

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 6-8 Ton Systems

Tonnage			6 Ton		8 Ton		
Model	208/230V, 3PH, 60Hz		HVWHP 072B32S	HVWHR 072B32S	HVWHP 096B32S	HVWHR 096B32S	
	460V, 3PH, 60Hz		HVWHP 072B42S	HVWHR 072B42S	HVWHP 096B42S	HVWHR 096B42S	
UNIT TYPE (HEAT PUMP: HP, HEAT RECOVERY: HR)			HP	HR	HP	HR	
Nominal Capacity	Cooling	Btu/h	72,000		96,000		
	Heating	Btu/h	81,000		108,000		
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	69,000		92,000		
	EER	Btu/Wh	17.1 / 13.6		13.7 / 12.6		
	IEER	Btu/Wh	29.0 / 22.5		25.2 / 22.3		
	Rated Heating Capacity ¹	Btu/h	77,000		103,000		
	COP	W/W	6.30 / 4.65		5.05 / 4.40		
	SCHE	Btu/Wh	-	21.7 / 12.4		-	16.6 / 15.1
	Sound Pressure ⁵	dB(A)	55		57		
	Refrigerant Piping	Liquid Pipe	in. [mm]	3/8 [9.52]		3/8 [9.52]	
High/Low Pressure Gas Pipe		in. [mm]	3/4 [19.05]	5/8 [15.88]	7/8 [22.2]	3/4 [19.05]	
Low Pressure Gas Pipe		in. [mm]	-	3/4 [19.05]	-	7/8 [22.2]	
Connection Ratio	Connection Ratio Range ⁴	%	50 -130				
	Number of Indoor Units (Recommended / Maximum)	Qty.	8 / 13		8 / 16		
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT				
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT				
	Condensation Pipe	in. [mm]	1/2 NPT				
	Maximum System Water Pressure	psi [MPa]	285 [1.96]				
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]				
	Water Flow Range per Unit (Rated/Range)	gpm [L/m]	15.1 [57] / 11 - 31 [40 - 120]		20.3 [77] / 14 - 39 [50 - 150]		
Electrical	Minimum Circuit Amps, MCA (208V / 230V / 460V)	A	20 / 18 / 11		32 / 29 / 17		
	Maximum Overcurrent Protection, MOP (208V / 230V / 460V)	A	30 / 30 / 15		50 / 45 / 25		
Compressor	Compressor Type		Inverter				
	Operating Range	%	10 - 100				
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 30-11/16 x 21-5/8 [1000 x 780 x 550]				
	Weight (208, 230V / 460V)	lb. [kg]	370 / 379 [168 / 172]				

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB
66.2°F (19°C)WB
Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB

Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 10-12 Ton Systems

Tonnage			10 Ton		12 Ton		
Model	208/230V, 3PH, 60Hz		HVWHP 120B32S	HVWHR 120B32S	HVWHP 144B32S	HVWHR 144B32S	
	460V, 3PH, 60Hz		HVWHP 120B42S	HVWHR 120B42S	HVWHP 144B42S	HVWHR 144B42S	
UNIT TYPE (HEAT PUMP: HP, HEAT RECOVERY: HR)			HP	HR	HP	HR	
Nominal Capacity	Cooling	Btu/h	120,000		144,000		
	Heating	Btu/h	135,000		162,000		
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	115,000		138,000		
	EER	Btu/Wh	14.4 / 13.0		15.0 / 14.0		
	IEER	Btu/Wh	26.1 / 22.6		24.9 / 23.8		
	Rated Heating Capacity ¹	Btu/h	129,000		154,000		
	COP	W/W	4.95 / 4.62		5.42 / 5.00		
	SCHE	Btu/Wh	-	21.8 / 19.8		-	21.9 / 19.9
	Sound Pressure ⁵	dB(A)	60		58		
Refrigerant Piping	Liquid Pipe	in. [mm]	1/2 [12.7]		1/2 [12.7]		
	High/Low Pressure Gas Pipe	in. [mm]	7/8 [22.2]	3/4 [19.05]	1-1/8 [28.58]	7/8 [22.2]	
	Low Pressure Gas Pipe	in. [mm]	-	7/8 [22.2]	-	1-1/8 [28.58]	
Connection Ratio	Connection Ratio Range ⁴	%	50 -130				
	Number of Indoor Units (Recommended / Maximum)	Qty.	8 / 23		10 / 26		
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT				
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT				
	Condensation Pipe	in. [mm]	1/2 NPT				
	Maximum System Water Pressure	psi [MPa]	285 [1.96]				
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]				
	Water Flow Range per Unit (Rated/Range)	gpm [L/m]	25.4 [96] / 20 - 56 [72 - 214]		36.5 [138] / 22 - 63 [81 - 241]		
Electrical	Minimum Circuit Amps, MCA (208V / 230V / 460V)	A	38 / 34 / 20		37 / 34 / 20		
	Maximum Overcurrent Protection, MOP (208V / 230V / 460V)	A	60 / 50 / 30		50 / 45 / 25		
Compressor	Compressor Type		Inverter				
	Operation Range	%	10 - 100				
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 30-11/16 x 21-5/8 [1000 x 780 x 550]		39-3/8 x 39-3/8 x 21-5/8 [1000 x 1000 x 550]		
	Weight (208, 230V / 460V)	lb. [kg]	381 / 390 [173 / 172]		556 / 564 [252 / 256]		

