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	MINERAL / ISO10	
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]
729	184	214	137	1.74	2.29	5.32	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)**	432	109	127	96	1.60	1.35	4.49	1.13	1.31
-30	**(-22)**	560	141	164	107	1.62	1.76	5.24	1.32	1.54
-25	**(-13)**	723	182	212	120	1.67	2.27	6.06	1.53	1.78
-20	**(- 4)**	926	233	271	133	1.74	2.91	6.95	1.75	2.04
-15	**(+ 5)**	1174	296	344	148	1.82	3.69	7.91	1.99	2.32
-10	**(+14)**	1471	371	431	164	1.92	4.64	8.93	2.25	2.62

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)**	404	102	118	98	1.59	1.27	4.10	1.03	1.20
-30	**(-22)**	535	135	157	112	1.63	1.68	4.79	1.21	1.40
-25	**(-13)**	697	176	204	126	1.69	2.19	5.53	1.39	1.62
-20	**(- 4)**	894	225	262	142	1.77	2.81	6.32	1.59	1.85
-15	**(+ 5)**	1132	285	332	158	1.87	3.56	7.15	1.80	2.10
-10	**(+14)**	1416	357	415	176	1.98	4.47	8.03	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)**	371	93	109	99	1.59	1.16	3.76	0.95	1.10
-30	**(-22)**	505	127	148	115	1.64	1.58	4.40	1.11	1.29
-25	**(-13)**	665	168	195	131	1.71	2.09	5.06	1.28	1.48
-20	**(- 4)**	857	216	251	149	1.81	2.69	5.75	1.45	1.69
-15	**(+ 5)**	1085	273	318	168	1.92	3.42	6.47	1.63	1.90
-10	**(+14)**	1355	341	397	188	2.05	4.27	7.22	1.82	2.12

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)**	332	84	97	97	1.59	1.04	3.44	0.87	1.01
-30	**(-22)**	468	118	137	116	1.65	1.47	4.03	1.01	1.18
-25	**(-13)**	627	158	184	135	1.74	1.97	4.62	1.17	1.35
-20	**(- 4)**	813	205	238	156	1.85	2.56	5.23	1.32	1.53
-15	**(+ 5)**	1031	260	302	177	1.98	3.25	5.84	1.47	1.71
-10	**(+14)**	1287	324	377	200	2.12	4.06	6.47	1.63	1.89

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		