# ALUMINUM ROOF PANELS

## 0.024" & 0.030" ALUMINUM 3" OLYMPIC RISERS AND 0.027" & 0.040" ALUMINUM TWIN VEE CLEAR SPAN TABLES APPROVED FOR NON-HVHZ AREAS

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

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AUGUST 7, 2023

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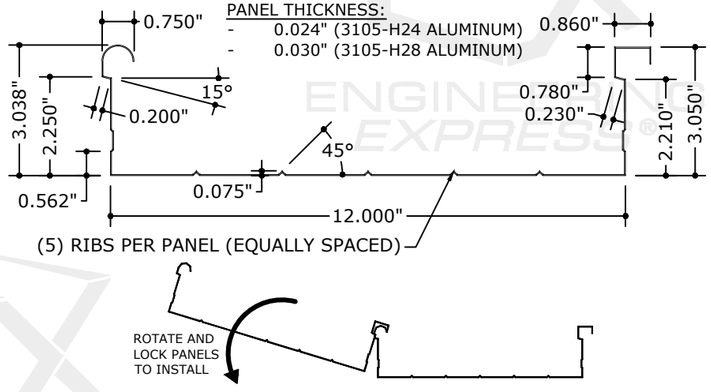
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**TABLE 1: 3" ALUMINUM OLYMPIC RISER PANEL**
**CLEAR SPANS BY ASD DESIGN PRESSURE**

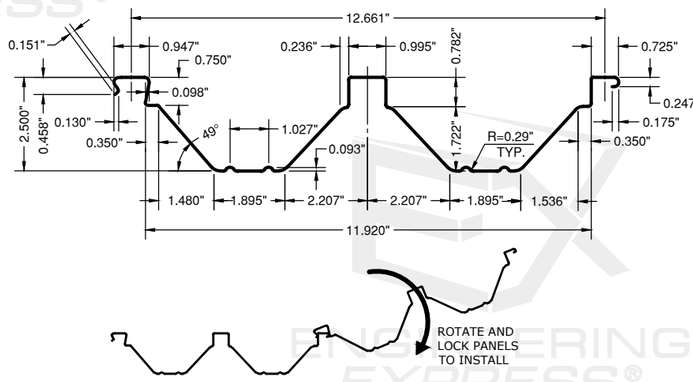
| 0.024" ALUMINUM PANEL | | | | 0.030" ALUMINUM PANEL | | | |
|---|---|---|---|---|---|---|---|
| MAX POSITIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX NEGATIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX POSITIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX NEGATIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN |
| +10 PSF | 10' - 0'' | -10 PSF | 10' - 0'' | +10 PSF | 11' - 2'' | -10 PSF | 11' - 2'' |
| +15 PSF | 9' - 8'' | -15 PSF | 9' - 10'' | +15 PSF | 11' - 2'' | -15 PSF | 11' - 2'' |
| +20 PSF | 9' - 2'' | -20 PSF | 8' - 2'' | +20 PSF | 10' - 10'' | -20 PSF | 10' - 10'' |
| +25 PSF | 8' - 7'' | -25 PSF | 6' - 5'' | +25 PSF | 10' - 5'' | -25 PSF | 10' - 5'' |
| +30 PSF | 8' - 0'' | -30 PSF | 4' - 9'' | +30 PSF | 10' - 1'' | -30 PSF | 10' - 1'' |
| +35 PSF | 7' - 6'' | | | +35 PSF | 9' - 8'' | -35 PSF | 9' - 8'' |
| +40 PSF | 6' - 11'' | | | +40 PSF | 9' - 3'' | -40 PSF | 9' - 3'' |
| +45 PSF | 6' - 4'' | | | +45 PSF | 8' - 10'' | -45 PSF | 8' - 10'' |
| +50 PSF | 5' - 10'' | | | +50 PSF | 8' - 5'' | -50 PSF | 8' - 5'' |
| +55 PSF | 5' - 3'' | | | +55 PSF | 8' - 1'' | -55 PSF | 8' - 1'' |
| +60 PSF | 4' - 9'' | | | +60 PSF | 7' - 8'' | -60 PSF | 7' - 8'' |
| | | | | +65 PSF | 7' - 3'' | | |
| | | | | +70 PSF | 6' - 10'' | | |
| | | | | +75 PSF | 6' - 5'' | | |
| | | | | +80 PSF | 6' - 1'' | | |
| | | | | +85 PSF | 5' - 8'' | | |
| | | | | +90 PSF | 5' - 3'' | | |
| | | | | +95 PSF | 4' - 10'' | | |