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB

66.2°F (19°C)WB

Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB

Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 14-18 Ton Systems

Tonnage			14 Ton		16 Ton		18 Ton	
Model	208/230V, 3PH, 60Hz		HVWHP 168B32S	HVWHR 168B32S	HVWHP 192B32S	HVWHR 192B32S	HVWHP 216B32S	HVWHR 216B32S
	460V, 3PH, 60Hz		HVWHP 168B42S	HVWHR 168B42S	HVWHP 192B42S	HVWHR 192B42S	HVWHP 216B42S	HVWHR 216B42S
UNIT TYPE (HEAT PUMP: HP, HEAT RECOVERY: HR)			HP	HR	HP	HR	HP	HR
Nominal Capacity	Cooling	Btu/h	168,000		192,000		216,000	
	Heating	Btu/h	189,000		216,000		243,000	
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	160,000		184,000		206,000	
	EER	Btu/Wh	13.9 / 13.2		12.9 / 12.3		11.3 / 10.7	
	IEER	Btu/Wh	22.7 / 20.4		20.9 / 21.0		20.3 / 19.5	
	Rated Heating Capacity ¹	Btu/h	180,000		206,000		232,000	
	COP	W/W	5.30 / 4.90		4.85 / 4.50		4.30 / 4.05	
	SCHE	Btu/Wh	-	22.6 / 20.5	-	26.5 / 25.4	-	19.3 / 17.6
	Sound Pressure ⁵	dB(A)	58		59		59	
Refrigerant Piping	Liquid Pipe	in. [mm]	5/8 [15.88]		5/8 [15.88]		5/8 [15.88]	
	High/Low Pressure Gas Pipe	in. [mm]	1-1/8 [28.58]	7/8 [22.2]	1-1/8 [28.58]	7/8 [22.2]	1-1/8 [28.58]	7/8 [22.2]
	Low Pressure Gas Pipe	in. [mm]	-	1-1/8 [28.58]	-	1-1/8 [28.58]	-	1-1/8 [28.58]
Connection Ratio	Connection Ratio Range ⁴	%	50 -130					
	Number of Indoor Units (Recommended / Maximum)	Qty.	12 / 29			14 / 33		
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Condensation Pipe	in. [mm]	1/2 NPT					
	Maximum System Water Pressure	psi [MPa]	285 [1.96]					
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]					
Electrical	Water Flow Range per Unit (Rated/Range)	gpm [L/m]	44.1 [167] / 24 - 70 [90 - 268]		51 [193] / 27 - 79 [101 - 301]		56 [212] / 27 - 79 [101 - 301]	
	Minimum Circuit Amps, MCA (208V / 230V / 460V)	A	41 / 37 / 22		55 / 50 / 29		71 / 64 / 37	
Compressor	Maximum Overcurrent Protection, MOP (208V / 230V / 460V)	A	50 / 50 / 25		70 / 60 / 40		90 / 80 / 50	
	Compressor Type		Inverter					
Unit	Operation Range	%	10 - 100					
	Dimensions (H x W x D)	in. [mm]	39-3/8 x 39-3/8 x 21-5/8 [1000 x 1000 x 550]					
	Weight (208, 230V / 460V)	lb. [kg]	558 / 567 [253 / 257]					

