

### COMPRESSOR DEFINITION

Designation	NE U6212Z
Nominal Voltage/Frequency	200-230 V 50 Hz / 208-230 V 60 Hz
Engineering Number	269MB51

### 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	CSCR		
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	14.28	[cm <sup>3</sup> ] (0.871 cu.in)
2.1 Bore [mm]	30.157	
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	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL 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	Voltage Relay	
2.1 Starting device	RVA3H3C-108	
3 Start capacitor	108-130(330)	[μF(VAC minimum)]
4 Run capacitor	12.5(400)	[μF(VAC minimum)]
5 Motor protection	T0834/G9	
6 Start winding resistance	10.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.59	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	26.00/26.00	[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	VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: <b>@208V60Hz</b>			<b>ASHRAEHBP46</b> <b>Fan</b>		Evaporating temperature (Condensing temperature		<b>7.2°C (44.96°F)</b> <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]
5796	1461	1698	693	3.37	37.58	8.36	2.11	2.45

### E - PERFORMANCE - CURVES

TEST CONDITIONS: <b>@208V50Hz</b>			<b>ASHRAE46</b> <b>Fan</b>		(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>-15</b>	<b>(+ 5)</b>	2407	607	705	317	1.96	13.02	7.60	1.91	2.23
<b>-10</b>	<b>(+14)</b>	3047	768	893	347	2.21	16.54	8.78	2.21	2.57
<b>-5</b>	<b>(+23)</b>	3816	962	1118	381	2.30	20.79	10.02	2.52	2.93
<b>0</b>	<b>(+32)</b>	4713	1188	1381	418	2.36	25.79	11.27	2.84	3.30
<b>+5</b>	<b>(+41)</b>	5738	1446	1681	458	2.48	31.57	12.52	3.15	3.67
<b>+10</b>	<b>(+50)</b>	6890	1736	2019	502	2.80	38.14	13.74	3.46	4.03

TEST CONDITIONS: <b>@208V50Hz</b>			<b>ASHRAE46</b> <b>Fan</b>		(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>-15</b>	<b>(+ 5)</b>	2129	537	624	339	2.06	12.44	6.27	1.58	1.84
<b>-10</b>	<b>(+14)</b>	2706	682	793	376	2.31	15.87	7.20	1.81	2.11
<b>-5</b>	<b>(+23)</b>	3402	857	997	415	2.42	20.03	8.20	2.07	2.40
<b>0</b>	<b>(+32)</b>	4218	1063	1236	457	2.51	24.95	9.24	2.33	2.71
<b>+5</b>	<b>(+41)</b>	5151	1298	1509	501	2.68	30.66	10.30	2.59	3.02
<b>+10</b>	<b>(+50)</b>	6202	1563	1817	547	3.06	37.17	11.34	2.86	3.32

TEST CONDITIONS: <b>@208V50Hz</b>			<b>ASHRAE46</b> <b>Fan</b>		(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>-15</b>	<b>(+ 5)</b>	1852	467	543	358	2.19	11.80	5.18	1.31	1.52
<b>-10</b>	<b>(+14)</b>	2370	597	695	403	2.38	15.16	5.87	1.48	1.72
<b>-5</b>	<b>(+23)</b>	2999	756	879	451	2.44	19.27	6.65	1.68	1.95
<b>0</b>	<b>(+32)</b>	3738	942	1095	499	2.48	24.14	7.49	1.89	2.19
<b>+5</b>	<b>(+41)</b>	4585	1155	1344	549	2.62	29.81	8.36	2.11	2.45
<b>+10</b>	<b>(+50)</b>	5540	1396	1623	600	2.99	36.28	9.24	2.33	2.71

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 35°C (+95°F))					
@208V60Hz		Fan								
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)	2820	711	826	365	1.79	15.25	7.72	1.94	2.26
-10	(+14)	3550	895	1040	408	1.99	19.27	8.70	2.19	2.55
-5	(+23)	4422	1114	1296	457	2.22	24.09	9.68	2.44	2.84
0	(+32)	5436	1370	1593	511	2.48	29.75	10.64	2.68	3.12
+5	(+41)	6594	1662	1932	571	2.77	36.27	11.54	2.91	3.38
+10	(+50)	7894	1989	2313	637	3.10	43.71	12.39	3.12	3.63

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@208V60Hz		Fan								
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)	2498	630	732	392	1.90	14.60	6.37	1.60	1.87
-10	(+14)	3164	797	927	441	2.13	18.55	7.18	1.81	2.10
-5	(+23)	3964	999	1162	494	2.39	23.34	8.03	2.02	2.35
0	(+32)	4899	1234	1435	552	2.67	28.98	8.88	2.24	2.60
+5	(+41)	5969	1504	1749	615	2.98	35.52	9.71	2.45	2.85
+10	(+50)	7174	1808	2102	682	3.31	42.99	10.51	2.65	3.08

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@208V60Hz		Fan								
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)	2188	551	641	411	1.99	13.94	5.32	1.34	1.56
-10	(+14)	2780	701	815	469	2.27	17.78	5.93	1.49	1.74
-5	(+23)	3499	882	1025	530	2.56	22.48	6.59	1.66	1.93
0	(+32)	4344	1095	1273	595	2.87	28.06	7.29	1.84	2.14
+5	(+41)	5317	1340	1558	664	3.21	34.57	8.01	2.02	2.35
+10	(+50)	6417	1617	1880	736	3.56	42.03	8.72	2.20	2.56

### 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		