

SIERRA05-0982Y3
R134a / R513A / R1234yf
100/150V DC
VARIABLE SPEED



Brushless DC Variable Speed Compressor Technical Data Sheet

General Information

Compressor Part Number	SIERRA00202	1/2" ID Suction - 5/16" ID Discharge
Compressor Drawing	DCMX33-002	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00203	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-002	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00145	M24 MIO Suction - M22 MIO Discharge
Compressor Drawing with Fittings	DCMX35-002	M5 Threaded Terminal Connections
Controller Options (75-125V)	025F0140-05, 025F0393	
Controller Options (70-145V)	025F0140-07, 025F0394	
Controller Options (90-165V)	025F0140-01, 025F0395	
Controller Options (90-260V)	025F0140-06, 025F0396	
Wiring Diagram Drawing	DEMX0006	

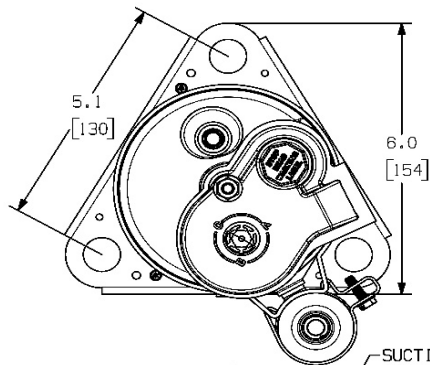
Application Information

Application	HBP, A/C
Refrigerant	R134a, R513A, R1234yf
Evaporator Temperature Range	-23.3°C to 12.8°C (-10°F to 55°F)
Condenser Temperature Range	26.7°C to 65.6°C (80°F to 150°F)
Maximum Discharge Temperature	130 °C (265 °F)
Maximum Compression Ratio	8:1
Minimum Airflow Over Compressor	425 cfm @ 6" from Outside Diameter of Housing

Design

Displacement	16.1 cm ³ (0.982 in ³)
Oil Quantity	290 cc
Oil Type	PVE 68cSt
Weight	6.4 kg / 14.1 lb
Weight with Fittings	6.6 kg / 14.5 lb

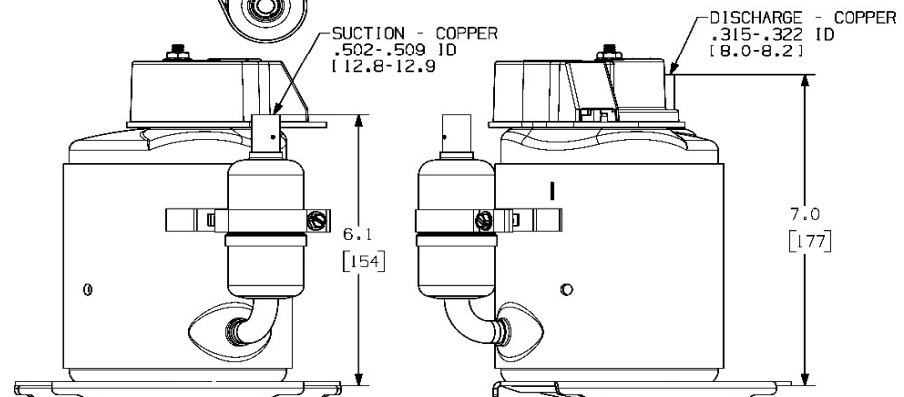
Compressor Dimensions



Packaging Options

- Single Pack (add -SP suffix to part number when ordering)
- Pallet Pack (25 piece multiples)

