

COMPRESSOR DEFINITION

Designation	EM 2X1125U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304038

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 Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSCR		
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)	Static/Fan	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	103 to 140 V
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	1/3+	[hp]
2 Displacement	6.09	[cm ³] (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	ESTER / ISO10	
4 Weight (with oil charge)	7.82	[kg] (17.24 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	PTC	
2.1 Starting device	8EA14D7/QPS2-A4R7MB4	
3 Start capacitor	161-193(149)	[µF(VAC minimum)]
4 Run capacitor	20(177)	[µF(VAC minimum)]
5 Motor protection	4TM445NFBYY-53	
6 Start winding resistance	3.55	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.82	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	20.01	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.36	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.02	[A] - Measured according to UL 984
11 Approval boards certification	CE - 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 +/- 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]
1236	311	362	209	1.89	3.68	5.91	1.49	1.73

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]
1236	311	362	209	1.89	3.68	5.91	1.49	1.73

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]
-40	(-40)	598	151	175	125	1.16	1.77	4.76	1.20	1.39
-35	(-31)	782	197	229	144	1.30	2.31	5.44	1.37	1.59
-30	(-22)	997	251	292	161	1.43	2.96	6.23	1.57	1.83
-25	(-13)	1249	315	366	176	1.58	3.71	7.12	1.80	2.09
-20	(- 4)	1544	389	452	190	1.74	4.61	8.11	2.04	2.38
-15	(+ 5)	1886	475	553	205	1.92	5.65	9.19	2.31	2.69
-10	(+14)	2283	575	669	220	2.13	6.87	10.34	2.61	3.03

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]
-40	(-40)	561	141	164	127	1.19	1.65	4.39	1.11	1.29
-35	(-31)	741	187	217	148	1.36	2.19	5.01	1.26	1.47
-30	(-22)	953	240	279	167	1.54	2.83	5.69	1.43	1.67
-25	(-13)	1201	303	352	187	1.72	3.57	6.42	1.62	1.88
-20	(- 4)	1492	376	437	207	1.92	4.45	7.19	1.81	2.11
-15	(+ 5)	1831	461	537	229	2.15	5.49	8.00	2.02	2.34
-10	(+14)	2223	560	652	254	2.41	6.69	8.84	2.23	2.59

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]
-40	(-40)	497	125	146	132	1.21	1.47	3.78	0.95	1.11
-35	(-31)	675	170	198	154	1.40	2.00	4.38	1.10	1.28
-30	(-22)	884	223	259	177	1.60	2.62	4.98	1.26	1.46
-25	(-13)	1129	284	331	201	1.81	3.36	5.59	1.41	1.64
-20	(- 4)	1416	357	415	228	2.04	4.23	6.19	1.56	1.82
-15	(+ 5)	1752	441	513	258	2.30	5.25	6.78	1.71	1.99
-10	(+14)	2140	539	627	292	2.59	6.44	7.35	1.85	2.15

TEST CONDITIONS: @115V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°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]
-40	(-40)	430	108	126	126	1.25	1.27	3.38	0.85	0.99
-35	(-31)	605	152	177	151	1.45	1.79	4.00	1.01	1.17
-30	(-22)	811	204	238	177	1.65	2.40	4.58	1.16	1.34
-25	(-13)	1053	265	309	207	1.87	3.13	5.12	1.29	1.50
-20	(- 4)	1338	337	392	240	2.12	3.99	5.60	1.41	1.64
-15	(+ 5)	1669	421	489	278	2.39	5.00	6.01	1.51	1.76
-10	(+14)	2053	517	602	321	2.71	6.17	6.36	1.60	1.86

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		