OMEGA TECHNOLOGY

OTEC AIR CONDITIONING
The Art of Comfort

OMEGA MINI VRF ULTIMA

SUBMITTAL DATA

208~230V/1/50-60Hz

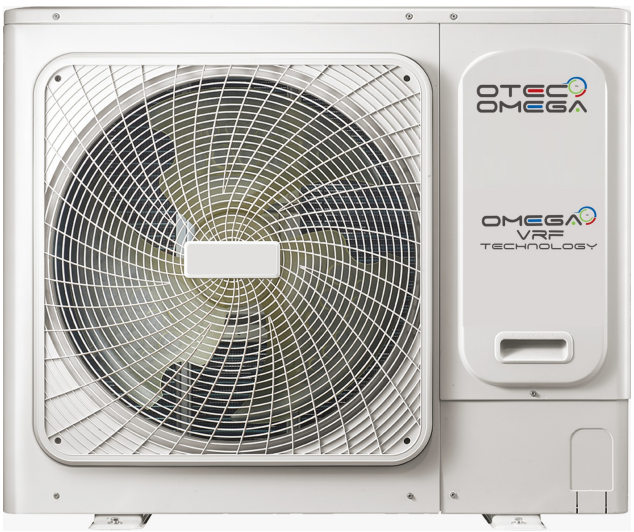
Job:	**Engineer:**
Location:	**Architect:**
Schedule No.:	**Date:**
System Designation:	**For:** Reference Approval Review Construction

FEATURES

- Anti-Corrosion Protection
- Refrigerant-Cooled PCB Board
- Welding Free Branch Piping
- Linear Capacity Match with IDU
- Automatic Fault Detection
- Intelligent Soft Start
- Cooling and Heating System
- Full DC Inverter Technology

Models: 15~50 Kbtu/h

Models: 60~80 Kbtu/h



1.Specifications

BCHB Mini VRF Ultima

Model			BCHB015Q0A3-DTM040	BCHB020Q0A3-DTM060	BCHB025Q0A3-DTM070
Power supply		V-Ph-Hz	208-230/1/ 50(60)		
Cooling[1]	Capacity	kBtu/h	12	18	21
		kW	3.5	5.3	6.2
	Input	kW	0.94	1.47	1.85
	EER	kW/ KW	3.71	3.6	3.35
Heating[2]	Capacity	kBtu/h	13	20	20.5
		kW	3.8	5.8	6.0
	Input	kW	0.88	1.35	1.41
	COP	kW/ kW	4.43	4.3	4.25
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity		
	Quantity		1~3	1~3	1~3
Compressor	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
	Oil type		RB74AF	RB74AF	RB74AF
Fan	Motor type		DC motor	DC motor	DC motor
	Quantity		1	1	1
	Output	W	65	65	65
Outdoor air flow		m3/h	2500	2700	2700
Sound pressure level[3]		dB(A)	53	54	55
Net dimensions (W×H×D)[4]		mm	795 x 555 x 365	795 x 555 x 365	795 x 555 x 365
Packed dimensions (W×H×D)		mm	915 x 610 x 420	915 x 610 x 420	915 x 610 x 420
Net weight		kg	35	35	35
Gross weight		kg	38.5	38.5	38.5
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	g	1450	1450	1450
	Throttle type		Electronic expansion valve		
Pipe connections	Liquid pipe	mm	Φ6.35	Φ6.35	Φ9.53
	Gas pipe	mm	Φ12.7	Φ12.7	Φ15.9
Ambient Temp. operation range	Cooling	ºC	-15~55[6]		
	Heating	ºC	-15~27		

Notes:

1. The cooling conditions: indoor temp: 27 ºC DB (80.6 ºF), 19 ºC WB (66.2 ºF) outdoor temp: 35 ºC DB (95 ºF) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp: 20 ºC DB (68 ºF), 15 ºC WB (44.6 ºF) outdoor temp.: 7 ºC DB (42.8 ºF) 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 1m for 28/26 model, 1.2m for 42 model. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. Diameters given are those of the unit's stop valves.
5. The above data may be changed without notice for future improvement on quality and performance.
6. When the cooling ambient temperature is below -5°C, the capacity of the IDU must be limited to at least 30% of the capacity of the the combined capacity of ODU.

