



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.**OSP -0176-10**Check whether application is: NEW RENEWAL

1.0 Bender Incorporated Dave Bradley
Manufacturer *Manufacturer's Technical Representative*

700 Fox Chase, Coatesville, PA 19320
Mailing Address

610.383.9200 dave.bradley@bender.-us.com
Telephone *E-mail Address*

2.0 Bender Isolated Power Panels Isolated Power Panels
Product Name *Product Type*

Various (See Tables 1, 2 and 3)
Product model No (List all unique product identification numbers and/or serial numbers)

General Description: Isolated power panels (IP), Dual isolated power panels (IX and ID) and Surgical Facility Centers (SFC) provided in accordance with Tables 1, 2 and 3. Wall mounted (flush) panels with primary voltages ranging from 120V-480V and secondary voltages ranging from 120V-240V. Products are also provided to project sites labeled as Square D products.

3.0 Tobolski Watkins Engineering, Inc. Matthew J. Tobolski, Ph.D., P.E.
Applicant Company Name *Contact Person*

3710 Ruffin Road, San Diego, CA 92123
Mailing Address

858.381.5843 mtobolski@tobolskiwatkins.com
Telephone *E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Signature of Applicant

05/03/2011*Date*President & CEO
*Title*Tobolski Watkins Engineering, Inc.
Company Name



Registered Design Professional Preparing the Report

4.0

Tobolski Watkins Engineering Inc.

Company Name

Matthew J. Tobolski, Ph.D, P.E.

Contact Name

C 72806

California License Number

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Mailing Address

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E-mail Address

California Licensed Structural Engineer Review and Acceptance of the Report

5.0

Tobolski Watkins Engineering Inc.

Company Name

Derrick A. Watkins, S.E.

Contact Name

S 5257

California License Number

3710 Ruffin Road, San Diego, CA 92123

Mailing Address

858.381.5843

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E-mail Address

Anchorage Pre-Approval

6.0

Anchorage is pre-approved under OPA- (Separate application for anchorage pre-approval is required)

Anchorage is not Pre-approved

Certification Method

7.0

Testing in accordance with: ICC-ES AC-156 Other (Please Specify):

- Analysis
Experience data
Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

8.0

Clark Dynamic Test Laboratory, Inc.

Company Name

J.R. Antenucci

Contact Name

1801 Route 51 South, Building 8, Jefferson Hills, PA 15025

Mailing Address

412.387.1001

Telephone

jrantenucci@clarkdynamic.com

E-mail:



Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: Yes No

- Design Basis of Equipment or Components (F_p/W_p) = **1.85g**
- S_{DS} (Spectral response acceleration at short period) = **2.46g**
- a_p (In-structure equipment or component amplification factor) = **2.5**
- R_p (Equipment or component response modification factor) = **6.0**
- I_p (Importance factor) = **1.5**
- z/h (Height factor ratio) = **1.0**
- Equipment or Component fundamental period(s) = **[See Attachment]**
- Building period limits (if any) = **None**
- Overall dimensions and weight (or range thereof) = **[See Attachment]**

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

- Design Basis of Equipment or Components (V/W) =
- S_{DS} (Spectral response acceleration at short period) =
- S_1 (Spectral response acceleration at 1 second period) =
- R (Response modification coefficient) = **1.0**
- Ω_0 (System overstrength factor) = **1.0**
- C_d (Deflection amplification factor) = **1.0**
- I_p (Importance factor) = **1.5**
- Height to Center of Gravity above base =
- Equipment or Component fundamental period(s) = Sec
- Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

11.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report Drawings Manufacturer's Catalog
- Calculations Others (Please Specify): **Attachment A**

11.0 OSHPD Approval (For Office Use Only)

<p style="text-align: center; margin: 0;">Signature & Date M. R. Karim, SHFR</p> <p style="text-align: center; margin: 0;">Name & Title</p>	<p style="margin: 0;">5/4/2011</p>	<p style="margin: 0;">December 31, 2016</p> <p style="margin: 0; font-size: small;">Approval Expiration Date</p> <p style="margin: 0;">S_{DS} (g) = 2.46 z/h = 1.0</p> <p style="margin: 0; font-size: small;">Special Seismic Certification Valid Up to</p>
<p>Condition of Approval (if any):</p>		



UUT - 1

UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2010-0078-CO-001

Manufacturer: Bender Incorporated

Model Line: IX & ID Isolated Power Panels

Model Number: IX10DA10DAS

Product Construction Summary:
Enclosure constructed in accordance to UL 50. Painted carbon steel enclosure with stainless steel front panel and doors.

Options/Subcomponent Summary:
Bender incorporated transformer & Schneider Electric loadcenter.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
600	8.0	34.0	72.0	N/A	N/A	N/A

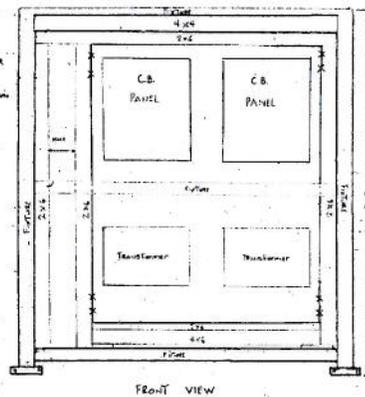
UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
IBC 2009	ICC-ES AC 156	2.46g	1.0	1.5	3.94g	2.95g	1.64g	0.66g

Test Mounting Details:



TYPICAL MOUNTING FOR
UUT 1, 2, 3, UUT 1 Shows
OTHER UUTS WILL BE
SIMILAR.



