COMPRESSOR DEFINITION

Designation	**EM 2P70CLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513304565**

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)	7.1	[kg] (15.65 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	8EA14C1/8EA14E63/8EA14E64/8EA21C1/QPS2-A4R7MG1/QP	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	6.14	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.65	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.57	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.87	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - NOM - 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]
674	170	197	138	2.01	2.12	4.88	1.23	1.43

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)**	447	113	131	90	1.64	1.40	4.95	1.25	1.45
-30	**(-22)**	569	143	167	101	1.70	1.78	5.71	1.44	1.67
-25	**(-13)**	737	186	216	112	1.77	2.31	6.63	1.67	1.94
-20	**(- 4)**	955	241	280	124	1.86	3.00	7.68	1.94	2.25
-15	**(+ 5)**	1228	309	360	139	1.97	3.86	8.83	2.23	2.59
-10	**(+14)**	1561	393	457	155	2.10	4.92	10.06	2.53	2.95

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)**	392	99	115	95	1.64	1.23	4.11	1.04	1.20
-30	**(-22)**	513	129	150	109	1.70	1.61	4.68	1.18	1.37
-25	**(-13)**	673	170	197	125	1.79	2.11	5.39	1.36	1.58
-20	**(- 4)**	878	221	257	142	1.89	2.76	6.19	1.56	1.81
-15	**(+ 5)**	1132	285	332	160	2.02	3.56	7.05	1.78	2.07
-10	**(+14)**	1441	363	422	181	2.17	4.55	7.96	2.01	2.33

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)**	342	86	100	96	1.64	1.07	3.60	0.91	1.05
-30	**(-22)**	463	117	136	113	1.71	1.45	4.11	1.04	1.21
-25	**(-13)**	618	156	181	131	1.81	1.94	4.72	1.19	1.38
-20	**(- 4)**	813	205	238	151	1.93	2.55	5.39	1.36	1.58
-15	**(+ 5)**	1051	265	308	172	2.07	3.31	6.10	1.54	1.79
-10	**(+14)**	1339	337	392	196	2.24	4.22	6.81	1.72	2.00

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)**	297	75	87	94	1.64	0.93	3.16	0.80	0.93
-30	**(-22)**	421	106	123	112	1.71	1.32	3.73	0.94	1.09
-25	**(-13)**	574	145	168	131	1.81	1.80	4.37	1.10	1.28
-20	**(- 4)**	761	192	223	151	1.95	2.39	5.03	1.27	1.47
-15	**(+ 5)**	986	248	289	174	2.11	3.10	5.69	1.43	1.67
-10	**(+14)**	1255	316	368	199	2.29	3.96	6.33	1.60	1.86

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +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 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 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		