

### COMPRESSOR DEFINITION

Designation	<b>NJ 9232GS</b>
Nominal Voltage/Frequency	<b>380-420 V 50 Hz / 440-480 V 60 Hz</b>
Engineering Number	<b>947NM01</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	380-420 / 50	[ V / Hz ]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	3PHASE		
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	25.2	[kgf/cm <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1 1/4	[hp]
2 Displacement	26.11	[cm <sup>3</sup> ] (1.593 cu.in)
2.1 Bore [mm]	41.770	
2.2 Stroke [mm]	19.066	
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)	20.4	[kg] (44.97 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	380-420 V 50 Hz / 440-480 V 60 Hz 3 ~ (Three phase)	
2 Starting device type	3PHASE	
2.1 Starting device		
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	31HM129-36	
6 Start winding resistance	7.55	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.55	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IMQ	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @420V60Hz			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]
16093	4055	4716	1887	2.96	132.49	8.53	2.15	2.50

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @420V50Hz			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)	5822	1467	1706	850	1.66	36.97	6.84	1.72	2.01
-15	(+ 5)	7429	1872	2177	951	1.81	47.42	7.82	1.97	2.29
-10	(+14)	9413	2372	2758	1044	1.99	60.45	9.02	2.27	2.64
-5	(+23)	11774	2967	3450	1129	2.15	76.18	10.43	2.63	3.06
0	(+32)	14512	3657	4252	1206	2.29	94.73	12.03	3.03	3.52
+5	(+41)	17629	4442	5166	1275	2.38	116.21	13.79	3.48	4.04
+10	(+50)	21122	5323	6189	1335	2.41	140.75	15.70	3.96	4.60

TEST CONDITIONS: @420V50Hz			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)	4859	1224	1424	868	1.69	34.03	5.61	1.41	1.64
-15	(+ 5)	6300	1587	1846	982	1.87	44.40	6.41	1.62	1.88
-10	(+14)	8054	2030	2360	1094	2.06	57.17	7.35	1.85	2.15
-5	(+23)	10122	2551	2966	1203	2.26	72.43	8.41	2.12	2.46
0	(+32)	12504	3151	3664	1309	2.43	90.32	9.56	2.41	2.80
+5	(+41)	15200	3830	4454	1412	2.56	110.95	10.79	2.72	3.16
+10	(+50)	18210	4589	5336	1512	2.63	134.44	12.08	3.04	3.54

TEST CONDITIONS: @420V50Hz			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)	3859	972	1131	886	1.72	30.35	4.35	1.10	1.27
-15	(+ 5)	5123	1291	1501	1015	1.92	40.55	5.05	1.27	1.48
-10	(+14)	6637	1672	1945	1146	2.14	52.95	5.79	1.46	1.70
-5	(+23)	8401	2117	2462	1280	2.36	67.65	6.57	1.66	1.92
0	(+32)	10415	2625	3052	1416	2.57	84.79	7.35	1.85	2.15
+5	(+41)	12680	3195	3716	1554	2.74	104.47	8.11	2.04	2.38
+10	(+50)	15195	3829	4452	1694	2.85	126.82	8.84	2.23	2.59

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 35°C (+95°F))					
@420V60Hz		Fan								
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]
-20	(- 4)	6812	1717	1996	1027	1.94	43.25	6.63	1.67	1.94
-15	(+ 5)	8691	2190	2547	1138	2.13	55.48	7.64	1.93	2.24
-10	(+14)	11013	2775	3227	1240	2.33	70.72	8.88	2.24	2.60
-5	(+23)	13775	3471	4036	1334	2.52	89.13	10.33	2.60	3.03
0	(+32)	16979	4279	4975	1419	2.68	110.83	11.96	3.01	3.50
+5	(+41)	20625	5198	6044	1495	2.80	135.97	13.76	3.47	4.03
+10	(+50)	24713	6228	7242	1561	2.84	164.67	15.70	3.96	4.60

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@420V60Hz		Fan								
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]
-20	(- 4)	5685	1433	1666	1051	1.98	39.82	5.42	1.37	1.59
-15	(+ 5)	7371	1857	2160	1178	2.19	51.95	6.25	1.58	1.83
-10	(+14)	9423	2375	2761	1302	2.41	66.88	7.23	1.82	2.12
-5	(+23)	11843	2984	3470	1422	2.64	84.75	8.32	2.10	2.44
0	(+32)	14630	3687	4287	1539	2.84	105.68	9.52	2.40	2.79
+5	(+41)	17785	4482	5211	1653	3.00	129.82	10.79	2.72	3.16
+10	(+50)	21308	5370	6244	1763	3.10	157.31	12.12	3.05	3.55

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@420V60Hz		Fan								
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]
-20	(- 4)	4514	1138	1323	1076	2.01	35.51	4.19	1.06	1.23
-15	(+ 5)	5993	1510	1756	1219	2.25	47.44	4.91	1.24	1.44
-10	(+14)	7764	1957	2275	1366	2.50	61.95	5.69	1.43	1.67
-5	(+23)	9829	2477	2880	1514	2.76	79.15	6.50	1.64	1.90
0	(+32)	12186	3071	3571	1665	3.01	99.21	7.31	1.84	2.14
+5	(+41)	14837	3739	4348	1818	3.22	122.24	8.13	2.05	2.38
+10	(+50)	17782	4481	5211	1972	3.38	148.40	8.91	2.25	2.61

### F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard		
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		