

### COMPRESSOR DEFINITION

Designation	J 7228P
Nominal Voltage/Frequency	380-420 V 50 Hz / 440-480 V 60 Hz
Engineering Number	166DM01

### 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 - 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 pressures/temperature			
9.1 Operating (gauge)	21.7	[kgf/cm <sup>2</sup> ] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm <sup>2</sup> ] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1+	[hp]
2 Displacement	23.51	[cm <sup>3</sup> ] (1.435 cu.in)
2.1 Bore [mm]	38.087	
2.2 Stroke [mm]	20.650	
3 Lubricant charge	890	[ml] (30.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO32	
4 Weight (with oil charge)	19.9	[kg] (43.87 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	31HM25-36	
6 Start winding resistance	5.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	18.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.70	[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]
13312	3355	3901	1449	2.75	82.21	9.19	2.32	2.69

### 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)	10798	2721	3164	896	2.02	0.00	12.05	3.04	3.53
+5 (+41)	13447	3389	3940	930	2.08	0.00	14.46	3.65	4.24
+10 (+50)	16535	4167	4845	955	2.11	0.00	17.32	4.36	5.07
+15 (+59)	20062	5056	5879	973	2.13	0.00	20.61	5.19	6.04

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)	9405	2370	2756	1002	2.22	0.00	9.40	2.37	2.75
+5 (+41)	11874	2992	3479	1063	2.34	0.00	11.16	2.81	3.27
+10 (+50)	14780	3725	4331	1115	2.44	0.00	13.25	3.34	3.88
+15 (+59)	18122	4567	5310	1157	2.52	0.00	15.67	3.95	4.59

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)	7954	2004	2331	1113	2.43	0.00	7.14	1.80	2.09
+5 (+41)	10236	2579	2999	1202	2.62	0.00	8.52	2.15	2.50
+10 (+50)	12952	3264	3795	1281	2.79	0.00	10.11	2.55	2.96
+15 (+59)	16102	4058	4718	1349	2.93	0.00	11.93	3.01	3.50

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)	12633	3184	3702	1054	2.06	0.00	11.98	3.02	3.51
+5 (+41)	15733	3965	4610	1092	2.12	0.00	14.41	3.63	4.22
+10 (+50)	19346	4875	5669	1121	2.16	0.00	17.27	4.35	5.06
+15 (+59)	23473	5915	6878	1142	2.20	0.00	20.55	5.18	6.02

### 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)	11004	2773	3224	1179	2.27	0.00	9.34	2.35	2.74
+5	(+41)	13893	3501	4071	1247	2.39	0.00	11.13	2.81	3.26
+10	(+50)	17293	4358	5067	1305	2.49	0.00	13.24	3.34	3.88
+15	(+59)	21203	5343	6213	1354	2.57	0.00	15.67	3.95	4.59

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)	9306	2345	2727	1309	2.48	0.00	7.10	1.79	2.08
+5	(+41)	11976	3018	3509	1409	2.67	0.00	8.51	2.14	2.49
+10	(+50)	15154	3819	4440	1497	2.84	0.00	10.13	2.55	2.97
+15	(+59)	18839	4747	5520	1574	2.99	0.00	11.96	3.01	3.51

### 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		