

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**CS11K6ME-PFZ-XXXXX**

**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.

DVM				01	F45-0819-0125 EN No.	A3 12.08.2019
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**PRODUCT SPECIFICATION****MODEL: CS11K6ME-PFZ-XXXXX****A) MODEL DESCRIPTION**

<b>Model Name</b>	<b>CS11K6ME-PFZ-XXXXX</b>
Compressor Type	Reciprocating, Connecting Rod Type
Application Group	Medium Temp.
Evaporating Temperature Range	(-)31.7 °C To (-)1.1 °C Or (-)25 °F To 30 °F
Refrigerant	R-404A
Rated Voltage & Circuit	220-240 V, 50Hz, 1 Phase,
Compressor Cooling	Fan: 400 ft <sup>3</sup> / minute
Typical Application	Cold Room Application

**B) PERFORMANCE SPECIFICATION @ RATED CONDITION**

Specification	Unit	ARI	EN12900
Cooling Capacity	Btu / hr	9650	10000
	kcal / hr	2432	2520
	W	2828	2931
Input Power	W	1610	1475
Input Current	A	7.6	7.2
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-hr	5.99	6.78
	kcal / W-hr	1.51	1.71
	W / W	1.76	1.99

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

**C) RATING CONDITIONS**

Parameter	Unit	ARI	EN12900
Evaporating Temperature	°C (°F)	-6.7 (20)	-10(14)
Condensing Temperature	°C (°F)	48.9 (120)	45 (113)
Ambient Temperature	°C (°F)	35 (95)	35 (95)
Sub cooled Liquid Temp.	°C (°F)	48.9 (120)	45 (113)
Return Gas Temperature	°C (°F)	4.4 (40)	20 (68)
Test Voltage	V	230	230

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# PRODUCT SPECIFICATION

**MODEL : CS11K6ME-PFZ-XXXXX**

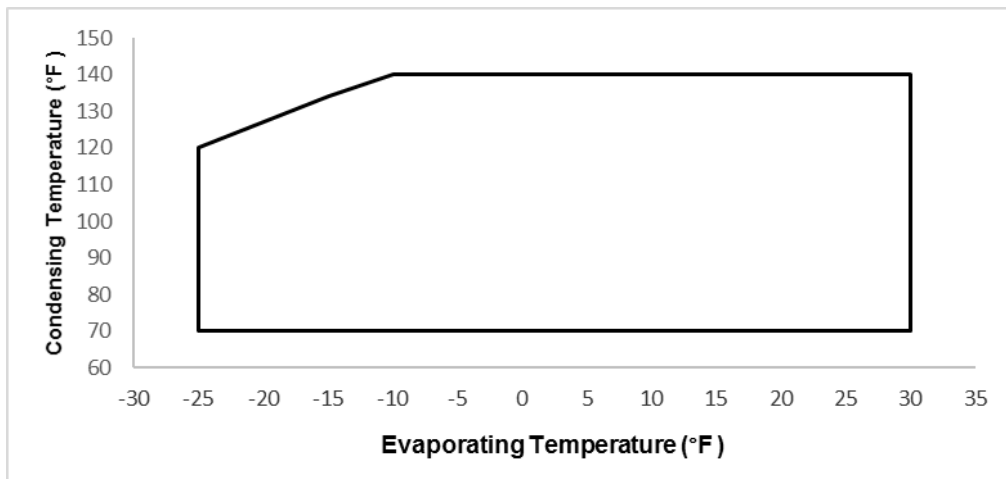
## D) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm <sup>3</sup> (inch <sup>3</sup> ) / rev	44.28 (2.702)
Net Weight	kg	29.8
Approximate Shipping Weight	kg	31.5
Oil Charge	cm <sup>3</sup> (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	POE
IPRV (Pressure Differential)	kg/cm <sup>2</sup> (psig)	31.64 / 38.67 (450 / 550)
Crank - Case Heater	W @ V	35 @ 240

## 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 @ 230
➤ Run Capacitor	μF @ V AC	36 @ 370
➤ Relay	---	Potential
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	61
Maximum Continuous Current (MCC)	A	13.5
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

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



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**PRODUCT SPECIFICATION****MODEL : CS11K6ME-PFZ-XXXXX****G) PERFORMANCE TABLES**

<b>Return Gas Temp.</b>	4.4 °C ( 40 °F )	<b>Voltage</b>	230V, 50 Hz, 1 Phase
<b>Sub - cooling</b>	0 °C ( 0 °F)	<b>Compressor Cooling</b>	400 ft3 / minute
<b>Ambient Temperature</b>	35 °C ( 95 °F)	<b>Refrigerant</b>	R-404A

