

PRODUCT SPECIFICATION

COMPRESSOR MODEL

KCE443HAE-BXXX

BILL OF MATERIALS

B330, B331, B332

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
Prepared by	Checked by	Verified by	Approved by	Page No.	F41-0304-0183 Last EN No.	REV. NO. DATE

PRODUCT SPECIFICATION**MODEL – KCE443HAE-BXXX****A) MODEL DESCRIPTION**

Model Name	KCE443HAE-BXXX
Compressor Type	Reciprocating ,Connecting Rod Type
Application Group	High / Medium temperature (HBP / CBP)
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 / Bottle cooler
Certifications & Approvals	ISI, EN60335-2-34

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Specification	Unit	HBP	CBP
Cooling Capacity	Btu / h	3600	1620
	kcal / h	907	408
	W	1054	475
	Nominal HP	0.36	0.16
Input Power	W	475	390
Input Current	A	2.3	2.0
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W - h	7.58	4.15
	kcal / W – h	1.91	1.05
	W / W	2.22	1.22

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)	-6.7 (20)
Condensing Temperature	°C (°F)	54.4 (130)	54.4 (130)
Ambient Temperature	°C (°F)	35 (95)	35 (95)
Sub cooled Liquid Temp.	°C (°F)	46.1 (115)	46.1 (115)
Return Gas Temperature	°C (°F)	35 (95)	35 (95)
Test voltage	V	230	230

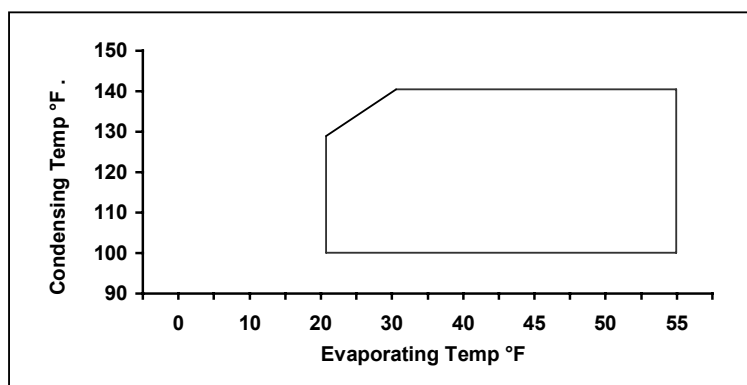
				2	F25-1206-0591 Current EN No.	A2 16.12.2006
Prepared by	Checked by	Verified by	Approved by	Page No.	F41-0304-0183 Last EN No.	REV. NO. DATE

PRODUCT SPECIFICATION**MODEL – KCE443HAE-BXXX****D) MECHANICAL SPECIFICATION**

Parameter	Unit	Value
Number of Cylinders	Number (s)	One (1)
Displacement	cm ³ (inch ³) / rev	8.00 (0.488)
Net Weight	kg	11.8
Approximate Shipping Weight	kg	----
Oil Charge	cm ³ (Oz)	310 (10.5)
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	---	CSCR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	40-60 @ 275
➤ Run Capacitor	μF @ V AC	10 @ 440
➤ Relay	---	LT85002
➤ Over Load Protector	---	KAT0072/K3
Lock Rotor Ampere (LRA)	A	13
Maximum Continuous Current (MCC)	A	3.9
Motor Insulation	---	B Class
High Potential Test	(kV/second/mA)	1.85 / 1 / 5.5

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

				3	F25-1206-0591 Current EN No.	A2 16.12.2006
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PRODUCT SPECIFICATION**MODEL – KCE443HAE-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 : ft3 / 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	2380	3170	4040	4710	5500	6130
43.3	110	2100	2870	3750	4330	5130	5800
48.9	120	1880	2600	3380	3900	4630	5380
54.4	130	1620	2390	3000	3600	4170	4900
60.0	140	---	2120	2670	3150	3750	4450

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	350	370	385	413	433	450
43.3	110	365	385	405	435	450	465
48.9	120	375	400	420	452	470	487
54.4	130	390	415	440	475	491	510
60.0	140	---	430	460	493	510	527

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	1.90	1.95	2.02	2.07	2.11	2.15
43.3	110	1.95	2.01	2.08	2.14	2.18	2.23
48.9	120	2.00	2.08	2.15	2.22	2.27	2.32
54.4	130	2.00	2.14	2.23	2.30	2.35	2.40
60.0	140	---	2.20	2.32	2.40	2.45	2.50

- 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.

				4	F25-1206-0591 Current EN No.	A2 16.12.2006
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