

COMPRESSOR DEFINITION

Designation	EM C3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	721SA50

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.2	[kg] (18.08 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(350)	[µF(VAC minimum)]
5 Motor protection	T0480/07	
6 Start winding resistance	13.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1390	350	407	237	1.16	4.14	5.87	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	914	230	268	166	0.86	2.71	5.49	1.38	1.61
-30	(-22)	1143	288	335	184	0.94	3.39	6.20	1.56	1.82
-25	(-13)	1428	360	418	202	1.01	4.25	7.08	1.78	2.07
-20	(- 4)	1768	446	518	218	1.08	5.28	8.11	2.04	2.38
-15	(+ 5)	2165	545	634	233	1.14	6.49	9.29	2.34	2.72
-10	(+14)	2616	659	767	247	1.20	7.87	10.60	2.67	3.10
-5	(+23)	3123	787	915	260	1.26	9.45	12.02	3.03	3.52
0	(+32)	3686	929	1080	272	1.32	11.21	13.55	3.41	3.97

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	829	209	243	172	0.89	2.45	4.84	1.22	1.42
-30	(-22)	1056	266	310	194	0.98	3.13	5.45	1.37	1.60
-25	(-13)	1338	337	392	215	1.07	3.98	6.21	1.56	1.82
-20	(- 4)	1676	422	491	236	1.15	5.00	7.08	1.78	2.08
-15	(+ 5)	2068	521	606	256	1.24	6.19	8.07	2.03	2.36
-10	(+14)	2515	634	737	274	1.32	7.57	9.15	2.31	2.68
-5	(+23)	3017	760	884	293	1.40	9.12	10.31	2.60	3.02
0	(+32)	3573	900	1047	310	1.48	10.86	11.54	2.91	3.38

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	775	195	227	178	0.90	2.29	4.35	1.10	1.27
-30	(-22)	993	250	291	203	1.01	2.94	4.90	1.24	1.44
-25	(-13)	1265	319	371	228	1.12	3.76	5.56	1.40	1.63
-20	(- 4)	1591	401	466	252	1.23	4.75	6.31	1.59	1.85
-15	(+ 5)	1972	497	578	277	1.33	5.90	7.13	1.80	2.09
-10	(+14)	2407	606	705	301	1.44	7.24	8.01	2.02	2.35
-5	(+23)	2896	730	848	324	1.55	8.75	8.94	2.25	2.62
0	(+32)	3439	867	1008	347	1.66	10.45	9.90	2.49	2.90

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 45° to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		