# APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

| OFFICE USE ONLY | |
|---|---|
| APPLICATION #: | OSP – 0533 – 10 |

## OSHPD Special Seismic Certification Preapproval (OSP)

**Type:** ☒ New ☐ Renewal

## Manufacturer Information

Manufacturer: Carrier Corporation

Manufacturer's Technical Representative: Brian Monk

Mailing Address: 629 McCaffrey, Montreal, Quebec, Canada H4T 1N3

Telephone: 514.906.4623 Email: brian.monk@carrier.utc.com

## Product Information

Product Name: Carrier Custom 39CC

Product Type: Custom Air Conditioning Units

Product Model Number: Varies. See Attachment.
(List all unique product identification numbers and/or part numbers)

General Description: Custom Air Conditioning Units.

Mounting Description: Rigid Base Mounted

## Applicant Information

Applicant Company Name: Structural Integrity Associates, Inc.

Contact Person: Matthew J. Tobolski, PhD, SE

Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138

Telephone: 541.205.4064 Email: mtobolski@structint.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: Date: 7/10/2017

Title: Executive Advisor Company Name: Structural Integrity Associates, Inc.

## California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: Structural Integrity Associates, Inc.

Name: Matthew J. Tobolski, PhD, SE California License Number: S5648

Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138

Telephone: 541.205.4064 Email: mtobolski@structint.com

## Supports and Attachments Preapproval

☐ Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

☒ Supports and attachments are not preapproved

## Certification Method

☒ Testing in accordance with: ☒ ICC-ES AC156

☐ Other (Please Specify): _____

## Testing Laboratory

Company Name: Pacific Earthquake Engineering Research Center (PEER)

Contact Name: Nathaniel Knight

Mailing Address: 1301 South 46th St., Bldg. 420, Richmond, CA 94804

Telephone: 510.665.2135 Email: nathaniel_knight@berkeley.edu

## Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components ($F_p/W_p$) = 1.5 ($S_{DS}$ = 2.0g); 1.44 ($S_{DS}$ = 3.2g)

$S_{DS}$ (Design spectral response acceleration at short period, g) = 2.0 (z/h = 1.0); 3.2 (z/h = 0.0)

$a_p$ (In-structure equipment or component amplification factor) = 2.5

$R_p$ (Equipment or component response modification factor) = 6.0

$\Omega_0$ (System overstrength factor) = 2.0

$I_p$ (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0 ($S_{DS}$ = 2.0g); 0.0 ($S_{DS}$ = 3.2g)

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) = _____

$S_{DS}$ (Design spectral response acceleration at short period, g) = _____

$S_{D1}$ (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient ) = _____

$\Omega_0$ (System overstrength factor) = _____

$C_d$ (Deflection amplification factor) = _____

$I_p$ (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: ☐ Yes ☒ No

## List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☐ Manufacturer's Catalog

☒ Other(s) (Please Specify): Attachment A and product brochure

## OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: _____ Date: October 11, 2017

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : $S_{DS}$ (g) = See Above z/h = See Above

Condition of Approval (if applicable): _____

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED COMPONENT MATRIX

## TRU PROJECT NO. 16022

***Manufacturer:*** Carrier
***Model Line:*** 39CC

**TABLE 1**

***Certified Product Construction Summary:***

Standard construction; Indoor or Outdoor, 2" Panels; **Panel - Outer Skin:** 16 gauge Al; **Panel - Inner Skin:** 20 gauge Al; **Roof:** 16 gauge Al; **Insulation:** Foam

***Certified Options Summary:***

Always single air tunnel. Large units will be shipped "split". See last 2 pages for split unit details.

***Mounting Configuration:***

Base mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

***Building Code: CBC 2016*** ***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h=1.0*** $S_{DS}$= ***3.2 g*** ***z/h=0.0*** $I_P$= ***1.5***

| Model Line | Model | Dimensions (in) | | | Weight (lb) | Weight (psf) | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| 39CC | Custom AHU - Aluminum construction | 200 | 48 | 44 | 5,000 | 75 | | Interp. |
| | | … | | | | … | | Interp. |
| | | 209 | 66 | 65 | 5,900 | 62 | UUT: Indoor | 1 |
| | | ... | | | | … | | Interp. |
| | | 227* | 175.5 | 116.6 | 23,200 | 84 | UUT: Outdoor | 2 |
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***Units may be up to 454 inches in depth**

