

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**KCJ511HAG-SXXXH**

BILL OF MATERIALS

**S420H,S320H**

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

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

SSS				01	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	

**PRODUCT SPECIFICATION****MODEL: KCJ511HAG-SXXXH****A) MODEL DESCRIPTION**

<b>Model Name</b>	<b>KCJ511HAG-SXXXH</b>
<b>Compressor Type</b>	Reciprocating, Connecting Rod Type
<b>Application Group</b>	High Temperature (HBP)
<b>Evaporating Temperature Range</b>	(-)17.8 °C To 12.8 °C Or 0 °F To 55 °F
<b>Refrigerant</b>	R134a
<b>Rated Voltage</b>	220 - 230 V, 50/60 Hz, 1 Phase
<b>Compressor Cooling</b>	Fan : 350 ft <sup>3</sup> / minute
<b>Typical Application</b>	Water Cooler
<b>Certifications &amp; Approvals</b>	---

**B) PERFORMANCE SPECIFICATION @ RATED CONDITION**

Parameter	Unit	HBP @ 50 Hz	HBP @ 60 Hz
Cooling Capacity	Btu / hr	9150	10500
	kcal / hr	2306	2646
	W	2680	3077
	Nominal HP	0.875	0.875
Input Power	W	1016	1175
Input Current	A	4.4	5.1
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-hr	9.00	8.93
	kcal / W-hr	2.26	2.24
	W / W	2.63	2.61

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

**C) RATING CONDITIONS**

Parameter	Unit	HBP @ ASRE/T	CBP @ ASRE/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 Temperature	°C (°F)	46.1 (115)	46.1 (115)
Return Gas Temperature	°C (°F)	35 (95)	35 (95)
Test Voltage	V	230	230

SSS				02	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	

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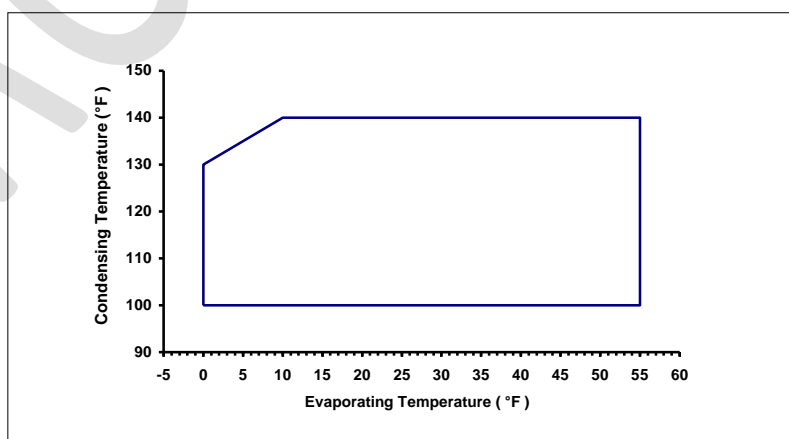
**PRODUCT SPECIFICATION****MODEL: KCJ511HAG-S4XXH****D) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Number of Cylinders	Number	One (1)
Displacement	cm <sup>3</sup> (inch <sup>3</sup> ) / rev	29.3(1.78)
Net Weight	kg	21.5
Approximate Shipping Weight	kg	-----
Oil Charge	cm <sup>3</sup> (Oz)	905 (30.5)
Oil Type	Refrigeration Grade	POE
IPRV (Pressure Differential)	kg/cm <sup>2</sup> (psig)	N/A
** Crank - case Heater	W @ V	N/A

\*\* Recommended only for Heat Pump Application.

**E) ELECTRICAL SPECIFICATIONS**

Parameter	Unit	Value
Operating Voltage Range	V	198 To 264 @ 50 Hz 207 To 253 @ 60 Hz
Motor Circuit	---	PSC
Electrical Accessories	---	---
➤ Start Capacitor	μF @ V AC	---
➤ Run Capacitor	μF @ V AC	25 @ 440
➤ Relay	---	----
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	31
Maximum Continuous Current (MCC)	A	8.5
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

**F) OPERATING ENVELOPE @ 220/230 V, 50/60 Hz, 1 Phase**

SSS				03	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	

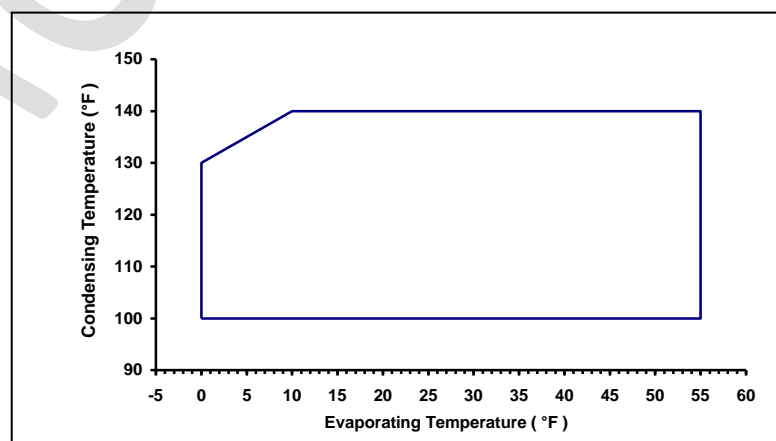
**PRODUCT SPECIFICATION****MODEL: KCJ511HAG-S3XXH****G) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Number of Cylinders	Number	One (1)
Displacement	cm <sup>3</sup> (inch <sup>3</sup> ) / rev	29.3(1.78)
Net Weight	kg	21.5
Approximate Shipping Weight	kg	-----
Oil Charge	cm <sup>3</sup> (Oz)	905 (30.5)
Oil Type	Refrigeration Grade	POE
IPRV (Pressure Differential)	kg/cm <sup>2</sup> (psig)	N/A
** Crank - case Heater	W @ V	N/A

