

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

APPI ICATION F	OR HCAI SPECIAL SEISMIC	OFFICE USE ONLY							
	ICATION PREAPPROVAL (OSP) APPLICATION #: OS cial Seismic Certification Preapproval (OSP) New Renewal								
HCAI Special Seismi	c Certification Preapproval (OSP)								
Type: X New	Renewal								
Manufacturer Inform	ation								
Manufacturer: Shang	hai United Imaging Healthcare Co., Ltd.								
Manufacturer's Technica	I Representative: Xin GAO								
Mailing Address: 2258	Chengbei Road, Jiading District, Shanghai, 201807								
Telephone:	Email: xin.gao@united-ima	ging.com							
Product Information	ED								
Product Name: CT Syst	ems	The second se							
Product Type: NA	SP 05P 0654	2							
Product Model Number:	uCT 520/528, 530/550, 760/780 CT systems and uMI	550 and 780 CT/PET systems Product Lines							
General Description:	Multiple component systems used for producing Comp diagnostic results	outed Tomography (CT) medical images for							
Mounting Description:	Rigid, Floor Mounted								
Tested Seismic Enhance	ements: None	2013							
Applicant Informatio	n Op	<u> </u>							
Applicant Company Nan	ne: W.E. GUNDY & ASOCIATES INC.								

Contact Person:	Travis Soppe	SOILDIN
Mailing Address:	P.O. Box 9121, Boise, ID 83707	

5	1 1		
Telephone: (20	08) 342-5989	Email:	tsoppe@wegai.com
Title: Presiden	t		



HCA



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

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 X ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
Other (Please Specify):
EOR CODE CO.
Testing Laboratory
Company Name: SUZHOU ELECTRICAL APPARATUS SCIENCE RESEARCH INSTITUTE CO., LTD. (EETI)
Contact Person: Tangfu Ji
Mailing Address: No. 5, Yuexi Qianzhu Road, Wuzhong District, Suzhou, 215104 Jiangsu, CHINA
Telephone: 86 (512) 69552195 Email: eeti-kz@eeti.cn
O DATE: 03/02/2022
DATE: 03/02/2022
BUILDING

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

HCAi



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

Seismic Parameters			
Design Basis of Equipment or Component	s (Fp/Wp) = See attachment		
SDS (Design spectral response acce	leration at short period, g) = 2.00 (z/h	= 1.0), 2.5	0 (z/h = 0.0)
ap (Amplification factor) =	See attachment		
Rp (Response modification factor) =	See attachment		
Ω_0 (System overstrength factor) =	See Attachment		
lp (Importance factor) =	1.5		
z/h (Height ratio factor) =	1 and 0		
Natural frequencies (Hz) =	See attachment		
Overall dimensions and weight =	See attachment		
	ED FORMAN		
HCAI Approval (For Office Use Only)	Approval Expires on 03/02/2020	BY	
Date: <u>3/2/2022</u>	OSP-0654	F	
Name: Timothy Piland		Title:	Senior Structural Engineer
Special Seismic Certification Valid Up to: S	SDS (g) = See Above	z/h =	See Above
Condition of Approval (if applicable):	DATE: 03/02/2022	6	
	ORNIA BUILDING COT	102	

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"



TABLE 1

UNITED IMAGING HEALTHCARE SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS



Manufacturer: United Imaging Healthcare

System: uCT and uMI Systems

	United Imaging		Dimensions (in)	Weight	Mounting	UUT	
System Component ¹	Part Number	Width	Depth Height		(lb)	Mounting	001	
		(CT Gantries					
uMI 550 CT	78001564	34.0	82.0	78.0	3968	floor	extrapolated	
uCT 520 CT	78002492	27.3	79.8	71.9	4300	floor	extrapolated	
uCT 528 CT	78002493	27.3	79.8	71.9	4300	floor	extrapolated	
uCT 530/550 CT	78001496	34.6	91.7	77.8	4300	floor	extrapolated	
uMI 780 CT	78000145	34.0	82.0	78.0	4718	floor	UUT-1A	
uCT 760/780 CT	78001101	31.5	91.7	77.8	5157	floor	UUT-2	
	L'	Р	ET Gantries	V P	7			
uMI 550 PET	78006264	28.1	SP-75254	77.0	1742	floor	UUT-3	
uMI 780 PET	80512214	28.1	75.2	77.0	2006	floor	UUT-1B	
	OB	BY:⊤Pa	tient Support	sd 📶	0			
uCT - PS1	78 <mark>0021</mark> 63	17.7	113.8-189.8	23.6-37.4	794 ²	floor	UUT-4	
uCT - PS2	80100042	23.6	119.9-205.8	18.9-37.4	21060^2	floor	UUT-5	
uMI - PS1	80150010	23.7	136.9-221.9	21.7-37.2	1698 ²	floor	UUT-6	
		Power	· Supply Cab	inets				
uCT - PSC1	78001298	27.6	24.5	55.1	992	floor	UUT-7	
uCT - PSC2	60000833	31.5	/IL 28.5 G	63.0	1918	floor	interpolated	
uMI - PSC1	78001474	27.6	24.5	55.1	1036	floor	interpolated	
uMI - PSC2	60000834	31.5	28.5	63.0	1940	floor	UUT-8	

