



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

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

OFFICE USE ONLY

APPLICATION #: OSP-0743

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Siemens Healthcare GmbH

Manufacturer's Technical Representative: Don Medlar

Mailing Address: Siemensstr. 3, Forchheim, Bavaria 91301

Telephone: (49919) 118-6521 Email: don.medlar@siemens-healthineers.com

Product Information

Product Name: NAEOTOM Alpha CT Systems

Product Model Number(s): See attachment

Product Category: CT Systems

Product Sub-Category: NA

General Description: Multiple component system for producing Computed Tomography (CT) medical images for a wide variety of medial diagnostic results.

Mounting Description: Several - See Certified Product Tables and UUT Sheet -

Tested Seismic Enhancements: None

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





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

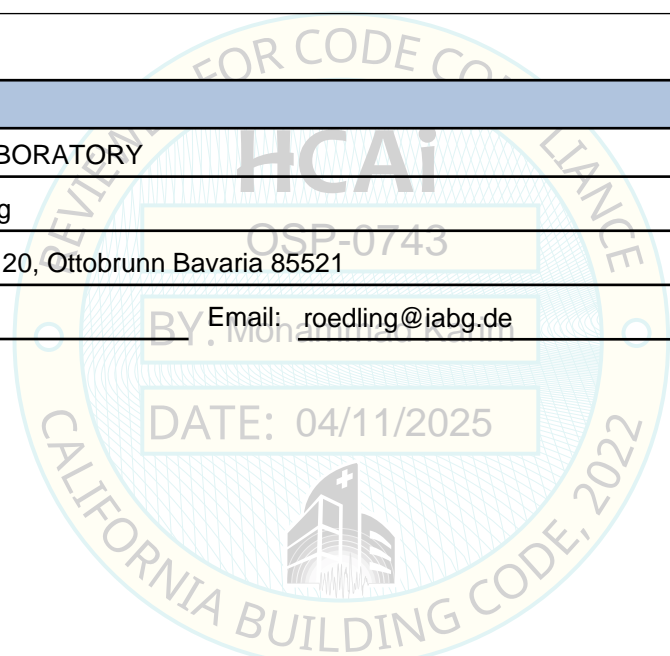
Company Name: W.E. GUNDY & ASSOCIATES INC.
 Name: Travis Soppe California License Number: S6115
 Mailing Address: P.O. Box 9121, Boise, ID 83707
 Telephone: (208) 342-5989 Email: tsoppe@wegai.com

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: Steffen Roedling
 Mailing Address: Einsteinstrasse 20, Ottobrunn Bavaria 85521
 Telephone: (49896) 088-2052 Email: roedling@iabg.de





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Seismic Parameters

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

SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1.0), 2.50 (z/h = 0.0)

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 04/10/2031

Date: 4/11/2025

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.0 z/h = 1

Condition of Approval (if applicable): DATE: 04/11/2025

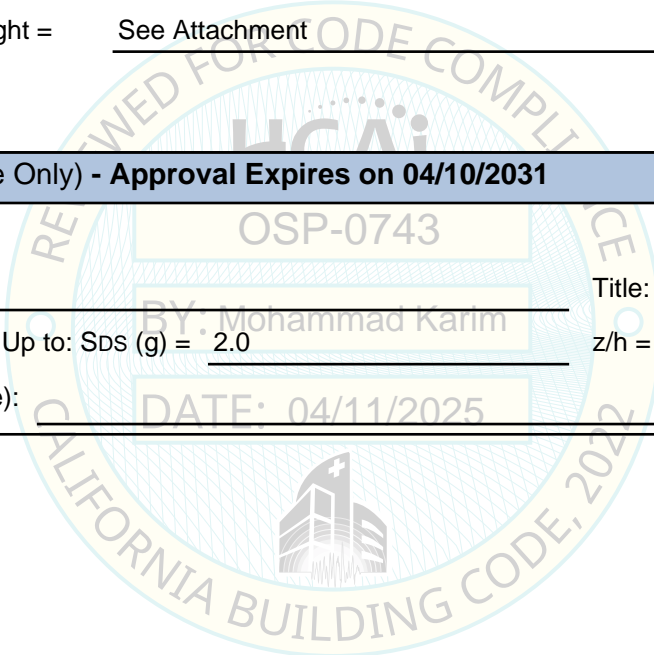


TABLE 1	SIEMENS HEALTHCARE GmbH SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM COMPONENTS				 WEGAI <small>W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING</small>		
	Manufacturer: Siemens Healthcare GmbH						

