

COMPRESSOR DEFINITION

Designation	NE 6181GK
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	952LN51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	200-240 / 50	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 0°C	(-4°F to 32°F)	
5 Motor type	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion 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)	25.7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 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	ESTER / ISO22	
4 Weight (with oil charge)	11.15	[kg] (24.58 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	200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	9660A-XX-145	
3 Start capacitor	72-88(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0645/G6	
6 Start winding resistance	18.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.69	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			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]
3506	884	1027	468	3.04	28.86	7.49	1.89	2.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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]
-20 (- 4)	1493	376	437	260	2.21	9.48	5.73	1.45	1.68
-15 (+ 5)	1905	480	558	286	2.30	12.16	6.67	1.68	1.95
-10 (+14)	2422	610	710	310	2.39	15.55	7.82	1.97	2.29
-5 (+23)	3043	767	892	332	2.47	19.69	9.16	2.31	2.68
0 (+32)	3768	950	1104	353	2.56	24.60	10.67	2.69	3.13
+5 (+41)	4597	1159	1347	372	2.65	30.31	12.33	3.11	3.61
+10 (+50)	5530	1394	1621	389	2.74	36.85	14.11	3.55	4.13

TEST CONDITIONS: @200V50Hz			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]
-20 (- 4)	1219	307	357	260	2.21	8.54	4.70	1.18	1.38
-15 (+ 5)	1585	399	464	293	2.33	11.17	5.41	1.36	1.59
-10 (+14)	2038	514	597	324	2.45	14.47	6.27	1.58	1.84
-5 (+23)	2579	650	756	355	2.57	18.45	7.27	1.83	2.13
0 (+32)	3207	808	940	384	2.69	23.16	8.36	2.11	2.45
+5 (+41)	3922	988	1149	412	2.81	28.63	9.53	2.40	2.79
+10 (+50)	4724	1190	1384	439	2.94	34.87	10.76	2.71	3.15

TEST CONDITIONS: @200V50Hz			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]
-20 (- 4)	935	236	274	260	2.20	7.36	3.59	0.91	1.05
-15 (+ 5)	1252	315	367	300	2.35	9.91	4.17	1.05	1.22
-10 (+14)	1638	413	480	339	2.51	13.07	4.83	1.22	1.42
-5 (+23)	2096	528	614	378	2.66	16.88	5.55	1.40	1.63
0 (+32)	2623	661	769	415	2.82	21.35	6.31	1.59	1.85
+5 (+41)	3221	812	944	452	2.98	26.53	7.08	1.78	2.08
+10 (+50)	3888	980	1139	488	3.15	32.45	7.84	1.98	2.30

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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]
-20 (- 4)	1747	440	512	304	2.21	11.09	5.75	1.45	1.68	
-15 (+ 5)	2229	562	653	334	2.30	14.23	6.67	1.68	1.95	
-10 (+14)	2833	714	830	363	2.39	18.19	7.81	1.97	2.29	
-5 (+23)	3560	897	1043	389	2.47	23.03	9.15	2.31	2.68	
0 (+32)	4409	1111	1292	413	2.56	28.78	10.67	2.69	3.13	
+5 (+41)	5381	1356	1577	435	2.65	35.47	12.34	3.11	3.62	
+10 (+50)	6475	1632	1897	455	2.74	43.14	14.15	3.57	4.15	

TEST CONDITIONS: @200V60Hz		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]
-20 (- 4)	1427	360	418	304	2.21	9.99	4.70	1.18	1.38	
-15 (+ 5)	1854	467	543	343	2.33	13.07	5.41	1.36	1.59	
-10 (+14)	2384	601	699	380	2.45	16.92	6.27	1.58	1.84	
-5 (+23)	3017	760	884	415	2.57	21.59	7.27	1.83	2.13	
0 (+32)	3753	946	1100	449	2.69	27.11	8.37	2.11	2.45	
+5 (+41)	4590	1157	1345	481	2.81	33.50	9.55	2.41	2.80	
+10 (+50)	5530	1393	1620	512	2.94	40.82	10.80	2.72	3.17	

TEST CONDITIONS: @200V60Hz		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]
-20 (- 4)	1094	276	321	304	2.20	8.61	3.60	0.91	1.05	
-15 (+ 5)	1464	369	429	351	2.35	11.59	4.17	1.05	1.22	
-10 (+14)	1917	483	562	397	2.51	15.29	4.83	1.22	1.42	
-5 (+23)	2452	618	718	442	2.66	19.74	5.55	1.40	1.63	
0 (+32)	3069	773	899	486	2.82	24.99	6.31	1.59	1.85	
+5 (+41)	3769	950	1104	529	2.98	31.05	7.09	1.79	2.08	
+10 (+50)	4551	1147	1333	571	3.15	37.97	7.86	1.98	2.30	

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		