



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OSP – 0544 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Siemens Healthcare GmbH, Diagnostic Imaging, Computed Tomography

Manufacturer's Technical Representative: Ottmar Foerstel

Mailing Address: Siemensstr. 3, 91301 Forchheim, Germany

Telephone: +49 9191 188761 Email: ottmar.foerstel@siemens-healthineers.com

Product Information

Product Name: SOMATOM go.Up and go.Now CT System

Product Type: Computed Tomography (CT) medical imaging system

Product Model Number: See Attachment

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

General Description: Multiple component system used for producing Computed Tomography (CT) medical images
for diagnostic results.

Mounting Description: Rigid floor mounted

Applicant Information

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

Contact Person: Travis Soppe, SE

Mailing Address: 250 Bobwhite Ct, Suite 100, Boise, ID 83706

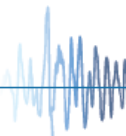
Telephone: (208) 342-5898 Ext. 115 Email: tsoppe@wegai.com

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: 11-28-2017

Title: Vice President Company Name: W.E. Gundy & Associates, Inc.

"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: W.E. Gundy & Associates, Inc.

Name: Travis Soppe, SE California License Number: S6115

Mailing Address: 250 Bobwhite Ct, Suite 100, Boise, ID 83706

Telephone: (208) 342-5898 Ext. 115 Email: tsoppe@wegai.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

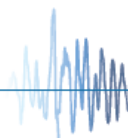
Testing Laboratory

Company Name: IABG mbH

Contact Name: Dr. Steffen Roedling

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

Telephone: +49 (0) 89 / 6088-2052 Email: roedling@iabg.de





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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

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

R_p (Equipment or component response modification factor) = See attachment

Ω_0 (System overstrength factor) = See attachment

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

Overall dimensions and weight (or range thereof) = See attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

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

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Certified System Matrix, UUT Summary Sheets, Subcomponent Certification Letter

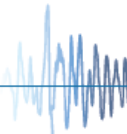
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:  Date: April 2, 2018

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): _____



**SIEMENS HEALTHCARE GmbH
SPECIAL SEISMIC CERTIFICATION
CERTIFIED SYSTEM AND COMPONENTS**



Manufacturer: Siemens Healthcare GmbH

System: SOMATOM go.Now and go.Up CT Systems

System Component ¹	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Length	Height			
SOMATOM go.Now Gantry	11061610 / 11061618	81.3	32.8	69.4	2415	floor	UUT-1
SOMATOM go.Up Gantry	11061620 / 11061628	87.1	32.8	73.1	2790	floor	UUT-2
aCTivate PHS Vario 1 Patient Table	11061332	25.6	97.0-163.2	21.8-38.3	740 ³	floor	UUT-3
aCTivate PHS VarioRT Patient Table	11061333	25.6	97.0-163.2	21.8-38.3	710 ³	floor	UUT-4
aCTivate PHS Vector Patient Table	11061331	25.6	97.0-157.5	32.6	670 ²	floor	UUT-5

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

2) Patient table weight does not include 315lb simulated weight.

3) Patient table weight does not include 415lb simulated weight.

