COMPRESSOR DEFINITION

Designation	**NE U2178GK**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513308226**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressure R404A		
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	25.2	[kgf/cm²] (358 psig)	/ ºC - ºF
9.2 Peak	28.3	[kgf/cm²] (402 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[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)	11.6	[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	RVA6M3C-114	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	15(400)	[µF(VAC minimum)]
5 Motor protection	MSP18LJ-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)	4.27	[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 - CE - EAC - UKCA - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**EN12900LBP_HH** **Fan**		Evaporating temperature (Condensing temperature	**-35°C (-31°F)** **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]
1709	431	501	441	2.10	12.58	3.88	0.98	1.14

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)**	1390	350	407	370	1.78	9.64	3.74	0.94	1.10
-35	**(-31)**	1845	465	541	426	2.03	12.84	4.34	1.09	1.27
-30	**(-22)**	2408	607	706	486	2.30	16.81	4.96	1.25	1.45
-25	**(-13)**	3079	776	902	550	2.58	21.59	5.60	1.41	1.64
-20	**(- 4)**	3858	972	1131	618	2.88	27.19	6.24	1.57	1.83
-15	**(+ 5)**	4746	1196	1391	690	3.21	33.66	6.87	1.73	2.01
-10	**(+14)**	5742	1447	1683	766	3.55	41.02	7.49	1.89	2.20

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)**	1141	287	334	382	1.82	8.88	2.99	0.75	0.88
-35	**(-31)**	1524	384	447	443	2.08	11.92	3.45	0.87	1.01
-30	**(-22)**	2001	504	586	510	2.38	15.70	3.92	0.99	1.15
-25	**(-13)**	2569	647	753	584	2.71	20.26	4.39	1.11	1.29
-20	**(- 4)**	3231	814	947	664	3.07	25.63	4.86	1.22	1.42
-15	**(+ 5)**	3985	1004	1168	751	3.46	31.84	5.31	1.34	1.56
-10	**(+14)**	4832	1218	1416	844	3.89	38.92	5.73	1.44	1.68

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)**	890	224	261	386	1.83	8.01	2.30	0.58	0.67
-35	**(-31)**	1204	304	353	453	2.13	10.89	2.65	0.67	0.78
-30	**(-22)**	1596	402	468	529	2.47	14.49	3.01	0.76	0.88
-25	**(-13)**	2064	520	605	614	2.85	18.86	3.36	0.85	0.99
-20	**(- 4)**	2610	658	765	707	3.28	24.00	3.70	0.93	1.08
-15	**(+ 5)**	3232	814	947	810	3.75	29.97	4.00	1.01	1.17
-10	**(+14)**	3932	991	1152	921	4.26	36.79	4.26	1.07	1.25

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0º Up + 28° to Back		
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		