

EVALUATION SUBJECT: 15-25T COMMERCIAL PACKAGED UNITS**FL # 46979.2****REPORT HOLDER:**RHEEM SALES COMPANY, INC.
800 INTERSTATE PARK DR
MONTGOMERY, AL 36109, USA
(770) 351-3000 | RHEEM.COM**SCOPE OF EVALUATION (compliance with the following codes):****THIS IS A STRUCTURAL (WIND) PERFORMANCE EVALUATION ONLY. NO ELECTRICAL OR TEMPERATURE PERFORMANCE RATINGS OR CERTIFICATIONS ARE OFFERED OR IMPLIED HEREIN. UNDER NO CIRCUMSTANCE DOES THIS PERFORMANCE EVALUATION GUARANTEE, IMPLY, OR STATE PERFORMANCE OF THE UNIT IS MAINTAINED DURING OR AFTER A DESIGN EVENT.**

This Performance Evaluation is being issued in accordance with the requirements of the **Florida Building Code Ninth Edition (2026)** per ASCE 7, FBC Building Ch. 16, FBC Building Sections 104.11 & 1522.2, FBC Existing Building Sections 707.1 & 707.2, FBC Mechanical 301.15, FBC Residential M1202.1 & M1301.1, and FS 471.025. The product noted in this performance evaluation has been tested and/or evaluated as summarized herein.

SUBSTANTIATING DATA:**• Product Evaluation Documents**

Substantiating documentation has been submitted to provide this performance evaluation and is summarized in the sections below.

• Structural Engineering Calculations

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

- Max. allowable lateral & uplift wind pressures certified herein
- Max. allowable sliding forces, uplift forces, & overturning moments (see Unit Reactions from Wind Guide on last page)
- Tie-down configuration and anchor capacity for concrete, aluminum, and steel host substrates (host by others).
- Unit panel wind pressure connection integrity

Calculation summary is included in this product evaluation and appears herein.

LIMITATIONS & CONDITIONS OF USE:

Use of the product(s) listed herein shall be in strict accordance with this product evaluation as noted herein and manufacturer-provided model specifications. Installation shall conform to the minimum standards stated in the referenced building code(s) in addition to the specifications and limitations stated herein. See herein for complete limitations & conditions of use.

OPTIONS:

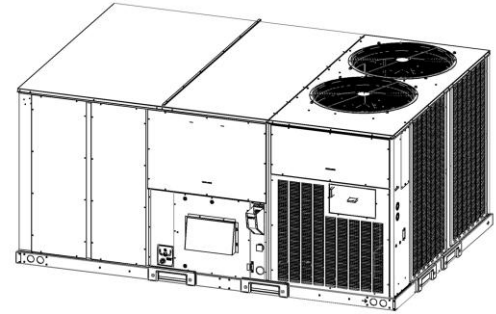
This evaluation is valid for the models described herein. The critical unit designs have been determined and used in this evaluation. Any structural changes outside of the design as described herein would void this certification.

UNIT CASING MATERIALS:

Exterior panels and unit base rail shall be UTS = 37 ksi min. G90U galv. steel. Exterior panels shall be 0.034" min. thick. Base rail shall be 0.069" min. thick. Exterior panels shall be secured with #10 min. Ø, SAE Gr. 2 or stronger sheet metal screws with 1/2" OD washers. Please contact Report Holder for further unit construction information.

TERMINOLOGY:

See herein for definitions of terms and abbreviations used in this evaluation.



NOTE: THE GRAPHICAL DEPICTIONS IN THIS EVALUATION ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER IN APPEARANCE.

STRUCTURAL PERFORMANCE:

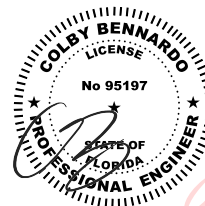
Models referenced herein are subject to the following design limitations:

**Maximum-Rated ASD Wind Pressures*:
± 140 psf Lateral, 111 psf Uplift**

- Required design wind pressures shall be determined according to the guide provided in the Appendix (see last page of this document) or on a site-specific basis in accordance with ASCE 7 and applicable sections of the building code(s) being referenced in accordance with ASD methodology.
- Required design wind pressures shall be less than or equal to the maximum pressures listed herein.
- *Maximum Rated Wind Pressures indicate the maximum pressures that all units listed herein are approved for. Valid for at-grade and rooftop applications. See limitations herein.
- Valid for use inside and outside the High-Velocity Hurricane Zone (HVHZ).
- Site-specific wind analysis may produce alternate limitations provided that the maximum-rated wind pressures stated herein are not exceeded.

VISIT [ECALC.IO/RHEEM](https://ecalc.io/rheem)FOR MORE INFORMATION AND
DEVIATIONS TO THIS EVALUATION OR
SCAN THE QR CODE TO THE RIGHT >

Engineer Signature & Seal:

**Digitally signed by
Colby Bennardo
Date: 2026.08.18
12:35:43 -04'00'**

August 17, 2026

Colby Bennardo, P.E.

