

COMPRESSOR DEFINITION

Designation	EM X5150U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304499

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[V / Hz]	
4 Application type	Medium-High Back Pressure +		
4.1 Evaporating temperature range	-20°C to 15°C	(-4°F to 59°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	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	3.97	[cm ³] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO22	
4 Weight (with oil charge)	7.89	[kg] (17.39 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514083	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5TM771JDBZZ-53	
6 Start winding resistance	9.16	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.61	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	26.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	4.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.13	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°F) 54.4°C (129.92°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]
2319	584	680	249	2.74	7.94	9.32	2.35	2.73

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			ASHRAE46 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)	925	233	271	145	2.01	2.69	6.38	1.61	1.87
-15	(+ 5)	1126	284	330	155	2.07	3.10	7.25	1.83	2.13
-10	(+14)	1360	343	398	164	2.13	3.74	8.26	2.08	2.42
-5	(+23)	1630	411	478	172	2.18	4.57	9.46	2.38	2.77
0	(+32)	1940	489	568	179	2.23	5.59	10.89	2.74	3.19
+5	(+41)	2294	578	672	183	2.26	6.78	12.60	3.18	3.69
+10	(+50)	2697	680	790	185	2.27	8.13	14.66	3.69	4.29
+15	(+59)	3151	794	923	184	2.26	9.62	17.10	4.31	5.01

TEST CONDITIONS: @115V60Hz			ASHRAE46 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)	884	223	259	158	2.08	2.70	5.63	1.42	1.65
-15	(+ 5)	1083	273	317	171	2.17	3.29	6.35	1.60	1.86
-10	(+14)	1313	331	385	184	2.26	4.03	7.13	1.80	2.09
-5	(+23)	1577	397	462	195	2.34	4.90	8.04	2.03	2.35
0	(+32)	1881	474	551	206	2.41	5.89	9.10	2.29	2.67
+5	(+41)	2227	561	652	214	2.47	6.98	10.39	2.62	3.04
+10	(+50)	2619	660	767	220	2.51	8.15	11.94	3.01	3.50
+15	(+59)	3061	771	897	222	2.53	9.39	13.80	3.48	4.04

TEST CONDITIONS: @115V60Hz			ASHRAE46 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)	822	207	241	167	2.14	2.68	4.89	1.23	1.43
-15	(+ 5)	1021	257	299	184	2.26	3.46	5.57	1.40	1.63
-10	(+14)	1249	315	366	202	2.38	4.32	6.24	1.57	1.83
-5	(+23)	1511	381	443	218	2.50	5.24	6.96	1.75	2.04
0	(+32)	1810	456	530	233	2.61	6.20	7.77	1.96	2.28
+5	(+41)	2150	542	630	246	2.71	7.19	8.73	2.20	2.56
+10	(+50)	2535	639	743	256	2.79	8.19	9.88	2.49	2.90
+15	(+59)	2968	748	870	263	2.85	9.18	11.28	2.84	3.31

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		