Conversion Formulae:
kBtu/h = kW × 3.412;
in.W.G. = Pa × 0.004;
lbs. = kg × 2.2;
in. = mm / 25.4

1. Specifications

BCHB Mini VRF Ultima

Model			BCHB030Q0A4-DTM090	BCHB040Q0A6-DTM115	BCHB050Q0A7-DTM140
Power supply		V-Ph-Hz	208-230/1/ 50(60)		
Cooling[1]	Capacity	kBtu/h	27	34	42
		kW	8	10	12.3
	Input	kW	2.1	2.66	3.39
	EER	kW/ KW	3.81	3.76	3.63
Heating[2]	Capacity	kBtu/h	30	41	47
		kW	9	12	14
	Input	kW	2.04	3.15	3.64
	COP	kW/ kW	4.41	3.81	3.85
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity		
	Quantity		1~4	1~6	1~7
Compressor	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
	Oil type		RB74AF	VG74	VG74
Fan	Motor type		DC motor	DC motor	DC motor
	Quantity		1	1	1
	Output	W	80	80	170
Outdoor air flow		m3/h	3750	4000	5000
Sound pressure level[3]		dB(A)	54	54	56
Net dimensions (W×H×D)[4]		mm	910 x 712 x 426	910 x 712 x 426	950 x 840 x 440
Packed dimensions (W×H×D)		mm	1045 x 810 x 485	1045 x 810 x 485	1025 x950 x 510
Net weight		kg	49	52.5	62.5
Gross weight		kg	53	56.5	69.5
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	g	1700	2600	3200
	Throttle type		Electronic expansion valve		
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9
Ambient Temp. operation range	Cooling	ºC	-15~55[6]		
	Heating	ºC	-15~27		

Notes:

1. The cooling conditions: indoor temp: 27 ºC DB (80.6 ºF), 19 ºC WB (66.2 ºF) outdoor temp: 35 ºC DB (95 ºF) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp: 20 ºC DB (68 ºF), 15 ºC WB (44.6 ºF) outdoor temp.: 7 ºC DB (42.8 ºF) 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 1m for 28/26 model, 1.2m for 42 model. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. Diameters given are those of the unit's stop valves.
5. The above data may be changed without notice for future improvement on quality and performance.
6. When the cooling ambient temperature is below -5°C, the capacity of the IDU must be limited to at least 30% of the capacity of the the combined capacity of ODU.

Conversion Formulae:
kBtu/h = kW × 3.412;
in.W.G. = Pa × 0.004;
lbs. = kg × 2.2;
in. = mm / 25.4

1. Specifications

BCHB Mini VRF Ultima

Model			BCHB060Q0A8-DTM160	BCHB070Q0A9-DTM190	BCHB080Q0A9-DTM200
Power supply		V-Ph-Hz	208-230/1/ 50(60)		
Cooling[1]	Capacity	kBtu/h	47	52	59
		kW	14	15.5	17.5
	Input	kW	3.97	4.87	6.12
	EER	kW/ KW	3.53	3.18	2.86
Heating[2]	Capacity	kBtu/h	54	61	66
		kW	16	18	19.5
	Input	kW	3.98	4.82	5.57
	COP	kW/ kW	4.02	3.73	3.50
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity		
	Quantity		1~8	1~9	1~9
Compressor	Type		DC inverter	DC inverter	DC inverter
	Quantity		1	1	1
	Oil type		RB74AF	RB74AF	RB74AF
Fan	Motor type		DC motor	DC motor	DC motor
	Quantity		1	1	1
	Output	W	170	170	170
Outdoor air flow		m3/h	5200	5000	5300
Sound pressure level[3]		dB(A)	56	56	57
Net dimensions (W×H×D)[4]		mm	950 x 840 x 440	950 x 840 x 440	1040 x 865 x 523
Packed dimensions (W×H×D)		mm	1025 x950 x 510	1025 x950 x 510	1120 x 980 x 560
Net weight		kg	75	77.5	91
Gross weight		kg	82	84.5	99
Refrigerant	Type		R410A	R410A	R410A
	Factory charge	g	3100	3600	4600
	Throttle type		Electronic expansion valve		
Pipe connections	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53
	Gas pipe	mm	Φ15.9	Φ19.1	Φ19.1
Ambient Temp. operation range	Cooling	ºC	-15~55[6]		
	Heating	ºC	-15~27		

