

Note: For R402A, R402B, R404A and R408A. Saturated Vapor Temperatures are shown

Temperature		R409A		R414B		R416A	
°F	°C	Liquid Press.	Vapor Press.	Liquid Press.	Vapor Press.	Liquid Press.	Vapor Press.
-30	-34.4	0.2	9.9	0.0	9.7	12.1	13.4
-25	-31.7	1.8	7	1.9	6.8	9.6	11.0
-20	-28.9	3.9	3.8	4.0	3.6	6.7	8.3
-15	-26.1	6.2	0.3	6.3	0.0	3.5	5.3
-10	-23.3	8.7	1.7	8.8	2.0	0.0	2.0
-5	-20.6	11.4	3.8	11.5	4.1	1.9	0.8
0	-17.8	14.4	6.1	14.5	6.5	4.0	2.8
5	-15.0	17.6	8.6	17.7	9.0	6.3	5.0
10	-12.2	21.1	11.4	21.2	11.9	8.9	7.4
15	-9.4	24.9	14.4	25.0	14.9	11.6	10.0
20	-6.7	29.0	17.6	29.0	18.3	14.6	12.8
25	-3.9	33.4	21.2	33.4	21.9	17.8	15.9
30	-1.1	38.1	25.0	38.1	25.8	21.4	19.3
35	1.7	43.2	29.2	43.1	30.0	25.2	22.9
40	4.4	48.6	33.6	48.5	34.6	29.3	26.8
45	7.2	54.4	38.5	54.3	39.5	33.7	31.1
50	10.0	60.6	43.6	60.4	44.8	38.4	35.6
55	12.8	67.2	49.2	67.0	50.4	43.5	40.5
60	15.6	74.2	55.2	73.9	56.5	49.0	45.7
65	18.3	81.7	61.5	81.3	62.9	54.8	51.3
70	21.1	89.6	68.4	89.1	69.8	61.1	57.3
75	23.9	98.0	75.6	97.4	77.1	67.7	63.7
80	26.7	107	83.4	106	85.0	74.8	70.6
85	29.4	116	91.6	116	93.3	82.3	77.8
90	32.2	126	100	125	102	90.3	85.5
95	35.0	137	110	136	111	98.8	93.7
100	37.8	148	120	146	121	108	102
105	40.6	159	130	158	132	117	112
110	43.3	172	141	170	143	127	121
115	46.1	184	153	183	155	138	132
120	48.9	198	165	196	167	149	143
125	51.7	212	178	210	180	161	154
130	54.4	227	192	224	193	173	166
135	57.2	242	207	239	208	186	179
140	60.0	258	222	255	223	200	192
145	62.8			272	239	214	206
150	65.6			289	255	229	221

Temperature		R404A	R507	R502	R402A	R402B	R408A
°F	°C						
-40	-40.0	4.3	5.5	4.1	6.3	3.6	2.8
-35	-37.2	6.8	8.2	6.5	9.1	6.0	5.1
-30	-34.4	9.5	11.1	9.2	12.1	9.0	7.6
-25	-31.7	12.5	14.3	12.1	15.4	12.0	10.4
-20	-28.9	15.7	17.8	15.3	18.9	15.4	13.5
-15	-26.1	19.3	21.7	18.8	22.9	18.6	16.8
-10	-23.3	23.2	25.8	22.6	27.1	22.6	20.4
-5	-20.6	27.5	30.3	26.7	31.7	27.0	24.4
0	-17.8	32.1	35.2	31.1	36.7	31.0	28.7
5	-15.0	37.0	40.5	35.9	42.1	36.0	33.3
10	-12.2	42.4	46.1	41.0	48.0	42.0	38.3
15	-9.4	48.2	52.2	46.5	54.2	47.0	43.7
20	-6.7	54.5	58.8	52.4	60.9	54.0	49.5
25	-3.9	61.2	65.8	58.8	68.1	60.0	55.8
30	-1.1	68.4	73.3	65.6	75.8	67.0	62.5
35	1.7	76.1	81.3	72.8	84.0	75.0	69.7
40	4.4	84.4	89.8	80.5	92.8	83.4	77.4
45	7.2	93.2	98.9	88.7	102	91.6	85.6
50	10.0	103	109	97.4	112	100	94.3
55	12.8	113	119	107	123	110	104
60	15.6	123	130	116	134	120	114
65	18.3	135	141	127	146	133	124
70	21.1	147	154	138	158	143	135
75	23.9	159	167	149	171	155	147
80	26.7	173	180	161	185	170	159
85	29.4	187	195	174	200	183	173
90	32.2	202	210	187	215	198	186
95	35.0	218	226	201	232	213	201
100	37.8	234	244	216	249	230	217
105	40.6	252	262	232	267	247	233
110	43.3	270	281	248	286	262	250
115	46.1	289	301	265	305	283	268
120	48.9	310	322	283	326	303	287
125	51.7	331	344	301	347	323	307
130	54.4	353	368	321	370	345	327
135	57.2	377	393	341	393	-	349
140	60.0	401	419	363	418	-	372
145	62.8	426	446	-	443	-	-
150	65.6	453	475	-	470	-	-

