

### COMPRESSOR DEFINITION

Designation	NE X4170UA
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513308301

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	115-127 / 60	[ V / Hz ]	
4 Application type	Low-Medium Back Pressure (Light Commercial - Curves until T.Evap -		
4.1 Evaporating temperature range	-40°C to 0°C	(-40°F to 32°F)	
5 Motor type	CSCR		
6 Starting torque	HST - High 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	1/2	[hp]
2 Displacement	16.80	[cm <sup>3</sup> ] (1.025 cu.in)
2.1 Bore [mm]	31.190	
2.2 Stroke [mm]	22.000	
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 - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVAH7AA3C-571	
3 Start capacitor	340-408(165)	[µF(VAC minimum)]
4 Run capacitor	30(400)	[µF(VAC minimum)]
5 Motor protection	USP-577-83	
6 Start winding resistance	3.81	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.96	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	49.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	9.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - CE - EAC - UKCA - UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
3436	866	1007	611	5.59	10.23	5.63	1.42	1.65

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	1679	423	492	360	3.60	4.96	4.65	1.17	1.36
-35	(-31)	2197	554	644	414	4.03	6.50	5.31	1.34	1.56
-30	(-22)	2815	709	825	469	4.48	8.35	6.01	1.52	1.76
-25	(-13)	3542	893	1038	524	4.94	10.53	6.76	1.70	1.98
-20	(- 4)	4386	1105	1285	580	5.41	13.09	7.57	1.91	2.22
-15	(+ 5)	5354	1349	1569	633	5.87	16.04	8.47	2.13	2.48
-10	(+14)	6454	1626	1891	682	6.30	19.43	9.47	2.39	2.77
-5	(+23)	7693	1939	2254	727	6.70	23.27	10.58	2.67	3.10
0	(+32)	9079	2288	2660	767	7.04	27.61	11.83	2.98	3.47

TEST CONDITIONS: @115V60Hz		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)	1512	381	443	367	3.66	4.46	4.13	1.04	1.21
-35	(-31)	2025	510	593	428	4.14	5.99	4.75	1.20	1.39
-30	(-22)	2639	665	773	492	4.67	7.82	5.37	1.35	1.57
-25	(-13)	3361	847	985	558	5.22	9.99	6.01	1.52	1.76
-20	(- 4)	4200	1058	1231	625	5.79	12.53	6.70	1.69	1.96
-15	(+ 5)	5163	1301	1513	690	6.36	15.47	7.45	1.88	2.18
-10	(+14)	6257	1577	1833	754	6.93	18.83	8.27	2.08	2.42
-5	(+23)	7491	1888	2195	815	7.47	22.65	9.18	2.31	2.69
0	(+32)	8872	2236	2600	871	7.97	26.97	10.21	2.57	2.99

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	1374	346	403	366	3.65	4.06	3.72	0.94	1.09
-35	(-31)	1866	470	547	436	4.21	5.52	4.29	1.08	1.26
-30	(-22)	2458	619	720	511	4.83	7.29	4.84	1.22	1.42
-25	(-13)	3159	796	926	589	5.49	9.39	5.39	1.36	1.58
-20	(- 4)	3976	1002	1165	670	6.18	11.86	5.95	1.50	1.74
-15	(+ 5)	4918	1239	1441	750	6.89	14.73	6.55	1.65	1.92
-10	(+14)	5990	1510	1755	831	7.60	18.02	7.19	1.81	2.11
-5	(+23)	7203	1815	2111	909	8.31	21.78	7.91	1.99	2.32
0	(+32)	8562	2158	2509	984	8.99	26.02	8.71	2.20	2.55

### 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		