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB

66.2°F (19°C)WB

Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB

Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 20-24 Ton Systems

Tonnage			20 Ton		22 Ton		24 Ton	
Model	208/230V, 3PH, 60Hz		HVWHP 240B32S	HVWHR 240B32S	HVWHP 264B32S	HVWHR 264B32S	HVWHP 288B32S	HVWHR 288B32S
	460V, 3PH, 60Hz		HVWHP 240B42S	HVWHR 240B42S	HVWHP 264B42S	HVWHR 264B42S	HVWHP 288B42S	HVWHR 288B42S
Unit Combination	208/230V, 3PH, 60Hz	Unit A	HVWHP 120B32S	HVWHR 120B32S	HVWHP 144B32S	HVWHR 144B32S	HVWHP 144B32S	HVWHR 144B32S
		Unit B	HVWHP 120B32S	HVWHR 120B32S	HVWHP 120B32S	HVWHR 120B32S	HVWHP 144B32S	HVWHR 144B32S
	460V, 3PH, 60Hz	Unit A	HVWHP 120B42S	HVWHR 120B42S	HVWHP 144B42S	HVWHR 144B42S	HVWHP 144B42S	HVWHR 144B42S
		Unit B	HVWHP 120B42S	HVWHR 120B42S	HVWHP 120B42S	HVWHR 120B42S	HVWHP 144B42S	HVWHR 144B42S
UNIT TYPE (HEAT PUMP: HP, HEAT RECOVERY: HR)			HP	HR	HP	HR	HP	HR
Nominal Capacity	Cooling	Btu/h	240,000		264,000		288,000	
	Heating	Btu/h	270,000		297,000		324,000	
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	230,000		252,000		276,000	
	EER	Btu/Wh	13.5 / 12.0		13.4 / 12.9		14.0 / 13.5	
	IEER	Btu/Wh	24.2 / 21.5		23.1 / 22.0		22.5 / 22.0	
	Rated Heating Capacity ¹	Btu/h	258,000		282,000		308,000	
	COP	W/W	5.15 / 4.50		5.05 / 4.60		5.00 / 4.65	
	SCHE	Btu/Wh	-	20.0 / 19.1		-	18.5 / 21.5	
	Sound Pressure ⁵	dB(A)	63		62.5		61	
Refrigerant Piping	Liquid Pipe	in. [mm]	3/4 [19.05]		3/4 [19.05]		3/4 [19.05]	
	High/Low Pressure Gas Pipe	in. [mm]	1-1/8 [28.58]	7/8 [22.2]	1-3/8 [34.93]	1-1/8 [28.58]	1-3/8 [34.93]	1-1/8 [28.58]
	Low Pressure Gas Pipe	in. [mm]	-	1-1/8 [28.58]	-	1-3/8 [34.93]	-	1-3/8 [34.93]
Connection Ratio	Connection Ratio Range ⁴	%	50 -130		50 -130		50 -130	
	Number of Indoor Units (Recommended / Maximum)	Qty.	16 / 46		18 / 49		20 / 52	
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT		1-1/4 - 11-1/2 NPT		1-1/4 - 11-1/2 NPT	
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT		1-1/4 - 11-1/2 NPT		1-1/4 - 11-1/2 NPT	
	Condensation Pipe	in. [mm]	1/2 NPT		1/2 NPT		1/2 NPT	
	Maximum System Water Pressure	psi [MPa]	285 [1.96]		285 [1.96]		285 [1.96]	
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]		50 -113 [10 - 45]		50 -113 [10 - 45]	
	Water Flow Range per Unit Rated Range (Unit A + Unit B)	gpm [L/m]	25.4+25.4 [96+96] / 20 - 56 [72 - 214] + 21 - 56 [72 - 214]		36.5+25.4 [138+96] / 22 - 63 [81 - 241] + 20 - 56 [72 - 214]		36.5+36.5 [138+138] / 22 - 63 [81 - 241] + 22 - 63 [81 - 241]	
Electrical	Minimum Circuit Amps, MCA (Unit A + Unit B) (208V / 230V / 460V)	A	38+38 / 34+34 / 20+20		37+38 / 34+34 / 20+20		37+37 / 34+34 / 20+20	
	Maximum Overcurrent Protection, MOP (Unit A + Unit B) (208V / 230V / 460V)	A	60+60 / 50+50 / 30+30		50+60 / 45+50 / 25+30		50+50 / 45+45 / 25+25	
Compressor	Compressor Type		Inverter		Inverter		Inverter	
	Operation Range	%	10 - 100		10 - 100		10 - 100	
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 65-3/8 x 21-5/8 [1000 x 1660 x 550]		39-3/8 x 74 x 21-5/8 [1000 x 1880 x 550]		39-3/8 x 82-11/16 x 21-5/8 [1000 x 2100 x 550]	
	Weight (Unit A + Unit B) (208, 230V / 460V)	lb. [kg]	381+381 / 390+390 [173+173 / 177+177]		556+381 / 564+390 [252+173 / 256+177]		556+556 / 564+564 [252+252 / 256+256]	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB
66.2°F (19°C)WB

Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB

Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 26-30 Ton Systems

Tonnage			26 Ton		28 Ton		30 Ton	
Model	208/230V, 3PH, 60Hz		HVWHP 312B32S	HVWHR 312B32S	HVWHP 336B32S	HVWHR 336B32S	HVWHP 360B32S	HVWHR 360B32S
	460V, 3PH, 60Hz		HVWHP 312B42S	HVWHR 312B42S	HVWHP 336B42S	HVWHR 336B42S	HVWHP 360B42S	HVWHR 360B42S
Unit Combination	208/230V, 3PH, 60Hz	Unit A	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S	HVWHP 192B32S	HVWHR 192B32S
		Unit B	HVWHP 144B32S	HVWHR 144B32S	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S
	460V, 3PH, 60Hz	Unit A	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 192B42S	HVWHR 192B42S
		Unit B	HVWHP 144B42S	HVWHR 144B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S
Unit Type (Heat Pump: HP, Heat Recovery: HR)			HP	HR	HP	HR	HP	HR
Nominal Capacity	Cooling	Btu/h	312,000		336,000		360,000	
	Heating	Btu/h	351,000		378,000		405,000	
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	298,000		320,000		344,000	
	EER	Btu/Wh	13.4 / 13.2		12.9 / 12.8		12.7 / 12.6	
	IEER	Btu/Wh	21.4 / 21.5		20.7 / 20.5		19.7 / 18.6	
	Rated Heating Capacity ¹	Btu/h	334,000		360,000		382,000	
	COP	W/W	4.70 / 4.45		4.60 / 4.50		4.50 / 4.40	
	SCHE	Btu/Wh	-	18.5 / 20.2		-	18.2 / 21.8	
	Sound Pressure ⁵	dB(A)	61				61.5	
Refrigerant Piping	Liquid Pipe	in. [mm]	3/4 [19.05]		3/4 [19.05]		3/4 [19.05]	
	High/Low Pressure Gas Pipe	in. [mm]	1-3/8 [34.93]	1-1/8 [28.58]	1-3/8 [34.93]	1-1/8 [28.58]	1-5/8 [41.28]	1-3/8 [34.93]
	Low Pressure Gas Pipe	in. [mm]	-	1-3/8 [34.93]	-	1-3/8 [34.93]	-	1-5/8 [41.28]
Connection Ratio	Connection Ratio Range ⁴	%	50 -130					
	Number of Indoor Units (Recommended / Maximum)	Qty.	22 / 55		24 / 58		26 / 62	
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Condensation Pipe	in. [mm]	1/2 NPT					
	Maximum System Water Pressure	psi [MPa]	285 [1.96]					
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]					
	Water Flow Range per Unit Rated Range (Unit A + Unit B)	gpm [L/m]	44.1+36.5 [167+138] / 24 - 70 [90 - 268] + 22 - 63 [81 - 241]		44.1+44.1 [167+167] / 24 - 70 [90 - 268] + 24 - 70 [90 - 268]		51+44.1 [193+167] / 27 - 79 [101 - 301] + 24 - 70 [90 - 268]	
Electrical	Minimum Circuit Amps, MCA (Unit A + Unit B) (208V / 230V / 460V)	A	41+37 / 37+34 / 22+20		41+41 / 37+37 / 22+22		55+41 / 50+37 / 29+22	
	Maximum Overcurrent Protection, MOP (Unit A + Unit B7) (208V / 230V / 460V)	A	50+50 / 50+45 / 25+25		50+50 / 50+50 / 25+25		70+50 / 60+50 / 40+25	
Compressor	Compressor Type		Inverter					
	Operation Range	%	10 - 100					
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 82-11/16 x 21-5/8 [1000 x 2100 x 550]					
	Weight (Unit A + Unit B + Unit C) (208, 230V / 460V)	lb. [kg]	558+556 / 567+564 [253+252 / 257+256]			558+558 / 567+567 [253+253 / 257+257]		

