

### COMPRESSOR DEFINITION

Designation	EG AS90HLR
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513701169

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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-CSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static/Fan	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3-	[hp]
2 Displacement	7.15	[cm <sup>3</sup> ] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
3 Lubricant charge	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.63	[kg] (23.43 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516001	
3 Start capacitor	233-280(180)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM 771NFBZZ-53	
6 Start winding resistance	7.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	28.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.92	[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 - TUV - UKCA - UL	

### 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]
937	236	275	173	2.26	5.32	5.42	1.37	1.59

TEST CONDITIONS: @127V60Hz			ASHRAELBP32 Fan		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]
951	240	279	171	2.26	5.40	5.56	1.40	1.63

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))				
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)	546	138	160	109	1.87	3.09	5.01	1.26	1.47
-30 (-22)	727	183	213	128	1.96	4.12	5.74	1.45	1.68
-25 (-13)	949	239	278	146	2.06	5.39	6.55	1.65	1.92
-20 (- 4)	1218	307	357	164	2.16	6.93	7.46	1.88	2.18
-15 (+ 5)	1543	389	452	182	2.28	8.81	8.47	2.13	2.48
-10 (+14)	1931	487	566	200	2.41	11.06	9.59	2.42	2.81

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))				
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)	477	120	140	111	1.87	2.70	4.32	1.09	1.26
-30 (-22)	671	169	197	133	1.98	3.80	5.04	1.27	1.48
-25 (-13)	902	227	264	156	2.11	5.12	5.80	1.46	1.70
-20 (- 4)	1177	296	345	178	2.25	6.70	6.60	1.66	1.93
-15 (+ 5)	1503	379	440	201	2.40	8.58	7.45	1.88	2.18
-10 (+14)	1889	476	553	225	2.58	10.82	8.36	2.11	2.45

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F) )					
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)	382	96	112	105	1.85	2.16	3.64	0.92	1.07
-30	(-22)	587	148	172	133	1.98	3.33	4.40	1.11	1.29
-25	(-13)	825	208	242	161	2.14	4.68	5.13	1.29	1.50
-20	(- 4)	1103	278	323	189	2.32	6.28	5.86	1.48	1.72
-15	(+ 5)	1430	360	419	218	2.52	8.16	6.58	1.66	1.93
-10	(+14)	1812	457	531	248	2.75	10.38	7.30	1.84	2.14

TEST CONDITIONS: @127V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F) )					
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)	260	66	76	91	1.79	1.47	2.88	0.73	0.84
-30	(-22)	474	120	139	125	1.96	2.69	3.70	0.93	1.09
-25	(-13)	718	181	210	160	2.15	4.08	4.45	1.12	1.30
-20	(- 4)	998	252	293	195	2.37	5.68	5.13	1.29	1.50
-15	(+ 5)	1323	333	388	232	2.63	7.55	5.76	1.45	1.69
-10	(+14)	1700	428	498	270	2.92	9.74	6.33	1.60	1.86

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
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	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		