

**SIERRA06-0982Y3  
R134a / R513A / R1234yf  
150/300 V DC  
VARIABLE SPEED**



**Brushless DC Variable Speed Compressor Technical Data Sheet**

**General Information**

Compressor Part Number	SIERRA00205	1/2" Suction - 5/16" Discharge
Compressor Drawing	DCMX33-002	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00206	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-002	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00221	M24 MIO Suction - M22 MIO Discharge
Compressor Drawing with Fittings	DCMX35-002	M5 Threaded Terminal Connections
Dual Compressor Part Number w/ Fittings	SIERRA00208	#10 MIO Suction - #8 MIO Discharge
Dual Compressor Drawing w/ Fittings	DCMX34-002	#10-32 Threaded Terminal Connections
Controller Options (115-325V)	025F0140-02, 025F0397	
Controller Options (120-420V)	025F0140-03, 025F0398	
Wiring Diagram Drawing	DEM0006	
Dual Compressor Controller (120-420V)	025F0188-03, 025F0401	
Dual Compressor Wiring Diagram	DEM0034	

**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 <sup>3</sup> (0.982 in <sup>3</sup> )
Oil Quantity	290 cc
Dual Compressor Oil Quantity	390 cc
Oil Type	PVE 68cSt
Weight	6.4 kg / 14.1 lb
Weight with Fittings	6.6 kg / 14.5 lb
Weight with Fittings (Dual)	6.8 kg / 14.9 lb

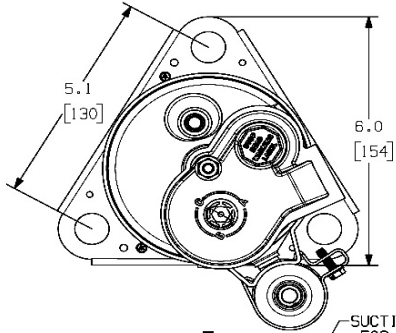
**Packaging Options**

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

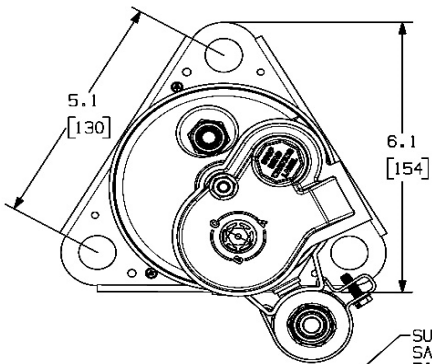
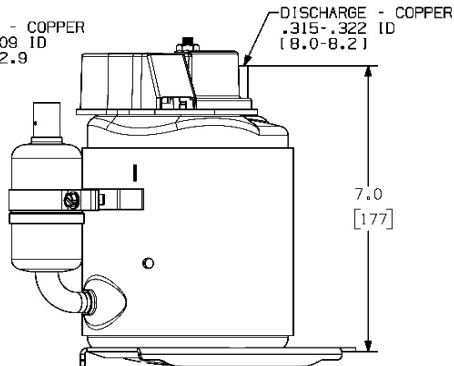
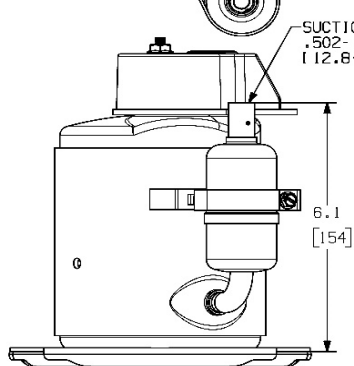
# SIERRA06-0982Y3



