

COMPRESSOR DEFINITION

Designation	EG AS70HLR
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701120

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		
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	198 to 255 V	198 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	198 to 255 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 ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5+	[hp]
2 Displacement	5.56	[cm ³] (0.339 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.000	
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)	10.34	[kg] (22.80 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	213516493	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM739KFBYY-53	
6 Start winding resistance	30.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.35	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	14.40/13.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.56/1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.85/1.65	[A] - Measured according to UL 984
11 Approval boards certification	IRAM - TUV - 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]
552	139	162	113	0.96	3.14	4.91	1.24	1.44

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]
675	170	198	126	0.88	3.84	5.35	1.35	1.57

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)	270	68	79	58	0.51	1.53	4.66	1.17	1.36
-30 (-22)	400	101	117	78	0.68	2.27	5.13	1.29	1.50
-25 (-13)	563	142	165	99	0.85	3.20	5.69	1.43	1.67
-20 (- 4)	756	190	221	120	1.03	4.30	6.33	1.60	1.86
-15 (+ 5)	972	245	285	139	1.19	5.55	7.06	1.78	2.07
-10 (+14)	1209	305	354	154	1.33	6.93	7.88	1.99	2.31

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)	230	58	67	64	0.56	1.30	3.64	0.92	1.07
-30 (-22)	343	86	101	82	0.72	1.94	4.18	1.05	1.22
-25 (-13)	496	125	145	104	0.89	2.81	4.76	1.20	1.39
-20 (- 4)	683	172	200	126	1.08	3.89	5.38	1.36	1.58
-15 (+ 5)	901	227	264	148	1.28	5.14	6.05	1.53	1.77
-10 (+14)	1146	289	336	169	1.47	6.56	6.77	1.71	1.98

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	181	46	53	72	0.61	1.02	2.53	0.64	0.74	
-30 (-22)	274	69	80	87	0.75	1.55	3.20	0.81	0.94	
-25 (-13)	412	104	121	107	0.92	2.34	3.87	0.98	1.14	
-20 (- 4)	592	149	173	130	1.12	3.37	4.55	1.15	1.33	
-15 (+ 5)	808	204	237	154	1.33	4.62	5.22	1.32	1.53	
-10 (+14)	1058	266	310	179	1.56	6.06	5.90	1.49	1.73	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	335	85	98	67	0.47	1.90	4.99	1.26	1.46	
-30 (-22)	497	125	146	90	0.62	2.82	5.51	1.39	1.61	
-25 (-13)	700	176	205	115	0.78	3.97	6.11	1.54	1.79	
-20 (- 4)	938	236	275	139	0.94	5.34	6.80	1.71	1.99	
-15 (+ 5)	1207	304	354	160	1.09	6.89	7.58	1.91	2.22	
-10 (+14)	1501	378	440	178	1.22	8.60	8.45	2.13	2.48	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	286	72	84	73	0.51	1.62	3.91	0.98	1.14	
-30 (-22)	426	107	125	95	0.65	2.42	4.49	1.13	1.32	
-25 (-13)	616	155	180	120	0.81	3.50	5.12	1.29	1.50	
-20 (- 4)	848	214	249	146	0.99	4.83	5.79	1.46	1.70	
-15 (+ 5)	1119	282	328	171	1.17	6.39	6.50	1.64	1.90	
-10 (+14)	1422	358	417	196	1.34	8.15	7.27	1.83	2.13	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V60Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	224	56	66	83	0.56	1.27	2.72	0.68	0.80	
-30 (-22)	340	86	100	101	0.68	1.93	3.44	0.87	1.01	
-25 (-13)	512	129	150	124	0.84	2.91	4.16	1.05	1.22	
-20 (- 4)	735	185	215	150	1.02	4.18	4.88	1.23	1.43	
-15 (+ 5)	1004	253	294	178	1.22	5.73	5.60	1.41	1.64	
-10 (+14)	1313	331	385	207	1.43	7.52	6.33	1.59	1.85	

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	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-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		