Notes:

1. The cooling conditions: indoor temp: 27 ºC DB (80.6 ºF), 19 ºC WB (66.2 ºF) outdoor temp: 35 ºC DB (95 ºF) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp: 20 ºC DB (68 ºF), 15 ºC WB (44.6 ºF) outdoor temp.: 7 ºC DB (42.8 ºF) 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 1m for 28/26 model, 1.2m for 42 model. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. Diameters given are those of the unit's stop valves.
5. The above data may be changed without notice for future improvement on quality and performance.
6. When the cooling ambient temperature is below -5°C, the capacity of the IDU must be limited to at least 30% of the capacity of the the combined capacity of ODU.

Conversion Formulae:
kBtu/h = kW × 3.412;
in.W.G. = Pa × 0.004;
lbs. = kg × 2.2;
in. = mm / 25.4

2 Dimensinal Drawings - (MM)

Figure 2-2.1: Model 12-21 Front view dimensions

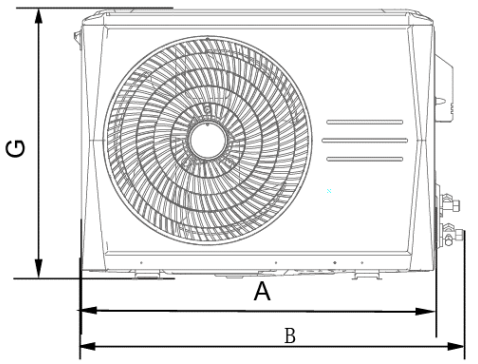


Figure 2-2.2: Model 12-21 Top view dimensions

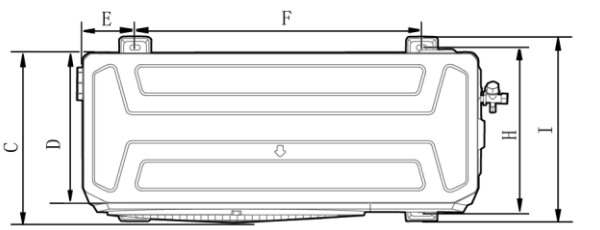


Figure 2-2.1: Model 28-36 Front view dimensions

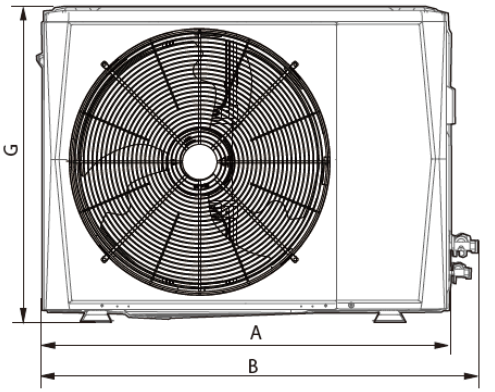


Figure 2-2.2: Model 28-36 Top view dimensions

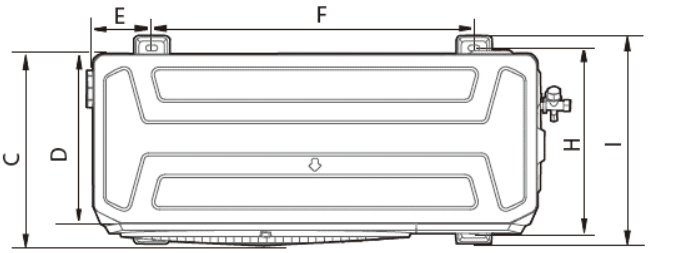
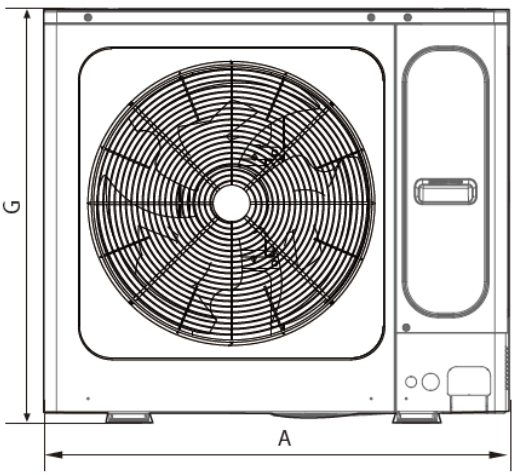


