



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0484 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Samsung

Manufacturer's Technical Representative: Ninad Gujar

Mailing Address: 14 Electronics Avenue, Danvers, MA 01923 USA

Telephone: On File

Email: On File

Product Information

Product Name: GC85A Digital X-Ray System

Product Type: Radiography medical diagnostic imaging system.

Product Model Number: See Attachment 1.

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

General Description: Multiple component medical diagnostic imaging system. Seismic enhancements made to test
Units and modifications to address anomalies observed in testing shall be incorporated in the certified units.

Mounting Description: See Attachment 1.

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, 2016.

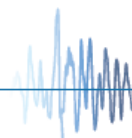
Signature of Applicant: 

Date: June 29, 2018

Title: Principal Structural Engineer

Company Name: EASE Co.

"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: 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

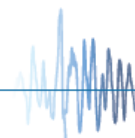
- ☒ Supports and attachments are preapproved under OPM- 0312, 0313, 0314 (Not all equipment has an OPM)
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- ☒ Supports and attachments are not preapproved

Certification Method

- ☒ Testing in accordance with: ☒ ICC-ES AC156
☐ Other (Please Specify): OSP-0484-10
BY: Timothy J. Piland
DATE: 05/28/2019

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





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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

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) = See Attachment 1

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

Ω_0 (System overstrength factor) = See Attachment 1

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 2

Overall dimensions and weight (or range thereof) = See Attachment 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) = OSP-0484-10

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = BY: Timothy J. Piland

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = DATE: 05/28/2019

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): ATTACHMENTS 1 & 2

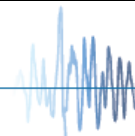
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: Timothy J. Piland Date: May 28, 2019

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): _____



ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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TABLE 1:

Manufacturer	Samsung												
System	GC85A Digital X-Ray System												
COMPONENT	MODEL NO.	APPROX. DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNT	BASIS ^[1]	F _P /W _P	S _{DS}	z/h	a _P	R _P	Ω ₀
		W	D	H									
X-RAY TUBE SUSPENSIONS													
Ceiling-mounted Tube Head Unit w/ 3 meter Bridge	SDR-OGTS80U	157.5	118.1	49.3	885	Ceiling	UUT 1601-1	3.60 Wp 1.50 Wp	2.0 2.5	1 0	2 ½	2 ½	2
PATIENT TABLES ^[4]													
Patient Table including:	SDR-OGTA80U	94.9	32.0	21.5 min 35.4 max	504 ^[2]	Rigid Base	UUT 1607-11	2.40 Wp 1.13 Wp	2.0 2.5	1 0	1	1 ½	1 ½
Digital X-ray Detector (C2)	S4343-W												
Patient Table including:	SDR-OGTA80U	94.9	32.0	21.5 min 35.4 max	441 ^[2] ^[9]	Rigid Base	UUT 1601-2	2.40 Wp 1.13 Wp	2.0 2.5	1 0	1	1 ½	1 ½
Digital X-ray Detector (C1#)	S4335-W												
WALL STANDS ^[5]													
Wall Stand including	SDR-OGST80U	23.7	40.2	89.5	397	Wall/Floor	UUT 1601-11	2.40 Wp 1.13 Wp	2.0 2.5	1 0	1	1 ½	1 ½
Digital X-ray Detector (C2)	S4343-W												
Wallstand	SDR-OGST73A	29.3	37.4	85.8	430	Wall/Floor	UUT 1607-4	2.40 Wp 1.13 Wp	2.0 2.5	1 0	1	1 ½	1 ½
Wireless Detector (C1#)	S4335-W												
Wallstand	SDR-OGST73B	29.3	37.4	85.8	430	Wall/Floor	UUT 1607-5	2.40 Wp 1.13 Wp	2.0 2.5	1 0	1	1 ½	1 ½
Wireless Detector (C2)	S4343-W												
POWER DISTRIBUTION ^[6]													
System Cabinet w/ 82kW HVG (DRGEM)	SDR-OGCA80U	29.5	19.9	44.9	485	Rigid Base	UUT 1601-4 1802-1	1.50 Wp 1.13 Wp	2.0 2.5	1 0	2 ½	6	2
System Cabinet w/ 82kW HVG (DRGEM)	SDR-OGCA75A	29.5	19.9	44.1	485	Rigid Base	UUT 1607-6	1.50 Wp 1.13 Wp	2.0 2.5	1 0	2 ½	6	2
System Cabinet w/ 52kW HVG (DRGEM)	SDR-OGCA75B	29.5	19.9	44.1	485	Rigid Base	SAME	1.50 Wp 1.13 Wp	2.0 2.5	1 0	2 ½	6	2
System Cabinet w/ 50kW HVG (SPELLMAN)	SDR-OGCA75D	29.5	19.9	44.1	408	Rigid Base	UUT 1607-7	1.50 Wp 1.13 Wp	2.0 2.5	1 0	2 ½	6	2
System Cabinet w/ 80kW HVG (SPELLMAN)	SDR-OGCA75C	29.5	19.9	44.1	408	Rigid Base	UUT 1607-9	1.50 Wp 1.13 Wp	2.0 2.5	1 0	2 ½	6	2
USER INTERFACE													
Lenovo ThinkStation P310 PC ^[7]	30ASS04X00	6.9	16.8	14.8	19	Rigid Base	UUT 1601-5	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
Lenovo ThinkCentre M900 PC ^[8]	10FLS1P200	7.0	7.2	1.4	3	Rigid Base	UUT 1601-6	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
MISC													
Cisco Access Point	AIR-SAP2602I-A-K9	8.7	8.7	2.1	2	Rigid Base	UUT 1601-7	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2

ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS


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TABLE 1:

Manufacturer	Samsung												
System	GC85A Digital X-Ray System												
COMPONENT	MODEL NO.	APPROX. DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNT	BASIS ^[1]	F _P /W _P	S _{DS}	z/h	a _P	R _P	Ω ₀
		W	D	H									
Cisco Access Point	AIR-SAP2602I-B-K9	8.7	8.7	2.1	2	Rigid Base	SAME	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
DLINK Switch	DGS-1008P	7.5	4.7	1.5	2	Rigid Base	UUT 1601-8	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
DLINK Wireless Access Point	DIR-850L	5.75	4.25	3.75	1	Rigid Base	UUT 1601-9	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
Control Interface Box (CIB)	SDR-OGCI80U	3.5	7.25	7.5	2	Rigid Base	UUT 1601-10	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
D-Link Access Point	DAP-2660A1	6.7	6.7	1.1	0.5	Rigid Base	UUT 1607-12	1.44 Wp 1.13 Wp	2.0 2.5	1 0	1	2 ½	2
Mount	<p>RIGID BASE (FLOOR) MOUNT: free-standing, base-mounted tower configuration with the component rigidly attached to a supporting structure and no lateral support above the base.</p> <p>WALL/FLOOR MOUNT refers to a condition where the unit bears on and anchored to the supporting floor. In addition, lateral restraint anchoring the unit to an adjacent wall or other supporting structure is provided along the height of the equipment.</p> <p>CEILING SUSPENDED refers to a condition where the unit is anchored to and suspended from a framing system at or slightly above the ceiling line of the room.</p>												
Notes	<p>1. BASIS:</p> <ul style="list-style-type: none">• UUT#: Indicates that a test specimen matching these characteristics was tested as part of this testing program. <p>2. Patient table weight includes all listed options but excludes 545 lb. simulated patient load present during testing.</p> <p>3. All components are manufactured by Samsung, unless otherwise noted.</p> <p>4. Requires use of Samsung Seismic Option Kit: Patient Table (Part No.: DGR-ACCSTA1/US) or equivalent.</p> <p>5. Requires use of Samsung Seismic Option Kit: Wall Stand (Part No.: DGR-ACCST2/US) or equivalent.</p> <p>6. Requires use of Samsung Seismic Option Kit: Cabinet (Part No.: DGR-ACCSCA1/US) or equivalent.</p> <p>7. Requires use of Samsung Seismic Option Kit: Workstation (Part No. DGR-ACCSPC1/US) or equivalent.</p> <p>8. Requires use of Samsung Seismic Option Kit: Workstation (Part No. DGR-ACCSPC2/US) or equivalent.</p> <p>9. Tabulated weight excludes detector, case, anti-scatter grid, seismic option kit, and cabling.</p> <p>10. Seismic Qualification limited to components used as part of a Samsung medical imaging system.</p>												

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS


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UUT1601-1 Ceiling-mounted Tube Head Unit w/ 3m Bridge									
MANUFACTURER:									
IDENTIFICATION:									
DESCRIPTION:				Component of the GC85A Digital X-Ray system.					
MOUNTING:				Ceiling Mounted using (2) – M8 A2-70 Stainless bolts & Samsung Fixing Bracket to Unistrut P1000 supports spaced 26" o.c. (10 locations total).					
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	Front-Axis		Side-Axis	Vert-Axis			
157.5	118.1	49.3	3.3		2.2	3.4			
SHAKE TABLE TEST PARAMETERS					*Weight includes equipment and all cabling attached to fixture.				
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	2.0 2.5	1 0	1.5 1.0	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

UUT1601-2				Patient Table w/ Detector				
MANUFACTURER:		Samsung						
IDENTIFICATION:		Model No.: SDR-OGTA80U						
DESCRIPTION:		Component of the GC85A Digital X-Ray system. Samsung S4335-W Digital Flat Panel Detector installed. 545 simulated patient load. Unit included enhancements not found on standard production units Seismic Option Kit (Patient Table, part no.: DGR-ACCSTA1/US)						
MOUNTING:		Rigid Base (Floor) Mounted using (8) – 5/8" diameter Grade 8 bolts w/ washers.						
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis		
94.9	32.0	21.5 min 35.4 max		441	10.2	31.2	8.5	
SHAKE TABLE TEST PARAMETERS								
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
Unit maintained structural integrity and remained functional per manufacturer requirement								

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

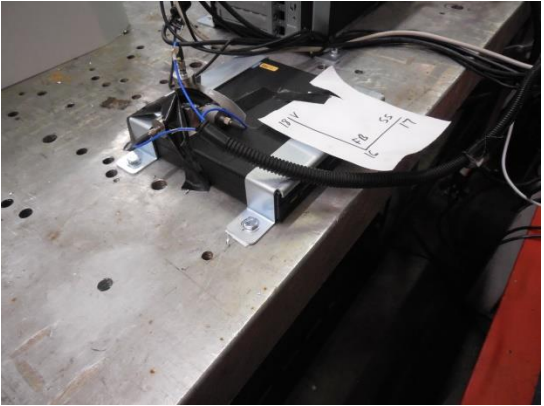
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UUT1601-4 Cabinet w/ HVG									
MANUFACTURER:			Samsung						
IDENTIFICATION:			Model No.: SDR-OGCA80U (System Cabinet)						
			Model No.: GXR-82 (HV Generator)						
DESCRIPTION:			Component of the GC85A Digital X-Ray system. Unit included enhancements not found on standard production units. Seismic Option Kit (Cabinet, part no.: DGR-ACCSCA1/US)						
MOUNTING:			Rigid Base (Floor) Mounted using (3) – 3/8" diam. socket head cap screws each bracket (6 total) to aluminum plate.						
			(3) – M8 stainless steel (A2-70) screws through bracket to cabinet frame (Torque = 220 cm-kgf). Typical each bracket.						
									
PROPERTIES:									
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)					
Width	Depth	Height	Weight (lb.)	Front-Axis	Side-Axis	Vert-Axis			
29.5	19.9	44.9	358	9.6	15.3	>50			
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

UUT1601-5			Lenovo ThinkStation P310			05/28/2019		
MANUFACTURER:			Lenovo					
IDENTIFICATION:			Model no.: 30ASS04X00					
DESCRIPTION:			Component of the GC85A Digital X-Ray system. Unit included external mounting brackets provided by Samsung. Seismic Option Kit (Workstation , part no.: DGR-ACCSPC1/US).					
MOUNTING:			Rigid Base using (4) – ¼" -20 machine screws through external mounting brackets provided by Samsung					
PROPERTIES:								
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height	Front-Axis		Side-Axis	Vert-Axis		
6.9	16.8	14.8	19	20.2	34.9	>50		
SHAKE TABLE TEST PARAMETERS								
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
Unit maintained structural integrity and remained functional per manufacturer requirement								

