



**APPLICATION FOR PREAPPROVAL  
SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS**

*For Office Use Only*

<p><b>APPLICATION NO.</b></p> <p><b>OSP – 0129-10</b></p>
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Check whether application is: NEW  RENEWAL

<b>1.0</b>	<p>YoungTouchstone <i>Manufacturer</i></p>	<p>Michael Spees <i>Manufacturer's Technical Representative</i></p>
	<p>200 Smith Lane, Jackson TN, 38308 <i>Mailing Address</i></p>	

	<p>414-768-7427 <i>Telephone</i></p>	<p>mspees@wabtec.com <i>E-mail Address</i></p>
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<b>2.0</b>	<p>HB Series Radiators <i>Product Name</i></p>	<p>Horizontal Core Radiators for Gensets <i>Product Type</i></p>
	<p>HB-24 thru HB-84 <i>Product model No (List all unique product identification numbers and/or serial numbers)</i></p>	

*General Description: Rigid base mounted stand-alone external radiators for Diesel Powered Gensets. Seismic design enhancements similar to tested unit HB-84 (see page # 5) shall be incorporated in units HB-32 and up.*

<b>3.0</b>	<p>The VMC Group <i>Applicant Company Name</i></p>	<p>John P. Giuliano, PE <i>Contact Person</i></p>
	<p>113 Main St, Bloomingdale NJ, 07403 <i>Mailing Address</i></p>	

	<p>973-838-1780 <i>Telephone</i></p>	<p>john.giuliano@thvmcgroup.com <i>E-mail Address</i></p>
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I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

11/12/2010

*Signature of Applicant*

*Date*

President  
*Title*

The VMC Group  
*Company Name*



Registered Design Professional Preparing the Report

4.0 The VMC Group  
*Company Name*

Samantha Kersting C-57001  
*Contact Name* *California License Number*

113 Main St, Bloomingdale, NJ 07403  
*Mailing Address*

973-838-1780 samantha.kersting@thevmcgroup.com  
*Telephone* *E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 The VMC Group  
*Company Name*

Samantha Kersting S-4642  
*Contact Name* *California License Number*

113 Main St, Bloomingdale, NJ 07403  
*Mailing Address*

973-838-1780 samantha.kersting@thevmcgroup.com  
*Telephone* *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 UC Berkeley Don Clyde  
*Company Name* *Contact Name*

1301 South 46<sup>th</sup> St, Richmond CA, 94804  
*Mailing Address*

513-528-7900 dclyde@berkeley.edu  
*Telephone* *E-mail:*

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Approval Parameters

9.0

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.44g

$S_{DS}$  (Spectral response acceleration at short period) = 2.0g

$a_p$  (In-structure equipment or component amplification factor) = 1.0

$R_p$  (Equipment or component response modification factor) = 2.5

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0

Equipment or Component fundamental period(s) = See Attachment

Building period limits (if any) = N/A

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

$\Omega_0$  (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

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

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

11.0 OSHPD Approval (For Office Use Only)

 _____ Signature & Date <b>Chris Tokas, SHFR</b> _____ Name & Title	11/15/10 _____ Date	December 31, 2016 _____ Approval Expiration Date
Condition of Approval (if any):	$S_{DS}$ (g) = <b>2.0</b> $z/h$ = <b>1.0</b> Special Seismic Certification Valid Up to	

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### YoungTouchstone Horizontal Core Radiators

Model Number	Operating Weight	Length	Width	Height	UUT	Resonant Frequencies			Units
						X-X	Y-Y	Z-Z	
HB-24	4524	78	68	106	1	10	20	10	Standard
HB-32	5428	91	78	110					Enhanced with Seismic Bracings
HB-40	6062	100	85	111					Enhanced with Seismic Bracings
HB-44	6356	101	90	116					Enhanced with Seismic Bracings
HB-50	7535	109	94	116					Enhanced with Seismic Bracings
HB-56	8008	111	101	111					Enhanced with Seismic Bracings
HB-64	8645	121	105	111					Enhanced with Seismic Bracings
HB-73	9324	125	114	118					Enhanced with Seismic Bracings
HB-84	12400	133	120	125	2	4	7.7	14.6	Enhanced with Seismic Bracings



