

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	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 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 - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-0052-59	
3 Start capacitor	243-292(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0728/G9	
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]
1528	385	448	375	6.06	10.36	4.07	1.03	1.19

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]
1806	455	529	426	5.65	12.24	4.24	1.07	1.24

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)	731	184	214	238	5.40	4.91	3.07	0.77	0.90
-35	(-31)	966	243	283	268	5.51	6.52	3.61	0.91	1.06
-30	(-22)	1264	318	370	299	5.66	8.55	4.24	1.07	1.24
-25	(-13)	1624	409	476	330	5.83	11.03	4.92	1.24	1.44
-20	(- 4)	2045	515	599	361	6.01	13.97	5.66	1.43	1.66
-15	(+ 5)	2529	637	741	393	6.21	17.38	6.44	1.62	1.89
-10	(+14)	3074	775	901	425	6.42	21.27	7.24	1.82	2.12

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)	651	164	191	240	5.42	4.37	2.72	0.69	0.80
-35	(-31)	879	221	258	274	5.53	5.91	3.22	0.81	0.94
-30	(-22)	1167	294	342	309	5.70	7.88	3.77	0.95	1.10
-25	(-13)	1515	382	444	347	5.90	10.27	4.36	1.10	1.28
-20	(- 4)	1924	485	564	385	6.13	13.11	4.99	1.26	1.46
-15	(+ 5)	2393	603	701	425	6.40	16.41	5.63	1.42	1.65
-10	(+14)	2922	736	856	467	6.69	20.17	6.27	1.58	1.84

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)	581	147	170	240	5.44	3.89	2.42	0.61	0.71
-35	(-31)	796	201	233	277	5.56	5.35	2.88	0.72	0.84
-30	(-22)	1069	269	313	317	5.74	7.21	3.37	0.85	0.99
-25	(-13)	1401	353	410	360	5.97	9.48	3.89	0.98	1.14
-20	(- 4)	1791	451	525	406	6.25	12.18	4.42	1.11	1.29
-15	(+ 5)	2240	564	656	454	6.58	15.33	4.94	1.24	1.45
-10	(+14)	2747	692	805	505	6.94	18.93	5.44	1.37	1.59

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)	868	219	254	245	4.23	5.83	3.54	0.89	1.04
-35	(-31)	1148	289	336	284	4.52	7.74	4.05	1.02	1.19
-30	(-22)	1502	378	440	325	4.84	10.16	4.63	1.17	1.36
-25	(-13)	1929	486	565	367	5.17	13.10	5.26	1.33	1.54
-20	(- 4)	2431	613	712	409	5.52	16.60	5.94	1.50	1.74
-15	(+ 5)	3009	758	882	452	5.89	20.67	6.66	1.68	1.95
-10	(+14)	3663	923	1073	495	6.28	25.34	7.40	1.87	2.17

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)	792	200	232	249	4.27	5.32	3.18	0.80	0.93
-35	(-31)	1075	271	315	293	4.59	7.24	3.67	0.92	1.08
-30	(-22)	1426	359	418	339	4.94	9.63	4.19	1.06	1.23
-25	(-13)	1845	465	541	389	5.34	12.51	4.74	1.19	1.39
-20	(- 4)	2333	588	684	440	5.78	15.90	5.29	1.33	1.55
-15	(+ 5)	2891	729	847	494	6.26	19.82	5.86	1.48	1.72
-10	(+14)	3520	887	1032	550	6.79	24.30	6.41	1.62	1.88

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)	660	166	193	249	4.28	4.42	2.65	0.67	0.78
-35	(-31)	933	235	274	297	4.62	6.27	3.15	0.79	0.92
-30	(-22)	1269	320	372	349	5.01	8.55	3.64	0.92	1.07
-25	(-13)	1667	420	489	406	5.48	11.28	4.12	1.04	1.21
-20	(- 4)	2129	537	624	466	6.01	14.48	4.58	1.15	1.34
-15	(+ 5)	2656	669	778	531	6.61	18.18	5.01	1.26	1.47
-10	(+14)	3248	819	952	599	7.28	22.38	5.40	1.36	1.58

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		