ENGINEERING EXPRESS®

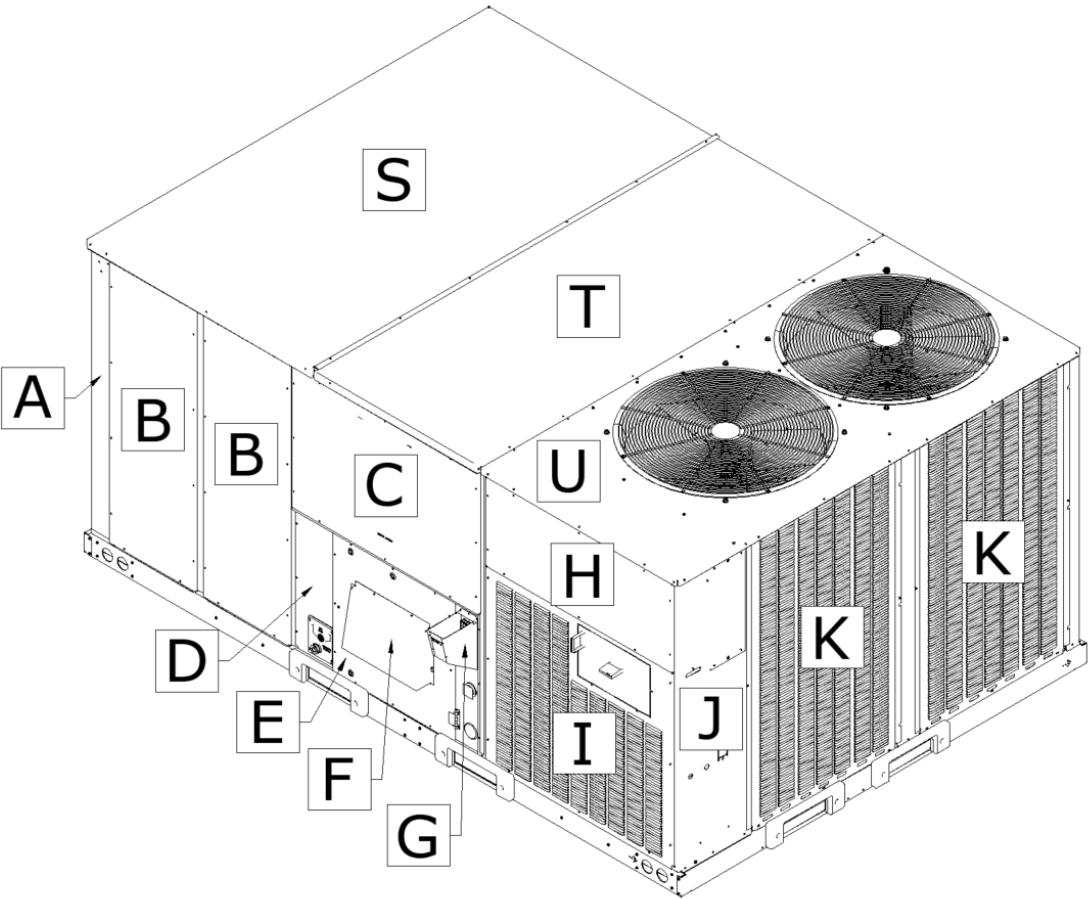
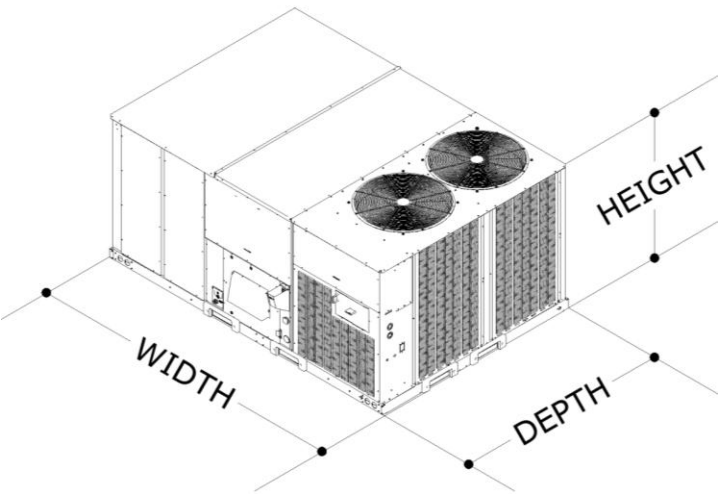
FL PE #95197 FLCA #9885

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***FOR FLORIDA STATEWIDE PRODUCT APPROVALS (FSAs) REGISTERED & APPROVED WITH THE STATE OF FLORIDA:** ORIGINAL, SEALED COPIES OF APPROVED FLORIDA PRODUCT APPROVALS ARE NOT REQUIRED FOR PERMIT. SEE [ECALC.IO/SEAL](https://ecalc.io/seal) TO LEARN MORE.

MODEL INFORMATION

Model Number	Unit dimensions (in)		
	Width	Depth	Height
(-)GEG-180	127	86	58.5
(-)GEG-210			
(-)GEG-240			
(-)GEG-300			
(-)ACG-180			
(-)ACG-210			
(-)ACG-240			
(-)ACG-300			

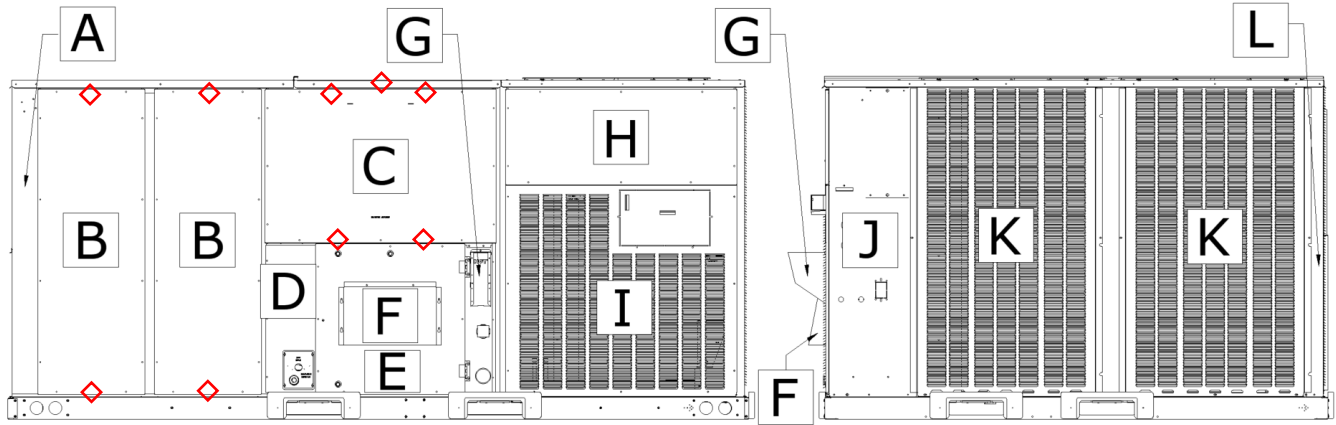


2 PANEL DESIGNATIONS
SCALE: NTS FRONT-RIGHT ISOMETRIC VIEW

MODEL INFORMATION NOTES

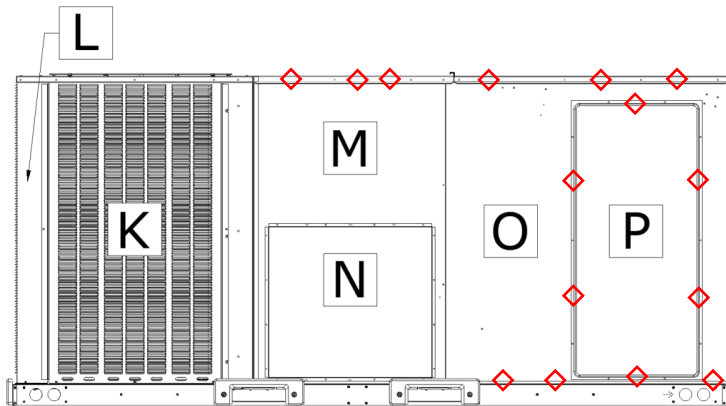
Model information listed herein is based on information provided by the Report Holder. ‘(-)’ designates equivalent trade brands with similar cabinetry and may vary depending on the brand. Unit dimensions listed above are net dimensions (as opposed to gross, packing, or shipping dimensions) and describe the main body of the unit only (not considering extra length from hoods, fan cages, etc.). Unit net weights shall be between 1750 lb and 2350 lb, typ. See Details 1 - 6 herein for definitions of unit dimensions, unit sides (front, back, left, right), and panel designations (related to the Panel Integrity evaluation summarized herein). Additional views are shown next page. Unit appearance may vary. Please contact Report Holder for more information.

