

COMPRESSOR DEFINITION

Designation	EM 2Q30HLR
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304627

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 60	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Light Commercial)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	3.00	[cm ³] (0.183 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.600	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.44	[kg] (16.40 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	Current Relay	
2.1 Starting device	213514091	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM319KFBYY-53	
6 Start winding resistance	19.68	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.89	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.55	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.75	[A] - Measured according to UL 984
11 Approval boards certification	CE - 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 +/- 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]
327	82	96	72	0.94	1.86	4.53	1.14	1.33

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)	178	45	52	50	0.84	1.00	3.54	0.89	1.04
-30	(-22)	259	65	76	58	0.87	1.47	4.46	1.12	1.31
-25	(-13)	352	89	103	65	0.90	2.00	5.43	1.37	1.59
-20	(- 4)	464	117	136	72	0.93	2.64	6.48	1.63	1.90
-15	(+ 5)	601	152	176	79	0.97	3.43	7.62	1.92	2.23
-10	(+14)	770	194	226	86	1.01	4.41	8.90	2.24	2.61
-5	(+23)	977	246	286	94	1.06	5.62	10.32	2.60	3.03
0	(+32)	1229	310	360	103	1.12	7.10	11.93	3.01	3.50

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)	169	43	49	52	0.85	0.95	3.20	0.81	0.94
-30	(-22)	245	62	72	60	0.89	1.39	4.02	1.01	1.18
-25	(-13)	333	84	98	68	0.92	1.89	4.86	1.22	1.42
-20	(- 4)	438	110	128	76	0.96	2.49	5.73	1.44	1.68
-15	(+ 5)	566	143	166	85	1.01	3.23	6.66	1.68	1.95
-10	(+14)	725	183	213	94	1.06	4.16	7.68	1.93	2.25
-5	(+23)	921	232	270	104	1.12	5.30	8.81	2.22	2.58
0	(+32)	1160	292	340	115	1.20	6.71	10.08	2.54	2.95

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)	131	33	38	50	0.85	0.74	2.63	0.66	0.77
-30	(-22)	205	52	60	59	0.88	1.16	3.44	0.87	1.01
-25	(-13)	289	73	85	69	0.92	1.64	4.22	1.06	1.24
-20	(- 4)	389	98	114	78	0.97	2.21	5.00	1.26	1.46
-15	(+ 5)	512	129	150	89	1.03	2.92	5.79	1.46	1.70
-10	(+14)	663	167	194	100	1.09	3.80	6.64	1.67	1.94
-5	(+23)	850	214	249	112	1.17	4.89	7.55	1.90	2.21
0	(+32)	1079	272	316	126	1.26	6.24	8.56	2.16	2.51

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)	86	22	25	45	0.82	0.49	1.93	0.49	0.56
-30	(-22)	160	40	47	55	0.86	0.91	2.81	0.71	0.82
-25	(-13)	243	61	71	66	0.91	1.38	3.61	0.91	1.06
-20	(- 4)	340	86	100	78	0.97	1.93	4.37	1.10	1.28
-15	(+ 5)	459	116	134	90	1.04	2.62	5.11	1.29	1.50
-10	(+14)	605	152	177	104	1.12	3.46	5.86	1.48	1.72
-5	(+23)	785	198	230	118	1.21	4.52	6.63	1.67	1.94
0	(+32)	1006	253	295	135	1.32	5.81	7.47	1.88	2.19

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	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		