

COMPRESSOR DEFINITION

Designation	EM C3134U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513300727

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[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)	Fan	-	-
8.2 LBP (43°C Ambient temperature)	Fan	103 to 140 V	-
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		[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 / ISO22	
4 Weight (with oil charge)	7.9	[kg] (17.42 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C3/8EA21C3/QP2-4.7/QPS2-A4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	4TM771RFBZZ-53	
6 Start winding resistance	5.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.93	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	22.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	5.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]	
1692	426	496	274	2.54	5.04	6.18	1.56	1.81	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	1067	269	313	186	1.76	3.16	5.72	1.44	1.68
-30	(-22)	1359	343	398	208	1.93	4.03	6.53	1.65	1.91
-25	(-13)	1698	428	498	230	2.12	5.05	7.39	1.86	2.17
-20	(- 4)	2091	527	613	251	2.31	6.24	8.34	2.10	2.44
-15	(+ 5)	2545	641	746	271	2.49	7.62	9.40	2.37	2.76
-10	(+14)	3066	773	898	289	2.65	9.23	10.63	2.68	3.11
-5	(+23)	3663	923	1073	304	2.78	11.08	12.05	3.04	3.53
0	(+32)	4343	1094	1273	317	2.87	13.21	13.70	3.45	4.01

TEST CONDITIONS: @115V60Hz			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)	991	250	290	195	1.83	2.93	5.07	1.28	1.49
-30	(-22)	1289	325	378	222	2.05	3.82	5.81	1.46	1.70
-25	(-13)	1631	411	478	249	2.28	4.85	6.56	1.65	1.92
-20	(- 4)	2024	510	593	275	2.51	6.04	7.35	1.85	2.15
-15	(+ 5)	2475	624	725	300	2.74	7.41	8.23	2.07	2.41
-10	(+14)	2991	754	877	324	2.96	9.00	9.22	2.32	2.70
-5	(+23)	3580	902	1049	345	3.15	10.83	10.37	2.61	3.04
0	(+32)	4248	1070	1245	363	3.29	12.91	11.71	2.95	3.43

TEST CONDITIONS: @115V60Hz			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)	884	223	259	197	1.85	2.61	4.47	1.13	1.31
-30	(-22)	1185	299	347	230	2.12	3.51	5.15	1.30	1.51
-25	(-13)	1528	385	448	264	2.40	4.54	5.81	1.46	1.70
-20	(- 4)	1918	483	562	297	2.70	5.72	6.47	1.63	1.90
-15	(+ 5)	2363	595	692	329	3.00	7.08	7.18	1.81	2.10
-10	(+14)	2870	723	841	360	3.28	8.64	7.96	2.01	2.33
-5	(+23)	3447	869	1010	388	3.54	10.42	8.86	2.23	2.60
0	(+32)	4101	1033	1202	414	3.76	12.46	9.90	2.50	2.90

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		