



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

-1ST APPLICATION FOR OSHPD
PREAPPROVAL OF MANUFACTURER'S
CERTIFICATION (OPM)

OFFICE USE ONLY
APPLICATION #: OPM-0508-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Belimed AG

Manufacturer's Technical Representative: Heike Hütterer

Mailing Address: Belimed AG, Grienbachstrasse 11 • 6300 Zug • Switzerland

Telephone: +41 71 644 86 65 Email: heike.huetterer@belimed.com

Product Information

Product Name: WD 290 IQ Washer/Disinfector

Product Type: Washer/Disinfector

Product Model Number: WD 290 IQ W/O CONSTRUCTIONS, WD 290 IQ WITH CONSTRUCTIONS

General Description: WD 290 IQ offers increased throughput because the prepared batch starts automatically with flexible working procedures on the loading side. Once the batch has been visually controlled the approval can be made directly on the screen. There is improved data and tracking quality.

Applicant Information

Applicant Company Name: ISAT Seismic Bracing

Contact Person: William V Joerger

Mailing Address: 1020 Crews Road, Suite Q, Matthews NC 28105

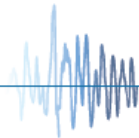
Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

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: [Signature] Date: November 15, 2018

Title: Principal Structural Engineer Company Name: ISAT Seismic Bracing

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





**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: SE 4545
Mailing Address: 1020 Crews Road, Suite Q, 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): _____

*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): _____

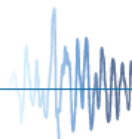
List of Attachments Supporting the Manufacturer's Certification

- 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: 11/12/2019
Print Name: Sonia Eliseo
Title: Structural Engineer
Condition of Approval (if applicable): _____

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TOTAL SUPPORT

Innovation • Engineering • BIM • Fabrication

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Submittal Documents

OPM-0508-13

OSHPD OPM-0508-13

**ATTACHMENT OPM DRAWINGS
WD 290 IQ STERILIZERS**

BELIMED

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



WVJ 07 Nov 19

FILE NO.: CLT-0818-207

"Empowered by Experience"

REV 2

OSHPD OPM-0508-13 DWG -i

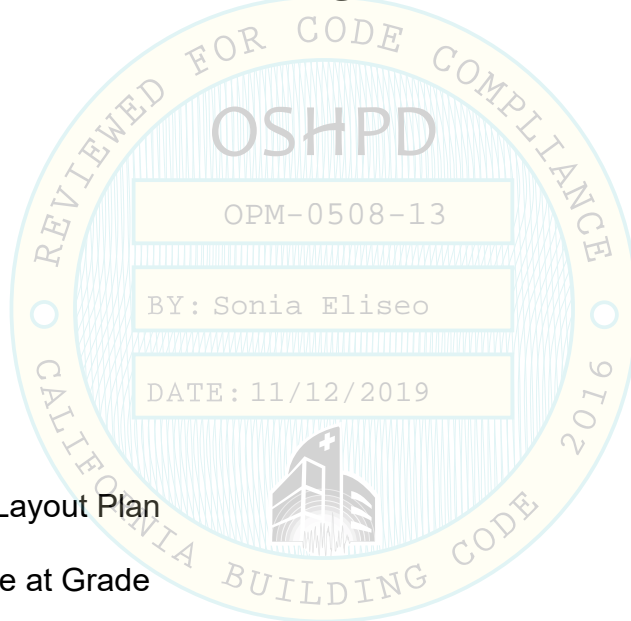


OSHPD OPM-0508-13

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DRAWING INDEX

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OSHPD OPM-0508-13

MANUFACTURE: BELIMED
EQUIPMENT TYPE: 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: $S_{D5} = 1.75$ $I_p = 1.5$ $a_p = 1.0$ $R_p = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0$ $F_pH = 1.13$ AND FOR $z/h \leq 1.0$ $F_pH = 2.10$ AND $F_pV = 0.35$.
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 ASCE 7-10 SECTION 12.4.3.2.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: ALL THREAD ROD ASTM F593 CW1 304 STAINLESS STEEL ($F_y = 65$ KSI) FOR BOLTS AT ELEVATED FLOORS, ANGLE ASTM A36 ($F_y = 36$ KSI) HOT DIPPED GALVANIZED.
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 KWIK BOLT TZ (ESR-1917) STAINLESS STEEL 5/8" DIAMETER x 4" EFFECTIVE EMBEDMENT. DRILL 11/16" DIAMETER x 4.75" INCH MINIMUM 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.



