HITACHI

LOW AMBIENT HEAT PUMP OUTDOOR UNITS

208/230V | 6-8 Ton Systems

6-8 Ton Systems	Type				Low Ambient Outdoor Systems			
	Tonnage				6 Ton		8 Ton	
Model (combination)					HVAHP072B31CW		HVAHP096B31CW	
Model (individual)	Unit A				-		-	
	Unit B				-		-	
	Unit C				-		-	
Power Supply					208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity (Nominal) *	Cooling	Capacity (Nominal)	Btu/h	(kW)	72,000	(21.1)	96,000	(28.1)
		Power input	kW		5.88		9.61	
		Current input	A (208/230V)		16.8 / 16.1		27.2 / 25.9	
	Heating	Capacity (Nominal)	Btu/h	(kW)	81,000	(23.7)	108,000	(31.7)
		Power Input	kW		5.51		8.08	
		Current Input	A (208/230V)		15.8 / 15.0		23.1 / 21.8	
Efficiency Ratings **	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)
		EER	Btu/Wh	(W/W)	13.00	(3.81)	11.90	(3.49)
		IEER	Btu/Wh	(Wh/Wh)	18.10	(5.31)	18.90	(5.54)
	Heating High	Capacity (Rated)	Btu/h	(kW)	76,000	(22.3)	103,000	(30.2)
		COP	W/W		4.09		3.80	
	Heating Low	Capacity	Btu/h	(kW)	64,000	(18.8)	87,000	(25.5)
		COP	W/W		2.57		2.42	
Cooling Operating Range	Indoor		°F WB (°C WB)		59(15) ~ 73(23)		59(15) ~ 73(23)	
	Outdoor ***		°F DB (°C DB)		14(-10) ~ 118(48)		14(-10) ~ 118(48)	
Heating Operating Range	Indoor		°F DB (°C DB)		59(15) ~ 80(27)		59(15) ~ 80(27)	
	Outdoor ***		°F WB (°C WB)		-13(-25) ~ 59(15)		-13(-25) ~ 59(15)	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	(H x W x D)		in		68-1/8 x 48-1/8 x 31-1/4		68-1/8 x 48-1/8 x 31-1/4	
Package Dimensions	(H x W x D)		in		74-1/4 x 50-7/8 x 34		74-1/4 x 50-7/8 x 34	
Weight	Net		lbs	(kg)	699	(317)	699	(317)
	Gross		lbs	(kg)	756	(343)	756	(343)
Connection Ratio	Connection Ratio Range		%		130 - 60		110 - 60	
	Max. (Recommendation) indoor units/system		-		15 (10)		16 (10)	
Heat Exchanger	Type		-		Multi-pass cross-finned tube			
	Material		-		Cu-Al (Anti-corrosion)			
Compressor	Type	Inverter	-		EK655DHD×1		EK655DHD×1	
		Fixed Speed	-		EK655DH×1		EK655DH×1	
	Motor Output (Pole)		kW (Pole)		3.2(4)+3.0(2)		3.2(4)+3.0(2)	
	Start Method		-		inverter			
	Operation Range		%		14 ~ 100		14 ~ 100	
	Refrigeration Oil Type		-		FVC68D		FVC68D	
Crank Case Heater			W×Qty		40.8 (230V) ×6		40.8 (230V) ×6	
Fan	Type		-		Propeller Fan			
	Motor Output (Pole)		kW (Pole)		0.66(8)		0.66(8)	
	Quantity		Qty		1			
	Airflow Rate		cfm	(m^3/min)	6884	(195)	6884	(195)
	External Static Pressure *****		in.WG	(Pa)	0 (0)		0 (0)	
	Drive		-		Direct-drive			
Electrical	Min Circuit Amps		A		51/46		51/46	
	Max Overcurrent Protective Device		A		72/65		72/65	
	Maximum Fuse Size		A		70/60		70/60	
Sound Pressure Level	Cooling (Night-Shift)		dB (A)		60	(56)	60	(56)
	Heating		dB (A)		61		61	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)			
	Inverter		-		Over-current protection / Over-heat protection			
	Compressor		-		Over-heat protection			
	PCB		-		Over-current protection			
Refrigerant	Type		-		R410A			
	Charge Amount		lbs	(kg)	17.0	(7.7)	17.0	(7.7)
Refrigeration Oil	Charge Amount		gal/Unit	(L/Unit)	2.1	(7.9)	2.1	(7.9)
Defrost Method			-		Reversed refrigerant cycle / Hot gas bypass			
Main Refrigerant Piping (Heat Pump)	Gas Line		in	(mm)	7/8	(22.2)	7/8	(22.2)
	Liquid Line		in	(mm)	3/8	(9.52)	3/8	(9.52)

* Rating Conditions are shown as below with piping length 24 feet 7-3/16 inch, piping lift 0 feet.

