COMPRESSOR DEFINITION

Designation	**EM 2P70CLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513304548**

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)	7.14	[kg] (15.74 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	8EA14C1/8EA14E62/8EA14E64/QPS2-A4R7MG1/QPS2-A4R7M	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	6.34	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.35	[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)	3.09	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.52	[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]
698	176	205	142	2.06	2.19	4.91	1.24	1.44

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)**	424	107	124	105	1.72	1.33	4.03	1.02	1.18
-30	**(-22)**	572	144	168	119	1.76	1.79	4.80	1.21	1.41
-25	**(-13)**	748	189	219	132	1.80	2.35	5.67	1.43	1.66
-20	**(- 4)**	958	241	281	145	1.85	3.01	6.59	1.66	1.93
-15	**(+ 5)**	1206	304	353	160	1.91	3.80	7.54	1.90	2.21
-10	**(+14)**	1498	378	439	176	1.98	4.72	8.48	2.14	2.49

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	107	1.72	1.27	3.79	0.95	1.11
-30	**(-22)**	539	136	158	122	1.77	1.69	4.41	1.11	1.29
-25	**(-13)**	705	178	207	137	1.82	2.21	5.14	1.30	1.51
-20	**(- 4)**	905	228	265	152	1.88	2.85	5.94	1.50	1.74
-15	**(+ 5)**	1147	289	336	169	1.95	3.61	6.77	1.71	1.99
-10	**(+14)**	1434	361	420	189	2.03	4.52	7.60	1.92	2.23

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)**	380	96	111	109	1.73	1.19	3.48	0.88	1.02
-30	**(-22)**	503	127	147	126	1.77	1.58	4.00	1.01	1.17
-25	**(-13)**	658	166	193	142	1.83	2.07	4.63	1.17	1.36
-20	**(- 4)**	850	214	249	160	1.90	2.67	5.33	1.34	1.56
-15	**(+ 5)**	1085	273	318	179	1.99	3.42	6.07	1.53	1.78
-10	**(+14)**	1368	345	401	201	2.09	4.32	6.82	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)**	351	88	103	112	1.74	1.10	3.13	0.79	0.92
-30	**(-22)**	462	117	136	130	1.79	1.45	3.56	0.90	1.04
-25	**(-13)**	608	153	178	148	1.85	1.91	4.12	1.04	1.21
-20	**(- 4)**	793	200	232	167	1.93	2.49	4.75	1.20	1.39
-15	**(+ 5)**	1022	258	299	188	2.03	3.22	5.43	1.37	1.59
-10	**(+14)**	1301	328	381	212	2.15	4.11	6.13	1.54	1.80

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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		