

# VRF ULTIMA

# OMEGA VRF TECHNOLOGY

## INVERTER TECHNOLOGY EXPERT

Engineered to elevate efficiency and comfort .....  
..... to the next level!

## BCSF SERIES 208-230V/1/50-60 Hz (Full DC) MINI VRF Outdoor Unit With Anti-Corrosion Protection

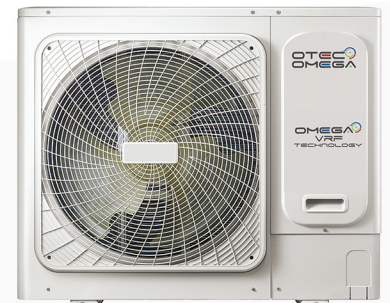
Cooling Capacity Min~Max: 13,650~70,970 BTU/h (4.0~20.8 kW)

### Product Features

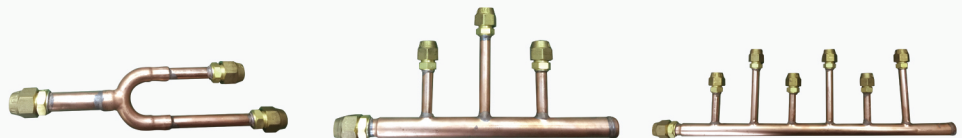
- ✓ Full DC Inverter Technologies.
- ✓ Full Flare Branch Pipe Kits (2 to 6 Ports).
- ✓ Up to 9 Indoor Units can be Connected.
- ✓ Non-polarity communication wiring.
- ✓ Factory-Tested up to 55°C/131°F Ambient.
- ✓ Ultra-Long Piping Runs Up to 330 ft.
- ✓ Automatic Address Setting .
- ✓ Small Installation Space.



9.0 - 14.0 kW



16.0, 19.0 kW



### Outdoor Unit Features

- ✓ Low-Noise Design with Single DC Fan Motor.
- ✓ Precise Oil Control Technology.
- ✓ Refrigerant-Cooled PCB Board.
- ✓ High-Efficiency Digital PFC Control.
- ✓ Wider Operation Condition Range.
- ✓ Compressor Oil Storage Technology.
- ✓ Four-Direction Piping Connection.
- ✓ Automatic Fault Detection.

### Anti-Corrosion Protection (\*\*)

- ✓ Anti-Corrosion Coating on the Casing.
- ✓ Anti-Corrosion BLUE FIN Condenser.
- ✓ Anti-Corrosion Coating on Motor Bracket.
- ✓ Anti-Corrosion Coating for Electronic Control Box.
- ✓ Dacromet-Coated Screws.
- ✓ Conformal PCB Coating for Corrosion Protection.

OMEGA



DC INVERTER

OTEC  
AIR CONDITIONING

A Product of  
**OMEGA**  
Environmental  
Technologies LLC.

ISO 14001 ISO 9001

Notes:  
Design, specifications and model numbers listed is subject to change without notice.  
Certifications and emblems shown are applicable to selected models only. Please contact Omega for details.

www.omegavrf.com



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### BCSF SERIES 208-230V/1/50-60 Hz (Full DC) MINI VRF Outdoor Unit With Anti-Corrosion Protection Cooling Capacity Min~Max: 13,650~70,970 BTU/h (4.0~20.8 kW)

