

COMPRESSOR DEFINITION

Designation	EM Y20CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306527

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 Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSIR-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 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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	3.97	[cm ³] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
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	2019	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(300)	[µF(VAC minimum)]
5 Motor protection	AE23AHNX	
6 Start winding resistance	27.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	40.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.35	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.20	[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			CECOMAF 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]
157	40	46	41	0.19	0.60	3.88	0.98	1.14

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)	105	27	31	32	0.17	0.37	3.32	0.84	0.97
-30 (-22)	140	35	41	35	0.18	0.49	4.01	1.01	1.17
-25 (-13)	190	48	56	39	0.19	0.66	4.82	1.21	1.41
-20 (- 4)	254	64	74	44	0.21	0.89	5.74	1.45	1.68
-15 (+ 5)	330	83	97	49	0.23	1.15	6.74	1.70	1.97
-10 (+14)	417	105	122	54	0.25	1.46	7.79	1.96	2.28

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)	86	22	25	31	0.17	0.33	2.80	0.71	0.82
-30 (-22)	115	29	34	35	0.18	0.44	3.30	0.83	0.97
-25 (-13)	158	40	46	40	0.19	0.60	3.90	0.98	1.14
-20 (- 4)	214	54	63	46	0.21	0.82	4.58	1.16	1.34
-15 (+ 5)	281	71	82	53	0.24	1.08	5.33	1.34	1.56
-10 (+14)	359	90	105	59	0.26	1.38	6.11	1.54	1.79

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)	67	17	20	30	0.17	0.28	2.23	0.56	0.65
-30 (-22)	89	23	26	35	0.18	0.38	2.62	0.66	0.77
-25 (-13)	126	32	37	41	0.20	0.53	3.09	0.78	0.91
-20 (- 4)	175	44	51	48	0.22	0.74	3.63	0.92	1.06
-15 (+ 5)	235	59	69	56	0.25	1.00	4.21	1.06	1.23
-10 (+14)	305	77	89	63	0.28	1.30	4.81	1.21	1.41

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 90° up + 24° to Back		
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 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		