

APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICI	E USE ONLY
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP – 0345
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: 🗌 New 🛛 Renewal		
Manufacturer Information		
Manufacturer:		
Manufacturer's Technical Representative: Amira Shokr		
Mailing Address: 7686 Bath Road, Mississauga, ON L4T 1L2		
Telephone: (905) 673-1553	r@i-gard.com	
Product Information	Mp,	
Product Name: Neutral Grounding Resistors (NGR) SHPD	T.	
Product Type: Electrical Equipment OSP-0345	- Cri	
Product Model Number: <u>See Attachments</u> (List all unique product identification numbers and/or part numbers) Othy J Pila General Description: <u>NGR is used in an electrical system similar to</u> damage. NGR limits the duration of electrical fault in a system.	ind	nel and equipment from
Mounting Description: Rigid Base Mounted and Externally Isolated u	Ising Neoprene Isolators	
	20	
Applicant Information Applicant Company Name: The VMC Group	ODE	
Applicant Company Name: The VMC Group		
Contact Person: John P. Giuliano, PE		
Mailing Address: 113 Main Street, Bloomingdale, NJ 07403		
Telephone: (973) 838-1780 Email: john.g	iuliano@thevmcgroup.co	om
I hereby agree to reimburse the Office of Statewide Health accordance with the California Administrative Code, 2016. Signature of Applicant:	_	opment review fees in e: 9/27/19
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs" STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	WMM	Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)
Company Name: The VMC Group
Name: Ken Tarlow California License Number: SE2851
Mailing Address:113 Main Street, Bloomingdale, NJ 07403
Telephone:       _(973) 838-1780         Email: <u>ken.tarlow@thevmcgroup.com</u>
Supports and Attachments Preapproval
<ul> <li>Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)</li> <li>Supports and attachments are not preapproved</li> </ul>
Certification Method
<ul> <li>Testing in accordance with: ICC-ES AC156</li> <li>Other (Please Specify): OSP-0345</li> </ul>
BY:Timothy J Piland
Testing Laboratory DATE: 11/19/2021
Company Name:PEER, University of California at Berkley
Contact Name: Amarnath Kasalanati
Mailing Address:1301 S. 46 <sup>th</sup> Street, Building 420, Richmond, California 94804
Telephone: (510) 642-6475 Email: amarnath1@berkley.edu

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#### OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters
Design in accordance with ASCE 7-10 Chapter 13: 🖂 Yes 🔲 No
Design Basis of Equipment or Components $(F_p/W_p) = 1.76$ (Rigid) and 4.28 (Isolated)
$S_{DS}$ (Design spectral response acceleration at short period, g) = 2.44 (Rigid) and 2.38 (Isolated)
$a_p$ (In-structure equipment or component amplification factor) = <u>1.0 (Rigid) and 2.5 (Isolated)</u>
R <sub>p</sub> (Equipment or component response modification factor) = <u>2.5</u>
$\Omega_0$ (System overstrength factor) = 2.0
I <sub>p</sub> (Importance factor) = 1.5
z/h (Height factor ratio) = _1
Equipment or Component Natural Frequencies (Hz) = <u>See Attachments</u>
Overall dimensions and weight (or range thereof) = See Attachments
Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: 🗌 Yes 🛛 No
Design Basis of Equipment or Components (V/W) =
S <sub>DS</sub> (Design spectral response acceleration at short period, g) =
S <sub>D1</sub> (Design spectral response acceleration at 1 second period, g) =
R (Response modification coefficient) =
Ω₀ (System overstrength factor) =By:Timothy J Piland
C₄ (Deflection amplification factor) =
I₂ (Importance factor) = 1.5 DATE: 11/19/2021
Height to Center of Gravity above base =
Equipment or Component Natural Frequencies (Hz) =
Overall dimensions and weight (or range thereof) =
Tank(s) designed in accordance with ASME BPVC, 2015: 🔲 Yes 🖾 No
List of Attachments Supporting Special Seismic Certification
<ul> <li>Test Report(s)</li> <li>Drawings</li> <li>Calculations</li> <li>Manufacturer's Catalog</li> <li>Other(s) (Please Specify):</li> </ul>
OSHPD Approval (For Office Use Only) – Approval Expires on November 19, 2027
1.1.1 00
Signature: Date: November 19, 2021
Print Name: Timothy J. Piland Title: SSE
Special Seismic Certification Valid Up to: $S_{DS}(g) = \underline{See \ Above} z/h = \underline{1}$
Condition of Approval (if applicable):
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

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		Max. Dime	nsional Da	ata			Product Speci	fications		
Serial Number	Length [ in ]	Width [ in ]	Height [ in ]	Weight <sup>1</sup> [ lb ]	b]	Enclosure Type	NGR Type	Voltage L / N [ volt ]	Current [ ampere ]	UUT
4	23	16	7	30	Туре А	NEMA 3R	277-1-C	277	1	UUT-1
3	23	16	7	40	Туре А	NEMA 3R	347-5-60148	347	5	Interpolated
5	23	16	7	40	Туре А	NEMA 3R	277-2-C	277	2	Interpolated
6	23	16	7	40	Type A	NEMA 3R	277-5-C	277	5	Interpolated
7	23	16	7	40	Type A	NEMA 3R	347-1-C	347	1	Interpolated
8	23	16	7	40	Type A	NEMA 3R	347-2-C	347	2	Interpolated
9	23	16	7	40	Туре А	NEMA 3R	347-5-10S	347	5	Interpolated
10	23	16	7	40	Type A	NEMA 3R	347-15-10S	347	15	Interpolated
11	23	16	14.5	50/	Туре А	NEMA 3R	347-10-60158	347	10	Interpolated
13	23	16	14.5	50	Type A	NEMA 3R	277-10-C	277	10	Interpolated
12	23	16	14.5	50	Type A	NEMA 3R	277-5-C/CT	277	5	Interpolated
14	23	16	14	50	Type A	NEMA 3R	347-5-C/CT	347	5	UUT-2
15	40	28	26.5	175	Туре В	NÉMA 3R	277-25-C	277	25	UUT-3
16	40	28	26.5	180	Туре В	NEMA 3R KD	347-15-C	347	15	Interpolated
17	40	28	26.5	180	Type B	NEMA 3R KD	347-25-C	347	25	Interpolated
18	40	28	26.5	180	Туре В	NEMA 3R KD	2400-5-10S	2400	5	Interpolated
19	40	28	26.5	1807	Туре В	NEMA 3R KD	2400-10-10S	2400	10	Interpolated
45	40	36	38.5	265	Туре В	NEMA 3R KD	4160-15-10S	4160	15	UUT-4

