

### COMPRESSOR DEFINITION

Designation	EM R60CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513400025

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 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	-	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 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	1/6	[hp]
2 Displacement	8.59	[cm <sup>3</sup> ] (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)	6.42	[kg] (14.15 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Combo	
2.1 Starting device	8EA17E64/QPS2-C22MD3107	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB180L61AXF	
6 Start winding resistance	19.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.85	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	5.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.07	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.19	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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	0.85	1.86	4.78	1.20	1.40

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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)	342	86	100	84	0.76	1.07	4.07	1.02	1.19
-30	(-22)	453	114	133	96	0.78	1.42	4.76	1.20	1.39
-25	(-13)	586	148	172	106	0.81	1.84	5.54	1.40	1.62
-20	(- 4)	746	188	218	116	0.84	2.34	6.42	1.62	1.88
-15	(+ 5)	940	237	275	127	0.87	2.96	7.37	1.86	2.16
-10	(+14)	1174	296	344	140	0.91	3.70	8.37	2.11	2.45

TEST CONDITIONS: @220V60Hz			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)	319	80	94	88	0.77	1.00	3.64	0.92	1.07
-30	(-22)	435	110	127	102	0.79	1.36	4.28	1.08	1.25
-25	(-13)	568	143	167	114	0.82	1.78	5.00	1.26	1.46
-20	(- 4)	727	183	213	126	0.86	2.28	5.76	1.45	1.69
-15	(+ 5)	916	231	268	139	0.90	2.88	6.56	1.65	1.92
-10	(+14)	1143	288	335	154	0.96	3.61	7.38	1.86	2.16

TEST CONDITIONS: @220V60Hz			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)	282	71	83	87	0.76	0.88	3.25	0.82	0.95
-30	(-22)	403	101	118	103	0.79	1.26	3.87	0.98	1.14
-25	(-13)	538	136	158	119	0.83	1.69	4.54	1.14	1.33
-20	(- 4)	696	175	204	134	0.88	2.19	5.21	1.31	1.53
-15	(+ 5)	882	222	258	150	0.94	2.78	5.90	1.49	1.73
-10	(+14)	1103	278	323	168	1.00	3.48	6.57	1.65	1.92

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	230	58	67	81	0.75	0.72	2.84	0.71	0.83
-30	(-22)	357	90	104	101	0.79	1.12	3.47	0.88	1.02
-25	(-13)	496	125	145	120	0.84	1.56	4.11	1.04	1.20
-20	(- 4)	654	165	192	138	0.90	2.06	4.73	1.19	1.39
-15	(+ 5)	838	211	245	158	0.97	2.64	5.32	1.34	1.56
-10	(+14)	1053	265	309	181	1.05	3.32	5.86	1.48	1.72

### 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		