System: NAEOTOM Alpha CT Systems

System Component ¹	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Depth	Height			
Gantries							
NAEOTOM Alpha.Prime	11549431	93.7	37.9	78.3	4409	floor	UUT _z -1
SOMATOM X.ceed	11330002	99.8	37.7	78.1	4748	floor	UUT _w -2
NAEOTOM Alpha.Pro	10191100	94.5	49.8	78.3	5953	floor	interpolated
NAEOTOM Alpha.Peak	11330003	94.5	49.8	78.3	5953	floor	UUT _x -2

Patient Tables							
Vario 2.D PHS	11061335	27.6	97.6-179.5	24.0-40.7	802 ²	floor	UUT _w -4
Vitus PHS	11061336	27.8	100.8-182.7	14.8-38.0	1040	floor	UUT _v -3

Image Reconstruction and UPS Systems							
ALON UPS-cabinet	11501140	34.8	40.5	50.8	895	floor / wall	UUT _y -3
ALON UPS-cabinet	11501140	34.8	40.5	50.8	886	floor / wall	UUT _z -2
UPS Rack - Config 1 1-GXT5 and IRSxp2e	11769311	25.6	32.4	24.5	226	floor	UUT _z -3
UPS Rack - Config 2 2-GXT5 and IRSxp..	11760611	25.6	32.4	24.5	305	floor	interpolated
UPS Rack - Config 3 3-GXT5 and IRSxp3h	11769987	25.6	32.4	24.5	366	floor	UUT _z -4
UPS Rack - IRSxp2e and UPS GXT-05	11501180	15.4	32.7	22.5	149	floor	UUT _x -5
Computer IRS XL20-1H	11513711	30.7	12.1	19.6	79	floor	UUT _x -4
IRSxp2a	11652201	7.0	21.7	17.1	44	floor	UUT _x -6

Notes:

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-component within the tested units.

² The units were tested at different times and the subscripts on the UUT's reference the following seismic certification test reports:
v = TAB3-PB-20-140-V1 / w = TAB3-PB-21-074-V1 / x = TA-B-000477-V1 / y = TA-B-00478-V1 / z = TA-B-005685-V1 & TA-B-05725-V1

SEISMIC CERTIFICATION LIMITS								
System Component	Code	S _{DS} (g)	z / h	I _p	a _p	R _p	Ω ₀	F _p / W _p
Gantries	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
IRS and UPS Systems	CBC 2022	2.0	1.0	1.50	1.0	2.5	2.0	1.44
		2.5	0					1.13

UUT_z-1

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (4) 5/8" grade 10.9 bolts



Manufacturer: Siemens Healthcare GmbH: 04/ **Test Location:** IABG mbH, Germany

Component: NAEOTOM Alpha.Prime Gantry **Test Date:** October 2024

Model Number: 11549431 **Report Number:** TA-B-005685-V1

UUT Function: Continuous rotating x-ray to generate diagnostic imaging

UUT Description: Gantry for the NAEOTOM Alpha CT systems

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
4,409	93.7	37.9	78.3	18.8	10.0	28.6

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	-	-
	2.50	0	1.5	-	-	1.67	0.67

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



Mounting Details: Rigid floor mounted with (5) 5/8" grade 8 bolts



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: SOMATOM X.ceed Gantry	Test Date: May 2021
Model Number: 11330002	Report Number: TAB3-PB-21-074-V1
UUT Function: Continuous rotating x-ray to generate diagnostic imaging	
UUT Description: Gantry with water cooling for the SOMATOM X.Ceed CT systems.	
UUT Modifications: Modifications required for the UUT to pass the seismic test will be incorporated in the standard production units.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
4,748	99.8	37.7	78.1	12.5	6.4	24.5

