

SIERRA05-0434Y3
R134a / R513A / R1234yf
100/150V DC
VARIABLE SPEED



Brushless DC Variable Speed Compressor Technical Data Sheet

General Information

Compressor Part Number	SIERRA00179	3/8" ID Suction - 5/16" ID Discharge
Compressor Drawing	DCMX33-001	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00180	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-001	#10-32 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	DEM0006	

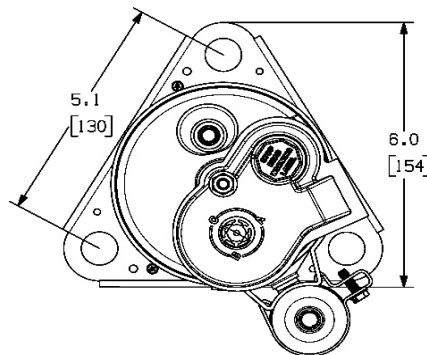
Application Information

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

Design

Displacement	7.1 cm ³ (0.434 in ³)
Oil Quantity	290 cc
Oil Type	PVE 68cSt
Weight	4.8 kg / 10.5 lb
Weight with Fittings	4.9 kg / 10.9 lb

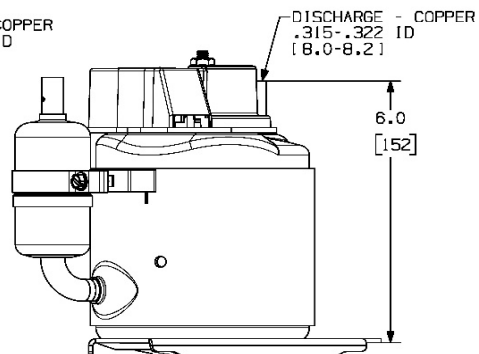
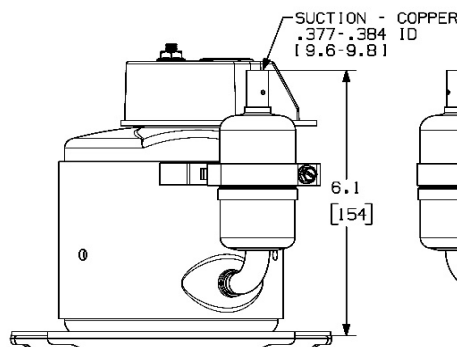
Compressor Dimensions



