

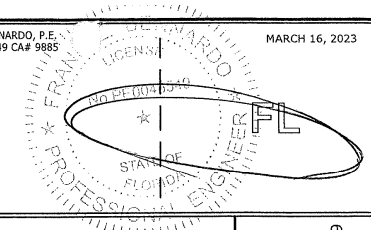
# RHEEM SALES COMPANY, INC.

WIND LOAD CERTIFICATION OF MECHANICAL UNIT CABINETY AND STEEL/ALUMINUM TIE-DOWN CLIPS: AT GRADE MOUNTED APPLICATIONS

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

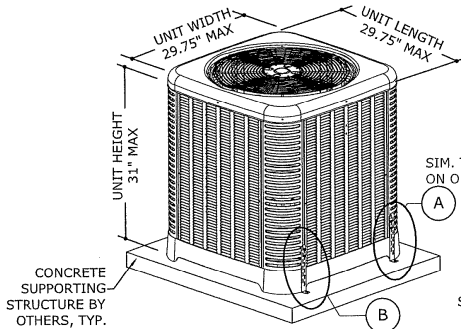
FRANK BERNARDO, P.E.  
PE# 0046549 CA# 9885

MARCH 16, 2023



## APPROVED DESIGN CRITERIA:

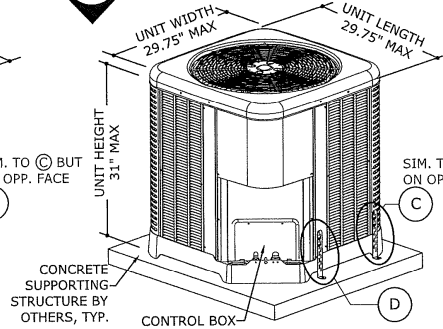
ASCE 7 Vult=175 MPH  
(Vasd=136 MPH), EXPOSURE 'D',  
AT GRADE INSTALLATION ONLY



SIM. TO C BUT ON OPP. FACE

CONCRETE SUPPORTING STRUCTURE BY OTHERS, TYP.

1 MECHANICAL UNIT  
1 NOT TO SCALE FRONT ISOMETRIC

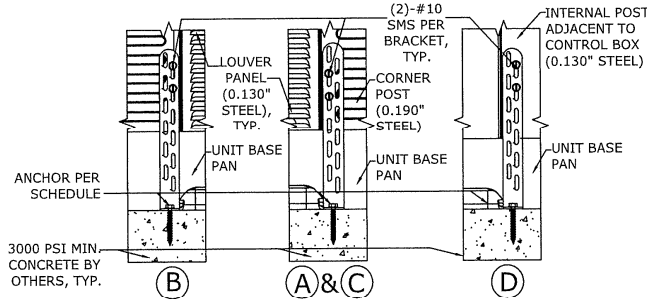


SIM. TO A BUT ON OPP. FACE

CONCRETE SUPPORTING STRUCTURE BY OTHERS, TYP.

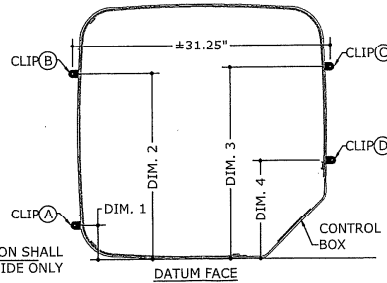
2 MECHANICAL UNIT  
1 NOT TO SCALE BACK ISOMETRIC

THESE ISOMETRICS ARE INTENDED FOR DIAGRAMMATICAL PURPOSES ONLY; ALTERNATE RHEEM UNITS MAY VARY IN APPEARANCE



A & C ARE SIM AND OCCUR ON OPP. FACES

3 TIE-DOWN BRACKETS  
1 NOT TO SCALE ELEVATION



CLIP OFFSET DIMENSION SHALL BE TAKEN FROM THIS SIDE ONLY

4 TIE-DOWN BRACKET LAYOUT  
1 NOT TO SCALE PLAN

## ANCHOR SCHEDULE:

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-1/4"Ø STAINLESS STEEL ITW BUILDEX TAPCON, 1 3/4" FULL EMBED TO CONCRETE, 2 1/2" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.

