### Manufacturer Information

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

### Product Information

**Product Name:** VISION AND RELIANCE WASHERS/DISINFECTORS  
**Product Type:** Washer/Disinfector  
**Product Model Number:** Vision 1321, Vision 1327, Vision 1330L, Reliance 1227  
**General Description:** Vision and Reliance Cart and Utensil Washers/Disinfectors are washers designed to clean and disinfect specific medical utensils, surgical instruments and other articles found in healthcare facilities. Productivity is improved through faster cleaning cycles, touch screen, PC controls and flow meters for verification of injection rates.

### 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

---

*Access to Safe Quality Healthcare Environments that Meet California’s Diverse and Dynamic Needs*  
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

5/29/2020

OPM-0198: Reviewed for Code Compliance by Jeffrey Kikumoto
**Certification Method**

<table>
<thead>
<tr>
<th>Testing in accordance with:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] ICC-ES AC156</td>
<td>[ ] FM 1950-16</td>
<td></td>
</tr>
<tr>
<td>[ ] Other(s) (Please Specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th>Date:</th>
<th>5/29/2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Jeffrey Kikumoto</td>
</tr>
<tr>
<td>Title:</td>
<td>Senior Structural Engineer</td>
</tr>
<tr>
<td>Condition of Approval (if applicable):</td>
<td></td>
</tr>
</tbody>
</table>

---

**Registered Design Professional Preparing Engineering Recommendations**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>ISAT SEISMIC BRACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>WILLIAM JOERGER</td>
</tr>
<tr>
<td>California License Number:</td>
<td>S4545</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>14848 Northam Street, La Mirada, CA 90638</td>
</tr>
<tr>
<td>Telephone:</td>
<td>(714) 920-6066</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:wjoerger@isatsb.com">wjoerger@isatsb.com</a></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Special Seismic Certification is preapproved under OSP:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP Number:</td>
<td></td>
</tr>
</tbody>
</table>
Submittal Documents

OSHPD OPM-0198

INSTALLATION DRAWINGS
VISION 1321, VISION 1327, VISION 1330L AND
RELIANCE 1227 WASHERS/DISINFECTOR

STERIS

ISAT
1020 Crews Road Suite Q
Matthews, N.C. 28105
704-841-4080

“Empowered by Experience”
OSHPD OPM-0198

DRAWING INDEX

DRAWING INDEX

Cover Page p i
Index Page p ii

Drawings for OPM-0198

General Notes and Responsibilities of SEOR p 1
Foundation Plan p 2
Foundation Plate p 3
Post Attachment p 4
Elevated Floor Details p 5
Concrete Reinforcement p 6
Overturning Moments p 7
Torsion Moments p 8
Attachment Forces p 9
GENERAL NOTES FOR ATTACHMENT:

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: $S_{u5} = 2.5$ \( I_p = 1.5 \) \( A_p = 1.0 \) \( R_p = 2.5 \) (ELEVATED SLABS) $F_{pHr} = 0.75$ Wp, and for $z/h \leq 1.0$ (ELEVATED SLABS) $F_{pHr} = 1.0$ Wp (SEE PAGE "CONCRETE" FOR SUPPLEMENTAL CONCRETE REINFORCING STEEL). WHERE $z/h$ IS 0.5 $F_{pH} = 1.20$ (SUPPLEMENTAL CONCRETE REINFORCING STEEL IS NOT REQUIRED). $F_{pHorizontal} = 0.50$ Wp.

3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-16 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $O_0 = 2.0$ IS USED FOR CONCRETE MATERIALS AND $O_0 = 1.0$ FOR STEEL MATERIALS PER ASCE 7-16 TABLE 13.6-1. LOADS SHOWN ARE STRENGTH DESIGN LOADS PER CBC 2019 SECTION 1909A.

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

5. THIS PREAPPROVAL IS FOR CONCRETE SLAB AT GRADE OR ELEVATED SLABS FOR THE DEMAND LOADS SHOWN WHERE $S_{u5} \leq 2.5$.

6. MATERIALS: PLATE ASTM A36, WIDE FLANGED BEAM ASTM A992 $F_y = 50$ KSI, WELDED STUDS ASTM A 36, BOLTS ASTM A327 WITH ASTM F436 CIRCULAR WASHERS, WELDING FILLER MATERIAL E70XX FOR CARBON STEEL WELDING, SHIM PLATE BY STERIS AISI 304 STAINLESS STEEL, CONCRETE REINFORCING BARS ASTM A615 GRADE 60 $F_y = 60$ KSI.

