

COMPRESSOR DEFINITION

Designation	EM R60CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513400024

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	1/6	[hp]
2 Displacement	8.59	[cm ³] (0.524 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	19.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	6.83	[kg] (15.06 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Combo	
2.1 Starting device	8EA14E64/QPS2-C4R7MD3108	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	DRB210N61B*F	
6 Start winding resistance	6.95	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	4.60	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.85	[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]
594	150	174	124	1.65	1.86	4.78	1.20	1.40

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)	344	87	101	88	1.51	1.08	3.89	0.98	1.14
-30	(-22)	460	116	135	99	1.55	1.44	4.66	1.18	1.37
-25	(-13)	591	149	173	108	1.58	1.85	5.47	1.38	1.60
-20	(- 4)	747	188	219	118	1.62	2.35	6.33	1.60	1.86
-15	(+ 5)	938	236	275	128	1.67	2.95	7.27	1.83	2.13
-10	(+14)	1171	295	343	140	1.73	3.69	8.31	2.09	2.43

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)	322	81	94	91	1.52	1.01	3.52	0.89	1.03
-30	(-22)	440	111	129	104	1.56	1.38	4.25	1.07	1.25
-25	(-13)	572	144	168	115	1.60	1.80	4.98	1.26	1.46
-20	(- 4)	726	183	213	127	1.65	2.28	5.74	1.45	1.68
-15	(+ 5)	912	230	267	139	1.71	2.87	6.54	1.65	1.92
-10	(+14)	1139	287	334	153	1.79	3.59	7.41	1.87	2.17

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)	278	70	82	89	1.51	0.87	3.10	0.78	0.91
-30	(-22)	403	102	118	105	1.56	1.26	3.83	0.97	1.12
-25	(-13)	539	136	158	119	1.62	1.69	4.53	1.14	1.33
-20	(- 4)	695	175	204	134	1.68	2.18	5.22	1.31	1.53
-15	(+ 5)	880	222	258	149	1.76	2.77	5.92	1.49	1.73
-10	(+14)	1103	278	323	166	1.85	3.48	6.66	1.68	1.95

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)	214	54	63	83	1.50	0.67	2.59	0.65	0.76
-30	(-22)	349	88	102	102	1.56	1.09	3.36	0.85	0.98
-25	(-13)	492	124	144	120	1.63	1.55	4.06	1.02	1.19
-20	(- 4)	653	165	191	138	1.71	2.05	4.72	1.19	1.38
-15	(+ 5)	841	212	246	157	1.80	2.65	5.37	1.35	1.57
-10	(+14)	1065	268	312	177	1.92	3.36	6.02	1.52	1.76

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
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 parallel BP+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 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		