

VRF

FULL DC INVERTER

Carrier

turn to the experts 



improve

buildings

60HZ

DC Inverter Compressor

DC Inverter Compressor

All DC inverter high discharge compressors contribute to higher IPLV greatly. The highest IPLV is up to 5.8. With all DC inverter compressors, series offer a wide operation range from 20Hz to 200Hz.

Note: Only full inverter series outdoor unit use all DC inverter compressor.



Multi-EEV Control Technology

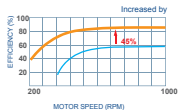


Multi-EEV Control Technology in one system, each EEV part achieves 480 pulse to adjust flow precisely. Ensure the temperature-controlling precisely and steadily to give a comfortable environment.

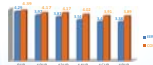
DC Fan Motor

Series adopt DC fan motor only.

Lowers running noise and reduces power consumption about 45% especially at low load.



* K series and Individual series use the DC fan motor +AC fan motor.

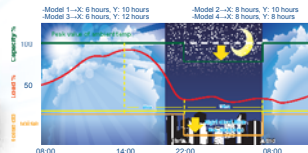


High Efficiency

Achieved the highest level for series has achieved the highest level for heating COP (4.39) and cooling EER (4.29) in the 8HP category.

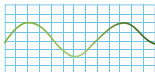
Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night. Super silent operation mode can reduce sound level further, minimum 45dB (A).



180° Sine Wave DC Inverter Control

Smooths the rotation of the motor, operation efficiency is improved sharply.



180° Sine Wave DC Inverter



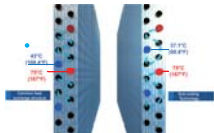
Five priority mode lock function

Heating priority mode, cooling priority mode, VIP priority or vote priority mode, heating only priority mode, cooling only priority mode.



High Efficient δ Structure Heat Exchanger

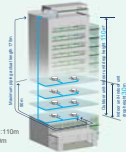
12 °C sub-cooling degree makes the cooling capacity increased efficiently. Thus, the total piping length becomes longer, reach up to 1000m.



Meanwhile, the innovative design makes heat exchanger high efficient and also simplifies the pipeline of outdoor unit to realize compact design and low weight.

Long Piping Length

Total pipe length can reach to 1000m.























*Level difference: outdoor unit is down:110m outdoor unit is up:70m

Auto addressing



Indoor Unit Lineup


Type	Model	18	22	28	36	45	56	71	80	90	100	112	125	140	160	200	250	280	400	450	560	
	(capacity *100w)																					
One-way cassette	 <small>Water pump is standard.</small>	▲	▲	▲	▲	▲	▲	▲														
Two-way cassette	 <small>Water pump is standard.</small>		▲	▲	▲	▲	▲	▲														
Compact four-way cassette	 <small>Water pump is standard.</small>		▲	▲	▲	▲																
Four-way cassette	 <small>Water pump is standard.</small>			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲							
Low Static Pressure Duct		▲	▲	▲	▲	▲	▲	▲	▲													
Medium Static Pressure Duct	 <small>Water pump is standard.</small>		▲ ^{e3}	▲ ^{e3}	▲ ^{e3}	▲ ^{e3}	▲ ^{e3}	▲ ^{e3}	▲ ^{e3}	▲	▲	▲	▲	▲	▲	▲	▲					
	 <small>(1 Type) Water pump is standard.</small>		▲ ^{e4}	▲ ^{e4}	▲ ^{e4}	▲ ^{e4}	▲ ^{e4}	▲ ^{e4}	▲ ^{e4}													
High Static Pressure Duct								▲	▲	▲		▲										
														▲	▲							
																▲	▲	▲				
																				▲ ^{e5}	▲ ^{e5}	▲ ^{e5}
Ceiling & Floor					▲	▲	▲	▲	▲	▲	▲		▲		▲	▲						
Wall-mounted S Type		▲	▲	▲	▲	▲	▲															
Wall-mounted C Type		▲	▲	▲	▲	▲	▲															
Wall-mounted R Type								▲	▲	▲												
Floor standing		▲	▲	▲	▲	▲	▲	▲	▲	▲												
		▲	▲	▲	▲	▲	▲	▲	▲	▲												
Console		▲	▲	▲	▲																	
Fresh Air processing unit													▲	▲								
																	▲	▲	▲			

*3: Models range 22-71 will shift to new structure slim AS.
























