## APPLICATION FOR OSHPD PREAPPROVAL OF MANUFACTURER’S CERTIFICATION (OPM)

### OSHPD Preapproval of Manufacturer's Certification (OPM)

**Type:**
- [ ] New
- [x] Renewal/Update

### Manufacturer Information

**Manufacturer:** Shimadzu Medical Systems

**Manufacturer's Technical Representative:** Jim Mekker

**Mailing Address:** 20101 S. Vermont Ave., Torrance, CA 60502

**Telephone:** (216) 288-0709  
**Email:** Mekker@shimadzu-usa.com

### Product Information

**Product Name:** BR-120 NON-TILTING WALL STAND

**Product Type:** Other Mechanical & Electrical Equipment

**Product Model Number:** ZS-200

**General Description:** Subcomponent of Sonialvision G4 System

### Applicant Information

**Applicant Company Name:** EASE LLC.

**Contact Person:** Tiffany Tonn

**Mailing Address:** 1515 FAIRVIEW AVE, STE 205, MISSOULA, MT 59801

**Telephone:** (406) 541-3273  
**Email:** tiffany@easeco.com

**Title:**

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*STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY*
**Certification Method**

- Testing in accordance with: [ ] ICC-ES AC156  [ ] FM 1950-16
- Other(s) (Please Specify): 

  *Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.*

- [ ] Analysis
- [ ] Experience Data
- [ ] Combination of Testing, Analysis, and/or Experience Data (Please Specify): 

**OSHPD Approval**

- Date: 7/2/2020
- Name: David Calia
- Title: Senior Structural Engineer
- Condition of Approval (if applicable): 

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- Name: David Calia
- Title: Senior Structural Engineer
- Condition of Approval (if applicable): 

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

- Special Seismic Certification is preapproved under OSP
- OSP Number: OSP-0319-10 (SQ10-1503-1)
1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 CBC.

2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.

3. THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE WHERE SoS IS NOT GREATER THAN 2.00.

4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3.1, 13.3.2 & 13.3-3, WHERE SoS = 2.00, Ap = 1.0, Ip = 1.5, Rp = 1.5, z/h = 0 AT CONCRETE SLAB & z/h < 1 AT CONCRETE SLAB ON METAL DECK. SEE FOLLOWING SHEETS FOR \( \Omega \).

5. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.

6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.

7. CONCRETE SLAB ON METAL DECK DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION IN THE BUILDING. (i.e. \( z/h \leq 1 \))

8. CONCRETE SLAB DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION AT OR BELOW GRADE. (i.e. \( z/h = 0 \))

9. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING

A. PROVIDE SUPPORTING STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.

B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.

C. VERIFY THAT PROJECT SPECIFIC VALUES OF SoS & z/h RESULT IN SEISMIC FORCES (Eh, Ev) THAT DO NOT EXCEED THE VALUES ON THE DETAILS.

D. VERIFY THAT THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR AND THIS OPM.

E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS. (SEE TYPICAL DETAIL ON SHEET 2).

F. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR 6\text{\textdegree} FROM THIS UNIT'S ANCHORS.
10. EXPANSION ANCHORS:

A. ATTACHMENT IS TO BE MADE WITH THE ANCHORS LISTED BELOW AND INSTALLED AS DESCRIBED IN THE CORRESPONDING ICC REPORT.

<table>
<thead>
<tr>
<th>Anchor Diameter</th>
<th>Concrete Type</th>
<th>Min. f’c (psi)</th>
<th>Anchor Type</th>
<th>ICC Report No.</th>
<th>Min. Embed.</th>
<th>Min. Spacing</th>
<th>Min. Edge Dist.</th>
<th>Min. Conc. Thickness</th>
<th>Torque Test</th>
<th>Direct Tension Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>Normal Weight</td>
<td>3000</td>
<td>Hilti Kwik Bolt TZ</td>
<td>ESR-1917</td>
<td>2&quot;</td>
<td>4&quot;</td>
<td>12&quot;</td>
<td>4&quot;</td>
<td>25 FT-LB</td>
<td>1338</td>
</tr>
</tbody>
</table>

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 12" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY EMPLOYED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5 AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER AND THE ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE.

