

COMPRESSOR DEFINITION

Designation	NE U3130L
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	279CQ44

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	HFO		
3 Nominal voltage and frequency	100 / 50	[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	CSCR		
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	15.72	[kgf/cm ²] (224 psig)	/ °C - °F
9.2 Peak	19.82	[kgf/cm ²] (282 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)	11.4	[kg] (25.13 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVAH7AA3C-571	
3 Start capacitor	340-408(250)	[µF(VAC minimum)]
4 Run capacitor	35(400)	[µF(VAC minimum)]
5 Motor protection	USP-529-83	
6 Start winding resistance	3.81	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.96	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	39.50	[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: @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]
1376	347	403	270	3.55	9.49	5.10	1.29	1.49

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]
1598	403	468	312	3.20	11.02	5.12	1.29	1.50

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]
-35 (-31)	827	208	242	192	3.01	4.67	4.29	1.08	1.26
-30 (-22)	1149	289	337	220	3.11	6.45	5.21	1.31	1.53
-25 (-13)	1494	376	438	247	3.25	8.37	6.05	1.52	1.77
-20 (- 4)	1862	469	545	273	3.45	10.42	6.83	1.72	2.00
-15 (+ 5)	2253	568	660	297	3.70	12.62	7.58	1.91	2.22
-10 (+14)	2668	672	782	320	4.00	14.95	8.32	2.10	2.44
-5 (+23)	3105	783	910	341	4.35	17.44	9.09	2.29	2.66
0 (+32)	3566	899	1045	361	4.74	20.09	9.90	2.49	2.90

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]
-35 (-31)	767	193	225	193	2.99	5.21	3.97	1.00	1.16
-30 (-22)	1095	276	321	227	3.12	7.53	4.82	1.21	1.41
-25 (-13)	1440	363	422	258	3.30	9.96	5.59	1.41	1.64
-20 (- 4)	1804	455	529	287	3.55	12.53	6.31	1.59	1.85
-15 (+ 5)	2186	551	641	313	3.84	15.23	7.00	1.76	2.05
-10 (+14)	2587	652	758	336	4.19	18.07	7.69	1.94	2.25
-5 (+23)	3005	757	881	357	4.60	21.05	8.41	2.12	2.46
0 (+32)	3442	867	1009	375	5.06	24.17	9.17	2.31	2.69

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	703	177	206	196	3.03	4.85	3.59	0.90	1.05
-30	(-22)	1034	260	303	235	3.16	7.10	4.38	1.10	1.28
-25	(-13)	1377	347	404	270	3.36	9.47	5.09	1.28	1.49
-20	(- 4)	1734	437	508	301	3.62	11.95	5.76	1.45	1.69
-15	(+ 5)	2104	530	617	329	3.93	14.56	6.40	1.61	1.88
-10	(+14)	2488	627	729	353	4.31	17.31	7.05	1.78	2.07
-5	(+23)	2884	727	845	373	4.75	20.18	7.73	1.95	2.27
0	(+32)	3293	830	965	389	5.25	23.20	8.47	2.13	2.48

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	941	237	276	214	2.27	5.28	4.40	1.11	1.29
-30	(-22)	1379	348	404	256	2.57	7.74	5.37	1.35	1.57
-25	(-13)	1806	455	529	293	2.88	10.14	6.17	1.56	1.81
-20	(- 4)	2220	559	650	325	3.21	12.46	6.84	1.72	2.00
-15	(+ 5)	2621	661	768	354	3.57	14.71	7.41	1.87	2.17
-10	(+14)	3011	759	882	378	3.94	16.91	7.95	2.00	2.33
-5	(+23)	3388	854	993	398	4.34	19.04	8.49	2.14	2.49
0	(+32)	3752	946	1100	414	4.76	21.11	9.07	2.29	2.66

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	871	219	255	221	2.23	5.96	3.93	0.99	1.15
-30	(-22)	1315	331	385	266	2.60	9.04	4.90	1.23	1.44
-25	(-13)	1740	438	510	307	2.97	12.00	5.67	1.43	1.66
-20	(- 4)	2144	540	628	342	3.37	14.83	6.29	1.59	1.84
-15	(+ 5)	2529	637	741	372	3.77	17.56	6.82	1.72	2.00
-10	(+14)	2893	729	848	397	4.20	20.17	7.28	1.83	2.13
-5	(+23)	3238	816	949	418	4.63	22.67	7.74	1.95	2.27
0	(+32)	3562	898	1044	433	5.08	25.06	8.23	2.07	2.41

E - PERFORMANCE - CURVES

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	766	193	225	215	2.25	5.26	3.58	0.90	1.05
-30	(-22)	1224	308	359	268	2.66	8.41	4.50	1.13	1.32
-25	(-13)	1653	417	484	316	3.07	11.39	5.21	1.31	1.53
-20	(- 4)	2055	518	602	357	3.50	14.20	5.76	1.45	1.69
-15	(+ 5)	2429	612	712	393	3.93	16.84	6.20	1.56	1.82
-10	(+14)	2775	699	813	423	4.37	19.32	6.57	1.65	1.92
-5	(+23)	3093	780	906	447	4.82	21.65	6.91	1.74	2.02
0	(+32)	3384	853	992	465	5.27	23.82	7.28	1.83	2.13

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		