APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0280

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Siemens Healthcare GmbH

Manufacturer's Technical Representative: Dieter Freitag

Mailing Address: Siemensstr. 3, D-91301 Forchheim, Germany

Telephone: +49 9191 185412 Email: freitag.dieter@siemens-healthineers.com

Product Information

Product Name: Fluoroscopy and Radiography Systems

Product Type: NA

Product Model Number: Ysio, Ysio Max, and Multix Fusion X-Ray Systems

General Description: Multi-component digital & analog radiographic medical imaging systems.

Mounting Description: Ceiling, Floor, Wall & floor, and Wall, See Certified Product Tables

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

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

Contact Person: Travis Soppe

Mailing Address: 1199 Shoreline Drive Suite 310, Boise, ID 83702

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Title: SE

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

Company Name: W.E. GUNDY & ASOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3

☐ Other (Please Specify):

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Brady Richard

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

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

Seismic Parameters

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

S_{DS} (Design spectral response acceleration at short period, g) = 2.0

a_p (Amplification factor) = See attachments

R_p (Response modification factor) = See attachments

Ω_0 (System overstrength factor) = See Attachment

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 11/30/2028

Date: 11/30/2022

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: S_{DS} (g) = 2.0 z/h = 1

Condition of Approval (if applicable):

TABLE 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION YSIO & YSIO MAX COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Siemens Healthcare GmbH

System: YSIO & YSIO MAX

System Component[1)]	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
Ceiling Suspension Ysio X-Ray Tubes							
3D Stand Ysio 3m track-synchronized	7042232	167	119	32 - 103	754	ceiling	UUT_x-1
3D Stand Ysio 4m track-synchronized	7042240	167	172	32 - 103	815	ceiling	interpolated
3D Stand Ysio 3m track-automated	7042216	167	119	32 - 103	846	ceiling	interpolated
3D Stand Ysio 4m track-automated	7042224	167	172	32 - 103	890	ceiling	UUT_w-1
Bucky Wall Stands							
Pro Non-Tilting Bucky Wall Stand - Digital Detector	10681650	30.0	16.6	82.9	452	floor	UUT_v-7
Non-Tilting Bucky Wall Stand - Fixed Detector	11688339	30.0	18.5	82.9	488	floor	interpolated
Non-Tilting Bucky Wall Stand - Wifi Dectector	11688339	30.0	18.5	82.9	488	floor	interpolated
Tilting Bucky Wall Stand Fixed Detector	10681702	30.0	48.9	85.0	530	floor	UUT_y-2
Tilting Bucky Wall Stand Wifi Dectector	10681704	30.0	28.1	82.9	645	floor	UUT_z-2
Tilting Bucky Wall Stand Wifi Dectector	10681705	30.0	28.1	82.9	645	floor	interpolated
Tilting Bucky Wall Stand Wifi Dectector	10656443	30.0	26.9	82.5	660	floor	interpolated
Tilting Bucky Wall Stand Wifi Dectector	10656442	30.0	26.9	82.5	660	floor	interpolated
Tilting Bucky Wall Stand Wifi Dectector	10150520	30.0	26.9	82.5	660	floor	interpolated
Tilting Bucky Wall Stand Wifi Dectector	10150519	30.0	26.9	82.5	660	floor	UUT_w-4

[1] All components are manufactured by Siemens Healthcare GmbH unless noted. Part numbers listed uniquely identify type of component, manufacturer, and material of construction for each sub-componenent within the tested units.

[2] The units were tested at different times and the subscripts on the UUTs reference the following seismic test reports:
v = SQ35-1302-02-r1 w = SQ35-1204-01-r3 x = SSC10-1010-02-r2 y = SQ35-1416-01-r2 z = SQ35-1415-02-r4

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Ceiling Suspension X-Ray Tubes	CBC 2022	2.0	1.0	1.50	2.5	2.5	2.0	3.60
Wall Stands	CBC 2022	2.0	1.0	1.50	1.0	1.5	1.5	2.40

TABLE 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION YSIO & YSIO MAX COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Siemens Healthcare GmbH

System: YSIO & YSIO MAX

System Component[1)]	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
Patient Tables							
Ysio MAX Patient Table	10273210	94.9	31.5	20.3 - 37.6	835[3)]	floor	UUT_y-1
Ysio Patient Table	10281013	94.9	31.5	20.3 - 37.5	1015[3)]	floor	UUT_w-2
Imaging Systems							
Flurospot Compact (FLC)	10762484	13.4	25.9	21.8	85	floor	UUT_y-3
Flurospot Compact (FLC)	10281016	13.4	27.0	21.8	116	floor	UUT_w-6
Generator Cabinets							
Polydoros 80kW	10096950	31.5	17.1	86.7	835	floor/wall	UUT_y-6
Polydoros R80/R65	10096980	31.0	17.0	86.7	883	floor/wall	UUT_w-5
Miscelaneous Components: Docking Station and Wireless Access Point							
Docking Station	10281025	20.5	8.0	18.0	33	wall	UUT_w-3
SCALANCE W700	Scalance W700	7.9	2.8	6.2	6	wall	UUT_y-4

[1] All components are manufactured by Siemens Healthcare GmbH unless noted. Part numbers listed uniquely identify type of component, manufacturer, and material of construction for each sub-componenent within the tested units.

[2] The units were tested at different times and the subscripts on the UUTs reference the following seismic test reports:
w = SQ35-1204-01-r3 x = SSC10-1010-02-r2 y = SQ35-1416-01-r2 z = SQ35-1415-02-r4

[3] Patient table weight does not include simulated patient weights of 440lb and 660lb for UUT_y-1 and UUT_w-2, respectively.

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Patient Tables	CBC 2022	2.0	1.0	1.50	1.0	1.5	1.5	2.40
Imaging Systems	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
Generator Cabinets	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
Docking Station / Wireless Access Point	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44

TABLE 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION MULTIX FUSION COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Siemens Healthcare GmbH

System: Multix Fusion

System Component[1)]	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
Ceiling Suspension X-Ray Tubes							
3D V Stand ACCS T 3m track-synchronized	7042166	167	119	32 - 103	750	ceiling	UUT_v-6
3D V Stand ACCS T 4m track-synchronized	7042174	167	119	32 - 103	815	ceiling	interpolated
3D Stand Ysio 4m track-automated	7042224	167	172	32 - 103	890	ceiling	UUT_w-1
Wall Stands							
Top Tilting Wall Stand	10681670	30.0	28.1	82.9	490	floor	UUT_v-8
Pro Non-Tilting Wall Stand	10681650	30.0	16.6	82.9	452	floor	UUT_v-7
Patient Tables							
Multix Fusion Patient Table	10273204	94.8	31.5	20.3 - 37.6	886[2)]	floor	UUT_v-9

[1] All components are manufactured by Siemens Healthcare GmbH unless noted. Part numbers listed uniquely identify type of component, manufacturer, and material of construction for each sub-componenent within the tested units.