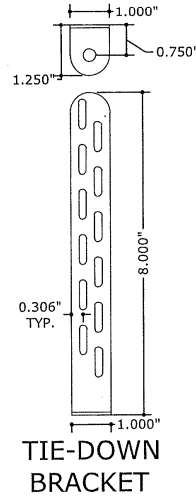
## TIE-DOWN BRACKET OFFSETS:

DIM. 1	4.50" MAX OFFSET FROM DATUM FACE
DIM. 2	24.50" MIN OFFSET FROM DATUM FACE
DIM. 3	25.25" MIN OFFSET FROM DATUM FACE
DIM. 4	13" MAX OFFSET FROM DATUM FACE

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
NOA-No. 23-0328.04

Expiration Date 02/25/2026

By Miami-Dade Product Control



## TIE-DOWN BRACKET

MIAMI TECH CLIP: 14GA (0.07")  
ASTM A653 Fu=90 KSI STEEL  
(CLUTD8) OR 0.080" 5052-H32  
ALUMINUM (CLUTD8), MIAMI  
TECH KIT # RRCUTDSMK OR  
RRCUTDASKM

## DESIGN NOTES:

THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH ASCE 7 AND THE FLORIDA BUILDING CODE SEVENTH EDITION (2020) FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE. THE DESIGN CRITERIA CONSIDERS ASCE 7 SECTION 29 FOR "OTHER STRUCTURES" - SOLID FREESTANDING WALLS" INSTALLATIONS AT GRADE. ALL DESIGN VARIABLES ARE IN ACCORDANCE WITH ASCE 7 CHAPTERS 26 & 29.

## GENERAL NOTES:

- THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE SEVENTH EDITION (2020) & ASCE 7. THIS SYSTEM MAY BE USED WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE. THIS DESIGN IS NOT INTENDED TO CERTIFY IMPACT RESISTANCE OF THE MECHANICAL UNIT CABINETY.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
- DESIGN & CERTIFICATION OF THE UNIT CABINETY IS APPROVED THROUGH TEST REPORT#0323-01-15 BY AMERICAN TEST LAB OF SOUTH FLORIDA.
- ALL MODELS WITH THE MAXIMUM DIMENSIONS, MINIMUM WEIGHT (120 LB MINIMUM), AND MINIMUM MATERIAL STRENGTH, THICKNESS, AND FASTENERS SHOWN HEREIN ARE COVERED UNDER THIS NOA. MODELS SHALL CONFORM TO THE LIMITATIONS STATED HEREIN. ALL MECHANICAL SPECIFICATIONS (CLEAR SPACE, TONNAGE, ETC.) SHALL BE AS PER MANUFACTURER RECOMMENDATIONS AND ARE THE EXPRESS RESPONSIBILITY OF THE CONTRACTOR.**
- TAPCONS REFERRED TO HEREIN SHALL BE ITW BUILDEX BRAND, ASTM F593 410 STAINLESS STEEL OR EQUIVALENT ONLY, INSTALLED TO 3000 PSI MIN CONCRETE. SEE ANCHOR SCHEDULE FOR ANCHOR REQUIREMENTS. ALL SHEET METAL SCREWS USED TO FASTEN BRACKETS TO MECHANICAL UNITS SHALL BE #10 (14 MIN THREADS PER INCH) ASTM F593 410 STAINLESS STEEL OR EQUIVALENT ONLY. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR SHEET METAL SCREWS. ALL FASTENERS SHALL HAVE APPROPRIATE CORROSION PROTECTION TO PREVENT ELECTROLYSIS.
- ALL CONCRETE SPECIFIED HEREIN IS NOT PART OF THIS CERTIFICATION. AS A MINIMUM, ALL CONCRETE SHALL BE STRUCTURAL CONCRETE 4" MIN. THICK AND SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.
- THE ADEQUACY OF ANY EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS SHALL BE VERIFIED BY THE ONSITE DESIGN PROFESSIONAL AND IS NOT INCLUDED IN THIS CERTIFICATION. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- THE SYSTEM DETAIL HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- WATER-TIGHTNESS OF EXISTING HOST SUBSTRATE SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ANY REMOVED OR ALTERED WATERPROOFING MEMBRANE IS RESTORED AFTER FABRICATION AND INSTALLATION OF STRUCTURE PROPOSED HEREIN. THIS ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY WATERPROOFING OR LEAKAGE ISSUES WHICH MAY OCCUR AS WATER-TIGHTNESS SHALL BE THE FULL RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
- FOR AN EXPLANATION OF EXPOSURE CATEGORIES THAT ACCOMPANY THE VULT WIND SPEEDS USED IN THIS DOCUMENT, SEE SECTION 26.7 OF ASCE 7

