

COMPRESSOR DEFINITION

Designation	EM 2Q30HLR
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513304628

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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)	7.13	[kg] (15.72 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514164	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283JDBYY	
6 Start winding resistance	32.83	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	27.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	8.72	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.59	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.71	[A] - Measured according to UL 984
11 Approval boards certification	CE - 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 +/- 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]
329	83	96	73	0.53	1.87	4.53	1.14	1.33

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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)	195	49	57	53	0.49	1.10	3.64	0.92	1.07
-30	(-22)	270	68	79	60	0.50	1.53	4.51	1.14	1.32
-25	(-13)	364	92	107	67	0.52	2.07	5.45	1.37	1.60
-20	(- 4)	479	121	140	74	0.54	2.72	6.46	1.63	1.89
-15	(+ 5)	619	156	181	82	0.57	3.53	7.57	1.91	2.22
-10	(+14)	787	198	231	90	0.60	4.51	8.80	2.22	2.58
-5	(+23)	987	249	289	97	0.62	5.68	10.16	2.56	2.98
0	(+32)	1222	308	358	105	0.64	7.07	11.67	2.94	3.42

TEST CONDITIONS: @220V60Hz			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)	168	42	49	53	0.49	0.95	3.17	0.80	0.93
-30	(-22)	242	61	71	61	0.50	1.37	3.98	1.00	1.16
-25	(-13)	333	84	97	69	0.52	1.89	4.80	1.21	1.41
-20	(- 4)	444	112	130	78	0.55	2.53	5.66	1.43	1.66
-15	(+ 5)	579	146	170	88	0.58	3.31	6.58	1.66	1.93
-10	(+14)	742	187	218	98	0.62	4.25	7.58	1.91	2.22
-5	(+23)	937	236	274	108	0.66	5.39	8.68	2.19	2.54
0	(+32)	1165	294	341	118	0.69	6.74	9.88	2.49	2.90

TEST CONDITIONS: @220V60Hz			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)	135	34	40	51	0.48	0.77	2.67	0.67	0.78
-30	(-22)	206	52	60	60	0.49	1.17	3.46	0.87	1.01
-25	(-13)	293	74	86	69	0.52	1.66	4.22	1.06	1.24
-20	(- 4)	400	101	117	80	0.55	2.27	4.99	1.26	1.46
-15	(+ 5)	530	134	155	92	0.59	3.02	5.78	1.46	1.69
-10	(+14)	687	173	201	104	0.64	3.93	6.60	1.66	1.93
-5	(+23)	874	220	256	117	0.69	5.03	7.48	1.89	2.19
0	(+32)	1095	276	321	130	0.74	6.33	8.44	2.13	2.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	95	24	28	47	0.48	0.54	2.04	0.51	0.60
-30	(-22)	162	41	48	56	0.49	0.92	2.86	0.72	0.84
-25	(-13)	245	62	72	67	0.52	1.39	3.62	0.91	1.06
-20	(- 4)	346	87	101	80	0.55	1.97	4.34	1.09	1.27
-15	(+ 5)	470	118	138	94	0.60	2.68	5.05	1.27	1.48
-10	(+14)	620	156	182	108	0.66	3.55	5.75	1.45	1.68
-5	(+23)	800	202	234	124	0.72	4.60	6.47	1.63	1.90
0	(+32)	1013	255	297	140	0.78	5.85	7.23	1.82	2.12

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		