APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0733

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Siemens Healthcare GmbH

Manufacturer's Technical Representative: Tina Kollmann

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

Telephone: +49 1731 048919 Email: tina.kollmann@siemens-healthineers.com

Product Information

Product Name: Fluoroscopy and Radiography Systems

Product Type: NA

Product Model Number: MULTIX Impact and MULTIX Impact C Radiography Systems

General Description: Multi-component digital and analog radiographic medical imagining systems.

Mounting Description: Rigid, 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: WE Gundy & Associates, Inc

Contact Person: Travis Soppe

Mailing Address: PO Box 9121, Boise, ID 83707

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

Title: President

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: IABG TEST LABORATORY

Contact Person: Dr. Steffen Roedling

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

Telephone: +49 89 6088 2052 Email: roedling@iabg.de

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 at z/h = 1 and 2.5 at z/h = 0

a_p (Amplification factor) = See attachments

R_p (Response modification factor) = See attachments

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 06/20/2029

Date: 6/20/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

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

Condition of Approval (if applicable):

Table 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

System: MULTIX Impact and MULTIX Impact C Systems | **Manufacturer:** Siemens Healthcare GmbH

System Component[1]	Siemens Part Number	Dimensions (in)			Weight (lb)[3]	Mounting	UUT[2]
		Width	Length	Height			
Ceiling Suspension X-Ray Tubes							
Tube stand 3D V ACSS TTP Carriage 3D V 3m manual	11373405 (stand) 07042133 (carriage)	118.1	167.3	31.5-102.4	792	ceiling	extrapolated
Tube stand 3D V ACSS TTM Carriage 3D V 3m manual	11373401 (stand) 07042133 (carriage)	118.1	167.3	31.5-102.4	793	ceiling	extrapolated
Tube stand 3D V SF Carriage 3D 3m SF motorized	07042125 (stand) 07042091 (carriage)	119.0	167.0	33.0-103.0	803	ceiling	UUT_u-1
Tube stand 3D V ACSS TTM Carriage 3D V 4m manual	11373401 (stand) 07042141 (carriage)	157.5	196.9	31.5-102.4	882	ceiling	UUT_x-3
Tube stand 3D V ACSS TTP Carriage 3D V 4m manual	11373405 (stand) 07042141 (carriage)	157.5	196.9	31.5-102.4	881	ceiling	interpolated
Tube stand 3D V SF Carriage 3D 4m manual	07042125 (stand) 07042141 (carriage)	172.0	167.0	33.0-103.0	816	ceiling	UUT_u-2
Floor Mounted X-Ray Tubes[3]							
FTS-SA-A (short rail)	11584390 (stand) 11333516 (rail)	59.4	51.2	86.7	922	floor	UUT_w-1
FTS-FA-A (short rail)	11333833 (stand) 11333516 (rail)	59.4	51.2	86.7	922	floor	interpolated
FTS-SA-A (medium rail)	11584390 (stand) 11584219 (rail)	93.1	51.2	86.7	959	floor	interpolated
FTS-FA-A (medium rail)	11333833 (stand) 11584219 (rail)	93.1	51.2	86.7	959	floor	interpolated
FTS-SA-A (long rail)	11584390 (stand) 11584220 (rail)	124.4	51.2	86.7	992	floor	interpolated
FTS-FA-A (long rail)	11333833 (stand) 11584220 (rail)	124.4	51.2	86.7	992	floor	UUT_w-2

[1] All components are manufactured by Siemens Healthcare GmbH unless noted. Part numbers listed uniquely identify the 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:
t = TAF4-PB-17-343-V1 u = TAB3-PB-20-134-V1 v = TAB3-PB-21-148-V1 w = TAB3-PB-21-151-V1
x = TAB3-PB-21-152-V1 y = TAB3-PB-21-153-V1 z = TAB3-PB-21-154-V1

[3] The floor mounted X-Ray Tubes listed all utilize the same tube stand (RAY-14S_3F - sn:07037208), collimator (RFU - sn:11491001), and user touch interface (TUI - sn:11368796). The only difference between systems is the base rail that comes as a fully automatic (FA) or semi-automatic (SA) option with a short, medium, long rail.