**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**RHEEM SALES COMPANY**  
5600 OLD GREENWOOD RD  
FORT SMITH, AR 72917  
(770) 351-3000  
MECHANICAL UNIT STEEL AND ALUMINUM TIE-DOWN CLIPS  
FOR GRADE AND ROOFTOP APPLICATIONS  
FBC 7TH EDITION. (2020) | MIAMI-DADE COUNTY NOA

DRW/CHKD	DATE	REMARKS
JAC	05/14/15	
LAO	01/17/18	
CCB	10/19/20	
EPF	03/10/23	

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20-28800GA

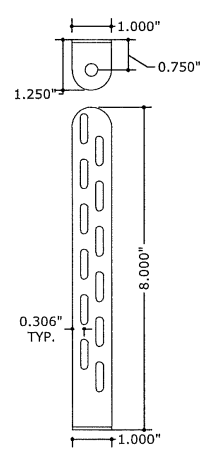
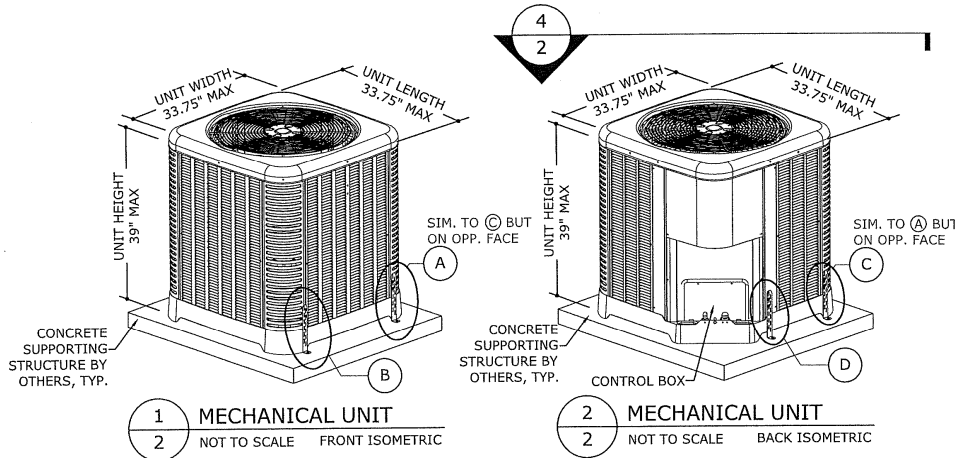
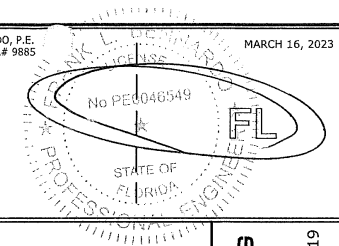
SCALE: NTS UNLESS NOTED

