

COMPRESSOR DEFINITION

Designation	NJ 7238P
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	147AM01

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 Expantion 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)	21.7	[kgf/cm ²] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	32.67	[cm ³] (1.994 cu.in)
2.1 Bore [mm]	41.770	
2.2 Stroke [mm]	23.850	
3 Lubricant charge	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO32	
4 Weight (with oil charge)	20.9	[kg] (46.08 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	8.50	[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]
17676	4454	5179	2157	3.55	109.17	8.19	2.06	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)	16285	4104	4772	1315	2.77	86.24	12.38	3.12	3.63
+5 (+41)	19186	4835	5622	1383	2.85	104.29	13.88	3.50	4.07
+10 (+50)	22762	5736	6670	1445	2.93	121.73	15.75	3.97	4.62
+15 (+59)	27011	6807	7915	1502	2.99	0.38	17.98	4.53	5.27

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)	13884	3499	4068	1479	2.98	79.20	9.39	2.37	2.75
+5 (+41)	16572	4176	4856	1580	3.12	94.99	10.48	2.64	3.07
+10 (+50)	19875	5009	5824	1677	3.25	114.71	11.85	2.99	3.47
+15 (+59)	23795	5996	6972	1769	3.37	0.17	13.46	3.39	3.94

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)	11385	2869	3336	1650	3.20	70.26	6.90	1.74	2.02
+5 (+41)	13848	3490	4058	1785	3.39	84.26	7.76	1.96	2.27
+10 (+50)	16868	4251	4943	1918	3.58	106.71	8.80	2.22	2.58
+15 (+59)	20445	5152	5991	2048	3.78	- 0.55	9.98	2.51	2.92

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)	18499	4662	5421	1547	2.83	97.89	11.96	3.01	3.50
+5 (+41)	22869	5763	6701	1623	2.91	124.40	14.09	3.55	4.13
+10 (+50)	27304	6881	8001	1692	2.98	146.00	16.14	4.07	4.73
+15 (+59)	31804	8015	9319	1756	3.05	0.43	18.11	4.56	5.31

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)	15965	4023	4678	1740	3.04	91.12	9.17	2.31	2.69
+5	(+41)	19601	4939	5744	1852	3.18	112.31	10.58	2.67	3.10
+10	(+50)	23594	5946	6914	1960	3.31	136.11	12.04	3.03	3.53
+15	(+59)	27945	7042	8189	2064	3.44	0.27	13.54	3.41	3.97

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)	13319	3356	3903	1942	3.26	82.20	6.86	1.73	2.01
+5	(+41)	16203	4083	4748	2092	3.46	98.52	7.75	1.95	2.27
+10	(+50)	19736	4973	5783	2239	3.66	124.97	8.81	2.22	2.58
+15	(+59)	23919	6028	7009	2384	3.85	- 0.70	10.04	2.53	2.94

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		