NOTES:

1 Rating Conditions:
Cooling

Indoor Air Inlet Temperature:	80.6°F (27°C)DB 66.2°F (19°C)WB
Entering Water Temperature:	86°F (30°C)
Piping Length:	24.6ft. (7.5m)

Heating	Indoor Air Inlet Temperature:	68°F (20°C)DB
	Entering Water Temperature:	68°F (20°C)
	Piping Lift:	0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 32-36 Ton Systems

Tonnage			32 Ton		34 Ton		36 Ton	
Model	208/230V, 3PH, 60Hz		HVWHP 384B32S	HVWHR 384B32S	HVWHP 408B32S	HVWHR 408B32S	HVWHP 432B32S	HVWHR 432B32S
	460V, 3PH, 60Hz		HVWHP 384B42S	HVWHR 384B42S	HVWHP 408B42S	HVWHR 408B42S	HVWHP 432B42S	HVWHR 432B42S
Unit Combination	208/230V, 3PH, 60Hz	Unit A	HVWHP 192B32S	HVWHR 192B32S	HVWHP 216B32S	HVWHR 216B32S	HVWHP 216B32S	HVWHR 216B32S
		Unit B	HVWHP 192B32S	HVWHR 192B32S	HVWHP 192B32S	HVWHR 192B32S	HVWHP 216B32S	HVWHR 216B32S
	460V, 3PH, 60Hz	Unit A	HVWHP 192B42S	HVWHR 192B42S	HVWHP 216B42S	HVWHR 216B42S	HVWHP 216B42S	HVWHR 216B42S
		Unit B	HVWHP 192B42S	HVWHR 192B42S	HVWHP 192B42S	HVWHR 192B42S	HVWHP 216B42S	HVWHR 216B42S
Unit Type (Heat Pump: HP, Heat Recovery: HR)			HP	HR	HP	HR	HP	HR
Nominal Capacity	Cooling	Btu/h	384,000		408,000		432,000	
	Heating	Btu/h	432,000		459,000		486,000	
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	366,000		390,000		414,000	
	EER	Btu/Wh	12.2 / 12.4		11.7 / 11.7		11.1 / 11.0	
	IEER	Btu/Wh	18.9 / 18.5		19.0 / 18.0		19.5 / 17.5	
	Rated Heating Capacity ¹	Btu/h	410,000		434,000		460,000	
	COP	W/W	4.30 / 4.20		4.15 / 4.10		4.10 / 4.00	
	SCHE	Btu/Wh	-	17.9 / 19.4	-	17.5 / 18.8	-	20.0 / 18.4
	Sound Pressure ⁵	dB(A)	62					
Refrigerant Piping	Liquid Pipe	in. [mm]	3/4 [19.05]		3/4 [19.05]		3/4 [19.05]	
	High/Low Pressure Gas Pipe	in. [mm]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]
	Low Pressure Gas Pipe	in. [mm]	-	1-5/8 [41.28]	-	1-5/8 [41.28]	-	1-5/8 [41.28]
Connection Ratio	Connection Ratio Range ⁴	%	50 - 130					
	Number of Indoor Units (Recommended / Maximum)	Qty.	28 / 64					
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT					
	Condensation Pipe	in. [mm]	1/2 NPT					
	Maximum System Water Pressure	psi [MPa]	285 [1.96]					
	Inlet Water Temperature Range ³	°F [°C]	50 - 113 [10 - 45]					
	Water Flow Range per Unit Rated Range (Unit A + Unit B)	gpm [L/m]	51+51 [193+193] / 27 - 79 [101 - 301] + 27 - 79 [101 - 301]		56+51 [212+193] / 27 - 79 [101 - 301] +2 7 - 79 [101 - 301]		56+56 [212+212] / 27 - 79 [101 - 301] + 27 - 79 [101 - 301]	
Electrical	Minimum Circuit Amps, MCA (Unit A + Unit B) (208V / 230V / 460V)	A	55+55 / 50+50 / 29+29		71+55 / 64+50 / 37+29		71+71 / 64+64 / 37+37	
	Maximum Overcurrent Protection, MOP (Unit A + Unit B) (208V / 230V / 460V)	A	70+70 / 60+60 / 40+40		90+70 / 80+60 / 50+40		90+90 / 80+80 / 50+50	
Compressor	Compressor Type		Inverter					
	Operation Range	%	10 - 100					
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 82-11/16 x 21-5/8 [1000 x 2100 x 550]					
	Weight (Unit A + Unit B) (208, 230V / 460V)	lb. [kg]	558+558 / 567+567 [253+253 / 257+257]					