[2] Patient table weight does not include 660lb simulated patient weight.

[3] All wall stands exclude the optional Spacer Box.

[4] Wall stands were modified as detailed in the test report, SQ35-1202-02 Rev. 1, these enhancements are required to meet the conditions of this listing.

[5] The units were tested at different times and the subscripts on the UUTs reference the following seismic test reports:
v = SQ35-1302-02-r1 w = SQ35-1204-01-r3

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Ceiling Suspension X-Ray Tubes	CBC 2022	2.0	1.0	1.50	2.5	2.5	2.0	3.60
Wall Stands	CBC 2022	2.0	1.0	1.50	1.0	1.5	1.5	2.40
Patient Tables	CBC 2022	2.0	1.0	1.50	1.0	1.5	1.5	2.40

TABLE 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION MULTIX FUSION COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Manufacturer: Siemens Healthcare GmbH

System: Multix Fusion

System Component[1)]	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
Imaging Systems							
Flurospot Compact	10569621	17.6	27.6	22.8	158	floor	UUT_v-3
Generator Cabinets							
Polydoros RF RAD80 / 65 / 55	10606040	22.5	50.0	21.4	424	floor	UUT_v-1
Miscelaneous Components: Power Box							
Power Box	10847706	12.4	2.3	11.0	10	wall	UUT_v-2

[1] All components are manufactured by Siemens Healthcare GmbH unless noted. Part numbers listed uniquely identify type of component, manufacturer, and material of construction for each sub-componenent within the tested units.

[2] Patient table weight does not include 660lb simulated patient weight.

[3] All wall stands exclude the optional Spacer Box.

[4] Wall stands were modified as detailed in the test report, SQ35-1202-02 Rev. 1, these enhancements are required to meet the conditions of this listing.

[5] The units were tested at different times and the subscripts on the UUTs reference the following seismic test reports:
v = SQ35-1302-02-r1 w = SQ35-1204-01-r3

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Imaging Systems	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
Generator Cabinets	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
Power Box	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44

UUT_w-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rails and connecting parts of the component bolt with 2 -M10 bolts (20 bolts total) to unistrut grid spaced at 27.0" on center. The unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at 32" on center.

Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: X-Ray Tube Stand w/ 4m Bridge	**Test Date:** March / May 2012
Model Number: 7042224	**Report Number:** SQ35-1204-01 Rev. 3

UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, fully automated

UUT Description: Component of the YSIO and YSIO MAX Systems

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
888	167	172	32-103	N/A	N/A	N/A

The ceiling suspended tube stand moves laterally, rotates, and extends up and down to accommodate different patients and procedures. The system was tested in the normal operating position with the system horizontally centered, no rotation, and with a height of 50" from mounting point to bottom of collimator.

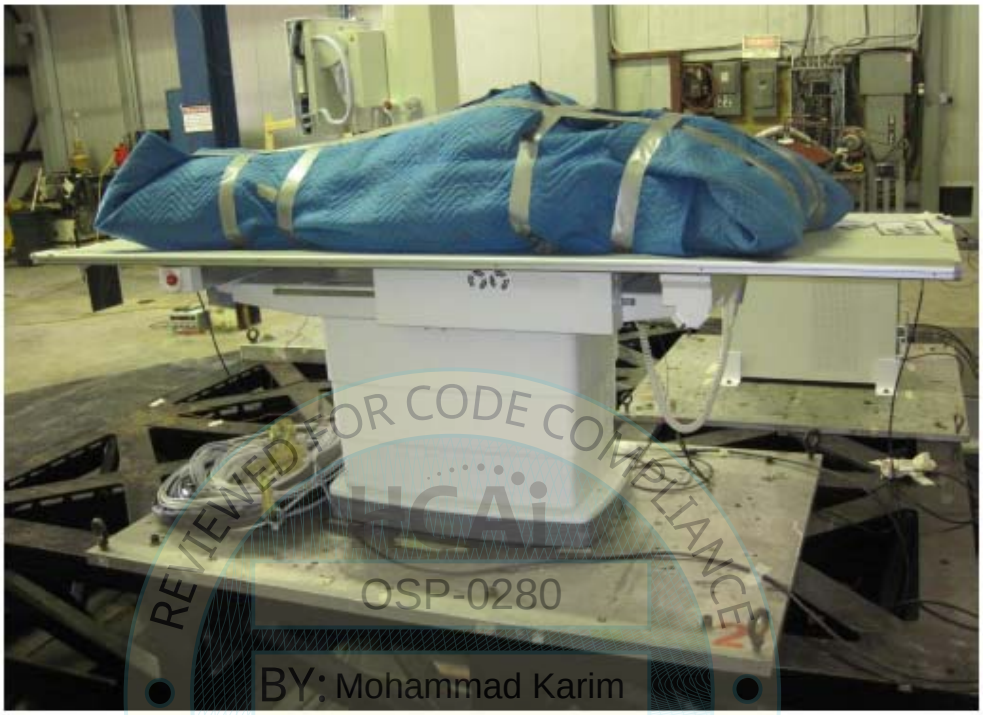
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_w-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Patient Table	**Test Date:** March 2012
Model Number: 10281013	**Report Number:** SQ35-1204-01 Rev. 3
UUT Function: Motorized patient table for support and positioning for image acquisition.	
UUT Description: Component of the YSIO and YSIO MAX systems, includes wi-D Digital Decector - Trixell Pixium FE 3542 pR (P/N: 62155967)	

UUT PROPERTIES

Weight w/ Patient(lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,675	94.9	31.5	20.3-37.5	2.4	23.0	11.7

The patient table moves laterally both ways and vertically to accommodate different patients and procedures. The system was tested in the normal operating position with the table horizontally centered, a table top height of 31.3", and a total simulated patient weight of 660lbs.

