ENGINEERING CONFORMANCE ANALYSIS:

THE TABLE SHOWS PAD SIZE AND ANCHOR TYPES FOR VARIOUS MODELS OF HVAC OUTDOOR EQUIPMENT UP TO 4 TONS THAT MEET THE FOLLOWING ANALYSIS: OVERTURN, EDGE CLEARANCES, ANCHOR PULLOUT AND SHEAR STRENGTH, EQUIPMENT INTEGRITY.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Weight (lbs)</th>
<th>Length B (in.)</th>
<th>Width A (in.)</th>
<th>Height C (in.)</th>
<th>Pad edge to anch. min (in.)</th>
<th>Pad edge to AC unit (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTI18HP320V1BO/CO</td>
<td>115</td>
<td>35.3</td>
<td>13.4</td>
<td>27.6</td>
<td>4.5</td>
<td>2.0</td>
</tr>
<tr>
<td>MULTI24HP320V1BO/CO</td>
<td>155</td>
<td>42.1</td>
<td>13.4</td>
<td>31.1</td>
<td>15.6</td>
<td>22.0</td>
</tr>
<tr>
<td>MULTI30HP320V1BO/CO</td>
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<td>42.1</td>
<td>13.4</td>
<td>31.1</td>
<td>15.6</td>
<td>22.0</td>
</tr>
<tr>
<td>MULTI36HP320V1BO/CO</td>
<td>198</td>
<td>37.4</td>
<td>14.9</td>
<td>42.2</td>
<td>16.3</td>
<td>24.8</td>
</tr>
<tr>
<td>MULTI42HP320V1BO/CO</td>
<td>198</td>
<td>37.4</td>
<td>14.9</td>
<td>42.2</td>
<td>16.3</td>
<td>24.8</td>
</tr>
<tr>
<td>MULTI48HP320V1BO/CO</td>
<td>256</td>
<td>35.4</td>
<td>13.4</td>
<td>53.0</td>
<td>14.9</td>
<td>22.5</td>
</tr>
</tbody>
</table>

TABLE A-2

**Anchor Clearances and Equipment**

1. Pad edge to ANCHOR CENTER: Pad edge to equipment: Set to 0.27 min. NOTT: GRAUNT: IS NOT RECOMMENDED AND NOT REQUIRED.

**Strapping Details**

- Metal Strapping 3/8" OD, Thicker than 1/0, and Thicker than 1/0 wide and may be overalnyzed and perforated or 1/4" dia. Holes: 1/4" dia. Anchor is the same as for Unit Feet.

**Equipment and Pad**

Pd = Gravity Force
Pw = Wind Force

**Input Criteria**

- Pad Weight: 350 lbs
- Pad to anch. distance: 4.5 in.
- Pad edge to AC unit: 2.0 in.

**Installation Requirements**

- anchors: 3 anchors
- Anchor pull-down: 30.5 k-in
- Anchor hold-down: 0.67 D + 0.78 W

**Code:** FMC and FBC 7th Ed. (2020) BLDG, ASCE 7-16

**Miami-Dade Wind Speed = 135 MPH (Risk Cat. IV)**

- Must have pad oriented with long side perpendicular to width of unit.
- Anchor Type is the minimum, higher strength types permitted.

**General Notes:**

1. This engineering report documents the analysis of the performance of HVAC mechanical equipment to withstand load overturn and anchor strength.
2. The analysis conforms to the requirements of the FBC 7th ed. (High Velocity Hurricane Zone) and ASCE 7-16 design wind loads.
3. The load path verified is from the equipment as a single unit, unit leg anchors to concrete slab.
4. Pads are either poured in place or pre-fabricated normal weight concrete with a minimum strength of 3000 psi and are located at grade level.
5. Anchors used to fasten the condenser feet to the concrete pad are defined in Table A-1 and specified in Table A-2. The embed is specified in Table A-2.
6. These anchors are typically manufactured from heat-treated steel and have corrosion resistance as specified by the manufacturer.
7. AC unit must be centered on pad with opposite sides having equal clearance.
8. Unit integrity, if not designated by the manufacturer for the stated wind pressures, is met by strapping the unit directly to the pad.

**Calculations:**

- OVERTURN: The critical wind load is on the long face of the condenser. The moment created by the wind load must be resisted by the moment created from the weight of the pad and the condenser.
- EDGE CLEARANCES: Distance from the edge of the pad to the condenser side (Y in Fig.) must be greater than 2.0 in. Distance from the edge of the pad to the center of the anchor must be greater than that specified in the input criteria.

**Anchor Strength:**

- The sliding resistance is transferred to the pad by the shear strength in the anchors. The anchor pullout resistance is transferred to the pad by the anchors. Configuration and anchor strength based on minimum edge yield moment resistance.

**Unit Integrity:**

- If required, strapping attached to the unit and anchored to the pad resists shear and frame deformation.