Figure 2-2.3: Model 42-56 Front view dimensions

Figure 2-2.4: Model 42-56 Top view dimensions



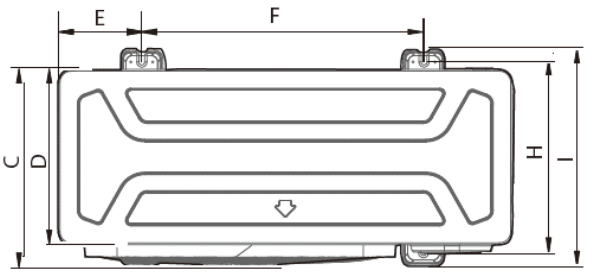
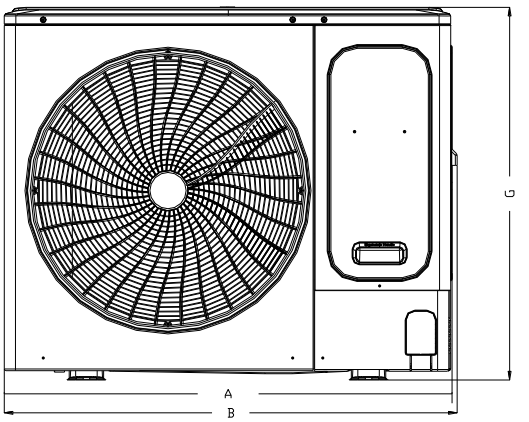
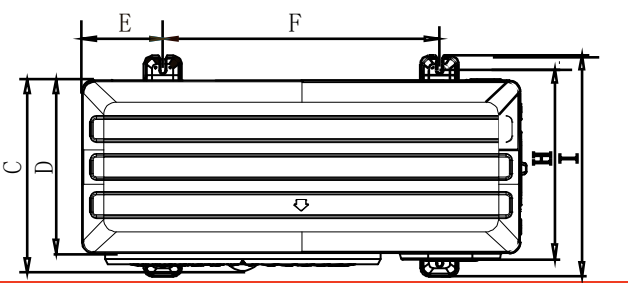


Figure 2-2.5: Model 60 Front view dimensions

Figure 2-2.6: Model 60 Top view dimensions





2 Dimensinal Drawings - (MM)

Model	A	B	C	D	E	F	G	H	I
12/18/21	795	845	330	287	125	514	555	340	365
28/36	910	982	390	345	120	663	712	375	426
42/48/56	950	/	406	360	175	590	840	390	440
60	1040	1053	452	410	191	656	865	463	523

Installation Space Requirements

Figure 2-3.1: Single unit installation top view (unit: mm)

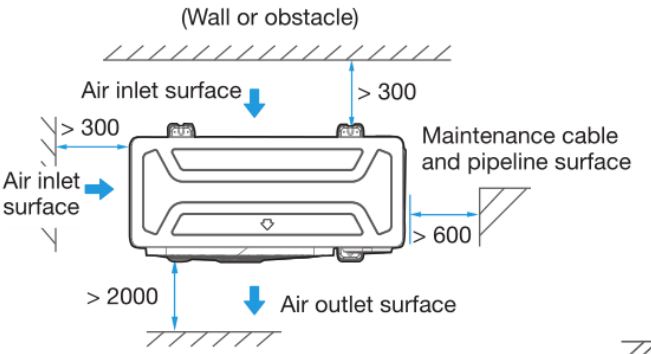


Figure 2-3.2: Single unit installation side view (unit: mm)

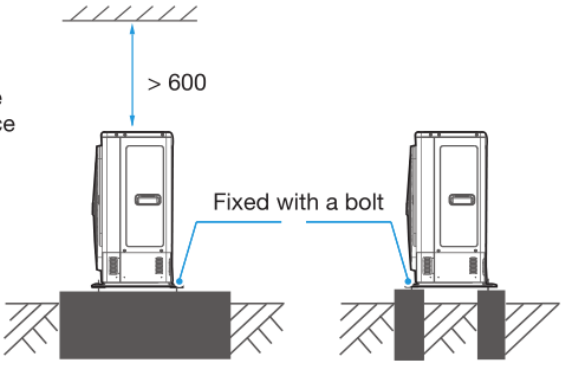


Figure 2-3.3: Multiple unit installation top view (unit: mm)

