

City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
 Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies." The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD. PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

Scope of Work: MECHANICAL: c/o 4ton HVAC with no ductwork

Comments: None

Project Information

Address: 3115 Indian Drive, Belle Isle, FL 32812
 Parcel ID: 29-23-30-4389-01-130
 Property Owner: Fitzgerald, Charles
 Phone Number: 407-851-6689

Company Name: Del-Air Heating, A/C & Refrigeration Inc
 Contractor Name: Del Russo, Robert
 License Number: CAC032448
 Address: 531 Codesco Way, Sanford, FL 32771
 Phone Number: 407-585-3004

Permit Number: 2014-06-002

Date of Application: 05/29/2014
Date Permit Issued: 06/03/2014

WARNING TO OWNER: "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.

BUILDING FEATURES

IMPACT FEES

School \$
 Traffic \$

ZONING FEES

Zoning Fee \$

UNIVERSAL ENG - BUILDING FEES

Cert of Occ \$
 Demo \$
 Building \$
 Fence \$
 Driveway \$
 Shed \$
 Window(s) \$
 Door(s) \$
 PrePower \$
 Electrical \$
 Temp Pole \$
 Plumbing \$
 Mechanical \$129.00
 Gas \$
 Roofing \$
 Boat Dock \$
 Screen Encl \$
 Swimming Pool \$
 Sign \$

SURCHARGE FEES

Surcharge Fee \$2.00
 Surcharge Fee \$2.00

TOTAL FEES \$133.00

Date Paid 6-4-14

CC or Check # VISA 5294

Amount Paid 133.00

The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).

BUILDING INSPECTOR USE ONLY

IF APPLICABLE:

Have Zoning Approval Conditions Been Met? YES NO Have Stormwater Approval Conditions Been Met? YES NO Silt fencing in place? YES NO Turbidity Barrier in place? YES NO

BUILDING

1st _____ (Footing/Foundation)
 Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____
 2nd _____ (Slab)
 3rd _____ (Lintel)(Wall Reinforcing on Masonry Building)
 4th _____ (Exterior Framing)(Roof/Wall Sheathing)
 5th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)
 6th _____ (Insulation to be Made After Roof Installed)
 7th _____ (Drywall)
 8th _____ (Sidewalk/Driveway)
 9th _____ (Other)
 10th _____ (Final – After MEP and Other Applicable Finals)

ROOFING

1ST ROOFING Deck Nailing/Dry-in/Flashing _____
 2nd ROOFING Covering In-Progress _____
 3rd ROOFING Covering Final _____

PLUMBING (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)

1ST _____ (Underground) 2nd _____ (Sewer)
 3rd _____ (Rough-In/Tub Set) 4th _____ (Final)

CHECK APPROPRIATE BOX

GAS ___ Natural ___ LP **MECHANICAL** **ELECTRICAL** **LOW VOLTAGE**

1st _____ (Rough-In) 2nd _____ (Final)

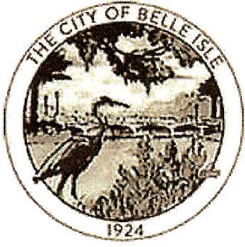
Inspection requests are to be emailed to BidScheduling@UniversalEngineering.com; a confirmation email will be sent back to you upon scheduling. Next-Day Inspection requests must be made by 1pm. Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

For a copy of your permit, or to check inspection results, please visit <https://universalengineering.sharefile.com/f/fo94edc4-832d-44bd-9809-ecf32f9e2e63>

login ID = cobi@universalengineering.com

password = universal13

received
05-29-14



City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

APPLICATION FOR MECHANICAL PERMIT

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 5/28/14 PERMIT NUMBER 2014-06-002

PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 3115 Indian Dr, Belle Isle FL 32809 32812
Property Owner Charles Fitzgerald Phone 407-581-6689
Property Owner's Mailing Address 3115 Indian Dr City Belle Isle
State FL Zip Code 32812 Parcel Id Number: 292330438901130

To obtain this information, please visit <http://www.ocpafl.org/Searches/ParcelSearch.aspx>

Class of Building: Old New Type of Building: Residential Commercial Other
Type of Work: New Alteration Addition Repair

