

COMPRESSOR DEFINITION

Designation	EM 2C70CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304570

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	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	1/4	[hp]
2 Displacement	11.14	[cm ³] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
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)	8.36	[kg] (18.43 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	7M220MD3/8EA17C3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(300)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	14.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	19.05	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.75	[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			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]
482	121	141	100	0.45	1.84	4.82	1.21	1.41

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)	364	92	107	71	0.35	1.16	5.10	1.28	1.49
-30	(-22)	484	122	142	82	0.39	1.55	5.91	1.49	1.73
-25	(-13)	634	160	186	93	0.44	2.04	6.81	1.72	2.00
-20	(- 4)	817	206	239	105	0.49	2.63	7.78	1.96	2.28
-15	(+ 5)	1033	260	303	117	0.54	3.32	8.79	2.22	2.58
-10	(+14)	1282	323	376	130	0.60	4.14	9.83	2.48	2.88

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)	319	80	93	72	0.36	1.11	4.43	1.12	1.30
-30	(-22)	424	107	124	84	0.41	1.48	5.06	1.27	1.48
-25	(-13)	558	141	164	97	0.46	1.94	5.76	1.45	1.69
-20	(- 4)	721	182	211	111	0.52	2.51	6.51	1.64	1.91
-15	(+ 5)	914	230	268	125	0.58	3.19	7.29	1.84	2.14
-10	(+14)	1138	287	333	141	0.65	3.98	8.08	2.04	2.37

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)	270	68	79	72	0.36	1.03	3.75	0.95	1.10
-30	(-22)	363	91	106	85	0.42	1.38	4.26	1.07	1.25
-25	(-13)	481	121	141	100	0.48	1.83	4.81	1.21	1.41
-20	(- 4)	625	158	183	116	0.54	2.39	5.40	1.36	1.58
-15	(+ 5)	797	201	234	133	0.61	3.05	6.00	1.51	1.76
-10	(+14)	997	251	292	151	0.69	3.83	6.59	1.66	1.93

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)	217	55	64	71	0.35	0.92	3.07	0.77	0.90
-30	(-22)	299	75	88	85	0.42	1.26	3.49	0.88	1.02
-25	(-13)	403	102	118	102	0.49	1.70	3.95	1.00	1.16
-20	(- 4)	531	134	156	120	0.56	2.25	4.43	1.12	1.30
-15	(+ 5)	683	172	200	140	0.64	2.90	4.90	1.23	1.44
-10	(+14)	861	217	252	162	0.72	3.67	5.34	1.35	1.57

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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 parallel BP+24°to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +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		