

COMPRESSOR DEFINITION

Designation	NT X2211U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513308801

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 - 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 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 1/4	[hp]
2 Displacement	27.80	[cm ³] (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)	17.8	[kg] (39.24 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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-103	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	17.5(400)	[µF(VAC minimum)]
5 Motor protection	USP-543-84	
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)	33.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	4.30	[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 (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]
4495	1133	1317	853	4.26	13.38	5.27	1.33	1.54

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	2251	567	660	501	2.76	6.65	4.48	1.13	1.31
-35	(-31)	2931	739	859	577	3.07	8.67	5.08	1.28	1.49
-30	(-22)	3742	943	1097	650	3.37	11.10	5.76	1.45	1.69
-25	(-13)	4690	1182	1374	721	3.68	13.95	6.51	1.64	1.91
-20	(- 4)	5780	1457	1694	789	3.98	17.25	7.33	1.85	2.15
-15	(+ 5)	7017	1768	2056	856	4.28	21.02	8.20	2.07	2.40
-10	(+14)	8408	2119	2464	920	4.57	25.30	9.13	2.30	2.68

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	2038	514	597	510	2.79	6.02	4.01	1.01	1.18
-35	(-31)	2719	685	797	598	3.15	8.04	4.55	1.15	1.33
-30	(-22)	3525	888	1033	685	3.51	10.45	5.14	1.29	1.50
-25	(-13)	4463	1125	1308	771	3.88	13.27	5.78	1.46	1.69
-20	(- 4)	5539	1396	1623	856	4.25	16.53	6.46	1.63	1.89
-15	(+ 5)	6756	1703	1980	941	4.62	20.24	7.18	1.81	2.11
-10	(+14)	8122	2047	2380	1024	4.99	24.43	7.94	2.00	2.33

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	1832	462	537	514	2.80	5.41	3.56	0.90	1.04
-35	(-31)	2476	624	726	614	3.22	7.33	4.03	1.02	1.18
-30	(-22)	3241	817	950	715	3.65	9.61	4.54	1.14	1.33
-25	(-13)	4133	1041	1211	815	4.09	12.29	5.07	1.28	1.49
-20	(- 4)	5156	1299	1511	917	4.53	15.38	5.63	1.42	1.65
-15	(+ 5)	6316	1592	1851	1018	4.99	18.91	6.21	1.56	1.82
-10	(+14)	7619	1920	2233	1120	5.45	22.92	6.79	1.71	1.99

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		