- REQUIRED Tie Down Engineering and Equipment Sizing Calculation
- REQUIRED, adding A/C to new space – provide Energy Calculations
- REQUIRED, if replacing unit with no duct work, Duct Certification as per FB 101.4.7.1, must be posted on unit

Please indicate the nature of work by completing the information below:

Air Conditioning: # of Units 1 Tons Per Unit 4 Total Tons 4
Type of System: Water to Air Chiller Split System Package Heat Pump Estimated Cost \$ 4431

Heating: # of Units KWS Per Unit 3 Total KWS 5 BTU's _____
Oil Electric Boiler Gas
(A) Estimated Cost Fee \$ _____

Fees for items below are based on valuation of all units, equipment, materials and labor supplied by owner or contractor.

Ventilation:
(Number of) Grease _____ Heat _____ Hoods, Air Intakes _____ Exhaust Fans _____ Dryer Vents _____ Estimated Cost \$ _____

Refrigeration: Number of units _____ Estimated Cost \$ _____

Piping: Air _____ Vacuum _____ Steam _____ Chill Water _____ Estimated Cost \$ _____

Others: (Specify) none. do no duct work, Package unit Estimated Cost \$ _____

Was the space previously Air Conditioned? Yes No (B) Estimated Cost Fee \$ _____

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances.

LICENSE HOLDER SIGNATURE [Signature] LICENSE # 00002448
LICENSE HOLDER NAME Radello Russo COMPANY NAME del-air
Street Address 531 Cochise way
City Santa Fe State FL Zip Code 32771 Phone Number 407 333 2665
Email Address Sales,chs@delair.com

Building Official: <u>Angel A Perez</u> Date <u>6-02-2014</u>	Review & Permit Fee	\$ <u>129-</u>
	3% Florida Surcharge	\$ <u>4-</u>
	Total Permit Fee	\$ <u>133-</u>

NOTE: The Building Permit Number is required if the Mechanical Installation is associated with any construction or alteration where a Building Permit has been issued. Building Permit Number _____

PROJECT NUMBER 0115.1400289.0000

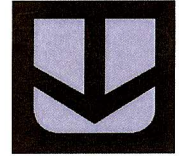
TASK NUMBER 01

CITY OF BELLE ISLE
Permit Application Review Sheet

Permit Number	2014-06-002	
Property Owner	Fitzgerald	
Address	3115 Indian Dr	
Nature of Improvement	Mechanical	
Received Application	5-29-14	
Sent for Stormwater Review		
Stormwater Approved		
Sent for Zoning Review		
Zoning Approved		
Applied for Variance		
Variance Approved		
Sent to BO for Review	5-30-14	W037816
Building Official Approved	6-02-2014	
Comments		
1.	6-3-14	cq emailed Lindsey it's ready
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		



COBI Permit Fee Calculation Form



Reviewer Signature: AP.

Date: 6-02-2014

Permit Type:	<u>Mechanical</u>	Job Cost:	<u>\$ 4,431-</u>
Permit Fee:	<u>\$ 86-</u>		
Plans Review Fee:	<u>\$ 43-</u>	(50% of permit fee – excluding ReRoofs)	
1.5% State Fee:	<u>\$ 2-</u>		
1.5% State Fee:	<u>\$ 2-</u>		
TOTAL BUILDING FEE:	<u>\$ 133-</u>	(does not include Zoning fees or Deposits)	

Note: Total gets doubled for SWO/AFT permits

$$37 + (\$6 \times 1) = 37 + 6 = 43.00$$
$$43 \times 50\% = 21.50 + 43 = 64.50$$
$$\$64.50 \times 2 = \$129$$
$$\$129 \times 1.5\% (2) = \$2 (2) = \$4 + 129 = \$133-$$

**DEL-AIR
HEATING - AIR CONDITIONING
REFRIGERATION, INC.**

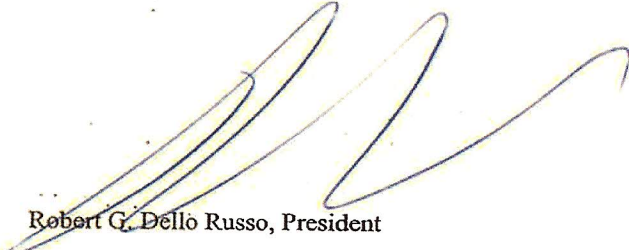
Date 5/28/14

City Of Belle Isle
Building Division

Dear Sir:

This letter is written to give authorization for e. dan mize to pull the mechanical permit for Del-Air Heating, Air Conditioning & Refrigeration, Inc. for 3115 Indian Dr

Thank You,



Robert G. Dello Russo, President

DEL-AIR HEATING, AIR CONDITIONING &
REFRIGERATION, INC.

