

SIERRA03-0982Y3 - High Capacity Model

R134a / R513A / R1234yf

24/48 V DC

VARIABLE SPEED



Brushless DC Variable Speed Compressor Technical Data Sheet

General Information

Compressor Part Number	SIERRA00125	1/2" ID Suction - 5/16" ID Discharge
Compressor Drawing	DCMX33-002	#10-32 Threaded Terminal Connections
Compressor Part Number	SIERRA00241	1/2" ID Suction - 5/16" ID Discharge
Compressor Drawing	DCMX33-002	M5 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00121	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-002	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00237	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-002	M5 Threaded Terminal Connections
Dual Compressor Part Number w/ Fittings	SIERRA00190	#10 MIO Suction - #8 MIO Discharge
Dual Compressor Drawing w/ Fittings	DCMX34-002	#10-32 Threaded Terminal Connections
Dual Compressor Part Number	SIERRA00234	1/2" ID Suction - 5/16" ID Discharge
Dual Compressor Drawing	DCMX46-002	#10-32 Threaded Terminal Connections
Controller Options (24/48V)	025F0149, 025F0129	
Controller Options (48V)	025F0158, 025F0152	
Wiring Diagram Drawing	DEMXX0010	
Dual Comp. Controller Options (24/48V)	025F0216	
Dual Comp. Wiring Diagram Drawing	DEMXX0023	

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
Dual Compressor Oil Quantity	390 cc
Oil Type	PVE 68cSt
Weight	6.4 kg / 14.1 lb
Weight (Dual)	6.6 kg / 14.5 lb
Weight with Fittings	6.6 kg / 14.5 lb
Weight with Fittings (Dual)	6.8 kg / 14.9 lb



Packaging Options

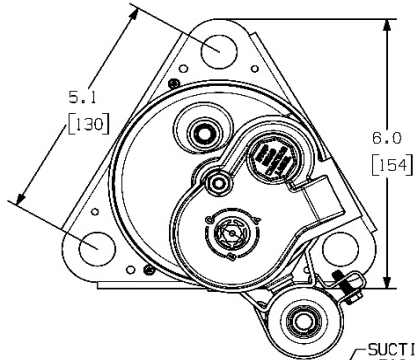
- Single Pack (add -SP suffix to part number when ordering)
- Pallet Pack (25 piece multiples)

the Sierra

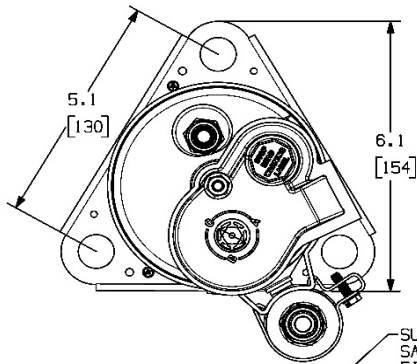
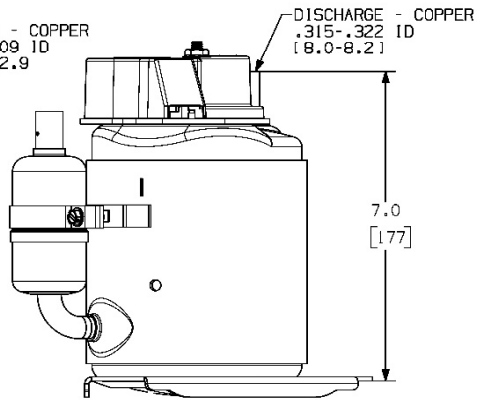
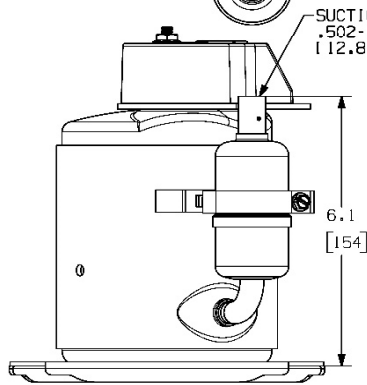
SIERRA03-0982Y3 - High Capacity Model



