

### COMPRESSOR DEFINITION

Designation	<b>NJ 2212GS</b>
Nominal Voltage/Frequency	<b>380-420 V 50 Hz / 440-480 V 60 Hz</b>
Engineering Number	<b>947AM01</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	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	3PHASE		
6 Starting torque	HST - Hight 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 1/2	[hp]
2 Displacement	34.38	[cm <sup>3</sup> ] (2.098 cu.in)
2.1 Bore [mm]	42.850	
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)	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	34HM260-50	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - UL - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @380V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]	
5075	1279	1487	1144	2.40	34.41	4.44	1.12	1.30	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @380V50Hz		ASHRAE32 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]
-40	(-40)	2380	600	697	616	1.85	16.00	3.84	0.97	1.13
-35	(-31)	3274	825	959	756	1.98	22.08	4.35	1.10	1.27
-30	(-22)	4405	1110	1291	896	2.12	29.80	4.93	1.24	1.44
-25	(-13)	5773	1455	1692	1036	2.27	39.22	5.57	1.40	1.63
-20	(- 4)	7379	1859	2162	1176	2.44	50.39	6.27	1.58	1.84
-15	(+ 5)	9222	2324	2702	1316	2.63	63.36	7.00	1.76	2.05
-10	(+14)	11302	2848	3312	1456	2.83	78.19	7.76	1.96	2.27

TEST CONDITIONS: @380V50Hz		ASHRAE32 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]
-40	(-40)	1910	481	560	573	1.80	12.81	3.33	0.84	0.98
-35	(-31)	2806	707	822	734	1.94	18.88	3.82	0.96	1.12
-30	(-22)	3924	989	1150	899	2.11	26.50	4.36	1.10	1.28
-25	(-13)	5264	1327	1542	1068	2.30	35.69	4.92	1.24	1.44
-20	(- 4)	6827	1720	2000	1240	2.52	46.53	5.50	1.39	1.61
-15	(+ 5)	8612	2170	2523	1416	2.76	59.05	6.09	1.53	1.78
-10	(+14)	10620	2676	3112	1596	3.02	73.31	6.67	1.68	1.95

TEST CONDITIONS: @380V50Hz		ASHRAE32 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]
-40	(-40)	1342	338	393	490	1.77	8.98	2.76	0.69	0.81
-35	(-31)	2190	552	642	669	1.91	14.71	3.27	0.82	0.96
-30	(-22)	3245	818	951	855	2.08	21.87	3.79	0.95	1.11
-25	(-13)	4507	1136	1321	1049	2.28	30.50	4.30	1.08	1.26
-20	(- 4)	5977	1506	1751	1250	2.52	40.65	4.79	1.21	1.40
-15	(+ 5)	7655	1929	2243	1459	2.80	52.38	5.26	1.33	1.54
-10	(+14)	9540	2404	2795	1675	3.11	65.74	5.68	1.43	1.66

### 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	9.6 +0.07/+0.00	[mm]	(0.378" +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		