

# OMEGA 18 SEER Ducted Inverter System

## SUBMITTAL DATA

**208-230V/1/60Hz**

Job: Sweet Briar- 5th Floor  
Location: Trinidad  
Schedule No.: 221014  
System Designation: 1 to 1

Engineer: \_\_\_\_\_  
Architect: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date: 10/28/22  
For  Reference  Approval  Review  Construction

### FEATURES

- DC Inverter Compressor.
- ETL& AHRI Listed.
- 24V Control(Thermostat not Included).
- R410A Refrigerant.
- AHU ECM Fan Motor w/3 Speed.
- Wide Operation Range.



1-IDU Specs

**IDU IEUC Series**



| Model                                     |                                | IEUC824N0A<br>-GNI070A                   | IEUC836N0A<br>-GNI105A                     | IEUC848N0A<br>-GNI140A    | IEUC860N0A<br>-GNI170A    |           |
|---|--------------------------------|--|--|---------------------------|---------------------------|-----------|
| Power supply                              |                                | V/Ph/H<br>z<br>208-<br>230V/1PH/60H<br>z | 208-<br>230V/1PH/60Hz                      | 208-<br>230V/1PH/60H<br>z | 208-<br>230V/1PH/60H<br>z |           |
| Cooling                                   | Capacity                       | Btu/h                                    | 24000                                      | 36000                     | 47000                     | 56000     |
|   | SEER                           | Btu/h.<br>W                              | 18   | 18                        | 18                        | 18        |
| Indoor coil                               | Number of rows                 |  | 4×2  | 4×2                       | 5×2                       | 5×2       |
|   | Tube outside dia. / Type       |  | 7mm / Rifled tube                          |                           |                           |           |
|   | Fin spacing / Thickness / Type | mm / mm                                  | 1.6 / 0.095 / Non-hydrophilic window slice |                           |                           |           |
|   | Tube pitch(a) × row pitch(b)   | mm                                       | 21 ×13.37                                  | 21 ×13.37                 | 21 ×13.37                 | 21 ×13.37 |
| Indoor motor                              | type                           |  | ECM  |                           |                           |           |
|   | Rated HP                       |  | 1/3  | 1/2                       | 3/4                       | 3/4       |
|   | Rated RPM                      | r/min                                    | 770  | 870                       | 1050                      | 1050      |
|   | FLA                            | A  | 2.8  | 4.1                       | 6.0                       | 6.0       |
| Indoor fan                                | material                       |  | Galvanized plate                           |                           |                           |           |
|   | Type                           |  | Centrifugal                                |                           |                           |           |
|   | Diameter                       | inch                                     | 11   | 11                        | 11                        | 11        |
|   | Height                         | inch                                     | 10-5/8                                     | 10-5/8                    | 10-5/8                    | 10-5/8    |
| Indoor air flow                           | CFM                            | 830                                      | 1100                                       | 1600                      | 1600                      |           |
| ESP                                       | Pa                             | 25                                       | 37.5                                       | 50                        | 50                        |           |
| Indoor noise level                        | dB(A)                          | 63                                       | 66   | 67                        | 68                        |           |
| Metering device                           | Throttle type                  |  | TXV  |                           |                           |           |
|   | Model number                   |  | 3TR  | 3TR                       | 5TR                       | 5TR       |
| Electrical Data                           | Voltage-Phase-Hz               | V-Ph-Hz                                  | 208/230V 1Ph 60Hz                          |                           |                           |           |
|   | Minimum Circuit Ampacity       | A  | 1.7  | 2                         | 5                         | 6         |
|   | Max. Overcurrent Protection    | A  | 22   | 25                        | 30                        | 30        |
|   | Min / Max Volts                | V  | 187 / 253                                  | 187 / 253                 | 187 / 253                 | 187 / 253 |
| Indoor unit                               | Dimension (W×H×D)              | mm                                       | 500×1162×560                               |                           | 560×1350×620              |           |
|   |                                | in.                                      | 19-2/3×45-3/4×22                           |                           | 22×53-1/8×24-1/2          |           |
|   | Packing (W×H×D)                | mm                                       | 580×1210×650                               |                           | 640×1390×710              |           |
|   |                                | in.                                      | 22-5/6×47-5/8×25-3/5                       |                           | 25-1/5×54-3/4×28          |           |
|   | Net / Gross weight             | kg                                       | 57 / 63                                    | 57 / 63                   | 77 / 85                   | 77 / 85   |
| lbs                                       |                                | 126 / 139                                | 126 / 139                                  | 170 / 188                 | 170 / 188                 |           |
| Refrigerant piping Liquid side / Gas side | in.                            | 3/8 / 3/4                                | 3/8 / 3/4                                  | 3/8 / 7/8                 | 3/8 / 7/8                 |           |