MODEL INFORMATION CONTINUED

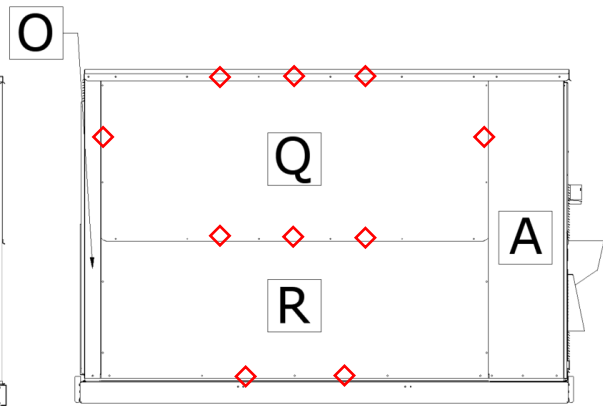


3 PANEL DESIGNATIONS
SCALE: NTS FRONT VIEW

4 PANEL DESIGNATIONS
SCALE: NTS RIGHT VIEW



5 PANEL DESIGNATIONS
SCALE: NTS BACK VIEW



6 PANEL DESIGNATIONS
SCALE: NTS LEFT VIEW

MODEL INFORMATION NOTES CONTINUED

See Details 1 - 6 herein for definitions of unit dimensions, unit sides (front, back, left, right), and panel designations (related to the Panel Integrity evaluation summarized herein). Panel layouts as designated by the boxed call-outs in Details 1 - 6 (e.g. "A", "B", etc.) apply for all unit models. Remaining exterior panels and fan cages not designated herein were considered in the panel integrity evaluation and are included in this evaluation. See Panel Integrity Summary section herein. Diamond "◇" regions in Details 3 - 6 herein illustrate approximate additional screw locations related to the Panel Integrity evaluation summarized herein on page 7. See Panel Integrity section herein for specifications.

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UNIT TIE-DOWN TO CONCRETE HOST SCHEDULE

Application	Max. ASD Wind Pressures Lateral (Uplift)	Number of Tie-Down Clips per Long Side	Number of Tie-Down Clips per Short Side	Number of Tie-Down Clips in Total per Unit
At-Grade to Concrete	± 40 psf (0 psf)	3	0	6
	± 54 psf (0 psf)	2	2	8

UNIT TIE-DOWN TO CONCRETE HOST SCHEDULE NOTES

INTRODUCTION: This Schedule provides direct mounting option to concrete (without curb) for at-grade applications. For rooftop and/or curb applications, see "Unit Mount to Steel Curb" Section further herein.

TIE-DOWN SCHEDULE DIRECTIVE: The Schedule table above is divided into maximum wind pressure tiers (each row of table). Site-specific wind pressures up to ± 40 psf lateral & 0 psf uplift shall follow, at-minimum, the tie-down specifications as stated in the ± 40 psf lateral (0 psf uplift) pressure tier row. Site-specific wind pressures greater than ± 40 psf lateral and up to ± 54 psf lateral & 0 psf uplift shall follow the tie-down specifications as stated in the ± 54 psf lateral (0 psf uplift) pressure tier row. Concrete host structure by others shall have 3000 psi minimum compressive strength. This schedule applies to all units described in this evaluation. See tie-down specifications and Details on this page.

ANCHOR NOTES: In all cases, the concrete host is by others. Utilize (1) anchor per tie-down clip. Anchor specifications shall be as follows:

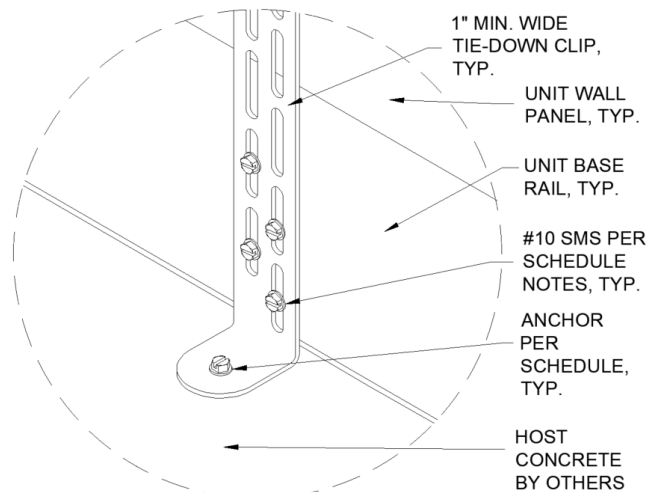
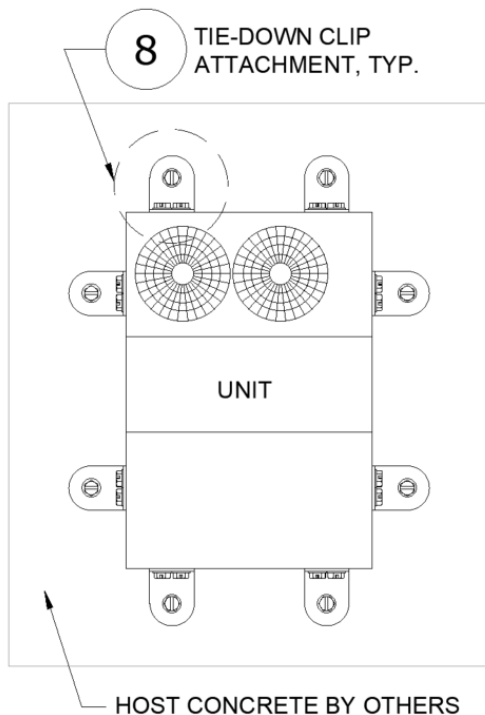
1/4" Ø ITW Tapcon or equivalent with 1-3/4" embedment, 3" min. edge distance to edge of concrete, 1/2" min. edge distance to edge of tie-down clip, and 4-1/4" min. spacing from neighboring concrete anchors, typ.