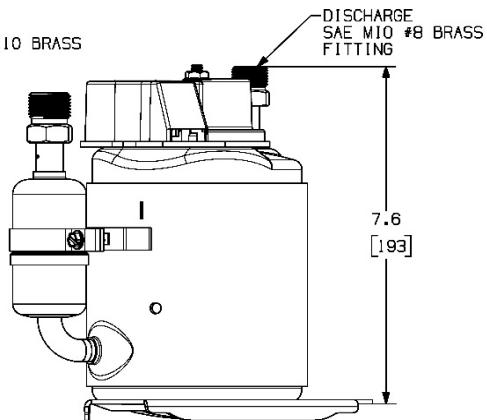
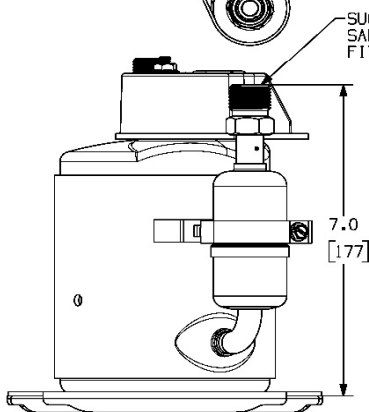
Compressor Dimensions



SIERRA00125



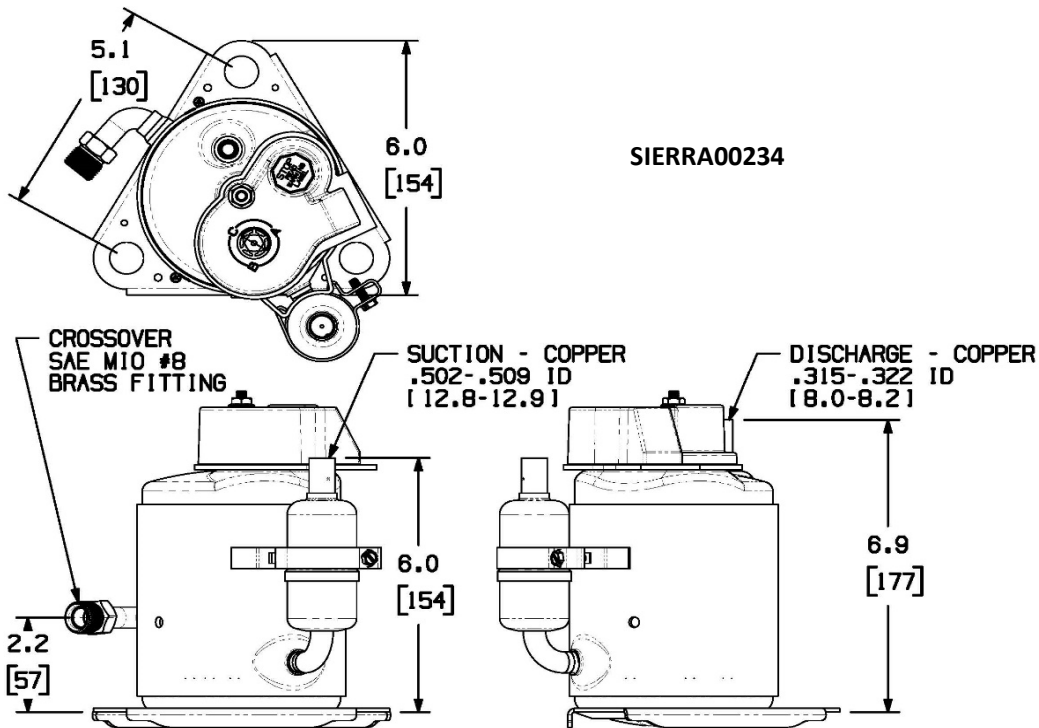
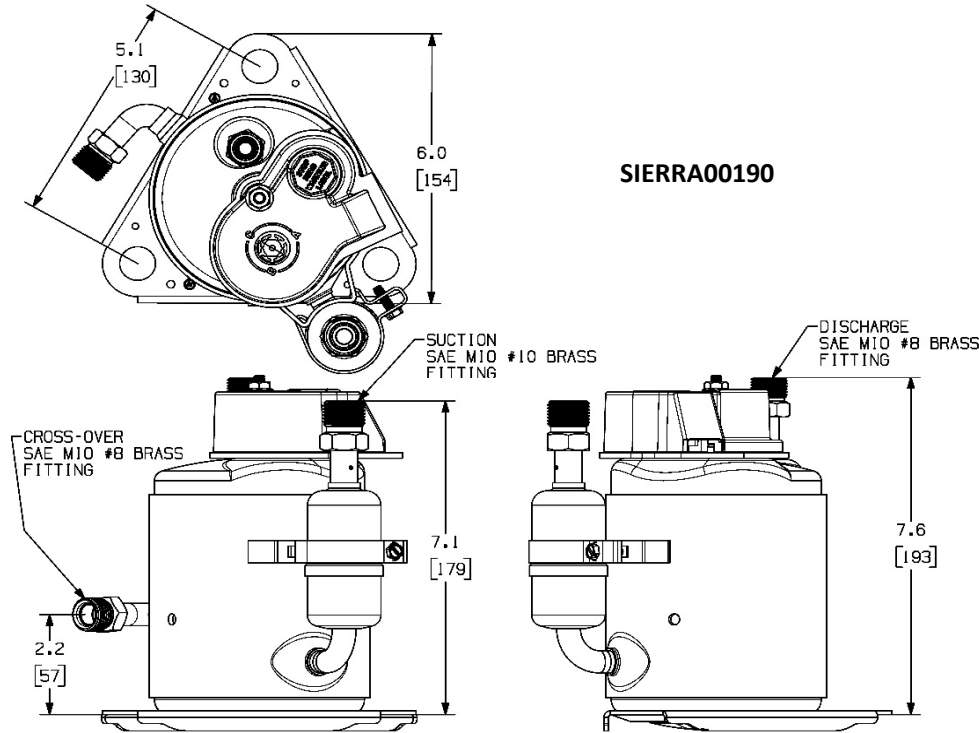
SIERRA00121



