



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: **OSP-0390-10**

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: **SIEMENS HEALTHCARE**

Manufacturer's Technical Representative: Carri Catalano

Mailing Address: 51 Valley Stream Parkway, Malvern, PA 19355

Telephone: (888) 826-9702 Email: On File

Product Information

Product Name: SOMATOM PERSPECTIVE CT SYSTEM

Product Type: Computed Tomography (CT) medical imaging

Product Model Number: See Attachment 1, Table 1

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

General Description: Multiple component systems for the provision of Computed Tomography medical diagnostic imaging. Seismic Certification is limited to components identical to tested components, identified in Attachment 1.

Mounting Description: Floor (rigid base) mounted

Applicant Information

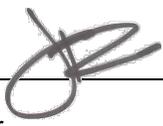
Applicant Company Name: **EASE Co.**

Contact Person: Jonathan Roberson, S.E.

Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: j.roberson@easeco.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: March 28, 2014

Title: Principal Engineer Company Name: EASE Co.

"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 6/14/13)



osHPD

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**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: EASE Co.

Name: Jonathan Roberson, S.E. California License Number: S4197

Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: j.roberson@easeco.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

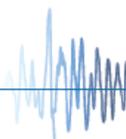
Company Name: Environmental Testing Laboratory, Inc.

Contact Name: Brady Richard

Mailing Address: 11034 Indian Trail, Dallas, TX 75229-3513

Telephone: (972) 247-9657 Email: brady@etldallas.com

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





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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 1 / Table 2

S_{DS} (Design spectral response acceleration at short period, g) = See Attachment 1 / Table 2

a_p (In-structure equipment or component amplification factor) = See Attachment 1 / Table 2

R_p (Equipment or component response modification factor) = See Attachment 1 / Table 2

Ω_0 (System overstrength factor) = 1.5 for Gantries & Patient Tables; 2.5 all others

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = See Attachment 1 / Table 2

Equipment or Component Natural Frequencies (Hz) = See Attachment 2

Overall dimensions and weight (or range thereof) = See Attachment 1 / Table 1

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): Attachments 1 & 2

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

Signature: 

Date: 4/10/2014

Print Name: M. R. Karim

Title: SHFR

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

Condition of Approval (if applicable): Seismic certification is limited to components identical to tested components.



ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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TABLE 1: SEISMIC CERTIFIED SYSTEMS & COMPONENTS

MANUFACTURER		SIEMENS HEALTHCARE					
SYSTEM		SOMATOM PERSPECTIVE COMPUTED TOMOGRAPHY (CT) SYSTEM					
COMPONENT	PART NO.	DIMENSIONS (IN.)			APPROX WT. (LB.)	MOUNTING	BASIS ^[1]
		W	D	H			
GANTRIES							
PERSPECTIVE GANTRY	10495243	89.56	26.75	71.65	2941	Floor	UUT1
PATIENT TABLE	10355389	97.38	27.56	37.25	752.5 ^[2]	Floor	UUT2
IMAGE CONTROL SYSTEM (ICS) Fujitsu Technology Solutions	10661038	8.5	20.625	17.5	48	Floor	UUT3
IMAGE RECONSTRUCTION SYSTEM (IRS) Supermicro	10661000	7	25.5	17.75	61	Floor	UUT4
LINE CONTROL BOX (LCB)	10165884	11.8	29.5	32	248.5	Floor	UUT5
EATON EX 2200 UPS	07735090	5.125	19	17.625	69	Floor	UUT6
CONTROL DESK Kokuyo Computer Desk 1200	10662685	47.25	36.62	29.73 (max)	79.5	Floor	UUT7
CONTROL BOX	10662542	---	---	---	---	Counter ^[4]	UUT8
19" LCD MONITOR Torch-Bigtide Digital Technology	10520199	16.54	8.66	16.42 / 18.39	20	Counter ^[4]	UUT9
MOUSE Fujitsu Technology Solutions	CL35A-4	---	---	---	---	Counter ^[4]	UUT10A
KEYBOARD Fujitsu Technology Solutions	KB900 MED US	---	---	---	---	Counter ^[4]	UUT10B
MOUNTING	FLOOR (RIGID BASE) MOUNT: free-standing, base-mounted configuration with the component rigidly attached to a supporting structure and no lateral support above the base. CT (COUNTERTOP): component bears on, but is not anchored to, the floor, countertop, desk, or other furniture.						
NOTES	1. BASIS: • UUT#: Indicates that a test specimen matching these characteristics was tested as part of this testing program. 2. All components are manufactured by Siemens Healthcare unless otherwise noted. 3. Patient Table weight does not include 440 lb. simulated patient load present during testing 4. Unsecured components may move during an earthquake and experience damage not observed during the limited testing conducted. It is recommended that unanchored devices necessary for the operation of the system be secured to mitigate potential for damage and a duplicate set of these devices be kept on hand at all times.						

