

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 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	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	3/4	[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)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL 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 25°C (77°F)] +/- 8%
7 Run winding resistance	0.96	[Ω at 25°C (77°F)] +/- 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: @127V60Hz			ARILBP Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 48.9°C (120.02°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]
2553	643	748	627	5.74	10.37	4.07	1.03	1.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ARI4 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]
-40	(-40)	1353	341	396	406	4.41	4.70	3.30	0.83	0.97
-35	(-31)	1761	444	516	454	4.67	6.13	3.88	0.98	1.14
-30	(-22)	2284	576	669	505	4.96	7.98	4.53	1.14	1.33
-25	(-13)	2921	736	856	558	5.29	10.25	5.25	1.32	1.54
-20	(- 4)	3672	925	1076	613	5.65	12.96	6.00	1.51	1.76
-15	(+ 5)	4538	1144	1330	671	6.05	16.14	6.77	1.71	1.98
-10	(+14)	5517	1390	1617	731	6.49	19.78	7.54	1.90	2.21

TEST CONDITIONS: @127V60Hz			ARI4 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]
-40	(-40)	1067	269	313	416	4.45	4.08	2.60	0.66	0.76
-35	(-31)	1451	366	425	470	4.75	5.58	3.10	0.78	0.91
-30	(-22)	1938	488	568	528	5.09	7.48	3.66	0.92	1.07
-25	(-13)	2529	637	741	588	5.48	9.81	4.28	1.08	1.25
-20	(- 4)	3222	812	944	652	5.92	12.58	4.92	1.24	1.44
-15	(+ 5)	4018	1013	1177	720	6.40	15.81	5.58	1.41	1.63
-10	(+14)	4917	1239	1441	791	6.93	19.52	6.22	1.57	1.82

TEST CONDITIONS: @127V60Hz			ARI4 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]
-40	(-40)	962	242	282	423	4.51	4.13	2.25	0.57	0.66
-35	(-31)	1252	315	367	484	4.85	5.40	2.58	0.65	0.76
-30	(-22)	1634	412	479	549	5.24	7.09	2.98	0.75	0.87
-25	(-13)	2107	531	618	618	5.69	9.20	3.42	0.86	1.00
-20	(- 4)	2673	674	783	691	6.19	11.75	3.88	0.98	1.14
-15	(+ 5)	3330	839	976	768	6.75	14.76	4.34	1.09	1.27
-10	(+14)	4079	1028	1195	850	7.36	18.25	4.79	1.21	1.40

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		