

COMPRESSOR DEFINITION

Designation	ES C36CBT
Nominal Voltage/Frequency	115-127 V 60 Hz / 110 V 50 Hz
Engineering Number	518100001

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 120 V	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	98 to 120 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	1/5	[hp]
2 Displacement	5.68	[cm ³] (0.347 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.400	
3 Lubricant charge	115	[ml] (3.89 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	5.3	[kg] (11.68 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	115-127 V 60Hz / 110 V 50 Hz 1~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	5SP14X 115V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(180)	[µF(VAC minimum)]
5 Motor protection	4TM276KFBYY	
6 Start winding resistance	11.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	4.90/4.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.59/0.59	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	0.75/0.75	[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]
386	97	113	64		1.21	5.99	1.51	1.76

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)	223	56	65	42	0.38	0.70	5.25	1.32	1.54
-30	(-22)	306	77	90	49	0.43	0.96	6.27	1.58	1.84
-25	(-13)	405	102	119	55	0.49	1.27	7.32	1.84	2.15
-20	(- 4)	524	132	153	62	0.55	1.65	8.46	2.13	2.48
-15	(+ 5)	665	168	195	69	0.60	2.09	9.71	2.45	2.84
-10	(+14)	832	210	244	75	0.66	2.63	11.12	2.80	3.26

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)	197	50	58	43	0.38	0.62	4.62	1.17	1.36
-30	(-22)	281	71	82	51	0.44	0.88	5.56	1.40	1.63
-25	(-13)	380	96	111	59	0.51	1.19	6.48	1.63	1.90
-20	(- 4)	497	125	146	67	0.58	1.56	7.42	1.87	2.17
-15	(+ 5)	635	160	186	75	0.66	2.00	8.42	2.12	2.47
-10	(+14)	797	201	234	84	0.73	2.51	9.51	2.40	2.79

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)	166	42	49	41	0.37	0.52	4.03	1.01	1.18
-30	(-22)	251	63	74	51	0.45	0.79	4.93	1.24	1.45
-25	(-13)	349	88	102	61	0.53	1.09	5.77	1.45	1.69
-20	(- 4)	463	117	136	71	0.62	1.46	6.56	1.65	1.92
-15	(+ 5)	597	150	175	81	0.71	1.88	7.36	1.85	2.16
-10	(+14)	754	190	221	92	0.81	2.38	8.19	2.06	2.40

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard ES/FMS		
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	Slanted parallel to Base Plate		
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 parallel to Base Plate		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Slanted 90° up		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		