COMPRESSOR DEFINITION

Designation	**EM 2S70CLC**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513304545**

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	RSCR		
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	MINERAL / ISO10	
4 Weight (with oil charge)	7.3	[kg] (16.09 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	7M220MD3/8EA17C3/8M220MD3/QPS2-A22MD3/QPS2-A22MD	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(315)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	18.33	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	11.72	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	9.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.67	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.97	[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]
727	183	213	136	0.72	2.28	5.33	1.34	1.56

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)**	413	104	121	95	0.58	1.29	4.34	1.09	1.27
-30	**(-22)**	546	138	160	107	0.63	1.71	5.10	1.29	1.50
-25	**(-13)**	701	177	205	118	0.67	2.20	5.97	1.50	1.75
-20	**(- 4)**	891	225	261	129	0.71	2.80	6.93	1.75	2.03
-15	**(+ 5)**	1129	285	331	141	0.75	3.55	8.00	2.02	2.35
-10	**(+14)**	1428	360	418	155	0.81	4.50	9.18	2.31	2.69

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)**	405	102	119	97	0.59	1.27	4.16	1.05	1.22
-30	**(-22)**	533	134	156	111	0.64	1.67	4.75	1.20	1.39
-25	**(-13)**	681	172	200	125	0.69	2.14	5.45	1.37	1.60
-20	**(- 4)**	863	218	253	138	0.74	2.71	6.25	1.57	1.83
-15	**(+ 5)**	1091	275	320	152	0.79	3.43	7.15	1.80	2.10
-10	**(+14)**	1377	347	403	168	0.86	4.34	8.16	2.06	2.39

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)**	394	99	115	95	0.58	1.23	4.15	1.05	1.22
-30	**(-22)**	518	131	152	113	0.64	1.62	4.58	1.15	1.34
-25	**(-13)**	661	166	194	129	0.70	2.07	5.12	1.29	1.50
-20	**(- 4)**	834	210	245	145	0.76	2.62	5.76	1.45	1.69
-15	**(+ 5)**	1052	265	308	162	0.83	3.31	6.51	1.64	1.91
-10	**(+14)**	1326	334	389	180	0.90	4.18	7.36	1.86	2.16

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)**	361	91	106	89	0.56	1.13	4.08	1.03	1.20
-30	**(-22)**	482	121	141	110	0.64	1.51	4.36	1.10	1.28
-25	**(-13)**	619	156	181	130	0.71	1.94	4.75	1.20	1.39
-20	**(- 4)**	785	198	230	150	0.78	2.47	5.24	1.32	1.54
-15	**(+ 5)**	993	250	291	170	0.86	3.13	5.84	1.47	1.71
-10	**(+14)**	1256	316	368	191	0.95	3.96	6.55	1.65	1.92

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		