

### COMPRESSOR DEFINITION

Designation	EM 2X1125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304031

### 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	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°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)	Static/Fan	198 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static/Fan	198 to 255 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 <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	6.09	[cm <sup>3</sup> ] (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)	8.03	[kg] (17.70 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD2-220V/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	CP4TMC283N61	
6 Start winding resistance	12.60	[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)	8.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.45	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	3.00	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IRAM - 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]
1029	259	302	171	0.86	3.06	6.02	1.52	1.76

### 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]
-35	(-31)	641	162	188	115	0.63	1.90	5.55	1.40	1.63
-30	(-22)	828	209	242	129	0.69	2.46	6.45	1.62	1.89
-25	(-13)	1052	265	308	140	0.75	3.13	7.52	1.90	2.20
-20	(- 4)	1310	330	384	151	0.81	3.91	8.68	2.19	2.54
-15	(+ 5)	1596	402	468	163	0.86	4.78	9.82	2.47	2.88
-10	(+14)	1908	481	559	176	0.89	5.74	10.83	2.73	3.17

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]
-35	(-31)	598	151	175	122	0.66	1.77	4.90	1.23	1.44
-30	(-22)	773	195	227	137	0.72	2.29	5.64	1.42	1.65
-25	(-13)	989	249	290	151	0.79	2.94	6.57	1.65	1.92
-20	(- 4)	1242	313	364	164	0.85	3.71	7.59	1.91	2.22
-15	(+ 5)	1528	385	448	178	0.90	4.58	8.60	2.17	2.52
-10	(+14)	1842	464	540	194	0.94	5.54	9.50	2.40	2.78

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]
-35	(-31)	540	136	158	126	0.69	1.60	4.32	1.09	1.27
-30	(-22)	702	177	206	142	0.76	2.08	4.94	1.24	1.45
-25	(-13)	909	229	266	158	0.83	2.70	5.76	1.45	1.69
-20	(- 4)	1157	292	339	173	0.89	3.45	6.68	1.68	1.96
-15	(+ 5)	1441	363	422	190	0.95	4.32	7.60	1.92	2.23
-10	(+14)	1757	443	515	209	0.99	5.28	8.43	2.12	2.47

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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]
-35	(-31)	477	120	140	130	0.72	1.41	3.68	0.93	1.08
-30	(-22)	626	158	183	148	0.79	1.86	4.22	1.06	1.24
-25	(-13)	824	208	241	165	0.86	2.45	4.96	1.25	1.45
-20	(- 4)	1065	268	312	183	0.93	3.18	5.82	1.47	1.71
-15	(+ 5)	1346	339	394	202	0.99	4.03	6.69	1.68	1.96
-10	(+14)	1663	419	487	224	1.03	5.00	7.46	1.88	2.19

### F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	Yes		
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 42° 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 parallel 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		