

COMPRESSOR DEFINITION

Designation	NB 6165GK
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	994NU51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220 / 60	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 0°C	(-4°F to 32°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	[kg] (24.25 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	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0030	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0741/G9	
6 Start winding resistance	20.72	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.28	[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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
3132	789	918	617	3.44	25.78	5.08	1.28	1.49

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			ASHRAE46 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]
-20	(- 4)	1473	371	432	315	2.10	9.36	4.68	1.18	1.37
-15	(+ 5)	1814	457	531	350	2.26	11.58	5.20	1.31	1.52
-10	(+14)	2248	567	659	386	2.42	14.43	5.82	1.47	1.71
-5	(+23)	2779	700	814	425	2.59	17.97	6.54	1.65	1.92
0	(+32)	3410	859	999	467	2.78	22.27	7.31	1.84	2.14
+5	(+41)	4144	1044	1214	514	2.99	27.39	8.10	2.04	2.37
+10	(+50)	4982	1255	1460	567	3.23	33.39	8.89	2.24	2.60

TEST CONDITIONS: @220V60Hz			ASHRAE46 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]
-20	(- 4)	1395	352	409	324	2.20	9.76	4.31	1.09	1.26
-15	(+ 5)	1674	422	491	362	2.36	11.81	4.62	1.16	1.35
-10	(+14)	2015	508	590	403	2.52	14.31	4.99	1.26	1.46
-5	(+23)	2421	610	709	449	2.71	17.32	5.40	1.36	1.58
0	(+32)	2894	729	848	499	2.92	20.90	5.80	1.46	1.70
+5	(+41)	3438	866	1007	555	3.16	25.12	6.19	1.56	1.81
+10	(+50)	4054	1022	1188	618	3.44	30.04	6.52	1.64	1.91

TEST CONDITIONS: @220V60Hz			ASHRAE46 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]
-20	(- 4)	1344	339	394	332	2.25	10.57	4.05	1.02	1.19
-15	(+ 5)	1571	396	460	374	2.41	12.44	4.19	1.06	1.23
-10	(+14)	1827	460	535	421	2.59	14.57	4.35	1.10	1.27
-5	(+23)	2116	533	620	472	2.80	17.03	4.49	1.13	1.32
0	(+32)	2440	615	715	531	3.04	19.87	4.59	1.16	1.34
+5	(+41)	2803	706	821	597	3.32	23.18	4.61	1.16	1.35
+10	(+50)	3206	808	940	671	3.64	26.99	4.53	1.14	1.33

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+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		