

### COMPRESSOR DEFINITION

Designation	EM C20CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701IA77

### 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	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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/12	[hp]
2 Displacement	3.97	[cm <sup>3</sup> ] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	MI.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(350)/2(350)	[µF(VAC minimum)]
5 Motor protection	AE23AHNX	
6 Start winding resistance	27.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	64.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.32	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.29	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.35	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFLBP-NOFAN 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]
164	41	48	35	0.17	0.63	4.66	1.17	1.37

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN Static				(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)	131	33	38	26	0.12	0.42	5.05	1.27	1.48
-30	(-22)	177	45	52	29	0.14	0.57	6.04	1.52	1.77
-25	(-13)	229	58	67	33	0.16	0.74	6.91	1.74	2.02
-20	(- 4)	290	73	85	37	0.18	0.93	7.79	1.96	2.28
-15	(+ 5)	362	91	106	41	0.19	1.17	8.81	2.22	2.58
-10	(+14)	450	113	132	45	0.21	1.45	10.11	2.55	2.96

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	100	25	29	26	0.12	0.35	3.91	0.99	1.15
-30	(-22)	145	36	42	30	0.14	0.50	4.85	1.22	1.42
-25	(-13)	194	49	57	34	0.16	0.68	5.60	1.41	1.64
-20	(- 4)	251	63	74	40	0.19	0.87	6.30	1.59	1.85
-15	(+ 5)	318	80	93	45	0.21	1.11	7.06	1.78	2.07
-10	(+14)	399	101	117	50	0.23	1.40	8.03	2.02	2.35

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	76	19	22	25	0.11	0.29	3.05	0.77	0.89
-30	(-22)	118	30	34	29	0.14	0.45	3.99	1.00	1.17
-25	(-13)	163	41	48	35	0.17	0.62	4.66	1.17	1.37
-20	(- 4)	215	54	63	41	0.19	0.82	5.21	1.31	1.53
-15	(+ 5)	275	69	81	48	0.22	1.05	5.75	1.45	1.69
-10	(+14)	348	88	102	54	0.25	1.34	6.43	1.62	1.89

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-NOFAN 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)	51	13	15	23	0.10	0.22	2.18	0.55	0.64
-30	(-22)	89	22	26	28	0.13	0.37	3.15	0.79	0.92
-25	(-13)	129	33	38	34	0.16	0.54	3.78	0.95	1.11
-20	(- 4)	174	44	51	42	0.20	0.74	4.22	1.06	1.24
-15	(+ 5)	227	57	67	50	0.23	0.97	4.59	1.16	1.35
-10	(+14)	291	73	85	57	0.26	1.24	5.03	1.27	1.47

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	4.94 +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		