

SIERRA06-0434Y3
R134a / R513A / R1234yf
150/300V DC
VARIABLE SPEED



Brushless DC Variable Speed Compressor Technical Data Sheet

General Information

Compressor Part Number	SIERRA00182	3/8" ID Suction - 5/16" ID Discharge
Compressor Drawing	DCMX33-001	#10-32 Threaded Terminal Connections
Compressor Part Number with Fittings	SIERRA00184	#10 MIO Suction - #8 MIO Discharge
Compressor Drawing with Fittings	DCMX27-001	#10-32 Threaded Terminal Connections
Controller Options (115-325V)	025F0140-02, 025F0397	
Controller Options (120-420)	025F0140-03, 025F0398	
Wiring Diagram Drawing	DEM0006	

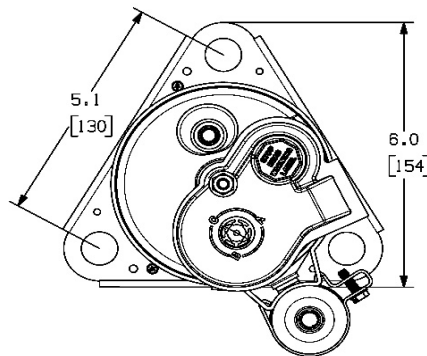
Application Information

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
Minimum Airflow Over Compressor	425 cfm @ 6" from Outside Diameter of Housing

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 / 10.8 lb

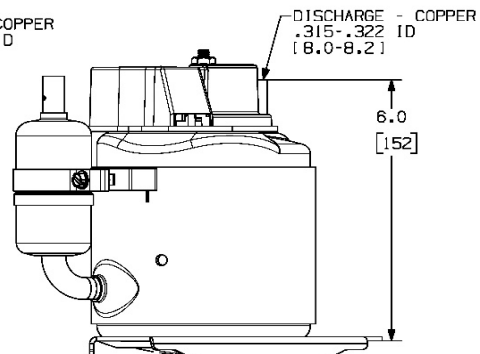
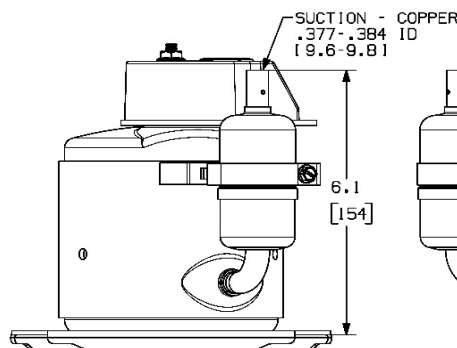
Compressor Dimensions



