

### COMPRESSOR DEFINITION

Designation	<b>NE U2178GK</b>
Nominal Voltage/Frequency	<b>115-127 V 60 Hz</b>
Engineering Number	<b>9590E71</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115-127 / 60	[ 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 - High 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 (gauge)	25.2	[kgf/cm <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak (gauge)	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	16.80	[cm <sup>3</sup> ] (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)	11.57	[kg] (25.51 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	243-292(250)	[µF(VAC minimum)]
4 Run capacitor	40(400)	[µF(VAC minimum)]
5 Motor protection	MST00AEK-3090	
6 Start winding resistance	3.71	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.81	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	53.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	9.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
2587	652	758	758	7.02	26.78	3.41	0.86	1.00

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	1423	359	417	448	4.54	11.71	3.17	0.80	0.93
-35	(-31)	1875	473	549	515	5.04	15.54	3.65	0.92	1.07
-30	(-22)	2451	618	718	590	5.63	20.42	4.15	1.05	1.22
-25	(-13)	3151	794	923	674	6.32	26.41	4.67	1.18	1.37
-20	(- 4)	3973	1001	1164	766	7.10	33.59	5.18	1.31	1.52
-15	(+ 5)	4920	1240	1442	866	7.98	42.03	5.68	1.43	1.66
-10	(+14)	5989	1509	1755	975	8.95	51.79	6.15	1.55	1.80

TEST CONDITIONS: @115V60Hz			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)	1127	284	330	454	4.58	10.68	2.49	0.63	0.73
-35	(-31)	1512	381	443	530	5.16	14.41	2.86	0.72	0.84
-30	(-22)	1999	504	586	615	5.84	19.17	3.25	0.82	0.95
-25	(-13)	2589	653	759	708	6.61	25.02	3.65	0.92	1.07
-20	(- 4)	3282	827	962	810	7.48	32.04	4.05	1.02	1.19
-15	(+ 5)	4078	1028	1195	920	8.44	40.29	4.44	1.12	1.30
-10	(+14)	4976	1254	1458	1038	9.50	49.85	4.79	1.21	1.40

TEST CONDITIONS: @115V60Hz			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)	855	215	251	448	4.51	9.68	1.91	0.48	0.56
-35	(-31)	1165	294	341	535	5.20	13.29	2.17	0.55	0.64
-30	(-22)	1557	392	456	631	5.98	17.89	2.46	0.62	0.72
-25	(-13)	2031	512	595	735	6.86	23.58	2.76	0.70	0.81
-20	(- 4)	2587	652	758	848	7.83	30.40	3.06	0.77	0.90
-15	(+ 5)	3224	813	945	969	8.90	38.44	3.33	0.84	0.98
-10	(+14)	3944	994	1156	1099	10.07	47.77	3.58	0.90	1.05

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+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		