

COMPRESSOR DEFINITION

Designation	NE U3140ZX
Nominal Voltage/Frequency	200 V 50-60 Hz
Engineering Number	279FR21

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	16.80	[cm ³] (1.025 cu.in)
2.1 Bore [mm]	31.190	
2.2 Stroke [mm]	22.000	
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)	11.5	[kg] (25.35 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]
1578	398	462	334	1.67	8.97	4.72	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]
1833	462	537	379	1.49	10.41	4.84	1.22	1.42

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)	885	223	259	215	1.52	5.01	4.12	1.04	1.21
-30	(-22)	1255	316	368	251	1.55	7.11	5.01	1.26	1.47
-25	(-13)	1686	425	494	288	1.59	9.58	5.86	1.48	1.72
-20	(- 4)	2179	549	638	326	1.65	12.40	6.68	1.68	1.96
-15	(+ 5)	2732	689	801	366	1.73	15.60	7.46	1.88	2.19
-10	(+14)	3347	843	981	407	1.82	19.17	8.22	2.07	2.41
-5	(+23)	4022	1014	1179	449	1.91	23.14	8.96	2.26	2.62
0	(+32)	4759	1199	1395	492	2.03	27.51	9.67	2.44	2.83

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)	816	206	239	222	1.52	4.62	3.66	0.92	1.07
-30	(-22)	1168	294	342	262	1.57	6.62	4.45	1.12	1.31
-25	(-13)	1581	398	463	304	1.64	8.98	5.21	1.31	1.53
-20	(- 4)	2056	518	603	347	1.71	11.70	5.94	1.50	1.74
-15	(+ 5)	2593	654	760	391	1.80	14.80	6.63	1.67	1.94
-10	(+14)	3192	804	935	437	1.90	18.28	7.30	1.84	2.14
-5	(+23)	3852	971	1129	485	2.01	22.16	7.94	2.00	2.33
0	(+32)	4573	1152	1340	534	2.12	26.44	8.56	2.16	2.51

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)	722	182	212	218	1.52	4.08	3.32	0.84	0.97
-30	(-22)	1071	270	314	265	1.58	6.07	4.03	1.02	1.18
-25	(-13)	1482	374	434	315	1.66	8.42	4.70	1.19	1.38
-20	(- 4)	1956	493	573	366	1.75	11.13	5.34	1.35	1.56
-15	(+ 5)	2492	628	730	419	1.84	14.23	5.94	1.50	1.74
-10	(+14)	3091	779	906	474	1.95	17.70	6.51	1.64	1.91
-5	(+23)	3751	945	1099	531	2.07	21.58	7.06	1.78	2.07
0	(+32)	4473	1127	1311	590	2.19	25.86	7.59	1.91	2.22

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)	1006	254	295	234	1.18	5.69	4.31	1.09	1.26
-30	(-22)	1435	362	421	280	1.27	8.14	5.14	1.29	1.51
-25	(-13)	1931	487	566	328	1.37	10.96	5.90	1.49	1.73
-20	(- 4)	2493	628	730	378	1.49	14.19	6.60	1.66	1.93
-15	(+ 5)	3121	786	914	431	1.62	17.82	7.24	1.82	2.12
-10	(+14)	3816	962	1118	487	1.76	21.86	7.84	1.97	2.30
-5	(+23)	4578	1154	1341	545	1.92	26.34	8.39	2.11	2.46
0	(+32)	5406	1362	1584	606	2.10	31.26	8.92	2.25	2.61

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)	941	237	276	243	1.20	5.32	3.85	0.97	1.13
-30	(-22)	1357	342	398	293	1.31	7.69	4.61	1.16	1.35
-25	(-13)	1840	464	539	347	1.43	10.45	5.30	1.34	1.55
-20	(- 4)	2389	602	700	403	1.56	13.59	5.93	1.49	1.74
-15	(+ 5)	3004	757	880	462	1.70	17.14	6.51	1.64	1.91
-10	(+14)	3685	929	1080	524	1.86	21.11	7.04	1.77	2.06
-5	(+23)	4434	1117	1299	589	2.03	25.51	7.53	1.90	2.21
0	(+32)	5249	1323	1538	657	2.22	30.34	8.00	2.01	2.34

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)	816	206	239	236	1.20	4.61	3.47	0.87	1.02
-30	(-22)	1230	310	360	296	1.33	6.97	4.15	1.05	1.22
-25	(-13)	1710	431	501	359	1.47	9.71	4.76	1.20	1.39
-20	(- 4)	2256	568	661	425	1.63	12.84	5.31	1.34	1.56
-15	(+ 5)	2868	723	840	494	1.80	16.37	5.81	1.46	1.70
-10	(+14)	3547	894	1039	566	1.98	20.32	6.26	1.58	1.84
-5	(+23)	4292	1082	1258	642	2.17	24.69	6.68	1.68	1.96
0	(+32)	5104	1286	1495	721	2.38	29.50	7.08	1.78	2.07

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		