

COMPRESSOR DEFINITION

Designation	NE 2130Z
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	262DQ50

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	100 / 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 temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 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)	10.95	[kg] (24.14 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	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-64	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MST20AGN-3261	
6 Start winding resistance	8.89	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.01	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	5.42	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
1103	278	323	270	5.08	6.27	4.09	1.03	1.20

TEST CONDITIONS: @100V60Hz			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]
1252	316	367	308	5.80	7.11	4.06	1.02	1.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz			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]
-30 (-22)	852	215	250	162	4.85	4.83	5.25	1.32	1.54
-25 (-13)	1077	271	315	183	4.97	6.11	5.90	1.49	1.73
-20 (- 4)	1372	346	402	205	5.11	7.81	6.71	1.69	1.97
-15 (+ 5)	1739	438	510	227	5.28	9.93	7.64	1.93	2.24
-10 (+14)	2177	549	638	251	5.49	12.47	8.68	2.19	2.54
-5 (+23)	2687	677	787	275	5.74	15.46	9.77	2.46	2.86

TEST CONDITIONS: @100V50Hz			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]
-30 (-22)	780	196	228	162	4.87	4.42	4.81	1.21	1.41
-25 (-13)	1022	257	299	186	5.00	5.80	5.50	1.39	1.61
-20 (- 4)	1326	334	389	211	5.16	7.55	6.27	1.58	1.84
-15 (+ 5)	1692	426	496	238	5.36	9.66	7.11	1.79	2.08
-10 (+14)	2121	534	621	266	5.61	12.15	7.97	2.01	2.34
-5 (+23)	2612	658	765	296	5.92	15.02	8.83	2.22	2.59

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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]
-30	(-22)	710	179	208	162	4.90	4.02	4.38	1.10	1.28
-25	(-13)	969	244	284	189	5.03	5.50	5.13	1.29	1.50
-20	(- 4)	1282	323	376	217	5.21	7.30	5.89	1.49	1.73
-15	(+ 5)	1648	415	483	248	5.44	9.41	6.65	1.68	1.95
-10	(+14)	2067	521	606	281	5.74	11.84	7.37	1.86	2.16
-5	(+23)	2539	640	744	316	6.11	14.60	8.02	2.02	2.35

TEST CONDITIONS: @100V60Hz		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]
-30	(-22)	997	251	292	190	5.63	5.65	5.24	1.32	1.53
-25	(-13)	1260	317	369	214	5.77	7.15	5.90	1.49	1.73
-20	(- 4)	1606	405	471	240	5.93	9.14	6.71	1.69	1.97
-15	(+ 5)	2035	513	596	266	6.13	11.62	7.64	1.93	2.24
-10	(+14)	2548	642	747	293	6.36	14.60	8.67	2.19	2.54
-5	(+23)	3143	792	921	322	6.66	18.08	9.77	2.46	2.86

TEST CONDITIONS: @100V60Hz		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]
-30	(-22)	912	230	267	190	5.65	5.17	4.80	1.21	1.41
-25	(-13)	1196	301	350	218	5.80	6.79	5.49	1.38	1.61
-20	(- 4)	1552	391	455	247	5.98	8.83	6.27	1.58	1.84
-15	(+ 5)	1981	499	580	279	6.22	11.31	7.10	1.79	2.08
-10	(+14)	2482	625	727	312	6.51	14.22	7.96	2.01	2.33
-5	(+23)	3055	770	895	346	6.87	17.58	8.82	2.22	2.59

TEST CONDITIONS: @100V60Hz		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]
-30	(-22)	830	209	243	190	5.68	4.70	4.37	1.10	1.28
-25	(-13)	1134	286	332	221	5.83	6.44	5.13	1.29	1.50
-20	(- 4)	1500	378	440	254	6.04	8.54	5.89	1.49	1.73
-15	(+ 5)	1928	486	565	290	6.31	11.01	6.65	1.68	1.95
-10	(+14)	2419	610	709	329	6.66	13.86	7.37	1.86	2.16
-5	(+23)	2971	749	871	370	7.09	17.09	8.02	2.02	2.35

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		