

COMPRESSOR DEFINITION

Designation	NE U2155U
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	862KE78

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 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 - 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	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	13.54	[cm ³] (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	[kg] (24.25 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-65-31	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MST00AFK-3265	
6 Start winding resistance	5.99	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	40.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[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: @127V60Hz			ARILBP Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 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]
2049	516	600	526	6.39	8.32	3.89	0.98	1.14

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 35°C (+95°F))					
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)	1077	271	316	344	5.81	3.73	3.13	0.79	0.92
-35	(-31)	1421	358	416	386	5.92	4.95	3.68	0.93	1.08
-30	(-22)	1841	464	539	428	6.06	6.43	4.29	1.08	1.26
-25	(-13)	2336	589	685	472	6.23	8.20	4.95	1.25	1.45
-20	(- 4)	2908	733	852	517	6.42	10.27	5.64	1.42	1.65
-15	(+ 5)	3557	896	1042	562	6.64	12.65	6.33	1.60	1.86
-10	(+14)	4281	1079	1254	609	6.88	15.35	7.02	1.77	2.06

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 45°C (+113°F))					
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)	890	224	261	349	5.80	3.41	2.57	0.65	0.75
-35	(-31)	1183	298	347	396	5.91	4.55	3.00	0.76	0.88
-30	(-22)	1553	391	455	445	6.07	5.99	3.49	0.88	1.02
-25	(-13)	1998	503	585	496	6.27	7.75	4.02	1.01	1.18
-20	(- 4)	2519	635	738	549	6.52	9.83	4.58	1.15	1.34
-15	(+ 5)	3117	786	913	604	6.81	12.27	5.16	1.30	1.51
-10	(+14)	3791	955	1111	662	7.15	15.06	5.73	1.44	1.68

TEST CONDITIONS: @127V60Hz			ARI4 Fan		(Condensing temperature 55°C (+131°F))					
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)	748	188	219	355	5.80	3.21	2.09	0.53	0.61
-35	(-31)	974	245	285	406	5.91	4.20	2.40	0.61	0.70
-30	(-22)	1276	321	374	460	6.09	5.53	2.78	0.70	0.81
-25	(-13)	1654	417	485	518	6.33	7.22	3.19	0.80	0.94
-20	(- 4)	2108	531	618	579	6.64	9.27	3.64	0.92	1.07
-15	(+ 5)	2639	665	773	644	7.02	11.70	4.10	1.03	1.20
-10	(+14)	3246	818	951	712	7.46	14.52	4.56	1.15	1.34

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	Yes		
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		