

COMPRESSOR DEFINITION

Designation	EM 2X1125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300140

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Very Low Back Pressure (Hot Gas Defrost not allowed)		
4.1 Evaporating temperature range	-45°C to -10°C	(-49°F to 14°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	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	1/2.5	[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)	8.23	[kg] (18.14 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8M220MD3/QP2-20A/QPS2-A22MD3/QPS2	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-73	
6 Start winding resistance	13.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
1041	262	305	170	0.81	3.10	6.12	1.54	1.79

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	566	143	166	111	0.59	1.68	5.20	1.31	1.52
-35	(-31)	471	119	138	93	0.49	1.39	4.85	1.22	1.42
-30	(-22)	796	201	233	120	0.61	2.36	6.47	1.63	1.89
-25	(-13)	1234	311	362	158	0.78	3.68	8.46	2.13	2.48
-20	(- 4)	1477	372	433	175	0.86	4.41	9.27	2.34	2.72
-15	(+ 5)	1218	307	357	136	0.66	3.64	7.32	1.84	2.14
-10	(+14)	149	38	44	9	0.04	0.45	1.02	0.26	0.30

TEST CONDITIONS: @220V50Hz		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)	543	137	159	112	0.59	1.61	4.87	1.23	1.43
-35	(-31)	421	106	123	99	0.51	1.24	4.17	1.05	1.22
-30	(-22)	730	184	214	129	0.65	2.16	5.56	1.40	1.63
-25	(-13)	1164	293	341	169	0.83	3.47	7.48	1.88	2.19
-20	(- 4)	1415	357	415	186	0.91	4.23	8.35	2.10	2.45
-15	(+ 5)	1175	296	344	145	0.71	3.51	6.59	1.66	1.93
-10	(+14)	137	34	40	15	0.07	0.41	0.62	0.16	0.18

TEST CONDITIONS: @220V50Hz		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)	502	126	147	110	0.58	1.49	4.52	1.14	1.32
-35	(-31)	353	89	104	103	0.53	1.04	3.48	0.88	1.02
-30	(-22)	648	163	190	136	0.68	1.92	4.69	1.18	1.37
-25	(-13)	1079	272	316	178	0.88	3.21	6.55	1.65	1.92
-20	(- 4)	1337	337	392	194	0.95	3.99	7.50	1.89	2.20
-15	(+ 5)	1117	281	327	153	0.74	3.34	5.97	1.50	1.75
-10	(+14)	110	28	32	19	0.09	0.33	0.37	0.09	0.11

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		