

### COMPRESSOR DEFINITION

Designation	EM C3125U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	711JA57

### 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-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 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 <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)	8.17	[kg] (18.01 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/TSD2-220V1.2/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM276JDBYY	
6 Start winding resistance	13.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.70	[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	VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
1041	262	305	162	0.74	3.10	6.43	1.62	1.88

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	688	173	202	109	0.52	2.04	6.28	1.58	1.84
-30	(-22)	859	216	252	123	0.58	2.55	6.97	1.76	2.04
-25	(-13)	1076	271	315	137	0.64	3.20	7.87	1.98	2.31
-20	(- 4)	1340	338	393	149	0.70	4.00	8.98	2.26	2.63
-15	(+ 5)	1650	416	483	161	0.75	4.94	10.27	2.59	3.01
-10	(+14)	2006	506	588	171	0.80	6.04	11.72	2.95	3.44
-5	(+23)	2409	607	706	181	0.85	7.29	13.34	3.36	3.91
0	(+32)	2859	720	838	189	0.89	8.69	15.09	3.80	4.42

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	632	159	185	114	0.54	1.87	5.56	1.40	1.63
-30	(-22)	799	201	234	131	0.62	2.37	6.14	1.55	1.80
-25	(-13)	1010	255	296	147	0.69	3.00	6.88	1.73	2.02
-20	(- 4)	1266	319	371	162	0.76	3.78	7.77	1.96	2.28
-15	(+ 5)	1566	395	459	177	0.83	4.69	8.79	2.22	2.58
-10	(+14)	1912	482	560	192	0.90	5.75	9.93	2.50	2.91
-5	(+23)	2302	580	675	206	0.96	6.96	11.17	2.81	3.27
0	(+32)	2738	690	802	220	1.02	8.32	12.49	3.15	3.66

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	585	147	171	117	0.54	1.73	4.96	1.25	1.45
-30	(-22)	745	188	218	136	0.64	2.21	5.51	1.39	1.61
-25	(-13)	949	239	278	154	0.73	2.82	6.16	1.55	1.81
-20	(- 4)	1195	301	350	173	0.82	3.57	6.91	1.74	2.02
-15	(+ 5)	1485	374	435	192	0.91	4.45	7.74	1.95	2.27
-10	(+14)	1818	458	533	211	1.00	5.47	8.62	2.17	2.53
-5	(+23)	2195	553	643	230	1.08	6.64	9.56	2.41	2.80
0	(+32)	2615	659	766	248	1.16	7.95	10.52	2.65	3.08

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	Straight		
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 46°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		