COMPRESSOR DEFINITION

Designation	**NE K2150U**
Nominal Voltage/Frequency	**115 V 60 Hz**
Engineering Number	**863AG71**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	Low Back Pressure R290		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°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	1/2	[hp]
2 Displacement	13.54	[cm³] (0.826 cu.in)
2.1 Bore [mm]	29.362	
2.2 Stroke [mm]	20.000	
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)	11.3	[kg] (24.91 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-68-31	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0736/J5	
6 Start winding resistance	4.50	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	0.77	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	41.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.54	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ARILBP**			Evaporating temperature		**-23.3°C (-9.94°F)**
@115V60Hz			**Fan**			(Condensing temperature		**48.9°C (120.02°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]
1874	472	549	538	7.17	7.61	3.48	0.88	1.02

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ARI4**					(Condensing temperature **35ºC (+95ºF))**			
@115V60Hz		**Fan**								
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]
-40	**(-40)**	1020	257	299	342	5.90	3.54	2.97	0.75	0.87
-35	**(-31)**	1316	332	386	382	6.11	4.58	3.45	0.87	1.01
-30	**(-22)**	1697	428	497	424	6.36	5.93	4.01	1.01	1.18
-25	**(-13)**	2163	545	634	467	6.64	7.59	4.63	1.17	1.36
-20	**(- 4)**	2715	684	796	513	6.95	9.59	5.29	1.33	1.55
-15	**(+ 5)**	3352	845	982	560	7.28	11.92	5.98	1.51	1.75
-10	**(+14)**	4074	1027	1194	610	7.62	14.61	6.68	1.68	1.96

TEST CONDITIONS:		**ARI4**					(Condensing temperature **45ºC (+113ºF))**			
@115V60Hz		**Fan**								
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]
-40	**(-40)**	833	210	244	349	5.96	3.18	2.40	0.61	0.70
-35	**(-31)**	1096	276	321	396	6.22	4.21	2.77	0.70	0.81
-30	**(-22)**	1432	361	419	446	6.53	5.53	3.20	0.81	0.94
-25	**(-13)**	1839	464	539	498	6.88	7.14	3.68	0.93	1.08
-20	**(- 4)**	2320	585	680	553	7.26	9.06	4.19	1.06	1.23
-15	**(+ 5)**	2872	724	842	610	7.67	11.30	4.71	1.19	1.38
-10	**(+14)**	3497	881	1025	670	8.10	13.88	5.22	1.32	1.53

TEST CONDITIONS:		**ARI4**					(Condensing temperature **55ºC (+131ºF))**			
@115V60Hz		**Fan**								
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]
-40	**(-40)**	702	177	206	359	6.08	3.01	1.95	0.49	0.57
-35	**(-31)**	919	232	269	413	6.38	3.97	2.22	0.56	0.65
-30	**(-22)**	1196	301	350	470	6.74	5.19	2.54	0.64	0.74
-25	**(-13)**	1532	386	449	530	7.14	6.69	2.89	0.73	0.85
-20	**(- 4)**	1928	486	565	594	7.58	8.47	3.26	0.82	0.95
-15	**(+ 5)**	2383	600	698	660	8.05	10.56	3.62	0.91	1.06
-10	**(+14)**	2897	730	849	730	8.55	12.97	3.96	1.00	1.16

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	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +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		