

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 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	1/5	[hp]
2 Displacement	5.09	[cm ³] (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 / ISO10	
4 Weight (with oil charge)	10.71	[kg] (23.61 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/QPS2-A22MD3/QPS2-A22MD3 091	
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	CE - UKCA - 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	88	0.43	2.84	5.70	1.44	1.67	

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	103	0.47	3.47	5.90	1.49	1.73	

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	58	0.29	1.46	4.46	1.12	1.31
-30	(-22)	347	87	102	69	0.34	1.97	5.10	1.29	1.49
-25	(-13)	493	124	144	83	0.41	2.80	5.95	1.50	1.74
-20	(- 4)	684	172	200	98	0.48	3.89	6.96	1.75	2.04
-15	(+ 5)	910	229	267	112	0.55	5.19	8.10	2.04	2.37
-10	(+14)	1161	293	340	125	0.61	6.65	9.33	2.35	2.73

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	3.90	0.98	1.14
-30	(-22)	293	74	86	65	0.32	1.66	4.57	1.15	1.34
-25	(-13)	437	110	128	81	0.40	2.48	5.35	1.35	1.57
-20	(- 4)	625	157	183	100	0.49	3.55	6.22	1.57	1.82
-15	(+ 5)	846	213	248	119	0.58	4.83	7.12	1.79	2.09
-10	(+14)	1092	275	320	137	0.67	6.26	8.03	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)	127	32	37	46	0.24	0.72	2.80	0.71	0.82	
-30 (-22)	219	55	64	61	0.30	1.24	3.67	0.92	1.08	
-25 (-13)	364	92	107	79	0.39	2.07	4.56	1.15	1.34	
-20 (- 4)	552	139	162	101	0.49	3.14	5.45	1.37	1.60	
-15 (+ 5)	773	195	226	123	0.60	4.41	6.29	1.59	1.84	
-10 (+14)	1016	256	298	145	0.71	5.82	7.05	1.78	2.07	

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	69	0.31	1.78	4.62	1.16	1.35	
-30 (-22)	423	107	124	82	0.37	2.40	5.28	1.33	1.55	
-25 (-13)	600	151	176	98	0.45	3.41	6.15	1.55	1.80	
-20 (- 4)	833	210	244	115	0.52	4.74	7.19	1.81	2.11	
-15 (+ 5)	1109	280	325	133	0.60	6.33	8.37	2.11	2.45	
-10 (+14)	1417	357	415	147	0.66	8.12	9.65	2.43	2.83	

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	61	0.28	1.41	4.02	1.01	1.18	
-30 (-22)	358	90	105	76	0.35	2.03	4.72	1.19	1.38	
-25 (-13)	533	134	156	96	0.44	3.02	5.53	1.39	1.62	
-20 (- 4)	762	192	223	118	0.53	4.33	6.43	1.62	1.88	
-15 (+ 5)	1032	260	303	140	0.63	5.89	7.37	1.86	2.16	
-10 (+14)	1332	336	390	161	0.72	7.63	8.31	2.09	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)	155	39	45	55	0.26	0.88	2.89	0.73	0.85	
-30 (-22)	267	67	78	72	0.33	1.51	3.80	0.96	1.11	
-25 (-13)	444	112	130	94	0.42	2.52	4.72	1.19	1.38	
-20 (- 4)	673	170	197	119	0.53	3.83	5.64	1.42	1.65	
-15 (+ 5)	942	237	276	145	0.65	5.38	6.51	1.64	1.91	
-10 (+14)	1239	312	363	171	0.77	7.10	7.29	1.84	2.14	

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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		