SIERRA00202

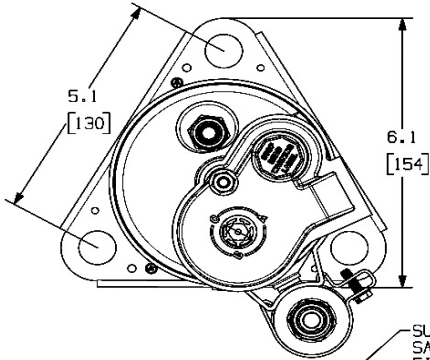


the Sierra

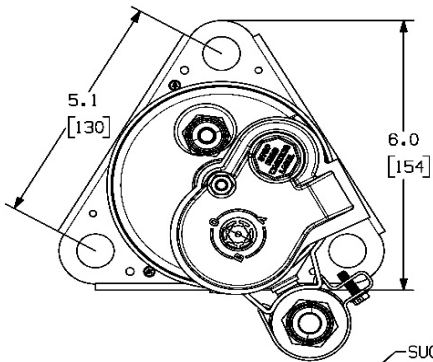
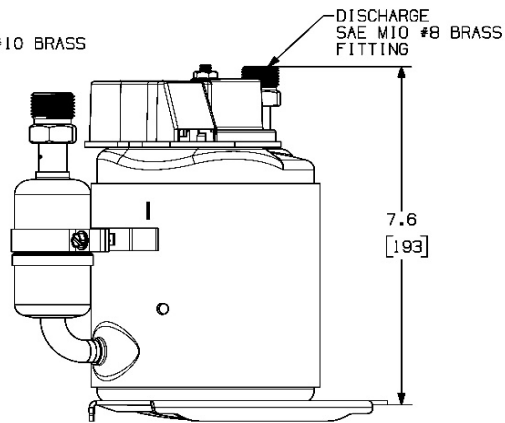
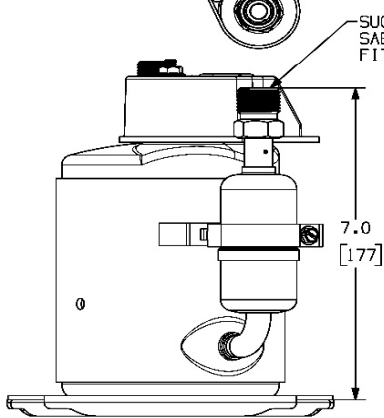
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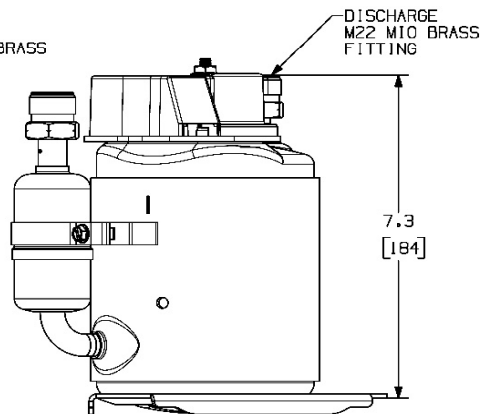
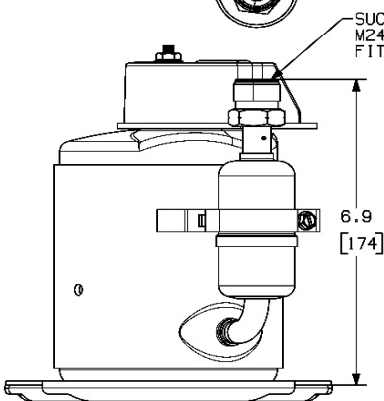
Compressor Dimensions with Fittings



