

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 / 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 50-60 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: @220V60Hz			ARIMBP Fan		Evaporating temperature (Condensing temperature		-6.7°C (19.94°F) 48.9°C (120.02°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]	
1194	301	350	185	1.24	4.99	6.47	1.63	1.90	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ARI4 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)	890	224	261	140	1.14	3.14	6.47	1.63	1.89
-15	(+ 5)	1079	272	316	128	1.15	3.84	8.50	2.14	2.49
-10	(+14)	1310	330	384	132	1.17	4.70	9.75	2.46	2.86
-5	(+23)	1583	399	464	153	1.18	5.73	10.30	2.60	3.02
0	(+32)	1898	478	556	190	1.20	6.95	10.21	2.57	2.99
+5	(+41)	2254	568	661	243	1.21	8.35	9.55	2.41	2.80
+10	(+50)	2652	668	777	312	1.23	9.96	8.40	2.12	2.46

TEST CONDITIONS: @220V60Hz		ARI4 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)	763	192	224	162	1.14	2.98	4.40	1.11	1.29
-15	(+ 5)	930	234	272	158	1.17	3.66	5.97	1.51	1.75
-10	(+14)	1128	284	330	160	1.20	4.48	7.18	1.81	2.10
-5	(+23)	1356	342	397	168	1.24	5.45	8.09	2.04	2.37
0	(+32)	1616	407	473	183	1.27	6.57	8.77	2.21	2.57
+5	(+41)	1906	480	559	203	1.31	7.85	9.30	2.34	2.72
+10	(+50)	2227	561	653	230	1.35	9.30	9.74	2.45	2.85

TEST CONDITIONS: @220V60Hz		ARI4 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)	626	158	183	153	1.19	2.75	4.17	1.05	1.22
-15	(+ 5)	781	197	229	174	1.22	3.46	4.57	1.15	1.34
-10	(+14)	957	241	280	191	1.25	4.28	5.01	1.26	1.47
-5	(+23)	1152	290	337	204	1.29	5.22	5.56	1.40	1.63
0	(+32)	1367	344	401	213	1.32	6.28	6.29	1.58	1.84
+5	(+41)	1602	404	469	218	1.36	7.48	7.27	1.83	2.13
+10	(+50)	1857	468	544	220	1.40	8.81	8.58	2.16	2.51

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		