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_w-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted with 4 - 1/4" sheet metal screws

Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Docking Station w/ WI-D Detector	**Test Date:** March 2012
Model Number: 10281025	**Report Number:** SQ35-1204-01 Rev. 3

UUT Function: Wall mounted docking station for detector used in radiographic medical imaging

UUT Description: Component of the YSIO and YSIO MAX systems includes wi-D digital detector, Trixell Pixium FE 3542 pR (P/N: 62155967)

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
33	20.5	8	18	N/A	N/A	N/A

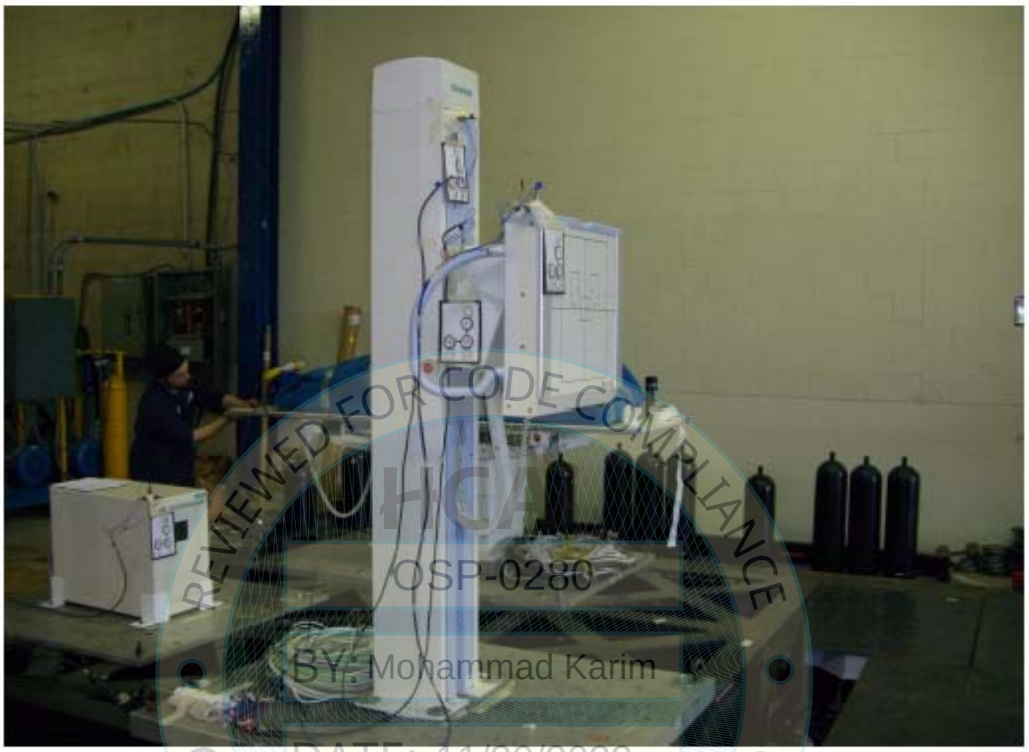
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_w-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Wall Stand	**Test Date:** March 2012
Model Number: 10150519	**Report Number:** SQ35-1204-01 Rev. 3
UUT Function: Wall stand for radiographic medical imaging	
UUT Description: Component of the YSIO and YSIO MAX systems includes wi-D Digital Detector, Trixell Pixium FE 3542 pR (P/N: 62155967)	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
661	30	26.9	82.5	8.8	8.1	8.8

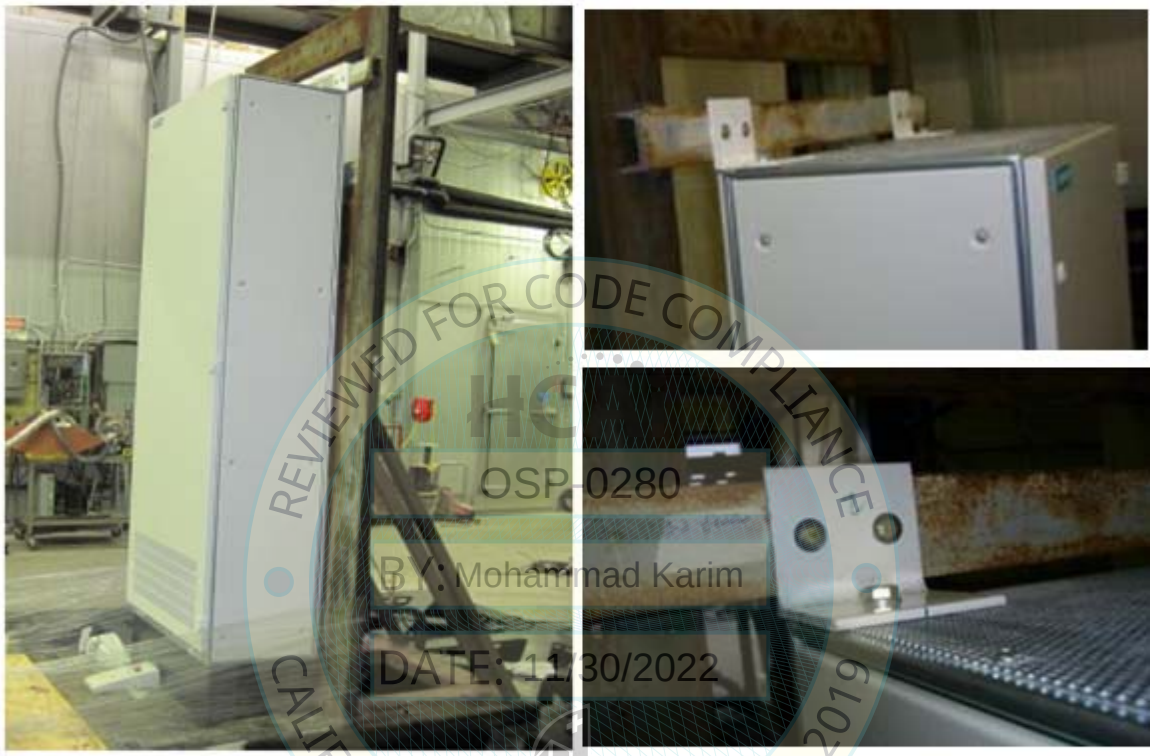
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_w-5	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid wall mounted at top back side of unit with 4 - 1/4" grade 8 bolts and rigid floor mounted with 2 - 3/8" grade 8 bolts. Wall mount brackets constructed of 4" long L4x2.5x0.25 angles that bolt thru the short leg to the UUT with a single 1/2" grade 8 bolt.



