

### COMPRESSOR DEFINITION

Designation	NJ 2192GS
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	948AM19

### 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 1/4	[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)	19.7	[kg] (43.43 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	31HM35-36	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.78	[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: @420V60Hz			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]
4502	1135	1319	1068	1.93	30.52	4.22	1.06	1.24

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @420V50Hz			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)	1472	371	431	669	1.18	9.89	2.19	0.55	0.64
-35	(-31)	2462	621	722	731	1.37	16.61	3.37	0.85	0.99
-30	(-22)	3482	877	1020	802	1.56	23.56	4.35	1.10	1.27
-25	(-13)	4552	1147	1334	884	1.75	30.92	5.16	1.30	1.51
-20	(- 4)	5695	1435	1669	979	1.95	38.89	5.82	1.47	1.71
-15	(+ 5)	6932	1747	2031	1089	2.15	47.63	6.36	1.60	1.86
-10	(+14)	8287	2088	2428	1216	2.36	57.33	6.81	1.72	2.00

TEST CONDITIONS: @420V50Hz			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)	1300	328	381	560	1.07	8.72	2.34	0.59	0.69
-35	(-31)	2124	535	623	657	1.30	14.30	3.22	0.81	0.94
-30	(-22)	3025	762	886	761	1.53	20.43	3.97	1.00	1.16
-25	(-13)	4024	1014	1179	873	1.77	27.28	4.60	1.16	1.35
-20	(- 4)	5142	1296	1507	997	2.02	35.05	5.15	1.30	1.51
-15	(+ 5)	6403	1614	1876	1133	2.28	43.91	5.65	1.42	1.66
-10	(+14)	7828	1973	2294	1284	2.55	54.04	6.11	1.54	1.79

TEST CONDITIONS: @420V50Hz			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)	1141	288	334	454	0.96	7.64	2.48	0.63	0.73
-35	(-31)	1800	454	528	585	1.23	12.09	3.08	0.78	0.90
-30	(-22)	2583	651	757	721	1.51	17.40	3.61	0.91	1.06
-25	(-13)	3510	885	1029	863	1.79	23.75	4.08	1.03	1.20
-20	(- 4)	4605	1160	1349	1014	2.09	31.32	4.54	1.14	1.33
-15	(+ 5)	5889	1484	1726	1174	2.41	40.30	5.00	1.26	1.46
-10	(+14)	7384	1861	2164	1348	2.74	50.87	5.48	1.38	1.61

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @420V60Hz		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]
-40	(-40)	1296	327	380	783	1.21	8.71	1.64	0.41	0.48
-35	(-31)	2519	635	738	855	1.40	16.99	2.95	0.74	0.86
-30	(-22)	3787	954	1110	938	1.59	25.62	4.05	1.02	1.19
-25	(-13)	5126	1292	1502	1034	1.79	34.83	4.97	1.25	1.46
-20	(- 4)	6564	1654	1923	1145	1.99	44.82	5.73	1.44	1.68
-15	(+ 5)	8126	2048	2381	1274	2.20	55.83	6.37	1.61	1.87
-10	(+14)	9840	2480	2883	1423	2.41	68.08	6.91	1.74	2.02

TEST CONDITIONS: @420V60Hz		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]
-40	(-40)	1311	330	384	655	1.09	8.79	2.03	0.51	0.60
-35	(-31)	2309	582	677	769	1.33	15.54	2.99	0.75	0.88
-30	(-22)	3400	857	996	890	1.56	22.96	3.80	0.96	1.11
-25	(-13)	4611	1162	1351	1022	1.81	31.26	4.50	1.13	1.32
-20	(- 4)	5968	1504	1749	1166	2.06	40.67	5.11	1.29	1.50
-15	(+ 5)	7499	1890	2197	1325	2.33	51.42	5.65	1.43	1.66
-10	(+14)	9230	2326	2704	1502	2.60	63.72	6.17	1.55	1.81

TEST CONDITIONS: @420V60Hz		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]
-40	(-40)	1334	336	391	531	0.98	8.93	2.48	0.62	0.73
-35	(-31)	2108	531	618	685	1.26	14.16	3.08	0.78	0.90
-30	(-22)	3024	762	886	844	1.54	20.37	3.61	0.91	1.06
-25	(-13)	4108	1035	1204	1010	1.83	27.79	4.09	1.03	1.20
-20	(- 4)	5387	1357	1578	1186	2.14	36.64	4.54	1.14	1.33
-15	(+ 5)	6888	1736	2018	1374	2.46	47.14	4.99	1.26	1.46
-10	(+14)	8637	2177	2531	1577	2.79	59.51	5.48	1.38	1.61

### F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard
2 Tray holder	No
3 Connectors	
3.1 SUCTION	12.7 +0.25/-0.25 [mm] (0.500" +0.010"/-0.010")
3.1.1 Material	Steel
3.1.2 Shape	ROTOLOCK(Ex. thr. 1"-14UNS-2A)
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