

### COMPRESSOR DEFINITION

Designation	<b>NB 5132Z</b>
Nominal Voltage/Frequency	<b>208-230 V 60 Hz</b>
Engineering Number	<b>293CD94</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	208-230 / 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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	5.01	[cm <sup>3</sup> ] (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)	10	[kg] (22.05 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-42	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0057/G9	
6 Start winding resistance	24.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[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)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			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]
1580	398	463	242	1.62	10.24	6.53	1.65	1.91

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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)	798	201	234	147	1.38	4.31	5.42	1.37	1.59
-10	(+14)	993	250	291	160	1.39	5.39	6.19	1.56	1.81
-5	(+23)	1235	311	362	175	1.42	6.73	7.07	1.78	2.07
0	(+32)	1525	384	447	190	1.46	8.34	8.03	2.02	2.35
+5	(+41)	1861	469	545	206	1.50	10.24	9.04	2.28	2.65
+10	(+50)	2245	566	658	223	1.56	12.43	10.08	2.54	2.95

TEST CONDITIONS: @200V50Hz			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)	687	173	201	149	1.35	4.02	4.61	1.16	1.35
-10	(+14)	859	216	252	165	1.38	5.04	5.21	1.31	1.53
-5	(+23)	1076	271	315	182	1.43	6.33	5.91	1.49	1.73
0	(+32)	1338	337	392	200	1.49	7.92	6.68	1.68	1.96
+5	(+41)	1645	415	482	219	1.55	9.79	7.51	1.89	2.20
+10	(+50)	1997	503	585	239	1.62	11.97	8.37	2.11	2.45

TEST CONDITIONS: @200V50Hz			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)	589	148	173	149	1.33	3.75	3.95	1.00	1.16
-10	(+14)	738	186	216	168	1.38	4.72	4.40	1.11	1.29
-5	(+23)	930	234	273	188	1.44	5.98	4.94	1.25	1.45
0	(+32)	1165	294	342	209	1.51	7.53	5.56	1.40	1.63
+5	(+41)	1443	364	423	232	1.59	9.38	6.23	1.57	1.83
+10	(+50)	1764	445	517	255	1.67	11.55	6.92	1.74	2.03

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	933	235	273	172	1.61	5.05	5.42	1.37	1.59
-10	(+14)	1161	293	340	188	1.63	6.30	6.19	1.56	1.81
-5	(+23)	1445	364	423	204	1.66	7.87	7.07	1.78	2.07
0	(+32)	1784	449	523	222	1.71	9.76	8.03	2.02	2.35
+5	(+41)	2177	549	638	241	1.76	11.98	9.04	2.28	2.65
+10	(+50)	2626	662	770	261	1.83	14.54	10.07	2.54	2.95

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	804	203	235	174	1.58	4.70	4.62	1.16	1.35
-10	(+14)	1005	253	294	193	1.62	5.89	5.21	1.31	1.53
-5	(+23)	1259	317	369	213	1.67	7.41	5.91	1.49	1.73
0	(+32)	1565	395	459	234	1.74	9.26	6.68	1.68	1.96
+5	(+41)	1925	485	564	256	1.81	11.46	7.51	1.89	2.20
+10	(+50)	2337	589	685	279	1.89	14.00	8.36	2.11	2.45

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	689	174	202	174	1.56	4.39	3.96	1.00	1.16
-10	(+14)	864	218	253	197	1.62	5.52	4.39	1.11	1.29
-5	(+23)	1088	274	319	220	1.69	6.99	4.94	1.24	1.45
0	(+32)	1363	344	399	245	1.77	8.81	5.56	1.40	1.63
+5	(+41)	1688	425	495	271	1.86	10.98	6.23	1.57	1.83
+10	(+50)	2063	520	605	298	1.95	13.51	6.93	1.75	2.03

### 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		