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Polydoros R80 Generator Cabinet	**Test Date:** March 2012
Model Number: 10096980	**Report Number:** SQ35-1204-01 Rev. 3
UUT Function: Generator for radiography and fluoroscopy systems	
UUT Description: Component of the YSIO and YSIO MAX systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
883	31	17	86.8	N/A	N/A	N/A

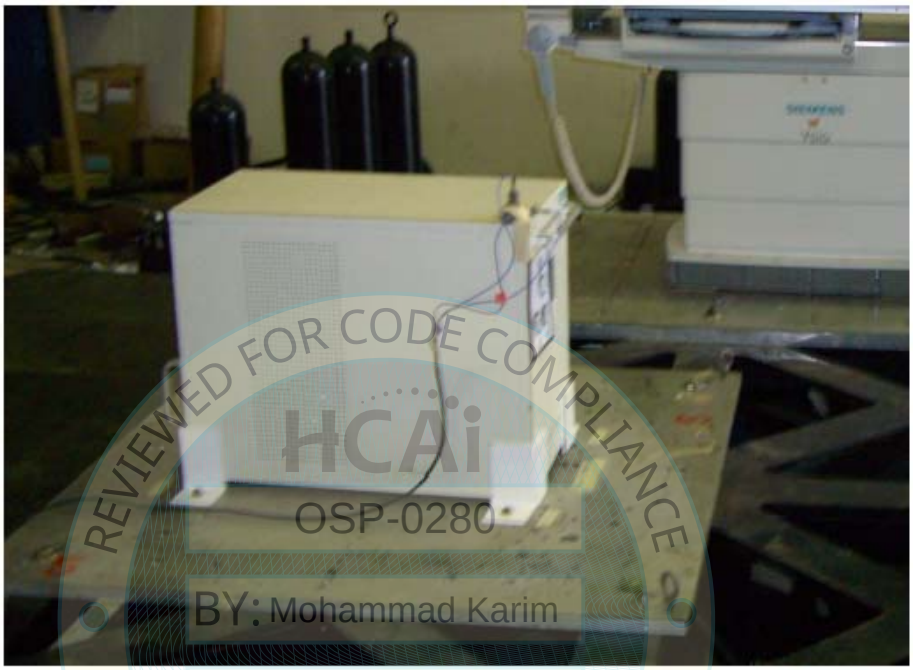
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_w-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 3/8" cap screws with washers



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Flurospot Compact Imaging System	**Test Date:** March 2012
Model Number: 10281016	**Report Number:** SQ35-1204-01 Rev. 3
UUT Function: Digital imaging solution for fluoroscopy and radiography	
UUT Description: Component of the YSIO and YSIO MAX systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
116	13.4	27	21.9	21.6	6.7	>33

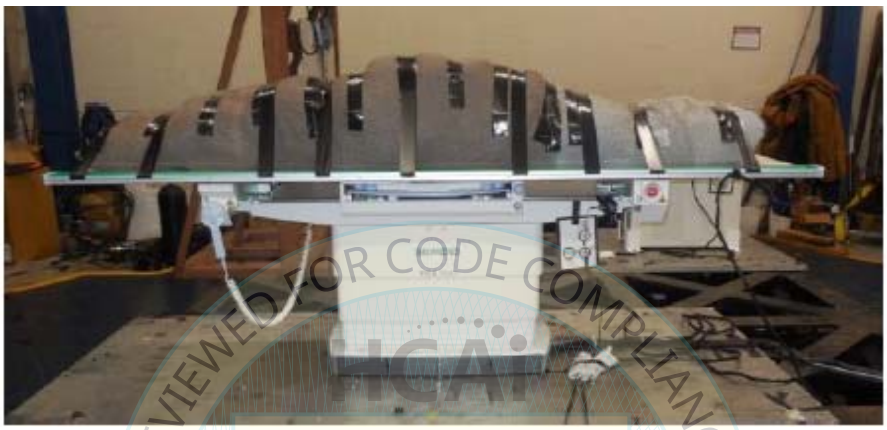
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_y-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted using 4 - 5/8" grade 8 bolts with washers



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: YSIO MAX Patient Table	**Test Date:** October 2014
Model Number: 10273210	**Report Number:** SQ35-1416-01 Rev. 2
UUT Function: Motorized patient table for support and positioning for image acquisition	
UUT Description: Component of YSIO and YSIO MAX systems, includes MAX wi-D wireless mobile digital detector - Trixell Pixium 3543EZh (P/N: 10762402)	

UUT PROPERTIES

Weight w/ Patient(lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,275	94.9	31.5	20.3 - 37.6	25.2	>33	11.6

The patient table moves laterally both ways and vertically to accommodate different patients and procedures. The system was tested in the normal operating position with the table horizontally centered, a table top height of 30", and a total simulated patient weight of 440lbs.

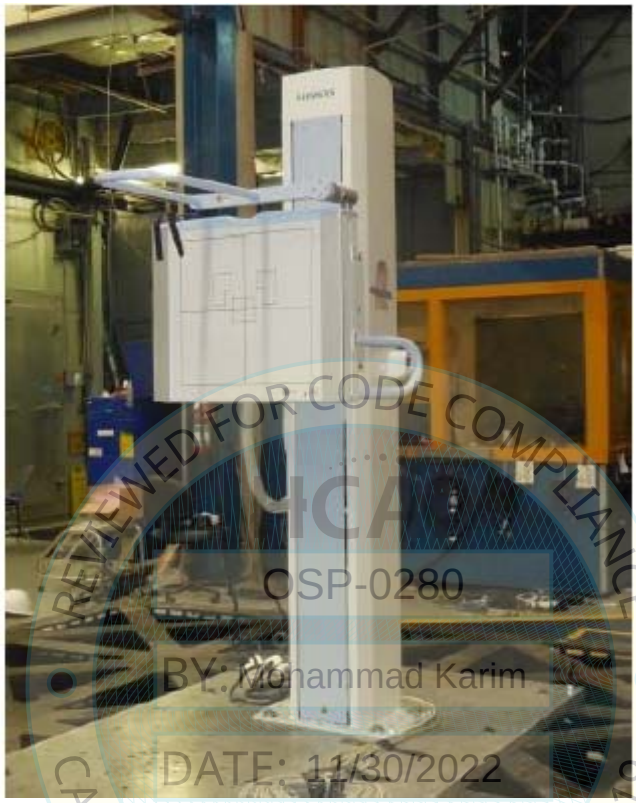
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_y-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" grade 8 bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Bucky Wall Stand w/ MAX Static	**Test Date:** October 2014
Model Number: 10681702	**Report Number:** SQ35-1416-01 Rev. 2

