



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PREAPPROVAL
OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY
APPLICATION #: OPM-0506-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

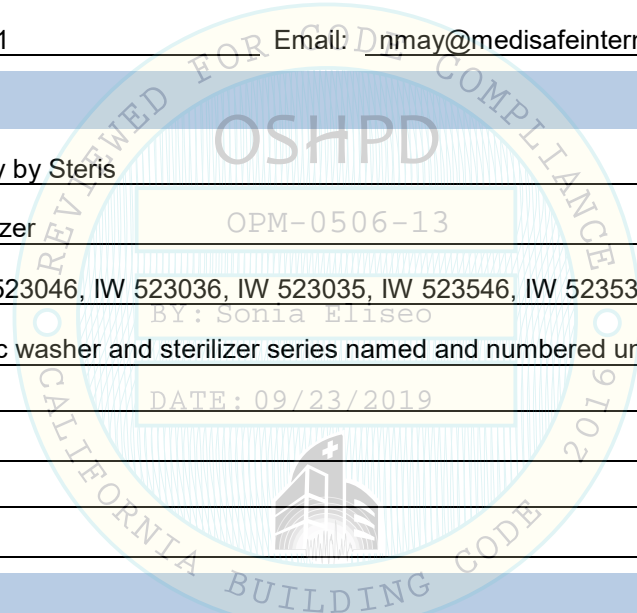
Type: [] New [] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: Medisafe
Manufacturer's Technical Representative: Neil May
Mailing Address: Twyford Road, Bishop's Stortford, Hertordshire CM23 3LJ, UK
Telephone: +44(0)1279 461641 Email: Dnmay@medisafeinternational.com

Product Information

Product Name: Innwave Unity by Steris
Product Type: Washer / Sterilizer
Product Model Number: IW 523046, IW 523036, IW 523035, IW 523546, IW 523536, IW 523535
General Description: The sonic washer and sterilizer series named and numbered under the Steris InnoWave (IW) brand for the American market.



Applicant Information

Applicant Company Name: ISAT Seismic Bracing
Contact Person: William V Joerger
Mailing Address: 1020 Crews Road, Suite Q, Matthews NC 28105
Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: [Handwritten Signature] Date: 10/15/18

Title: Principal Structural Engineer Company Name: ISAT Seismic Bracing

"Access to Safe, Quality Healthcare Environments that Meet California's



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations

Company Name: ISAT Seismic Bracing
Name: William V Joerger California License Number: SE4545
Mailing Address: 1020 Crews Rd, Matthews NC 28105
Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- Special Seismic Certification is not preapproved

Certification Method(s)

- Testing in accordance with: ICC-ES AC156 FM 1950-16
- Other* (Please Specify): Equipment is considered to be rugged. OPM is for anchorage to concrete slabs.

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 may be used when approved by OSHPD prior to testing.

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

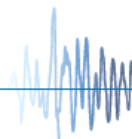
List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
- Other(s) (Please Specify): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature: Sonia Eliseo Date: 9/23/2019
Print Name: Sonia Eliseo
Title: SSE
Condition of Approval (if applicable): _____

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INTERNATIONAL SEISMIC APPLICATION TECHNOLOGY

A Division of Tomarco Contractor Specialties

Submittal Documents

OSHPD OPM-0506-13

BY: Sonia Eliseo

**STERIS INNOWAVE UNITY
WASHERS AND STERILIZERS**

**SUPPORT AND ATTACHMENT
CONSTRUCTION DRAWINGS**

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



WVJ 30 Aug 19

FILE NO.: CLT-1018-122

"Empowered by Experience"

REV 3

OSHPD OPM-0506-13 DWG - i



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STERIS INNOWAVE UNITY

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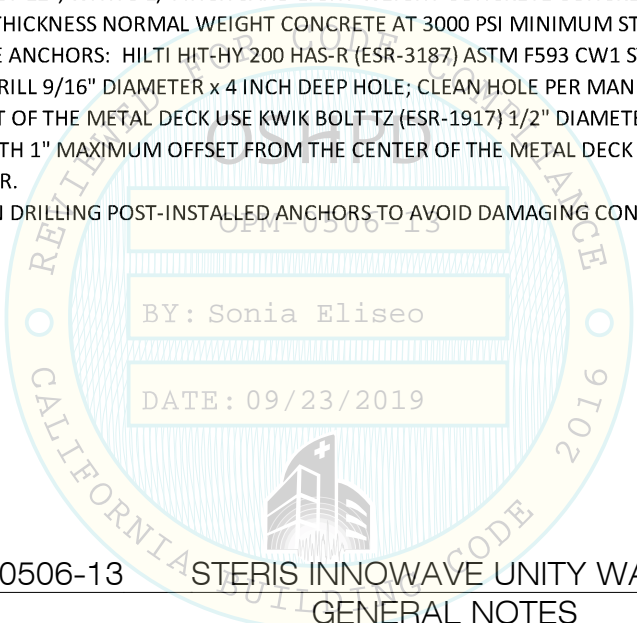
OSHPD OPM-0506-13

