

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

APPLICATION F	OR HCAI SPECIAL SEISMIC	OFFICE USE ONLY
CERTIFICATION	PREAPPROVAL (OSP)	APPLICATION #: OSP-0654
HCAI Special Seismi	c Certification Preapproval (OSP)	
Type: X New	Renewal	
Manufacturer Informa	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
	FORCODECO	
Product Information	ED	
Product Name: CT Syste	ems	-
Product Type: NA	OSP-0654	Z
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	uted Tomography (CT) medical images for
Mounting Description:	Rigid, Floor Mounted	
Tested Seismic Enhance	ements: None DATE. 0010212022	100
Applicant Information	n Optila	Kr land
Applicant Company Nam	ne: W.E. GUNDY & ASOCIATES INC.	
Contact Person: Travis	Sonne	

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

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

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

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

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
PART
BUILDING

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



STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY



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	SDS (Design spectral response acceleration at short period, g) = $2.00 (z/h = 1.0), 2.50 (z/h = 0.0)$								
ap (Amplification factor) =	See attachment								
R _p (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 ODE								
HCAI Approval (For Office Use Only)	Approval Expires on 03/02/2028	The second							
Date: 3/2/2022	OSP-0654	G							
Name: Timothy Piland		Title:	Senior Structural Engineer						
Special Seismic Certification Valid Up to: S	DS (g) = See Above	z/h =	See Above						
Condition of Approval (if applicable):	DATE: 03/02/2022	δ							
	ORNIA BUILDING COD	102							



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	Manufina				
System Component	Part Number	Width	Depth	Height	(lb)	Mounting	UUI			
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'H	Р	ET Gantries	E Contraction	7					
uMI 550 PET	78006264	28.1	SP-75254	77.0	1742	floor	UUT-3			
uMI 780 PET	80 <mark>5122</mark> 14	28.1	75.2	77.0	2006	floor	UUT-1B			
	OEE	8Y:⊤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	1060^{2}	floor	UUT-5			
uMI - PS1	80150010	23.7	136.9-221.9	21.7-37.2	1698 ²	floor	UUT-6			
		Power	· Supply Cabi	inets						
uCT - PSC1	78001298	27.6	24.5	55.1	992	floor	UUT-7			
uCT - PSC2	60000833	31.5	/IL 28.5	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	$S_{DS}(g)$	z / h	I _P	ap	R _P	Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$		
CT/PET Gantries	CBC	2.0	1.0	1.50	1.0	15	1.5	2.40		
	2019	2.5	0	1.50		1.5		1.13		
	CBC	2.0	1.0	1.50	1.0	1.5	1.5	2.40		
Fatient Supports	2019	2.5	0	1.30				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

Senter Comment	United Imaging]	Dimensions (in)	Weight	Mounting				
System Component	Part Number	Width	Depth	Height	(lb)	Mounting	UUI			
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									
System Component	Code	S _{DS} (g)	z/h	03/42/202	a _P		Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$	
Imaging Systems	CBC	2.0	1.0		10	25	2.0	1.44	
(PCs)	2019	2.5	0	1.50	1.0	2.3	2.0	1.13	
VIA BUILDING COST									

UNITED IMAGING HEALTHCARE SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS



Manufacturer: United Imaging Healthcare

System: uCT and uMI Systems

Subcomponent	United Imaging	Dir	nensions	(in)	Weight	LILIT			
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-Ray Tube Assembly								
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)	SP12.56	5418.0	12.5	213.0	UUT-1B			
	CT - High Voltage Generator								
HV1	35000222 (5201)	17.7	24.1	7.1	103.0	extrapolated			
HV2	80100013 (4429)	0.2/0.02/	2021.3	7.90	108.0	UUT-1B			
HV3	35000036 (4889)	17.1	17.7	11.6	148.0	UUT-1A, -2, -3			
	С	- Dete	ctor	41					
Detector1	78001481	13.8	39.8	11.2	110.2	UUT-1B			
Detector2	80510925	117.3	46.1	11.6	187.4	UUT-2			
	CT - S	lipring	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 - С	Cooling	System						
Fan	18000882	8.9	8.9	4.0	3.8	UUT-1A/B,-2,-3			

UUT-1A

UNIT UNDER TEST (UUT) SUMMARY SHEET



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

Manufacturer: United Imaging Healthcare									
Manufacturer	: United Imagin	ng Healthcare		Test Lo	cation: EE	ΓΙ (Suzhou	, CHINA)		
Component:	uMI 780 CT Gai	ntry	BUTH	Test Da	ite: Novemb	per 2019			
Model Numbe	er: 78000145			Report	Number:	340-01			
UUT Function	: Continuous ro	otating x-ray t	to generat	te diagno	stic imaging	5			
UUT Descript	ion: Componen	t of the uMI	780 CT/P	ET syste	m				
		U	UT PRC	PERTI	ES				
Weight (lb)	Dir	nensions (inc	hes)		N	atural Freq	uency (Hz)		
4 719	Width	Depth	He	ight	FB	12	5	V 21.0	
4,/18	34.0	82.0 GELONI			10.5	13.		31.0	
SEISMIC TEST PARAMETERS									
Building Code	e / Test Criteria	$S_{DS}(g)$	z / h	IP	$A_{FLX-H}(g)$	$A_{RIG-H}(g)$	$A_{FLX-V}(g)$	$A_{RIG-V}(g)$	
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 d ural integrity during	uring testing and g and after the IC	d remained	functiona 156 test.	before and aft	er the ICC-ES	S AC156 test	The unit	

