COMPRESSOR DEFINITION

Designation	**NE U2168U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**863TA51**

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)	10.6	[kg] (23.37 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	USP-M0M-83	
6 Start winding resistance	15.21	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	6.15	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	19.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[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:			EN12900LBP_HH		Evaporating temperature		-35°C (-31°F)	
@220V50Hz			Fan		(Condensing temperature		40°C (104°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]
1558	393	457	359	1.76	4.93	4.34	1.09	1.27

E - PERFORMANCE - CURVES

TEST CONDITIONS:		EN12900HH				(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)**	1270	320	372	305	1.52	3.84	4.16	1.05	1.22
-35	**(-31)**	1657	417	485	346	1.69	5.02	4.79	1.21	1.40
-30	**(-22)**	2138	539	626	388	1.87	6.49	5.51	1.39	1.62
-25	**(-13)**	2713	684	795	430	2.06	8.26	6.31	1.59	1.85
-20	**(- 4)**	3384	853	991	473	2.25	10.34	7.15	1.80	2.10
-15	**(+ 5)**	4148	1045	1215	517	2.45	12.73	8.03	2.02	2.35
-10	**(+14)**	5007	1262	1467	562	2.65	15.43	8.91	2.24	2.61

TEST CONDITIONS:		EN12900HH				(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)**	1088	274	319	321	1.58	3.59	3.40	0.86	1.00
-35	**(-31)**	1420	358	416	366	1.78	4.69	3.88	0.98	1.14
-30	**(-22)**	1841	464	540	413	1.98	6.10	4.45	1.12	1.30
-25	**(-13)**	2353	593	689	463	2.20	7.82	5.07	1.28	1.49
-20	**(- 4)**	2953	744	865	514	2.44	9.85	5.74	1.45	1.68
-15	**(+ 5)**	3644	918	1068	568	2.68	12.21	6.42	1.62	1.88
-10	**(+14)**	4424	1115	1296	624	2.93	14.90	7.10	1.79	2.08

TEST CONDITIONS:		EN12900HH				(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)**	924	233	271	331	1.63	3.37	2.79	0.70	0.82
-35	**(-31)**	1195	301	350	381	1.85	4.37	3.14	0.79	0.92
-30	**(-22)**	1552	391	455	435	2.09	5.69	3.57	0.90	1.04
-25	**(-13)**	1994	502	584	493	2.34	7.33	4.04	1.02	1.18
-20	**(- 4)**	2520	635	738	554	2.61	9.31	4.55	1.15	1.33
-15	**(+ 5)**	3131	789	917	618	2.90	11.62	5.07	1.28	1.49
-10	**(+14)**	3827	964	1121	686	3.21	14.28	5.57	1.40	1.63

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	6.1 +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		