RGDR/jd

Sworn to before me by Robert G. Dello Russo
on this 29 day of May, 2014

Michelle Sodoski
NOTARY PUBLIC
MY COMMISSION EXPIRES: _____



P.O. Box 520522
Longwood, FL 32752-0522
Phone (407)333-COOL (2665)
(407)831-COOL (2665)

SALES
SERVICE
INSTALLATION



Certificate of Product Ratings

AHRI Certified Reference Number: 5053385

Date: 5/28/2014

Product: Single-Package Air-Conditioner, Air-Cooled

Model Number: 50ZPB042---31**

Manufacturer: CARRIER AIR CONDITIONING

Trade/Brand name: CARRIER

Series name:

Manufacturer responsible for the rating of this system combination is CARRIER AIR CONDITIONING

Rated as follows in accordance with AHRI Standard 210/240-2008 for Unitary Air-Conditioning and Air-Source Heat Pump Equipment and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (Btuh): 40500

EER Rating (Cooling): 11.50

SEER Rating (Cooling): 13.50

IEER Rating (Cooling):

AHRI CERTIFIED[®]
www.ahridirectory.org

* Ratings followed by an asterisk (*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate.

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CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at www.ahridirectory.org, click on "Verify Certificate" link and enter the AHRI Certified Reference Number and the date on which the certificate was issued, which is listed above, and the Certificate No., which is listed at bottom right.

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& REFRIGERATION INSTITUTE

we make life better™

CERTIFICATE NO.:

130457750307865198

Business & Professional Regulation



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Product Approval
 USER: Public User

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 Application Detail

FL # FL14239-R1
Application Type Revision
Code Version 2010
Application Status Approved
Comments
 Archived

Product Manufacturer BMP International Inc.
Address/Phone/Email 4710 28th Street N
 St. Petersburg, FL 33714
 (727) 458-0544
 benmeng@yahoo.com

Authorized Signature Xianbin Meng
 benmeng@yahoo.com

Technical Representative
 Address/Phone/Email

Quality Assurance Representative
 Address/Phone/Email

Category Structural Components
Subcategory Anchors

Compliance Method: Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer
 Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the: Frank L. Bennardo, P.E.
Evaluation Report
Florida License PE-0046549
Quality Assurance Entity National Accreditation & Management Institute,
Quality Assurance Contract Expiration Date 12/31/2013
Validated By: Ryan J. King, P.E.
 Validation Checklist - Hardcopy Received

Certificate of Independence [FL14239-R1-COI_COI.pdf](#)

Referenced Standard and Year (of Standard):	Standard	Year
	ASTM D1761-06	2006
	ASTM D1761-88	2000

Equivalence of Product Standards Certified By Florida Licensed Professional Engineer or Architect
[FL14239-R1_Equiv_Equiv.pdf](#)

Sections from the Code

Product Approval Method Method 1 Option 0

Date Submitted 09/29/2011
Date Validated 12/13/2011
Date Pending FBC Approval 12/18/2011
Date Approved 01/31/2012

Summary of Products

FL #	Model, Number or Name	Description
14239.1	Slotted Steel Tie-Down Clips, 1" and 2" Models	Steel Tie-Down Clip System (For Use with Mechanical Units at Roof or Grade)
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: N/A Design Pressure: N/A Other: This design provides allowable capacities for the system. The required site-specific design pressure (demand) shall be calculated by others for use with this design.		Installation Instructions FL14239-R1-IT-Dwg.pdf Verified By: Frank L. Bennardo, P.E. 0046549 Created by Independent Third Party: Yes Evaluation Reports FL14239-R1-AE-Eval.pdf Created by Independent Third Party: Yes