UUT Function: Radiographic wall stand for X-ray exposures

UUT Description: Component of YSIO and YSIO MAX systems includes Trixell MAX Static fixed plate detector (P/N: 10762401)

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
528	30	48.9	85	8.6	7.7	8.7

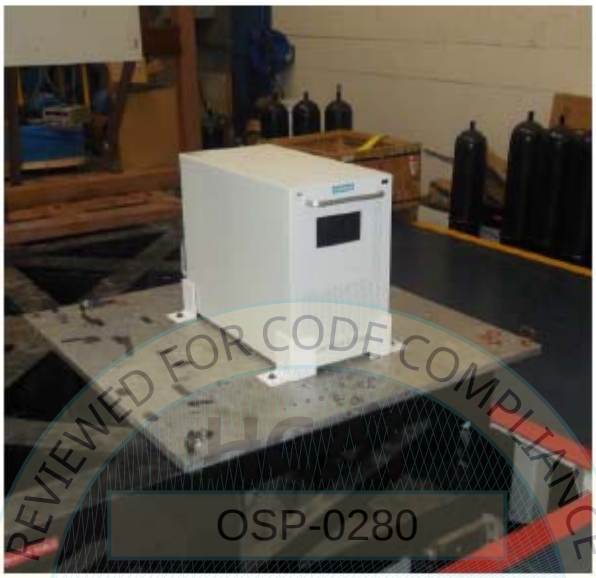
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_y-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 3/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Fluorospot Compact (FLC)	**Test Date:** October 2014
Model Number: 10762484	**Report Number:** SQ35-1416-01 Rev. 2
UUT Function: Digital imaging solution for fluoroscopy and radiography	
UUT Description: Component of the YSIO and YSIO MAX systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
85	13.4	26	21.7	20.7	12.7	26.3

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_y-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted with 4 - 1/4" screws

Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Wireless access point	**Test Date:** October 2014
Model Number: Scalance W700	**Report Number:** SQ35-1416-01 Rev. 2
UUT Function: Wireless access point	
UUT Description: Component of the YSIO and YSIO MAX systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
6	7.9	2.8	6.2	N/A	N/A	N/A

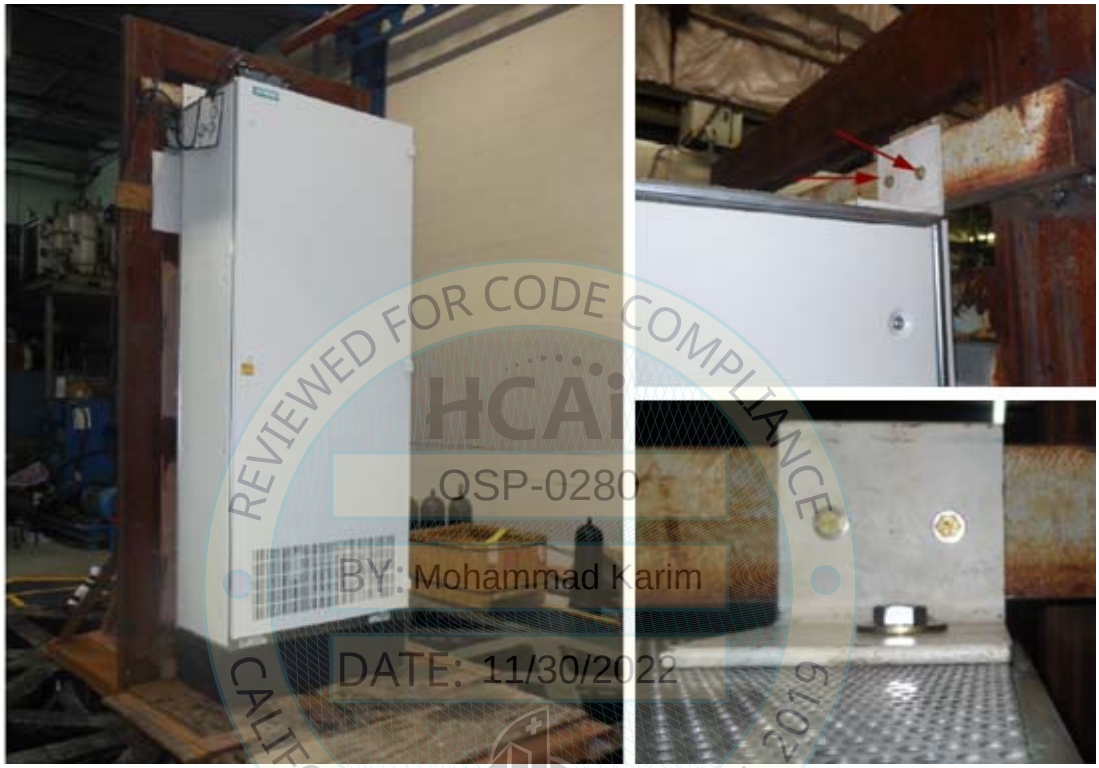
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_y-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted at top back side of unit with 4 - 1/4" grade 8 bolts and rigid floor mounted with 2 - 5/8" grade 8 bolts. Wall mount brackets constructed of 4" long L4x2.5x0.25 angles that bolt thru the short leg to the UUT with a single 1/2" grade 8 bolt.