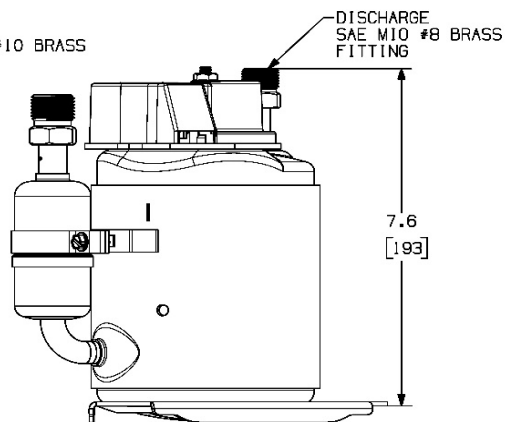
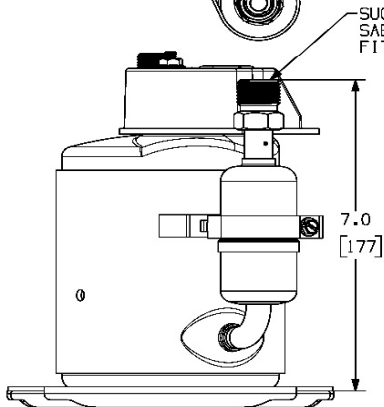
## Compressor Dimensions



SIERRA00205



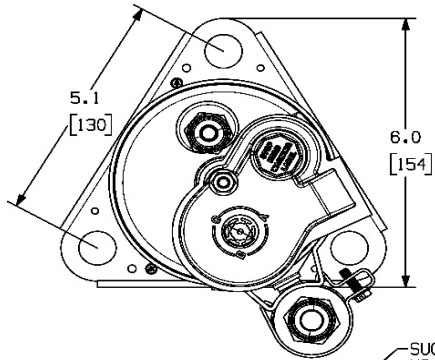
SIERRA00206



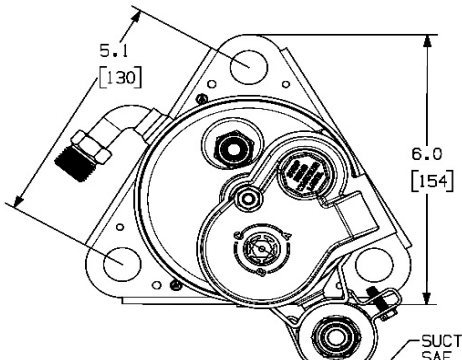
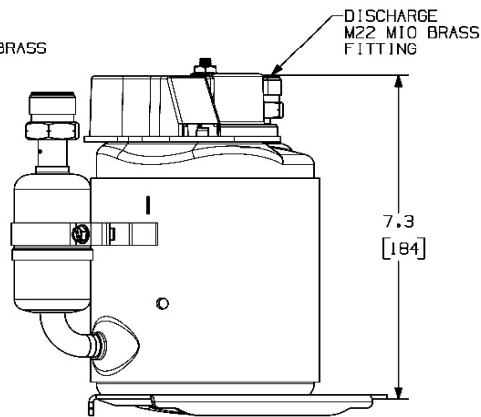
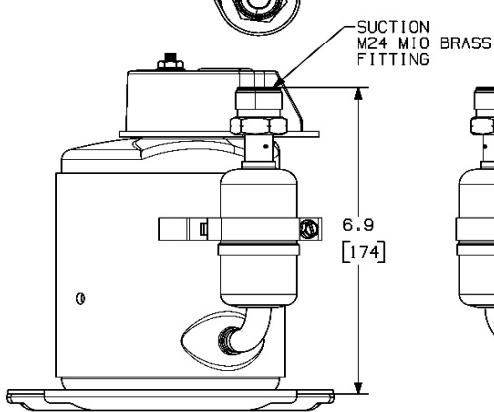
# SIERRA06-0982Y3



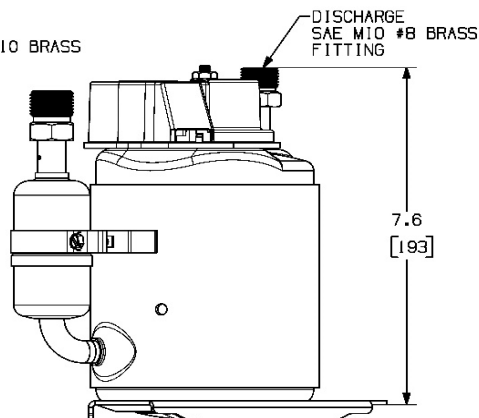
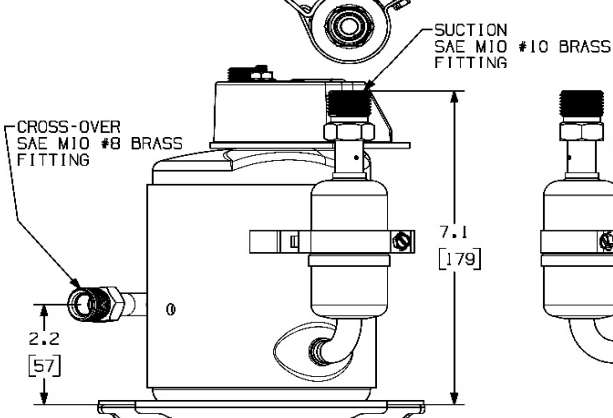
## Compressor Dimensions