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S _{DS} (g)	z / h	I _p	A _{AFLX-H} (g)	A _{ARIG-H} (g)	A _{AFLX-V} (g)	A _{ARIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-
	2.50	0	1.5	-	-	1.67	0.67

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-2

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



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



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: NAEOTOM Alpha.Peak Gantry	Test Date: March 2022
Model Number: 11330003	Report Number: TA-B-000477-V1
UUT Function: Continuous rotating x-ray to generate diagnostic imaging	
UUT Description: Gantry for the NAEOTOM Alpha CT systems.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
5,953	94.5	49.8	78.3	9.8	18.2	> 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	1.5	-	-	1.67	0.67

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



Mounting Details: Rigid floor mounted with (4) 5/8" grade 8 bolts.



Manufacturer: Siemens Healthcare GmbH: 04/11/2025 **Test Location:** IABG mbH, Germany

Component: Vario 2.D PHS **Test Date:** May 2021

Model Number: 11061335 **Report Number:** TAB3-PB-21-074-V1

UUT Function: Motorized patient support

UUT Description: Patient table for the SOMATOM X.ceed CT systems.

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,343	27.6	97.6 – 179.5	24.0 – 40.7	11.6	14.9	> 33

The patient table moves vertically and horizontally to accommodate different positions and procedures. The system was tested in the normal operating position, with the tabletop extended 39.4 inches, vertically extended 36.8 inches, and with 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	1.5	-	-	1.67	0.67

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**



Mounting Details: Rigid floor mounted with (6) 5/8" grade 8 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: Vitus PHS	Test Date: September 2020
Model Number: 11061336	Report Number: TAB3-PB-20-140-V1
UUT Function: Motorized patient support	
UUT Description: Patient table for the SOMATOM X.cite CT systems.	

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,580	27.8	100.8 – 182.7	14.8 – 38.0	16.6	7.6	11.3

The patient table moves vertically and horizontally to accommodate different positions and procedures. The system was tested in the normal operating position, with the tabletop extended 39.4 inches, vertically extended 38 inches, and with 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	1.5	-	-	1.67	0.67

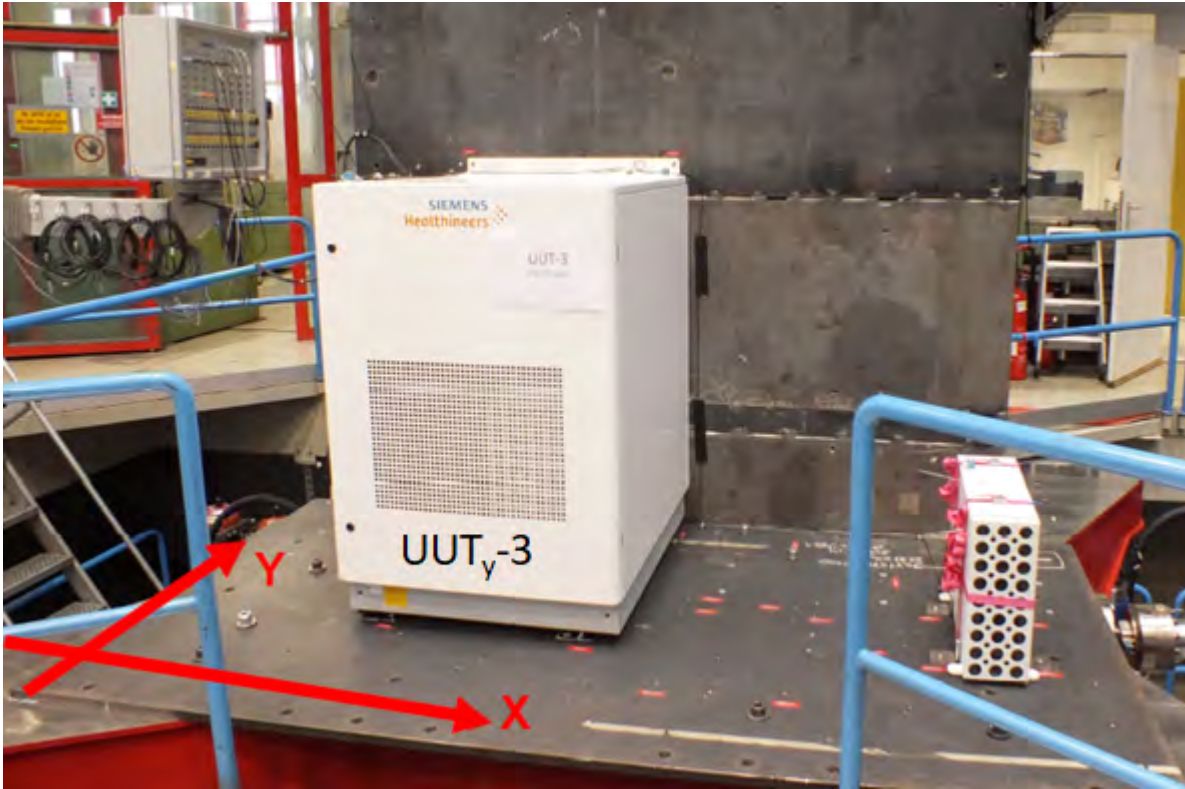
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-3