### **Table 1: Certified Product Matrix**



		Max. Dime	nsional Da	ata			Product Spec	ifications		
Serial Number	Length [ in ]	Width [ in ]	Height [ in ]	Weight <sup>1</sup> [ lb ]	Product Config.	Enclosure Type	NGR Type	Voltage L / N [ volt ]	Current [ ampere ]	UUT
20	40	36	38.5	350	Туре В	NEMA 3R KD	2400-300- 62566	2400	300	Interpolated
21	40	36	38.5	350	Туре В	NEMA 3R KD	2400-200- 62562	2400	200	Interpolated
22	40	36	38.5	350	Туре В	NEMA 3R KD	2400-100- 62556	2400	100	Interpolated
23	40	36	38.5	350	Туре В	NEMA 3R KD	2400-400- 62570	2400	400	Interpolated
24	40	36	38.5	350	Туре В	NEMA 3R KD	1390-5-C	1390	5	Interpolated
25	40	36	38.5	350	Type B	NEMA 3R KD	2400-2-C	2400	2	Interpolated
26	40	36	38.5	350	Туре В	NEMA 3R KD	2400-3- <mark>C</mark>	2400	3	Interpolated
27	40	36	38.5	350	Type B	NEMA 3R KD	2400-4-C	2400	4	Interpolated
28	40	36	38.5	350	Туре В	NEMA 3R KD	2400-1-C	2400	1	Interpolated
29	40	36	38.5	350	Туре В	NEMA 3R KD	2400-200-10S	2400	200	Interpolated
30	40	36	38.5	350	Type B	NEMA 3R KD	2400 <b>-250-</b> 10S	2400	250	Interpolated
31	40	36	38.5	350	Туре В	NEMA 3R KD	2400-300-10S	2400	300	Interpolated

THORNIA BUILDING CODE: 20

		Max. Dime	nsional Da	ita			Product Speci	ifications		
Serial Number	Length [ in ]	Width [ in ]	Height [ in ]	Weight <sup>1</sup> [Ib]	Product Config.	Enclosure Type	NGR Type	Voltage L / N [ volt ]	Current [ ampere ]	UUT
32	40	36	38.5	350	Туре В	NEMA 3R KD	2400-400-10S	2400	400	Interpolated
42	52	36	38.5	500	Туре В	NEMA 3R KD	2400-5-C	2400	5	Interpolated
43	52	36	38.5	500	Туре В	NEMA 3R KD	2400-10-C	2400	10	Interpolated
44	52	36	38.5	500	Type B	NEMA 3R KD	2400-25-10S	2400	25	Interpolated
57	52	36	50.5	580	Туре В	NEMA 3R KD	2400-100- 62558	2400	100	UUT-5
47	52	36	48.5	430	Туре В	NEMA 3R KD	1390-400-10S	1390	400	Interpolated
48	52	36	48.5	430	Type B	NEMA 3R KD	2400-5-C/CT	2400	5	Interpolated
49	52	36	48.5	430	Type B	NEMA 3R KD	2400-10-C/CT	2400	10	Interpolated
50	52	36	48.5	430	Туре В	NEMA 3R KD	2400-100-60S	2400	100	Interpolated
51	52	36	48.5	430	Туре В	NEMA 3R KD	2400-100- 10S/CT	2400	100	Interpolated
52	52	36	48.5	430	Type B	NEMA 3R KD	2400-200- 10S/CT	2400	200	Interpolated
53	52	36	48.5	430	Type B 1	NEMA 3R KD	2400-300- 10S/CT	2400	300	Interpolated



		Max. Dime	nsional Da	ata			Product Speci	fications		
Serial Number	Length [ in ]	Width [ in ]	Height [ in ]	Weight <sup>1</sup> [Ib]	Product Config.	Enclosure Type	NGR Type	Voltage L / N [ volt ]	Current [ ampere ]	UUT
54	52	36	48.5	430	Туре В	NEMA 3R KD	2400-400- 10S/CT	2400	400	Interpolated
55	52	36	48.5	430	Туре В	NEMA 3R KD	2400-800-10S	2400	800	Interpolated
46	52	36	38.5	350	Type C	NEMA 3R KD	2400-50-60S	2400	50	Interpolated
56	50	50	48.5	520	Туре С	NEMA 3R/4	2400-50- 60S/CT	2400	50	UUT-6
58	52	36	66.5	720	Туре С	NEMA 3R/4	4160-100-60S	4160	100	Interpolated
33	50	50	66.5	720	Туре С	NEMA 3R/4	8000-100- 62715	8000	100	UUT-7
34	50	50	66.5	720	Туре С	NEMA 3R/4	8000-200- 62717	8000	200	Interpolated
35	50	50	66.5	720	Type C	NEMA 3R/4	8000-400- 62721	8000	400	Interpolated
36	50	50	66.5	720	Type C	NEMA 3R/4	8000-400- 62721-New	8000	400	Interpolated
37	50	50	66.5	720	Туре С	NEMA 3R/4	2400-25-C	2400	25	Interpolated
38	50	50	66.5	720	Туре С	NEMA 3R/4	2400-400-60S	2400	400	Interpolated
39	50	50	66.5	720	Туре С	NEMA 3R/4	4160-200-60S	4160	200	Interpolated



		Max. Dime	nsional Da	ata			Product Spec	ifications		
Serial Number	Length [ in ]	Width [ in ]	Height [ in ]	Weight <sup>1,2</sup> [ Ib ]	Product Config.	Enclosure Type	NGR Type	Voltage L / N [ volt ]	Current [ ampere ]	UUT
40	50	50	66.5	720	Туре С	NEMA 3R/4	8000-100-10S	8000	100	Interpolated
41	50	50	66.5	720	Туре С	NEMA 3R/4	8000-200-10S	8000	200	Interpolated
64	62	50	66.5	590	Туре С	NEMA 3R/4	8000-200- 10S/CT	8000	200	UUT-8
59	62	50	66.5	590	Type C	NEMA 3R/4	2400-25-C/CT	2400	25	Interpolated
60	62	50	66.5	590	Туре С	NEMA 3R/4	2400-400- 60S/CT	2400	400	Interpolated
61	62	50	66.5	590	Туре С	NEMA 3R/4	4160-100- 60S/CT	4160	100	Interpolated
62	62	50	66.5	590	Туре С	NEMA 3R/4	4160-200- 60S/CT	4160	200	Interpolated
63	62	50	66.5	590	Type C	NEMA 3R/4	8000-100- 10S/CT	8000	100	Interpolated
1	21	16	34.5	95	Type D	1/NEMA 3R21	OHMNI-4PM- 10RM	277 L/N	10	UUT-9
2	21	16	34.5	100	Type D	NEMA 3R	OHMNI-6PM- 10RM	347 L/N	10	UUT-10

Notes:

1: Maximum weight is listed.

2: UUT 8 NGR was made of Aluminum.



### **OSHPD OSP PRODUCT MATRIX WITH CERTIFIED SUBCOMPONENTS**

Manufacturer:i-Gard CorporationProduct Type:Neutral Grounding Resistors (NGR)Seismic Level:Sds = 2.44 g, z/h = 1.0 rigid mounted

Sds = 2.38 g, z/h = 1.0 isolator mounted

#### **Product Configuration**

- Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.
- Type B: Resistors supported on a rack, rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

All product was tested on and certified as hard mounted and isolated



### Table 2: Enclosures

Manufacturer	Part No.	Max Dimensions L x W x H [ in ]	NEMA Type	Material	Weight [ Ib ]	UUT
iGard	LV-2	16 X 23 X 7	3R	Galvanized	40.00	UUT-1
iGard	2LV-2	16 X 23 X 14	3R	Carbon Steel	60.00	UUT-2
iGard	KD-1-SS	24 X 36 X 26 1/2	3R KD	Stainless Steel	180.00	UUT-3
iGard	KD-2	32 X 36 X 28 1/2	3R KD	Carbon Steel	250.00	UUT-4
iGard	KD-3-48H-GL	32 X 48 X 50 1/2	3R KD	Galvanized	500.00	UUT-5
iGard	HV-9	46 X 46 X 48 1/2	3R/4 Welded Frame	Carbon Steel	600.00	UUT-6
iGard	HV-5	46 X 46 X 66 1/2	3R/4 Welded Frame	Stainless Steel	850.00	UUT-7
iGard	HV-6	46 X 58 X 66 1/2	3R/4 Welded Frame	Aluminum	1100.00	UUT-8
iGard	OHMNI-L	16 X 21 X 34 1/2	DE 3R	Carbon Steel	110.00	UUT-9
iGard	OHMNI-L	16 X 21 X 34 1/2	3R	Carbon Steel	110.00	UUT-10

