

COMPRESSOR DEFINITION

Designation	NE U3145ZX
Nominal Voltage/Frequency	200 V 50-60 Hz
Engineering Number	279GR21

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200 / 50-60	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	3PHASE		
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 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	1/2	[hp]
2 Displacement	18.70	[cm ³] (1.141 cu.in)
2.1 Bore [mm]	32.186	
2.2 Stroke [mm]	23.000	
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)	11.39	[kg] (25.11 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200 V 50-60 Hz 3 ~ (Three phase)	
2 Starting device type	3PHASE	
2.1 Starting device		
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	34HM207-66	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[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)	-	[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: @200V50Hz			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]
1667	420	488	354	1.71	9.47	4.71	1.19	1.38

TEST CONDITIONS: @200V60Hz			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]
1898	478	556	403	1.55	10.78	4.71	1.19	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		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)	923	232	270	230	1.55	5.22	4.00	1.01	1.17
-30	(-22)	1321	333	387	272	1.60	7.49	4.86	1.23	1.43
-25	(-13)	1783	449	522	315	1.66	10.12	5.67	1.43	1.66
-20	(- 4)	2309	582	677	360	1.73	13.14	6.43	1.62	1.88
-15	(+ 5)	2899	731	850	406	1.82	16.55	7.14	1.80	2.09
-10	(+14)	3554	896	1041	454	1.91	20.36	7.82	1.97	2.29
-5	(+23)	4273	1077	1252	504	2.02	24.59	8.48	2.14	2.48
0	(+32)	5056	1274	1482	555	2.15	29.23	9.11	2.30	2.67

TEST CONDITIONS: @200V50Hz		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)	851	214	249	236	1.54	4.81	3.62	0.91	1.06
-30	(-22)	1251	315	366	283	1.61	7.09	4.41	1.11	1.29
-25	(-13)	1712	431	502	333	1.69	9.72	5.13	1.29	1.50
-20	(- 4)	2236	563	655	384	1.78	12.72	5.81	1.46	1.70
-15	(+ 5)	2821	711	827	438	1.89	16.11	6.44	1.62	1.89
-10	(+14)	3469	874	1017	493	2.01	19.88	7.02	1.77	2.06
-5	(+23)	4179	1053	1225	551	2.15	24.05	7.58	1.91	2.22
0	(+32)	4952	1248	1451	611	2.30	28.63	8.11	2.04	2.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		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]
-35	(-31)	766	193	224	235	1.54	4.33	3.25	0.82	0.95
-30	(-22)	1146	289	336	290	1.63	6.50	3.94	0.99	1.16
-25	(-13)	1587	400	465	347	1.73	9.01	4.57	1.15	1.34
-20	(- 4)	2087	526	612	407	1.85	11.88	5.14	1.29	1.50
-15	(+ 5)	2648	667	776	469	1.98	15.11	5.65	1.42	1.66
-10	(+14)	3268	824	958	535	2.13	18.72	6.12	1.54	1.79
-5	(+23)	3949	995	1157	603	2.29	22.72	6.56	1.65	1.92
0	(+32)	4691	1182	1374	673	2.47	27.12	6.96	1.75	2.04

TEST CONDITIONS: @200V60Hz		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]
-35	(-31)	1048	264	307	249	1.22	5.93	4.21	1.06	1.23
-30	(-22)	1508	380	442	302	1.33	8.55	4.99	1.26	1.46
-25	(-13)	2036	513	597	358	1.45	11.56	5.69	1.43	1.67
-20	(- 4)	2633	663	771	417	1.60	14.98	6.31	1.59	1.85
-15	(+ 5)	3298	831	966	479	1.76	18.82	6.88	1.73	2.02
-10	(+14)	4031	1016	1181	544	1.93	23.10	7.41	1.87	2.17
-5	(+23)	4834	1218	1416	612	2.12	27.81	7.89	1.99	2.31
0	(+32)	5704	1438	1672	683	2.33	32.98	8.36	2.11	2.45

TEST CONDITIONS: @200V60Hz		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]
-35	(-31)	968	244	284	250	1.22	5.48	3.88	0.98	1.14
-30	(-22)	1423	359	417	309	1.35	8.06	4.59	1.16	1.35
-25	(-13)	1946	490	570	372	1.49	11.05	5.22	1.32	1.53
-20	(- 4)	2540	640	744	439	1.66	14.45	5.78	1.46	1.69
-15	(+ 5)	3203	807	938	509	1.84	18.28	6.29	1.58	1.84
-10	(+14)	3935	992	1153	583	2.04	22.54	6.74	1.70	1.98
-5	(+23)	4737	1194	1388	661	2.25	27.25	7.16	1.80	2.10
0	(+32)	5609	1413	1643	743	2.49	32.42	7.56	1.90	2.21

E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		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)	867	219	254	247	1.22	4.91	3.52	0.89	1.03
-30	(-22)	1301	328	381	312	1.36	7.38	4.16	1.05	1.22
-25	(-13)	1805	455	529	382	1.52	10.25	4.72	1.19	1.38
-20	(- 4)	2380	600	698	457	1.70	13.55	5.21	1.31	1.53
-15	(+ 5)	3026	763	887	536	1.90	17.27	5.65	1.42	1.65
-10	(+14)	3742	943	1097	620	2.12	21.44	6.04	1.52	1.77
-5	(+23)	4529	1141	1327	709	2.35	26.05	6.39	1.61	1.87
0	(+32)	5386	1357	1578	802	2.61	31.14	6.72	1.69	1.97

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +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		