



COMPRESSOR TECHNICAL DATA

COMPRESSOR DEFINITION

Designation	NJ 2192GJ
Nominal Voltage/Frequency	220 V 50 Hz / 220 V 60 Hz
Engineering Number	948AM01

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220 / 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	1PHASE		
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 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 1/4	[hp]
2 Displacement	26.11	[cm ³] (1.593 cu.in)
2.1 Bore	41.770	
2.2 Stroke	9.533	
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 ²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50 Hz / 220 V 60 Hz 1 ~ (one phase)	
2 Starting device type	1PHASE	
2.1 Starting device		
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection (external)		
6 Start winding resistance		[at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.78	[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		

UPDATE: 11OCT2006

948AM01



COMPRESSOR TECHNICAL DATA

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
3848	970	-	-	-	26.09	4.21	1.06	1.23

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 35°C (+95°F))			
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%	
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	1472	371			9.89	2.19	0.55
-35	(-31)	2462	621			16.61	3.37	0.85
-30	(-22)	3482	877			23.56	4.35	1.10
-25	(-13)	4552	1147			30.92	5.16	1.30
-20	(- 4)	5695	1435			38.89	5.82	1.47
-15	(+ 5)	6932	1747			47.63	6.36	1.60
-10	(+14)	8287	2088			57.33	6.81	1.72

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 45°C (+113°F))			
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%	
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	1300	328			8.72	2.34	0.59
-35	(-31)	2124	535			14.30	3.22	0.81
-30	(-22)	3025	762			20.43	3.97	1.00
-25	(-13)	4024	1014			27.28	4.60	1.16
-20	(- 4)	5142	1296			35.05	5.15	1.30
-15	(+ 5)	6403	1614			43.91	5.65	1.42
-10	(+14)	7828	1973			54.04	6.11	1.54

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(Condensing temperature 55°C (+131°F))			
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%	
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	1141	288			7.64	2.48	0.63
-35	(-31)	1800	454			12.09	3.08	0.78
-30	(-22)	2583	651			17.40	3.61	0.91
-25	(-13)	3510	885			23.75	4.08	1.03
-20	(- 4)	4605	1160			31.32	4.54	1.14
-15	(+ 5)	5889	1484			40.30	5.00	1.26
-10	(+14)	7384	1861			50.87	5.48	1.38



COMPRESSOR TECHNICAL DATA

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))				
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]	
-40	(-40)	1296	327			8.71	1.64	0.41	
-35	(-31)	2519	635			16.99	2.95	0.74	
-30	(-22)	3787	954			25.62	4.05	1.02	
-25	(-13)	5126	1292			34.83	4.97	1.25	
-20	(- 4)	6564	1654			44.82	5.73	1.44	
-15	(+ 5)	8126	2048			55.83	6.37	1.61	
-10	(+14)	9840	2480			68.08	6.91	1.74	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))				
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]	
-40	(-40)	1311	330			8.79	2.03	0.51	
-35	(-31)	2309	582			15.54	2.99	0.75	
-30	(-22)	3400	857			22.96	3.80	0.96	
-25	(-13)	4611	1162			31.26	4.50	1.13	
-20	(- 4)	5968	1504			40.67	5.11	1.29	
-15	(+ 5)	7499	1890			51.42	5.65	1.43	
-10	(+14)	9230	2326			63.72	6.17	1.55	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(Condensing temperature 55°C (+131°F))				
Evaporating temperature		Cooling capacity +/- 5%		Power consumption	Current consumption	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]			[kg/h]	[Btu/Wh]	[kcal/Wh]	
-40	(-40)	1334	336			8.93	2.48	0.62	
-35	(-31)	2108	531			14.16	3.08	0.78	
-30	(-22)	3024	762			20.37	3.61	0.91	
-25	(-13)	4108	1035			27.79	4.09	1.03	
-20	(- 4)	5387	1357			36.64	4.54	1.14	
-15	(+ 5)	6888	1736			47.14	4.99	1.26	
-10	(+14)	8637	2177			59.51	5.48	1.38	



COMPRESSOR TECHNICAL DATA

F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +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		