

COMPRESSOR DEFINITION

Designation	NB 2112GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	994BG70

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
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)	25.7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	3.78	[cm ³] (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)	10.6	[kg] (23.37 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (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-0030	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0645/G9	
6 Start winding resistance	8.33	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.90	[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: @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]
460	116	135	132	1.80	3.12	3.48	0.88	1.02

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]
-40	(-40)	196	50	58	85	1.36	1.32	2.31	0.58	0.68
-35	(-31)	308	78	90	97	1.46	2.08	3.18	0.80	0.93
-30	(-22)	424	107	124	111	1.56	2.87	3.87	0.97	1.13
-25	(-13)	554	140	162	125	1.66	3.76	4.46	1.12	1.31
-20	(- 4)	705	178	207	139	1.76	4.81	5.05	1.27	1.48
-15	(+ 5)	885	223	259	154	1.87	6.08	5.72	1.44	1.68
-10	(+14)	1102	278	323	168	1.97	7.63	6.57	1.66	1.93

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]
-40	(-40)	123	31	36	73	1.31	0.83	1.70	0.43	0.50
-35	(-31)	238	60	70	89	1.43	1.60	2.65	0.67	0.78
-30	(-22)	356	90	104	106	1.54	2.40	3.37	0.85	0.99
-25	(-13)	484	122	142	123	1.66	3.28	3.94	0.99	1.15
-20	(- 4)	631	159	185	142	1.78	4.30	4.46	1.12	1.31
-15	(+ 5)	805	203	236	160	1.91	5.52	5.02	1.26	1.47
-10	(+14)	1013	255	297	178	2.05	6.99	5.70	1.44	1.67

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]
-40	(-40)	64	16	19	62	1.26	0.43	1.10	0.28	0.32
-35	(-31)	179	45	53	81	1.39	1.21	2.13	0.54	0.62
-30	(-22)	295	74	86	102	1.52	1.99	2.88	0.73	0.84
-25	(-13)	419	106	123	123	1.66	2.83	3.44	0.87	1.01
-20	(- 4)	559	141	164	145	1.81	3.80	3.89	0.98	1.14
-15	(+ 5)	723	182	212	166	1.97	4.95	4.34	1.09	1.27
-10	(+14)	919	232	269	188	2.14	6.33	4.86	1.22	1.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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]
-40 (-40)	230	58	67	93	1.57	1.54	2.46	0.62	0.72	
-35 (-31)	360	91	106	111	1.71	2.43	3.25	0.82	0.95	
-30 (-22)	497	125	146	129	1.83	3.36	3.89	0.98	1.14	
-25 (-13)	649	163	190	146	1.95	4.41	4.46	1.12	1.31	
-20 (- 4)	825	208	242	163	2.07	5.64	5.05	1.27	1.48	
-15 (+ 5)	1036	261	303	180	2.18	7.12	5.73	1.44	1.68	
-10 (+14)	1289	325	378	196	2.30	8.92	6.59	1.66	1.93	

TEST CONDITIONS: @100V60Hz		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]
-40 (-40)	144	36	42	81	1.49	0.96	1.79	0.45	0.52	
-35 (-31)	278	70	82	102	1.65	1.87	2.69	0.68	0.79	
-30 (-22)	416	105	122	123	1.80	2.81	3.38	0.85	0.99	
-25 (-13)	566	143	166	144	1.94	3.84	3.94	0.99	1.15	
-20 (- 4)	738	186	216	166	2.09	5.03	4.45	1.12	1.30	
-15 (+ 5)	941	237	276	187	2.24	6.46	5.01	1.26	1.47	
-10 (+14)	1184	298	347	209	2.40	8.18	5.69	1.43	1.67	

TEST CONDITIONS: @100V60Hz		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]
-40 (-40)	74	19	22	71	1.44	0.50	1.11	0.28	0.33	
-35 (-31)	209	53	61	95	1.61	1.41	2.13	0.54	0.62	
-30 (-22)	345	87	101	119	1.78	2.32	2.88	0.73	0.84	
-25 (-13)	490	123	144	144	1.94	3.31	3.44	0.87	1.01	
-20 (- 4)	654	165	192	169	2.11	4.45	3.90	0.98	1.14	
-15 (+ 5)	846	213	248	194	2.30	5.79	4.35	1.10	1.27	
-10 (+14)	1075	271	315	221	2.49	7.41	4.85	1.22	1.42	

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		