TABLE 2: ASCE 7-10 DESIGN BASIS FOR EQUIPMENT

COMPONENT	F_p / W_p	E_v / W_p	S_{DS}	z/h	a_p	R_p	Ω_0
PERSPECTIVE GANTRY	2.40	0.40	2.0	1	1	1 ½	1 ½
PATIENT TABLE	1.17	0.52	2.6	0			
IMAGE CONTROL SYSTEM (ICS)	1.44	0.40	2.0	1	1	2 ½	2 ½
IMAGE RECONSTRUCTION SYSTEM (IRS)	1.17	0.52	2.6	0			
LINE CONTROL BOX (LCB)	1.44	0.40	2.0	1	1	2 ½	2 ½
EATON EX 2200 UPS	1.17	0.52	2.6	0			

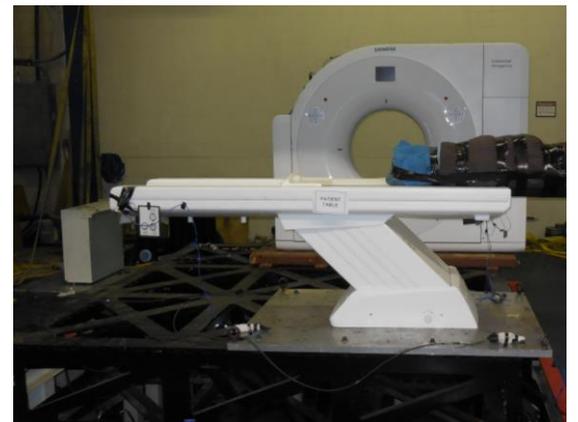
ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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UUT-1 SOMATOM PERSPECTIVE GANTRY								
MANUFACTURER:	Siemens Healthcare							
IDENTIFICATION:	Model No.: 10495243 (Gantry) 10495568 (System)							
DESCRIPTION:	Component of SOMATOM Perspective CT System							
MOUNTING:	Floor Mounted (4) – 1/2" dia. Gr 8 Hex head bolts to interface frame							
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
90.55	26.93	71.65	2966	4.2	5.9	15.3		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT-2 PATIENT TABLE								
MANUFACTURER:	Siemens Healthcare							
IDENTIFICATION:	Model No.: 10355389							
DESCRIPTION:	Component of SOMATOM Perspective CT System							
MOUNTING:	Floor Mounted using (4) – 1/2" dia. Gr. 8 bolts to aluminum interface plate.							
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
97 3/8	27 9/16	37 1/4	752.5 + 440 Patient Load	3.1	5.3	4.8		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

UUT-3 ICS (IMAGE CONTROL SYSTEM)								
MANUFACTURER:	Fujitsu Technology Solutions							
IDENTIFICATION:	Siemens Fujitsu Technology Solutions							
Model No.:	10661038 MCS-02778							
DESCRIPTION:	Component of SOMATOM Perspective CT System							
MOUNTING:	Floor Mounted using: <ul style="list-style-type: none"> (2)-1" wide nylon straps with metal cinch (200# working load rating) through L2.5"x2.5"x1/4"x0'-2.5" brackets ea. end (4 total) positioned tight against unit Anchored to plywood with (2)-#8 SMS/bracket (8 screws total) 							
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
8.5	20.625	17.5	48	19.8	31.9	33.6		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT-4 IRS (IMAGE RECONSTRUCTION SYSTEM)								
MANUFACTURER:	Supermicro							
IDENTIFICATION:	Siemens Supermicro							
Model No.:	10661000 743-8							
DESCRIPTION:	Component of SOMATOM Perspective CT System							
MOUNTING:	Floor Mounted using: <ul style="list-style-type: none"> (2)-1" wide nylon straps with metal cinch (200# working load rating) through L2.5"x2.5"x1/4"x0'-2.5" brackets ea. end (4 total) positioned tight against unit Anchored to plywood with (2)-#8 SMS/bracket (8 screws total) 							
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
7	25.5	17.75	61	17.1	25.9	28.7		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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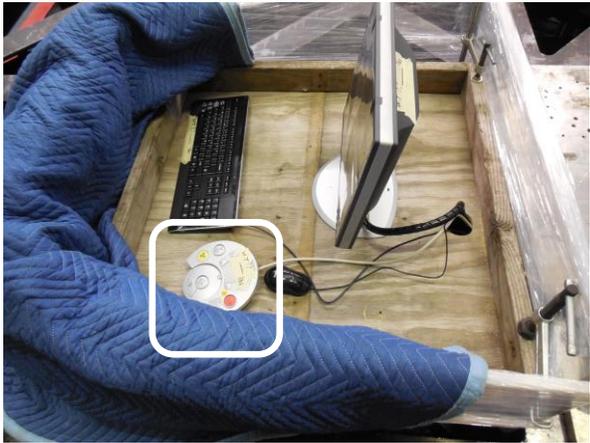
UUT- 5 LCB (LINE CONTROL BOX)									
MANUFACTURER:		Siemens Healthcare							
IDENTIFICATION:		Model No.: 10165884							
DESCRIPTION:		Component of SOMATOM Perspective CT System							
MOUNTING:		Floor mounted using (4) – 3/8" dia GR 8 Allen head cap bolts through holes tapped in aluminum interface plate.							
									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	F/B Axis		S/S Axis	Vert Axis			
11.75	29.375	31.5	248.5	13.9	25.3	>50			
SHAKE TABLE TEST PARAMETERS									
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 AC156-10	2.0	1.0	1.5	3.20	2.40	1.34	0.54	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									