Cooling
Indoor Air Inlet Temperature: 80°F DB, 67 °F WB
Outdoor Air Inlet Temperature: 95°F DB

Heating
Indoor Air Inlet Temperature: 70°F DB
Outdoor Air Inlet Temperature: 47°F DB, 43°F WB

** Rating Conditions are based on the AHRI 1230 test standard.
*** For more details, please refer to Engineering manual "Operation range" section.
**** For more details, please refer to Engineering manual "Operation range" section.
***** External static pressure can be changed via DSW setting 0.24 in. W.G. (60Pa).

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LOW AMBIENT HEAT PUMP OUTDOOR UNITS

208/230V | 12-24 Ton Systems

12-24 Ton Systems	Type			Low Ambient Outdoor Systems							
	Tonnage			12 Ton (6 + 6)		14 Ton (8+6)		16 Ton (8+8)		24 Ton (8+8+8)	
Model (combination)				HVAHP144B31CW		HVAHP168B31CW		HVAHP192B31CW		HVAHP288B31CW	
Model (individual)	Unit A			HVAHP072B31CW		HVAHP096B31CW		HVAHP096B31CW		HVAHP096B31CW	
	Unit B			HVAHP072B31CW		HVAHP072B31CW		HVAHP096B31CW		HVAHP096B31CW	
	Unit C			-		-		-		HVAHP096B31CW	
Power Supply				208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity (Nominal) *	Cooling	Capacity (Nominal)	Btu/h (kW)	144,000	(42.2)	168,000	(49.2)	192,000	(56.3)	288,000	(84.4)
		Power input	kW	11.77		15.50		19.23		28.84	
		Current input	A (208/230V)	33.6 / 32.2		44.0 / 42.0		54.4 / 51.8		81.6 / 77.7	
	Heating	Capacity (Nominal)	Btu/h (kW)	162,000	(47.5)	189,000	(55.4)	216,000	(63.3)	324,000	(95.0)
		Power Input	kW	11.02		13.59		16.16		24.25	
		Current Input	A (208/230V)	31.6 / 30.0		38.9/ 36.8		46.2 / 43.6		69.3 / 65.4	
Efficiency Ratings **	Cooling	Capacity (Rated)	Btu/h (kW)	138,000	(40.5)	160,000	(46.9)	182,000	(53.4)	274,000	(80.4)
		EER	Btu/Wh (W/W)	12.80	(3.75)	12.30	(3.61)	12.20	(3.58)	10.60	(3.11)
		IEER	Btu/Wh (Wh/Wh)	17.60	(5.16)	18.50	(5.43)	18.50	(5.43)	17.70	(5.19)
	Heating High	Capacity (Rated)	Btu/h (kW)	154,000	(45.2)	178,000	(52.2)	204,000	(59.8)	308,000	(90.3)
		COP	W/W	3.99		3.80		3.68		3.57	
	Heating Low	Capacity	Btu/h (kW)	129,000	(37.8)	151,000	(44.3)	174,000	(51.0)	260,000	(76.3)
		COP	W/W	2.50		2.33		2.37		2.34	
Cooling Operating Range	Indoor		°F WB (°C WB)	59(15) ~ 73(23)		59(15) ~ 73(23)		59(15) ~ 73(23)		59(15) ~ 73(23)	
	Outdoor ***		°F DB (°C DB)	14(-10) ~ 118(48)		14(-10) ~ 118(48)		14(-10) ~ 118(48)		14(-10) ~ 118(48)	
Heating Operating Range	Indoor		°F DB (°C DB)	59(15) ~ 80(27)		59(15) ~ 80(27)		59(15) ~ 80(27)		59(15) ~ 80(27)	
	Outdoor ****		°F WB (°C WB)	-13(-25) ~ 59(15)		-13(-25) ~ 59(15)		-13(-25) ~ 59(15)		-13(-25) ~ 59(15)	
Cabinet Color (Munsell Code)			-	2.5Y 8/2		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	(H x W x D)		in	(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x3	
Package Dimensions	(H x W x D)		in	-		-		-		-	
Weight	Net		lbs (kg)	1398	(634)	1398	(634)	1398	(634)	2097	(951)
	Gross		lbs (kg)	1513	(686)	1513	(686)	1513	(686)	2269	(1029)
