

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 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	[hp]
2 Displacement	18.70	[cm ³] (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 ²]

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			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
1810	456	530	400	1.88	6.06	4.53	1.14	1.33

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 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)	1499	378	439	344	1.62	4.79	4.36	1.10	1.28
-35	(-31)	1934	487	567	391	1.83	6.20	4.96	1.25	1.45
-30	(-22)	2468	622	723	439	2.05	7.94	5.63	1.42	1.65
-25	(-13)	3099	781	908	486	2.28	10.00	6.37	1.61	1.87
-20	(- 4)	3828	965	1122	534	2.50	12.41	7.16	1.80	2.10
-15	(+ 5)	4655	1173	1364	582	2.73	15.17	7.99	2.01	2.34
-10	(+14)	5579	1406	1635	631	2.96	18.29	8.85	2.23	2.59

TEST CONDITIONS: @220V50Hz			EN12900 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)	1296	327	380	354	1.67	4.54	3.65	0.92	1.07
-35	(-31)	1678	423	492	411	1.93	5.89	4.09	1.03	1.20
-30	(-22)	2146	541	629	468	2.20	7.56	4.58	1.16	1.34
-25	(-13)	2699	680	791	526	2.47	9.54	5.13	1.29	1.50
-20	(- 4)	3337	841	978	585	2.74	11.86	5.71	1.44	1.67
-15	(+ 5)	4061	1023	1190	645	3.01	14.52	6.30	1.59	1.85
-10	(+14)	4870	1227	1427	705	3.29	17.52	6.91	1.74	2.02

TEST CONDITIONS: @220V50Hz			EN12900 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)	1023	258	300	354	1.63	3.98	2.90	0.73	0.85
-35	(-31)	1368	345	401	420	1.95	5.34	3.26	0.82	0.95
-30	(-22)	1786	450	523	488	2.28	6.99	3.66	0.92	1.07
-25	(-13)	2277	574	667	557	2.61	8.95	4.08	1.03	1.20
-20	(- 4)	2841	716	832	628	2.94	11.23	4.53	1.14	1.33
-15	(+ 5)	3478	876	1019	701	3.27	13.85	4.97	1.25	1.46
-10	(+14)	4188	1055	1227	775	3.61	16.80	5.40	1.36	1.58

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		