COMPRESSOR DEFINITION

Designation	**NJ 7238E**
Nominal Voltage/Frequency	**230 V 60 Hz / 200 V 50 Hz**
Engineering Number	**143AJ01**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	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	PSC		
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		[hp]
2 Displacement	32.67	[cm³] (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)	22.1	[kg] (48.72 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	230 V 60 Hz / 200 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PSC	
2.1 Starting device		
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	25(440)	[µF(VAC minimum)]
5 Motor protection	GA3RLU0002	
6 Start winding resistance	5.67	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.07	[Ω at 25ºC (77ºF)] +/- 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: **@230V60Hz**			**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	2351	10.94	109.17	7.52	1.90	2.20

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **35ºC (+95ºF))**
@230V50Hz **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)**	16285	4104	4772	1364	7.93	0.00	11.94	3.01	3.50
+5	**(+41)**	19186	4835	5622	1517	8.55	0.00	12.65	3.19	3.71
+10	**(+50)**	22762	5736	6670	1685	9.25	0.00	13.51	3.40	3.96
+15	**(+59)**	27011	6807	7915	1868	10.06	0.00	14.46	3.64	4.24

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **45ºC (+113ºF))**
@230V50Hz **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)**	13884	3499	4068	1544	8.76	0.00	9.00	2.27	2.64
+5	**(+41)**	16572	4176	4856	1716	9.44	0.00	9.65	2.43	2.83
+10	**(+50)**	19875	5009	5824	1907	10.21	0.00	10.42	2.63	3.05
+15	**(+59)**	23795	5996	6972	2118	11.07	0.00	11.24	2.83	3.29

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **55ºC (+131ºF))**
@230V50Hz **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)**	11385	2869	3336	1731	9.62	0.00	6.58	1.66	1.93
+5	**(+41)**	13848	3490	4058	1923	10.37	0.00	7.20	1.81	2.11
+10	**(+50)**	16868	4251	4943	2139	11.20	0.00	7.89	1.99	2.31
+15	**(+59)**	20445	5152	5991	2378	12.13	0.00	8.60	2.17	2.52

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **35ºC (+95ºF))**
@230V60Hz **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)**	18499	4662	5421	1604	8.10	0.00	11.54	2.91	3.38
+5	**(+41)**	22869	5763	6701	1774	8.72	0.00	12.88	3.25	3.77
+10	**(+50)**	27304	6881	8001	1960	9.44	0.00	13.94	3.51	4.08
+15	**(+59)**	31804	8015	9319	2161	10.27	0.00	14.72	3.71	4.31

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **45ºC (+113ºF))**
@230V60Hz **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)**	15965	4023	4678	1816	8.94	0.00	8.78	2.21	2.57
+5	**(+41)**	19601	4939	5744	2007	9.63	0.00	9.77	2.46	2.86
+10	**(+50)**	23594	5946	6914	2218	10.42	0.00	10.64	2.68	3.12
+15	**(+59)**	27945	7042	8189	2449	11.30	0.00	11.41	2.87	3.34

TEST CONDITIONS: **ASHRAE46** (Condensing temperature **55ºC (+131ºF))**
@230V60Hz **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)**	13319	3356	3903	2037	9.82	0.00	6.54	1.65	1.92
+5	**(+41)**	16203	4083	4748	2249	10.58	0.00	7.21	1.82	2.11
+10	**(+50)**	19736	4973	5783	2487	11.43	0.00	7.93	2.00	2.32
+15	**(+59)**	23919	6028	7009	2749	12.37	0.00	8.71	2.19	2.55

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		