

**COMPRESSOR DEFINITION**

Designation	<b>EM T6170Z</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>513306210</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 - Hight starting torque		
7 Expantion 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 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	1/3-	[hp]
2 Displacement	7.69	[cm <sup>3</sup> ] (0.469 cu.in)
2.1 Bore [mm]	24.000	
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)	7.7	[kg] (16.98 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-38	
3 Start capacitor	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0318/G6	
6 Start winding resistance	18.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.60	[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]
2665	672	781	368	2.09	17.28	7.25	1.83	2.12

**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)	1407	355	412	203	1.55	7.61	6.91	1.74	2.03
-10 (+14)	1775	447	520	222	1.59	9.64	7.98	2.01	2.34
-5 (+23)	2181	550	639	246	1.66	11.88	8.86	2.23	2.60
0 (+32)	2641	665	774	274	1.74	14.44	9.66	2.43	2.83
+5 (+41)	3167	798	928	303	1.84	17.42	10.45	2.63	3.06
+10 (+50)	3776	952	1106	333	1.96	20.91	11.35	2.86	3.32

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)	1218	307	357	216	1.58	7.11	5.66	1.43	1.66
-10 (+14)	1572	396	461	236	1.63	9.22	6.64	1.67	1.95
-5 (+23)	1955	493	573	263	1.71	11.51	7.43	1.87	2.18
0 (+32)	2380	600	697	293	1.80	14.09	8.12	2.05	2.38
+5 (+41)	2863	721	839	325	1.92	17.04	8.80	2.22	2.58
+10 (+50)	3417	861	1001	358	2.04	20.47	9.56	2.41	2.80

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)	1064	268	312	222	1.60	6.78	4.79	1.21	1.40
-10 (+14)	1371	345	402	247	1.67	8.76	5.56	1.40	1.63
-5 (+23)	1696	427	497	278	1.77	10.89	6.12	1.54	1.79
0 (+32)	2053	517	602	313	1.89	13.26	6.58	1.66	1.93
+5 (+41)	2458	619	720	350	2.03	15.98	7.01	1.77	2.05
+10 (+50)	2924	737	857	389	2.18	19.15	7.52	1.90	2.20

**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		