

**COMPRESSOR DEFINITION**

Designation	<b>EM T6144Z</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>513306218</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	CSIR		
6 Starting torque	HST - High 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)	Fan	198 to 255 V	-
8.4 HBP (43°C Ambient temperature)	Fan	198 to 255 V	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16,2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20,6	[kgf/cm <sup>2</sup> ] (293 psig)	
10 Maximum winding temperature	130	[ °C ]	

**B - MECHANICAL DATA**

1 Commercial designation	1/5	[hp]
2 Displacement	5,19	[cm <sup>3</sup> ] (0.317 cu.in)
2.1 Bore [mm]	21,000	
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)	7,72	[kg] (17.02 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	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	T0827/G6	
6 Start winding resistance	21.30	[Wat 25°C (77°F)] +/- 8%
7 Run winding resistance	12.95	[Wat 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)	2.15	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.30	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

**D - PERFORMANCE - CHECK POINT DATA**

TEST CONDITIONS: @220V50Hz			<b>ASHRAEHBP46</b> 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]
1968	496	577	222	1,38	12,76	8,86	2,23	2,60

**E - PERFORMANCE - CURVES**

TEST CONDITIONS: @220V50Hz			<b>ASHRAE46</b> 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]
-15 (+5)	986	249	289	131	1,08	5,33	7,53	1,90	2,21
-10 (+14)	1242	313	364	142	1,11	6,74	8,75	2,21	2,56
-5 (+23)	1542	389	452	154	1,14	8,40	10,01	2,52	2,93
0 (+32)	1890	477	554	165	1,17	10,34	11,46	2,89	3,36
+5 (+41)	2288	577	671	176	1,21	12,59	13,00	3,28	3,81
+10 (+50)	2740	691	803	187	1,24	15,17	14,65	3,69	4,29

TEST CONDITIONS: @220V50Hz			<b>ASHRAE46</b> 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)	863	218	253	140	1,10	5,04	6,16	1,55	1,81
-10 (+14)	1095	276	321	153	1,14	6,42	7,16	1,81	2,10
-5 (+23)	1367	345	401	167	1,18	8,05	8,19	2,07	2,40
0 (+32)	1685	425	494	181	1,22	9,97	9,31	2,35	2,73
+5 (+41)	2052	517	601	195	1,27	12,21	10,52	2,65	3,08
+10 (+50)	2469	623	724	208	1,31	14,80	11,87	2,99	3,48

TEST CONDITIONS: @220V50Hz			<b>ASHRAE46</b> 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)	746	188	219	148	1,12	4,75	5,04	1,27	1,48
-10 (+14)	948	239	278	164	1,18	6,06	5,78	1,46	1,69
-5 (+23)	1189	300	348	181	1,24	7,64	6,57	1,66	1,93
0 (+32)	1473	371	432	198	1,29	9,51	7,44	1,88	2,18
+5 (+41)	1803	455	528	215	1,36	11,72	8,39	2,12	2,46
+10 (+50)	2182	550	639	232	1,43	14,29	9,41	2,37	2,76

**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		