

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC	OFFICE USE ONLY
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSP-0766
HCAI Special Seismic Certification Preapproval (OSP)	
Type: X New Renewal	
Manufacturer Information	
Manufacturer: Shanghai United Imaging Healthcare Co., Ltd.	
Manufacturer's Technical Representative: Xin GAI	
Mailing Address: 2258 Chengbei Rd., Jiading District, Shanghai, 201807	
Telephone: +86 (21) 67076888 Email: xin.gao@united-ima	iging.com
FORCODECOA	
Product Information	0,
Product Name: Fluoroscopy and Radiography Systems	1
Product Type: NA	12
Product Model Number: uDR X-Ray and Fluoroscopy System	m
General Description: Multiple component digital radiography and fluoroscop	y medical diagnostic imaging system.
Mounting Description: Several – See UUT Sheets	
Tested Seismic Enhancements: Seismic enhancements made to the test un anomalies during the tests shall be incorpor	its and/or modifications required to address rated into the production units.
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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OSP-0766

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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 ICC-ES AC156 X IEEE 344 IEEE 693 NEBS 3
Other (Please Specify):
FOR 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: 09/20/2023
PNT
DATE: 09/20/2023



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Seismic Parameters

In Basis of Equipment or Components	(Fp/Wp) = See Attachments							
SDS (Design spectral response accele	eration at short period, g) = $2.00 (z/h)$	i = 1.0) and	2.50 (z/h = 0.0)					
ap (Amplification factor) =	See attachments							
Rp (Response modification factor) =	See attachments							
Ω_0 (System overstrength factor) =								
Ip (Importance factor) =	1.5							
z/h (Height ratio factor) =	1 and 0							
Natural frequencies (Hz) =	See Attachment							
Overall dimensions and weight =	See Attachment							
	FORMER							
	JE CONTRACTOR							
Approval (For Office Use Only)	Approval Expires on 09/20/2029	9 7						
9/20/2023	OSP-0766	G						
e: Mohammad Karim		Title:	Supervisor, Health Facilities					
al Seismic Certification Valid Up to: St	os (g) = See Above	z/h =	See Above					
ition of Approval (if applicable):	DATE: 00/20/2023	\mathbb{T}						
	DATL. 0912012023							
		201						
		<u>k</u> .						
	Philade Contraction							
	BITTOING							
	SDS (Design spectral response accele a_p (Amplification factor) = R_p (Response modification factor) = Ω_0 (System overstrength factor) = l_p (Importance factor) = z/h (Height ratio factor) = Natural frequencies (Hz) = Overall dimensions and weight = I Approval (For Office Use Only) = 9/20/2023 a_p : Mohammad Karim	SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h ap (Amplification factor) = See attachments Rp (Response modification factor) = See attachments Ω_0 (System overstrength factor) = See Attachment lp (Importance factor) = 1.5 z/h (Height ratio factor) = $1 \text{ and } 0$ Natural frequencies (Hz) = See Attachment Overall dimensions and weight = See Attachment Approval (For Office Use Only) - Approval Expires on 09/20/202 <u>9/20/2023</u> e: Mohammad Karim al Seismic Certification Valid Up to: SDS (g) = See Above	SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1.0) and ap (Amplification factor) = See attachments Rp (Response modification factor) = See attachments Ω0 (System overstrength factor) = See Attachment Ip (Importance factor) = 1.5 z/h (Height ratio factor) = 1 and 0 Natural frequencies (Hz) = See Attachment Overall dimensions and weight = See Attachment 9/20/2023 OSP-0766 9/20/2023 OSP-0766 al Seismic Certification Valid Up to: SDs (g) = See Above					