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
		2.5	0					1.50
Floor Mounted X-Ray Tubes	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13

Table 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

System: MULTIX Impact and MULTIX Impact C Systems | **Manufacturer:** Siemens Healthcare GmbH

System Component[1]	Siemens Part Number	Dimensions (in)			Weight (lb)[3]	Mounting	UUT[2]
		Width	Length	Height			
Bucky Wall Stands							
Bucky Wall Stand Mars 1717VS Wifi Detector	11506510 (stand) 11506513 (wifi)	31.9	33.1	86.3	426	floor	UUT_y-7
Bucky Wall Stand MAX wi-D Wifi Detector	11506510 (stand) 11506513 (wifi)	31.9	33.1	86.3	426	floor	interpolated
Bucky Wall Stand Venu1717X Core Fixed Detector	11506510 (stand) 11506512 (fixed)	31.9	33.1	86.3	426	floor	UUT_v-8
Patient Tables							
TBL-A-EZH	11506506 (table) 11368305 (top)	83.9	31.5	19.6-36.0	883	floor	UUT_y-5
TBL-A-EZH	11506506 (table) 11145351 (top)	91.7	31.5	19.6-36.0	893	floor	interpolated
TBL_A_W	11506507 (table) 11368305 (top)	83.9	31.5	19.6-36.0	883	floor	interpolated
TBL_A_W	11506507 (table) 11145351 (top)	91.7	31.5	19.6-36.0	893	floor	UUT_y-4
Power Supply Unit / Generator[4]							
Unified Generator & PSU	11011802 (55/65kw)	23.6	22.0	52.0	415	floor	extrapolated
Unified Generator & PSU	11011803 (80kw)	23.6	22.0	52.0	419	floor	UUT_z-6
Polydoros Generator & PSU	10307360 (80kw)	50.9	22.4	21.4	499	floor	UUT_t-1

[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:
t = TAF4-PB-17-343-V1 u = TAB3-PB-20-134-V1 v = TAB3-PB-21-148-V1 w = TAB3-PB-21-151-V1
x = TAB3-PB-21-152-V1 y = TAB3-PB-21-153-V1 z = TAB3-PB-21-154-V1

[3] Patient table weights do not include simulated patient weight of 540lb.

[4] The Unified Generator configurations utilize the same power supply unit (PSU sn: 11333304) and cabinet (sn: 1133305)

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
Bucky Wall Stands	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13
Patient Tables	CBC 2022	2.0	1.0	1.50	1.0	1.5	2.0	2.40
		2.5	0					1.13
Power Supply Unit / Generator	CBC 2022	2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13

Table 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

System: MULTIX Impact and MULTIX Impact C Systems | **Manufacturer:** Siemens Healthcare GmbH

System Component[1]	Siemens Part Number	Dimensions (in)			Weight (lb)[3]	Mounting	UUT[2]
		Width	Length	Height			
PC / User Interface							
IS Workstation	11333707	23.3	2.5	14.6	34	wall	UUT_z-9
IS Workstation Touch Screen	11333732	23.3	2.5	14.6	34	wall	UUT_v-10
Wireless Access Point							
ARUBA 303 US (ARUBA)	11333839	5.9	5.9	1.4	1	wall	UUT_v-11

[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:

t = TAF4-PB-17-343-V1 u = TAB3-PB-20-134-V1 v = TAB3-PB-21-148-V1 w = TAB3-PB-21-151-V1
x = TAB3-PB-21-152-V1 y = TAB3-PB-21-153-V1 z = TAB3-PB-21-154-V1

SEISMIC CERTIFICATION LIMITS

System Component	Code	S_{DS} (g)	z / h	I_P	a_P	R_P	Ω_0	F_P / W_P
PC / User Interface	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
		2.5	0					1.13
Wireless Access Point	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
		2.5	0					1.13

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

Mounting Details: Rails and connecting parts of the 3D Tube Stand bolt with M10 bolts torqued at 36 ft-lb to unistrut grid spaced at 26.6" on center. The unistrut grid consisted of MURPO#150969 MPR-41/82/2.0 H-Profiles (Unistrut P1001 equivalent) anchored with 2 - M10 bolts with clamping claws (MURPO 157219) at each intersection to the ceiling fixture framing spaced at 23.6" on center.

