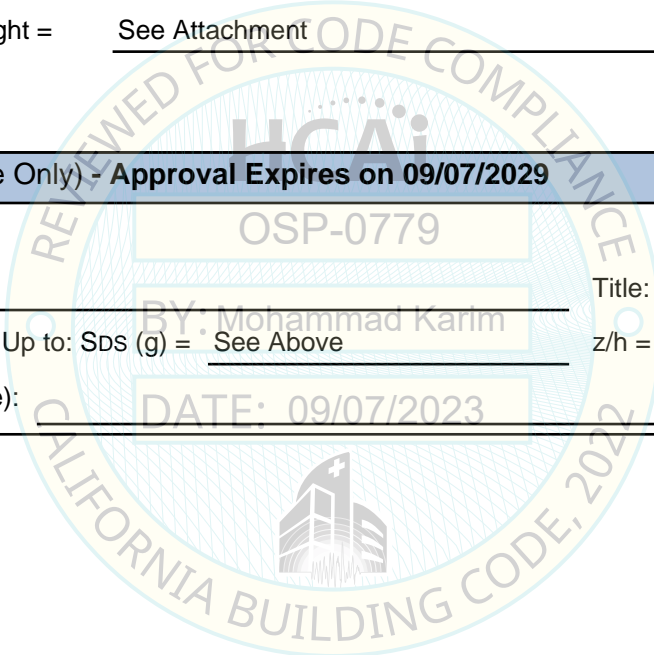
$I_p$  (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

<b>HCAI Approval (For Office Use Only) - Approval Expires on 09/07/2029</b>			
Date:	<u>9/7/2023</u>	OSP-0779	
Name:	<u>Mohammad Karim</u>	BY: Mohammad Karim	Title: <u>Supervisor, Health Facilities</u>
Special Seismic Certification Valid Up to: SDS (g) =	<u>See Above</u>	DATE: 09/07/2023	z/h = <u>1</u>
Condition of Approval (if applicable):	<u></u>		



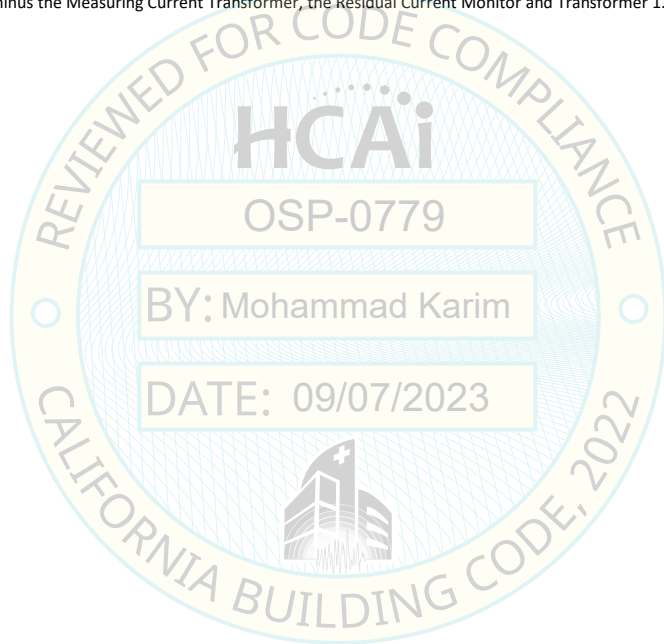
**Special Seismic Certification**  
**Table 1- Certified Components**



**DCL Project Number:** 13063-2301  
**Manufacturer:** Bevco Engineering Company, Inc.  
**Product Line:** IECMI Panel with UPS Bracket  
**Mounting:** Rigid Wall Mount  
**Certified Seismic Levels:**  $S_{DS} = 2.50g, z/h=1.0$ ;  $S_{DS} = 2.50g, z/h=0.0$

Model Number	Description	Manufacturer	Dimensions [in.]			Weight [ lb. ]	Unit
			Depth	Width	Height		
IECMI480V150Axx	IECMI Panel with UPS Bracket	Bevco Engineering	10.0	32.0	72.8	450	Extrapolated
IECMI480V150ALL	IECMI Panel with UPS Bracket	Bevco Engineering	10.0	32.0	72.8	450	UUT-01, UUT-02

