



**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-0545**

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Siemens Healthcare GmbH, Advanced Therapies, HC AT R&D HW

Manufacturer's Technical Representative: Martin Knierim

Mailing Address: Siemensstr. 1, Forchheim, Ba 91301

Telephone: (49919) 118-9539 Email: martin.knierim@siemens-healthineers.com

**Product Information**

Product Name: Motorized Operating Table Systems

Product Model Number(s): See attachment

Product Category: Motorized Operating Table Systems

Product Sub-Category: NA

General Description: Multiple component operating table system used for interventional patient procedures.

Mounting Description: Several - See UUT Sheets -

Tested Seismic Enhancements: None

**Applicant Information**

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

Contact Person: Travis Soppe

Mailing Address: 1199 Shoreline Dr. Suite 310, Boise, ID 83702

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)**

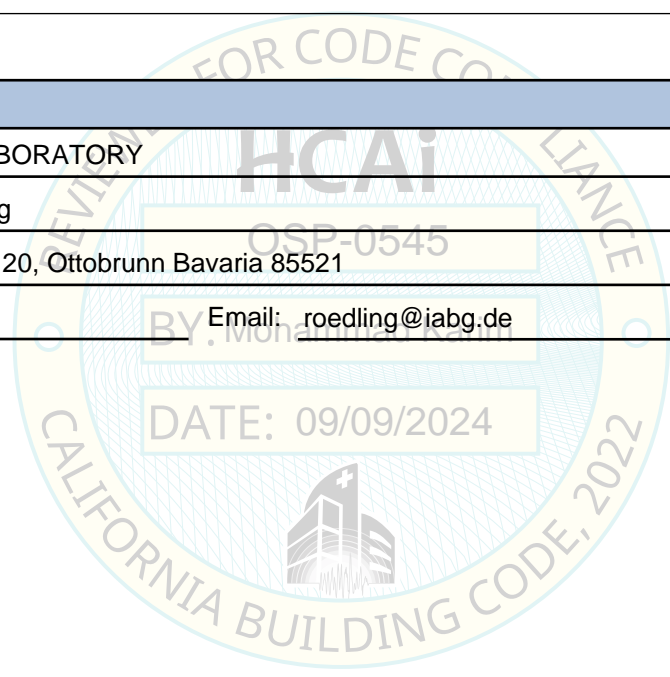
Company Name: W.E. GUNDY & ASSOCIATES INC.  
Name: Travis Soppe California License Number: S6115  
Mailing Address: P.O. Box 9121, Boise, ID 83707  
Telephone: (208) 342-5989 Email: tsoppe@wegai.com

**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) and 2.50 (z/h = 0.0)

$a_p$  (Amplification factor) = See attachments

$R_p$  (Response modification factor) = See attachments

$\Omega_0$  (System overstrength factor) = See Attachment

$I_p$  (Importance factor) = 1.5

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

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

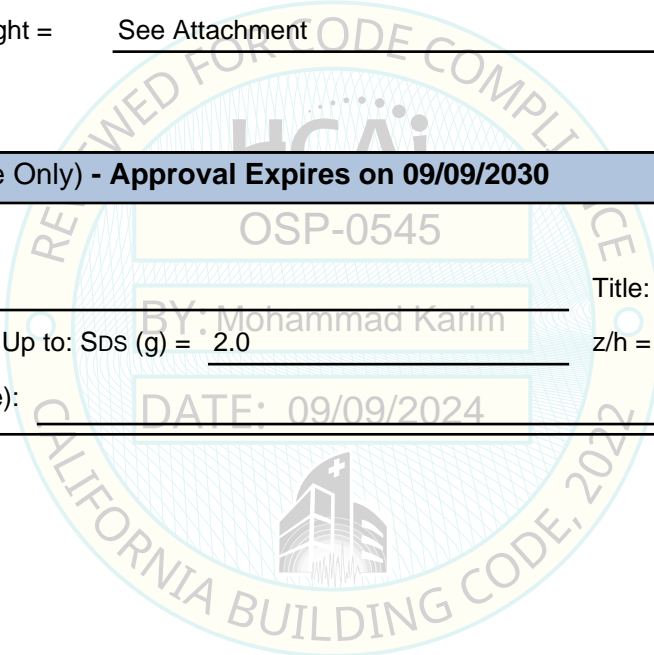
**HCAI Approval (For Office Use Only) - Approval Expires on 09/09/2030**

