

### COMPRESSOR DEFINITION

Designation	NJ 9232P
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	147HM11

### 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	Medium-High Back pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	3PHASE		
6 Starting torque	HST - High 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	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	750	[ml] (25.36 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	20.2	[kg] (44.53 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	34HM207-42	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.10	[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]
14453	3642	4235	1605	2.89	89.26	9.00	2.27	2.64

### 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]
-20	(- 4)	4362	1099	1278	766	1.78	22.82	5.69	1.43	1.67
-15	(+ 5)	5841	1472	1712	836	1.90	30.68	6.99	1.76	2.05
-10	(+14)	7643	1926	2239	900	2.01	40.30	8.49	2.14	2.49
-5	(+23)	9766	2461	2862	959	2.10	51.73	10.19	2.57	2.98
0	(+32)	12213	3078	3579	1013	2.19	65.06	12.07	3.04	3.54
+5	(+41)	14982	3775	4390	1062	2.27	80.35	14.12	3.56	4.14
+10	(+50)	18073	4555	5296	1105	2.34	97.66	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]
-20	(- 4)	3962	998	1161	761	1.80	22.14	5.22	1.32	1.53
-15	(+ 5)	5208	1312	1526	864	1.96	29.22	6.03	1.52	1.77
-10	(+14)	6754	1702	1979	959	2.11	38.04	7.03	1.77	2.06
-5	(+23)	8601	2167	2520	1045	2.26	48.69	8.21	2.07	2.41
0	(+32)	10748	2708	3149	1124	2.39	61.22	9.55	2.41	2.80
+5	(+41)	13196	3325	3867	1195	2.51	75.70	11.05	2.79	3.24
+10	(+50)	15944	4018	4672	1257	2.62	92.20	12.70	3.20	3.72

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]
-20	(- 4)	3548	894	1040	756	1.82	21.32	4.67	1.18	1.37
-15	(+ 5)	4548	1146	1333	893	2.03	27.45	5.11	1.29	1.50
-10	(+14)	5827	1468	1707	1019	2.23	35.33	5.73	1.44	1.68
-5	(+23)	7384	1861	2164	1135	2.42	45.01	6.51	1.64	1.91
0	(+32)	9220	2323	2702	1240	2.60	56.57	7.43	1.87	2.18
+5	(+41)	11335	2856	3321	1333	2.77	70.09	8.50	2.14	2.49
+10	(+50)	13728	3459	4023	1416	2.92	85.62	9.69	2.44	2.84

### E - PERFORMANCE - CURVES

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]
-20	(- 4)	5104	1286	1495	920	1.82	26.70	5.54	1.40	1.62
-15	(+ 5)	6834	1722	2002	996	1.94	35.90	6.86	1.73	2.01
-10	(+14)	8942	2253	2620	1067	2.05	47.15	8.38	2.11	2.46
-5	(+23)	11427	2880	3348	1132	2.15	60.53	10.10	2.54	2.96
0	(+32)	14289	3601	4187	1192	2.24	76.12	12.00	3.02	3.52
+5	(+41)	17529	4417	5136	1246	2.31	94.01	14.08	3.55	4.12
+10	(+50)	21146	5329	6196	1295	2.38	114.26	16.31	4.11	4.78

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]
-20	(- 4)	4635	1168	1358	923	1.84	25.90	5.04	1.27	1.48
-15	(+ 5)	6093	1535	1785	1035	2.00	34.18	5.89	1.48	1.73
-10	(+14)	7902	1991	2315	1139	2.16	44.51	6.92	1.74	2.03
-5	(+23)	10062	2536	2949	1235	2.30	56.96	8.13	2.05	2.38
0	(+32)	12575	3169	3685	1322	2.44	71.62	9.50	2.39	2.78
+5	(+41)	15439	3891	4524	1401	2.56	88.57	11.02	2.78	3.23
+10	(+50)	18654	4701	5466	1472	2.68	107.87	12.69	3.20	3.72

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]
-20	(- 4)	4150	1046	1216	926	1.86	24.94	4.46	1.12	1.31
-15	(+ 5)	5321	1341	1559	1076	2.07	32.12	4.96	1.25	1.45
-10	(+14)	6817	1718	1998	1215	2.27	41.33	5.62	1.42	1.65
-5	(+23)	8640	2177	2532	1342	2.47	52.66	6.44	1.62	1.89
0	(+32)	10788	2719	3161	1458	2.65	66.20	7.40	1.86	2.17
+5	(+41)	13262	3342	3886	1563	2.82	82.00	8.49	2.14	2.49
+10	(+50)	16062	4048	4706	1656	2.98	100.17	9.69	2.44	2.84

### 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		