

### COMPRESSOR DEFINITION

Designation	<b>J 7231GP</b>
Nominal Voltage/Frequency	<b>380-420 V 50 Hz / 440-480 V 60 Hz</b>
Engineering Number	<b>968CM01</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-407C		
3 Nominal voltage and frequency	380-420 / 50	[ V / Hz ]	
4 Application type	Air Conditioning		
4.1 Evaporating temperature range	0°C to 15°C	(32°F to 59°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)	22.4	[kgf/cm <sup>2</sup> ] (319 psig)	/ °C - °F
9.2 Peak (gauge)	25.2	[kgf/cm <sup>2</sup> ] (358 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	890	[ml] (30.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	20.05	[kg] (44.20 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	31HM25-36	
6 Start winding resistance	5.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.10	[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		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @440V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
14692	3702	4305	1675	3.45	87.69	8.77	2.21	2.57

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @440V50Hz			ASHRAE46 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]
0 (+32)	12765	3217	3740	1048	2.35	64.39	12.18	3.07	3.57
+5 (+41)	15615	3935	4576	1103	2.45	79.31	14.16	3.57	4.15
+10 (+50)	18786	4734	5505	1155	2.56	96.27	16.26	4.10	4.77
+15 (+59)	21987	5541	6443	1207	2.67	113.80	18.22	4.59	5.34

TEST CONDITIONS: @440V50Hz			ASHRAE46 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]
0 (+32)	11086	2794	3248	1155	2.52	60.34	9.60	2.42	2.81
+5 (+41)	13590	3425	3982	1242	2.65	74.56	10.94	2.76	3.20
+10 (+50)	16383	4129	4801	1324	2.79	90.71	12.37	3.12	3.63
+15 (+59)	19176	4832	5619	1406	2.93	107.34	13.64	3.44	4.00

TEST CONDITIONS: @440V50Hz			ASHRAE46 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]
0 (+32)	9407	2371	2756	1262	2.69	55.80	7.45	1.88	2.18
+5 (+41)	11565	2914	3389	1381	2.85	69.20	8.37	2.11	2.45
+10 (+50)	13980	3523	4097	1493	3.02	84.46	9.37	2.36	2.75
+15 (+59)	16365	4124	4795	1605	3.19	100.09	10.19	2.57	2.99

TEST CONDITIONS: @440V60Hz			ASHRAE46 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]
0 (+32)	14934	3763	4376	1226	2.75	75.33	12.18	3.07	3.57
+5 (+41)	18270	4604	5353	1291	2.87	92.79	14.16	3.57	4.15
+10 (+50)	21979	5539	6440	1352	2.99	112.64	16.25	4.10	4.76
+15 (+59)	25725	6483	7538	1413	3.11	133.14	18.21	4.59	5.33

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @440V60Hz		ASHRAE46 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]
0	(+32)	12970	3268	3801	1351	2.95	70.60	9.60	2.42	2.81
+5	(+41)	15900	4007	4659	1453	3.10	87.23	10.94	2.76	3.21
+10	(+50)	19168	4830	5617	1549	3.26	106.13	12.37	3.12	3.63
+15	(+59)	22436	5654	6574	1645	3.42	125.59	13.64	3.44	4.00

TEST CONDITIONS: @440V60Hz		ASHRAE46 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]
0	(+32)	11006	2773	3225	1476	3.15	65.28	7.46	1.88	2.18
+5	(+41)	13530	3410	3965	1615	3.33	80.97	8.38	2.11	2.45
+10	(+50)	16357	4122	4793	1746	3.53	98.81	9.38	2.36	2.75
+15	(+59)	19147	4825	5611	1877	3.73	117.11	10.20	2.57	2.99

### 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		