COMPRESSOR DEFINITION

Designation	**EM T45CDP**
Nominal Voltage/Frequency	**100 V 50-60 Hz**
Engineering Number	**513306053**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100 / 50-60	[V / Hz]	
4 Application type	High Back Pressure		
4.1 Evaporating temperature range	-5°C to 15°C	(23°F to 59°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	Static	85 to 110 V	85 to 110 V
8.4 HBP (43ºC Ambient temperature)	Static	85 to 110 V	85 to 110 V
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm²] (109 psig)	/ ºC - ºF
9.2 Peak (gauge)	9.8	[kgf/cm²] (139 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	6.78	[cm³] (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	MINERAL / ISO10	
4 Weight (with oil charge)	7.65	[kg] (16.87 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V115	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0886/07	
6 Start winding resistance	2.94	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.80	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	15.40/14.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	3.40/2.90	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	3.80/3.30	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@100V50Hz**			**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]
1430	360	419	162	2.62	5.55	8.83	2.23	2.59

TEST CONDITIONS: **@100V60Hz**			**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]
1684	424	493	183	2.43	6.53	9.22	2.32	2.70

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@100V50Hz** — **CECOMAF** **Static** — (Condensing temperature **45ºC (+113ºF))**

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]
-5	**(+23)**	899	227	263	129	2.50	3.15	6.95	1.75	2.04
0	**(+32)**	1157	292	339	144	2.53	4.08	8.00	2.02	2.34
+5	**(+41)**	1365	344	400	155	2.56	4.83	8.79	2.22	2.58
+10	**(+50)**	1524	384	447	164	2.60	5.41	9.32	2.35	2.73
+15	**(+59)**	1633	412	479	170	2.64	5.83	9.59	2.42	2.81

TEST CONDITIONS: **@100V50Hz** — **CECOMAF** **Static** — (Condensing temperature **55ºC (+131ºF))**

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]
-5	**(+23)**	807	203	236	139	2.58	3.11	5.79	1.46	1.70
0	**(+32)**	1051	265	308	153	2.63	4.06	6.83	1.72	2.00
+5	**(+41)**	1269	320	372	165	2.68	4.92	7.70	1.94	2.26
+10	**(+50)**	1461	368	428	174	2.73	5.69	8.41	2.12	2.46
+15	**(+59)**	1626	410	477	182	2.78	6.38	8.95	2.26	2.62

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF** (Condensing temperature **65ºC (+149ºF))**
@100V50Hz **Static**

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]
-5	**(+23)**	667	168	195	147	2.61	2.85	4.55	1.15	1.33
0	**(+32)**	856	216	251	160	2.69	3.67	5.33	1.34	1.56
+5	**(+41)**	1042	263	305	173	2.76	4.49	6.04	1.52	1.77
+10	**(+50)**	1225	309	359	183	2.82	5.31	6.69	1.69	1.96
+15	**(+59)**	1404	354	412	193	2.88	6.12	7.28	1.83	2.13

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 42º 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 parallet BP+24°to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		