

COMPRESSOR DEFINITION

Designation	EM 2S60CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304609

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	115-127 / 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	-	103 to 140 V
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	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
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)	7.06	[kg] (15.56 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	PTC	
2.1 Starting device	8EA14C1/8EA14E63/8EA21C1/QPS2-A4R7MG1/QPS2A4R7MG	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427KFBYY-53	
6 Start winding resistance	5.89	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.01	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	13.64	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.68	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

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]
607	153	178	114	1.57	1.91	5.31	1.34	1.56

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)	359	90	105	79	1.42	1.12	4.52	1.14	1.32
-30 (-22)	483	122	142	91	1.46	1.51	5.31	1.34	1.56
-25 (-13)	641	162	188	104	1.52	2.01	6.19	1.56	1.81
-20 (- 4)	834	210	244	117	1.58	2.62	7.14	1.80	2.09
-15 (+ 5)	1062	268	311	131	1.65	3.34	8.15	2.05	2.39
-10 (+14)	1327	334	389	144	1.73	4.19	9.22	2.32	2.70

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)	330	83	97	80	1.43	1.03	4.13	1.04	1.21
-30 (-22)	448	113	131	93	1.47	1.40	4.84	1.22	1.42
-25 (-13)	600	151	176	107	1.53	1.88	5.61	1.41	1.64
-20 (- 4)	787	198	231	122	1.61	2.47	6.43	1.62	1.89
-15 (+ 5)	1010	255	296	138	1.69	3.18	7.31	1.84	2.14
-10 (+14)	1270	320	372	155	1.78	4.01	8.23	2.07	2.41

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)	298	75	87	80	1.43	0.93	3.73	0.94	1.09
-30 (-22)	409	103	120	94	1.48	1.28	4.37	1.10	1.28
-25 (-13)	554	140	162	109	1.54	1.74	5.06	1.28	1.48
-20 (- 4)	734	185	215	126	1.63	2.31	5.79	1.46	1.70
-15 (+ 5)	951	240	279	145	1.73	2.99	6.56	1.65	1.92
-10 (+14)	1205	304	353	164	1.84	3.80	7.35	1.85	2.15

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)	265	67	78	80	1.43	0.83	3.29	0.83	0.97
-30	(-22)	367	92	107	95	1.48	1.15	3.90	0.98	1.14
-25	(-13)	503	127	147	111	1.55	1.58	4.53	1.14	1.33
-20	(- 4)	676	170	198	130	1.64	2.12	5.20	1.31	1.52
-15	(+ 5)	885	223	259	150	1.76	2.79	5.88	1.48	1.72
-10	(+14)	1132	285	332	172	1.89	3.57	6.58	1.66	1.93

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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	Slanted 42° up + 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 parallel BP+24°to Back		
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	Slanted parallel BP+45°to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		