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

² Patient table weight does not include 362lb (164kg) simulated patient weight.

SEISMIC CERTIFICATION LIMITS													
System Component	Code	$S_{DS}\left(g ight)$	z / h	I _P	a _P	R _P	Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$					
CT/PET Gantries	CBC	2.0	1.0	1.50	1.0	1.5	1.5	2.40					
CI/PET Gantries	2019	2.5	0	1.50	1.0	1.5	1.5	1.13					
Patient Supports	CBC	2.0	1.0	1.50	1.0	1.5	1.5	2.40					
Fatient Supports	2019	2.5	0	1.50	1.0	1.5	1.5	1.13					
Power Supply	CBC	2.0	1.0	1.50	2.5	6.0	2.0	1.50					
Cabinets	2019	2.5	0	1.30	2.3	0.0	2.0	1.13					

TABLE 1

UNITED IMAGING HEALTHCARE SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS



Manufacturer: United Imaging Healthcare

System: uCT and uMI Systems

	United Imaging]	Dimensions (in)	Weight	Mounting	UUT						
System Component ¹	Part Number	Width Depth Height		(lb)	Mounting								
Imaging Systems (PCs)													
uCT - PC1	60003853	7.0	20.5	17.2	44	floor	UUT-9 _z						
uMI - PC1	60001369	7.0	20.5	17.2	44	floor	interpolated						
uMI - PC2	60002731	7.0	25.5	17.8	56	floor	interpolated						
uMI - PC3	60002732	7.0	25.5	17.8	56	floor	interpolated						
uCT / uMI - PC2	60004342	7.0 K	19.0	18.6	37	floor	UUT-10 _x						
uCT / uMI - PC3	80504016	7.0	25.5	17.8	56	floor	UUT-11 _y						

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

² Patient table weight does not include 362lb simulated patient weight.

³ PCs are installed in any of three cabinets supplied by United Imaging Healthcare

_x - 18022538, _y - 18022536, _z - 18022537 mothy J. Piland

SEISMIC CERTIFICATION LIMITS											
m Component	Code	S _{DS} (g)	z/h	03/42/202	a _P		Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$			
ging Systems	CBC	2.0	1.0	1.50		2.5	2.0	1.44			
(PCs)	2019	2.5	0	1.50	1.0	2.5	2.0	1.13			
		25		1.50	1.0	2.5	2.0				

UNITED IMAGING HEALTHCARE SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS



Manufacturer: United Imaging Healthcare

System: uCT and uMI Systems

Subcomponent	United Imaging	Din	nensions	<u>(in)</u>	Weight	UUT	
Subcomponent	Part Number	Width Length Height			(lb)	001	
	СТ	- Collin	nator				
Collimator1	18008816	10.7	18.5	8.4	60.8	extrapolated	
Collimator3	80100251	13.8	16.9	5.9	89.3	UUT-1A, -2, -3	
Collimator2	18004936	13.0	20	6.1	100.2	UUT-1B	
	CT - X-R	ay Tubo	e Assem	bly			
Tube1	35000221 (20717)	7.5	18.9	8.1	69.4	extrapolated	
Tube2	35000223 (30717)	7.5	19.6	8.1	73.0	extrapolated	
Tube4	80100379 (7171)	12.2	11.8	12.2	139.3	UUT-2	
Tube3	80100010 (2150)	\$P ₁₂ 96	5418.0	12.5	213.0	UUT-1B	
	CT - High	Voltage	e Gener	ator			
HV1	35000222 (5201)	17.7	24.1	7.1	103.0	extrapolated	
HV2	80100013 4429	0.2,0.02/	2(21.3	7.90	108.0	UUT-1B	
HV3	35000036 (4889)	17.1	17.7	11.6	148.0	UUT-1A, -2,	
	C]	F - Dete	ctor	41			
Detector1	78001481	13.8	39.8	11.2	110.2	UUT-1B	
Detector2	80510925	147.3	46.1	11.6	187.4	UUT-2	
	CT - S	Slipring	System				
Slipring1	80100018	54.1	54.1	3.3	79.4	UUT-1B	
Slipring2	80100221	54.0	54.0	3.3	83.8	UUT-2	
	СТ - (Cooling	System				
Fan	18000882	8.9	8.9	4.0	3.8	UUT-1A/B,-2,-	