Packaging Options

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

SIERRA00182

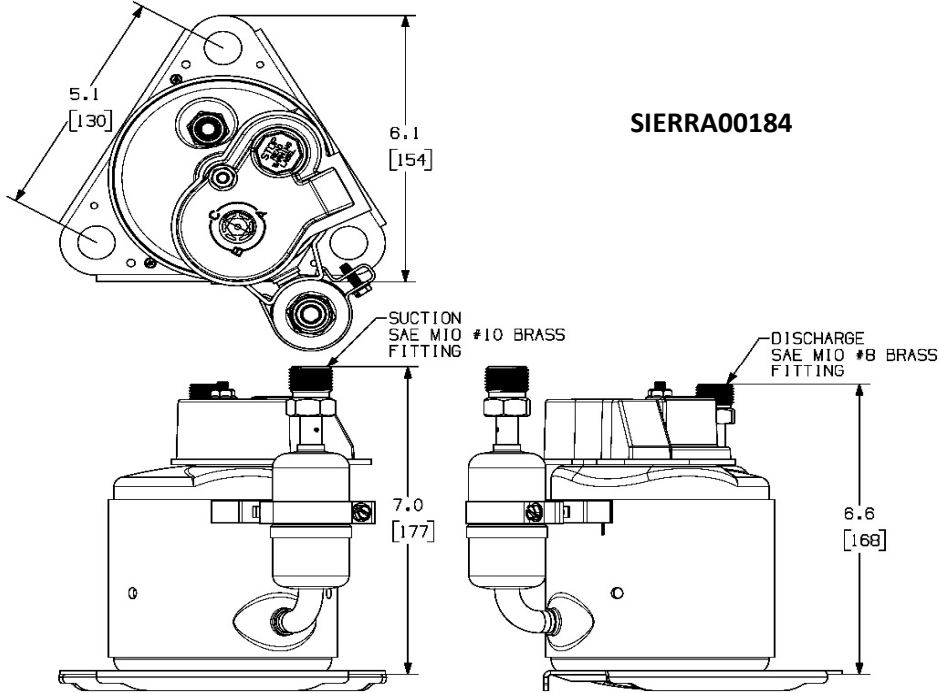


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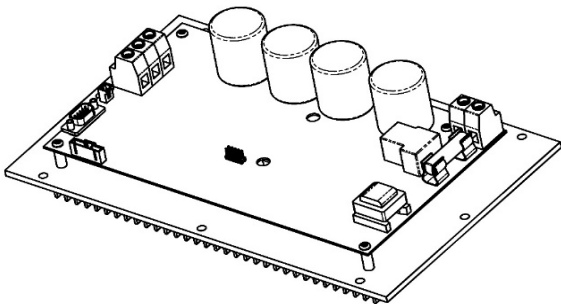


Compressor Dimensions with Fittings

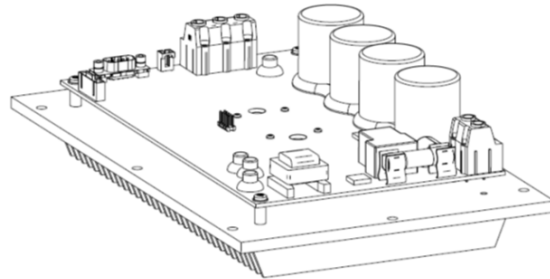


Controller Configurations

Custom controllers and configurations available



025F0140-XX



025F0397
025F0398

SIERRA06-0434Y3



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	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 (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	118	155	181	203	213	212	192	0.79	1.03	1.21	1.35	1.42	1.41	1.28
2400	173	197	221	243	256	257	245	1.16	1.31	1.47	1.62	1.71	1.72	1.63
3000	228	240	262	286	304	309	305	1.52	1.60	1.75	1.91	2.03	2.06	2.04
3600	282	286	308	335	359	368	374	1.88	1.91	2.05	2.23	2.39	2.45	2.49

