

COMPRESSOR DEFINITION

Designation	EM 2S60CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513304602

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 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	RSCR		
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)	Static	-	198 to 242 V
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	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA17E61/8EA17E62/8EA17E63/8EA17E64/QPS2-A	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(287)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	19.92	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	5.56	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.78	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.96	[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]
591	149	173	112	0.52	1.86	5.29	1.33	1.55

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)	354	89	104	265	0.34	1.11	1.33	0.34	0.39
-30	(-22)	480	121	141	299	0.39	1.50	1.60	0.40	0.47
-25	(-13)	638	161	187	339	0.45	2.00	1.88	0.47	0.55
-20	(- 4)	828	209	243	383	0.53	2.60	2.17	0.55	0.63
-15	(+ 5)	1048	264	307	427	0.60	3.30	2.46	0.62	0.72
-10	(+14)	1297	327	380	471	0.68	4.09	2.77	0.70	0.81

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)	319	80	94	269	0.36	1.00	1.19	0.30	0.35
-30	(-22)	436	110	128	308	0.40	1.37	1.42	0.36	0.42
-25	(-13)	589	148	173	353	0.46	1.85	1.66	0.42	0.49
-20	(- 4)	775	195	227	404	0.53	2.44	1.91	0.48	0.56
-15	(+ 5)	995	251	291	457	0.61	3.13	2.18	0.55	0.64
-10	(+14)	1245	314	365	510	0.69	3.93	2.45	0.62	0.72

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)	291	73	85	271	0.38	0.91	1.08	0.27	0.32
-30	(-22)	397	100	116	312	0.42	1.24	1.28	0.32	0.37
-25	(-13)	540	136	158	363	0.48	1.69	1.49	0.37	0.44
-20	(- 4)	720	181	211	419	0.56	2.26	1.71	0.43	0.50
-15	(+ 5)	935	236	274	480	0.64	2.94	1.94	0.49	0.57
-10	(+14)	1184	298	347	542	0.73	3.74	2.18	0.55	0.64

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)	269	68	79	271	0.38	0.84	0.99	0.25	0.29
-30	(-22)	360	91	105	315	0.42	1.13	1.16	0.29	0.34
-25	(-13)	491	124	144	369	0.49	1.54	1.34	0.34	0.39
-20	(- 4)	661	167	194	431	0.57	2.08	1.54	0.39	0.45
-15	(+ 5)	869	219	255	498	0.66	2.74	1.74	0.44	0.51
-10	(+14)	1113	281	326	568	0.76	3.51	1.96	0.49	0.57

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	Yes		
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 parallel BP+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 30° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		