SIERRA03-0982Y3 - High Capacity Model



Compressor Dimensions

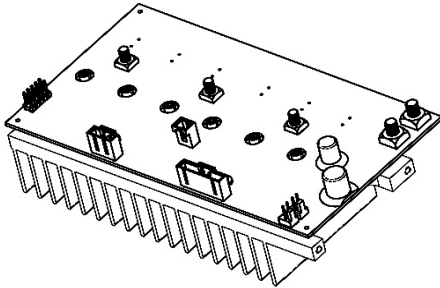


SIERRA03-0982Y3 - High Capacity Model

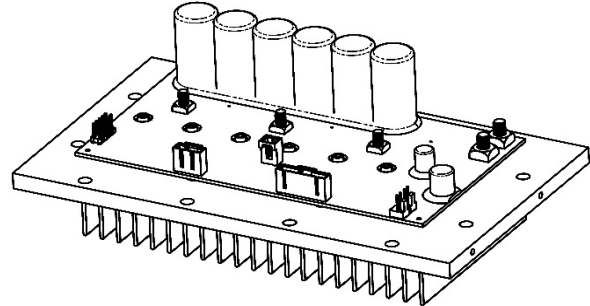


Controller Configurations

Custom controllers and configurations available



**025F0129 &
025F0152**



**025F0149 &
025F0158
025F0216 (dual)**

SIERRA03-0982Y3 - High Capacity Model



Cooling Capacity (24V) - 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 (24V) - ARI HBP - R134a / R513A Watt Current (24V) - 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	256	336	393	440	462	459	416	10.65	14.02	16.38	18.34	19.27	19.14	17.32
2400	376	427	479	526	556	559	531	15.68	17.80	19.94	21.94	23.16	23.28	22.14
3000	494	521	570	621	660	671	663	20.60	21.71	23.73	25.88	27.51	27.94	27.61
3600	612	620	669	727	779	798	812	25.52	25.84	27.87	30.28	32.45	33.24	33.83
4200	733	728	779	846	914	943	982	30.54	30.32	32.46	35.26	38.07	39.28	40.91