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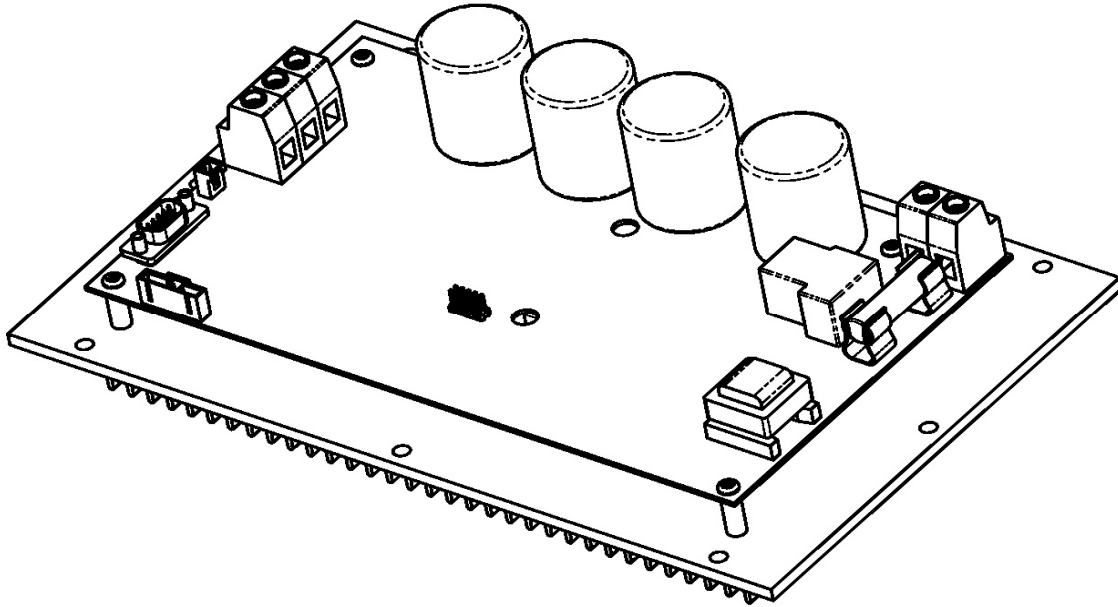


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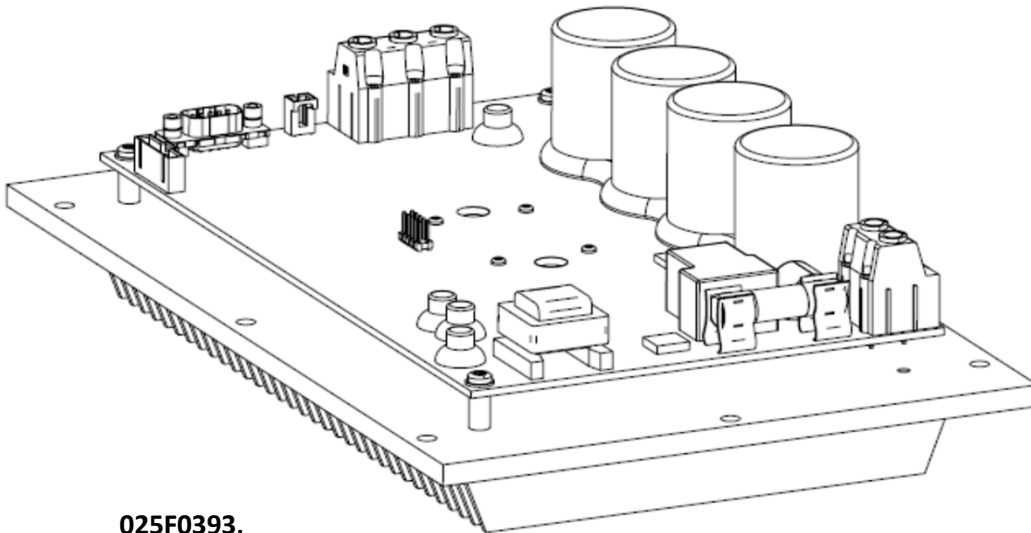


Controller Configurations

Custom controllers and configurations available



025F0140-XX



**025F0393,
025F0394,
025F0395,**

SIERRA05-0982Y3



Cooling Capacity (100V) - ARI HBP - R134a / R513A BTU/hr (Watt)

