

### COMPRESSOR DEFINITION

Designation	EG AS80HLR
Nominal Voltage/Frequency	220 V 50 Hz
Engineering Number	513701231

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 50	[ 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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static/Fan	198 to 242 V	-
8.2 LBP (43°C Ambient temperature)	Static/Fan	198 to 242 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	1/4+	[hp]
2 Displacement	6.36	[cm <sup>3</sup> ] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
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)	9.7	[kg] (21.38 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	220 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516221	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM739KFBYY-53	
6 Start winding resistance	33.45	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.81	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	11.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.15	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.30	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
650	164	190	132	1.07	3.69	4.94	1.24	1.45

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	383	97	112	87	0.77	2.17	4.41	1.11	1.29
-30 (-22)	506	128	148	99	0.80	2.87	5.17	1.30	1.52
-25 (-13)	659	166	193	110	0.83	3.74	6.04	1.52	1.77
-20 (- 4)	849	214	249	121	0.86	4.83	7.02	1.77	2.06
-15 (+ 5)	1085	273	318	132	0.90	6.20	8.13	2.05	2.38
-10 (+14)	1376	347	403	146	0.94	7.88	9.38	2.36	2.75

TEST CONDITIONS: @220V50Hz		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)	353	89	103	91	0.79	2.00	3.89	0.98	1.14
-30 (-22)	486	122	142	106	0.82	2.75	4.61	1.16	1.35
-25 (-13)	641	162	188	120	0.86	3.64	5.37	1.35	1.57
-20 (- 4)	827	208	242	134	0.90	4.71	6.20	1.56	1.82
-15 (+ 5)	1053	265	309	148	0.95	6.01	7.10	1.79	2.08
-10 (+14)	1327	334	389	163	1.01	7.60	8.08	2.04	2.37

TEST CONDITIONS: @220V50Hz		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)	288	73	84	86	0.78	1.63	3.34	0.84	0.98
-30 (-22)	435	110	127	106	0.83	2.47	4.05	1.02	1.19
-25 (-13)	598	151	175	125	0.88	3.39	4.77	1.20	1.40
-20 (- 4)	785	198	230	144	0.93	4.47	5.49	1.38	1.61
-15 (+ 5)	1005	253	294	163	1.00	5.74	6.21	1.57	1.82
-10 (+14)	1266	319	371	182	1.07	7.26	6.96	1.75	2.04

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	189	48	55	72	0.75	1.07	2.67	0.67	0.78
-30	(-22)	354	89	104	100	0.81	2.01	3.43	0.87	1.01
-25	(-13)	529	133	155	126	0.88	3.01	4.14	1.04	1.21
-20	(- 4)	722	182	212	151	0.96	4.11	4.79	1.21	1.40
-15	(+ 5)	941	237	276	176	1.04	5.37	5.39	1.36	1.58
-10	(+14)	1195	301	350	202	1.14	6.84	5.95	1.50	1.74

### 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	Slanted		
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		
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	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		