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Tube Stand 3D V SF / Carriage 3D 3m SF motorized	**Test Date:** September 2020
Model Number: 07042125 (stand) / 07042091 (carriage)	**Report Number:** TAB3-PB-20-134-V1
UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, fully automated	
UUT Description: Component of the YSIO X.pree X-Ray system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
803	119	167	33-103	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 downard extension of 32in (height = 33in + 32in = 65in).

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rails and connecting parts of the 3D Tube Stand bolt with M10 bolts torqued at 36 ft-lb to unistrut grid spaced at 26.6" on center. The unistrut grid consisted of MURPO#150969 MPR-41/82/2.0 H-Profiles (Unistrut P1001 equivalent) anchored with 2 - M10 bolts with clamping claws (MURPO 157219) at each intersection to the ceiling fixture framing spaced at 23.6" on center.

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Tube Stand 3DV SF / Carriage 3D 4m manual	**Test Date:** September 2020
Model Number: 07042125 (stand) / 07042141 (carriage)	**Report Number:** TAB3-PB-20-134-V1
UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, manual	
UUT Description: Component of the YSIO X.pree X-Ray system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
816	172	167	33-103	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 downard extension of 32in (height = 33in + 32in = 65in).

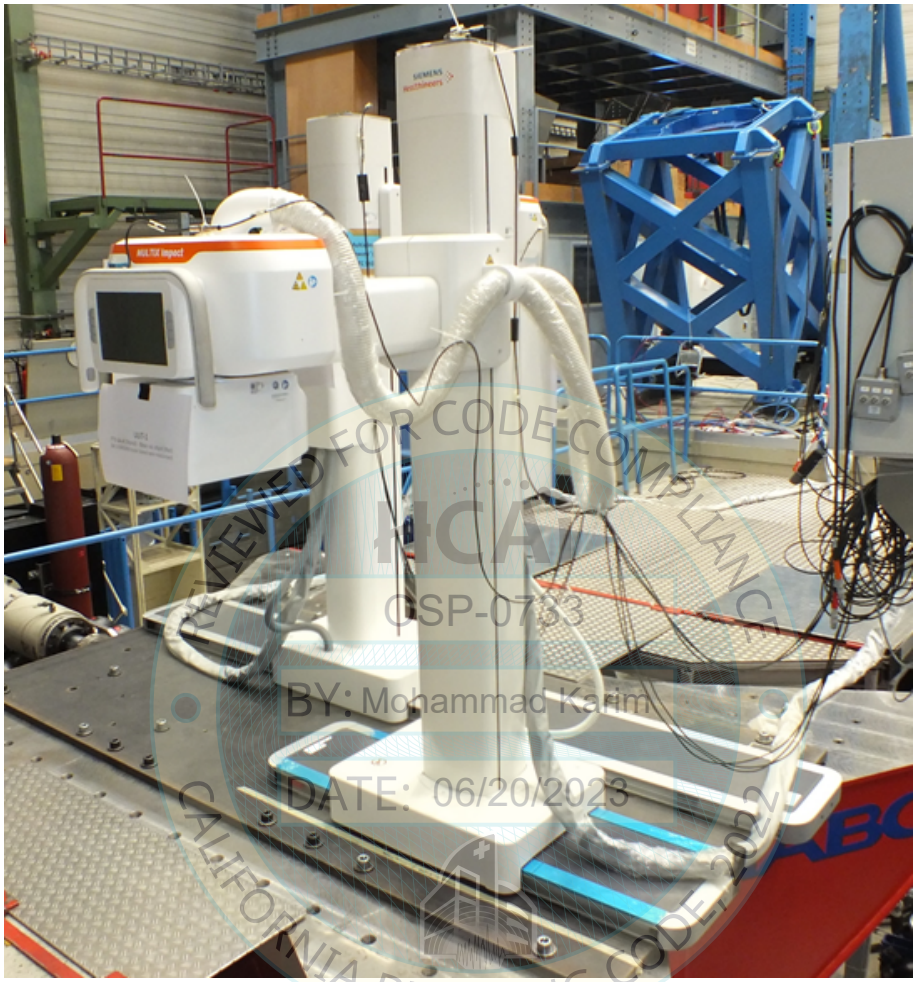
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rigid floor mounted with 6 - M10 Gr. 10.9 bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: FTS-SA-A (short rail)	**Test Date:** September 2021
Model Number: 11584390 (stand) / 11333516 (rail)	**Report Number:** TAB3-PB-21-151-V1
UUT Function: Floor mounted tube stand on rails for radiographic medical imaging	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
922	59.4	51.2	86.7	2.8	3.1	9.2

