

### COMPRESSOR DEFINITION

Designation	NJ 2212GS
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	947AM01

### 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			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
2718	685	796	796	1.99	21.58	3.41	0.86	1.00

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @380V50Hz			EN12900 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)	2425	611	711	656	1.85	18.04	3.68	0.93	1.08
-35	(-31)	3129	789	917	782	1.98	23.41	4.03	1.02	1.18
-30	(-22)	4094	1032	1200	912	2.12	30.76	4.51	1.14	1.32
-25	(-13)	5320	1341	1559	1047	2.28	40.16	5.07	1.28	1.49
-20	(- 4)	6805	1715	1994	1187	2.45	51.71	5.71	1.44	1.67
-15	(+ 5)	8552	2155	2506	1332	2.65	65.48	6.41	1.62	1.88
-10	(+14)	10559	2661	3094	1481	2.86	81.57	7.14	1.80	2.09

TEST CONDITIONS: @380V50Hz			EN12900 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)	1727	435	506	633	1.87	14.56	2.71	0.68	0.79
-35	(-31)	2377	599	697	781	2.00	20.17	3.04	0.77	0.89
-30	(-22)	3230	814	946	935	2.16	27.55	3.45	0.87	1.01
-25	(-13)	4287	1080	1256	1094	2.34	36.78	3.91	0.99	1.15
-20	(- 4)	5548	1398	1626	1259	2.54	47.94	4.41	1.11	1.29
-15	(+ 5)	7012	1767	2055	1430	2.77	61.10	4.91	1.24	1.44
-10	(+14)	8681	2188	2544	1607	3.03	76.37	5.41	1.36	1.58

TEST CONDITIONS: @380V50Hz			EN12900 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)	930	234	272	540	1.74	9.24	1.76	0.44	0.51
-35	(-31)	1518	382	445	713	1.90	15.10	2.11	0.53	0.62
-30	(-22)	2253	568	660	893	2.10	22.50	2.50	0.63	0.73
-25	(-13)	3135	790	919	1080	2.31	31.54	2.90	0.73	0.85
-20	(- 4)	4164	1049	1220	1274	2.56	42.29	3.28	0.83	0.96
-15	(+ 5)	5340	1346	1565	1475	2.84	54.84	3.64	0.92	1.07
-10	(+14)	6663	1679	1953	1682	3.15	69.27	3.94	0.99	1.15

### 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		