Connection Ratio	Connection Ratio Range		%	130 - 60		110 - 60		110 - 60		110 - 60	
	Max. (Recommendation) indoor units/system		-	31(18)		30(18)		33(18)		50(32)	
Heat Exchanger	Type		-	Multi-pass cross-finned tube							
	Material		-	Cu-Al (Anti-corrosion)							
Compressor	Type	Inverter	-	EK655DHD×2		EK655DHD×2		EK655DHD×2		EK655DHD×3	
		Fixed Speed	-	EK655DH×2		EK655DH×2		EK655DH×2		EK655DH×3	
	Motor Output (Pole)		kW (Pole)	3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2) 3.2(4)+3.0(2)	
	Start Method		-	inverter							
	Operation Range		%	7 ~ 100		7 ~ 100		7 ~ 100		8 ~ 100	
	Refrigeration Oil Type		-	FVC68D		FVC68D		FVC68D		FVC68D	
Crank Case Heater			W×Qty	40.8 (230V) ×12		40.8 (230V) ×12		40.8 (230V) ×12		40.8 (230V) ×18	
Fan	Type		-	Propeller Fan							
	Motor Output (Pole)		kW (Pole)	0.66(8)×2		0.66(8)×2		0.66(8)×2		0.66(8)×3	
	Quantity		Qty	2		2		2		3	
	Airflow Rate		cfm (m^3/min)	6884+6884	(195+195)	6884+6884	(195+195)	6884+6884	(195+195)	6884+6884+6884	(195+195+195)
	External Static Pressure *****		in.WG (Pa)	0 (0)		0 (0)		0 (0)		0 (0)	
	Drive		-	Direct-drive							
Electrical	Min Circuit Amps		A	Reference: HVAHP072B31CW HVAHP072B31CW		Reference: HVAHP096B31CW HVAHP072B31CW		Reference: HVAHP096B31CW HVAHP096B31CW		Reference: HVAHP096B31CW HVAHP096B31CW HVAHP096B31CW	
	Max Overcurrent Protective Device		A								
	Maximum Fuse Size		A								
Sound Pressure Level	Cooling (Night-Shift)		dB (A)	63	(59)	63	(59)	63	(59)	65	(61)
	Heating		dB (A)	64		64		64		66	
Protection devices	Cycle		-	High pressure switch at 601psi (4.15MPa)							
	Inverter		-	Over-current protection / Over-heat protection							
	Compressor		-	Over-heat protection							
	PCB		-	Over-current protection							
Refrigerant	Type		-	R410A							
	Charge Amount		lbs (kg)	17.0+17.0	(7.7+7.7)	17.0+17.0	(7.7+7.7)	17.0+17.0	(7.7+7.7)	17.0+17.0+17.0	(7.7+7.7+7.7)
Refrigeration Oil	Charge Amount		gal/Unit (L/Unit)	2.1+2.1	(7.9+7.9)	2.1+2.1	(7.9+7.9)	2.1+2.1	(7.9+7.9)	2.1+2.1+2.1	(7.9+7.9+7.9)
Defrost Method			-	Reversed refrigerant cycle / Hot gas bypass							
Main Refrigerant Piping (Heat Pump)	Gas Line		in (mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)	1-3/8	(34.93)
	Liquid Line		in (mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)	3/4	(19.05)

* Rating Conditions are shown as below with piping length 24 feet 7-3/16 inch, piping lift 0 feet.

Cooling
Indoor Air Inlet Temperature: 80°F DB, 67 °F WB
Outdoor Air Inlet Temperature: 95°F DB

Heating
Indoor Air Inlet Temperature: 70°F DB
Outdoor Air Inlet Temperature: 47°F DB, 43°F WB

** Rating Conditions are based on the AHRI 1230 test standard.
*** For more details, please refer to Engineering manual "Operation range" section.
**** For more details, please refer to Engineering manual "Operation range" section.
***** External static pressure can be changed via DSW setting 0.24 in. W.G. (60Pa).

