COMPRESSOR DEFINITION

Designation	**NJ 9238P**
Nominal Voltage/Frequency	**380-420 V 50 Hz / 440-480 V 60 Hz**
Engineering Number	**147LM01**

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 Compressor R134a, R22 se		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°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 (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 1/2	[hp]
2 Displacement	32.67	[cm³] (1.994 cu.in)
2.1 Bore	41.770	
2.2 Stroke	11.925	
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)	21.5	[kg] (47.40 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	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 (external)	34HM260	
6 Start winding resistance		[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	8.40	[Ω at 25ºC (77ºF)] +/- 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:			**ASHRAEHBP46**		Evaporating temperature	**7.2°C (44.96°F)**		
@380V50Hz			**Fan**		(Condensing temperature	**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]
15278	3850	4477	1856	4.00	94.36	8.23	2.07	2.41

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE46**					(Condensing temperature **35ºC (+95ºF))**			
@380V50Hz		**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]
-20	**(- 4)**	5757	1451	1687	1016	2.44	30.13	5.65	1.42	1.66
-15	**(+ 5)**	7325	1846	2147	1119	2.66	38.47	6.55	1.65	1.92
-10	**(+14)**	9293	2342	2723	1214	2.87	48.99	7.66	1.93	2.24
-5	**(+23)**	11661	2938	3417	1300	3.08	61.76	8.97	2.26	2.63
0	**(+32)**	14428	3636	4228	1379	3.29	76.85	10.47	2.64	3.07
+5	**(+41)**	17594	4434	5156	1449	3.50	94.36	12.15	3.06	3.56
+10	**(+50)**	21161	5333	6201	1510	3.72	114.35	14.00	3.53	4.10

TEST CONDITIONS:		**ASHRAE46**					(Condensing temperature **45ºC (+113ºF))**			
@380V50Hz		**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]
-20	**(- 4)**	5274	1329	1545	1054	2.49	29.44	5.02	1.27	1.47
-15	**(+ 5)**	6730	1696	1972	1181	2.75	37.76	5.71	1.44	1.67
-10	**(+14)**	8521	2147	2497	1301	3.01	48.01	6.54	1.65	1.92
-5	**(+23)**	10646	2683	3119	1415	3.26	60.29	7.50	1.89	2.20
0	**(+32)**	13105	3302	3840	1521	3.50	74.66	8.60	2.17	2.52
+5	**(+41)**	15899	4007	4659	1621	3.74	91.20	9.81	2.47	2.87
+10	**(+50)**	19027	4795	5575	1713	3.99	110.00	11.13	2.80	3.26

TEST CONDITIONS:		**ASHRAE46**					(Condensing temperature **55ºC (+131ºF))**			
@380V50Hz		**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]
-20	**(- 4)**	4778	1204	1400	1093	2.59	28.73	4.36	1.10	1.28
-15	**(+ 5)**	6111	1540	1791	1245	2.89	36.89	4.91	1.24	1.44
-10	**(+14)**	7713	1944	2260	1392	3.18	46.76	5.55	1.40	1.63
-5	**(+23)**	9584	2415	2808	1534	3.45	58.41	6.25	1.58	1.83
0	**(+32)**	11724	2954	3435	1670	3.72	71.93	7.03	1.77	2.06
+5	**(+41)**	14133	3562	4141	1800	3.98	87.39	7.85	1.98	2.30
+10	**(+50)**	16812	4237	4926	1925	4.23	104.87	8.72	2.20	2.56

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **35ºC (+95ºF))**
@380V60Hz **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]
-20	**(- 4)**	6735	1697	1974	1223	2.49	35.25	5.49	1.38	1.61
-15	**(+ 5)**	8570	2160	2511	1336	2.71	45.01	6.42	1.62	1.88
-10	**(+14)**	10873	2740	3186	1440	2.92	57.32	7.56	1.90	2.21
-5	**(+23)**	13643	3438	3998	1535	3.14	72.25	8.89	2.24	2.61
0	**(+32)**	16881	4254	4946	1622	3.36	89.92	10.41	2.62	3.05
+5	**(+41)**	20586	5188	6032	1700	3.58	110.40	12.11	3.05	3.55
+10	**(+50)**	24758	6239	7255	1769	3.80	133.79	13.98	3.52	4.10

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **45ºC (+113ºF))**
@380V60Hz **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]
-20	**(- 4)**	6171	1555	1808	1274	2.57	34.44	4.86	1.23	1.42
-15	**(+ 5)**	7875	1984	2307	1413	2.83	44.17	5.58	1.41	1.63
-10	**(+14)**	9970	2512	2921	1546	3.08	56.18	6.44	1.62	1.89
-5	**(+23)**	12456	3139	3650	1671	3.33	70.54	7.43	1.87	2.18
0	**(+32)**	15334	3864	4493	1789	3.57	87.35	8.55	2.16	2.51
+5	**(+41)**	18602	4688	5451	1900	3.82	106.71	9.79	2.47	2.87
+10	**(+50)**	22262	5610	6523	2004	4.06	128.71	11.13	2.80	3.26

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **55ºC (+131ºF))**
@380V60Hz **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]
-20	**(- 4)**	5590	1409	1638	1326	2.65	33.61	4.20	1.06	1.23
-15	**(+ 5)**	7150	1802	2095	1494	2.95	43.16	4.79	1.21	1.40
-10	**(+14)**	9024	2274	2644	1656	3.24	54.71	5.45	1.37	1.60
-5	**(+23)**	11213	2826	3286	1813	3.52	68.34	6.19	1.56	1.81
0	**(+32)**	13717	3457	4019	1964	3.79	84.16	6.99	1.76	2.05
+5	**(+41)**	16536	4167	4845	2109	4.06	102.24	7.84	1.98	2.30
+10	**(+50)**	19669	4957	5764	2249	4.32	122.69	8.73	2.20	2.56

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		