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Polydoros Generator Cabinet	**Test Date:** October 2014
Model Number: 10096950	**Report Number:** SQ35-1416-01 Rev. 2
UUT Function: Generator for radiography and fluoroscopy systems	
UUT Description: Component of the YSIO and YSIO MAX systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
835	31.5	17.1	86.7	N/A	N/A	N/A

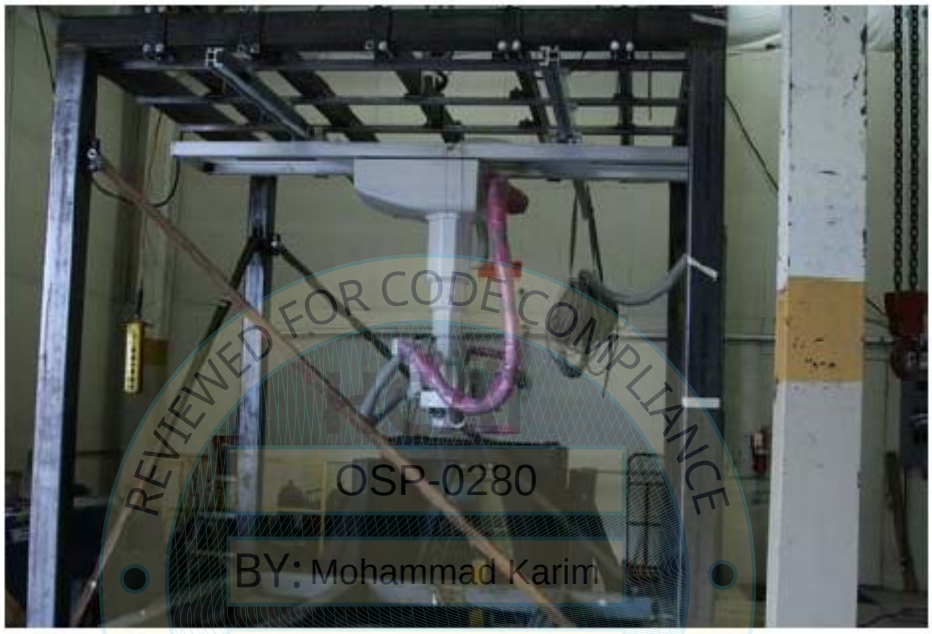
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_x-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rails and connecting parts of the component bolt with 2 -M10 bolts (20 bolts total) to unistrut grid spaced at 26.0" on center. The unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at 20" on center.



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: X-Ray Tube Stand w/ 3m Bridge	**Test Date:** April 2010
Model Number: 7042232	**Report Number:** SSC10-1010-2 Rev. 2
UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, fully synchronized	
UUT Description: Component of the Luminos dRF System	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
754	120	126	106	N/A	N/A	N/A

The ceiling suspended tube stand moves laterally, rotates, and extends up and down to accommodate different patients and procedures. The system was tested in the normal operating position with the system horizontally centered, no rotation, and with a height of 50" from mounting point to bottom of collimator.

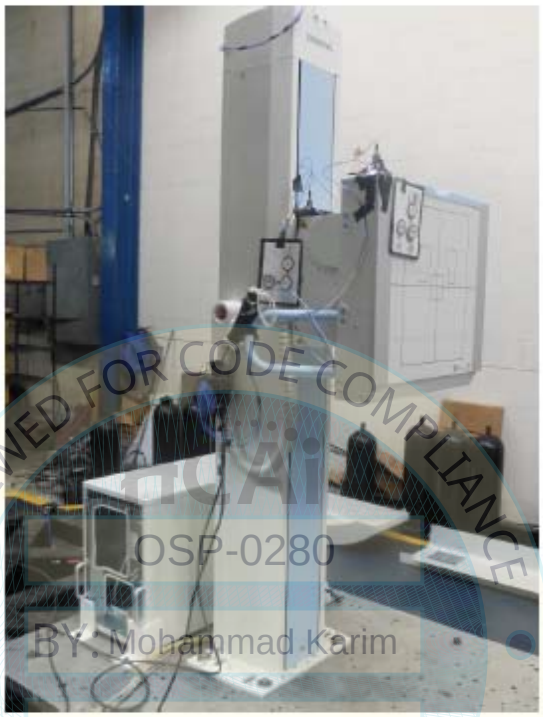
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_z-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 4 - 5/8" Gr. 8 bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Tilting Bucky Wall Stand	**Test Date:** July 2014
Model Number: 10681704	**Report Number:** SQ35-1415-02 Rev. 4
UUT Function: Wall stand for radiographic medical imaging	
UUT Description: Component of the YSIO and YSIO MAX Systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
643	30	28.1	82.9	11.7	9.1	9.1

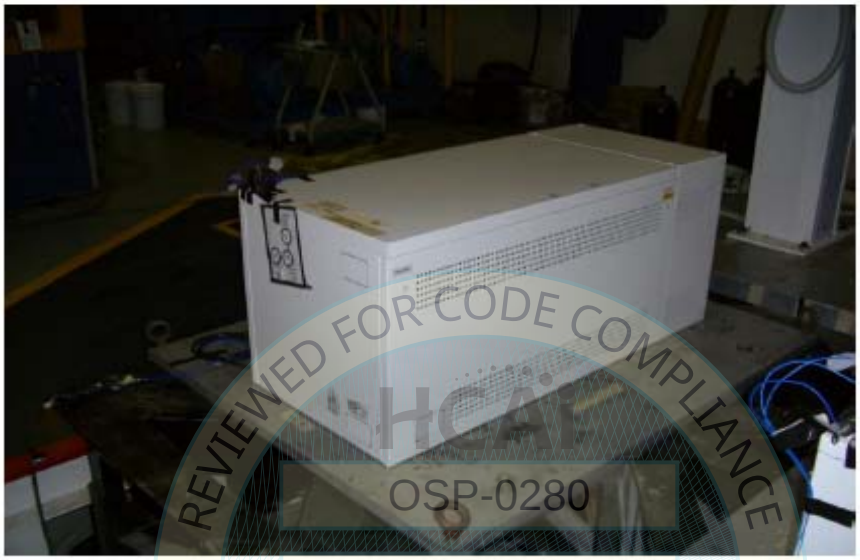
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_V-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 3/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Polydoros RF RAD80 Generator	**Test Date:** April 2013
Model Number: 10606040	**Report Number:** SQ35-1302-02 Rev. 1
UUT Function: Generator for radiography and fluoroscopy systems	
UUT Description: Component of Multix Fusion system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
424	22.5	50	21.4	31.9	32.6	12.3