MANUFACTURE: MEDISAFE



EQUIPMENT TYPE: WASHERS / STERILIZERS

GENERAL NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. SEISMIC CRITERIA USED: $S_{D5} = 2.5$ $I_p = 1.5$ $a_p = 1.0$ $R_p = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0$ $F_pH = 1.13$ AND FOR $z/h \leq 1.0$ $F_pH = 3.00$ AND $F_{pV} = 0.50$.
3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-10 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $\Omega_0 = 1.5$ IS USED FOR CONCRETE MATERIALS PER ASCE 7-10 SUPPLEMENT 1 TABLE 13.6-1. LOADS SHOWN ARE STRENGTH DESIGN LOADS PER CBC 2016 SECTION 1605A.2.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: PLATE BS EN 10088-2:2014 (304-2B-6) STAINLESS STEEL BY MANUFACTURER ($F_y = 33.3$ KSI), ALL THREAD ROD ASTM F593 CW1 304 STAINLESS STEEL FOR BOLTS ($F_y = 30$ ksi) AT ELEVATED FLOORS, ANGLE ASTM A36 ($F_y = 36$ KSI) HOT DIPPED
6. CONCRETE SLABS:
 - a. FOR ELEVATED SOLID CONCRETE SLABS: 6" THICKNESS OF NORMAL WEIGHT CONCRETE WITH 3000 PSI MINIMUM STRENGTH.
 - b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAGE 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 3000 PSI MINIMUM
 - c. FOR SLAB ON GRADE: 6" THICKNESS NORMAL WEIGHT CONCRETE AT 3000 PSI MINIMUM STRENGTH.
7. POST-INSTALLED CONCRETE ANCHORS: HILTI HIT-HY 200 HAS-R (ESR-3187) ASTM F593 CW1 STAINLESS STEEL 1/2" DIAMETER x 3" EFFECTIVE EMBEDMENT. DRILL 9/16" DIAMETER x 4 INCH DEEP HOLE; CLEAN HOLE PER MANUFACTURER'S INSTRUCTIONS. FOR ANCHORS INTO THE SOFFIT OF THE METAL DECK USE KWIK BOLT TZ (ESR-1917) 1/2" DIAMETER x 4" MIN. HOLE DEPTH FOR 3 1/4" EFFECTIVE EMBEDMENT WITH 1" MAXIMUM OFFSET FROM THE CENTER OF THE METAL DECK FLUTE. BOTH ARE SUPPLIED BY INSTALLATION CONTRACTOR.
8. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS.



OPM-0506-13 STERIS INNOWAVE UNITY WASHERS / STERILIZERS
GENERAL NOTES

 A Division of Tomarco Contractor Specialties International Seismic Application Technology 1020 Crews Road, Suite Q, Matthews, NC 28105 704-841-4080 www.isatsb.com	
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	REVISED BY: WVJ DATE: 08/30/19 REV NO: 3
SCALE: N.T.S.	PAGE: GEN NOTES

OSHPD OPM-0506-13

MANUFACTURE: MEDISAFE

EQUIPMENT TYPE: WASHERS / STERILIZERS

ATTACHMENT NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. PERIODIC SPECIAL INSPECTION PER CBC 2016 SECTION 1705A 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 2016 CALIFORNIA BUILDING CODE SECTION 1910A.5.5. FOR ADHESIVE ANCHORS - TENSION TESTING BY THE HYDRAULIC RAM METHOD SHALL USE A TENSION FORCE OF 2250 POUNDS (1.25*ANCHOR STRENGTH). TENSION TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR. TORQUE CONTROLLED POST-INSTALLED ANCHORS - TEST USING A CALIBRATED TORQUE WRENCH; 40 FOOT-POUNDS TORQUE SHALL BE ACHIEVED WITHIN ONE-HALF TURN OF THE NUT. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. IF ANY ANCHOR FAILS TEST ALL ANCHORS. REPORT OF TEST RESULTS ARE TO BE SUBMITTED TO THE ENFORCEMENT AGENCY. 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 Ω_0 PER ACI 318-14 WHERE REQUIRED FOR ATTACHMENT TO CONCRETE.
4. PROVIDE FOR FULL THREAD ENGAGEMENT OF THE NUT AND WASHER.

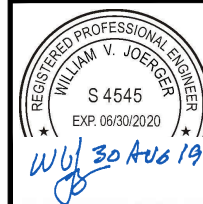
RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

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 2016 AND WITH THE OPM-0506-13 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_{DS} AND z/h VALUES RESULT IN SEISMIC FORCES (E_h AND E_v) DO NOT EXCEED THE VALUES SHOWN IN THESE DETAILS.