**TABLE 2: ALUMINUM TWIN VEE PANEL**
**CLEAR SPANS BY ASD DESIGN PRESSURE**

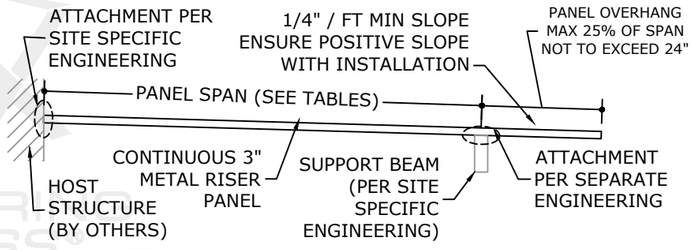
| 0.027" ALUMINUM PANEL | | | | 0.040" ALUMINUM PANEL | | | |
|---|---|---|---|---|---|---|---|
| MAX POSITIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX NEGATIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX POSITIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN | MAX NEGATIVE PRESSURE (ASD) | MAX PANEL CLEAR SPAN |
| +10 PSF | 11' - 2'' | -10 PSF | 8' - 5'' | +10 PSF | 11' - 2'' | -10 PSF | 11' - 2'' |
| +15 PSF | 10' - 10'' | -15 PSF | 6' - 10'' | +15 PSF | 11' - 2'' | -15 PSF | 10' - 3'' |
| +20 PSF | 9' - 4'' | -20 PSF | 5' - 11'' | +20 PSF | 11' - 2'' | -20 PSF | 8' - 10'' |
| +25 PSF | 8' - 4'' | -25 PSF | 5' - 4'' | +25 PSF | 11' - 2'' | -25 PSF | 7' - 11'' |
| +30 PSF | 7' - 8'' | -30 PSF | 4' - 10'' | +30 PSF | 11' - 2'' | -30 PSF | 7' - 3'' |
| +35 PSF | 7' - 1'' | -35 PSF | 4' - 6'' | +35 PSF | 10' - 4'' | -35 PSF | 6' - 8'' |
| +40 PSF | 6' - 7'' | -40 PSF | 4' - 2'' | +40 PSF | 9' - 8'' | -40 PSF | 6' - 3'' |
| +45 PSF | 6' - 3'' | -45 PSF | 3' - 11'' | +45 PSF | 9' - 1'' | -45 PSF | 5' - 11'' |
| +50 PSF | 5' - 11'' | -50 PSF | 3' - 9'' | +50 PSF | 8' - 7'' | -50 PSF | 5' - 7'' |
| +55 PSF | 5' - 8'' | -55 PSF | 3' - 7'' | +55 PSF | 8' - 3'' | -55 PSF | 5' - 4'' |
| +60 PSF | 5' - 5'' | -60 PSF | 3' - 5'' | +60 PSF | 7' - 10'' | -60 PSF | 5' - 1'' |
| +65 PSF | 5' - 2'' | | | +65 PSF | 7' - 7'' | | |
| +70 PSF | 5' - 0'' | | | +70 PSF | 7' - 3'' | | |
| +75 PSF | 4' - 10'' | | | +75 PSF | 7' - 0'' | | |
| +80 PSF | 4' - 8'' | | | +80 PSF | 6' - 10'' | | |
| +85 PSF | 4' - 6'' | | | +85 PSF | 6' - 7'' | | |
| +90 PSF | 4' - 5'' | | | +90 PSF | 6' - 5'' | | |




1/1 3" METAL RISER PANELS
N.T.S. SECTION VIEW




2/1 2.5" TWIN VEE PANELS
N.T.S. SECTION VIEW




3/1 3" METAL RISER ROOF PANELS
N.T.S. SIDE ELEVATION

## DESIGN NOTES

1. THE DESIGN PRESSURE VALUES LISTED IN THE TABLES HEREIN ARE ALLOWABLE (ASD) PRESSURES. IF ULTIMATE DESIGN PRESSURES ARE REQUIRED, MULTIPLY THE ALLOWABLE DESIGN PRESSURES BY 1.67 (ULTIMATE PRESSURE = ALLOWABLE PRESSURE * 1.67).
2. THIS PRODUCT IS APPROVED FOR NON-HABITABLE STRUCTURES ONLY.
3. ALL ROOF PANEL SPANS LISTED HEREIN ASSUME A MAXIMUM DEFLECTION OF L/90.
4. LINEAR INTERPOLATION OF THE ROOF PANEL SPANS LISTED HEREIN IS PERMITTED.
6. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR. IF A 2.0 SAFETY FACTOR IS REQUIRED BY LOCAL JURISDICTION, SPANS SHALL BE MULTIPLIED BY A REDUCTION FACTOR OF 0.66. FOR OPTIMIZED SPANS WITH A SAFETY FACTOR OF 2.0 OR GREATER, SITE SPECIFIC ENGINEERING IS REQUIRED.
7. A 300LB POINT LOAD HAS NOT BEEN CONSIDERED IN THESE CALCULATIONS DUE TO THE NATURE OF THE INTENDED APPLICATION. END USER SHALL BE NOTIFIED THAT PANELS ARE NOT DESIGNED FOR HUMAN LOADING.
8. ALUMINUM RISER PANELS SHALL BE 3105-H24 (FOR 0.024" & 0.027" THICK PANELS) AND 3105-H28 (FOR 0.030" & 0.040" THICK PANELS) OR EQUIVALENT ALUMINUM ALLOY.

## GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED PER ASTM E330 (TEST REPORT #'S F7038.01-401-44-R0 & F7038.02-401-44-R0 BY ARCHITECTURAL TESTING, INC.) IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, EIGHTH EDITION (2023).
2. SITE SPECIFIC POSITIVE AND NEGATIVE DESIGN PRESSURES (ASD) CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED SEPARATELY PER ASCE 7 AND THE REFERENCED BUILDING CODE. DESIGN PRESSURES MUST BE LESS THAN OR EQUAL TO THE POSITIVE AND NEGATIVE DESIGN PRESSURES LISTED HEREIN.
3. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A DESIGN PROFESSIONAL SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
4. THESE INSTALLATION INSTRUCTIONS ARE PART OF A PRODUCT APPROVAL EVALUATION AND SHALL ONLY BE USED IN CONJUNCTION WITH THE EVALUATION REPORT SUBMITTED FOR THE SAME PRODUCT APPROVAL.
5. DESIGN PROFESSIONAL SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. BRICK VENEER PER ASTM C62 (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER ANY APPLICABLE LOADS TO THE EXISTING HOST STRUCTURE.
6. ALL PANEL ATTACHMENTS SHALL BE CERTIFIED PER SEPARATE ENGINEERING ON A SITE SPECIFIC BASIS.REFER TO FASTENER MANUFACTURER'S PUBLISHED DATA SHEETS AND RECOMMENDATIONS FOR FASTENER INSTALLATION INSTRUCTIONS.
7. CONTRACTOR IS RESPONSIBLE TO INSULATE OR PROTECT ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
8. THE CONTRACTOR IS RESPONSIBLE FOR WATER/WEATHER PROOFING MATERIALS AND INSTALLATION SUCH AS FLASHING, CAULKING, ETC.
9. ENGINEER SEAL AFFIXED HERETO VALIDATE STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
12. ALTERATIONS ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
13. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

## TABLE USE INSTRUCTIONS:

1. DETERMINE TYPE OF ENCLOSURE TO BE COVERED (OPEN, SCREENED WALLS, OR FULLY ENCLOSED) AND CORRESPONDING DEFLECTION LIMIT.
2. THE SPANS LISTED HEREIN ARE APPLICABLE FOR NON-HABITABLE STRUCTURES ONLY.
3. DETERMINE THE SITE SPECIFIC REQUIRED DESIGN LOAD PER BY SEPARATE ENGINEERING, CERTIFIED BY A DESIGN PROFESSIONAL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ANY GOVERNING CODE, MUNICIPALITY, AND BUILDING CODES IN EFFECT FOR THE PROJECT LOCATION.
4. BASED ON THE PROJECT DESIGN CONDITIONS DETERMINED, SELECT A SUITABLE ROOFING PANEL WITH AN ALLOWABLE SPAN GREATER THAN OR EQUAL TO THE PROJECT REQUIREMENTS.
5. COMPONENT FRONT CONNECTION TO SUPPORTING BEAM AND BACK CONNECTION TO HOST STRUCTURE TO BE DETERMINED SEPARATELY ON A SITE SPECIFIC BASIS BY A DESIGN PROFESSIONAL.

## SPAN TABLE NOTES:

1. SPANS SHOWN BASED ON PRODUCT TESTING LISTED IN GENERAL NOTES.
2. PANEL DEAD LOADS HAVE BEEN FACTORED INTO CALCULATIONS FOR GRAVITY LOADS AS WELL AS CALCULATIONS FOR PANEL PROPERTIES.
3. POSITIVE AND NEGATIVE DESIGN PRESSURE SHALL BE DETERMINED SEPARATELY PER ASCE 7 BASED ON SITE SPECIFIC APPLICATION AND COMPARED TO THE APPLICABLE TABLE ABOVE. THE LIMITING POSITIVE OR NEGATIVE PRESSURE SPAN VALUE SHALL BE USED FOR INSTALLATION.
4. CALCULATED PRESSURES SHALL CONSIDER THE CONTROLLING LOAD COMBINATION, USING ALL APPLICABLE ASCE 7 LOADS INCLUDING DEAD, LIVE, SNOW, WIND, AND ANY OTHER LOADING APPLICABLE TO THE INSTALLATION, DETERMINED PER SEPARATE CERTIFICATION.
5. TABLE CONSIDERS ASD DESIGN PRESSURES. TO CONVERT SEPARATELY CALCULATED ULTIMATE PRESSURES TO DESIGN PRESSURES, P(ULT)*0.6 = P(ASD).
6. OVERHANG FOR DESIGN PRESSURES ABOVE +/- 45 PSF = 12.0" MAX (ON EITHER SIDE OF PANEL) AND NO MORE THAN 25% OF CLEAR SPAN (ON EITHER END OF PANEL).

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ALUMINUM ROOF RISER & TWIN VEE PANELS
FLORIDA BUILDING CODE EIGHTH EDITION (2023)
FLORIDA STATEWIDE APPROVAL (FSA FL#19131.1)

| REMARKS | DRWN | CHKD | DATE |
|---|---|---|---|
| 2020 FBC (20-32093) | CCB | RWN | 9/29/20 |
| 2023 FBC | MLD | CCB | 8/07/23 |

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