\*The xx in the model number is as follows:  
 IECMI480V150AEU is the the tested design minus Transformer 1.5KVA;  
 IECMI480V150AUS is the the tested design minus the Measuring Current Transformer and the Residual Current Monitor;  
 IECMI480V150ARW is the tested design minus the Measuring Current Transformer, the Residual Current Monitor and Transformer 1.5KVA



**Special Seismic Certification**  
**Table 2 - Certified Subcomponents**



DCL Project Number: 13063-2301

Product Line: IECMI Panel with UPS Bracket

Model Number	Description	Manufacturer	Material	Weight [ lb. ]	Unit
SD-819	Enclosure 48X32X8.93	Hoffman	14 GA mild carbon steel, NEMA 1	110	UUT-01, UUT-02
SD-818	UPS Bracket	Bevco	11 GA mild carbon steel, NEMA 1	78.5	UUT-01, UUT-02
9PX6K	UPS Power Supply	Eaton	plastic, carbon steel, lead acid battery 12V	106	UUT-01, UUT-02
6EP13333BA10	Power Supply	Siemens	plastic, copper and aluminum	1	UUT-01, UUT-02
ML15.241	Power Supply 24VDC 0.63A	Pulse	plastic, copper and aluminum	<1	UUT-01, UUT-02
3VA61155HL310AA	Circuit Breaker	Siemens	plastic, copper and aluminum	5	UUT-01, UUT-02
3VA51301MU310AA	Circuit Breaker	Siemens	plastic, copper and aluminum	2	UUT-01, UUT-02
3VA61155HL410AA	Circuit Breaker	Siemens	plastic, copper and aluminum	7	UUT-01, UUT-02
5SY41117	Circuit Breaker	Siemens	plastic	<1	UUT-01, UUT-02
DMA100C06/030	RCB Circuit Breaker	General Electric	plastic	1	UUT-01, UUT-02
EP102ULC30	Circuit Breaker 30A 2P	General Electric	plastic	1	UUT-01, UUT-02
EQBQK000063-1	Transformer 500VA	Hammond	mild steel, aluminum, copper	11	UUT-01, UUT-02
Q1C5DTCF	Transformer 1.5KVA	Hammond	mild steel, aluminum, copper	42	UUT-01, UUT-02
CHCC1DU	Fuse Block 30A 1P CLASS CC	Bussmann	plastic	<1	UUT-01, UUT-02
CHCC2DU	Fuse Block 30A 2P 600V	Bussmann	plastic	<1	UUT-01, UUT-02
CHCC3DU	Fuse Block 3P 600V 30A	Bussmann	plastic	<1	UUT-01, UUT-02
3SU14001AA101CA	Timing Relay	Siemens	plastic	<1	UUT-01, UUT-02
3RT10566AR36	Contactora (busbar control)	Siemens	plastic/copper and aluminum	7	UUT-01, UUT-02
3RT20152BB41	Contactora 3P	Siemens	plastic	1	UUT-01, UUT-02
3RT20172VB42	Contactora, 3Pole with Diode	Siemens	plastic	1	UUT-01, UUT-02
3SU15000AA100AA	Power Contactora	Siemens	plastic	<1	UUT-01, UUT-02
3VA99780AA13	AUX Switch Type/HQ_EL	Siemens	plastic	<1	UUT-01, UUT-02
3SU19000DY300AA	Latching Block	Siemens	plastic	<1	UUT-01, UUT-02
N250X	Neutral Block	Siemens	aluminum and copper	2	UUT-01, UUT-02
DOCA232/030	Add-on RCD 2P	General Electric	plastic	1	UUT-01, UUT-02
W60AB	Measuring Current Transformer	Bender	plastic	1	UUT-01, UUT-02
RCMA423D1	Residual Current Monitor	Bender	plastic	<1	UUT-01, UUT-02
ADR35-21	Ground Lug (3) #4-500 MCM	Thomas and Betts	aluminum and copper	<1	UUT-01, UUT-02
WX100	Cable Bender	Bender	copper	1	UUT-01, UUT-02
EKI-2525-BE	Switch, Ethernet 12-48VDC	AdvanTech	plastic	1	UUT-01, UUT-02
2910379	Arrester, Lightning/Surge	Phoenix Contact	plastic	1	UUT-01, UUT-02

