

### COMPRESSOR DEFINITION

Designation	EM T1130U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	873BA62

### 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 Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°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	1/2-	[hp]
2 Displacement	6.76	[cm <sup>3</sup> ] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
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)	8	[kg] (17.64 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	V230	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	5(440)	[μF(VAC minimum)]
5 Motor protection	T0933/07	
6 Start winding resistance	17.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.55	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	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]
1160	292	340	225	1.25	3.45	5.16	1.30	1.51

### 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)	574	145	168	148	1.05	1.70	3.87	0.98	1.13
-35	(-31)	742	187	217	162	1.09	2.20	4.58	1.16	1.34
-30	(-22)	938	236	275	177	1.13	2.78	5.30	1.34	1.55
-25	(-13)	1170	295	343	193	1.18	3.48	6.07	1.53	1.78
-20	(- 4)	1444	364	423	209	1.23	4.31	6.93	1.75	2.03
-15	(+ 5)	1768	446	518	223	1.28	5.30	7.94	2.00	2.33
-10	(+14)	2148	541	629	235	1.33	6.46	9.13	2.30	2.68

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)	525	132	154	153	1.06	1.55	3.44	0.87	1.01
-35	(-31)	694	175	203	169	1.11	2.05	4.11	1.04	1.21
-30	(-22)	889	224	261	187	1.17	2.64	4.76	1.20	1.39
-25	(-13)	1117	282	327	206	1.23	3.32	5.42	1.36	1.59
-20	(- 4)	1386	349	406	225	1.29	4.13	6.14	1.55	1.80
-15	(+ 5)	1701	429	498	244	1.35	5.09	6.97	1.76	2.04
-10	(+14)	2070	522	607	260	1.42	6.23	7.97	2.01	2.33

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)	470	118	138	153	1.06	1.39	3.06	0.77	0.90
-35	(-31)	640	161	188	172	1.12	1.89	3.72	0.94	1.09
-30	(-22)	834	210	244	193	1.19	2.47	4.32	1.09	1.27
-25	(-13)	1058	267	310	216	1.26	3.15	4.91	1.24	1.44
-20	(- 4)	1320	333	387	239	1.34	3.94	5.53	1.39	1.62
-15	(+ 5)	1627	410	477	261	1.42	4.87	6.22	1.57	1.82
-10	(+14)	1985	500	582	282	1.50	5.97	7.04	1.77	2.06

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
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	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		