COMPRESSOR DEFINITION

Designation	**EM YE70CLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513306573**

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)	Static	-	103 to 140 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	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.74	[kg] (17.06 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL 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	8EA14E61/8EA14E63/8EA14E64	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	6.42	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.30	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	14.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.90	[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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
700	176	205	141	1.94	2.20	4.97	1.25	1.46

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@127V60Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	424	107	124	88	1.52	1.33	4.84	1.22	1.42
-30	**(-22)**	557	140	163	100	1.58	1.75	5.53	1.39	1.62
-25	**(-13)**	718	181	210	115	1.66	2.25	6.22	1.57	1.82
-20	**(- 4)**	912	230	267	132	1.75	2.86	6.91	1.74	2.03
-15	**(+ 5)**	1146	289	336	150	1.86	3.61	7.61	1.92	2.23
-10	**(+14)**	1426	359	418	172	2.00	4.50	8.31	2.09	2.44

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@127V60Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	395	99	116	91	1.54	1.24	4.38	1.10	1.28
-30	**(-22)**	522	131	153	105	1.61	1.63	5.02	1.27	1.47
-25	**(-13)**	677	171	198	120	1.69	2.12	5.67	1.43	1.66
-20	**(- 4)**	867	219	254	137	1.79	2.72	6.32	1.59	1.85
-15	**(+ 5)**	1098	277	322	157	1.92	3.46	6.98	1.76	2.04
-10	**(+14)**	1376	347	403	180	2.08	4.34	7.64	1.93	2.24

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@127V60Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	365	92	107	91	1.53	1.14	4.00	1.01	1.17
-30	**(-22)**	484	122	142	105	1.61	1.52	4.59	1.16	1.35
-25	**(-13)**	632	159	185	122	1.70	1.98	5.20	1.31	1.52
-20	**(- 4)**	816	206	239	140	1.81	2.57	5.81	1.46	1.70
-15	**(+ 5)**	1042	263	305	161	1.95	3.28	6.43	1.62	1.88
-10	**(+14)**	1315	331	385	186	2.13	4.15	7.06	1.78	2.07

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@127V60Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	323	81	95	91	1.53	1.01	3.50	0.88	1.03
-30	**(-22)**	432	109	127	107	1.61	1.36	4.06	1.02	1.19
-25	**(-13)**	572	144	168	124	1.71	1.80	4.62	1.17	1.35
-20	**(- 4)**	748	188	219	144	1.84	2.35	5.20	1.31	1.52
-15	**(+ 5)**	966	243	283	167	1.99	3.04	5.79	1.46	1.70
-10	**(+14)**	1233	311	361	193	2.18	3.89	6.39	1.61	1.87

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
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 30° up + 24° to Back		
3.3 PROCESS	8.2 +0.12/-0.08	[mm]	(0.323" +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		