

COMPRESSOR DEFINITION

Designation	J 9232E
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	163MD01

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	208-230 / 60	[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	CSCR		
6 Starting torque	HST - Hight 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 ²] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1 1/4	[hp]
2 Displacement	26.11	[cm ³] (1.593 cu.in)
2.1 Bore [mm]	41.770	
2.2 Stroke [mm]	19.066	
3 Lubricant charge	890	[ml] (30.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	21.65	[kg] (47.73 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	3ARR3B3AV3	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	20(440)	[µF(VAC minimum)]
5 Motor protection	T0838/C9	
6 Start winding resistance	5.56	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.23	[Ω at 25°C (77°F)] +/- 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: @200V50Hz			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]
12395	3124	3632	1482	7.30	76.55	8.36	2.11	2.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz			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)	4338	1093	1271	875	3.79	22.67	4.96	1.25	1.45
-15	(+ 5)	5653	1425	1657	963	4.29	29.72	5.86	1.48	1.72
-10	(+14)	7135	1798	2091	1041	4.73	37.65	6.85	1.73	2.01
-5	(+23)	8833	2226	2588	1110	5.12	46.79	7.96	2.01	2.33
0	(+32)	10795	2720	3163	1169	5.45	57.49	9.26	2.33	2.71
+5	(+41)	13069	3293	3830	1215	5.71	70.07	10.77	2.71	3.16
+10	(+50)	15706	3958	4602	1249	5.90	84.88	12.55	3.16	3.68

TEST CONDITIONS: @200V50Hz			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)	3924	989	1150	868	3.80	21.94	4.54	1.14	1.33
-15	(+ 5)	5117	1289	1499	968	4.33	28.71	5.29	1.33	1.55
-10	(+14)	6473	1631	1897	1065	4.85	36.45	6.07	1.53	1.78
-5	(+23)	8041	2026	2356	1158	5.35	45.51	6.93	1.75	2.03
0	(+32)	9870	2487	2892	1245	5.83	56.21	7.91	1.99	2.32
+5	(+41)	12008	3026	3519	1325	6.27	68.89	9.05	2.28	2.65
+10	(+50)	14505	3655	4250	1398	6.69	83.89	10.40	2.62	3.05

TEST CONDITIONS: @200V50Hz			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)	3508	884	1028	861	3.80	21.10	4.04	1.02	1.18
-15	(+ 5)	4579	1154	1342	975	4.37	27.62	4.71	1.19	1.38
-10	(+14)	5810	1464	1702	1090	4.97	35.20	5.36	1.35	1.57
-5	(+23)	7249	1827	2124	1205	5.58	44.19	6.03	1.52	1.77
0	(+32)	8946	2254	2621	1321	6.21	54.92	6.76	1.70	1.98
+5	(+41)	10948	2759	3208	1436	6.84	67.73	7.60	1.92	2.23
+10	(+50)	13305	3353	3899	1548	7.47	82.95	8.60	2.17	2.52

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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)	5075	1279	1487	1024	4.44	26.52	4.96	1.25	1.45
-15	(+ 5)	6614	1667	1938	1126	5.01	34.77	5.86	1.48	1.72
-10	(+14)	8348	2104	2446	1218	5.53	44.05	6.85	1.73	2.01
-5	(+23)	10335	2604	3028	1299	5.98	54.75	7.96	2.01	2.33
0	(+32)	12630	3183	3701	1367	6.37	67.26	9.26	2.33	2.71
+5	(+41)	15291	3853	4481	1422	6.68	81.98	10.77	2.71	3.16
+10	(+50)	18376	4631	5385	1461	6.91	99.31	12.55	3.16	3.68

TEST CONDITIONS: @200V60Hz		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)	4590	1157	1345	1016	4.44	25.66	4.54	1.14	1.33
-15	(+ 5)	5986	1508	1754	1133	5.07	33.58	5.29	1.33	1.55
-10	(+14)	7573	1908	2219	1246	5.67	42.65	6.07	1.53	1.78
-5	(+23)	9408	2371	2757	1354	6.26	53.24	6.93	1.75	2.03
0	(+32)	11548	2910	3384	1456	6.82	65.76	7.91	1.99	2.32
+5	(+41)	14050	3541	4117	1551	7.34	80.60	9.05	2.28	2.65
+10	(+50)	16971	4277	4973	1636	7.82	98.15	10.40	2.62	3.05

TEST CONDITIONS: @200V60Hz		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)	4105	1034	1203	1008	4.44	24.69	4.04	1.02	1.18
-15	(+ 5)	5358	1350	1570	1140	5.12	32.32	4.71	1.19	1.38
-10	(+14)	6798	1713	1992	1274	5.82	41.19	5.36	1.35	1.57
-5	(+23)	8482	2137	2485	1410	6.54	51.71	6.03	1.52	1.77
0	(+32)	10466	2638	3067	1546	7.27	64.26	6.76	1.70	1.98
+5	(+41)	12809	3228	3753	1680	8.00	79.24	7.60	1.92	2.23
+10	(+50)	15567	3923	4561	1812	8.73	97.05	8.60	2.17	2.52

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		