COMPRESSOR DEFINITION

Designation	**EM 2P70CLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513304566**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 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	-	198 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm²] (109 psig)	/ ºC - ºF
9.2 Peak (gauge)	9.8	[kgf/cm²] (139 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)	6.87	[kg] (15.15 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/QPS2-A22MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283RFBYY-53	
6 Start winding resistance	21.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	11.41	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	8.32	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.23	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.44	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V60Hz**			**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]
690	174	202	138	1.01	2.17	5.02	1.27	1.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V60Hz **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)**	460	116	135	103	0.92	1.44	4.44	1.12	1.30
-30	**(-22)**	603	152	177	116	0.95	1.89	5.20	1.31	1.52
-25	**(-13)**	784	198	230	131	0.99	2.46	6.01	1.51	1.76
-20	**(- 4)**	1005	253	295	147	1.03	3.16	6.87	1.73	2.01
-15	**(+ 5)**	1271	320	373	164	1.08	4.00	7.80	1.96	2.28
-10	**(+14)**	1585	399	464	181	1.14	5.00	8.80	2.22	2.58

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V60Hz **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)**	396	100	116	100	0.92	1.24	3.97	1.00	1.16
-30	**(-22)**	529	133	155	114	0.96	1.66	4.65	1.17	1.36
-25	**(-13)**	700	176	205	130	1.00	2.20	5.36	1.35	1.57
-20	**(- 4)**	913	230	268	149	1.05	2.87	6.11	1.54	1.79
-15	**(+ 5)**	1171	295	343	169	1.12	3.69	6.92	1.74	2.03
-10	**(+14)**	1477	372	433	190	1.19	4.66	7.78	1.96	2.28

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V60Hz **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)**	354	89	104	99	0.92	1.11	3.60	0.91	1.06
-30	**(-22)**	475	120	139	113	0.95	1.49	4.21	1.06	1.23
-25	**(-13)**	635	160	186	131	1.00	1.99	4.83	1.22	1.42
-20	**(- 4)**	838	211	245	152	1.06	2.63	5.49	1.38	1.61
-15	**(+ 5)**	1086	274	318	175	1.14	3.42	6.19	1.56	1.81
-10	**(+14)**	1383	349	405	199	1.22	4.36	6.93	1.75	2.03

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**

@220V60Hz **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)**	333	84	98	100	0.92	1.04	3.32	0.84	0.97
-30	**(-22)**	441	111	129	115	0.96	1.38	3.86	0.97	1.13
-25	**(-13)**	588	148	172	134	1.01	1.85	4.42	1.11	1.29
-20	**(- 4)**	779	196	228	156	1.08	2.45	4.99	1.26	1.46
-15	**(+ 5)**	1016	256	298	182	1.16	3.20	5.59	1.41	1.64
-10	**(+14)**	1303	328	382	209	1.26	4.11	6.23	1.57	1.83

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		