Temperature		R422A		R422B		R422D	
°F	°C	Liquid	Vapor	Liquid	Vapor	Liquid	Vapor
-40	-40.0	5.2	3.2	0.9	2.7	2.4	1.2
-35	-37.2	7.8	5.6	3.0	0.9	4.6	0.8
-30	-34.4	10.7	8.3	5.4	1.1	7.1	3.0
-25	-31.7	13.9	11.3	7.9	3.2	9.9	5.4
-20	-28.9	17.3	14.6	10.7	5.7	12.9	8.1
-15	-26.1	21.1	18.2	13.8	8.3	16.2	11.0
-10	-23.3	25.2	22.1	17.1	11.3	19.8	14.3
-5	-20.6	29.6	26.3	20.7	14.5	23.7	17.8
0	-17.8	34.4	30.9	24.7	18.0	27.9	21.7
5	-15.0	39.6	35.6	29.0	21.9	32.5	25.8
10	-12.2	45.2	41.4	33.6	26.1	37.5	30.4
15	-9.4	51.3	47.2	38.6	30.6	42.8	35.3
20	-6.7	57.8	53.5	43.9	35.5	48.5	40.7
25	-3.9	64.7	60.2	49.7	40.8	54.7	46.4
30	-1.1	72.2	67.5	55.9	46.6	61.3	52.6
35	1.7	80.1	75.2	62.5	52.7	68.4	59.3
40	4.4	88.6	83.5	69.6	59.4	75.9	66.4
45	7.2	97.6	92.3	77.2	66.5	84.0	74.0
50	10.0	107	102	85.3	74.1	92.6	82.2
55	12.8	117	112	93.9	82.2	102	90.9
60	15.6	128	122	103	90.9	111	100
65	18.3	140	134	113	100	122	110
70	21.1	152	146	123	110	133	121
75	23.9	165	158	134	120	144	132
80	26.7	179	172	145	132	156	144
85	29.4	193	186	158	143	169	156
90	32.2	208	201	170	156	183	170
95	35.0	224	217	184	169	197	184
100	37.8	241	234	198	183	212	198
105	40.6	258	251	213	198	228	214
110	43.3	277	270	229	213	245	231
115	46.1	296	289	246	230	262	248
120	48.9	317	310	263	247	281	266
125	51.7	338	331	281	265	300	286
130	54.4	361	354	301	284	320	306
135	57.2	385	378	321	304	341	327
140	60.0	410	403	342	326	364	350
145	62.8	-	-	364	348	387	373
150	65.6	-	-	387	371	411	398

VAPOR PRESSURES - psig
RED FIGURES (IN Hg) VACUUM



PRESSURE TEMPERATURE CHART

11401 Roosevelt Boulevard
Philadelphia, PA 19154

(800.262.0012) www.refrigerants.com

data subject to change 01/2009

PRESSURE VACUUM EQUIVALENTS

Absolute Pressure above zero base		Vacuum Below one atmosphere		Approximate fraction of one atmos.	Vaporization Temperature of H2O in °F
microns	PSIA	mm Hg	inches Hg		
0	0	760.00	29.921	-	-
50	0.001	759.95	29.92	1/15000	-50
100	0.002	759.90	29.92	1/7600	-40
150	0.003	759.85	29.92	1/5100	-33
200	0.004	759.80	29.91	1/3800	-28
300	0.006	759.70	29.91	1/2500	-21
500	0.009	759.50	29.90	1/1500	-12
1000	0.019	759.00	29.88	1/760	1
2000	0.039	758.00	29.84	1/380	15
4000	0.078	756.00	29.76	1/190	29
6000	0.117	754.00	29.69	1/127	39
10000	0.193	750.00	29.53	1/76	52
15000	0.290	745.00	29.33	1/50	63
20000	0.387	740.00	29.13	1/38	72
30000	0.580	730.00	28.74	1/25	84
50000	0.967	710.00	27.95	1/15	101
100000	1.93	660.00	25.98	2/15	125
200000	3.87	560.00	22.05	1/4	152
500000	9.67	260.00	10.24	2/3	192
760000	14.696	0	0	1 atmos.	212