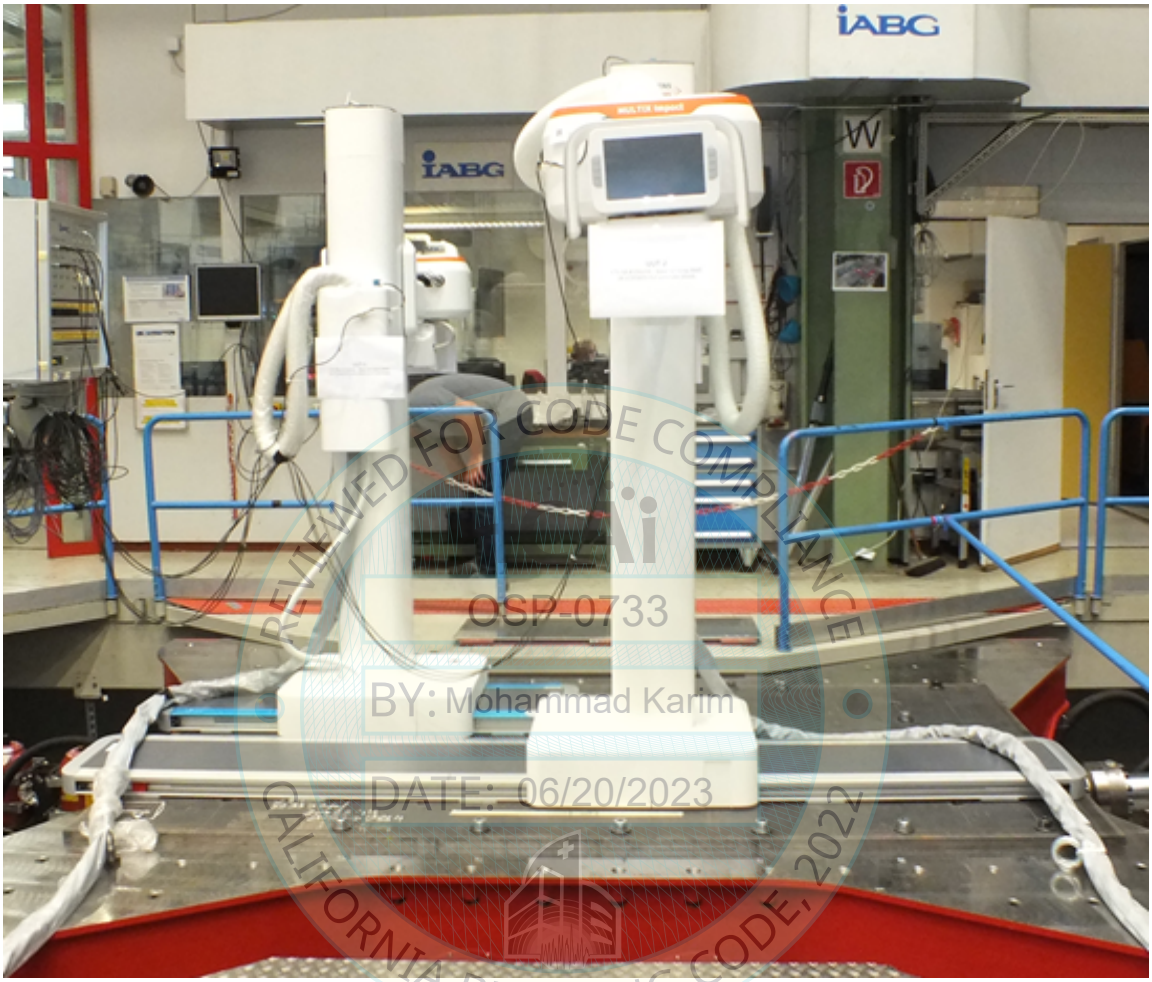
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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 12 - M10 Gr. 10.9 bolts