Note: KD is Kock Down

### Table 3: Mounting Frames

Manufacturer	Part No.	Material P-(	Weight [ lb ]	m	UUT	
iGard	4H-SML-5EW	Aluminum	3.00		UUT-3	
iGard	5H-LRG-2FDL	Aluminum	4.00		UUT-4	
iGard	8H-LRG-6EW	<sup>B</sup> Aluminum <sup>11</sup> Y	J P 5.0010		UUT-5	
iGard	5H-LRG-8EW	Aluminum	5.00		UUT-6	
iGard	6H-LRG-8EW	Aluminum/19	2026.00		UUT-7	
iGard	4H-LRG-8EW	Aluminum	4.00		UUT-8	

DSHF

# Table 4: Resistors

Manufacturer	Part No.	Materia	Weight [ lb ]	UUT
iGard	FDL-86500	Nickel-Chromium	1.00	UUT-1
iGard	FDL-8600	Nickel-Chromium	1.00	UUT-2
iGard	EW-5-141	1JR Alloy type 2	3.50	UUT-3
iGard	FDL-13500	Nickel-Chromium	1.00	UUT-4
iGard	EW-6-61	1JR Alloy type 2	4.50	UUT-5
iGard	EW-8-231	1JR Alloy type 2	4.75	UUT-6
iGard	EW-8-231	1JR Alloy type 2	4.75	UUT-7
iGard	EW-8-152	1JR Alloy type 2	5.00	UUT-8
iGard	FDL & EW	Nickel-Chromium	3.50	UUT-9, UUT-10

### Table 5: Junction Box

Manufacturer	Part No.	Material	Weight [ Ib ]	UUT
iGard	JB 4X3 1/2 X 6	Carbon Steel	2.00	UUT-1

#### Table 6: Standoffs

Manufacturer	Part No.	Material	Weight [ Ib ]	UUT
Porcelain Products	5002	Glazed Porcelain	1.00	UUT-4, UUT-5, UUT-6, UUT-7, UUT-8
Porcelain Products	5003	Glazed Porcelain	2.50	UUT-4, UUT-7, UUT-8

Manufacturer	Part No.	Material	Weight [ Ib ]	UUT
GE	600V	Molded Epoxy	25.00	UUT-2
GE	5KV	Molded Epoxy	36.00	UUT-7
GE	15KV	Molded Epoxy	55.00	UUT-8
iGard	600V	Molded Epoxy	8.00	UUT-9, UUT-10

### **Table 7: Current Transformer**

### **Table 8: Terminal Pads/Bushing**

Manufacturer	Part No.	Material	Weight [ Ib ]	UUT
Grt Genesis	600V	Ероху	0.50	UUT-1, UUT-2, UUT-3
Porcelain Products	5001	Glazed Porcelain	0.75	UUT-4, UUT-5, UUT-6, UUT-7, UUT-8
Porcelain Products	15 KV Bushing	<b>Glazed Porcelain</b>	6.00	UUT-7

### **Table 9: Terminal Block**

Manufacturer	Part No.	Material	Weight [ Ib ]	UUT
Cooper Bussmann	EB27B04SC	Molded Thermoplastic	0.254	UUT-1, UUT-9, UUT-10
	La la	" OSH	PD	TT.
	REVIE	OSP-0	)345	(m
		BY:Timothy		
	C	DATE: 11/19		6/
	Y			502
		EORNIA BUIL	DING COD	



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### **Summary Sheet**

UUT-3A

								STI 2013	
Model Line		Мос	del Numbe	er		I	Manufacture	er	
NGR		2	277-25-C				iGard		
	1	Product Cor	struction	Summary					
duct Configuration B	3, NEMA 3R Knock Dow	n Galvanized S	teel Enclo	sure					
		Options / Sub	-	-					
losure: iGard; Moun	ting Frame: iGard; Resi	stors: iGard; Te	erminal Pac	ds/Bushing: (	Grt Genesis	;			
		OR	CODF	0					
		COFUN	Decementia	COMO					
<b>14</b> /-:		Dimension	Propertie	es es		Lowo	st Nat. Freq	Г Ц <del>-</del> 1	
Weight [lbs]	Length	Widt		Heig	ht	F-B	S-S	·[n2]	
175	40	28		5 26		>33.3	>33.3	21.	
		Highest Passe		0		00.0	00.0		
Building Code	Test Criteria	Spin of	z/h	Pila <sup>l</sup> nd	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>	
CBC 2016	ICC-ES AC156	2.44	y	1.5	3.90	2.93	1.63	0.6	
			UUT-3	A					
	31		-AL			ALL STREET			



#### **Summary Sheet**

UUT-4A

						-		STI 2013
Model Line	·	N	lodel Numbe	r			Manufacture	er
NGR			4160-15-10S			iGard		
	i	Product C	onstruction	Summary		•		
roduct Configuration E	3, NEMA 3R Knock Dow	n Carbon Ste	eel Enclosure					
		Options / S	ubcomponen	t Summar	у			
nclosure: iGard; Moun roducts	iting Frame: iGard; Resi	stors: iGard;	Standoffs: Po	rcelain Pro	oducts; Term	inal Pads/B	ushing: Porc	elain
		FOR	R CODE	COL				
		EV U	UT Propertie	s				
Weight			ions [ in ] D		4	Lowe	st Nat. Freq	. [ Hz ]
[ lbs ]	Length	Width		He	ight	F-B	S-S	v
265	40	0	6P-034	345 38.5		18.2	17.8	18.8
	UUT	Highest Pas	sed Seismic	Run Infori	mation			
Building Code	Test C <mark>riteri</mark> a	DV.SD\$m	hthz/h	ila <sup>l</sup> nd	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>
CBC 2016	ICC-ES AC156	2.44	1	1.5	3.90	2.93	1.63	0.65
			UUT-4A			3		



### UNIT UNDER TEST (UUT)

#### **Summary Sheet**

UUT-5A

Model Line		Model Num	ıber		Γ	Manufacture	ər
NGR		2400-100-62	2558			iGard	
	I	Product Construction	on Summary				
oduct Configuration B	, NEMA 3R Knock Dowr	n Galvanized Steel End	closure				
		Options / Subcompo	nent Summary	/			
iclosure: iGard; Mount oducts	ing Frame: iGard; Resis	stors: iGard; Standoffs:	Porcelain Pro	ducts; Termi	inal Pads/Bเ	ushing: Porc	elain
		UUT Prope	ties				
Weight	L.	Dimensions [ in ]		4	Lowe	st Nat. Freq	. [ Hz ]
[lbs]	Length	Width	Hei	ght	F-B	S-S	v
580	52	O35P-03	<b>45</b> 50	.5	13.1	10.2	21.3
	UUT H	Highest Passed Seisn	nic Run Inforn	nation			
Building Code		By <sup>S</sup> ⊅smothz/h	Piland	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	2.44 1 Test Mounting	1.5	3. <mark>90</mark>	2.93	1.63	0.65
UT was mounted to the	e fixture using four (4) 5	/8" diameter grade 8 b	olts.	UUT-5A			