OPM-0506-13 INNOWAVE UNITY WASHERS / STERILIZERS ATTACHMENT NOTES

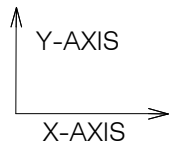


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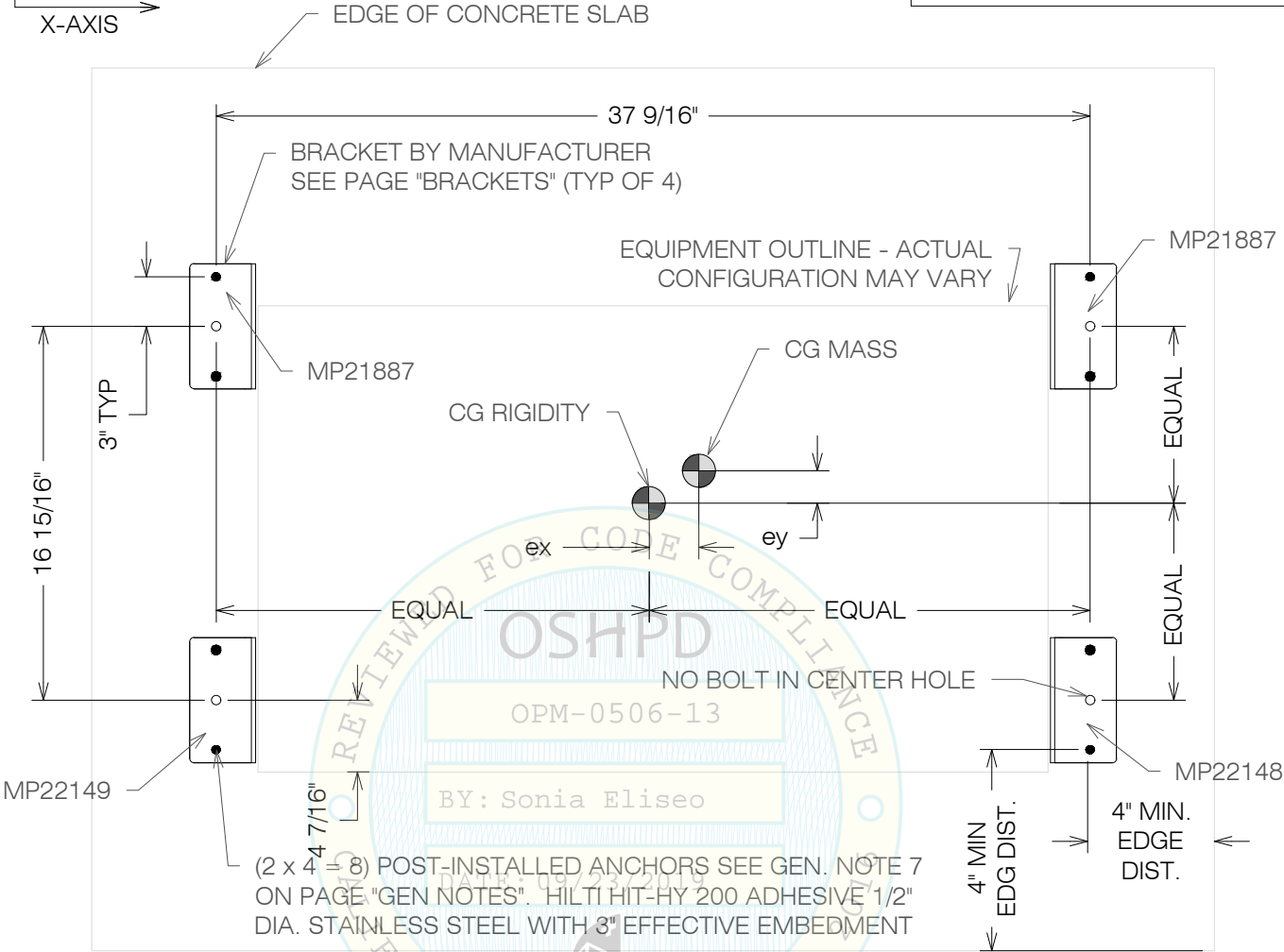


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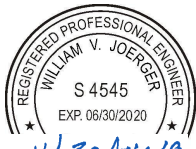
SEE PAGE "DIM & FORCES" FOR DIMENSIONS, ECCENTRICITIES AND ANCHOR FORCES



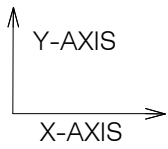
OPM-0506-13 STERIS INNOWAVE UNITY WASHERS / STERILIZERS AT GRADE