PRESSURE TEMPERATURE CHART

Temperature °F °C		R11	R113	R114	R123	R124	R500
-20	-28.9	27.0	29.1	22.9	27.8	16.1	3.2
-15	-26.1	26.5	28.9	21.8	27.4	14.1	5.4
-10	-23.3	26.0	28.7	20.6	26.9	12.0	7.8
-5	-20.6	25.4	28.5	19.3	26.4	9.6	10.4
0	-17.8	24.7	28.2	17.8	25.9	6.9	13.3
5	-15.0	23.9	27.9	16.2	25.2	3.9	16.4
10	-12.2	23.1	27.6	14.4	24.5	0.6	19.7
15	-9.4	22.1	27.2	12.4	23.8	1.6	23.4
20	-6.7	21.1	26.8	10.2	22.8	3.5	27.3
25	-3.9	19.9	26.3	7.8	21.8	5.7	31.5
30	-1.1	18.6	25.8	5.2	20.7	8.1	36.0
35	1.7	17.2	25.2	2.3	19.5	10.5	40.9
40	4.4	15.6	24.5	0.4	18.1	13.2	46.1
45	7.2	13.9	23.8	2.0	16.6	16.1	51.6
50	10.0	12.0	22.9	3.8	14.9	19.2	57.6
55	12.8	10.0	22.2	5.8	13.0	22.6	63.9
60	15.6	7.8	21.0	7.9	11.2	26.3	70.6
65	18.3	5.4	19.9	10.1	8.9	30.2	77.8
70	21.1	2.8	18.7	12.6	6.5	34.4	85.4
75	23.9	0.0	17.3	15.2	4.1	38.9	93.5
80	26.7	1.5	15.9	18.0	1.2	43.7	102
85	29.4	3.2	14.3	20.9	0.9	48.8	111
90	32.2	4.9	12.5	24.1	2.5	54.2	121
95	35.0	6.8	10.6	27.5	4.3	60.0	131
100	37.8	8.8	8.6	31.2	6.1	66.1	141
105	40.6	10.9	6.4	35.0	8.1	72.6	152
110	43.3	13.2	4.0	39.1	10.3	79.5	164
115	46.1	15.6	1.4	43.4	12.6	86.8	177
120	48.9	18.2	0.7	48.0	15.1	94.5	189
125	51.7	21.0	2.2	52.8	17.8	103	203
130	54.4	24.0	3.7	58.0	20.6	111	217
135	57.2	27.1	5.4	63.4	23.6	120	232
140	60.0	30.4	7.2	69.1	26.8	130	248
145	62.8	34.0	9.2	75.1	30.2	140	-
150	65.6	37.7	11.2	81.4	33.9	150	-

Temperature °F °C		R13	R23	R503	R508B	R403B
-120	-84.4	4.5	4.0	3.1	3.1	25.4
-115	-81.7	0.3	0.3	6.0	6.0	24.5
-110	-78.9	2.1	2.9	9.3	9.3	23.4
-105	-76.1	4.7	5.8	12.9	12.9	22.2
-100	-73.3	7.6	9.0	16.9	16.9	20.9
-95	-70.6	10.8	12.7	21.4	21.4	19.3
-90	-67.8	14.3	16.7	26.3	26.4	17.5
-85	-65.0	18.2	21.3	31.8	31.8	15.5
-80	-62.2	22.5	26.3	37.7	37.8	13.2
-75	-59.4	27.2	31.8	44.2	44.4	10.6
-70	-56.7	32.3	37.9	51.3	51.5	7.8
-65	-53.9	37.8	44.6	59.0	59.3	4.6
-60	-51.1	43.9	52.0	67.3	67.8	1.0
-55	-48.3	50.4	60.0	76.4	76.9	1.5
-50	-45.6	57.5	68.7	86.1	86.8	3.6
-45	-42.8	65.1	78.1	96.6	97.5	6.0
-40	-40.0	73.3	88.3	108	109	8.6
-35	-37.2	82.1	99.4	120	121	11.4
-30	-34.4	91.6	111	133	135	14.5
-25	-31.7	102	124	147	149	17.9
-20	-28.9	113	138	161	164	21.6

