

COMPRESSOR DEFINITION

Designation	EM C3130U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	711NA52

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 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	6.92	[cm ³] (0.422 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	20.000	
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)	8.2	[kg] (18.08 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	TSD	
2.1 Starting device	TSD-220V0.6/TSD2-220V/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(420)/7.5(420)/7(420)	[µF(VAC minimum)]
5 Motor protection	CP4TMC288K61A5	
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)	6.60	[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			EN12900MBP Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]	
1841	464	539	222	1.03	6.63	8.29	2.09	2.43	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 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)	721	182	211	127	0.61	2.31	5.69	1.43	1.67
-30	(-22)	898	226	263	141	0.68	2.89	6.38	1.61	1.87
-25	(-13)	1133	285	332	156	0.74	3.66	7.28	1.83	2.13
-20	(- 4)	1422	358	417	170	0.80	4.61	8.35	2.10	2.45
-15	(+ 5)	1761	444	516	184	0.86	5.74	9.57	2.41	2.80
-10	(+14)	2149	542	630	197	0.91	7.05	10.91	2.75	3.20
-5	(+23)	2582	651	757	209	0.97	8.53	12.36	3.11	3.62
0	(+32)	3057	770	896	220	1.02	10.18	13.88	3.50	4.07

TEST CONDITIONS: @220V50Hz			EN12900 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)	629	159	184	135	0.65	2.21	4.68	1.18	1.37
-30	(-22)	782	197	229	151	0.73	2.76	5.18	1.31	1.52
-25	(-13)	984	248	288	169	0.80	3.48	5.83	1.47	1.71
-20	(- 4)	1233	311	361	186	0.87	4.38	6.60	1.66	1.93
-15	(+ 5)	1525	384	447	204	0.94	5.45	7.47	1.88	2.19
-10	(+14)	1857	468	544	221	1.02	6.68	8.40	2.12	2.46
-5	(+23)	2226	561	652	238	1.09	8.07	9.37	2.36	2.75
0	(+32)	2628	662	770	254	1.17	9.62	10.36	2.61	3.04

TEST CONDITIONS: @220V50Hz			EN12900 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)	514	130	151	138	0.66	2.01	3.71	0.94	1.09
-30	(-22)	655	165	192	158	0.75	2.57	4.17	1.05	1.22
-25	(-13)	837	211	245	178	0.84	3.29	4.71	1.19	1.38
-20	(- 4)	1058	267	310	199	0.93	4.18	5.32	1.34	1.56
-15	(+ 5)	1313	331	385	220	1.02	5.22	5.97	1.50	1.75
-10	(+14)	1600	403	469	242	1.11	6.41	6.62	1.67	1.94
-5	(+23)	1917	483	562	264	1.21	7.75	7.26	1.83	2.13
0	(+32)	2259	569	662	287	1.31	9.23	7.86	1.98	2.30

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
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 0° up + 45° 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		