

COMPRESSOR DEFINITION

Designation	EM U40CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306113

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	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.23	[cm ³] (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)	7.3	[kg] (16.09 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	2019	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	AE37FN10	
6 Start winding resistance	25.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	26.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF Static			(Condensing temperature 45°C (+113°F))					
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)	196	49	57	60	0.54	0.68	3.27	0.82	0.96	
-30 (-22)	272	68	80	70	0.56	0.95	3.89	0.98	1.14	
-25 (-13)	361	91	106	80	0.58	1.26	4.51	1.14	1.32	
-20 (- 4)	466	118	137	90	0.60	1.63	5.16	1.30	1.51	
-15 (+ 5)	591	149	173	101	0.62	2.06	5.85	1.47	1.71	
-10 (+14)	738	186	216	112	0.64	2.58	6.61	1.67	1.94	

TEST CONDITIONS: @220V50Hz		CECOMAF Static			(Condensing temperature 55°C (+131°F))					
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)	159	40	47	61	0.54	0.60	2.61	0.66	0.77	
-30 (-22)	229	58	67	72	0.56	0.87	3.19	0.80	0.93	
-25 (-13)	310	78	91	83	0.59	1.18	3.75	0.94	1.10	
-20 (- 4)	405	102	119	94	0.61	1.55	4.31	1.09	1.26	
-15 (+ 5)	518	131	152	106	0.64	1.98	4.90	1.23	1.44	
-10 (+14)	651	164	191	117	0.67	2.50	5.54	1.40	1.62	

TEST CONDITIONS: @220V50Hz		CECOMAF Static			(Condensing temperature 65°C (+149°F))					
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	60	0.54	0.55	2.16	0.54	0.63	
-30 (-22)	191	48	56	72	0.57	0.81	2.65	0.67	0.78	
-25 (-13)	262	66	77	85	0.60	1.11	3.10	0.78	0.91	
-20 (- 4)	345	87	101	98	0.63	1.46	3.54	0.89	1.04	
-15 (+ 5)	444	112	130	111	0.67	1.89	3.99	1.00	1.17	
-10 (+14)	560	141	164	125	0.71	2.39	4.47	1.13	1.31	

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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° 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 parallel BP+24°to Back		
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	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		