Product Evaluation Report

November 4, 2011

Application Number: **FL #14239**
FLB Project Number: **11-BMP-0001-01**

Product Manufacturer: **BMP International**

Manufacturer Address: **4710 28th Street North
St. Petersburg, FL 33714**

Product Name: **Slotted Steel Tie-Down Clips, 1" and 2" Models**
Product Description: **Steel Tie-Down Clip System (For Use with Mechanical Units at Roof or Grade)**

Scope of Evaluation:

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Community Affairs (Florida Building Commission) Rule Chapter 9N-3.005, F.A.C., for statewide acceptance per Method 1(d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with the 2010 Florida Building Code and is, for the purpose intended, at least equivalent to that required by the Code. Re-evaluation of this product shall be required following pertinent Florida Building Code modifications or revisions.

Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

FLB drawing #11-BMP-0001-01 titled "Mechanical Unit Steel Tie-Down Clip Capacities: At-Grade and Roof-Top Mounted Applications", sheets 1-4, prepared by Engineering Express, signed & sealed by Frank L. Bennardo, P.E. is an integral part of this Evaluation Report.

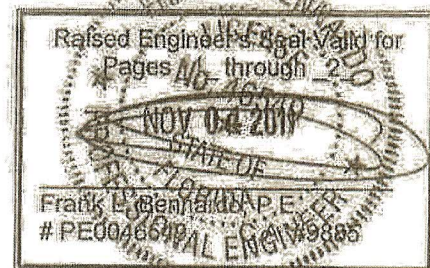
- **TEST REPORTS**

Ultimate test loading structural performance has been tested in accordance with ASTM D1761-88 test standards per test report(s) #TEL 01970387A and #TEL 01970387B by Testing Evaluation Laboratories, Inc.

- **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:

1. Maximum Allowable Unit Wind Pressures
2. Minimum Allowable Unit Width
3. Maximum Allowable Unit Height
4. Minimum Unit Weight
5. Maximum Allowable Unit Surface Area
6. Clip Configuration and Anchor Spacing
7. Anchor Capacity for Various Substrates



8. Maximum Allowable Additional Uplift per Clip in Combination with Lateral Forces (For Use with Rooftop Applications)

No 33% increase in allowable stress has been used in the design of this product.

Impact Resistance:

Not applicable to this product.

Wind Load Resistance

This product has been designed to resist wind loads as indicated in the design schedule(s) on the Product Evaluation Document (i.e. engineering drawing).

Installation

The product listed above shall be installed in strict compliance with the Product Evaluation Document (i.e. engineering drawing), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation Document (i.e. engineering drawing).

Limitations & Conditions of Use:

Use of this product shall be in strict accordance with the Product Evaluation Document (i.e. engineering drawing) as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in this product's respective anchor schedule. 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.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

This product has been designed for use within the High Velocity Hurricane Zone (HVHZ).

1" STEEL CLIP TIE-DOWN SCHEDULE: AT GRADE INSTALLATIONS:

MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	MAXIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHORS TO HOST STRUCTURE)				
			(1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)	(2) CLIP AT EACH CORNER (TOTAL OF 3 CLIPS PER UNIT)	(3) SHEET METAL SCREW TO ALUMINUM	(4) SHEET METAL SCREW TO STEEL	(5) WOOD SCREW TO WOOD
4 FT	48" MAX	24" MIN	TAPCON TO CONCRETE	WOOD SCREW TO WOOD	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD
5 FT			91 PSF	81 PSF	100 PSF	100 PSF	100 PSF
6 FT	60" MAX	48" MIN	51 PSF	61 PSF	100 PSF	100 PSF	100 PSF
8 FT			40 PSF	40 PSF	77 PSF	77 PSF	77 PSF
12 FT			30 PSF	30 PSF	58 PSF	58 PSF	58 PSF
16 FT			22 PSF	22 PSF	43 PSF	43 PSF	43 PSF
20 FT	18 PSF	18 PSF	38 PSF	38 PSF	38 PSF	38 PSF	
25 FT	15 PSF	15 PSF	33 PSF	33 PSF	33 PSF	33 PSF	
30 FT	12 PSF	12 PSF	27 PSF	27 PSF	27 PSF	27 PSF	
36 FT	9 PSF	9 PSF	21 PSF	21 PSF	21 PSF	21 PSF	

