

COMPRESSOR DEFINITION

Designation	NE 6187Z
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	262EN51

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	CSIR		
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)	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	[kg] (24.25 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELECTRICAL 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	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0817/G6	
6 Start winding resistance	35.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	16.80	[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)	3.03	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IMQ	

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]
4406	1110	1291	562	3.31	28.57	7.84	1.98	2.30

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V50Hz		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)	1809	456	530	271	2.09	9.79	6.67	1.68	1.95
-10	(+14)	2304	581	675	301	2.19	12.50	7.65	1.93	2.24
-5	(+23)	2916	735	855	331	2.29	15.88	8.82	2.22	2.59
0	(+32)	3647	919	1069	359	2.40	19.95	10.16	2.56	2.98
+5	(+41)	4495	1133	1317	386	2.50	24.73	11.64	2.93	3.41
+10	(+50)	5462	1376	1600	412	2.60	30.24	13.25	3.34	3.88

TEST CONDITIONS: @230V50Hz		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)	1552	391	455	277	2.09	9.06	5.62	1.42	1.65
-10	(+14)	2003	505	587	313	2.22	11.75	6.39	1.61	1.87
-5	(+23)	2558	645	750	350	2.36	15.06	7.30	1.84	2.14
0	(+32)	3217	811	943	386	2.49	19.04	8.32	2.10	2.44
+5	(+41)	3979	1003	1166	422	2.63	23.68	9.42	2.37	2.76
+10	(+50)	4845	1221	1420	458	2.76	29.03	10.59	2.67	3.10

TEST CONDITIONS: @230V50Hz		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)	1284	324	376	283	2.09	8.18	4.53	1.14	1.33
-10	(+14)	1690	426	495	326	2.26	10.81	5.18	1.31	1.52
-5	(+23)	2185	551	640	370	2.43	14.04	5.91	1.49	1.73
0	(+32)	2769	698	811	415	2.60	17.88	6.68	1.68	1.96
+5	(+41)	3442	867	1008	460	2.77	22.37	7.49	1.89	2.19
+10	(+50)	4203	1059	1232	506	2.94	27.53	8.30	2.09	2.43

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz		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)	2117	534	620	317	2.09	11.45	6.67	1.68	1.95	
-10 (+14)	2696	679	790	353	2.19	14.63	7.65	1.93	2.24	
-5 (+23)	3412	860	1000	387	2.29	18.58	8.82	2.22	2.58	
0 (+32)	4267	1075	1250	420	2.40	23.35	10.16	2.56	2.98	
+5 (+41)	5260	1325	1541	452	2.50	28.94	11.64	2.93	3.41	
+10 (+50)	6390	1610	1873	483	2.60	35.38	13.23	3.33	3.88	

TEST CONDITIONS: @230V60Hz		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)	1816	458	532	324	2.09	10.60	5.61	1.41	1.64	
-10 (+14)	2344	591	687	367	2.22	13.75	6.38	1.61	1.87	
-5 (+23)	2994	754	877	410	2.36	17.63	7.30	1.84	2.14	
0 (+32)	3764	949	1103	452	2.49	22.27	8.32	2.10	2.44	
+5 (+41)	4656	1173	1364	494	2.63	27.71	9.42	2.37	2.76	
+10 (+50)	5668	1428	1661	536	2.76	33.96	10.58	2.67	3.10	

TEST CONDITIONS: @230V60Hz		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)	1502	379	440	331	2.09	9.57	4.54	1.14	1.33	
-10 (+14)	1977	498	579	382	2.26	12.65	5.18	1.30	1.52	
-5 (+23)	2557	644	749	433	2.43	16.42	5.90	1.49	1.73	
0 (+32)	3240	816	949	485	2.60	20.92	6.68	1.68	1.96	
+5 (+41)	4027	1015	1180	538	2.77	26.18	7.49	1.89	2.20	
+10 (+50)	4917	1239	1441	592	2.94	32.21	8.30	2.09	2.43	

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		