

COMPRESSOR DEFINITION

Designation	EM T45CDP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306241

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	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	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	6.78	[cm ³] (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/cm ²]

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	26.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[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]
1218	307	357	135	0.88		9.00	2.27	2.64

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)	630	159	185	87	0.75	2.03	7.26	1.83	2.13
-10	(+14)	792	200	232	95	0.76	2.56	8.37	2.11	2.45
-5	(+23)	982	247	288	102	0.78	3.18	9.61	2.42	2.82
0	(+32)	1202	303	352	109	0.80	3.91	10.99	2.77	3.22
+5	(+41)	1455	367	426	116	0.82	4.75	12.54	3.16	3.68
+10	(+50)	1744	439	511	122	0.84	5.71	14.28	3.60	4.18

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)	554	139	162	92	0.76	1.94	6.00	1.51	1.76
-10	(+14)	698	176	205	101	0.78	2.45	6.89	1.74	2.02
-5	(+23)	870	219	255	111	0.80	3.06	7.85	1.98	2.30
0	(+32)	1069	269	313	120	0.83	3.77	8.91	2.25	2.61
+5	(+41)	1300	328	381	129	0.86	4.61	10.09	2.54	2.96
+10	(+50)	1565	394	459	137	0.89	5.57	11.41	2.88	3.34

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)	477	120	140	98	0.77	1.83	4.85	1.22	1.42
-10	(+14)	602	152	176	108	0.80	2.31	5.56	1.40	1.63
-5	(+23)	752	189	220	119	0.83	2.90	6.31	1.59	1.85
0	(+32)	928	234	272	131	0.86	3.59	7.10	1.79	2.08
+5	(+41)	1134	286	332	142	0.90	4.41	7.97	2.01	2.34
+10	(+50)	1371	346	402	153	0.94	5.35	8.93	2.25	2.62

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		