7. CONCRETE SLABS. FOR THROUGH BOLTS - SOLID CONCRETE SLAB 6" NORMAL WEIGHT CONCRETE WITH 3000 PSI STRENGTH. METAL DECK - 3" DEEP COMPARE DECK, 20 GA MINIMUM, 4.5 INCH MINIMUM BOTTOM FLUTE WIDTH AND 12" FLUTE SPACING AND 3.25" MINIMUM LIGHT WEIGHT CONCRETE COVER WITH 3000 PSI MINIMUM STRENGTH. FOR EMBEDDED PLATES - 10" MINIMUM THICKNESS NORMAL WEIGHT CONCRETE WITH 4000 PSI MINIMUM STRENGTH.

8. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCING OR TENDONS.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

1. CONFIRM THE MATERIAL PROPERTIES 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. DETAIL CONCRETE PIT DIMENSIONS TO PROVIDE SUFFICIENT COVER FOR THE FOUNDATION ANCHOR RODS.

4. VERIFY THAT THE 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-0198 DETAILS INCLUDING MATERIALS AND DIMENSIONS OF THE SUPPORT WHERE THE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN.

6. VERIFY THAT THE PROJECT SPECIFIC $S_{u5}$ AND $z/h$ VALUES RESULT IN SEISMIC FORCES ($F_{pH}$ AND $F_{pHorizontal}$ DO NOT EXCEED THE VALUES
NOTES:

1. FOR INSTALLATIONS WITH A PIT THE PLATE ELEVATION IS TO BE 7" BELOW THE FINISHED SLAB ELEVATION.

2. FOR INSTALLATIONS WITHOUT A PIT, SET THE TOP OF THE FOUNDATION PLATE FLUSH WITH THE TOP OF THE SLAB.

3. FOUNDATION PLATE IS TO BE SET LEVEL AND TRUE WITHIN 1/32" PER FOOT.

4. FOR MODEL VISION 1321 THE EDGE DISTANCE TO THE CENTER DRAIN IS ALLOWED TO BE 5 INCHES. SEE PAGE "CONC REINF" FOR ADDITIONAL CONCRETE REINFORCEMENT DETAILS.

DIMENSIONS ARE IN INCHES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>POST X-AXIS DIM</th>
<th>POST Y-AXIS DIM</th>
<th>PLATE X-AXIS DIM</th>
<th>PLATE Y-AXIS DIM</th>
<th>VERTICAL CG</th>
<th>WEIGHT - LBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISION 1321</td>
<td>61.625 (61 5/8)</td>
<td>84.562 (84 9/16)</td>
<td>68.75 (68 3/4)</td>
<td>94</td>
<td>51.25</td>
<td>6371</td>
</tr>
<tr>
<td>VISION 1327</td>
<td>61.625 (61 5/8)</td>
<td>108.562 (108 9/16)</td>
<td>68.75 (68 3/4)</td>
<td>118</td>
<td>50.65</td>
<td>6666</td>
</tr>
<tr>
<td>VISION 1330L</td>
<td>61.625 (61 5/8)</td>
<td>120.562 (120 9/16)</td>
<td>68.75 (68 3/4)</td>
<td>130</td>
<td>50.45</td>
<td>6810</td>
</tr>
<tr>
<td>RELIANCE 1227</td>
<td>55.625 (55 5/8)</td>
<td>108.562 (108 9/16)</td>
<td>60.75 (60 3/4)</td>
<td>118</td>
<td>49.15</td>
<td>5360</td>
</tr>
</tbody>
</table>

OMP-0198  STERIS VISION AND RELIANCE WASHERS/DISINFECTORS FOUNDATION PLAN
OPM-0198  STERIS VISION AND RELIANCE WASHERS/DISINFECTORS
FOUNDATION PLATE DETAILS (SUPPLIED BY FIELD)

FOUNDATION PLATE WITH WELDED STUDS
ELEVATION VIEW

ASTM A36 PLATE
3/8 x 2 x 2

3/4" PLATE

(4) ANCHOR STUDS 5/8" DIA.
ASTM A36 (MIN) Fu = 58 KSI

SEE CONC. SLAB
NOTE ON PAGE
"GEN NOTES"

SEE PLAN
VIEW BELOW

SEE PLAN
VIEW BELOW

(4) 5/8" BOLTS OR STUDS
AT 5' x 7' SPACING

SEE PAGE "POST ATTACH" FOR DETAILS - POST IS NOT CENTERED ON THE PLATE

SEE PAGE "POST ATTACH"
FOR DETAILS - POST IS NOT CENTERED ON THE PLATE

(4) ASTM A307 BOLTS OR ASTM A36
ALL THREAD RODS (MIN) Fu = 58 KSI

FOUNDATION PLATE WITH THRU BOLTS
ELEVATION VIEW

PLATE 3/4" x 8" x 10'
ASTM A36, Fy = 36 KSI

SEE CONC. SLAB NOTE ON PAGE "GEN NOTES"

SEE PAGE "POST ATTACH" FOR RELIANCE 1227 ONLY

SEE PLAN VIEW BELOW

8"

(4) 5/16" HOLES AT
1/2" EDGE DISTANCE

1 1/2" TYP.
1/2" TYP.

