

COMPRESSOR DEFINITION

Designation	NE 5187Z
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	262QN51

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-240 / 50	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
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)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	12.11	[cm ³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.15	[kg] (24.58 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	200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0029	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0660/G5	
6 Start winding resistance	60.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.30	[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)	2.80	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

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]
3790	955	1111	496	2.98	24.57	7.64	1.93	2.24

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]
-15	(+5)	1888	476	553	270	1.95	10.22	6.97	1.76	2.04
-10	(+14)	2374	598	696	301	2.07	12.88	7.91	1.99	2.32
-5	(+23)	3005	757	881	330	2.19	16.37	9.12	2.30	2.67
0	(+32)	3763	948	1103	358	2.31	20.59	10.52	2.65	3.08
+5	(+41)	4626	1166	1355	385	2.45	25.46	12.03	3.03	3.52
+10	(+50)	5575	1405	1634	411	2.59	30.86	13.57	3.42	3.98

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]
-15	(+5)	1619	408	475	277	1.97	9.46	5.86	1.48	1.72
-10	(+14)	2052	517	601	315	2.13	12.03	6.52	1.64	1.91
-5	(+23)	2616	659	766	353	2.30	15.40	7.39	1.86	2.17
0	(+32)	3292	829	964	391	2.47	19.48	8.40	2.12	2.46
+5	(+41)	4059	1023	1189	429	2.66	24.16	9.46	2.38	2.77
+10	(+50)	4899	1234	1435	468	2.86	29.35	10.49	2.64	3.07

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]
-15	(+5)	1351	340	396	284	1.99	8.60	4.75	1.20	1.39
-10	(+14)	1729	436	507	329	2.19	11.07	5.26	1.32	1.54
-5	(+23)	2226	561	652	376	2.40	14.30	5.92	1.49	1.74
0	(+32)	2820	711	826	424	2.63	18.21	6.66	1.68	1.95
+5	(+41)	3492	880	1023	474	2.87	22.70	7.39	1.86	2.16
+10	(+50)	4222	1064	1237	525	3.13	27.66	8.02	2.02	2.35

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]
-15	(+ 5)	2212	557	648	316	2.28	11.97	6.98	1.76	2.04
-10	(+14)	2820	711	826	352	2.42	15.34	8.01	2.02	2.35
-5	(+23)	3514	886	1030	386	2.56	19.13	9.11	2.30	2.67
0	(+32)	4342	1094	1272	419	2.71	23.71	10.38	2.62	3.04
+5	(+41)	5354	1349	1569	450	2.86	29.41	11.90	3.00	3.49
+10	(+50)	6597	1663	1933	481	3.02	36.59	13.74	3.46	4.03

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]
-15	(+ 5)	1781	449	522	324	2.30	10.34	5.60	1.41	1.64
-10	(+14)	2466	621	723	368	2.49	14.50	6.67	1.68	1.96
-5	(+23)	3151	794	923	413	2.69	18.60	7.60	1.92	2.23
0	(+32)	3884	979	1138	457	2.89	23.00	8.48	2.14	2.48
+5	(+41)	4714	1188	1381	502	3.11	28.04	9.38	2.36	2.75
+10	(+50)	5691	1434	1667	547	3.34	34.08	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]
-15	(+ 5)	1583	399	464	332	2.32	10.08	4.76	1.20	1.39
-10	(+14)	2317	584	679	385	2.56	14.83	5.93	1.49	1.74
-5	(+23)	2964	747	869	440	2.81	19.05	6.74	1.70	1.97
0	(+32)	3574	901	1047	496	3.07	23.07	7.28	1.84	2.13
+5	(+41)	4195	1057	1229	554	3.36	27.25	7.64	1.92	2.24
+10	(+50)	4875	1229	1429	614	3.66	31.94	7.88	1.99	2.31

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		