TIE-DOWN CLIP NOTES: Tie-down clips shall be 1" min. wide, 4" - 10" tall, 0.068" min. thick, UTS = 45 ksi min. (equiv. to ASTM A653 Gr. 33 or stronger) galv. steel. Utilize (1) anchor per tie-down clip with specifications as described in the above "Anchor Notes". Ensure anchor is placed at center of tie-down clip leg to provide 1/2" min. edge distance.

Fasten clip to unit base rail with (4) #10 min. Ø, SAE Gr. 2 min. or SS SMS, typ. Utilize (4) slots that have flush, solid contact with unit, (1) screw per slot, typ. Ensure all screws fully engage with unit. Tie-down clips shall sit flush on concrete and flush against unit.

For each unit long side (along unit width), distribute tie-down clip quantity approximately evenly-spaced. Position end clips 3" minimum away from either end of unit base rail. For scenarios in which tie-down clips are required on unit short sides (along unit depth), position tie-down clip at either corner of each unit short side, 3" minimum away from either end of unit base rail. See Details below.

UNIT TIE-DOWN TO HOST CONCRETE DETAILS



8 TIE-DOWN CLIP ATTACHMENT TO UNIT, TYP.
SCALE: NTS ISOMETRIC VIEW

Unit Tie-Down to Host Concrete Details Notes

For each Detail in this section, consult the Unit Tie-Down to Host Concrete Schedule and Notes on this page for all tie-down components and specifications required.

The units and components depicted are for illustrative purposes only and may vary in quantity and/or appearance. Component sizes may be exaggerated for clarity. Tie-down system may not be depicted in full.

7 SAMPLE TIE-DOWN CLIP LAYOUT
SCALE: NTS PLAN VIEW

UNIT MOUNT TO STEEL CURB SCHEDULE

Application	Max. ASD Wind Pressures Lateral (Uplift)	# of Curb Clips per Long Side	# of Curb Clips per Short Side	# of Curb Clips Total per Unit
Rooftop Mount to Steel Curb	± 80 psf (64 psf)	2	2	8
	± 110 psf (87 psf)	3	2	10
	± 140 psf (111 psf)	4	2	12

UNIT MOUNT TO STEEL CURB SCHEDULE NOTES

SCHEDULE DIRECTIVE: The Schedule table above is divided into maximum wind pressure tiers (each row of table). Site-specific wind pressures up to ± 80 psf lateral & 64 psf uplift shall use, at-minimum, the specifications as stated in the ± 80 psf lateral (64 psf uplift) pressure tier row. Site-specific wind pressures that fall in-between pressure tiers shall use, at-minimum, the specifications as specified by the higher pressure tier. This schedule applies to all units described in this evaluation. Steel curb by others shall be 16 GA. min. thick, UTS = 45 ksi min. (equiv. to ASTM A653 Gr. 33 or stronger) galv. steel. Curb structural integrity and attachment to host structure shall be by others. Curb schedule may also be used for at-grade applications to steel curbs. See specifications and Unit Mount to Curb Details herein.

Example: Say you are installing a unit at a site location with site-specific wind pressures of ± 85 psf lateral and 68 psf uplift. In this case, you would need to follow, at-minimum, the specifications corresponding to the ± 110 psf (87 psf) wind pressure tier row. By consulting the Schedule table:

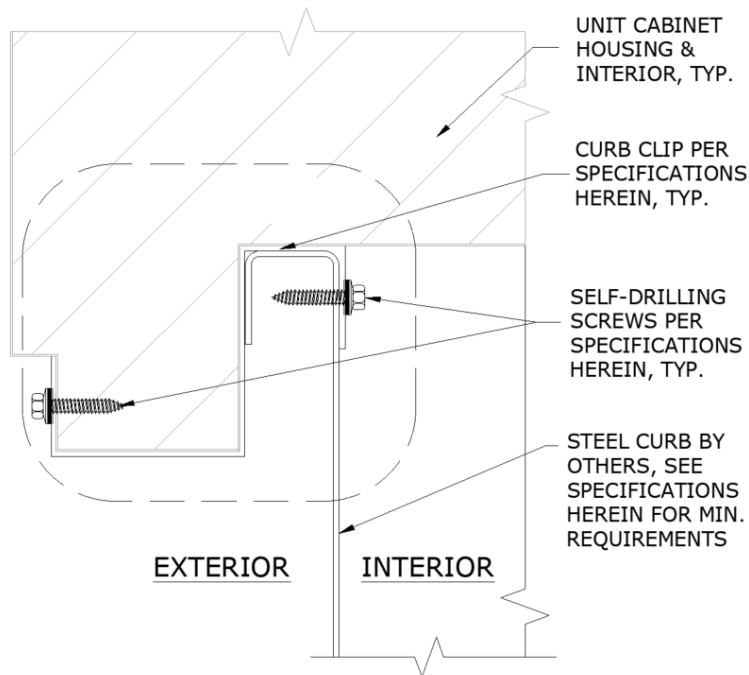
CURB CLIP NOTES: Curb clips may also be referred to as “curb brackets” or curb “hold-down brackets”. Curb clips shall be 16 GA min. thick, UTS = 45 ksi min. (equiv. to ASTM A653 Gr. 33 or stronger) galv. steel. Curb clips shall be equally spaced along specified curb side (± 12” variance as needed). Position end curb clips on unit long sides 12” minimum away from either end of side edge. Position end curb clips on unit short sides towards the unit corners, 3” minimum and 12” maximum away from either end of side edge. See Unit Mount to Curb Details herein.

Fasten curb clip to curb with (4) #14, SAE Gr. 2 min. or SS SMS with 1/2” min. edge distance to edge of curb and curb clip edge, and 1” min. spacing between screws. (Note: Size #14 SMS are 1/4” Ø). Fasten curb clips to curb prior to unit placement on curb and curb clip attachment to unit. Ensure all screws fully engage with both members in contact.

