

### COMPRESSOR DEFINITION

Designation	<b>EM T50HDP</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>513306041</b>

### 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 temperature			
9.1 Operating (gauge)	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak (gauge)	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	4.50	[cm <sup>3</sup> ] (0.275 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.000	
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)	7.51	[kg] (16.56 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	T0521/07	
6 Start winding resistance	32.78	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.05	[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]
1466	369	430	166	1.01	10.02	8.82	2.22	2.58

### 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)	758	191	222	102	0.78	4.43	7.42	1.87	2.17
-10	(+14)	963	243	282	111	0.81	5.66	8.69	2.19	2.55
-5	(+23)	1207	304	354	120	0.85	7.11	10.09	2.54	2.96
0	(+32)	1488	375	436	128	0.88	8.82	11.59	2.92	3.40
+5	(+41)	1806	455	529	137	0.91	10.76	13.19	3.32	3.87
+10	(+50)	2160	544	633	145	0.94	12.96	14.89	3.75	4.36

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)	643	162	188	109	0.80	4.10	5.91	1.49	1.73
-10	(+14)	825	208	242	121	0.84	5.28	6.82	1.72	2.00
-5	(+23)	1043	263	306	133	0.89	6.71	7.83	1.97	2.29
0	(+32)	1294	326	379	145	0.93	8.37	8.93	2.25	2.62
+5	(+41)	1579	398	463	156	0.98	10.28	10.10	2.55	2.96
+10	(+50)	1895	478	555	167	1.03	12.43	11.35	2.86	3.33

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)	550	139	161	116	0.83	3.87	4.73	1.19	1.39
-10	(+14)	705	178	206	131	0.87	4.98	5.37	1.35	1.57
-5	(+23)	890	224	261	147	0.93	6.32	6.07	1.53	1.78
0	(+32)	1106	279	324	162	0.98	7.91	6.85	1.72	2.01
+5	(+41)	1352	341	396	176	1.05	9.73	7.68	1.93	2.25
+10	(+50)	1626	410	476	190	1.12	11.81	8.56	2.16	2.51

### 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		