

COMPRESSOR DEFINITION

Designation	NB 2121GK
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	995BN42

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 - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
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	1/4+	[hp]
2 Displacement	6.05	[cm ³] (0.369 cu.in)
2.1 Bore [mm]	21.996	
2.2 Stroke [mm]	15.920	
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)	11.1	[kg] (24.47 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	200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0029	
3 Start capacitor	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0168/G5	
6 Start winding resistance	34.82	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.67	[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)	2.13	[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 Fan		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]
966	243	283	241	1.87	6.55	4.01	1.01	1.18

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			ASHRAE32 Fan		(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)	445	112	130	162	1.64	2.99	2.73	0.69	0.80
-35	(-31)	620	156	182	188	1.68	4.18	3.31	0.83	0.97
-30	(-22)	820	207	240	214	1.75	5.55	3.85	0.97	1.13
-25	(-13)	1051	265	308	241	1.82	7.14	4.37	1.10	1.28
-20	(- 4)	1319	332	386	268	1.92	9.01	4.90	1.24	1.44
-15	(+ 5)	1631	411	478	297	2.02	11.21	5.48	1.38	1.60
-10	(+14)	1993	502	584	326	2.12	13.79	6.13	1.54	1.80

TEST CONDITIONS: @200V50Hz			ASHRAE32 Fan		(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)	358	90	105	135	1.61	2.40	2.65	0.67	0.78
-35	(-31)	538	136	158	166	1.66	3.62	3.24	0.82	0.95
-30	(-22)	738	186	216	197	1.74	4.99	3.75	0.95	1.10
-25	(-13)	966	243	283	229	1.83	6.55	4.22	1.06	1.24
-20	(- 4)	1228	309	360	263	1.94	8.37	4.66	1.18	1.37
-15	(+ 5)	1529	385	448	298	2.06	10.49	5.12	1.29	1.50
-10	(+14)	1877	473	550	335	2.19	12.96	5.61	1.41	1.65

TEST CONDITIONS: @200V50Hz			ASHRAE32 Fan		(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)	274	69	80	109	1.58	1.84	2.53	0.64	0.74
-35	(-31)	459	116	134	144	1.64	3.08	3.14	0.79	0.92
-30	(-22)	660	166	193	181	1.73	4.45	3.64	0.92	1.07
-25	(-13)	885	223	259	219	1.83	5.99	4.06	1.02	1.19
-20	(- 4)	1140	287	334	258	1.96	7.75	4.43	1.12	1.30
-15	(+ 5)	1431	361	419	300	2.10	9.79	4.78	1.20	1.40
-10	(+14)	1764	445	517	343	2.26	12.16	5.13	1.29	1.50

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		ASHRAE32 Fan			(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]
-40	(-40)	520	131	152	190	1.90	3.50	2.72	0.69	0.80
-35	(-31)	725	183	212	220	1.95	4.89	3.31	0.83	0.97
-30	(-22)	959	242	281	251	2.03	6.49	3.84	0.97	1.13
-25	(-13)	1229	310	360	282	2.12	8.35	4.36	1.10	1.28
-20	(- 4)	1543	389	452	314	2.22	10.54	4.89	1.23	1.43
-15	(+ 5)	1909	481	559	348	2.34	13.11	5.47	1.38	1.60
-10	(+14)	2332	588	683	382	2.46	16.13	6.12	1.54	1.79

TEST CONDITIONS: @200V60Hz		ASHRAE32 Fan			(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]
-40	(-40)	419	106	123	158	1.87	2.81	2.65	0.67	0.78
-35	(-31)	629	159	184	194	1.93	4.24	3.24	0.82	0.95
-30	(-22)	864	218	253	231	2.02	5.83	3.76	0.95	1.10
-25	(-13)	1130	285	331	268	2.12	7.66	4.22	1.06	1.24
-20	(- 4)	1436	362	421	308	2.25	9.79	4.66	1.17	1.37
-15	(+ 5)	1789	451	524	349	2.39	12.26	5.11	1.29	1.50
-10	(+14)	2195	553	643	392	2.54	15.16	5.61	1.41	1.64

TEST CONDITIONS: @200V60Hz		ASHRAE32 Fan			(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]
-40	(-40)	321	81	94	128	1.84	2.15	2.52	0.64	0.74
-35	(-31)	537	135	157	169	1.90	3.61	3.14	0.79	0.92
-30	(-22)	772	195	226	211	2.00	5.21	3.65	0.92	1.07
-25	(-13)	1035	261	303	256	2.13	7.01	4.07	1.02	1.19
-20	(- 4)	1333	336	391	302	2.27	9.07	4.43	1.12	1.30
-15	(+ 5)	1674	422	490	351	2.44	11.45	4.77	1.20	1.40
-10	(+14)	2064	520	605	402	2.62	14.22	5.12	1.29	1.50

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		