

### COMPRESSOR DEFINITION

Designation	<b>NB 5125Z</b>
Nominal Voltage/Frequency	<b>115 V 60 Hz</b>
Engineering Number	<b>293AG70</b>

### 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 <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	1/8	[hp]
2 Displacement	3.78	[cm <sup>3</sup> ] (0.231 cu.in)
2.1 Bore [mm]	19.089	
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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0046	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0432/G9	
6 Start winding resistance	16.77	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	14.00	[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)	2.10	[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]
1027	259	301	162	1.85	6.66	6.34	1.60	1.86

### 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)	488	123	143	98	1.41	2.64	4.96	1.25	1.45
-10	(+14)	628	158	184	108	1.46	3.41	5.83	1.47	1.71
-5	(+23)	802	202	235	117	1.52	4.37	6.85	1.73	2.01
0	(+32)	1009	254	296	126	1.57	5.52	8.02	2.02	2.35
+5	(+41)	1248	315	366	134	1.62	6.87	9.31	2.35	2.73
+10	(+50)	1521	383	446	142	1.68	8.42	10.70	2.70	3.14

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)	415	105	122	99	1.39	2.42	4.22	1.06	1.24
-10	(+14)	541	136	158	110	1.47	3.17	4.92	1.24	1.44
-5	(+23)	696	175	204	121	1.54	4.10	5.72	1.44	1.68
0	(+32)	881	222	258	133	1.62	5.21	6.62	1.67	1.94
+5	(+41)	1095	276	321	144	1.69	6.52	7.59	1.91	2.22
+10	(+50)	1339	337	392	156	1.77	8.02	8.61	2.17	2.52

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)	340	86	100	99	1.37	2.17	3.43	0.86	1.00
-10	(+14)	450	113	132	112	1.47	2.88	4.02	1.01	1.18
-5	(+23)	586	148	172	126	1.57	3.76	4.66	1.18	1.37
0	(+32)	748	188	219	140	1.66	4.83	5.35	1.35	1.57
+5	(+41)	936	236	274	155	1.76	6.08	6.05	1.52	1.77
+10	(+50)	1150	290	337	170	1.85	7.53	6.75	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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	571	144	167	115	1.70	3.09	4.96	1.25	1.45	
-10 (+14)	735	185	215	126	1.76	3.99	5.83	1.47	1.71	
-5 (+23)	938	236	275	137	1.83	5.11	6.86	1.73	2.01	
0 (+32)	1180	297	346	147	1.90	6.46	8.03	2.02	2.35	
+5 (+41)	1461	368	428	157	1.96	8.04	9.32	2.35	2.73	
+10 (+50)	1780	449	522	166	2.03	9.86	10.71	2.70	3.14	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	486	122	142	115	1.68	2.84	4.23	1.07	1.24	
-10 (+14)	633	159	185	129	1.77	3.71	4.92	1.24	1.44	
-5 (+23)	814	205	239	142	1.86	4.79	5.72	1.44	1.68	
0 (+32)	1030	260	302	155	1.95	6.10	6.62	1.67	1.94	
+5 (+41)	1281	323	375	169	2.04	7.63	7.58	1.91	2.22	
+10 (+50)	1567	395	459	183	2.13	9.39	8.58	2.16	2.52	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	398	100	117	116	1.66	2.54	3.43	0.86	1.00	
-10 (+14)	526	133	154	131	1.77	3.37	4.01	1.01	1.18	
-5 (+23)	685	173	201	147	1.89	4.40	4.66	1.17	1.37	
0 (+32)	875	220	256	164	2.00	5.65	5.35	1.35	1.57	
+5 (+41)	1095	276	321	181	2.12	7.12	6.05	1.53	1.77	
+10 (+50)	1345	339	394	199	2.23	8.81	6.75	1.70	1.98	

### 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		