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TRU COMPLIANCE**

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Direct drive plenum Array

**TABLE 2**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0***; $S_{DS}$= ***3.2 g*** ***z/h = 0.0***; $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQS 1x1 Array (Twin City Fans) | 122 Class II | 20.0 | 23.0 | 23.0 | 149 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 25.4 | 25.4 | 173 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 28.1 | 28.1 | 250 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 31.8 | 31.8 | 337 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 31.8 | 31.8 | 373 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 34.5 | 34.5 | 423 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 34.5 | 34.5 | 467 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 39.8 | 39.8 | 505 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 39.8 | 39.8 | 555 | Al wheel, CS housing | | Interp. |
| | 245 Class II | 36.8 | 43.3 | 43.3 | 681 | Al wheel, CS housing | | Interp. |
| | 245 Class III | 36.8 | 43.3 | 43.3 | 748 | Al wheel, CS housing | | Interp. |
| | 270 Class II | 40.5 | 46.9 | 46.9 | 810 | Al wheel, CS housing | | Interp. |
| | 270 Class III | 40.5 | 46.9 | 46.9 | 944 | Al wheel, CS housing | | Interp. |
| | 300 Class II | 45.0 | 51.5 | 51.5 | 997 | Al wheel, CS housing | | Interp. |
| MPQS 1x2 Array (Twin City Fans) | 122 Class II | 20.0 | 46.0 | 23.0 | 298 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 50.8 | 25.4 | 346 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 56.1 | 28.1 | 500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 63.6 | 31.8 | 674 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 63.6 | 31.8 | 746 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 69.0 | 34.5 | 846 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 69.0 | 34.5 | 934 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 79.6 | 39.8 | 1010 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 79.6 | 39.8 | 1110 | Al wheel, CS housing | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Direct drive plenum Array

**TABLE 2**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0***; $S_{DS}$= ***3.2 g*** ***z/h = 0.0***; $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQS 1x3 Array (Twin City Fans) | 122 Class II | 20.0 | 69.0 | 23.0 | 447 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 76.1 | 25.4 | 519 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 84.2 | 28.1 | 750 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 95.4 | 31.8 | 1011 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 95.4 | 31.8 | 1119 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 103.5 | 34.5 | 1269 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 103.5 | 34.5 | 1401 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 119.4 | 39.8 | 1515 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 119.4 | 39.8 | 1665 | Al wheel, CS housing | | Interp. |
| MPQS 2x1 Array (Twin City Fans) | 122 Class II | 20.0 | 23.0 | 46.0 | 298 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 25.4 | 50.8 | 346 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 28.1 | 56.1 | 500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 31.8 | 63.6 | 674 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 31.8 | 63.6 | 746 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 34.5 | 69.0 | 846 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 34.5 | 69.0 | 934 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 39.8 | 79.6 | 1010 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 39.8 | 79.6 | 1110 | Al wheel, CS housing | | Interp. |
| MPQS 2x2 Array (Twin City Fans) | 122 Class II | 20.0 | 46.0 | 46.0 | 596 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 50.8 | 50.8 | 692 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 56.1 | 56.1 | 1000 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 63.6 | 63.6 | 1348 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 63.6 | 63.6 | 1492 | Al wheel, CS housing | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Direct drive plenum Array

**TABLE 2**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0*** $S_{DS}$= ***3.2 g*** ***z/h = 0.0*** $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQS 2x2 Array (Twin City Fans) | 200 Class II | 30.0 | 69.0 | 69.0 | 1692 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 69.0 | 69.0 | 1868 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 79.6 | 79.6 | 2020 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 79.6 | 79.6 | 2220 | Al wheel, CS housing | | Interp. |
| MPQS 2x3 Array (Twin City Fans) | 122 Class II | 20.0 | 69.0 | 46.0 | 894 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 76.1 | 50.8 | 1038 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 84.2 | 56.1 | 1500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 95.4 | 63.6 | 2022 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 95.4 | 63.6 | 2238 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 103.5 | 69.0 | 2538 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 103.5 | 69.0 | 2802 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 119.4 | 79.6 | 3030 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 119.4 | 79.6 | 3330 | Al wheel, CS housing | | Interp. |
| MPQN 1x1 Array (Twin City Fans) | 122 Class II | 20.0 | 23.0 | 23.0 | 149 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 25.4 | 25.4 | 173 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 28.1 | 28.1 | 250 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 31.8 | 31.8 | 337 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 31.8 | 31.8 | 373 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 34.5 | 34.5 | 423 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 34.5 | 34.5 | 467 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 39.8 | 39.8 | 505 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 39.8 | 39.8 | 555 | Al wheel, CS housing | | Interp. |
| | 245 Class II | 36.8 | 43.3 | 43.3 | 681 | Al wheel, CS housing | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Direct drive plenum Array

**TABLE 2**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0***; $S_{DS}$= ***3.2 g*** ***z/h = 0.0***; $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQN 1x1 Array (Twin City Fans) | 245 Class III | 36.8 | 43.3 | 43.3 | 748 | Al wheel, CS housing | | Interp. |
| | 270 Class II | 40.5 | 46.9 | 46.9 | 810 | Al wheel, CS housing | | Interp. |
| | 270 Class III | 40.5 | 46.9 | 46.9 | 944 | Al wheel, CS housing | | Interp. |
| | 300 Class II | 45.0 | 51.5 | 51.5 | 997 | Al wheel, CS housing | | 1 |
| MPQN 1x2 Array (Twin City Fans) | 122 Class II | 20.0 | 46.0 | 23.0 | 298 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 50.8 | 25.4 | 346 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 56.1 | 28.1 | 500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 63.6 | 31.8 | 674 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 63.6 | 31.8 | 746 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 69.0 | 34.5 | 846 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 69.0 | 34.5 | 934 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 79.6 | 39.8 | 1010 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 79.6 | 39.8 | 1110 | Al wheel, CS housing | | Interp. |
| | 245 Class II | 36.8 | 86.5 | 43.3 | 1362 | Al wheel, CS housing | | Interp. |
| | 245 Class III | 36.8 | 86.5 | 43.3 | 1496 | Al wheel, CS housing | | Interp. |
| | 270 Class II | 40.5 | 93.9 | 46.9 | 1620 | Al wheel, CS housing | | Interp. |
| | 270 Class III | 40.5 | 93.9 | 46.9 | 1888 | Al wheel, CS housing | | Interp. |
| | 300 Class II | 45.0 | 103.0 | 51.5 | 1994 | Al wheel, CS housing | | Interp. |
| MPQN 1x3 Array (Twin City Fans) | 122 Class II | 20.0 | 69.0 | 23.0 | 447 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 76.1 | 25.4 | 519 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 84.2 | 28.1 | 750 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 95.4 | 31.8 | 1011 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 95.4 | 31.8 | 1119 | Al wheel, CS housing | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TABLE 2**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** Direct drive plenum Array

