

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



"A healthier California where all receive equitable, affordable, and quality health care" STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

OSP-0766

All Ju

YNTIN



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 |



"A healthier California where all receive equitable, affordable, and quality health care" STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

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 | | | | | |



"A healthier California where all receive equitable, affordable, and quality health care"

Alla

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)

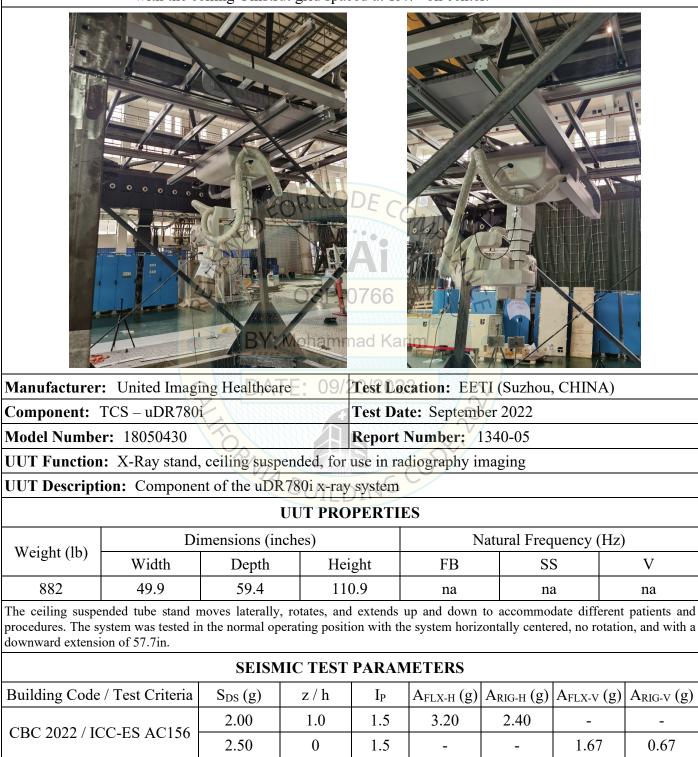
| 4 | OSP-0766 | 1 |
|----|--------------------|---|
| | | |
| | BY: Mohammad Karim | |
| | | |
| C | DATE: 09/20/2023 | |
| | | |
| 10 | | |
| | VI. | |
| | NIA BUILDING COD | |

| 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

| | and the second | 1-1 | |
|----------------------------------|----------------|----------------|------------------------|
| | | | |
| 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.

| | | | | | (| / | 1 | | | | |
|---|---|---------------|--------------|--------|---------------------------|-------------------------------------|----------------|----------------------|-----------------------|-----|--|
| | | 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 | | |