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Table 1

UNITED IMAGING HEALTHCARE Co., Ltd SPECIAL SEISMIC CERTIFICATION CERTIFIED SYSTEM AND COMPONENTS



System: uDR X-Ray and Fl	uoroscopy Systems	Ma	nufacture	er: United	Imaging	Healthcare C	o., Ltd		
System Component ¹	United Imaging	Di	mensions (Weight	Mounting	UUT		
System Component	Part Number	Width	Length	Height	(lb)		001		
Tube Ceiling Stand									
TCS - uDR780i	18050430	39.4-52.4	51.2-67.6	53.2-124.1	882	ceiling	UUT-1		
		Bucky Wរ	all Stand						
BSW-1 - uDR596i	18047224	26.4	24.0	88.5	547	floor	UUT-2		
BWS-2 - uDR780i	18046649	37.901	24.0	88.5	573	floor	UUT-3		
	EDFL	Tube S	Stand	10					
TS - uDR596i	18047045	42.9-73.7	94.4-144.4	89.8	507	floor	UUT-4		
	<u>H</u>	Patient	Table ²	TÉ					
TBL-1 - uDR596i	18050033	33.1-42.7	90.6-129.2	27.6	1157	floor	UUT-5		
TBL-2 - uDR780i	78010619	33.3	91.4	19.4-34.9	992	floor	UUT-6		
Notes:		E: 09/2	0/2023		1				

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

BUILDING

² Patient table weights do not include 565lb simulated patient weight.

³ PC is installed in a United Imaging Healthcare cabinet with model number 18022538

	SEISMIC CERTIFICATION LIMITS											
System Component	Code	S _{DS} (g)	z / h	I _P	a _P	R _P	Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$				
Tube Ceiling Stand	CBC	2.0	1.0	1.50	2.5	2.5	2.0	3.60				
Tube Cennig Stand	2022	2.5	0	1.50	2.5	2.5	2.0	1.50				
Bucky Wall Stand	CBC	2.0	1.0	1.50	1.0	1.5	2.0	2.40				
Bucky wan Stand	2022	2.5	0	1.50	1.0	1.5	2.0	1.13				
Tube Stand	CBC	2.0	1.0	1.50	1.0	1.5	2.0	2.40				
Tube Stand	2022	2.5	0	1.50	1.0	1.5	2.0	1.13				
Patient Table	CBC	2.0	1.0	1.50	1.0	1.5	2.0	2.40				
	2022	2.5	0	1.30	1.0	1.3	2.0	1.13				

Table 1	SPE	CD IMAGING CCIAL SEISM IFIED SYSTE	IIC CE	RTIFIC	ATION			GAI ISSOCIATES, INC. AQUAKE ENGINEERING
System: uDR X	-Ray and Flue	proscopy Systems	Ma	inufacture	er: United	Imaging	Healthcare C	o., Ltd
	.1	United Imaging	Di	mensions ((in)	Weight		
System Col	mponent	Part Number	Width	Length	Height	(lb)	Mounting	UUT
		Po	wer Supp	ly Cabinet	t			
PSC - uL	DR780i	80504613	23.2	32.5	52.5	375	wall	UUT-7
	Ι	maging Systems ((Cabinet /	Internally	y Mountee	$d PC)^3$		
PC Cal	binet	18022538	34.2	30.3	35.8	174	floor	UUT-8
PC - uDR596	i / uDR780i	60007750	7.2	14.3	16.7	16	11001	001-8
Notes:								

¹ All components are manufactured by United Imaging Healthcare Co., Ltd. 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 weights do not include 565lb simulated patient weight.

³ PC is installed in a United Imaging Healthcare cabinet with model number 18022538 (see cabinet dimensions / weight above)

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	BY: Mohammad Karim	
C	DATE: 09/20/2023	
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	VI.	
	NIA BUILDING COD	

SEISMIC CERTIFICATION LIMITS										
System Component	Code	$S_{DS}(g)$	z / h	I _P	a _P	R _P	Ω ₀	$\mathbf{F}_{\mathbf{P}}$ / $\mathbf{W}_{\mathbf{P}}$		
Downer Symply Cohingt	CBC	2.0	1.0	1.50	2.5	6.0	2.0	1.50		
Power Supply Cabinet	2022	2.5	0	1.30	2.3	0.0	2.0	1.13		
PC / User Interface	CBC	2.0	1.0	1.50	2.5	6.0	2.0	1.50		
rC / User Interface	2022	2.5	0	1.30	2.3	0.0	2.0	1.13		

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid ceiling mounted with (28) M8 grade 12.9 bolts; two bolts at each intersection with the ceiling Unistrut grid spaced at 19.7" on center.