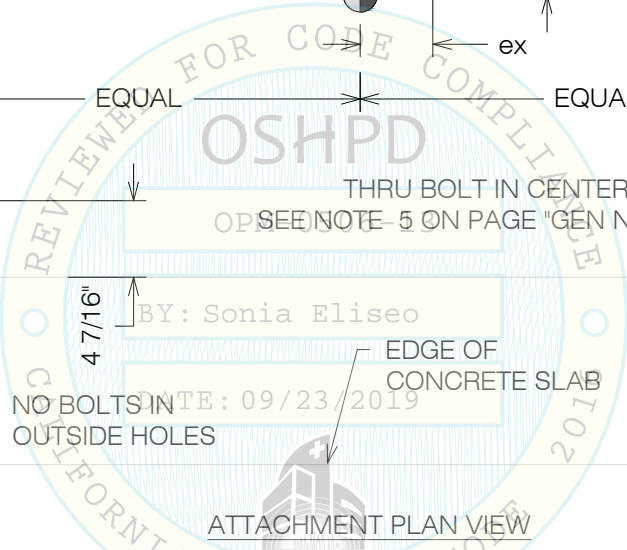
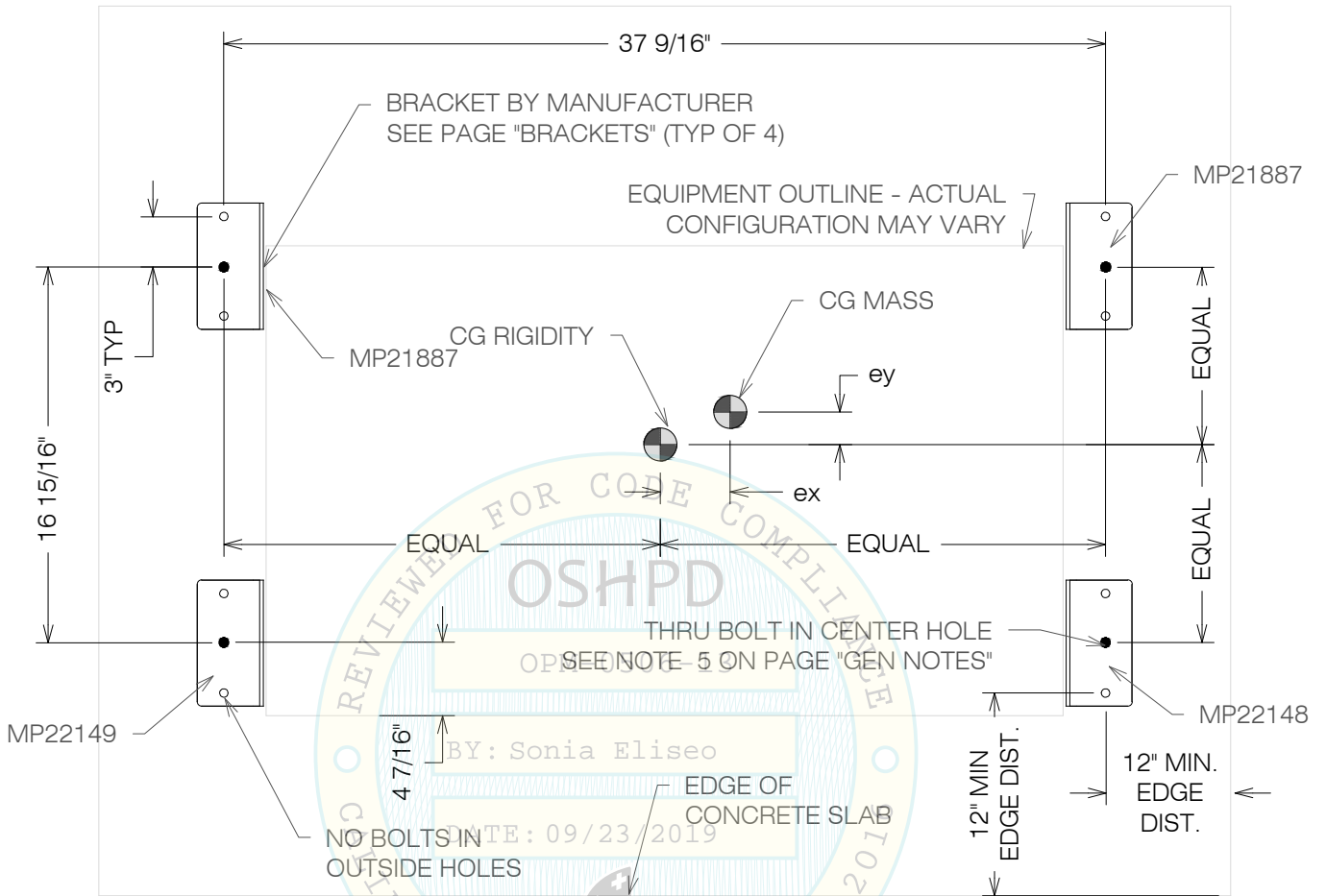
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SEE PAGE "DIM & FORCES" FOR DIMENSIONS, ECCENTRICITIES AND ANCHOR FORCES



