

COMPRESSOR DEFINITION

Designation	EM ZS55CLC
Nominal Voltage/Frequency	115-127 V 60 Hz / 110 V 50 Hz
Engineering Number	513301792

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	115-127 / 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	98 to 127 V	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	98 to 127 V	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	0.13	[hp]
2 Displacement	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60Hz / 110 V 50 Hz 1~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD2-115V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM319NFBYY-53	
6 Start winding resistance	7.58	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.90	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.00	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
669	169	196	108	1.00	2.10	6.18	1.56	1.81

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	382	96	112	70	0.67	1.20	5.46	1.38	1.60	
-30 (-22)	515	130	151	81	0.77	1.61	6.38	1.61	1.87	
-25 (-13)	662	167	194	90	0.85	2.08	7.34	1.85	2.15	
-20 (- 4)	834	210	244	100	0.93	2.62	8.35	2.10	2.45	
-15 (+ 5)	1042	263	305	110	1.01	3.28	9.43	2.38	2.76	
-10 (+14)	1297	327	380	122	1.10	4.09	10.61	2.67	3.11	

TEST CONDITIONS: @115V60Hz		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)	371	94	109	72	0.69	1.16	5.13	1.29	1.50	
-30 (-22)	505	127	148	85	0.81	1.58	5.89	1.48	1.73	
-25 (-13)	649	163	190	98	0.91	2.04	6.66	1.68	1.95	
-20 (- 4)	815	205	239	110	1.01	2.56	7.45	1.88	2.18	
-15 (+ 5)	1014	256	297	122	1.11	3.19	8.29	2.09	2.43	
-10 (+14)	1257	317	368	136	1.23	3.96	9.21	2.32	2.70	

TEST CONDITIONS: @115V60Hz		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)	327	82	96	73	0.69	1.02	4.50	1.13	1.32	
-30 (-22)	462	116	135	88	0.83	1.45	5.19	1.31	1.52	
-25 (-13)	605	152	177	103	0.96	1.90	5.86	1.48	1.72	
-20 (- 4)	766	193	225	118	1.08	2.41	6.53	1.65	1.91	
-15 (+ 5)	958	241	281	133	1.20	3.02	7.22	1.82	2.12	
-10 (+14)	1190	300	349	149	1.35	3.76	7.95	2.00	2.33	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	251	63	74	71	0.68	0.79	3.54	0.89	1.04
-30	(-22)	389	98	114	90	0.84	1.22	4.26	1.07	1.25
-25	(-13)	531	134	156	107	0.99	1.67	4.92	1.24	1.44
-20	(- 4)	690	174	202	124	1.14	2.17	5.56	1.40	1.63
-15	(+ 5)	875	221	256	142	1.29	2.76	6.18	1.56	1.81
-10	(+14)	1098	277	322	161	1.46	3.47	6.82	1.72	2.00

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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		