Efficiency (24V) - 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	4.09 (1.20)	5.81 (1.70)	5.87 (1.72)	6.19 (1.81)	7.14 (2.09)	8.01 (2.35)	11.26 (3.30)						
2400	4.38 (1.28)	6.61 (1.93)	7.03 (2.06)	7.60 (2.22)	8.69 (2.54)	9.57 (2.80)	12.52 (3.67)						
3000	4.25 (1.24)	6.80 (1.99)	7.50 (2.20)	8.25 (2.42)	9.41 (2.75)	10.25 (3.00)	12.80 (3.75)						
3600	3.99 (1.17)	6.70 (1.96)	7.58 (2.22)	8.46 (2.48)	9.62 (2.82)	10.40 (3.04)	12.58 (3.68)						
4200	3.71 (1.09)	6.47 (1.89)	7.46 (2.18)	8.40 (2.46)	9.53 (2.79)	10.24 (3.00)	12.10 (3.54)						

* 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 (24V) - ARI HBP - R134a / R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-2.027346E+03	-8.447274E+01	-2.034164E+02
C2	2.918585E+00	5.260032E-01	2.191680E-02	2.796228E-02
C3	-3.031178E-04	-3.378158E-05	-1.407566E-06	-2.825652E-06
C4	3.168748E-08	2.017630E-09	8.406791E-11	2.498261E-10
C5	2.547616E+02	1.449336E+01	6.038900E-01	1.281964E+00
C6	-7.186143E-01	8.087975E-01	3.369989E-02	7.525860E-03
C7	1.620815E-02	-2.553144E-03	-1.063810E-04	1.188066E-04
C8	3.203621E+02	3.217305E+01	1.340544E+00	4.763349E+00
C9	-2.534614E+00	-1.099573E-01	-4.581556E-03	-3.839735E-02
C10	6.128652E-03	-1.570861E-04	-6.545253E-06	9.837328E-05
C11	1.517656E-03	1.692853E-05	7.053553E-07	1.433789E-05
C12	3.295947E-08	5.477219E-09	2.282175E-10	4.227007E-10
C13	-2.017177E-07	1.936578E-06	8.069074E-08	2.606284E-08
C14	-7.799236E-06	-5.874451E-07	-2.447688E-08	-7.249366E-08
C15	-4.387516E-02	3.606464E-03	1.502693E-04	-2.738471E-04
C16	-1.033664E-02	-6.186137E-03	-2.577557E-04	-7.651051E-05
C17	-4.463238E+00	-5.571538E-01	-2.321474E-02	-2.882155E-02
C18	-4.140785E-06	-3.249679E-07	-1.354033E-08	-5.668466E-08
C19	3.143432E-04	-1.991312E-04	-8.297132E-06	1.314290E-06
C20	-1.015077E-06	1.489729E-07	6.207205E-09	-3.070176E-09
C21	6.080003E-05	2.857978E-05	1.190824E-06	4.219426E-07
C22	-3.537261E-03	-6.140540E-03	-2.558559E-04	-1.108327E-04
C23	1.952243E-02	4.047358E-03	1.686399E-04	1.413719E-04

Performance Equation

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

$x_1 = \text{RPM}$
 $x_2 = E_t \text{ (°F)}$
 $x_3 = C_t \text{ (°F)}$

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Cooling Capacity (48V) - 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 (48V) - ARI HBP - R134a / R513A Watt Current (48V) - 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	632	641	691	751	804	824	839	13.18	13.34	14.39	15.64	16.75	17.16	17.47
4500	821	811	866	942	1020	1056	1111	17.10	16.89	18.05	19.62	21.26	22.00	23.14
5500	1048	1033	1102	1202	1316	1374	1480	21.84	21.52	22.97	25.04	27.42	28.62	30.84
6500	1307	1302	1393	1526	1683	1767	1933	27.23	27.13	29.03	31.79	35.07	36.81	40.27

