

COMPRESSOR DEFINITION

Designation	NE 6181GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	952LA51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 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 - 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)	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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0029	
3 Start capacitor	53-64(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0606/G6	
6 Start winding resistance	36.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.44	[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: @220V50Hz			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]
3428	864	1004	460	2.81	28.22	7.45	1.88	2.18

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	1382	348	405	250	2.18	8.77	5.53	1.39	1.62
-15	(+ 5)	1824	460	534	281	2.24	11.64	6.48	1.63	1.90
-10	(+14)	2357	594	691	309	2.30	15.14	7.63	1.92	2.24
-5	(+23)	2982	751	874	333	2.36	19.30	8.96	2.26	2.63
0	(+32)	3699	932	1084	354	2.42	24.14	10.44	2.63	3.06
+5	(+41)	4509	1136	1321	372	2.48	29.72	12.05	3.04	3.53
+10	(+50)	5411	1364	1585	386	2.54	36.05	13.76	3.47	4.03

TEST CONDITIONS: @220V50Hz			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)	1162	293	340	251	2.11	8.14	4.63	1.17	1.36
-15	(+ 5)	1520	383	446	287	2.21	10.71	5.30	1.34	1.55
-10	(+14)	1967	496	576	320	2.31	13.95	6.14	1.55	1.80
-5	(+23)	2501	630	733	351	2.41	17.89	7.12	1.79	2.09
0	(+32)	3124	787	915	380	2.51	22.57	8.23	2.07	2.41
+5	(+41)	3835	967	1124	407	2.61	28.02	9.43	2.38	2.76
+10	(+50)	4636	1168	1358	433	2.71	34.27	10.71	2.70	3.14

TEST CONDITIONS: @220V50Hz			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)	932	235	273	252	2.05	7.33	3.69	0.93	1.08
-15	(+ 5)	1204	303	353	292	2.19	9.53	4.13	1.04	1.21
-10	(+14)	1560	393	457	332	2.33	12.45	4.70	1.19	1.38
-5	(+23)	2000	504	586	370	2.47	16.11	5.40	1.36	1.58
0	(+32)	2525	636	740	408	2.61	20.55	6.19	1.56	1.81
+5	(+41)	3135	790	919	445	2.75	25.81	7.05	1.78	2.06
+10	(+50)	3830	965	1122	482	2.89	31.91	7.95	2.00	2.33

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		