NOTES:

1 Rating Conditions:
Cooling

Indoor Air Inlet Temperature:	80.6°F (27°C)DB 66.2°F (19°C)WB
Entering Water Temperature:	86°F (30°C)
Piping Length:	24.6ft. (7.5m)

Heating	Indoor Air Inlet Temperature:	68°F (20°C)DB
	Entering Water Temperature:	68°F (20°C)
	Piping Lift:	0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 38-42 Ton Systems

Tonnage			38 Ton		40 Ton		42 Ton		
Model	208/230V, 3PH, 60Hz		HVWHP 456B32S	HVWHR 456B32S	HVWHP 480B32S	HVWHR 480B32S	HVWHP 504B32S	HVWHR 504B32S	
	460V, 3PH, 60Hz		HVWHP 456B42S	HVWHR 456B42S	HVWHP 480B42S	HVWHR 480B42S	HVWHP 504B42S	HVWHR 504B42S	
Unit Combination	208/230V, 3PH, 60Hz		Unit A	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S
			Unit B	HVWHP 144B32S	HVWHR 144B32S	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S
			Unit C	HVWHP 144B32S	HVWHR 144B32S	HVWHP 144B32S	HVWHR 144B32S	HVWHP 168B32S	HVWHR 168B32S
	460V, 3PH, 60Hz		Unit A	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S
			Unit B	HVWHP 144B42S	HVWHR 144B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S
			Unit C	HVWHP 144B42S	HVWHR 144B42S	HVWHP 144B42S	HVWHR 144B42S	HVWHP 168B42S	HVWHR 168B42S
Unit Type (Heat Pump: HP, Heat Recovery: HR)			HP	HR	HP	HR	HP	HR	
Nominal Capacity	Cooling	Btu/h	456,000		480,000		504,000		
	Heating	Btu/h	513,000		540,000		567,000		
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	436,000		460,000		480,000		
	EER	Btu/Wh	12.5 / 14.0		11.9 / 13.6		11.5 / 13.1		
	IEER	Btu/Wh	22.0 / 20.2		21.5 / 19.9		21.0 / 18.8		
	Rated Heating Capacity ¹	Btu/h	484,000		510,000		540,000		
	COP	W/W	4.55 / 4.60		4.40 / 4.55		4.30 / 4.50		
	SCHE	Btu/Wh	-	23.5 / 18.9		-	21.0 / 18.8		
	Sound Pressure ⁵	dB(A)			63				
Refrigerant Piping	Liquid Pipe	in. [mm]	3/4 [19.05]		3/4 [19.05]		3/4 [19.05]		
	High/Low Pressure Gas Pipe	in. [mm]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]	
	Low Pressure Gas Pipe	in. [mm]	-	1-5/8 [41.28]	-	1-5/8 [41.28]	-	1-5/8 [41.28]	
Connection Ratio	Connection Ratio Range ⁴	%	50 -130						
	Number of Indoor Units (Recommended / Maximum)	Qty.	28 / 64						
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT						
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT						
	Condensation Pipe	in. [mm]	1/2 NPT						
	Maximum System Water Pressure	psi [MPa]	285 [1.96]						
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]						
Electrical	Minimum Circuit Amps, MCA (Unit A + Unit B + Unit C) (208V / 230V / 460V)	A	41+37+37 / 37+34+34 / 22+20+20		41+41+37 / 37+37+34 / 22+22+20		41+41+41 / 37+37+37 / 22+22+22		
	Maximum Overcurrent Protection, MOP (Unit A + Unit B + Unit C) (208V / 230V / 460V)	A	50+50+50 / 50+45+45 / 25+25+25		50+50+50 / 50+50+45 / 25+25+25		50+50+50 / 50+50+50 / 25+25+25		
Compressor	Compressor Type		Inverter						
	Operation Range	%	10 - 100						
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 126 x 21-5/8 [1000 x 3200 x 550]						
	Weight (Unit A + Unit B + Unit C) (208, 230V / 460V)	lb. [kg]	558+556+556 / 567+564+564 [253+252+252 / 257+256+256]		558+558+556 / 567+567+564 [253+253+252 / 257+257+256]		558+558+558 / 567+567+567 [253+253+253 / 257+257+257]		

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB
66.2°F (19°C)WB
Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB
Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

