

PRODUCT SPECIFICATION

COMPRESSOR MODEL

KCE461HAE-BXXX

BILL OF MATERIALS

B470, B371

Emerson Climate Technologies (India) Limited

Karad Dhebewadi Road

Karad - 415 110

INDIA

Note – Sales compressor drawing number and compressor model name are the same.

				1	F25-1206-0591 Current EN No.	A2 16..12.2006
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PRODUCT SPECIFICATION**MODEL – KCE461HAE-BXXX****A) MODEL DESCRIPTION**

Model Name	KCE461HAE-BXXX
Compressor Type	Reciprocating ,Connecting Rod Type
Application Group	High temperature (HBP)
Evaporating Temperature Range	-6.7°C To 12.8°C (20 °F To 55°F)
Refrigerant	R-22
Rated Voltage	230V, 1Phase, 50Hz
Compressor Cooling	FAN : 350 ft ³ / minute
Typical Application	Water Cooler
Certifications & Approvals	ISI, EN60335-2-34

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Specification	Unit	HBP	CBP
Cooling Capacity	Btu / h	5100	N / A
	kcal / h	1285	
	W	1494	
	Nominal HP	0.51	
Input Power	W	675	
Input Current	A	3.1	
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	7.56	
	kcal / W-h	1.90	
	W / W	2.21	

Note – Above performance parameters are nominal values & subject to $\pm 5\%$ variation

C) RATING CONDITIONS

Parameter	Unit	HBP @ ASHRAE-T	CBP @ ASHRAE-T
Evaporating Temperature	°C (°F)	7.2 (45)	N / A
Condensing Temperature	°C (°F)	54.4 (130)	
Ambient Temperature	°C (°F)	35 (95)	
Sub cooled Liquid Temp.	°C (°F)	46.1 (115)	
Return Gas Temperature	°C (°F)	35 (95)	
Test Voltage	V	230	

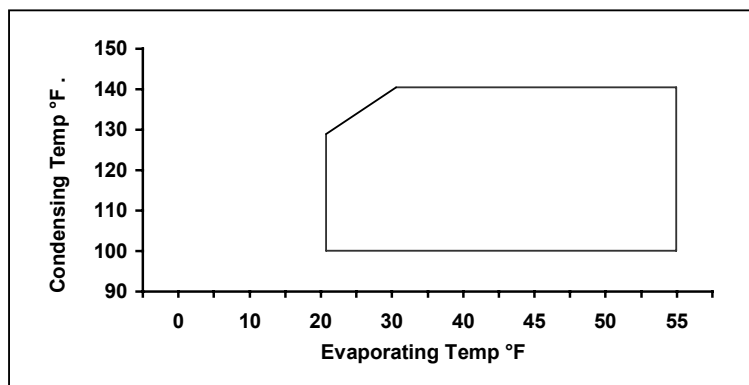
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PRODUCT SPECIFICATION**MODEL – KCE461HAE-BXXX****D) MECHANICAL SPECIFICATION**

Parameter	Unit	Value
Number of Cylinders	Number (s)	One (1)
Displacement	cm ³ (inch ³) / rev	11.50 (0.702)
Net Weight	kg	13.4
Approximate Shipping Weight	kg	----
Oil Charge	cm ³ (Oz)	590 (20)
Oil Type	Refrigeration Grade	Mineral
IPRV (Pressure Differential)	kg / cm ² (psig)	N / A
Crank Case Heater	W / V	N / A

E) ELECTRICAL SPECIFICATION

Parameter	Unit	Value
Operating Voltage Range	V	180 To 260
Motor Circuit	---	PSC (Optional : CSCR)
Electrical Accessories		
➤ Start Capacitor	μF @ V AC	60 – 80 @ 275
➤ Run Capacitor	μF @ V AC	15 @ 440
➤ Relay	---	LT85003
➤ Over Load Protector	---	KAT0159/B2
Lock Rotor Ampere (LRA)	A	17
Maximum Continuous Current (MCC)	A	5.2
Motor Insulation	---	B Class
High Potential Test	(kV/second/mA)	1.85 / 1 / 5.5

F) OPERATING ENVELOP @ 230V, 50Hz, 1 Phase

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PRODUCT SPECIFICATION**MODEL – KCE461HAE-BXXX****PERFORMANCE TABLES**

Return Gas Temp	35°C (95°F)	Voltage	230V, 1Ph, 50Hz
Liquid Sub Cooling	8.3°C (15°F)	Compressor Cooling	350 ft ³ / minute
Ambient temp.	35°C (95°F)		

A) COOLING CAPACITY (Btu / h)

Condensing Temperature		Evaporating Temperature					
		-6.7	-1.1	4.4	7.2	10	12.8
°C	(°F)	20	30	40	45	50	55
37.8	100	3580	4680	6000	6840	7500	8200
43.3	110	3210	4235	5500	6290	6880	7650
48.9	120	2950	3870	4900	5670	6300	7000
54.4	130	2590	3500	4400	5100	5780	6500
60.0	140	---	3130	3980	4650	5335	6000

B) INPUT POWER (W)

Condensing Temperature		Evaporating Temperature					
		-6.7	-1.1	4.4	7.2	10	12.8
°C	(°F)	20	30	40	45	50	55
37.8	100	460	490	525	580	625	665
43.3	110	485	520	550	610	655	700
48.9	120	505	540	585	645	685	730
54.4	130	520	565	610	675	720	755
60.0	140	---	580	640	700	745	781

C) INPUT CURRENT (A)

Condensing Temperature		Evaporating Temperature					
		-6.7	-1.1	4.4	7.2	10	12.8
°C	(°F)	20	30	40	45	50	55
37.8	100	2.25	2.35	2.45	2.70	2.87	2.90
43.3	110	2.30	2.45	2.55	2.85	2.98	3.12
48.9	120	2.35	2.55	2.65	2.98	3.10	3.26
54.4	130	2.42	2.65	2.75	3.10	3.25	3.43
60.0	140	---	2.72	2.85	3.23	3.40	3.58

- Note – 1. Nominal performance values ($\pm 5\%$) based on 24 hours running. Subject to change without notice.
 2. Compressor is intended to be operated in the range of condensing & evaporating temperature where performance values are specified in above tables.

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