#### Summary Sheet

UUT-6A

PEER STI 2013-08

							PEER	STI 2013-
Model Line		Мо	del Numb	er		N	lanufacture	er
NGR		240	0-50-608/0	СТ		iGard		
	•	Product Cor	nstruction	Summary				
oduct Configuration B	, NEMA 3R/4 Welded F	rame Galvaniz	ed Steel E	nclosure				
		Options / Sub	-	-				
closure: iGard; Moun	ting Frame: iGard; Resi	stors; iGard; St	andoffs; i0	Gard; Termin	al Pads/Bus	shing: Porcel	ain Product	5
		OP	CODE					
		FUR	CCDL	CON				
			۲ Properti	es				
Weight		Dimensior		DN	T		st Nat. Freq	. [ Hz ]
[lbs]	Length	Width		Height		F-B	S-S	V
520	50	50		.5 48		>33.3	18.9	>33.
		Highest Passe				-		
Building Code	Test Criteria	BY: Pimp	th <mark>z/h</mark> J-l	Piland	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>
CBC 2016	ICC-ES AC156	2.44	1	1.5	3. <mark>90</mark>	2.93	1.63	0.65
						JUT-6A		
						1/ 1		

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### **Summary Sheet**

UUT-7A

Model Line NGR roduct Configuration C, NE nclosure: iGard; Mounting F ads/Bushing: Porcelain Pro Weight [Ibs] 720 Building Code CBC 2016 UT was mounted to the fixt	Frame: iGard; Resis oducts Length	Options / Subcompone	15 <b>Summary</b> closure <b>ent Summary</b> Porcelain Proc es Heig 5 66	ducts; Curre	ent Transform	st Nat. Freq. S-S 19.7	minal
Weight [Ibs] 720 Building Code CBC 2016	Frame: iGard; Resis oducts Length 50 UUT H Test Criteria	Product Construction rame Stainless Steel En- Options / Subcompone stors: iGard; Standoffs: F UUT Properti Dimensions [ in ] Width 50 P-03 Highest Passed Seismin 2.44 1	es Heig Closure Closure Concelain Procession Concelain Proces	ducts; Curre	Lowes F-B >33.3	ner: GE; Terr st Nat. Freq. S-S 19.7	[ Hz ] V
osure: iGard; Mounting F         s/Bushing: Porcelain Pro         Weight         [ Ibs ]         720         Building Code         CBC 2016	Frame: iGard; Resis oducts Length 50 UUT H Test Criteria	Options / Subcompone         Stors: iGard; Standoffs: F         UUT Properti         Dimensions [ in ]         Width         50 P-032         Highest Passed Seismin         2.44	es Heig Corcelain Procession Corcelain Pr	ducts; Curre	Lowes F-B >33.3	st Nat. Freq. S-S 19.7	[ Hz ] V
Weight [ Ibs ] 720 Building Code CBC 2016	Frame: iGard; Resis oducts Length 50 UUT H Test Criteria	Options / Subcompone         Stors: iGard; Standoffs: F         UUT Properti         Dimensions [ in ]         Width         50 P-032         Highest Passed Seismin         2.44	es Heig Corcelain Procession Corcelain Pr	ducts; Curre	Lowes F-B >33.3	st Nat. Freq. S-S 19.7	[ Hz ] V
s/Bushing: Porcelain Pro Weight [ lbs ] 720 Building Code CBC 2016	Frame: iGard; Resis oducts Length 50 UUT H Test Criteria	stors: iGard; Standoffs: F UUT Properti Dimensions [ in ] Width 50 P-034 Highest Passed Seismin 2.44 1	Porcelain Procession P	ducts; Curre	Lowes F-B >33.3	st Nat. Freq. S-S 19.7	[ Hz ] V
Is/Bushing: Porcelain Pro Weight [ Ibs ] 720 Building Code CBC 2016	Frame: iGard; Resis oducts Length 50 UUT H Test Criteria	stors: iGard; Standoffs: F UUT Properti Dimensions [ in ] Width 50 P-034 Highest Passed Seismin 2.44 1	Porcelain Procession P	ducts; Curre	Lowes F-B >33.3	st Nat. Freq. S-S 19.7	[ Hz ] V
Is/Bushing: Porcelain Pro	Length 50 UUT H Test Criteria	UUT Properti Dimensions [ in ] Width 50 P-032 Highest Passed Seismi 2.44 1	es Heig 5 66 c Run Inform	ght .5 nation	Lowes F-B >33.3	st Nat. Freq. S-S 19.7	[ Hz ] V
Weight [ lbs ] 720 Building Code CBC 2016	Length 50 UUT H Test Criteria	Dimensions [ in ] Width 50 P-032 Highest Passed Seismin S <sub>DS</sub> z/h 2.44 1	Heig 5 66 c Run Inform	.5 nation	<b>F-B</b> >33.3	<b>S-S</b> 19.7	V
[ lbs ] 720 Building Code CBC 2016	50 UUT H Test Criteria	Dimensions [ in ] Width 50 P-032 Highest Passed Seismin S <sub>DS</sub> z/h 2.44 1	Heig 5 66 c Run Inform	.5 nation	<b>F-B</b> >33.3	<b>S-S</b> 19.7	V
[ lbs ] 720 Building Code CBC 2016	50 UUT H Test Criteria	Dimensions [ in ] Width 50 P-032 Highest Passed Seismin S <sub>DS</sub> z/h 2.44 1	Heig 5 66 c Run Inform	.5 nation	<b>F-B</b> >33.3	<b>S-S</b> 19.7	V
[ lbs ] 720 Building Code CBC 2016	50 UUT H Test Criteria	Dimensions [ in ] Width 50 P-032 Highest Passed Seismin S <sub>DS</sub> z/h 2.44 1	Heig 5 66 c Run Inform	.5 nation	<b>F-B</b> >33.3	<b>S-S</b> 19.7	V
[ lbs ] 720 Building Code CBC 2016	50 UUT H Test Criteria	Width       50 P-034       Highest Passed Seismin       Sps       2.44	56 c Run Inform	.5 nation	<b>F-B</b> >33.3	<b>S-S</b> 19.7	V
720 Building Code CBC 2016	50 UUT H Test Criteria	50 P-034       Highest Passed Seismin       S <sub>DS</sub> z/h       2.44     1	56 c Run Inform	.5 nation	>33.3	19.7	
Building Code CBC 2016	UUT F Test C <mark>riteri</mark> a	Highest Passed Seismin Sps thz/h 2.44 1	c Run Inform Pila <sup>I</sup> nd	nation		· · · ·	21.
CBC 2016	Test C <mark>riteri</mark> a	2.44 1	Pila <sup>l</sup> nd	7.7.7.7.7.7	Δ		
CBC 2016		2.44 1	нани	A <sub>FLX-H</sub>	Δ		
	ICC-ES AC156		1.5		A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	<b>A</b> <sub>RIG</sub>
「was mounted to the fixt			1.5	3. <mark>90</mark>	2.93	1.63	0.6
	UUT-7A						