Date: 9/9/2024

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: 09/09/2024



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



**Manufacturer:** Siemens Healthcare GmbH

**System:** Artis Interventional System

System Component <sup>1</sup>	Siemens Part Number	Dimensions (in)			Weight (lb)	Mounting	UUT
		Width	Length	Height			
OR Patient Table	10992200	113.6"	27.0"	38.0"	1,200 <sup>2</sup>	floor	UUT <sub>x</sub> -1A/B
OR Patient Table	11636800	113.6"	27.0"	38.0"	1,208 <sup>3</sup>	floor	UUT <sub>y</sub> -1
SC Main VE	11115700	39.4"	25.6"	74.8"	870	floor / wall	UUT <sub>x</sub> -2
AXIS-VE	10910323	23.7"	37.2"	28.0"	290	floor	UUT <sub>x</sub> -3
FD Cooling	10848724	23.6"	19.1"	11.8"	55 <sup>4</sup>	floor	UUT <sub>x</sub> -4
Tube Cooling Unit	11321256	16.5"	20.5"	30.7"	80 <sup>4</sup>	floor	UUT <sub>x</sub> -5

Notes:

<sup>1</sup> 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.

<sup>2</sup> Patient table weight does not include 510lb simulated weight.

<sup>3</sup> Patient table weight does not include 494lb simulated weight.

<sup>4</sup> Cooling unit weights include operating fluids.

<sup>5</sup> The units were tested at different times and the subscripts on the UUT's reference the following seismic test reports:  
x = TAF4-PB-17-280-V2 / y = TA-B-004674-V2

**SEISMIC CERTIFICATION LIMITS**

System Component	Code	S <sub>DS</sub> (g)	z / h	I <sub>P</sub>	a <sub>P</sub>	R <sub>P</sub>	Ω <sub>0</sub>	F <sub>P</sub> / W <sub>P</sub>
OR Patient Table	CBC 2022 / ASCE 7-16	2.0	1.0	1.50	1.0	1.5	1.5	2.40
		2.5	0					1.13
SC Main VE		2.0	1.0	1.50	2.5	6.0	2.0	1.50
		2.5	0					1.13
AXIS-VE		2.0	1.0	1.50	1.0	2.5	2.0	1.44
		2.5	0					1.13
FD Cooling		2.0	1.0	1.50	1.0	2.5	2.0	1.44
	2.5	0	1.13					
Tube Cooling Unit	2.0	1.0	1.50	1.0	2.5	2.0	1.44	
	2.5	0					1.13	



UUT<sub>y</sub>-1

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



**Mounting Details:** Rigid floor mounted with 4 - M12 grade 8.8 bolts



<b>Manufacturer:</b> Siemens Healthcare GmbH		
<b>Component:</b> OR Patient Table	<b>Model / Serial Number:</b>	11636800 / 1001
<b>UUT Function:</b> Patient Table with integrated x-ray system		
<b>UUT Description:</b> Component of Artis Interventional System		
<b>Test Location / Report:</b> IABG mbH, Germany / TA-B-004674-V1		<b>Test Date:</b> February 2024

**UUT PROPERTIES**

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,702	138.4"	27.0"	38.0"	27.8	5.6	14.7

The patient table moves vertically, horizontally, and rotates to accommodate different patients and procedures. The system was tested in its normal operating position with 0° rotation, a longitudinal extension of 24.8", and height of 38.0". The system was tested with a total simulated patient weight of 494lbs.

