

COMPRESSOR DEFINITION

Designation	BP 1046Z
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	223AA47

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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	RSIR		
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 (32°C Ambient temperature)	Static	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 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/cm²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	2.84	[cm³] (0.173 cu.in)
2.1 Bore [mm]	17.100	
2.2 Stroke [mm]	12.380	
3 Lubricant charge	200	[ml] (6.76 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.05	[kg] (15.54 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)		
2 Starting device type	PTC		
2.1 Starting device	V230		
3 Start capacitor	-	[μF(VAC minimum)]	
4 Run capacitor	-	[μF(VAC minimum)]	
5 Motor protection	T0550/26		
6 Start winding resistance	39.30	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	28.00	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50 Hz)	2.70	[A] - Measured according to UL 984	
9 FLA - Full load amperage L/MBP (50 Hz)	0.50	[A]	
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]	
11 Approval boards certification	IMQ		

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]
214	54	63	68	0.50	1.22	3.17	0.80	0.93

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz				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)	128	32	37	51	0.45	0.72	2.49	0.63	0.73
-30	(-22)	182	46	53	57	0.47	1.03	3.17	0.80	0.93
-25	(-13)	248	63	73	64	0.48	1.41	3.88	0.98	1.14
-20	(- 4)	330	83	97	71	0.50	1.88	4.63	1.17	1.36
-15	(+ 5)	428	108	125	79	0.52	2.44	5.44	1.37	1.60
-10	(+14)	546	138	160	86	0.54	3.13	6.32	1.59	1.85

TEST CONDITIONS:				ASHRAE32		(Condensing temperature 45°C (+113°F))				
@220V50Hz				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)	103	26	30	50	0.45	0.58	2.09	0.53	0.61
-30	(-22)	156	39	46	57	0.47	0.88	2.76	0.69	0.81
-25	(-13)	220	56	65	64	0.48	1.25	3.43	0.86	1.00
-20	(- 4)	299	75	88	73	0.50	1.70	4.11	1.03	1.20
-15	(+ 5)	394	99	116	82	0.53	2.25	4.81	1.21	1.41
-10	(+14)	509	128	149	91	0.56	2.91	5.56	1.40	1.63

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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)	75	19	22	46	0.44	0.42	1.62	0.41	0.47
-30	(-22)	125	32	37	54	0.46	0.71	2.30	0.58	0.67
-25	(-13)	187	47	55	63	0.48	1.06	2.95	0.74	0.86
-20	(- 4)	262	66	77	73	0.50	1.49	3.58	0.90	1.05
-15	(+ 5)	354	89	104	84	0.53	2.02	4.21	1.06	1.23
-10	(+14)	463	117	136	95	0.57	2.66	4.84	1.22	1.42

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)	47	12	14	42	0.42	0.27	1.13	0.29	0.33
-30	(-22)	95	24	28	51	0.44	0.54	1.85	0.47	0.54
-25	(-13)	153	39	45	61	0.47	0.87	2.51	0.63	0.74
-20	(- 4)	225	57	66	72	0.50	1.28	3.12	0.79	0.91
-15	(+ 5)	312	79	91	85	0.53	1.78	3.69	0.93	1.08
-10	(+14)	416	105	122	98	0.58	2.38	4.24	1.07	1.24

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		