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	3.92 (1.15)	5.57 (1.63)	5.63 (1.65)	5.94 (1.74)	6.85 (2.00)	7.68 (2.25)	10.79 (3.16)							
2400	4.20 (1.23)	6.34 (1.86)	6.74 (1.97)	7.28 (2.13)	8.33 (2.44)	9.18 (2.69)	12.00 (3.51)							
3000	4.07 (1.19)	6.52 (1.91)	7.19 (2.11)	7.92 (2.32)	9.02 (2.64)	9.83 (2.88)	12.28 (3.59)							
3600	3.83 (1.12)	6.43 (1.88)	7.27 (2.13)	8.12 (2.38)	9.23 (2.70)	9.97 (2.92)	12.06 (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 (150V) - ARI HBP - R134a/R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-6.262409E+03	-9.343085E+02	-6.228723E+00	-8.990093E+01
C2	1.289884E+00	2.424102E-01	1.616068E-03	1.235807E-02
C3	-1.339645E-04	-1.556835E-05	-1.037890E-07	-1.248812E-06
C4	1.400445E-08	9.298309E-10	6.198873E-12	1.104119E-10
C5	1.125932E+02	6.679309E+00	4.452873E-02	5.665706E-01
C6	-3.175953E-01	3.727368E-01	2.484912E-03	3.326093E-03
C7	7.163275E-03	-1.176624E-03	-7.844162E-06	5.250719E-05
C8	1.415857E+02	1.482705E+01	9.884698E-02	2.105187E+00
C9	-1.120186E+00	-5.067418E-02	-3.378278E-04	-1.696991E-02
C10	2.708589E-03	-7.239360E-05	-4.826240E-07	4.347658E-05
C11	6.707360E-04	7.801563E-06	5.201042E-08	6.336705E-06
C12	1.456661E-08	2.524193E-09	1.682796E-11	1.868148E-10
C13	-8.915019E-08	8.924778E-07	5.949852E-09	1.151861E-08
C14	-3.446913E-06	-2.707259E-07	-1.804839E-09	-3.203895E-08
C15	-1.939086E-02	1.662050E-03	1.108033E-05	-1.210281E-04
C16	-4.568333E-03	-2.850900E-03	-1.900600E-05	-3.381422E-05
C17	-1.972551E+00	-2.567660E-01	-1.711774E-03	-1.273783E-02
C18	-1.830042E-06	-1.497624E-07	-9.984163E-10	-2.505208E-08
C19	1.389256E-04	-9.177021E-05	-6.118014E-07	5.808573E-07
C20	-4.486187E-07	6.865462E-08	4.576975E-10	-1.356880E-09
C21	2.687089E-05	1.317108E-05	8.780719E-08	1.864797E-07
C22	-1.563311E-03	-2.829887E-03	-1.886591E-05	-4.898309E-05
C23	8.628039E-03	1.865237E-03	1.243492E-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 (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	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 (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	113	148	173	194	204	202	183	0.75	0.99	1.16	1.29	1.36	1.35	1.22
2400	166	188	211	232	245	246	234	1.11	1.26	1.41	1.55	1.63	1.64	1.56
3000	218	230	251	274	291	296	292	1.45	1.53	1.67	1.82	1.94	1.97	1.95
3600	270	273	295	320	343	352	358	1.80	1.82	1.97	2.14	2.29	2.34	2.39

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	4.37 (1.28)	6.21 (1.82)	6.27 (1.84)	6.61 (1.94)	7.63 (2.23)	8.56 (2.51)	12.02 (3.52)					
2400	4.68 (1.37)	7.06 (2.07)	7.51 (2.20)	8.11 (2.38)	9.28 (2.72)	10.23 (2.99)	13.37 (3.92)					
3000	4.54 (1.33)	7.27 (2.13)	8.01 (2.35)	8.82 (2.58)	10.05 (2.94)	10.95 (3.21)	13.68 (4.00)					
3600	4.26 (1.25)	7.16 (2.10)	8.10 (2.37)	9.04 (2.65)	10.28 (3.01)	11.11 (3.25)	13.44 (3.93)					