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: FTS-FA-A (long rail)	**Test Date:** September 2021
Model Number: 11333833 (stand) / 11584220 (rail)	**Report Number:** TAB3-PB-21-151-V1
UUT Function: Fully automatic floor mounted tube stand on rails for radiographic medical imaging	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
992	124.4	51.2	86.7	2.6	3.1	8.9

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rails and connecting parts of the 3D Tube Stand bolt with M10 bolts torqued at 36 ft-lb to unistrut grid spaced at 26.6" on center. The unistrut grid consisted of MURPO#150969 MPR-41/82/2.0 H-Profiles (Unistrut P1001 equivalent) anchored with 2 - M10 bolts with clamping claws (MURPO 157219) at each intersection to the ceiling fixture framing spaced at 26.8" on center.

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Tube Stand 3D V / Carriage 3D V 4m manual	**Test Date:** September 2021
Model Number: 11373401 (stand) / 07042141 (carrriage)	**Report Number:** TAB3-PB-21-152-V1
UUT Function: X-Ray stand, ceiling suspended, for use in radiography imaging, fully automated	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
882	157.5	196.9	31.5-102.4	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 downard extension of 31.5in (height = 31.5in + 31.5in = 63in).

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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 floor mounted using 4 - M10 grade 10.9 bolts with washers

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: TBL_A_W	**Test Date:** September 2021
Model Number: 11506507 (table) / 11145351 (top)	**Report Number:** TAB3-PB-21-153-V1
UUT Function: Motorized patient table for support and positioning for image acquisition	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems, includes Mars 1717VS(Cor XL) detector.	

UUT PROPERTIES

Weight w/ Patient(lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,433	91.7	31.5	19.6-36.0	2.5	> 33	9.2

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 27.6", and a total simulated patient weight of 540lbs.

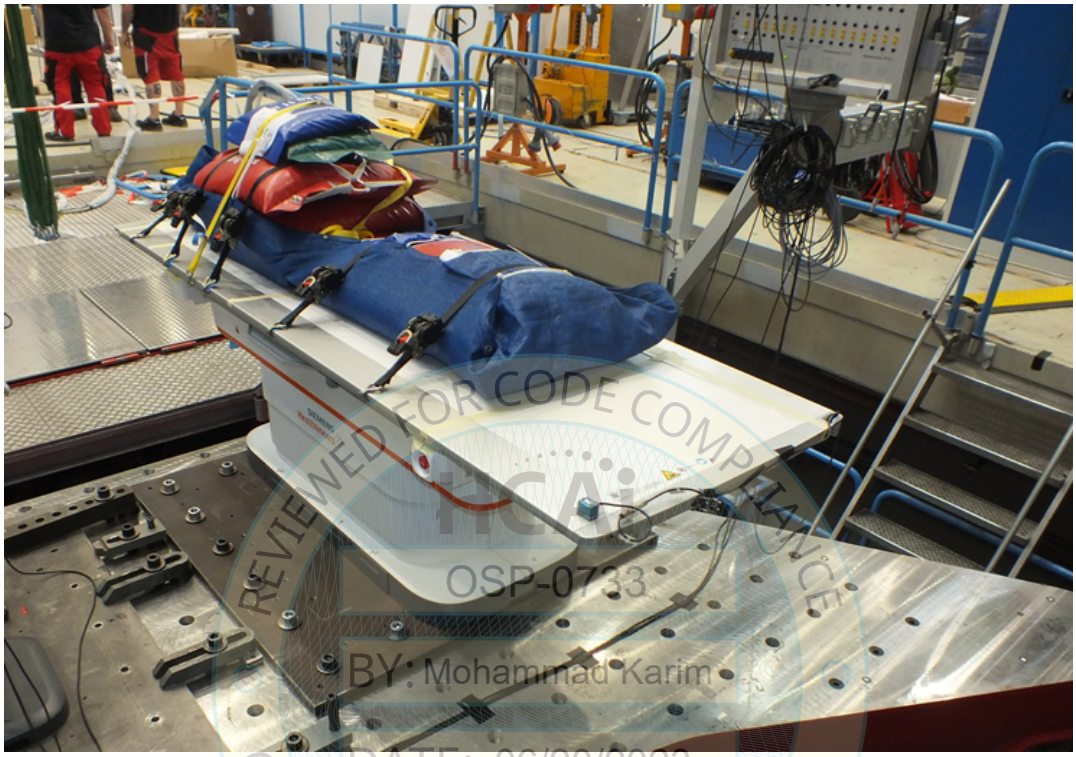
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rigid floor mounted using 4 - M10 grade 10.9 bolts with washers



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: TBL-A-EZH	**Test Date:** September 2021
Model Number: 11506506 (table) / 11368305 (top)	**Report Number:** TAB3-PB-21-153-V1

UUT Function: Motorized patient table for support and positioning for image acquisition

UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems, includes MAX wi-D pixium 3543 EZh detector (sn:11105032).

