COMPRESSOR DEFINITION

Designation	**EM X3115Y**
Nominal Voltage/Frequency	**100-127 V 60 Hz / 100 V 50 Hz**
Engineering Number	**513301891**

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	1/5	[hp]
2 Displacement	10.61	[cm³] (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)	7.7	[kg] (16.98 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	17.5(180)	[µF(VAC minimum)]
5 Motor protection	T0819/07	
6 Start winding resistance	4.20	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.76	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	17.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	2.70	[A] - Measured according to UL 984
11 Approval boards certification		

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]
622	157	182	110	1.45	1.95	5.63	1.42	1.65

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)**	366	92	107	75	1.20	1.15	4.89	1.23	1.43
-30	**(-22)**	476	120	139	86	1.27	1.49	5.58	1.41	1.63
-25	**(-13)**	623	157	183	97	1.35	1.95	6.44	1.62	1.89
-20	**(- 4)**	808	204	237	108	1.43	2.54	7.46	1.88	2.18
-15	**(+ 5)**	1031	260	302	120	1.52	3.24	8.59	2.16	2.52
-10	**(+14)**	1291	325	378	131	1.62	4.07	9.82	2.47	2.88
-5	**(+23)**	1590	401	466	143	1.72	5.03	11.11	2.80	3.26
0	**(+32)**	1927	486	565	155	1.83	6.11	12.44	3.14	3.65

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)**	331	83	97	74	1.20	1.04	4.46	1.12	1.31
-30	**(-22)**	444	112	130	88	1.29	1.39	5.10	1.28	1.49
-25	**(-13)**	593	149	174	101	1.39	1.86	5.88	1.48	1.72
-20	**(- 4)**	777	196	228	115	1.49	2.44	6.76	1.70	1.98
-15	**(+ 5)**	997	251	292	129	1.60	3.14	7.73	1.95	2.27
-10	**(+14)**	1252	316	367	143	1.72	3.95	8.76	2.21	2.57
-5	**(+23)**	1543	389	452	157	1.85	4.88	9.81	2.47	2.88
0	**(+32)**	1870	471	548	172	1.98	5.93	10.86	2.74	3.18

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)**	306	77	90	77	1.20	0.96	3.97	1.00	1.16
-30	**(-22)**	421	106	123	92	1.31	1.32	4.60	1.16	1.35
-25	**(-13)**	569	143	167	107	1.42	1.79	5.32	1.34	1.56
-20	**(- 4)**	750	189	220	122	1.54	2.36	6.12	1.54	1.79
-15	**(+ 5)**	964	243	282	139	1.67	3.03	6.96	1.75	2.04
-10	**(+14)**	1211	305	355	155	1.82	3.82	7.82	1.97	2.29
-5	**(+23)**	1492	376	437	173	1.97	4.72	8.67	2.18	2.54
0	**(+32)**	1806	455	529	190	2.14	5.73	9.47	2.39	2.78

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 0° up + 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		