

COMPRESSOR DEFINITION

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

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 ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	14.28	[cm ³] (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 ²]

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 (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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V60Hz			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]
696	175	204	176	2.63	2.65	3.96	1.00	1.16

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	523	132	153	122	2.29	1.67	4.28	1.08	1.25
-30	(-22)	702	177	206	140	2.40	2.25	5.00	1.26	1.46
-25	(-13)	912	230	267	161	2.54	2.93	5.69	1.43	1.67
-20	(- 4)	1162	293	341	183	2.70	3.73	6.37	1.61	1.87
-15	(+ 5)	1458	367	427	207	2.89	4.69	7.05	1.78	2.07
-10	(+14)	1807	455	529	233	3.11	5.83	7.75	1.95	2.27

TEST CONDITIONS: @100V60Hz		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)	442	111	129	124	2.29	1.53	3.57	0.90	1.05
-30	(-22)	608	153	178	145	2.42	2.11	4.19	1.06	1.23
-25	(-13)	801	202	235	168	2.58	2.79	4.77	1.20	1.40
-20	(- 4)	1028	259	301	192	2.77	3.59	5.35	1.35	1.57
-15	(+ 5)	1297	327	380	219	2.99	4.53	5.91	1.49	1.73
-10	(+14)	1615	407	473	248	3.24	5.65	6.49	1.64	1.90

TEST CONDITIONS: @100V60Hz		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)	369	93	108	124	2.28	1.40	2.96	0.75	0.87
-30	(-22)	521	131	153	149	2.44	1.98	3.47	0.88	1.02
-25	(-13)	695	175	204	175	2.63	2.65	3.95	1.00	1.16
-20	(- 4)	900	227	264	204	2.86	3.44	4.42	1.11	1.29
-15	(+ 5)	1142	288	334	235	3.12	4.37	4.87	1.23	1.43
-10	(+14)	1427	360	418	268	3.42	5.48	5.33	1.34	1.56

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	279	70	82	122	2.28	1.18	2.30	0.58	0.67
-30	(-22)	416	105	122	152	2.48	1.75	2.71	0.68	0.79
-25	(-13)	571	144	167	184	2.71	2.41	3.09	0.78	0.90
-20	(- 4)	752	190	220	219	2.98	3.19	3.44	0.87	1.01
-15	(+ 5)	965	243	283	256	3.30	4.11	3.79	0.95	1.11
-10	(+14)	1218	307	357	295	3.65	5.20	4.13	1.04	1.21

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		