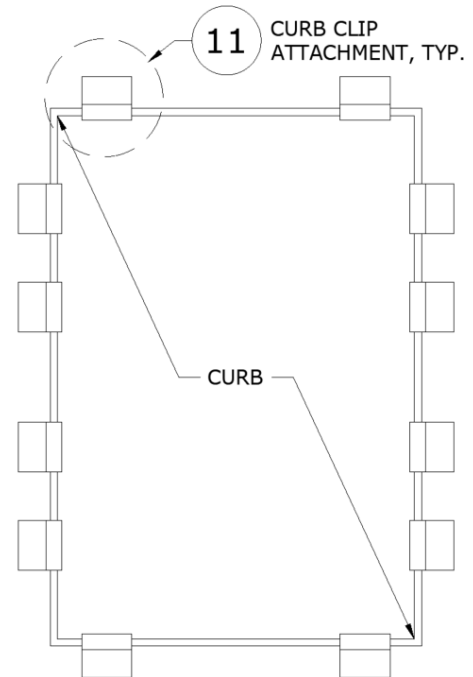
Once unit is positioned on curb and the unit base rail is resting on the curb clips: Fasten curb clip to unit base rail with (4) #14, SAE Gr. 2 min. or SS SMS with 1/2” min. edge distance to edge of curb clip and unit base rail edge, and 1” min. spacing between screws. Ensure all screws fully engage with both members in contact.

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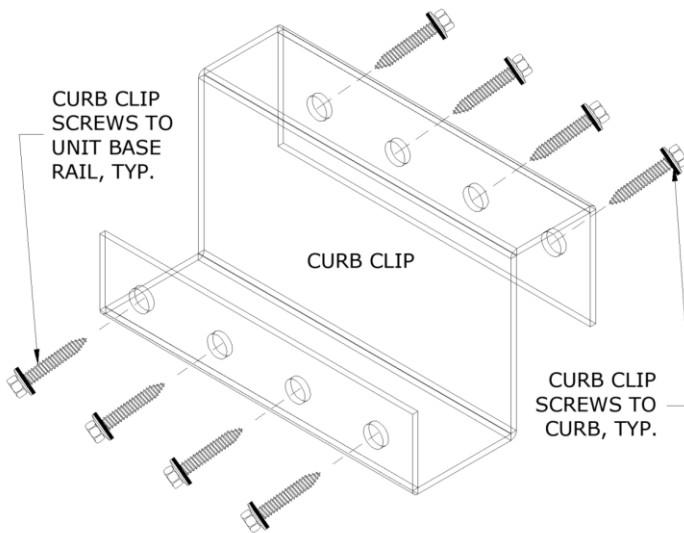
UNIT MOUNT TO STEEL CURB DETAILS



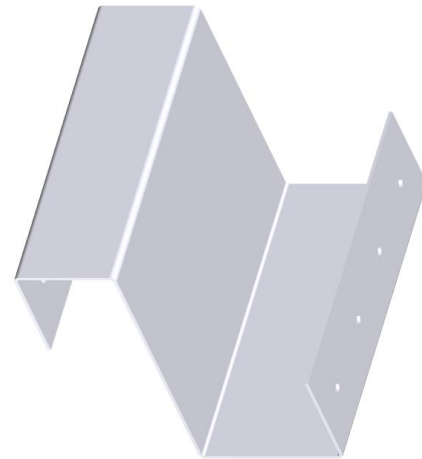
9 UNIT ATTACHMENT TO CURB WITH CURB CLIP, TYP.
SCALE: NTS SECTION VIEW



10 SAMPLE TIE-DOWN CLIP LAYOUT
SCALE: NTS PLAN VIEW



11 SAMPLE CURB CLIP SCREW ATTACHMENT, TYP.
SCALE: NTS ISOMETRIC VIEW



12 MICROMETL CURB CLIP, TYP.
SCALE: NTS ISOMETRIC VIEW

UNIT MOUNT TO STEEL CURB DETAILS NOTES

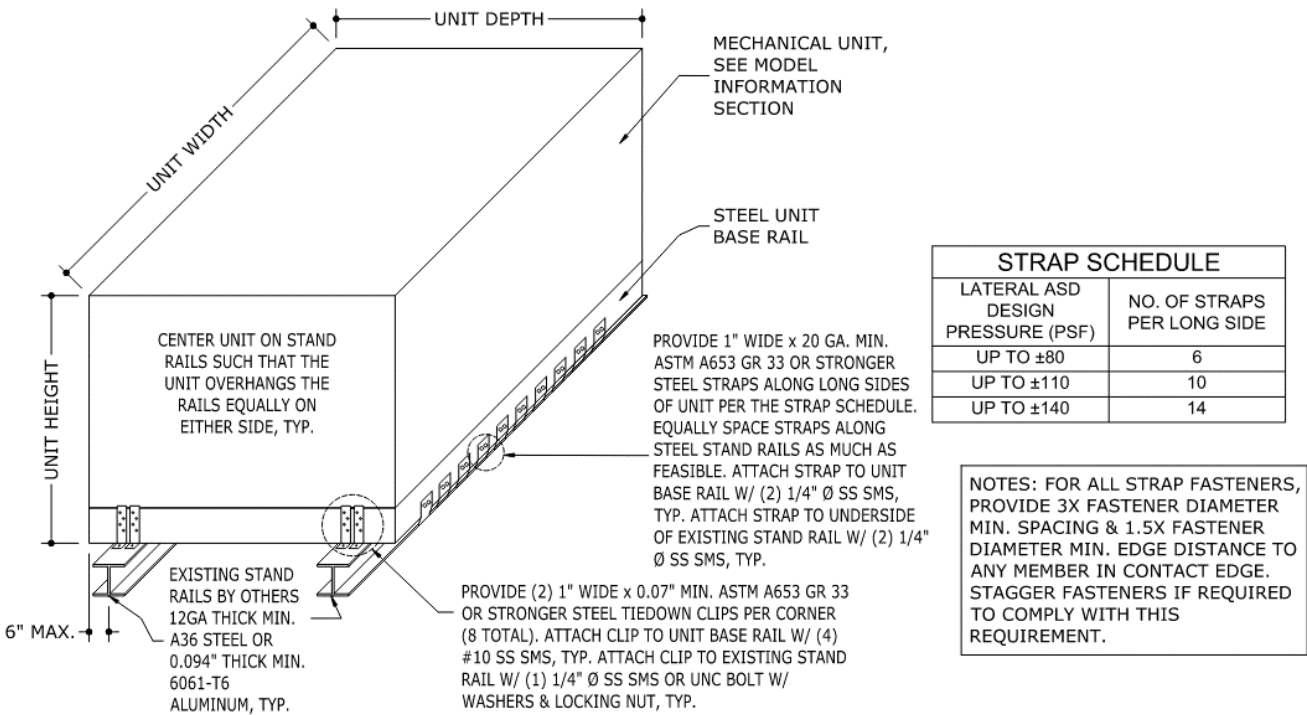
For each Detail in this section, see Unit Mount to Steel Schedule and Notes on the previous page for all tie-down components and specifications required.

