

COMPRESSOR DEFINITION

Designation	EG ZS80HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701124

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/Fan	198 to 255 V	198 to 255 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	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	6.36	[cm ³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
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)	11.28	[kg] (24.87 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	PTC	
2.1 Starting device	7M220MD2/7M220MD3/8EA17C3/8EA17E61/8EA17E62/8EA17	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	22.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.60/6.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.15/1.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.50	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - IRAM - OFT - 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]
651	164	191	111	0.59	3.70	5.85	1.47	1.71

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]
800	202	234	132	0.62	4.55	6.05	1.52	1.77

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	73	0.38	1.83	4.45	1.12	1.30
-30 (-22)	488	123	143	89	0.45	2.77	5.45	1.37	1.60
-25 (-13)	667	168	195	105	0.54	3.79	6.35	1.60	1.86
-20 (- 4)	871	219	255	121	0.62	4.96	7.24	1.82	2.12
-15 (+ 5)	1107	279	324	136	0.69	6.32	8.17	2.06	2.39
-10 (+14)	1386	349	406	150	0.77	7.94	9.21	2.32	2.70

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	65	0.34	1.48	4.02	1.01	1.18
-30 (-22)	419	106	123	84	0.44	2.38	4.93	1.24	1.44
-25 (-13)	596	150	175	104	0.54	3.38	5.72	1.44	1.67
-20 (- 4)	801	202	235	124	0.64	4.56	6.46	1.63	1.89
-15 (+ 5)	1044	263	306	144	0.74	5.96	7.23	1.82	2.12
-10 (+14)	1332	336	390	165	0.85	7.63	8.08	2.04	2.37

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	60	0.31	1.14	3.39	0.85	0.99	
-30 (-22)	345	87	101	80	0.42	1.96	4.28	1.08	1.26	
-25 (-13)	513	129	150	102	0.53	2.91	5.04	1.27	1.48	
-20 (- 4)	714	180	209	125	0.64	4.06	5.73	1.44	1.68	
-15 (+ 5)	957	241	280	149	0.76	5.46	6.41	1.61	1.88	
-10 (+14)	1250	315	366	174	0.88	7.16	7.16	1.80	2.10	

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	87	0.41	2.27	4.60	1.16	1.35	
-30 (-22)	602	152	176	107	0.49	3.41	5.62	1.42	1.65	
-25 (-13)	823	207	241	126	0.58	4.67	6.55	1.65	1.92	
-20 (- 4)	1074	271	315	145	0.67	6.11	7.46	1.88	2.19	
-15 (+ 5)	1366	344	400	163	0.76	7.80	8.42	2.12	2.47	
-10 (+14)	1710	431	501	180	0.84	9.80	9.50	2.39	2.78	

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	78	0.37	1.83	4.16	1.05	1.22	
-30 (-22)	517	130	151	101	0.48	2.93	5.08	1.28	1.49	
-25 (-13)	734	185	215	124	0.59	4.17	5.89	1.49	1.73	
-20 (- 4)	988	249	289	148	0.70	5.62	6.66	1.68	1.95	
-15 (+ 5)	1287	324	377	173	0.81	7.35	7.45	1.88	2.18	
-10 (+14)	1644	414	482	197	0.92	9.42	8.33	2.10	2.44	

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	71	0.33	1.41	3.50	0.88	1.02	
-30 (-22)	426	107	125	96	0.45	2.41	4.41	1.11	1.29	
-25 (-13)	633	159	185	122	0.57	3.59	5.19	1.31	1.52	
-20 (- 4)	881	222	258	150	0.70	5.01	5.90	1.49	1.73	
-15 (+ 5)	1181	298	346	178	0.83	6.74	6.61	1.66	1.94	
-10 (+14)	1542	389	452	208	0.96	8.84	7.38	1.86	2.16	

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	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		