RPM	Evaporator Temperature											
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)					
1800	1046 (306)	1955 (573)	2309 (676)	2725 (798)	3301 (967)	3680 (1078)	4678 (1370)					
2400	1648 (483)	2824 (827)	3363 (985)	3999 (1171)	4830 (1414)	5348 (1566)	6652 (1948)					
3000	2100 (615)	3545 (1038)	4270 (1251)	5127 (1502)	6213 (1820)	6872 (2013)	8484 (2485)					
3600	2443 (716)	4159 (1218)	5071 (1485)	6150 (1801)	7492 (2194)	8293 (2429)	10212 (2991)					
4200	2719 (796)	4707 (1379)	5808 (1701)	7109 (2082)	8709 (2551)	9651 (2827)	11880 (3479)					

Power Consumption (100V) - ARI HBP - R134a / R513A Watt Current (100V) - ARI HBP - R134a / R513A Amp

RPM	Evaporator Temperature							Evaporator Temperature						
	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	-10°F	10°F	20°F	30°F	40°F	45°F	55°F
1800	286	376	440	492	517	514	465	2.86	3.76	4.40	4.92	5.17	5.14	4.65
2400	421	478	535	589	622	625	594	4.21	4.78	5.35	5.89	6.22	6.25	5.94
3000	553	583	637	695	739	750	741	5.53	5.83	6.37	6.95	7.39	7.50	7.41
3600	685	694	748	813	871	892	908	6.85	6.94	7.48	8.13	8.71	8.92	9.08
4200	820	814	871	946	1022	1054	1098	8.20	8.14	8.71	9.46	10.22	10.54	10.98

Efficiency (100V) - ARI HBP - R134a / R513A BTU/hr/W (W/W)

RPM	Evaporator Temperature											
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)					
1800	3.66 (1.07)	5.20 (1.52)	5.25 (1.54)	5.53 (1.62)	6.38 (1.87)	7.16 (2.10)	10.06 (2.95)					
2400	3.92 (1.15)	5.91 (1.73)	6.28 (1.84)	6.79 (1.99)	7.77 (2.27)	8.56 (2.51)	11.19 (3.28)					
3000	3.80 (1.11)	6.08 (1.78)	6.70 (1.96)	7.38 (2.16)	8.41 (2.46)	9.16 (2.68)	11.45 (3.35)					
3600	3.57 (1.04)	5.99 (1.76)	6.78 (1.98)	7.57 (2.22)	8.60 (2.52)	9.29 (2.72)	11.24 (3.29)					
4200	3.32 (0.97)	5.78 (1.69)	6.67 (1.95)	7.51 (2.20)	8.52 (2.50)	9.15 (2.68)	10.82 (3.17)					

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

Performance Coefficients (100V) - ARI HBP - R134a / R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-2.267499E+03	-2.267499E+01	-2.034164E+02
C2	2.918585E+00	5.883120E-01	5.883120E-03	2.796228E-02
C3	-3.031178E-04	-3.778325E-05	-3.778325E-07	-2.825652E-06
C4	3.168748E-08	2.256632E-09	2.256632E-11	2.498261E-10
C5	2.547616E+02	1.621020E+01	1.621020E-01	1.281964E+00
C6	-7.186143E-01	9.046052E-01	9.046052E-03	7.525860E-03
C7	1.620815E-02	-2.855582E-03	-2.855582E-05	1.188066E-04
C8	3.203621E+02	3.598417E+01	3.598417E-01	4.763349E+00
C9	-2.534614E+00	-1.229826E-01	-1.229826E-03	-3.839735E-02
C10	6.128652E-03	-1.756940E-04	-1.756940E-06	9.837328E-05
C11	1.517656E-03	1.893383E-05	1.893383E-07	1.433789E-05
C12	3.295947E-08	6.126034E-09	6.126034E-11	4.227007E-10
C13	-2.017177E-07	2.165979E-06	2.165979E-08	2.606284E-08
C14	-7.799236E-06	-6.570321E-07	-6.570321E-09	-7.249366E-08
C15	-4.387516E-02	4.033675E-03	4.033675E-05	-2.738471E-04
C16	-1.033664E-02	-6.918929E-03	-6.918929E-05	-7.651051E-05
C17	-4.463238E+00	-6.231526E-01	-6.231526E-03	-2.882155E-02
C18	-4.140785E-06	-3.634626E-07	-3.634626E-09	-5.668466E-08
C19	3.143432E-04	-2.227197E-04	-2.227197E-06	1.314290E-06
C20	-1.015077E-06	1.666198E-07	1.666198E-09	-3.070176E-09
C21	6.080003E-05	3.196525E-05	3.196525E-07	4.219426E-07
C22	-3.537261E-03	-6.867931E-03	-6.867931E-05	-1.108327E-04
C23	1.952243E-02	4.526796E-03	4.526796E-05	1.413719E-04

