



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0374-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Johnson Controls, Inc.

Manufacturer's Technical Representative: Brian Aske

Mailing Address: 631 South Richland Ave., York, PA 17403

Telephone: 717-771-7814

Email: Brian.A.Aske@jci.com

Product Information

Product Name: YLAA/QTC3 Air-Cooled Scroll Chiller

Product Type: Chiller

Product Model Number: Various (see Certified Product Matrix)

(List all unique product identification numbers and/or part numbers)

General Description: Air-Cooled Scroll Chillers with Brazed Plate Heat Exchangers mounted at base on isolators.

Mounting Description: Base mounted on captive neoprene mount isolators.

Applicant Information

Applicant Company Name: TRU Compliance, LLC – A Tobolski Watkins Affiliate

Contact Person: Matthew J. Tobolski, Ph.D., S.E.

Mailing Address: 960 SW Disk Dr., Ste. 104, Bend, OR 97702

Telephone: 844-878-0200

Email: mtobolski@trucompliance.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: _____

Date: 07/07/2015

Title: President & CEO

Company Name: TRU Compliance, LLC

"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 10/21/14)



OSHPD

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

Company Name: TRU Compliance, LLC – A Tobolski Watkins Affiliate

Name: Matthew J. Tobolski, Ph.D., S.E. California License Number: S 5648

Mailing Address: 960 SW Disk Dr., Ste. 104, Bend, OR 97702

Telephone: 844-878-0200 Email: mtobolski@trucompliance.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

Testing Laboratory

Company Name: U.S. Army Engineer Research & Development Center

Contact Name: Jim Wilcoski

Mailing Address: 2902 Newmark Drive, Champaign, IL 61826

Telephone: 217-373-6763 Email: James.Wilcoski@usace.army.mil

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
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Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 4.5

S_{DS} (Design spectral response acceleration at short period, g) = 2.5

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

R_p (Equipment or component response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

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, 2010: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Attachment A

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019

Signature:  Date: August 3, 2015

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.5 z/h = 1

Condition of Approval (if applicable): _____





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Table 1

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2011-0263-CO-004

Manufacturer: Johnson Controls, Inc.

Model Line: YLAA/QTC3

Certified Product Construction Summary:

Painted carbon steel enclosure.

Certified Options Summary:

200-460V (Component voltage tied directly to overall unit voltage).

See Tables 2-8 for certified option details.

Mounting Configuration:

Isolated floor mount using captive mount isolators. SEOR to design unit anchorage.

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2013

Seismic Certification Limits: $S_{DS} = 2.5g$ $z/h = 1.0$

$I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
YLAA Chillers	YLAA0058	104.1	93.7	94.2	5,132		
	YLAA0065	104.1	93.7	94.2	5,369		
	YLAA0070	120.0	93.7	94.2	5,292	Voltage tested: 460/3/60	2
	YLAA0080	120.0	93.7	94.2	5,652		
	YLAA0081	104.1	93.7	94.2	5,839		
	YLAA089/90	120.0	93.7	94.2	5,967		
	YLAA0091/92	146.6	93.7	94.2	6,551		
	YLAA0100	146.6	93.7	94.2	6,648		
	YLAA0101	146.6	93.7	94.2	6,836		
	YLAA0115	146.6	93.7	94.2	6,935		
	YLAA0120	146.6	93.7	94.2	7,153		
	YLAA0125	191.6	93.7	94.2	7,838		
	YLAA0135/136	191.6	93.7	94.2	8,156		
	YLAA0141/142	191.6	93.7	94.2	8,319		
	YLAA0155	191.6	93.7	94.2	8,499		
	YLAA0156	236.6	93.7	94.2	9,444		
	YLAA0170	236.6	93.7	94.2	9,864		
YLAA0175	236.6	93.7	94.2	10,074	Voltage tested: 200-208/3/60	1	



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Table 1

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2011-0263-CO-004

Manufacturer: Johnson Controls, Inc.

Model Line: YLAA/QTC3

Certified Product Construction Summary:

Painted carbon steel enclosure.

Certified Options Summary:

200-460V (Component voltage tied directly to overall unit voltage).

See Tables 2-8 for certified option details.

Mounting Configuration:

Isolated floor mount using captive mount isolators. SEOR to design unit anchorage.

