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

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

**Manufacturer Information**

- **Manufacturer:** Steris
- **Manufacturer's Technical Representative:** Lloyd Dupuis
- **Mailing Address:** 490 boul. Armand-Paris, Québec, QC G1C8A3
- **Telephone:** (418) 664-1549
- **Email:** Lloyd_Dupuis@steris.com

**Product Information**

- **Product Name:** 7052 HP AND 7053HP WASHERS / DISINFECTORS
- **Product Type:** Washer/Disinfector
- **Product Model Number:** 7052HP, 7053HP
- **General Description:** Washer/Disinfector for hospital facilities

**Applicant Information**

- **Applicant Company Name:** ISAT SEISMIC BRACING
- **Contact Person:** WILLIAM JOERGER
- **Mailing Address:** 14848 Northam Street, La Mirada, CA 90638
- **Telephone:** (714) 920-6066
- **Email:** wvjoerger@isatsb.com
- **Title:**

---

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

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

5/28/2020  

OPM-0445: Reviewed for Code Compliance by Jeffrey Kikumoto  

1 of 10
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: 5/28/2020

Name: Jeffrey Kikumoto  Title: Senior Structural Engineer

Condition of Approval (if applicable): ________________________________
OSHPD OPM-0445

CONSTRUCTION DRAWING INDEX

CONSTRUCTION DRAWING INDEX

Cover Page p i
Index Page p ii
General Notes p 1
Attachment Notes p 2
Washers at Grade p 3
Washers at Elevated Slabs p 4
Miscellaneous Steel p 5
Bracket p 6
GENERAL NOTES:
1. THIS OSHPD PREAPPROVAL OF MANUFACTURER’S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
2. SEISMIC CRITERIA USED: $S_{K} = 2.5$  $I = 1.5$  $a_{p} = 1.0$  $R_{p} = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0$ $F_{PH} = 1.13$ AND FOR $z/h \leq 1.0$ $F_{PH} = 3.00$ AND $F_{EQ} = 0.50$.
3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-16 CHAPTER 13 “SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS”. AN OVERSTRENGTH FACTOR $O = 1.50$ IS USED FOR CONCRETE MATERIALS PER CBC SECTION 1617A.1.23. LOADS SHOWN ARE STRENGTH DESIGN LOADS.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: ANGLES AND PLATE ASTM A36, ALL THREAD ROD ASTM A193 B8 CLASS 2 (304 STAINLESS STEEL $F_{fu} = 125$ KSI).
6. CONCRETE SLABS:
   a. FOR ELEVATED SOLID CONCRETE SLABS: 6" THICKNESS OF NORMAL WEIGHT CONCRETE WITH 4000 PSI MINIMUM STRENGTH.
   b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAUGE MINIMUM, 4 1/2 INCH MINIMUM BOTTOM FLUTE WIDTH AND MINIMUM FLUTE SPACING OF 12", WITH 3 1/4 INCH SAND LIGHT WEIGHT CONCRETE CONCRETE COVER AT 4000 PSI MINIMUM STRENGTH.
   c. FOR SLAB ON GRADE: 6" THICKNESS NORMAL WEIGHT CONCRETE AT 4000 PSI MINIMUM STRENGTH.
7. POST-INSTALLED CONCRETE ANCHORS: HILTI HIT HY-200 + HAS-R (EST-3187) 3/16 STAINLESS STEEL, 3/4" DIAMETER x 5" HOLE DEPTH AND 4" MIN. EMBEDMENT, CLEAN HOLE PER MANUFACTURER’S INSTRUCTIONS. FOR ANCHORS INTO METAL DECK SOFTEN USE HILTI KWIK BOLT T2 (ESR-1917) 1/2" DIAMETER x 4" HOLE DEPTH FOR 3 3/4" EFFECTIVE EMBEDMENT WITH 1" MAXIMUM OFFSET FROM THE CENTER OF THE METAL DECK FLUTE. BOTH ARE SUPPLIED BY INSTALLATION CONTRACTOR.
8. THROUGH BOLTS SHALL BE TIGHTENED BY 3/4 TURN AFTER CONNECTED PLIES ARE IN FIRM CONTACT (SNUG TIGHT CONDITION).
9. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS.

RESPECTIVE PRICES OF THE STRUCTURAL ENGINEER OF RECORD
1. CONFIRM THE MATERIAL PROPERTIES AND THICKNESS OF THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ATTACHED MEETS THE REQUIREMENTS OF THIS OPM.
2. PROVIDE A PLAN FOR INSPECTION OF SUPPORTS AND ATTACHMENTS AND VERIFY ITS IMPLEMENTATION.
3. CONFIRM THE SPECIFIED MINIMUM CONCRETE EDGE DISTANCES ARE MAINTAINED BASED ON THE ACTUAL EQUIPMENT LOCATION. VERIFY THAT EXISTING OR NEW ANCHORS ARE AN ADEQUATE DISTANCE FROM THIS UNIT’S ATTACHMENT.
4. VERIFY THAT THE EXISTING STRUCTURE IS ADEQUATE FOR THE IMPOSED DEAD, LATERAL AND TENSION FORCES ShOWN IN ADDITION TO ALL OTHER LOADS.
5. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH CBC 2019 AND WITH THE OPM-0445-19 DETAILS INCLUDING MATERIALS AND DIMENSIONS OF THE SUPPORT WHERE THE ATTACHMENTS ARE MADE AGREEMENT WITH THE INFORMATION SHOWN.
6. VERIFY THAT THE PROJECT SPECIFIC $S_{PH}$ AND $S_{EV}$ VALUES RESULT IN SEISMIC FORCES $F_{PH}$ AND $F_{EQ}$ DO NOT EXCEED THE VALUES SHOWN IN THESE DETAILS.
ATTACHMENT NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.

2. PERIODIC SPECIAL INSPECTION PER CBC 2019 SECTIONS 1705A.3.8 AND 1910A AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO THE MANUFACTURER’S PRINTED INSTALLATION INSTRUCTIONS. IN ADDITION, FOLLOW THE PROVISIONS OF THE 2019 CALIFORNIA BUILDING CODE SECTION 1910A.5.5 FOR ADHESIVE ANCHORS. TENSION TESTING BY THE HYDRAULIC RAM METHOD SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR. TENSION TEST LOAD = 7000 POUNDS. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. IF ANY ANCHORS FAILS TEST ALL ANCHORS. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY THE FACILITY OWNER PER CBC 1704A AND 1910A.5 AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER AND ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. THE SEOR SHALL PROVIDE REMEDIAL ANCHORAGE DETAILS IN THE EVENT THAT AN ANCHOR FAILS TO MEET THE TEST REQUIREMENTS. FOR THROUGH BOLTS MARK THE NUT LOCATION AT SNUG TIGHT CONDITION. INSPECTOR IS TO VERIFY 3/4 TURN.

3. STRENGTH DESIGN WAS USED FOR ANCHOR FORCE CALCULATIONS INCLUDING $\phi_2$ PER ACI 318-14 WHERE REQUIRED FOR ATTACHMENT TO CONCRETE.

4. PROVIDE FOR FULL THREAD ENGAGEMENT OF THE NUT AND WASHER.

<table>
<thead>
<tr>
<th>Equipment Data</th>
<th>Anchor Dimensions</th>
<th>Seismic Design Forces at Grade</th>
<th>Seismic Design Forces at Elevated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Weight</td>
<td>Length (in)</td>
<td>Depth (in)</td>
</tr>
<tr>
<td>7052HP</td>
<td>1461</td>
<td>33.45</td>
<td>27.72</td>
</tr>
<tr>
<td>7053HP</td>
<td>1543</td>
<td>33.45</td>
<td>33.72</td>
</tr>
</tbody>
</table>

1. WEIGHTS AND MOMENTS ARE FACTORED LOADS USING STRENGTH DESIGN AND INCLUDE THE FOLLOWING FACTORS: $\alpha_l = 0.9$, $\phi_H$ AT GRADE = 1.13, $\phi_M$ ELEVATED = 1.00 AND $\phi_W = 0.5$.

2. TABULATED FORCES ARE PER ANCHOR AT STRENGTH DESIGN LEVEL AND INCLUDE A CONCRETE OVERSTRENGTH FACTOR $\phi_2 = 1.5$.

OPM-0445: STERIS 7052HP AND 7053HP WASHERS / DISINFECTORS ATTACHMENT NOTES
SEE DWG. 'ATTACH NOTES' FOR DIMENSIONS, ECCENTRICITIES AND ANCHOR FORCES.

(4) POST-Installed ADHESIVE ANCHORS SEE GEN. NOTE 5 ON PAGE 'GEN NOTES'. 3/4" HILTI HIT HY-200 + HAS-R 316 STEEL

PLATE WASHER SEE PAGE 'MISC STEEL'

6" MIN. SEE PAGE 'GEN NOTES' NOTE 6

SHIMS 2 1/2" OD 304SS BY STERIS 1" MAXIMUM HEIGHT TYP. THICKNESS VARIES 3/8", 3/16" AND 1/16"

EQUIPMENT BASE FRAME

ATTACHMENT PLAN VIEW

ATTACHMENT PLAN VIEW

ELEVATION VIEW

CG RIGIDITY

WEIGHT

FpH

FpV

SHEAR

SHEAR

EQUIPMENT BASE FRAME

CG HEIGHT ez

SHIMS 2 1/2" OD 304SS BY STERIS 1" MAXIMUM HEIGHT TYP. THICKNESS VARIES 3/8", 3/16" AND 1/16"
STERIS 7052HP AND 7053HP WASHERS / DISINFECTORS AT ELEVATED SLABS

(4) POST-INSTALLED ADHESIVE ANCHORS SEE GEN. NOTE 5 ON PAGE "GEN NOTES". 3/4" HILTI HIT HY-200 + HAS-R 316 STEEL

PLATE WASHER
SEE PAGE "MISC STEEL"

SOLID CONCRETE OR SLAB ON DECK SEE PAGE "GEN NOTES" NOTE 6 AND PAGE "MISC. STEEL"

13/16" HOLE IN CONCRETE
SEE DWG. "MISC STEEL"

SHIMS 2 1/2" OD 304SS BY STERIS 1/2" MAXIMUM HEIGHT TYP. THICKNESS VARIES 3/8", 3/16" AND 1/16"

EQUIPMENT BASE FRAME

ATTACHMENT PLAN VIEW

ATTACHMENT PLAN VIEW

WEIGHT

CG MASS

CG RIGIDITY

TENSION

SHEAR

SHEAR

CG HEIGHT ez

1'-4" MIN EDGE DISTANCE TYP.

33.43'

33.72" FOR 7052HP

33.72" FOR 7053HP

x

y

22.72"

FpH

FpV

X-AXIS

Y-AXIS

SEE DWG. "ATTACH NOTES" FOR DIMENSIONS, ECCENTRICITIES AND ANCHOR FORCES.

SEISMIC APPLICATION TECHNOLOGY
1020 Crews Road, Suite Q, Matthews, NC 28105
704-841-4080
www.isatsb.com
A DIVISION OF TOMARCO CONTRACTOR SPECIALTIES

OSHPD OPM-0445  DWG - 4

OPM-0445-19
STERIS 7052HP AND 7053HP WASHERS / DISINFECTORS AT ELEVATED SLABS

5/28/2020

OPM-0445: Reviewed for Code Compliance by Jeffrey Kikumoto

8 of 10
(4) 3/4" ALL THREAD ROD OR THRU BOLTS ASTM A193 B8 CLASS 2 WITH NUTS AND WASHERS. FINGER TIGHTEN NUTS PLUS 3/4 TURN. DRILL 13/16" HOLES IN CONCRETE

PLATE WASHER OR SEISMIC BRACKET SEE PAGE "BRACKET"

CONCRETE SLAB ON METAL DECK OR SOLID SLAB, SEE PAGE "GEN NOTES" NOTE 6

SHIMS BY STERIS 1/2" MAX. THICKNESS

TACK WELD NUT

WASHER FRAME 11 GA 304SS
Fy = 31.2 KSI

HILTI KWI K BOLT TZ
NOTE 7 ON "GEN NOTES"

1" MIN.

SUPPLEMENTAL STEEL L3x3x1/4 x 30'

STERIS 7052HP AND 7053HP WASHERS / DISINFECTORS MISCELLANEOUS STEEL

OPM-0445-19

OPM-0445

Jeffrey Kikumoto

05/28/2020

OPM-0445: Reviewed for Code Compliance by Jeffrey Kikumoto
LOCATION DETAIL FOR PLATE WASHERS AND SEISMIC BRACKETS

PLATE WASHER BY STERIS (2) PLACES
VERTICAL
14 GA 304 SS

FRAME 11 GA 304 SS

PLATE WASHER BY STERIS 304 STAINLESS STEEL 2' x 4' x 3/8' THICK WITH 13/16' HOLE

SEISMIC BRACKET BY STERIS (2) PLACES WITH 10 mm 304 SS BOLTS

PLATE WASHER BY STERIS (4 TOTAL)

SEISMIC BRACKET BY STERIS

7 GAGE 304 SS

7/16' x 17/32' SLOTS
7/16' HOLE IS FRAME

1 1/2'

4'

7''