Performance Equation

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 X_3 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

X₁ = RPM
 X₂ = E_t (°F)
 X₃ = C_t (°F)

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Cooling Capacity (100V) - ARI HBP - R1234yf BTU/hr (Watt)

RPM	Evaporator Temperature											
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)					
1800	1114 (326)	2082 (610)	2459 (720)	2903 (850)	3517 (1030)	3920 (1148)	4983 (1459)					
2400	1755 (514)	3008 (881)	3582 (1049)	4260 (1248)	5145 (1507)	5697 (1669)	7087 (2075)					
3000	2237 (655)	3776 (1106)	4549 (1332)	5461 (1600)	6618 (1938)	7320 (2144)	9037 (2647)					
3600	2603 (762)	4430 (1297)	5402 (1582)	6551 (1919)	7981 (2337)	8834 (2587)	10879 (3186)					
4200	2896 (848)	5014 (1468)	6187 (1812)	7573 (2218)	9277 (2717)	10281 (3011)	12655 (3706)					

Power Consumption (100V) - ARI HBP - R1234yf Watt Current (100V) - ARI HBP - R1234yf Amp

RPM	Evaporator Temperature							Evaporator Temperature						
	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	-10°F	10°F	20°F	30°F	40°F	45°F	55°F
1800	273	360	420	471	495	491	445	2.73	3.60	4.20	4.71	4.95	4.91	4.45
2400	403	457	512	563	594	598	568	4.03	4.57	5.12	5.63	5.94	5.98	5.68
3000	529	557	609	664	706	717	709	5.29	5.57	6.09	6.64	7.06	7.17	7.09
3600	655	663	715	777	833	853	868	6.55	6.63	7.15	7.77	8.33	8.53	8.68
4200	784	778	833	905	977	1008	1050	7.84	7.78	8.33	9.05	9.77	10.08	10.50

Efficiency (100V) - ARI HBP - R1234yf BTU/hr/W (W/W)

RPM	Evaporator Temperature											
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)					
1800	4.08 (1.19)	5.79 (1.69)	5.85 (1.71)	6.17 (1.81)	7.11 (2.08)	7.98 (2.34)	11.21 (3.28)					
2400	4.36 (1.28)	6.58 (1.93)	7.00 (2.05)	7.57 (2.22)	8.65 (2.53)	9.53 (2.79)	12.47 (3.65)					
3000	4.23 (1.24)	6.78 (1.98)	7.47 (2.19)	8.22 (2.41)	9.37 (2.74)	10.21 (2.99)	12.75 (3.73)					
3600	3.97 (1.16)	6.68 (1.96)	7.55 (2.21)	8.43 (2.47)	9.58 (2.81)	10.35 (3.03)	12.53 (3.67)					
4200	3.69 (1.08)	6.44 (1.89)	7.43 (2.17)	8.37 (2.45)	9.49 (2.78)	10.20 (2.99)	12.05 (3.53)					

