COMPRESSOR DEFINITION

Designation	**EM R70CLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513400012**

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)	-	-	-
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	9.50	[cm³] (0.580 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	21.000	
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)	7.1	[kg] (15.65 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	8EA14C1/8EA14E62/8EA14E63/8EA14E64/8EA21C1/QPS2-A4	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM414RFBYY-53	
6 Start winding resistance	6.31	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	4.53	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[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]
645	163	189	134	1.75	2.03	4.83	1.22	1.42

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)**	342	86	100	92	1.61	1.07	3.70	0.93	1.08
-30	**(-22)**	495	125	145	106	1.65	1.55	4.63	1.17	1.36
-25	**(-13)**	665	168	195	121	1.71	2.09	5.52	1.39	1.62
-20	**(- 4)**	858	216	252	135	1.77	2.70	6.39	1.61	1.87
-15	**(+ 5)**	1082	273	317	150	1.85	3.40	7.25	1.83	2.13
-10	**(+14)**	1343	338	393	165	1.94	4.23	8.13	2.05	2.38

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)**	314	79	92	95	1.62	0.98	3.33	0.84	0.98
-30	**(-22)**	460	116	135	109	1.66	1.44	4.19	1.06	1.23
-25	**(-13)**	625	157	183	124	1.72	1.96	5.00	1.26	1.47
-20	**(- 4)**	815	205	239	141	1.80	2.56	5.79	1.46	1.70
-15	**(+ 5)**	1037	261	304	158	1.89	3.26	6.56	1.65	1.92
-10	**(+14)**	1299	327	381	177	2.00	4.10	7.34	1.85	2.15

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)**	291	73	85	97	1.62	0.91	3.02	0.76	0.89
-30	**(-22)**	426	107	125	111	1.66	1.33	3.81	0.96	1.12
-25	**(-13)**	581	146	170	128	1.73	1.82	4.54	1.14	1.33
-20	**(- 4)**	764	192	224	146	1.82	2.40	5.23	1.32	1.53
-15	**(+ 5)**	981	247	287	166	1.93	3.09	5.91	1.49	1.73
-10	**(+14)**	1239	312	363	188	2.06	3.91	6.59	1.66	1.93

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)**	272	69	80	98	1.63	0.85	2.76	0.70	0.81
-30	**(-22)**	391	99	115	113	1.67	1.23	3.47	0.87	1.02
-25	**(-13)**	533	134	156	130	1.74	1.67	4.11	1.04	1.20
-20	**(- 4)**	705	178	207	150	1.84	2.22	4.71	1.19	1.38
-15	**(+ 5)**	913	230	268	173	1.97	2.87	5.29	1.33	1.55
-10	**(+14)**	1164	293	341	198	2.12	3.67	5.86	1.48	1.72

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted parallel BP+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 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		