#### **Summary Sheet**

UUT-8A

PEER STI 2013-08

							PEERS	STI 2013
Model Line		Mode	el Number			Г	Manufacture	r
NGR		8000-2	200-10S/CT			iGard		
	·	Product Cons	struction Sur	nmary				
oduct Configuration C	, NEMA 3R/4 Welded F	rame Aluminum	Enclosure					
		Options / Subc						
closure: iGard, Moun	ting Frame: iGard; Resis	stors: iGard; Sta	ndoffs: Porce	lain Pro	ducts;			
			ODC					
		FOR	CODE C	01.				
		UUT	Properties	40				
Weight	4	Dimensions	; [ in ] D		T	Lowe	st Nat. Freq	[ Hz ]
[ lbs ]	Length	Width		Hei	ght	F-B	S-S	V
590	62	50	P-0345	5 66.5		>33.3	19.9	23.1
	UUT I	lighest Passed	Seismic Ru	n Inform	nation			
Building Code	Test C <mark>riteri</mark> a	BV.Spimoth	z/h Pila	ahd	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>
CBC 2016	ICC-ES AC156	2.44	1	1.5	3.90	2.93	1.63	0.65
					2011	K mi		
			The second					
		LAV.		COM	UHL.			
		BL.	TENES.					
			UUT-84					
		and the second						
130				+				
			1.74	13	-	27		
					-	6		
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				14			1 3 🚔	
		Sen L	The second		1/	117		
- Charles			10 135			0 1	1 aug	
			5	1	1 the second		Sille	
					Mr.	- Balle	A Distant	
		8 100	1 m	9	and the second s	A A A A A A A A A A A A A A A A A A A	The second	
1		2112	and the second second	2/	0	SAL	All -	
			5		R		10	



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### Summary Sheet

UUT-1B

Model Line	)	Model Numbe	er		1	Manufacture	er
NGR		277-1-C			iGard		
		Product Construction	Summary				
duct Configuration A	A, NEMA 3R Galvanized	Steel Enclosure					
		Options / Subcomponer	nt Summary	,			
losure: iGard; Resis	stors: iGard; Junction Bo	k: iGard; Terminal Pads/B	Bushing; Grt	Genesis; Te	erminal Bloc	k: Cooper B	ussmanı
		OR CODE					
		FURTHER	CON				
	2	UUT Propertie	es in the second s	·			
Weight		Dimensions [ in ]	D	Z		st Nat. Freq	 I
[ lbs ]	Length	Width	Hei		F-B	S-S	V
30	23	<u>06P-034</u>	<u>5</u> 7		>33.3	>33.3	>33.
Building Code	Test Criteria	lighest Passed Seismic				•	•
					A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>
		нвтаннирину о п	Pila <mark>h</mark> nd			1	
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De RDC2-175 rubber isolato	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails rs. The isola	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails	3.81	2.86	1.59	0.63
CBC 2019 T was externally isol	ICC-ES AC156	2.38 1 Test Mounting De	1.5 etails rs. The isola	3.81	2.86	1.59	0.63



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

#### UUT-2B

iGard

S-S

22.5

A<sub>FLX-V</sub>

1.59

۷

27.2

 $\mathbf{A}_{\mathsf{RIG-V}}$ 

0.63

PEER STI 2013-08



#### Summary Sheet

UUT-3B

( me: iGard; Resis Length 40 UUT H st Criteria :-ES AC156	277-25-C Product Construction In Galvanized Steel Enclo Options / Subcompone stors: iGard; Terminal P UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps 1 z/h 2.38 1 Test Mounting J RDC2-175 rubber isola	n Summary losure ent Summary ads/Bushing: C ties Heig 26.5 ic Run Informa 1.5 Details	Grt Genesis		iGard st Nat. Freq S-S 12.7 A <sub>FLX-V</sub> 1.59	. [Hz] V 21. A <sub>RIG</sub> 0.6
( me: iGard; Resis Length 40 UUT H st Criteria :-ES AC156	n Galvanized Steel Encl Options / Subcompon stors: iGard; Terminal P UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps z/h 2.38 1 Test Mounting J	ent Summary ads/Bushing: G ties Heig 1.5 Details	Grt Genesis	Lowes F-B 13.1 А <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21.8 <b>A<sub>RIG</sub></b>
( me: iGard; Resis Length 40 UUT H st Criteria :-ES AC156	n Galvanized Steel Encl Options / Subcompon stors: iGard; Terminal P UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps z/h 2.38 1 Test Mounting J	ent Summary ads/Bushing: G ties Heig 1.5 Details	Grt Genesis	Lowes F-B 13.1 А <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	<b>V</b> 21.4 <b>A<sub>RIG</sub></b>
ne: iGard; Resis	UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps 1 z/h 2.38 1 Test Mounting J	ads/Bushing: G	Grt Genesis	Lowes F-B 13.1 А <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
ne: iGard; Resis	UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps 1 z/h 2.38 1 Test Mounting J	ads/Bushing: G	Grt Genesis	Lowes F-B 13.1 А <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
Length 40 UUT H st Criteria 2-ES AC156	UUT Propert Dimensions [ in ] Width 28 P-03 Highest Passed Seism Sps t z/h 2.38 1 Test Mounting J	Heig ties Heig 5 26.5 ic Run Informa 1.5 Details	jht 5 ation A <sub>FLX-H</sub>	Lowes F-B 13.1 А <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
40 UUT H st Criteria C-ES AC156	Dimensions [ in ] Width 28 P-03 Highest Passed Seism S <sub>DS</sub> z/h 2.38 1 Test Mounting J	Heig 45 26.5 ic Run Informa 1.5 Details	5 ation A <sub>FLX-H</sub>	<b>F-B</b> 13.1 <b>A</b> <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. A <sub>RIG</sub>
40 UUT H st Criteria C-ES AC156	Dimensions [ in ] Width 28 P-03 Highest Passed Seism S <sub>DS</sub> z/h 2.38 1 Test Mounting J	Heig 45 26.5 ic Run Informa 1.5 Details	5 ation A <sub>FLX-H</sub>	<b>F-B</b> 13.1 <b>A</b> <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
40 UUT H st Criteria C-ES AC156	Dimensions [ in ] Width 28 P-03 Highest Passed Seism S <sub>DS</sub> z/h 2.38 1 Test Mounting J	Heig 45 26.5 ic Run Informa 1.5 Details	5 ation A <sub>FLX-H</sub>	<b>F-B</b> 13.1 <b>A</b> <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
40 UUT H st Criteria C-ES AC156	Dimensions [ in ] Width 28 P-03 Highest Passed Seism S <sub>DS</sub> z/h 2.38 1 Test Mounting J	Heig 45 26.5 ic Run Informa 1.5 Details	5 ation A <sub>FLX-H</sub>	<b>F-B</b> 13.1 <b>A</b> <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. A <sub>RIG</sub>
40 UUT H st Criteria C-ES AC156	Width       28       28       1       28       28       28       28       28       28       28       200 <tr< td=""><td>ic Run Information</td><td>5 ation A<sub>FLX-H</sub></td><td><b>F-B</b> 13.1 <b>A</b><sub>RIG-H</sub></td><td><b>S-S</b> 12.7 <b>A</b><sub>FLX-V</sub></td><td>V 21. <b>A<sub>RIG</sub></b></td></tr<>	ic Run Information	5 ation A <sub>FLX-H</sub>	<b>F-B</b> 13.1 <b>A</b> <sub>RIG-H</sub>	<b>S-S</b> 12.7 <b>A</b> <sub>FLX-V</sub>	V 21. <b>A<sub>RIG</sub></b>
UUT H st Criteria C-ES AC156	lighest Passed Seism S <sub>DS</sub> z/h 2.38 1 Test Mounting	ic Run Informa Pila <sup>I</sup> P 1.5 Details	ation A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG</sub>
st Criteria C-ES AC156	2.38 1 Test Mounting	Details	A <sub>FLX-H</sub>			
-ES AC156	2.38 1 Test Mounting I	1.5 Details				
	Test Mounting I	Details	3.81	2.86	1.59	0.6
ng four (4) VMC	DATE 11/101/1					
	UUT	-3B				

