

PRODUCT SPECIFICATION

COMPRESSOR MODEL
CS17K6ME-TFM-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	F45-0319-0053 EN No.	A2 29.03.2019
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PRODUCT SPECIFICATION**MODEL : CS17K6ME-TFM-XXXXX****A) MODEL DESCRIPTION**

Model Name	CS17K6ME-TFM-XXXXX
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	380-420 V, 50 Hz, 3 Phase
Compressor Cooling	Fan: 400 ft ³ / minute
Typical Application	Cold Room Application

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Parameter	Unit	ARI	EN12900
Cooling Capacity	Btu / h	14015	14545
	kcal / h	3532	3665
	W	4107	4263
Input Power	W	2150	2120
Input Current	A	4.70	4.50
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	6.52	6.86
	kcal / W-h	1.64	1.73
	W / W	1.91	2.01

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 Temperature	°C (°F)	48.9 (120)	45 (113)
Return Gas Temperature	°C (°F)	4.4 (40)	20 (68)
Test Voltage	V	400	400

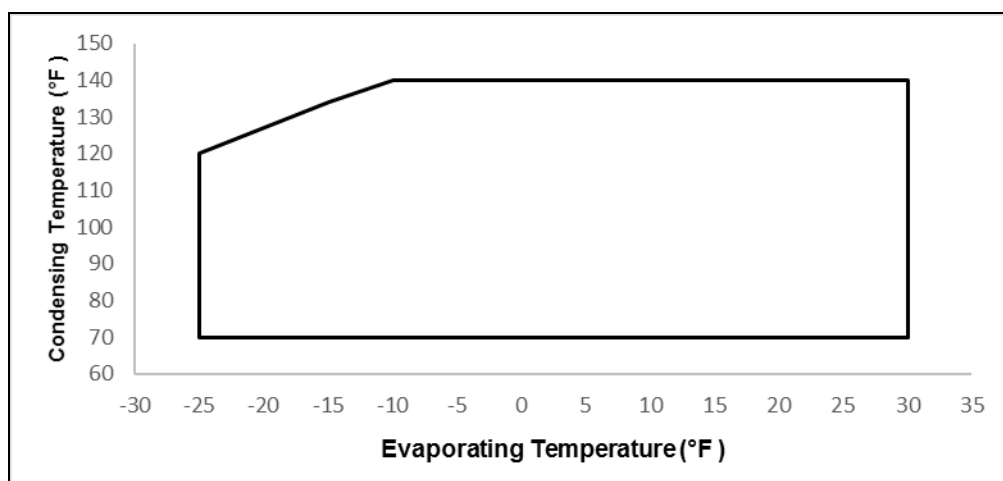
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PRODUCT SPECIFICATION**MODEL : CS17K6ME-TFM-XXXXX****D) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm ³ (inch ³) / rev	59.65 (3.640)
Net Weight	kg	31.0
Approximate Shipping Weight	kg	32.1
Oil Charge	cm ³ (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	Polyolester (POE)
IPRV (Pressure Differential)	kg / cm ² (psig)	31.65/38.68 (450 / 550)
Crank - case Heater	W @ V	40 @ 240

E) ELECTRICAL SPECIFICATION

Parameter	Unit	Value
Operating Voltage Range	V	342 To 462
Motor Circuit	---	Three Phase
Electrical Accessories	---	--
Start Capacitor	μF @ V AC	N / A
Run Capacitor	μF @ V AC	N / A
➤ Relay	---	N / A
➤ Over Load Protector	---	Internal
Lock Rotor Ampere (LRA)	A	41
Maximum Continuous Current (MCC)	A	7.3
Motor Insulation	---	B Class
High Potential Test	(kV / second / mA)	2.30 / 1 / 5.5 ± 0.5

F) OPERATING ENVELOP @ 400 V, 50 Hz, 3 Phase

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PRODUCT SPECIFICATION**MODEL : CS17K6ME-TFM-XXXXX****G) PERFORMANCE TABLES**