Efficiency (48V) - 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	3.86 (1.13)	6.49 (1.90)	7.34 (2.15)	8.19 (2.40)	9.32 (2.73)	10.07 (2.95)	12.18 (3.57)					
4500	3.46 (1.01)	6.13 (1.79)	7.11 (2.08)	8.05 (2.36)	9.12 (2.67)	9.77 (2.86)	11.44 (3.35)					
5500	3.13 (0.92)	5.68 (1.66)	6.69 (1.96)	7.62 (2.23)	8.60 (2.52)	9.15 (2.68)	10.46 (3.06)					
6500	2.97 (0.87)	5.33 (1.56)	6.29 (1.84)	7.17 (2.10)	8.04 (2.35)	8.50 (2.49)	9.54 (2.79)					

* 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 (48V) - ARI HBP - R134a / R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.416978E+04	-2.093586E+03	-4.361636E+01	-2.034164E+02
C2	2.918585E+00	5.431894E-01	1.131645E-02	2.796228E-02
C3	-3.031178E-04	-3.488534E-05	-7.267778E-07	-2.825652E-06
C4	3.168748E-08	2.083552E-09	4.340734E-11	2.498261E-10
C5	2.547616E+02	1.496690E+01	3.118105E-01	1.281964E+00
C6	-7.186143E-01	8.352234E-01	1.740049E-02	7.525860E-03
C7	1.620815E-02	-2.636563E-03	-5.492841E-05	1.188066E-04
C8	3.203621E+02	3.322424E+01	6.921717E-01	4.763349E+00
C9	-2.534614E+00	-1.135500E-01	-2.365625E-03	-3.839735E-02
C10	6.128652E-03	-1.622186E-04	-3.379554E-06	9.837328E-05
C11	1.517656E-03	1.748163E-05	3.642007E-07	1.433789E-05
C12	3.295947E-08	5.656177E-09	1.178370E-10	4.227007E-10
C13	-2.017177E-07	1.999852E-06	4.166358E-08	2.606284E-08
C14	-7.799236E-06	-6.066388E-07	-1.263831E-08	-7.249366E-08
C15	-4.387516E-02	3.724298E-03	7.758955E-05	-2.738471E-04
C16	-1.033664E-02	-6.388258E-03	-1.330887E-04	-7.651051E-05
C17	-4.463238E+00	-5.753578E-01	-1.198662E-02	-2.882155E-02
C18	-4.140785E-06	-3.355856E-07	-6.991367E-09	-5.668466E-08
C19	3.143432E-04	-2.056374E-04	-4.284113E-06	1.314290E-06
C20	-1.015077E-06	1.538403E-07	3.205007E-09	-3.070176E-09
C21	6.080003E-05	2.951357E-05	6.148660E-07	4.219426E-07
C22	-3.537261E-03	-6.341171E-03	-1.321077E-04	-1.108327E-04
C23	1.952243E-02	4.179598E-03	8.707496E-05	1.413719E-04

Performance Equation

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

x₁ = RPM
 x₂ = E_t (°F)
 x₃ = C_t (°F)

SIERRA03-0982Y3 - High Capacity Model



Cooling Capacity (24V) - 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	982 (288)	1835 (537)	2167 (635)	2558 (749)	3099 (908)	3455 (1012)	4392 (1286)							
2400	1547 (453)	2651 (776)	3157 (925)	3754 (1099)	4534 (1328)	5021 (1470)	6245 (1829)							
3000	1972 (577)	3328 (975)	4008 (1174)	4813 (1410)	5832 (1708)	6451 (1889)	7964 (2332)							
3600	2294 (672)	3904 (1143)	4761 (1394)	5773 (1691)	7033 (2060)	7785 (2280)	9587 (2808)							
4200	2552 (748)	4419 (1294)	5452 (1597)	6674 (1955)	8176 (2394)	9060 (2653)	11153 (3266)							