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

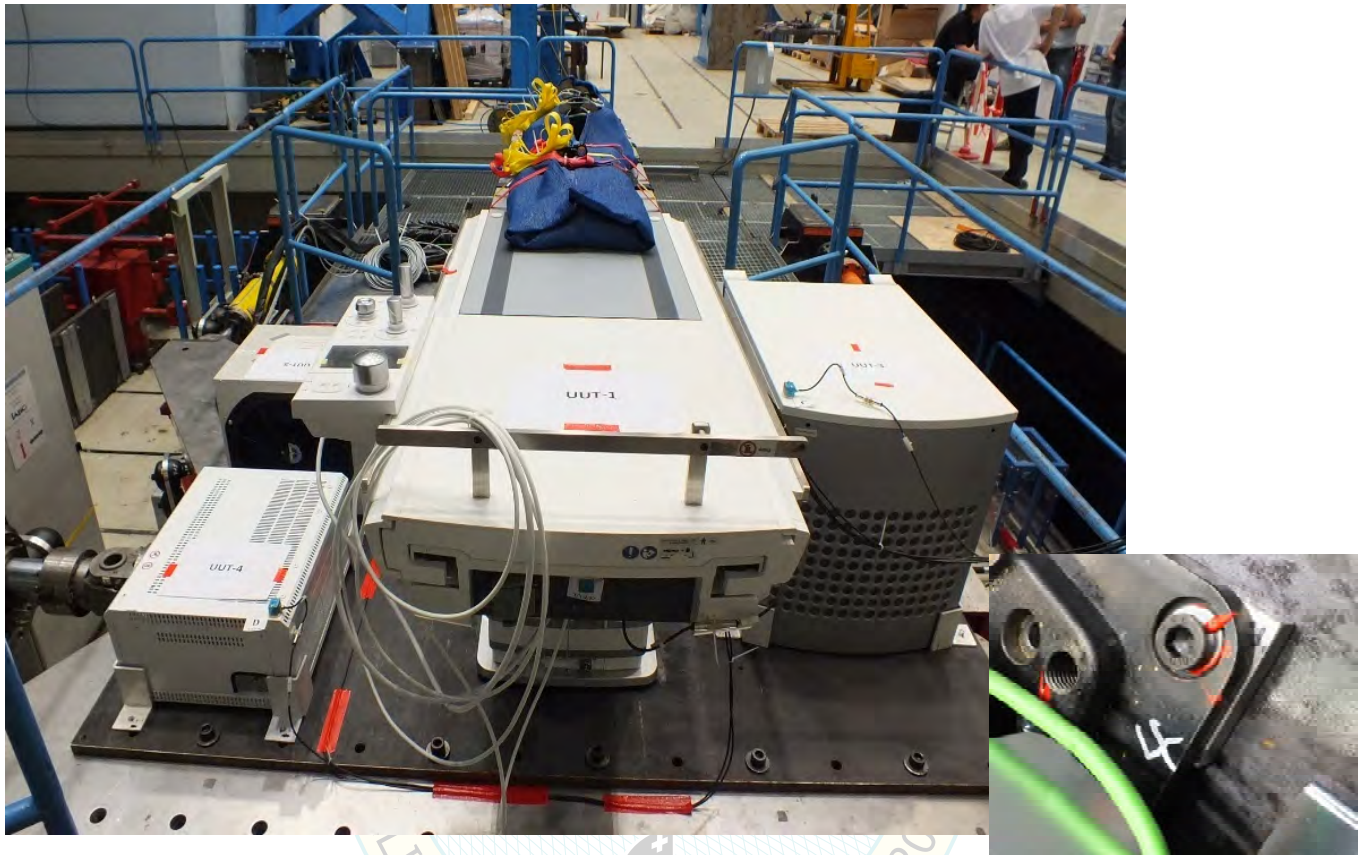
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT<sub>x</sub>-1A

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



**Mounting Details:** Rigid floor mounted with 4 - M16 grade 10.9 bolts



**Manufacturer:** Siemens Healthcare GmbH

**Component:** OR Patient Table - 0° Rotation      **Model / Serial Number:** 10992200 / 1003

**UUT Function:** Patient Table with integrated x-ray system

**UUT Description:** Component of Artis Interventional System

**Test Location / Report:** IABG mbH, Germany / TAF4-PB-17-280-V2      **Test Date:** September 2017

**UUT PROPERTIES**

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,708	138.4"	27.0"	38.0"	8.4	2.7	3.7

The patient table moves vertically, horizontally, and rotates to accommodate different patients and procedures. The system was tested in its normal operating position with 0° rotation, a longitudinal extension of 24.8", and height of 38.0". The system was tested with a total simulated patient weight of 510lbs.

