

### COMPRESSOR DEFINITION

Designation	<b>NE U2178GK</b>
Nominal Voltage/Frequency	<b>208-230 V 60 Hz</b>
Engineering Number	<b>959OD71</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	208-230 / 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 - Hight 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	25.2	[kgf/cm <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak	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)	11.5	[kg] (25.35 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-230 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA4AH3C-648	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	15(400)	[µF(VAC minimum)]
5 Motor protection	MRA38168-3261	
6 Start winding resistance	9.27	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.39	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	29.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - KC - UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @208V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°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]
3600	907	1055	767	3.70	24.41	4.69	1.18	1.37

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V60Hz			ASHRAE32 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)	1648	415	483	436	2.10	11.08	3.77	0.95	1.11
-35	(-31)	2185	551	640	504	2.42	14.73	4.35	1.10	1.27
-30	(-22)	2859	720	838	578	2.78	19.34	4.95	1.25	1.45
-25	(-13)	3670	925	1075	660	3.18	24.93	5.55	1.40	1.63
-20	(- 4)	4617	1164	1353	750	3.61	31.53	6.15	1.55	1.80
-15	(+ 5)	5701	1437	1670	845	4.09	39.17	6.74	1.70	1.98
-10	(+14)	6921	1744	2028	948	4.61	47.88	7.31	1.84	2.14

TEST CONDITIONS: @208V60Hz			ASHRAE32 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)	1530	386	448	446	2.14	10.26	3.42	0.86	1.00
-35	(-31)	2053	517	602	520	2.50	13.82	3.95	1.00	1.16
-30	(-22)	2701	681	792	602	2.89	18.24	4.49	1.13	1.31
-25	(-13)	3476	876	1019	693	3.33	23.57	5.02	1.26	1.47
-20	(- 4)	4376	1103	1282	791	3.81	29.82	5.53	1.39	1.62
-15	(+ 5)	5402	1361	1583	897	4.34	37.04	6.03	1.52	1.77
-10	(+14)	6553	1651	1920	1010	4.92	45.24	6.48	1.63	1.90

TEST CONDITIONS: @208V60Hz			ASHRAE32 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)	1358	342	398	444	2.12	9.09	3.07	0.77	0.90
-35	(-31)	1891	477	554	529	2.52	12.70	3.57	0.90	1.05
-30	(-22)	2539	640	744	623	2.97	17.11	4.06	1.02	1.19
-25	(-13)	3301	832	967	726	3.47	22.34	4.54	1.14	1.33
-20	(- 4)	4179	1053	1225	838	4.02	28.42	4.99	1.26	1.46
-15	(+ 5)	5171	1303	1515	958	4.62	35.38	5.41	1.36	1.58
-10	(+14)	6278	1582	1840	1086	5.27	43.26	5.77	1.45	1.69

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	6.45 +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		