*4: These slim AS will be phased in to replace old models range 22-71 AS.

*5: Customized model.

Heat Recovery Ventilation Unit

Type	Model	200	300	400	500	800	1000	1500	2000
	Air Volume(m ³ /h)								
Heat Recovery Ventilation		▲	▲	▲	▲	▲	▲	▲	▲

Control Devices

Type	
Individual Controller	Remote controller   WL-12-CM WL-14-CM
	*6: Standard individual controller is WL-12-CM, other individual controller need to customise. Wired controller      WR-10-CM WR-12-CM WR-29-CM WR-90-CM WR-120-CM
Centralized Controller	    CRF-10-CM WCRF-10-CM CRC-10-CM CRF-30-CM
BMS Gateway	   BACNET Gateway MODBUS Gateway LONWORK Gateway
Network Control Software & Hardware	  Used for network control and power fee calculation.
Accessories	       Hotel card Intra-red NIM ODU alarm module AHU kit Data converter Digital power meter

Model		39VW008H117010	39VW010H117010	39VW012H117010	
Power supply		V-Ph-Hz	220V 3Ph ~ 60Hz		
Cooling (*1)	Capacity	W	25200	28000	33500
		Btu/h	86000	95500	114300
	Input	W	4800	6100	8000
	EER	W/W	5.25	4.59	4.19
Heating (*2)	Capacity	W	27000	31500	37500
		Btu/h	92100	107500	128000
	Input	W	4450	5830	7800
	COP	W/W	6.07	5.4	4.81
	Quantities		1		
	Type		DC Inverter		
	Brand		Hitachi		
Drainage pipe outside diameter		in.(mm)	Φ25/64(Φ10)		
Water side connecting pipe		in.(mm)	1-1/4(DN32) inner groove		
Outdoor sound level(*3)		dB(A)	51	52	52
Main unit	Dimension(WxHxD)	mm	780x1000x550		
	Packing (WxHxD)	mm	845x1170x600		
	Net/Gross weight	kg	146/155		
Charged refrigerant type and volume		kg	R410A/2		
Throttle type			EXV		
Excessive operating pressure		MPa	4.4/2.6		
Refrigerant piping	Liquid side/ Gas side	in.(mm)	Φ9.53/Φ22.2	Φ9.53/Φ22.2	Φ12.7/Φ25.4
Main unit water inlet temp.		°F (°C)	44.6-113°F (7 - 45°C)		
Main unit ambient temp. range		°F (°C)	32-104°F (0 - 40°C)		
Main unit ambient humidity			Below 80%		
<p>1. The cooling conditions: indoor temp.: 80.6°F (27°C) DB, 66.2°F (19°C) WB, outdoor temp.: 95°F (35°C) DB, water inlet temp.: 86°F (30°C), equivalent pipe length: 16.4ft. (5m), drop length: 0ft. (0m).</p> <p>2. The heating conditions: indoor temp.: 68°F (20°C) DB, 59°F (15°C) WB, outdoor temp.: 44.6°F (7°C) DB, 42.8°F (6°C) WB, water inlet temp.: 68°F (20°C), equivalent pipe length: 16.4ft. (5m) drop length: 0ft. (0m).</p> <p>3. Sound level: Anechoic chamber conversion value, measured at a point 3.28 ft. (1m) in front of the unit at a height of 3.28ft. (1 m). During actual operation, these values are normally somewhat higher as a result of ambient conditions.</p> <p>4. Connection piping diameter is based on the condition that the total equivalent liquid length is less than 295.2ft. (90m). When the total equivalent liquid length is more than 295.2 ft. (90m), please refer to installation manual to choose the connection piping diameter.</p> <p>5. The farthest equivalent pipe length should be equal to or shorter than 131.2 ft. (40m), but it can be up to 295.2ft. (90m) if meet the required conditions following part 4 installation sections.</p> <p>The above data may be changed without notice for future improvement on quality and performance.</p>					