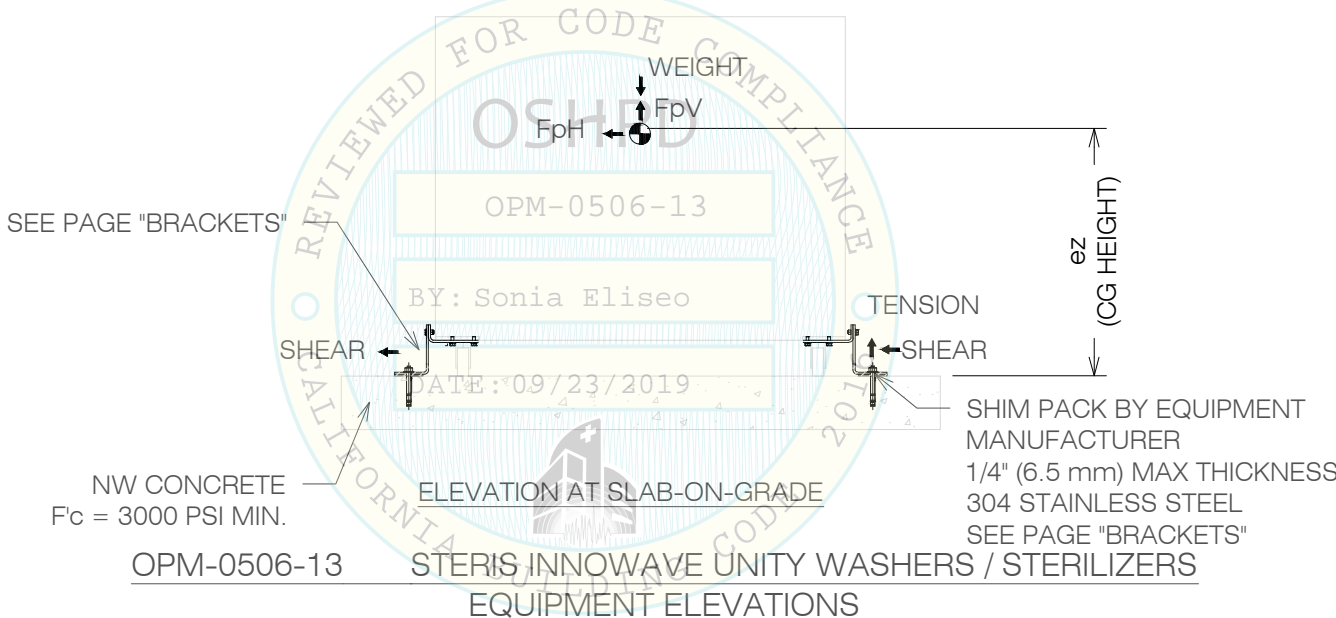
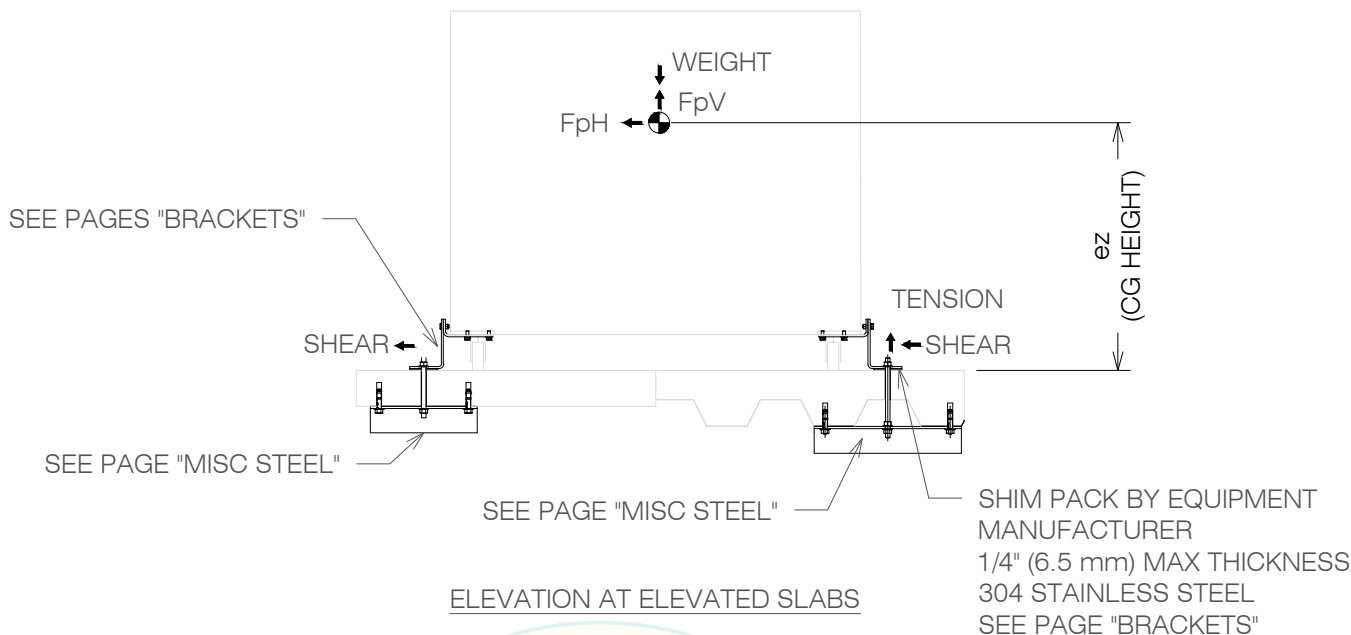
OPM-0506-13 STERIS INNOWAVE UNITY WASHERS / STERILIZERS AT ELEVATED SLAB




