

COMPRESSOR DEFINITION

Designation	EM X3115Y
Nominal Voltage/Frequency	100-127 V 60 Hz
Engineering Number	513301872

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100-127 / 60	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	RSCR		
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	1/5	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100-127 V 60 Hz 1~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C3/QPS2-A4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	15(180)	[µF(VAC minimum)]
5 Motor protection	5TM762PFBZZ-53	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.77	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.65	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
713	180	209	125	1.23	2.24	5.73	1.44	1.68

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
697	176	204	122	1.22	2.19	5.71	1.44	1.67

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			ASHRAE32 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]
-35 (-31)	425	107	125	85	0.95	1.33	4.98	1.26	1.46
-30 (-22)	559	141	164	97	1.04	1.75	5.76	1.45	1.69
-25 (-13)	725	183	213	111	1.14	2.28	6.55	1.65	1.92
-20 (- 4)	926	233	271	126	1.25	2.91	7.37	1.86	2.16
-15 (+ 5)	1166	294	342	142	1.38	3.67	8.23	2.08	2.41
-10 (+14)	1449	365	424	158	1.52	4.57	9.15	2.31	2.68
-5 (+23)	1777	448	521	176	1.66	5.62	10.13	2.55	2.97
0 (+32)	2156	543	632	193	1.81	6.84	11.18	2.82	3.28

TEST CONDITIONS: @115V60Hz			ASHRAE32 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]
-35 (-31)	387	98	113	87	0.97	1.21	4.44	1.12	1.30
-30 (-22)	520	131	152	100	1.06	1.63	5.21	1.31	1.53
-25 (-13)	686	173	201	115	1.17	2.15	5.97	1.50	1.75
-20 (- 4)	888	224	260	132	1.30	2.79	6.74	1.70	1.97
-15 (+ 5)	1129	285	331	150	1.45	3.55	7.52	1.90	2.20
-10 (+14)	1414	356	414	169	1.61	4.46	8.34	2.10	2.44
-5 (+23)	1746	440	512	190	1.78	5.52	9.20	2.32	2.70
0 (+32)	2128	536	624	211	1.96	6.75	10.12	2.55	2.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32 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]
-35	(-31)	338	85	99	86	0.96	1.06	3.94	0.99	1.15
-30	(-22)	469	118	137	100	1.06	1.47	4.70	1.18	1.38
-25	(-13)	634	160	186	117	1.18	1.99	5.44	1.37	1.59
-20	(- 4)	835	210	245	136	1.33	2.63	6.17	1.55	1.81
-15	(+ 5)	1077	272	316	156	1.50	3.39	6.89	1.74	2.02
-10	(+14)	1364	344	400	179	1.69	4.30	7.62	1.92	2.23
-5	(+23)	1698	428	498	203	1.89	5.37	8.37	2.11	2.45
0	(+32)	2084	525	611	228	2.11	6.61	9.16	2.31	2.68

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	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 0° up + 24° to Back
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	Slanted 45° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs