COMPRESSOR DEFINITION

Designation	**EM 2S70CLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513304541**

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)	8.6	[kg] (18.96 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/QPS2-A22MG1/QPS2-A22MG1 092	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CP4TMC291K61	
6 Start winding resistance	20.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	13.00	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	8.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.83	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.11	[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]
725	183	212	137	1.01	2.28	5.31	1.34	1.56

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V60Hz**		**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)**	414	104	121	92	0.92	1.30	4.49	1.13	1.32
-30	**(-22)**	560	141	164	104	0.93	1.75	5.37	1.35	1.57
-25	**(-13)**	722	182	212	116	0.97	2.27	6.20	1.56	1.82
-20	**(- 4)**	925	233	271	131	1.02	2.91	7.08	1.78	2.08
-15	**(+ 5)**	1193	301	350	147	1.07	3.75	8.09	2.04	2.37
-10	**(+14)**	1549	390	454	166	1.11	4.89	9.32	2.35	2.73

TEST CONDITIONS: **@220V60Hz**		**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)**	401	101	118	96	0.92	1.26	4.18	1.05	1.22
-30	**(-22)**	542	137	159	109	0.94	1.70	4.94	1.25	1.45
-25	**(-13)**	695	175	204	123	0.98	2.18	5.65	1.42	1.66
-20	**(- 4)**	885	223	259	139	1.03	2.78	6.40	1.61	1.88
-15	**(+ 5)**	1135	286	333	156	1.08	3.57	7.27	1.83	2.13
-10	**(+14)**	1469	370	431	175	1.13	4.64	8.34	2.10	2.45

TEST CONDITIONS: **@220V60Hz**		**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)**	377	95	110	97	0.93	1.18	3.86	0.97	1.13
-30	**(-22)**	517	130	151	113	0.95	1.62	4.54	1.14	1.33
-25	**(-13)**	665	168	195	129	0.99	2.09	5.16	1.30	1.51
-20	**(- 4)**	846	213	248	146	1.05	2.66	5.81	1.46	1.70
-15	**(+ 5)**	1083	273	317	165	1.11	3.41	6.56	1.65	1.92
-10	**(+14)**	1401	353	411	186	1.16	4.42	7.52	1.89	2.20

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)**	340	86	100	97	0.94	1.07	3.52	0.89	1.03
-30	**(-22)**	484	122	142	115	0.96	1.52	4.14	1.04	1.21
-25	**(-13)**	632	159	185	134	1.01	1.98	4.70	1.18	1.38
-20	**(- 4)**	809	204	237	154	1.07	2.54	5.28	1.33	1.55
-15	**(+ 5)**	1038	262	304	174	1.14	3.27	5.95	1.50	1.74
-10	**(+14)**	1344	339	394	196	1.19	4.24	6.82	1.72	2.00

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		