

COMPRESSOR DEFINITION

Designation	NE K2140Z
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	269GG71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 60	[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 - 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	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	16.80	[cm ³] (1.025 cu.in)
2.1 Bore [mm]	31.190	
2.2 Stroke [mm]	22.000	
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	[kg] (24.25 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-68-31	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0793/J5	
6 Start winding resistance	6.54	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.89	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	40.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ARILBP Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 48.9°C (120.02°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]
1332	336	390	415	5.96	10.24	3.21	0.81	0.94

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ARI4 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]
-30	(-22)	1118	282	328	326	5.46	7.43	3.42	0.86	1.00
-25	(-13)	1501	378	440	379	5.76	10.02	3.96	1.00	1.16
-20	(- 4)	1974	498	579	435	6.09	13.22	4.54	1.15	1.33
-15	(+ 5)	2539	640	744	494	6.46	17.08	5.14	1.30	1.51
-10	(+14)	3194	805	936	557	6.86	21.61	5.74	1.45	1.68
-5	(+23)	3940	993	1154	623	7.32	26.84	6.32	1.59	1.85

TEST CONDITIONS: @115V60Hz		ARI4 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]
-30	(-22)	954	240	279	334	5.52	7.01	2.87	0.72	0.84
-25	(-13)	1290	325	378	390	5.82	9.51	3.31	0.83	0.97
-20	(- 4)	1715	432	503	452	6.17	12.68	3.79	0.95	1.11
-15	(+ 5)	2227	561	653	520	6.60	16.56	4.28	1.08	1.25
-10	(+14)	2827	712	828	594	7.10	21.16	4.76	1.20	1.40
-5	(+23)	3515	886	1030	674	7.68	26.51	5.23	1.32	1.53

TEST CONDITIONS: @115V60Hz		ARI4 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]
-30	(-22)	805	203	236	342	5.60	6.62	2.35	0.59	0.69
-25	(-13)	1072	270	314	401	5.88	8.86	2.68	0.68	0.79
-20	(- 4)	1425	359	417	469	6.26	11.83	3.04	0.77	0.89
-15	(+ 5)	1862	469	546	545	6.73	15.55	3.42	0.86	1.00
-10	(+14)	2383	601	698	631	7.32	20.05	3.78	0.95	1.11
-5	(+23)	2990	753	876	725	8.02	25.36	4.12	1.04	1.21

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		