

Designation	NEK6187Z
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	268AA51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors R134a, R22)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°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)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	9.99	[cm ³] (0.610 cu.in)
2.1 Bore	26.497	
2.2 Stroke	9.060	
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	[kg] (24.25 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		
3 Start capacitor	53-64(330)	[µf(VAC minimum)]
4 Run capacitor	-	[µf(VAC minimum)]
5 Motor protection (external)	T0168/G6	
6 Start winding resistance	31.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.18	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	16.10	[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	7.2°C (44.96°F)		
					(Condensing temperature	54.4°C (129.92°F)		
Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
3300	832	967	410	2.61	21.40	8.05	2.03	2.36

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE46 Fan		(Condensing temperature 35°C (+95°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	1630	411	478	238	2.08	8.81	6.85	1.73	2.01
-10 (+14)	2031	512	595	257	2.13	11.02	7.91	1.99	2.32
-5 (+23)	2534	639	743	278	2.19	13.80	9.12	2.30	2.67
0 (+32)	3139	791	920	300	2.25	17.17	10.45	2.63	3.06
+5 (+41)	3845	969	1127	324	2.33	21.15	11.88	2.99	3.48
+10 (+50)	4654	1173	1364	348	2.42	25.77	13.36	3.37	3.91

TEST CONDITIONS: @220V50Hz			ASHRAE46 Fan		(Condensing temperature 45°C (+113°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	1411	356	413	252	2.10	8.24	5.60	1.41	1.64
-10 (+14)	1779	448	521	278	2.17	10.43	6.40	1.61	1.88
-5 (+23)	2238	564	656	305	2.24	13.18	7.35	1.85	2.15
0 (+32)	2789	703	817	331	2.32	16.50	8.42	2.12	2.47
+5 (+41)	3431	865	1005	359	2.43	20.42	9.57	2.41	2.80
+10 (+50)	4165	1050	1220	387	2.55	24.96	10.76	2.71	3.15

TEST CONDITIONS: @220V50Hz			ASHRAE46 Fan		(Condensing temperature 55°C (+131°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	1192	300	349	258	2.13	7.60	4.64	1.17	1.36
-10 (+14)	1527	385	447	293	2.20	9.76	5.21	1.31	1.53
-5 (+23)	1942	489	569	327	2.29	12.48	5.92	1.49	1.74
0 (+32)	2439	615	715	361	2.40	15.75	6.75	1.70	1.98
+5 (+41)	3017	760	884	395	2.53	19.61	7.65	1.93	2.24
+10 (+50)	3676	926	1077	428	2.68	24.07	8.59	2.17	2.52

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		