

COMPRESSOR DEFINITION

Designation	NE K2150GK
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	959PE71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115-127 / 60	[V / Hz]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSCR		
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 temperature			
9.1 Operating (gauge)	25.2	[kgf/cm ²] (358 psig)	/ °C - °F
9.2 Peak (gauge)	28.3	[kgf/cm ²] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[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)	11.5	[kg] (25.35 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 - (Single phase)		
2 Starting device type	Voltage Relay		
2.1 Starting device	RVABAD3C-121		
3 Start capacitor	189-227(250)	[µF(VAC minimum)]	
4 Run capacitor	25(400)	[µF(VAC minimum)]	
5 Motor protection	T0736/G9		
6 Start winding resistance	4.14	[at 25°C (77°F)] +/- 8%	
7 Run winding resistance	0.81	[at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (60 Hz)	42.00	[A] - Measured according to UL 984	
9 FLA - Full load amperage L/MBP (60 Hz)	6.94	[A] - Measured according to UL 984	
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984	
11 Approval boards certification	IMTRO		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F))	
Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
2470	622	724	531	5.35	16.75	4.65	1.17	1.36

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(Condensing temperature 35°C (+95°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	1173	296	344	309	3.58	7.88	3.78	0.95	1.11
-35 (-31)	1527	385	447	356	3.85	10.30	4.30	1.08	1.28
-30 (-22)	1987	501	582	405	4.20	13.44	4.91	1.24	1.44
-25 (-13)	2552	643	748	457	4.62	17.34	5.57	1.40	1.63
-20 (- 4)	3224	813	945	512	5.10	22.02	6.29	1.58	1.84
-15 (+ 5)	4002	1009	1173	569	5.84	27.50	7.03	1.77	2.08
-10 (+14)	4888	1231	1432	629	6.23	33.80	7.78	1.98	2.28

TEST CONDITIONS: @115V60Hz		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	1045	263	306	312	3.62	7.01	3.36	0.85	0.98
-35 (-31)	1411	356	413	385	3.94	9.50	3.88	0.98	1.14
-30 (-22)	1876	473	550	422	4.34	12.67	4.48	1.12	1.31
-25 (-13)	2440	615	715	482	4.80	16.54	5.08	1.28	1.48
-20 (- 4)	3103	782	909	546	5.31	21.15	5.88	1.43	1.67
-15 (+ 5)	3865	974	1133	613	5.89	26.50	6.30	1.59	1.85
-10 (+14)	4728	1191	1385	684	6.53	32.63	6.90	1.74	2.02

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(Condensing temperature 55°C (+131°F))				
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	830	209	243	309	3.57	5.55	2.89	0.68	0.79
-35 (-31)	1217	307	357	389	3.98	8.18	3.29	0.83	0.96
-30 (-22)	1697	428	497	433	4.45	11.43	3.90	0.98	1.14
-25 (-13)	2268	572	665	502	4.98	15.35	4.51	1.14	1.32
-20 (- 4)	2933	739	859	576	5.57	19.95	5.10	1.29	1.49
-15 (+ 5)	3689	930	1081	654	6.22	25.24	5.66	1.43	1.66
-10 (+14)	4538	1144	1330	736	6.92	31.27	6.16	1.55	1.80

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	6.45 +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		