SIERRA00221



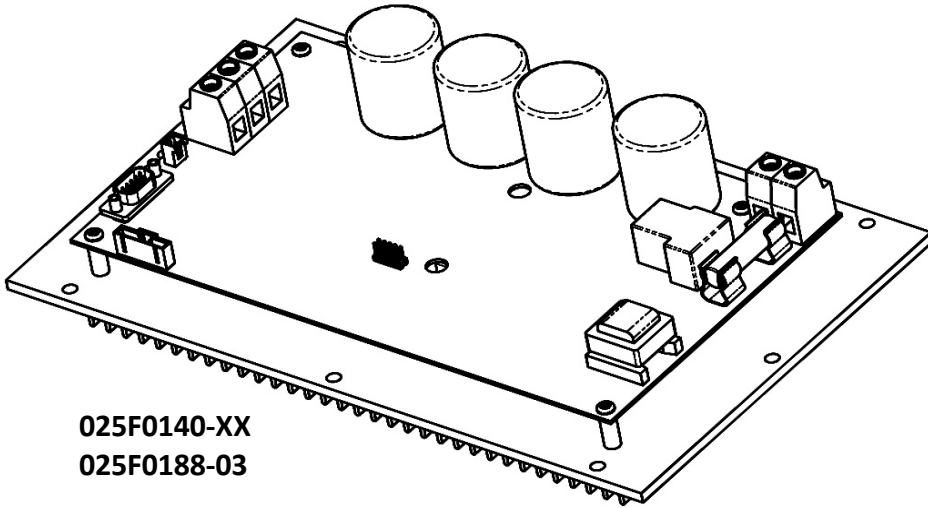
SIERRA00208



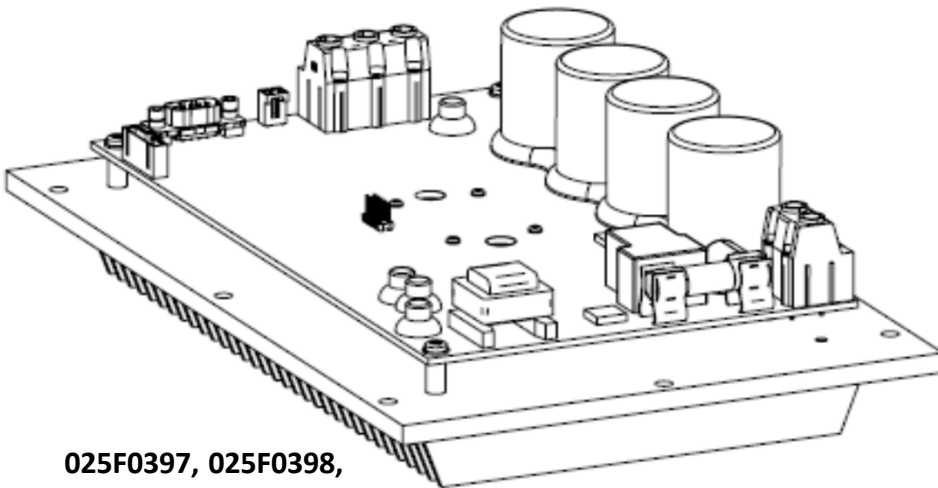
# SIERRA06-0982Y3

## Controller Configuration

Custom controllers and configurations available



**025F0140-XX**  
**025F0188-03**



**025F0397, 025F0398,**  
**025F0401**

# SIERRA06-0982Y3



## 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)							
1800	1046 (306)	1955 (572)	2309 (676)	2725 (798)	3301 (967)	3680 (1078)	4678 (1370)							
2300	1559 (457)	2690 (788)	3199 (937)	3798 (1112)	4586 (1343)	5081 (1488)	6334 (1855)							
2800	1964 (575)	3318 (972)	3981 (1166)	4765 (1395)	5765 (1688)	6378 (1867)	7887 (2309)							
3500	2392 (700)	4062 (1189)	4943 (1447)	5985 (1752)	7284 (2133)	8061 (2360)	9930 (2908)							

## 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
1800	248	326	381	427	449	446	403	1.65	2.18	2.54	2.85	2.99	2.97	2.69
2300	346	400	450	496	523	525	496	2.31	2.66	3.00	3.31	3.49	3.50	3.31
2800	442	475	522	571	605	613	599	2.94	3.16	3.48	3.81	4.04	4.09	3.99
3500	575	585	632	687	735	752	762	3.83	3.90	4.21	4.58	4.90	5.01	5.08

## 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)							
1800	4.22 (1.24)	5.99 (1.75)	6.05 (1.77)	6.38 (1.87)	7.36 (2.15)	8.26 (2.42)	11.60 (3.40)							
2300	4.51 (1.32)	6.73 (1.97)	7.11 (2.08)	7.65 (2.24)	8.76 (2.57)	9.68 (2.83)	12.78 (3.74)							
2800	4.45 (1.30)	6.99 (2.05)	7.62 (2.23)	8.35 (2.44)	9.52 (2.79)	10.41 (3.05)	13.18 (3.86)							
3500	4.16 (1.22)	6.94 (2.03)	7.82 (2.29)	8.71 (2.55)	9.91 (2.90)	10.72 (3.14)	13.03 (3.81)							

\* 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

\* dual compressor performance values are approximately 2x capacity, power and current.

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

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-1.966561E+03	-1.311040E+01	-2.034164E+02
C2	2.918585E+00	5.102323E-01	3.401549E-03	2.796228E-02
C3	-3.031178E-04	-3.276873E-05	-2.184582E-07	-2.825652E-06
C4	3.168748E-08	1.957136E-09	1.304757E-11	2.498261E-10
C5	2.547616E+02	1.405881E+01	9.372541E-02	1.281964E+00
C6	-7.186143E-01	7.845476E-01	5.230318E-03	7.525860E-03
C7	1.620815E-02	-2.476594E-03	-1.651063E-05	1.188066E-04
C8	3.203621E+02	3.120842E+01	2.080561E-01	4.763349E+00
C9	-2.534614E+00	-1.066605E-01	-7.110702E-04	-3.839735E-02
C10	6.128652E-03	-1.523762E-04	-1.015842E-06	9.837328E-05
C11	1.517656E-03	1.642097E-05	1.094731E-07	1.433789E-05
C12	3.295947E-08	5.312998E-09	3.541999E-11	4.227007E-10
C13	-2.017177E-07	1.878514E-06	1.252343E-08	2.606284E-08
C14	-7.799236E-06	-5.698320E-07	-3.798880E-09	-7.249366E-08
C15	-4.387516E-02	3.498333E-03	2.332222E-05	-2.738471E-04
C16	-1.033664E-02	-6.000661E-03	-4.000441E-05	-7.651051E-05
C17	-4.463238E+00	-5.404489E-01	-3.602993E-03	-2.882155E-02
C18	-4.140785E-06	-3.152245E-07	-2.101497E-09	-5.668466E-08
C19	3.143432E-04	-1.931607E-04	-1.287738E-06	1.314290E-06
C20	-1.015077E-06	1.445063E-07	9.633755E-10	-3.070176E-09
C21	6.080003E-05	2.772288E-05	1.848192E-07	4.219426E-07
C22	-3.537261E-03	-5.956431E-03	-3.970954E-05	-1.108327E-04
C23	1.952243E-02	3.926008E-03	2.617339E-05	1.413719E-04

