COMPRESSOR DEFINITION

Designation	**EM X20CLC**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513309523**

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	187 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	187 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	1/12	[hp]
2 Displacement	3.97	[cm³] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.88	[kg] (17.37 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	TSD-220V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(380)	[µF(VAC minimum)]
5 Motor protection	4TM110KFBYY-73	
6 Start winding resistance	34.90	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	47.80	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	1.95	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.30	[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:			**CECOMAFLBP**			Evaporating temperature		**-25°C (-13°F)**
@220V50Hz			**Static**			(Condensing temperature		**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]
158	40	46	37	0.17	0.60	4.24	1.07	1.24

E - PERFORMANCE - CURVES

TEST CONDITIONS:			**CECOMAF**				(Condensing temperature **45ºC (+113ºF))**		
@220V50Hz			**Static**						
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)**	104	26	31	28	0.13	0.36	3.78	0.95	1.11
-30	**(-22)**	145	37	43	32	0.14	0.51	4.58	1.15	1.34
-25	**(-13)**	194	49	57	36	0.16	0.68	5.40	1.36	1.58
-20	**(- 4)**	253	64	74	40	0.18	0.88	6.28	1.58	1.84
-15	**(+ 5)**	322	81	94	45	0.20	1.12	7.22	1.82	2.12
-10	**(+14)**	402	101	118	49	0.22	1.41	8.26	2.08	2.42

TEST CONDITIONS:			**CECOMAF**				(Condensing temperature **55ºC (+131ºF))**		
@220V50Hz			**Static**						
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)**	82	21	24	28	0.13	0.31	2.92	0.74	0.86
-30	**(-22)**	117	29	34	32	0.15	0.44	3.60	0.91	1.05
-25	**(-13)**	160	40	47	37	0.17	0.61	4.27	1.08	1.25
-20	**(- 4)**	211	53	62	42	0.19	0.81	4.97	1.25	1.45
-15	**(+ 5)**	272	69	80	48	0.22	1.04	5.69	1.43	1.67
-10	**(+14)**	344	87	101	53	0.25	1.32	6.47	1.63	1.90

TEST CONDITIONS:			**CECOMAF**				(Condensing temperature **65ºC (+149ºF))**		
@220V50Hz			**Static**						
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)**	61	15	18	27	0.13	0.26	2.22	0.56	0.65
-30	**(-22)**	91	23	27	32	0.15	0.39	2.83	0.71	0.83
-25	**(-13)**	129	32	38	38	0.17	0.54	3.40	0.86	1.00
-20	**(- 4)**	174	44	51	44	0.20	0.74	3.96	1.00	1.16
-15	**(+ 5)**	228	57	67	51	0.23	0.97	4.51	1.14	1.32
-10	**(+14)**	292	74	86	57	0.26	1.24	5.07	1.28	1.49

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
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 42º up + 45° to Back		
3.2 DISCHARGE	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 42° up + 24° 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		