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



Mounting Details: Rigid combined floor and wall mounting using Siemens provided seismic restraint kit SN:11500841. Seismic restraint kit includes an angle wall bracket connecting the UUT to the wall with 2 – 3/8" grade 5 bolts and floor brackets connecting the UUT to the floor with 4 – 3/8" grade 5 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: ALON UPS-cabinet	Test Date: September 2022
Model Number: 11501140	Report Number: TA-B-000478-V1

UUT Function: Uninterruptible power supply and IRS system.

UUT Description: Component of the NAEOTOM Alpha CT systems.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
895	34.8	40.5	50.8	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	1.5	-	-	1.67	0.67

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**



Mounting Details: Rigid combined floor and wall mounting using Siemens provided seismic restraint kit SN:11500841. Seismic restraint kit includes an angle wall bracket connecting the UUT to the wall with 2 – 3/8" grade 5 bolts and floor brackets connecting the UUT to the floor with 4 – 3/8" grade 5 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: ALON UPS-cabinet	Test Date: October 2024
Model Number: 11501140	Report Number: TA-B-005685-V1

UUT Function: Uninterruptible power supply and IRS system.

UUT Description: Component of the NAEOTOM Alpha CT systems.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
886	34.8	40.5	50.8	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	1.5	-	-	1.67	0.67

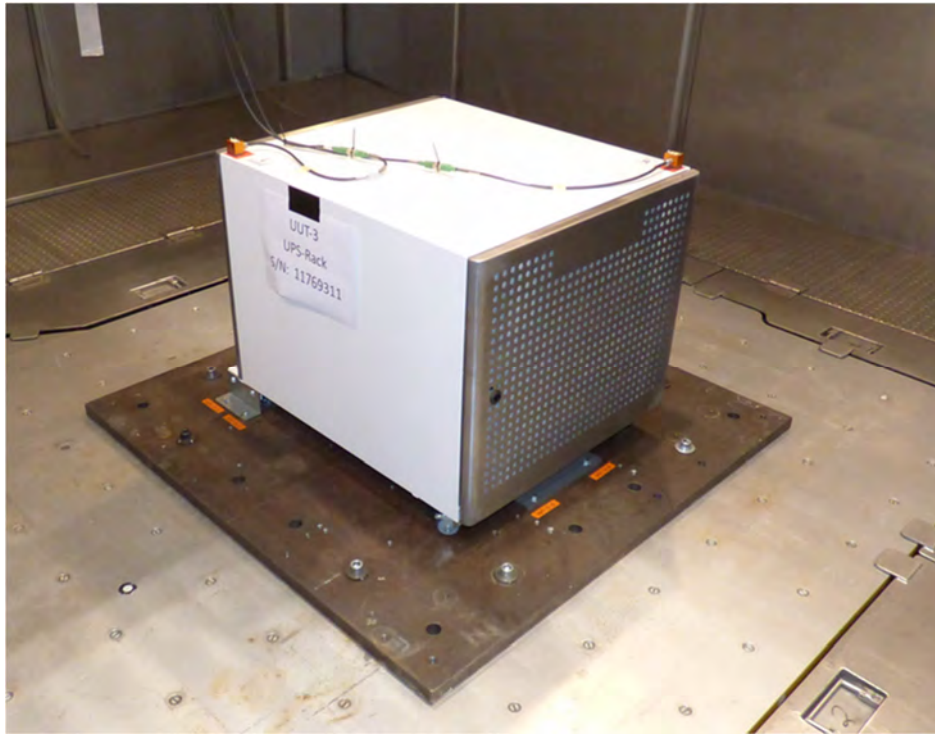
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-3