UUT-1A

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) M16 grade 12.9 bolts

	L'HAN CHE	BY:	Timothy	DDE C Ai -0654 / J. Pila	22 20			
	: United Imagin uMI 780 CT Gan	- ///			ate: Novemb		, CIIINA)	
Model Numbe			BUIL	RINU	Number:			
	Continuous ro	tating x_ray	to gener					
	ion: Component					>		
c c i Desempti	ion, component			OPERTI				
	Din	nensions (in		VI ENTI		atural Free	uency (Hz)	
Weight (lb)	Width	Depth		eight	FB	S		V
4,718	34.0	82.0		78.0	10.5	13		31.0
		SEISM	IIC TES	T PARA	METERS			
Building Code	e / Test Criteria	S _{DS} (g)	z / h	IP	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
		2.00	1.0	1.5	3.20	2.40	-	-
CBC 2019 / I	CC-ES AC156	2.50	0	1.5	-	-	1.67	0.67
	as full of contents du ural integrity during	ring testing a			l before and aft	er the ICC-ES	S AC156 test.	

UUT-1B

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) M12 grade 12.9 bolts

	Chr.	BY: DAT	FE:	03/0	J. Pilar 02/202	2 20				
	: United Imagin uMI 780 PET Ga	1/17				cation: EE		, 0111102	1)	
Model Numbe			B		HNO	Number: 1				
	1: Use of small a	mounts of r	radio					imaging	<u>т</u>	
	ion: Component					-	ulagnostic	maging	5	
UUI Descript	ion. Component				-					
	~ ·				PERTI		. 15		TT \	
Weight (lb)		nensions (in Donth	ches	/	aht		latural Freq	Ì	Hz)	V
2,006	Width 28.1	Depth 75.2		Hei 77	-	FB 12.5	SS 13.			V >33.0
2,000	20.1				1	AETERS	15.			- 55.0
Building Code	e / Test Criteria	S _{DS} (g)		z / h	Ip	Aflx-h (g)	Arig-h (g)	Aflx-v	(g)	Arig-v (g)
CBC 2019 / I	CC-ES AC156	2.00		1.0	1.5	3.20	2.40	-		-
		2.50		0	1.5	-	-	1.67		0.67
Note: The unit wa maintained struct	as full of contents du ural integrity during	and after the	nd re ICC-	ES AC1	functional 56 test.	before and aft	er the ICC-ES	5 AC156	test.	The unit

UUT-2

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (4) M16 grade 12.9 bolts



UUT-3

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) M12 grade 12.9 bolts





Mounting Details: Rigid floor mounted with (4) M12 grade 12.9 bolts

BY: Timothy J. Piland									
	: United Imagir	ig Healthcare			cation: EE		, CHINA)		
Component:	uCT – PS1			Test Da	te: Novemb	er 2019			
Model Numbe	er: 78002163	PAN		Report	Number: 1	340-01			
UUT Function	: Motorized pat	ient support	RITE	ING	0				
UUT Descript	ion: Componen	t of the uCT	CT system	ıs					
		U	UT PRO	PERTII	ES				
Weight (lb)	Din	nensions (inc	hes)		Natural Frequency (Hz)				
with Patient	Width	Depth	Hei	ght	FB	SS		V	
1,156	17.7	113.8-189.8			>33.0	3.0		4.0	
The patient table moves vertically and horizontally to accommodate different positions and procedures. The system was tested in the normal operating position, with the table top extended 41.7 inches, at the maximum height, and a total simulated patient weight of 362lbs.									
SEISMIC TEST PARAMETERS									
Building Code	e / Test Criteria	S _{DS} (g)	z / h	Ip	Aflx-h (g)	Arig-H (g)	AFLX-V (g)	Arig-v (g)	
		2.00	1.0	1.5	3.20	2.40	-	-	
CBC 2019 / ICC-ES AC156		2.50	0	1.5	-	-	1.67	0.67	
	as full of contents du				before and aft	er the ICC-ES	S AC156 test.	The unit	

maintained structural integrity during and after the ICC-ES AC156 test.