1 OF 7

# RHEEM SALES COMPANY, INC.

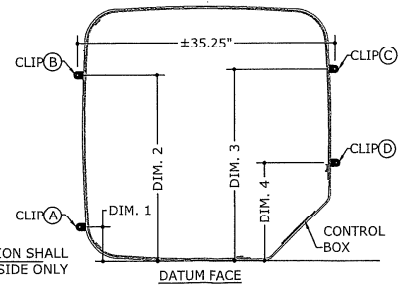
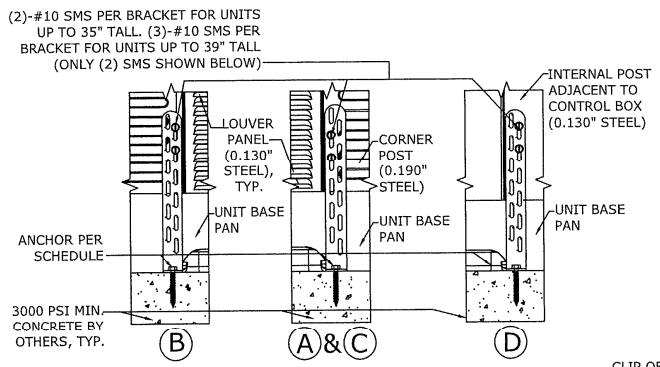
## WIND LOAD CERTIFICATION OF MECHANICAL UNIT CABINETRY AND STEEL/ALUMINUM TIE-DOWN CLIPS: AT GRADE MOUNTED APPLICATIONS

FRANK BENNARDO, P.E.  
PE# 0046549 CA# 9885 MARCH 16, 2023



**TIE-DOWN BRACKET**  
MIAMI TECH CLIP: 14GA (0.07")  
ASTM A653 Fu=90 KSI STEEL (CUTD8) OR 0.080" 5052-H32 ALUMINUM (CUTD48), MIAMI TECH KIT # RRCUTDSMK OR RRCUTDASMK

THESE ISOMETRICS ARE INTENDED FOR DIAGRAMMATICAL PURPOSES ONLY; ALTERNATE RHEEM UNITS MAY VARY IN APPEARANCE



### ANCHOR SCHEDULE:

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PST MIN.)	(1)-1/4"Ø STAINLESS STEEL ITW BUILDDEX TAPCON, 1 3/4" FULL EMBED TO CONCRETE, 2 1/2" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.

### TIE-DOWN BRACKET OFFSETS:

DIM.	OFFSET
DIM. 1	4.50" MAX OFFSET FROM DATUM FACE
DIM. 2	28.00" MIN OFFSET FROM DATUM FACE
DIM. 3	29.00" MIN OFFSET FROM DATUM FACE
DIM. 4	13.00" MAX OFFSET FROM DATUM FACE

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POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**RHEEM SALES COMPANY**  
5600 OLD GREENWOOD RD  
FORT SMITH, AR 72917  
(770) 351-3000  
MECHANICAL UNIT STEEL AND ALUMINUM TIE-DOWN CLIPS FOR GRADE AND ROOFTOP APPLICATIONS  
FBC 7TH EDITION, (2020) | MIAMI-DADE COUNTY NOA