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



Mounting Details: Rigid floor mounting using Siemens provided seismic restraint kit SN:11768107. Seismic restraint kit includes 2 angle brackets in the backside of the UUT and 1 angle bracket in the front of the UUT. Each bracket connects the UUT to the floor with 2 – 3/8" grade 5 bolts for a total of 6 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: UPS Rack – Config 1 1-GXT5 and IRSxp2e	Test Date: October 2024
Model Number: 11769311	Report Number: TA-B-05725-V1
UUT Function: Combined uninterruptible power supply and image reconstruction PC	
UUT Description: Component of the NAEOTOM Alpha CT systems.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
226	25.6	32.4	24.5	> 33	> 33	> 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	1.5	-	-	1.67	0.67

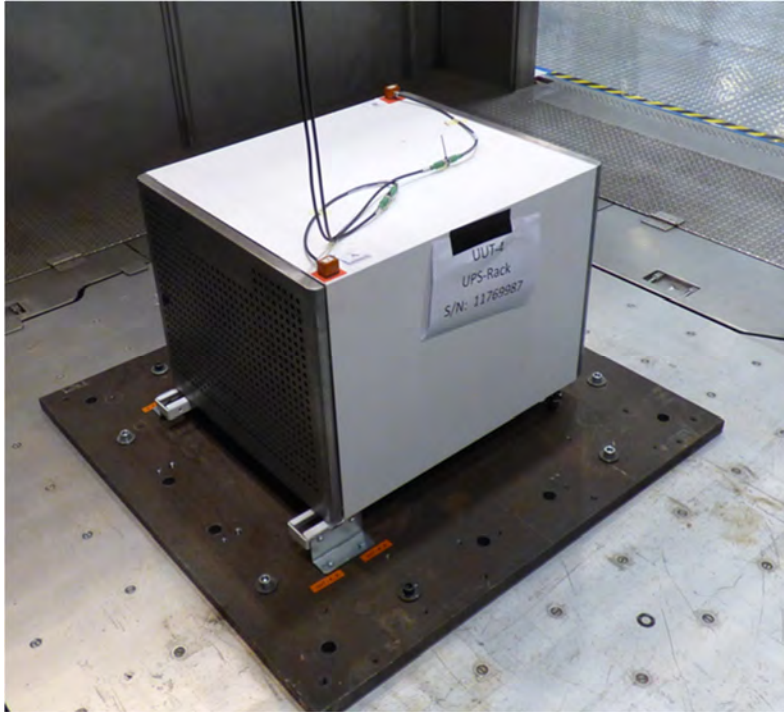
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_z-4

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



Mounting Details: Rigid floor mounting using Siemens provided seismic restraint kit SN:11768107. Seismic restraint kit includes 2 angle brackets in the backside of the UUT and 1 angle bracket in the front of the UUT. Each bracket connects the UUT to the floor with 2 – 3/8" grade 5 bolts for a total of 6 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: UPS Rack – Config 3 3-GXT5 and IRSxp3h	Test Date: October 2024
Model Number: 11769987	Report Number: TA-B-05725-V1
UUT Function: Combined uninterruptible power supply and image reconstruction PC	
UUT Description: Component of the NAEOTOM Alpha CT systems.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
366	25.6	32.4	24.5	> 33	19.8	> 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	1.5	-	-	1.67	0.67

