

COMPRESSOR DEFINITION

Designation	EM C3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513301945

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	ALQUILB / ISO22	
4 Weight (with oil charge)	8.15	[kg] (17.97 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL 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)	1.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.50	[A] - Measured according to UL 984
11 Approval boards certification	CE - ISI - UKCA - 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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1423	359	417	229	1.15	4.24	6.22	1.57	1.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	952	240	279	164	0.92	2.82	5.79	1.46	1.70
-30	(-22)	1163	293	341	180	0.99	3.45	6.47	1.63	1.90
-25	(-13)	1434	361	420	196	1.06	4.26	7.34	1.85	2.15
-20	(- 4)	1767	445	518	211	1.12	5.27	8.38	2.11	2.46
-15	(+ 5)	2160	544	633	226	1.19	6.47	9.56	2.41	2.80
-10	(+14)	2615	659	766	241	1.25	7.87	10.87	2.74	3.19
-5	(+23)	3130	789	917	255	1.31	9.47	12.28	3.09	3.60
0	(+32)	3707	934	1086	269	1.37	11.27	13.76	3.47	4.03

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	911	230	267	175	0.96	2.70	5.23	1.32	1.53
-30	(-22)	1118	282	328	194	1.05	3.32	5.77	1.46	1.69
-25	(-13)	1384	349	405	213	1.13	4.11	6.49	1.63	1.90
-20	(- 4)	1708	431	501	232	1.21	5.10	7.34	1.85	2.15
-15	(+ 5)	2092	527	613	251	1.29	6.27	8.31	2.09	2.44
-10	(+14)	2534	639	743	270	1.37	7.63	9.38	2.36	2.75
-5	(+23)	3035	765	889	288	1.45	9.18	10.52	2.65	3.08
0	(+32)	3595	906	1053	307	1.53	10.93	11.72	2.95	3.43

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	853	215	250	179	0.98	2.52	4.77	1.20	1.40
-30	(-22)	1056	266	309	203	1.07	3.13	5.22	1.32	1.53
-25	(-13)	1315	331	385	226	1.17	3.91	5.81	1.46	1.70
-20	(- 4)	1631	411	478	250	1.27	4.86	6.52	1.64	1.91
-15	(+ 5)	2003	505	587	274	1.37	6.00	7.31	1.84	2.14
-10	(+14)	2432	613	713	298	1.48	7.32	8.18	2.06	2.40
-5	(+23)	2918	735	855	321	1.58	8.82	9.10	2.29	2.67
0	(+32)	3460	872	1014	345	1.69	10.52	10.04	2.53	2.94

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		