

### COMPRESSOR DEFINITION

Designation	EM U40CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513306023

### 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 <sup>2</sup> ] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm <sup>2</sup> ] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	7.23	[cm <sup>3</sup> ] (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	MINERAL / ISO7	
4 Weight (with oil charge)	7.3	[kg] (16.09 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0224/07	
6 Start winding resistance	30.42	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	28.11	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.62	[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

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 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]
429	108	126	90	0.61	1.35	4.77	1.20	1.40

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	210	53	62	63	0.54	0.66	3.34	0.84	0.98
-30 (-22)	312	79	91	71	0.56	0.98	4.41	1.11	1.29
-25 (-13)	425	107	125	80	0.59	1.33	5.32	1.34	1.56
-20 (- 4)	553	139	162	91	0.62	1.74	6.11	1.54	1.79
-15 (+ 5)	697	176	204	102	0.66	2.19	6.86	1.73	2.01
-10 (+14)	860	217	252	113	0.70	2.71	7.59	1.91	2.22

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	191	48	56	64	0.55	0.60	2.97	0.75	0.87
-30 (-22)	288	72	84	72	0.57	0.90	3.97	1.00	1.16
-25 (-13)	396	100	116	83	0.60	1.24	4.79	1.21	1.40
-20 (- 4)	520	131	152	95	0.63	1.63	5.49	1.38	1.61
-15 (+ 5)	660	166	193	108	0.68	2.08	6.12	1.54	1.79
-10 (+14)	818	206	240	122	0.73	2.58	6.73	1.70	1.97

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	158	40	46	64	0.56	0.49	2.50	0.63	0.73
-30 (-22)	250	63	73	73	0.57	0.78	3.44	0.87	1.01
-25 (-13)	354	89	104	84	0.60	1.11	4.20	1.06	1.23
-20 (- 4)	474	119	139	98	0.65	1.49	4.82	1.22	1.41
-15 (+ 5)	610	154	179	114	0.70	1.92	5.36	1.35	1.57
-10 (+14)	765	193	224	130	0.76	2.42	5.86	1.48	1.72

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper(OD)		
3.1.2 Shape	Slanted 42° 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 parallel BP+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		