COMPRESSOR DEFINITION

Designation	**EM I40CNC**
Nominal Voltage/Frequency	**220-240 V 50-60 Hz**
Engineering Number	**877EE81**

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	RSIR		
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 254 V	198 to 254 V
8.2 LBP (43ºC Ambient temperature)	Static	198 to 254 V	198 to 254 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	7.23	[cm³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
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)	7.55	[kg] (16.64 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	MI2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	AE64FS	
6 Start winding resistance	22.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	24.00	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A]
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A]
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**		Evaporating temperature	**-23.3°C (-9.94°F)**		
@220V60Hz			**Static**		(Condensing temperature	**54.4°C (129.92°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]
472	119	138	99	0.68	1.48	4.76	1.20	1.39

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**				(Condensing temperature **35ºC (+95ºF))**				
@220V60Hz		**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)**	284	72	83	68	0.59	0.89	4.19	1.06	1.23
-30	**(-22)**	376	95	110	77	0.62	1.18	4.90	1.23	1.43
-25	**(-13)**	495	125	145	87	0.65	1.55	5.73	1.44	1.68
-20	**(- 4)**	643	162	188	97	0.68	2.02	6.66	1.68	1.95
-15	**(+ 5)**	818	206	240	107	0.71	2.58	7.66	1.93	2.24
-10	**(+14)**	1024	258	300	118	0.75	3.23	8.70	2.19	2.55

TEST CONDITIONS:		**ASHRAE32**				(Condensing temperature **45ºC (+113ºF))**				
@220V60Hz		**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)**	262	66	77	70	0.60	0.82	3.77	0.95	1.11
-30	**(-22)**	349	88	102	80	0.63	1.10	4.39	1.11	1.29
-25	**(-13)**	464	117	136	90	0.66	1.46	5.11	1.29	1.50
-20	**(- 4)**	607	153	178	102	0.70	1.91	5.91	1.49	1.73
-15	**(+ 5)**	778	196	228	115	0.74	2.45	6.77	1.71	1.98
-10	**(+14)**	979	247	287	128	0.79	3.09	7.65	1.93	2.24

TEST CONDITIONS:		**ASHRAE32**				(Condensing temperature **55ºC (+131ºF))**				
@220V60Hz		**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)**	243	61	71	72	0.61	0.76	3.40	0.86	1.00
-30	**(-22)**	323	81	95	82	0.64	1.01	3.94	0.99	1.15
-25	**(-13)**	431	109	126	94	0.67	1.35	4.56	1.15	1.34
-20	**(- 4)**	567	143	166	107	0.71	1.78	5.25	1.32	1.54
-15	**(+ 5)**	731	184	214	122	0.76	2.30	5.98	1.51	1.75
-10	**(+14)**	926	233	271	138	0.82	2.92	6.71	1.69	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**

@220V60Hz **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)**	231	58	68	73	0.62	0.72	3.15	0.79	0.92
-30	**(-22)**	301	76	88	83	0.65	0.95	3.63	0.91	1.06
-25	**(-13)**	400	101	117	96	0.68	1.26	4.18	1.05	1.22
-20	**(- 4)**	527	133	154	111	0.72	1.66	4.77	1.20	1.40
-15	**(+ 5)**	683	172	200	127	0.78	2.15	5.37	1.35	1.57
-10	**(+14)**	869	219	255	146	0.85	2.74	5.97	1.50	1.75

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 42°		
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°		
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 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		