

### COMPRESSOR DEFINITION

Designation	<b>NE K2125GK</b>
Nominal Voltage/Frequency	<b>100 V 50 Hz 60 Hz</b>
Engineering Number	<b>959CQ71</b>

### 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 - 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 temperature			
9.1 Operating	25.2	[kgf/cm <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	6.20	[cm <sup>3</sup> ] (0.378 cu.in)
2.1 Bore [mm]	20.873	
2.2 Stroke [mm]	18.120	
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)	11.2	[kg] (24.69 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL 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	RVA7AC3C-115	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	20(400)	[µF(VAC minimum)]
5 Motor protection	MRA38112-3261	
6 Start winding resistance	3.82	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.94	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	32.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	4.79	[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	VDE	

### 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]
1155	291	338	273	4.21	7.83	4.23	1.07	1.24

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]
1382	348	405	297	3.50	9.37	4.65	1.17	1.36

### 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)	552	139	162	186	3.88	3.71	2.96	0.75	0.87
-35	(-31)	722	182	212	206	3.96	4.87	3.52	0.89	1.03
-30	(-22)	941	237	276	225	4.04	6.37	4.18	1.05	1.23
-25	(-13)	1208	305	354	244	4.14	8.21	4.95	1.25	1.45
-20	(- 4)	1524	384	447	263	4.24	10.41	5.80	1.46	1.70
-15	(+ 5)	1888	476	553	281	4.35	12.97	6.72	1.69	1.97
-10	(+14)	2301	580	674	299	4.47	15.92	7.69	1.94	2.25

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)	495	125	145	186	3.87	3.32	2.66	0.67	0.78
-35	(-31)	665	168	195	209	3.96	4.48	3.19	0.80	0.94
-30	(-22)	881	222	258	232	4.06	5.95	3.80	0.96	1.11
-25	(-13)	1144	288	335	255	4.18	7.76	4.48	1.13	1.31
-20	(- 4)	1453	366	426	279	4.31	9.91	5.20	1.31	1.52
-15	(+ 5)	1809	456	530	303	4.45	12.40	5.97	1.50	1.75
-10	(+14)	2210	557	648	327	4.62	15.26	6.76	1.70	1.98

### 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)	424	107	124	186	3.89	2.84	2.27	0.57	0.67
-35	(-31)	591	149	173	211	3.99	3.97	2.81	0.71	0.82
-30	(-22)	802	202	235	236	4.09	5.41	3.39	0.86	0.99
-25	(-13)	1058	267	310	264	4.22	7.16	4.01	1.01	1.18
-20	(- 4)	1358	342	398	292	4.36	9.23	4.65	1.17	1.36
-15	(+ 5)	1701	429	498	321	4.53	11.64	5.30	1.34	1.55
-10	(+14)	2089	526	612	351	4.72	14.39	5.95	1.50	1.74

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)	650	164	190	184	2.52	4.37	3.53	0.89	1.03
-35	(-31)	860	217	252	211	2.73	5.80	4.08	1.03	1.20
-30	(-22)	1124	283	329	237	2.95	7.60	4.74	1.19	1.39
-25	(-13)	1441	363	422	263	3.18	9.79	5.48	1.38	1.60
-20	(- 4)	1813	457	531	289	3.41	12.38	6.28	1.58	1.84
-15	(+ 5)	2238	564	656	314	3.65	15.38	7.12	1.79	2.09
-10	(+14)	2716	685	796	340	3.90	18.79	7.99	2.01	2.34

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)	591	149	173	185	2.53	3.97	3.19	0.80	0.94
-35	(-31)	795	200	233	215	2.77	5.35	3.70	0.93	1.09
-30	(-22)	1051	265	308	245	3.03	7.10	4.29	1.08	1.26
-25	(-13)	1360	343	398	275	3.29	9.22	4.94	1.24	1.45
-20	(- 4)	1721	434	504	306	3.58	11.73	5.62	1.42	1.65
-15	(+ 5)	2134	538	625	337	3.87	14.64	6.33	1.60	1.85
-10	(+14)	2600	655	762	370	4.18	17.95	7.04	1.77	2.06

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(Condensing temperature <b>55°C (+131°F)</b> )					
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)	525	132	154	186	2.54	3.51	2.82	0.71	0.83
-35	(-31)	721	182	211	218	2.80	4.85	3.31	0.83	0.97
-30	(-22)	969	244	284	251	3.08	6.53	3.85	0.97	1.13
-25	(-13)	1267	319	371	286	3.39	8.58	4.44	1.12	1.30
-20	(- 4)	1617	408	474	321	3.72	11.00	5.04	1.27	1.48
-15	(+ 5)	2018	509	591	358	4.08	13.81	5.63	1.42	1.65
-10	(+14)	2470	622	724	397	4.45	17.02	6.21	1.57	1.82

### 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		