

### COMPRESSOR DEFINITION

Designation	EG AS70HLR
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701300

### 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 <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	1/5+	[hp]
2 Displacement	5.56	[cm <sup>3</sup> ] (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)	9.97	[kg] (21.98 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	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516531	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM739KFBYY-53	
6 Start winding resistance	24.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	12.65/12.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.47/1.65	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.76/1.91	[A] - Measured according to UL 984
11 Approval boards certification	CE - IRAM - TUV - UKCA	

### 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]
553	139	162	113	0.95	3.14	4.92	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]
692	174	203	129	0.87	3.93	5.36	1.35	1.57

### 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)	317	80	93	80	0.94	1.79	3.99	1.00	1.17
-30 (-22)	441	111	129	89	0.96	2.50	4.97	1.25	1.46
-25 (-13)	586	148	172	98	0.97	3.33	6.00	1.51	1.76
-20 (- 4)	756	191	222	107	0.99	4.30	7.05	1.78	2.07
-15 (+ 5)	952	240	279	117	1.01	5.43	8.13	2.05	2.38
-10 (+14)	1175	296	344	127	1.03	6.73	9.22	2.32	2.70

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)	286	72	84	82	0.95	1.62	3.48	0.88	1.02
-30 (-22)	406	102	119	94	0.97	2.30	4.34	1.09	1.27
-25 (-13)	549	138	161	105	0.98	3.12	5.25	1.32	1.54
-20 (- 4)	717	181	210	116	1.00	4.08	6.20	1.56	1.82
-15 (+ 5)	911	230	267	127	1.02	5.20	7.17	1.81	2.10
-10 (+14)	1134	286	332	139	1.05	6.50	8.17	2.06	2.39

### E - PERFORMANCE - CURVES

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)	249	63	73	77	0.95	1.41	3.22	0.81	0.94	
-30 (-22)	367	92	108	93	0.97	2.08	3.93	0.99	1.15	
-25 (-13)	508	128	149	108	0.99	2.88	4.69	1.18	1.37	
-20 (- 4)	674	170	198	123	1.02	3.84	5.50	1.39	1.61	
-15 (+ 5)	868	219	254	137	1.05	4.95	6.34	1.60	1.86	
-10 (+14)	1091	275	320	152	1.08	6.25	7.20	1.81	2.11	

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)	213	54	62	66	0.93	1.21	3.25	0.82	0.95	
-30 (-22)	330	83	97	87	0.96	1.87	3.77	0.95	1.11	
-25 (-13)	470	118	138	108	0.99	2.67	4.36	1.10	1.28	
-20 (- 4)	636	160	186	127	1.03	3.62	4.99	1.26	1.46	
-15 (+ 5)	829	209	243	146	1.07	4.73	5.66	1.43	1.66	
-10 (+14)	1053	265	308	165	1.12	6.03	6.36	1.60	1.86	

TEST CONDITIONS: @220V60Hz		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)	441	111	129	87	0.78	2.49	5.05	1.27	1.48	
-30 (-22)	579	146	170	101	0.81	3.28	5.76	1.45	1.69	
-25 (-13)	757	191	222	115	0.85	4.30	6.64	1.67	1.95	
-20 (- 4)	982	247	288	128	0.89	5.59	7.70	1.94	2.26	
-15 (+ 5)	1257	317	368	141	0.94	7.18	8.94	2.25	2.62	
-10 (+14)	1589	401	466	153	0.98	9.11	10.37	2.61	3.04	

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)	358	90	105	85	0.78	2.02	4.24	1.07	1.24	
-30 (-22)	498	126	146	102	0.82	2.82	4.91	1.24	1.44	
-25 (-13)	678	171	199	119	0.87	3.85	5.68	1.43	1.67	
-20 (- 4)	901	227	264	137	0.92	5.13	6.58	1.66	1.93	
-15 (+ 5)	1175	296	344	155	0.98	6.71	7.59	1.91	2.23	
-10 (+14)	1504	379	441	172	1.05	8.61	8.75	2.20	2.56	

### E - PERFORMANCE - CURVES

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)	279	70	82	76	0.76	1.58	3.69	0.93	1.08
-30	(-22)	423	107	124	97	0.80	2.40	4.36	1.10	1.28
-25	(-13)	605	152	177	119	0.86	3.43	5.08	1.28	1.49
-20	(- 4)	829	209	243	141	0.93	4.72	5.86	1.48	1.72
-15	(+ 5)	1103	278	323	164	1.01	6.29	6.70	1.69	1.96
-10	(+14)	1429	360	419	187	1.10	8.19	7.62	1.92	2.23

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)	205	52	60	63	0.73	1.16	3.25	0.82	0.95
-30	(-22)	355	89	104	88	0.78	2.01	3.97	1.00	1.16
-25	(-13)	540	136	158	115	0.85	3.07	4.68	1.18	1.37
-20	(- 4)	768	194	225	143	0.94	4.37	5.38	1.36	1.58
-15	(+ 5)	1042	263	305	171	1.04	5.95	6.10	1.54	1.79
-10	(+14)	1369	345	401	201	1.15	7.84	6.83	1.72	2.00

### 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		