Packaging Options

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

SIERRA00179

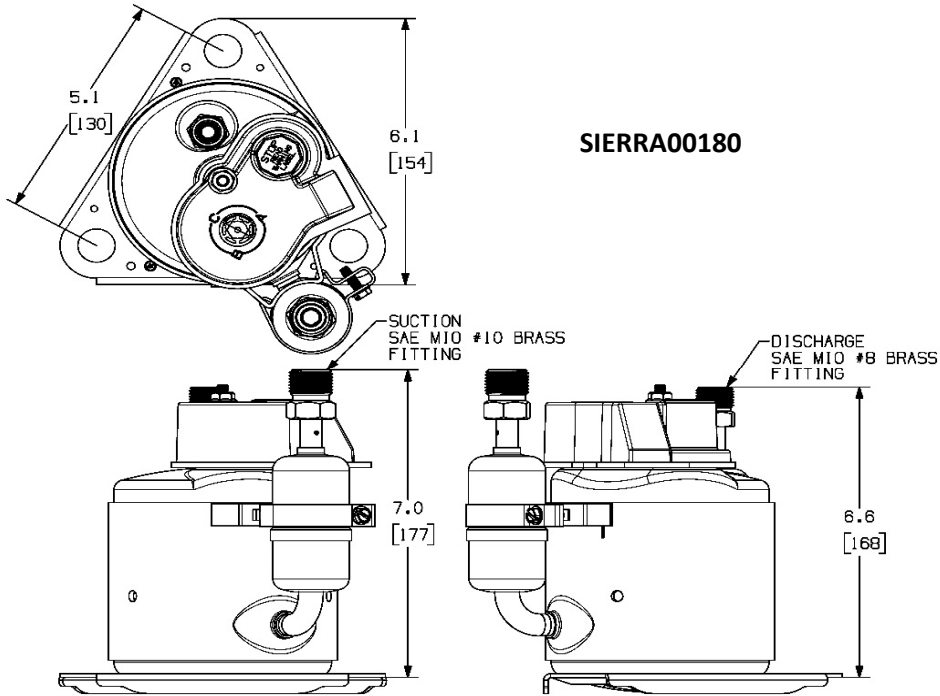


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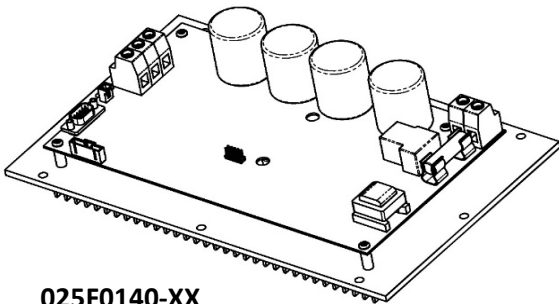


Compressor Dimensions with Fittings

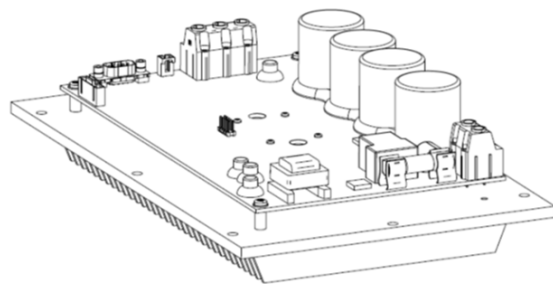


Controller Configurations

Custom controllers and configurations available



025F0140-XX



025F0393,
025F0394,
025F0395, 025F0396

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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	462 (135)	864 (253)	1020 (299)	1204 (353)	1459 (427)	1626 (476)	2068 (606)					
2400	728 (213)	1248 (366)	1486 (435)	1767 (518)	2134 (625)	2364 (692)	2940 (861)					
3000	928 (272)	1567 (459)	1887 (553)	2266 (664)	2746 (804)	3037 (889)	3749 (1098)					
3600	1080 (316)	1838 (538)	2241 (656)	2718 (796)	3311 (970)	3665 (1073)	4513 (1322)					

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	127	168	196	220	231	229	207	1.27	1.68	1.96	2.20	2.31	2.29	2.07
2400	188	213	239	262	277	279	265	1.88	2.13	2.39	2.62	2.77	2.79	2.65
3000	247	260	284	310	329	334	330	2.47	2.60	2.84	3.10	3.29	3.34	3.30
3600	305	309	333	362	388	398	405	3.05	3.09	3.33	3.62	3.88	3.98	4.05

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	3.63 (1.06)	5.15 (1.51)	5.21 (1.52)	5.49 (1.61)	6.33 (1.85)	7.10 (2.08)	9.98 (2.92)					
2400	3.88 (1.14)	5.86 (1.72)	6.23 (1.82)	6.73 (1.97)	7.70 (2.26)	8.48 (2.48)	11.10 (3.25)					
3000	3.77 (1.10)	6.03 (1.77)	6.65 (1.95)	7.32 (2.14)	8.34 (2.44)	9.08 (2.66)	11.35 (3.32)					
3600	3.54 (1.04)	5.94 (1.74)	6.72 (1.97)	7.50 (2.20)	8.53 (2.50)	9.21 (2.70)	11.15 (3.26)					