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3) #8-12 SAE GRADE 5 SHEET METAL SCREWS. (5) SHEET METAL SCREWS REQUIRED FOR LONG CLIPS, SEE DETAIL 1/4.
- MECHANICAL HOUSING UNIT SHALL CONFORM TO THE FOLLOWING:
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - STEEL HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
- MAXIMUM ALLOWABLE WIND PRESSURES FOR EACH INDIVIDUAL SUBSTRATE MAY BE EQUIVALENT DUE TO THE LIMITING CAPACITY OF THE 1" CLIP.
- A MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED, FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

ANCHOR SCHEDULE:

SUBSTRATE	ANCHOR
CONCRETE	(1) 3/8" CARBON STEEL TW BUILD EX TAPCON, 3/4" FULL EMBED TO CONCRETE, 24" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.
ALUMINUM	(1) #14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(1) #14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD	(1) #14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/4" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.
SOUTHERN YELLOW PINE, G-0-05 OR BETTER	

- ANCHOR SCHEDULE NOTES:**
- EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
 - ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
- TABLE LEGEND:**
- - DENOTES EXAMPLE VALUE FOR USE WITH COVER PAGE DIRECTIVE
- - DENOTES VALUES NOT APPROVED FOR USE

2" STEEL CLIP TIE-DOWN SCHEDULE: AT GRADE INSTALLATIONS:

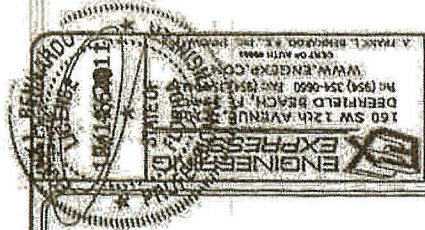
MAXIMUM SURFACE AREA OF UNITS LARGEST FACE	UNIT HEIGHT	UNIT WIDTH	MAXIMUM ALLOWABLE LATERAL WIND PRESSURE (ANCHORS TO HOST STRUCTURE)				
			(1) CLIP AT EACH CORNER (TOTAL OF 4 CLIPS PER UNIT)	(2) CLIP AT EACH CORNER (TOTAL OF 3 CLIPS PER UNIT)	(3) SHEET METAL SCREW TO ALUMINUM	(4) SHEET METAL SCREW TO STEEL	(5) WOOD SCREW TO WOOD
4 FT	48" MAX	24" MIN	TAPCON TO CONCRETE	WOOD SCREW TO WOOD	SHEET METAL SCREW TO ALUMINUM	SHEET METAL SCREW TO STEEL	WOOD SCREW TO WOOD
5 FT			100 PSF	100 PSF	100 PSF	100 PSF	100 PSF
6 FT	60" MAX	48" MIN	87 PSF	87 PSF	100 PSF	100 PSF	100 PSF
8 FT			67 PSF	67 PSF	87 PSF	87 PSF	87 PSF
12 FT			50 PSF	50 PSF	67 PSF	67 PSF	67 PSF
16 FT			38 PSF	38 PSF	50 PSF	50 PSF	50 PSF
20 FT	31 PSF	31 PSF	41 PSF	41 PSF	41 PSF		
25 FT	27 PSF	27 PSF	37 PSF	37 PSF	37 PSF		
30 FT	23 PSF	23 PSF	31 PSF	31 PSF	31 PSF		
36 FT	19 PSF	19 PSF	27 PSF	27 PSF	27 PSF		

- TIE-DOWN CLIPS SHALL BE FASTENED TO MECHANICAL HOUSING UNIT WITH (3) #14 SAE GRADE 5 SHEET METAL SCREWS.
- MECHANICAL HOUSING UNIT SHALL CONFORM TO THE FOLLOWING:
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - STEEL HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
 - ALUMINUM HOUSING UNITS SHALL BE 0.063" MIN. THICKNESS. (4" THICK MIN. 3192KSI MIN.)
- MAXIMUM ALLOWABLE WIND PRESSURES FOR EACH INDIVIDUAL SUBSTRATE MAY BE EQUIVALENT DUE TO THE LIMITING CAPACITY OF THE 2" CLIP.
- A MAXIMUM ALLOWABLE VALUE OF 100 PSF HAS BEEN UTILIZED, FOR HIGHER DEMAND CAPACITIES CONTACT THIS ENGINEER FOR SITE-SPECIFIC ENGINEERING.