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS


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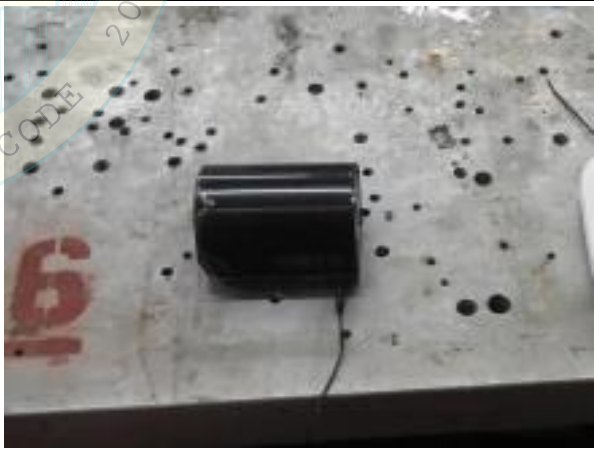
UUT1601-6 Lenovo ThinkCentre M900																			
MANUFACTURER:		Lenovo																	
IDENTIFICATION:		Model no.: 10FLS1P200																	
DESCRIPTION:		Component of the GC85A Digital X-Ray system. Unit included external mounting brackets provided by Samsung. Seismic Option Kit (Workstation , part no.: DGR-ACCSPC2/US)																	
MOUNTING:		Rigid Base using (4) – ¼" -20 machine screws through external mounting brackets provided by Samsung.																	
																			
										PROPERTIES:									
										DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
										Width	Depth	Height	Weight (lb.)	Front-Axis	Side-Axis	Vert-Axis			
7.0	7.2	1.4	3	>50	>50	>50													
SHAKE TABLE TEST PARAMETERS																			
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68											
Unit maintained structural integrity and remained functional per manufacturer requirement																			

UUT1601-7 Access Point																			
MANUFACTURER:		Cisco																	
IDENTIFICATION:		Model no.: AIR-SAP26021-A-K9																	
DESCRIPTION:		Component of the GC85A Digital X-Ray system.																	
MOUNTING:		Rigid Base using (2) – ¼"-20 x 1" machine screws through cisco mounting bracket																	
																			
										PROPERTIES:									
										DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
										Width	Depth	Height	Weight (lb.)	Front-Axis	Side-Axis	Vert-Axis			
8.7	8.7	2.1	2	46.2	43.7	45.1													
SHAKE TABLE TEST PARAMETERS																			
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68											
Unit maintained structural integrity and remained functional per manufacturer requirement																			

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS


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UUT1601-8 DLINK Switch									
MANUFACTURER:		Samsung							
IDENTIFICATION:		Model no.:DGS-1008P Serial no.:QXBP1G3000010							
DESCRIPTION:		Component of the GC85A Digital X-Ray system.							
MOUNTING:		Counter Top Anchored (CTA) Mounted using (2) – 1" x 7" industrial Velcro hook & loop tape.							
									
PROPERTIES:									
DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	Weight (lb.)		Front-Axis	Side-Axis	Vert-Axis		
7.5	4.7	1.5	2		>50	>50	>50		
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

UUT1601-9 DLINK Wireless Access Point DIR-850L									
MANUFACTURER:		Samsung							
IDENTIFICATION:		Model no.: KIR850LKKR...A1E							
DESCRIPTION:		Component of the GC85A Digital X-Ray system.							
MOUNTING:		Counter Top Anchored (CTA) Mounted using (2) – 1" x 5" industrial Velcro hook & loop tape.							
									