**Notes:**

1. Nominal cooling capacities are based on the following conditions:

Indoor temp: 27°C DB, 19°CWB; Outdoor temp: 35°C DB; Equivalent ref. piping: 5m (horizontal)

2. Actual noise level may differ, depending on the room structure, etc., since these noise values are from an anechoic room.

## 2-IDU DIMENSIONAL DRAWINGS

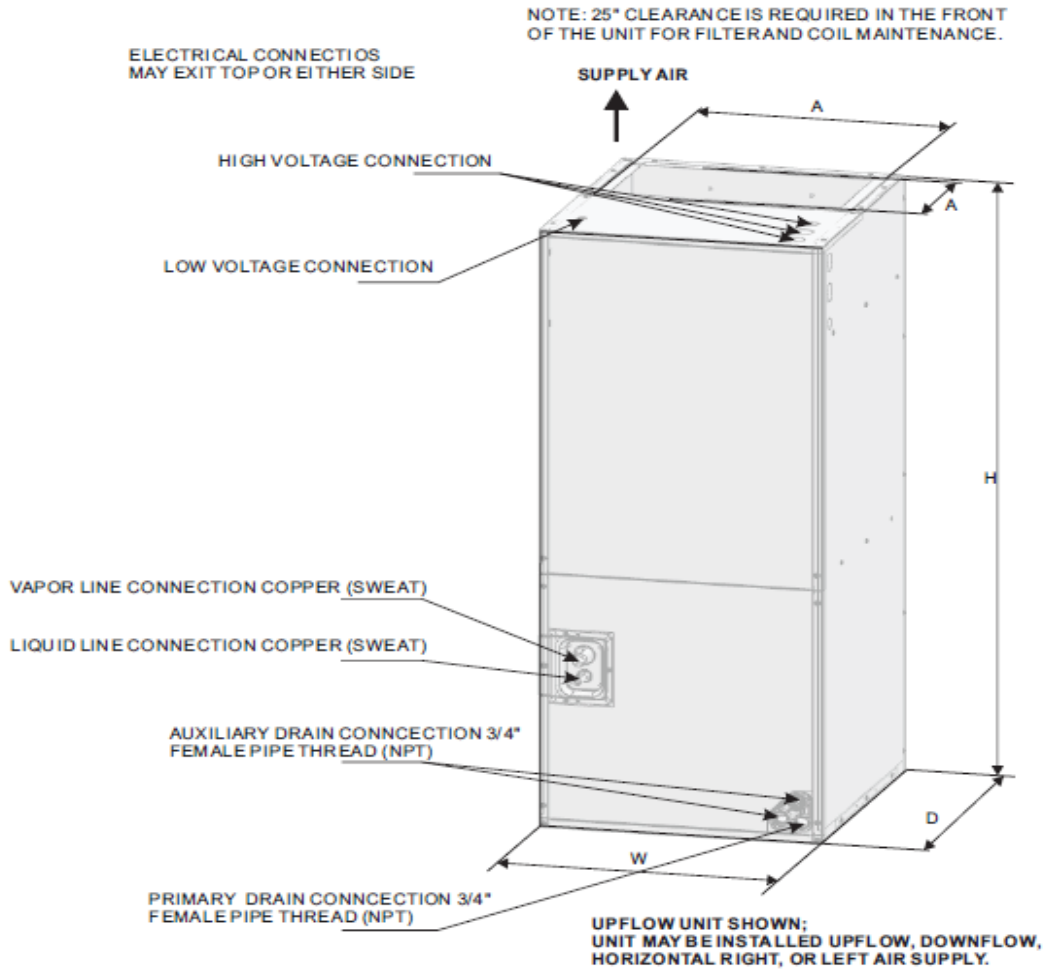
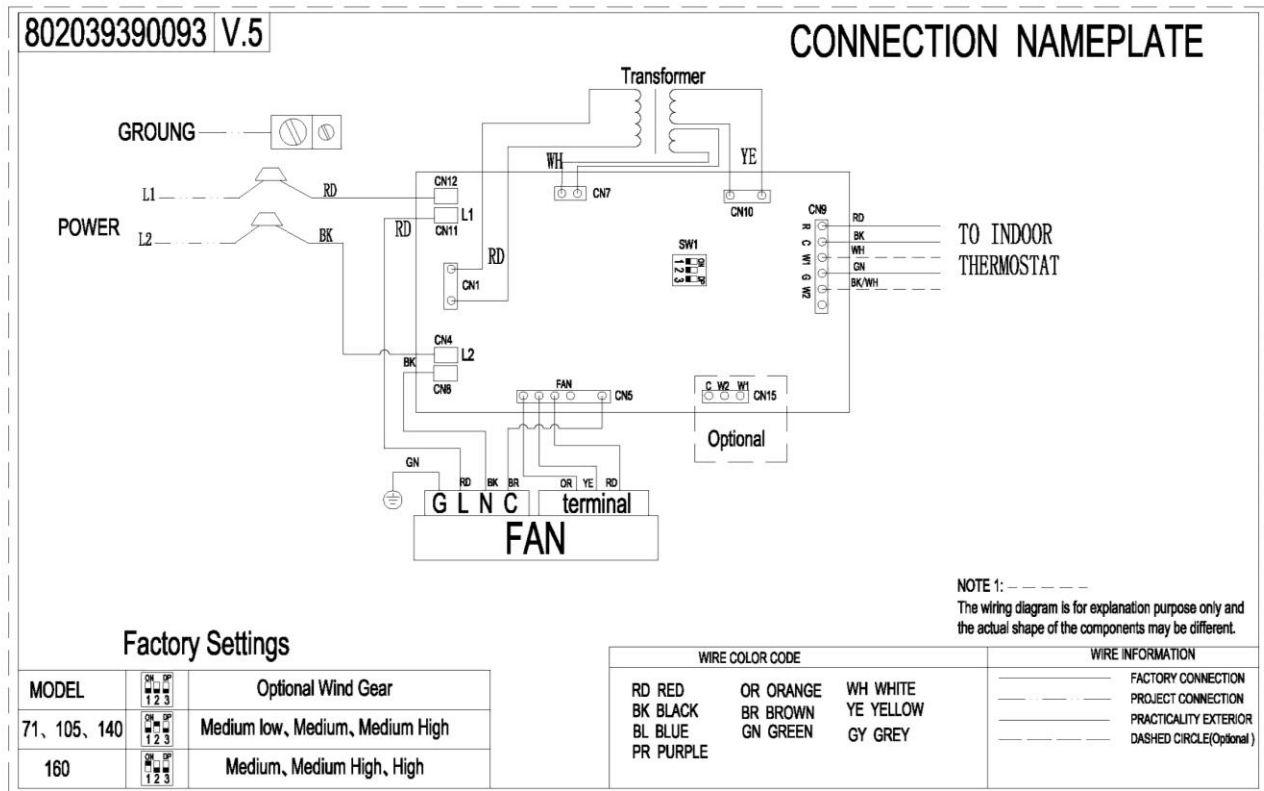