## Performance Equation

$$Y = C_1 + C_2x_1 + C_3x_1^2 + C_4x_1^3 + C_5x_2 + C_6x_2^2 + C_7x_2^3 + C_8x_3 + C_9x_3^2 + C_{10}x_3^3 + C_{11}x_1x_2x_3 + C_{12}x_1^2x_2x_3 + C_{13}x_1x_2^2x_3 + C_{14}x_1x_2x_3^2 + C_{15}x_1x_2^2x_3 + C_{16}x_1x_3^2 + C_{17}x_2x_3^2 + C_{18}x_1^2x_2 + C_{19}x_1x_2^2 + C_{20}x_1^2x_3 + C_{21}x_1x_3^2 + C_{22}x_2^2x_3 + C_{23}x_2x_3^2$$

x<sub>1</sub> = RPM  
 x<sub>2</sub> = E<sub>t</sub> (°F)  
 x<sub>3</sub> = C<sub>t</sub> (°F)

# SIERRA06-0982Y3



## 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)							
1800	1114 (326)	2082 (610)	2459 (720)	2903 (850)	3517 (1030)	3920 (1148)	4983 (1459)							
2300	1661 (486)	2866 (839)	3407 (998)	4046 (1185)	4885 (1430)	5413 (1585)	6748 (1976)							
2800	2092 (612)	3535 (1035)	4241 (1242)	5075 (1486)	6141 (1798)	6794 (1989)	8401 (2460)							
3500	2548 (746)	4327 (1267)	5266 (1542)	6375 (1867)	7760 (2272)	8587 (2514)	10578 (3097)							

## 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
1800	237	312	365	408	429	426	386	1.58	2.08	2.43	2.72	2.86	2.84	2.57
2300	331	382	430	475	500	502	474	2.20	2.55	2.87	3.16	3.34	3.35	3.16
2800	422	454	499	546	579	586	572	2.82	3.03	3.33	3.64	3.86	3.91	3.82
3500	550	560	604	657	703	719	729	3.67	3.73	4.03	4.38	4.69	4.79	4.86

## 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)							
1800	4.70 (1.38)	6.67 (1.95)	6.74 (1.97)	7.11 (2.08)	8.20 (2.40)	9.20 (2.69)	12.93 (3.79)							
2300	5.02 (1.47)	7.50 (2.20)	7.92 (2.32)	8.53 (2.50)	9.76 (2.86)	10.78 (3.16)	14.23 (4.17)							
2800	4.95 (1.45)	7.79 (2.28)	8.49 (2.49)	9.30 (2.72)	10.61 (3.11)	11.59 (3.39)	14.68 (4.30)							
3500	4.63 (1.36)	7.73 (2.26)	8.71 (2.55)	9.70 (2.84)	11.04 (3.23)	11.94 (3.50)	14.51 (4.25)							

\* 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

\* dual compressor performance values are approximately 2x capacity, power and current.

## Performance Coefficients (150V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.509427E+04	-1.880553E+03	-1.253702E+01	-1.673984E+02
C2	3.109005E+00	4.879174E-01	3.252782E-03	2.301113E-02
C3	-3.228944E-04	-3.133559E-05	-2.089039E-07	-2.325327E-06
C4	3.375490E-08	1.871541E-09	1.247694E-11	2.055905E-10
C5	2.713832E+02	1.344395E+01	8.962634E-02	1.054973E+00
C6	-7.654995E-01	7.502356E-01	5.001570E-03	6.193291E-03
C7	1.726563E-02	-2.368281E-03	-1.578854E-05	9.777006E-05
C8	3.412638E+02	2.984352E+01	1.989568E-01	3.919925E+00
C9	-2.699982E+00	-1.019958E-01	-6.799717E-04	-3.159851E-02
C10	6.528509E-03	-1.457121E-04	-9.714138E-07	8.095477E-05
C11	1.616674E-03	1.570280E-05	1.046853E-07	1.179915E-05
C12	3.510987E-08	5.080635E-09	3.387090E-11	3.478550E-10
C13	-2.148786E-07	1.796358E-06	1.197572E-08	2.144801E-08
C14	-8.308089E-06	-5.449105E-07	-3.632737E-09	-5.965754E-08
C15	-4.673775E-02	3.345334E-03	2.230222E-05	-2.253583E-04
C16	-1.101105E-02	-5.738223E-03	-3.825482E-05	-6.296315E-05
C17	-4.754437E+00	-5.168124E-01	-3.445416E-03	-2.371825E-02
C18	-4.410946E-06	-3.014382E-07	-2.009588E-09	-4.664777E-08
C19	3.348521E-04	-1.847129E-04	-1.231419E-06	1.081575E-06
C20	-1.081305E-06	1.381864E-07	9.212424E-10	-2.526554E-09
C21	6.476687E-05	2.651043E-05	1.767362E-07	3.472312E-07
C22	-3.768046E-03	-5.695928E-03	-3.797285E-05	-9.120806E-05
C23	2.079615E-02	3.754305E-03	2.502870E-05	1.163398E-04

