

COMPRESSOR DEFINITION

Designation	EM X6144U
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	721FI52

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50-60	[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	1/5	[hp]
2 Displacement	4.53	[cm ³] (0.276 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
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 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-34	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	OLP 4TM317KDBYY-153	
6 Start winding resistance	15.23	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.03	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	9.00/9.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900MBP Fan		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]	
1209	305	354	171	1.20	4.35	7.08	1.78	2.07	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 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]
-20	(- 4)	940	237	275	137	1.11	3.05	6.84	1.72	2.01
-15	(+ 5)	1142	288	335	145	1.13	3.72	7.86	1.98	2.30
-10	(+14)	1386	349	406	151	1.15	4.54	9.15	2.30	2.68
-5	(+23)	1672	421	490	156	1.16	5.52	10.71	2.70	3.14
0	(+32)	1999	504	586	160	1.17	6.66	12.55	3.16	3.68
+5	(+41)	2369	597	694	161	1.18	7.97	14.70	3.70	4.31
+10	(+50)	2781	701	815	162	1.19	9.46	17.15	4.32	5.03

TEST CONDITIONS: @220V50Hz			EN12900 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]
-20	(- 4)	807	203	236	150	1.15	2.87	5.43	1.37	1.59
-15	(+ 5)	983	248	288	161	1.18	3.52	6.11	1.54	1.79
-10	(+14)	1197	302	351	171	1.21	4.31	6.97	1.76	2.04
-5	(+23)	1447	365	424	180	1.24	5.25	8.02	2.02	2.35
0	(+32)	1734	437	508	187	1.26	6.35	9.27	2.34	2.72
+5	(+41)	2058	519	603	192	1.28	7.61	10.72	2.70	3.14
+10	(+50)	2419	610	709	196	1.29	9.06	12.40	3.12	3.63

TEST CONDITIONS: @220V50Hz			EN12900 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]
-20	(- 4)	680	171	199	159	1.17	2.69	4.25	1.07	1.25
-15	(+ 5)	829	209	243	174	1.22	3.30	4.77	1.20	1.40
-10	(+14)	1009	254	296	188	1.26	4.04	5.38	1.36	1.58
-5	(+23)	1220	307	358	201	1.30	4.93	6.09	1.53	1.78
0	(+32)	1463	369	429	212	1.34	5.98	6.91	1.74	2.02
+5	(+41)	1738	438	509	221	1.37	7.19	7.85	1.98	2.30
+10	(+50)	2044	515	599	229	1.40	8.57	8.92	2.25	2.61

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
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°		
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	Straight		
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 46°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		