BY: Sonia Eliseo

DATE: 11/12/2019

OPM-0508-13 BELIMED WD 290 IQ STERILIZER GENERAL NOTES

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OSHPD OPM-0508-13 DWG - 1

OSHPD OPM-0508-13

MANUFACTURE: BELIMED

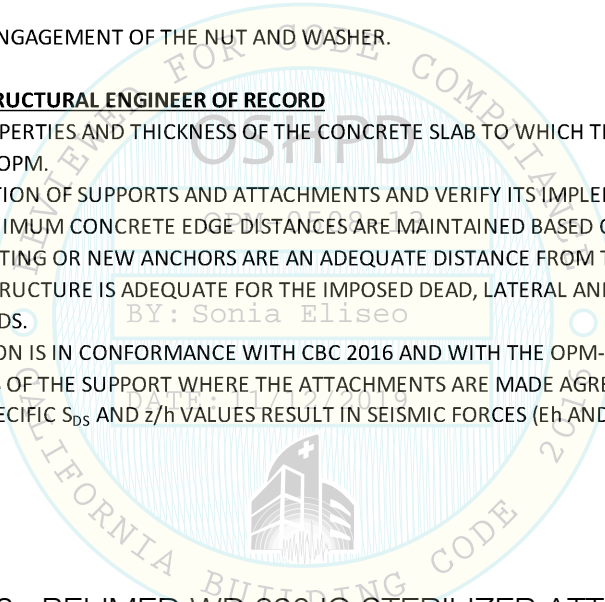
EQUIPMENT TYPE: STERILIZERS

ATTACHMENT NOTES:


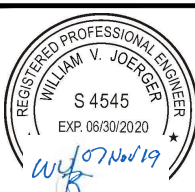
1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. PERIODIC SPECIAL INSPECTION PER CBC 2016 SECTION 1705A AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, 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. TORQUE CONTROLLED POST-INSTALLED ANCHORS - TEST USING A CALIBRATED TORQUE WRENCH; 60 FOOT-POUNDS TORQUE FOR 5/8" ANCHORS AND 40 FOOT-POUNDS FOR 1/2" ANCHORS 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.

