COMPRESSOR DEFINITION

Designation	**NE K6181U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**861FA41**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm²] (262 psig)	/ ºC - ºF
9.2 Peak	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	7.28	[cm³] (0.444 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	13.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	AB / ISO32	
4 Weight (with oil charge)	10	[kg] (22.05 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	MTRP-0029	
3 Start capacitor	43-53(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0186/G6	
6 Start winding resistance	28.20	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	6.10	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	12.00	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**EN12900MBP** **Fan**		Evaporating temperature (Condensing temperature	**-10°C (14°F)** **45°C (113°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1669	421	489	285	2.08	6.01	5.85	1.47	1.71

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz**		**EN12900** **Fan**				(Condensing temperature **35ºC (+95ºF))**				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	**(- 4)**	1273	321	373	231	1.95	4.13	5.51	1.39	1.61
-15	**(+ 5)**	1566	395	459	247	2.00	5.11	6.34	1.60	1.86
-10	**(+14)**	1932	487	566	260	2.04	6.33	7.43	1.87	2.18
-5	**(+23)**	2369	597	694	270	2.07	7.82	8.78	2.21	2.57
0	**(+32)**	2879	726	844	277	2.09	9.59	10.40	2.62	3.05
+5	**(+41)**	3461	872	1014	282	2.11	11.64	12.29	3.10	3.60
+10	**(+50)**	4115	1037	1206	284	2.12	13.99	14.47	3.65	4.24

TEST CONDITIONS: **@220V50Hz**		**EN12900** **Fan**				(Condensing temperature **45ºC (+113ºF))**				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	**(- 4)**	1058	267	310	243	1.96	3.76	4.39	1.11	1.29
-15	**(+ 5)**	1321	333	387	265	2.03	4.72	4.98	1.26	1.46
-10	**(+14)**	1644	414	482	285	2.10	5.92	5.74	1.45	1.68
-5	**(+23)**	2026	511	594	302	2.15	7.35	6.67	1.68	1.96
0	**(+32)**	2469	622	723	316	2.20	9.04	7.79	1.96	2.28
+5	**(+41)**	2972	749	871	327	2.25	11.00	9.09	2.29	2.66
+10	**(+50)**	3535	891	1036	335	2.28	13.24	10.58	2.67	3.10

TEST CONDITIONS: **@220V50Hz**		**EN12900** **Fan**				(Condensing temperature **55ºC (+131ºF))**				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	**(- 4)**	852	215	250	257	2.00	3.37	3.29	0.83	0.96
-15	**(+ 5)**	1079	272	316	286	2.09	4.30	3.78	0.95	1.11
-10	**(+14)**	1354	341	397	313	2.18	5.43	4.35	1.10	1.27
-5	**(+23)**	1677	423	491	336	2.26	6.78	5.00	1.26	1.47
0	**(+32)**	2048	516	600	357	2.33	8.37	5.75	1.45	1.68
+5	**(+41)**	2467	622	723	374	2.40	10.21	6.59	1.66	1.93
+10	**(+50)**	2934	739	860	389	2.46	12.30	7.54	1.90	2.21

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		