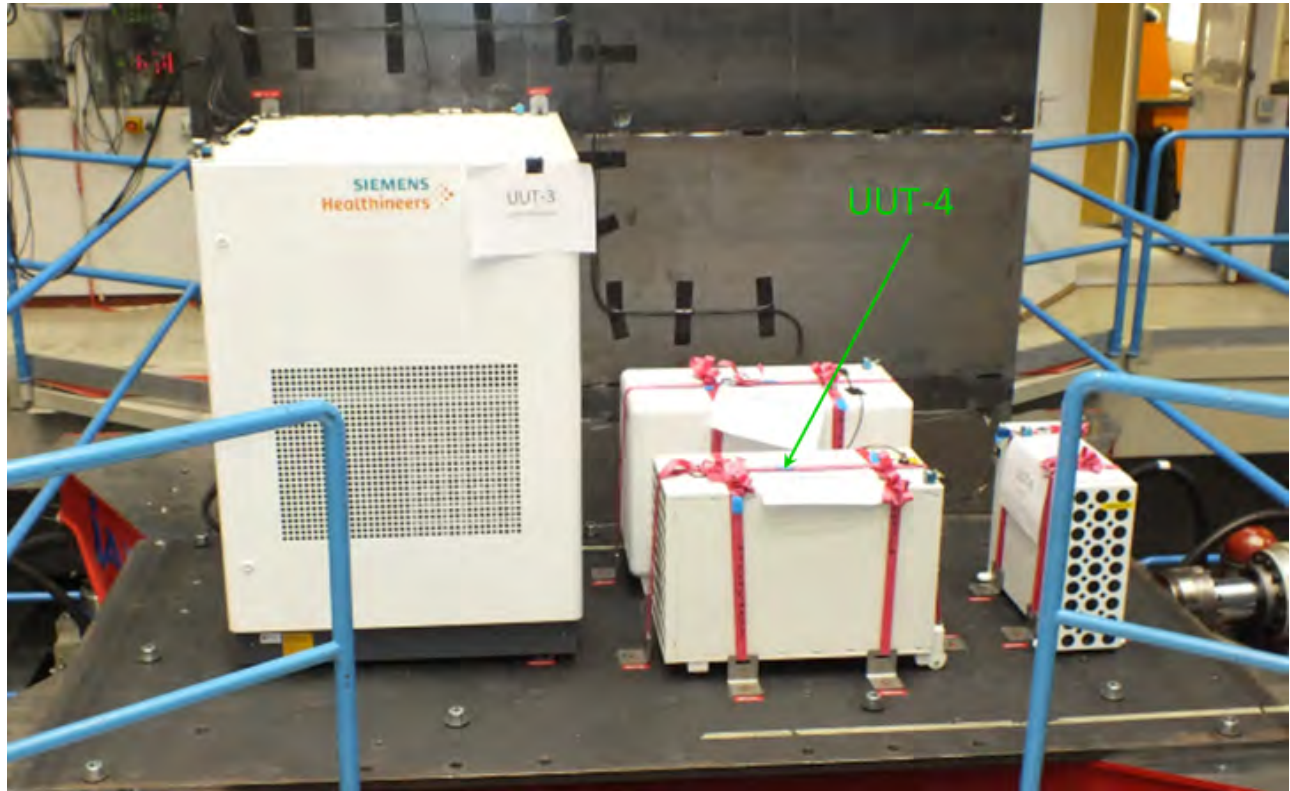
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_x-4

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid Floor mounting using Siemens provided seismic restraint kit SN:11500840. Seismic restraint kit includes three 1" wide hand tightened cam buckle straps (560lb WLL) looped thru angle brackets positioned on the long and short sides of the unit. The six angle brackets are attached to the table with individual 3/8" grade 5 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: Computer IRS XL20-1H	Test Date: March 2022
Model Number: 11513711	Report Number: TA-B-000477-V1

UUT Function: Image Reconstruction System

UUT Description: Component of the NAEOTOM Alpha CT systems.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
79.4	30.7	12.1	19.6	23.9	17.9	> 33

SEISMIC TEST PARAMETERS

Building Code / Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLEX-H} (g)	A _{RIG-H} (g)	A _{FLEX-V} (g)	A _{RIG-V} (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	-	-
	2.50	0	1.5	-	-	1.67	0.67