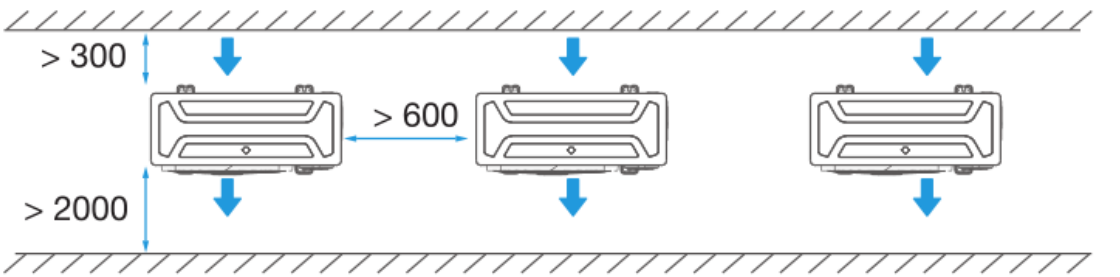
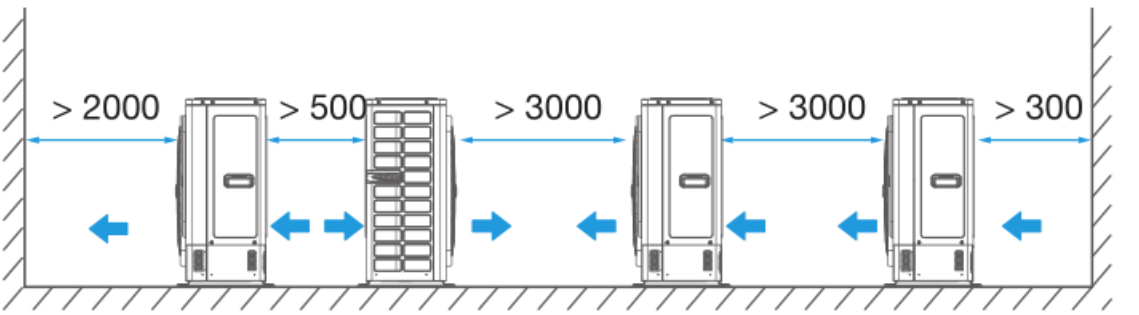


Figure 2-3.4: Multiple unit installation side view (unit: mm)



6 Electrical Characteristics

Table 2-6.1: Outdoor unit electrical characteristics

Model	Power Supply[1]							Compressor		OFM	
	Hz	Volts	Min. volts	Max. volts	MCA[2]	TOCA[3]	MFA[4]	MSC[5]	RLA[6]	kW	FLA
BCHB015Q0A3-DTM040	50/60Hz	220-240	198	264	10	10	16	Soft start	8	0.08	0.53
BCHB020Q0A3-DTM060	50/60Hz	220-240	198	264	16.3	15	20	Soft start	13	0.08	0.53
BCHB025Q0A3-DTM070	50/60Hz	220-240	198	264	16.3	15	20	Soft start	13	0.08	0.53
BCHB030Q0A4-DTM090	50/60Hz	220-240	198	264	21.25	18.1	25	Soft start	17	0.08	1.0
BCHB040Q0A6-DTM115	50/60Hz	220-240	198	264	28.75	24	32	Soft start	23	0.17	1.52
BCHB050Q0A7-DTM140	50/60Hz	220-240	198	264	35	29	40	Soft start	28	0.17	1.52
BCHB060Q0A8-DTM160	50/60Hz	220-240	198	264	40	33	40	Soft start	32	0.17	1.52
BCHB070Q0A9-DTM190	50/60Hz	220-240	198	264	40	33	40	Soft start	32	0.17	1.52
BCHB080Q0A9-DTM200	50/60Hz	220-240	198	264	40	33	40	Soft start	32	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:
1. 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%.
2. Select wire size based on the value of MCA.
3. TOCA indicates the total overcurrent amps value of each OC set.
4. MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
5. MSC indicates the maximum current on compressor start-up in amps.
6. RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB.

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