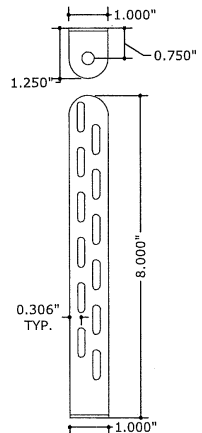
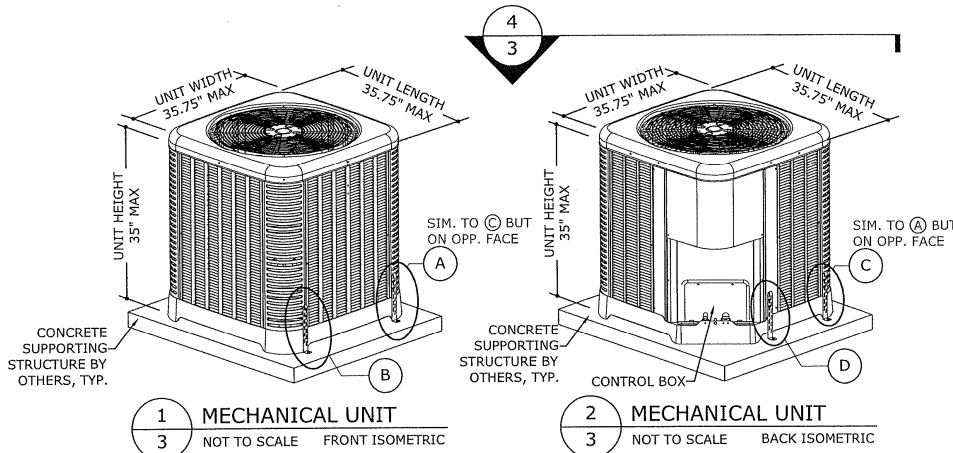
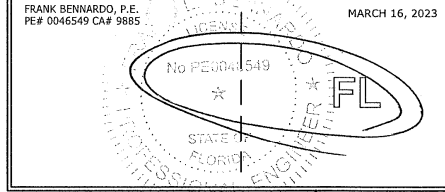
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2	TSB	07/12/18
3	LAO	01/19/20
4	FLB	10/19/20
5	CCB	03/10/23
6	RWN	
7	RWN	

COMPLY WITH ENGINEERING EXPRESS  
**20-28800GB**  
SCALE: NTS UNLESS NOTED  
**2** OF **7**

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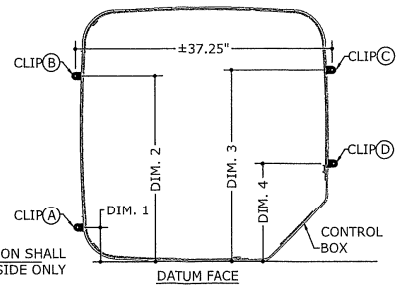
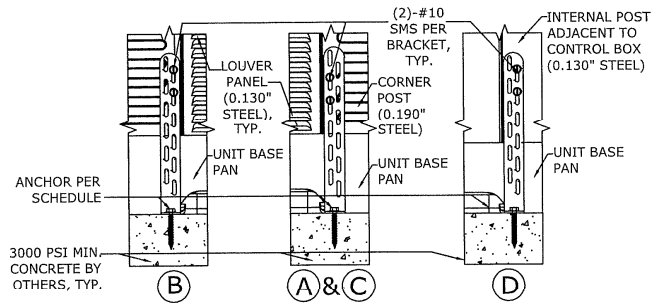
# RHEEM SALES COMPANY, INC.

## WIND LOAD CERTIFICATION OF MECHANICAL UNIT CABINETY AND STEEL/ALUMINUM TIE-DOWN CLIPS: AT GRADE MOUNTED APPLICATIONS



**TIE-DOWN BRACKET**  
 MIAMI TECH CLIP: 14GA (0.07")  
 ASTM A653 Fu=90 KSI STEEL (CUTD8) OR 0.080" 5052-H32 ALUMINUM (CUTD8), MIAMI TECH KIT # RRCUTD5MK OR RRCUTDASMK

THESE ISOMETRICS ARE INTENDED FOR DIAGRAMMATICAL PURPOSES ONLY; ALTERNATE RHEEM UNITS MAY VARY IN APPEARANCE



**3 TIE-DOWN BRACKETS**  
 3 NOT TO SCALE ELEVATION

**4 TIE-DOWN BRACKET LAYOUT**  
 3 NOT TO SCALE PLAN

**ANCHOR SCHEDULE:**

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-1/4"Ø STAINLESS STEEL ITW BUILDEX TAPCON, 1 3/4" FULL EMBED TO CONCRETE, 2 1/2" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.