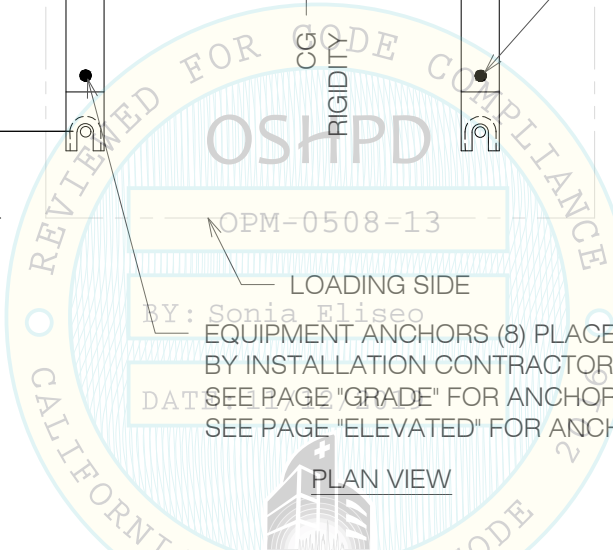
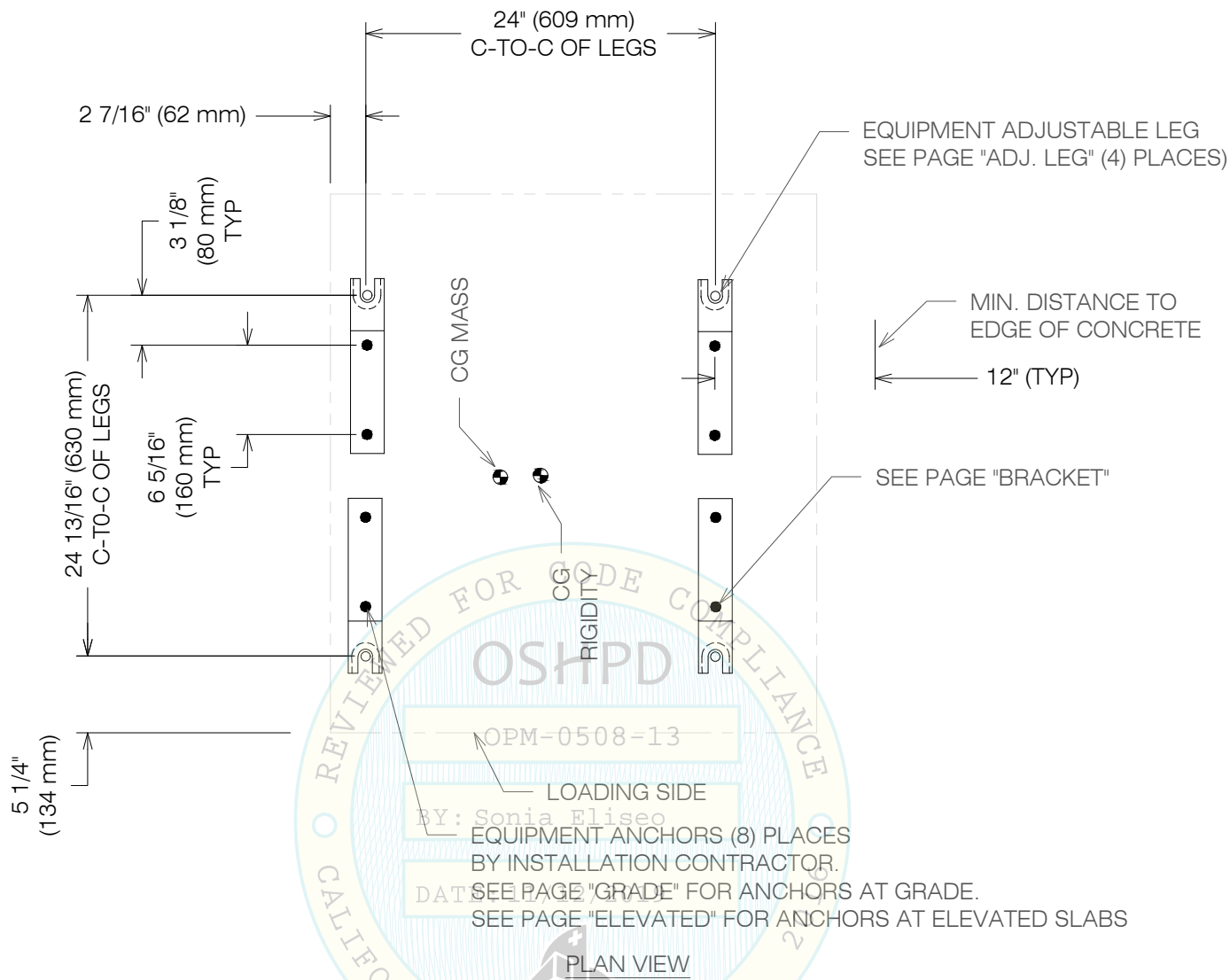
RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

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-0508-13 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.


