

COMPRESSOR DEFINITION

Designation	EM 2S60HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301003

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		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	98 to 140 V
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		[hp]
2 Displacement	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.68	[kg] (16.93 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL 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	4TM427KFBYY-53	
6 Start winding resistance	11.48	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.86	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.09	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.85	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.18	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
605	152	177	118	1.48	3.44	5.12	1.29	1.50

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	317	80	93	76	1.20	1.79	4.16	1.05	1.22
-30	(-22)	441	111	129	86	1.28	2.50	5.15	1.30	1.51
-25	(-13)	603	152	177	98	1.35	3.42	6.19	1.56	1.81
-20	(- 4)	806	203	236	111	1.42	4.59	7.25	1.83	2.13
-15	(+ 5)	1055	266	309	126	1.51	6.02	8.33	2.10	2.44
-10	(+14)	1352	341	396	144	1.62	7.75	9.41	2.37	2.76
-5	(+23)	1702	429	499	163	1.76	9.79	10.47	2.64	3.07

TEST CONDITIONS: @115V60Hz			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)	313	79	92	81	1.22	1.77	3.83	0.97	1.12
-30	(-22)	428	108	125	93	1.31	2.43	4.62	1.16	1.35
-25	(-13)	577	145	169	106	1.40	3.28	5.47	1.38	1.60
-20	(- 4)	764	192	224	121	1.49	4.35	6.35	1.60	1.86
-15	(+ 5)	992	250	291	137	1.59	5.67	7.25	1.83	2.12
-10	(+14)	1266	319	371	155	1.72	7.25	8.16	2.06	2.39
-5	(+23)	1589	400	465	175	1.88	9.14	9.06	2.28	2.65

TEST CONDITIONS: @115V60Hz			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)	303	76	89	85	1.23	1.71	3.55	0.89	1.04
-30	(-22)	410	103	120	99	1.34	2.32	4.16	1.05	1.22
-25	(-13)	548	138	161	113	1.44	3.11	4.84	1.22	1.42
-20	(- 4)	721	182	211	130	1.54	4.10	5.57	1.40	1.63
-15	(+ 5)	931	235	273	147	1.66	5.31	6.33	1.60	1.86
-10	(+14)	1183	298	347	167	1.81	6.78	7.11	1.79	2.08
-5	(+23)	1480	373	434	188	1.99	8.51	7.88	1.99	2.31

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	285	72	84	88	1.24	1.61	3.26	0.82	0.96
-30	(-22)	388	98	114	103	1.36	2.20	3.74	0.94	1.10
-25	(-13)	517	130	151	120	1.47	2.93	4.29	1.08	1.26
-20	(- 4)	677	171	198	138	1.59	3.85	4.90	1.23	1.43
-15	(+ 5)	871	219	255	157	1.72	4.97	5.54	1.40	1.62
-10	(+14)	1103	278	323	178	1.88	6.32	6.21	1.57	1.82
-5	(+23)	1376	347	403	200	2.08	7.92	6.89	1.74	2.02

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	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		