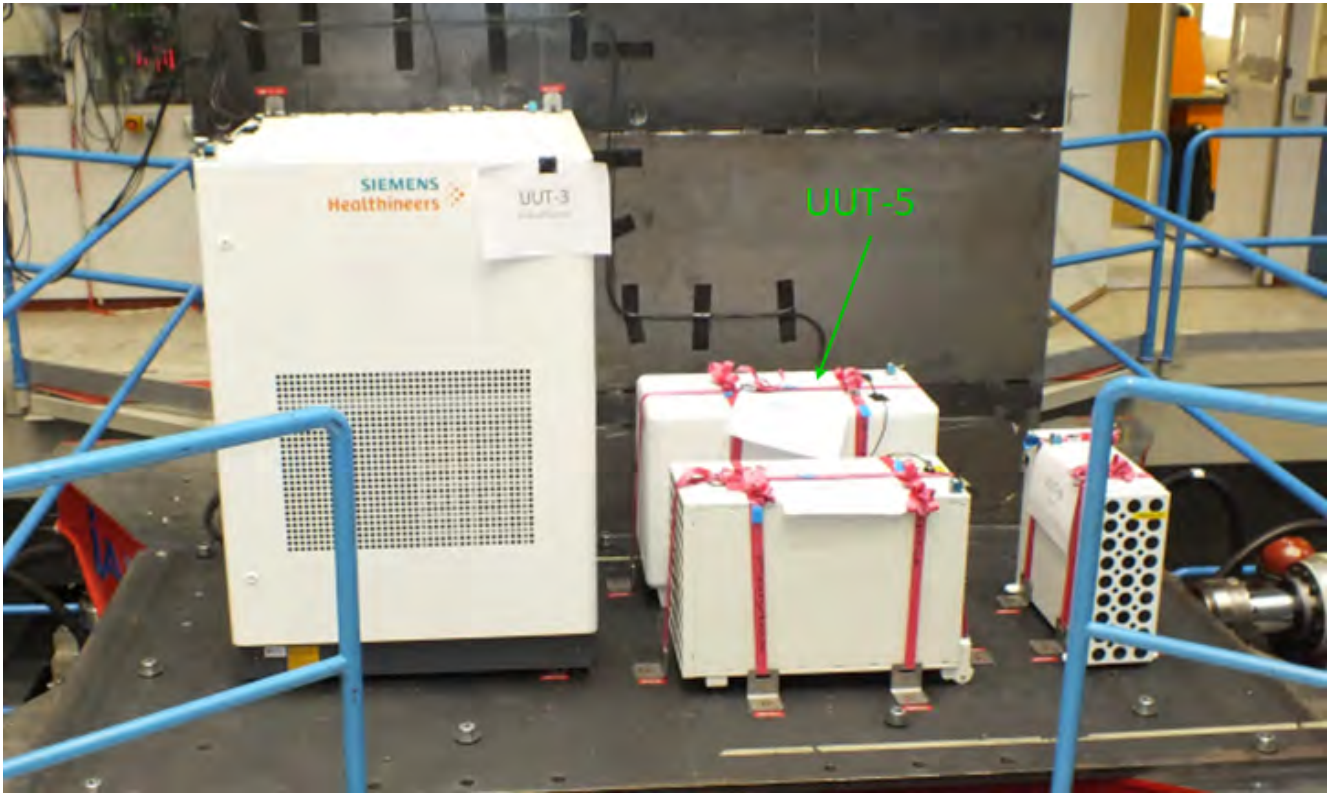
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_{x-5}

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



Mounting Details: Rigid Floor mounting using Siemens provided seismic restraint kit SN:11500840. Seismic restraint kit includes three 1" wide hand tightened cam buckle straps (560lb WLL) looped thru angle brackets positioned on the long and short sides of the unit. The six angle brackets are attached to the table with individual 3/8" grade 5 bolts.



