

COMPRESSOR DEFINITION

Designation	NE 6181GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	952LG71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-58	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0060/G9	
6 Start winding resistance	8.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.04	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	34.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
4264	1075	1249	584	6.61	35.10	7.30	1.84	2.14

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	1835	462	538	334	4.79	11.65	5.49	1.38	1.61
-15	(+ 5)	2350	592	689	365	5.00	15.00	6.44	1.62	1.89
-10	(+14)	2972	749	871	396	5.21	19.09	7.50	1.89	2.20
-5	(+23)	3701	933	1084	426	5.42	23.95	8.69	2.19	2.55
0	(+32)	4538	1144	1330	454	5.62	29.62	9.99	2.52	2.93
+5	(+41)	5483	1382	1607	482	5.82	36.15	11.40	2.87	3.34
+10	(+50)	6538	1647	1916	508	6.01	43.57	12.91	3.25	3.78

TEST CONDITIONS: @115V60Hz			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)	1467	370	430	318	4.68	10.27	4.61	1.16	1.35
-15	(+ 5)	1940	489	568	363	4.97	13.67	5.35	1.35	1.57
-10	(+14)	2501	630	733	405	5.26	17.75	6.17	1.55	1.81
-5	(+23)	3152	794	924	446	5.55	22.55	7.06	1.78	2.07
0	(+32)	3892	981	1140	485	5.84	28.11	8.03	2.02	2.35
+5	(+41)	4722	1190	1384	522	6.12	34.47	9.05	2.28	2.65
+10	(+50)	5643	1422	1653	557	6.40	41.67	10.14	2.55	2.97

TEST CONDITIONS: @115V60Hz			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)	1084	273	318	302	4.57	8.53	3.59	0.90	1.05
-15	(+ 5)	1512	381	443	360	4.94	11.97	4.20	1.06	1.23
-10	(+14)	2010	507	589	415	5.32	16.04	4.85	1.22	1.42
-5	(+23)	2579	650	756	467	5.69	20.77	5.52	1.39	1.62
0	(+32)	3219	811	943	517	6.07	26.21	6.22	1.57	1.82
+5	(+41)	3931	991	1152	564	6.44	32.39	6.94	1.75	2.03
+10	(+50)	4715	1188	1382	608	6.82	39.35	7.68	1.93	2.25

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		