

COMPRESSOR DEFINITION

Designation	EM T3134U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300903

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	7.96	[cm ³] (0.486 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	17.600	
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)	7.4	[kg] (16.31 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	QP2- 20A	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(320)	[µF(VAC minimum)]
5 Motor protection	4TM739NFBYY-53	
6 Start winding resistance	18.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.24	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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		

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]
1365	344	400	259	1.56	4.06	5.28	1.33	1.55

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)	907	228	266	186	1.40	2.68	4.83	1.22	1.42
-30	(-22)	1125	284	330	203	1.42	3.34	5.54	1.40	1.62
-25	(-13)	1385	349	406	219	1.45	4.12	6.33	1.60	1.86
-20	(- 4)	1695	427	497	236	1.49	5.06	7.22	1.82	2.11
-15	(+ 5)	2063	520	604	252	1.54	6.18	8.20	2.07	2.40
-10	(+14)	2497	629	732	269	1.60	7.51	9.30	2.34	2.73
-5	(+23)	3007	758	881	286	1.66	9.09	10.51	2.65	3.08
0	(+32)	3600	907	1055	303	1.72	10.95	11.86	2.99	3.47

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)	842	212	247	195	1.41	2.49	4.32	1.09	1.26
-30	(-22)	1074	271	315	215	1.44	3.19	4.98	1.26	1.46
-25	(-13)	1343	338	393	234	1.49	3.99	5.71	1.44	1.67
-20	(- 4)	1656	417	485	254	1.54	4.94	6.51	1.64	1.91
-15	(+ 5)	2024	510	593	274	1.61	6.06	7.39	1.86	2.16
-10	(+14)	2453	618	719	294	1.68	7.38	8.35	2.10	2.45
-5	(+23)	2953	744	865	314	1.76	8.93	9.41	2.37	2.76
0	(+32)	3532	890	1035	334	1.83	10.74	10.57	2.66	3.10

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)	750	189	220	200	1.42	2.22	3.79	0.96	1.11
-30	(-22)	987	249	289	224	1.46	2.93	4.40	1.11	1.29
-25	(-13)	1256	316	368	248	1.53	3.73	5.05	1.27	1.48
-20	(- 4)	1565	394	459	272	1.60	4.67	5.74	1.45	1.68
-15	(+ 5)	1923	485	563	296	1.68	5.76	6.49	1.64	1.90
-10	(+14)	2339	589	685	320	1.77	7.04	7.30	1.84	2.14
-5	(+23)	2820	711	826	345	1.86	8.53	8.19	2.06	2.40
0	(+32)	3376	851	989	369	1.96	10.26	9.15	2.31	2.68

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Fan			(Condensing temperature 65°C (+149°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)	717	181	210	201	1.42	2.12	3.55	0.89	1.04
-30	(-22)	950	239	278	231	1.49	2.82	4.08	1.03	1.20
-25	(-13)	1210	305	355	260	1.57	3.60	4.63	1.17	1.36
-20	(- 4)	1506	380	441	289	1.66	4.49	5.20	1.31	1.52
-15	(+ 5)	1847	465	541	319	1.77	5.53	5.80	1.46	1.70
-10	(+14)	2240	564	656	348	1.88	6.74	6.45	1.62	1.89
-5	(+23)	2694	679	790	378	2.00	8.14	7.14	1.80	2.09
0	(+32)	3219	811	943	408	2.12	9.78	7.88	1.99	2.31

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
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		