SEISMIC CERTIFICATION LIMITS

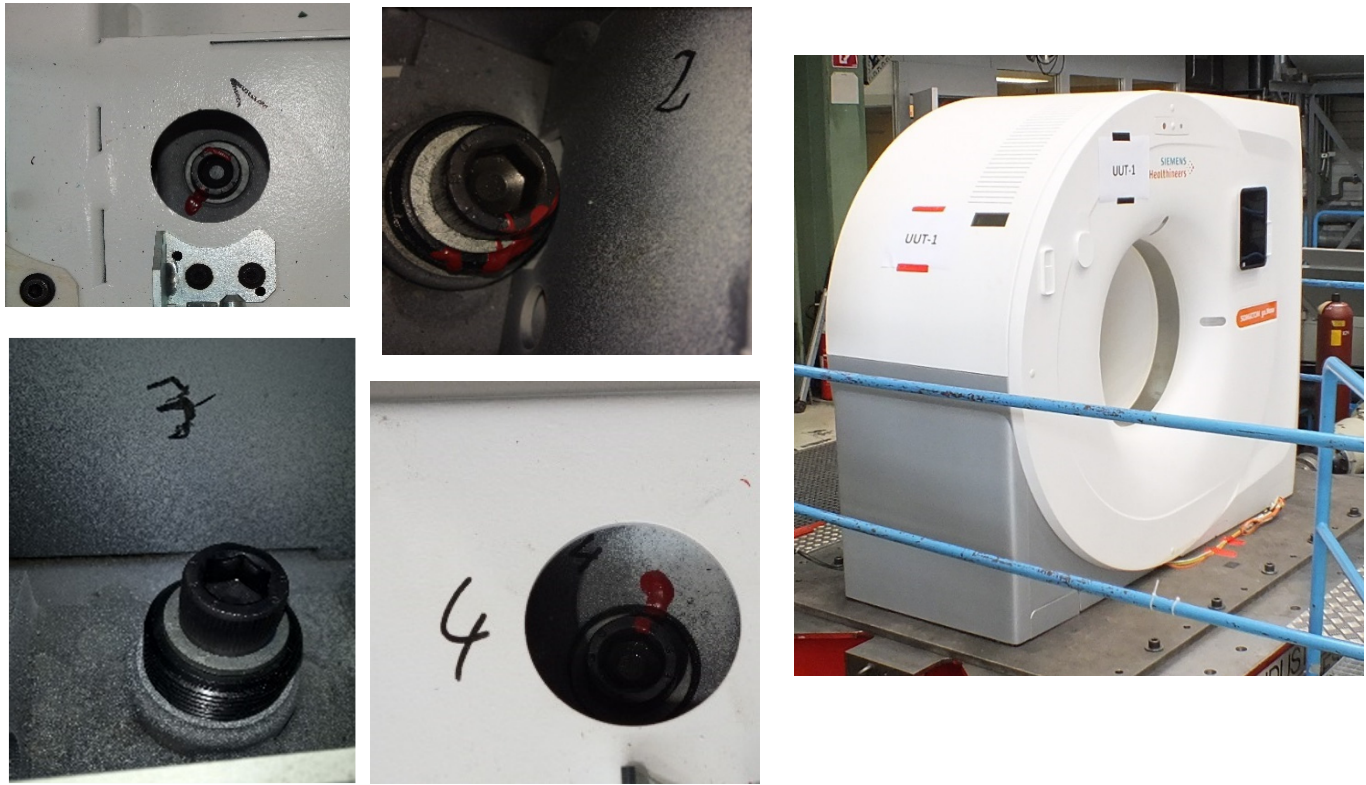
System Component	Code	S _{DS} (g)	z / h	I _p	a _p	R _p	Ω ₀	F _p / W _p
SOMATOM go.Now Gantry	CBC 2016 ASCE 7-10	2.0	1.0	1.50	1.0	1.5	1.5	2.40
		2.5	0					1.13
SOMATOM go.Up Gantry		2.0	1.0	1.50	1.0	1.5	1.5	2.40
		2.5	0					1.13
aCTivate PHS Vario 1 Patient Table		2.0	1.0	1.50	1.0	1.5	1.5	2.40
		2.5	0					1.13
aCTivate PHS VarioRT Patient Table		2.0	1.0	1.50	1.0	1.5	1.5	2.40
		2.5	0					1.13
aCTivate PHS Vector Patient Table	2.0	1.0	1.50	1.0	1.5	1.5	2.40	
	2.5	0					1.13	

UUT-1

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



Mounting Details: Rigid floor mounted with 4 - M14 grade 12.9 bolts



Manufacturer: Siemens Healthcare GmbH

Component: SOMATOM go.Now Gantry

Model / Serial Number: 11061618 / 106074

UUT Function: Continuous rotating detector for high-resolution data acquisition

UUT Description: Component of SOMATOM go.Now CT System

Test Location: IABG mbH, Germany

Test Date: August 2017

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,415	81.3"	32.8"	69.4"	13.0	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 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	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-2

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



Mounting Details: Rigid floor mounted with 4 - M14 grade 12.9 bolts



Manufacturer: Siemens Healthcare GmbH

Component: SOMATOM go.Up Gantry

Model / Serial Number:

11061620 / 111076

UUT Function: Continuous rotating detector for high-resolution data acquisition

UUT Description: Component of SOMATOM go.Up CT System

Test Location: IABG mbH, Germany

Test Date: August 2017

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,790	87.1"	32.8"	73.1"	8.2	8.0	7.8

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 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	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-3

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



Mounting Details: Rigid Floor mounted with 4 - M14 grade 12.9 bolts



Manufacturer: Siemens Healthcare GmbH

Component: aCTivate PHS Vario 1 Patient Table **Model / Serial Number:** 11061332 / 10056

UUT Function: Motorized table which moves patient through circular opening in the CT system

UUT Description: Component of SOMATOM go.Now and go.Up CT Systems

Test Location: IABG mbH, Germany

Test Date: August 2017

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,155	25.6"	97.0"-163.2"	21.8" - 38.3"	13.0	10.2	10.5

The patient table moves vertically and horizontally to accommodate different patients and procedures. The system was tested in the tallest configuration (38.3") with a horizontal extension of 39.4" (total width = 136.4") and a total simulated patient weight of 415lbs.

