Certification valid for

one (1) project site

only.



June 16, 2009

Work Prepared For:

Miami Tech, Inc. 3611 NW 74<sup>th</sup> Street Miami, FL 33147

Regarding:

A/C Unit Tiedown to Concrete

Attention:

**Building Official** 

This office has reviewed the design requirements for the installation of air conditioning units onto concrete slabs using Miami Tech Condensing Unit Tiedowns (CUTD-1). The tiedown or clip used for the installation shall be fabricated using galvanized steel (ASTM A653, Grade 33 minimum), measuring 4"-18" tall x 1" wide x 14ga (0.070" minimum), with layout as described below, and a maximum height of 60" per unit. The lower leg of each clip shall be anchored to the concrete host structure with (1) 1/4" diameter ITW Buildex (or equivalent) carbon steel Tapcon embedded 1-3/4" minimum into 3,000 psi concrete with 2-1/2" minimum edge distance. The upper leg of each clip shall utilize a minimum of (2) #10 sheet metal screws anchored through the clip into the minimum 22-gauge (0.028" minimum) steel housing (ASTM A653, Grade 33 minimum). Maximum wind pressures for use with this installation are as noted below; additional anchors may be utilized to achieve higher pressures, as shown:

<u>Table 1:</u> (1) clip required at each corner of unit or (2) each opposite face for a total of (4) per unit

ior a total of (4) per unit				
Maximum Unit Face, Area (ft <sup>2</sup> )	(2) SMS	(3) SMS	(4) SMS	
4	+/- 114 PSF	+/- 150 PSF	+/- 150 PSF	
7	+/- 65 PSF	+/- 98 PSF	+/- 127 PSF	
9	+/- 50 PSF	+/- 76 PSF	+/- 98 PSF	
12	+/- 38 PSF	+/- 57 PSF	+/- 74 PSF	
15	+/- 30 PSF	+/- 45 PSF	+/- 59 PSF	

Note: (1) Tapcon acceptable for both one- and two-anchor hole versions of the CUTD.

Table 2: (2) clips required at each corner of unit or (4) each opposite face for a total of (8) per unit

ior a total of (6) per unit				
Maximum Unit Face, Area (ft <sup>2</sup> )	(2) SMS	(3) SMS	(4) SMS	
20	+/- 45 PSF	+/- 68 PSF	+/- 91 PSF	
25	+/- 36 PSF	+/- 54 PSF	+/- 73 PSF	
30	+/- 33 PSF	+/- 50 PSF	+/- 66 PSF	
35	+/- 30 PSF	+/- 46 PSF	+/- 61 PSF	

Note: (1) Tapcon acceptable for both one- and two-anchor hole versions of the CUTD.

UP TO 18"

A/C UNIT
HOUSING
(22GA MIN)

#10 SMS
(LOCATION VARIES)

(1) 1/4"Ø
TAPCON

2-1/2"
MINIMUM

All other installation work shall follow the minimum requirements of the 2007 Florida Building Code with 2009 supplements. Thank you for your attention to this matter.

Respectfully.

JUN I 7 2009

Frank L Bennardo, P.E. ENGINEERING EXPRESS® #PE0046549 | Cert. Auth. 9885 09-MTI-0001

APPROV**E**D **FOR M**ASTER FILE

City of Port Orange
Community Development
Building Division

Master File No .: .

Approved By:

**Building Official** 

No.: Date: 8/10/09
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