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0*** $S_{DS}$= ***3.2 g*** ***z/h = 0.0*** $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQN 1x3 Array (Twin City Fans) | 200 Class II | 30.0 | 103.5 | 34.5 | 1269 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 103.5 | 34.5 | 1401 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 119.4 | 39.8 | 1515 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 119.4 | 39.8 | 1665 | Al wheel, CS housing | | Interp. |
| | 245 Class II | 36.8 | 129.8 | 43.3 | 2043 | Al wheel, CS housing | | Interp. |
| | 245 Class III | 36.8 | 129.8 | 43.3 | 2244 | Al wheel, CS housing | | Interp. |
| | 270 Class II | 40.5 | 140.8 | 46.9 | 2430 | Al wheel, CS housing | | Interp. |
| | 270 Class III | 40.5 | 140.8 | 46.9 | 2832 | Al wheel, CS housing | | Interp. |
| MPQN 2x1 Array (Twin City Fans) | 122 Class II | 20.0 | 23.0 | 46.0 | 298 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 25.4 | 50.8 | 346 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 28.1 | 56.1 | 500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 31.8 | 63.6 | 674 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 31.8 | 63.6 | 746 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 34.5 | 69.0 | 846 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 34.5 | 69.0 | 934 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 39.8 | 79.6 | 1010 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 39.8 | 79.6 | 1110 | Al wheel, CS housing | | Interp. |
| MPQN 2x2 Array (Twin City Fans) | 122 Class II | 20.0 | 46.0 | 46.0 | 596 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 50.8 | 50.8 | 692 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 56.1 | 56.1 | 1000 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 63.6 | 63.6 | 1348 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 63.6 | 63.6 | 1492 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 69.0 | 69.0 | 1692 | Al wheel, CS housing | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TABLE 2**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** Direct drive plenum Array

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$= ***2.0 g*** ***z/h = 1.0*** $S_{DS}$= ***3.2 g*** ***z/h = 0.0*** $I_P$ = ***1.5***

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| MPQN 2x2 Array (Twin City Fans) | 200 Class III | 30.0 | 69.0 | 69.0 | 1868 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 79.6 | 79.6 | 2020 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 79.6 | 79.6 | 2220 | Al wheel, CS housing | | Interp. |
| MPQN 2x3 Array (Twin City Fans) | 122 Class II | 20.0 | 69.0 | 46.0 | 894 | Al wheel, CS housing | | Interp. |
| | 150 Class II | 21.0 | 76.1 | 50.8 | 1038 | Al wheel, CS housing | | Interp. |
| | 165 Class II | 23.6 | 84.2 | 56.1 | 1500 | Al wheel, CS housing | | Interp. |
| | 182 Class II | 27.4 | 95.4 | 63.6 | 2022 | Al wheel, CS housing | | Interp. |
| | 182 Class III | 27.4 | 95.4 | 63.6 | 2238 | Al wheel, CS housing | | Interp. |
| | 200 Class II | 30.0 | 103.5 | 69.0 | 2538 | Al wheel, CS housing | | Interp. |
| | 200 Class III | 30.0 | 103.5 | 69.0 | 2802 | Al wheel, CS housing | | Interp. |
| | 222 Class II | 33.4 | 119.4 | 79.6 | 3030 | Al wheel, CS housing | | Interp. |
| | 222 Class III | 33.4 | 119.4 | 79.6 | 3330 | Al wheel, CS housing | | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** Fan Motors

**TABLE 3**

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Component Type | Manufacturer | Model | Material | Description | Notes | UUT |
|---|---|---|---|---|---|---|
| Fan Motors | Baldor | 184 | CS housing, Cu windings | 5-7.5 HP, 200, 230/460V | | Interp. |
| | | 213 | CS housing, Cu windings | 5-7.5 HP, 200, 230/460V | | Interp. |
| | | 215 | CS housing, Cu windings | 5-15 HP, 200, 230/460V | | Interp. |
| | | 254 | CS housing, Cu windings | 5-15 HP, 200, 230/460V | | Interp. |
| | | 256 | CS housing, Cu windings | 7.5-20 HP, 200, 230/460V | | Interp. |
| | | 284 | CS housing, Cu windings | 10-25 HP, 200, 230/460V | UUT: 25 HP, 200, 230/460V | 1 |
| | | 286 | CS housing, Cu windings | 15-30 HP, 200, 230/460V | | Interp. |
| | | 324 | CS housing, Cu windings | 20-40 HP, 200, 230/460V | | Interp. |
| | | 326 | CS housing, Cu windings | 25-50 HP, 230/460V | UUT: 50 HP, 230/460V | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TABLE 4**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** Hydronic Coils