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / 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<sub>x</sub>-1B**

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



**Mounting Details:** Rigid floor mounted with 4 - M16 grade 10.9 bolts



<b>Manufacturer:</b> Siemens Healthcare GmbH		
<b>Component:</b> OR Patient Table - 30° Rotation	<b>Model / Serial Number:</b>	10992200 / 1003
<b>UUT Function:</b> Patient Table with integrated x-ray system		
<b>UUT Description:</b> Component of Artis Interventional System		
<b>Test Location / Report:</b> IABG mbH, Germany / TAF4-PB-17-280-V2	<b>Test Date:</b> September 2017	

**UUT PROPERTIES**

Weight (lb) with Patient	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,708	138.4"	27.0"	38.0"	3.6	2.5	3.7

The patient table moves vertically, horizontally, and rotates to accommodate different patients and procedures. The system was tested in its normal operating position with 30° rotation, a longitudinal extension of 24.8", and height of 38.0". The system was tested with a total simulated patient weight of 510lbs.

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

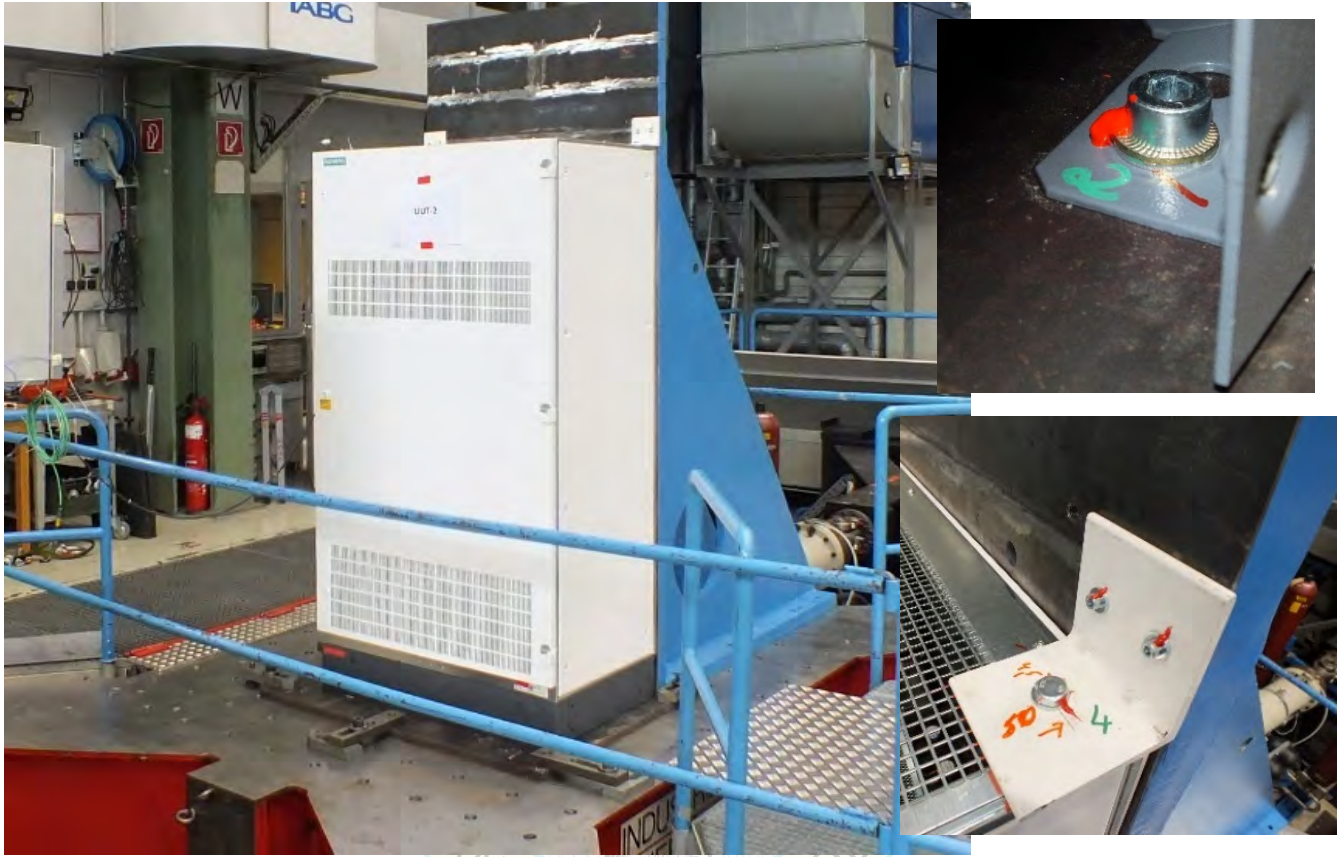
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT<sub>x</sub>-2

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



**Mounting Details:** Rigid Floor/Wall mount with 2 - M10 grade 8.8 bolts to the floor and 4 - M6 grade 8.8 bolts to the wall fixture. The M6 bolts to the wall fixture are connected to the UUT with 2 - L3x4x0.25x3" A36 angle brackets and 2 - M12 grade 8.8 bolts.



