

OMEGA MINI VRF HEAT PUMP

SUBMITTAL DATA

220~240V/1/50-60Hz

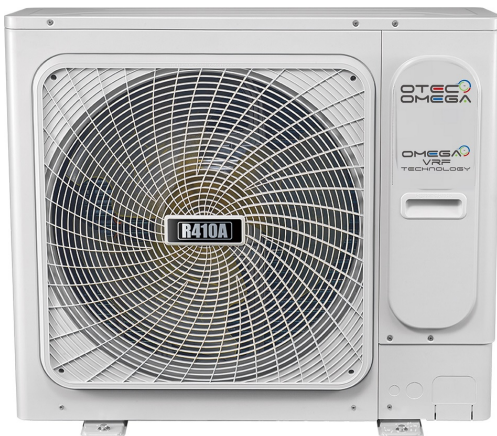
Job: _____
 Location: _____
 Schedule No.: _____
 System Designation: _____

Engineer: _____
 Architect: _____
 Date: _____
 For: Reference Approval Review Construction

FEATURES

- Anti-Corrosion Protection
- Precise Oil Control Technology
- Automatic Fault Detection
- Refrigerant-Cooled PCB Board
- Four-Direction Piping Connection
- Intelligent Soft Start

VNMC



VNSC



1. Specifications

VNMC Mini VRF Heat Pump

| Model | | | VNMC002Q0A-D04V080 | VNMC253Q0A-D06V100 | VNMC003Q0A-D07V120 |
|------------------------|-----------------------|---------------------|----------------------------|-------------------------|-------------------------|
| Power supply | | V-Ph-Hz | 220-240V~ 50/60Hz | 220-240V~ 50/60Hz | 220-240V~ 50/60Hz |
| Cooling | Capacity | kW | 8 | 10 | 12 |
| | Input | kW | 2 | 2.55 | 3.1 |
| | EER | kW/ KW | 4.00 | 3.92 | 3.87 |
| Heating | Capacity | kW | 9 | 12 | 14 |
| | Input | kW | 1.95 | 2.97 | 3.45 |
| | COP | kW/ kW | 4.62 | 4.04 | 4.06 |
| Compressor | Model | | KTM240D57UMT | KTM240D57UMT | ATF400D64UMT |
| | Type | | Rotary | Rotary | Rotary |
| | Brand | | GMCC | GMCC | GMCC |
| | Capacity | Btu/h | 26349 | 26349 | 41957 |
| | Input | W | 2085 | 2085 | 3365 |
| | Rated current(RLA) | A | 9.45 | 9.45 | 6.5 |
| | Crankcase | W | 20 | 20 | 25 |
| | Refrigerant oil | ml | RB74AF 670ml+0ml | RB74AF 670ml+200ml | RB74AF 1000ml+200ml |
| Outdoor fan motor | Model | | WZDK80-38G-W (A) | WZDK170-38G-1 | WZDK170-38G-1 |
| | Type | | DC motor | DC motor | DC motor |
| | Brand | | Welling/NIDEC | Welling/Panasonic/NIDEC | Welling/Panasonic/NIDEC |
| | Insulation class | | E | E | E |
| | Safe class | | IPX4 | IPX4 | IPX4 |
| | Input | W | 120 | 195 | 195 |
| | Output | W | 80 | 170 | 170 |
| | Rated current | A | 1 | 1.52 | 1.52 |
| | Speed | r/min | 900 | 800 | 800 |
| Outdoor air flow | | m3/h | 3700 | 5200 | 5000 |
| Outdoor sound level | | dB(A) | 54 | 54 | 56 |
| (sound pressure level) | | | | | |
| Outdoor Unit | Dimension(W x H x D) | mm | 910 x 712 x 345 | 950 x 840 x 360 | 950 x 840 x 360 |
| | Packing (W x H x D) | mm | 1045 x 800 x 485 | 1025 x 860 x 510 | 1025 x 860 x 510 |
| | Net/Gross weight | kg | 53/57.5 | 71.5/81 | 83/92 |
| Refrigerant | Type | | R410A | R410A | R410A |
| | Charged volume | g | 2200 | 2350 | 3000 |
| Throttle type | | | Electronic expansion valve | | |
| Design pressure | | MPa | 4.4/2.6 | | |
| Refrigerant piping | Liquid side/ Gas side | mm | Φ9.53/Φ15.9 | Φ9.53/Φ15.9 | Φ9.53/Φ15.9 |
| | Total Pipe | m | 50 | 65 | 65 |
| | Length(Actual) | | | | |
| | Outdoor unit up | Max. | 10m | 20m | 20m |
| | Outdoor unit down | difference in level | 10m | 20m | 20m |