* 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	-6.262409E+03	-1.010793E+03	-1.010793E+01	-8.990093E+01
C2	1.289884E+00	2.622543E-01	2.622543E-03	1.235807E-02
C3	-1.339645E-04	-1.684280E-05	-1.684280E-07	-1.248812E-06
C4	1.400445E-08	1.005949E-09	1.005949E-11	1.104119E-10
C5	1.125932E+02	7.226089E+00	7.226089E-02	5.665706E-01
C6	-3.175953E-01	4.032497E-01	4.032497E-03	3.326093E-03
C7	7.163275E-03	-1.272945E-03	-1.272945E-05	5.250719E-05
C8	1.415857E+02	1.604082E+01	1.604082E-01	2.105187E+00
C9	-1.120186E+00	-5.482246E-02	-5.482246E-04	-1.696991E-02
C10	2.708589E-03	-7.831987E-05	-7.831987E-07	4.347658E-05
C11	6.707360E-04	8.440213E-06	8.440213E-08	6.336705E-06
C12	1.456661E-08	2.730828E-09	2.730828E-11	1.868148E-10
C13	-8.915019E-08	9.655377E-07	9.655377E-09	1.151861E-08
C14	-3.446913E-06	-2.928880E-07	-2.928880E-09	-3.203895E-08
C15	-1.939086E-02	1.798108E-03	1.798108E-05	-1.210281E-04
C16	-4.568333E-03	-3.084280E-03	-3.084280E-05	-3.381422E-05
C17	-1.972551E+00	-2.777854E-01	-2.777854E-03	-1.273783E-02
C18	-1.830042E-06	-1.620223E-07	-1.620223E-09	-2.505208E-08
C19	1.389256E-04	-9.928269E-05	-9.928269E-07	5.808573E-07
C20	-4.486187E-07	7.427481E-08	7.427481E-10	-1.356880E-09
C21	2.687089E-05	1.424929E-05	1.424929E-07	1.864797E-07
C22	-1.563311E-03	-3.061547E-03	-3.061547E-05	-4.898309E-05
C23	8.628039E-03	2.017929E-03	2.017929E-05	6.248005E-05

Performance Equation

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

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

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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	492 (144)	920 (270)	1087 (318)	1283 (376)	1554 (455)	1732 (507)	2202 (645)					
2400	776 (227)	1329 (389)	1583 (464)	1883 (551)	2274 (666)	2518 (737)	3132 (917)					
3000	989 (290)	1669 (489)	2010 (589)	2414 (707)	2925 (857)	3235 (948)	3994 (1170)					
3600	1150 (337)	1958 (573)	2387 (699)	2895 (848)	3527 (1033)	3904 (1143)	4808 (1408)					

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	122	160	187	210	221	219	198	1.22	1.60	1.87	2.10	2.21	2.19	1.98
2400	179	204	228	251	265	266	253	1.79	2.04	2.28	2.51	2.65	2.66	2.53
3000	236	248	272	296	315	320	316	2.36	2.48	2.72	2.96	3.15	3.20	3.16
3600	292	296	319	347	371	380	387	2.92	2.96	3.19	3.47	3.71	3.80	3.87

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	4.04 (1.18)	5.74 (1.68)	5.80 (1.70)	6.11 (1.79)	7.05 (2.06)	7.91 (2.32)	11.11 (3.25)					
2400	4.32 (1.27)	6.53 (1.91)	6.94 (2.03)	7.50 (2.20)	8.58 (2.51)	9.45 (2.77)	12.36 (3.62)					
3000	4.19 (1.23)	6.72 (1.97)	7.40 (2.17)	8.15 (2.39)	9.29 (2.72)	10.12 (2.96)	12.64 (3.70)					
3600	3.94 (1.15)	6.62 (1.94)	7.49 (2.19)	8.36 (2.45)	9.50 (2.78)	10.26 (3.01)	12.42 (3.64)					

* 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

Performance Coefficients (100V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-6.670993E+03	-9.665858E+02	-9.665858E+00	-7.398259E+01
C2	1.374041E+00	2.507847E-01	2.507847E-03	1.016989E-02
C3	-1.427048E-04	-1.610618E-05	-1.610618E-07	-1.027690E-06
C4	1.491815E-08	9.619536E-10	9.619536E-12	9.086181E-11
C5	1.199392E+02	6.910058E+00	6.910058E-02	4.662506E-01
C6	-3.383165E-01	3.856136E-01	3.856136E-03	2.737157E-03
C7	7.630635E-03	-1.217273E-03	-1.217273E-05	4.320999E-05
C8	1.508233E+02	1.533927E+01	1.533927E-01	1.732431E+00
C9	-1.193271E+00	-5.242481E-02	-5.242481E-04	-1.396512E-02
C10	2.885308E-03	-7.489456E-05	-7.489456E-07	3.577838E-05
C11	7.144975E-04	8.071082E-06	8.071082E-08	5.214694E-06
C12	1.551699E-08	2.611396E-09	2.611396E-11	1.537363E-10
C13	-9.496669E-08	9.233100E-07	9.233100E-09	9.479061E-09
C14	-3.671803E-06	-2.800786E-07	-2.800786E-09	-2.636596E-08
C15	-2.065599E-02	1.719468E-03	1.719468E-05	-9.959825E-05
C16	-4.866389E-03	-2.949390E-03	-2.949390E-05	-2.782689E-05
C17	-2.101248E+00	-2.656365E-01	-2.656365E-03	-1.048240E-02
C18	-1.949441E-06	-1.549363E-07	-1.549363E-09	-2.061622E-08
C19	1.479896E-04	-9.494057E-05	-9.494057E-07	4.780076E-07
C20	-4.778884E-07	7.102642E-08	7.102642E-10	-1.116624E-09
C21	2.862405E-05	1.362610E-05	1.362610E-07	1.534606E-07
C22	-1.665307E-03	-2.927650E-03	-2.927650E-05	-4.030988E-05
C23	9.190966E-03	1.929675E-03	1.929675E-05	5.141699E-05

