

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 ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/12	[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	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 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	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(350)/2.5(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)	2.05	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.31	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.40	[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	37	0.17	0.63	4.44	1.12	1.30

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	28	0.12	0.42	4.68	1.18	1.37
-30	(-22)	177	45	52	31	0.14	0.57	5.65	1.42	1.66
-25	(-13)	229	58	67	35	0.16	0.74	6.51	1.64	1.91
-20	(- 4)	290	73	85	39	0.18	0.93	7.39	1.86	2.17
-15	(+ 5)	362	91	106	43	0.19	1.17	8.41	2.12	2.46
-10	(+14)	450	113	132	47	0.21	1.45	9.68	2.44	2.84

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	28	0.12	0.35	3.63	0.92	1.06
-30	(-22)	145	36	42	32	0.14	0.50	4.55	1.15	1.33
-25	(-13)	194	49	57	36	0.16	0.68	5.30	1.34	1.55
-20	(- 4)	251	63	74	42	0.19	0.87	5.99	1.51	1.76
-15	(+ 5)	318	80	93	47	0.21	1.11	6.76	1.70	1.98
-10	(+14)	399	101	117	52	0.23	1.40	7.72	1.95	2.26

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	27	0.11	0.29	2.83	0.71	0.83
-30	(-22)	118	30	34	31	0.14	0.45	3.74	0.94	1.10
-25	(-13)	163	41	48	37	0.17	0.62	4.41	1.11	1.29
-20	(- 4)	215	54	63	43	0.19	0.82	4.96	1.25	1.45
-15	(+ 5)	275	69	81	50	0.22	1.05	5.52	1.39	1.62
-10	(+14)	348	88	102	56	0.25	1.34	6.20	1.56	1.82

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	25	0.10	0.22	2.00	0.50	0.59
-30	(-22)	89	22	26	30	0.13	0.37	2.94	0.74	0.86
-25	(-13)	129	33	38	36	0.16	0.54	3.58	0.90	1.05
-20	(- 4)	174	44	51	44	0.20	0.74	4.03	1.01	1.18
-15	(+ 5)	227	57	67	52	0.23	0.97	4.41	1.11	1.29
-10	(+14)	291	73	85	59	0.26	1.24	4.86	1.22	1.42

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		