

### COMPRESSOR DEFINITION

Designation	<b>NB 1117GK</b>
Nominal Voltage/Frequency	<b>200-240 V 50 Hz / 230 V 60 Hz</b>
Engineering Number	<b>994CN42</b>

### 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	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)	-	-	-
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 <sup>2</sup> ] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm <sup>2</sup> ] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	4.51	[cm <sup>3</sup> ] (0.275 cu.in)
2.1 Bore [mm]	20.873	
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 <sup>2</sup> ] (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-34	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0175/G5	
6 Start winding resistance	39.37	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.89	[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)	1.20	[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]
625	158	183	158	1.16	4.24	3.96	1.00	1.16

### 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)	268	67	78	106	1.03	1.80	2.50	0.63	0.73
-35	(-31)	389	98	114	121	1.08	2.63	3.24	0.82	0.95
-30	(-22)	532	134	156	136	1.14	3.60	3.93	0.99	1.15
-25	(-13)	698	176	205	152	1.19	4.74	4.60	1.16	1.35
-20	(- 4)	891	225	261	169	1.26	6.09	5.27	1.33	1.54
-15	(+ 5)	1114	281	326	186	1.33	7.65	5.97	1.50	1.75
-10	(+14)	1368	345	401	204	1.41	9.47	6.72	1.69	1.97

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)	204	51	60	93	1.00	1.37	2.20	0.55	0.64
-35	(-31)	327	82	96	112	1.06	2.20	2.92	0.74	0.85
-30	(-22)	468	118	137	131	1.12	3.16	3.57	0.90	1.05
-25	(-13)	630	159	185	151	1.19	4.27	4.17	1.05	1.22
-20	(- 4)	817	206	239	172	1.27	5.57	4.76	1.20	1.39
-15	(+ 5)	1031	260	302	193	1.36	7.07	5.34	1.35	1.57
-10	(+14)	1276	321	374	214	1.46	8.81	5.96	1.50	1.75

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)	142	36	41	80	0.97	0.95	1.81	0.46	0.53
-35	(-31)	265	67	78	103	1.04	1.78	2.55	0.64	0.75
-30	(-22)	405	102	119	126	1.11	2.73	3.19	0.80	0.94
-25	(-13)	564	142	165	150	1.20	3.82	3.76	0.95	1.10
-20	(- 4)	745	188	218	174	1.29	5.07	4.29	1.08	1.26
-15	(+ 5)	952	240	279	199	1.39	6.51	4.79	1.21	1.40
-10	(+14)	1186	299	348	224	1.51	8.17	5.29	1.33	1.55

### 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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	309	78	91	124	1.19	2.08	2.48	0.62	0.73	
-35 (-31)	453	114	133	142	1.25	3.06	3.21	0.81	0.94	
-30 (-22)	621	157	182	159	1.31	4.20	3.91	0.99	1.15	
-25 (-13)	817	206	239	178	1.38	5.55	4.60	1.16	1.35	
-20 (- 4)	1043	263	306	197	1.46	7.13	5.28	1.33	1.55	
-15 (+ 5)	1304	329	382	217	1.54	8.96	5.99	1.51	1.76	
-10 (+14)	1601	403	469	238	1.64	11.08	6.74	1.70	1.98	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	237	60	69	108	1.16	1.59	2.19	0.55	0.64	
-35 (-31)	381	96	112	131	1.23	2.56	2.90	0.73	0.85	
-30 (-22)	546	138	160	154	1.30	3.69	3.56	0.90	1.04	
-25 (-13)	737	186	216	177	1.38	5.00	4.17	1.05	1.22	
-20 (- 4)	956	241	280	201	1.48	6.52	4.76	1.20	1.40	
-15 (+ 5)	1207	304	354	225	1.58	8.27	5.35	1.35	1.57	
-10 (+14)	1492	376	437	250	1.69	10.30	5.96	1.50	1.75	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	164	41	48	93	1.12	1.09	1.81	0.45	0.53	
-35 (-31)	309	78	90	120	1.20	2.07	2.53	0.64	0.74	
-30 (-22)	473	119	139	148	1.29	3.19	3.17	0.80	0.93	
-25 (-13)	660	166	193	176	1.39	4.46	3.75	0.95	1.10	
-20 (- 4)	872	220	256	204	1.49	5.93	4.28	1.08	1.26	
-15 (+ 5)	1114	281	326	233	1.61	7.62	4.79	1.21	1.40	
-10 (+14)	1388	350	407	262	1.75	9.56	5.29	1.33	1.55	

### 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		