

### COMPRESSOR DEFINITION

Designation	EM T6170L
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	513300053

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	HFO		
3 Nominal voltage and frequency	100 / 50	[ V / Hz ]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	CSCR		
6 Starting torque	HST - Hight starting torque		
7 Expansion device	Capillary tube or Expansion valve		
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	15.72	[kgf/cm <sup>2</sup> ] (224 psig)	/ °C - °F
9.2 Peak	19.82	[kgf/cm <sup>2</sup> ] (282 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	7.96	[cm <sup>3</sup> ] (0.486 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	17.600	
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)	8.2	[kg] (18.08 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M4R7MB3/8EA14B11	
3 Start capacitor	88-108(165)	[µF(VAC minimum)]
4 Run capacitor	20(250)	[µF(VAC minimum)]
5 Motor protection	5TM444NFBYY-53	
6 Start winding resistance	6.42	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.18	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]	
2860	721	838	311	3.39		9.18	2.31	2.69	

TEST CONDITIONS: @100V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]	
3326	838	975	382	3.74		8.70	2.19	2.55	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			ASHRAE46 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]
-15 (+5)	1279	322	375	191	2.42	0.00	6.71	1.69	1.97
-10 (+14)	1611	406	472	210	2.55	0.00	7.68	1.94	2.25
-5 (+23)	1997	503	585	229	2.71	0.00	8.71	2.19	2.55
0 (+32)	2448	617	717	250	2.88	0.00	9.80	2.47	2.87
+5 (+41)	2974	750	872	271	3.07	0.00	10.98	2.77	3.22
+10 (+50)	3587	904	1051	293	3.27	0.00	12.24	3.08	3.59

TEST CONDITIONS: @100V50Hz			ASHRAE46 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]
-15 (+5)	1099	277	322	202	2.50	0.00	5.44	1.37	1.59
-10 (+14)	1401	353	411	225	2.68	0.00	6.23	1.57	1.82
-5 (+23)	1748	440	512	249	2.87	0.00	7.03	1.77	2.06
0 (+32)	2150	542	630	273	3.08	0.00	7.87	1.98	2.31
+5 (+41)	2618	660	767	299	3.32	0.00	8.75	2.20	2.56
+10 (+50)	3162	797	927	326	3.58	0.00	9.69	2.44	2.84

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+ 5)	1459	368	428	209	2.14	0.00	6.97	1.76	2.04
-10	(+14)	1848	466	542	236	2.42	0.00	7.81	1.97	2.29
-5	(+23)	2313	583	678	266	2.73	0.00	8.68	2.19	2.54
0	(+32)	2852	719	836	298	3.06	0.00	9.57	2.41	2.80
+5	(+41)	3464	873	1015	330	3.40	0.00	10.49	2.64	3.08
+10	(+50)	4147	1045	1215	362	3.72	0.00	11.46	2.89	3.36

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+ 5)	1238	312	363	218	2.23	0.00	5.69	1.43	1.67
-10	(+14)	1587	400	465	249	2.54	0.00	6.38	1.61	1.87
-5	(+23)	2005	505	588	284	2.91	0.00	7.06	1.78	2.07
0	(+32)	2492	628	730	322	3.31	0.00	7.73	1.95	2.27
+5	(+41)	3045	767	892	362	3.74	0.00	8.41	2.12	2.46
+10	(+50)	3664	923	1074	403	4.17	0.00	9.09	2.29	2.66

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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		