

### COMPRESSOR DEFINITION

Designation	EG AS70HLP
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701233

### 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)	10.34	[kg] (22.80 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	PTC	
2.1 Starting device	QPS2-A22MG1/QPS2-C22MD3J6/QPS2-C22MD3J8	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	23.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	16.45	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[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]
545	137	160	112	0.91	3.10	4.88	1.23	1.43

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]
679	171	199	128	0.86	3.86	5.29	1.33	1.55

### 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)	320	81	94	74	0.83	1.81	4.31	1.09	1.26
-30 (-22)	427	108	125	84	0.84	2.42	5.14	1.30	1.51
-25 (-13)	556	140	163	92	0.86	3.16	6.05	1.53	1.77
-20 (- 4)	718	181	210	101	0.88	4.09	7.10	1.79	2.08
-15 (+ 5)	924	233	271	110	0.90	5.28	8.34	2.10	2.44
-10 (+14)	1186	299	348	120	0.93	6.80	9.82	2.48	2.88

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)	296	75	87	78	0.83	1.68	3.79	0.95	1.11
-30 (-22)	412	104	121	90	0.85	2.33	4.58	1.16	1.34
-25 (-13)	541	136	159	102	0.88	3.07	5.39	1.36	1.58
-20 (- 4)	697	176	204	112	0.91	3.97	6.26	1.58	1.83
-15 (+ 5)	890	224	261	123	0.94	5.08	7.24	1.82	2.12
-10 (+14)	1132	285	332	134	0.97	6.49	8.40	2.12	2.46

### 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)	233	59	68	73	0.83	1.32	3.14	0.79	0.92	
-30 (-22)	364	92	107	90	0.86	2.07	4.00	1.01	1.17	
-25 (-13)	503	127	147	106	0.89	2.86	4.79	1.21	1.40	
-20 (- 4)	661	167	194	120	0.93	3.76	5.57	1.40	1.63	
-15 (+ 5)	849	214	249	134	0.97	4.85	6.39	1.61	1.87	
-10 (+14)	1079	272	316	148	1.01	6.18	7.31	1.84	2.14	

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)	129	32	38	60	0.80	0.73	2.23	0.56	0.65	
-30 (-22)	284	72	83	83	0.84	1.61	3.23	0.81	0.95	
-25 (-13)	440	111	129	105	0.89	2.50	4.10	1.03	1.20	
-20 (- 4)	608	153	178	124	0.94	3.46	4.88	1.23	1.43	
-15 (+ 5)	799	201	234	143	0.99	4.56	5.64	1.42	1.65	
-10 (+14)	1024	258	300	160	1.05	5.87	6.42	1.62	1.88	

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)	405	102	119	83	0.72	2.29	4.85	1.22	1.42	
-30 (-22)	557	140	163	98	0.76	3.16	5.70	1.44	1.67	
-25 (-13)	743	187	218	112	0.80	4.22	6.64	1.67	1.94	
-20 (- 4)	966	243	283	126	0.85	5.50	7.68	1.94	2.25	
-15 (+ 5)	1229	310	360	139	0.89	7.01	8.86	2.23	2.60	
-10 (+14)	1535	387	450	151	0.93	8.80	10.19	2.57	2.98	

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)	347	87	102	83	0.72	1.96	4.18	1.05	1.22	
-30 (-22)	503	127	147	101	0.77	2.85	4.98	1.25	1.46	
-25 (-13)	691	174	203	119	0.82	3.92	5.81	1.46	1.70	
-20 (- 4)	915	231	268	137	0.88	5.21	6.69	1.69	1.96	
-15 (+ 5)	1179	297	345	154	0.95	6.73	7.64	1.93	2.24	
-10 (+14)	1485	374	435	170	1.01	8.51	8.69	2.19	2.55	

### 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)	271	68	79	77	0.70	1.53	3.52	0.89	1.03
-30	(-22)	428	108	125	99	0.76	2.42	4.32	1.09	1.27
-25	(-13)	616	155	180	121	0.83	3.50	5.10	1.29	1.50
-20	(- 4)	839	212	246	143	0.90	4.78	5.88	1.48	1.72
-15	(+ 5)	1101	277	323	165	0.99	6.29	6.67	1.68	1.95
-10	(+14)	1405	354	412	187	1.08	8.05	7.50	1.89	2.20

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)	178	45	52	65	0.67	1.01	2.74	0.69	0.80
-30	(-22)	333	84	98	91	0.74	1.89	3.61	0.91	1.06
-25	(-13)	519	131	152	117	0.82	2.94	4.40	1.11	1.29
-20	(- 4)	739	186	216	145	0.91	4.20	5.13	1.29	1.50
-15	(+ 5)	996	251	292	172	1.01	5.69	5.81	1.47	1.70
-10	(+14)	1295	326	379	200	1.13	7.42	6.49	1.63	1.90

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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	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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		