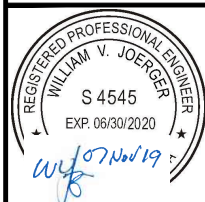


OPM-0508-13 BELIMED WD 290 IQ STERILIZER ATTACHMENT NOTES

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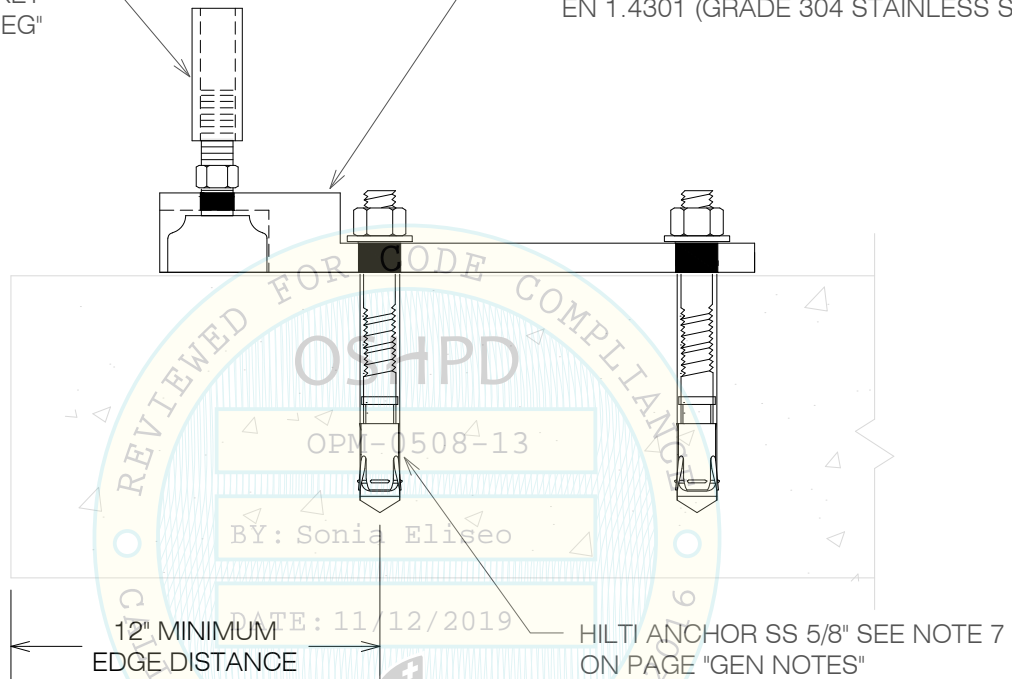


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ANCHOR LAYOUT

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ADJUSTABLE LEG
AND SOCKET
SEE PAGE "ADJ LEG"

BRACKET BY BELIMED WHERE SHOWN
SEE LAYOUT PLANS
SEE PAGE "BRACKET" FOR DIMENSIONS
EN 1.4301 (GRADE 304 STAINLESS STEEL)