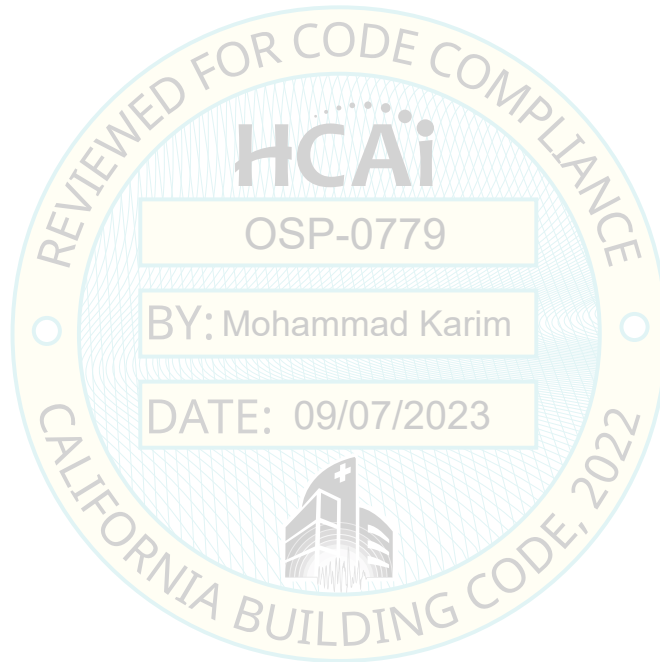
**Special Seismic Certification**

**Table 3- Tested Units**



**DCL Project Number:** 13063-2301  
**Manufacturer:** Bevco Engineering Company, Inc.  
**Product Line:** IECMI Panel with UPS Bracket  
**DCL Test Report Number:** 89168-1901  
**Mounting:** Rigid Wall Mount  
**Certified Seismic Levels:**  $S_{DS} = 2.50g, z/h=1.0$ ;  $S_{DS} = 2.50g, z/h=0.0$

Model Number	Description	Manufacturer	Dimensions [in.]			Weight [lb.]	Unit
			Length	Width	Height		
IECMI480V150ALL	IECMI Panel with UPS Bracket	Bevco Engineering	10.0	32.0	72.8	450	UUT-01
							UUT-02



**UUT-01, UUT-02 - DCL Test Report 89168-1901**



**UNIT UNDER TEST (UUT) Summary Sheet**

**Manufacturer:** Bevco Engineering Company, Inc.

**Product Line:** IECMI Panel with UPS Bracket

**Model Number:** IECMI480V150ALL

**Product Construction Summary:** Powder coated carbon steel enclosure

**Options / Component Summary:** Reference subcomponent table

**Note:** Each 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 was maintained.

**UUT Properties**

Operating Weight (lb)	Dimensions (in)				Lowest Natural Frequency (Hz)		
	Tested Unit	Depth	Width	Height	Front-Back	Side-Side	Vertical
450	UUT-01, UUT-02	10.0	32.0	72.8	N/A	N/A	N/A

**Seismic Test Parameters**

Building Code	Test Criteria	Component	Sds (g)	z/h	Ip	Afix (g)	Arig (g)
CBC 2022	ICC-ES AC156	Horizontal	2.0	1.0	1.5	3.20	2.40
		Vertical	2.5	0.0		1.67	0.67

**Unit Mounting Description:**

UUT-01 and UUT-02 were identical units made by Bevco Engineering Company, Inc. The UUTs were mounted directly to the DCL wall frame fixture using eight 3/8" Grade 5 bolts, 3"x3"x1/4" galvanized carbon steel square washers, 3/8" channel nuts, and 3/8" round washers to simulate a wall mounted installation. The UUTs were mounted to the side of the DCL wall frame fixture using the manufacturer's bolt-hole locations on the cabinet frame. The bolts on the IECMI panel were spaced 14.5" width-wise and 46" height-wise, while the two bolts used to mount the UPS bracket to the wall fixture were spaced 29" width-wise and spaced 23" from the bottom of the IECMI panel. The UPS Brackets were mounted to the bottom of the IECMI Panel using (4) 3/8" diameter by 1" long bolts, (4) 3/8" hex nuts, (4) 3/8" lock washers, and (4) 3/8" flat washers. All hardware is Grade 5. The bolts were spaced 29" width-wise and 2.5" depth-wise.



**Figure 1. Photograph of UUT-01**



**Figure 2. Photograph of UUT-02**