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LOW AMBIENT HEAT PUMP OUTDOOR UNITS

460V HP | 6-8 Ton Systems

6-8 Ton Systems	Type			Low Ambient Outdoor Systems			
	Tonnage			6 Ton		8 Ton	
Model (combination)				HVAHP072B41CW		HVAHP096B41CW	
Model (individual)	Unit A			-		-	
	Unit B			-		-	
	Unit C			-		-	
Power Supply				460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity (Nominal) *	Cooling	Capacity (Nominal)	Btu/h (kW)	72,000	(21.1)	96,000	(28.1)
		Power input	kW	5.88		9.61	
		Current input	A	7.9		12.8	
	Heating	Capacity (Nominal)	Btu/h (kW)	81,000	(23.7)	108,000	(31.7)
		Power Input	kW	5.51		8.08	
		Current Input	A	7.4		10.8	
Efficiency Ratings **	Cooling	Capacity (Rated)	Btu/h (kW)	69,000	(20.2)	92,000	(27.0)
		EER	Btu/Wh (W/W)	13.00	(3.81)	11.90	(3.49)
		IEER	Btu/Wh (Wh/Wh)	18.10	(5.31)	18.90	(5.54)
	Heating High	Capacity (Rated)	Btu/h (kW)	76,000	(22.3)	103,000	(30.2)
		COP	W/W	4.09		3.80	
	Heating Low	Capacity	Btu/h (kW)	64,000	(18.8)	87,000	(25.5)
		COP	W/W	2.57		2.42	
Cooling Operating Range	Indoor		°F WB (°C WB)	59(15) ~ 73(23)		59(15) ~ 73(23)	
	Outdoor ***		°F DB (°C DB)	14(-10) ~ 118(48)		14(-10) ~ 118(48)	
Heating Operating Range	Indoor		°F DB (°C DB)	59(15) ~ 80(27)		59(15) ~ 80(27)	
	Outdoor ****		°F WB (°C WB)	-13(-25) ~ 59(15)		-13(-25) ~ 59(15)	
Cabinet Color (Munsell Code)			-	2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	(H x W x D)		in	68-1/8 x 48-1/8 x 31-1/4		68-1/8 x 48-1/8 x 31-1/4	
Package Dimensions	(H x W x D)		in	74-1/4 x 50-7/8 x 34		74-1/4 x 50-7/8 x 34	
Weight	Net		lbs (kg)	787	(357)	787	(357)
	Gross		lbs (kg)	845	(383)	845	(383)
Connection Ratio	Connection Ratio Range		%	130 - 60		110 - 60	
	Max. (Recommendation) indoor units/system		-	15 (10)		16 (10)	
Heat Exchanger	Type		-	Multi-pass cross-finned tube			
	Material		-	Cu-Al (Anti-corrosion)			
Compressor	Type	Inverter	-	EK655DHD×1		EK655DHD×1	
		Fixed Speed	-	EK655DH×1		EK655DH×1	
	Motor Output (Pole)		kW (Pole)	3.2(4)+3.0(2)		3.2(4)+3.0(2)	
	Start Method		-	inverter			
	Operation Range		%	14 ~ 100		14 ~ 100	
	Refrigeration Oil Type		-	FVC68D		FVC68D	
Crank Case Heater			W×Qty	40.8 (230V) ×6		40.8 (230V) ×6	
Fan	Type		-	Propeller Fan			
	Motor Output (Pole)		kW (Pole)	0.66(8)		0.66(8)	
	Quantity		Qty	1			
	Airflow Rate		cfm (m^3/min)	6884	(195)	6884	(195)
	External Static Pressure *****		in.WG (Pa)	0 (0)		0 (0)	
	Drive		-	Direct-drive			
Electrical	Min Circuit Amps		A	24		24	
	Max Overcurrent Protective Device		A	34		34	
	Maximum Fuse Size		A	30		30	
Sound Pressure Level	Cooling (Night-Shift)		dB (A)	60	(56)	60	(56)
	Heating		dB (A)	61		61	
Protection devices	Cycle		-	High pressure switch at 601psi (4.15MPa)			
	Inverter		-	Over-current protection / Over-heat protection			
	Compressor		-	Over-heat protection			
	PCB		-	Over-current protection			
Refrigerant	Type		-	R410A			
	Charge Amount		lbs (kg)	17.0	(7.7)	17.0	(7.7)
Refrigeration Oil	Charge Amount		gal/Unit (L/Unit)	2.1	(7.9)	2.1	(7.9)
Defrost Method			-	Reversed refrigerant cycle / Hot gas bypass			
Main Refrigerant Piping (Heat Pump)	Gas Line		in (mm)	7/8	(22.2)	7/8	(22.2)
	Liquid Line		in (mm)	3/8	(9.52)	3/8	(9.52)

* Rating Conditions are shown as below with piping length 24 feet 7-3/16 inch, piping lift 0 feet.

