COMPRESSOR DEFINITION

Designation	**EM 2C70CLT**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513304635**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	11.14	[cm³] (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/cm²]

C - ELECTRICAL 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	TSD-220V	
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 25ºC (77ºF)] +/- 8%
7 Run winding resistance	19.05	[Ω at 25ºC (77ºF)] +/- 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	CE - IRAM - UKCA - 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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
482	121	141	98	0.45	1.84	4.91	1.24	1.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz** — **CECOMAF-NOFAN** **Static** — (Condensing temperature **35ºC (+95ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	364	92	107	69	0.35	1.16	5.24	1.32	1.54
-30	**(-22)**	484	122	142	80	0.39	1.55	6.06	1.53	1.77
-25	**(-13)**	634	160	186	91	0.44	2.04	6.96	1.75	2.04
-20	**(- 4)**	817	206	239	103	0.49	2.63	7.93	2.00	2.32
-15	**(+ 5)**	1033	260	303	115	0.54	3.32	8.95	2.26	2.62
-10	**(+14)**	1282	323	376	128	0.60	4.14	9.99	2.52	2.93

TEST CONDITIONS: **@220V50Hz** — **CECOMAF-NOFAN** **Static** — (Condensing temperature **45ºC (+113ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	319	80	93	70	0.36	1.11	4.55	1.15	1.33
-30	**(-22)**	424	107	124	82	0.41	1.48	5.17	1.30	1.52
-25	**(-13)**	558	141	164	95	0.46	1.94	5.87	1.48	1.72
-20	**(- 4)**	721	182	211	109	0.52	2.51	6.62	1.67	1.94
-15	**(+ 5)**	914	230	268	123	0.58	3.19	7.41	1.87	2.17
-10	**(+14)**	1138	287	333	139	0.65	3.98	8.20	2.07	2.40

TEST CONDITIONS: **@220V50Hz** — **CECOMAF-NOFAN** **Static** — (Condensing temperature **55ºC (+131ºF))**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	270	68	79	70	0.36	1.03	3.87	0.98	1.14
-30	**(-22)**	363	91	106	83	0.42	1.38	4.35	1.10	1.28
-25	**(-13)**	481	121	141	98	0.48	1.83	4.90	1.23	1.43
-20	**(- 4)**	625	158	183	114	0.54	2.39	5.48	1.38	1.61
-15	**(+ 5)**	797	201	234	131	0.61	3.05	6.08	1.53	1.78
-10	**(+14)**	997	251	292	150	0.69	3.83	6.68	1.68	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF-NOFAN** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	217	55	64	67	0.35	0.92	3.22	0.81	0.94
-30	**(-22)**	299	75	88	83	0.42	1.26	3.61	0.91	1.06
-25	**(-13)**	403	102	118	100	0.49	1.70	4.04	1.02	1.18
-20	**(- 4)**	531	134	156	118	0.56	2.25	4.50	1.13	1.32
-15	**(+ 5)**	683	172	200	138	0.64	2.90	4.97	1.25	1.46
-10	**(+14)**	861	217	252	160	0.72	3.67	5.41	1.36	1.59

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	Yes		
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 42º 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 parallet 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		