COMPRESSOR DEFINITION

Designation	**NE U2168U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**863IA58**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA3AN3C-647	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	10(400)	[µF(VAC minimum)]
5 Motor protection	MST30AMK-3261	
6 Start winding resistance	11.03	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.15	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	21.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.25	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V50Hz			**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]
2690	678	788	516	2.45	8.01	5.21	1.31	1.53

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **35ºC (+95ºF))**			
@220V50Hz		**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)**	1297	327	380	306	1.51	3.83	4.22	1.06	1.24
-35	**(-31)**	1676	422	491	347	1.69	4.96	4.84	1.22	1.42
-30	**(-22)**	2162	545	633	388	1.88	6.41	5.58	1.41	1.63
-25	**(-13)**	2754	694	807	430	2.07	8.19	6.40	1.61	1.88
-20	**(- 4)**	3452	870	1012	473	2.26	10.30	7.30	1.84	2.14
-15	**(+ 5)**	4256	1073	1247	517	2.46	12.75	8.24	2.08	2.41
-10	**(+14)**	5166	1302	1514	561	2.66	15.55	9.21	2.32	2.70

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**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)**	1221	308	358	319	1.59	3.60	3.84	0.97	1.13
-35	**(-31)**	1594	402	467	364	1.79	4.72	4.39	1.11	1.29
-30	**(-22)**	2068	521	606	411	2.00	6.13	5.02	1.26	1.47
-25	**(-13)**	2641	666	774	461	2.22	7.85	5.72	1.44	1.67
-20	**(- 4)**	3314	835	971	513	2.46	9.89	6.45	1.63	1.89
-15	**(+ 5)**	4087	1030	1198	567	2.70	12.24	7.21	1.82	2.11
-10	**(+14)**	4960	1250	1453	623	2.96	14.92	7.96	2.01	2.33

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**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)**	1136	286	333	329	1.62	3.35	3.45	0.87	1.01
-35	**(-31)**	1492	376	437	379	1.84	4.41	3.93	0.99	1.15
-30	**(-22)**	1941	489	569	433	2.08	5.76	4.48	1.13	1.31
-25	**(-13)**	2484	626	728	491	2.34	7.38	5.06	1.27	1.48
-20	**(- 4)**	3120	786	914	553	2.62	9.31	5.65	1.42	1.66
-15	**(+ 5)**	3849	970	1128	618	2.92	11.53	6.24	1.57	1.83
-10	**(+14)**	4671	1177	1369	687	3.24	14.05	6.79	1.71	1.99

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +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		