**Manufacturer:** Siemens Healthcare GmbH

**Component:** System Cabinet      **Model / Serial Number:** 11115700 / 1042

**UUT Function:** System Cabinet hosting OR Patient Table computers and control components

**UUT Description:** Component of Artis Interventional System

**Test Location / Report:** IABG mbH, Germany / TAF4-PB-17-280-V2      **Test Date:** September 2017

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
870	39.4"	25.6"	74.8"	NA	NA	NA

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / 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.

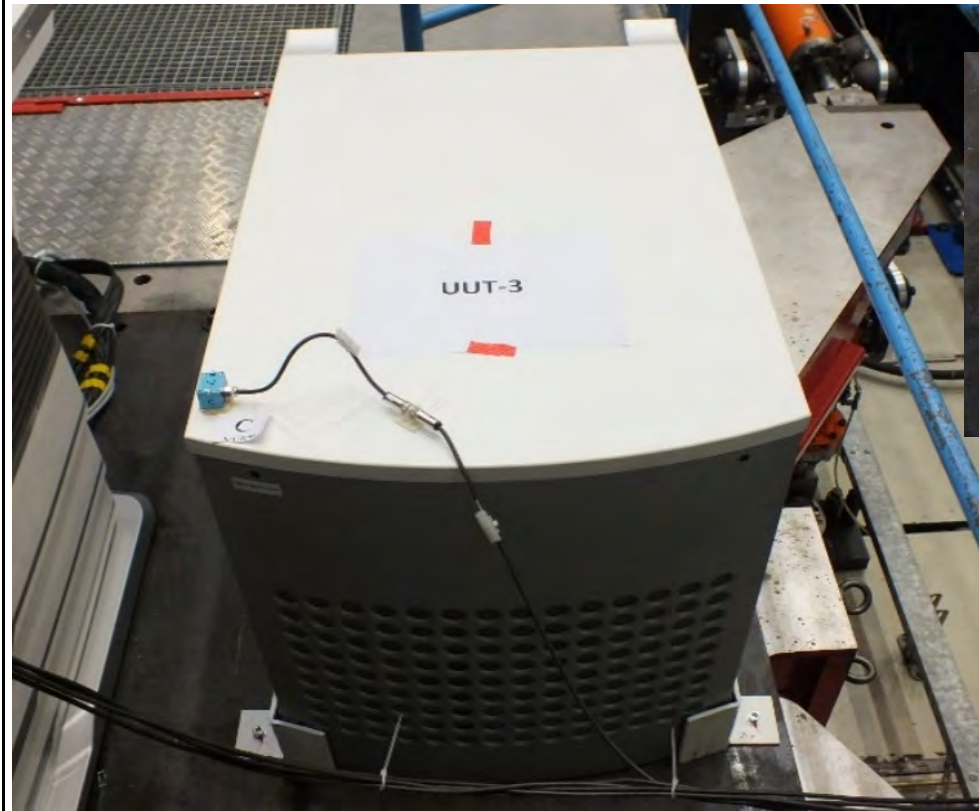


UUT<sub>x</sub>-3

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



**Mounting Details:** Rigid Floor mounted using Siemens provided seismic restraint kit. Seismic restraint kit includes steel corner brackets bolted to the floor with 4 - M10 grade 8.8 bolts and attached to the unit with 2"x2" 3M Dual Lock (SJ3550).



