COMPRESSOR DEFINITION

Designation	**NB 2112GK**
Nominal Voltage/Frequency	**200-240 V 50 Hz / 230 V 60 Hz**
Engineering Number	**994BN42**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	200-240 / 50	[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	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		

8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-

9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm²] (365 psig)	/ ºC - ºF
9.2 Peak (gauge)	28.7	[kgf/cm²] (408 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	3.78	[cm³] (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/cm²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-30	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0567/G5	
6 Start winding resistance	45.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	11.40	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	8.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.06	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@200V50Hz**			**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]
451	114	132	130	1.00	3.06	3.47	0.87	1.02

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@200V50Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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)**	179	45	53	85	0.88	1.21	2.08	0.52	0.61
-35	**(-31)**	281	71	82	100	0.91	1.90	2.85	0.72	0.83
-30	**(-22)**	399	101	117	114	0.95	2.70	3.53	0.89	1.04
-25	**(-13)**	537	135	157	128	0.99	3.65	4.19	1.06	1.23
-20	**(- 4)**	698	176	204	142	1.04	4.76	4.87	1.23	1.43
-15	**(+ 5)**	885	223	259	156	1.09	6.08	5.64	1.42	1.65
-10	**(+14)**	1103	278	323	170	1.15	7.63	6.53	1.65	1.91

TEST CONDITIONS: **@200V50Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	110	28	32	73	0.85	0.74	1.48	0.37	0.43
-35	**(-31)**	216	54	63	91	0.89	1.46	2.38	0.60	0.70
-30	**(-22)**	335	84	98	108	0.93	2.26	3.11	0.78	0.91
-25	**(-13)**	469	118	137	126	0.98	3.18	3.75	0.95	1.10
-20	**(- 4)**	622	157	182	143	1.04	4.24	4.34	1.09	1.27
-15	**(+ 5)**	799	201	234	161	1.11	5.48	4.94	1.25	1.45
-10	**(+14)**	1002	252	293	179	1.19	6.91	5.60	1.41	1.64

TEST CONDITIONS: **@200V50Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	42	11	12	62	0.82	0.28	0.74	0.19	0.22
-35	**(-31)**	153	39	45	82	0.86	1.03	1.80	0.45	0.53
-30	**(-22)**	273	69	80	102	0.91	1.84	2.64	0.67	0.77
-25	**(-13)**	404	102	118	123	0.98	2.73	3.30	0.83	0.97
-20	**(- 4)**	550	139	161	144	1.05	3.74	3.85	0.97	1.13
-15	**(+ 5)**	715	180	210	166	1.14	4.90	4.32	1.09	1.27
-10	**(+14)**	903	228	265	188	1.23	6.22	4.79	1.21	1.40

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@200V60Hz **Static**

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)**	210	53	62	100	1.03	1.41	2.07	0.52	0.61
-35	**(-31)**	329	83	96	117	1.06	2.22	2.85	0.72	0.83
-30	**(-22)**	467	118	137	133	1.10	3.16	3.54	0.89	1.04
-25	**(-13)**	628	158	184	150	1.15	4.27	4.20	1.06	1.23
-20	**(- 4)**	816	206	239	166	1.20	5.58	4.88	1.23	1.43
-15	**(+ 5)**	1036	261	303	182	1.26	7.12	5.65	1.42	1.66
-10	**(+14)**	1291	325	378	198	1.33	8.93	6.55	1.65	1.92

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@200V60Hz **Static**

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)**	128	32	38	86	0.99	0.86	1.48	0.37	0.43
-35	**(-31)**	253	64	74	106	1.03	1.70	2.38	0.60	0.70
-30	**(-22)**	391	99	115	126	1.08	2.64	3.12	0.79	0.91
-25	**(-13)**	548	138	161	147	1.14	3.72	3.76	0.95	1.10
-20	**(- 4)**	728	183	213	167	1.21	4.96	4.35	1.10	1.27
-15	**(+ 5)**	934	235	274	188	1.29	6.41	4.95	1.25	1.45
-10	**(+14)**	1172	295	343	209	1.38	8.09	5.61	1.41	1.65

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@200V60Hz **Static**

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)**	50	13	15	72	0.95	0.33	0.74	0.19	0.22
-35	**(-31)**	180	45	53	96	1.00	1.21	1.80	0.45	0.53
-30	**(-22)**	319	80	93	120	1.06	2.15	2.64	0.66	0.77
-25	**(-13)**	472	119	138	144	1.14	3.20	3.30	0.83	0.97
-20	**(- 4)**	644	162	189	169	1.22	4.38	3.84	0.97	1.13
-15	**(+ 5)**	837	211	245	194	1.32	5.73	4.32	1.09	1.27
-10	**(+14)**	1057	266	310	220	1.43	7.28	4.79	1.21	1.40

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	4.86 +0.07/+0.00	[mm]	(0.191" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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		