

COMPRESSOR DEFINITION

Designation	NE U2170UA
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513308230

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	3/4	[hp]
2 Displacement	16.80	[cm ³] (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	[kg] (24.25 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	10(400)	[µF(VAC minimum)]
5 Motor protection	USP-M1E-83	
6 Start winding resistance	12.02	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	23.50	[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 - 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)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1646	415	482	382	2.08	5.51	4.31	1.09	1.26

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1359	343	398	325	1.86	4.34	4.17	1.05	1.22
-35	(-31)	1733	437	508	365	2.01	5.56	4.76	1.20	1.39
-30	(-22)	2208	556	647	405	2.16	7.10	5.46	1.38	1.60
-25	(-13)	2783	701	815	444	2.32	8.98	6.26	1.58	1.83
-20	(- 4)	3458	871	1013	484	2.48	11.21	7.14	1.80	2.09
-15	(+ 5)	4233	1067	1240	522	2.64	13.80	8.10	2.04	2.37
-10	(+14)	5108	1287	1497	560	2.80	16.75	9.12	2.30	2.67

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1136	286	333	326	1.86	3.97	3.48	0.88	1.02
-35	(-31)	1481	373	434	377	2.05	5.20	3.93	0.99	1.15
-30	(-22)	1909	481	559	427	2.25	6.73	4.47	1.13	1.31
-25	(-13)	2418	609	709	477	2.45	8.56	5.07	1.28	1.49
-20	(- 4)	3010	759	882	526	2.65	10.70	5.73	1.44	1.68
-15	(+ 5)	3684	928	1079	574	2.86	13.17	6.42	1.62	1.88
-10	(+14)	4440	1119	1301	621	3.07	15.97	7.15	1.80	2.10

TEST CONDITIONS: @220V50Hz			EN12900 Fan		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	868	219	254	319	1.83	3.38	2.73	0.69	0.80
-35	(-31)	1190	300	349	382	2.07	4.64	3.11	0.78	0.91
-30	(-22)	1577	397	462	444	2.31	6.17	3.54	0.89	1.04
-25	(-13)	2027	511	594	506	2.57	7.97	4.01	1.01	1.17
-20	(- 4)	2542	641	745	566	2.82	10.05	4.50	1.13	1.32
-15	(+ 5)	3121	786	914	626	3.08	12.42	4.99	1.26	1.46
-10	(+14)	3764	948	1103	684	3.35	15.10	5.49	1.38	1.61

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.15 +0.00/-0.05	[mm]	(0.321" +0.000"/-0.002")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		