

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.

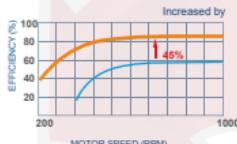
Note: Only full inverter series outdoor unit use all DC inverter compressor.



DC Fan Motor

Series adopt DC fan motor only.

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

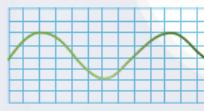


* K series and Individual series use the DC fan motor +AC fan motor.



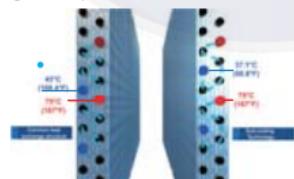
180° Sine Wave DC Inverter Control

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



High Efficient 5 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.

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.



Inverter individual series:
20/22/24/30/35HP

Full inverter side blow discharge series:
8/10/12/14/16/18/20/22/24/26kW

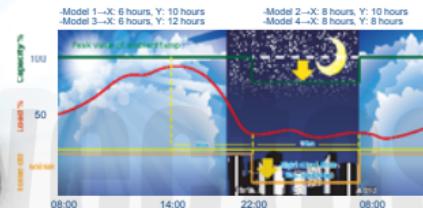


High Efficiency

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

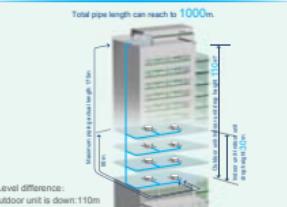
High comfort outdoor unit's multi-choice of silent mode during the night. Super silent operation mode can reduce sound level further, minimum 45dB (A).



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.

Long Piping Length



Auto addressing



Indoor Unit Lineup

Type	Model (capacity *100w)	18 22 28 36 45 56 71 80 90 100 112 125 140 160 200 250 290 400 450 560
One-way cassette	 Water pump is standard.	▲ ▲ ▲ ▲ ▲ ▲ ▲
Two-way cassette	 Water pump is standard.	▲ ▲ ▲ ▲ ▲ ▲
Compact four-way cassette	 Water pump is standard.	▲ ▲ ▲ ▲
Four-way cassette	 Water pump is standard.	▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲
Low Static Pressure Duct		▲ ▲ ▲ ▲ ▲ ▲
Medium Static Pressure Duct	 Water pump is standard.	▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3 ▲+3
	 (V type) Water pump is standard	▲+4 ▲+4 ▲+4 ▲+4 ▲+4 ▲+4 ▲+4
High Static Pressure Duct		▲ ▲ ▲ ▲
		▲+4 ▲+4
		▲+4 ▲+4
		▲+5 ▲+5 ▲+5
% customized model		
Ceiling & Floor		▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲
Wall-mounted S Type		▲ ▲ ▲ ▲ ▲
Wall-mounted C Type		▲ ▲ ▲ ▲ ▲
Wall-mounted R Type		▲ ▲ ▲
Floor standing		▲ ▲ ▲ ▲ ▲ ▲ ▲
		▲ ▲ ▲ ▲ ▲ ▲ ▲
Console		▲ ▲ ▲ ▲
Fresh Air processing unit		▲ ▲
		▲ ▲ ▲

Heat Recovery Ventilation Unit

Type	Model Air Volume(m³/h)	200	300	400	500	800	1000	1500	2000
Heat Recovery Ventilation		▲	▲	▲	▲	▲	▲	▲	▲

Control Devices

Type	WL-12-CM								
Individual Controller	Remote controller								
	Wired controller								
Centralized Controller	CRF-10-CM		WCRF-10-CM		CRC-10-CM		CRF-30-CM		
BMS Gateway									
Network Control Software & Hardware					Used for network control and power fee calculation.				
Accessories									

Model			38VW008H117010	38VW010H117010	38VW012H117010			
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)	@25/64(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	780×1000×550					
	Packing (WxHxD)	mm	845×1170×600					
	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%					
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).								
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).								
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.								
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.								
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.								
The above data may be changed without notice for future improvement on quality and performance.								

Model		38VF008H116010	38VF010H116010	38VF012H116010	38VF014H116010	38VF016H116010
Power supply	V-Ph-Hz	460V 3Ph ~ 60Hz	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	kW/kW	4.29	3.97	3.81	3.54
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	kW/kW	4.39	4.17	4.17	4.02
Compressor	Quantities		1	1	1+1	1+1
	Brand		Hitachi	Hitachi	Hitachi	Hitachi
Fan motor	Type		DC inverter	DC inverter	DC inverter	DC MOTOR
	Brand		Panasonic&Nidec	Panasonic&Nidec	Panasonic&Nidec	Panasonic&Nidec
Outdoor air flow		CFM(m ³ /h)	6604(11242)	6604(11242)	9185(15620)	9185(15620)
External static pressure		Pa	0~20 (default)	0~20 (default)	0~20 (default)	0~20 (default)
			20~40(optional)	20~40(optional)	20~60(optional)	20~40(optional)
Outdoor sound level (*3)		dB(A)	57	57	59	61
Outdoor Unit	Dimension(WxHxD)		(960x1615x765)	(960x1615x765)	(1250x1615x765)	(1250x1615x765)
	Packing (WxHxD)		(1025x1790x830)	(1025x1790x830)	(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
Throttle type			EXV	EXV	EXV	EXV
Excessive operating pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Liquid side/ Gas side		in.(mm)	Φ127/Φ25.4	Φ127/Φ25.4	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)
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)

1.The cooling conditions: indoor temperature: 27 °CDB(80.6 °F), 19 °CWB(60 °F), outdoor temperature: 35 °CDB(95 °F), equivalent pipe length: 16.4ft(5m), drop length: 0m.

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.

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.

4.The above data maybe changed without notice for future improvement on quality and performance.

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Indoor Branch Pipe

Name	Gas side joints	Liquid side joints	Heat insulation material
BJF-224-CM(i)			
BJF-330-CM(i)			
BJF-710-CM(i)			
BJF-1344-CM(ii)			
BJF-E1500-CM(ii)			

Outdoor Branch Pipe

Name	Gas side joints	Liquid side joints	Gas branch pipe	Liquid branch pipe	Oil branch pipe	Heat insulation material
BLJ-AE-CM(i)						
BLJ-AE-CM(ii)						
BLJ-EAE-CM(i)						

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