

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)	-	-	-
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			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]
212	53	62	44	0.22	0.67	4.77	1.20	1.40

E - PERFORMANCE - CURVES

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)	111	28	32	35	0.18	0.35	3.18	0.80	0.93
-30 (-22)	153	39	45	38	0.19	0.48	4.06	1.02	1.19
-25 (-13)	208	52	61	41	0.21	0.65	5.02	1.26	1.47
-20 (- 4)	275	69	81	45	0.22	0.87	6.08	1.53	1.78
-15 (+ 5)	357	90	105	49	0.23	1.12	7.26	1.83	2.13
-10 (+14)	455	115	133	53	0.24	1.43	8.57	2.16	2.51
-5 (+23)	569	143	167	57	0.25	1.80	10.05	2.53	2.95

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)	91	23	27	34	0.19	0.29	2.69	0.68	0.79
-30 (-22)	134	34	39	38	0.20	0.42	3.54	0.89	1.04
-25 (-13)	188	47	55	43	0.21	0.59	4.41	1.11	1.29
-20 (- 4)	254	64	75	48	0.23	0.80	5.33	1.34	1.56
-15 (+ 5)	334	84	98	53	0.24	1.05	6.30	1.59	1.85
-10 (+14)	428	108	125	58	0.26	1.35	7.35	1.85	2.15
-5 (+23)	538	136	158	63	0.28	1.70	8.50	2.14	2.49

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)	68	17	20	33	0.19	0.21	2.07	0.52	0.61
-30 (-22)	111	28	32	37	0.20	0.35	2.98	0.75	0.87
-25 (-13)	163	41	48	42	0.22	0.51	3.84	0.97	1.13
-20 (- 4)	226	57	66	48	0.24	0.71	4.69	1.18	1.37
-15 (+ 5)	301	76	88	54	0.26	0.95	5.54	1.40	1.62
-10 (+14)	390	98	114	61	0.28	1.23	6.40	1.61	1.88
-5 (+23)	494	124	145	68	0.30	1.56	7.31	1.84	2.14

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		