The unit components, curb, curb clip, and screws depicted in the Details on this page are for illustrative purposes only and may vary in quantity and/or appearance. Unit mounting specifications may not be depicted in full. Component sizes may be exaggerated for illustration clarity.

Sample curb clip placement shown in Detail 10 and sample curb clip shown in Detail 11 are for illustrative purposes only. The MicroMetL curb clip shown has been pre-reviewed by Engineering Express to meet the curb clip specifications stated herein and is approved for use. See the previous page for specifications.

STAND MOUNT TIEDOWN OPTION

If stand mount option is required, unit-to-stand attachment shall be per detail below. This detail is applicable for both at-grade and rooftop applications. Stand Integrity by others.



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PANEL INTEGRITY SUMMARY

No additional screws are required for all at-grade applications and rooftop applications with site wind ASD pressures up to ± 77 psf lateral & 61 psf uplift. For site-specific ASD pressures greater than ± 77 psf lateral & 61 psf uplift, follow the directives and specifications as noted in the Panel Integrity Summary Tables and Notes below:

Up to ± 110 psf Lateral & 87 psf Uplift Wind Pressures		
Panel Designation	Addtl. Screws Required	Additional Screws Directive
Panel O	1	Install (1) addtl. screw at top of panel to join with Panel S.
Panel P	4	Install (2) addtl. screws along left-hand side of panel and (2) addtl. screws along right-hand side of panel to join with Panel O.
Panel Q	6	Install (2) addtl. screws at top of panel to join with Panel S. Install (2) addtl. screws at bottom of panel to join with Panel R. Install (1) addtl. screw along left-hand side of panel to join with Panel O. Install (1) addtl. screw along right-hand side of panel to join with Panel A.
Panel T	1	Install (1) addtl. screw at front side of unit to join with unit main body.
(12) Additional Screws Required in Total per Unit. Addtl. screws shall be #14 min. Ø, SAE Gr. 2 min. or SS SMS. See notes below for further specifications.		

Note: Wind pressures listed in the tables are ASD wind pressures

PANEL INTEGRITY SUMMARY NOTES

Panel integrity calculations were based on information provided by the client and manufacturer-listed specifications. Calculations are valid for all unit models listed herein, and specifications herein apply to all unit models listed herein (see "Model Information" on page 2).

All exterior panels were considered in the calculations and are covered by this certification. Panels were assigned various porosities depending on the ratio of louver/aperture area to total panel area, for the purposes of calculating the acting wind force on each panel. Screw sizes, quantities on panels, and panel characteristics were considered based on client-provided information and additional conservative assumptions. Screw quantities were checked to reinforce unit panels as needed.

"Additional screws" are screws that are required to be installed **in addition to** the existing screws present as part of the original unit design(s) submitted to this office, unless noted otherwise (U.N.O.). It is the installing contractor's responsibility to ensure additional screws are installed on the unit as applicable.

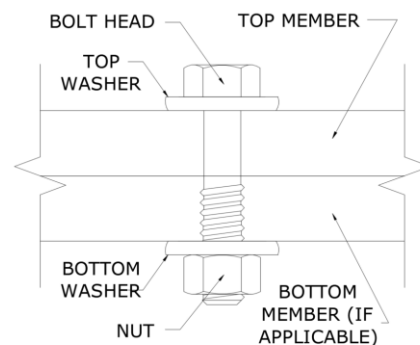
The purpose of additional screws are to ensure panel connection integrity, referred to herein as "panel integrity", is sufficiently validated, such that the panel in question can withstand a high-speed wind gust and not detach or otherwise become flying debris. The panel integrity analysis considered perimeter exterior panel screws at overlapping fastener holes for each respective panel in the client-provided 3D model titled "GEG w SmokeDet.STP".

Additional screw(s) shall be #14 minimum diameter, SAE Gr. 2 min. or SS SMS. 1000 hours of ASTM B117 with zero red rust is required for all additional screws. Position additional screw(s) as directed by the respective "Additional Screws Directive" specifications for the panel in question. Provide 1" min. spacing between neighboring screws (existing or additional). Validate that each additional screw joins the panel in question to the other specified member (as specified in the "Additional Screws Directive" where applicable). See diamond "◇" regions in Details 3 – 6 herein for approximate screw locations.

Up to ± 140 psf Lateral & 111 psf Uplift Wind Pressures		
Panel Designation	Addtl. Screws Required	Additional Screws Directive
Panel B	2 per panel, 4 total	Install (1) addtl. screw at top of panel to join with Panel A. Install (1) addtl. screw at bottom of panel to join with unit base rail.
Panel C	4	Install (2) addtl. screws at top of panel and (2) addtl. screws at bottom of panel to join with unit main body.
Panel M	3	Install (3) addtl. screws at top of panel to join with Panel S.
Panel O	6	Install (3) addtl. screws at top of panel to join with Panel S. Install (3) addtl. Screws at bottom of panel to join with unit base rail.
Panel P	6	Install (1) addtl. screw at top of panel, (1) addtl. screw at bottom of panel, (2) addtl. screws along left-hand side of panel, and (2) addtl. screws along right-hand side of panel to join with Panel O.
Panel Q	10	Install (3) addtl. screws at top of panel to join with Panel S. Install (3) addtl. screws at bottom of panel to join with Panel R. Install (2) addtl. screws along left-hand side of panel to join with Panel O. Install (2) addtl. screws along right-hand side of panel to join with Panel A.
Panel R	2	Install (2) addtl. screws at bottom of panel to join with unit base rail.
Panel T	1	Install (1) addtl. screw at front side of unit to join with unit main body.
(36) Additional Screws Required in Total per Unit. Addtl. screws shall be #14 min. Ø, SAE Gr. 2 min. or SS SMS. See notes below for further specifications.		