FOR RELIANCE 1227 ONLY

SEE PAGE "CONC REINF" FOR ADDITIONAL CONCRETE REINFORCEMENT WHEN FpH EXCEEDS 1.20 (UPPER HALF THE BUILDING HEIGHT WHEN Sds = 2.5).

SEE PLAN VIEW BELOW

SEE PAGES "ELEV. SLAB" AND "GEN NOTES"

OPM-0198: Reviewed for Code Compliance by Jeffrey Kikumoto
STERIS VISION AND RELIANCE WASHERS/DISINFECTORS
ELEVATED SLAB DETAIL FOR MODELS MOUNTED TO THE TOP OF THE SLAB

(4) 5/8" ASTM A307 BOLTS, F436 WASHERS AND A563 NUTS. TORQUE TO 3/4 TURN PAST SNUG TIGHT. BOTTOM WASHER TO BE CLIPPED TO 15/16" ON ONE SIDE. DOUBLE NUTS AT BOTTOM PLATE. DRILL 3/4" HOLE IN CONCRETE.

O6x11.5 CONNECTION DETAILS BY SEOR

STRUCTURAL ENGINEER OF RECORD IS TO VERIFY THE ADEQUACY OF THE W8 BEAM AND BEAM CONNECTION TO STRUCTURE FOR THE IMPOSED LOADS.

PLATE ASTM A36 3/4x10x10 WITH 11/16" HOLES ON A 5"x7" AND 7"x5" PATTERN

(4) 5/8" ASTM A307 BOLTS, F436 WASHERS AND A563 NUTS. TORQUE TO 3/4 TURN PAST SNUG TIGHT. DOUBLE NUTS AT BOTTOM PLATE. DRILL 3/4" HOLE IN CONCRETE.

3/16
3/16

STRUCTURAL ENGINEER OF RECORD IS TO VERIFY THE ADEQUACY OF THE STRUCTURE FOR THE IMPOSED LOADS.

PLATE 3/8" x 3" x 8" ASTM A36, Fy = 36 KSI
TWO PLATES REQUIRED PER POST LOCATION

0.3 Tu FROM PAGE "FORCES"

SEE PAGE "FDN PLATE" FOR DETAILS

SEE PAGE "GEN NOTES" FOR CONCRETE SLAB REQUIREMENTS

SEE PAGE "GEN NOTES" FOR METAL DECK AND CONCRETE SLAB REQUIREMENTS

O6x11.5 CONNECTION DETAILS BY SEOR

SOLID CONCRETE SLAB

CONCRETE SLAB ON METAL DECK

0.3 Tu FROM PAGE "FORCES"

Vu FROM PAGE "FORCES"
OPM-0198  STERIS VISION AND RELIANCE WASHERS/DISINFECTORS
ADDITIONAL CONCRETE REINFORCEMENT AT FOUNDATION PLATE DETAILS

MIN. (6) #5 AT 2' ON CENTER WITH 180° HOOK x 30' LONG TYPICAL CENTERED ON FOUNDATION PLATE (BY OTHERS)

10' MIN. EDGE DIST.

1 1/2' MIN. CLEAR.

3/4' MIN. CLEARANCE

10' MIN.

30" LONG TYPICAL CENTERED ON FOUNDATION PLATE (BY OTHERS)

CONCRETE SLAB SEE PAGE 'GEN NOTES' FOR MINIMUM REQUIREMENTS

SUPPLEMENTAL CONCRETE REINFORCING STEEL IS ONLY NEEDED WHEN \( z/h > 0.50 \) (THE UPPER HALF OF THE BUILDING). SEE GENERAL NOTE 2 ON PAGE "GEN NOTES".