WATER SOURCE VRF HEAT PUMP AND HEAT RECOVERY UNITS

208/230V & 460V | 44-48 Ton Systems

Tonnage			44 Ton		46 Ton		48 Ton				
Model	208/230V, 3PH, 60Hz		HVWHP 528B32S	HVWHR 528B32S	HVWHP 552B32S	HVWHR 552B32S	HVWHP 576B32S	HVWHR 576B32S			
	460V, 3PH, 60Hz		HVWHP 528B42S	HVWHR 528B42S	HVWHP 552B42S	HVWHR 552B42S	HVWHP 576B42S	HVWHR 576B42S			
Unit Combination	208/230V, 3PH, 60Hz		Unit A	HVWHP 192B32S	HVWHR 192B32S	HVWHP 192B32S	HVWHR 192B32S	HVWHP 192B32S	HVWHR 192B32S		
			Unit B	HVWHP 168B32S	HVWHR 168B32S	HVWHP 192B32S	HVWHR 192B32S	HVWHP 192B32S	HVWHR 192B32S		
			Unit C	HVWHP 168B32S	HVWHR 168B32S	HVWHP 168B32S	HVWHR 168B32S	HVWHP 192B32S	HVWHR 192B32S		
	460V, 3PH, 60Hz		Unit A	HVWHP 192B42S	HVWHR 192B42S	HVWHP 192B42S	HVWHR 192B42S	HVWHP 192B42S	HVWHR 192B42S		
			Unit B	HVWHP 168B42S	HVWHR 168B42S	HVWHP 192B42S	HVWHR 192B42S	HVWHP 192B42S	HVWHR 192B42S		
			Unit C	HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 192B42S	HVWHR 192B42S		
				HVWHP 168B42S	HVWHR 168B42S	HVWHP 168B42S	HVWHR 168B42S	HVWHP 192B42S	HVWHR 192B42S		
Unit Type (Heat Pump: HP, Heat Recovery: HR)			HP	HR	HP	HR	HP	HR			
Nominal Capacity	Cooling	Btu/h	528,000		552,000		576,000				
	Heating	Btu/h	594,000		621,000		648,000				
Performance ² (Non-ducted / Ducted)	Rated Cooling Capacity ¹	Btu/h	504,000		530,000		550,000				
	EER	Btu/Wh	11.0 / 12.6		10.8 / 11.8		10.35 / 11.4				
	IEER	Btu/Wh	20.5 / 18.8		20.5 / 17.2		20.5 / 16.9				
	Rated Heating Capacity ¹	Btu/h	564,000		590,000		614,000				
	COP	W/W	4.20 / 4.35		4.10 / 4.30		4.00 / 4.10				
	SCHE	Btu/Wh	-	18.0 / 18.5		-	17.0 / 18.3		-	15.0 / 18.1	
	Sound Pressure ⁵	dB(A)	63.5						64		
Refrigerant Piping	Liquid Pipe	in. [mm]	3/4 [19.05]			3/4 [19.05]		3/4 [19.05]			
	High/Low Pressure Gas Pipe	in. [mm]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]	1-5/8 [41.28]	1-3/8 [34.93]			
	Low Pressure Gas Pipe	in. [mm]	-	1-5/8 [41.28]	-	1-5/8 [41.28]	-	1-5/8 [41.28]			
Connection Ratio	Connection Ratio Range ⁴	%	50 -130								