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### Summary Sheet

UUT-4B

					PEER S	STI 2013-08	
	Model Number				Manufacturer		
	4160-15-10	S			iGard		
1	Product Construction	n Summary					
, NEMA 3R Knock Dow	n Carbon Steel Enclosur	e					
	Options / Subcompone	ent Summary	/				
ting Frame: iGard; Resi	stors: iGard; Standoffs: F	Porcelain Pro	ducts; Term	inal Pads/Bu	ushing: Porc	elain	
	-D C 0 DI						
	FORCODE	CON					
	UUT Propert	ies	*				
	Dimensions [ in ]		T	Lowest Nat. Freq. [ Hz			
Length	Width	Hei	ght	F-B	S-S	V	
40	O36 P-034	45 38	.5	7.6	9.8	18	
UUT I	Highest Passed Seismi	c Run Inforn	nation				
Test Criteria	By.Spsmothz/h	Pila <sup>l</sup> nd	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>	
ICC-ES AC156	2.38 1	1.5	3. <mark>81</mark>	2.86	1.59	0.63	
	ting Frame: iGard; Resident of the second se	4160-15-10.         Product Construction         options / Subcompone         Options / Subcompone         ting Frame: iGard; Resistors: iGard; Standoffs: F         UUT Propert         Dimensions [ in ]         Length         UUT Propert         Dimensions [ in ]         Length         UUT Highest Passed Seismi         Test Criteria         Sps       z/h         ICC-ES AC156       2.38         Test Mounting E         ated using four (4) VMC RDC2-175 rubber isolat	4160-15-10S         Product Construction Summary         NEMA 3R Knock Down Carbon Steel Enclosure         Options / Subcomponent Summary         Options / Subcomponent Summary         ting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Prod         UUT Properties         Dimensions [ in ]         Length       Width       Hei         40       36       -03       5       38         UUT Highest Passed Seismic Run Inform         Test Mounting Details	4160-15-10S         Product Construction Summary         NEMA 3R Knock Down Carbon Steel Enclosure         Options / Subcomponent Summary         ting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Term         UUT Properties         Dimensions [ in ]         Length         Width         Height         40         Ost colspan="2">Options [ in ]         Length         Width         Height         40         Options [ in ]         Length         Width         Height         40         38.5         UUT Highest Passed Seismic Run Information         Test Mounting Details         ated using four (4) VMC RDC2-175 rubber isolators. The isolators were a	4160-15-10S         Product Construction Summary         NEMA 3R Knock Down Carbon Steel Enclosure         Options / Subcomponent Summary         ting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Terminal Pads/Bu         UUT Properties         UUT Properties         Dimensions [ in ]         Length       Width         Height       F-B         40       36       38.5       7.6         UUT Highest Passed Seismic Run Information         Test Criteria       Spis       z/h       IP       AFLX.H       ARIG.H         ICC-ES AC156       2.38       1       1.5       3.81       2.86         Test Mounting Details         ated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the tot of the standard	Model Number         Manufacture           4180-15-10S         iGard           Product Construction Summary           , NEMA 3R Knock Down Carbon Steel Enclosure           Options / Subcomponent Summary           ting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Terminal Pads/Bushing: Porce           UUT Properties           UUT Properties           UUT Highest Passed Seismic Run Information           Test Criteria         Sps         4/1         Height         F-B         S-S           40         36         38.5         7.6         9.8           UUT Highest Passed Seismic Run Information         Test Criteria         Sps         4/1         A <sub>FLX-H</sub> A <sub>FLX-V</sub> ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59           Test Mounting Details           ated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture usi	

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### **Summary Sheet**

UUT-5B

580     52     35 P-034 5 50.5     5.7     5.9     12       UUT Highest Passed Seismic Run Information       Building Code     Sps     Z/h     Pierce     AFLX-H     ARIG-H     AFLX-V     ARIM								PEER	STI 2013-08
Product Construction Summary         Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure         Options / Subcomponent Summary         Enclosure: iCard; Mounting Frame: iGard; Resistors: iCard; Standoffs: Porcelain Products; Terminal Pads/Bushing: Porcelain Products         UUT Properties         UUT Properties         Weight       Lowest Nat. Freq. [Hz]         Ibit Internet in Internation         Building Code       Sas       12         UUT Highest Passed Seismic Run Information         Building Code       Sas       12         UUT Was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig(8) 1/2" grade 8 bolts.         UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig(8) 1/2" grade 8 bolts.	Model Line		Ν	Nodel Numb	ber		N	Manufacture	ər
Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure	NGR		2	400-100-625	558	iGard			
Options / Subcomponent Summary         Enclosure: iGard; Mounting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Terminal Pads/Bushing: Porcelain Products         UUT Properties         UUT Properties         UUT Properties         UUT Properties         UUT Properties         UUT Highest Passed Seismic Run Information         Building Code       Spé       Z/h       Iprime: Areuxet			Product C	Construction	n Summary		•		
Enclosure: IGard; Mounting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Terminal Pads/Bushing: Porcelain Products           UUT Properties           Weight         Lowest Nat. Freq. [Hz]           [Ibs]         Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Selsmic Run Information           Building Code         Sps         z/h         I.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.	Product Configuration B,	NEMA 3R Knock Down	Galvanize	d Steel Enclo	osure				
Enclosure: IGard; Mounting Frame: iGard; Resistors: iGard; Standoffs: Porcelain Products; Terminal Pads/Bushing: Porcelain Products           UUT Properties           Weight         Lowest Nat. Freq. [Hz]           [Ibs]         Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Selsmic Run Information           Building Code         Sps         z/h         I.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.									
Products           UUT Properties           Weight         Dimensions [ in ]         Lowest Nat. Freq. [Hz]           [ lbs ]         Length         Width         Height         F-B         S-S         V           580         52         35         5.5         5.7         5.9         12           UUT Highest Passed Seismic Run Information           Building Code         S38         Z/h         Ip.         AFLX+I         AFLG-H         AFLX-V         AFLX           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig         (8) 1/2" grade 8 bolts.			-	-	-				
Weight [Ibs]         Lowest Nat. Freq. [Hz]           Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Seismic Run Information           Building Code         Sps         z/h         Ip         AFLX-H         ARIG-H         AFLX-V         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig         (8) 1/2" grade 8 bolts.         Solators         Solators were attached to the fixture using eig         (8) 1/2" grade 8 bolts.         Solators         Solators were attached to the fixture using eig		ing Frame: iGard; Resis	tors: iGard;	Standoffs: F	Porcelain Proc	ducts; Term	inal Pads/Bu	ushing: Porc	elain
Weight [Ibs]         Lowest Nat. Freq. [Hz]           Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Seismic Run Information           Building Code         Sps         z/h         Ip         AFLX-H         ARIG-H         AFLX-V         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig         (8) 1/2" grade 8 bolts.         Solators         Solators were attached to the fixture using eig         (8) 1/2" grade 8 bolts.         Solators         Solators were attached to the fixture using eig									
Weight [Ibs]         Lowest Nat. Freq. [Hz]           Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Seismic Run Information           Building Code         Sps         z/h         Ip         AFLX-H         ARIG-H         AFLX-V         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.         Solators         Solators         Solators         Solators were attached to the fixture using eig (8) 1/2" grade 8 bolts.			R FO	K CODE	CON				
Ibs]         Length         Width         Height         F-B         S-S         V           580         52         35         50.5         5.7         5.9         12           UUT Highest Passed Seismic Run Information           Building Code         Sps         z/h         -P         AFLX-H         ARIG-H         AFLX-V         ARIM           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eigt(8) 1/2" grade 8 bolts.		(A.)	E U	UT Propert	ies	-			
580       52       35       50.5       5.7       5.9       12         UUT Highest Passed Seismic Run Information         Building Code       Sps       Z/h       P       AFLX-H       ARIG-H       AFLX-V       ARIG         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.6         Test Mounting Details         UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.         Output the isolator were attached to the fixture using eig (8) 1/2" grade 8 bolts.	-					Z	Lowes	1	. [ Hz ]
UUT Highest Passed Seismic Run Information           Building Code         Sps         Z/h         Ip         AFLX.H         AFLD.H         AFLX.V         AFLD.V         AFLD.V									V
Building Code         Sps         Z/h         Ip         AFLX-H         AFIG-H         AFLX-V         ARM           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.6           Test Mounting Details           UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.	580				U		5.7	5.9	12.7
CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.6         Test Mounting Details         UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.	I	UUT H			c Run Inform			<del>.                                    </del>	. <u> </u>
Test Mounting Details UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.	-			VIIIY J	нани –		1		A <sub>RIG-V</sub>
UUT was externally isolated using four (4) VMC TTB-10-500 rubber isolators. The isolators were attached to the fixture using eig (8) 1/2" grade 8 bolts.	CBC 2016	ICC-ES AC156				3. <mark>81</mark>	2.86	1.59	0.63
								UUT-5B	

