

COMPRESSOR DEFINITION

Designation	NB 6144GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	994IG70

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 - 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)	10.33	[kg] (22.77 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-0019	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0743/G9	
6 Start winding resistance	8.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	27.70	[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)	4.70	[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]
2033	512	596	324	3.98	16.74	6.27	1.58	1.84

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)	902	227	264	192	3.07	5.73	4.70	1.18	1.38
-15	(+ 5)	1134	286	332	209	3.17	7.24	5.42	1.37	1.59
-10	(+14)	1415	357	415	227	3.27	9.09	6.23	1.57	1.83
-5	(+23)	1744	440	511	245	3.37	11.29	7.13	1.80	2.09
0	(+32)	2122	535	622	262	3.48	13.85	8.09	2.04	2.37
+5	(+41)	2548	642	747	279	3.61	16.79	9.13	2.30	2.67
+10	(+50)	3022	762	886	294	3.77	20.13	10.23	2.58	3.00

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)	761	192	223	193	3.05	5.33	3.95	0.99	1.16
-15	(+ 5)	966	243	283	213	3.18	6.81	4.54	1.14	1.33
-10	(+14)	1215	306	356	233	3.31	8.62	5.20	1.31	1.52
-5	(+23)	1506	380	441	254	3.43	10.78	5.93	1.49	1.74
0	(+32)	1841	464	539	275	3.57	13.30	6.70	1.69	1.96
+5	(+41)	2218	559	650	295	3.72	16.20	7.53	1.90	2.21
+10	(+50)	2638	665	773	313	3.90	19.49	8.40	2.12	2.46

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)	614	155	180	193	3.03	4.83	3.18	0.80	0.93
-15	(+ 5)	791	199	232	216	3.19	6.26	3.66	0.92	1.07
-10	(+14)	1006	254	295	240	3.34	8.03	4.20	1.06	1.23
-5	(+23)	1259	317	369	264	3.49	10.14	4.77	1.20	1.40
0	(+32)	1549	390	454	288	3.65	12.61	5.38	1.35	1.58
+5	(+41)	1877	473	550	312	3.83	15.46	6.01	1.51	1.76
+10	(+50)	2242	565	657	334	4.03	18.70	6.67	1.68	1.95

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)	1056	266	309	225	3.70	6.70	4.69	1.18	1.38
-15	(+ 5)	1327	334	389	245	3.82	8.47	5.41	1.36	1.59
-10	(+14)	1655	417	485	266	3.95	10.63	6.23	1.57	1.83
-5	(+23)	2040	514	598	286	4.07	13.20	7.13	1.80	2.09
0	(+32)	2482	625	727	307	4.20	16.20	8.09	2.04	2.37
+5	(+41)	2981	751	874	329	4.33	19.65	9.07	2.29	2.66
+10	(+50)	3537	891	1037	351	4.46	23.57	10.07	2.54	2.95

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)	890	224	261	225	3.68	6.23	3.96	1.00	1.16
-15	(+ 5)	1130	285	331	249	3.83	7.97	4.54	1.14	1.33
-10	(+14)	1421	358	416	273	3.99	10.08	5.21	1.31	1.53
-5	(+23)	1762	444	516	297	4.14	12.61	5.93	1.49	1.74
0	(+32)	2154	543	631	322	4.30	15.56	6.69	1.69	1.96
+5	(+41)	2596	654	761	348	4.46	18.96	7.46	1.88	2.19
+10	(+50)	3089	778	905	375	4.62	22.82	8.22	2.07	2.41

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)	718	181	210	226	3.66	5.65	3.18	0.80	0.93
-15	(+ 5)	926	233	271	253	3.84	7.33	3.66	0.92	1.07
-10	(+14)	1177	297	345	280	4.03	9.39	4.20	1.06	1.23
-5	(+23)	1473	371	432	308	4.21	11.86	4.78	1.21	1.40
0	(+32)	1812	457	531	337	4.40	14.75	5.38	1.35	1.58
+5	(+41)	2195	553	643	367	4.59	18.08	5.96	1.50	1.75
+10	(+50)	2623	661	768	399	4.78	21.88	6.51	1.64	1.91

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		