COMPRESSOR DEFINITION

Designation	**EM 2S70CLC**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513304546**

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	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	10.61	[cm³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
4 Weight (with oil charge)	7.52	[kg] (16.58 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	8EA14C3/QPS2-A4R7MD3/QPS2-A4R7MD3 094	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	5TM762KFBYY-53	
6 Start winding resistance	5.90	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.78	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	20.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.07	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.67	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

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]
734	185	215	138	1.50	2.30	5.33	1.34	1.56

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@127V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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)**	417	105	122	96	1.26	1.31	4.34	1.09	1.27
-30	**(-22)**	543	137	159	106	1.32	1.70	5.11	1.29	1.50
-25	**(-13)**	690	174	202	117	1.38	2.17	5.94	1.50	1.74
-20	**(- 4)**	876	221	257	128	1.44	2.75	6.84	1.72	2.00
-15	**(+ 5)**	1115	281	327	142	1.52	3.51	7.81	1.97	2.29
-10	**(+14)**	1424	359	417	160	1.62	4.49	8.87	2.23	2.60

TEST CONDITIONS: **@127V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	412	104	121	100	1.27	1.29	4.10	1.03	1.20
-30	**(-22)**	539	136	158	113	1.35	1.69	4.73	1.19	1.39
-25	**(-13)**	683	172	200	126	1.42	2.14	5.44	1.37	1.59
-20	**(- 4)**	860	217	252	139	1.50	2.70	6.22	1.57	1.82
-15	**(+ 5)**	1085	273	318	153	1.59	3.41	7.08	1.78	2.07
-10	**(+14)**	1374	346	403	171	1.70	4.34	8.01	2.02	2.35

TEST CONDITIONS: **@127V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	397	100	116	101	1.28	1.24	3.94	0.99	1.16
-30	**(-22)**	527	133	154	117	1.37	1.65	4.46	1.12	1.31
-25	**(-13)**	668	168	196	132	1.46	2.10	5.05	1.27	1.48
-20	**(- 4)**	837	211	245	147	1.55	2.63	5.71	1.44	1.67
-15	**(+ 5)**	1050	265	308	163	1.65	3.30	6.46	1.63	1.89
-10	**(+14)**	1321	333	387	181	1.77	4.17	7.29	1.84	2.14

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@127V60Hz **Static**

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)**	363	91	106	97	1.27	1.14	3.76	0.95	1.10
-30	**(-22)**	496	125	145	118	1.39	1.56	4.16	1.05	1.22
-25	**(-13)**	637	160	187	136	1.50	2.00	4.64	1.17	1.36
-20	**(- 4)**	799	201	234	154	1.60	2.51	5.20	1.31	1.52
-15	**(+ 5)**	1000	252	293	172	1.71	3.15	5.84	1.47	1.71
-10	**(+14)**	1255	316	368	191	1.84	3.96	6.58	1.66	1.93

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 42º 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 parallet BP+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		