

COMPRESSOR DEFINITION

Designation	NE U2178GK
Nominal Voltage/Frequency	208-230 V 60 Hz
Engineering Number	959OD92

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 ²] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm ²] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	16.80	[cm ³] (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	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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: @230V60Hz			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]
2604	656	763	764	3.44	26.96	3.41	0.86	1.00

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz			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)	1334	336	391	471	2.25	10.87	2.87	0.72	0.84
-35	(-31)	1859	468	545	535	2.50	15.40	3.48	0.88	1.02
-30	(-22)	2480	625	727	606	2.78	20.72	4.09	1.03	1.20
-25	(-13)	3197	806	937	684	3.11	26.87	4.67	1.18	1.37
-20	(- 4)	4010	1011	1175	768	3.47	33.95	5.22	1.32	1.53
-15	(+ 5)	4919	1240	1441	860	3.87	42.02	5.72	1.44	1.68
-10	(+14)	5924	1493	1736	959	4.31	51.16	6.15	1.55	1.80

TEST CONDITIONS: @230V60Hz			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)	1170	295	343	476	2.26	11.09	2.43	0.61	0.71
-35	(-31)	1634	412	479	548	2.54	15.59	2.93	0.74	0.86
-30	(-22)	2173	547	637	628	2.87	20.84	3.42	0.86	1.00
-25	(-13)	2787	702	817	714	3.23	26.92	3.89	0.98	1.14
-20	(- 4)	3476	876	1018	809	3.64	33.91	4.33	1.09	1.27
-15	(+ 5)	4240	1068	1242	910	4.08	41.86	4.70	1.19	1.38
-10	(+14)	5079	1280	1488	1019	4.56	50.86	5.01	1.26	1.47

TEST CONDITIONS: @230V60Hz			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)	770	194	226	476	2.27	8.85	1.67	0.42	0.49
-35	(-31)	1153	291	338	556	2.59	13.16	2.07	0.52	0.61
-30	(-22)	1590	401	466	645	2.95	18.20	2.45	0.62	0.72
-25	(-13)	2081	524	610	741	3.34	24.05	2.81	0.71	0.82
-20	(- 4)	2626	662	769	844	3.78	30.77	3.13	0.79	0.92
-15	(+ 5)	3225	813	945	955	4.26	38.45	3.39	0.85	0.99
-10	(+14)	3878	977	1136	1073	4.78	47.15	3.57	0.90	1.05

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	6.1 +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		