**Manufacturer:** Siemens Healthcare GmbH

**Component:** AXIS-VE

**Model / Serial Number:** 10910323 / 1046

**UUT Function:** Houses image system hardware used for interfacing and debugging patient table.

**UUT Description:** Component of Artis Interventional System

**Test Location / Report:** IABG mbH, Germany / TAF4-PB-17-280-V2

**Test Date:** September 2017

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
290	23.7"	37.2"	28.0"	23.6	18.1	27.2

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

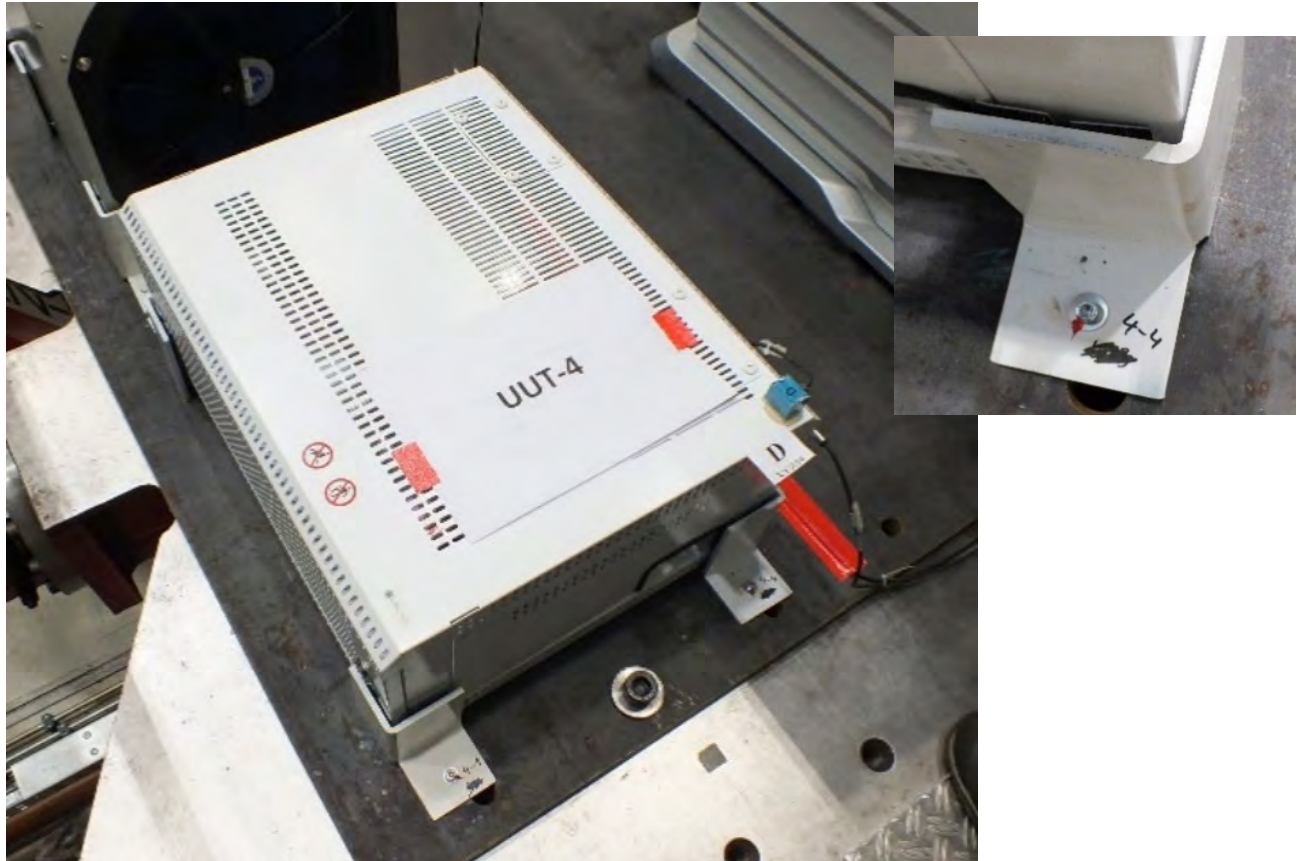
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT<sub>x</sub>-4

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



**Mounting Details:** Rigid Floor mounted using Siemens provided seismic restraint kit. Seismic restraint kit includes steel corner brackets bolted to the floor with 4 - M6 grade 8.8 bolts and attached to the unit with 2"x2" 3M Dual Lock (SJ3550).



