COMPRESSOR DEFINITION

Designation	**NE U2170UA**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513308230**

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	ESTER / ISO22	
4 Weight (with oil charge)	11	[kg] (24.25 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	Current Relay	
2.1 Starting device	QL2-7.8-NTC-15	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	10(400)	[µF(VAC minimum)]
5 Motor protection	USP-M1E-83	
6 Start winding resistance	12.02	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.15	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	23.50	[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 - EAC - UKCA - 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]
2798	705	820	533	2.69	8.33	5.25	1.32	1.54

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)**	1417	357	415	322	1.86	4.18	4.39	1.11	1.29
-35	**(-31)**	1800	454	528	362	2.00	5.33	4.99	1.26	1.46
-30	**(-22)**	2292	578	672	401	2.15	6.80	5.72	1.44	1.68
-25	**(-13)**	2891	729	847	441	2.30	8.60	6.56	1.65	1.92
-20	**(- 4)**	3598	907	1054	480	2.46	10.74	7.49	1.89	2.19
-15	**(+ 5)**	4413	1112	1293	519	2.62	13.22	8.49	2.14	2.49
-10	**(+14)**	5336	1345	1564	558	2.79	16.06	9.56	2.41	2.80

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)**	1273	321	373	326	1.87	3.76	3.91	0.99	1.15
-35	**(-31)**	1670	421	489	376	2.05	4.94	4.44	1.12	1.30
-30	**(-22)**	2162	545	633	426	2.24	6.41	5.07	1.28	1.49
-25	**(-13)**	2749	693	805	476	2.44	8.17	5.77	1.45	1.69
-20	**(- 4)**	3431	865	1005	525	2.64	10.24	6.54	1.65	1.92
-15	**(+ 5)**	4208	1060	1233	573	2.85	12.60	7.35	1.85	2.15
-10	**(+14)**	5080	1280	1489	621	3.07	15.28	8.18	2.06	2.40

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)**	1093	275	320	318	1.86	3.23	3.44	0.87	1.01
-35	**(-31)**	1501	378	440	382	2.08	4.44	3.93	0.99	1.15
-30	**(-22)**	1992	502	584	444	2.31	5.91	4.48	1.13	1.31
-25	**(-13)**	2565	646	752	505	2.56	7.63	5.08	1.28	1.49
-20	**(- 4)**	3220	812	944	565	2.81	9.61	5.71	1.44	1.67
-15	**(+ 5)**	3958	997	1160	625	3.07	11.85	6.35	1.60	1.86
-10	**(+14)**	4778	1204	1400	683	3.34	14.37	6.98	1.76	2.05

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.15 +0.00/-0.05	[mm]	(0.321" +0.000"/-0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		