COMPRESSOR DEFINITION

Designation	**EM 2P70CLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513304547**

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 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)	7.12	[kg] (15.70 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	8EA17C1/8EA17E61/8EA17E64/QPS2-A22MG1/QPS2-A22MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	20.90	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	13.10	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	9.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.69	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.18	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

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]
705	178	207	139	1.13	2.21	5.06	1.28	1.48

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)**	436	110	128	98	1.05	1.36	4.43	1.12	1.30
-30	**(-22)**	562	142	165	111	1.07	1.76	5.10	1.28	1.49
-25	**(-13)**	726	183	213	123	1.10	2.28	5.90	1.49	1.73
-20	**(- 4)**	931	235	273	137	1.13	2.93	6.81	1.72	2.00
-15	**(+ 5)**	1181	298	346	151	1.16	3.72	7.79	1.96	2.28
-10	**(+14)**	1478	373	433	168	1.21	4.66	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)**	407	103	119	103	1.06	1.27	3.97	1.00	1.16
-30	**(-22)**	531	134	156	116	1.08	1.66	4.58	1.15	1.34
-25	**(-13)**	691	174	203	130	1.11	2.17	5.33	1.34	1.56
-20	**(- 4)**	891	224	261	145	1.15	2.80	6.16	1.55	1.81
-15	**(+ 5)**	1133	285	332	161	1.19	3.57	7.05	1.78	2.07
-10	**(+14)**	1420	358	416	178	1.24	4.48	7.97	2.01	2.34

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)**	372	94	109	103	1.06	1.16	3.59	0.90	1.05
-30	**(-22)**	495	125	145	119	1.09	1.55	4.15	1.05	1.22
-25	**(-13)**	653	165	191	135	1.12	2.05	4.82	1.22	1.41
-20	**(- 4)**	848	214	248	152	1.16	2.66	5.58	1.41	1.64
-15	**(+ 5)**	1083	273	317	170	1.21	3.41	6.38	1.61	1.87
-10	**(+14)**	1362	343	399	189	1.27	4.30	7.20	1.81	2.11

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)**	332	84	97	101	1.06	1.04	3.30	0.83	0.97
-30	**(-22)**	456	115	134	120	1.09	1.43	3.79	0.96	1.11
-25	**(-13)**	612	154	179	139	1.13	1.92	4.39	1.11	1.29
-20	**(- 4)**	803	202	235	158	1.18	2.53	5.07	1.28	1.48
-15	**(+ 5)**	1033	260	303	179	1.24	3.25	5.77	1.46	1.69
-10	**(+14)**	1304	329	382	202	1.31	4.12	6.48	1.63	1.90

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		