

COMPRESSOR DEFINITION

Designation	J 2212GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	963BG01

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[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	CSCR		
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	890	[ml] (30.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	21.45	[kg] (47.29 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	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	3ARR3B3S3	
3 Start capacitor	340-408(165)	[µF(VAC minimum)]
4 Run capacitor	20(450)	[µF(VAC minimum)]
5 Motor protection	15HM2350-168	
6 Start winding resistance	2.01	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	87.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	14.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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	986	9.00	34.26	5.12	1.29	1.50

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			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	429	4.79	13.31	4.54	1.14	1.33
-35	(-31)	3017	760	884	603	6.57	20.34	5.06	1.28	1.48
-30	(-22)	4230	1066	1239	775	8.34	28.61	5.52	1.39	1.62
-25	(-13)	5657	1426	1658	949	10.12	38.43	5.97	1.50	1.75
-20	(- 4)	7340	1850	2151	1125	11.92	50.13	6.46	1.63	1.89
-15	(+ 5)	9317	2348	2730	1306	13.78	64.02	7.07	1.78	2.07
-10	(+14)	11628	2930	3407	1491	15.71	80.43	7.86	1.98	2.30

TEST CONDITIONS: @100V50Hz			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	372	4.00	9.80	3.89	0.98	1.14
-35	(-31)	2532	638	742	553	5.85	17.05	4.57	1.15	1.34
-30	(-22)	3734	941	1094	739	7.77	25.21	5.09	1.28	1.49
-25	(-13)	5105	1287	1496	931	9.78	34.61	5.51	1.39	1.61
-20	(- 4)	6687	1685	1959	1131	11.89	45.57	5.90	1.49	1.73
-15	(+ 5)	8517	2146	2496	1341	14.13	58.41	6.32	1.59	1.85
-10	(+14)	10638	2681	3117	1562	16.52	73.44	6.82	1.72	2.00

TEST CONDITIONS: @100V50Hz			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	318	3.26	6.40	3.10	0.78	0.91
-35	(-31)	2065	520	605	506	5.17	13.88	3.97	1.00	1.16
-30	(-22)	3259	821	955	704	7.23	21.97	4.60	1.16	1.35
-25	(-13)	4578	1154	1341	913	9.45	30.97	5.05	1.27	1.48
-20	(- 4)	6061	1527	1776	1137	11.85	41.22	5.37	1.35	1.57
-15	(+ 5)	7749	1953	2271	1375	14.46	53.02	5.64	1.42	1.65
-10	(+14)	9682	2440	2837	1630	17.29	66.71	5.91	1.49	1.73

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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)	2104	530	616	666	10.16	14.13	3.16	0.80	0.93	
-35 (-31)	3173	800	930	852	11.19	21.40	3.73	0.94	1.09	
-30 (-22)	4523	1140	1325	1042	12.39	30.60	4.34	1.09	1.27	
-25 (-13)	6149	1549	1802	1238	13.75	41.77	4.97	1.25	1.46	
-20 (- 4)	8044	2027	2357	1438	15.28	54.94	5.60	1.41	1.64	
-15 (+ 5)	10204	2571	2990	1643	16.97	70.11	6.22	1.57	1.82	
-10 (+14)	12622	3181	3698	1853	18.83	87.31	6.80	1.71	1.99	

TEST CONDITIONS: @100V60Hz		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)	1626	410	476	609	9.86	10.91	2.67	0.67	0.78	
-35 (-31)	2562	646	751	804	10.91	17.25	3.19	0.80	0.93	
-30 (-22)	3794	956	1112	1010	12.20	25.62	3.74	0.94	1.10	
-25 (-13)	5315	1339	1557	1227	13.71	36.03	4.32	1.09	1.26	
-20 (- 4)	7119	1794	2086	1455	15.45	48.52	4.89	1.23	1.43	
-15 (+ 5)	9201	2319	2696	1694	17.42	63.09	5.44	1.37	1.59	
-10 (+14)	11556	2912	3386	1945	19.62	79.78	5.95	1.50	1.74	

TEST CONDITIONS: @100V60Hz		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)	1313	331	385	530	9.39	8.79	2.46	0.62	0.72	
-35 (-31)	2148	541	630	749	10.55	14.43	2.89	0.73	0.85	
-30 (-22)	3292	830	965	985	12.01	22.19	3.35	0.84	0.98	
-25 (-13)	4739	1194	1389	1238	13.76	32.06	3.83	0.96	1.12	
-20 (- 4)	6483	1634	1900	1509	15.80	44.09	4.30	1.08	1.26	
-15 (+ 5)	8519	2147	2496	1797	18.14	58.29	4.74	1.20	1.39	
-10 (+14)	10840	2732	3176	2102	20.77	74.69	5.15	1.30	1.51	

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		