COMPRESSOR DEFINITION

Designation	**EM X3113Y**
Nominal Voltage/Frequency	**100-127 V 60 Hz / 100 V 50 Hz**
Engineering Number	**513301898**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/7	[hp]
2 Displacement	9.04	[cm³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
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)	8	[kg] (17.64 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100-127 V 60 Hz / 100 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V115	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12.5(200)	[µF(VAC minimum)]
5 Motor protection	T0886/07	
6 Start winding resistance	5.60	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.27	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	14.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.97	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.44	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@100V50Hz**			**ASHRAE LBP-NOFAN Static**		Evaporating temperature (Condensing temperature	**-23.3°C (-9.94°F)** **54.4°C (129.92°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
532	134	156	89	1.10	1.67	5.98	1.51	1.75

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@100V50Hz** — **ASHRAE32-NOFAN Static** — (Condensing temperature **35ºC (+95ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	305	77	89	56	0.82	0.95	5.40	1.36	1.58
-30	**(-22)**	413	104	121	67	0.91	1.29	6.16	1.55	1.80
-25	**(-13)**	550	139	161	78	1.00	1.73	7.10	1.79	2.08
-20	**(- 4)**	716	181	210	88	1.08	2.25	8.18	2.06	2.40
-15	**(+ 5)**	911	230	267	97	1.17	2.87	9.38	2.36	2.75
-10	**(+14)**	1135	286	333	106	1.25	3.58	10.68	2.69	3.13
-5	**(+23)**	1388	350	407	115	1.33	4.39	12.05	3.04	3.53
0	**(+32)**	1669	421	489	124	1.41	5.29	13.47	3.39	3.95

TEST CONDITIONS: **@100V50Hz** — **ASHRAE32-NOFAN Static** — (Condensing temperature **45ºC (+113ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	280	70	82	58	0.84	0.88	4.80	1.21	1.41
-30	**(-22)**	381	96	112	70	0.93	1.19	5.45	1.37	1.60
-25	**(-13)**	512	129	150	82	1.03	1.61	6.25	1.57	1.83
-20	**(- 4)**	674	170	197	94	1.13	2.12	7.17	1.81	2.10
-15	**(+ 5)**	866	218	254	105	1.23	2.73	8.20	2.07	2.40
-10	**(+14)**	1089	274	319	117	1.34	3.43	9.29	2.34	2.72
-5	**(+23)**	1342	338	393	129	1.45	4.24	10.43	2.63	3.06
0	**(+32)**	1625	410	476	140	1.56	5.15	11.59	2.92	3.40

TEST CONDITIONS: **@100V50Hz** — **ASHRAE32-NOFAN Static** — (Condensing temperature **55ºC (+131ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	255	64	75	59	0.86	0.80	4.29	1.08	1.26
-30	**(-22)**	350	88	102	72	0.96	1.10	4.89	1.23	1.43
-25	**(-13)**	476	120	140	85	1.07	1.50	5.62	1.42	1.65
-20	**(- 4)**	635	160	186	98	1.18	2.00	6.46	1.63	1.89
-15	**(+ 5)**	826	208	242	112	1.30	2.60	7.36	1.85	2.16
-10	**(+14)**	1049	264	307	126	1.43	3.31	8.31	2.10	2.44
-5	**(+23)**	1303	328	382	140	1.56	4.12	9.29	2.34	2.72
0	**(+32)**	1589	400	466	155	1.70	5.04	10.26	2.59	3.01

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 42º 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 parallet 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		