

### COMPRESSOR DEFINITION

Designation	<b>NB T1118Y</b>
Nominal Voltage/Frequency	<b>100 V 50 Hz 60 Hz</b>
Engineering Number	<b>812BQ42</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100 / 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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	90 to 110 V	-
8.2 LBP (43°C Ambient temperature)	Static	90 to 110 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	14.28	[cm <sup>3</sup> ] (0.871 cu.in)
2.1 Bore [mm]	30.157	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.7	[kg] (23.59 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V115	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0764/07	
6 Start winding resistance	8.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.40	[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		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°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]
590	149	173	155	2.52	2.25	3.82	0.96	1.12

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		CECOMAF 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)	443	112	130	109	2.28	1.42	4.05	1.02	1.19
-30	(-22)	587	148	172	124	2.36	1.89	4.75	1.20	1.39
-25	(-13)	761	192	223	139	2.44	2.44	5.49	1.38	1.61
-20	(- 4)	971	245	285	155	2.53	3.12	6.27	1.58	1.84
-15	(+ 5)	1223	308	358	172	2.64	3.93	7.11	1.79	2.08
-10	(+14)	1524	384	446	190	2.77	4.91	7.98	2.01	2.34

TEST CONDITIONS: @100V50Hz		CECOMAF 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]
-35	(-31)	384	97	112	113	2.30	1.33	3.39	0.85	0.99
-30	(-22)	516	130	151	130	2.39	1.80	3.97	1.00	1.16
-25	(-13)	673	170	197	147	2.48	2.35	4.58	1.15	1.34
-20	(- 4)	861	217	252	165	2.59	3.00	5.22	1.31	1.53
-15	(+ 5)	1085	273	318	184	2.72	3.79	5.88	1.48	1.72
-10	(+14)	1352	341	396	205	2.87	4.73	6.57	1.66	1.93

TEST CONDITIONS: @100V50Hz		CECOMAF 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]
-35	(-31)	325	82	95	115	2.31	1.24	2.83	0.71	0.83
-30	(-22)	448	113	131	134	2.41	1.71	3.32	0.84	0.97
-25	(-13)	590	149	173	154	2.52	2.25	3.82	0.96	1.12
-20	(- 4)	757	191	222	175	2.66	2.89	4.32	1.09	1.27
-15	(+ 5)	956	241	280	198	2.81	3.66	4.84	1.22	1.42
-10	(+14)	1191	300	349	222	3.00	4.57	5.37	1.35	1.57

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		CECOMAF 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)	254	64	74	112	2.29	1.07	2.29	0.58	0.67
-30	(-22)	370	93	108	135	2.41	1.56	2.70	0.68	0.79
-25	(-13)	498	126	146	159	2.55	2.10	3.11	0.78	0.91
-20	(- 4)	647	163	190	185	2.71	2.74	3.51	0.88	1.03
-15	(+ 5)	821	207	241	211	2.91	3.49	3.90	0.98	1.14
-10	(+14)	1027	259	301	240	3.14	4.38	4.28	1.08	1.25

### 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		