

### COMPRESSOR DEFINITION

Designation	NE X2180UA
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	864DA46

### 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 <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	[hp]
2 Displacement	18.70	[cm <sup>3</sup> ] (1.141 cu.in)
2.1 Bore [mm]	32.186	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL 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	RVA6M3C-114	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	12.5(400)	[µF(VAC minimum)]
5 Motor protection	USP-523-83	
6 Start winding resistance	10.44	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.23	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	21.50	[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]
3181	802	932	577	2.69	9.47	5.52	1.39	1.62

### 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)	1609	405	471	342	1.62	4.75	4.69	1.18	1.37
-35	(-31)	2059	519	603	390	1.83	6.09	5.29	1.33	1.55
-30	(-22)	2610	658	765	437	2.05	7.74	5.98	1.51	1.75
-25	(-13)	3264	823	956	484	2.26	9.71	6.74	1.70	1.98
-20	(- 4)	4020	1013	1178	531	2.47	12.00	7.56	1.91	2.22
-15	(+ 5)	4877	1229	1429	579	2.69	14.61	8.43	2.12	2.47
-10	(+14)	5836	1471	1710	626	2.90	17.56	9.32	2.35	2.73

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)	1496	377	438	353	1.69	4.42	4.24	1.07	1.24
-35	(-31)	1944	490	570	410	1.94	5.75	4.75	1.20	1.39
-30	(-22)	2488	627	729	467	2.19	7.38	5.33	1.34	1.56
-25	(-13)	3128	788	916	524	2.46	9.30	5.96	1.50	1.75
-20	(- 4)	3864	974	1132	583	2.73	11.53	6.63	1.67	1.94
-15	(+ 5)	4697	1184	1376	641	3.01	14.07	7.33	1.85	2.15
-10	(+14)	5626	1418	1649	701	3.30	16.93	8.03	2.02	2.35

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)	1331	336	390	355	1.75	3.93	3.75	0.95	1.10
-35	(-31)	1776	448	521	421	2.01	5.26	4.22	1.06	1.24
-30	(-22)	2312	583	677	489	2.29	6.86	4.73	1.19	1.39
-25	(-13)	2938	740	861	557	2.58	8.74	5.27	1.33	1.54
-20	(- 4)	3655	921	1071	627	2.90	10.90	5.83	1.47	1.71
-15	(+ 5)	4463	1125	1308	698	3.23	13.37	6.40	1.61	1.88
-10	(+14)	5362	1351	1571	770	3.58	16.13	6.96	1.75	2.04

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		