Model		38VF008H116010	38VF010H116010	38VF012H116010	38VF014H116010	38VF016H116010
Power supply		V Ph-Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz
Cooling (*1)	Capacity	KW	25.2	28	33.5	40000
		Btu/h	86000	95500	114300	136500
	Input	KW	5.875	7.053	8.793	11299
		EER	WW/W	4.29	3.97	3.81
Heating (*2)	Capacity	KW	27	31.5	37.5	45000
		Btu/h	92100	107500	128000	153500
	Input	KW	6.15	7.554	8.993	11194
		COP	WW/W	4.39	4.17	4.17
Compressor	Quantities	1	1	1+1	1+1	1+1
	Brand	Hitachi	Hitachi	Hitachi	Hitachi	Hitachi
Fan motor	Type	DC inverter	DC inverter	DC inverter	DC MOTOR	DC MOTOR
	Brand	Panasonic&Nidec	Panasonic&Nidec	Panasonic&Nidec	Panasonic&Nidec	Panasonic&Nidec
Outdoor air flow	CFM(m ³ /h)	6604(11242)	6604(11242)	9185(15620)	9185(15620)	9185(15620)
External static pressure	Pa	0~20 (default)	0~20 (default)	0~20 (default)	0~20 (default)	0~20 (default)
		20~40 (optional)	20~40 (optional)	20~60 (optional)	20~40 (optional)	20~40 (optional)
Outdoor sound level (*3)	dB(A)	57	57	59	61	62
Outdoor Unit	Dimension(WxHxD)	(960x1615x765)	(960x1615x765)	(1250x1615x765)	(1250x1615x765)	(1250x1615x765)
	Packing (WxHxD)	(1025x1790x830)	(1025x1790x830)	(1305x1790x820)	(1305x1790x820)	(1305x1790x820)
	Net/Gross weight	lbs.(kg)	466/485(212/220)	466/485(212/220)	634/678(288/308)	634/678(288/308)
Charged refrigerant type and volume	kg	R410A / 10	R410A / 10	R410A / 12	R410A / 15	R410A / 15
Throttle type		EXV	EXV	EXV	EXV	EXV
Excessive operating pressure	MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Liquid side/Gas side	in.(mm)	Φ12.7/Φ25.4	Φ12.7/Φ25.4	Φ15.9/Φ31.8	Φ15.9/Φ31.8	Φ15.9/Φ31.8
Oil balance pipe	in.(mm)	1/4(Φ6.4)	1/4(Φ6.4)	1/4(Φ6.4)	1/4(Φ6.4)	1/4(Φ6.4)
Ambient temperature range	Cooling	°F (°C)	23~118.4(5~48)	23~118.4(5~48)	23~118.4(5~48)	23~118.4(5~48)
	Heating	°F (°C)	-4~75.2(-20~24)	-4~75.2(-20~24)	-4~75.2(-20~24)	-4~75.2(-20~24)
<p>1. The cooling conditions: indoor temperature: 27 °CDB(80.6 °F), 19 °CWB(66 °F), outdoor temperature: 35 °CDB(95 °F), equivalent pipe length: 16.4ft(5m), drop length: 0m.</p> <p>2. The heating conditions: indoor temperature: 20 °CDB(68 °F), 15 °CWB(44.6 °F) outdoor temperature: 7 °CDB(42.8 °F) equivalent pipe length: 16.4ft(5m), drop length: 0m.</p> <p>3. Sound level: Anechoic chamber conversion value, measured at a point 3.28ft(1m) in front of the unit at a height of 4.92ft(1.5m). During actual operation, these values are normally somewhat higher as a result of ambient conditions.</p> <p>4. The above data may be changed without notice for future improvement on quality and performance.</p> <p>The above data may be changed without notice for future improvement on quality and performance.</p>						

Indoor Branch Pipe

Name	Gas side joints	Liquid side joints	Heat insulation material
BF-E224-CM0			
BF-E330-CM0			
BF-E710-CM0			
BF-E1344-CM0			
BF-E1344-CM0			
BF-E1500-CM0			

Outdoor Branch Pipe

Name	Gas side joints	Liquid side joints	No. Insulation joints	No. Insulation joints	No. Insulation joints	Heat insulation material
BF-E100-CM0						
BF-E100-CM0			M	N	P	
BF-E100-CM0			M(Two)	N(Two)	P(Two)	

2 All the branch pipe will be shifted to new models ended with "T" (adding insulation blanket) from Jan. 2014*