UUT-1B

UNIT UNDER TEST (UUT) SUMMARY SHEET



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

	BY: Timothy J. Piland DATE: 03/02/2022								
Manufacturer	: United Imagin	ng Healthcare		Test Lo	ocation: EE	TI (Suzhou	, CHINA	A)	
Component:	uMI 780 PET Ga	antry	BLITE F	Test Da	ate: Novemb	per 2019			
Model Numbe	er: 80512214		UILL	Report	Number: 1	340-01			
UUT Function	: Use of small a	amounts of rac	lioactive	materia	l to generate	diagnostic	imaging	g	
UUT Descript	ion: Componen	t of the uMI 7	80 CT/P	ET syste	em				
		U	UT PRO	PERTI	ES				
Weight (lb)	Din	nensions (inch	es)		N	atural Freq	uency (Hz)	
	Width	Depth	Hei	ght	FB	SS	5		V
2,006	28.1	75.2	77	.0	12.5	13.	.5		>33.0
		SEISMIC	C TEST	PARA	METERS				
Building Code	e / Test Criteria	Sds (g)	z / h	Ip	$A_{FLX-H}(g)$	Arig-H (g)	AFLX-V	(g)	Arig-V (g)
		2.00	1.0	1.5	3.20	2.40	-		-
CBC 2019 / 1	CC-ES AC156	2.50	0	1.5	-	-	1.67	7	0.67
Note: The unit w maintained struct	as full of contents du ural integrity during	uring testing and and after the IC	remained C-ES AC1	functiona 56 test.	l before and aft	er the ICC-ES	S 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

	Manufacturer: United Imaging Healtheare								
Manufacturer	: United Imagin	ng Healthcar	e	Test Lo	cation: EE	<mark>FI (Suzhou</mark>	, CHINA)		
Component:	uCT – PS1			Test Da	te: Novemb	er 2019			
Model Numbe	er: 78002163			Report	Number: 1	340-01			
UUT Function	: Motorized pa	tient support	RUTE	ING	9				
UUT Descript	ion: Componen	t of the uCT	CT system	ıs					
		τ	UUT PRO	PERTII	ES				
Weight (lb)	Dir	nensions (ind	ches)		N	atural Freq	uency (Hz)		
with Patient	Width	Depth	Hei	ght	FB	SS	5	V	
1,156	17.7	113.8-189.8	3 23.6-	37.4	>33.0	3.0	0	4.0	
The patient tab system was tes maximum heig	le moves vertica ted in the norma ht, and a total sin	lly and horiz l operating p nulated patie	contally to a osition, wi ent weight	accomm th the ta of 362lb	odate differe ble top exter os.	ent position ided 41.7 in	s and proce thes, at the	edures. The	
		SEISM	IC TEST	PARAN	IETERS				
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	-	-	
СВС 2019 / 1	CC-ES AC156	2.50	0	1.5	-	-	1.67	0.67	
Note: The unit wa	as full of contents d	uring testing ar	nd remained	functional	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





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

#02 #02 OR CODE OBP-0654												
Manufacturer: United Imaging Healthcare Test Location: EETI (Suzhou, CHINA)												
Component: uMI – PS1 Test Date: November 2019												
Model Number: 80150010 Report Number: 1340-01												
UUT Function: Motorized patient support												
UUT Descript	ion: Componen	t of the uMI C	CT system	ns								
		U	UT PRO	PERTI	ES							
Weight (lb)	Din	Dimensions (inches)			Natural Frequency (Hz)							
with Patient	Width	Depth	Hei	ght	FB	SS	5	V				
2,060	23.7	136.9-221.9	21.7-	37.2	>33.0	5.:	5	6.0				
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	Sds (g)	z / h	Ip	$A_{FLX-H}(g)$	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 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: 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 Function: Imaging System PC

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	SS	SS					
44	7.0	20.5	17	.2	>33.0	19.	0	22.5				
SEISMIC TEST PARAMETERS												
Building Code / Test Criteria		Sds (g)	z / h	Ip	Aflx-H (g)	Arig-H (g)	AFLX-V (g)	Arig-V (g)				
CDC 2010 / ICC ES AC156		2.00	1.0	1.5	3.20	2.40	-	-				
CBC 201971	CC-ES ACI30	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												

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).



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