

COMPRESSOR DEFINITION

Designation	NB 6165GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	994NG71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 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 - Hight 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)	10.43	[kg] (22.99 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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-63	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0538/G9	
6 Start winding resistance	7.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	29.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	6.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
2807	707	823	517	6.05	23.11	5.43	1.37	1.59

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			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)	1289	325	378	286	4.59	8.18	4.51	1.14	1.32
-15	(+ 5)	1589	400	466	315	4.75	10.14	5.05	1.27	1.48
-10	(+14)	1959	494	574	345	4.94	12.58	5.68	1.43	1.66
-5	(+23)	2400	605	703	376	5.13	15.53	6.38	1.61	1.87
0	(+32)	2911	734	853	408	5.34	19.00	7.14	1.80	2.09
+5	(+41)	3493	880	1023	441	5.55	23.03	7.92	2.00	2.32
+10	(+50)	4145	1045	1215	475	5.77	27.63	8.73	2.20	2.56

TEST CONDITIONS: @100V50Hz			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)	1106	279	324	290	4.62	7.75	3.81	0.96	1.12
-15	(+ 5)	1378	347	404	323	4.79	9.72	4.27	1.08	1.25
-10	(+14)	1710	431	501	357	4.99	12.14	4.79	1.21	1.40
-5	(+23)	2100	529	615	393	5.22	15.03	5.35	1.35	1.57
0	(+32)	2549	642	747	430	5.47	18.41	5.93	1.49	1.74
+5	(+41)	3057	770	896	469	5.73	22.31	6.52	1.64	1.91
+10	(+50)	3623	913	1062	509	6.01	26.75	7.09	1.79	2.08

TEST CONDITIONS: @100V50Hz			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)	915	231	268	295	4.65	7.20	3.10	0.78	0.91
-15	(+ 5)	1159	292	340	331	4.83	9.18	3.50	0.88	1.02
-10	(+14)	1450	365	425	370	5.05	11.57	3.92	0.99	1.15
-5	(+23)	1787	450	524	410	5.31	14.39	4.36	1.10	1.28
0	(+32)	2172	547	636	453	5.60	17.68	4.79	1.21	1.40
+5	(+41)	2603	656	763	498	5.92	21.45	5.20	1.31	1.52
+10	(+50)	3082	777	903	544	6.26	25.72	5.57	1.40	1.63

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	1508	380	442	335	5.33	9.57	4.50	1.13	1.32
-15	(+ 5)	1859	468	545	369	5.52	11.86	5.04	1.27	1.48
-10	(+14)	2292	578	672	404	5.73	14.72	5.67	1.43	1.66
-5	(+23)	2808	708	823	440	5.96	18.17	6.38	1.61	1.87
0	(+32)	3406	858	998	477	6.20	22.23	7.14	1.80	2.09
+5	(+41)	4087	1030	1198	515	6.46	26.94	7.94	2.00	2.33
+10	(+50)	4850	1222	1421	554	6.72	32.32	8.75	2.21	2.57

TEST CONDITIONS: @100V60Hz		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)	1294	326	379	340	5.36	9.06	3.81	0.96	1.12
-15	(+ 5)	1613	406	473	378	5.56	11.37	4.26	1.07	1.25
-10	(+14)	2000	504	586	418	5.79	14.20	4.78	1.20	1.40
-5	(+23)	2457	619	720	460	6.06	17.58	5.34	1.35	1.57
0	(+32)	2982	751	874	503	6.35	21.54	5.93	1.49	1.74
+5	(+41)	3576	901	1048	548	6.66	26.10	6.52	1.64	1.91
+10	(+50)	4239	1068	1242	595	6.99	31.30	7.11	1.79	2.08

TEST CONDITIONS: @100V60Hz		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)	1071	270	314	345	5.39	8.42	3.10	0.78	0.91
-15	(+ 5)	1356	342	397	388	5.60	10.73	3.49	0.88	1.02
-10	(+14)	1696	427	497	433	5.86	13.53	3.92	0.99	1.15
-5	(+23)	2091	527	613	480	6.16	16.84	4.36	1.10	1.28
0	(+32)	2541	640	745	530	6.50	20.69	4.79	1.21	1.40
+5	(+41)	3046	768	893	582	6.87	25.10	5.21	1.31	1.53
+10	(+50)	3606	909	1057	636	7.27	30.10	5.58	1.41	1.64

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +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		