

COMPRESSOR DEFINITION

Designation	NB 5132Z
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	293CG70

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	RSIR		
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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	5.01	[cm ³] (0.306 cu.in)
2.1 Bore [mm]	21.996	
2.2 Stroke [mm]	13.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	9.45	[kg] (20.83 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 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-0028	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0537/G9	
6 Start winding resistance	10.37	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	20.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.75	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAEHBP46 Static		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
1478	372	433	231	2.60	9.58	6.40	1.61	1.88

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			ASHRAE46 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]
-15	(+5)	714	180	209	123	1.89	3.86	5.80	1.46	1.70
-10	(+14)	907	229	266	139	1.99	4.92	6.53	1.65	1.91
-5	(+23)	1142	288	335	155	2.10	6.22	7.36	1.85	2.16
0	(+32)	1420	358	416	172	2.21	7.77	8.26	2.08	2.42
+5	(+41)	1740	439	510	189	2.33	9.57	9.21	2.32	2.70
+10	(+50)	2103	530	616	206	2.45	11.64	10.20	2.57	2.99

TEST CONDITIONS: @100V50Hz			ASHRAE46 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]
-15	(+5)	623	157	183	129	1.92	3.64	4.83	1.22	1.41
-10	(+14)	796	201	233	147	2.03	4.67	5.42	1.36	1.59
-5	(+23)	1009	254	296	166	2.15	5.94	6.09	1.53	1.78
0	(+32)	1260	318	369	185	2.28	7.45	6.81	1.72	2.00
+5	(+41)	1550	391	454	205	2.42	9.23	7.58	1.91	2.22
+10	(+50)	1879	473	551	225	2.58	11.26	8.36	2.11	2.45

TEST CONDITIONS: @100V50Hz			ASHRAE46 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]
-15	(+5)	528	133	155	136	1.96	3.36	3.88	0.98	1.14
-10	(+14)	681	172	200	156	2.06	4.36	4.37	1.10	1.28
-5	(+23)	870	219	255	176	2.19	5.59	4.93	1.24	1.44
0	(+32)	1094	276	321	198	2.34	7.07	5.52	1.39	1.62
+5	(+41)	1353	341	396	221	2.52	8.80	6.14	1.55	1.80
+10	(+50)	1647	415	483	244	2.71	10.79	6.74	1.70	1.98

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+5)	835	210	245	151	2.19	4.52	5.52	1.39	1.62
-10	(+14)	1061	267	311	170	2.31	5.76	6.25	1.57	1.83
-5	(+23)	1336	337	391	189	2.43	7.28	7.08	1.78	2.07
0	(+32)	1661	419	487	208	2.57	9.09	7.98	2.01	2.34
+5	(+41)	2036	513	597	228	2.70	11.20	8.93	2.25	2.62
+10	(+50)	2460	620	721	248	2.84	13.62	9.92	2.50	2.91

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+5)	729	184	214	155	2.23	4.26	4.71	1.19	1.38
-10	(+14)	932	235	273	176	2.35	5.46	5.30	1.34	1.55
-5	(+23)	1180	297	346	197	2.49	6.95	5.97	1.51	1.75
0	(+32)	1474	372	432	220	2.64	8.72	6.70	1.69	1.96
+5	(+41)	1814	457	532	243	2.81	10.80	7.47	1.88	2.19
+10	(+50)	2199	554	644	267	2.99	13.18	8.24	2.08	2.41

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+5)	617	156	181	159	2.27	3.93	3.88	0.98	1.14
-10	(+14)	797	201	234	182	2.39	5.10	4.38	1.10	1.28
-5	(+23)	1018	257	298	206	2.54	6.54	4.94	1.24	1.45
0	(+32)	1280	323	375	232	2.72	8.27	5.53	1.39	1.62
+5	(+41)	1583	399	464	258	2.92	10.29	6.14	1.55	1.80
+10	(+50)	1927	486	565	286	3.14	12.62	6.73	1.70	1.97

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +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		