PROPERTIES:									
DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	Weight (lb.)		Front-Axis	Side-Axis	Vert-Axis		
5.75	4.25	3.75	1		>50	>50	>50		
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS


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UUT1601-10 Control Interface Box								
MANUFACTURER:		Samsung						
IDENTIFICATION:		Model no.: SDR-OGCI80U						
DESCRIPTION:		Component of the GC85A Digital X-Ray system.						
MOUNTING:		Rigid Base (Floor) Mounted using ¼"-20 x 1" machine screw in tapped hole in aluminum plate						
								
PROPERTIES:								
DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height	Weight (lb.)		Front-Axis	Side-Axis	Vert-Axis	
3.5	7.25	7.5	2		38.5	38.8	42.4	
SHAKE TABLE TEST PARAMETERS								
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
Unit maintained structural integrity and remained functional per manufacturer requirement								

UUT1601-11 Wall Stand w/ Detector									
MANUFACTURER:			Samsung						
IDENTIFICATION:			Model no.: SDR-OGST80U						
DESCRIPTION:			Component of the GC85A Digital X-Ray system. Samsung S4335-W wireless digital flat panel detector installed. Unit included enhancements not found on standard production units. Seismic Option Kit (Wall Stand, part no.: DGR-ACCSST1/US).						
MOUNTING:			Wall/Floor Mounted using (4) – ½" dia GR 8 bolts to floor and (4) – 3/8"dia GR 8 bolts to wall. All bolts include washers.						
									
PROPERTIES:									
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)					
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis			
23.7	40.2	89.5	397	4.9	16.4	7.2			
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS


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UUT1607- 4 Wallstand w/ Rotating Detector Tray and C1# Detector									
MANUFACTURER:		DRGEM		Samsung		JPI			
IDENTIFICATION:		Wallstand		Detector		Anti-Scatter Grid			
Model No.:		SDR-OGST73A		S4335-W		M197-03295A			
DESCRIPTION:		Component of GC70 & GC85A digital radiography system Manual Tilting Wallstand w/ <ul style="list-style-type: none">Rotating detector tray (change from portrait to landscape)Wireless portable digital detector installed (C1#)Anti-scatter grid installed (110 cm SID)Seismic option Kit (Wall Stand part no.: DGR-ACCSST2/US)<ul style="list-style-type: none">Wall Stand Top BracketsWall Stand Detector-Tray Holder							
MOUNTING:		Wall/Floor mounted using (2) – 3/8" diam. socket head cap screws & washers (Torque=25 ft-lb) to floor and (4) – 3/8" diam. gr 8 bolts to wall.							
PROPERTIES:									
DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	Weight (lb.)		Front-Axis	Side-Axis	Vert-Axis		
29.25	37.36	85.8	439.5*		18	6.97	7.98		
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									


UUT1607- 5 Manual Tilting Wallstand w/ Rotating Detector Tray & C2 Detector								
MANUFACTURER:		DRGEM	Samsung	JPI				
IDENTIFICATION:		Wallstand	Detector	Anti-Scatter Grid				
Model No.:		SDR-OGST73B	S4343-W	M197-03297A				
DESCRIPTION:		Component of GC70 & GC85A digital radiography system Manual Tilting Wallstand w/ <ul style="list-style-type: none">Wireless portable digital detector installed (C2)Anti-scatter grid installed (180 cm SID)Seismic option Kit (Wall Stand, part no.: DGR-ACCSST2/US)<ul style="list-style-type: none">Wall Stand Top BracketsWall Stand Detector-Tray Holder						
MOUNTING:		Wall/Floor mounted using (2) – 3/8" diam. socket head cap screws & washers (Torque=25 ft-lb) to floor and (4) – 3/8" diam. gr 8bolts to wall.						
								
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis		
29.25	37.36	85.8	438*	8.04	6.66	7.68		
SHAKE TABLE TEST PARAMETERS					*Installed weight, including mounting hardware and all cabling attached to fixture.			
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
Unit maintained structural integrity and remained functional per manufacturer requirement								

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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UUT1607- 6 System Cabinet Type A w/ 82kW HVG (DRGEM)									
MANUFACTURER:		Samsung							
IDENTIFICATION:		Model No.: SDR-OGCA75A							
DESCRIPTION:		Component of GC70 & GC85A digital radiography system 82kW High Voltage X-Ray Generator (HVG) by DRGEM Mounting brackets are provided in : <ul style="list-style-type: none">Seismic Option Kit (Cabinet, part no.: DGR-ACCSCA1/US)							
MOUNTING:		Rigid Base (Floor) Mounted using (3) – 3/8" diam. socket head cap screws each bracket (6 total) to aluminum plate. (3) – M8 stainless steel (A2-70) screws through bracket to cabinet frame (Torque = 220 cm-kgf). Typical each bracket.							
									
PROPERTIES:									
DIMENSIONS (in.)					LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	Weight (lb.)		Front-Axis	Side-Axis	Vert-Axis		
29.5	19.9	44.1	485		13.48	15.12	>50		
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									




UUT1607- 7 System Cabinet Type B w/ 50kW HVG (Spellman)									
MANUFACTURER:		Samsung							
IDENTIFICATION:		Model No.: SDR-OGCA75D							
DESCRIPTION:		<div>Component of GC70 & GC85A digital radiography system 50kW High voltage X-Ray Generator (HVG) by Spellman High Voltage Electronics.</div> <div>Mounting brackets are provided in :<ul style="list-style-type: none">Seismic Option Kit (Cabinet, part no.: DGR-ACCSCA1/US)</div>							
MOUNTING:		<div>Rigid Base (Floor) Mounted using (3) – 3/8" diam. socket head cap screws each bracket (6 total) to aluminum plate.</div> <div>(3) – M8 stainless steel (A2-70) screws through bracket to cabinet frame (Torque = 220 cm-kgf). Typical each bracket.</div>							
									
PROPERTIES:									
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)					
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis			
29.5	19.9	44.1	408	10.61	11.64	>50			
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									



ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

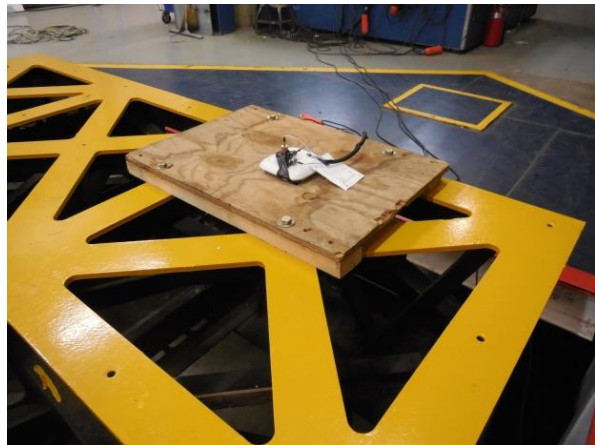
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UUT1607- 9 System Cabinet w/ 80kW HVG (Spellman)									
MANUFACTURER:			Samsung						
IDENTIFICATION:			Model No.: SDR-OGCA75C						
DESCRIPTION:			<div>Component of GC70 & GC85A digital radiography system 80kW High Voltage X-Ray Generator (HVG) by Spellman High Voltage Electronics.</div> <div>Mounting brackets are provided in :<ul style="list-style-type: none">Seismic Option Kit (Cabinet, part no.: DGR-ACCSCA1/US)</div>						
MOUNTING:			<div>Rigid Base (Floor) Mounted using (3) – 3/8" diam. socket head cap screws each bracket (6 total) to aluminum plate.</div> <div>(3) – M8 stainless steel (A2-70) screws through bracket to cabinet frame (Torque = 220 cm-kgf). Typical each bracket.</div>						
									
PROPERTIES:									
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)					
Width	Depth	Height	Weight (lb.)	Front-Axis	Side-Axis	Vert-Axis			
29.5	19.9	44.1	408	12.71	11.37	21.14			
SHAKE TABLE TEST PARAMETERS									
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