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| Hydronic Coils - SS (Aerofin) | Single Stack | 6 | 32 | 21 | 61 | SS casing; SS rack; CS header; Al fins; Cu tubes | | Interp. |
| | | … | | | | | | Interp. |
| | | 6 | 50 | 48 | 121 | SS casing; SS rack; CS header; Al fins; Cu tubes | 6 FPI, 1 row, 5/8" O.D., 0.020" thick | 1 |
| | ... | ... | | | | | … | Interp. |
| | Double Stack | 10 | 136 | 96 | 1614 | SS casing; SS rack; CS header; Al fins; Cu tubes | 12 FPI, 8 rows, 5/8" O.D., 0.025" thick | 2 |
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**Hydronic Coils: 6-12 Fins per inch; 5/8" tube diameter; 0.020" - 0.025" thick wall**

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TABLE 5**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** DX Coils

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| DX Coils - SS (Aerofin) | Single Stack | 7.5 | 32 | 21 | 63 | SS casing; SS rack; Cu header, Al fins, Cu tubes | | Interp. |
| | | … | | | | | | Interp. |
| | | 7.5 | 50 | 48 | 227 | SS casing; SS rack; Cu header, Al fins, Cu tubes | 6 FPI, 4 rows, 5/8" O.D., 0.02" thick | 1 |
| | ... | ... | | | | | ... | Interp. |
| | Double Stack | 10 | 136 | 96 | 2127 | SS casing; SS rack; Cu header, Al fins, Cu tubes | 12 FPI, 6 rows, 5/8" O.D., 0.02" thick | 2 |
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**DX Coils: 6-12 Fins per inch; 5/8" tube diameter; 0.020" thick wall**

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**Manufacturer:** Carrier
**Model Line:** 39CC
**Table Description:** VFDs

**TABLE 6**

**Building Code: CBC 2016**
**Seismic Certification Limits:** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| Variable Frequency Drive (VFD) | ABB | ACH550-UH | 208-460V, 5-50HP, Base drive | | Interp. |
| | | ACH550-VCR | 208-460V, 5-50HP, Vertical Drive w/ E-bypass & breaker | UUT: 208V, 7.5HP | 1 |
| | | ACH550-PCR | 208-460V, 5-150HP, Drive w/breaker | | Interp. |
| | | ACH550-BCR | 208-460V, 5-150HP, Drive w/E-bypass & breaker | UUT: 460V, 150HP | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Electrical panels

**TABLE 7**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| Power Distribution Panels (Quatro) | Custom Electrical Panel | 6 | 12 | 12 | 18 | Carbon Steel panel | NEMA 4 | 1 |
| | | ... | | | | | | Interp. |
| | | 12 | 36 | 42 | 156 | Carbon Steel panel | NEMA 1 | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**Manufacturer:** Carrier
**Model Line:** 39CC
**Table Description:** Electrical Panel Components

**TABLE 7.1**

***Building Code: CBC 2016*** ***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0 $I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| Circuit Breaker | Techna | JTECUL-1C-01 | 1A, 1 Pole | | Interp. |
| | | JTECUL-1C-04 | 4A, 1 Pole | | Interp. |
| | | JTECUL-1C-05 | 5A, 1 Pole | | Interp. |
| | | JTECUL-1C-10 | 10A, 1 Pole | | 1 |
| | | JTECUL-1C-15 | 15A, 1 Pole | | 2 |
| Fuses | MERSEN | ATDR1 | 1A Time Delay Fuse | | 2 |
| | | … | | | Interp. |
| | | ATDR10 | 10A Time Delay Fuse | | 1 |
| | | … | | | Interp. |
| | | ATDR15 | 15A Time Delay Fuse | | 1 |
| | | … | | | Interp. |
| | | ATDR20 | 20A Time Delay Fuse | | 2 |
| | | ATDR300 | 300A Time Delay Fuse | | Interp. |
| | | AJT1 | 1A Time Delay Fuse | | Interp. |
| | | … | | | Interp. |
| | | AJT60 | 60A Time Delay Fuse | | 1 |
| | | … | | | Interp. |
| | | AJT300 | 300A Time Delay Fuse | | 2 |
| Transformers | Hammond | SP50PR | 120x240/12x24 50VA; Cu windings | | Interp. |
| | | SP100PR | 120x240/12x24 100VA; Cu windings | | Interp. |
| | | SP150PR | 120x240/12x24 150VA; Cu windings | | 2 |
| | | SP250PR | 120x240/12x24 250VA; Cu windings | | Interp. |
| | | SP350PR | 120x240/12x24 350VA; Cu windings | | Interp. |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**Manufacturer:** Carrier
**Model Line:** 39CC
**Table Description:** Electrical Panel Components

