

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	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 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	14.28	[cm ³] (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 ²]

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	MTRPH-55-65	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRA 6981-3259	
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: @208V60Hz			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]
5665	1428	1660	760	4.29	36.73	7.45	1.88	2.18

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V50Hz		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)	2387	601	699	334	3.03	12.91	7.15	1.80	2.10
-10	(+14)	3017	760	884	367	3.11	16.37	8.22	2.07	2.41
-5	(+23)	3775	951	1106	404	3.21	20.56	9.34	2.35	2.74
0	(+32)	4660	1174	1365	444	3.34	25.50	10.48	2.64	3.07
+5	(+41)	5672	1429	1662	488	3.50	31.20	11.62	2.93	3.41
+10	(+50)	6810	1716	1995	535	3.68	37.70	12.74	3.21	3.73

TEST CONDITIONS: @208V50Hz		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)	2118	534	621	362	3.10	12.37	5.85	1.47	1.71
-10	(+14)	2688	677	788	402	3.21	15.76	6.69	1.69	1.96
-5	(+23)	3376	851	989	444	3.34	19.88	7.60	1.92	2.23
0	(+32)	4183	1054	1226	490	3.50	24.75	8.54	2.15	2.50
+5	(+41)	5109	1287	1497	538	3.68	30.40	9.50	2.39	2.78
+10	(+50)	6151	1550	1802	589	3.88	36.86	10.45	2.63	3.06

TEST CONDITIONS: @208V50Hz		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)	1820	459	533	381	3.16	11.59	4.79	1.21	1.40
-10	(+14)	2321	585	680	430	3.29	14.84	5.39	1.36	1.58
-5	(+23)	2932	739	859	482	3.46	18.84	6.07	1.53	1.78
0	(+32)	3652	920	1070	536	3.65	23.59	6.81	1.72	2.00
+5	(+41)	4482	1130	1313	592	3.87	29.14	7.57	1.91	2.22
+10	(+50)	5421	1366	1588	650	4.11	35.50	8.34	2.10	2.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V60Hz		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)	2795	704	819	380	2.74	15.11	7.35	1.85	2.15	
-10 (+14)	3511	885	1029	428	2.90	19.05	8.21	2.07	2.40	
-5 (+23)	4365	1100	1279	483	3.11	23.78	9.04	2.28	2.65	
0 (+32)	5357	1350	1570	544	3.36	29.31	9.85	2.48	2.88	
+5 (+41)	6488	1635	1901	612	3.65	35.69	10.60	2.67	3.11	
+10 (+50)	7757	1955	2273	687	3.98	42.95	11.28	2.84	3.31	

TEST CONDITIONS: @208V60Hz		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)	2468	622	723	410	2.84	14.42	6.02	1.52	1.76	
-10 (+14)	3131	789	917	464	3.04	18.36	6.74	1.70	1.98	
-5 (+23)	3921	988	1149	525	3.27	23.08	7.46	1.88	2.19	
0 (+32)	4837	1219	1417	592	3.55	28.62	8.17	2.06	2.39	
+5 (+41)	5881	1482	1723	665	3.87	35.00	8.85	2.23	2.59	
+10 (+50)	7051	1777	2066	743	4.22	42.25	9.49	2.39	2.78	

TEST CONDITIONS: @208V60Hz		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)	2121	535	622	431	2.91	13.52	4.92	1.24	1.44	
-10 (+14)	2707	682	793	497	3.16	17.31	5.44	1.37	1.60	
-5 (+23)	3408	859	999	569	3.45	21.89	5.99	1.51	1.76	
0 (+32)	4224	1064	1238	645	3.78	27.28	6.54	1.65	1.92	
+5 (+41)	5155	1299	1510	727	4.15	33.51	7.09	1.79	2.08	
+10 (+50)	6201	1563	1817	814	4.56	40.61	7.61	1.92	2.23	

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		