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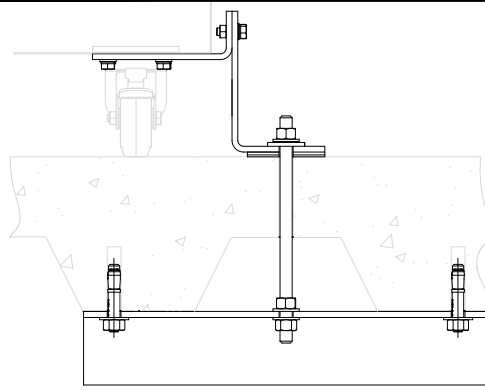




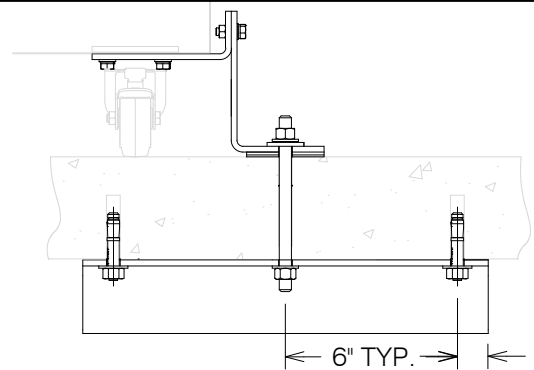
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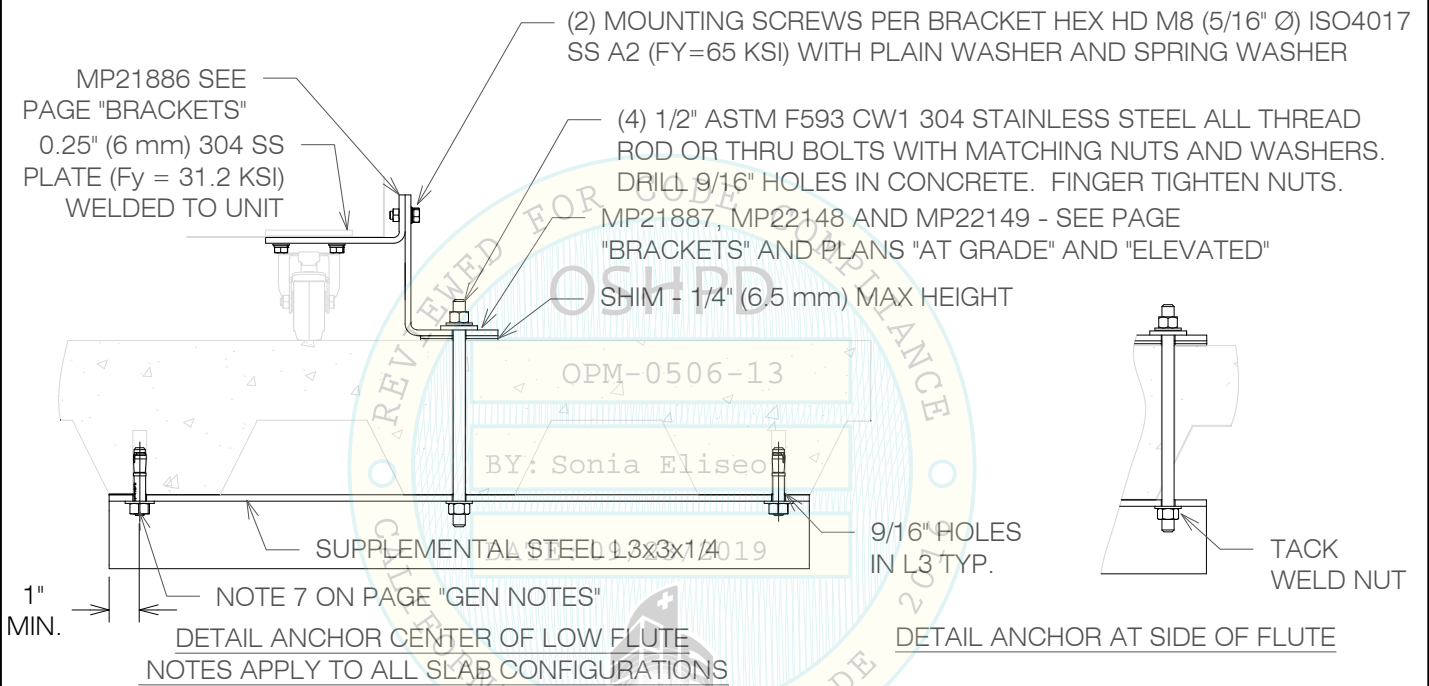
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DETAIL ANCHOR CENTER OF HIGH FLUTE




