

### COMPRESSOR DEFINITION

Designation	EM Y3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300744

### 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 (Plus) Back Pressure		
4.1 Evaporating temperature range	-35°C to 5°C	(-31°F to 41°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 <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.95	[cm <sup>3</sup> ] (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)	7.65	[kg] (16.87 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	8EA17C3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(450)	[µF(VAC minimum)]
5 Motor protection	DRB35K61A2	
6 Start winding resistance	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50 Hz)	10.50	[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	CCC	

### 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]
1327	334	389	249	1.58	3.95	5.33	1.34	1.56

### 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)	831	209	243	197	1.44	2.46	4.21	1.06	1.23
-30	(-22)	1061	267	311	215	1.49	3.15	4.92	1.24	1.44
-25	(-13)	1343	339	394	232	1.54	4.00	5.78	1.46	1.69
-20	(- 4)	1681	424	493	248	1.59	5.02	6.79	1.71	1.99
-15	(+ 5)	2077	523	608	262	1.64	6.22	7.98	2.01	2.34
-10	(+14)	2532	638	742	274	1.68	7.62	9.37	2.36	2.74
-5	(+23)	3050	769	894	282	1.71	9.23	10.96	2.76	3.21
0	(+32)	3634	916	1065	285	1.73	11.06	12.78	3.22	3.75
+5	(+41)	4285	1080	1256	284	1.72	13.13	14.85	3.74	4.35

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)	765	193	224	203	1.46	2.26	3.82	0.96	1.12
-30	(-22)	985	248	289	225	1.51	2.92	4.38	1.10	1.28
-25	(-13)	1256	316	368	247	1.58	3.74	5.03	1.27	1.47
-20	(- 4)	1580	398	463	270	1.66	4.71	5.78	1.46	1.69
-15	(+ 5)	1959	494	574	291	1.73	5.87	6.65	1.68	1.95
-10	(+14)	2397	604	702	311	1.81	7.21	7.66	1.93	2.24
-5	(+23)	2895	730	848	329	1.88	8.76	8.81	2.22	2.58
0	(+32)	3456	871	1013	344	1.94	10.52	10.14	2.55	2.97
+5	(+41)	4083	1029	1197	355	1.99	12.51	11.65	2.93	3.41

### E - PERFORMANCE - CURVES

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)	734	185	215	193	1.43	2.17	3.88	0.98	1.14
-30	(-22)	946	238	277	218	1.50	2.81	4.39	1.11	1.29
-25	(-13)	1206	304	353	246	1.59	3.59	4.92	1.24	1.44
-20	(- 4)	1517	382	445	275	1.68	4.53	5.50	1.39	1.61
-15	(+ 5)	1882	474	552	305	1.79	5.63	6.13	1.55	1.80
-10	(+14)	2303	580	675	334	1.90	6.93	6.85	1.73	2.01
-5	(+23)	2782	701	815	362	2.01	8.41	7.65	1.93	2.24
0	(+32)	3323	837	974	388	2.12	10.11	8.57	2.16	2.51
+5	(+41)	3927	990	1151	411	2.22	12.03	9.62	2.42	2.82

TEST CONDITIONS: @220V50Hz		ASHRAE32 Fan			(Condensing temperature 65°C (+149°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)	674	170	197	184	1.41	1.99	3.59	0.90	1.05
-30	(-22)	879	221	257	214	1.49	2.61	4.12	1.04	1.21
-25	(-13)	1130	285	331	247	1.59	3.36	4.63	1.17	1.36
-20	(- 4)	1429	360	419	283	1.71	4.26	5.12	1.29	1.50
-15	(+ 5)	1781	449	522	320	1.85	5.33	5.61	1.41	1.64
-10	(+14)	2186	551	641	358	1.99	6.57	6.12	1.54	1.79
-5	(+23)	2648	667	776	396	2.15	8.01	6.67	1.68	1.95
0	(+32)	3169	799	929	434	2.30	9.64	7.27	1.83	2.13
+5	(+41)	3752	945	1099	470	2.46	11.49	7.94	2.00	2.33

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	Yes		
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		