

COMPRESSOR DEFINITION

Designation	NE U2140GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	958JA51

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	CSIR		
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	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	1/2	[hp]
2 Displacement	8.77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	15.920	
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)	10.6	[kg] (23.37 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-0025-65	
3 Start capacitor	64-77(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	PROTECTOR DRB210J52A	
6 Start winding resistance	24.26	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.79	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	13.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.63	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
938	236	275	243	1.63	6.90	3.86	0.97	1.13

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	778	196	228	205	1.52	5.39	3.78	0.95	1.11
-35	(-31)	1023	258	300	238	1.61	7.12	4.31	1.09	1.26
-30	(-22)	1334	336	391	271	1.72	9.32	4.93	1.24	1.44
-25	(-13)	1711	431	501	305	1.83	12.00	5.62	1.42	1.65
-20	(- 4)	2154	543	631	338	1.95	15.18	6.37	1.61	1.87
-15	(+ 5)	2663	671	780	371	2.07	18.89	7.17	1.81	2.10
-10	(+14)	3238	816	949	404	2.21	23.13	8.02	2.02	2.35

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	625	158	183	208	1.52	4.87	3.02	0.76	0.88
-35	(-31)	841	212	246	245	1.63	6.58	3.44	0.87	1.01
-30	(-22)	1111	280	326	284	1.76	8.72	3.91	0.98	1.14
-25	(-13)	1435	362	421	324	1.90	11.32	4.41	1.11	1.29
-20	(- 4)	1814	457	531	367	2.05	14.39	4.94	1.24	1.45
-15	(+ 5)	2246	566	658	411	2.23	17.95	5.48	1.38	1.60
-10	(+14)	2733	689	801	455	2.41	22.01	6.01	1.52	1.76

TEST CONDITIONS: @220V50Hz			EN12900HH 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)	470	118	138	208	1.52	4.23	2.26	0.57	0.66
-35	(-31)	657	165	192	248	1.64	5.94	2.64	0.66	0.77
-30	(-22)	886	223	260	293	1.79	8.05	3.02	0.76	0.89
-25	(-13)	1158	292	339	341	1.96	10.58	3.40	0.86	1.00
-20	(- 4)	1473	371	432	392	2.15	13.55	3.77	0.95	1.11
-15	(+ 5)	1831	461	536	446	2.37	16.98	4.11	1.04	1.20
-10	(+14)	2231	562	654	504	2.61	20.88	4.41	1.11	1.29

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		