SEE PAGE "FDN PLATE"
5/8" ASTM A307 BOLT x 8" LONG WITH F436 CIRCULAR WASHER

SQUARE TUBE 1 1/8' 304 SS FY = 42 KSI (EQUIPMENT FRAME)

POST ATTACHMENT PLATE
4" DIA. x 1 1/4" THICK ASTM A36 FY = 36 KSI TAPPED FOR 5/8-11 UNC BOLT

SPACER WELDED TO EQUIPMENT FRAME TUBE

1 1/2" OD AISI 304 SS SHIM PLATE WITH 0.656" HOLE - THICKNESS VARIES FROM 1/8" TO 5/8"

0.115" DEEP MACHINED DEPRESSION FOR SHIM

CONCRETE SLAB - SEE PAGE "GEN NOTES" FOR MINIMUM REQUIREMENTS

SEE PAGE 'FDN PLATE' FOR ATTACHMENT TO STRUCTURE

OPM-0198 STERIS VISION AND RELIANCE WASHERS/DISINFECTORS POST ATTACHMENT
**SUM MOMENTS FOR P1/P2 TENSION**

**SUM MOMENTS FOR P3/P4 TENSION**

**ELEVATION - DOOR SIDE OF UNIT**

**SUM MOMENTS FOR P1/P4 TENSION**

**SUM MOMENTS FOR P2/P3 TENSION**

**ELEVATION - MECHANICAL EQUIPMENT SIDE OF UNIT**

---

### OPM-0198  STERIS VISION AND RELIANCE WASHERS/Disinfectors

**OVERTURNING MOMENTS**

---

**MODEL | VERTICAL CG - IN**
---
| VISION 1321 | 51.250 |
| VISION 1327 | 50.650 |
| VISION 1330L | 50.450 |
| RELIANCE 1227 | 49.150 |

---
OPM-0198  STERIS VISION AND RELIANCE WASHERS/DISINFECTORS
TORSION MOMENTS

---

Jeffrey Kikumoto
05/29/2020

OPM-0198: Reviewed for Code Compliance by Jeffrey Kikumoto
<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>GRADE TO MID-HT - LBS (FpH MAX. = 1.20)</th>
<th>MID-HT TO TOP FLOOR - LBS (FpH = 1.80 MAX.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISION 1321</td>
<td>Tu at P1 = 13,785</td>
<td>Tu at P1 = 24116</td>
</tr>
<tr>
<td></td>
<td>Vu at P1 = 9,544</td>
<td>Vu at P1 = 14315</td>
</tr>
<tr>
<td></td>
<td>Tu at P2 = 18,797</td>
<td>Tu at P2 = 29128</td>
</tr>
<tr>
<td></td>
<td>Vu at P2 = 2,093</td>
<td>Vu at P2 = 3,140</td>
</tr>
<tr>
<td>VISION 1327</td>
<td>Tu at P1 = 13,403</td>
<td>Tu at P1 = 21,610</td>
</tr>
<tr>
<td></td>
<td>Vu at P1 = 9,776</td>
<td>Vu at P1 = 13,686</td>
</tr>
<tr>
<td></td>
<td>Tu at P2 = 18,462</td>
<td>Tu at P2 = 26,669</td>
</tr>
<tr>
<td></td>
<td>Vu at P2 = 2,028</td>
<td>Vu at P2 = 2,840</td>
</tr>
<tr>
<td>VISION 1330L</td>
<td>Tu at P1 = 13,349</td>
<td>Tu at P1 = 21,579</td>
</tr>
<tr>
<td></td>
<td>Vu at P1 = 9,880</td>
<td>Vu at P1 = 13,832</td>
</tr>
<tr>
<td></td>
<td>Tu at P2 = 18,423</td>
<td>Tu at P2 = 26,653</td>
</tr>
<tr>
<td></td>
<td>Vu at P2 = 1,992</td>
<td>Vu at P2 = 2,788</td>
</tr>
<tr>
<td>RELIANCE 1227</td>
<td>Tu at P1 = 11,932</td>
<td>Tu at P1 = 18,925</td>
</tr>
<tr>
<td></td>
<td>Vu at P1 = 7,452</td>
<td>Vu at P1 = 10,433</td>
</tr>
<tr>
<td></td>
<td>Tu at P2 = 15,638</td>
<td>Tu at P2 = 22,632</td>
</tr>
<tr>
<td></td>
<td>Vu at P2 = 1,329</td>
<td>Vu at P2 = 1,861</td>
</tr>
</tbody>
</table>

1. Tu and Vu values include an overstrength factor of 2.0 in accordance with ASCE 7-16 Table 13.5-1.
2. Tu values have been divided by 0.75 to account for the concrete anchorage reduction from ACI 318-14 Section 17.2.3.4.4.
3. Forces at P3 and P4 do not control and are not listed.

OPM-0198 STERIS VISION AND RELIANCE WASHERS/DISINFECTORS CONCRETE ATTACHMENT FORCES

5/29/2020 OPM-0198: Reviewed for Code Compliance by Jeffrey Kikumoto