Manufacturer: Siemens Healthcare GmbH **Test Location:** IABG mbH, Germany

Component: UPS Rack: IRSxp2e & UPS GXT-05 **Test Date:** March 2022

Model Number: 11501180 **Report Number:** TA-B-000477-V1

UUT Function: Combined Uninterruptable Power System and Image Reconstruction System

UUT Description: Component of the NAEOTOM Alpha CT systems.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
149.0	15.4	32.7	22.5	> 33	9.8	> 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	1.5	-	-	1.67	0.67

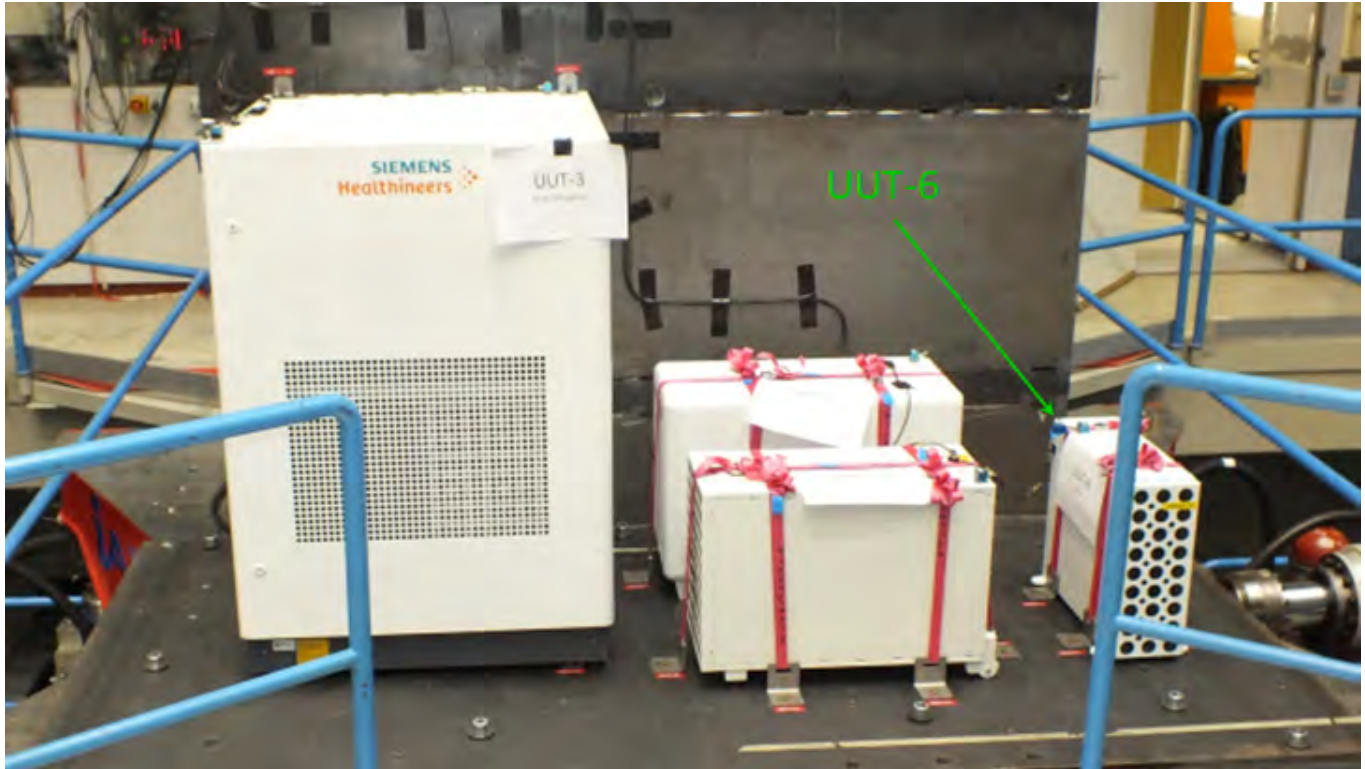
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_{x-6}

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



Mounting Details: Rigid Floor mounting using Siemens provided seismic restraint kit SN:11500840. Seismic restraint kit includes two 1" wide hand tightened cam buckle straps (560lb WLL) looped thru angle brackets positioned on the long side of the unit. The four angle brackets are attached to the table with individual 3/8" grade 5 bolts.



Manufacturer: Siemens Healthcare GmbH	Test Location: IABG mbH, Germany
Component: IRSxp2a	Test Date: March 2022
Model Number: 11652201	Report Number: TA-B-000477-V1

UUT Function: Image Reconstruction System

UUT Description: Component of the NAEOTOM Alpha CT systems.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
44.1	7.0	21.7	17.1	> 33	16.7	> 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	1.5	-	-	1.67	0.67

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.