

COMPRESSOR DEFINITION

Designation	NE U2178GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	9590A51

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 - 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 pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 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)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL 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	SPT2970	
6 Start winding resistance	11.03	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.15	[Ω at 25°C (77°F)] +/- 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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
3120	786	914	645	3.00	21.15	4.84	1.22	1.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	1473	371	432	382	1.81	9.90	3.84	0.97	1.13
-35	(-31)	1925	485	564	434	2.05	12.98	4.44	1.12	1.30
-30	(-22)	2494	629	731	491	2.31	16.88	5.09	1.28	1.49
-25	(-13)	3180	801	932	553	2.59	21.61	5.75	1.45	1.68
-20	(- 4)	3983	1004	1167	621	2.90	27.20	6.42	1.62	1.88
-15	(+ 5)	4904	1236	1437	693	3.24	33.69	7.08	1.78	2.07
-10	(+14)	5941	1497	1741	770	3.60	41.10	7.71	1.94	2.26

TEST CONDITIONS: @220V50Hz			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)	1350	340	395	391	1.86	9.05	3.46	0.87	1.01
-35	(-31)	1795	452	526	449	2.12	12.08	4.00	1.01	1.17
-30	(-22)	2353	593	690	514	2.42	15.89	4.57	1.15	1.34
-25	(-13)	3023	762	886	587	2.74	20.50	5.14	1.30	1.51
-20	(- 4)	3805	959	1115	666	3.10	25.93	5.71	1.44	1.67
-15	(+ 5)	4699	1184	1377	753	3.49	32.22	6.25	1.57	1.83
-10	(+14)	5705	1438	1672	846	3.92	39.39	6.75	1.70	1.98

TEST CONDITIONS: @220V50Hz			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)	1233	311	361	393	1.87	8.25	3.14	0.79	0.92
-35	(-31)	1659	418	486	459	2.17	11.15	3.62	0.91	1.06
-30	(-22)	2193	553	643	533	2.51	14.78	4.11	1.04	1.20
-25	(-13)	2834	714	830	617	2.88	19.18	4.59	1.16	1.34
-20	(- 4)	3582	903	1050	710	3.30	24.36	5.05	1.27	1.48
-15	(+ 5)	4437	1118	1300	812	3.76	30.36	5.47	1.38	1.60
-10	(+14)	5400	1361	1582	923	4.27	37.20	5.84	1.47	1.71

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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		