

COMPRESSOR DEFINITION

Designation	NE 2130Z
Nominal Voltage/Frequency	200-220 V 50 Hz / 230 V 60 Hz
Engineering Number	263DK50

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-220 / 50	[V / Hz]	
4 Application type	Low Back Pressure R134a		
4.1 Evaporating temperature range	-30°C to -5°C	(-22°F to 23°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)	11.65	[kg] (25.68 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	200-220 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-0027	
3 Start capacitor	43-53(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM758NFBZZ-153	
6 Start winding resistance	18.58	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	17.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.48	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @230V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
1234	311	362	298	2.85	7.01	4.14	1.04	1.21

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V50Hz			ASHRAE32 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]
-35	(-31)	699	176	205	188	2.31	3.95	3.62	0.91	1.06
-30	(-22)	852	215	250	210	2.34	4.83	4.05	1.02	1.19
-25	(-13)	1077	271	315	235	2.39	6.11	4.60	1.16	1.35
-20	(- 4)	1372	346	402	262	2.47	7.81	5.23	1.32	1.53
-15	(+ 5)	1739	438	510	293	2.57	9.93	5.92	1.49	1.74
-10	(+14)	2177	549	638	328	2.70	12.47	6.64	1.67	1.94

TEST CONDITIONS: @230V50Hz			ASHRAE32 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]
-35	(-31)	599	151	176	185	2.29	3.39	3.20	0.81	0.94
-30	(-22)	780	196	228	212	2.34	4.42	3.68	0.93	1.08
-25	(-13)	1022	257	299	241	2.41	5.80	4.24	1.07	1.24
-20	(- 4)	1326	334	389	273	2.51	7.55	4.86	1.22	1.42
-15	(+ 5)	1692	426	496	308	2.62	9.66	5.50	1.39	1.61
-10	(+14)	2121	534	621	346	2.76	12.15	6.13	1.55	1.80

TEST CONDITIONS: @230V50Hz			ASHRAE32 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]
-35	(-31)	503	127	147	182	2.26	2.84	2.80	0.70	0.82
-30	(-22)	710	179	208	214	2.34	4.02	3.33	0.84	0.98
-25	(-13)	969	244	284	247	2.43	5.50	3.91	0.99	1.15
-20	(- 4)	1282	323	376	283	2.54	7.30	4.52	1.14	1.33
-15	(+ 5)	1648	415	483	322	2.67	9.41	5.12	1.29	1.50
-10	(+14)	2067	521	606	364	2.82	11.84	5.69	1.43	1.67

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz		ASHRAE32 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]
-35	(-31)	817	206	239	218	2.00	4.62	3.63	0.92	1.06
-30	(-22)	997	251	292	244	2.02	5.65	4.08	1.03	1.20
-25	(-13)	1260	317	369	272	2.06	7.15	4.64	1.17	1.36
-20	(- 4)	1606	405	471	304	2.13	9.14	5.28	1.33	1.55
-15	(+ 5)	2035	513	596	340	2.22	11.62	5.98	1.51	1.75
-10	(+14)	2548	642	747	380	2.33	14.60	6.69	1.69	1.96

TEST CONDITIONS: @230V60Hz		ASHRAE32 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]
-35	(-31)	702	177	206	215	1.98	3.96	3.22	0.81	0.94
-30	(-22)	912	230	267	246	2.02	5.17	3.71	0.94	1.09
-25	(-13)	1196	301	350	279	2.08	6.79	4.28	1.08	1.26
-20	(- 4)	1552	391	455	316	2.16	8.83	4.91	1.24	1.44
-15	(+ 5)	1981	499	580	357	2.26	11.31	5.55	1.40	1.63
-10	(+14)	2482	625	727	401	2.38	14.22	6.19	1.56	1.81

TEST CONDITIONS: @230V60Hz		ASHRAE32 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]
-35	(-31)	588	148	172	211	1.96	3.32	2.82	0.71	0.83
-30	(-22)	830	209	243	247	2.02	4.70	3.36	0.85	0.98
-25	(-13)	1134	286	332	286	2.10	6.44	3.95	1.00	1.16
-20	(- 4)	1500	378	440	328	2.19	8.54	4.56	1.15	1.34
-15	(+ 5)	1928	486	565	374	2.30	11.01	5.17	1.30	1.51
-10	(+14)	2419	610	709	423	2.43	13.86	5.73	1.45	1.68

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		