

COMPRESSOR DEFINITION

Designation	NE 5211E
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	263FG71

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	1/2-	[hp]
2 Displacement	9.99	[cm ³] (0.610 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	18.120	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO32	
4 Weight (with oil charge)	11.65	[kg] (25.68 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	T0815/J5	
6 Start winding resistance	8.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.85	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	46.50	[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)	6.00	[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]
4459	1124	1307	646	7.30	27.54	6.90	1.74	2.02

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)	2370	597	694	383	5.42	12.44	6.18	1.56	1.81
-10	(+14)	2935	740	860	415	5.59	15.48	7.07	1.78	2.07
-5	(+23)	3600	907	1055	447	5.79	19.07	8.05	2.03	2.36
0	(+32)	4350	1096	1275	479	6.04	23.18	9.08	2.29	2.66
+5	(+41)	5173	1304	1516	511	6.32	27.74	10.13	2.55	2.97
+10	(+50)	6054	1526	1774	543	6.65	32.71	11.15	2.81	3.27

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)	2028	511	594	402	5.52	11.38	5.05	1.27	1.48
-10	(+14)	2536	639	743	443	5.78	14.29	5.72	1.44	1.68
-5	(+23)	3150	794	923	485	6.06	17.83	6.49	1.64	1.90
0	(+32)	3857	972	1130	526	6.38	21.96	7.32	1.85	2.15
+5	(+41)	4642	1170	1360	568	6.72	26.63	8.18	2.06	2.40
+10	(+50)	5493	1384	1610	609	7.10	31.77	9.02	2.27	2.64

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)	1763	444	517	420	5.62	10.64	4.19	1.06	1.23
-10	(+14)	2197	554	644	471	5.97	13.32	4.67	1.18	1.37
-5	(+23)	2743	691	804	522	6.34	16.73	5.25	1.32	1.54
0	(+32)	3388	854	993	573	6.72	20.79	5.91	1.49	1.73
+5	(+41)	4119	1038	1207	624	7.12	25.47	6.60	1.66	1.94
+10	(+50)	4922	1240	1442	675	7.54	30.70	7.29	1.84	2.14

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	2845	717	834	462	6.53	14.93	6.16	1.55	1.81	
-10 (+14)	3548	894	1040	500	6.73	18.71	7.09	1.79	2.08	
-5 (+23)	4345	1095	1273	539	6.98	23.02	8.07	2.03	2.36	
0 (+32)	5237	1320	1535	577	7.27	27.90	9.07	2.29	2.66	
+5 (+41)	6222	1568	1823	616	7.62	33.37	10.10	2.55	2.96	
+10 (+50)	7300	1840	2139	655	8.01	39.44	11.14	2.81	3.27	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	2480	625	727	484	6.65	13.92	5.12	1.29	1.50	
-10 (+14)	3103	782	909	534	6.96	17.48	5.81	1.46	1.70	
-5 (+23)	3829	965	1122	584	7.31	21.67	6.56	1.65	1.92	
0 (+32)	4658	1174	1365	634	7.69	26.52	7.35	1.85	2.15	
+5 (+41)	5587	1408	1637	684	8.10	32.05	8.17	2.06	2.39	
+10 (+50)	6618	1668	1939	734	8.55	38.28	9.02	2.27	2.64	

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]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-15 (+5)	2115	533	620	506	6.77	12.76	4.18	1.05	1.22	
-10 (+14)	2658	670	779	568	7.19	16.12	4.69	1.18	1.37	
-5 (+23)	3313	835	971	629	7.64	20.20	5.26	1.33	1.54	
0 (+32)	4078	1028	1195	691	8.10	25.03	5.90	1.49	1.73	
+5 (+41)	4953	1248	1451	752	8.59	30.62	6.58	1.66	1.93	
+10 (+50)	5936	1496	1739	813	9.09	37.02	7.30	1.84	2.14	

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		