## Performance Equation

$$Y = C_1 + C_2 x_1 + C_3 x_1^2 + C_4 x_1^3 + C_5 x_2 + C_6 x_2^2 + C_7 x_2^3 + C_8 x_3 + C_9 x_3^2 + C_{10} x_3^3 + C_{11} x_1 x_2 x_3 + C_{12} x_1^2 x_2 x_3 + C_{13} x_1 x_2^2 x_3 + C_{14} x_1 x_2 x_3^2 + C_{15} x_1 x_2^2 x_3 + C_{16} x_1 x_3^2 + C_{17} x_2 x_3^2 + C_{18} x_1^2 x_2 + C_{19} x_1 x_2^2 + C_{20} x_1^2 x_3 + C_{21} x_1 x_3^2 + C_{22} x_2^2 x_3 + C_{23} x_2 x_3^2$$

x<sub>1</sub> = RPM  
 x<sub>2</sub> = E<sub>t</sub> (°F)  
 x<sub>3</sub> = C<sub>t</sub> (°F)

# SIERRA06-0982Y3



## Cooling Capacity (300V) - 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)							
3700	2493 (730)	4254 (1245)	5197 (1522)	6313 (1849)	7698 (2254)	8522 (2495)	10494 (3073)							
4500	2844 (833)	4969 (1455)	6164 (1805)	7578 (2219)	9307 (2725)	10320 (3022)	12704 (3720)							
5300	3184 (932)	5677 (1662)	7126 (2087)	8839 (2588)	10913 (3195)	12116 (3548)	14915 (4367)							
6500	3885 (1138)	6938 (2032)	8770 (2568)	10936 (3202)	13532 (3962)	15022 (4399)	18446 (5401)							

## Power Consumption (300V) - ARI HBP - R134a / R513A Watt Current (300V) - 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
3700	691	697	751	815	875	897	917	2.30	2.32	2.50	2.72	2.92	2.99	3.06
4500	869	859	918	997	1080	1118	1176	2.90	2.86	3.06	3.32	3.60	3.73	3.92
5300	1060	1043	1113	1213	1326	1382	1483	3.53	3.48	3.71	4.04	4.42	4.61	4.94
6500	1384	1379	1476	1616	1783	1871	2047	4.61	4.60	4.92	5.39	5.94	6.24	6.82

## Efficiency (300V) - 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)							
3700	3.61 (1.06)	6.10 (1.79)	6.92 (2.03)	7.74 (2.27)	8.80 (2.58)	9.50 (2.78)	11.44 (3.35)							
4500	3.27 (0.96)	5.79 (1.69)	6.72 (1.97)	7.60 (2.23)	8.61 (2.52)	9.23 (2.70)	10.80 (3.16)							
5300	3.00 (0.88)	5.44 (1.59)	6.40 (1.87)	7.29 (2.13)	8.23 (2.41)	8.77 (2.57)	10.06 (2.95)							
6500	2.81 (0.82)	5.03 (1.47)	5.94 (1.74)	6.77 (1.98)	7.59 (2.22)	8.03 (2.35)	9.01 (2.64)							

\* 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

\* dual compressor performance values are approximately 2x capacity, power and current.