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

Performance Coefficients (100V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.509427E+04	-2.168330E+03	-2.168330E+01	-1.673984E+02
C2	3.109005E+00	5.625823E-01	5.625823E-03	2.301113E-02
C3	-3.228944E-04	-3.613081E-05	-3.613081E-07	-2.325327E-06
C4	3.375490E-08	2.157939E-09	2.157939E-11	2.055905E-10
C5	2.713832E+02	1.550125E+01	1.550125E-01	1.054973E+00
C6	-7.654995E-01	8.650424E-01	8.650424E-03	6.193291E-03
C7	1.726563E-02	-2.730694E-03	-2.730694E-05	9.777006E-05
C8	3.412638E+02	3.441041E+01	3.441041E-01	3.919925E+00
C9	-2.699982E+00	-1.176039E-01	-1.176039E-03	-3.159851E-02
C10	6.528509E-03	-1.680101E-04	-1.680101E-06	8.095477E-05
C11	1.616674E-03	1.810576E-05	1.810576E-07	1.179915E-05
C12	3.510987E-08	5.858113E-09	5.858113E-11	3.478550E-10
C13	-2.148786E-07	2.071250E-06	2.071250E-08	2.144801E-08
C14	-8.308089E-06	-6.282969E-07	-6.282969E-09	-5.965754E-08
C15	-4.673775E-02	3.857263E-03	3.857263E-05	-2.253583E-04
C16	-1.101105E-02	-6.616331E-03	-6.616331E-05	-6.296315E-05
C17	-4.754437E+00	-5.958991E-01	-5.958991E-03	-2.371825E-02
C18	-4.410946E-06	-3.475666E-07	-3.475666E-09	-4.664777E-08
C19	3.348521E-04	-2.129790E-04	-2.129790E-06	1.081575E-06
C20	-1.081305E-06	1.593327E-07	1.593327E-09	-2.526554E-09
C21	6.476687E-05	3.056726E-05	3.056726E-07	3.472312E-07
C22	-3.768046E-03	-6.567563E-03	-6.567563E-05	-9.120806E-05
C23	2.079615E-02	4.328818E-03	4.328818E-05	1.163398E-04

Performance Equation

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 X_3 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

X₁ = RPM
 X₂ = E_t (°F)
 X₃ = C_t (°F)

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Cooling Capacity (150V) - ARI HBP - R134a / R513A BTU/hr (Watt)

RPM	Evaporator Temperature												
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)						
3600	2443 (716)	4159 (1218)	5071 (1485)	6150 (1801)	7492 (2194)	8293 (2429)	10212 (2991)						
4500	2844 (833)	4969 (1455)	6164 (1805)	7578 (2219)	9307 (2726)	10320 (3022)	12704 (3721)						
5500	3278 (960)	5865 (1718)	7377 (2160)	9165 (2684)	11326 (3317)	12577 (3683)	15479 (4534)						
6500	3885 (1138)	6938 (2032)	8770 (2569)	10936 (3203)	13532 (3963)	15022 (4400)	18446 (5402)						

Power Consumption (150V) - ARI HBP - R134a / R513A Watt Current (150V) - ARI HBP - R134a / R513A Amp

RPM	Evaporator Temperature							Evaporator Temperature						
	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	-10°F	10°F	20°F	30°F	40°F	45°F	55°F
3600	628	636	686	746	799	818	833	4.19	4.24	4.57	4.97	5.33	5.46	5.55
4500	816	805	861	935	1014	1049	1103	5.44	5.37	5.74	6.24	6.76	6.99	7.35
5500	1041	1026	1095	1194	1308	1365	1470	6.94	6.84	7.30	7.96	8.72	9.10	9.80
6500	1298	1294	1384	1516	1672	1755	1920	8.65	8.62	9.23	10.10	11.15	11.70	12.80

Efficiency (150V) - ARI HBP - R134a / R513A BTU/hr/W (W/W)

