

### COMPRESSOR DEFINITION

Designation	<b>NJ 9238GK</b>
Nominal Voltage/Frequency	<b>230 V 60 Hz</b>
Engineering Number	<b>943RJ01</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	230 / 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	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 <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak (gauge)	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1 1/2	[hp]
2 Displacement	32.67	[cm <sup>3</sup> ] (1.994 cu.in)
2.1 Bore [mm]	41.770	
2.2 Stroke [mm]	23.850	
3 Lubricant charge	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	22.1	[kg] (48.72 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA4AL3C-649	
3 Start capacitor	130-156(330)	[µF(VAC minimum)]
4 Run capacitor	30(400)	[µF(VAC minimum)]
5 Motor protection	GA3RNU0002	
6 Start winding resistance	4.01	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.23	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	59.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	10.25	[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: @230V60Hz			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]
17690	4458	5184	2545	11.80	145.64	6.95	1.75	2.04

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz			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)	8361	2107	2450	1370	6.35	53.05	6.10	1.54	1.79
-15	(+ 5)	10512	2649	3080	1504	6.95	67.10	7.00	1.76	2.05
-10	(+14)	13036	3285	3820	1653	7.63	83.75	7.88	1.99	2.31
-5	(+23)	15932	4015	4669	1818	8.38	103.11	8.76	2.21	2.57
0	(+32)	19199	4838	5626	1997	9.21	125.30	9.62	2.42	2.82
+5	(+41)	22836	5755	6692	2189	10.11	150.46	10.46	2.63	3.06
+10	(+50)	26843	6764	7866	2395	11.07	178.69	11.28	2.84	3.30

TEST CONDITIONS: @230V60Hz			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)	6973	1757	2043	1391	6.50	48.83	5.00	1.26	1.47
-15	(+ 5)	8959	2258	2625	1552	7.21	63.16	5.77	1.45	1.69
-10	(+14)	11221	2828	3288	1725	8.00	79.66	6.50	1.64	1.91
-5	(+23)	13759	3467	4032	1912	8.85	98.46	7.20	1.81	2.11
0	(+32)	16572	4176	4856	2110	9.77	119.68	7.86	1.98	2.30
+5	(+41)	19659	4954	5760	2319	10.74	143.46	8.48	2.14	2.49
+10	(+50)	23019	5801	6745	2538	11.77	169.90	9.06	2.28	2.65

TEST CONDITIONS: @230V60Hz			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)	5432	1369	1592	1413	6.57	42.77	3.85	0.97	1.13
-15	(+ 5)	7242	1825	2122	1598	7.41	57.31	4.53	1.14	1.33
-10	(+14)	9234	2327	2706	1793	8.30	73.62	5.15	1.30	1.51
-5	(+23)	11405	2874	3342	1999	9.24	91.82	5.71	1.44	1.67
0	(+32)	13755	3466	4031	2213	10.24	112.03	6.21	1.57	1.82
+5	(+41)	16283	4103	4771	2435	11.29	134.38	6.65	1.68	1.95
+10	(+50)	18989	4785	5564	2666	12.38	158.98	7.02	1.77	2.06

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	12.77 +0.08/+0.00	[mm]	(0.503" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	8 +0.07/+0.00	[mm]	(0.315" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted J		
3.3 PROCESS	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		