

COMPRESSOR DEFINITION

Designation	EM Y20CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	894GA57

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	4.15	[cm ³] (0.253 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	12.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO7	
4 Weight (with oil charge)	7.7	[kg] (16.98 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-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(280)/3(280)	[µF(VAC minimum)]
5 Motor protection	4TM110NFBYY-53	
6 Start winding resistance	28.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	43.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.25	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.70	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFB Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°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]
160	40	47	40	0.19	0.61	3.96	1.00	1.16

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	104	26	30	33	0.16	0.36	3.17	0.80	0.93
-30	(-22)	142	36	42	36	0.17	0.49	3.97	1.00	1.16
-25	(-13)	191	48	56	39	0.19	0.66	4.85	1.22	1.42
-20	(- 4)	252	63	74	43	0.20	0.88	5.81	1.46	1.70
-15	(+ 5)	326	82	95	47	0.21	1.14	6.87	1.73	2.01
-10	(+14)	414	104	121	52	0.22	1.45	8.03	2.02	2.35
-5	(+23)	517	130	151	56	0.23	1.81	9.30	2.34	2.73

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	82	21	24	32	0.17	0.31	2.57	0.65	0.75
-30	(-22)	117	29	34	36	0.18	0.44	3.25	0.82	0.95
-25	(-13)	161	40	47	41	0.19	0.61	3.95	1.00	1.16
-20	(- 4)	214	54	63	46	0.21	0.82	4.70	1.18	1.38
-15	(+ 5)	279	70	82	51	0.22	1.07	5.49	1.38	1.61
-10	(+14)	355	90	104	56	0.24	1.36	6.34	1.60	1.86
-5	(+23)	445	112	131	61	0.26	1.71	7.25	1.83	2.13

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	55	14	16	31	0.17	0.23	1.78	0.45	0.52
-30	(-22)	86	22	25	35	0.18	0.36	2.43	0.61	0.71
-25	(-13)	125	31	37	40	0.20	0.53	3.07	0.77	0.90
-20	(- 4)	171	43	50	46	0.22	0.73	3.70	0.93	1.08
-15	(+ 5)	227	57	66	52	0.24	0.97	4.33	1.09	1.27
-10	(+14)	293	74	86	59	0.26	1.25	4.98	1.25	1.46
-5	(+23)	370	93	108	66	0.28	1.58	5.65	1.42	1.65

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°		
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 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		