

COMPRESSOR DEFINITION

Designation	EM C80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701UA90

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		[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
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)	8.15	[kg] (17.97 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	TSD	
2.1 Starting device	M.I.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(300)	[µF(VAC minimum)]
5 Motor protection	AE15BU	
6 Start winding resistance	23.17	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.86	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.12	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.22	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.48	[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]
552	139	162	113	0.53	2.10	4.91	1.24	1.44

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)	432	109	127	71	0.36	1.39	6.03	1.52	1.77
-30	(-22)	565	142	165	85	0.42	1.81	6.68	1.68	1.96
-25	(-13)	733	185	215	99	0.48	2.35	7.46	1.88	2.18
-20	(- 4)	939	237	275	113	0.54	3.02	8.34	2.10	2.44
-15	(+ 5)	1181	298	346	127	0.61	3.80	9.31	2.35	2.73
-10	(+14)	1460	368	428	141	0.68	4.71	10.33	2.60	3.03

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)	371	93	109	77	0.37	1.29	4.85	1.22	1.42
-30	(-22)	492	124	144	91	0.43	1.71	5.41	1.36	1.58
-25	(-13)	646	163	189	106	0.50	2.25	6.06	1.53	1.78
-20	(- 4)	832	210	244	122	0.57	2.90	6.80	1.71	1.99
-15	(+ 5)	1051	265	308	138	0.65	3.67	7.59	1.91	2.22
-10	(+14)	1303	328	382	155	0.73	4.57	8.40	2.12	2.46

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)	309	78	90	79	0.37	1.17	3.95	1.00	1.16
-30	(-22)	417	105	122	94	0.44	1.59	4.42	1.11	1.30
-25	(-13)	554	140	162	111	0.52	2.11	4.96	1.25	1.45
-20	(- 4)	719	181	211	129	0.60	2.75	5.55	1.40	1.63
-15	(+ 5)	914	230	268	148	0.69	3.50	6.17	1.55	1.81
-10	(+14)	1137	286	333	168	0.79	4.36	6.78	1.71	1.99

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)	249	63	73	76	0.36	1.05	3.27	0.82	0.96
-30	(-22)	342	86	100	93	0.45	1.44	3.66	0.92	1.07
-25	(-13)	461	116	135	112	0.54	1.95	4.09	1.03	1.20
-20	(- 4)	603	152	177	133	0.63	2.56	4.55	1.15	1.33
-15	(+ 5)	770	194	226	155	0.74	3.27	5.00	1.26	1.46
-10	(+14)	962	243	282	179	0.85	4.10	5.41	1.36	1.59

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 +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		