

COMPRESSOR DEFINITION

Designation	NE 5210E
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	261RG71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-22		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
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)	21.7	[kgf/cm ²] (309 psig)	/ °C - °F
9.2 Peak (gauge)	24.2	[kgf/cm ²] (344 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	8.77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	15.920	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO46	
4 Weight (with oil charge)	10.4	[kg] (22.93 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-63	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0728/G6	
6 Start winding resistance	8.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.33	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	37.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	6.90	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
3925	989	1150	558	7.02	24.24	7.03	1.77	2.06

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE46 Fan				(Condensing temperature 35°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]
-15	(+ 5)	2020	509	592	338	5.18	10.60	5.98	1.51	1.75
-10	(+14)	2611	658	765	375	5.43	13.77	6.96	1.75	2.04
-5	(+23)	3273	825	959	408	5.64	17.35	8.02	2.02	2.35
0	(+32)	4007	1010	1174	437	5.82	21.35	9.18	2.31	2.69
+5	(+41)	4811	1212	1410	463	5.97	25.80	10.41	2.62	3.05
+10	(+50)	5687	1433	1666	485	6.08	30.73	11.72	2.95	3.43

TEST CONDITIONS: @100V50Hz		ASHRAE46 Fan				(Condensing temperature 45°C (+113°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]
-15	(+ 5)	1702	429	499	352	5.25	9.56	4.85	1.22	1.42
-10	(+14)	2204	555	646	394	5.55	12.41	5.59	1.41	1.64
-5	(+23)	2790	703	817	435	5.84	15.79	6.40	1.61	1.88
0	(+32)	3459	872	1014	474	6.13	19.69	7.29	1.84	2.14
+5	(+41)	4212	1061	1234	511	6.40	24.16	8.24	2.08	2.41
+10	(+50)	5048	1272	1479	547	6.66	29.20	9.24	2.33	2.71

TEST CONDITIONS: @100V50Hz		ASHRAE46 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]
-15	(+ 5)	1372	346	402	366	5.32	8.28	3.74	0.94	1.09
-10	(+14)	1781	449	522	414	5.68	10.80	4.31	1.09	1.26
-5	(+23)	2287	576	670	462	6.05	13.94	4.96	1.25	1.45
0	(+32)	2889	728	847	511	6.44	17.73	5.65	1.42	1.66
+5	(+41)	3587	904	1051	560	6.84	22.18	6.40	1.61	1.88
+10	(+50)	4382	1104	1284	609	7.26	27.32	7.19	1.81	2.11

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE46 Fan			(Condensing temperature 35°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]
-15	(+ 5)	2421	610	709	392	5.29	12.71	6.17	1.56	1.81
-10	(+14)	3045	767	892	435	5.54	16.05	7.00	1.77	2.05
-5	(+23)	3808	960	1116	473	5.75	20.17	8.05	2.03	2.36
0	(+32)	4712	1187	1381	507	5.93	25.10	9.30	2.34	2.73
+5	(+41)	5756	1450	1687	537	6.07	30.87	10.73	2.70	3.14
+10	(+50)	6940	1749	2034	563	6.17	37.50	12.32	3.10	3.61

TEST CONDITIONS: @100V60Hz		ASHRAE46 Fan			(Condensing temperature 45°C (+113°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]
-15	(+ 5)	2021	509	592	408	5.36	11.33	4.97	1.25	1.46
-10	(+14)	2574	649	754	457	5.67	14.50	5.63	1.42	1.65
-5	(+23)	3254	820	953	505	5.96	18.42	6.43	1.62	1.88
0	(+32)	4060	1023	1190	550	6.25	23.12	7.37	1.86	2.16
+5	(+41)	4992	1258	1463	593	6.53	28.64	8.41	2.12	2.46
+10	(+50)	6052	1525	1773	635	6.79	34.99	9.55	2.41	2.80

TEST CONDITIONS: @100V60Hz		ASHRAE46 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]
-15	(+ 5)	1605	404	470	424	5.43	9.69	3.78	0.95	1.11
-10	(+14)	2084	525	611	480	5.80	12.64	4.35	1.10	1.27
-5	(+23)	2676	674	784	536	6.18	16.31	5.00	1.26	1.46
0	(+32)	3380	852	990	593	6.57	20.74	5.71	1.44	1.67
+5	(+41)	4197	1058	1230	650	6.98	25.95	6.46	1.63	1.89
+10	(+50)	5127	1292	1502	707	7.41	31.98	7.24	1.82	2.12

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+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		