COMPRESSOR DEFINITION

Designation	**EM 2X3125U**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513304052**

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	Low-Medium Back Pressure (Light Commercial)		
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)	Static/Fan	-	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static/Fan	-	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm²] (262 psig)	/ ºC - ºF
9.2 Peak	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	6.09	[cm³] (0.372 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	17.600	
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)	7.84	[kg] (17.28 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C3/8EA14E63/8EA21C3/QPS2-A4R7MD3/QPS2-A4R7MI	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	DRB46N61A*	
6 Start winding resistance	5.41	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.86	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	16.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.84	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.23	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - ISI - TUV - UKCA - UL	

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 (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]
1217	307	357	212	1.89	3.62	5.74	1.45	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 (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]
1231	310	361	213	1.90	3.66	5.79	1.46	1.70

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V60Hz**		**ASHRAE32 Fan**			(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)**	810	204	237	147	1.31	2.40	5.49	1.38	1.61
-30	**(-22)**	1011	255	296	164	1.47	3.00	6.17	1.56	1.81
-25	**(-13)**	1249	315	366	180	1.61	3.71	6.98	1.76	2.05
-20	**(- 4)**	1532	386	449	194	1.74	4.57	7.91	1.99	2.32
-15	**(+ 5)**	1868	471	547	209	1.87	5.60	8.97	2.26	2.63
-10	**(+14)**	2262	570	663	223	1.99	6.81	10.15	2.56	2.98
-5	**(+23)**	2722	686	798	237	2.12	8.23	11.47	2.89	3.36
0	**(+32)**	3255	820	954	252	2.26	9.90	12.92	3.25	3.78

TEST CONDITIONS: **@115V60Hz**		**ASHRAE32 Fan**			(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)**	742	187	217	153	1.36	2.19	4.85	1.22	1.42
-30	**(-22)**	953	240	279	174	1.55	2.83	5.46	1.38	1.60
-25	**(-13)**	1198	302	351	194	1.73	3.56	6.16	1.55	1.80
-20	**(- 4)**	1484	374	435	213	1.90	4.43	6.94	1.75	2.03
-15	**(+ 5)**	1817	458	532	232	2.07	5.44	7.81	1.97	2.29
-10	**(+14)**	2205	556	646	251	2.24	6.64	8.78	2.21	2.57
-5	**(+23)**	2654	669	778	270	2.42	8.03	9.83	2.48	2.88
0	**(+32)**	3172	799	929	289	2.61	9.64	10.99	2.77	3.22

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V60Hz **Fan**

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)**	665	168	195	154	1.38	1.97	4.34	1.09	1.27
-30	**(-22)**	885	223	259	180	1.60	2.62	4.91	1.24	1.44
-25	**(-13)**	1134	286	332	204	1.82	3.37	5.54	1.40	1.62
-20	**(- 4)**	1420	358	416	228	2.04	4.23	6.22	1.57	1.82
-15	**(+ 5)**	1748	441	512	251	2.25	5.24	6.94	1.75	2.03
-10	**(+14)**	2127	536	623	275	2.47	6.40	7.73	1.95	2.26
-5	**(+23)**	2564	646	751	299	2.69	7.75	8.57	2.16	2.51
0	**(+32)**	3064	772	898	323	2.93	9.31	9.47	2.39	2.78

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@115V60Hz **Fan**

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)**	581	146	170	151	1.35	1.72	3.85	0.97	1.13
-30	**(-22)**	806	203	236	181	1.61	2.39	4.43	1.12	1.30
-25	**(-13)**	1057	266	310	210	1.87	3.14	5.03	1.27	1.47
-20	**(- 4)**	1340	338	393	238	2.13	4.00	5.64	1.42	1.65
-15	**(+ 5)**	1662	419	487	267	2.39	4.98	6.26	1.58	1.83
-10	**(+14)**	2029	511	595	295	2.65	6.10	6.91	1.74	2.02
-5	**(+23)**	2450	617	718	324	2.93	7.41	7.57	1.91	2.22
0	**(+32)**	2930	738	859	354	3.22	8.91	8.26	2.08	2.42

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +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		