

COMPRESSOR DEFINITION

Designation	NE U6214E
Nominal Voltage/Frequency	200-230 V 50 Hz / 208-230 V 60 Hz
Engineering Number	959SB51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-422D		
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 - 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	21.8	[kgf/cm ²] (310 psig)	/ °C - °F
9.2 Peak	24.6	[kgf/cm ²] (350 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	3/4	[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)	11.62	[kg] (25.62 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	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	MRA38168-3259	
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)	25.00/25.00	[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		

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]
6639	1673	1945	997	5.50		6.66	1.68	1.95

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)	3110	784	911	432	3.37	0.00	7.20	1.81	2.11
-10	(+14)	3869	975	1134	476	3.51	0.00	8.13	2.05	2.38
-5	(+23)	4760	1199	1395	525	3.67	0.00	9.06	2.28	2.66
0	(+32)	5784	1457	1695	579	3.87	0.00	9.99	2.52	2.93
+5	(+41)	6941	1749	2034	637	4.10	0.00	10.90	2.75	3.19
+10	(+50)	8232	2075	2412	700	4.36	0.00	11.77	2.96	3.45

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)	2716	685	796	466	3.46	0.00	5.83	1.47	1.71
-10	(+14)	3394	855	995	517	3.64	0.00	6.57	1.66	1.92
-5	(+23)	4191	1056	1228	572	3.84	0.00	7.33	1.85	2.15
0	(+32)	5109	1287	1497	630	4.06	0.00	8.11	2.04	2.38
+5	(+41)	6146	1549	1801	692	4.32	0.00	8.88	2.24	2.60
+10	(+50)	7305	1841	2141	758	4.60	0.00	9.64	2.43	2.82

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)	2292	578	672	493	3.54	0.00	4.65	1.17	1.36
-10	(+14)	2861	721	838	556	3.77	0.00	5.15	1.30	1.51
-5	(+23)	3537	891	1036	621	4.02	0.00	5.69	1.43	1.67
0	(+32)	4319	1088	1266	689	4.30	0.00	6.27	1.58	1.84
+5	(+41)	5210	1313	1527	759	4.60	0.00	6.87	1.73	2.01
+10	(+50)	6208	1565	1819	832	4.93	0.00	7.47	1.88	2.19

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)	3651	920	1070	508	3.22	0.00	7.18	1.81	2.11	
-10 (+14)	4528	1141	1327	570	3.46	0.00	7.95	2.00	2.33	
-5 (+23)	5533	1394	1621	643	3.77	0.00	8.60	2.17	2.52	
0 (+32)	6666	1680	1953	729	4.15	0.00	9.14	2.30	2.68	
+5 (+41)	7928	1998	2323	827	4.60	0.00	9.59	2.42	2.81	
+10 (+50)	9315	2347	2730	938	5.12	0.00	9.93	2.50	2.91	

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)	3185	803	933	546	3.35	0.00	5.83	1.47	1.71	
-10 (+14)	3965	999	1162	613	3.63	0.00	6.47	1.63	1.90	
-5 (+23)	4860	1225	1424	692	3.98	0.00	7.02	1.77	2.06	
0 (+32)	5869	1479	1720	784	4.40	0.00	7.48	1.89	2.19	
+5 (+41)	6991	1762	2048	888	4.89	0.00	7.87	1.98	2.31	
+10 (+50)	8224	2072	2410	1005	5.45	0.00	8.19	2.06	2.40	

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)	2691	678	789	576	3.48	0.00	4.67	1.18	1.37	
-10 (+14)	3361	847	985	655	3.81	0.00	5.13	1.29	1.50	
-5 (+23)	4131	1041	1210	747	4.22	0.00	5.53	1.39	1.62	
0 (+32)	4999	1260	1465	852	4.71	0.00	5.87	1.48	1.72	
+5 (+41)	5965	1503	1748	969	5.27	0.00	6.15	1.55	1.80	
+10 (+50)	7028	1771	2059	1100	5.90	0.00	6.39	1.61	1.87	

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		