

PRESSURE TEMPERATURE CHART							
Temperature F                  C		R409A Liquid Press.    Vapor Press.		R414B Liquid Press.    Vapor Press.		R416A 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 F                  C		R404A	R507	R502	R402A	R402B	R408A
-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	-	-
Note: For R402A, R402B, R404A and R408A Saturated Vapor Temperatures are shown. VAPOR PRESSURES - psig RED FIGURES (IN Hg) ACUUM <div> <div>NATIONAL</div> <div>REFRIGERANTS<sup>INC</sup></div> </div> 11401 Roosevelt Boulevard Philadephia, PA 19154 (800) 262 - 0012 FAX (215) 698 - 7466 E-Mail: info@refrigerants.com Return empty cylinders to: NATIONAL REGRIGERANTS, INC. 661 Kenyon Avenue Rosenhayn, NJ 08352 Data is subject to change							

## PRESSURE VACUUM EQUIVALENTS

Absolute Pressure above zero base		Vacuum Below one atmosphere		Apporiximate 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

## PRESSURE TEMPERATURE CHART

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	R407C Liquid Press.   Vapor Press.		R417A Liquid Press.   Vapor Press.		R410A
-40	-40.0	0.5	3.0	4.4	0.5	4.2	11.6
-35	-37.2	2.6	5.4	0.6	2.4	0.8	14.9
-30	-34.4	4.9	8.0	1.8	4.5	1.5	18.5
-25	-31.7	7.4	10.9	4.1	6.9	3.6	22.5
-20	-28.9	10.1	14.1	6.6	9.4	5.9	26.9
-15	-26.1	13.2	17.6	9.4	12.2	8.4	31.7
-10	-23.3	16.5	21.3	12.5	15.2	11.2	36.8
-5	-20.6	20.1	25.4	15.9	18.5	14.3	42.5
0	-17.8	24.0	29.9	19.6	22.0	17.6	48.6
5	-15.0	28.2	34.7	23.6	25.9	21.2	55.2
10	-12.2	32.8	39.9	28.0	30.0	25.1	62.3
15	-9.4	37.7	45.6	32.8	34.5	29.3	70.0
20	-6.7	43.0	51.6	38.0	39.3	33.9	78.3
25	-3.9	48.8	58.2	43.6	44.5	38.9	87.3
30	-1.1	54.9	65.2	49.6	50.8	44.2	96.8
35	1.7	61.5	72.6	56.1	56.0	49.9	107
40	4.4	68.5	80.7	63.1	62.4	56.1	118
45	7.2	76.0	89.2	70.6	69.2	62.7	130
50	10.0	84.0	98.3	78.7	76.4	69.8	142
55	12.8	92.6	108	87.3	87.2	77.3	155
60	15.6	102	118	96.8	95.7	85.4	170
65	18.3	111	129	106	105	93.9	185
70	21.1	121	141	117	114	103	201
75	23.9	132	153	128	124	113	217
80	26.7	144	166	140	134	123	235
85	29.4	156	180	153	146	134	254
90	32.2	168	195	166	157	145	274
95	35.0	182	210	181	170	158	295
100	37.8	196	226	196	183	170	317
105	40.6	211	243	211	197	184	340
110	43.3	226	261	229	211	198	365
115	46.1	243	280	247	225	212	391
120	48.9	260	300	266	241	227	418
125	51.7	278	321	286	258	244	446
130	54.4	297	342	307	275	261	476
135	57.2	317	365	329	293	279	507
140	60.0	337	389	353	312	297	539
145	62.8	359	-	-	-	-	573
150	65.6	382	-	-	-	-	608

Temperature		R12	R134a	R401A		R401B	
°F	°C			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

60.0	207	229	255	284	207
62.8	220	246	272	250	287
65.6	234	263	290	267	305