ANCHOR SCHEDULE:

SUBSTRATE	ANCHOR
ALUMINUM	(2) #14 SAE GRADE 5 SHEET METAL SCREW TO ALUMINUM, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
STEEL	(2) #14 SAE GRADE 5 SHEET METAL SCREW TO STEEL, PROVIDE (5) PINCHES MIN. PAST THREAD PLANE FOR SHEET METAL SCREW.
SEALED WOOD, 1-1/2" MIN THICKNESS	(2) #14 SAE GRADE 5 WOOD SCREW TO WOOD MEMBER, PROVIDE 1/4" MIN. THREAD PENETRATION, 1" MIN. EDGE DISTANCE, 1" MIN. END DISTANCE.
SOUTHERN YELLOW PINE, G-0-05 OR BETTER	

- ANCHOR SCHEDULE NOTES:**
- EMBEDMENT AND EDGE DISTANCE EXCLUDES FINISHES, IF APPLICABLE.
 - ENSURE MINIMUM EDGE DISTANCE AS NOTED IN ANCHOR SCHEDULE.
- TABLE LEGEND:**
- - DENOTES VALUES NOT APPROVED FOR USE



BMP INTERNATIONAL, INC.
 4720 28TH STREET NORTH
 ST. PETERSBURG, FL 34717
 PH: (727) 577-1613
 MECHANICAL UNIT STEEL TIE-DOWN CLIPS
 FLORIDA STATEWIDE APPROVAL

FORM NO. 12-11-17	DATE
REVISION	
PROJECT	
CLIENT	
DATE RECEIVED FROM	01
SCALE	1/4" = 1'-0"
PROJECT NO.	11-BMP-0001

BMP INTERNATIONAL, INC
4710 28th St N, St Petersburg, FL 33714
Phone: 727-458- 0544

State Approved Equipment Tie Down - FL14239

On March 23rd 2012 the governor signed HB 704 amending SECTION 16 of the 2010 FBC to the 2007 FBC. See the copy below.

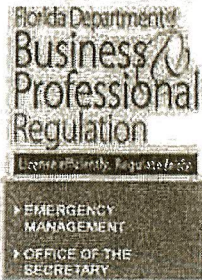
HB 704 – Relating to the Florida Building Commission and the Florida Building Code

Chapter Law Number: Chapter No. 2012-1
Approved by the Governor 3/23/2012

Section 16

4). Notwithstanding the provisions of this section, exposed mechanical equipment or appliances fastened to a roof or installed on the ground in compliance with the code using rated stands, platforms, curbs, slabs, or other means are deemed to comply with the wind resistance requirements of the 2007 Florida Building Code, as amended. Further support or enclosure of such mechanical equipment or appliances is not required by a state or local official having authority to enforce the Florida Building Code. This subsection expires on the effective date of the 2013 ~~2010~~ Florida Building Code.

The following files from www.floridabuilding.org Code Version 2007, number FL 14239, contain the necessary compliance information for tie down clip approval. The specific information required by building departments may vary. Consult with the individual building department for what portion of the following information is needed for permit approval.