(X) = 5/16" BOLT, SPACED
2" FROM TOP OR BOTTOM,
2" FROM EDGE AND 2" APART.

* Mounted to Seismic
Table using (16) 5/16" x 13
grade 5 Hex bolts spaced
to 60 P.C.L.B.

Flush wall mount using (4) groups of 5/16" bolts spaced 2" from top or bottom of each corner of the enclosure and 2" apart.



UUT - 2

UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2010-0078-CO-001

Manufacturer: Bender Incorporated

Model Line: IP Isolated Power Panels

Model Number: IP25EBSPN18A68H2

Product Construction Summary:

Enclosure constructed in accordance to UL 50. Painted carbon steel enclosure with stainless steel front panel and doors.

Options/Subcomponent Summary:

Bender incorporated transformer & Schneider Electric loadcenter. Circuit control option.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
600	14.0	30.0	51.0	N/A	N/A	N/A

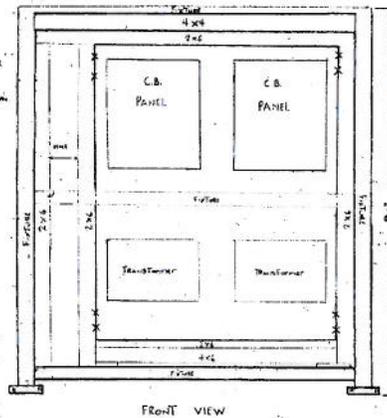
UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
IBC 2009	ICC-ES AC 156	2.46g	1.0	1.5	3.94g	2.95g	1.64g	0.66g

Test Mounting Details:



TYPICAL MOUNTING FOR
UUT 1, 2, 3, UUT 2 SHOWN
OTHER UUTS WILL BE
SIMILAR.



(X) = 5/16" BOLTS SPACED
2" FROM TOP OR BOTTOM, 2"
FROM EDGE, AND 2" APART

* Mounted to seismic table using (16) 5/16" x 13 grade 5 Hex bolts torqued to 60 Ft-Lbs.

Flush wall mount using (4) groups of 5/16" bolts spaced 2" from top or bottom of each corner of the enclosure and 2" apart.



UUT - 3

UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2010-0078-CO-001

Manufacturer: Bender Incorporated

Model Line: IP Isolated Power Panels

Model Number: IP05BA

Product Construction Summary:

Enclosure constructed in accordance to UL 50. Painted carbon steel enclosure with stainless steel front panel and doors.

Options/Subcomponent Summary:

Bender incorporated transformer & Schneider Electric loadcenter. Receptacles with ground jacks option.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
195	6.0	24.0	43.0	N/A	N/A	N/A

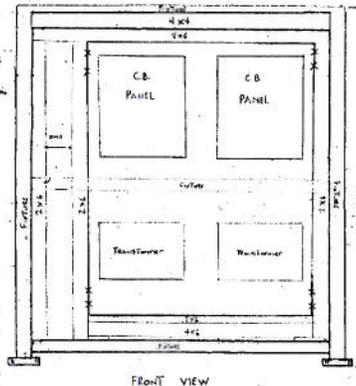
UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIg-H}	A _{FLX-V}	A _{RIg-V}
IBC 2009	ICC-ES AC 156	2.46g	1.0	1.5	3.94g	2.95g	1.64g	0.66g

Test Mounting Details:



TYPICAL MOUNTING FOR
UUT 1, 2, 3 - UUT 1 SHOWN
OTHER UNITS WILL BE
SIMILAR.



(X) 5/16" BOLTS, SPACED
2" FROM TOP OR BOTTOM, 2"
FROM EDGE, AND 2" APART

** Mounted to seismic table using (16) 5/16" x 13 grade 5 HSS bolts torqued to 60 Ft.-lbs.*

Flush wall mount using (4) groups of 5/16" bolts spaced 2" from top or bottom of each corner of the enclosure and 2" apart.



UUT - 4

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

TWEI Project No.: 2010-0078-CO-001

Manufacturer: Bender Incorporated

Model Line: SFC Surgical Facility Center

Model Number: SFC-10BA1-S2/8P16-4-6D1-3Y-E

Product Construction Summary:

Enclosure constructed in accordance to UL 50. Painted carbon steel enclosure with stainless steel front panel and doors.

Options/Subcomponent Summary:

Bender incorporated transformer & Schneider Electric loadcenter.

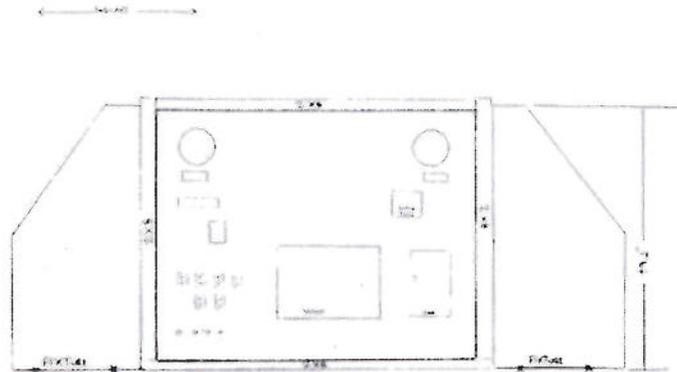
UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
455	8.0	50.0	50.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
IBC 2009	ICC-ES AC 156	2.46g	1.0	1.5	3.94g	2.95g	1.64g	0.66g

Test Mounting Details:



Flush wall mount using (4) groups of 5/16" bolts spaced 2" from top or bottom of each corner of the enclosure and 2" apart. (4) 1/4"x2" lag bolts at backplane.

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