1-Specifications

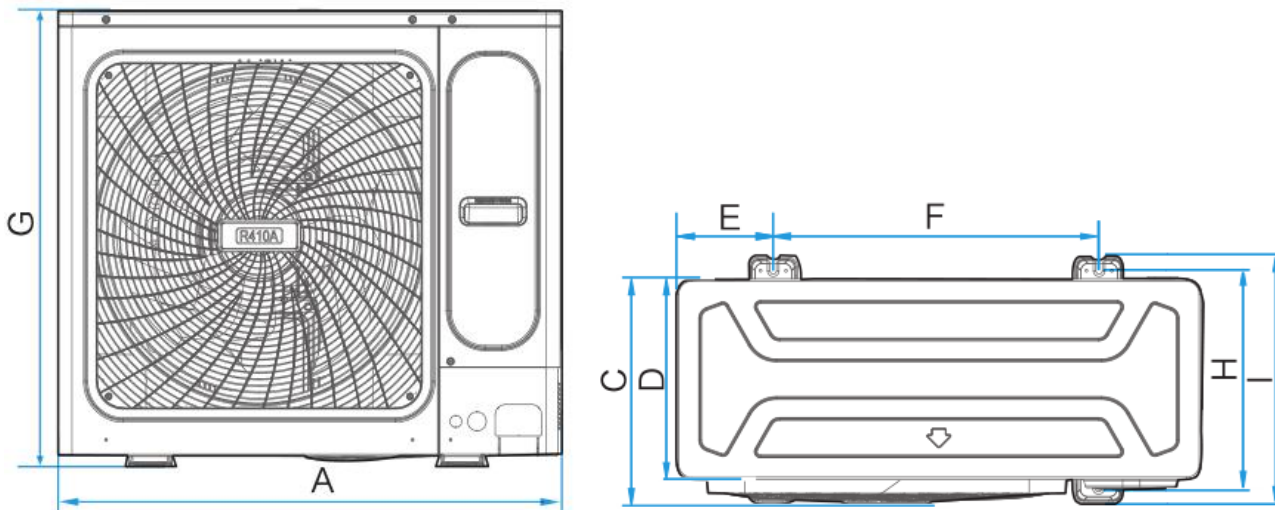
| | | | | | |
|-------------------|---------------|-----|---------------------------------|--------------------------------|--------------------------------|
| Connection wiring | Power wiring | mm2 | 3*4.0 | 3*4.0 | 3*6.0 |
| | Signal wiring | mm2 | 3 core shielded wire x 0.75 | 3 core shielded wire x 0.75 | 3 core shielded wire x 0.75 |
| Ambient temp | | °C | Cooling: -5~55, Heating: -15~27 | | |

Notes:

1. The cooling conditions: indoor temp: 27°CDB (80.6°F), 19°CWB (66.2°F) outdoor temp: 35°CDB (95°F) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp: 20°CDB (68°F), 15°CWB (44.6°F) outdoor temp: 7°CDB (42.8°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of *m(1m for 80/105 model, 1.2m for 120~160 model). During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

VNMC Mini VRF Heat Pump

2 Dimensinal Drawings - (MM)



| Model | A | B | C | D | E | F | G | H | I |
|-------------|------|------|-----|-----|-----|-----|-----|-----|-----|
| VNMC002 | 910 | 982 | 390 | 345 | 120 | 663 | 712 | 375 | 426 |
| VNMC253~003 | 950 | / | 406 | 360 | 175 | 590 | 840 | 390 | 440 |
| VNCS004~345 | 1040 | 1053 | 452 | 410 | 191 | 656 | 865 | 463 | 523 |