All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



#### Summary Sheet

UUT-6B

NGR     2400-50-60S/CT     iGard       Product Construction Summary       oduct Configuration B, NEMA 3R/4 Welded Frame Galvanized Steel Enclosure       Options / Subcomponent Summary       closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products       UUT Properties       Weight     Lowest Nat. Freq. [Hz]       [Ibs]     Length     Width       Height     F-B     S-S     V       520     50     50     60     48.5     9.8     9.4       UUT Highest Passed Seismic Run Information       Building Code     Test Criteria     Sps     Z/h     Ip       Closure: Mounting Details			Model Numb	er	PEER STI Manufacturer				
Options / Subcomponent Summary         Closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products         UUT Properties         UUT Properties         Weight       Dimensions [ in ]       Lowest Nat. Freq. [ Hz ]         [ Ibs ]       Length       Width       Height       F-B       S-S       V         520       50       50       60       48.5       9.8       9.4       16.6         UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       Z/h       Ip       AFILXH       ARIG-H       AFILXV       ARIG         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.63         T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.	NGR		2400-50-60S/			iGard			
Options / Subcomponent Summary         Closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products         UUT Properties         UUT Properties         Weight       Dimensions [ in ]       Lowest Nat. Freq. [ Hz ]         [ Ibs ]       Length       Width       Height       F-B       S-S       V         520       500       580       2/h       AFLX:H       ARIG:H       AFLX:V       ARIG:H         Building Code       Test Criteria       Spos       2/h       AFLX:H       ARIG:H       AFLX:V       ARIG:H         DUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Spos       Z/h       I.5       3.81       2.86       1.59       0.63         Test Mounting Details         IT was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.									
Options / Subcomponent Summary         closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products         UUT Properties         UUT Properties         Weight       Length       Width       Height       F-B       S-S       V         520       50       50       60       48.5       9.8       9.4       16.6         UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       Z/h       I.e.       Aruce: Ar				-					
Closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products           UUT Properties           Weight         Dimensions [ in ]         Lowest Nat. Freq. [ Hz ]           [ Ibs ]         Length         Width         Height         F-B         S-S         V           520         50         50         -0.3         48.5         9.8         9.4         16.5           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps         z/h         IP         AFLX-H         ARIG-H         AFLX-V         ARIG-H           Building Code         Test Criteria         Sps         z/h         IP         AFLX-H         ARIG-H         AFLX-V         ARIG-H           CDE 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.65           T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.         Colspan="2"	Douct Conliguration B	, NEIVIA 3R/4 VVelded F	rame Galvanized Steel E	Inclosure					
closure: iGard; Mounting Frame: iGard; Resistors; iGard; Standoffs; iGard; Terminal Pads/Bushing: Porcelain Products           UUT Properties           Weight         Dimensions [ in ]         Lowest Nat. Freq. [ Hz ]           [ Ibs ]         Length         Width         Height         F-B         S-S         V           520         50         50         60         48.5         9.8         9.4         16.5           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps         Z/h         Ip         AFLX-H         ARIG-H         AFLXV         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.63           T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.			0						
UUT Properties         Weight       Dimensions [ in ]       Lowest Nat. Freq. [ Hz ]         [ lbs ]       Length       Width       Height       F-B       S-S       V         520       50       50       -03       48.5       9.8       9.4       16.8         UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       Z/h       Ip       AFLX-H       ARIG-R       AFLX-V       ARIG-R         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.63         Twas externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight " grade 8 bolts.	closure: iGard: Mount			-		shina: Porce	lain Products	<u>.</u>	
UUT Properties           Weight [lbs]         Longth         Dimensions [in]         Lowest Nat. Freq. [Hz]           [lbs]         Length         Width         Height         F-B         S-S         V           520         50         50         648.5         9.8         9.4         16.6           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps         Z/h         I.P         AFLX-H         ARIG-H         AFLX-V         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.63           Test Mounting Details	Josure. IGard, Mourit	ing Frame. Idaid, Nesis	stors, iGard, Standons, i			sining. I bice		•	
UUT Properties           Weight [lbs]         Longth         Dimensions [in]         Lowest Nat. Freq. [Hz]           [lbs]         Length         Width         Height         F-B         S-S         V           520         50         50         50         48.5         9.8         9.4         16.6           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps         Z/h         I.P         AFLX-H         ARIG-H         AFLX-V         ARIG.           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.63           Twas externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight if grade 8 bolts.									
UUT Properties           Weight [lbs]         Longth         Dimensions [in]         Lowest Nat. Freq. [Hz]           [lbs]         Length         Width         Height         F-B         S-S         V           520         50         50         50         48.5         9.8         9.4         16.6           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps         Z/h         I.P         AFLX-H         ARIG-H         AFLX-V         ARIG.           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.63           Twas externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight if grade 8 bolts.			ORCODE	E Ca					
Weight [Ibs]       Length       Dimensions [ in ]       Lowest Nat. Freq. [ Hz ]         [Ibs]       Length       Width       Height       F-B       S-S       V         520       50       50       50       48.5       9.8       9.4       16.6         UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       z/h       Ip       AFLX.H       ARIG.H       AFLX.V       ARIG.         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.63         Test Mounting Details			- OF						
Ibs ]       Length       Width       Height       F-B       S-S       V         520       50       50       50       48.5       9.8       9.4       16.6         UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       Z/h       Ip       AFLX-H       ARIG-H       AFLX-V       ARIG         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.63         Test Mounting Details         TT was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.       7	I	5	· / · · · · · · · · · · · · · · · · · ·	es			· • • • •	<u> </u>	
520     50     50     50     50     60       UUT Highest Passed Seismic Run Information       Building Code     Test Criteria     Sps     Z/h     Ip     AFLX-H     ARIG-H     AFLX-V     ARIG-       CBC 2016     ICC-ES AC156     2.38     1     1.5     3.81     2.86     1.59     0.63       Test Mounting Details       T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.	-				Y.			1	
UUT Highest Passed Seismic Run Information         Building Code       Test Criteria       Sps       Z/h       Ip       AFLX-H       ARIG-H       AFLX-V       ARIG-H         CBC 2016       ICC-ES AC156       2.38       1       1.5       3.81       2.86       1.59       0.63         Test Mounting Details         T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.									
Building Code         Test Criteria         SDS         Z/h         Ipp         AFLX-H         ARIG-H         AFLX-V         ARIG           CBC 2016         ICC-ES AC156         2.38         1         1.5         3.81         2.86         1.59         0.63           Test Mounting Details           T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.         Output         Area	520			0		9.8	9.4	16.8	
CBC 2016 ICC-ES AC156 2.38 1 1.5 3.81 2.86 1.59 0.63 Test Mounting Details T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight " grade 8 bolts.	Duilding Onde							•	
Test Mounting Details IT was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.	_			нани					
T was externally isolated using four (4) VMC RDC2-175 rubber isolators. The isolators were attached to the fixture using eight "grade 8 bolts.	CBC 2016	ICC-ES AC156			3.81	2.86	1.59	0.63	
			RDC2-175 rubber isolat	ors. The isola	ators were a	attached to th	ne fixture usi	ng eight	