RPM	Evaporator Temperature												
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)						
3600	3.89 (1.14)	6.54 (1.91)	7.39 (2.16)	8.25 (2.42)	9.38 (2.75)	10.13 (2.97)	12.26 (3.59)						
4500	3.49 (1.02)	6.17 (1.81)	7.16 (2.10)	8.10 (2.37)	9.18 (2.69)	9.84 (2.88)	11.52 (3.37)						
5500	3.15 (0.92)	5.72 (1.67)	6.74 (1.97)	7.67 (2.25)	8.66 (2.54)	9.21 (2.70)	10.53 (3.08)						
6500	2.99 (0.88)	5.36 (1.57)	6.34 (1.86)	7.22 (2.11)	8.09 (2.37)	8.56 (2.51)	9.61 (2.81)						

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

Performance Coefficients (150V) - ARI HBP - R134a / R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-2.079662E+03	-1.386442E+01	-2.034164E+02
C2	2.918585E+00	5.395770E-01	3.597180E-03	2.796228E-02
C3	-3.031178E-04	-3.465334E-05	-2.310222E-07	-2.825652E-06
C4	3.168748E-08	2.069696E-09	1.379797E-11	2.498261E-10
C5	2.547616E+02	1.486737E+01	9.911579E-02	1.281964E+00
C6	-7.186143E-01	8.296689E-01	5.531126E-03	7.525860E-03
C7	1.620815E-02	-2.619029E-03	-1.746020E-05	1.188066E-04
C8	3.203621E+02	3.300329E+01	2.200219E-01	4.763349E+00
C9	-2.534614E+00	-1.127949E-01	-7.519657E-04	-3.839735E-02
C10	6.128652E-03	-1.611398E-04	-1.074265E-06	9.837328E-05
C11	1.517656E-03	1.736538E-05	1.157692E-07	1.433789E-05
C12	3.295947E-08	5.618562E-09	3.745708E-11	4.227007E-10
C13	-2.017177E-07	1.986552E-06	1.324368E-08	2.606284E-08
C14	-7.799236E-06	-6.026045E-07	-4.017363E-09	-7.249366E-08
C15	-4.387516E-02	3.699531E-03	2.466354E-05	-2.738471E-04
C16	-1.033664E-02	-6.345774E-03	-4.230516E-05	-7.651051E-05
C17	-4.463238E+00	-5.715315E-01	-3.810210E-03	-2.882155E-02
C18	-4.140785E-06	-3.333539E-07	-2.222359E-09	-5.668466E-08
C19	3.143432E-04	-2.042699E-04	-1.361799E-06	1.314290E-06
C20	-1.015077E-06	1.528172E-07	1.018782E-09	-3.070176E-09
C21	6.080003E-05	2.931730E-05	1.954486E-07	4.219426E-07
C22	-3.537261E-03	-6.299000E-03	-4.199334E-05	-1.108327E-04
C23	1.952243E-02	4.151803E-03	2.767868E-05	1.413719E-04

Performance Equation

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2^2 X_3 + C_{16} X_1 X_3^2 + C_{17} X_2 X_3^2 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

$X_1 = \text{RPM}$
 $X_2 = E_t \text{ (°F)}$
 $X_3 = C_t \text{ (°F)}$

SIERRA05-0982Y3

Cooling Capacity (150V) - ARI HBP - R1234yf BTU/hr (Watt)

RPM	Evaporator Temperature												
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)						
3600	2603 (762)	4430 (1297)	5402 (1582)	6551 (1919)	7981 (2337)	8834 (2587)	10879 (3186)						
4500	3029 (887)	5293 (1550)	6567 (1923)	8072 (2364)	9914 (2904)	10993 (3220)	13533 (3963)						
5500	3492 (1023)	6247 (1830)	7858 (2301)	9763 (2859)	12065 (3533)	13397 (3924)	16489 (4829)						
6500	4139 (1212)	7391 (2165)	9343 (2736)	11649 (3412)	14415 (4222)	16002 (4687)	19650 (5755)						

Power Consumption (150V) - ARI HBP - R1234yf Watt Current (150V) - ARI HBP - R1234yf Amp