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FL #	FL14239-R0
Application Type	New
Code Version	2007
Application Status	Approved
Comments	
Archived	
Product:Manufacturer	BMP International Inc.
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Authorized Signature	Xianbin Meng benmeng8@yahoo.com
Technical Representative	
Address/Phone/Email	
Quality Assurance Representative	
Address/Phone/Email	
Category	Structural Components
Subcategory	Anchors
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input checked="" type="checkbox"/> Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Kristina S. Daugherty, P.E.
Florida License	PE-68455
Quality Assurance Entity	National Accreditation & Management Institute,
Quality Assurance Contract Expiration Date	12/31/2013
Validated By	Steven M. Ulrich, PE <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received
Certificate of Independence	FL14239_R0_COI_COI_BMP.pdf
Referenced Standard and Year (of Standard)	
Equivalence of Product Standards Certified By	
Sections from the Code	Chapter 22

BMP INTERNATIONAL, INC.		PREPARED BY: CERTWORKS, LLC	
8499 INTERNATIONAL, INC. 57 STEVENSON BLVD ST. PETERSBURG, FL 33714 PH: 727-582-0444		127 W. FAIRBANKS AVE., STE. 438 WINTER PARK, FL 32789 PH: (407) 644-6957 FX: (407) 644-2366	
A/C HOLD DOWN CLIP		GENERAL NOTES	
TITLE		DATE	
DESCRIPTION		BY	
NO.		NO.	

DATE	06.30.10
DWN BY:	JLA
CHK BY:	KSD
SCALE:	NTS
DWG #:	BM003
SHEET:	2 OF 2

GENERAL NOTES:

- DESIGN CALCULATIONS WERE BASED ON THE FLORIDA BUILDING CODE 2007 WITH 2009 AMENDMENTS AND ASCE 7-05 CH. 16 FOR WIND LOADS AND VELOCITIES OF 146 MPH AND 155 MPH. AN IMPORTANCE FACTOR OF 1.4 AND EXPOSURE C AS CRITICAL WERE USED IN THE DESIGN.
- A/C UNIT MAXIMUM SIZE: 4 FT x 4 FT x 4 FT. MINIMUM WEIGHT OF 150 LBS.
- ALL SCREWS USED TO ATTACH CLIP SHALL BE GALVANIZED A307. SELF DRILLING WITH A MINIMUM HEAD DIAMETER OF 0.3125 IN. SCREWS SHALL BE DRILLED TIGHT, NOT OVER TIGHTENED.
- TACONS USED TO ATTACH CLIP TO CONCRETE SHALL BE APPROVED WITH A RATED TENSILE STRENGTH OF 480 LBS WITH A MINIMUM EMBEDMENT OF 1.3/4 IN, MINIMUM EDGE DISTANCE OF 2.5", AND MINIMUM CENTER TO CENTER DISTANCE OF 3".
- WHEN UNIT IS SUPPORTED BY WOOD USE #10 WOOD SCREWS WITH A MINIMUM 1.1/2 IN EMBEDMENT
- SCREWS AT THE BOTTOM OF CLIP ATTACHMENT TO SUPPORTING STRUCTURE REQUIRE WASHERS OF 14 GA. STEEL MINIMUM WITH A YIELD STRENGTH OF 33 KSI.
- CLIPS SHALL BE MANUFACTURED OUT OF MINIMUM 39 KSI STEEL THAT IS 690 GALVANIZED OR STAINLESS STEEL
- UNIT SIZES MAY INCREASE TO 6 FT x 6 FT x 6 FT AND REQUIRE TWO (2) CLIPS AT CORNERS AND MAY NOT BE HIGHER THAN 15 FT FROM GRADE.
- #12 GALV. SELF DRILLING SCREWS MAY BE USED ON UNITS WHICH ARE INSTALLED NO HIGHER THAN 40 FT FROM GRADE FOR WIND VELOCITY ZONES ARE 146 MPH OR LESS.
- INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR SUBSTRATES INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
- INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
 - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2700 PSI.
 - ALUMINUM - MINIMUM 6061-T9 ALLOY (MINIMUM WALL THICKNESS OF 0.125")
 - STEEL - MINIMUM YIELD STRENGTH OF 33 KSI, MINIMUM WALL THICKNESS OF 33 MILS.
- CLIPS CAN ALSO BE SUPPLIED IN A POWDER-COATED FINISH
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING. DISSIMILAR MATERIALS MUST BE SEPARATED OR COATED IN ACCORDANCE WITH FBC SECTION 008.8.4.