1. Specifications

VNCS Mini VRF Heat Pump

| Model | | | VNCS004Q0A-D08V140 | VNCS345Q0A-D09V160 |
|--|----------------------|---------|----------------------------|-------------------------|
| Power supply | | V-Ph-Hz | 220-240V~ 50/60Hz | 220-240V~ 50/60Hz |
| Cooling | Capacity | kW | 14 | 15.5 |
| | Input | kW | 3.75 | 4.8 |
| | EER | kW/ KW | 3.73 | 3.23 |
| Heating | Capacity | kW | 16 | 18 |
| | Input | kW | 3.85 | 4.65 |
| | COP | kW/ kW | 4.16 | 3.87 |
| Compressor | Model | | ATF400D64UMV | ATF400D64UMV |
| | Type | | Rotary | Rotary |
| | Brand | | GMCC | GMCC |
| | Capacity | Btu/h | 41957 | 41957 |
| | Input | W | 3365 | 3365 |
| | Rated current(RLA) | A | 6.5 | 6.5 |
| | Crankcase | W | 25 | 25 |
| | Refrigerant oil | ml | RB74AF 1000ml+400ml | RB74AF 1000ml+500ml |
| Outdoor fan motor | Model | | WZDK170-38G-1 | WZDK170-38G-1 |
| | Type | | DC motor | DC motor |
| | Brand | | Welling/Panasonic/NIDEC | Welling/Panasonic/NIDEC |
| | Insulation class | | E | E |
| | Safe class | | IPX4 | IPX4 |
| | Input | W | 195 | 195 |
| | Output | W | 170 | 170 |
| | Rated current | A | 1.52 | 1.52 |
| | Speed | r/min | 800 | 800 |
| Outdoor air flow | | m3/h | 5400 | 5200 |
| Outdoor sound level (sound pressure level) | | dB(A) | 56 | 56 |
| Outdoor Unit | Dimension(W x H x D) | mm | 1040 x 865 x 410 | 1040 x 865 x 410 |
| | Packing (W x H x D) | mm | 1120 x 890 x 560 | 1120 x 890 x 560 |
| | Net/Gross weight | kg | 90.4/100.4 | 90.4/104.4 |
| Refrigerant | Type | | R410A | R410A |
| | Charged volume | g | 3400 | 3800 |
| Throttle type | | | Electronic expansion valve | |