(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST OR TORQUE TEST AT LEAST 50% OF THE ANCHORS.

(ii) ACCEPTANCE CRITERIA:
- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.
- TORQUE TEST: THE APPLICABLE TORQUE MUST BE ACHIEVED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE : 1/2 TURN OF THE NUT

(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE SLAB WHEN INSTALLING CONCRETE EXPANSION ANCHORS.

E. PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT & WASHER.
SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB / CONCRETE SLAB ON METAL DECK

AT CONCRETE SLAB
NORMAL WEIGHT CONCRETE
(p'c = 3000 PSI MIN)
AT OR BELOW GRADE LEVEL
OR
AT CONCRETE SLAB ON METAL DECK
N.H. OR SAND L.W.
(p'c = 3000 PSI MIN)

41/2" MIN

Tu wall = 556 LB/BOLT (MAX)
Vu wall = 182 LB/BOLT (MAX)
Vu floor = 159 LB/BOLT (MAX)
VALUES INCLUDE Ω

FRONT ELEVATION

NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.
   STRENGTH DESIGN IS USED. (Sps = 2.00, Ωp = 10, Ip = 15, Rp = 15, Ωp = 15, z/fn ≤ 1)
   HORIZONTAL FORCE (Eh) = 2.40 Wp
   HORIZONTAL FORCE (Em) = 3.60 Wp (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (Ev) = 0.40 Wp

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS
   FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.

3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL
   PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS
   AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS
   THAT MAY BE PRESENT.

4. SEE GENERAL NOTES: SHEET 1 AND 2
SHIMADZU MEDICAL SYSTEMS
BR-120 NON-TILTING WALL STAND

SEISMIC SUPPORTS & ATTACHMENTS

BRACKET TO BRACKET CONNECTION
(2) M6 (CLASS B) BOLTS
W/ FLAT WASHERS & NUT
TORQUED TO 9 NM (6.64 FT-LB)

5/8" THK. WALL BOARD

36.6"

10.3"

CONCRETE SLAB / CONCRETE SLAB ON METAL DECK

STRUCTURAL ENGINEER OF RECORD
SHALL DESIGN THE BACKING
PLATE (16 6A, 50 KSI MIN)
AND THE WALL STRUCTURE

USE 2-5/16"Ø (GR 5) BOLT TO WALL BACKING
BRACKET PROVIDED
BY SHIMADZU
(SEE BRACKET DETAILS "A" & "B")

C.G. WT. = 283 LB

USE 4- M10 (CLASS 12.9)
CAP SCREWS FROM UNIT BASE
TO BASE PLATE
(0.63" THK CRS, Fy = 35.5 KSI MIN)

BASE PLATE
(0.63" THK CRS, Fy = 35.5 KSI MIN)

AT CONCRETE SLAB
NORMAL WEIGHT CONCRETE
(F'c = 3000 PSI MIN)
AT OR BELOW GRADE LEVEL
OR
AT CONCRETE SLAB ON METAL DECK
N.W. OR SAND L.A.
(F'c = 3000 PSI MIN)

SIDE ELEVATION

USE 4-3/8" Ø HILTI KB-TZ
EXPANSION ANCHORS
(MIN. EMBED. (f_m) = 2")
SHIMADZU MEDICAL SYSTEMS
BR-120 NON-TILTING WALL STAND

SEISMIC SUPPORTS & ATTACHMENTS

BRACKET MATERIAL
(0.125" THK, A1008 Fy=20 KSI MIN)

0.276" Holes
(4) M6 (CL 8.8 MIN) TO UNIT
FULL THREAD ENGAGEMENT PROVIDED WITHIN UNIT

0.276" Holes
(2) M6 (CL 8.8 MIN) TO WALL BRACKET

BACK ELEVATION: David M. Calia
DATE: 07/02/2020

SIDE

TOP

BRACKET DETAIL