COMPRESSOR DEFINITION

Designation	**NT 2170U**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**842BA09**

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	CSIR		
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	20.44	[cm³] (1.247 cu.in)
2.1 Bore [mm]	36.990	
2.2 Stroke [mm]	19.030	
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)	17.2	[kg] (37.92 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH55-59	
3 Start capacitor	64-77(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0743/G6	
6 Start winding resistance	10.40	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.40	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V50Hz			**Fan**			(Condensing temperature		**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]
2786	702	816	625	3.98	8.29	4.46	1.12	1.31

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **35ºC (+95ºF))**			
@220V50Hz		**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)**	1451	366	425	370	3.18	4.29	3.91	0.98	1.14
-35	**(-31)**	1880	474	551	426	3.33	5.56	4.42	1.11	1.29
-30	**(-22)**	2421	610	709	483	3.49	7.18	5.02	1.26	1.47
-25	**(-13)**	3074	775	901	540	3.68	9.14	5.69	1.43	1.67
-20	**(- 4)**	3840	968	1125	598	3.88	11.46	6.42	1.62	1.88
-15	**(+ 5)**	4718	1189	1382	656	4.09	14.13	7.19	1.81	2.11
-10	**(+14)**	5709	1439	1673	715	4.32	17.18	7.99	2.01	2.34

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**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)**	1265	319	371	372	3.18	3.73	3.41	0.86	1.00
-35	**(-31)**	1678	423	492	435	3.35	4.96	3.86	0.97	1.13
-30	**(-22)**	2196	553	644	501	3.55	6.51	4.38	1.10	1.28
-25	**(-13)**	2820	711	826	568	3.78	8.38	4.95	1.25	1.45
-20	**(- 4)**	3548	894	1040	638	4.04	10.59	5.56	1.40	1.63
-15	**(+ 5)**	4382	1104	1284	709	4.32	13.13	6.18	1.56	1.81
-10	**(+14)**	5322	1341	1559	783	4.62	16.01	6.80	1.71	1.99

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**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)**	1095	276	321	375	3.17	3.23	2.92	0.73	0.85
-35	**(-31)**	1484	374	435	446	3.37	4.39	3.33	0.84	0.98
-30	**(-22)**	1971	497	578	520	3.61	5.85	3.78	0.95	1.11
-25	**(-13)**	2556	644	749	599	3.89	7.60	4.27	1.08	1.25
-20	**(- 4)**	3240	816	949	681	4.20	9.66	4.77	1.20	1.40
-15	**(+ 5)**	4021	1013	1178	766	4.54	12.04	5.26	1.32	1.54
-10	**(+14)**	4901	1235	1436	855	4.92	14.74	5.72	1.44	1.68

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	12.7 +0.25/-0.25	[mm]	(0.500" +0.010"/-0.010")
3.1.1 Material	Steel		
3.1.2 Shape	ROTOLOCK(Ex. thr. 1"-14UNS-2A)		
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		