DETAIL AT SOLID CONCRETE SLAB



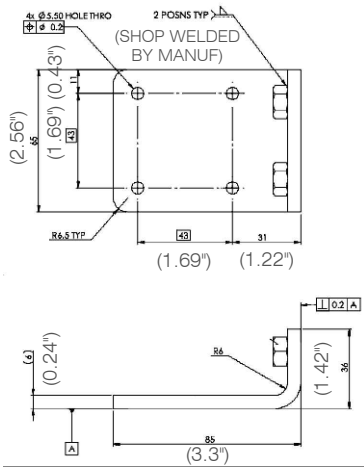
OPM-0506-13 STERIS INNOWAVE UNITY WASHERS / STERILIZERS
MISCELLANEOUS STEEL



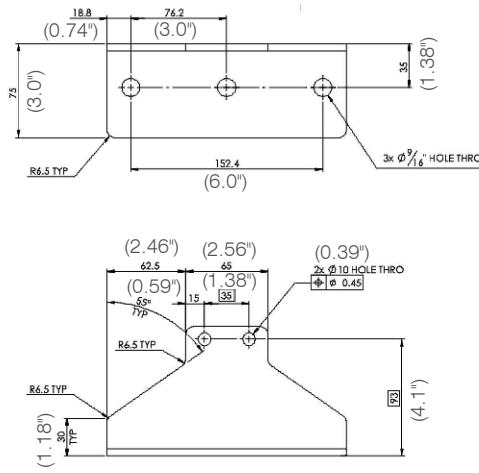
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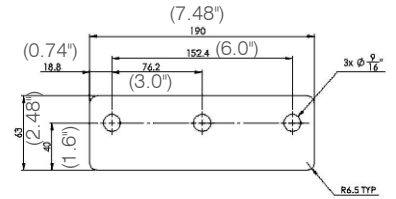
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MP21886 DETAIL

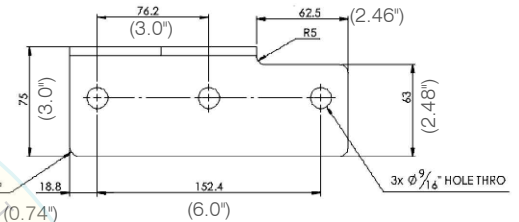
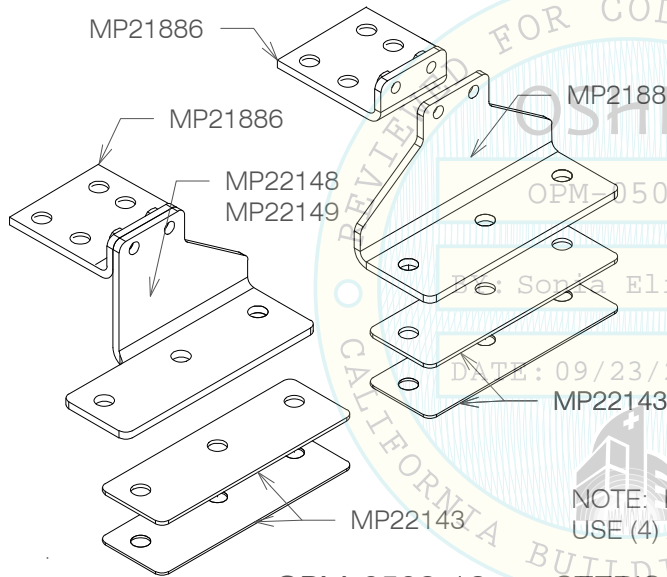


