COMPRESSOR DEFINITION

Designation	**ES C40CBT**
Nominal Voltage/Frequency	**115-127 V 60 Hz / 110 V 50 Hz**
Engineering Number	**518100008**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	98 to 127 V	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	98 to 127 V	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	6.23	[cm³] (0.380 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	18.000	
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/cm²] (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/5SP21X 115V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	8(180)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	7.76	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	8.45	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	6.30/6.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.97/0.97	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.06/1.06	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@60V60Hz**			**GEALBP** **Static**		Evaporating temperature (Condensing temperature	**-23.3°C (-9.94°F)** **40.5°C (104.9°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]
479	121	140	68	0.62	1.50	7.10	1.79	2.08

E - PERFORMANCE - CURVES

TEST CONDITIONS: **GEA** (Condensing temperature **35ºC (+95ºF))**
@60V60Hz **Static**

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)**	256	65	75	48	0.46	0.00	5.37	1.35	1.57
-30	**(-22)**	345	87	101	55	0.52	0.00	6.25	1.57	1.83
-25	**(-13)**	453	114	133	63	0.58	0.00	7.24	1.82	2.12
-20	**(- 4)**	584	147	171	70	0.65	0.00	8.34	2.10	2.44
-15	**(+ 5)**	739	186	216	77	0.71	0.00	9.56	2.41	2.80
-10	**(+14)**	921	232	270	84	0.78	0.00	10.92	2.75	3.20

TEST CONDITIONS: **GEA** (Condensing temperature **45ºC (+113ºF))**
@60V60Hz **Static**

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)**	234	59	69	48	0.46	0.00	4.87	1.23	1.43
-30	**(-22)**	322	81	94	57	0.53	0.00	5.65	1.42	1.66
-25	**(-13)**	429	108	126	66	0.61	0.00	6.49	1.64	1.90
-20	**(- 4)**	557	140	163	75	0.69	0.00	7.40	1.86	2.17
-15	**(+ 5)**	708	179	208	84	0.78	0.00	8.38	2.11	2.45
-10	**(+14)**	886	223	260	94	0.87	0.00	9.43	2.38	2.76

TEST CONDITIONS: **GEA** (Condensing temperature **55ºC (+131ºF))**
@60V60Hz **Static**

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)**	208	52	61	48	0.46	0.00	4.36	1.10	1.28
-30	**(-22)**	294	74	86	58	0.54	0.00	5.10	1.29	1.49
-25	**(-13)**	398	100	117	68	0.63	0.00	5.84	1.47	1.71
-20	**(- 4)**	523	132	153	79	0.73	0.00	6.60	1.66	1.93
-15	**(+ 5)**	670	169	196	91	0.84	0.00	7.37	1.86	2.16
-10	**(+14)**	843	212	247	103	0.95	0.00	8.18	2.06	2.40

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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 90° up		
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		
3.3.2 Shape	Slanted parallel to Base Plate		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		