Fig.1 DIMENSIONS

| DIMENSIONAL DATA |                    |                   |                    |                    |                             |
|------------------|--------------------|-------------------|--------------------|--------------------|-----------------------------|
| MODEL SIZE       | Dimensions         |                   |                    |                    |                             |
|                  | UNIT HEIGHT "H"/in | UNIT WIDTH "W"/in | UNIT LENGTH "D"/in | SUPPLY DUCT "A"/in | LIQUID LINE / VAPOR LINE IN |
| 24K              | 45.75              | 19.68             | 22.05              | 454                | 3/8" / 3/4"                 |
| 36K              | 45.75              | 19.68             | 22.05              | 454                | 3/8" / 3/4"                 |
| 48K              | 53.15              | 22.05             | 24.53              | 496                | 3/8" / 7/8"                 |
| 60K              | 53.15              | 22.05             | 24.53              | 496                | 3/8" / 7/8"                 |

## 3-IDU WIRING DIAGRAM



## 1-ODU Specs

### ODU ICVC Series



| Model               |                              |          | ICVC824H2A-GTI070A | ICVC836H2A-GTI105A | ICVC848H0A-GMI140A | ICVC860H0A-GMI170A |
|---------------------|------------------------------|----------|--------------------|--------------------|--------------------|--------------------|
| Electrical Data     | Voltage-Phase-Hz             | V-Ph-Hz  | 208/230V-1Ph-60Hz  |                    |                    |                    |
|                     | Minimum Circuit Ampacity     | A        | 14                 | 19                 | 25                 | 29                 |
|                     | Max. Overcurrent Protection  | A        | 20                 | 30                 | 40                 | 50                 |
|                     | Min / Max Volts              | V        | 187 / 253          | 187 / 253          | 187 / 253          | 187 / 253          |
| Cooling             | Capacity                     | Btu/h    | 24000              | 34500              | 47000              | 56000              |
|                     | EER                          | Btu/h.W  | 11.6               | 11.6               | 11.6               | 10.8               |
|                     | SEER                         | Btu/h.W  | 17.5               | 17.5               | 17.5               | 17.5               |
| Heating             | Capacity                     | Btu/h    | 24000              | 34500              | 46500              | 55000              |
|                     | HSPF                         | Btu/h.W  | 9.5                | 9.0                | 9.5                | 9.5                |
| Compressor          | Model                        |          | ATM240D57UF<br>T   | ATM240D57UF<br>T   | MNB42FCKMC-<br>L   | MNB42FCKM<br>C-L   |
|                     | Brand                        |          | GMCC               | GMCC               | Mitsubishi         | Mitsubishi         |
|                     | Type                         |          | Twin-rotary<br>DC  | Twin-rotary<br>DC  | Twin-rotary<br>DC  | Twin-rotary<br>DC  |
|                     | Thermal protector            | uf       | internal           | internal           | internal           | internal           |
|                     | Rated Capacity               | W/h      | 7190±3%            | 7190±3%            | 13780±5%           | 13780±5%           |
|                     | Input                        | W        | 1935±3%            | 1935±3%            | 4040±5%            | 4040±5%            |
|                     | Rated inverter input current | A        | 8.85               | 8.85               | 11.80              | 11.80              |
|                     | Refrigerant oil              | ml       | 670                | 670                | 1400               | 1400               |
|                     | RLA                          |          | 13.5               | 18.5               | 27.2               | 27.2               |
| LRA                 |                              | 45       | 45                 | 58.1               | 58.1               |                    |
| Outdoor motor       | Model                        |          | YDK-110-8P2-<br>AL | YDK-110-8P2-<br>AL | DRN-310-200-<br>10 | DRN-310-200-<br>10 |
|                     | Brand                        |          | Lvzhi              | Lvzhi              | Panasonic          | Panasonic          |
|                     | Type                         |          | AC                 | AC                 | DC                 | DC                 |
|                     | Rated output power           | W        | 110                | 110                | 200                | 200                |
|                     | Capacitor                    | µF       | 6                  | 6                  | /                  | /                  |
|                     | Speed                        | rpm      | 850/610            | 850/610            | 1100               | 1100               |
|                     | FLA                          | A        | 0.9                | 0.9                | 2.5                | 2.5                |
| Outdoor Fan         | Material                     |          | Metal              |                    |                    |                    |
|                     | Type                         |          | Axial flow         |                    |                    |                    |
|                     | Diameter                     | In.      | 23.03              | 23.03              | 23.43              | 23.43              |
|                     | Height                       | In.      | 4.33               | 4.33               | 4.53               | 4.53               |
|                     | Air flow                     | CFM      | 2400               | 2950               | 4100               | 4100               |
| Outdoor coil        | Number of row                |          | 1                  | 2                  | 2                  | 2                  |
|                     | Tube outside dia             | mm (in.) | 7 (9/32)           | 7 (9/32)           | 7 (9/32)           | 7 (9/32)           |
| Outdoor noise level |                              | dB(A)    | 52-63              | 52-63              | 54-65              | 54-65              |
| Outdoor unit        | Dimension (W×H×D)            | mm       | 740×633×740        |                    | 740×835×740        |                    |
|                     |                              | inch     | 29.13x24.92x29.13  |                    | 29.13x32.87x29.13  |                    |