Return Gas Temp.	4.4 °C (40 °F)	Voltage	400V, 50 Hz, 3 Phase
Sub - cooling	0 °C (0 °F)	Compressor Cooling	400 ft3 / minute
Ambient Temperature	35 °C (95 °F)	Refrigerant	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	31198.425484902000
	(°F)	-25	-15	-10	-5	0	5	10	15	20	25	30	c2	724.863369797982
21.1	70	7156	10293	12131	14166	16411	18878	21579	24529	27740	31224	34994	c3	-222.244162818720
26.7	80	6032	8880	10554	12412	14467	16731	19217	21939	24908	28137	31641	c4	6.253065119760
32.2	90	4980	7532	9039	10716	12577	14635	16902	19391	22115	25087	28319	c5	-3.373471754127
37.8	100	4006	6253	7589	9082	10746	12594	14638	16891	19366	22076	25034	c6	0.109981380235
43.3	110	3112	5048	6208	7514	8977	10611	12428	14442	16665	19109	21789	c7	0.017062468065
48.9	120	2303	3920	4902	6015	7274	8691	10278	12048	14015	16191	18588	c8	-0.025809761623
54.4	130	---	2874	3673	4591	5642	6837	8190	9714	11421	13324	15436	c9	-0.003676979073
60.0	140	---	---	2526	3245	4084	5055	6170	7443	8887	10513	12336	c10	0.000672049781

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	1768.373312328950
	(°F)	-25	-15	-10	-5	0	5	10	15	20	25	30	c2	10.658043098293
21.1	70	1027	1254	1350	1436	1513	1582	1644	1699	1748	1793	1835	c3	-16.175456011398
26.7	80	1045	1282	1384	1476	1560	1636	1704	1767	1825	1878	1928	c4	-0.222283063578
32.2	90	1063	1311	1420	1519	1610	1694	1771	1842	1909	1972	2032	c5	-0.011498624328
37.8	100	1073	1336	1452	1559	1659	1751	1837	1918	1995	2068	2139	c6	0.244983743051
43.3	110	1072	1350	1475	1591	1700	1802	1898	1989	2077	2162	2244	c7	0.001225415845
48.9	120	1073	1351	1483	1609	1727	1840	1947	2050	2150	2247	2342	c8	0.000814346685
54.4	130	---	1352	1484	1610	1736	1861	1980	2096	2208	2318	2427	c9	0.000961618563
60.0	140	---	---	1485	1611	1740	1870	1990	2119	2245	2370	2493	c10	-0.000941917122

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 : CS17K6ME-TFM-XXXXX****A) MECHANICAL SPECIFICATION**

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)	8030 (490)
Maximum Residual Moisture	mg	300
Maximum Internal Solid Residue / Impurities	mg	40

B) ELECTRICAL SPECIFICATION

Parameter	Unit	Value
Motor Type	---	2 Pole, Induction, Three Phase
Nominal Motor Speed	rpm	2,900
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω
	Aux	Ω
Nominal Motor Output Power	kW	2.35
Maximum Allowable Motor Winding Temperature	°F (°C)	266 (130)
Relay		
Type	---	---
Part Number	---	N / A
Pick up	V	N / A
Drop out	V	N / A
Maximum voltage rating of coils	V	N / A
Over Load Protector		
Type	---	Internal
Part Number	---	34HM-252-56
Disc opening temperature	°C (°F)	212 To 230 (100 To 110)
Disc closing temperature	°C (°F)	126 To 158 (52 To 70)
1 st cycle trip Current	A	24
1 st cycle trip on time	second	3 to 10
Terminal Fused Cluster	---	¼ inch Quick connector
Wire Material	---	Hermetic Grade Round Enameled
Wire Enamel Designation	---	H Class
Wire Enamel Construction	---	Base Coat – 65-75% of Polyester Imide Top Coat – 25-35 % of Polyamide Imide

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PRODUCT SPECIFICATION**MODEL: CS17K6ME-TFM-XXXXX****P) PERFORMANCE SPECIFICATIONS**

Parameter	Unit	Value
Bare Compressor Sound	dBA	82.0 Maximum
Bare Compressor Vibration	µm	152.0 Maximum
Compressor Discharge Pulse	psi	6.0 Maximum

Q) 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)
Test					
Overload (High Load)	462	5.13 (73)	31.70 (451)	--	46 (115)
Blocked Fan	400	6.7 (95)	30.58 (435)	--	35(95)
Low Voltage Start:					
Unequalised	342	8 (114)	25.3(360)	65(149)	--
Equalised	342	14.3 (203)	14.3(203)	65(149)	
Low Voltage Run	342	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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