

### COMPRESSOR DEFINITION

Designation	NT 2210U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	843BA02

### 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	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 - 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 pressures/temperature			
9.1 Operating (gauge)	19.1	[kgf/cm <sup>2</sup> ] (272 psig)	/ °C - °F
9.2 Peak (gauge)	21.2	[kgf/cm <sup>2</sup> ] (301 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1 1/4	[hp]
2 Displacement	27.80	[cm <sup>3</sup> ] (1.696 cu.in)
2.1 Bore [mm]	38.100	
2.2 Stroke [mm]	24.400	
3 Lubricant charge	450	[ml] (15.22 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	18.5	[kg] (40.78 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA2E3C-547	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	17.5(440)	[µF(VAC minimum)]
5 Motor protection	15HM1962-247	
6 Start winding resistance	3.92	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.72	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	33.00	[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			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°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]
4048	1020	1186	844	4.43	12.05	4.80	1.21	1.41

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	2087	526	611	513	3.14	6.16	4.06	1.02	1.19
-35	(-31)	2642	666	774	586	3.40	7.82	4.52	1.14	1.32
-30	(-22)	3368	849	987	662	3.69	9.99	5.09	1.28	1.49
-25	(-13)	4263	1074	1249	742	4.01	12.68	5.75	1.45	1.68
-20	(- 4)	5326	1342	1561	825	4.35	15.89	6.46	1.63	1.89
-15	(+ 5)	6554	1652	1920	911	4.71	19.64	7.20	1.81	2.11
-10	(+14)	7946	2002	2328	1001	5.09	23.91	7.94	2.00	2.33

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	1834	462	537	511	3.15	5.41	3.59	0.91	1.05
-35	(-31)	2383	601	698	596	3.46	7.05	4.01	1.01	1.18
-30	(-22)	3094	780	907	684	3.79	9.17	4.52	1.14	1.32
-25	(-13)	3963	999	1161	776	4.15	11.78	5.10	1.28	1.49
-20	(- 4)	4990	1257	1462	872	4.54	14.89	5.72	1.44	1.68
-15	(+ 5)	6172	1555	1809	972	4.96	18.49	6.35	1.60	1.86
-10	(+14)	7508	1892	2200	1077	5.41	22.59	6.97	1.76	2.04

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	1622	409	475	507	3.12	4.79	3.19	0.81	0.94
-35	(-31)	2157	544	632	603	3.47	6.38	3.58	0.90	1.05
-30	(-22)	2844	717	833	704	3.86	8.43	4.04	1.02	1.18
-25	(-13)	3679	927	1078	808	4.28	10.94	4.55	1.15	1.33
-20	(- 4)	4661	1175	1366	918	4.73	13.90	5.08	1.28	1.49
-15	(+ 5)	5789	1459	1696	1032	5.21	17.34	5.62	1.42	1.65
-10	(+14)	7060	1779	2069	1151	5.73	21.24	6.13	1.54	1.80

### 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		