

COMPRESSOR DEFINITION

Designation	NB 2117GK
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	994DN42

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	1/5	[hp]
2 Displacement	4.51	[cm ³] (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 ²] (2.84 to 4.27 psig)

C - ELECTRICAL 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-0037	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0175/G5	
6 Start winding resistance	31.48	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.98	[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)	1.27	[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]	
608	153	178	162	1.22	4.12	3.75	0.95	1.10	

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)	269	68	79	110	1.03	1.81	2.41	0.61	0.71
-35	(-31)	390	98	114	126	1.08	2.63	3.12	0.79	0.92
-30	(-22)	531	134	155	141	1.13	3.59	3.80	0.96	1.11
-25	(-13)	696	175	204	156	1.19	4.73	4.46	1.12	1.31
-20	(- 4)	890	224	261	172	1.25	6.08	5.15	1.30	1.51
-15	(+ 5)	1118	282	328	189	1.33	7.69	5.90	1.49	1.73
-10	(+14)	1385	349	406	206	1.41	9.58	6.74	1.70	1.98

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)	193	49	57	97	1.00	1.30	1.99	0.50	0.58
-35	(-31)	318	80	93	116	1.06	2.14	2.74	0.69	0.80
-30	(-22)	460	116	135	135	1.12	3.10	3.41	0.86	1.00
-25	(-13)	621	157	182	155	1.19	4.21	4.02	1.01	1.18
-20	(- 4)	808	204	237	175	1.27	5.51	4.61	1.16	1.35
-15	(+ 5)	1025	258	300	196	1.36	7.03	5.22	1.31	1.53
-10	(+14)	1277	322	374	218	1.46	8.81	5.87	1.48	1.72

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)	121	30	35	84	0.97	0.81	1.47	0.37	0.43
-35	(-31)	250	63	73	107	1.04	1.68	2.30	0.58	0.67
-30	(-22)	392	99	115	130	1.11	2.64	2.99	0.75	0.88
-25	(-13)	550	139	161	154	1.20	3.72	3.59	0.90	1.05
-20	(- 4)	730	184	214	178	1.29	4.97	4.11	1.04	1.21
-15	(+ 5)	936	236	274	203	1.39	6.40	4.61	1.16	1.35
-10	(+14)	1172	295	343	229	1.51	8.07	5.10	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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	315	79	92	129	1.20	2.11	2.41	0.61	0.71	
-35 (-31)	456	115	134	147	1.25	3.07	3.13	0.79	0.92	
-30 (-22)	620	156	182	164	1.31	4.20	3.80	0.96	1.11	
-25 (-13)	814	205	238	183	1.38	5.53	4.46	1.12	1.31	
-20 (- 4)	1041	262	305	201	1.45	7.11	5.15	1.30	1.51	
-15 (+ 5)	1308	330	383	221	1.54	8.99	5.90	1.49	1.73	
-10 (+14)	1621	408	475	241	1.64	11.21	6.75	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)	226	57	66	113	1.16	1.52	2.00	0.50	0.58	
-35 (-31)	373	94	109	136	1.23	2.51	2.74	0.69	0.80	
-30 (-22)	538	136	158	159	1.30	3.63	3.41	0.86	1.00	
-25 (-13)	727	183	213	182	1.38	4.93	4.01	1.01	1.18	
-20 (- 4)	946	238	277	205	1.47	6.45	4.60	1.16	1.35	
-15 (+ 5)	1200	302	352	230	1.58	8.23	5.21	1.31	1.53	
-10 (+14)	1494	376	438	255	1.69	10.31	5.86	1.48	1.72	

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)	141	36	41	98	1.12	0.94	1.47	0.37	0.43	
-35 (-31)	293	74	86	126	1.20	1.97	2.29	0.58	0.67	
-30 (-22)	459	116	134	153	1.29	3.09	2.98	0.75	0.87	
-25 (-13)	644	162	189	181	1.39	4.36	3.57	0.90	1.05	
-20 (- 4)	854	215	250	209	1.49	5.81	4.10	1.03	1.20	
-15 (+ 5)	1095	276	321	238	1.61	7.49	4.60	1.16	1.35	
-10 (+14)	1371	346	402	268	1.75	9.45	5.11	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		