OPM-0508-13 BELIMED WD 290 IQ STERILIZER
ATTACHMENT DETAILS AT SLAB-ON-GRADE

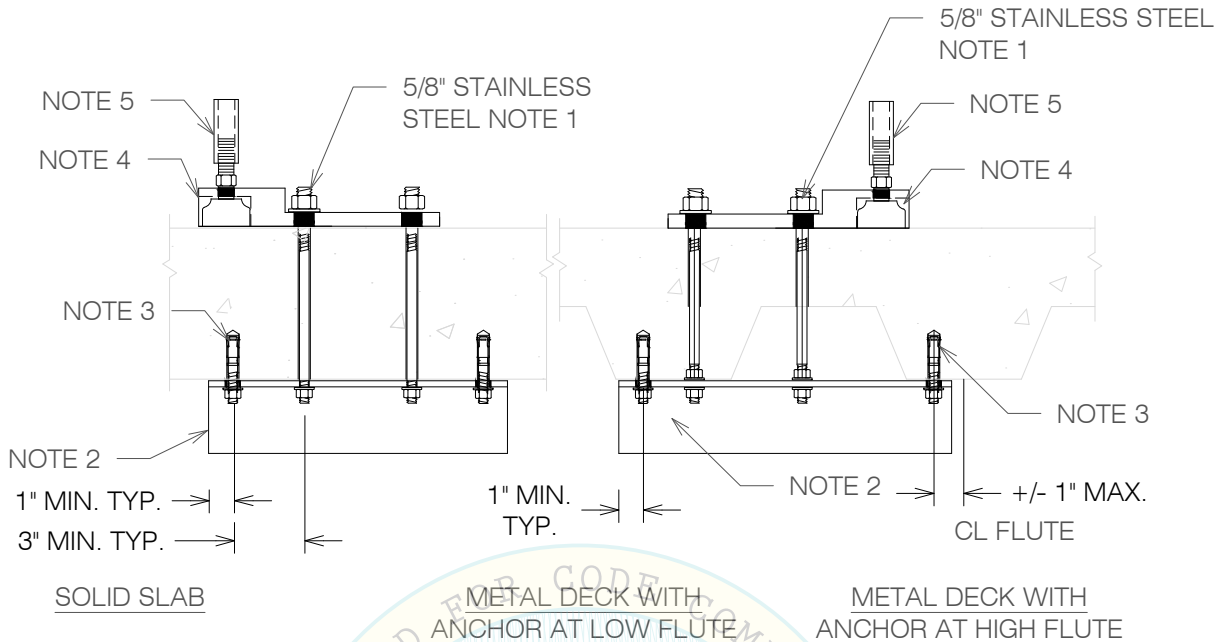


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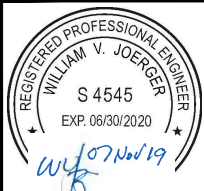
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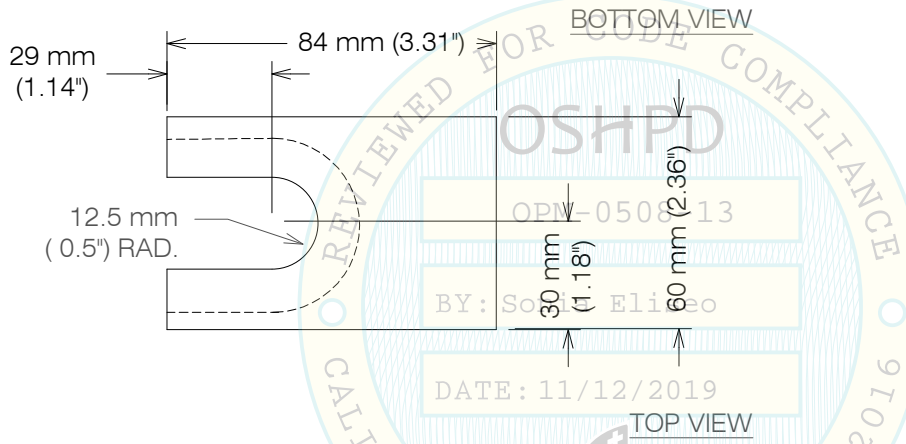
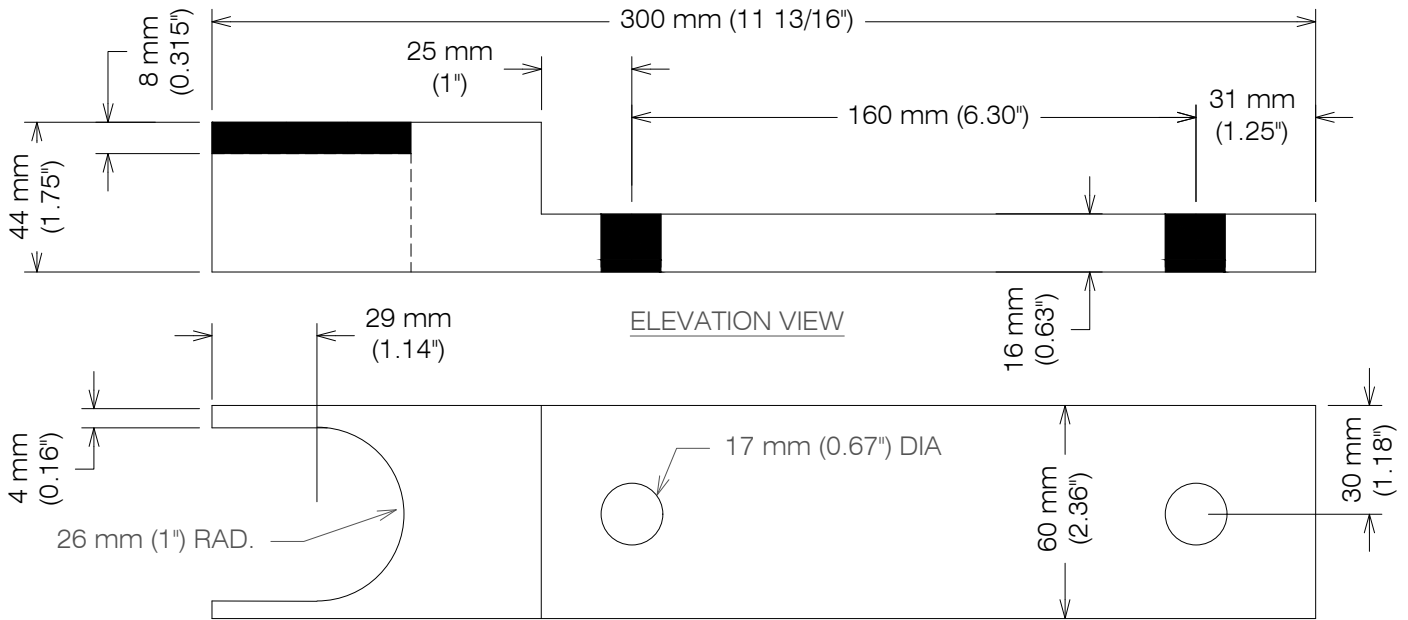


