COMPRESSOR DEFINITION

Designation	**NE U2168U**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**863IE71**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[V / Hz]	
4 Application type	Low Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSCR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm²] (262 psig)	/ ºC - ºF
9.2 Peak	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	3/4	[hp]
2 Displacement	16.80	[cm³] (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	AB / ISO32	
4 Weight (with oil charge)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVAH7AA3C-571	
3 Start capacitor	340-408(165)	[µF(VAC minimum)]
4 Run capacitor	30(400)	[µF(VAC minimum)]
5 Motor protection	T0736/G9	
6 Start winding resistance	3.81	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	0.96	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	49.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@115V60Hz			**Fan**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
3241	817	950	627	5.87	9.65	5.17	1.30	1.51

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **35ºC (+95ºF))**			
@115V60Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1530	386	448	376	3.84	4.52	4.06	1.02	1.19
-35	**(-31)**	1999	504	586	427	4.23	5.92	4.69	1.18	1.37
-30	**(-22)**	2583	651	757	480	4.65	7.66	5.39	1.36	1.58
-25	**(-13)**	3283	827	962	534	5.10	9.76	6.14	1.55	1.80
-20	**(- 4)**	4098	1033	1201	591	5.58	12.23	6.93	1.75	2.03
-15	**(+ 5)**	5028	1267	1473	650	6.09	15.06	7.74	1.95	2.27
-10	**(+14)**	6074	1531	1780	711	6.63	18.28	8.54	2.15	2.50

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@115V60Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1424	359	417	387	3.95	4.20	3.69	0.93	1.08
-35	**(-31)**	1885	475	552	444	4.38	5.58	4.25	1.07	1.25
-30	**(-22)**	2460	620	721	504	4.86	7.29	4.88	1.23	1.43
-25	**(-13)**	3149	794	923	568	5.39	9.36	5.54	1.40	1.62
-20	**(- 4)**	3952	996	1158	635	5.97	11.79	6.21	1.57	1.82
-15	**(+ 5)**	4869	1227	1427	707	6.60	14.58	6.89	1.74	2.02
-10	**(+14)**	5901	1487	1729	782	7.29	17.75	7.55	1.90	2.21

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@115V60Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1327	334	389	397	4.01	3.92	3.34	0.84	0.98
-35	**(-31)**	1763	444	517	459	4.48	5.22	3.85	0.97	1.13
-30	**(-22)**	2312	583	677	526	5.01	6.86	4.40	1.11	1.29
-25	**(-13)**	2974	749	871	598	5.61	8.84	4.97	1.25	1.46
-20	**(- 4)**	3749	945	1098	677	6.28	11.18	5.55	1.40	1.62
-15	**(+ 5)**	4636	1168	1358	760	7.02	13.88	6.10	1.54	1.79
-10	**(+14)**	5637	1420	1652	849	7.83	16.95	6.63	1.67	1.94

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		