

COMPRESSOR DEFINITION

Designation	EM Y20CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	894GA73

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)	-	-	-
8.2 LBP (43°C Ambient temperature)	Static	187 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	PTC	
2.1 Starting device	MSDA3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(450)	[µF(VAC minimum)]
5 Motor protection	4TM110NFBYY-153	
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	42	0.20	0.61	3.77	0.95	1.10

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	35	0.17	0.36	2.99	0.75	0.88
-30	(-22)	142	36	42	38	0.18	0.49	3.76	0.95	1.10
-25	(-13)	191	48	56	41	0.20	0.66	4.62	1.16	1.35
-20	(- 4)	252	63	74	45	0.21	0.88	5.56	1.40	1.63
-15	(+ 5)	326	82	95	49	0.22	1.14	6.59	1.66	1.93
-10	(+14)	414	104	121	54	0.23	1.45	7.73	1.95	2.26
-5	(+23)	517	130	151	58	0.24	1.81	8.98	2.26	2.63

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	34	0.18	0.31	2.42	0.61	0.71
-30	(-22)	117	29	34	38	0.19	0.44	3.08	0.78	0.90
-25	(-13)	161	40	47	43	0.20	0.61	3.77	0.95	1.10
-20	(- 4)	214	54	63	48	0.22	0.82	4.50	1.13	1.32
-15	(+ 5)	279	70	82	53	0.23	1.07	5.28	1.33	1.55
-10	(+14)	355	90	104	58	0.25	1.36	6.12	1.54	1.79
-5	(+23)	445	112	131	63	0.27	1.71	7.02	1.77	2.06

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	33	0.18	0.23	1.67	0.42	0.49
-30	(-22)	86	22	25	37	0.19	0.36	2.30	0.58	0.68
-25	(-13)	125	31	37	42	0.21	0.53	2.93	0.74	0.86
-20	(- 4)	171	43	50	48	0.23	0.73	3.55	0.89	1.04
-15	(+ 5)	227	57	66	54	0.25	0.97	4.17	1.05	1.22
-10	(+14)	293	74	86	61	0.27	1.25	4.82	1.21	1.41
-5	(+23)	370	93	108	68	0.29	1.58	5.48	1.38	1.61

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	4.95 +0.05/+0.05	[mm]	(0.195" +0.002"/+0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		