COMPRESSOR DEFINITION

Designation	**EM I40CNC**
Nominal Voltage/Frequency	**220-240 V 50-60 Hz**
Engineering Number	**513307360**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50-60	[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	187 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	187 to 255 V	187 to 242 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	1/8	[hp]
2 Displacement	6.36	[cm³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	160	[ml] (5.41 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO32	
4 Weight (with oil charge)	7.73	[kg] (17.04 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA5B3/QPS2-A22MD3/QPS2-A22MD3 091	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	3(300)	[µF(VAC minimum)]
5 Motor protection	4TM189KFBYY-53	
6 Start winding resistance	21.55	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	21.10	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	5.00/4.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.80/0.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - IRAM - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**CECOMAFLBP** **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]
265	67	78	83	0.52	1.01	3.20	0.81	0.94

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz** — **CECOMAF** **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)**	213	54	62	67	0.46	0.68	3.18	0.80	0.93
-30	**(-22)**	291	73	85	71	0.48	0.94	4.05	1.02	1.19
-25	**(-13)**	386	97	113	77	0.50	1.24	4.96	1.25	1.45
-20	**(- 4)**	497	125	146	84	0.53	1.60	5.90	1.49	1.73
-15	**(+ 5)**	621	156	182	91	0.55	2.00	6.86	1.73	2.01
-10	**(+14)**	758	191	222	98	0.57	2.44	7.81	1.97	2.29

TEST CONDITIONS: **@220V50Hz** — **CECOMAF** **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)**	161	41	47	66	0.46	0.56	2.51	0.63	0.73
-30	**(-22)**	231	58	68	71	0.48	0.80	3.26	0.82	0.96
-25	**(-13)**	318	80	93	78	0.51	1.11	4.07	1.02	1.19
-20	**(- 4)**	422	106	124	86	0.53	1.47	4.90	1.24	1.44
-15	**(+ 5)**	539	136	158	94	0.56	1.88	5.75	1.45	1.69
-10	**(+14)**	671	169	196	102	0.59	2.35	6.61	1.67	1.94

TEST CONDITIONS: **@220V50Hz** — **CECOMAF** **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)**	130	33	38	68	0.46	0.50	1.90	0.48	0.56
-30	**(-22)**	189	48	55	75	0.49	0.72	2.52	0.64	0.74
-25	**(-13)**	265	67	78	83	0.52	1.01	3.20	0.81	0.94
-20	**(- 4)**	358	90	105	92	0.55	1.37	3.91	0.98	1.14
-15	**(+ 5)**	466	117	137	101	0.58	1.78	4.64	1.17	1.36
-10	**(+14)**	588	148	172	110	0.62	2.25	5.39	1.36	1.58

E - PERFORMANCE - CURVES

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)**	104	26	31	65	0.46	0.43	1.57	0.39	0.46
-30	**(-22)**	148	37	43	73	0.49	0.63	2.04	0.51	0.60
-25	**(-13)**	210	53	62	83	0.53	0.90	2.57	0.65	0.75
-20	**(- 4)**	290	73	85	93	0.56	1.23	3.14	0.79	0.92
-15	**(+ 5)**	385	97	113	103	0.60	1.63	3.74	0.94	1.10
-10	**(+14)**	494	124	145	114	0.63	2.10	4.35	1.10	1.28

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	Straight		
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		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		