

COMPRESSOR DEFINITION

Designation	EM T2125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300128

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	Very Low Back Pressure		
4.1 Evaporating temperature range	-45°C to -10°C	(-49°F to 14°F)	
5 Motor type	CSIR		
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	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.8	[kg] (17.20 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	Current Relay	
2.1 Starting device	MTRP-34	
3 Start capacitor	43-53(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM276RFBYY-53	
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)	8.50	[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 - 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]
1006	254	295	196	1.45	2.99	5.13	1.29	1.50

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]
-40	(-40)	552	139	162	120	1.02	1.63	4.57	1.15	1.34
-35	(-31)	731	184	214	135	1.06	2.16	5.39	1.36	1.58
-30	(-22)	931	235	273	150	1.10	2.76	6.20	1.56	1.82
-25	(-13)	1164	293	341	166	1.15	3.46	7.05	1.78	2.07
-20	(- 4)	1437	362	421	180	1.20	4.29	7.98	2.01	2.34
-15	(+ 5)	1761	444	516	195	1.24	5.28	9.02	2.27	2.64
-10	(+14)	2145	540	628	209	1.29	6.45	10.23	2.58	3.00

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]
-40	(-40)	462	117	135	125	1.04	1.36	3.76	0.95	1.10
-35	(-31)	634	160	186	141	1.08	1.88	4.48	1.13	1.31
-30	(-22)	823	207	241	159	1.13	2.44	5.17	1.30	1.51
-25	(-13)	1039	262	304	177	1.18	3.09	5.85	1.47	1.71
-20	(- 4)	1291	325	378	196	1.25	3.85	6.58	1.66	1.93
-15	(+ 5)	1589	400	466	215	1.31	4.76	7.39	1.86	2.17
-10	(+14)	1942	489	569	234	1.38	5.84	8.32	2.10	2.44

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]
-40	(-40)	402	101	118	135	1.06	1.19	2.95	0.74	0.87
-35	(-31)	544	137	159	151	1.10	1.61	3.60	0.91	1.05
-30	(-22)	700	176	205	168	1.15	2.08	4.17	1.05	1.22
-25	(-13)	877	221	257	187	1.21	2.61	4.71	1.19	1.38
-20	(- 4)	1087	274	318	207	1.28	3.24	5.25	1.32	1.54
-15	(+ 5)	1337	337	392	229	1.36	4.00	5.84	1.47	1.71
-10	(+14)	1637	413	480	251	1.44	4.93	6.51	1.64	1.91

F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard
2 Tray holder	Yes
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