

COMPRESSOR DEFINITION

Designation	NE U6214U
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	862GA51

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	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	CSIR		
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 (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 pressures/temperature			
9.1 Operating (gauge)	19.1	[kgf/cm²] (272 psig)	/ °C - °F
9.2 Peak (gauge)	21.2	[kgf/cm²] (301 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	12.11	[cm ³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
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/cm ²]

C - ELETRICAL 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	MTRP-49-65	
3 Start capacitor	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0964/G6	
6 Start winding resistance	27.95	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.11	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
5613	1414	1645	666	3.72	19.21	8.43	2.12	2.47

TEST CONDITIONS: @220V50Hz			EN12900MBP Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]
3194	805	936	478	3.03	10.71	6.68	1.68	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE46 Fan			(Condensing temperature35°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]
-20	(- 4)	2582	651	756	372	2.69	7.28	6.93	1.75	2.03
-15	(+ 5)	3175	800	930	402	2.78	9.00	7.91	1.99	2.32
-10	(+14)	3875	976	1135	430	2.87	11.02	9.02	2.27	2.64
-5	(+23)	4681	1180	1372	457	2.96	13.38	10.26	2.59	3.01
0	(+32)	5595	1410	1639	482	3.05	16.08	11.62	2.93	3.41
+5	(+41)	6615	1667	1938	505	3.14	19.14	13.10	3.30	3.84
+10	(+50)	7743	1951	2269	527	3.23	22.56	14.68	3.70	4.30

TEST CONDITIONS:					ASHRAE46		(Condensing temperature 45°C (+113°F))			
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	2264	571	663	404	2.79	6.91	5.61	1.41	1.64
-15	(+ 5)	2798	705	820	440	2.90	8.57	6.35	1.60	1.86
-10	(+14)	3426	863	1004	476	3.01	10.54	7.19	1.81	2.11
-5	(+23)	4149	1045	1216	510	3.13	12.83	8.12	2.05	2.38
0	(+32)	4966	1251	1455	543	3.25	15.45	9.14	2.30	2.68
+5	(+41)	5878	1481	1722	575	3.38	18.42	10.23	2.58	3.00
+10	(+50)	6886	1735	2018	606	3.51	21.75	11.38	2.87	3.34

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE46			(Condensing temperature 55°C (+131°F))					
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	1939	489	568	430	2.86	6.46	4.51	1.14	1.32
-15	(+ 5)	2417	609	708	476	3.01	8.09	5.08	1.28	1.49
-10	(+14)	2976	750	872	522	3.17	10.00	5.71	1.44	1.67
-5	(+23)	3618	912	1060	567	3.33	12.23	6.39	1.61	1.87
0	(+32)	4342	1094	1272	611	3.50	14.78	7.11	1.79	2.08
+5	(+41)	5149	1298	1509	654	3.68	17.66	7.87	1.98	2.31
+10	(+50)	6039	1522	1770	696	3.87	20.90	8.67	2.18	2.54

TEST CONDITIONS:		EN12900			(Condensing temperature 35°C (+95°F))					
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	2428	612	711	370	2.69	0.00	6.55	1.65	1.92
-15	(+ 5)	2974	749	871	400	2.78	0.00	7.44	1.87	2.18
-10	(+14)	3628	914	1063	429	2.88	0.00	8.47	2.13	2.48
-5	(+23)	4392	1107	1287	456	2.97	0.00	9.63	2.43	2.82
0	(+32)	5265	1327	1543	483	3.07	0.00	10.91	2.75	3.20
+5	(+41)	6246	1574	1830	508	3.17	0.00	12.29	3.10	3.60
+10	(+50)	7336	1849	2150	532	3.27	0.00	13.76	3.47	4.03

TEST CONDITIONS:		EN12900			(Condensing temperature 45°C (+113°F))					
@220V50Hz		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20	(- 4)	2114	533	619	405	2.78	0.00	5.21	1.31	1.53
-15	(+ 5)	2602	656	763	441	2.89	0.00	5.90	1.49	1.73
-10	(+14)	3187	803	934	475	3.01	0.00	6.70	1.69	1.96
-5	(+23)	3867	975	1133	509	3.13	0.00	7.59	1.91	2.22
0	(+32)	4643	1170	1361	542	3.26	0.00	8.57	2.16	2.51
+5	(+41)	5515	1390	1616	574	3.39	0.00	9.62	2.42	2.82
+10	(+50)	6482	1633	1899	605	3.52	0.00	10.73	2.71	3.15

E - PERFORMANCE - CURVES

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]
-20	(- 4)	1784	450	523	428	2.85	0.00	4.17	1.05	1.22
-15	(+ 5)	2210	557	647	475	3.00	0.00	4.66	1.17	1.36
-10	(+14)	2718	685	796	521	3.16	0.00	5.22	1.32	1.53
-5	(+23)	3308	834	969	566	3.33	0.00	5.84	1.47	1.71
0	(+32)	3982	1003	1167	610	3.50	0.00	6.52	1.64	1.91
+5	(+41)	4737	1194	1388	654	3.68	0.00	7.24	1.83	2.12
+10	(+50)	5575	1405	1634	697	3.87	0.00	7.99	2.01	2.34

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +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		