**TIE-DOWN BRACKET OFFSETS:**

DIM. 1	4.50" MAX OFFSET FROM DATUM FACE
DIM. 2	30.00" MIN OFFSET FROM DATUM FACE
DIM. 3	31.00" MIN OFFSET FROM DATUM FACE
DIM. 4	13.00" MAX OFFSET FROM DATUM FACE

**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
**NOA-No. 23-0328.04**  
 Expiration Date **02/25/2026**  
 By *[Signature]*  
 Miami-Dade Product Control

**ENGINEERING EXPRESS**  
 POSTAL ADDRESS:  
 401 W. ATLANTIC AVE R10 BOX 219  
 DELRAY BEACH, FL 33444  
 ENGINEERINGEXPRESS.COM

**RHEEM SALES COMPANY**  
 5600 OLD GREENWOOD RD  
 FORT SMITH, AR 72917  
 (770) 351-3000

MECHANICAL UNIT STEEL AND ALUMINUM TIE-DOWN CLIPS  
 FOR GRADE AND ROOFTOP APPLICATIONS  
 FBC 7TH EDITION. (2020) | MIAMI-DADE COUNTY NOA

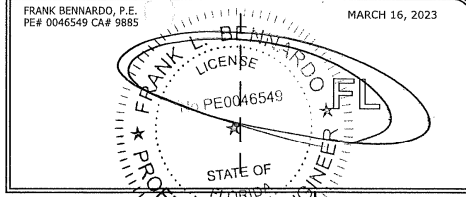
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2	01/12/18	LAO FLR
3	10/19/20	CCB R/WN
4	03/10/23	EPR R/WN

20-28800GC  
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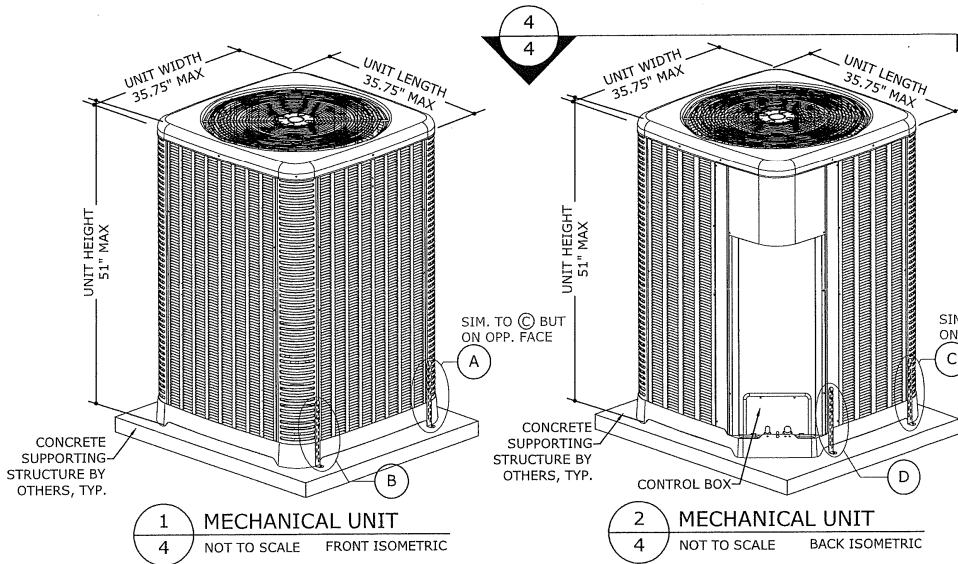
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# RHEEM SALES COMPANY, INC.