**TABLE 7.1**

**Building Code: CBC 2016**
**Seismic Certification Limits:** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| Transformers | Hammond | SP500PR | 120x240/12x24 500VA; Cu windings | | Interp. |
| | | SP50QR | 240/480-12/24 50VA; Cu windings | | Interp. |
| | | SP100QR | 240/480-12/24 100VA; Cu windings | | Interp. |
| | | SP150QR | 240/480-12/24 150VA; Cu windings | | Interp. |
| | | SP250QR | 240/480-12/24 250VA; Cu windings | | Interp. |
| | | SP350QR | 240/480-12/24 350VA; Cu windings | | Interp. |
| | | SP500QR | 240/480-12/24 500VA; Cu windings | | Interp. |
| | | SP50ACP | 600/480-120x240 50VA; Cu windings | | Interp. |
| | | SP100ACP | 600/480-120x240 100VA; Cu windings | | Interp. |
| | | SP150ACP | 600/480-120x240 150VA; Cu windings | | Interp. |
| | | SP250ACP | 600/480-120x240 250VA; Cu windings | | Interp. |
| | | SP350ACP | 600/480-120x240 350VA; Cu windings | | Interp. |
| | | SP500ACP | 600/480-120x240 500VA; Cu windings | | Interp. |
| | | SP750ACP | 600/480-120x240 750VA; Cu windings | | Interp. |
| | | SP1000ACP | 600/480-120x240 1000VA; Cu windings | | Interp. |
| | | SP1500ACP | 600/480-120x240 1500VA; Cu windings | | 1 |
| | | SP2000ACP | 600/480-120x240 2000VA; Cu windings | | Interp. |
| | | SP3000ACP | 600/480-120x240 3000VA; Cu windings | | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**TABLE 8**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** Dampers

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| Damper-horizontal (Tamco) | 1000SM | 4 | 12 | 12 | 7 | Aluminum | w/ Belimo EFB-24-SR actuator | 1 |
| | 1000SM | 4 | 36 | 48 | 84 | Aluminum | w/ Belimo EFB-24-SR actuator | 2 |
| | 1000 | 6.4 | 60 | 60 | 150 | Aluminum | No Actator | Interp. |
| | 7000 | 5 | 12 | 12 | 5 | Aluminum | No Actator | 1 |
| | 7000 | 5 | 36 | 48 | 60 | Aluminum | No Actator | Interp. |
| | 9000 | 6.4 | 12 | 12 | 7 | Aluminum | No Actator | Interp. |
| | 9000 | 6.4 | 60 | 60 | 175 | Aluminum | w/ Belimo AF Series actuator | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Filter Racks

**TABLE 9**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| Universal Filter Racks | AAF | 312-600-100 | 12 x 24 x 3 Carbon steel | | 2 |
| | | 312-606-100 | 24 x 24 x 3 Carbon steel | | 1,2 |
| HEPA Filter Racks | AAF | 3061967-001 | 12 x 24 x 11.5 Carbon steel | | 2 |
| | | 3061983-001 | 12.6 x 24.6 x 11.5 Carbon steel | | 2 |
| | | 3061959-001 | 24 x 24 x 11.5 Carbon steel | | 1,2 |
| | | 3061975-001 | 24.6 x 24.6 x 11.5 Carbon steel | | Extrap. |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**Manufacturer:** Carrier
**Model Line:** 39CC
**Table Description:** Filters

**TABLE 10**

**Building Code: CBC 2016**
**Seismic Certification Limits:** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0; $I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| 2" Pleated Filter | AAF | 12x24x2 | 12x24x2 Pleated filter | | 2 |
| | | 24x24x2 | 24x24x2 Pleated filter | | 1,2 |
| VariCel RF SH 12" Filter | AAF | 3011079-001 | 24x24x12 MERV 15 | | Interp. |
| | | 3011079-004 | 24x12x12 MERV 15 | | Interp. |
| | | 3011079-009 | 24x24x12 MERV 12 | | Interp. |
| | | 3011079-012 | 24x12x12 MERV 12 | | Interp. |
| | | 3011079-013 | 24x24x12 MERV 11 | | Interp. |
| | | 3011079-016 | 24x12x12 MERV 11 | | Interp. |
| | | 3011079-008 | 24x12x12 MERV 14 | | 1 |
| | | 3011079-005 | 24x24x12 MERV 14 | | 2 |
| VariSorb XL 12" Filter | AAF | 3039567-001 | 24x12x12 | | 2 |
| | | 3039567-002 | 24x24x12 | | 1,2 |
| AstroCel 1 12" HEPA | AAF | HCX212x24 | 12x24x11.5 | | 2 |
| | | HCX24x24 | 24x24x11.5 | | 1,2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

TRU COMPLIANCE

***Manufacturer:*** Carrier
***Model Line:*** 39CC

***Table Description:*** Humidifiers

**TABLE 11**

***Building Code: CBC 2016***

***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0 $I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| Humidifier (Nortec Sam-E) | Vertical | 9.1 | 45 | 45 | 42 | SS Rack; SS tubes; SS header | Tube qty: 9; Spacing: 3" | 1 |
| | | ... | | | | | | Interp. |
| | | 9.1 | 130 | 100 | 136 | SS Rack; SS Tubes; SS Header | Tube qty: 12; Spacing: 12" | 2 |

# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

**Manufacturer:** Carrier
**Model Line:** 39CC
**Table Description:** Louvers

**TABLE 12**

**Building Code: CBC 2016**
**Seismic Certification Limits:** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0
$I_P$ = 1.5

| Model Line (Manufacturer) | Model | Dimension (in) | | | Weight (lb) | Material | Notes | UUT |
|---|---|---|---|---|---|---|---|---|
| | | Depth | Width | Height | | | | |
| Louver-horizontal (Ruskin) | EME3625 | 3 | 60 | 60 | 125 | Aluminum | | 2 |
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# SPECIAL SEISMIC CERTIFICATION
# CERTIFIED SUBCOMPONENT MATRIX

## TRU PROJECT NO. 16022

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Table Description:*** UV Lights

**TABLE 13**

***Building Code: CBC 2016***
***Seismic Certification Limits:*** $S_{DS}$ = 2.0 g z/h = 1.0; $S_{DS}$ = 3.2 g z/h = 0.0
$I_P$ = 1.5

| Component Type | Manufacturer | Model | Description | Notes | UUT |
|---|---|---|---|---|---|
| Lamps | UV Resources | SEL-33-HO-EL-T5 | 33" Single end - HO Encapsulamp | | 1 |
| | | SEL-61-HO-EL-T5 | 61" Single end - HO Encapsulamp | | 2 |
| Loom Kit | UV Resources | RLM-20-LOOM-KIT-LH | 20' Plenum rated wire w/lampholder | | 1,2 |
| LampHolster | UV Resources | RLM-DLH-EB | Dual LampHolster - Extended base | | 1,2 |
| Switches | UV Resources | UVR-120-277V ISS | Access interlock safety switch 120-277V | | 1,2 |
| | | UVR-WP-TS | Waterproof UV lamp toggle switch | | 1,2 |
| Enclosures | UV Resources | RLM-X-Box 2P | 120-277V NEMA 2 enclosure w/CU2 | | 1,2 |
| | | RLM-X-Box 4P | 120-277V NEMA 2 enclosure w/CU2 | | 1,2 |
| | | RLM-X-Box 6P | 120-277V NEMA 2 enclosure w/CU2 | | 1,2 |
| Monitor | UV Resources | CU2 | Lamp/Ballast sensing monitor | | 1,2 |
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# UNIT UNDER TEST (UUT) SUMMARY SHEET

## TRU PROJECT NO. 16022

**UUT 1**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Model Number:*** 39CCW ***Serial Number:*** N/A

***Product Construction Summary:***
Standard construction; 2" Panels; **Panel - Outer Skin**: 16 gauge Al; **Panel - Inner Skin**: 20 gauge Al; **Roof:** 16 gauge Al; **Insulation**: Foam

***Options/Subcomponent Summary:***
MPQN 300 Class II 1x1 fan array; Baldor 25 HP motor; Aerofin single stack hydronic coils; Aerofin single stack DX coils; ABB ACH550-VCR Variable Frequency Drive; Quatro Electrical Panel; TAMCO 1000SM aluminum damper w/ Belimo EFB-24-SR actuator; TAMCO 7000 aluminum damper; Nortec SAM-E vertical humidifier; UV Light assembly.
See tables 2-13 for a complete listing of included subcomponents.

***UUT Properties***

| Weight (lb) | Dimension (in) | | | Lowest Natural Frequency (Hz) | | |
|---|---|---|---|---|---|---|
| | Depth | Width | Height | Front-Back | Side-Side | Vertical |
| 5,900 | 209 | 66 | 65 | 21.4 | 21.5 | 12.7 |

***UUT Highest Passed Seismic Run Information***

| Building Code | Test Criteria | $S_{DS}$ (g) | z/h | $I_P$ | $A_{FLX-H}$ (g) | $A_{RIG-H}$ (g) | $A_{FLX-V}$ (g) | $A_{RIG-V}$ (g) |
|---|---|---|---|---|---|---|---|---|
| CBC 2016 | ICC-ES AC156 | 2.0 g | 1.0 | 1.5 | 3.2 | 2.4 | 2.13 | 0.85 |
| | | 3.2 g | 0.0 | 1.5 | | | | |

***Test Mounting Details:***


The unit was mounted using (14) 1/2" diameter SAE Grade 8 bolts around the perimeter of the base flange.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

## TRU PROJECT NO. 16022

**UUT 2**

***Manufacturer:*** Carrier
***Model Line:*** 39CC
***Model Number:*** 39CCM ***Serial Number:*** N/A

***Product Construction Summary:***
Standard construction; 2" Panels; **Panel - Outer Skin**: 16 gauge Al; **Panel - Inner Skin**: 20 gauge Al; **Roof:** 16 gauge Al; **Insulation**: Foam

***Options/Subcomponent Summary:***
MPQN 222 Class III 2x3 fan array; Baldor 50 HP motor; Aerofin double stack hydronic coils; Aerofin double stack DX coils; ABB ACH550-BCR Variable Frequency Drive; Quatro Electrical Panel; TAMCO 1000SM aluminum damper w/ Belimo EFB-24-SR actuator; TAMCO 9000 aluminum damper w/Belimo AF series actuator; Nortec SAM-E vertical humidifier; UV Light assembly. See tables 2-13 for a complete listing of included subcomponents.