UUT1607-11 Patient Table w/ C2 Detector & Grid																																												
MANUFACTURER:		Samsung																																										
IDENTIFICATION:		Table	Detector	Grid																																								
Model No.:		SDR-OGTA80U	S4343W	M197-03297A																																								
DESCRIPTION:		<div>Component of GC70 & GC85A digital radiography system Elevating Float-Top Radiographic Table w/<ul style="list-style-type: none">Wireless portable digital detector installedAnti-scatter grid installed (180 cm SID)Seismic Option Kit (Patient Table, part no.: DGR-ACCSTA1/US)<ul style="list-style-type: none">Patient Table Detector Tray/Grid HolderPatient Table Grid Holder</div>																																										
MOUNTING:		Rigid Base (Floor) Mounted w/ (8) – 5/8" Grade 8 hex head bolts w/ washers to tapped holes in aluminum interface plate.																																										
<div>PROPERTIES:</div> <table><tr><th colspan="3">DIMENSIONS (in.)</th><th rowspan="2">Weight (lb.)</th><th colspan="3">LOWEST RESONANT FREQUENCY (Hz.)</th></tr><tr><th>Width</th><th>Depth</th><th>Height</th><th>Front-Axis</th><th>Side-Axis</th><th>Vert-Axis</th></tr><tr><td>94.9</td><td>32.0</td><td>21.5 min 35.4 max</td><td>510</td><td>30.9</td><td>25.21</td><td>13.45</td></tr></table> <div>SHAKE TABLE TEST PARAMETERS</div> <table><tr><th>CODE</th><th>TEST CRITERIA</th><th>S_{DS} (G)</th><th>z/h</th><th>I_P</th><th>A_{FLX-H} (G)</th><th>A_{RIG-H} (G)</th><th>A_{FLX-V} (G)</th><th>A_{RIG-V} (G)</th></tr><tr><td>CBC 2016</td><td>ICC-ES AC156</td><td>2.0 2.5</td><td>1 0</td><td>1.5</td><td>3.20</td><td>2.40</td><td>1.68</td><td>0.68</td></tr></table> <div>Unit maintained structural integrity and remained functional per manufacturer requirement</div>							DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			Width	Depth	Height	Front-Axis	Side-Axis	Vert-Axis	94.9	32.0	21.5 min 35.4 max	510	30.9	25.21	13.45	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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)																																								
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis																																						
94.9	32.0	21.5 min 35.4 max	510	30.9	25.21	13.45																																						
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68																																				

ATTACHMENT 2: SEISMIC CERTIFIED COMPONENTS

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UUT1607- 12 D-Link Access Point									
MANUFACTURER:		Samsung							
IDENTIFICATION:		Model No.: DAP-2660A1							
DESCRIPTION:		Component of GC70 & GC85A digital radiography system							
MOUNTING:		Rigid Base Mounted w/ (2) - #8 x ¾ SMS through D-Link mounting bracket to ¾" thick plywood sheet.							
									
PROPERTIES:									
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)					
Width	Depth	Height	Weight (lb.)	Front-Axis	Side-Axis	Vert-Axis			
6.7	6.7	1.1	½	>50	30.59	44.03			
SHAKE TABLE TEST PARAMETERS				*Weight includes equipment and all cabling attached to fixture.					
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68	
Unit maintained structural integrity and remained functional per manufacturer requirement									

UUT1802- 1			GC85A System Cabinet w/ HVG					
MANUFACTURER:			Samsung					
IDENTIFICATION:			Model No.: SDR-OGCA80U					
DESCRIPTION:			Component of GC85A digital radiography system GXR-82 High Voltage Generator by DRGEM Samsung Seismic Option Kit: Cabinet (Part No.: DGR-ACCSCA1/US)					
MOUNTING:			Rigid Base (Floor) Mounted using (3) – 3/8" diam. socket head cap screws each bracket (6 total) to aluminum plate. (3) – M8 stainless steel (A2-70) screws through bracket to cabinet frame (Torque = 220 cm-kgf). Typical each bracket.					
								
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		Front-Axis	Side-Axis	Vert-Axis		
29.5	22.4	44.9	467 (installed)	>50	>50	>50		
SHAKE TABLE TEST PARAMETERS								
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	2.0 2.5	1 0	1.5	3.20	2.40	1.68	0.68
Unit maintained structural integrity and remained functional per manufacturer requirement								