UUT PROPERTIES

Weight w/ Patient(lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,423	83.9	31.5	19.6-36.0	2.5	> 33	8.8

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 27.6", and a total simulated patient weight of 540lbs.

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mounted using 4 - M10 grade 10.9 bolts with washers

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Power Supply Unit and Generator	**Test Date:** September 2021
Model Number: 11011803 (80kw) 11333304 (PSU) / 11333305 (Cabinet)	**Report Number:** TAB3-PB-21-154-V1
UUT Function: Generator for radiography and fluoroscopy systems.	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
419	23.6	22	52	6.4	8.5	25

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rigid floor mounted using 4 - M8 grade 8.8 bolts and 2 - M10 grade 10.9 bolts with washers

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Power Supply Unit and Generator	**Test Date:** October 2017
Model Number: 10307360 (80kw) / 11020582 (PSU)	**Report Number:** TAF4-PB-17-343-V1
UUT Function: Generator for radiography and fluoroscopy systems.	
UUT Description: Component of the MULTIX Fusion Max X-Ray system	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
499	50.9	22.4	21.4	26.2	26.7	> 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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rigid floor mounted with 4 - M10 Gr. 8 bolts

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Bucky Wall Stand / Mars 1717VS Wifi Detector	**Test Date:** September 2021
Model Number: 11506510 (stand) / 11506513 (wifi)	**Report Number:** TAB3-PB-21-153-V1

UUT Function: Radiographic wall stand for X-ray exposures

UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems, includes sn: 1133822 Mars 1717VS(Cor XL) detector, sn:11506310 Tilting Module, sn:11506858 Front Module cover_Mars.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
426	31.9	33.1	86.3	7.9	9.4	6.3

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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 - M10 Gr. 8 bolts

Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: Bucky Wall Stand / Venu1717X Core Fixed Detector	**Test Date:** September 2021
Model Number: 11506510 (stand) / 11506512 (fixed)	**Report Number:** TAB3-PB-21-148-V1

UUT Function: Radiographic wall stand for X-ray exposures

UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems, includes sn:11333821 Venu 1717X Core static fixed detector, sn:11506310 Tilting Module, sn:11506697 Front Module cover_venu.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
426	31.9	33.1	86.3	6.4	7.2	8.9

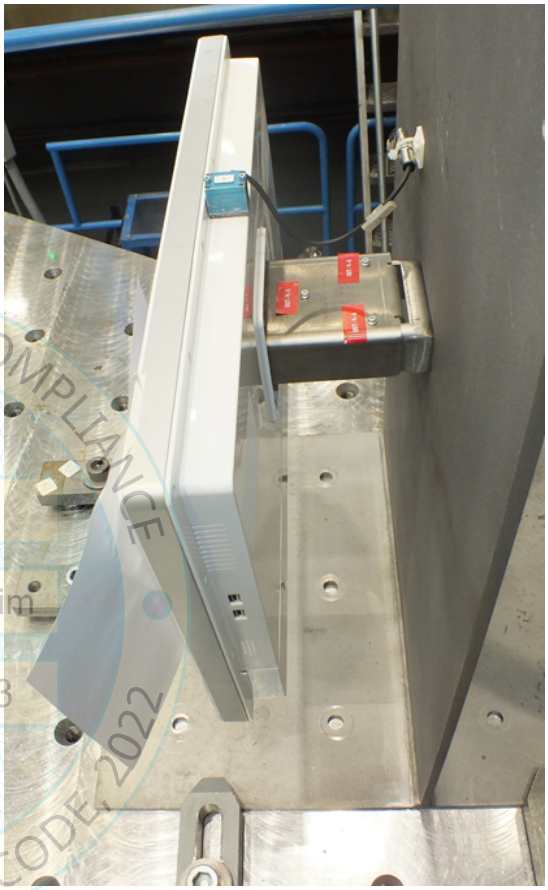
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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

Mounting Details: Rigid wall mounted with 3 - M6 grade 8.8 screws. Wall mount with Siemens brackets (11506241, 11506242).



