

COMPRESSOR DEFINITION

Designation	EM U40CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513306143

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	115-127 / 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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
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)	6.55	[kg] (14.44 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M4R7MC1/8EA14C1/QPS2-A4R7MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283RFBYY-53	
6 Start winding resistance	6.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.24	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	7.33	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.47	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.53	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			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]
393	99	115	92	1.33	1.23	4.28	1.08	1.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	238	60	70	60	1.12	0.75	3.92	0.99	1.15
-30	(-22)	316	80	93	71	1.18	0.99	4.45	1.12	1.30
-25	(-13)	418	105	122	81	1.22	1.31	5.21	1.31	1.53
-20	(- 4)	544	137	159	89	1.24	1.71	6.15	1.55	1.80
-15	(+ 5)	694	175	203	96	1.27	2.18	7.20	1.82	2.11
-10	(+14)	868	219	254	104	1.31	2.74	8.32	2.10	2.44

TEST CONDITIONS: @127V60Hz		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)	218	55	64	65	1.16	0.68	3.35	0.84	0.98
-30	(-22)	292	73	85	76	1.22	0.91	3.87	0.97	1.13
-25	(-13)	389	98	114	85	1.26	1.22	4.58	1.15	1.34
-20	(- 4)	510	129	150	94	1.29	1.60	5.42	1.37	1.59
-15	(+ 5)	655	165	192	103	1.33	2.06	6.33	1.60	1.85
-10	(+14)	824	208	241	113	1.38	2.60	7.26	1.83	2.13

TEST CONDITIONS: @127V60Hz		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)	196	49	57	66	1.16	0.61	2.99	0.75	0.88
-30	(-22)	266	67	78	76	1.23	0.83	3.50	0.88	1.03
-25	(-13)	359	90	105	86	1.27	1.13	4.15	1.05	1.22
-20	(- 4)	475	120	139	97	1.31	1.49	4.89	1.23	1.43
-15	(+ 5)	614	155	180	108	1.36	1.93	5.65	1.42	1.66
-10	(+14)	776	196	227	122	1.43	2.45	6.38	1.61	1.87

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	173	44	51	62	1.12	0.54	2.79	0.70	0.82
-30	(-22)	238	60	70	73	1.20	0.75	3.27	0.83	0.96
-25	(-13)	326	82	96	85	1.26	1.02	3.86	0.97	1.13
-20	(- 4)	437	110	128	97	1.31	1.37	4.49	1.13	1.32
-15	(+ 5)	570	144	167	112	1.38	1.79	5.10	1.29	1.49
-10	(+14)	726	183	213	129	1.47	2.29	5.63	1.42	1.65

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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		