

COMPRESSOR DEFINITION

Designation	NB 6152GK
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	994LD50

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	208-230 / 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	5.01	[cm ³] (0.306 cu.in)
2.1 Bore [mm]	21.996	
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)	10.3	[kg] (22.71 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	208-230 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	T0660/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: @208V60Hz			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]
2678	675	785	478	2.83	22.05	5.60	1.41	1.64

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V50Hz			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)	1141	288	334	219	1.72	7.25	5.21	1.31	1.53
-15	(+ 5)	1374	346	402	240	1.78	8.77	5.73	1.44	1.68
-10	(+14)	1668	420	489	264	1.85	10.71	6.33	1.59	1.85
-5	(+23)	2026	511	594	290	1.94	13.11	6.99	1.76	2.05
0	(+32)	2448	617	717	318	2.03	15.98	7.71	1.94	2.26
+5	(+41)	2935	740	860	347	2.15	19.35	8.45	2.13	2.48
+10	(+50)	3487	879	1022	378	2.29	23.25	9.22	2.32	2.70

TEST CONDITIONS: @208V50Hz			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)	961	242	282	219	1.69	6.73	4.38	1.10	1.28
-15	(+ 5)	1160	292	340	246	1.77	8.17	4.72	1.19	1.38
-10	(+14)	1411	356	414	275	1.87	10.02	5.14	1.30	1.51
-5	(+23)	1717	433	503	306	1.98	12.28	5.62	1.42	1.65
0	(+32)	2076	523	608	338	2.11	15.00	6.13	1.54	1.80
+5	(+41)	2490	628	730	372	2.25	18.18	6.66	1.68	1.95
+10	(+50)	2960	746	867	406	2.42	21.87	7.19	1.81	2.11

TEST CONDITIONS: @208V50Hz			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)	750	189	220	221	1.71	5.89	3.40	0.86	1.00
-15	(+ 5)	937	236	275	251	1.81	7.42	3.72	0.94	1.09
-10	(+14)	1167	294	342	284	1.91	9.31	4.11	1.03	1.20
-5	(+23)	1441	363	422	318	2.04	11.61	4.53	1.14	1.33
0	(+32)	1759	443	516	354	2.18	14.32	4.98	1.25	1.46
+5	(+41)	2123	535	622	390	2.34	17.48	5.43	1.37	1.59
+10	(+50)	2532	638	742	426	2.53	21.11	5.88	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V60Hz		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)	1336	337	391	256	2.01	8.48	5.22	1.32	1.53
-15	(+ 5)	1607	405	471	281	2.08	10.26	5.72	1.44	1.68
-10	(+14)	1952	492	572	309	2.16	12.54	6.32	1.59	1.85
-5	(+23)	2371	598	695	339	2.27	15.34	6.99	1.76	2.05
0	(+32)	2865	722	839	372	2.38	18.70	7.71	1.94	2.26
+5	(+41)	3434	865	1006	407	2.52	22.64	8.45	2.13	2.48
+10	(+50)	4079	1028	1195	444	2.68	27.20	9.19	2.32	2.69

TEST CONDITIONS: @208V60Hz		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)	1124	283	329	256	1.98	7.88	4.38	1.10	1.28
-15	(+ 5)	1357	342	398	288	2.08	9.56	4.72	1.19	1.38
-10	(+14)	1652	416	484	322	2.19	11.72	5.14	1.30	1.51
-5	(+23)	2009	506	589	358	2.32	14.37	5.62	1.42	1.65
0	(+32)	2429	612	712	396	2.47	17.55	6.13	1.55	1.80
+5	(+41)	2914	734	854	435	2.63	21.28	6.66	1.68	1.95
+10	(+50)	3463	873	1015	477	2.82	25.59	7.16	1.81	2.10

TEST CONDITIONS: @208V60Hz		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)	877	221	257	258	2.00	6.90	3.41	0.86	1.00
-15	(+ 5)	1096	276	321	294	2.12	8.68	3.72	0.94	1.09
-10	(+14)	1365	344	400	332	2.24	10.90	4.10	1.03	1.20
-5	(+23)	1686	425	494	372	2.39	13.58	4.53	1.14	1.33
0	(+32)	2059	519	603	414	2.55	16.76	4.98	1.25	1.46
+5	(+41)	2484	626	728	457	2.73	20.46	5.42	1.37	1.59
+10	(+50)	2962	747	868	501	2.93	24.70	5.84	1.47	1.71

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		