***UUT Properties***

| Weight (lb) | Dimension (in) | | | Lowest Natural Frequency (Hz) | | |
|---|---|---|---|---|---|---|
| | Depth | Width | Height | Front-Back | Side-Side | Vertical |
| 23,200 | 227 | 175.5 | 116.6 | 11.7 | 12.3 | 15.7 |

***UUT Highest Passed Seismic Run Information***

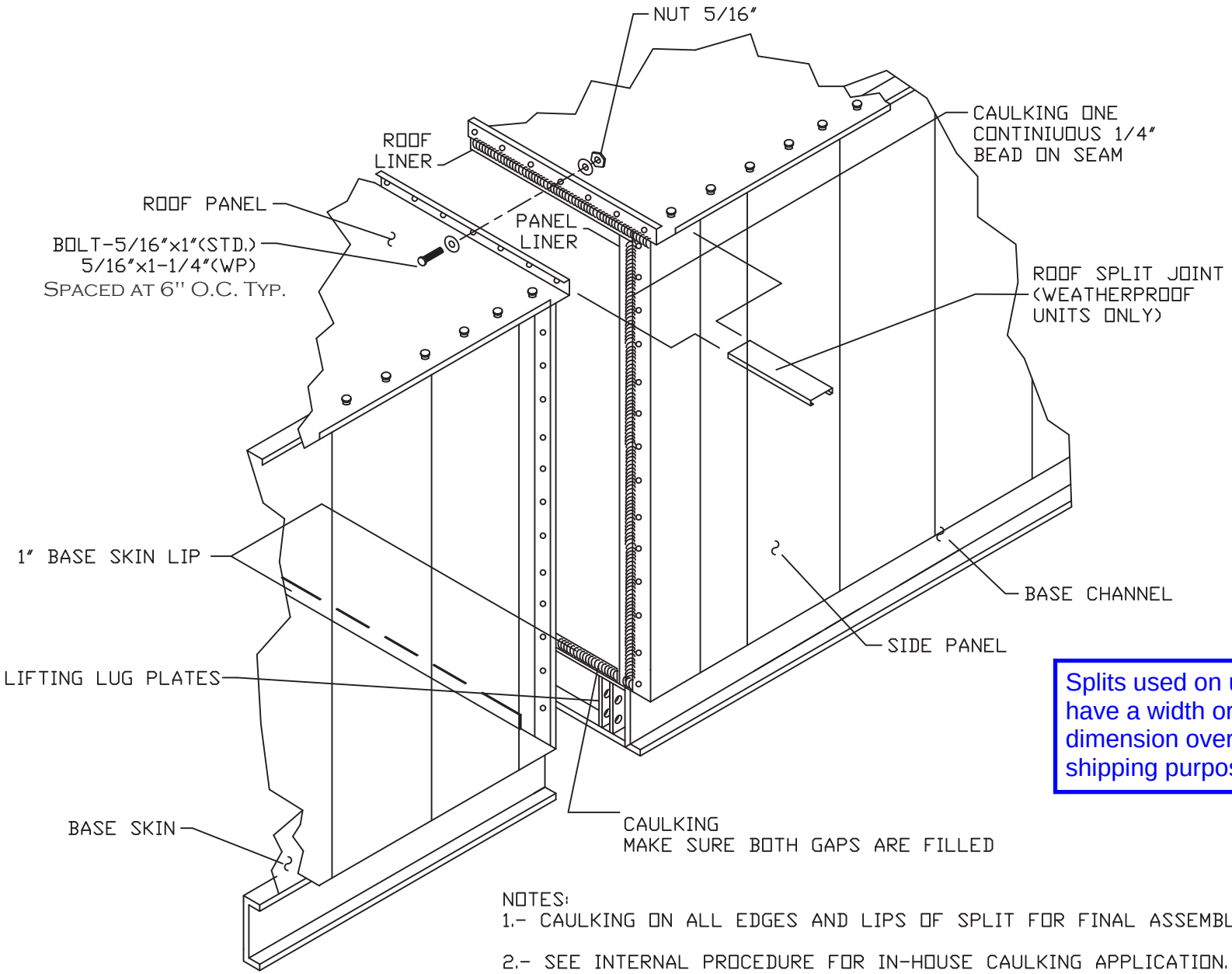
| Building Code | Test Criteria | $S_{DS}$ (g) | z/h | $I_P$ | $A_{FLX-H}$ (g) | $A_{RIG-H}$ (g) | $A_{FLX-V}$ (g) | $A_{RIG-V}$ (g) |
|---|---|---|---|---|---|---|---|---|
| CBC 2016 | ICC-ES AC156 | 2.0 g | 1.0 | 1.5 | 3.2 | 2.4 | 2.13 | 0.85 |
| | | 3.2 g | 0.0 | 1.5 | | | | |

***Test Mounting Details:***

The unit was mounted using (24) 3/4" diameter SAE Grade 8 bolts around the perimeter of the base flange.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.