## 1-ODU Specs

### ODU ICVC Series Continuation....

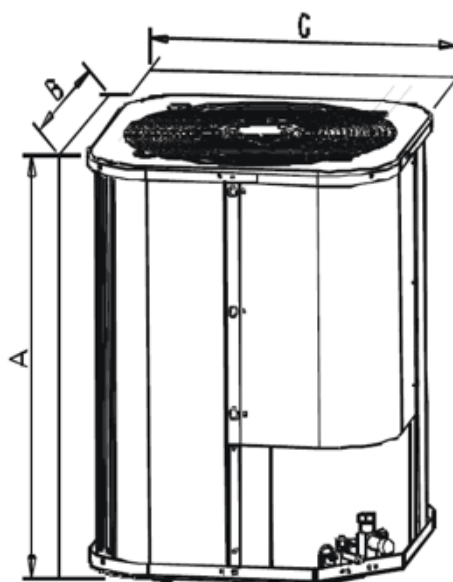


|                              |                        |     |             |           |                |           |
|------------------------------|------------------------|-----|-------------|-----------|----------------|-----------|
| Outdoor unit                 | Packing (WxHxD)        | mm  | 760x660x760 |           | 760x875x760    |           |
|                              |                        | in. | 30x26x30    |           | 30/16x34-4/9x3 |           |
|                              | Net / Gross weight     | kg  | 71 / 75     | 71 / 75   | 91 / 96        | 91 / 96   |
|                              |                        | lbs | 157 / 165   | 157 / 165 | 201 / 211      | 201 / 211 |
| Refrigerant type             |                        |     | R410A       | R410A     | R410A          | R410A     |
| Refrigerant quantity         |                        | kg  | 3.35        | 3.35      | 4.85           | 4.85      |
| Refrigerant system           | Liquid side / Gas side | in. | 3/8 / 3/4   | 3/8 / 3/4 | 3/8 / 7/8      | 3/8 / 7/8 |
|                              | Factory charge R410A   | oz  | 114         | 114       | 166            | 166       |
|                              | Metering device        |     | EEV         | EEV       | EEV            | EEV       |
| Max. refrigerant pipe length |                        | m   | 30          | 30        | 30             | 30        |
|                              |                        | ft  | 100         | 100       | 100            | 100       |
| Max. difference in level     |                        | m   | 15          | 15        | 15             | 15        |
|                              |                        | ft  | 50          | 50        | 50             | 50        |
| Operating temperatures       |                        | °F  | 5-118       | 5-118     | 5-118          | 5-118     |

