

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 pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1 1/2	[hp]
2 Displacement	34.38	[cm ³] (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 ²] (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	34HM260-42	
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 (50/60 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		

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]
5053	1273	1481	1139	1.96	34.26	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)	1980	499	580	1083	1.46	13.31	1.82	0.46	0.53
-35	(-31)	3017	760	884	1084	1.59	20.34	2.78	0.70	0.82
-30	(-22)	4230	1066	1239	1092	1.73	28.61	3.88	0.98	1.14
-25	(-13)	5657	1426	1658	1107	1.88	38.43	5.11	1.29	1.50
-20	(- 4)	7340	1850	2151	1131	2.04	50.13	6.48	1.63	1.90
-15	(+ 5)	9317	2348	2730	1165	2.22	64.02	7.98	2.01	2.34
-10	(+14)	11628	2930	3407	1210	2.42	80.43	9.62	2.42	2.82

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)	1461	368	428	1090	1.40	9.80	1.34	0.34	0.39
-35	(-31)	2532	638	742	1094	1.55	17.05	2.31	0.58	0.68
-30	(-22)	3734	941	1094	1103	1.71	25.21	3.39	0.85	0.99
-25	(-13)	5105	1287	1496	1119	1.88	34.61	4.56	1.15	1.34
-20	(- 4)	6687	1685	1959	1144	2.08	45.57	5.85	1.47	1.71
-15	(+ 5)	8517	2146	2496	1177	2.29	58.41	7.23	1.82	2.12
-10	(+14)	10638	2681	3117	1221	2.52	73.44	8.71	2.20	2.55

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)	957	241	281	1098	1.35	6.40	0.88	0.22	0.26
-35	(-31)	2065	520	605	1103	1.52	13.88	1.86	0.47	0.55
-30	(-22)	3259	821	955	1114	1.69	21.97	2.92	0.74	0.86
-25	(-13)	4578	1154	1341	1131	1.89	30.97	4.05	1.02	1.19
-20	(- 4)	6061	1527	1776	1156	2.11	41.22	5.25	1.32	1.54
-15	(+ 5)	7749	1953	2271	1190	2.35	53.02	6.51	1.64	1.91
-10	(+14)	9682	2440	2837	1233	2.63	66.71	7.85	1.98	2.30

E - PERFORMANCE - CURVES

TEST CONDITIONS: @380V60Hz		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)	2312	583	678	1264	1.49	15.55	1.82	0.46	0.53	
-35 (-31)	3526	889	1033	1268	1.62	23.78	2.78	0.70	0.81	
-30 (-22)	4946	1246	1449	1278	1.77	33.45	3.88	0.98	1.14	
-25 (-13)	6617	1667	1939	1296	1.92	44.95	5.11	1.29	1.50	
-20 (- 4)	8586	2164	2516	1323	2.08	58.64	6.48	1.63	1.90	
-15 (+ 5)	10900	2747	3194	1362	2.26	74.90	7.99	2.01	2.34	
-10 (+14)	13604	3428	3986	1414	2.46	94.10	9.63	2.43	2.82	

TEST CONDITIONS: @380V60Hz		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)	1705	430	500	1273	1.43	11.44	1.34	0.34	0.39	
-35 (-31)	2959	746	867	1279	1.58	19.92	2.31	0.58	0.68	
-30 (-22)	4366	1100	1279	1291	1.75	29.48	3.38	0.85	0.99	
-25 (-13)	5971	1505	1750	1310	1.92	40.48	4.56	1.15	1.34	
-20 (- 4)	7822	1971	2292	1338	2.12	53.31	5.85	1.47	1.71	
-15 (+ 5)	9965	2511	2920	1377	2.33	68.33	7.23	1.82	2.12	
-10 (+14)	12446	3136	3647	1429	2.57	85.93	8.72	2.20	2.55	

TEST CONDITIONS: @380V60Hz		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)	1117	282	327	1281	1.37	7.47	0.88	0.22	0.26	
-35 (-31)	2414	608	707	1290	1.54	16.23	1.86	0.47	0.55	
-30 (-22)	3811	960	1117	1303	1.72	25.69	2.92	0.74	0.86	
-25 (-13)	5354	1349	1569	1324	1.92	36.23	4.05	1.02	1.19	
-20 (- 4)	7091	1787	2078	1352	2.15	48.22	5.25	1.32	1.54	
-15 (+ 5)	9066	2285	2657	1392	2.40	62.04	6.51	1.64	1.91	
-10 (+14)	11327	2854	3319	1443	2.68	78.05	7.85	1.98	2.30	

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		