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 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

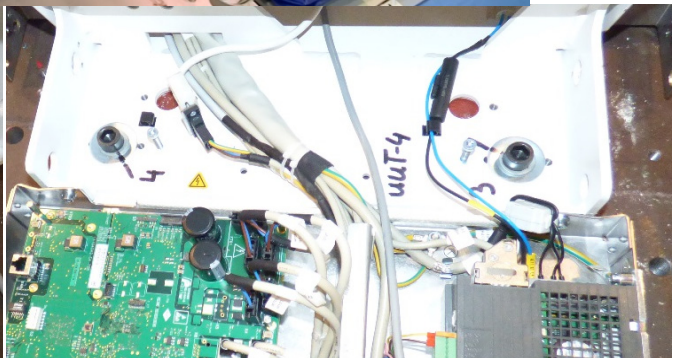
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-4

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



Mounting Details: Rigid Floor mounted with 4 - M14 grade 12.9 bolts



Manufacturer: Siemens Healthcare GmbH

Component: aCTivate PHS Vario RT Patient Table | **Model / Serial Number:** 11061333 / 10010

UUT Function: Motorized table which moves patient through circular opening in the CT system

UUT Description: Component of SOMATOM go.Now and go.Up CT System

Test Location: IABG mbH, Germany

Test Date: August 2017

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,125	25.6"	97.0"-163.2"	21.8" - 38.3"	3.4	6.0	28.2

The patient table moves vertically and horizontally to accommodate different patients and procedures. The system was tested in the tallest configuration (38.3") with a horizontal extension of 39.4" (total width = 136.4") and a total simulated patient weight of 415lbs.

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 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

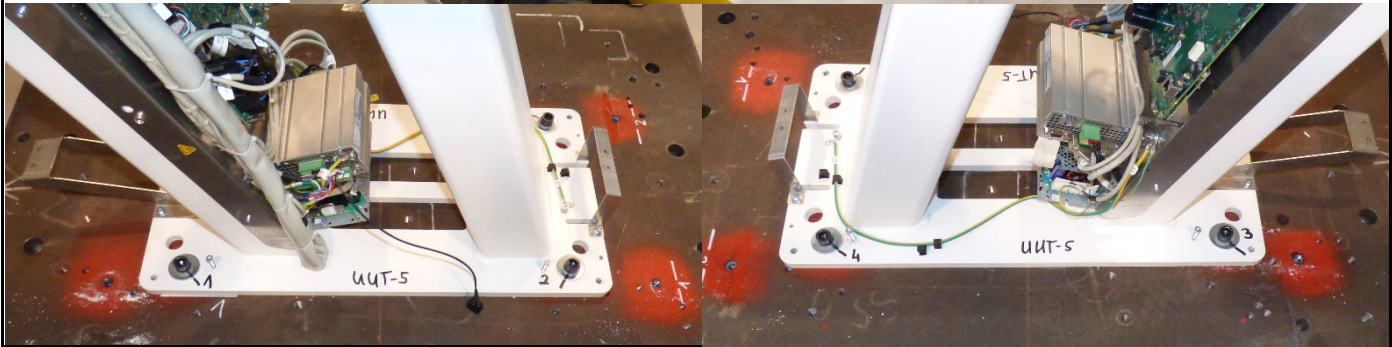
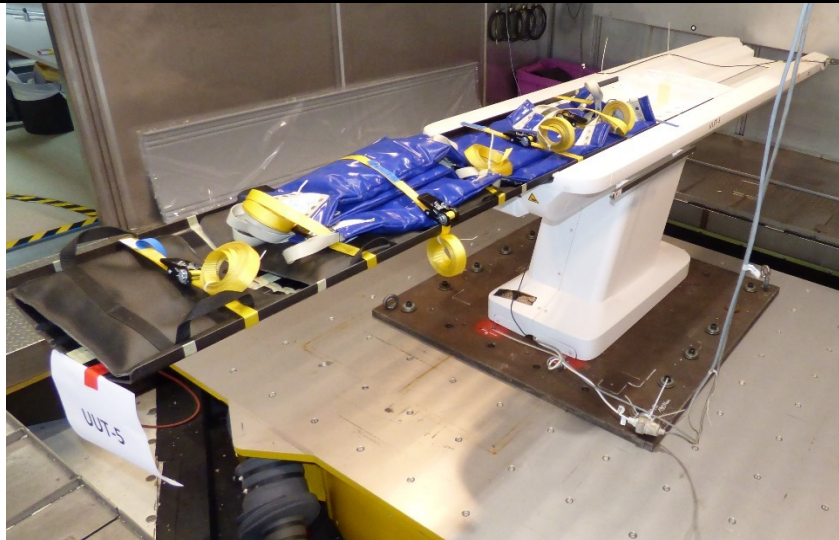
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-5

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



Mounting Details: Rigid Floor mounted with 4 - M14 grade 12.9 bolts



Manufacturer: Siemens Healthcare GmbH

Component: aCTivate PHS Vector Patient Table **Model / Serial Number:** 11061331 / 10008

UUT Function: Motorized table which moves patient through circular opening in the CT system

UUT Description: Component of SOMATOM go.Now CT System

Test Location: IABG mbH, Germany **Test Date:** August 2017

UUT PROPERTIES

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
985	25.6"	97.0"-157.5"	32.6"	-	25.5	30.5

The patient table moves horizontally to accommodate different patients and procedures. The system was tested with a horizontal extension of 39.4" (total width = 136.4") and a total simulated patient weight of 315lbs.

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 2016 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	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.