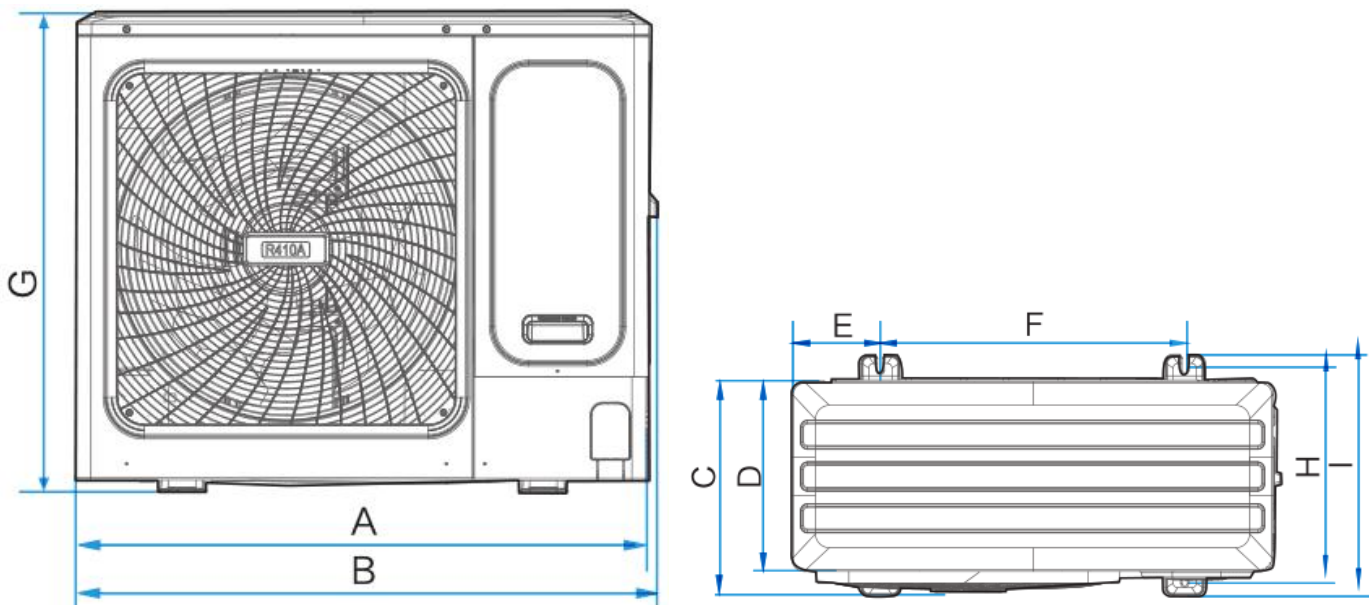
1 Specifications

| | | | | |
|--------------------|---------------------------|--------------------------|---------------------------------|-----------------------------|
| Design pressure | | MPa | 4.4/2.6 | |
| Refrigerant piping | Liquid side/ Gas side | mm | Φ9.53/Φ15.9 | Φ9.53/Φ15.9 |
| | Total Pipe Length(Actual) | m | 100 | 100 |
| | Outdoor unit up | Max. difference in level | 30m | 30m |
| | Outdoor unit down | | 20m | 20m |
| | Power wiring | mm ² | 3*6.0 | 3*6.0 |
| Connection wiring | Signal wiring | mm ² | 3 core shielded wire x 0.75 | 3 core shielded wire x 0.75 |
| | Ambient temp | °C | Cooling: -5~55, Heating: -15~27 | |

Notes:

1. The cooling conditions: indoor temp: 27°CDB (80.6°F), 19°CWB (66.2°F) outdoor temp: 35°CDB (95°F) equivalent pipe length: 5m drop length: 0m.
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3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of *m(1m for 80/105 model,1.2m for 120~160 model). During actual operation, these values are normally somewhat higher as a result of ambient conditions.
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2 Dimensinal Drawings - (MM)



| Model | A | B | C | D | E | F | G | H | I |
|-------------|------|------|-----|-----|-----|-----|-----|-----|-----|
| VNMC002 | 910 | 982 | 390 | 345 | 120 | 663 | 712 | 375 | 426 |
| VNMC253~003 | 950 | / | 406 | 360 | 175 | 590 | 840 | 390 | 440 |
| VNCS004~345 | 1040 | 1053 | 452 | 410 | 191 | 656 | 865 | 463 | 523 |

3. Electrical Characteristics

VNCS Mini VRF Heat Pump

Electrical Characteristics

Table Outdoor unit electrical characteristics

| Model | Power Supply ¹ | | | | | | | Compressor | | OFM | |
|---------------------------|---------------------------|---------|-------|-------|------------------|-------------------|------------------|------------------|------------------|------|------|
| | Hz | Volts | Min. | Max. | MCA ² | TOCA ³ | MFA ⁴ | MSC ⁵ | RLA ⁶ | kW | FLA |
| | | | volts | volts | | | | | | | |
| VNMC002Q0A-D04V080 | 50/60Hz | 220-240 | 198 | 264 | 21.25 | 18.1A | 25A | Soft start | 9.45 | 0.08 | 1.0 |
| VNMC253Q0A-D06V100 | 50/60Hz | 220-240 | 198 | 264 | 28.75 | 24A | 32A | Soft start | 9.45 | 0.17 | 1.52 |
| VNMC003Q0A-D07V120 | 50/60Hz | 220-240 | 198 | 264 | 35 | 29A | 40A | Soft start | 6.5 | 0.17 | 1.52 |
| VNSC004Q0A-D08V140 | 50/60Hz | 220-240 | 198 | 264 | 40 | 33A | 40A | Soft start | 6.5 | 0.17 | 1.52 |
| VNSC345Q0A-D09V160 | 50/60Hz | 220-240 | 198 | 264 | 40 | 33A | 40A | Soft start | 6.5 | 0.17 | 1.52 |

Abbreviations:

MCA: Minimum Circuit Amps; TOCA: Total Over-current Amps; MFA: Maximum Fuse Amps; MSC: Maximum Starting Current (A); RLA: Rated Load Amps; FLA: Full Load Amps

Notes:

- Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits. Maximum allowable voltage variation between phases is 2%.
- Select wire size based on the value of MCA.
- TOCA indicates the total overcurrent amps value of each OC set.
- MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
- MSC indicates the maximum current on compressor start-up in amps.
- RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB.



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