COMPRESSOR DEFINITION

Designation	**NT 2180UV**
Nominal Voltage/Frequency	**115 V 60 Hz**
Engineering Number	**842LG02**

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	CSCR		
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	[hp]
2 Displacement	22.37	[cm³] (1.365 cu.in)
2.1 Bore [mm]	36.990	
2.2 Stroke [mm]	20.830	
3 Lubricant charge	450	[ml] (15.22 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	AB / ISO32	
4 Weight (with oil charge)	16.5	[kg] (36.38 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	Voltage Relay	
2.1 Starting device	RVA2AE3C-105	
3 Start capacitor	243-292(250)	[µF(VAC minimum)]
4 Run capacitor	20(400)	[µF(VAC minimum)]
5 Motor protection	MST00AFK	
6 Start winding resistance	2.66	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	0.43	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	54.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	9.60	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - 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]
2840	716	832	746	7.91	11.53	3.81	0.96	1.12

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)**	1627	410	477	479	5.98	5.64	3.39	0.85	0.99
-35	**(-31)**	2051	517	601	538	6.38	7.14	3.83	0.97	1.12
-30	**(-22)**	2625	661	769	603	6.85	9.17	4.36	1.10	1.28
-25	**(-13)**	3347	843	981	676	7.40	11.75	4.95	1.25	1.45
-20	**(- 4)**	4219	1063	1236	755	8.02	14.90	5.58	1.41	1.63
-15	**(+ 5)**	5239	1320	1535	841	8.71	18.63	6.22	1.57	1.82
-10	**(+14)**	6408	1615	1878	934	9.48	22.97	6.87	1.73	2.01

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)**	1351	340	396	487	6.06	5.16	2.77	0.70	0.81
-35	**(-31)**	1738	438	509	557	6.52	6.68	3.12	0.79	0.91
-30	**(-22)**	2248	566	659	633	7.07	8.68	3.55	0.89	1.04
-25	**(-13)**	2880	726	844	716	7.70	11.18	4.02	1.01	1.18
-20	**(- 4)**	3636	916	1065	804	8.41	14.20	4.52	1.14	1.32
-15	**(+ 5)**	4514	1137	1323	899	9.20	17.76	5.03	1.27	1.47
-10	**(+14)**	5514	1390	1616	1000	10.08	21.88	5.52	1.39	1.62

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)**	1046	264	306	491	6.21	4.50	2.14	0.54	0.63
-35	**(-31)**	1387	349	406	573	6.70	5.99	2.42	0.61	0.71
-30	**(-22)**	1824	460	534	661	7.28	7.91	2.75	0.69	0.81
-25	**(-13)**	2358	594	691	755	7.94	10.28	3.12	0.79	0.91
-20	**(- 4)**	2988	753	876	854	8.70	13.13	3.51	0.88	1.03
-15	**(+ 5)**	3715	936	1089	959	9.55	16.47	3.88	0.98	1.14
-10	**(+14)**	4538	1144	1330	1070	10.49	20.32	4.23	1.07	1.24

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		