RPM	Evaporator Temperature							Evaporator Temperature						
	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	-10°F	10°F	20°F	30°F	40°F	45°F	55°F
3600	601	608	656	713	764	783	797	4.01	4.06	4.37	4.75	5.09	5.22	5.31
4500	780	770	823	894	969	1003	1055	5.20	5.13	5.49	5.96	6.46	6.69	7.03
5500	996	981	1047	1142	1250	1305	1406	6.64	6.54	6.98	7.61	8.34	8.70	9.37
6500	1241	1237	1324	1449	1599	1678	1836	8.28	8.25	8.82	9.66	10.66	11.19	12.24

Efficiency (150V) - ARI HBP - R1234yf BTU/hr/W (W/W)

RPM	Evaporator Temperature												
	-10°F (-23°C)	10°F (-12°C)	20°F (-7°C)	30°F (-1°C)	40°F (4°C)	45°F (7°C)	55°F (13°C)						
3600	4.33 (1.27)	7.28 (2.13)	8.23 (2.41)	9.19 (2.69)	10.45 (3.06)	11.29 (3.31)	13.66 (4.00)						
4500	3.88 (1.14)	6.87 (2.01)	7.98 (2.34)	9.03 (2.64)	10.23 (3.00)	10.96 (3.21)	12.83 (3.76)						
5500	3.51 (1.03)	6.37 (1.86)	7.50 (2.20)	8.55 (2.50)	9.65 (2.83)	10.27 (3.01)	11.73 (3.43)						
6500	3.33 (0.98)	5.97 (1.75)	7.06 (2.07)	8.04 (2.35)	9.01 (2.64)	9.53 (2.79)	10.70 (3.13)						

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

Performance Coefficients (150V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.509427E+04	-1.988709E+03	-1.325806E+01	-1.673984E+02
C2	3.109005E+00	5.159787E-01	3.439858E-03	2.301113E-02
C3	-3.228944E-04	-3.313778E-05	-2.209185E-07	-2.325327E-06
C4	3.375490E-08	1.979178E-09	1.319452E-11	2.055905E-10
C5	2.713832E+02	1.421715E+01	9.478098E-02	1.054973E+00
C6	-7.654995E-01	7.933835E-01	5.289223E-03	6.193291E-03
C7	1.726563E-02	-2.504487E-03	-1.669658E-05	9.777006E-05
C8	3.412638E+02	3.155990E+01	2.103993E-01	3.919925E+00
C9	-2.699982E+00	-1.078618E-01	-7.190786E-04	-3.159851E-02
C10	6.528509E-03	-1.540923E-04	-1.027282E-06	8.095477E-05
C11	1.616674E-03	1.660590E-05	1.107060E-07	1.179915E-05
C12	3.510987E-08	5.372835E-09	3.581890E-11	3.478550E-10
C13	-2.148786E-07	1.899671E-06	1.266447E-08	2.144801E-08
C14	-8.308089E-06	-5.762497E-07	-3.841664E-09	-5.965754E-08
C15	-4.673775E-02	3.537732E-03	2.358488E-05	-2.253583E-04
C16	-1.101105E-02	-6.068243E-03	-4.045495E-05	-6.296315E-05
C17	-4.754437E+00	-5.465356E-01	-3.643571E-03	-2.371825E-02
C18	-4.410946E-06	-3.187747E-07	-2.125165E-09	-4.664777E-08
C19	3.348521E-04	-1.953361E-04	-1.302241E-06	1.081575E-06
C20	-1.081305E-06	1.461338E-07	9.742253E-10	-2.526554E-09
C21	6.476687E-05	2.803511E-05	1.869007E-07	3.472312E-07
C22	-3.768046E-03	-6.023515E-03	-4.015676E-05	-9.120806E-05
C23	2.079615E-02	3.970224E-03	2.646816E-05	1.163398E-04

Performance Equation

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2^2 X_3 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

$X_1 = \text{RPM}$
 $X_2 = E_t \text{ (°F)}$
 $X_3 = C_t \text{ (°F)}$