COMPRESSOR DEFINITION

Designation	**NJ 7228E**
Nominal Voltage/Frequency	**230 V 60 Hz / 200 V 50 Hz**
Engineering Number	**142DJ01**

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	23.51	[cm³] (1.435 cu.in)
2.1 Bore [mm]	38.087	
2.2 Stroke [mm]	20.650	
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)	19.3	[kg] (42.55 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	17.5(440)	[µF(VAC minimum)]
5 Motor protection	T0820/20	
6 Start winding resistance	8.47	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.51	[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]
13312	3355	3901	1591	7.33	82.21	8.37	2.11	2.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@230V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **35ºC (+95ºF))**

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)**	10798	2721	3164	1052	5.56	0.00	10.26	2.59	3.01
+5	**(+41)**	13447	3389	3940	1130	5.98	0.00	11.90	3.00	3.49
+10	**(+50)**	16535	4167	4845	1205	6.42	0.00	13.73	3.46	4.02
+15	**(+59)**	20062	5056	5879	1277	6.87	0.00	15.71	3.96	4.60

TEST CONDITIONS: **@230V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **45ºC (+113ºF))**

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)**	9405	2370	2756	1132	6.01	0.00	8.31	2.10	2.44
+5	**(+41)**	11874	2992	3479	1220	6.46	0.00	9.73	2.45	2.85
+10	**(+50)**	14780	3725	4331	1313	6.94	0.00	11.25	2.83	3.30
+15	**(+59)**	18122	4567	5310	1412	7.44	0.00	12.84	3.24	3.76

TEST CONDITIONS: **@230V50Hz** — **ASHRAE46** **Fan** — (Condensing temperature **55ºC (+131ºF))**

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)**	7954	2004	2331	1217	6.47	0.00	6.53	1.65	1.91
+5	**(+41)**	10236	2579	2999	1314	6.96	0.00	7.79	1.96	2.28
+10	**(+50)**	12952	3264	3795	1426	7.48	0.00	9.09	2.29	2.66
+15	**(+59)**	16102	4058	4718	1552	8.04	0.00	10.37	2.61	3.04

TEST CONDITIONS: **@230V60Hz** — **ASHRAE46** **Fan** — (Condensing temperature **35ºC (+95ºF))**

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)**	12633	3184	3702	1237	5.68	0.00	10.21	2.57	2.99
+5	**(+41)**	15733	3965	4610	1324	6.10	0.00	11.88	2.99	3.48
+10	**(+50)**	19346	4875	5669	1408	6.55	0.00	13.75	3.46	4.03
+15	**(+59)**	23473	5915	6878	1488	7.01	0.00	15.77	3.97	4.62

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)**	11004	2773	3224	1332	6.13	0.00	8.27	2.08	2.42
+5	**(+41)**	13893	3501	4071	1429	6.59	0.00	9.72	2.45	2.85
+10	**(+50)**	17293	4358	5067	1532	7.08	0.00	11.28	2.84	3.31
+15	**(+59)**	21203	5343	6213	1641	7.59	0.00	12.93	3.26	3.79

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)**	9306	2345	2727	1431	6.60	0.00	6.50	1.64	1.90
+5	**(+41)**	11976	3018	3509	1539	7.10	0.00	7.79	1.96	2.28
+10	**(+50)**	15154	3819	4440	1662	7.63	0.00	9.12	2.30	2.67
+15	**(+59)**	18839	4747	5520	1800	8.21	0.00	10.46	2.64	3.07

F - EXTERNAL CHARACTERISTICS

1 Base plate	American Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	6.42 +0.08/+0.00	[mm]	(0.253" +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		