

COMPRESSOR DEFINITION

Designation	NE K2134GK
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	959DQ71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	100 / 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	CSCR		
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 temperature			
9.1 Operating	25.2	[kgf/cm ²] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm ²] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	8.77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26.497	
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)	11.5	[kg] (25.35 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA7AC3	
3 Start capacitor	243-292(165)	[µF(VAC minimum)]
4 Run capacitor	17.5(425)	[µF(VAC minimum)]
5 Motor protection	T0808	
6 Start winding resistance	4.14	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.86	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	34.00/34.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
1544	389	452	354	5.09	10.47	4.36	1.10	1.28

TEST CONDITIONS: @100V60Hz			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]
1819	458	533	400	4.61	12.33	4.55	1.15	1.33

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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)	745	188	218	224	4.42	5.01	3.32	0.84	0.97
-35	(-31)	979	247	287	253	4.56	6.60	3.88	0.98	1.14
-30	(-22)	1282	323	376	282	4.71	8.67	4.55	1.15	1.33
-25	(-13)	1654	417	485	312	4.87	11.23	5.30	1.34	1.55
-20	(- 4)	2094	528	614	342	5.05	14.30	6.13	1.54	1.80
-15	(+ 5)	2603	656	763	371	5.25	17.89	7.01	1.77	2.05
-10	(+14)	3181	802	932	401	5.47	22.00	7.92	2.00	2.32

TEST CONDITIONS: @100V50Hz		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)	669	169	196	226	4.43	4.49	2.96	0.75	0.87
-35	(-31)	890	224	261	258	4.57	5.99	3.45	0.87	1.01
-30	(-22)	1175	296	344	292	4.74	7.93	4.02	1.01	1.18
-25	(-13)	1522	384	446	327	4.94	10.32	4.65	1.17	1.36
-20	(- 4)	1933	487	566	364	5.17	13.17	5.31	1.34	1.56
-15	(+ 5)	2406	606	705	401	5.45	16.50	6.00	1.51	1.76
-10	(+14)	2942	741	862	441	5.76	20.31	6.68	1.68	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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)	582	147	170	227	4.45	3.89	2.56	0.65	0.75
-35	(-31)	803	202	235	262	4.58	5.39	3.07	0.77	0.90
-30	(-22)	1082	273	317	299	4.76	7.29	3.61	0.91	1.06
-25	(-13)	1418	357	416	339	4.99	9.60	4.18	1.05	1.22
-20	(- 4)	1812	457	531	382	5.28	12.32	4.75	1.20	1.39
-15	(+ 5)	2263	570	663	427	5.62	15.48	5.30	1.34	1.55
-10	(+14)	2771	698	812	475	6.01	19.09	5.83	1.47	1.71

TEST CONDITIONS: @100V60Hz		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)	896	226	263	233	3.11	6.02	3.82	0.96	1.12
-35	(-31)	1162	293	340	269	3.43	7.84	4.33	1.09	1.27
-30	(-22)	1505	379	441	307	3.77	10.18	4.91	1.24	1.44
-25	(-13)	1922	484	563	346	4.12	13.06	5.56	1.40	1.63
-20	(- 4)	2410	607	706	385	4.48	16.46	6.26	1.58	1.83
-15	(+ 5)	2967	748	869	424	4.85	20.38	7.00	1.76	2.05
-10	(+14)	3589	904	1052	462	5.24	24.83	7.76	1.96	2.27

TEST CONDITIONS: @100V60Hz		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)	807	203	236	236	3.12	5.41	3.43	0.86	1.01
-35	(-31)	1072	270	314	276	3.48	7.22	3.90	0.98	1.14
-30	(-22)	1411	356	414	320	3.87	9.53	4.41	1.11	1.29
-25	(-13)	1821	459	534	366	4.29	12.35	4.97	1.25	1.46
-20	(- 4)	2299	579	674	414	4.75	15.67	5.54	1.40	1.62
-15	(+ 5)	2843	716	833	464	5.23	19.49	6.12	1.54	1.79
-10	(+14)	3449	869	1011	515	5.75	23.81	6.69	1.69	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	683	172	200	238	3.13	4.57	2.86	0.72	0.84
-35	(-31)	941	237	276	281	3.52	6.32	3.35	0.84	0.98
-30	(-22)	1270	320	372	329	3.95	8.56	3.86	0.97	1.13
-25	(-13)	1666	420	488	381	4.43	11.27	4.37	1.10	1.28
-20	(- 4)	2128	536	623	437	4.96	14.47	4.88	1.23	1.43
-15	(+ 5)	2652	668	777	496	5.54	18.14	5.36	1.35	1.57
-10	(+14)	3235	815	948	557	6.17	22.29	5.80	1.46	1.70

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	6.45 +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		