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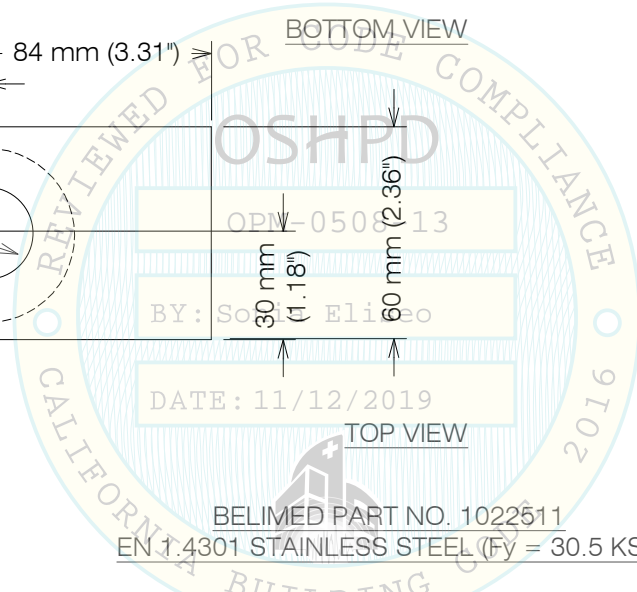
1. DRILL 11/16" HOLE IN THE CONCRETE SLAB TO RECEIVE THE 5/8" ASTM F593 CW1 (Fy = 65 KSI) 304 STAINLESS STEEL RODS WITH MATCHING WASHERS AND NUTS.
2. SUPPLEMENTAL ANGLE SHALL BE L3x3x1/4 ASTM A36. DRILL 11/16" HOLES IN ANGLE FOR EQUIPMENT ANCHORAGE BOLTS. FOR LOCATIONS WHERE A TOP NUT CANNOT BE INSTALLED, DRILL AND TAP THE ANGLE TO RECEIVE THE 5/8" ASTM F593 CW1 (Fy = 65 KSI) EQUIPMENT ANCHORAGE BOLT.
3. ANCHOR INTO BOTTOM OF SLAB SHALL BE HILTI KWIK BOLT TZ 1/2", SEE NOTE 7 ON PAGE "GEN NOTES".
4. BRACKET BY BELIMED WHERE SHOWN SEE LAYOUT PLANS SEE PAGE "BRACKET" FOR DIMENSIONS EN 1.4301 (GRADE 304 STAINLESS STEEL)
5. ADJUSTABLE LEG AND SOCKET, SEE PAGE "ADJ LEG".

OPM-0508-13 BELIMED WD 290 IQ
ATTACHMENT DETAILS AT ELEVATED SLABS

	
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SEE LAYOUT DRAWINGS FOR BRACKET LOCATIONS

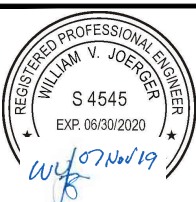


BELIMED PART NO. 1022511
EN 1.4301 STAINLESS STEEL (Fy = 30.5 KSI)

