

### COMPRESSOR DEFINITION

Designation	NT X2213U
Nominal Voltage/Frequency	230 V 50 Hz
Engineering Number	843IV72

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	230 / 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 - Hight 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 <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1 1/2	[hp]
2 Displacement	33.42	[cm <sup>3</sup> ] (2.039 cu.in)
2.1 Bore [mm]	41.770	
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)	17.8	[kg] (39.24 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA2E3C-103	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	25(400)	[µF(VAC minimum)]
5 Motor protection	USP-553-84	
6 Start winding resistance	3.64	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.78	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	34.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	5.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - 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]	
5409	1363	1585	1054	5.13	16.10	5.13	1.29	1.50	

### 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)	2785	702	816	612	3.19	8.22	4.53	1.14	1.33
-35	(-31)	3543	893	1038	687	3.57	10.48	5.13	1.29	1.50
-30	(-22)	4472	1127	1310	801	3.96	13.26	5.60	1.41	1.64
-25	(-13)	5573	1404	1633	934	4.36	16.58	6.03	1.52	1.77
-20	(- 4)	6845	1725	2006	1067	4.76	20.43	6.51	1.64	1.91
-15	(+ 5)	8288	2089	2429	1181	5.17	24.83	7.14	1.80	2.09
-10	(+14)	9903	2495	2902	1256	5.59	29.80	8.02	2.02	2.35

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)	2548	642	747	651	3.21	7.52	3.93	0.99	1.15
-35	(-31)	3321	837	973	715	3.68	9.83	4.63	1.17	1.36
-30	(-22)	4246	1070	1244	819	4.16	12.59	5.16	1.30	1.51
-25	(-13)	5322	1341	1559	944	4.64	15.83	5.63	1.42	1.65
-20	(- 4)	6550	1651	1919	1071	5.14	19.54	6.12	1.54	1.79
-15	(+ 5)	7930	1998	2324	1180	5.65	23.75	6.73	1.70	1.97
-10	(+14)	9461	2384	2772	1252	6.17	28.46	7.56	1.90	2.21

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)	2325	586	681	657	3.30	6.86	3.54	0.89	1.04
-35	(-31)	3096	780	907	739	3.86	9.16	4.19	1.05	1.23
-30	(-22)	3999	1008	1172	862	4.42	11.86	4.64	1.17	1.36
-25	(-13)	5035	1269	1475	1008	4.99	14.97	5.00	1.26	1.46
-20	(- 4)	6202	1563	1817	1157	5.58	18.50	5.35	1.35	1.57
-15	(+ 5)	7502	1890	2198	1291	6.18	22.47	5.80	1.46	1.70
-10	(+14)	8934	2251	2618	1389	6.79	26.87	6.44	1.62	1.89

### 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		