* 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	-8.934466E+02	-5.956311E+00	-7.398259E+01
C2	1.374041E+00	2.318084E-01	1.545389E-03	1.016989E-02
C3	-1.427048E-04	-1.488747E-05	-9.924978E-08	-1.027690E-06
C4	1.491815E-08	8.891649E-10	5.927766E-12	9.086181E-11
C5	1.199392E+02	6.387190E+00	4.258127E-02	4.662506E-01
C6	-3.383165E-01	3.564352E-01	2.376235E-03	2.737157E-03
C7	7.630635E-03	-1.125165E-03	-7.501099E-06	4.320999E-05
C8	1.508233E+02	1.417859E+01	9.452393E-02	1.732431E+00
C9	-1.193271E+00	-4.845795E-02	-3.230530E-04	-1.396512E-02
C10	2.885308E-03	-6.922747E-05	-4.615165E-07	3.577838E-05
C11	7.144975E-04	7.460363E-06	4.973575E-08	5.214694E-06
C12	1.551699E-08	2.413798E-09	1.609199E-11	1.537363E-10
C13	-9.496669E-08	8.534454E-07	5.689636E-09	9.479061E-09
C14	-3.671803E-06	-2.588857E-07	-1.725905E-09	-2.636596E-08
C15	-2.065599E-02	1.589360E-03	1.059574E-05	-9.959825E-05
C16	-4.866389E-03	-2.726217E-03	-1.817478E-05	-2.782689E-05
C17	-2.101248E+00	-2.455364E-01	-1.636909E-03	-1.048240E-02
C18	-1.949441E-06	-1.432126E-07	-9.547507E-10	-2.061622E-08
C19	1.479896E-04	-8.775665E-05	-5.850443E-07	4.780076E-07
C20	-4.778884E-07	6.565202E-08	4.376801E-10	-1.116624E-09
C21	2.862405E-05	1.259504E-05	8.396695E-08	1.534606E-07
C22	-1.665307E-03	-2.706122E-03	-1.804081E-05	-4.030988E-05
C23	9.190966E-03	1.783662E-03	1.189108E-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 (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)
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 (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
3600	312	316	341	371	397	407	414	1.04	1.05	1.14	1.24	1.32	1.36	1.38
4500	405	400	428	465	504	521	548	1.35	1.33	1.43	1.55	1.68	1.74	1.83
5500	518	510	544	593	650	678	731	1.73	1.70	1.81	1.98	2.17	2.26	2.44
6500	645	643	688	753	831	872	954	2.15	2.14	2.29	2.51	2.77	2.91	3.18

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)
3600	3.46	(1.01)	5.81	(1.70)	6.57	(1.92)	7.34	(2.15)	8.34	(2.44)	9.01	(2.64)	10.90	(3.19)
4500	3.10	(0.91)	5.49	(1.61)	6.37	(1.86)	7.20	(2.11)	8.17	(2.39)	8.75	(2.56)	10.24	(3.00)
5500	2.80	(0.82)	5.08	(1.49)	5.99	(1.75)	6.82	(2.00)	7.70	(2.26)	8.19	(2.40)	9.36	(2.74)
6500	2.66	(0.78)	4.77	(1.40)	5.63	(1.65)	6.42	(1.88)	7.20	(2.11)	7.61	(2.23)	8.54	(2.50)

* 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 (300V) - ARI HBP - R134a/R513A

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-6.262409E+03	-1.033602E+03	-3.445340E+00	-8.990093E+01
C2	1.289884E+00	2.681723E-01	8.939076E-04	1.235807E-02
C3	-1.339645E-04	-1.722287E-05	-5.740956E-08	-1.248812E-06
C4	1.400445E-08	1.028648E-09	3.428828E-12	1.104119E-10
C5	1.125932E+02	7.389151E+00	2.463050E-02	5.665706E-01
C6	-3.175953E-01	4.123493E-01	1.374498E-03	3.326093E-03
C7	7.163275E-03	-1.301670E-03	-4.338899E-06	5.250719E-05
C8	1.415857E+02	1.640279E+01	5.467596E-02	2.105187E+00
C9	-1.120186E+00	-5.605956E-02	-1.868652E-04	-1.696991E-02
C10	2.708589E-03	-8.008721E-05	-2.669574E-07	4.347658E-05
C11	6.707360E-04	8.630673E-06	2.876891E-08	6.336705E-06
C12	1.456661E-08	2.792451E-09	9.308171E-12	1.868148E-10
C13	-8.915019E-08	9.873257E-07	3.291086E-09	1.151861E-08
C14	-3.446913E-06	-2.994972E-07	-9.983241E-10	-3.203895E-08
C15	-1.939086E-02	1.838684E-03	6.128946E-06	-1.210281E-04
C16	-4.568333E-03	-3.153879E-03	-1.051293E-05	-3.381422E-05
C17	-1.972551E+00	-2.840538E-01	-9.468460E-04	-1.273783E-02
C18	-1.830042E-06	-1.656784E-07	-5.522614E-10	-2.505208E-08
C19	1.389256E-04	-1.015231E-04	-3.384102E-07	5.808573E-07
C20	-4.486187E-07	7.595088E-08	2.531696E-10	-1.356880E-09
C21	2.687089E-05	1.457083E-05	4.856944E-08	1.864797E-07
C22	-1.563311E-03	-3.130632E-03	-1.043544E-05	-4.898309E-05
C23	8.628039E-03	2.063465E-03	6.878217E-06	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 (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)					
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 (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
3600	299	302	326	354	380	389	396	1.00	1.01	1.09	1.18	1.27	1.30	1.32
4500	388	383	409	445	482	499	524	1.29	1.28	1.36	1.48	1.61	1.66	1.75
5500	495	488	520	568	621	649	699	1.65	1.63	1.73	1.89	2.07	2.16	2.33
6500	617	615	658	720	795	834	912	2.06	2.05	2.19	2.40	2.65	2.78	3.04