TERMINOLOGY, CONTINUED

The following abbreviations may appear in this report: "Addtl." for "additional", "AHJ" for "Authority Having Jurisdiction", "alum" for "aluminum", "ASCE" for "American Society of Civil Engineers", "ASD" for "Allowable Stress Design", "ASTM" for "American Society for Testing and Materials", "EA." for "each", "E.D." for "edge distance", "EDDS" for "extra deep drawing steel", "e.g." for "*exempli gratia*" or "for example", "equiv." for "equivalent", "FBC" for "Florida Building Code", "FEA" for "Finite Element Analysis", "FLCA" for "Florida Certificate of Authorization", "FS" for "Florida Statutes", "Fu" for "ultimate tensile strength" or "ultimate tensile stress", "Fy" for "yield strength" or "yield stress", "GA" for "gauge", "GR." or "Gr." for "grade", "HVAC" for "heating, ventilation, and air conditioning", "HVBZ" for "High-Velocity Hurricane Zone", "i.e." for "*id est*" or "in other words", "in" for "inch", "lb" for "pound (force)", "max." for "maximum", "min." for "minimum", "mm" for "millimeter", "NTS" for "not to scale", "O.C." for "on center", "OD" for "outer diameter", "pcf" for "pounds (force) per cubic foot", "PE" for "Professional Engineer", "qty" for "quantity", "SAE" for "Society of Automotive Engineering", "SMS" for "sheet metal screws", "SS" for "stainless steel", "TER" for "Technical Evaluation Report", "typ." for "typical", "ult" for "ultimate loads", "U.N.O." for "unless noted otherwise", "UTS" for "ultimate tensile strength" or "ultimate tensile stress", "WLL" for "working load limit", "w/o" for "without", "YS" for "yield strength" or "yield stress", "#" for "number", "&" for "and", and "Ø" for "diameter". Please visit ecal.io/glossary for additional abbreviation clarifications.



SAMPLE THRU-BOLT

SCALE: NTS SECTION VIEW

The term "Thru-Bolt" or through bolt, if used herein, refers to a bolt passing through the member(s) in contact and is fastened by a nut at the end opposite the screw head. Nut shall be equivalent to or exceed the strength of the bolt U.N.O. Nut shall be sized to accommodate the same nominal diameter as the bolt U.N.O. See diagram above-right for a sample thru-bolt configuration. For instances herein which list material specifications as "[material type] or stronger": U.N.O. herein, the term "stronger" refers to a material with a UTS value equal to or greater than the UTS value of the stated material type. Consult appropriate literature for established material UTS values. Equivalent steel gauge thicknesses as used in this evaluation, U.N.O., are as follows: 22 GA (.030"), 20 GA (.036"), 18 GA (.048"), 16 GA (.060"), 14 GA (.075"), 12 GA (.098").

LIMITATIONS & CONDITIONS OF USE, CONTINUED

Use of this product shall be in strict accordance with this product evaluation as noted herein. The supporting host structure shall be designed to resist all superimposed loads as determined by others on a site-specific basis as may be required by the authority having jurisdiction. Host structure conditions which are not accounted for in this product's respective anchor schedule shall be designed for on a site-specific basis by a registered Professional Engineer. No evaluation is offered for the host supporting structure by use of this document. Adjustment factors noted herein and the applicable building codes must be considered, where applicable. Product components shall be of the material(s) specified in the manufacturer-provided product specifications. **For permanent outdoor installations, all exposed anchors, fasteners, connectors, and metal plates shall be corrosion resistant. Corrosion resistance may be provided by inherent material composition or, where permitted by code, by an approved protective coating or galvanization. Where applicable near a saltwater coastline, such components shall comply with FBC Section 1711, including applicable requirements for exposed, protected, or enclosed conditions. Materials, coatings, and finishes shall be compatible with connected materials, and protective coatings shall be continuous over exposed surfaces. Fasteners used with aluminum members shall also comply with Section J.3.7.2 of the Aluminum Design Manual, "Specification for Aluminum Structures."** Substitution of components from alternate manufacturers, or with different materials, coatings, or finishes, shall not be assumed equivalent and may require additional engineering review or site-specific analysis. All fasteners and anchors shall be installed in accordance with the applicable provisions specified herein in addition to the anchor/fastener manufacturers' published installation instructions. *Fasteners must penetrate (3) pitches minimum beyond the thread plane of the connecting members in contact. For thru-bolt connections, provide (3) pitches minimum beyond end of nut. For screw connections, provide (3) pitches minimum beyond the bottom member. See Sample Thru-Bolt Detail herein.

All of the wind-resisting exterior panels (with accompanying retrofits) individually meet or exceed their capacity to resist the design wind loads as stated in the calculations as required by the codes and standards stated herein. Due to the indeterminate nature of these units, distortion, deflection, and material deformation cannot be accurately evaluated, but with the diaphragm action of external components and internal stiffeners, the base unit (with accompanying retrofits stated herein as applicable) has the capacity to withstand the design wind loads without detaching from the unit and becoming flying debris.

Survivability: This performance evaluation is valid for a newly installed unit and do not include certification of the product beyond a design event or if impacted by any debris. Inspections shall be implemented annually by the end user and after every named storm. All fasteners and cabinet components are to be verified, and all damaged, loose, corroded and/or broken fasteners and cabinet components shall be replaced to ensure structural integrity against hurricane wind forces. Contact this office for any reevaluation needs or as designated by the Authority Having Jurisdiction.

Durability: Components or component assemblies shall not deteriorate, crack, fail, or lose functionality due to galvanic corrosion or weathering. All supporting components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. Each component or component assembly shall be supported and oriented in its intended installation position. All exposed plastic components shall be certified to resist sunlight exposure as specified by ASTM B117, or ASTM G155 in Broward or Miami Dade counties.

Extent of Certification: Certification pertains to the overall structural integrity of the unit components listed within the evaluation as required by code, subject to the limitations and criteria stated herein. Operability during or after a design event is not included in this certification. Water infiltration is outside the bounds of this certification. No other certifications are intended other than as described herein. This evaluation alone does not offer any evaluation for large missile impact debris or cyclic wind requirements unless specifically stated herein.

Proj. #	Remarks	By	Checked	Date	Proj. #	Remarks	By	Checked	Date
24-76223	Initial Issue	MARH	EPR	07/11/24	26-101527	2026 FBC Update	MARH	EPR	08/17/26
24-76223	Modify model numbers	MARH	EPR	11/25/24					

APPENDIX A: DESIGN WIND PRESSURE GUIDE

Max. Ult. Wind Speed (V _{ult})	Max. MRH (Roof Height)	Exposure Category	Required Design Wind Pressures (ASD)	
			Lateral Pressure	Uplift Pressure
140 mph	At-Grade (0 ft)	C	± 26 psf	0* psf
		D	± 31 psf	0* psf
	100 ft	C	± 63 psf	50 psf
		D	± 71 psf	56 psf
	200 ft	C	± 72 psf	57 psf
		D	± 80 psf	63 psf
175 mph	At-Grade (0 ft)	C	± 40 psf	0* psf
		D	± 49 psf	0* psf
	100 ft	C	± 98 psf	77 psf
		D	± 111 psf	87 psf
	200 ft	C	± 113 psf	89 psf
		D	± 124 psf	98 psf
186 mph	At-Grade (0 ft)	C	± 46 psf	0* psf
		D	± 54 psf	0* psf
	100 ft	C	± 111 psf	87 psf
		D	± 125 psf	99 psf
	200 ft	C	± 127 psf	100 psf
		D	± 140 psf	111 psf

100 psf

Note: Any table values with the format shown left, if present, indicate design wind pressures and site conditions that are **not approved for use** by this evaluation. Seek additional engineering or contact this firm for design solutions.

