



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP – 0549 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: ait-deutschland GmbH

Manufacturer's Technical Representative: Markus Zobler

Mailing Address: Industriestrasse 3; 95359 Kasendorf

Telephone: +49-9228-9906-1580

Email: markus.zobler@ait-deutschland.eu

Product Information

Product Name: cBoxX 100 Compact Chiller and Chiller Interface Panel (CIP)

Product Type: Water Chiller

Product Model Number: See Attachment

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

General Description: Chiller system for cooling fluid using air cooled refrigerant

Mounting Description: Flexible floor mounted chiller and rigid wall mounted Chiller Interface Panel (CIP)

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe, SE

Mailing Address: 250 Bobwhite Ct, Suite 100, Boise, ID 83706

Telephone: (208) 342-5989 Ext 115

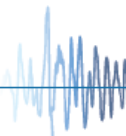
Email: tsoppe@wegai.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 01-24-2018

Title: Vice President Company Name: W.E. Gundy & Associates, Inc.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

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

Company Name: W.E. Gundy & Associates, Inc.

Name: Travis Soppe, SE California License Number: S6115

Mailing Address: 205 Bobwhite Ct, Suite 100, Boise, ID 83706

Telephone: (208) 342-5898 Ext. 115 Email: tsoppe@wegai.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): _____

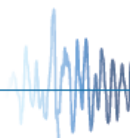
Testing Laboratory

Company Name: IABG mbH

Contact Name: Dr. Steffen Roedling

Mailing Address: Einsteinstrasse 20, Ottobrunn, Germany D-85521

Telephone: +49 (0) 89 / 6088-2052 Email: roedling@iabg.de





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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) = See Attachment

S_{DS} (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1); 2.50 (z/h = 0)

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

R_p (Equipment or component response modification factor) = See Attachment

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1 ($S_{DS} = 2.00$); 0 ($S_{DS} = 2.50$)

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, 2015: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Certified System Matrix, UUT Summary Sheets, Subcomponent Certification Letter

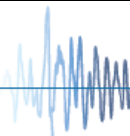
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:  Date: May 14, 2018

Print Name: Timothy J. Piland Title: SSE

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

Condition of Approval (if applicable): _____



**KKT Chillers - AIT Deutschland GmbH
SPECIAL SEISMIC CERTIFICATION
CERTIFIED SYSTEM AND COMPONENTS**



Manufacturer: KKT Chillers - AIT Deutschland GmbH

System: cBoxX 100 Compact Chiller System

System Component ¹	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
cBoxX 100 ³	909100-00469	32.7"	72.4"	79.9"	1740 ²	flexible floor	UUT-1
Chiller Interface Panel (CIP)	909000.0107	13.6"	25.4"	52.2"	171	rigid wall	UUT-2

¹ All components are manufactured by AIT Deutschland GmbH unless noted. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component within the tested units.

² Weight includes normal operating fluid used during seismic test.

³ cBoxX100 shall include added base plate assembly (AIT drawing P6856-0020) to address anomalies observed during test.

SEISMIC CERTIFICATION LIMITS

System Component	Code	S _{DS} (g)	z / h	I _p	a _p	R _p	Ω ₀	F _p / W _p
cBoxX 100	CBC 2016 ASCE 7-10	2.0	1.0	1.50	2.5	2.5	2.0	3.60
		2.5	0					1.50
Chiller Interface Panel (CIP)		2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

UUT-1

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Flexible floor mounted on 4 - AMC Mecanocaucho Marinelager S/N:136024 isolation devices. Each isolator connects to the UUT with one M16 Grade 8.8 bolt and mounts to the table with 2 - M12 Grade 8.8 bolts.



Manufacturer: KKT Chillers - AIT Deutschland GmbH

Component: cBoxX 100 **Model / Serial Number:** 909100-00469 / 91001235

UUT Function: Cools liquid using an air chilled refrigerant system

UUT Description: KKT Compact Chiller with 75kW net cooling capacity. Unit is floor mounted on vibration isolators as detailed above.

Test Location: IABG mbH, Germany **Test Date:** September 2017

UUT PROPERTIES

Weight (lb)*	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,740	32.7"	72.4"	79.9"	4.5	2.6	7.9

*Weight includes normal operating fluid.

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

Notes: ¹⁾ The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. ²⁾ The unit maintained structural integrity during and after the ICC-ES AC156 Test. ³⁾ Modification to the base of the unit (add base plates - AIT drawing #P6856-0020) are required to address anomalies observed during the test.

UUT-2

**UNIT UNDER TEST (UUT)
SUMMARY SHEET**



Mounting Details: Rigid wall mounted with 3 - M8 Grade 8.8 bolts



Manufacturer: KKT Chillers - AIT Deutschland GmbH

Component: Chiller Interface Panel (CIP) **Model / Serial Number:** 909000.0107 / Z910701

UUT Function: Serves as Chiller Interface and Fluid Line connection

UUT Description: Component of cBoxX 100 Chiller configuration. Contains pressure gauges, manual shut off valve, flow meter, and thermometer.

Test Location: IABG mbH, Germany **Test Date:** September 2017

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
171	13.6"	25.4"	52.2"	15.4	16.4	32.8

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S _{DS} (g)	z / h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

Note: ¹⁾ The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. ²⁾ The unit maintained structural integrity during and after the ICC-ES AC156 Test.