

Designation	NEK6210Z
Nominal Voltage/Frequency	200-230 V 50 Hz / 208-230 V 60 Hz
Engineering Number	269EB51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-230 / 50	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
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	1/2-	[hp]
2 Displacement	12.11	[cm ³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
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)	11.6	[kg] (25.57 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	200-230 V 50 Hz / 208-230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0012	
3 Start capacitor	64-77(330)	[µf(VAC minimum)]
4 Run capacitor	-	[µf(VAC minimum)]
5 Motor protection	T0883/G6	
6 Start winding resistance	15.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[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	UL - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			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]
3770	950	1105	518	3.83	24.44	7.28	1.83	2.13

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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]
-15	(+5)	2072	522	607	313	3.20	11.22	6.60	1.66	1.94
-10	(+14)	2273	573	666	327	3.25	12.34	6.97	1.76	2.04
-5	(+23)	2722	686	798	349	3.31	14.82	7.82	1.97	2.29
0	(+32)	3420	862	1002	378	3.39	18.71	9.04	2.28	2.65
+5	(+41)	4368	1101	1280	416	3.50	24.03	10.49	2.64	3.07
+10	(+50)	5564	1402	1630	461	3.64	30.81	12.08	3.04	3.54

TEST CONDITIONS: @200V50Hz			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]
-15	(+5)	1746	440	512	332	3.24	10.19	5.27	1.33	1.54
-10	(+14)	1953	492	572	349	3.29	11.46	5.59	1.41	1.64
-5	(+23)	2374	598	696	376	3.36	13.98	6.31	1.59	1.85
0	(+32)	3007	758	881	410	3.47	17.80	7.32	1.84	2.14
+5	(+41)	3854	971	1129	454	3.61	22.94	8.48	2.14	2.49
+10	(+50)	4914	1238	1440	507	3.81	29.44	9.70	2.45	2.84

TEST CONDITIONS: @200V50Hz			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]
-15	(+5)	1523	384	446	345	3.28	9.70	4.42	1.12	1.30
-10	(+14)	1724	434	505	367	3.32	11.03	4.68	1.18	1.37
-5	(+23)	2101	529	616	399	3.41	13.50	5.26	1.33	1.54
0	(+32)	2656	669	778	440	3.54	17.15	6.04	1.52	1.77
+5	(+41)	3388	854	993	492	3.72	22.03	6.91	1.74	2.03
+10	(+50)	4298	1083	1259	554	3.97	28.15	7.75	1.95	2.27

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	2300	580	674	330	2.59	12.44	6.97	1.76	2.04
-10	(+14)	2552	643	748	347	2.64	13.85	7.37	1.86	2.16
-5	(+23)	3076	775	901	379	2.76	16.76	8.11	2.04	2.38
0	(+32)	3874	976	1135	426	2.95	21.19	9.07	2.29	2.66
+5	(+41)	4942	1245	1448	488	3.22	27.19	10.12	2.55	2.97
+10	(+50)	6282	1583	1841	565	3.56	34.78	11.12	2.80	3.26

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	2016	508	591	352	2.67	11.78	5.72	1.44	1.68
-10	(+14)	2223	560	651	373	2.74	13.04	5.97	1.50	1.75
-5	(+23)	2683	676	786	408	2.87	15.79	6.57	1.66	1.93
0	(+32)	3397	856	995	459	3.09	20.09	7.40	1.86	2.17
+5	(+41)	4363	1100	1279	526	3.38	25.97	8.31	2.09	2.43
+10	(+50)	5581	1406	1635	607	3.75	33.45	9.18	2.31	2.69

TEST CONDITIONS: @200V60Hz		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]
-15	(+ 5)	1737	438	509	366	2.72	11.06	4.76	1.20	1.40
-10	(+14)	1911	482	560	393	2.82	12.23	4.86	1.22	1.42
-5	(+23)	2320	585	680	436	2.99	14.91	5.31	1.34	1.56
0	(+32)	2964	747	868	494	3.24	19.14	6.00	1.51	1.76
+5	(+41)	3840	968	1125	568	3.58	24.97	6.78	1.71	1.99
+10	(+50)	4949	1247	1450	658	4.00	32.41	7.52	1.90	2.20

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	8.1 +0.10/+0.00	[mm]	(0.319" +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		