Mounting Details: Rigid floor mounted with (4) M12 grade 12.9 bolts

Conte: 03/02/2022									
Manufacturer	: United Imagin	ng Healthcar	e	Test Lo	cation: EE	TI (Suzhou	, CHINA)		
Component: uCT – PS2 Test Date: August 2019									
Model Numbe	r: 80100042	PA		Report	Number:	1340-01			
UUT Function	: Motorized pat	tient support	BLITE	ING	0				
UUT Descript	ion: Componen	t of the uCT	CT system	ıs					
		ι	JUT PRO	PERTI	ES				
Weight (lb) Dim		nensions (inches)			Natural Frequency (Hz))		
with Patient	Width	Depth	Hei	ght	FB	SS		V	
1,422	23.6	119.9-205.8			8.0	9.	-	8.5	
system was test	le moves verticated in the normal ht, and a total sin	operating point operating point operating point operating point operation op	osition, wi	th the ta of 3621b	ble top extens.	1	-		
Building Code	e / Test Criteria	S _{DS} (g)	z / h	Ip	Aflx-H (g)		Aflx-v (g)	Arig-v (g)	
CBC 2019 / ICC-ES AC156		2.00	1.0	1.5	3.20	2.40	-	-	
2.50 0				1.5	-	-	1.67	0.67	
	as full of contents du ural integrity during				before and aft	er the ICC-ES	S AC156 test.	The unit	



Mounting Details: Rigid floor mounted with (6) M12 grade 12.9 bolts

			H					
Ur	T		#02	1	1	1		-
		CO FO	DRCO	DEQ	OA			
		Lu lu			The second second	-	-	-
			OSP-0		1			4
		BY:	Fimothy .	J. Pilar	nd			
Manufacturer	: United Imagin	DAT ig Healthcar	E: 03/0	2/202 Test Lo	cation: EE	TI (Suzhou	, CHINA)	
Component:	uMI – PS1			Test Da	ite: Novemb	ber 2019		
Model Numbe	r: 80150010	PA		Report	Number: 1	1340-01		
UUT Function	: Motorized pat	tient support	BLILE	ING	0			
UUT Descript	ion: Componen	t of the uMI	CT system	ns				
		τ	JUT PRO	PERTI	ES			
Weight (lb)	Din	mensions (inches)			Natural Frequency (Hz)			
with Patient	Width	Depth	Hei	ght	FB	SS	8	V
2,060	23.7	136.9-221.9			>33.0	5.		6.0
system was test	le moves vertica ted in the normal ht, and a total sir	operating p	osition, wi	th the ta	ble top exter	-	-	
		SEISM	IC TEST	PARAN	AETERS			
Building Code	e / Test Criteria	S _{DS} (g)	z / h	Ip	A _{FLX-H} (g)	Arig-h (g)	A _{FLX-V} (g)	ARIG-V (g)
		2.00	1.0	1.5	3.20	2.40	-	-
CBC 2019 / ICC-ES AC156		2.50	0	1.5	-	_	1.67	0.67
	as full of contents du ural integrity during				before and aft	er the ICC-ES	S AC156 test.	The unit





Mounting Details: Rigid floor mounted with (8) M12 grade 12.9 bolts thru United Imaging seismic anchorage brackets (78005842).





UUT-9_z



Mounting Details: Cabinet is Rigid floor mounted with (4) M12 grade 12.9 bolts thru United Imaging seismic anchorage brackets (18042254). Internal PC mounts to the cabinet with United Imaging seismic restraint brackets (18042256).



UUT Description: Component of the uCT CT systems. UUT-9 was tested installed in United Imaging PC Cabinet, Part Number: 18022537

UUT PROPERTIES									
Weight (lb)	Dimensions (inches)				Natural Frequency (Hz)				
	Width	Depth	Hei	ght	FB S		5	V	
44	7.0	20.5	17	17.2		19.	0	22.5	
SEISMIC TEST PARAMETERS									
Building Code	e / Test Criteria	S _{DS} (g)	z / h	Ip	Aflx-H (g)	Arig-h (g)	AFLX-V (g)	Arig-v (g)	
CPC 2010 / I		2.00	1.0	1.5	3.20	2.40	-	-	
CBC 2019 / ICC-ES AC156		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.





Mounting Details: Cabinet is Rigid floor mounted with (4) M12 grade 12.9 bolts thru United Imaging seismic anchorage brackets (18042255). Internal PC mounts to the cabinet with United Imaging seismic restraint brackets (18042256).



UUT-11_y



Mounting Details: Cabinet is Rigid floor mounted with (4) M12 grade 12.9 bolts thru United Imaging seismic anchorage brackets (18042254). Internal PC mounts to the cabinet with United Imaging seismic restraint brackets (18042256).

