

### COMPRESSOR DEFINITION

Designation	EG ZS60HLC
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513701015

### 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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5.09	[cm <sup>3</sup> ] (0.311 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	12.800	
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)	10.71	[kg] (23.61 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	7M220MD3/8EA17C3/8M220MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	18.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	5.70/5.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.90/0.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.10/0.95	[A] - Measured according to UL 984
11 Approval boards certification	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]
500	126	147	87	0.43	2.84	5.77	1.45	1.69

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]
610	154	179	102	0.47	3.47	5.96	1.50	1.75

### 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)	258	65	76	57	0.29	1.46	4.51	1.14	1.32
-30	(-22)	347	87	102	68	0.34	1.97	5.16	1.30	1.51
-25	(-13)	493	124	144	82	0.41	2.80	6.01	1.51	1.76
-20	(- 4)	684	172	200	97	0.48	3.89	7.03	1.77	2.06
-15	(+ 5)	910	229	267	111	0.55	5.19	8.18	2.06	2.40
-10	(+14)	1161	293	340	124	0.61	6.65	9.43	2.38	2.76

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)	204	52	60	51	0.26	1.16	3.95	0.99	1.16
-30	(-22)	293	74	86	64	0.32	1.66	4.62	1.17	1.35
-25	(-13)	437	110	128	81	0.40	2.48	5.42	1.36	1.59
-20	(- 4)	625	157	183	99	0.49	3.55	6.29	1.58	1.84
-15	(+ 5)	846	213	248	118	0.58	4.83	7.20	1.81	2.11
-10	(+14)	1092	275	320	135	0.67	6.26	8.12	2.05	2.38

### 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)	127	32	37	46	0.24	0.72	2.83	0.71	0.83	
-30 (-22)	219	55	64	60	0.30	1.24	3.71	0.94	1.09	
-25 (-13)	364	92	107	79	0.39	2.07	4.62	1.16	1.35	
-20 (- 4)	552	139	162	100	0.49	3.14	5.51	1.39	1.62	
-15 (+ 5)	773	195	226	122	0.60	4.41	6.36	1.60	1.86	
-10 (+14)	1016	256	298	143	0.71	5.82	7.13	1.80	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)	314	79	92	68	0.31	1.78	4.66	1.17	1.36	
-30 (-22)	423	107	124	81	0.37	2.40	5.33	1.34	1.56	
-25 (-13)	600	151	176	97	0.45	3.41	6.21	1.56	1.82	
-20 (- 4)	833	210	244	114	0.52	4.74	7.26	1.83	2.13	
-15 (+ 5)	1109	280	325	131	0.60	6.33	8.45	2.13	2.48	
-10 (+14)	1417	357	415	146	0.66	8.12	9.74	2.45	2.85	

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)	249	63	73	60	0.28	1.41	4.06	1.02	1.19	
-30 (-22)	358	90	105	76	0.35	2.03	4.77	1.20	1.40	
-25 (-13)	533	134	156	95	0.44	3.02	5.59	1.41	1.64	
-20 (- 4)	762	192	223	117	0.53	4.33	6.49	1.64	1.90	
-15 (+ 5)	1032	260	303	139	0.63	5.89	7.43	1.87	2.18	
-10 (+14)	1332	336	390	160	0.72	7.63	8.39	2.11	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)	155	39	45	54	0.26	0.88	2.92	0.74	0.86	
-30 (-22)	267	67	78	71	0.33	1.51	3.84	0.97	1.12	
-25 (-13)	444	112	130	93	0.42	2.52	4.77	1.20	1.40	
-20 (- 4)	673	170	197	118	0.53	3.83	5.69	1.43	1.67	
-15 (+ 5)	942	237	276	144	0.65	5.38	6.57	1.66	1.92	
-10 (+14)	1239	312	363	169	0.77	7.10	7.36	1.85	2.16	

### 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		