

COMPRESSOR DEFINITION

Designation	EM B46CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513300430

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 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)	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak (gauge)	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	8.23	[cm ³] (0.502 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	18.200	
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)	8.1	[kg] (17.86 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD-220V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(300)/5(300)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@50V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	278	70	82	47	0.24	0.87	5.92	1.49	1.73	
-30 (-22)	378	95	111	55	0.27	1.18	6.83	1.72	2.00	
-25 (-13)	500	126	146	64	0.31	1.57	7.81	1.97	2.29	
-20 (- 4)	645	163	189	73	0.35	2.03	8.85	2.23	2.59	
-15 (+ 5)	814	205	238	82	0.39	2.56	9.95	2.51	2.92	
-10 (+14)	1007	254	295	91	0.42	3.18	11.11	2.80	3.25	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@50V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	258	65	76	48	0.25	0.81	5.35	1.35	1.57	
-30 (-22)	352	89	103	57	0.28	1.10	6.12	1.54	1.79	
-25 (-13)	470	118	138	67	0.32	1.47	6.94	1.75	2.03	
-20 (- 4)	611	154	179	78	0.37	1.92	7.80	1.96	2.28	
-15 (+ 5)	776	196	227	89	0.42	2.44	8.69	2.19	2.55	
-10 (+14)	966	243	283	100	0.47	3.05	9.62	2.42	2.82	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@50V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	225	57	66	47	0.24	0.70	4.80	1.21	1.41	
-30 (-22)	314	79	92	58	0.28	0.98	5.48	1.38	1.61	
-25 (-13)	426	107	125	69	0.32	1.34	6.19	1.56	1.81	
-20 (- 4)	563	142	165	81	0.38	1.77	6.91	1.74	2.02	
-15 (+ 5)	724	182	212	95	0.44	2.28	7.64	1.93	2.24	
-10 (+14)	911	229	267	108	0.50	2.87	8.39	2.11	2.46	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@50V50Hz		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	199	50	58	46	0.24	0.62	4.25	1.07	1.25	
-30 (-22)	281	71	82	58	0.28	0.88	4.89	1.23	1.43	
-25 (-13)	388	98	114	70	0.33	1.22	5.53	1.39	1.62	
-20 (- 4)	520	131	152	85	0.39	1.64	6.16	1.55	1.80	
-15 (+ 5)	677	171	198	100	0.46	2.13	6.78	1.71	1.99	
-10 (+14)	860	217	252	116	0.53	2.72	7.40	1.86	2.17	

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.2 +0.05/+0.05	[mm]	(0.244" +0.002"/+0.002")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		