Power Consumption (24V) - ARI HBP - R1234yf Watt Current (24V) - 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	267	352	411	460	484	480	435	11.13	14.66	17.13	19.18	20.15	20.02	18.11
2400	394	447	500	551	581	584	556	16.40	18.62	20.85	22.94	24.22	24.34	23.16
3000	517	545	596	649	691	701	693	21.54	22.70	24.82	27.06	28.77	29.22	28.88
3600	640	649	699	760	814	834	849	26.69	27.03	29.14	31.67	33.93	34.76	35.38
4200	767	761	815	885	955	986	1027	31.94	31.70	33.94	36.87	39.81	41.07	42.79

Efficiency (24V) - 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	3.67 (1.08)	5.22 (1.53)	5.27 (1.54)	5.56 (1.63)	6.41 (1.88)	7.19 (2.11)	10.10 (2.96)							
2400	3.93 (1.15)	5.93 (1.74)	6.31 (1.85)	6.82 (2.00)	7.80 (2.28)	8.59 (2.52)	11.24 (3.29)							
3000	3.81 (1.12)	6.11 (1.79)	6.73 (1.97)	7.41 (2.17)	8.45 (2.47)	9.20 (2.69)	11.49 (3.36)							
3600	3.58 (1.05)	6.02 (1.76)	6.81 (1.99)	7.60 (2.22)	8.64 (2.53)	9.33 (2.73)	11.29 (3.31)							
4200	3.33 (0.97)	5.81 (1.70)	6.69 (1.96)	7.54 (2.21)	8.56 (2.51)	9.19 (2.69)	10.86 (3.18)							

* 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 (24V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.330191E+04	-2.120067E+03	-8.833611E+01	-2.471842E+02
C2	2.739828E+00	5.500600E-01	2.291917E-02	3.397874E-02
C3	-2.845525E-04	-3.532659E-05	-1.471941E-06	-3.433629E-06
C4	2.974669E-08	2.109906E-09	8.791276E-11	3.035795E-10
C5	2.391580E+02	1.515621E+01	6.315089E-01	1.557796E+00
C6	-6.746008E-01	8.457879E-01	3.524116E-02	9.145150E-03
C7	1.521543E-02	-2.669912E-03	-1.112463E-04	1.443694E-04
C8	3.007406E+02	3.364449E+01	1.401854E+00	5.788247E+00
C9	-2.379374E+00	-1.149862E-01	-4.791094E-03	-4.665905E-02
C10	5.753285E-03	-1.642704E-04	-6.844601E-06	1.195396E-04
C11	1.424703E-03	1.770275E-05	7.376147E-07	1.742288E-05
C12	3.094077E-08	5.727720E-09	2.386550E-10	5.136504E-10
C13	-1.893629E-07	2.025147E-06	8.438114E-08	3.167061E-08
C14	-7.321550E-06	-6.143120E-07	-2.559633E-08	-8.809164E-08
C15	-4.118791E-02	3.771406E-03	1.571419E-04	-3.327690E-04
C16	-9.703546E-03	-6.469061E-03	-2.695442E-04	-9.297277E-05
C17	-4.189874E+00	-5.826353E-01	-2.427647E-02	-3.502289E-02
C18	-3.887171E-06	-3.398303E-07	-1.415960E-08	-6.888112E-08
C19	2.950903E-04	-2.082384E-04	-8.676602E-06	1.597077E-06
C20	-9.529061E-07	1.557862E-07	6.491092E-09	-3.730766E-09
C21	5.707616E-05	2.988688E-05	1.245287E-06	5.127292E-07
C22	-3.320612E-03	-6.421378E-03	-2.675574E-04	-1.346798E-04
C23	1.832672E-02	4.232465E-03	1.763527E-04	1.717900E-04

Performance Equation

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

X₁ = RPM

X₂ = E_t (°F)

X₃ = C_t (°F)