Temperature °F °C		R22	R407A		R407C		R410A
			Liquid Press./	Vapor Press.	Liquid Press./	Vapor Press.	
-40	-40.0	0.5	3.9	1.0	3.0	4.4	11.6
-35	-37.2	2.6	6.4	1.0	5.4	0.6	14.9
-30	-34.4	4.9	9.2	3.3	8.0	1.8	18.5
-25	-31.7	7.4	12.2	5.8	10.9	4.1	22.5
-20	-28.9	10.1	15.6	8.5	14.1	6.6	26.9
-15	-26.1	13.2	19.2	11.5	17.6	9.4	31.7
-10	-23.3	16.5	23.2	14.9	21.3	12.5	36.8
-5	-20.6	20.1	27.5	18.5	25.4	15.9	42.5
0	-17.8	24.0	32.2	22.5	29.9	19.6	48.6
5	-15.0	28.2	37.3	26.9	34.7	23.6	55.2
10	-12.2	32.8	42.8	31.6	39.9	28.0	62.3
15	-9.4	37.7	48.7	36.7	45.6	32.8	70.0
20	-6.7	43.0	55.1	42.3	51.6	38.0	78.3
25	-3.9	48.8	62.0	48.3	58.2	43.6	87.3
30	-1.1	54.9	69.3	54.8	65.2	49.6	96.8
35	1.7	61.5	77.2	61.8	72.6	56.1	107
40	4.4	68.5	85.6	69.4	80.7	63.1	118
45	7.2	76.0	94.6	77.4	89.2	70.6	130
50	10.0	84.0	104	86.1	98.3	78.7	142
55	12.8	92.6	114	95.3	108	87.3	155
60	15.6	102	125	105	118	96.8	170
65	18.3	111	137	116	129	106	185
70	21.1	121	149	127	141	117	201
75	23.9	132	162	139	153	128	217
80	26.7	144	175	152	166	140	235
85	29.4	156	190	165	180	153	254
90	32.2	168	205	179	195	166	274
95	35.0	182	221	194	210	181	295
100	37.8	196	238	210	226	196	317
105	40.6	211	255	227	243	211	340
110	43.3	226	274	245	261	229	365
115	46.1	243	293	264	280	247	391
120	48.9	260	314	284	300	266	418
125	51.7	278	335	305	321	286	446
130	54.4	297	358	327	342	307	476
135	57.2	317	382	350	365	329	507
140	60.0	337	406	375	389	353	539
145	62.8	359	432	401	-	-	573
150	65.6	382	459	428	-	-	608

Temperature °F °C		R12	R134a	R401A		R401B	
				Liquid Press./	Vapor Press.	Liquid Press./	Vapor Press.
-40	-40.0	11.0	14.8	8.1	13.2	6.5	11.8
-35	-37.2	8.4	12.5	5.1	10.7	3.3	9.1
-30	-34.4	5.5	9.9	1.7	7.9	0.2	6.1
-25	-31.7	2.3	6.9	1.0	4.8	2.1	2.8
-20	-28.9	0.6	3.7	3.0	1.4	4.3	0.5
-15	-26.1	2.4	0.6	5.2	1.2	6.6	2.5
-10	-23.3	4.5	1.9	7.7	3.3	9.2	4.7
-5	-20.6	6.7	4.0	10.3	5.5	12.0	7.1
0	-17.8	9.2	6.5	13.2	8.0	15.1	9.7
5	-15.0	11.8	9.1	16.3	10.7	18.4	12.6
10	-12.2	14.6	11.9	19.7	13.7	22.0	15.8
15	-9.4	17.7	15.0	23.4	16.9	25.9	19.2
20	-6.7	21.0	18.4	27.4	20.4	30.1	23.0
25	-3.9	24.6	22.1	31.7	24.2	34.6	27.0
30	-1.1	28.5	26.1	36.4	28.3	39.5	31.4
35	1.7	32.6	30.4	41.3	32.8	44.8	36.1
40	4.4	37.0	35.0	46.6	37.6	50.4	41.1
45	7.2	41.7	40.1	52.4	42.7	56.4	46.6
50	10.0	46.7	45.5	58.5	48.2	62.8	52.4
55	12.8	52.0	51.3	65.0	54.1	69.6	58.7
60	15.6	57.7	57.5	71.9	60.4	76.9	65.4
65	18.3	63.8	64.1	79.3	67.2	84.7	72.5
70	21.1	70.2	71.2	87.1	74.4	92.9	80.1
75	23.9	77.0	78.8	95.4	82.1	102	88.2
80	26.7	84.2	86.8	104	90.2	111	96.8
85	29.4	91.8	95.4	114	98.9	121	106
90	32.2	99.8	104	123	108	131	116
95	35.0	108	114	134	118	142	126
100	37.8	117	124	145	128	153	137
105	40.6	127	135	156	139	166	148
110	43.3	136	147	169	151	178	160
115	46.1	147	159	181	163	192	173
120	48.9	158	171	195	176	206	187
125	51.7	169	185	209	189	220	201
130	54.4	181	199	224	203	236	216
135	57.2	194	214	239	218	252	231
140	60.0	207	229	255	234	269	248
145	62.8	220	246	272	250	287	265
150	65.6	234	263	290	267	305	283

VAPOR PRESSURES - psig
RED FIGURES (IN Hg) VACUUM