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: IS Workstation	**Test Date:** September 2021
Model Number: 11333707	**Report Number:** TAB3-PB-21-154-V1
UUT Function: User interface for radiography system.	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
34	23.3	2.5	14.6	NA	NA	NA

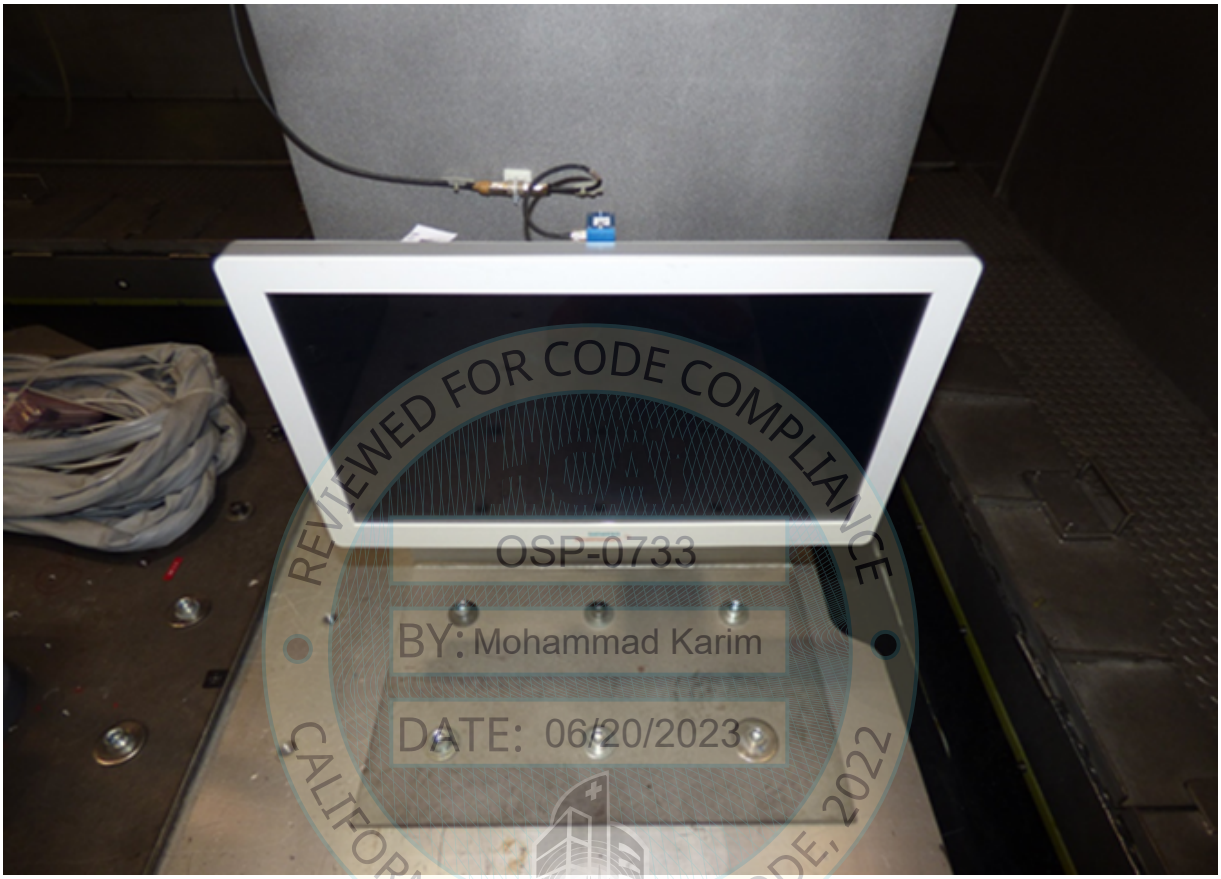
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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-10	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted with 3 - M6 grade 8.8 screws. Wall mount with Siemens brackets (11506241, 11506242).



