

COMPRESSOR DEFINITION

Designation	EG ZS80HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701417

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
8.2 LBP (43°C Ambient temperature)	Static	-	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	1/4	[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 / ISO10	
4 Weight (with oil charge)	10.78	[kg] (23.77 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	8EA17C3/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MD3/QPS3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-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		

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	112	0.59	3.70	5.80	1.46	1.70

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	133	0.62	4.55	6.00	1.51	1.76

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	74	0.38	1.83	4.41	1.11	1.29
-30 (-22)	488	123	143	90	0.45	2.77	5.39	1.36	1.58
-25 (-13)	667	168	195	106	0.54	3.79	6.29	1.59	1.84
-20 (- 4)	871	219	255	122	0.62	4.96	7.17	1.81	2.10
-15 (+ 5)	1107	279	324	137	0.69	6.32	8.10	2.04	2.37
-10 (+14)	1386	349	406	152	0.77	7.94	9.13	2.30	2.68

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	66	0.34	1.48	3.99	1.01	1.17
-30 (-22)	419	106	123	85	0.44	2.38	4.88	1.23	1.43
-25 (-13)	596	150	175	105	0.54	3.38	5.67	1.43	1.66
-20 (- 4)	801	202	235	125	0.64	4.56	6.40	1.61	1.88
-15 (+ 5)	1044	263	306	146	0.74	5.96	7.16	1.81	2.10
-10 (+14)	1332	336	390	166	0.85	7.63	8.01	2.02	2.35

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	3.36	0.85	0.99	
-30 (-22)	345	87	101	81	0.42	1.96	4.25	1.07	1.24	
-25 (-13)	513	129	150	103	0.53	2.91	4.99	1.26	1.46	
-20 (- 4)	714	180	209	126	0.64	4.06	5.67	1.43	1.66	
-15 (+ 5)	957	241	280	150	0.76	5.46	6.35	1.60	1.86	
-10 (+14)	1250	315	366	176	0.88	7.16	7.09	1.79	2.08	

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	88	0.41	2.27	4.56	1.15	1.34	
-30 (-22)	602	152	176	107	0.49	3.41	5.57	1.40	1.63	
-25 (-13)	823	207	241	127	0.58	4.67	6.50	1.64	1.90	
-20 (- 4)	1074	271	315	146	0.67	6.11	7.40	1.87	2.17	
-15 (+ 5)	1366	344	400	164	0.76	7.80	8.36	2.11	2.45	
-10 (+14)	1710	431	501	181	0.84	9.80	9.43	2.38	2.76	

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	4.13	1.04	1.21	
-30 (-22)	517	130	151	101	0.48	2.93	5.04	1.27	1.48	
-25 (-13)	734	185	215	125	0.59	4.17	5.85	1.47	1.71	
-20 (- 4)	988	249	289	149	0.70	5.62	6.61	1.67	1.94	
-15 (+ 5)	1287	324	377	174	0.81	7.35	7.39	1.86	2.17	
-10 (+14)	1644	414	482	198	0.92	9.42	8.27	2.08	2.42	

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	72	0.33	1.41	3.47	0.88	1.02	
-30 (-22)	426	107	125	97	0.45	2.41	4.38	1.10	1.28	
-25 (-13)	633	159	185	123	0.57	3.59	5.15	1.30	1.51	
-20 (- 4)	881	222	258	151	0.70	5.01	5.86	1.48	1.72	
-15 (+ 5)	1181	298	346	180	0.83	6.74	6.56	1.65	1.92	
-10 (+14)	1542	389	452	210	0.96	8.84	7.32	1.85	2.15	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	Yes		
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	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	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		