#### **Summary Sheet**

UUT-7B

							PEERS	STI 2013-08
Model Line		Ν	lodel Numb	ber		Manufacturer		
NGR	NGR 8000-100-62715						iGard	
		Product C	onstructio	n Summary				
Product Configuration C	, NEMA 3R/4 Welded Fra	ame Stainle	ess Steel Er	closure				
		-	-	ent Summary	•			
Enclosure: iGard; Moun Pads/Bushing: Porcelair	ting Frame: iGard; Resist n Products	tors: iGard;	Standoffs: I	Porcelain Pro	ducts; Curre	ent Transforr	ner: GE; Ter	minal
		U	UT Propert	ies				
Weight	4		ons [ in ]		4	Lowe	st Nat. Freq	. [ Hz ]
[lbs]	Length		dth	Hei	ght	F-B	S-S	v
720	50	05	0P-034	<b>15</b> 66	6.5	8.4	6.6	15.4
	UUT H	ighest Pas	sed Seismi	c Run Inform	nation			
Building Code	Test C <mark>riteri</mark> a	BV.Spsm	thz/h	Pila <sup>n</sup> d	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	2.38	1	1.5	3. <mark>81</mark>	2.86	1.59	0.63
sixteen (16) 1/2" grade {	ated using eight (8) VMC bolts.							



#### **Summary Sheet**

UUT-8B

						PEER S		
Model Line Model Number					N	lanufacture	r	
NGR		8000-200-10S	/CT		iGard			
	1	Product Construction	n Summary		1			
luct Configuration C	C, NEMA 3R/4 Welded F	rame Aluminum Enclosu						
		Options / Subcompone	-					
losure: iGard, Moun	ting Frame: iGard; Resi	stors: iGard; Standoffs: F	Porcelain Proc	ducts;				
		OR CODA						
		FURGESL	· CON					
		UUT Properti	es	·				
Weight		Dimensions [ in ]	D	Z		st Nat. Freq.	[ Hz ]	
[lbs]	Length	Width	Hei		F-B	S-S	V	
590	62 2	O50P-034	5 66		8.2	10.6	15.	
		Highest Passed Seismi						
Building Code	Test C <mark>riteri</mark> a	BY: Spismoth Z/h	Piland	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	<b>A</b> <sub>RIG</sub>	
CBC 2016	ICC-ES AC156	2.38 1 Test Mounting D	1.5	3. <mark>81</mark>	2.86	1.59	0.6	
				0.1	THE R. L.			
			UUT-8B					



#### **Summary Sheet**

UUT-9B

						PEER	STI 2013-0	
Model Line		Model Num	ber		N	Manufacture	er	
NGR		OHMNI-4PM-7	I0RM		iGard			
	ł	Product Construction	on Summary					
oduct Configuration D	, NEMA 3R Carbon Ste	el Enclosure						
		Options / Subcompon	-					
closure: iGard; Resist	tors; iGard; Current Tra	nsformer: iGard; Termir	al Block: Coo	per Bussma	inn			
		-OR COD	FCa					
		COF0	- CON					
		UUT Proper	ties				F 11_ 1	
Weight [ lbs ]	Length	Dimensions [ in ] Width		ght	F-B	st Nat. Freq S-S	. [HZ]	
95	21 C	016P-03	-	.5	<b>г-</b> Б 9.8	7.8	<b>v</b> 27.2	
33		Highest Passed Seism	0		9.0	7.0	21.2	
Building Code	Test Criteria	Spin othz/h	Pila <sup>l</sup> nd	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>	
CBC 2016	ICC-ES AC156	2.38 1	1.5	3.81	2.86	1.59	0.63	
		Test Mounting	Details					
			5		UUT-9B			



#### **Summary Sheet**

UUT-10B

						PEER S	STI 2013-	
Model Line		Model Number			Manufacturer			
NGR		OHMNI-6PM-10RM				iGard		
		Product Construction S	Summary					
luct Configuration D	, NEMA 3R Carbon Stee							
		Options / Subcomponent	-					
osure: iGard; Resis	tors; iGard; Current Tran	nsformer: iGard; Terminal E	Block: Coope	r Bussmai	nn			
		FORCODE	COL					
	, A	UUT Properties						
Weight		Dimensions [ in ]	DN	Z	Lowest Nat. Freq.		[ Hz ]	
[lbs]	Length	Width	Heigh		F-B	S-S	V	
100	21	<u>016P-0345</u>	34.5		10	7.2	24.2	
Building Code	Test Criteria	lighest Passed Seismic I			۸	•	^	
CBC 2016	ICC-ES AC156	By Sps thz/h P 2.38 1	iland	А <sub>FLX-Н</sub> 3.81	<b>А<sub>RIG-Н</sub></b> 2.86	<b>Α<sub>FLX-V</sub></b> 1.59	<b>A<sub>RIG</sub></b> 0.63	
CBC 2010	ICC-ES ACIDO	Test Mounting Det		3.01	2.00	1.59	0.63	
	UUT-10B							
			17					