

### COMPRESSOR DEFINITION

Designation	EM T45CDP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306224

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°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	6.9	[kgf/cm <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	6.78	[cm <sup>3</sup> ] (0.414 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO22	
4 Weight (with oil charge)	7.65	[kg] (16.87 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	T0357/07	
6 Start winding resistance	20.97	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	24.10	[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)	1.47	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFHBP Static		Evaporating temperature (Condensing temperature		5°C (41°F) 55°C (131°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]
1143	288	335	151	0.91	4.43	7.59	1.91	2.22

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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]
-20	(- 4)	505	127	148	86	0.71	1.63	5.92	1.49	1.73
-15	(+ 5)	636	160	186	91	0.73	2.05	6.99	1.76	2.05
-10	(+14)	789	199	231	98	0.75	2.54	8.01	2.02	2.35
-5	(+23)	953	240	279	107	0.77	3.08	8.90	2.24	2.61
0	(+32)	1116	281	327	117	0.80	3.62	9.59	2.42	2.81
+5	(+41)	1266	319	371	127	0.82	4.12	9.99	2.52	2.93
+10	(+50)	1390	350	407	138	0.85	4.54	10.04	2.53	2.94

TEST CONDITIONS: @220V50Hz		CECOMAF 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]
-20	(- 4)	424	107	124	91	0.72	1.48	4.69	1.18	1.37
-15	(+ 5)	540	136	158	97	0.75	1.89	5.58	1.40	1.63
-10	(+14)	679	171	199	105	0.77	2.38	6.46	1.63	1.89
-5	(+23)	830	209	243	114	0.80	2.91	7.27	1.83	2.13
0	(+32)	981	247	287	124	0.83	3.45	7.93	2.00	2.32
+5	(+41)	1120	282	328	135	0.86	3.96	8.35	2.11	2.45
+10	(+50)	1236	311	362	145	0.89	4.39	8.47	2.13	2.48

TEST CONDITIONS: @220V50Hz		CECOMAF 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]
-20	(- 4)	357	90	105	93	0.73	1.36	3.88	0.98	1.14
-15	(+ 5)	452	114	132	102	0.76	1.73	4.45	1.12	1.30
-10	(+14)	572	144	168	112	0.79	2.20	5.08	1.28	1.49
-5	(+23)	706	178	207	124	0.82	2.72	5.68	1.43	1.66
0	(+32)	841	212	246	136	0.86	3.24	6.18	1.56	1.81
+5	(+41)	965	243	283	149	0.90	3.74	6.50	1.64	1.90
+10	(+50)	1068	269	313	162	0.94	4.17	6.56	1.65	1.92

### 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		