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2013

Seismic Certification Limits: $S_{DS} = 2.5g$ $z/h = 1.0$

$I_p = 1.5$

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
QTC3 Chillers	QTC3055T	104.1	93.7	94.2	5,132		
	QTC3060T	104.1	93.7	94.2	5,369		
	QTC3070T	120.0	93.7	94.2	5,292	Voltage tested: 460/3/60	2
	QTC3075T	120.0	93.7	94.2	5,652		
	QTC3080T	104.1	93.7	94.2	5,839		
	QTC3085T	120.0	93.7	94.2	5,967		
	QTC3090T	146.6	93.7	94.2	6,551		
	QTC3095T	146.6	93.7	94.2	6,648		
	QTC3100T	146.6	93.7	94.2	6,836		
	QTC3110T	146.6	93.7	94.2	7,153		
	QTC3120T	191.6	93.7	94.2	7,838		
	QTC3125T	191.6	93.7	94.2	8,156		
	QTC3130T	191.6	93.7	94.2	8,319		
	QTC3140T	191.6	93.7	94.2	8,499		
	QTC3150T	236.6	93.7	94.2	9,444		
	QTC3160T	236.6	93.7	94.2	9,864		
	QTC3170T	236.6	93.7	94.2	10,074	Voltage tested: 200-208/3/60	1



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UUT - 1

Unit Under Test (UUT) Summary Sheet

TWEI Project No.: 2011-0263-CO-004

Manufacturer: Johnson Controls, Inc.

Model Line: YLAA/QTC3

Model Number: YLAA 0175HE17/QTC3170T **Serial Number:** N/A

Product Construction Summary:
Painted carbon steel enclosure.

Options/Subcomponent Summary:
Copeland compressor, Bitzer compressor, Alfa Laval evaporator, Luvata condenser, 200-208V AO Smith condenser fan motor, MultiWing impeller, three phase I/O fan VSD, Danfoss electronic expansion valve, Westermeyer liquid receiver, aesthetic panel kit, NEMA 3R Schneider electrical panel. See tables for specific models of subcomponents.

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
10,074	236.6	93.7	94.2	7.0	3.5	8.1

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}
CBC 2013	ICC-ES AC156	2.50g	1.0	1.5	4.00g	3.00g	1.67g	0.67g

Test Mounting Details:



Unit mounted on (2) YRSM3-700Z, (2) YRSM3-1300Z, (3) YRSM3-1600Z and (1) YRSM3-2300Z VMC captive mount isolators using 5/8" dia. Grade 8 bolts. Isolators mounted to shake table platen using (32) 5/8" dia. Grade 5 bolts. Unit maintained structural integrity and remained functional per manufacturer requirement. Contents were included in testing per operating conditions.



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UUT - 2

Unit Under Test (UUT) Summary Sheet

TWEI Project No.: 2011-0263-CO-004

Manufacturer: Johnson Controls, Inc.

Model Line: YLAA/QTC3

Model Number: YLAA 0070SE46/QTC3070T **Serial Number:** N/A

Product Construction Summary:
Painted carbon steel enclosure.

Options/Subcomponent Summary:
Copeland compressor, Bitzer compressor, Alfa Laval evaporator, Luvata condenser, 460V AO Smith condenser fan motor, MultiWing impeller, three phase I/O fan VSD, Danfoss electronic expansion valve, Westermeyer liquid receiver, aesthetic panel kit, NEMA 3R Schneider electrical panel. See tables for specific models of subcomponents.

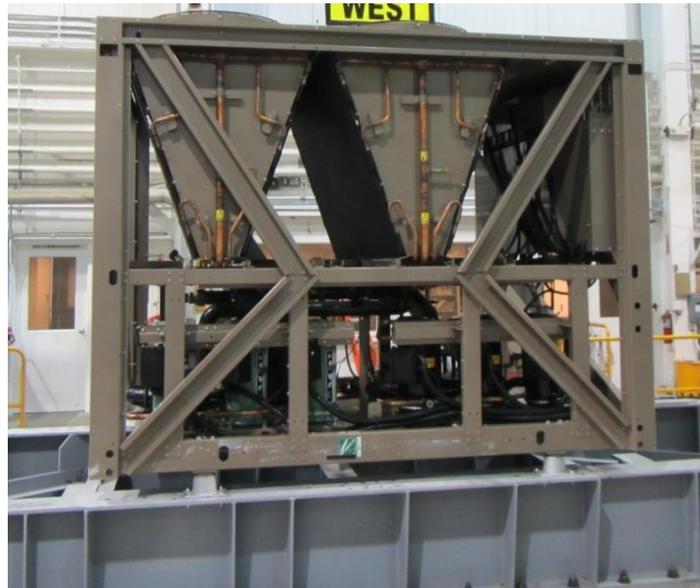
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
5,292	120.0	93.7	94.2	4.8	3.6	7.9

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}
CBC 2013	ICC-ES AC156	2.50g	1.0	1.5	4.00g	3.00g	1.67g	0.67g

Test Mounting Details:



Unit mounted on (2) YRSM3-1300Z and (2) YRSM3-1600Z VMC captive mount isolators using 5/8" dia. Grade 8 bolts. Isolators mounted to shake table platen using (16) 5/8" dia. Grade 5 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.