

### COMPRESSOR DEFINITION

Designation	EM R40CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513400016

### 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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	5.96	[cm <sup>3</sup> ] (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)	6.3	[kg] (13.89 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELECTRICAL 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	8EA14C1/QPS2-A4R7MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB29N61A*	
6 Start winding resistance	9.61	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	6.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

### 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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
378	95	111	95	1.26	1.19	3.99	1.01	1.17

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	243	61	71	69	1.18	0.76	3.51	0.89	1.03
-30	(-22)	313	79	92	78	1.21	0.98	4.04	1.02	1.19
-25	(-13)	401	101	118	85	1.23	1.26	4.72	1.19	1.38
-20	(- 4)	512	129	150	93	1.26	1.61	5.53	1.39	1.62
-15	(+ 5)	650	164	190	101	1.29	2.05	6.42	1.62	1.88
-10	(+14)	819	206	240	110	1.33	2.58	7.39	1.86	2.17

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	210	53	62	72	1.18	0.66	2.94	0.74	0.86
-30	(-22)	283	71	83	81	1.21	0.89	3.49	0.88	1.02
-25	(-13)	374	94	110	90	1.24	1.17	4.17	1.05	1.22
-20	(- 4)	485	122	142	98	1.27	1.52	4.93	1.24	1.44
-15	(+ 5)	622	157	182	108	1.31	1.96	5.76	1.45	1.69
-10	(+14)	788	199	231	119	1.37	2.49	6.62	1.67	1.94

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	183	46	54	71	1.18	0.57	2.59	0.65	0.76
-30	(-22)	257	65	75	81	1.21	0.81	3.14	0.79	0.92
-25	(-13)	346	87	101	91	1.24	1.09	3.78	0.95	1.11
-20	(- 4)	455	115	133	101	1.28	1.43	4.47	1.13	1.31
-15	(+ 5)	587	148	172	113	1.33	1.85	5.20	1.31	1.52
-10	(+14)	747	188	219	126	1.40	2.36	5.93	1.49	1.74

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F) )					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	162	41	47	67	1.17	0.51	2.43	0.61	0.71
-30	(-22)	233	59	68	78	1.20	0.73	2.95	0.74	0.86
-25	(-13)	317	80	93	90	1.24	1.00	3.52	0.89	1.03
-20	(- 4)	420	106	123	102	1.29	1.32	4.12	1.04	1.21
-15	(+ 5)	544	137	159	116	1.35	1.71	4.71	1.19	1.38
-10	(+14)	694	175	203	132	1.43	2.19	5.27	1.33	1.54

### F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	7.84 +0.00/-0.10	[mm]	(0.309" +0.000"/-0.004")
3.1.1 Material	Copper(OD)		
3.1.2 Shape	Slanted 40° 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 30° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		