COMPRESSOR DEFINITION

Designation	**NE X2180UB**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513308224**

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 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	18.70	[cm³] (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)	11.2	[kg] (24.69 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	QL2-7.8-NTC-15	
3 Start capacitor	108-130(330)	[µF(VAC minimum)]
4 Run capacitor	12.5(400)	[µF(VAC minimum)]
5 Motor protection	USP-M12-83	
6 Start winding resistance	7.80	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.20	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	22.50	[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	CCC - CE - EAC - UKCA - 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 (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]
1861	469	545	409	2.03	6.23	4.55	1.15	1.33

E - PERFORMANCE - CURVES

TEST CONDITIONS: **EN12900** (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)**	1556	392	456	350	1.79	4.98	4.43	1.12	1.30
-35	**(-31)**	1975	498	579	397	1.98	6.33	4.99	1.26	1.46
-30	**(-22)**	2502	631	733	443	2.17	8.05	5.66	1.43	1.66
-25	**(-13)**	3137	791	919	489	2.37	10.12	6.42	1.62	1.88
-20	**(- 4)**	3880	978	1137	535	2.57	12.58	7.25	1.83	2.13
-15	**(+ 5)**	4732	1192	1386	580	2.78	15.42	8.16	2.06	2.39
-10	**(+14)**	5691	1434	1668	625	2.99	18.66	9.11	2.30	2.67

TEST CONDITIONS: **EN12900** (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)**	1293	326	379	358	1.82	4.52	3.62	0.91	1.06
-35	**(-31)**	1677	423	491	414	2.05	5.89	4.05	1.02	1.19
-30	**(-22)**	2150	542	630	470	2.29	7.58	4.57	1.15	1.34
-25	**(-13)**	2714	684	795	527	2.53	9.60	5.14	1.30	1.51
-20	**(- 4)**	3368	849	987	584	2.78	11.97	5.76	1.45	1.69
-15	**(+ 5)**	4112	1036	1205	641	3.04	14.70	6.42	1.62	1.88
-10	**(+14)**	4946	1246	1449	698	3.31	17.79	7.10	1.79	2.08

TEST CONDITIONS: **EN12900** (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)**	1029	259	301	352	1.80	4.00	2.92	0.74	0.86
-35	**(-31)**	1377	347	403	421	2.09	5.37	3.27	0.82	0.96
-30	**(-22)**	1797	453	527	490	2.38	7.04	3.66	0.92	1.07
-25	**(-13)**	2290	577	671	560	2.68	9.00	4.09	1.03	1.20
-20	**(- 4)**	2854	719	836	630	2.99	11.29	4.54	1.14	1.33
-15	**(+ 5)**	3491	880	1023	701	3.31	13.90	4.99	1.26	1.46
-10	**(+14)**	4200	1058	1231	773	3.63	16.84	5.42	1.37	1.59

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		