COMPRESSOR DEFINITION

Designation	**EM 2S70CLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513304540**

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 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	ALQUILB / ISO5	
4 Weight (with oil charge)	7.38	[kg] (16.27 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	8EA14C1/QPS2-A4R7MG1/QPS2-A4R7MG1 090	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5TM427KFBYY	
6 Start winding resistance	6.14	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.97	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	14.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.85	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.29	[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]
716	180	210	134	1.72	2.25	5.35	1.35	1.57

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)**	428	108	125	97	1.48	1.34	4.41	1.11	1.29
-30	**(-22)**	581	147	170	110	1.53	1.82	5.29	1.33	1.55
-25	**(-13)**	724	182	212	117	1.59	2.27	6.23	1.57	1.82
-20	**(- 4)**	908	229	266	127	1.66	2.85	7.14	1.80	2.09
-15	**(+ 5)**	1188	299	348	147	1.73	3.74	7.96	2.01	2.33
-10	**(+14)**	1616	407	474	186	1.80	5.10	8.61	2.17	2.52

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)**	416	105	122	96	1.50	1.30	4.30	1.08	1.26
-30	**(-22)**	568	143	166	113	1.56	1.78	4.97	1.25	1.46
-25	**(-13)**	703	177	206	123	1.64	2.21	5.73	1.44	1.68
-20	**(- 4)**	875	220	256	136	1.72	2.75	6.50	1.64	1.91
-15	**(+ 5)**	1137	286	333	158	1.81	3.58	7.22	1.82	2.12
-10	**(+14)**	1541	388	452	197	1.88	4.86	7.79	1.96	2.28

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)**	391	98	114	97	1.50	1.22	4.03	1.02	1.18
-30	**(-22)**	543	137	159	117	1.59	1.70	4.54	1.14	1.33
-25	**(-13)**	673	170	197	130	1.68	2.11	5.19	1.31	1.52
-20	**(- 4)**	835	211	245	144	1.77	2.62	5.88	1.48	1.72
-15	**(+ 5)**	1082	273	317	167	1.86	3.41	6.54	1.65	1.92
-10	**(+14)**	1466	369	430	206	1.94	4.63	7.11	1.79	2.08

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)**	351	88	103	99	1.49	1.10	3.59	0.91	1.05
-30	**(-22)**	506	128	148	121	1.59	1.59	4.01	1.01	1.18
-25	**(-13)**	635	160	186	136	1.70	1.99	4.59	1.16	1.34
-20	**(- 4)**	790	199	231	151	1.80	2.48	5.25	1.32	1.54
-15	**(+ 5)**	1024	258	300	174	1.89	3.22	5.93	1.49	1.74
-10	**(+14)**	1390	350	407	214	1.97	4.39	6.53	1.65	1.91

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		