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.

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (10) M12 grade 8.8 bolts

	O Krist	BY:		P-la mm	VT-2				
	: United Imagir BWS-1 – uDR59					cation: EE te: Septemb		, CHINA)	
Model Numbe						Number: 1			
	: Radiographic	wall stand t	for x-ra				1340 05		
	ion: Component		SHI		THU				
	ton component				PERTI	FS			
	Din	nensions (in		NU			latural Freq	llency (Uz)
Weight (lb)	Width	Depth		Hei	oht	FB	SS) V
547	26.4	24.0		88.	0	12.5	11.		17.5
	I I		IIC TE			IETERS	I	I	
Building Code	e / Test Criteria	S _{DS} (g)	z / ł	1	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 2022 / I	CC-ES AC156	2.50	0		1.5		-	1.67	0.67
	as full of contents du ural integrity during	ring testing a	nd remai		functional	before and aft	er the ICC-ES		

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (10) M12 grade 8.8 bolts

	: United Imagin BWS-2 – uDR78	g Healthcar	re				/	, CHINA	<u>,</u>)	
Model Numbe	r: 18046649	P	<u>MM</u>			Number: 1				
	: Radiographic	wall stand f	for	<u></u>	THE PARTY	$\overline{\mathcal{O}}$				
-	ion: Component		~							
oor Descript	ion. Component									
					PERTI		T , 1 37	/*	T)	
Weight (lb)		nensions (in	iches	/	~h+		latural Freq		1Z)	V
573	Width 37.9	Depth 24.0		Heig 88		FB 7.5	4.0			V 8.0
515	51.7						4.	0		0.0
		SEISM			rakan	METERS		T		
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 2022 / I	CC-ES AC156	2.00	1	1.0	1.5	3.20	2.40	-		-
	CC-L5 AC150	2.50		0	1.5	-	-	1.67		0.67
	as full of contents du ural integrity during	ring testing a			functional	before and aft	er the ICC-ES		est.	