# UNIT CONSTRUCTION

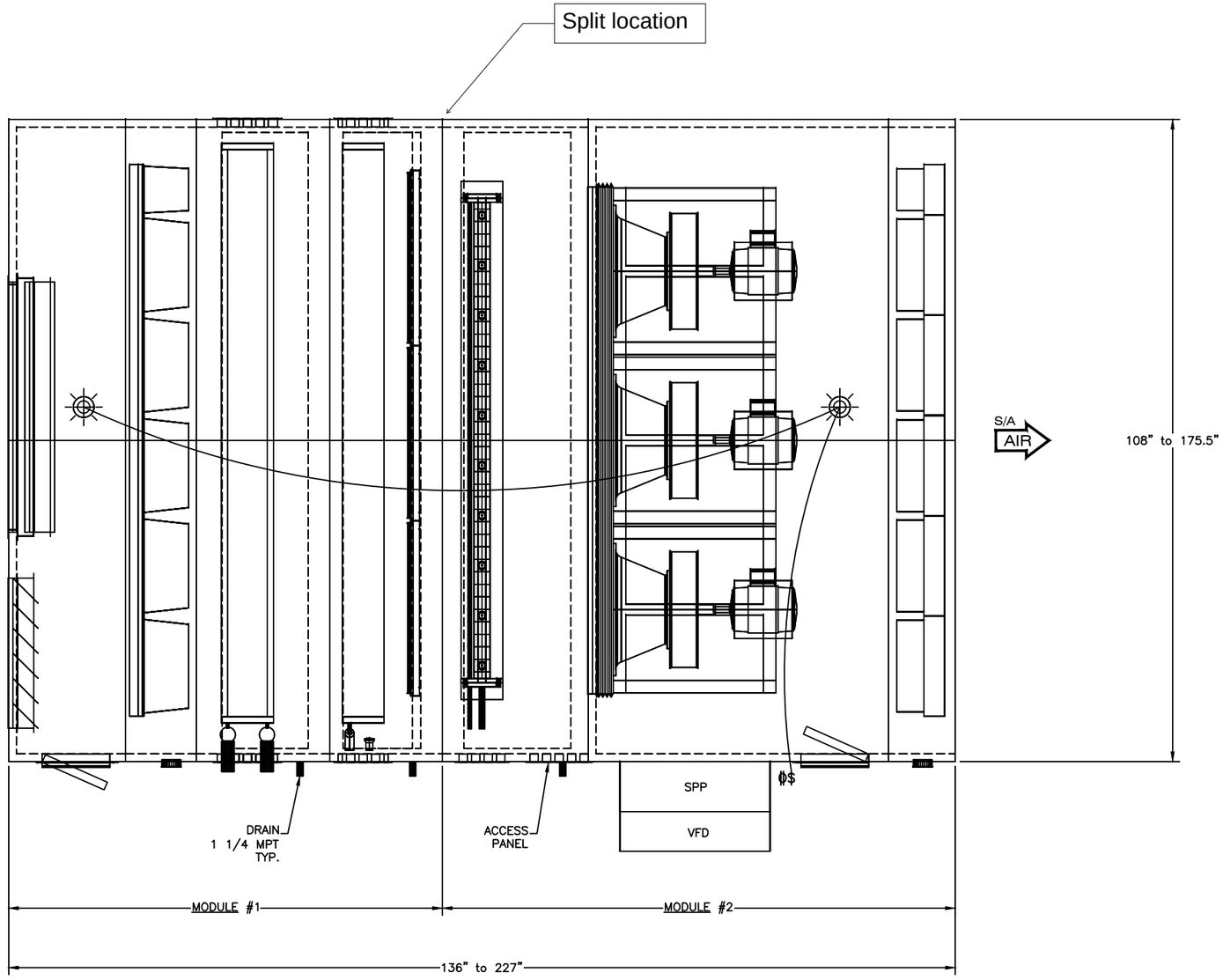
## Split Detail




Splits used on units that have a width or depth dimension over 108" for shipping purposes.

NOTES:
1.- CAULKING ON ALL EDGES AND LIPS OF SPLIT FOR FINAL ASSEMBLY.

2.- SEE INTERNAL PROCEDURE FOR IN-HOUSE CAULKING APPLICATION.

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|---|---|---|---|
| PROJECT/PROJET NAME: | SEISMIC TEST UNIT | | |
| PROJECT/PROJET N°: Q37229 | | CUSTOMER/CLIENT : | |
| MODEL/MODÈLE: 39CCW | | SYSTEM/SYSTÈME : AHU_OUTDOOR | CFM: 16,000-45,000 |
| ENGINEER/INGÉNIEUR: | | AGENT: | |
| DRAFTER/DESSINATEUR: Salem B. | DATE: 16-DEC-16 | | |
| CHEKED BY/VÉRIFIÉ PAR: | APPROBATION: | | |
| SCALE/ÉCHELLE: 3/8"=1'-0" | REV/RÉV : 00 | | |
| DRAWING/DESSIN N°: Q-37229 (AHU_OUTDOOR) | SHEET : 3/3 | | |

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