DIRECTIVE: This design pressure guide is for reference only and shall be approved for use by the Authority Having Jurisdiction (AHJ). If the design pressures listed in this guide are not used, required design pressures shall be calculated separately. For site-specific scenarios classified as Exposure Category B, the required design pressures stated for Exposure Category C in the above guide shall be used or design pressures shall be calculated separately. For heights and parameters beyond the parameters listed in this guide, visit our Online Calculator via the website link (<https://ecalc.io/forces>) or QR Code below, or obtain calculations separately by others.

The required ASD design pressures listed in this guide were calculated per the table's listed corresponding site conditions. The project design professional or permitting contractor shall verify that the site-specific conditions are equal to or less than the approved design parameters listed in the guide. Per the note below table: any values shown as "XX psf", indicate wind pressures and corresponding site conditions that are **not valid for use** with this evaluation (exceeds the max. rated pressures).

*Note: Per the codes and standards referenced herein, uplift is not required for mechanical equipment at-grade. If uplift at-grade is required by the AHJ, contact this firm for a site-specific evaluation.

At-Grade (0 ft MRH) Required Design Pressures:

- o ASCE 7 "Design Wind Loads: Other Structures"
- o Structure Shape = Square, flat terrain
- o Height of structure (unit + stand or curb, if used) = 6 ft max.
- o Width of unit = 1 ft min., Depth of unit = 11 in min.

Rooftop (>15 ft MRH) Required Design Pressures:

- o ASCE 7 "Design Wind Loads: Other Structures: Rooftop Structures and Equipment for Buildings"
- o Structure Shape = Square, flat terrain
- o z = up to 7 ft, where z = height of stand or curb + ½ unit height
- o Lateral GC_f = 1.90; Uplift GC_f = 1.50

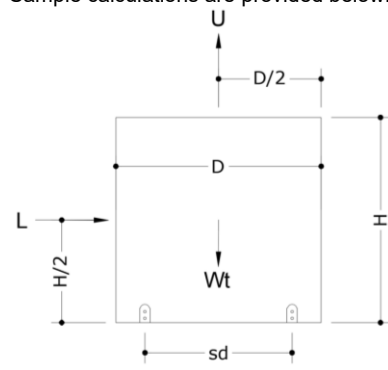
VISIT [ECALC.IO/FORCES](https://ecalc.io/forces)

FOR DESIGN AID CALCULATORS AND RESOURCES RELATED TO THIS EVALUATION & GUIDES HEREIN, OR SCAN THE QR CODE RIGHT >



UNIT REACTIONS FROM WIND GUIDE

DIRECTIVE: This guide is intended for use by a design professional. Design parameters shall abide all specifications and limitations stated in this evaluation. Design professional shall consider all forces, including seismic and snow loads, per the governing building code. Unit reactions obtained from this guide shall be verified by a registered Professional Engineer. Reactions are applicable for unit-to-host connections only. Sample calculations are provided below.

**Design Parameters:**

- Lateral Wind Pressure, P_{lat}
- Unit Height, H
- Unit Width, W
- Support Spacing across Depth, sd
- Uplift Wind Pressure, P_{up}
- Unit Depth, D
- Unit Weight, Wt
- Support Spacing across Width, sw

Unit Reaction Equations:**Long Side (Width x Height):**

- Sliding Force, L = P_{lat} x W x H
- Uplift Force, U = P_{up} x W x D
- Total Tension per Long Side = (L x H/2 + U x sd/2 - Wt x 0.6 x sd/2) / sd

Short Side (Depth x Height):

- Sliding Force, L = P_{lat} x D x H
- Uplift Force, U = P_{up} x W x D
- Total Tension per Short Side = (L x H/2 + U x sw/2 - Wt x 0.6 x sw/2) / sw

Example: A (48" W x 36" D x 42" H), 250 lb net weight unit at wind pressures of 120 psf lateral and 95 psf uplift, on a 24" wide roof stand, shall have the following unit reactions:

Long Side (Width x Height):

1. Sliding Force, L = P_{lat} x W x H
= (120 psf) x (48 in) x (42 in) x (1 in² / 144 ft²) = **1680 lb**
2. Uplift Force, U = P_{up} x W x D
= (95 psf) x (48 in) x (36 in) x (1 in² / 144 ft²) = **1140 lb**
3. Total Tension per Long Side =
= (L x H/2 + U x sd/2 - Wt x 0.6 x sd/2) / sd
= ((1680 lb x 42/2 in) + (1140 lb x 24/2 in) - (250 lb x 0.6 x 24/2 in)) / 24 in = **1965 lb**

Short Side (Depth x Height):

1. Sliding Force, L = P_{lat} x D x H
= (120 psf) x (36 in) x (42 in) x (1 in² / 144 ft²) = **1260 lb**
2. Uplift Force, U = P_{up} x W x D
= (95 psf) x (48 in) x (36 in) x (1 in² / 144 ft²) = **1140 lb**
3. Total Tension per Short Side =
= (L x H/2 + U x sw/2 - Wt x 0.6 x sw/2) / sw
= ((1260 lb x 42/2 in) + (1140 lb x 48/2 in) - (250 lb x 0.6 x 48/2 in)) / 48 in = **1046 lb**

IN ALL CONDITIONS IT IS THE RESPONSIBILITY OF THE PERMIT HOLDER TO ENSURE THE HOST STRUCTURE IS CAPABLE OF WITHSTANDING THE RATED GRAVITY, LATERAL, AND UPLIFT FORCES BY SITE-SPECIFIC DESIGN. NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS OFFERED BY ENGINEERING EXPRESS AS TO THE INTEGRITY OF THE HOST STRUCTURE TO CARRY DESIGN FORCE LOADS INCURRED BY THIS UNIT.