## WIND LOAD CERTIFICATION OF MECHANICAL UNIT CABINETRY AND STEEL/ALUMINUM TIE-DOWN CLIPS: AT GRADE MOUNTED APPLICATIONS



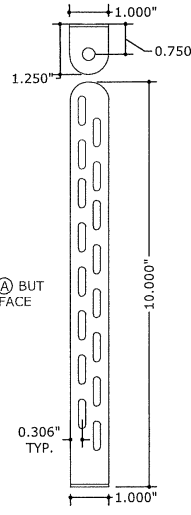
MARCH 16, 2023



**1** MECHANICAL UNIT  
4 NOT TO SCALE FRONT ISOMETRIC

**2** MECHANICAL UNIT  
4 NOT TO SCALE BACK ISOMETRIC

THESE ISOMETRICS ARE INTENDED FOR  
DIAGRAMMATICAL PURPOSES ONLY; ALTERNATE RHEEM  
UNITS MAY VARY IN APPEARANCE



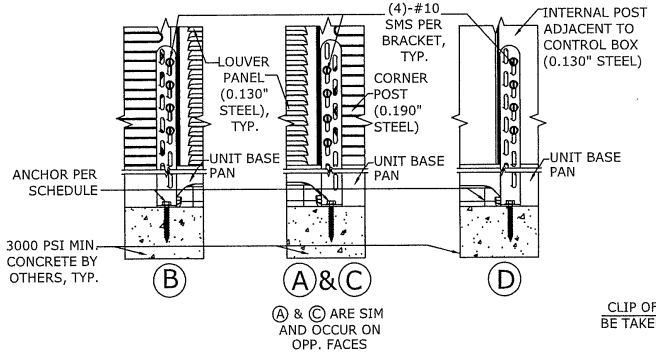
**TIE-DOWN BRACKET**

MIAMI TECH CLIP: 14GA (0.07") ASTM A653  
Fu=90 KSI STEEL (CUTD10) OR 0.080"  
5052-H32 ALUMINUM (CUTD10), MIAMI  
TECH KIT # RRCUTDLK OR RRCUTDALK

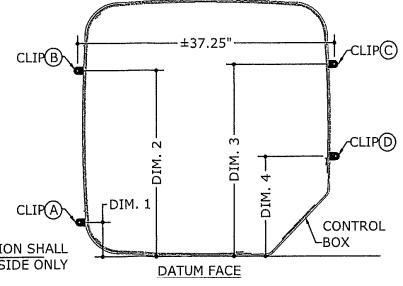
**ANCHOR SCHEDULE:**

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-1/4"Ø CARBON STEEL SIMPSON STRONG BOLT 2, 1 1/2" MIN EMBED TO CONCRETE, 3" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.
	(1)-1/4"Ø CARBON STEEL DEWALT WEDGE BOLT+, 2 1/2" MIN EMBED TO CONCRETE, 3" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.

SUPPORTING CONCRETE SUBSTRATE DEPTH SHALL BE A MINIMUM  
1.5X ANCHOR EMBED.  
EITHER ANCHOR FROM THIS SCHEDULE MAY BE USED FOR INSTALLATION.



**3** TIE-DOWN BRACKETS  
4 NOT TO SCALE ELEVATION



**4** TIE-DOWN BRACKET LAYOUT  
4 NOT TO SCALE PLAN

**TIE-DOWN BRACKET OFFSETS:**

DIM. 1	4.50" MAX OFFSET FROM DATUM FACE
DIM. 2	30.00" MIN OFFSET FROM DATUM FACE
DIM. 3	31.00" MIN OFFSET FROM DATUM FACE
DIM. 4	13.00" MAX OFFSET FROM DATUM FACE

**EX ENGINEERING EXPRESS**  
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DELRAY BEACH, FL 33444  
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**RHEEM SALES COMPANY**  
5600 OLD GREENWOOD RD  
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(770) 351-3000  
MECHANICAL UNIT STEEL AND ALUMINUM TIE-DOWN CLIPS  
FOR GRADE AND ROOFTOP APPLICATIONS  
FBC 7TH EDITION, (2020) | MIAMI-DADE COUNTY NOA

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	JAC	TSB	05/14/15
2017 FBC UPDATE	LAO	FLB	01/12/18
2020 FBC	ICB	RWN	10/19/20
ADD MODEL NOTE	EPF	RWN	03/07/23

20-28800GD

SCALE: NTS UNLESS NOTED

4

OF 7

c:\Users\eric\OneDrive\Documents\Projects\20-120-28800 - noa 18-0719.07 - wind load cert of mechanical unit\wp\2020 fbc\20-28800f - noa.dwg.dwg

3/16/2023, 4:01 PM ERIC