

COMPRESSOR DEFINITION

Designation	EG AS80HLR
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513701405

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-Medium Back Pressure (Light Commercial)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	6.36	[cm ³] (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)	10.29	[kg] (22.69 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (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	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM 771JDBZZ-53	
6 Start winding resistance	8.45	[Ωat 25°C (77°F)] +/- 8%
7 Run winding resistance	3.68	[Ωat 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	27.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.60	[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	TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
819	206	240	158	2.20	4.65	5.17	1.30	1.51

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	479	121	140	105	1.96	2.71	4.52	1.14	1.33
-30	(-22)	643	162	188	119	2.01	3.65	5.42	1.37	1.59
-25	(-13)	856	216	251	135	2.09	4.86	6.33	1.59	1.85
-20	(- 4)	1118	282	327	153	2.18	6.36	7.30	1.84	2.14
-15	(+ 5)	1429	360	419	171	2.28	8.16	8.39	2.11	2.46
-10	(+14)	1790	451	524	186	2.37	10.26	9.67	2.44	2.83
-5	(+23)	2201	555	645	198	2.44	12.67	11.19	2.82	3.28
0	(+32)	2663	671	780	203	2.48	15.40	13.01	3.28	3.81

TEST CONDITIONS: @115V60Hz		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)	410	103	120	112	1.98	2.32	3.69	0.93	1.08
-30	(-22)	583	147	171	126	2.03	3.31	4.66	1.17	1.37
-25	(-13)	803	202	235	144	2.12	4.56	5.55	1.40	1.63
-20	(- 4)	1068	269	313	165	2.24	6.08	6.43	1.62	1.88
-15	(+ 5)	1380	348	404	187	2.37	7.88	7.35	1.85	2.15
-10	(+14)	1739	438	510	207	2.50	9.96	8.37	2.11	2.45
-5	(+23)	2144	540	628	225	2.62	12.34	9.56	2.41	2.80
0	(+32)	2597	654	761	237	2.72	15.01	10.97	2.76	3.21

TEST CONDITIONS: @115V60Hz		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)	318	80	93	116	2.00	1.80	2.78	0.70	0.81
-30	(-22)	501	126	147	131	2.06	2.84	3.87	0.98	1.13
-25	(-13)	726	183	213	151	2.16	4.12	4.81	1.21	1.41
-20	(- 4)	994	250	291	175	2.29	5.66	5.66	1.43	1.66
-15	(+ 5)	1305	329	382	201	2.45	7.45	6.47	1.63	1.90
-10	(+14)	1660	418	486	226	2.63	9.51	7.30	1.84	2.14
-5	(+23)	2058	519	603	250	2.80	11.84	8.21	2.07	2.41
0	(+32)	2501	630	733	270	2.96	14.45	9.27	2.34	2.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	205	52	60	117	2.03	1.16	1.72	0.43	0.50
-30	(-22)	395	100	116	133	2.08	2.24	3.00	0.76	0.88
-25	(-13)	625	157	183	155	2.19	3.55	4.05	1.02	1.19
-20	(- 4)	894	225	262	183	2.35	5.09	4.93	1.24	1.44
-15	(+ 5)	1203	303	353	213	2.54	6.87	5.68	1.43	1.67
-10	(+14)	1553	391	455	244	2.75	8.89	6.38	1.61	1.87
-5	(+23)	1943	490	569	274	2.97	11.18	7.09	1.79	2.08
0	(+32)	2374	598	696	302	3.19	13.72	7.85	1.98	2.30

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +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		

Refrig