## Performance Coefficients (300V) - ARI HBP - R134a / R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-2.217077E+03	-7.390258E+00	-2.034164E+02
C2	2.918585E+00	5.752299E-01	1.917433E-03	2.796228E-02
C3	-3.031178E-04	-3.694308E-05	-1.231436E-07	-2.825652E-06
C4	3.168748E-08	2.206452E-09	7.354841E-12	2.498261E-10
C5	2.547616E+02	1.584974E+01	5.283246E-02	1.281964E+00
C6	-7.186143E-01	8.844898E-01	2.948299E-03	7.525860E-03
C7	1.620815E-02	-2.792083E-03	-9.306945E-06	1.188066E-04
C8	3.203621E+02	3.518400E+01	1.172800E-01	4.763349E+00
C9	-2.534614E+00	-1.202478E-01	-4.008261E-04	-3.839735E-02
C10	6.128652E-03	-1.717872E-04	-5.726239E-07	9.837328E-05
C11	1.517656E-03	1.851280E-05	6.170935E-08	1.433789E-05
C12	3.295947E-08	5.989812E-09	1.996604E-11	4.227007E-10
C13	-2.017177E-07	2.117815E-06	7.059383E-09	2.606284E-08
C14	-7.799236E-06	-6.424219E-07	-2.141406E-09	-7.249366E-08
C15	-4.387516E-02	3.943979E-03	1.314660E-05	-2.738471E-04
C16	-1.033664E-02	-6.765075E-03	-2.255025E-05	-7.651051E-05
C17	-4.463238E+00	-6.092957E-01	-2.030986E-03	-2.882155E-02
C18	-4.140785E-06	-3.553804E-07	-1.184601E-09	-5.668466E-08
C19	3.143432E-04	-2.177671E-04	-7.258904E-07	1.314290E-06
C20	-1.015077E-06	1.629147E-07	5.430491E-10	-3.070176E-09
C21	6.080003E-05	3.125445E-05	1.041815E-07	4.219426E-07
C22	-3.537261E-03	-6.715211E-03	-2.238404E-05	-1.108327E-04
C23	1.952243E-02	4.426135E-03	1.475378E-05	1.413719E-04

## Performance Equation

$$Y = C_1 + C_2x_1 + C_3x_1^2 + C_4x_1^3 + C_5x_2 + C_6x_2^2 + C_7x_2^3 + C_8x_3 + C_9x_3^2 + C_{10}x_3^3 + C_{11}x_1x_2x_3 + C_{12}x_1^2x_2x_3 + C_{13}x_1x_2^2x_3 + C_{14}x_1x_2x_3^2 + C_{15}x_1x_2^2x_3 + C_{16}x_1x_3^2 + C_{17}x_2x_3^2 + C_{18}x_1^2x_2 + C_{19}x_1x_2^2 + C_{20}x_1^2x_3 + C_{21}x_1x_3^2 + C_{22}x_2^2x_3 + C_{23}x_2x_3^2$$

x<sub>1</sub> = RPM  
 x<sub>2</sub> = E<sub>t</sub> (°F)  
 x<sub>3</sub> = C<sub>t</sub> (°F)

# SIERRA06-0982Y3



## Cooling Capacity (300V) - 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)							
3700	2656 (778)	4531 (1327)	5536 (1621)	6725 (1969)	8201 (2401)	9078 (2658)	11178 (3273)							
4500	3029 (887)	5293 (1550)	6567 (1923)	8072 (2364)	9914 (2903)	10993 (3219)	13533 (3963)							
5300	3391 (993)	6048 (1771)	7591 (2223)	9415 (2757)	11625 (3404)	12907 (3779)	15888 (4652)							
6500	4139 (1212)	7391 (2164)	9343 (2736)	11649 (3411)	14415 (4221)	16002 (4686)	19650 (5754)							

## Power Consumption (300V) - ARI HBP - R1234yf Watt Current (300V) - 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
3700	661	667	718	780	837	858	877	2.20	2.22	2.39	2.60	2.79	2.86	2.92
4500	831	821	877	953	1033	1069	1125	2.77	2.74	2.92	3.18	3.44	3.56	3.75
5300	1014	998	1065	1160	1268	1321	1418	3.38	3.33	3.55	3.87	4.23	4.40	4.73
6500	1323	1319	1411	1545	1705	1789	1957	4.41	4.40	4.70	5.15	5.68	5.96	6.52