1" CLIP			
HEIGHT ABOVE GROUND (FT)	NUMBER OF SCREWS PER CLIP TO HOUSING OF A/C (GALV. 1/4" DIA)	NUMBER OF SCREWS PER CLIP INTO CONCRETE (1/4" x 1 1/2" DIA)	NUMBER OF SCREWS PER CLIP INTO ALUM. (1/4" x 1 1/2" DIA)
0-15	3	3	3
20	3	3	3
25	3	3	3
30	3	3	3
35	3	3	3
40	3	3	3
45	3	3	3
50	3	3	3
55	3	3	3
60	3	3	3
65	3	3	3
70	3	3	3
75	3	3	3
80	3	3	3
85	3	3	3
90	3	3	3

* Three additional clips at corners for a total of 8 clips, when using the 1" clip, where the unit is supported by concrete. (Additional clips are required for units supported by wood.)

2" CLIP			
HEIGHT ABOVE GROUND (FT)	NUMBER OF SCREWS PER CLIP TO HOUSING OF A/C (GALV. 1/4" DIA)	NUMBER OF SCREWS PER CLIP INTO CONCRETE (1/4" x 1 1/2" DIA)	NUMBER OF SCREWS PER CLIP INTO ALUM. (1/4" x 1 1/2" DIA)
0-15	3	3	3
20	3	3	3
25	3	3	3
30	3	3	3
35	3	3	3
40	3	3	3
45	3	3	3
50	3	3	3
55	3	3	3
60	3	3	3
65	3	3	3
70	3	3	3
75	3	3	3
80	3	3	3
85	3	3	3
90	3	3	3

* Three additional clips at corners for a total of 8 clips, when using the 2" clip, where the unit is supported by concrete. (Additional clips are required for units supported by wood.)

TABLE OF CLIP ATTACHMENT TO SUPPORTING STRUCTURE OR A/C UNIT (155 MPH) - 4 CLIPS PER UNIT			
HEIGHT ABOVE GROUND (FT)	NUMBER OF SCREWS PER CLIP TO HOUSING OF A/C (GALV. 1/4" DIA)	NUMBER OF SCREWS PER CLIP INTO CONCRETE (1/4" x 1 1/2" DIA)	NUMBER OF SCREWS PER CLIP INTO ALUM. (1/4" x 1 1/2" DIA)
0-15	4	4	4
20	4	4	4
25	4	4	4
30	4	4	4
35	4	4	4
40	4	4	4
45	4	4	4
50	4	4	4
55	4	4	4
60	4	4	4
65	4	4	4
70	4	4	4
75	4	4	4
80	4	4	4
85	4	4	4
90	4	4	4

* Three additional clips at corners for a total of 7 clips, when using 2 clips into concrete and 2 screws per clip are required. (Additional clips are required for units supported by wood.)

NOTES:

- ABOVE CHART DENOTES NUMBER OF SCREWS PER CLIP. ASSUMING 4 CLIPS PER UNIT. ENGINEERS ARE ADVISED ABOVE, WHERE WIND SPEEDS EXCEED 155 MPH, MORE SCREWS PER CLIP MAY BE REQUIRED. THIS SUBSTRATE USE FOR THE CLIPS OR USE THE 2" CLIP.
- FOR ALL SUPPORTING STRUCTURES, USE SELF DRILLING GALV. 2 1/4" x 1 1/4" SCREWS AND QUANTITIES INDICATED ABOVE.
- PROVE IN PROOF FOR ALUMINUM RACK SCREWS.
- SCREWS IN A/C HOUSING SHALL BE A MINIMUM OF 1 IN.
- STAINLESS STEEL SCREWS MAY BE USED WHERE REQUIRED BY GOVERNING AGENCY.

TD08	1" x 8" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD04SS	1" x 4" Tie Down Clip, Stainless Steel, 4/Bag
TD06SS	1" x 6" Tie Down Clip, Stainless Steel, 4/Bag
TD042L	2" x 4" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD062L	2" x 6" Tie Down Clip, Galv/Powder Coat, 4/Bag
TD062	2" x 6" Fat Cat Clip, Galvanized, 4/Bag

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Note: This file contains approval information from www.floridabuilding.org for BMP tie down clips. Information required by building departments will vary, from listing the approval number, FL14239-R1, on your permit application to submitting copies of the drawings. Consult with the individual building departments for their requirements. This file can be downloaded in PDF format