\*\* Recommended only for Heat Pump Application.

**H) ELECTRICAL SPECIFICATIONS**

Parameter	Unit	Value
Operating Voltage Range	V	198 To 264 @ 50 Hz 207 To 253 @ 60 Hz
Motor Circuit	---	CSCR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	80-100 @ 230
➤ Run Capacitor	μF @ V AC	25 @ 440
➤ Relay	---	AC85006 Or HLR3800-6M3C-6
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	31
Maximum Continuous Current (MCC)	A	8.5
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

**J) OPERATING ENVELOPE @ 220/230 V, 50/60 Hz, 1 Phase**

SSS				04	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	

**PRODUCT SPECIFICATION****MODEL: KCJ511HAG-S4XXH****M) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	3.99(1.5742)
Crank - Shaft Eccentricity	cm (inch)	1.165(0.459)
Crank - Shaft Stroke	cm (inch)	2.331(0.918)
Approximate Internal Free Volume (Without Oil)	cm <sup>3</sup> (inch <sup>3</sup> )	4530 (276)
Maximum Residual Moisture	mg	100
Maximum Internal Solid Residue / Impurities	mg	75

**N) ELECTRICAL SPECIFICATIONS**

Parameter	Unit	Value
Motor Type	---	2 Pole, Induction, Single Phase
Nominal Motor Speed	rpm	2,900 @ 50Hz, 3450 @ 60Hz
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω 2.94 To 3.38
	Aux.	Ω 7.45 To 8.57
Nominal Motor Output Power	kW	0.75 @ 50 Hz, 0.9 @ 60 Hz
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130) B Class Insulation
Relay		
Type	---	-----
Part Number	---	-----
Pick Up (Maximum)	V	-----
Drop Out (Minimum)	V	-----
Maximum Voltage Rating of Coils	V	----
Over Load Protector		
Type	---	Internal
Part Number		3HM-188-110
Disc Opening Temperature	°F (°C)	257 To 275 (125 To 135)
Disc Closing Temperature	°F (°C)	152 To 192 (67 To 89)
1 <sup>st</sup> Cycle Trip Current	A	22
1 <sup>st</sup> Cycle Trip On Time	second	2 To 10
Terminal Fused Cluster	---	1/4" Quick connector
Wire Material	---	Hermetic Grade Round Enameled
Wire Enamel Designation & Construction	---	H Class, Dual Coated

SSS				05	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	

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**PRODUCT SPECIFICATION****MODEL: KCJ511HAG-S3XXH****K) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	3.99(1.5742)
Crank - Shaft Eccentricity	cm (inch)	1.165(0.459)
Crank - Shaft Stroke	cm (inch)	2.331(0.918)
Approximate Internal Free Volume (Without Oil)	cm <sup>3</sup> (inch <sup>3</sup> )	4530 (276)
Maximum Residual Moisture	mg	100
Maximum Internal Solid Residue / Impurities	mg	75

**L) ELECTRICAL SPECIFICATIONS**

Parameter	Unit	Value
Motor Type	---	2 Pole, Induction, Single Phase
Nominal Motor Speed	rpm	2,900 @ 50Hz, 3450 @ 60Hz
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω 2.94 To 3.38
	Aux.	Ω 7.45 To 8.57
Nominal Motor Output Power	kW	0.75 @ 50 Hz, 0.9 @ 60 Hz
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130) B Class Insulation
Relay		
Type	---	Potential
Part Number	---	AC85006 Or HLR3800-6M3C-6
Pick Up (Maximum)	V	240 To 260
Drop Out (Minimum)	V	80 To 150
Maximum Voltage Rating of Coils	V	430
Over Load Protector		
Type	---	Internal
Part Number		3HM-188-110
Disc Opening Temperature	°F (°C)	257 To 275 (125 To 135)
Disc Closing Temperature	°F (°C)	152 To 192 (67 To 89)
1 <sup>st</sup> Cycle Trip Current	A	22
1 <sup>st</sup> Cycle Trip On Time	second	2 To 10
Terminal Fused Cluster	---	1/4" Quick connector
Wire Material	---	Hermetic Grade Round Enameled
Wire Enamel Designation & Construction	---	H Class, Dual Coated

SSS				06	F42-0316-0111 EN No.	A1 21.03.2016
Prepared by	Checked by	Verified by	Approved by	Page No.	<b>KCJ511HAG-SXXXH</b> DOCUMENT No.	