**H) COOLING CAPACITY (Btu / h)**

Condensing Temperature		Evaporating Temperature											Coefficients	
°C		-31.7	-26.1	-23.3	-20.6	-17.8	-15.0	-12.2	-9.4	-6.7	-3.9	-1.1	c1	16089.827396608200
	( °F )	-25	-15	-10	-5	0	5	10	15	20	25	30	c2	651.989558768678
21.1	70	4843	6954	8281	9794	11499	13402	15508	17822	20348	23093	26062	c3	30.556072693809
26.7	80	4160	6075	7273	8639	10177	11892	13791	15877	18157	20636	23318	c4	6.723627739021
32.2	90	3394	5128	6206	7431	8809	10345	12044	13911	15951	18171	20574	c5	-4.696705191965
37.8	100	2584	4153	5118	6211	7436	8800	10307	11962	13772	15739	17872	c6	-1.845685441375
43.3	110	1773	3190	4050	5018	6099	7299	8621	10073	11658	13382	15251	c7	0.006943096917
48.9	120	999	2281	3044	3895	4839	5881	7027	8282	9650	11139	12752	c8	-0.039625965120
54.4	130	---	1466	2139	2880	3695	4588	5565	6631	7791	9051	10415	c9	0.007644396010
60.0	140	---	---	1376	2015	2708	3460	4275	5160	6120	7158	8282	c10	0.006747704170

**J) INPUT POWER (W)**

Condensing Temperature		Evaporating Temperature											Coefficients	
°C		-31.7	-26.1	-23.3	-20.6	-17.8	-15.0	-12.2	-9.4	-6.7	-3.9	-1.1	c1	960.714133587032
	( °F )	-25	-15	-10	-5	0	5	10	15	20	25	30	c2	4.086389691492
21.1	70	775	944	1016	1081	1140	1193	1240	1282	1319	1353	1384	c3	0.877851341503
26.7	80	790	965	1042	1111	1175	1233	1286	1335	1380	1421	1460	c4	-0.197820450536
32.2	90	805	986	1066	1141	1209	1273	1332	1388	1440	1489	1536	c5	0.095010821101
37.8	100	817	1005	1089	1168	1242	1312	1377	1440	1499	1556	1612	c6	0.034990632370
43.3	110	827	1021	1110	1194	1273	1348	1420	1489	1556	1621	1685	c7	0.000738169371
48.9	120	833	1034	1127	1215	1300	1381	1460	1536	1610	1683	1756	c8	0.001089928586
54.4	130	---	1043	1140	1233	1323	1410	1495	1578	1660	1742	1823	c9	0.000073716319
60.0	140	---	---	1147	1245	1341	1434	1525	1616	1705	1795	1885	c10	-0.000156198560

Note: 1. Nominal Performance Values ( ± 5% ) based on 24 h of 'run in'. Subject to change without notice.  
 2. Compressor is intended to be operated in the range of condensing & evaporating temperatures where performance values are specified in above tables.

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**PRODUCT SPECIFICATION****MODEL : CS11K6ME-PFZ-XXXXX****M) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.21 (1.656)
Crank - Shaft Eccentricity	cm (inch)	0.80 (0.314)
Crank - Shaft Stroke	cm (inch)	1.59 (0.627)
Approximate Internal Free Volume (Without Oil)	cm <sup>3</sup> (inch <sup>3</sup> )	6,500 (397)
Maximum Residual Moisture	mg	300
Maximum Internal Solid Residue / Impurities	mg	40

**N) 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 1.46 To 1.68
	Aux.	Ω 3.91 To 4.49
Nominal Motor Output Power	kW	1.57
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130) B Class Insulation
Relay		
Type	---	Potential
Part Number	---	HLR3800-3F3C-4
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-0793-78
Disc Opening Temperature	°F (°C)	239 To 257 (115 To 125)
Disc Closing Temperature	°F (°C)	140 To 170 (60 To 77)
1 <sup>st</sup> Cycle Trip Current	A	44
1 <sup>st</sup> Cycle Trip On Time	second	1 To 10
Terminal Fused Cluster	---	¼" Quick Connector
Wire Material	---	Hermetic Grade Round Enameled
Wire Enamel Designation & Construction	---	H Class, Dual Coated

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**PRODUCT SPECIFICATION****MODEL: CS11K6ME-PFZ-XXXXX****P) PERFORMANCE SPECIFICATIONS**

Parameter	Unit	Value
Bare Compressor Sound	dBA	78 Maximum
Bare Compressor Vibration	µm	85 Maximum
Compressor Discharge Pulse	psi	5.0 Maximum

**Q) TEST CONDITIONS**

Parameter	Voltage	Suction Pressure	Discharge Pressure	Top Shell Temperature	Ambient Temperature
Unit	V	kg/cm <sup>2</sup> (psig)	kg/cm <sup>2</sup> (psig)	°C (°F)	°C (°F)
Test					
Overload (High Load)	264	5.13 (73)	31.70 (451)	--	46 (115)
Blocked Fan	230	6.7 (95)	28.4 (404)	--	35(95)
Low Voltage Start:					
Unequalised	198	8 (114)	25.3(360)	65(149)	--
Equalised	198	14.3 (203)	14.3(203)	65(149)	--
Low Voltage Run	198	5.13 (73)	31.70 (451)	--	46 (115)

Note: Above test conditions are only for reference. Refer operating envelop and maximum allowable discharge line temperature for safe operation of compressor.

**R) REFERENCE APPLICATION DETAIL CONDITIONS**

Parameter	Unit	Value
Maximum Allowable Ambient Temperature	°C (°F)	46 (115)
Maximum Discharge Line Temperature	°C (°F)	135 (275)
Maximum Return Gas Temperature	°C (°F)	43 (109)

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

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