

### 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			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]
783	197	229	162	2.56	2.46	4.83	1.22	1.42

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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)	463	117	136	112	2.28	1.45	4.12	1.04	1.21
-30	(-22)	611	154	179	127	2.36	1.92	4.81	1.21	1.41
-25	(-13)	789	199	231	142	2.44	2.47	5.55	1.40	1.63
-20	(- 4)	1002	253	294	158	2.54	3.15	6.34	1.60	1.86
-15	(+ 5)	1259	317	369	175	2.64	3.96	7.18	1.81	2.10
-10	(+14)	1566	395	459	194	2.77	4.94	8.07	2.03	2.37

TEST CONDITIONS: @100V50Hz		ASHRAE32 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)	436	110	128	116	2.30	1.37	3.76	0.95	1.10
-30	(-22)	584	147	171	133	2.39	1.83	4.39	1.11	1.29
-25	(-13)	758	191	222	150	2.48	2.38	5.05	1.27	1.48
-20	(- 4)	966	243	283	168	2.59	3.03	5.75	1.45	1.68
-15	(+ 5)	1214	306	356	187	2.72	3.82	6.47	1.63	1.90
-10	(+14)	1510	380	442	208	2.88	4.76	7.23	1.82	2.12

TEST CONDITIONS: @100V50Hz		ASHRAE32 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)	406	102	119	118	2.31	1.27	3.45	0.87	1.01
-30	(-22)	556	140	163	137	2.41	1.74	4.03	1.02	1.18
-25	(-13)	728	184	213	157	2.52	2.29	4.63	1.17	1.36
-20	(- 4)	932	235	273	178	2.66	2.93	5.23	1.32	1.53
-15	(+ 5)	1173	296	344	201	2.82	3.69	5.85	1.47	1.71
-10	(+14)	1460	368	428	225	3.00	4.61	6.48	1.63	1.90

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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)	356	90	104	115	2.29	1.12	3.11	0.78	0.91
-30	(-22)	509	128	149	138	2.41	1.60	3.66	0.92	1.07
-25	(-13)	683	172	200	162	2.55	2.14	4.19	1.06	1.23
-20	(- 4)	884	223	259	188	2.72	2.78	4.72	1.19	1.38
-15	(+ 5)	1121	282	328	214	2.92	3.53	5.24	1.32	1.53
-10	(+14)	1400	353	410	243	3.15	4.42	5.76	1.45	1.69

### 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		