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)					
3600	3.85 (1.13)	6.47 (1.90)	7.32 (2.14)	8.17 (2.39)	9.29 (2.72)	10.04 (2.94)	12.14 (3.56)					
4500	3.45 (1.01)	6.11 (1.79)	7.10 (2.08)	8.03 (2.35)	9.10 (2.66)	9.74 (2.85)	11.41 (3.34)					
5500	3.12 (0.91)	5.66 (1.66)	6.67 (1.95)	7.60 (2.23)	8.58 (2.51)	9.13 (2.67)	10.43 (3.05)					
6500	2.96 (0.87)	5.31 (1.56)	6.28 (1.84)	7.15 (2.09)	8.02 (2.35)	8.48 (2.48)	9.52 (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

Performance Coefficients (300V) - ARI HBP - R1234yf

Coefficient	Capacity (BTU/Hr)	Power (Watts)	Current (Amperes)	Mass Flow (Lbs/Hr)
C1	-6.670993E+03	-9.883975E+02	-3.294658E+00	-7.398259E+01
C2	1.374041E+00	2.564438E-01	8.548127E-04	1.016989E-02
C3	-1.427048E-04	-1.646963E-05	-5.489877E-08	-1.027690E-06
C4	1.491815E-08	9.836607E-10	3.278869E-12	9.086181E-11
C5	1.199392E+02	7.065988E+00	2.355329E-02	4.662506E-01
C6	-3.383165E-01	3.943153E-01	1.314384E-03	2.737157E-03
C7	7.630635E-03	-1.244741E-03	-4.149138E-06	4.320999E-05
C8	1.508233E+02	1.568542E+01	5.228472E-02	1.732431E+00
C9	-1.193271E+00	-5.360781E-02	-1.786927E-04	-1.396512E-02
C10	2.885308E-03	-7.658461E-05	-2.552820E-07	3.577838E-05
C11	7.144975E-04	8.253211E-06	2.751070E-08	5.214694E-06
C12	1.551699E-08	2.670324E-09	8.901080E-12	1.537363E-10
C13	-9.496669E-08	9.441452E-07	3.147151E-09	9.479061E-09
C14	-3.671803E-06	-2.863988E-07	-9.546625E-10	-2.636596E-08
C15	-2.065599E-02	1.758269E-03	5.860898E-06	-9.959825E-05
C16	-4.866389E-03	-3.015945E-03	-1.005315E-05	-2.782689E-05
C17	-2.101248E+00	-2.716307E-01	-9.054358E-04	-1.048240E-02
C18	-1.949441E-06	-1.584325E-07	-5.281083E-10	-2.061622E-08
C19	1.479896E-04	-9.708297E-05	-3.236099E-07	4.780076E-07
C20	-4.778884E-07	7.262918E-08	2.420973E-10	-1.116624E-09
C21	2.862405E-05	1.393358E-05	4.644526E-08	1.534606E-07
C22	-1.665307E-03	-2.993715E-03	-9.979049E-06	-4.030988E-05
C23	9.190966E-03	1.973220E-03	6.577399E-06	5.141699E-05

Performance Equation

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

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