Performance Equation

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

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

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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	1080	(316)	1838	(538)	2241	(656)	2718	(796)	3311	(970)	3665	(1073)	4513	(1322)
4500	1257	(368)	2196	(643)	2724	(798)	3349	(981)	4113	(1205)	4561	(1336)	5615	(1644)
5500	1449	(424)	2592	(759)	3260	(955)	4050	(1186)	5006	(1466)	5558	(1628)	6841	(2004)
6500	1717	(503)	3066	(898)	3876	(1135)	4833	(1416)	5981	(1752)	6639	(1944)	8152	(2388)

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	290	294	317	344	369	378	384	1.93	1.96	2.11	2.29	2.46	2.52	2.56
4500	376	372	397	432	468	484	509	2.51	2.48	2.65	2.88	3.12	3.23	3.39
5500	481	474	505	551	604	630	679	3.20	3.16	3.37	3.67	4.02	4.20	4.52
6500	599	597	639	699	772	810	886	3.99	3.98	4.26	4.66	5.15	5.40	5.91

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	3.72	(1.09)	6.26	(1.83)	7.08	(2.07)	7.90	(2.31)	8.98	(2.63)	9.70	(2.84)	11.74	(3.44)
4500	3.34	(0.98)	5.91	(1.73)	6.86	(2.01)	7.76	(2.27)	8.79	(2.57)	9.42	(2.76)	11.03	(3.23)
5500	3.01	(0.88)	5.47	(1.60)	6.45	(1.89)	7.35	(2.15)	8.29	(2.43)	8.82	(2.58)	10.08	(2.95)
6500	2.87	(0.84)	5.14	(1.50)	6.07	(1.78)	6.91	(2.02)	7.75	(2.27)	8.20	(2.40)	9.20	(2.69)

* 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	-6.262409E+03	-9.598442E+02	-6.398962E+00	-8.990093E+01
C2	1.289884E+00	2.490356E-01	1.660237E-03	1.235807E-02
C3	-1.339645E-04	-1.599385E-05	-1.066257E-07	-1.248812E-06
C4	1.400445E-08	9.552443E-10	6.368295E-12	1.104119E-10
C5	1.125932E+02	6.861862E+00	4.574575E-02	5.665706E-01
C6	-3.175953E-01	3.829241E-01	2.552827E-03	3.326093E-03
C7	7.163275E-03	-1.208783E-03	-8.058552E-06	5.250719E-05
C8	1.415857E+02	1.523229E+01	1.015486E-01	2.105187E+00
C9	-1.120186E+00	-5.205916E-02	-3.470611E-04	-1.696991E-02
C10	2.708589E-03	-7.437220E-05	-4.958147E-07	4.347658E-05
C11	6.707360E-04	8.014789E-06	5.343193E-08	6.336705E-06
C12	1.456661E-08	2.593182E-09	1.728788E-11	1.868148E-10
C13	-8.915019E-08	9.168703E-07	6.112468E-09	1.151861E-08
C14	-3.446913E-06	-2.781251E-07	-1.854168E-09	-3.203895E-08
C15	-1.939086E-02	1.707476E-03	1.138317E-05	-1.210281E-04
C16	-4.568333E-03	-2.928819E-03	-1.952546E-05	-3.381422E-05
C17	-1.972551E+00	-2.637838E-01	-1.758558E-03	-1.273783E-02
C18	-1.830042E-06	-1.538556E-07	-1.025704E-09	-2.505208E-08
C19	1.389256E-04	-9.427840E-05	-6.285226E-07	5.808573E-07
C20	-4.486187E-07	7.053103E-08	4.702069E-10	-1.356880E-09
C21	2.687089E-05	1.353106E-05	9.020706E-08	1.864797E-07
C22	-1.563311E-03	-2.907231E-03	-1.938154E-05	-4.898309E-05
C23	8.628039E-03	1.916217E-03	1.277478E-05	6.248005E-05