## Efficiency (300V) - 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)							
3700	4.02 (1.18)	6.80 (1.99)	7.71 (2.26)	8.62 (2.53)	9.80 (2.87)	10.58 (3.10)	12.74 (3.73)							
4500	3.64 (1.07)	6.45 (1.89)	7.48 (2.19)	8.47 (2.48)	9.60 (2.81)	10.28 (3.01)	12.03 (3.52)							
5300	3.35 (0.98)	6.06 (1.77)	7.13 (2.09)	8.12 (2.38)	9.17 (2.69)	9.77 (2.86)	11.21 (3.28)							
6500	3.13 (0.92)	5.60 (1.64)	6.62 (1.94)	7.54 (2.21)	8.46 (2.48)	8.94 (2.62)	10.04 (2.94)							

\* 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

\* dual compressor performance values are approximately 2x capacity, power and current.

## Performance Coefficients (300V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.509427E+04	-2.120114E+03	-7.067046E+00	-1.673984E+02
C2	3.109005E+00	5.500723E-01	1.833574E-03	2.301113E-02
C3	-3.228944E-04	-3.532738E-05	-1.177579E-07	-2.325327E-06
C4	3.375490E-08	2.109953E-09	7.033178E-12	2.055905E-10
C5	2.713832E+02	1.515655E+01	5.052184E-02	1.054973E+00
C6	-7.654995E-01	8.458068E-01	2.819356E-03	6.193291E-03
C7	1.726563E-02	-2.669972E-03	-8.899907E-06	9.777006E-05
C8	3.412638E+02	3.364524E+01	1.121508E-01	3.919925E+00
C9	-2.699982E+00	-1.149888E-01	-3.832961E-04	-3.159851E-02
C10	6.528509E-03	-1.642741E-04	-5.475803E-07	8.095477E-05
C11	1.616674E-03	1.770315E-05	5.901050E-08	1.179915E-05
C12	3.510987E-08	5.727848E-09	1.909283E-11	3.478550E-10
C13	-2.148786E-07	2.025193E-06	6.750642E-09	2.144801E-08
C14	-8.308089E-06	-6.143257E-07	-2.047752E-09	-5.965754E-08
C15	-4.673775E-02	3.771490E-03	1.257163E-05	-2.253583E-04
C16	-1.101105E-02	-6.469205E-03	-2.156402E-05	-6.296315E-05
C17	-4.754437E+00	-5.826483E-01	-1.942161E-03	-2.371825E-02
C18	-4.410946E-06	-3.398379E-07	-1.132793E-09	-4.664777E-08
C19	3.348521E-04	-2.082431E-04	-6.941437E-07	1.081575E-06
C20	-1.081305E-06	1.557897E-07	5.192989E-10	-2.526554E-09
C21	6.476687E-05	2.988754E-05	9.962515E-08	3.472312E-07
C22	-3.768046E-03	-6.421522E-03	-2.140507E-05	-9.120806E-05
C23	2.079615E-02	4.232559E-03	1.410853E-05	1.163398E-04

## Performance Equation

$$Y = C_1 + C_2x_1 + C_3x_1^2 + C_4x_1^3 + C_5x_2 + C_6x_2^2 + C_7x_2^3 + C_8x_3 + C_9x_3^2 + C_{10}x_3^3 + C_{11}x_1x_2x_3 + C_{12}x_1^2x_2x_3 + C_{13}x_1x_2^2x_3 + C_{14}x_1x_2x_3^2 + C_{15}x_1x_2^2x_3 + C_{16}x_1x_3^2 + C_{17}x_2x_3^2 + C_{18}x_1^2x_2 + C_{19}x_1x_2^2 + C_{20}x_1^2x_3 + C_{21}x_1x_3^2 + C_{22}x_2^2x_3 + C_{23}x_2x_3^2$$

x<sub>1</sub> = RPM  
 x<sub>2</sub> = E<sub>t</sub> (°F)  
 x<sub>3</sub> = C<sub>t</sub> (°F)