## 2-ODU DIMENSIONAL DRAWINGS

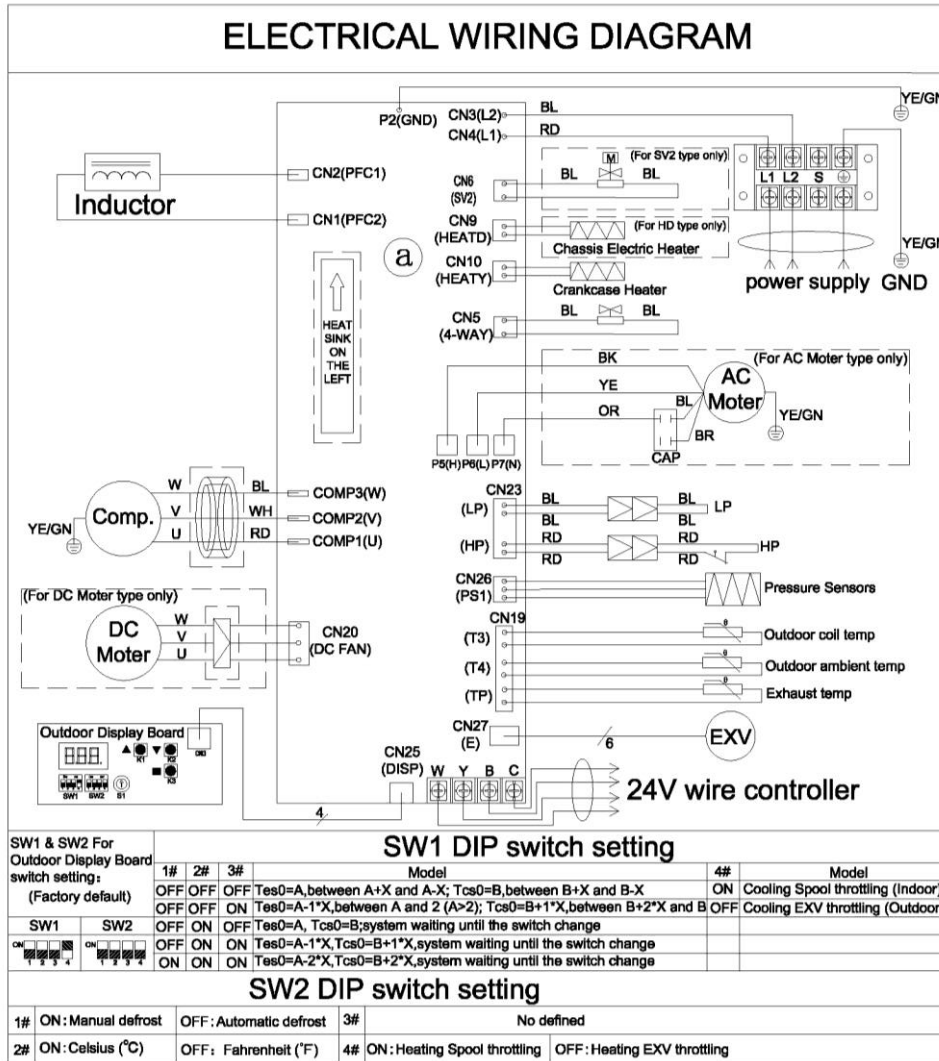
All dimensions are in mm. They are subject to change without notice. Certified dimensions will be provided upon request.

| Unit Model | Dimensions(mm) |     |     | Refrigerant Connection Line Size(mm) |    |          |    |
|------------|----------------|-----|-----|--------------------------------------|----|----------|----|
|            | A              | B   | C   | Liquid(Φ)                            |    | Vapor(Φ) |    |
|            |                |     |     | LF                                   | RF | LF       | RF |
| 24         | 633            | 740 | 740 | 9.52                                 |    | 19.05    |    |
| 36         | 633            | 740 | 740 |                                      |    | 19.05    |    |
| 48         | 843            | 740 | 740 |                                      |    | 22       |    |
| 60         | 843            | 740 | 740 |                                      |    | 22       |    |



NOTE: LF means cooling only model; RF means heat pump model.

## 3-ODU WIRING DIAGRAM



## 4-ODU ELECTRICAL TABLE

| Model | MCA  | MOCP |
|-------|------|------|
| 24K   | 14.0 | 20.0 |
| 36K   | 19.0 | 30.0 |
| 48K   | 25.0 | 40.0 |
| 60K   | 29.0 | 50.0 |

MCA: Min. Circuit Ampacity  
 MOCP: maximum current rating of overcurrent protection