OPM-0508-13 BELIMED WD 290 IQ STERILIZER BRACKET

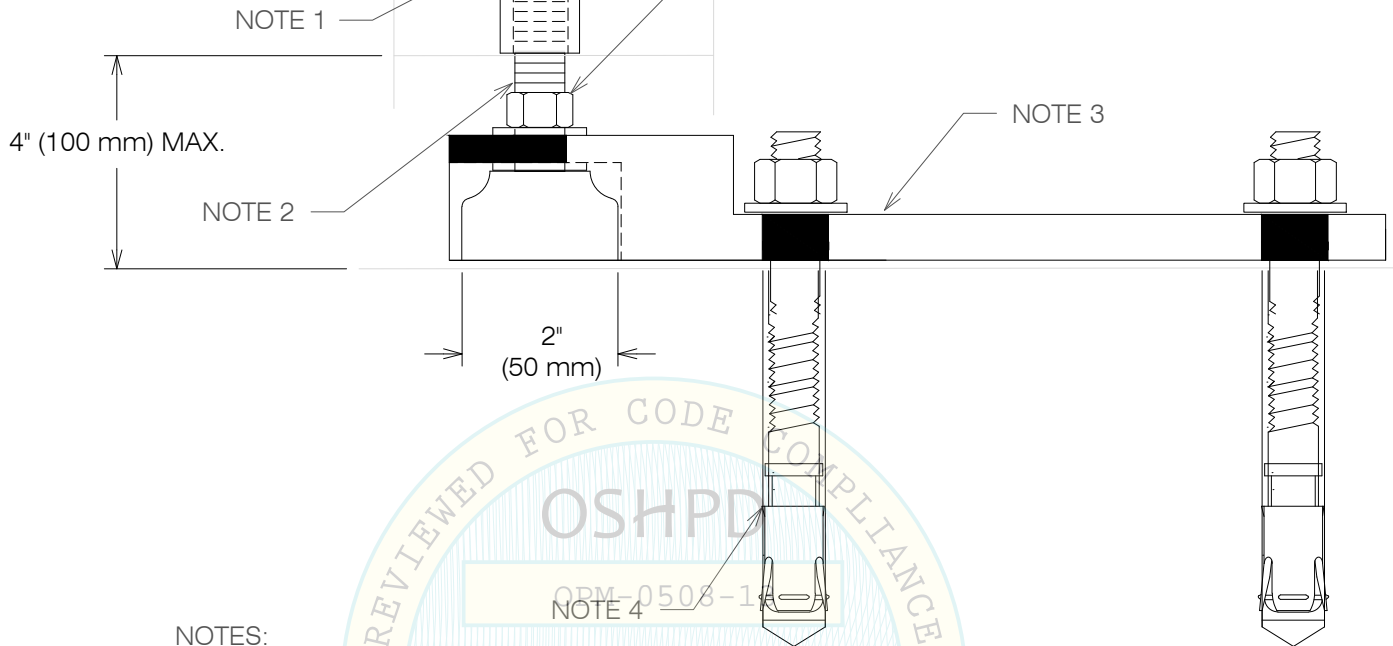


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EQUIPMENT FRAME
50mm HT x 2mm
EN 1.4301 STAINLESS STEEL
FY = 30.5 KSI (BY BELIMED)

M16 NUT DIN 934 STAINLESS STEEL (BY BELIMED) WITH 30mm OD x 3mm THICK 304 STAINLESS STEEL WASHERS TOP AND BOTTOM



NOTES:

1. SOCKET BY BELIMED, PART NO. 70428 EN 1.4301 304 STAINLESS STEEL (FY = 30.5 KSI), 25 mm DIA. x 70 mm LONG.
2. ADJUSTABLE LEG BY BELIMED, PART NO. 70233, EN 1.4301 M16 (16 mm) Fy = 30.5 KSI THREADED ROD AND BLACK POLYAMIDE MATERIAL BASE.
3. ATTACHMENT BRACKET BY BELIMED - SEE PAGE "BRACKET".
4. FASTENER - SEE PAGES "GRADE" OR THRU BOLTS SEE PAGE "ELEVATED".

