

COMPRESSOR DEFINITION

Designation	EM 2S60HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301001

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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 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	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427KFBYY-53	
6 Start winding resistance	12.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	13.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	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	116	1.17	3.44	5.22	1.32	1.53

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	69	1.24	1.79	4.57	1.15	1.34
-30	(-22)	441	111	129	83	1.31	2.50	5.35	1.35	1.57
-25	(-13)	603	152	177	97	1.38	3.42	6.22	1.57	1.82
-20	(- 4)	806	203	236	113	1.46	4.59	7.17	1.81	2.10
-15	(+ 5)	1055	266	309	129	1.54	6.02	8.19	2.07	2.40
-10	(+14)	1352	341	396	145	1.64	7.75	9.30	2.34	2.72
-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	78	1.29	1.77	4.00	1.01	1.17
-30	(-22)	428	108	125	91	1.37	2.43	4.72	1.19	1.38
-25	(-13)	577	145	169	105	1.45	3.28	5.51	1.39	1.61
-20	(- 4)	764	192	224	120	1.53	4.35	6.34	1.60	1.86
-15	(+ 5)	992	250	291	137	1.64	5.67	7.22	1.82	2.12
-10	(+14)	1266	319	371	155	1.76	7.25	8.15	2.05	2.39
-5	(+23)	1589	400	465	174	1.91	9.14	9.12	2.30	2.67

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	86	1.33	1.71	3.54	0.89	1.04
-30	(-22)	410	103	120	97	1.40	2.32	4.23	1.06	1.24
-25	(-13)	548	138	161	111	1.49	3.11	4.94	1.24	1.45
-20	(- 4)	721	182	211	127	1.58	4.10	5.67	1.43	1.66
-15	(+ 5)	931	235	273	145	1.70	5.31	6.42	1.62	1.88
-10	(+14)	1183	298	347	165	1.85	6.78	7.18	1.81	2.10
-5	(+23)	1480	373	434	186	2.03	8.51	7.96	2.01	2.33

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	90	1.36	1.61	3.16	0.80	0.93
-30	(-22)	388	98	114	102	1.42	2.20	3.81	0.96	1.12
-25	(-13)	517	130	151	116	1.50	2.93	4.46	1.12	1.31
-20	(- 4)	677	171	198	133	1.61	3.85	5.10	1.28	1.49
-15	(+ 5)	871	219	255	152	1.74	4.97	5.72	1.44	1.68
-10	(+14)	1103	278	323	174	1.90	6.32	6.34	1.60	1.86
-5	(+23)	1376	347	403	198	2.11	7.92	6.93	1.75	2.03

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		