

COMPRESSOR DEFINITION

Designation	EG ZS70HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701080

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	RSCR		
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 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	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 / ISO7	
4 Weight (with oil charge)	11.25	[kg] (24.80 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	TSD	
2.1 Starting device	TSD-220V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(380)/5(380)	[µF(VAC minimum)]
5 Motor protection	BT74-105	
6 Start winding resistance	18.38	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.31	[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	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]
560	141	164	92	0.46	3.18	6.06	1.53	1.78

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]
695	175	204	111	0.53	3.95	6.24	1.57	1.83

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	60	0.30	1.53	4.53	1.14	1.33
-30	(-22)	400	101	117	73	0.37	2.27	5.41	1.36	1.59
-25	(-13)	563	142	165	88	0.44	3.20	6.36	1.60	1.86
-20	(- 4)	756	190	221	103	0.51	4.30	7.36	1.85	2.16
-15	(+ 5)	972	245	285	117	0.58	5.55	8.41	2.12	2.46
-10	(+14)	1209	305	354	128	0.64	6.93	9.49	2.39	2.78

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	53	0.27	1.30	4.37	1.10	1.28
-30	(-22)	343	86	101	69	0.34	1.94	5.03	1.27	1.47
-25	(-13)	496	125	145	86	0.43	2.81	5.74	1.45	1.68
-20	(- 4)	683	172	200	105	0.52	3.89	6.51	1.64	1.91
-15	(+ 5)	901	227	264	123	0.61	5.14	7.32	1.84	2.14
-10	(+14)	1146	289	336	141	0.70	6.56	8.17	2.06	2.39

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)	181	46	53	48	0.24	1.02	3.81	0.96	1.12	
-30 (-22)	274	69	80	64	0.32	1.55	4.37	1.10	1.28	
-25 (-13)	412	104	121	83	0.41	2.34	4.98	1.26	1.46	
-20 (- 4)	592	149	173	104	0.52	3.37	5.65	1.42	1.66	
-15 (+ 5)	808	204	237	126	0.63	4.62	6.37	1.60	1.87	
-10 (+14)	1058	266	310	148	0.75	6.06	7.12	1.79	2.09	

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)	335	85	98	72	0.34	1.90	4.66	1.17	1.37	
-30 (-22)	497	125	146	89	0.41	2.82	5.58	1.41	1.63	
-25 (-13)	700	176	205	106	0.50	3.97	6.55	1.65	1.92	
-20 (- 4)	938	236	275	124	0.59	5.34	7.58	1.91	2.22	
-15 (+ 5)	1207	304	354	140	0.67	6.89	8.65	2.18	2.54	
-10 (+14)	1501	378	440	155	0.74	8.60	9.77	2.46	2.86	

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)	286	72	84	64	0.31	1.62	4.50	1.13	1.32	
-30 (-22)	426	107	125	83	0.39	2.42	5.18	1.30	1.52	
-25 (-13)	616	155	180	104	0.49	3.50	5.91	1.49	1.73	
-20 (- 4)	848	214	249	126	0.60	4.83	6.70	1.69	1.96	
-15 (+ 5)	1119	282	328	148	0.71	6.39	7.53	1.90	2.21	
-10 (+14)	1422	358	417	170	0.81	8.15	8.41	2.12	2.46	

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)	224	56	66	57	0.28	1.27	3.91	0.99	1.15	
-30 (-22)	340	86	100	77	0.37	1.93	4.49	1.13	1.32	
-25 (-13)	512	129	150	100	0.47	2.91	5.13	1.29	1.50	
-20 (- 4)	735	185	215	126	0.59	4.18	5.82	1.47	1.70	
-15 (+ 5)	1004	253	294	152	0.73	5.73	6.55	1.65	1.92	
-10 (+14)	1313	331	385	179	0.86	7.52	7.33	1.85	2.15	

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		