#### VRF Outdoor Unit

| MODEL NO.   | BCSF  | 030N0A4-<br>DTM090                  | 040N0A6-<br>DTM115 | 050N0A7-<br>DTM140 | 060N0A8-<br>DTM160 | 070N0A9-<br>DTM190 |
|---|---|-------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Nominal System Cooling with Indoor Unit Ratio @ 100% BTU/h (kW) |   | 30,708 (9.0)                        | 37,530 (11.0)      | 47,770 (14.0)      | 54,590 (16.0)      | 64,830 (19.0)      |
| EER @ 100% IDU  | BTU/h / W (W / W)                               | 14.9 (4.37)                         | 12.9 (3.78)        | 11.5 (3.37)        | 12.0 (3.52)        | 12.6 (3.69)        |
| System Maximum Cooling with Indoor Unit Ratio @ 100% BTU/h (kW) |   | 35,485 (10.4)                       | 44,355 (13.0)      | 53,230 (15.6)      | 62,100 (18.2)      | 70,970 (20.8)      |
| EER @ Max Cooling   | BTU/h / W (W / W)                               | 12.2 (3.58)                         | 12.8 (3.75)        | 11.2 (3.28)        | 11.7 (3.43)        | 12.3 (3.60)        |
| System Minimum Cooling with Indoor Unit Ratio @ 45% BTU/h (kW)  |   | 13,650 (4.0)                        | 17,060 (5.0)       | 20,470 (6.0)       | 23,885 (7.0)       | 27,295 (8.0)       |
| EER @ Minimum Cooling   | BTU/h / W (W / W)                               | 19.5 (5.72)                         | 20.1 (5.89)        | 18.0 (5.28)        | 18.8 (5.51)        | 19.6 (5.74)        |
| Maximum Indoor Units Connectable per Module                     |   | 4                                   | 5                  | 6                  | 8                  | 9                  |
| Coil Type   | Grooved Cooper Tubes - Hydrophilic Aluminum Fin |                                     |                    |                    |                    |                    |
| DC Fan Motor  | Type  | Axial Fan - Direct Drive            |                    |                    |                    |                    |
|   | Qty   | 1                                   | 1                  | 1                  | 1                  | 1                  |
|   | Motor (FLA) each                                | 1.0                                 | 1.0                | 1.0                | 1.7                | 1.7                |
|   | Air Flow CFM (m³/hr) (Hi)                       | 2000 (3,400)                        | 2000 (3,400)       | 2000 (3,400)       | 3000 (5,100)       | 3000 (5,100)       |
|   | Noise Level Hi (dBa)                            | 54                                  | 54                 | 54                 | 55                 | 55                 |
| Electrical  | Voltage-Phase                                   | 208-230V - 1Ph                      |                    |                    |                    |                    |
|   | Frequency                                       | N/A - 3D                            |                    |                    |                    |                    |
|   | Rated Input / Cooling (kW)                      | 1.94                                | 2.35               | 3.18               | 3.54               | 3.86               |
|   | Rated Current / Cooling (A)                     | 9.3                                 | 11.3               | 15.3               | 17.0               | 18.6               |
|   | Crankcase Heater (W)                            | 25                                  | 25                 | 25                 | 25                 | 25                 |
|   | Compressor Power Input (W)                      | 1760                                | 2170               | 3000               | 3140               | 3460               |
|   | Minimum Circuit Amps (MCA)                      | 23.0                                | 23.0               | 23.0               | 33.0               | 33.0               |
|   | Maximum Fuse Amps (MOCP)                        | 30                                  | 30                 | 30                 | 40                 | 40                 |
| Refrigerant Charge R410A (oz / kgs)                             |   | 49.3 / 1.40                         | 49.3 / 1.40        | 49.3 / 1.40        | 91.6 / 2.60        | 91.6 / 2.60        |
| Refrigerant Connections inches (mm)                             | Type  | Branch Header                       |                    |                    |                    |                    |
|   | Liquid  | 3/8 (9.52)                          | 3/8 (9.52)         | 3/8 (9.52)         | 3/8 (9.52)         | 3/8 (9.52)         |
|   | Suction   | 5/8 (15.9)                          | 5/8 (15.9)         | 5/8 (15.9)         | 5/8 (15.9)         | 5/8 (15.9)         |
| Farthest Indoor Pipe Length ft (m)                              |   | 195 (60)                            |                    |                    |                    |                    |
| Maximum Total Pipe Length ft (m)                                |   | 330 (100)                           |                    |                    |                    |                    |
| Height Difference between IDU & ODU ft (m)                      |   | 98.4 (30) & 65.6 (20) see note (5*) |                    |                    |                    |                    |
| Dimensions inches (mm)  | Height  | 34 (862)                            | 34 (862)           | 34 (862)           | 34 1/8 (865)       | 34 1/8 (865)       |
|   | Width   | 38 3/4 (973)                        | 38 3/4 (973)       | 38 3/4 (973)       | 41 (1040)          | 41 (1040)          |
|   | Depth   | 14 (355)                            | 14 (355)           | 14 (355)           | 20 5/8 (523)       | 20 5/8 (523)       |
| Net Weight Lbs (kgs)  |   | 127.9 (58.0)                        | 127.9 (58.0)       | 127.9 (58.0)       | 187.4 (85.0)       | 187.4 (85.0)       |

#### Applicable Indoor Units



BECW



BEWM



BECM



BECS



BE (LP-MP)



BEHP



Wired Controller VAECR-R001 (Standard)



Deluxe Wired Controller VAECD-D001 (Optional)



Centralized Controller VAECG-D064T (Optional)



Wireless Controller VAEWR-R001 (Standard)



Wireless Controller VAEWD-D001 (Optional)



Sweat Branch Pipe Kit

- Notes:**
- Nominal capacities are based on ARI standards 210/240-89, air entering the indoor coil operating at high fan speed for 220V-240V setting. Cooling: 80/67° F (27/19° C) DB/WB indoor & 95° F (35° C) outdoor ambient temperature.
  - EER figures are estimate subject to indoor units installed.
  - Refrigerant metering device is installed at the indoor unit as standard.
  - Flare fittings are provided as standard.

- Insulation of both liquid and suction line is required (Heat Pump Model).
  - ODU's installed above IDU's 98 ft (30m) & ODU's installed below IDU's 66 ft (20m).
  - Refer to individual indoor unit spec sheets for details.
  - For details of model number nomenclature, please refer to publication OMGNM-0921.
- (\*\*) Anti-Corrosion Protection is optional, please refer to sales representative for more information.

