

PRODUCT SPECIFICATION

COMPRESSOR MODEL

CR34K6M-PFZ-XXX

Emerson Climate Technologies (India) Limited
Karad Dhebewadi Road
Karad - 415 110
INDIA

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

SC1				01	L45-0511-0282 Current EN No.	A3 04.05.2011
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MODEL : CR34K6M-PFZ-XXX

A) MODEL DESCRIPTION

Model Name	CR34K6M-PFZ-XXX
Compressor Type	Reciprocating, Connecting Rod Type
Application Group	High Temperature (HBP)
Evaporating Temperature Range	(-)23.3 °C To 12.8 °C Or (-)10 °F To 55 °F
Refrigerant	R-22
Rated Voltage	220 / 240 V, 50 Hz, 1 Phase
Compressor Cooling	Fan : 400 ft ³ / minute
Typical Application	Air - Conditioning, Heat Pump
Certifications & Approvals	UL-984 Certification in Process

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Parameter	Unit	ARI
Cooling Capacity	Btu / h	28,700
	kcal / h	7,232
	W	8,411
	Nominal HP	2.39
Input Power	W	2,850
Input Current	A	14.0
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	10.07
	kcal / W-h	2.54
	W / W	2.95

Note: Above Performance Parameters are Nominal Values & subject to $\pm 5\%$ variation.

C) RATING CONDITIONS

Parameter	Unit	ARI
Evaporating Temperature	°C (°F)	7.2 \pm 0.5 (45)
Condensing Temperature	°C (°F)	54.4 \pm 1 (130)
Ambient Temperature	°C (°F)	35 \pm 1 (95)
Sub-cooled Liquid Temperature	°C (°F)	46 \pm 1 (115)
Return Gas Temperature	°C (°F)	18.3 \pm 1 (65)
Test Voltage	V	220

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D) MECHANICAL SPECIFICATIONS

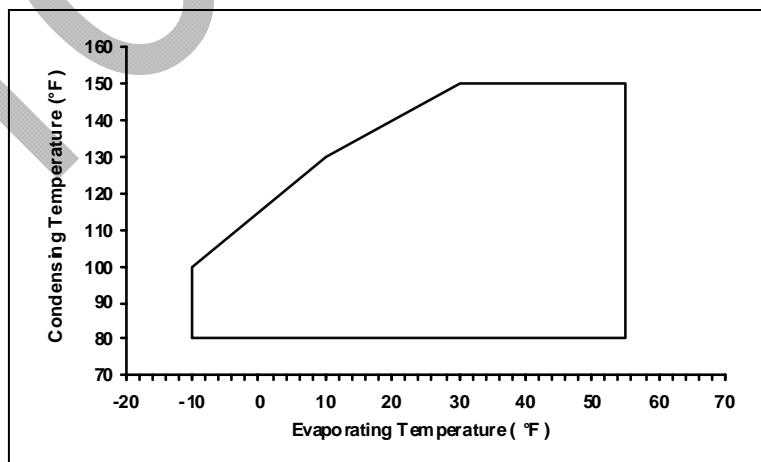
Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm ³ (inch ³) / rev	59.66 (3.640)
Net Weight	kg	32.5
Approximate Shipping Weight	kg	33.1
Oil Charge	cm ³ (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	Mineral
IPRV (Pressure Differential)	kg/cm ² (psig)	31.64 / 38.67 (450 / 550)
** Crank - case Heater	W @ V	35 @ 240 For CR34K6M-PFZ-102

** Recommended only for Heat Pump Application.

E) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Operating Voltage Range	V	198 To 264
Motor Circuit	---	CSCR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	150 / 200 @ 275
➤ Run Capacitor	μF @ V AC	45 @ 440
➤ Relay	---	Potential
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	100 @ 240 V
Maximum Continuous Current (MCC)	A	28
Motor Insulation	---	B Class
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

F) OPERATING ENVELOPE @ 220 V, 50 Hz, 1 Phase



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A) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.21 (1.656)
Crank - Shaft Eccentricity	cm (inch)	1.07 (0.423)
Crank - Shaft Stroke	cm (inch)	2.15 (0.846)
Approximate Internal Free Volume (Without Oil)	cm ³ (inch ³)	7000 (427)
Maximum Residual Moisture	mg	300
Maximum Internal Solid Residue / Impurities	mg	40

B) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Motor Type	---	2 Pole, Induction, Single Phase
Nominal Motor Speed	rpm	2,900
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω 0.69 To 0.81
	Aux.	Ω 3.00 To 3.50
Nominal Motor Output Power	kW	2.45
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130)
Relay		
Type	---	Potential
Part Number	---	AC85004 or 3ARR3CT3P5 or RVA-3F6D
Pick Up (Maximum)	V	165 To 185
Drop Out (Minimum)	V	65 To 95
Maximum Voltage Rating of Coils	V	330
Over Load Protector		
Type	---	Internal
Part Number		5DN-0321-78
Disc Opening Temperature	°F (°C)	257 To 275 (125 To 135)
Disc Closing Temperature	°F (°C)	140 To 172 (61 To 78)
1 st Cycle Trip Current	A	85
1 st Cycle Trip On Time	second	2 to 10
Terminal Fused Cluster	---	¼" Quick connector
Copper Wire Material	---	Hermetic Grade Round Enameled
Copper Wire Enamel Designation	---	H Class
Copper Wire Enamel Construction	---	Base Coat – 65-75% of Polyester Imide
	---	Top Coat – 25-35% of Polyamide Imide

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C) PERFORMANCE SPECIFICATIONS

Parameter	Unit	Value
Bare Compressor Sound	dB(A)	71 Maximum
Bare Compressor Vibration	µm	100 Maximum
Compressor Discharge Pulse	psi	6.0 Maximum

D) TEST CONDITIONS

Parameter	Voltage	Suction Pressure	Discharge Pressure	Top Shell Temperature	Ambient Temperature
Unit	V	kg/cm ² (psig)	kg/cm ² (psig)	°C (°F)	°C (°F)
Overload (High Load)	220	6.50 (92.43)	30 (426.6)	--	55 (131)
Blocked Fan	220	6.33 (90)	28.12 (400)	--	--
Low Voltage Start : Equalised	198	11.9 ± 0.5 (169)	11.9 ± 0.5 (169)	62 (143.6)	--
Low Voltage Run	198	6.50 (92.43)	30 (426.6)	--	55 (131)

Note: Above test conditions are only for reference and not for customer product qualification.

E) REFERENCE APPLICATION DETIAL CONDITIONS

Parameter	Unit	Value
Maximum Allowable Ambient Temperature	°C (°F)	55 (131)
Maximum Permissible Discharge Pressure	Transient	30.9 (440)
	Stabilised	29.5 (420)
Maximum Discharge Line Temperature	° C (°F)	129.4 (265)
Maximum Return Gas Temperature	° C (°F)	27 (80.6)

Note: Application Details are the guidelines for safe operation of compressor.

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