

### COMPRESSOR DEFINITION

Designation	<b>NE U6214US</b>
Nominal Voltage/Frequency	<b>200 V 50-60 Hz</b>
Engineering Number	<b>865GR46</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	200 / 50-60	[ V / Hz ]	
4 Application type	Medium-High Back pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°F to 50°F)	
5 Motor type	3PHASE		
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	12.11	[cm <sup>3</sup> ] (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	AB / ISO32	
4 Weight (with oil charge)	11.35	[kg] (25.02 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200 V 50-60 Hz 3 ~ (Three phase)	
2 Starting device type	3PHASE	
2.1 Starting device		
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	34HM207-66	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	16.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @200V50Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
5829	1469	1708	588	2.27	19.95	9.91	2.50	2.90

TEST CONDITIONS: @200V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
6882	1734	2017	722	2.43	23.55	9.53	2.40	2.79

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		ASHRAE46 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]
-20	(- 4)	2645	667	775	341	1.72	7.46	7.76	1.96	2.27
-15	(+ 5)	3250	819	952	369	1.77	9.21	8.81	2.22	2.58
-10	(+14)	3975	1002	1165	393	1.82	11.31	10.11	2.55	2.96
-5	(+23)	4821	1215	1413	413	1.87	13.78	11.68	2.94	3.42
0	(+32)	5786	1458	1695	429	1.91	16.63	13.51	3.40	3.96
+5	(+41)	6872	1732	2014	441	1.94	19.88	15.59	3.93	4.57
+10	(+50)	8078	2036	2367	450	1.98	23.54	17.93	4.52	5.25

TEST CONDITIONS: @200V50Hz		ASHRAE46 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]
-20	(- 4)	2321	585	680	367	1.75	7.08	6.34	1.60	1.86
-15	(+ 5)	2854	719	836	402	1.82	8.74	7.11	1.79	2.08
-10	(+14)	3500	882	1026	433	1.89	10.77	8.06	2.03	2.36
-5	(+23)	4260	1073	1248	461	1.96	13.17	9.20	2.32	2.70
0	(+32)	5133	1293	1504	486	2.01	15.97	10.53	2.65	3.08
+5	(+41)	6119	1542	1793	508	2.07	19.17	12.04	3.03	3.53
+10	(+50)	7218	1819	2115	527	2.12	22.80	13.74	3.46	4.03

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V50Hz		ASHRAE46 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]
-20	(- 4)	2009	506	589	393	1.81	6.69	5.08	1.28	1.49
-15	(+ 5)	2463	621	722	434	1.89	8.24	5.70	1.44	1.67
-10	(+14)	3024	762	886	472	1.97	10.17	6.43	1.62	1.88
-5	(+23)	3691	930	1082	507	2.05	12.48	7.28	1.84	2.13
0	(+32)	4464	1125	1308	541	2.12	15.20	8.25	2.08	2.42
+5	(+41)	5344	1347	1566	572	2.18	18.33	9.34	2.35	2.74
+10	(+50)	6330	1595	1855	600	2.24	21.90	10.53	2.65	3.09

TEST CONDITIONS: @200V60Hz		ASHRAE46 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]
-20	(- 4)	3179	801	931	402	1.53	8.97	7.91	1.99	2.32
-15	(+ 5)	3881	978	1137	439	1.62	11.00	8.85	2.23	2.59
-10	(+14)	4720	1189	1383	472	1.71	13.43	10.00	2.52	2.93
-5	(+23)	5697	1436	1669	501	1.79	16.28	11.37	2.87	3.33
0	(+32)	6812	1717	1996	527	1.87	19.58	12.94	3.26	3.79
+5	(+41)	8064	2032	2363	548	1.94	23.33	14.71	3.71	4.31
+10	(+50)	9453	2382	2770	566	1.99	27.55	16.67	4.20	4.89

TEST CONDITIONS: @200V60Hz		ASHRAE46 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]
-20	(- 4)	2806	707	822	435	1.61	8.56	6.46	1.63	1.89
-15	(+ 5)	3439	867	1008	480	1.72	10.53	7.17	1.81	2.10
-10	(+14)	4196	1057	1230	522	1.83	12.91	8.03	2.02	2.35
-5	(+23)	5078	1280	1488	560	1.93	15.70	9.05	2.28	2.65
0	(+32)	6085	1533	1783	595	2.02	18.93	10.21	2.57	2.99
+5	(+41)	7216	1819	2115	627	2.11	22.61	11.52	2.90	3.38
+10	(+50)	8473	2135	2483	655	2.19	26.76	12.96	3.27	3.80

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @200V60Hz		ASHRAE46 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]
-20	(- 4)	2392	603	701	458	1.66	7.97	5.22	1.32	1.53
-15	(+ 5)	2965	747	869	513	1.80	9.92	5.79	1.46	1.70
-10	(+14)	3650	920	1069	566	1.94	12.27	6.46	1.63	1.89
-5	(+23)	4446	1120	1303	616	2.08	15.03	7.23	1.82	2.12
0	(+32)	5354	1349	1569	662	2.22	18.22	8.08	2.04	2.37
+5	(+41)	6374	1606	1868	706	2.35	21.87	9.03	2.27	2.64
+10	(+50)	7506	1892	2199	747	2.48	25.97	10.05	2.53	2.94

### 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		