MP21887 DETAIL



MP22143 SHIM DETAIL
 PROVIDE 16 SHIMS PER BRACKET: (4) EACH OF 1/64" (0.5 mm), 1/32" (1 mm), 5/64" (2 mm), AND 1/8" (3 mm)

ALL MATERIAL THIS PAGE IS 1/4" (6 mm) BS EN 10088-2:2014 (304-2B-6mm) STAINLESS STEEL
 Fy = 33.3 KSI MIN. UNLESS NOTED OTHERWISE



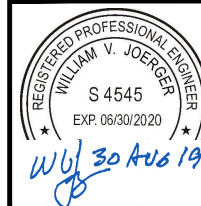
MP22148 RH AND MP22149 LH DETAIL

NOTE: BOLT MATERIAL ISO4017 SS 8 mm (5/16") Fy = 30 KSI
 USE (4) AT WHEELS AND (2) IN BRACKET VERTICAL LEG

OPM-0506-13 STERIS INNOWAVE UNITY BRACKETS



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STERIS INNOWAVE UNITY WASHERS / STERILIZERS								
Equipment Data				Anchor Dimensions		Equipment Eccentricities		
Model Series	Model	Max. Water Fill	Weight (lb)	Length (in)	Depth (in)	ex (in)	ey (in)	ez (in)
Innowave Unity	IW 523046	NO	289	37.56	16.93	0.91	0.56	20.46
Innowave Unity	IW 523046	YES	373	37.56	16.93	1.05	0.57	23.00
Innowave Unity	IW 523036	NO	289	37.56	16.93	0.91	0.56	20.46
Innowave Unity	IW 523036	YES	373	37.56	16.93	1.05	0.57	23.00
Innowave Unity	IW 523035	NO	289	37.56	16.93	0.91	0.56	20.46
Innowave Unity	IW 523035	YES	373	37.56	16.93	1.05	0.57	23.00
Innowave Unity	IW 523546	NO	301	37.56	16.93	0.92	0.58	20.26
Innowave Unity	IW 523546	YES	401	37.56	16.93	1.09	0.59	23.20
Innowave Unity	IW 523536	NO	301	37.56	16.93	0.92	0.58	20.26
Innowave Unity	IW 523536	YES	401	37.56	16.93	1.09	0.59	23.20
Innowave Unity	IW 523535	NO	301	37.56	16.93	0.92	0.58	20.26
Innowave Unity	IW 523535	YES	401	37.56	16.93	1.09	0.59	23.20

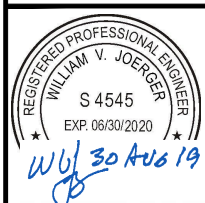
STERIS INNOWAVE UNITY WASHERS / STERILIZERS						
Equipment Data			Seismic Design Forces at Grade ²		Seismic Design Forces at Elevated ²	
Model Series	Model	Max. Water Fill ³	Vu (lbs.)	Tu (lbs.)	Vu (lbs.)	Tu (lbs.)
Innowave Unity	IW 523046	NO	64	152	336	561
Innowave Unity	IW 523046	YES	83	218	429	799
Innowave Unity	IW 523036	NO	64	152	336	561
Innowave Unity	IW 523036	YES	83	218	429	799
Innowave Unity	IW 523035	NO	64	152	336	561
Innowave Unity	IW 523035	YES	83	218	429	799
Innowave Unity	IW 523546	NO	67	154	349	567
Innowave Unity	IW 523546	YES	91	237	468	870
Innowave Unity	IW 523536	NO	67	154	349	567
Innowave Unity	IW 523536	YES	91	237	468	870
Innowave Unity	IW 523535	NO	67	154	349	567
Innowave Unity	IW 523535	YES	91	237	468	870

1. WEIGHTS AND MOMENTS ARE FACTORED LOADS USING STRENGTH DESIGN AND INCLUDE THE FOLLOWING FACTORS: DL = 0.9, FpH AT GRADE = 1.13, FpH ELEVATED = 3.0 AND FpV = 0.5.
2. TABULATED FORCES ARE PER ANCHOR AT STRENGTH DESIGN LEVEL AND INCLUDE A CONCRETE OVERSTRENGTH FACTOR $\Omega_0 = 1.5$. FOR THROUGH BOLTS ON ELEVATED SLABS A TENSION OVERSTRENGTH FACTOR OF 1.0 IS USED.
3. MAX. WATER FILL INDICATES THE ANALYSIS INCLUDES WATER WEIGHT.

OPM-0506-13 STERIS INNOWAVE UNITY WASHERS / STERILIZERS
EQUIPMENT DIMENSIONS AND FORCES



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