

**COMPRESSOR DEFINITION**

Designation	<b>NE K2140Z</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>269GA51</b>

**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	Low Back Pressure R134a		
4.1 Evaporating temperature range	-30°C to -5°C	(-22°F to 23°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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

**B - MECHANICAL DATA**

1 Commercial designation	1/2	[hp]
2 Displacement	16.80	[cm <sup>3</sup> ] (1.025 cu.in)
2.1 Bore	31.190	
2.2 Stroke	11.000	
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 <sup>2</sup> ] (2.84 to 4.27 psig)

**C - ELETRICAL 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	72-88(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection (external)	T0059/G6	
6 Start winding resistance	18.58	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.21	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	17.00	[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			<b>ASHRAELBP32</b> Fan		Evaporating temperature	<b>-23.3°C (-9.94°F)</b>		
					(Condensing temperature	<b>54.4°C (129.92°F)</b>		
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]
1490	375	437	340	2.35	8.47	4.38	1.10	1.28

**E - PERFORMANCE - CURVES**

TEST CONDITIONS: @220V50Hz			<b>ASHRAE32</b> Fan		(Condensing temperature <b>35°C (+95°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]
<b>-30 (-22)</b>	1146	289	336	257	2.13	6.49	4.45	1.12	1.30
<b>-25 (-13)</b>	1514	382	444	299	2.22	8.60	5.08	1.28	1.49
<b>-20 (- 4)</b>	1979	499	580	344	2.35	11.27	5.75	1.45	1.69
<b>-15 (+ 5)</b>	2541	640	745	394	2.51	14.51	6.46	1.63	1.89
<b>-10 (+14)</b>	3201	807	938	447	2.71	18.34	7.17	1.81	2.10
<b>-5 (+23)</b>	3959	998	1160	504	2.94	22.78	7.86	1.98	2.30

TEST CONDITIONS: @220V50Hz			<b>ASHRAE32</b> Fan		(Condensing temperature <b>45°C (+113°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]
<b>-26 (-23)</b>	<del>1088</del>	<del>262</del>	<del>327</del>	<del>262</del>	<del>2.26</del>	<del>8.13</del>	<del>4.02</del>	<del>1.08</del>	<del>1.39</del>
<b>-20 (- 4)</b>	1886	475	553	363	2.42	10.73	5.19	1.31	1.52
<b>-15 (+ 5)</b>	2426	611	711	420	2.61	13.85	5.77	1.45	1.69
<b>-10 (+14)</b>	3059	771	896	483	2.85	17.53	6.34	1.60	1.86
<b>-5 (+23)</b>	3786	954	1109	553	3.13	21.78	6.86	1.73	2.01

TEST CONDITIONS: @220V50Hz			<b>ASHRAE32</b> 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]
<b>-30 (-22)</b>	1005	253	294	270	2.15	5.69	3.73	0.94	1.09
<b>-25 (-13)</b>	1345	339	394	320	2.29	7.64	4.20	1.06	1.23
<b>-20 (- 4)</b>	1774	447	520	379	2.48	10.09	4.68	1.18	1.37
<b>-15 (+ 5)</b>	2290	577	671	446	2.72	13.07	5.14	1.29	1.50
<b>-10 (+14)</b>	2894	729	848	522	3.01	16.58	5.55	1.40	1.63
<b>-5 (+23)</b>	3587	904	1051	607	3.35	20.64	5.91	1.49	1.73

**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		