

COMPRESSOR DEFINITION

Designation	NE 6181E
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	262LD71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	208-230 / 60	[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 pressures/temperature			
9.1 Operating (gauge)	21.7	[kgf/cm ²] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7.28	[cm ³] (0.444 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	13.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
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	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0012	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0645/G9	
6 Start winding resistance	25.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	18.20	[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)	3.60	[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]
3954	996	1159	511	2.98	24.42	7.74	1.95	2.27

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)	1696	427	497	265	2.16	8.91	6.40	1.61	1.87
-10	(+14)	2151	542	630	288	2.25	11.34	7.46	1.88	2.19
-5	(+23)	2699	680	791	309	2.33	14.30	8.74	2.20	2.56
0	(+32)	3338	841	978	327	2.42	17.78	10.22	2.58	3.00
+5	(+41)	4069	1025	1192	342	2.51	21.82	11.91	3.00	3.49
+10	(+50)	4891	1233	1433	354	2.59	26.43	13.80	3.48	4.04

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)	1466	369	430	272	2.18	8.22	5.41	1.36	1.58
-10	(+14)	1876	473	550	302	2.31	10.57	6.21	1.57	1.82
-5	(+23)	2368	597	694	330	2.44	13.41	7.16	1.80	2.10
0	(+32)	2941	741	862	356	2.57	16.75	8.23	2.07	2.41
+5	(+41)	3596	906	1054	381	2.70	20.63	9.43	2.38	2.76
+10	(+50)	4333	1092	1270	404	2.83	25.05	10.75	2.71	3.15

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)	1226	309	359	280	2.20	7.40	4.36	1.10	1.28
-10	(+14)	1588	400	465	317	2.37	9.63	5.02	1.27	1.47
-5	(+23)	2022	509	592	352	2.55	12.32	5.75	1.45	1.68
0	(+32)	2527	637	740	388	2.72	15.50	6.52	1.64	1.91
+5	(+41)	3103	782	909	422	2.90	19.19	7.35	1.85	2.15
+10	(+50)	3751	945	1099	456	3.07	23.40	8.22	2.07	2.41

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]
-15	(+ 5)	1984	500	581	310	2.16	10.42	6.39	1.61	1.87
-10	(+14)	2517	634	738	337	2.25	13.27	7.47	1.88	2.19
-5	(+23)	3157	796	925	361	2.33	16.72	8.75	2.21	2.56
0	(+32)	3905	984	1144	382	2.42	20.80	10.23	2.58	3.00
+5	(+41)	4760	1200	1395	400	2.51	25.53	11.91	3.00	3.49
+10	(+50)	5723	1442	1677	415	2.59	30.93	13.77	3.47	4.04

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]
-15	(+ 5)	1715	432	503	319	2.18	9.62	5.40	1.36	1.58
-10	(+14)	2195	553	643	353	2.31	12.37	6.21	1.57	1.82
-5	(+23)	2770	698	812	386	2.44	15.68	7.16	1.80	2.10
0	(+32)	3441	867	1008	417	2.57	19.60	8.23	2.07	2.41
+5	(+41)	4207	1060	1233	446	2.70	24.13	9.43	2.38	2.76
+10	(+50)	5069	1277	1485	473	2.83	29.31	10.74	2.71	3.15

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]
-15	(+ 5)	1434	361	420	328	2.20	8.65	4.36	1.10	1.28
-10	(+14)	1858	468	545	371	2.37	11.27	5.02	1.27	1.47
-5	(+23)	2366	596	693	412	2.55	14.42	5.75	1.45	1.68
0	(+32)	2957	745	866	453	2.72	18.14	6.53	1.65	1.91
+5	(+41)	3631	915	1064	494	2.90	22.45	7.36	1.85	2.16
+10	(+50)	4389	1106	1286	533	3.07	27.38	8.22	2.07	2.41

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+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		