Cooling
Indoor Air Inlet Temperature: 80°F DB, 67 °F WB
Outdoor Air Inlet Temperature: 95°F DB

Heating
Indoor Air Inlet Temperature: 70°F DB
Outdoor Air Inlet Temperature: 47°F DB, 43°F WB

** Rating Conditions are based on the AHRI 1230 test standard.
*** For more details, please refer to Engineering manual "Operation range" section.
**** For more details, please refer to Engineering manual "Operation range" section.
***** External static pressure can be changed via DSW setting 0.24 in. W.G. (60Pa).

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LOW AMBIENT HEAT PUMP OUTDOOR UNITS

460V | 12-24 Ton Systems

12-24 Ton Systems	Type			Low Ambient Outdoor Systems							
	Tonnage			12 Ton (6 + 6)		14 Ton (8+6)		16 Ton (8+8)		24 Ton (8+8+8)	
Model (combination)				HVAHP144B41CW		HVAHP168B41CW		HVAHP192B41CW		HVAHP288B41CW	
Model (individual)	Unit A			HVAHP072B41CW		HVAHP096B41CW		HVAHP096B41CW		HVAHP096B41CW	
	Unit B			HVAHP072B41CW		HVAHP072B41CW		HVAHP096B41CW		HVAHP096B41CW	
	Unit C			-		-		-		HVAHP096B41CW	
Power Supply				460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity (Nominal) *	Cooling	Capacity (Nominal)	Btu/h (kW)	144,000	(42.2)	168,000	(49.2)	192,000	(56.3)	288,000	(84.4)
		Power input	kW	11.77		15.50		19.23		28.84	
		Current input	A	15.8		20.7		25.6		38.4	
	Heating	Capacity (Nominal)	Btu/h (kW)	162,000	(47.5)	189,000	(55.4)	216,000	(63.3)	324,000	(95.0)
		Power Input	kW	11.02		13.59		16.16		24.25	
		Current Input	A	14.8		18.2		21.6		32.4	
Efficiency Ratings **	Cooling	Capacity (Rated)	Btu/h (kW)	138,000	(40.5)	160,000	(46.9)	182,000	(53.4)	274,000	(80.4)
		EER	Btu/Wh (W/W)	12.80	(3.75)	12.30	(3.61)	12.20	(3.58)	10.60	(3.11)
		IEER	Btu/Wh (Wh/Wh)	17.60	(5.16)	18.50	(5.43)	18.50	(5.43)	17.70	(5.19)
	Heating High	Capacity (Rated)	Btu/h (kW)	154,000	(45.2)	178,000	(52.2)	204,000	(59.8)	308,000	(90.3)
		COP	W/W	3.99		3.80		3.68		3.57	
	Heating Low	Capacity	Btu/h (kW)	129,000	(37.8)	151,000	(44.3)	174,000	(51.0)	260,000	(76.3)
		COP	W/W	2.50		2.33		2.37		2.34	
Cooling Operating Range	Indoor		°F WB (°C WB)	59(15) ~ 73(23)		59(15) ~ 73(23)		59(15) ~ 73(23)		59(15) ~ 73(23)	
	Outdoor ***		°F DB (°C DB)	14(-10) ~ 118(48)		14(-10) ~ 118(48)		14(-10) ~ 118(48)		14(-10) ~ 118(48)	
Heating Operating Range	Indoor		°F DB (°C DB)	59(15) ~ 80(27)		59(15) ~ 80(27)		59(15) ~ 80(27)		59(15) ~ 80(27)	
	Outdoor ****		°F WB (°C WB)	-13(-25) ~ 59(15)		-13(-25) ~ 59(15)		-13(-25) ~ 59(15)		-13(-25) ~ 59(15)	
Cabinet Color (Munsell Code)			-	2.5Y ~ 8/2		2.5Y ~ 8/2		2.5Y ~ 8/2		2.5Y ~ 8/2	
Outer Dimensions	(H x W x D)		in	(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x2		(68-1/8 x 48-1/8 x 31-1/4) x3	
Package Dimensions	(H x W x D)		in	-		-		-		-	
Weight	Net		lbs (kg)	1574	(714)	1574	(714)	1574	(714)	2362	(1071)
	Gross		lbs (kg)	1689	(766)	1689	(766)	1689	(766)	2534	(1149)
Connection Ratio	Connection Ratio Range		%	130 - 60		110 - 60		110 - 60		110 - 60	
