

Designation	NEK6181GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	957MA51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors R404A)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°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	1/3+	[hp]
2 Displacement	7.28	[cm ³] (0.444 cu.in)
2.1 Bore [mm]	26.497	
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)	10.4	[kg] (22.93 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-41	
3 Start capacitor	43-53(330)	[µf(VAC minimum)]
4 Run capacitor	-	[µf(VAC minimum)]
5 Motor protection	T0874/G6	
6 Start winding resistance	28.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
3716	936	1089	515	2.99	30.59	7.22	1.82	2.12

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	1819	458	533	291	2.13	11.54	6.25	1.58	1.83
-15	(+ 5)	2216	558	649	305	2.18	14.15	7.27	1.83	2.13
-10	(+14)	2710	683	794	324	2.24	17.41	8.36	2.11	2.45
-5	(+23)	3302	832	968	346	2.33	21.36	9.52	2.40	2.79
0	(+32)	3991	1006	1169	371	2.43	26.05	10.72	2.70	3.14
+5	(+41)	4777	1204	1400	399	2.55	31.50	11.96	3.01	3.50
+10	(+50)	5661	1427	1659	430	2.68	37.78	13.20	3.33	3.87

TEST CONDITIONS: @220V50Hz			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)	1555	392	456	301	2.15	10.90	5.15	1.30	1.51
-15	(+ 5)	1888	476	553	330	2.25	13.31	5.72	1.44	1.68
-10	(+14)	2307	581	676	360	2.36	16.37	6.41	1.61	1.88
-5	(+23)	2814	709	824	392	2.48	20.12	7.19	1.81	2.11
0	(+32)	3408	859	998	424	2.60	24.61	8.04	2.03	2.36
+5	(+41)	4089	1030	1198	457	2.74	29.88	8.96	2.26	2.63
+10	(+50)	4857	1224	1423	489	2.88	35.97	9.92	2.50	2.91

TEST CONDITIONS: @220V50Hz			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)	1311	330	384	319	2.21	10.31	4.11	1.04	1.20
-15	(+ 5)	1581	398	463	359	2.35	12.52	4.40	1.11	1.29
-10	(+14)	1928	486	565	398	2.49	15.38	4.84	1.22	1.42
-5	(+23)	2353	593	689	435	2.63	18.94	5.41	1.36	1.58
0	(+32)	2854	719	836	470	2.78	23.24	6.08	1.53	1.78
+5	(+41)	3433	865	1006	502	2.92	28.32	6.84	1.72	2.01
+10	(+50)	4090	1031	1198	532	3.07	34.23	7.69	1.94	2.25

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		