

## COMPRESSOR DEFINITION

Designation	<b>NEK2168GK</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>959FA51</b>



## 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		
4.1 Evaporating temperature range	-40°C to -10°C		
5 Motor type	CSR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Fan cooled	Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
	-	-	-
	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	24.7	[bar]	
9.2 Peak (gauge)	27.7	[bar]	
10 Maximum winding temperature	130	[ °C ]	

## B - MECHANICAL DATA

1 Commercial designation	3/4	[hp]
2 Displacement	14.28	[cm³]
2.1 Bore	30.16	
2.2 Stroke	20.0	
3 Lubricant charge	350	[ml]
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight(with oil charge)	11.6	[kg]
5 Nitrogen charge	0.2 to 0.3	[bar]

## C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Potential Relay	
2.1 Starting device	3AAR3B10AB3	
3 Start capacitor	88-108 (330)	[µF(VAC minimum)]
4 Run capacitor	10 (450)	[µF(VAC minimum)]
5 Motor protection (external)	T0834	
6 Start winding resistance	13.2	[ohm at 25°C] +/- 8%
7 Run winding resistance	4.0	[ohm at 25°C] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	10.5	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

**D - PERFORMANCE - CHECK POINT DATA**

TEST CONDITIONS: <b>@220V50Hz</b>		<b>EN12900LBP household Fan Cooled</b>		Evap. temp. -35°C	Return Gas +32°C
				Cond. temp. +40°C	Liquid Subcooling 0 K
Cooling capacity +/- 5%		Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%
[W]		[W]	[A]	[Kg/h]	[W/W]
389		359	1.96	9.79	1.08

**E - PERFORMANCE - CURVES**

TEST CONDITIONS: <b>@220V50Hz</b>		<b>EN12900 household Fan Cooled</b>		Condensing temperature <b>35°C</b>	
Evaporating temperature	Cooling capacity +/- 5%	Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%
°C	[W]	[W]	[A]	[Kg/h]	[W/W]
-40	323	309	1.78	7.64	1.05
-35	428	354	1.94	10.16	1.21
-30	557	403	2.12	13.28	1.38
-25	713	456	2.33	17.05	1.56
-20	896	513	2.56	21.54	1.75
-15	1108	573	2.81	26.82	1.93
-10	1351	636	3.08	34.67	2.12

TEST CONDITIONS: <b>@220V50Hz</b>		<b>EN12900 household Fan Cooled</b>		Condensing temperature <b>45°C</b>	
Evaporating temperature	Cooling capacity +/- 5%	Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%
°C	[W]	[W]	[A]	[Kg/h]	[W/W]
-40	259	313	1.79	6.86	0.83
-35	352	363	1.97	9.39	0.97
-30	465	418	2.18	12.46	1.11
-25	599	478	2.41	16.13	1.25
-20	756	542	2.68	20.48	1.40
-15	938	610	2.97	25.57	1.54
-10	1145	681	3.28	31.46	1.68

TEST CONDITIONS: <b>@220V50Hz</b>		<b>EN12900 household Fan cooled</b>		Condensing temperature <b>55°C</b>	
Evaporating temperature	Cooling capacity +/- 5%	Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%
°C	[W]	[W]	[A]	[Kg/h]	[W/W]
-40	-	-	-	-	-
-35	278	366	1.99	8.54	0.76
-30	372	429	2.22	11.52	0.87
-25	483	497	2.49	15.06	0.97
-20	612	569	2.79	19.23	1.08
-15	761	647	3.12	24.09	1.18
-10	930	728	3.49	29.71	1.28

**F - EXTERNAL CHARACTERISTICS**

1 Base plate	European Standard
2 Tray holder	No
3 Connectors	
3.1 SUCTION	8.1 +0.10/+0.00 [mm]
3.1.1 Material	Copper
3.1.2 Shape	Slanted 42°
3.2 DISCHARGE	6.1 +0.10/+0.00 [mm]
3.2.1 Material	Copper
3.2.2 Shape	Straight
3.3 PROCESS	6.1 +0.10/+0.00 [mm]
3.3.1 Material	Copper
3.3.2 Shape	Slanted 42°
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs