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**			**ASHRAE LBP-NOFAN** **Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F)** **54.4°C (129.92°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]
645	163	189	103	0.48	2.03	6.28	1.58	1.84

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz** — **ASHRAE32-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)**	378	95	111	68	0.34	1.18	5.55	1.40	1.63
-30	**(-22)**	500	126	146	79	0.38	1.57	6.32	1.59	1.85
-25	**(-13)**	654	165	192	91	0.42	2.05	7.23	1.82	2.12
-20	**(- 4)**	841	212	246	102	0.47	2.64	8.25	2.08	2.42
-15	**(+ 5)**	1062	268	311	114	0.52	3.34	9.31	2.35	2.73
-10	**(+14)**	1318	332	386	127	0.58	4.16	10.38	2.62	3.04

TEST CONDITIONS: **@220V50Hz** — **ASHRAE32-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)**	358	90	105	69	0.34	1.12	5.16	1.30	1.51
-30	**(-22)**	474	119	139	82	0.39	1.49	5.80	1.46	1.70
-25	**(-13)**	622	157	182	95	0.44	1.95	6.57	1.66	1.92
-20	**(- 4)**	804	202	235	108	0.50	2.53	7.42	1.87	2.18
-15	**(+ 5)**	1019	257	298	122	0.57	3.21	8.32	2.10	2.44
-10	**(+14)**	1268	320	372	138	0.64	4.00	9.21	2.32	2.70

TEST CONDITIONS: **@220V50Hz** — **ASHRAE32-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)**	332	84	97	69	0.34	1.04	4.81	1.21	1.41
-30	**(-22)**	443	112	130	83	0.40	1.39	5.34	1.35	1.56
-25	**(-13)**	586	148	172	98	0.46	1.84	5.99	1.51	1.75
-20	**(- 4)**	763	192	223	113	0.53	2.40	6.72	1.69	1.97
-15	**(+ 5)**	973	245	285	130	0.60	3.06	7.47	1.88	2.19
-10	**(+14)**	1218	307	357	148	0.68	3.84	8.21	2.07	2.41

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32-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)**	298	75	87	66	0.34	0.93	4.50	1.13	1.32
-30	**(-22)**	406	102	119	82	0.40	1.27	4.95	1.25	1.45
-25	**(-13)**	546	138	160	99	0.47	1.71	5.50	1.39	1.61
-20	**(- 4)**	719	181	211	117	0.55	2.26	6.13	1.54	1.80
-15	**(+ 5)**	926	233	271	137	0.63	2.92	6.77	1.71	1.98
-10	**(+14)**	1167	294	342	158	0.72	3.68	7.38	1.86	2.16

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		