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: IS Workstation Touch Screen	**Test Date:** September 2021
Model Number: 11333732	**Report Number:** TAB3-PB-21-148-V1
UUT Function: User interface for radiography system.	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
34	23.3	2.5	14.6	NA	NA	NA

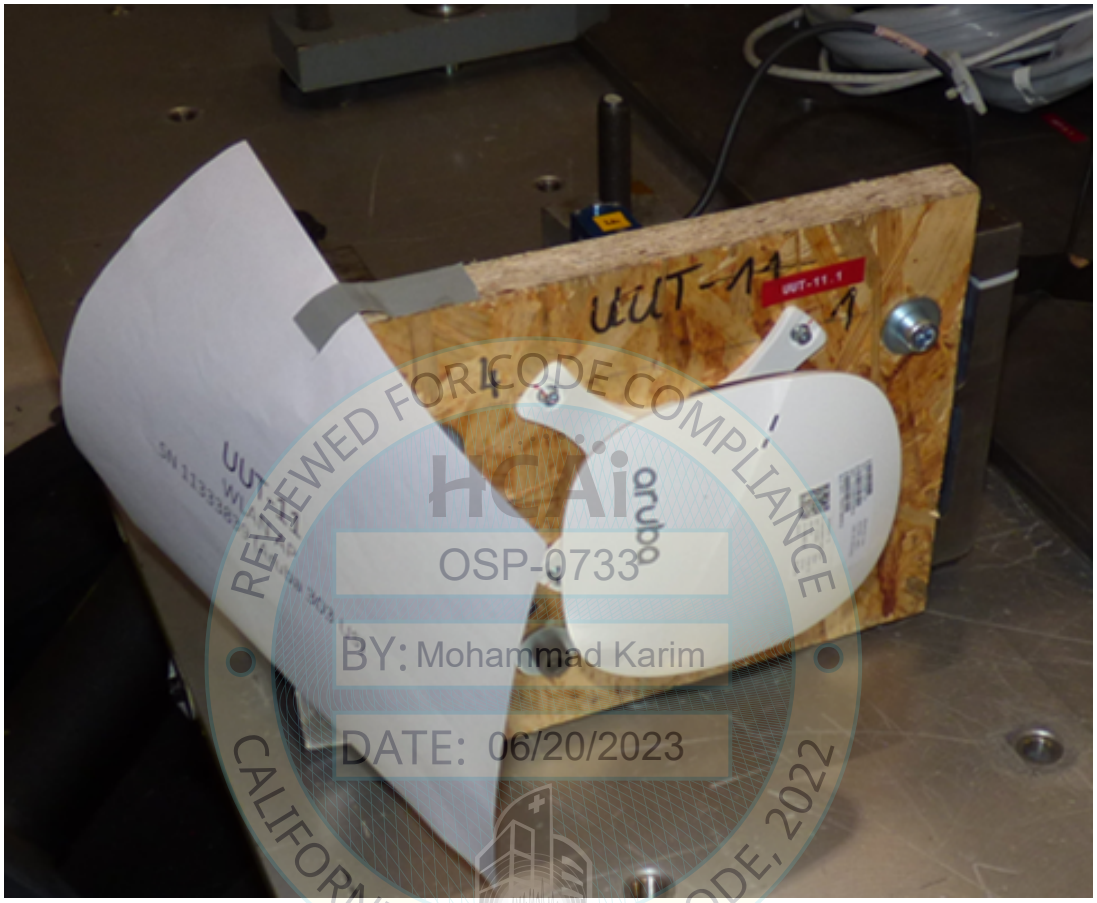
SEISMIC TEST PARAMETERS

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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-11	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Rigid wall mounted with 4 - M4 grade 8.8 screws.



Manufacturer: Siemens Healthcare GmbH	**Test Location:** IABG - Munich, Germany
Component: ARUBA 303 US	**Test Date:** September 2021
Model Number: 11333839	**Report Number:** TAB3-PB-21-148-V1
UUT Function: Wireless access point for radiography system.	
UUT Description: Component of the MULTIX Impact and MULTIX Impact C X-Ray systems	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1	5.9	5.9	1.4	NA	NA	NA

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	-	-
	2.50	0.0	1.5	-	-	1.68	0.68

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.