

COMPRESSOR DEFINITION

Designation	NJ 7240P
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	147CM01

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
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 temperature			
9.1 Operating	21.7	[kgf/cm ²] (309 psig)	/ °C - °F
9.2 Peak	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[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	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	21.4	[kg] (47.18 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	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	34HM260	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.40	[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]
19366	4880	5675	2362	3.86	119.60	8.20	2.07	2.40

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)	14845	3741	4350	1415	3.10	78.81	10.49	2.64	3.07
+5 (+41)	18387	4633	5388	1559	3.24	99.35	11.79	2.97	3.46
+10 (+50)	22467	5662	6583	1639	3.32	120.73	13.72	3.46	4.02
+15 (+59)	27087	6826	7937	1657	3.35	0.21	16.34	4.12	4.79

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)	13635	3436	3995	1586	3.26	77.72	8.61	2.17	2.52
+5 (+41)	16828	4241	4931	1753	3.46	96.50	9.59	2.42	2.81
+10 (+50)	20460	5156	5995	1856	3.60	118.20	11.01	2.78	3.23
+15 (+59)	24532	6182	7189	1895	3.68	0.08	12.95	3.26	3.80

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)	12375	3119	3626	1765	3.42	76.15	7.00	1.77	2.05
+5 (+41)	15201	3831	4454	1955	3.69	93.25	7.79	1.96	2.28
+10 (+50)	18367	4628	5382	2081	3.89	115.35	8.82	2.22	2.59
+15 (+59)	21873	5512	6409	2144	4.03	- 0.29	10.20	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)	17369	4377	5090	1665	3.16	92.21	10.43	2.63	3.06
+5 (+41)	21513	5421	6304	1826	3.31	116.23	11.78	2.97	3.45
+10 (+50)	26286	6624	7703	1921	3.39	141.25	13.69	3.45	4.01
+15 (+59)	31691	7986	9286	1950	3.41	0.24	16.25	4.09	4.76

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 45°C (+113°F))					
@440V60Hz		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)	15953	4020	4675	1866	3.32	90.93	8.56	2.16	2.51
+5	(+41)	19688	4961	5769	2053	3.53	112.90	9.58	2.41	2.81
+10	(+50)	23938	6032	7014	2173	3.67	138.29	11.01	2.77	3.23
+15	(+59)	28703	7233	8411	2226	3.76	0.10	12.90	3.25	3.78

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@440V60Hz		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)	14479	3649	4243	2076	3.49	89.10	6.97	1.76	2.04
+5	(+41)	17784	4482	5211	2289	3.76	109.10	7.78	1.96	2.28
+10	(+50)	21489	5415	6297	2435	3.97	134.96	8.82	2.22	2.59
+15	(+59)	25592	6449	7499	2514	4.12	- 0.34	10.18	2.56	2.98

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		