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (4) M12 grade 8.8 bolts



UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) M12 grade 8.8 bolts

			CO COSP-(DE A D76				
Manufacturer: Component: T			Mohamn E: 09/2 re	<u>HANNY</u>	cation: EE te: Septemb		, CHINA)	
	BL-1 – uDR59			Test Da	O \$6556	per 2022	, CHINA)	
Component: T	BL-1 – uDR59 : 18050033	96i		Test Da	te: Septemb	per 2022	, CHINA)	
Component: T Model Number	BL-1 – uDR59 : 18050033 Motorized pa	06i tient suppor	B	Test Da Report	te: Septemb Number:	per 2022	, CHINA)	
Component: T Model Number UUT Function:	BL-1 – uDR59 : 18050033 Motorized pa	D6i tient support pport for the	B	Test Da Report	te: Septemb Number: 1 tem	per 2022	, CHINA)	
Component: T Model Number UUT Function:	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup	D6i tient support pport for the	t uDR596i x UUT PRO	Test Da Report	te: Septemb Number: 1 tem ES	per 2022		
Component: T Model Number UUT Function: UUT Descriptio	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup	Ofi tient support oport for the	t uDR596i x UUT PRO	Test Da Report -ray sys PERTI	te: Septemb Number: 1 tem ES	ber 2022 1340-05	uency (Hz)) V
Component: T Model Number UUT Function: UUT Descriptio	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup Din	D6i tient support oport for the mensions (in	t uDR596i x UUT PRO uches)	Test Da Report -ray sys PERTII ght	te: Septemb Number: 1 tem ES	ber 2022 1340-05 Jatural Freq	juency (Hz)	
Component: T Model Number UUT Function: UUT Descriptio Weight (lb) with Patient	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup Din Width 37.9 noves horizontally	26i tient support poport for the mensions (in Depth 109.9 to accommod tered and a tota	t uDR596i x UUT PRO aches) Hei 27 late different al simulated p	Test Da Report	te: Septemb Number: 1 tem ES N FB 7.5 and procedure ight of 565lbs.	Jatural Freq 8.	uency (Hz) S 0	V 22.0
Component: T Model Number UUT Function: UUT Descriptio Weight (lb) with Patient 1,722 The patient table m	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup Din Width 37.9 noves horizontally	26i tient support poport for the mensions (in Depth 109.9 to accommod tered and a tota	t uDR596i x UUT PRO iches) Hei 27 late different	Test Da Report	te: Septemb Number: 1 tem ES N FB 7.5 and procedure ight of 565lbs.	Jatural Freq 8.	uency (Hz) S 0	V 22.0
Component: T Model Number UUT Function: UUT Description Weight (lb) with Patient 1,722 The patient table m operating position, w	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup Din Width 37.9 ovves horizontally with the table cen	26i tient support poport for the mensions (in Depth 109.9 to accommod tered and a tota	t uDR596i x UUT PRO aches) Hei 27 late different al simulated p	Test Da Report	te: Septemb Number: 1 tem ES N FB 7.5 and procedure ight of 565lbs.	Jatural Freq 8.	uency (Hz) S 0	V 22.0
Component: T Model Number UUT Function: UUT Descriptio Weight (lb) with Patient 1,722 The patient table m	BL-1 – uDR59 : 18050033 Motorized pa on: Patient sup Din Width 37.9 Noves horizontally with the table cen	bi tient support poport for the mensions (in Depth 109.9 to accommod tered and a tota SEISN	t uDR596i x UUT PRO aches) Hei 27 late different al simulated p HIC TEST	Test Da Report	te: Septemb Number: 1 tem ES N FB 7.5 and procedure ight of 565lbs. METERS	Jatural Freq SS 8.0 SS. The system	uency (Hz) S 0 n was tested	V 22.0 in the normal

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (4) M12 grade 8.8 bolts

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int			
3			
cation: EET	FI (Suzhou,	CHINA)	
te: Septemb	er 2022		
Number: 1	340-05		
9			
em.			
2S			
Ν	atural Freq	uency (Hz)	
FB	SS	5	V
7.0	6.0)	6.5
nd procedures. ed patient wei			n the norma
IETERS			
$A_{FLX-H}\left(g ight)$	$A_{RIG-H}(g)$	$A_{FLX-V}(g)$	A _{RIG-V} (g)
3.20	2.40	-	-
-	-	1.67	0.67
ł	3.20	3.20 2.40	3.20 2.40 -

UNIT UNDER TEST (UUT) SUMMARY SHEET



Mounting Details: Rigid floor mounted with (8) M12 grade 12.9 bolts thru (2) 3mm thick United Imaging U brackets mounted to the cabinet with (2) M12 screws per bracket.

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		ED F			DE C 0766 nad Ka						
Manufacturer: United Imaging Healthcare						Test Location: EETI (Suzhou, CHINA)					
Component: PSC – uDR780i					Test Date: September 2022						
Model Number: 80504613					Report Number: 1340-05						
UUT Function	: Power Suppl	y Cabinet	BU		DING						
UUT Descript	ion: Power sup	ply for the u	DR78()i x-	ray syste	em.					
		l	UUT I	PRO	PERTI	ES					
	Di	mensions (in	ches)			N	latural Freq	uency (H	z)		
Weight (lb)	Width	Depth		Height		FB		SS S			
375	23.2	32.5		52.5		15.0	13	.0	7.0		
		SEISM	IIC TI	EST	PARA	METERS	1	I			
Building Code / Test Criteria S _{DS}		$S_{DS}(g)$	z /]	h	IP	$A_{FLX-H}(g)$	$A_{RIG-H}(g)$	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	,	
	s full of contents d aral integrity during					before and afte	er the ICC-ES	AC156 tes	t. The unit		

