

COMPRESSOR DEFINITION

Designation	EG AS80HLR
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701173

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[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	198 to 255 V	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	198 to 255 V	198 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 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	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.42	[kg] (22.97 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	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516256/213516493	
3 Start capacitor	88-108(180)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM743KFBYY-53	
6 Start winding resistance	38.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	14.30/13.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.70/1.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.00/1.80	[A] - Measured according to UL 984
11 Approval boards certification	IRAM - VDE	

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]
665	168	195	128	1.07	3.78	5.20	1.31	1.52

TEST CONDITIONS: @220V60Hz			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]
820	207	240	149	0.99	4.66	5.50	1.39	1.61

E - PERFORMANCE - CURVES

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)	324	82	95	84	0.70	1.83	3.85	0.97	1.13
-30 (-22)	488	123	143	103	0.86	2.77	4.71	1.19	1.38
-25 (-13)	667	168	195	122	1.01	3.79	5.49	1.38	1.61
-20 (- 4)	871	219	255	140	1.16	4.95	6.26	1.58	1.83
-15 (+ 5)	1107	279	324	157	1.30	6.32	7.06	1.78	2.07
-10 (+14)	1386	349	406	174	1.44	7.94	7.97	2.01	2.33

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)	262	66	77	75	0.63	1.48	3.48	0.88	1.02
-30 (-22)	419	106	123	97	0.82	2.38	4.26	1.07	1.25
-25 (-13)	595	150	174	120	1.00	3.38	4.94	1.25	1.45
-20 (- 4)	800	202	235	143	1.20	4.56	5.58	1.41	1.64
-15 (+ 5)	1043	263	306	167	1.39	5.95	6.24	1.57	1.83
-10 (+14)	1332	336	390	190	1.58	7.63	6.99	1.76	2.05

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)	201	51	59	69	0.58	1.14	2.94	0.74	0.86	
-30 (-22)	345	87	101	93	0.78	1.96	3.71	0.93	1.09	
-25 (-13)	513	129	150	118	0.99	2.91	4.36	1.10	1.28	
-20 (- 4)	714	180	209	145	1.21	4.06	4.95	1.25	1.45	
-15 (+ 5)	957	241	280	173	1.43	5.46	5.54	1.40	1.62	
-10 (+14)	1250	315	366	201	1.66	7.16	6.18	1.56	1.81	

TEST CONDITIONS: @220V60Hz		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)	401	101	117	98	0.65	2.27	4.08	1.03	1.20	
-30 (-22)	602	152	176	120	0.79	3.41	4.98	1.26	1.46	
-25 (-13)	823	207	241	142	0.93	4.67	5.81	1.46	1.70	
-20 (- 4)	1074	271	315	163	1.06	6.11	6.62	1.67	1.94	
-15 (+ 5)	1366	344	400	183	1.20	7.80	7.47	1.88	2.19	
-10 (+14)	1710	431	501	203	1.33	9.80	8.43	2.12	2.47	

TEST CONDITIONS: @220V60Hz		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)	324	82	95	88	0.59	1.83	3.69	0.93	1.08	
-30 (-22)	517	130	151	113	0.76	2.93	4.51	1.14	1.32	
-25 (-13)	734	185	215	140	0.93	4.17	5.23	1.32	1.53	
-20 (- 4)	988	249	289	167	1.11	5.62	5.91	1.49	1.73	
-15 (+ 5)	1287	324	377	194	1.28	7.35	6.61	1.67	1.94	
-10 (+14)	1644	414	482	222	1.46	9.42	7.39	1.86	2.17	

TEST CONDITIONS: @220V60Hz		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)	248	63	73	81	0.54	1.41	3.10	0.78	0.91	
-30 (-22)	426	107	125	108	0.72	2.41	3.92	0.99	1.15	
-25 (-13)	633	159	185	138	0.92	3.59	4.61	1.16	1.35	
-20 (- 4)	881	222	258	169	1.11	5.01	5.24	1.32	1.53	
-15 (+ 5)	1181	298	346	201	1.32	6.74	5.86	1.48	1.72	
-10 (+14)	1542	389	452	235	1.53	8.84	6.55	1.65	1.92	

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	Slanted		
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	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		