

### COMPRESSOR DEFINITION

Designation	<b>NJ 7240F</b>
Nominal Voltage/Frequency	<b>208-230 V 60 Hz</b>
Engineering Number	<b>143FD11</b>

### 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	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 temperature			
9.1 Operating	21.7	[kgf/cm <sup>2</sup> ] (309 psig)	/ °C - °F
9.2 Peak	24.2	[kgf/cm <sup>2</sup> ] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	34.38	[cm <sup>3</sup> ] (2.098 cu.in)
2.1 Bore [mm]	42.850	
2.2 Stroke [mm]	23.850	
3 Lubricant charge	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	22	[kg] (48.50 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	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA3AN3C-647	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	25(440)	[µF(VAC minimum)]
5 Motor protection	GA3PJU0002	
6 Start winding resistance	5.35	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[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: @200V50Hz			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]
16552	4171	4850	2223	12.50	102.22	7.45	1.88	2.18

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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)	14845	3741	4350	1716	10.23	78.81	8.65	2.18	2.53
+5 (+41)	18387	4633	5388	1890	10.82	99.35	9.73	2.45	2.85
+10 (+50)	22467	5662	6583	2038	11.29	120.73	11.03	2.78	3.23
+15 (+59)	27087	6826	7937	2160	11.62	0.21	12.54	3.16	3.67

TEST CONDITIONS: @200V50Hz			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)	13635	3436	3995	1819	10.77	77.72	7.50	1.89	2.20
+5 (+41)	16828	4241	4931	2011	11.48	96.50	8.37	2.11	2.45
+10 (+50)	20460	5156	5995	2178	12.08	118.20	9.39	2.37	2.75
+15 (+59)	24532	6182	7189	2319	12.55	0.08	10.58	2.67	3.10

TEST CONDITIONS: @200V50Hz			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)	12375	3119	3626	1927	11.34	76.15	6.42	1.62	1.88
+5 (+41)	15201	3831	4454	2138	12.17	93.25	7.11	1.79	2.08
+10 (+50)	18367	4628	5382	2324	12.90	115.35	7.90	1.99	2.32
+15 (+59)	21873	5512	6409	2486	13.53	- 0.29	8.80	2.22	2.58

TEST CONDITIONS: @200V60Hz			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)	17369	4377	5090	2019	10.44	92.21	8.60	2.17	2.52
+5 (+41)	21513	5421	6304	2213	11.04	116.23	9.72	2.45	2.85
+10 (+50)	26286	6624	7703	2380	11.52	141.25	11.05	2.78	3.24
+15 (+59)	31691	7986	9286	2519	11.85	0.24	12.58	3.17	3.69

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@200V60Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
0	(+32)	15953	4020	4675	2140	10.99	90.93	7.46	1.88	2.18
+5	(+41)	19688	4961	5769	2355	11.72	112.90	8.36	2.11	2.45
+10	(+50)	23938	6032	7014	2542	12.32	138.29	9.41	2.37	2.76
+15	(+59)	28703	7233	8411	2703	12.81	0.10	10.62	2.68	3.11

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@200V60Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
0	(+32)	14479	3649	4243	2267	11.57	89.10	6.39	1.61	1.87
+5	(+41)	17784	4482	5211	2502	12.42	109.10	7.11	1.79	2.08
+10	(+50)	21489	5415	6297	2711	13.16	134.96	7.93	2.00	2.32
+15	(+59)	25592	6449	7499	2894	13.80	- 0.34	8.84	2.23	2.59

### 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	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		