**Manufacturer:** Siemens Healthcare GmbH

**Component:** FD Cooling **Model / Serial Number:** 10848724 / 2899

**UUT Function:** Chiller cooling unit for x-ray system

**UUT Description:** Component of Artis Interventional System, listed weight includes operating fluid.

**Test Location / Report:** IABG mbH, Germany / TAF4-PB-17-280-V2 **Test Date:** September 2017

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
55	23.6"	19.1"	11.8"	>33	>33	>33

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / ICC-ES AC156	2.00	1.0	1.5	3.20	2.40		
	2.50	0.0	1.5			1.67	0.67

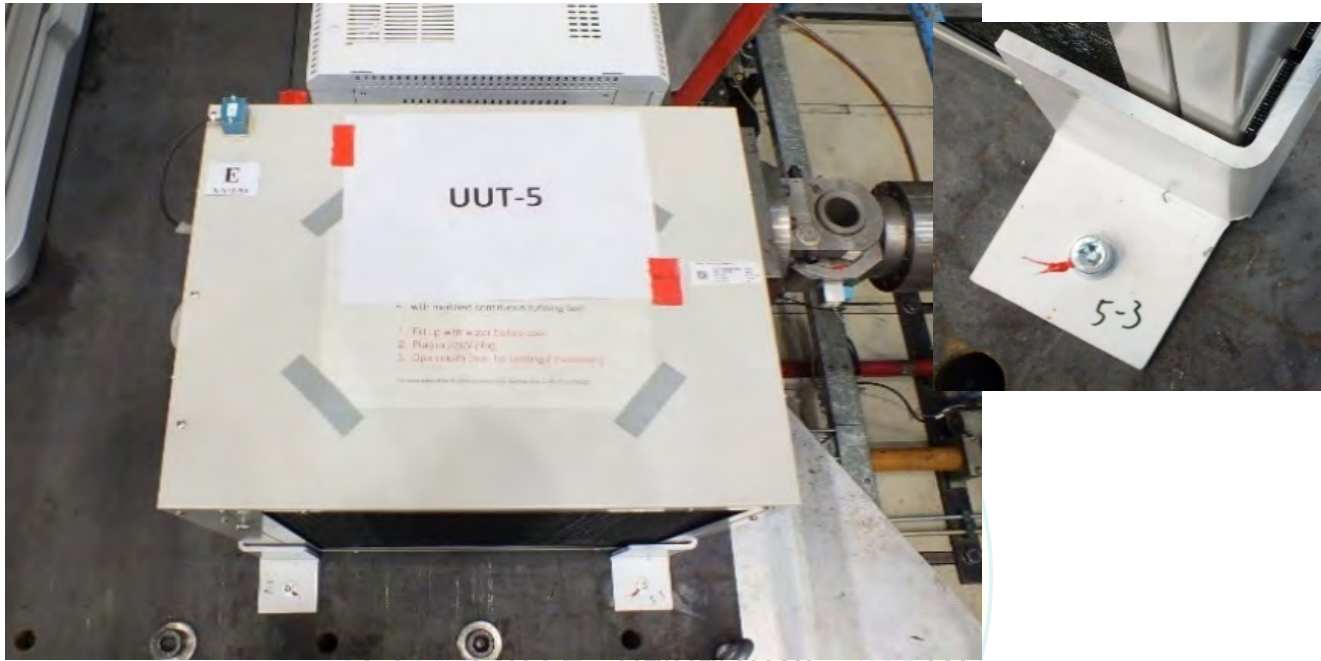
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT<sub>x</sub>-5

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



**Mounting Details:** Rigid Floor mounted using Siemens provided seismic restraint kit. Seismic restraint kit includes steel corner brackets bolted to the floor with 4 - M10 grade 8.8 bolts and attached to the unit with 2"x2" 3M Dual Lock (SJ3550).



**Manufacturer:** Siemens Healthcare GmbH

**Component:** Tube Cooling Unit

**Model / Serial Number:** 11321256 / 00001

**UUT Function:** Chiller cooling unit for x-ray system

**UUT Description:** Component of Artis Interventional System

**Test Location / Report:** IABG mbH, Germany / TAF4-PB-17-280-V2

**Test Date:** September 2017

**UUT PROPERTIES**

Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)		
	Width	Depth	Height	FB	SS	V
80	16.5"	20.5"	30.7"	30.0	30.0	>33

Weight includes operating fluid.

**SEISMIC TEST PARAMETERS**

Building Code / Test Criteria	S <sub>DS</sub> (g)	z / h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2022 / 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.