	Number of Indoor Units (Recommended / Maximum)	Qty.	28 / 64								
Water Side	Inlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT								
	Outlet Pipe	in. [mm]	1-1/4 - 11-1/2 NPT								
	Condensation Pipe	in. [mm]	1/2 NPT								
	Maximum System Water Pressure	psi [MPa]	285 [1.96]								
	Inlet Water Temperature Range ³	°F [°C]	50 -113 [10 - 45]								
	Water Flow Range Per Unit Rated Range (Unit A + Unit B + Unit C)	gpm [L/m]	51+44.1+44.1 [193+167+167] / 27 - 79 [101 - 301] + 24 - 70 [90 - 268] + 24 - 70 [90 - 268]		51+51+44.1 [193+193+167] / 27 - 79 [101 - 301] + 27 - 79 [101 - 301] + 24 - 70 [90 - 268]		51+51+51 [193+193+193] / 27 - 79 [101 - 301] + 27 - 79 [101 - 301] + 27 - 79 [101 - 301]				
Electrical	Minimum Circuit Amps, MCA (Unit A + Unit B + Unit C) (208V / 230V / 460V)	A	55+41+41 / 50+37+37 / 29+22+22			55+55+41 / 50+50+37 / 29+29+22		55+55+55 / 50+50+50 / 29+29+29			
	Maximum Overcurrent Protection, MOP (Unit A + Unit B + Unit C) (208V / 230V / 460V)	A	70+50+50 / 60+50+50 / 40+25+25			70+70+50 / 60+60+50 / 40+40+25		70+70+70 / 60+60+60 / 40+40+40			
Compressor	Compressor Type		Inverter								
	Operation Range	%	10 - 100								
Unit	Dimensions (H x W x D)	in. [mm]	39-3/8 x 126 x 21-5/8 [1000 x 3200 x 550]								
	Weight (Unit A + Unit B + Unit C) (208, 230V / 460V)	lb. [kg]	558+558+558 / 567+567+567 [253+253+253 / 257+257+257]								

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C)DB
66.2°F (19°C)WB
Entering Water Temperature: 86°F (30°C)

Piping Length: 24.6ft. (7.5m)

Heating

Indoor Air Inlet Temperature: 68°F (20°C)DB
Entering Water Temperature: 68°F (20°C)

Piping Lift: 0ft. (0m)

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for each operation ranges. For details, refer to Engineering Manual.

4 For details, refer to Engineering Manual.

5 Measurement Point: 3.3ft. (1m) from the air outlet side, 3.3ft. (1m) from floor level.

The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.