SIERRA03-0982Y3 - High Capacity Model



Cooling Capacity (48V) - 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	2294 (672)	3904 (1143)	4761 (1394)	5773 (1691)	7033 (2060)	7785 (2280)	9587 (2808)						
4500	2670 (782)	4665 (1366)	5787 (1695)	7114 (2083)	8737 (2559)	9688 (2837)	11926 (3493)						
5500	3077 (901)	5505 (1612)	6925 (2028)	8603 (2520)	10632 (3114)	11806 (3458)	14531 (4256)						
6500	3647 (1068)	6513 (1908)	8233 (2411)	10266 (3007)	12703 (3720)	14102 (4130)	17316 (5072)						

Power Consumption (48V) - ARI HBP - R1234yf Watt Current (48V) - 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	661	670	722	785	841	861	877	13.78	13.95	15.05	16.35	17.52	17.95	18.27
4500	859	848	906	985	1067	1104	1161	17.89	17.66	18.88	20.51	22.23	23.01	24.20
5500	1096	1080	1153	1257	1377	1437	1548	22.84	22.51	24.02	26.19	28.68	29.93	32.25
6500	1367	1362	1457	1595	1760	1848	2021	28.47	28.37	30.36	33.24	36.67	38.49	42.11

Efficiency (48V) - 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	3.47 (1.02)	5.83 (1.71)	6.59 (1.93)	7.36 (2.15)	8.36 (2.45)	9.04 (2.65)	10.93 (3.20)						
4500	3.11 (0.91)	5.50 (1.61)	6.39 (1.87)	7.22 (2.12)	8.19 (2.40)	8.77 (2.57)	10.27 (3.01)						
5500	2.81 (0.82)	5.10 (1.49)	6.01 (1.76)	6.84 (2.00)	7.72 (2.26)	8.22 (2.41)	9.39 (2.75)						
6500	2.67 (0.78)	4.78 (1.40)	5.65 (1.65)	6.43 (1.88)	7.22 (2.11)	7.63 (2.23)	8.57 (2.51)						

* 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 (48V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-1.330191E+04	-2.189336E+03	-4.561116E+01	-2.471842E+02
C2	2.739828E+00	5.680322E-01	1.183400E-02	3.397874E-02
C3	-2.845525E-04	-3.648082E-05	-7.600171E-07	-3.433629E-06
C4	2.974669E-08	2.178844E-09	4.539258E-11	3.035795E-10
C5	2.391580E+02	1.565142E+01	3.260712E-01	1.557796E+00
C6	-6.746008E-01	8.734224E-01	1.819630E-02	9.145150E-03
C7	1.521543E-02	-2.757147E-03	-5.744056E-05	1.443694E-04
C8	3.007406E+02	3.474376E+01	7.238283E-01	5.788247E+00
C9	-2.379374E+00	-1.187432E-01	-2.473817E-03	-4.665905E-02
C10	5.753285E-03	-1.696376E-04	-3.534118E-06	1.195396E-04
C11	1.424703E-03	1.828116E-05	3.808575E-07	1.742288E-05
C12	3.094077E-08	5.914863E-09	1.232263E-10	5.136504E-10
C13	-1.893629E-07	2.091315E-06	4.356907E-08	3.167061E-08
C14	-7.321550E-06	-6.343835E-07	-1.321632E-08	-8.809164E-08
C15	-4.118791E-02	3.894629E-03	8.113811E-05	-3.327690E-04
C16	-9.703546E-03	-6.680425E-03	-1.391755E-04	-9.297277E-05
C17	-4.189874E+00	-6.016718E-01	-1.253483E-02	-3.502289E-02
C18	-3.887171E-06	-3.509336E-07	-7.311117E-09	-6.888112E-08
C19	2.950903E-04	-2.150423E-04	-4.480047E-06	1.597077E-06
C20	-9.529061E-07	1.608762E-07	3.351588E-09	-3.730766E-09
C21	5.707616E-05	3.086338E-05	6.429870E-07	5.127292E-07
C22	-3.320612E-03	-6.631185E-03	-1.381497E-04	-1.346798E-04
C23	1.832672E-02	4.370752E-03	9.105734E-05	1.717900E-04

Performance Equation

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

X₁ = RPM

X₂ = E_t (°F)

X₃ = C_t (°F)