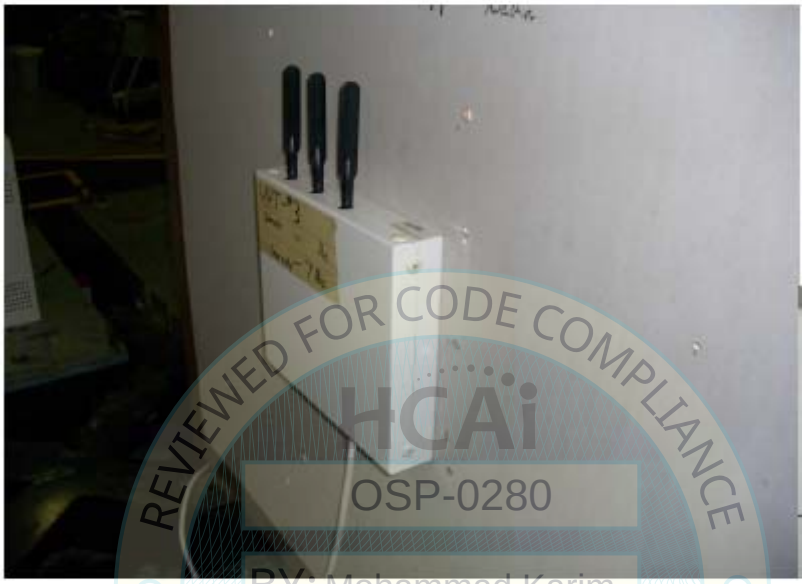
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_V-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted with 4 - 1/4" sheet metal screws



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Power Box	**Test Date:** April 2013
Model Number: 10847706	**Report Number:** SQ35-1302-02 Rev. 1
UUT Function: Power box for wired detector	
UUT Description: Component of Multix Fusion system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
10	12.4	2.3	11	N/A	N/A	N/A

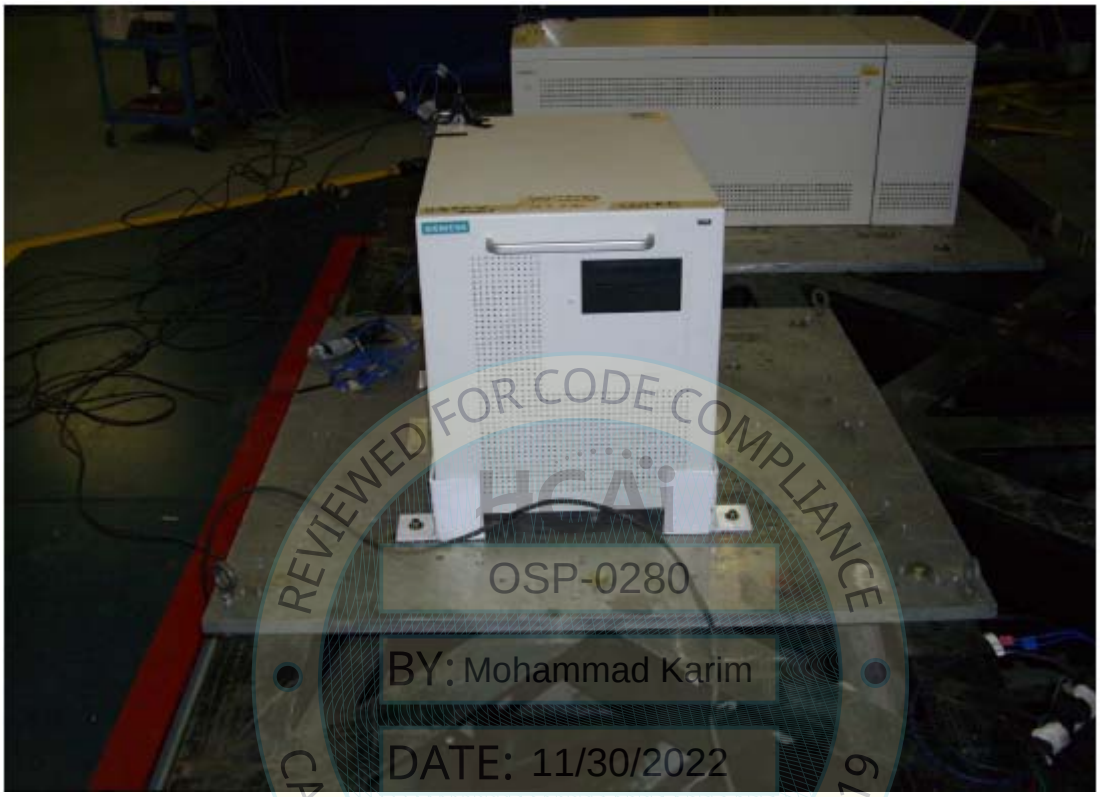
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_v-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted with 4 - 3/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Fluorospot Compact Imaging System	**Test Date:** April 2013
Model Number: 10569621	**Report Number:** SQ35-1302-02 Rev. 1
UUT Function: Digital imaging solution for fluoroscopy and radiography	
UUT Description: Component of Multix Fusion system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
158	17.6	27.6	22.8	18.4	12.5	16.2

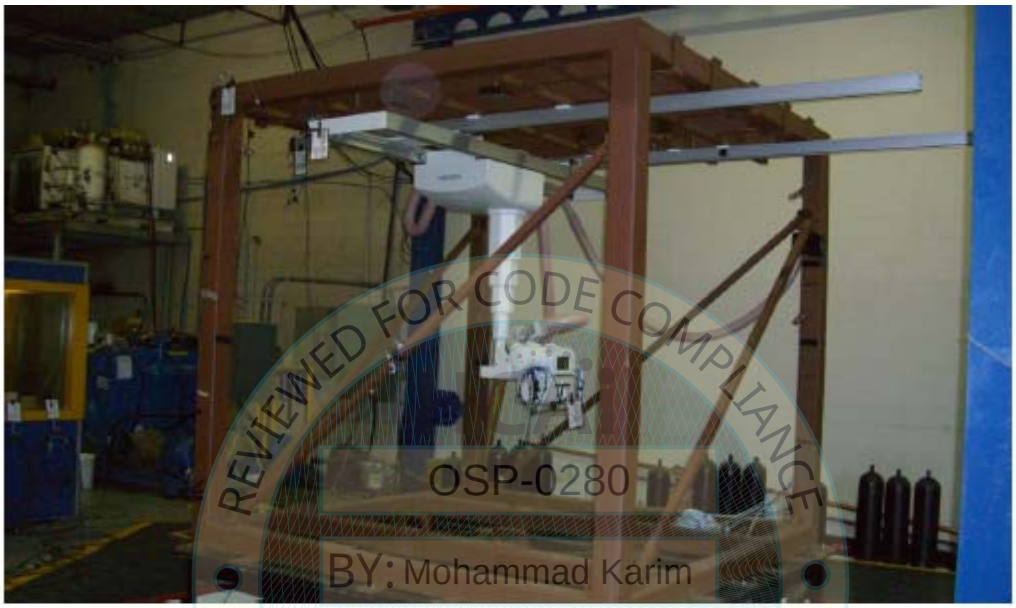
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_v-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rails and connecting parts of the component bolt with 2 -M10 bolts (20 bolts total) to unistrut grid spaced at 26.0" on center. The unistrut grid consisted of Unistrut P1001 rails anchored with 2 - 3/8" bolts at each intersection to the ceiling fixture framing spaced at 20" on center.



