



# APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

<b>APPLICATION NO.</b>
<b>OSP -0205-10</b>

Check whether application is: NEW  RENEWAL

1.0 The Trane Company Steve Lotspaih  
*Manufacturer* *Manufacturer's Technical Representative*  
 3600 Pammel Creek Road, La Crosse, WI 54601  
*Mailing Address*

608-787-4100 slotspaih@trane.com  
*Telephone* *E-mail Address*

2.0 Air -Cooled Chiller Helical Rotary Water Chiller  
*Product Name* *Product Type*  
 RTAC Series, Size 250  
*Product model No (List all unique product identification numbers and/or serial numbers)*

*General Description: Rigid floor mounted cataloged Air-Cooled Chiller. Certification is limited to Size 250 unit identical to tested unit and does not include supports and attachments. Unit was tested mounted onto elastomeric pads, and bolted down to a fixture.*

3.0 The VMC Group John Wilson, Jr.  
*Applicant Company Name* *Contact Person*  
 113 Main St, Bloomingdale NJ, 07403  
*Mailing Address*

973-838-1780 jwilson@thevmcgroup.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.

8/5/2011

*Signature of Applicant*

*Date*

CEO

*Title*

The VMC Group

*Company Name*

1/4



**Registered Design Professional Preparing the Report**

4.0 The VMC Group  
*Company Name*

Mr. Ken Tarlow SE2851  
*Contact Name* *California License Number*

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

973-838-1780 ken.tarlow@thvmcgroup.com  
*Telephone* *E-mail Address*

**California Licensed Structural Engineer Review and Acceptance of the Report**

5.0 The VMC Group  
*Company Name*

Mr. Ken Tarlow SE2851  
*Contact Name* *California License Number*

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

973-838-1780 ken.tarlow@thvmcgroup.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):

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Analysis

Experience data

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

**Testing Laboratory (if applicable)**

8.0 UC Berkeley PEER Wesley Neighbour  
*Company Name* *Contact Name*

1301 S. 46<sup>th</sup> Street, Building 240, Richmond, CA 94804  
*Mailing Address*

510-665-3409 wdn@berkeley.edu  
*Telephone* *E-mail:*



Approval Parameters

9.0

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 0.60 g

$S_{DS}$  (Spectral response acceleration at short period) = 1.0 g

$a_p$  (In-structure equipment or component amplification factor) = 2.5

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

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 0.0

Equipment or Component fundamental period(s) = See Attached UUT Description

Building period limits (if any) = N/A

Overall dimensions and weight (or range thereof) = 268"Lx89"Wx96"H; 14937#

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>M. R. Karim, SHFR</b> _____ Name & Title	8/9/2011	December 31, 2016 Approval Expiration Date
Condition of Approval (if any):	$S_{DS}$ (g) = 1.0 $z/h$ = 0.0 Special Seismic Certification Valid Up to	



# Unit Under Test (UUT) Description Trane RTAC 250 Air-Cooled Chillers

Product Envelope		Operating Weight (lbs)	
Nominal Capacity (tons)	250	Length (in)	268
Type	Standard	Width (in)	89
Freq (Hz)	60	Height (in)	96
Refrigerant Circuits	2		
Base Rail Channel	C6 X 8.2		

Natural Frequencies (Hz)	
X	6.6
Y	7.1
Z	8.1

Anchor Points		Fan Blade Manufacturer	
Anchor Points	10	Fan Blade Manufacturer	Revcor: P/N X38011052010
Fan Quantity	14		

Evaporator Manufacturer		Compressor Manufacturer	
Evaporator Manufacturer	Trane: P/N EVP-Assy-019	Compressor Manufacturer	Trane: P/N 570301860100
Evaporator Quantity	1	Compressor Type	N2+N2
Expansion Valve Manufacturer	Sporlan Valve: P/N X15111210200	Compressor Quantity	2
Expansion Valve Quantity	2		

Coil Manufacturer		Operator Interface Manufacturer	
Coil Manufacturer	CLS-SLAB-123	Operator Interface Manufacturer	Atmel: P/N 570954130100
Base Coil Fin Material	Aluminum	Operator Interface Type	DynaView
Coil Quantity	4	Motor Starter & Control Panel Manufacturer	Curtiss Wright: P/N 572245181900
		Motor Starter & Control Panel Quantity	1



Trane RTAC 250 on Shake Table



Figure 9. Bolted connection and elastomeric pad between the UUT1 skid and adapter frame

Attachment of RTAC 250 to fixture with 5/8" Bolts & VMC Shear-Flex Pads