COMPRESSOR DEFINITION

Designation	**J 7231F**
Nominal Voltage/Frequency	**208-230 V 60 Hz**
Engineering Number	**164ED01**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	208-230 / 60	[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	PSC		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	21.7	[kgf/cm²] (309 psig)	/ ºC - ºF
9.2 Peak (gauge)	24.2	[kgf/cm²] (344 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1 1/4	[hp]
2 Displacement	26.11	[cm³] (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	MINERAL / ISO32	
4 Weight (with oil charge)	20.4	[kg] (44.97 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	PSC	
2.1 Starting device		
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	25(450)	[µF(VAC minimum)]
5 Motor protection	CRA9924-3031	
6 Start winding resistance	5.90	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.35	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	38.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@208V60Hz**			**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]
14394	3627	4218	1754	8.01	88.90	8.21	2.07	2.41

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@208V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **35ºC (+95ºF))**

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)**	12992	3274	3807	1177	5.93	0.00	11.04	2.78	3.23
+5	**(+41)**	15529	3913	4550	1261	6.40	0.00	12.32	3.10	3.61
+10	**(+50)**	18491	4660	5418	1327	6.79	0.00	13.93	3.51	4.08
+15	**(+59)**	21877	5513	6411	1375	7.12	0.00	15.91	4.01	4.66

TEST CONDITIONS: **@208V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **45ºC (+113ºF))**

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)**	11196	2821	3281	1247	6.47	0.00	8.98	2.26	2.63
+5	**(+41)**	13478	3397	3949	1354	6.99	0.00	9.95	2.51	2.92
+10	**(+50)**	16093	4056	4716	1437	7.45	0.00	11.20	2.82	3.28
+15	**(+59)**	19041	4798	5579	1495	7.85	0.00	12.74	3.21	3.73

TEST CONDITIONS: **@208V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **55ºC (+131ºF))**

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)**	9326	2350	2733	1320	7.03	0.00	7.07	1.78	2.07
+5	**(+41)**	11340	2858	3323	1451	7.61	0.00	7.82	1.97	2.29
+10	**(+50)**	13594	3426	3983	1551	8.14	0.00	8.76	2.21	2.57
+15	**(+59)**	16088	4054	4714	1620	8.61	0.00	9.93	2.50	2.91

TEST CONDITIONS: **@208V60Hz** — **ASHRAE46** **Fan** — (Condensing temperature **35ºC (+95ºF))**

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)**	14806	3731	4338	1384	6.05	0.00	10.70	2.70	3.13
+5	**(+41)**	17857	4500	5233	1478	6.53	0.00	12.08	3.05	3.54
+10	**(+50)**	21676	5462	6352	1553	6.93	0.00	13.96	3.52	4.09
+15	**(+59)**	26265	6619	7696	1609	7.27	0.00	16.32	4.11	4.78

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **45ºC (+113ºF))**
@208V60Hz **Fan**

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)**	12896	3250	3779	1467	6.60	0.00	8.79	2.22	2.58
+5	**(+41)**	15612	3934	4575	1587	7.13	0.00	9.83	2.48	2.88
+10	**(+50)**	18852	4751	5524	1681	7.60	0.00	11.21	2.83	3.29
+15	**(+59)**	22617	5700	6627	1749	8.01	0.00	12.93	3.26	3.79

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **55ºC (+131ºF))**
@208V60Hz **Fan**

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)**	10912	2750	3197	1553	7.17	0.00	7.03	1.77	2.06
+5	**(+41)**	13267	3343	3888	1700	7.77	0.00	7.80	1.97	2.29
+10	**(+50)**	15904	4008	4660	1814	8.31	0.00	8.77	2.21	2.57
+15	**(+59)**	18824	4744	5516	1895	8.78	0.00	9.93	2.50	2.91

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		