UUT-6 EATON EX 2200 2200VA 230V UPS									
MANUFACTURER:		Eaton							
IDENTIFICATION:		Model No.: 07735090							
DESCRIPTION:		Component of SOMATOM Perspective CT System							
MOUNTING:		Floor Mounted using: <ul style="list-style-type: none"> (2)-1" wide nylon straps with metal cinch (200# working load rating) through L2.5"x2.5"x1/4"x0'-2.5" brackets ea. end (4 total) positioned tight against unit Anchored to plywood with (2)-#8 SMS/bracket (8 screws total) 							
									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	F/B Axis		S/S Axis	Vert Axis			
5.125	19	17.625	69	10.9	25.9	28.2			
SHAKE TABLE TEST PARAMETERS									
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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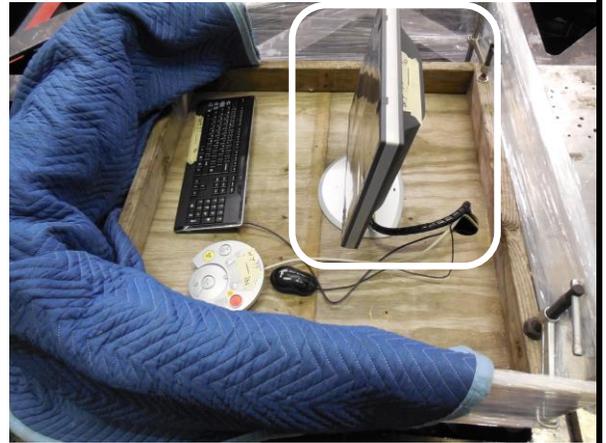
UUT- 7 OPERATORS CONSOLE									
MANUFACTURER:		Kokuyo							
IDENTIFICATION:		Model No.: 10662685							
DESCRIPTION:		Component of SOMATOM Perspective CT System							
MOUNTING:		Floor mounted using (8) – 3/8" dia GR 8 Allen head cap bolts							
									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	F/B Axis		S/S Axis	Vert Axis			
47.25	36.62	29.25	79.5	7.9	16.0	15.2			
SHAKE TABLE TEST PARAMETERS									
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 AC156-10	2.0	1.0	1.5	3.20	2.40	1.34	0.54	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									

UUT-8 CONTROL BOX									
MANUFACTURER:		Siemens Healthcare							
IDENTIFICATION:		Model No.: 10662542							
DESCRIPTION:		Component of SOMATOM Perspective CT System							
MOUNTING:		None. Power Power/data cable routed through hole in plywood.							
									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	F/B Axis		S/S Axis	Vert Axis			
---	---	---	1.5	N/A	N/A	N/A			
SHAKE TABLE TEST PARAMETERS									
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 AC156-10	2.0	1.0	1.5	3.20	2.40	1.34	0.54	
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test									

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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UUT-9		19" LCD MONITOR						
MANUFACTURER:		Torch-Bigtide Digital Technology						
IDENTIFICATION:		Siemens	Torch Bigtide Digital Technology					
Model No.:		10520199	DSC1910-D					
DESCRIPTION: Component of SOMATOM Perspective CT System								
MOUNTING: None. Power Power/data cable routed through hole in plywood.								
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
16.54	8.66	16.42 / 18.39	20	N/A	N/A	N/A		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								



UUT-10		KEYBOARD & MOUSE						
MANUFACTURER:		Fujitsu Technology Solutions						
IDENTIFICATION:		Mouse	Keyboard					
Model No.:		CL35A-4	KB900 MED US					
DESCRIPTION: Component of SOMATOM Perspective CT System								
MOUNTING: None. Power Power/data cable routed through hole in plywood.								
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		F/B Axis	S/S Axis	Vert Axis		
---	---	---	2	N/A	N/A	N/A		
SHAKE TABLE TEST PARAMETERS								
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 AC156-10	2.0 2.6	1.0 0.0	1.5	3.2	2.4	1.74	0.70
Unit maintained structural integrity and functionality after the ICC-ES AC 156 test								