OPM-0508-13 BELIMED WD 290 IQ
ADJUSTABLE LEG DETAILS



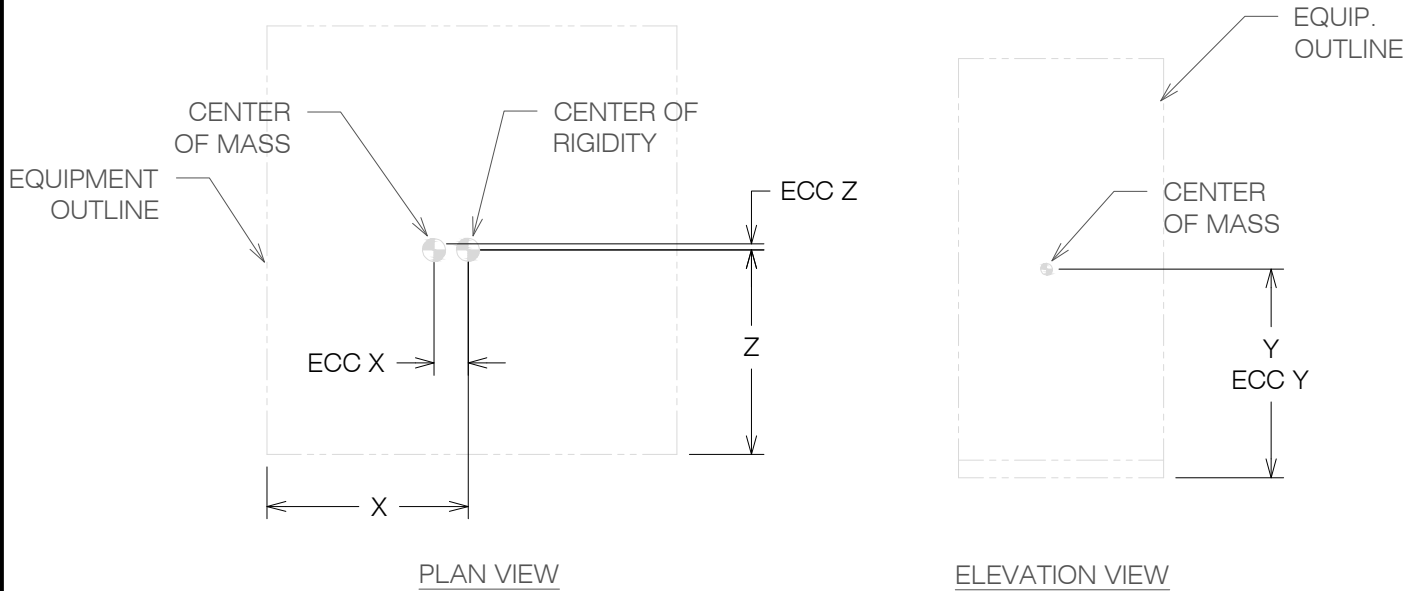
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EQUIPMENT WEIGHTS AND DIMENSIONS				
Model and Weight		Center of Mass		
Tag No.	Weight lbs	X in	Y in	Z in
ED 290 IQ W/O CONSTRUCTIONS	1466	17.4	36.8	17.7
ED 290 IQ WITH CONSTRUCTIONS	1845	17.6	42.4	17.7

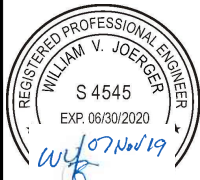
EQUIPMENT ECCENTRICITIES AND FORCES PER FASTENER							
Model and Weight	Eccentricities			Forces At Grade		Forces at Elevated	
	Tag No.	ex - in	ey - in	ez - in	Vu Lbs.	Tu Lbs.	Vu Lbs.
ED 290 IQ W/O CONSTRUCTIONS	2.93	36.80	0.02	866	2202	1155	4163
ED 290 IQ WITH CONSTRUCTIONS	3.13	42.40	0.02	1090	3495	1453	6521

WEIGHTS AND MOMENTS ARE FACTORED LOADS USING STRENGTH DESIGN AND INCLUDE THE FOLLOWING FACTORS: DL = 0.9, FpH AT GRADE = 0.79 AND FpH ELEVATED = 2.10 AND FpV = 0.35. TABULATED FORCES ARE PER FASTENER AT STRENGTH DESIGN LEVEL AND INCLUDE A CONCRETE OVERSTRENGTH FACTOR $\Omega = 1.5$ AS REQUIRED. FOR THROUGH BOLTS ON ELEVATED SLABS A TENSION OVERSTRENGTH FACTOR OF 1.0 IS USED.

**OPM-0508-13 BELIMED WD 290 IQ STERILIZER
DIMENSIONS AND ANCHORAGE FORCES**



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