

COMPRESSOR DEFINITION

Designation	EM T6144U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306248

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
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	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)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4-	[hp]
2 Displacement	4.50	[cm ³] (0.275 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.000	
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)	7.76	[kg] (17.11 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (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-0015/QL2-3.76 **	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB180K52AXF	
6 Start winding resistance	21.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - CE - UKCA - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900MBP_HH Static		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]
1170	295	343	171	1.11	3.94	6.83	1.72	2.00

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]
-20	(- 4)	894	225	262	138	0.99	2.73	6.50	1.64	1.90
-15	(+ 5)	1100	277	322	146	1.03	3.37	7.54	1.90	2.21
-10	(+14)	1344	339	394	153	1.06	4.14	8.76	2.21	2.57
-5	(+23)	1629	411	477	160	1.09	5.05	10.17	2.56	2.98
0	(+32)	1954	493	573	166	1.11	6.09	11.79	2.97	3.45
+5	(+41)	2321	585	680	171	1.12	7.29	13.62	3.43	3.99
+10	(+50)	2729	688	800	174	1.13	8.64	15.67	3.95	4.59

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]
-20	(- 4)	778	196	228	150	1.01	2.60	5.21	1.31	1.53
-15	(+ 5)	955	241	280	161	1.06	3.20	5.95	1.50	1.74
-10	(+14)	1169	295	343	171	1.11	3.94	6.81	1.72	2.00
-5	(+23)	1421	358	416	181	1.15	4.81	7.81	1.97	2.29
0	(+32)	1710	431	501	191	1.19	5.83	8.95	2.25	2.62
+5	(+41)	2038	514	597	199	1.22	7.01	10.24	2.58	3.00
+10	(+50)	2405	606	705	206	1.25	8.35	11.69	2.95	3.43

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]
-20	(- 4)	667	168	195	159	1.06	2.46	4.16	1.05	1.22
-15	(+ 5)	812	205	238	174	1.12	3.01	4.69	1.18	1.37
-10	(+14)	991	250	291	188	1.17	3.70	5.29	1.33	1.55
-5	(+23)	1206	304	353	202	1.23	4.53	5.97	1.50	1.75
0	(+32)	1455	367	426	216	1.28	5.51	6.73	1.70	1.97
+5	(+41)	1740	438	510	229	1.33	6.65	7.58	1.91	2.22
+10	(+50)	2061	519	604	241	1.37	7.95	8.54	2.15	2.50

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		