	Max. Recommendation) indoor units/system		-	31(18)		30(18)		33(18)		50(32)	
Heat Exchanger	Type		-	Multi-pass cross-finned tube							
	Material		-	Cu-Al (Anti-corrosion)							
Compressor	Type	Inverter	-	EK655DHD×2		EK655DHD×2		EK655DHD×2		EK655DHD×3	
		Fixed Speed	-	EK655DH×2		EK655DH×2		EK655DH×2		EK655DH×3	
	Motor Output (Pole)		kW (Pole)	3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2)		3.2(4)+3.0(2) 3.2(4)+3.0(2) 3.2(4)+3.0(2)	
	Start Method		-	inverter							
	Operation Range		%	7 ~ 100		7 ~ 100		7 ~ 100		8 ~ 100	
	Refrigeration Oil Type		-	FVC68D		FVC68D		FVC68D		FVC68D	
Crank Case Heater			W×Qty	40.8 (230V) ×12		40.8 (230V) ×12		40.8 (230V) ×12		40.8 (230V) ×18	
Fan	Type		-	Propeller Fan							
	Motor Output (Pole)		kW (Pole)	0.66(8)×2		0.66(8)×2		0.66(8)×2		0.66(8)×3	
	Quantity		Qty	2		2		2		3	
	Airflow Rate		cfm (m^3/min)	6884+6884	(195+195)	6884+6884	(195+195)	6884+6884	(195+195)	6884+6884+6884	(195+195+195)
	External Static Pressure *****		in.WG (Pa)	0 (0)		0 (0)		0 (0)		0 (0)	
	Drive		-	Direct-drive							
Electrical	Min Circuit Amps		A	Reference: HVAHP072B41CW HVAHP072B41CW		Reference: HVAHP096B41CW HVAHP072B41CW		Reference: HVAHP096B41CW HVAHP096B41CW		Reference: HVAHP096B41CW HVAHP096B41CW HVAHP096B41CW	
	Max Overcurrent Protective Device		A								
	Maximum Fuse Size		A								
Sound Pressure Level	Cooling (Night-Shift)		dB (A)	63	(59)	63	(59)	63	(59)	65	(61)
	Heating		dB (A)	64		64		64		66	
Protection devices	Cycle		-	High pressure switch at 601psi (4.15MPa)							
	Inverter		-	Over-current protection / Over-heat protection							
	Compressor		-	Over-heat protection							
	PCB		-	Over-current protection							
Refrigerant	Type		-	R410A							
	Charge Amount		lbs (kg)	17.0+17.0	(7.7+7.7)	17.0+17.0	(7.7+7.7)	17.0+17.0	(7.7+7.7)	17.0+17.0+17.0	(7.7+7.7+7.7)
Refrigeration Oil	Charge Amount		gal/Unit (L/Unit)	2.1+2.1	(7.9+7.9)	2.1+2.1	(7.9+7.9)	2.1+2.1	(7.9+7.9)	2.1+2.1+2.1	(7.9+7.9+7.9)
Defrost Method			-	Reversed Refrigerant cycle / Hot Gas Bypass							
Main Refrigerant Piping (Heat Pump)	High/Low Pressure Gas Line		in (mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)	1-3/8	(34.93)
	Liquid Line		in (mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)	3/4	(19.05)

* Rating Conditions are shown as below with piping length 24 feet 7-3/16 inch, piping lift 0 feet.

Cooling
Indoor Air Inlet Temperature: 80°F DB, 67 °F WB
Outdoor Air Inlet Temperature: 95°F DB

Heating
Indoor Air Inlet Temperature: 70°F DB
Outdoor Air Inlet Temperature: 47°F DB, 43°F WB

** Rating Conditions are based on the AHRI 1230 test standard.
*** For more details, please refer to Engineering manual "Operation range" section.
**** For more details, please refer to Engineering manual "Operation range" section.
***** External static pressure can be changed via DSW setting 0.24 in. W.G. (60Pa).

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