

COMPRESSOR DEFINITION

Designation	EM T37HDP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306039

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 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	RSIR		
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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	3.40	[cm ³] (0.207 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	12.000	
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)	7.24	[kg] (15.96 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	-	[μF(VAC minimum)]
5 Motor protection	T0225/07	
6 Start winding resistance	31.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	26.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.70	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900HBP_HH Static		Evaporating temperature (Condensing temperature		5°C (41°F) 50°C (122°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]
1102	278	323	129	0.83	7.53	8.54	2.15	2.50

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900HH Static		(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]
-15	(+ 5)	577	145	169	83	0.65	3.37	6.95	1.75	2.04
-10	(+14)	727	183	213	90	0.68	4.26	8.06	2.03	2.36
-5	(+23)	906	228	266	97	0.71	5.34	9.36	2.36	2.74
0	(+32)	1116	281	327	103	0.74	6.61	10.83	2.73	3.17
+5	(+41)	1357	342	398	109	0.77	8.09	12.45	3.14	3.65
+10	(+50)	1630	411	478	115	0.80	9.78	14.17	3.57	4.15

TEST CONDITIONS: @220V50Hz			EN12900HH Static		(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)	489	123	143	86	0.66	3.12	5.68	1.43	1.67
-10	(+14)	624	157	183	96	0.70	4.00	6.51	1.64	1.91
-5	(+23)	785	198	230	105	0.74	5.05	7.47	1.88	2.19
0	(+32)	971	245	285	114	0.77	6.28	8.54	2.15	2.50
+5	(+41)	1184	298	347	122	0.81	7.71	9.68	2.44	2.84
+10	(+50)	1424	359	417	131	0.85	9.34	10.88	2.74	3.19

TEST CONDITIONS: @220V50Hz			EN12900HH Static		(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)	406	102	119	90	0.67	2.86	4.51	1.14	1.32
-10	(+14)	528	133	155	102	0.72	3.73	5.18	1.31	1.52
-5	(+23)	672	169	197	113	0.76	4.77	5.92	1.49	1.74
0	(+32)	836	211	245	125	0.81	5.97	6.71	1.69	1.97
+5	(+41)	1022	258	299	136	0.86	7.36	7.51	1.89	2.20
+10	(+50)	1230	310	360	148	0.91	8.93	8.31	2.09	2.43

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	Yes		
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° up + 45° to Back		
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	Slanted parallel BP+24°to Back		
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 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		