Performance Equation

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

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

SIERRA05-0434Y3



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	1150 (337)	1958 (573)	2387 (699)	2895 (848)	3527 (1033)	3904 (1143)	4808 (1408)					
4500	1339 (392)	2339 (685)	2902 (850)	3568 (1045)	4381 (1283)	4858 (1423)	5981 (1752)					
5500	1543 (452)	2761 (809)	3473 (1017)	4315 (1264)	5332 (1562)	5921 (1734)	7288 (2134)					
6500	1829 (536)	3266 (957)	4129 (1209)	5149 (1508)	6371 (1866)	7072 (2071)	8684 (2543)					

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	277	281	303	329	353	361	368	1.85	1.87	2.02	2.19	2.35	2.41	2.45
4500	360	355	380	413	447	463	487	2.40	2.37	2.53	2.75	2.98	3.09	3.25
5500	460	453	483	527	577	602	649	3.06	3.02	3.22	3.51	3.85	4.02	4.33
6500	573	571	611	669	738	775	847	3.82	3.81	4.07	4.46	4.92	5.16	5.65

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	4.15 (1.21)	6.97 (2.04)	7.88 (2.31)	8.80 (2.58)	10.00 (2.93)	10.81 (3.17)	13.08 (3.83)					
4500	3.72 (1.09)	6.58 (1.93)	7.64 (2.24)	8.64 (2.53)	9.80 (2.87)	10.49 (3.07)	12.28 (3.60)					
5500	3.36 (0.98)	6.10 (1.79)	7.19 (2.10)	8.19 (2.40)	9.24 (2.71)	9.83 (2.88)	11.23 (3.29)					
6500	3.19 (0.93)	5.72 (1.68)	6.76 (1.98)	7.70 (2.25)	8.63 (2.53)	9.13 (2.67)	10.25 (3.00)					

* 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	-6.670993E+03	-9.178656E+02	-6.119104E+00	-7.398259E+01
C2	1.374041E+00	2.381440E-01	1.587627E-03	1.016989E-02
C3	-1.427048E-04	-1.529436E-05	-1.019624E-07	-1.027690E-06
C4	1.491815E-08	9.134668E-10	6.089779E-12	9.086181E-11
C5	1.199392E+02	6.561760E+00	4.374507E-02	4.662506E-01
C6	-3.383165E-01	3.661770E-01	2.441180E-03	2.737157E-03
C7	7.630635E-03	-1.155917E-03	-7.706113E-06	4.320999E-05
C8	1.508233E+02	1.456611E+01	9.710738E-02	1.732431E+00
C9	-1.193271E+00	-4.978236E-02	-3.318824E-04	-1.396512E-02
C10	2.885308E-03	-7.111954E-05	-4.741303E-07	3.577838E-05
C11	7.144975E-04	7.664263E-06	5.109509E-08	5.214694E-06
C12	1.551699E-08	2.479770E-09	1.653180E-11	1.537363E-10
C13	-9.496669E-08	8.767711E-07	5.845141E-09	9.479061E-09
C14	-3.671803E-06	-2.659614E-07	-1.773076E-09	-2.636596E-08
C15	-2.065599E-02	1.632800E-03	1.088533E-05	-9.959825E-05
C16	-4.866389E-03	-2.800727E-03	-1.867152E-05	-2.782689E-05
C17	-2.101248E+00	-2.522472E-01	-1.681648E-03	-1.048240E-02
C18	-1.949441E-06	-1.471268E-07	-9.808452E-10	-2.061622E-08
C19	1.479896E-04	-9.015515E-05	-6.010343E-07	4.780076E-07
C20	-4.778884E-07	6.744637E-08	4.496425E-10	-1.116624E-09
C21	2.862405E-05	1.293928E-05	8.626187E-08	1.534606E-07
C22	-1.665307E-03	-2.780084E-03	-1.853389E-05	-4.030988E-05
C23	9.190966E-03	1.832411E-03	1.221607E-05	5.141699E-05

Performance Equation

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

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