COMPRESSOR DEFINITION

Designation	**EM X70CLC**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**700AA98**

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 pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm²] (109 psig)	/ ºC - ºF
9.2 Peak (gauge)	9.8	[kgf/cm²] (139 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[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)	7.4	[kg] (16.31 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	MI.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	AE37FQ	
6 Start winding resistance	22.47	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	18.35	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	6.01	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.05	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.25	[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]
488	123	143	105	0.53	1.86	4.66	1.17	1.37

E - PERFORMANCE - CURVES

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

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)**	391	99	115	72	0.38	1.25	5.42	1.37	1.59
-30	**(-22)**	508	128	149	78	0.43	1.63	6.44	1.62	1.89
-25	**(-13)**	657	166	192	89	0.48	2.11	7.33	1.85	2.15
-20	**(- 4)**	840	212	246	103	0.53	2.70	8.16	2.06	2.39
-15	**(+ 5)**	1057	266	310	118	0.59	3.40	8.99	2.26	2.63
-10	**(+14)**	1310	330	384	133	0.65	4.23	9.88	2.49	2.89

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

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)**	325	82	95	77	0.39	1.13	4.25	1.07	1.25
-30	**(-22)**	432	109	127	85	0.44	1.50	5.10	1.29	1.50
-25	**(-13)**	568	143	166	97	0.50	1.98	5.82	1.47	1.71
-20	**(- 4)**	735	185	215	113	0.57	2.56	6.48	1.63	1.90
-15	**(+ 5)**	933	235	273	131	0.64	3.26	7.14	1.80	2.09
-10	**(+14)**	1164	293	341	148	0.72	4.08	7.86	1.98	2.30

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

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)**	272	69	80	79	0.40	1.03	3.43	0.86	1.01
-30	**(-22)**	367	93	108	89	0.46	1.40	4.13	1.04	1.21
-25	**(-13)**	489	123	143	104	0.53	1.86	4.69	1.18	1.38
-20	**(- 4)**	639	161	187	123	0.61	2.44	5.20	1.31	1.52
-15	**(+ 5)**	817	206	239	143	0.69	3.13	5.70	1.44	1.67
-10	**(+14)**	1024	258	300	163	0.78	3.93	6.26	1.58	1.84

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF-NOFAN** (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)**	225	57	66	80	0.40	0.95	2.80	0.71	0.82
-30	**(-22)**	308	78	90	93	0.47	1.30	3.36	0.85	0.98
-25	**(-13)**	414	104	121	110	0.55	1.75	3.79	0.95	1.11
-20	**(- 4)**	545	137	160	131	0.64	2.31	4.15	1.05	1.22
-15	**(+ 5)**	701	177	205	154	0.73	2.98	4.51	1.14	1.32
-10	**(+14)**	884	223	259	178	0.83	3.77	4.94	1.24	1.45

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 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 42º 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		