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: X-Ray Tube Stand w/ 3m Bridge	**Test Date:** April 2013
Model Number: 10746666 / 7042166	**Report Number:** SQ35-1302-02 Rev. 1
UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, fully synchronized	
UUT Description: Component of Multix Fusion system	

UUT PROPERTIES

Weight w/ Rails (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
750	167	119	33-104	N/A	N/A	N/A

The ceiling suspended tube stand moves laterally, rotates, and extends up and down to accommodate different patients and procedures. The system was tested in the normal operating position with the system horizontally centered, no rotation, and with a height of 72" from mounting point to bottom of collimator.

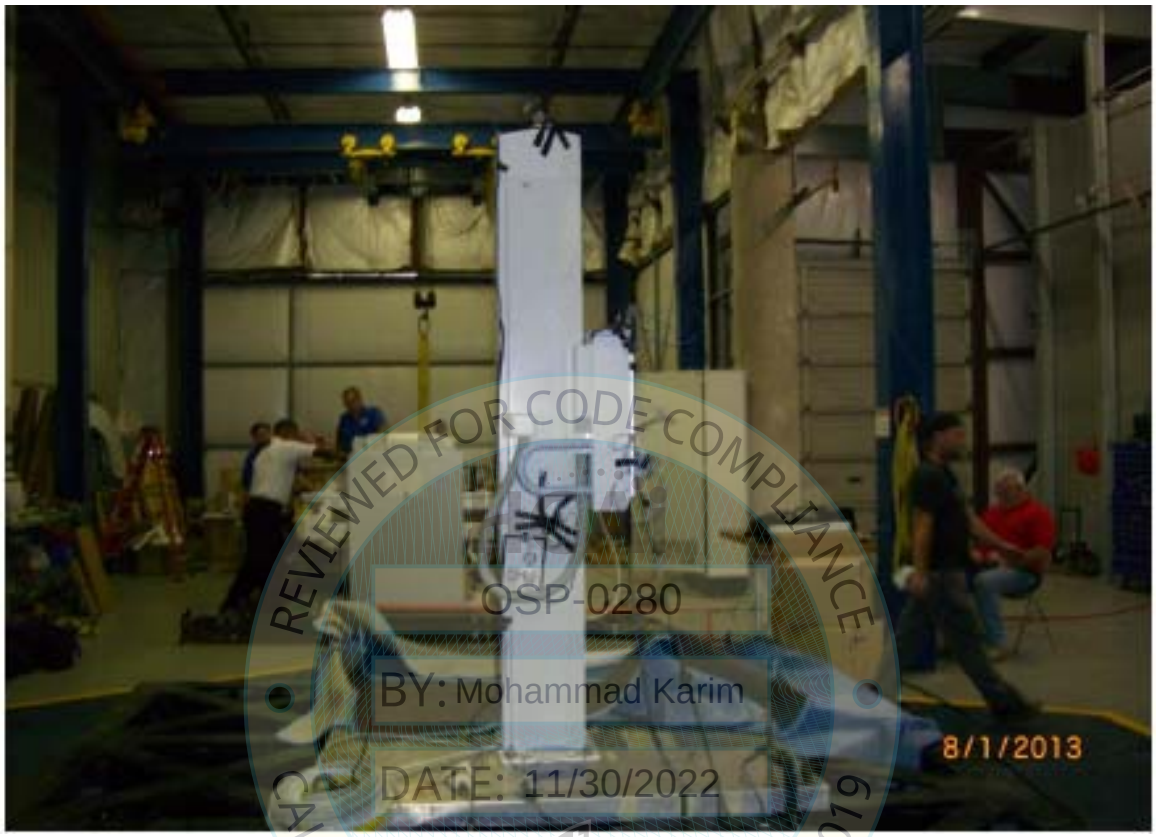
SEISMIC TEST PARAMETERS

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_v-7	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Pro Non-Tilt Wall Stand	**Test Date:** August 2013
Model Number: 10681650	**Report Number:** SQ35-1302-02 Rev. 1

UUT Function: Wall stand for radiographic medical imaging

UUT Description: Component of Multix Fusion system, included Varian Medical Systems portable digital detector (P/N: 10847569) installed in cassette tray during test. Cassette tray was modified to prevent detector from ejecting during testing.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
452	30	16.6	82.9	12.8	14.5	13.6

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_v-8	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" bolts

Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Top Tilting Wall Stand	**Test Date:** August 2013
Model Number: 10681670	**Report Number:** SQ35-1302-02 Rev. 1

UUT Function: Wall stand for radiographic medical imaging

UUT Description: Component of Multix Fusion system, included Varian Medical Systems portable digital detector (P/N: 10847569) installed in cassette tray during test. Cassette tray was modified to prevent detector from ejecting during testing.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
490	30	28.1	82.9	8.4	9.1	9.3

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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

UUT_v-9	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid floor mounted with 4 - 5/8" bolts

Manufacturer: Siemens Healthcare GmbH	**Test Location:** Environmental Testing Laboratory
Component: Patient Table	**Test Date:** August 2013
Model Number: 10273204	**Report Number:** SQ35-1302-02 Rev. 1
UUT Function: Motorized patient table for support and positioning for image acquisition	
UUT Description: Component of Multix Fusion system, included Varian Medical Systems portable digital detector (P/N: 10847569) installed in cassette tray during test. Cassette tray was modified to prevent detector from ejecting during testing.	

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,546	31.5	94.8	20.3-37.6	2.4	27.4	7.4

The patient table moves laterally both ways and vertically to accommodate different patients and procedures. The system was tested in the normal operating position with the table horizontally centered, a table top height of 32", and a total simulated patient weight of 660lbs.

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 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.34	0.54

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