Table 21 .... Refrigerant 717 (Ammonia) Properties of Liquid and Saturated Vapor*

Temp F	Pressure psia	Pressure psig	Volume cu ft/lb Vapor v_g	Density lb/cu ft Liquid $1/v_f$	Enthalpy** Btu/lb Liquid h_f	Enthalpy** Btu/lb Vapor h_g	Entropy** Btu/(lb) (°R) Liquid s_f	Entropy** Btu/(lb) (°R) Vapor s_g	Temp F	Pressure psia	Pressure psig	Volume cu ft/lb Vapor v_g	Density lb/cu ft Liquid $1/v_f$	Enthalpy** Btu/lb Liquid h_f	Enthalpy** Btu/lb Vapor h_g	Entropy** Btu/(lb) (°R) Liquid s_f	Entropy** Btu/(lb) (°R) Vapor s_g
−105	0.996	27.9•	223.2	45.71	−68.5	570.3	−0.1774	1.6243	−15	20.88	6.2	12.97	42.00	26.7	606.7	0.0618	1.3664
−104	1.041	27.8•	214.2	45.67	−67.5	570.7	− .1744	1.6205	−14	21.43	6.7	12.66	41.96	27.8	607.1	.0642	1.3643
−103	1.087	27.7•	205.7	45.63	−66.4	571.2	− .1714	1.6167	−13	21.99	7.3	12.36	41.91	28.9	607.5	.0666	1.3621
−102	1.135	27.6•	197.6	45.59	−65.4	571.6	− .1685	1.6129	−12	22.56	7.9	12.06	41.87	30.0	607.8	.0690	1.3600
−101	1.184	27.5•	189.8	45.55	−64.3	572.1	− .1655	1.6092	−11	23.15	8.5	11.78	41.82	31.0	608.1	.0714	1.3579
−100	1.24	27.4•	182.4	45.52	−63.3	572.5	−0.1626	1.6055	−10	23.74	9.0	11.50	41.78	32.1	608.5	0.0738	1.3558
− 99	1.29	27.3•	175.3	45.47	−62.2	572.9	− .1597	1.6018	− 9	24.35	9.7	11.23	41.74	33.2	608.8	.0762	1.3537
− 98	1.34	27.2•	168.5	45.43	−61.2	573.4	− .1568	1.5982	− 8	24.97	10.3	10.97	41.69	34.3	609.2	.0786	1.3516
− 97	1.40	27.1•	162.1	45.40	−60.1	573.8	− .1539	1.5945	− 7	25.61	10.9	10.71	41.65	35.4	609.5	.0809	1.3495
− 96	1.46	26.9•	155.9	45.36	−59.1	574.3	− .1510	1.5910	− 6	26.26	11.6	10.47	41.60	36.4	609.8	.0833	1.3474
− 95	1.52	26.8•	150.0	45.32	−58.0	574.7	−0.1481	1.5874	− 5	26.92	12.2	10.23	41.56	37.5	610.1	0.0857	1.3454
− 94	1.59	26.7•	144.3	45.28	−57.0	575.1	− .1452	1.5839	− 4	27.59	12.9	9.991	41.52	38.6	610.5	.0880	1.3433
− 93	1.65	26.6•	138.9	45.24	−55.9	575.6	− .1423	1.5803	− 3	28.28	13.6	9.763	41.47	39.7	610.8	.0904	1.3413
− 92	1.72	26.4•	133.8	45.20	−54.9	576.0	− .1395	1.5768	− 2	28.98	14.3	9.541	41.43	40.7	611.1	.0928	1.3393
− 91	1.79	26.3•	128.9	45.16	−53.8	576.5	− .1366	1.5734	− 1	29.69	15.0	9.326	41.38	41.8	611.4	.0951	1.3372
− 90	1.86	26.1•	124.1	45.12	−52.8	576.9	−0.1338	1.5699	0	30.42	15.7	9.116	41.34	42.9	611.8	0.0975	1.3352
− 89	1.94	26.0•	119.6	45.08	−51.7	577.3	− .1309	1.5665	1	31.16	16.5	8.912	41.29	44.0	612.1	.0998	1.3332
− 88	2.02	25.8•	115.3	45.04	−50.7	577.8	− .1281	1.5631	2	31.92	17.2	8.714	41.25	45.1	612.4	.1022	1.3312
− 87	2.10	25.6•	111.1	45.00	−49.6	578.2	− .1253	1.5597	3	32.69	18.0	8.521	41.20	46.2	612.7	.1045	1.3292
− 86	2.18	25.5•	107.1	44.96	−48.6	578.6	− .1225	1.5564	4	33.47	18.8	8.333	41.16	47.2	613.0	.1069	1.3273
− 85	2.27	25.3•	103.3	44.92	−47.5	579.1	−0.1197	1.5531	5†	34.27	19.6	8.150	41.11	48.3	613.3	0.1092	1.3253
− 84	2.35	25.1•	99.68	44.88	−45.5	579.5	− .1169	1.5498	6	35.09	20.4	7.971	41.07	49.4	613.6	.1115	1.3234
− 83	2.45	24.9•	96.17	44.84	−45.4	579.9	− .1141	1.5465	7	35.92	21.2	7.798	41.01	50.5	613.9	.1138	1.3214
− 82	2.54	24.7•	92.81	44.80	−44.4	580.4	− .1113	1.5432	8	36.77	22.1	7.629	40.98	51.6	614.3	.1162	1.3195
− 81	2.64	24.5•	89.59	44.76	−43.3	580.8	− .1085	1.5400	9	37.63	22.9	7.464	40.93	52.7	614.6	.1185	1.3176
− 80	2.74	24.3•	86.50	44.73	−42.2	581.2	−0.1057	1.5368	10	38.51	23.8	7.304	40.89	53.8	614.9	0.1208	1.3157
− 79	2.84	24.1•	83.54	44.68	−41.2	581.6	− .1030	1.5336	11	39.40	24.7	7.148	40.84	54.9	615.2	.1231	1.3137
− 78	2.95	23.9•	80.69	44.64	−40.1	582.1	− .1002	1.5304	12	40.31	25.6	6.996	40.80	56.0	615.5	.1254	1.3118
− 77	3.06	23.7•	77.96	44.60	−39.1	582.5	− .0975	1.5273	13	41.24	26.5	6.847	40.75	57.1	615.8	.1277	1.3099
− 76	3.18	23.5•	75.33	44.56	−38.0	582.9	− .0947	1.5242	14	42.18	27.5	6.703	40.71	58.2	616.1	.1300	1.3081
− 75	3.29	23.2•	72.81	44.52	−37.0	583.3	−0.0920	1.5211	15	43.14	28.4	6.562	40.66	59.2	616.3	0.1323	1.3062
− 74	3.42	23.0•	70.39	44.48	−35.9	583.8	− .0892	1.5180	16	44.12	29.4	6.425	40.61	60.3	616.6	.1346	1.3043
− 73	3.54	22.7•	68.06	44.44	−34.9	584.2	− .0865	1.5149	17	45.12	30.4	6.291	40.57	61.4	616.9	.1369	1.3025
− 72	3.67	22.4•	65.82	44.40	−33.8	584.6	− .0838	1.5119	18	46.13	31.4	6.161	40.52	62.5	617.2	.1392	1.3006
− 71	3.80	22.2•	63.67	44.36	−32.8	585.0	− .0811	1.5089	19	47.16	32.5	6.034	40.48	63.6	617.5	.1415	1.2988
− 70	3.94	21.9•	61.60	44.32	−31.7	585.5	−0.0784	1.5059	20	48.21	33.5	5.910	40.43	64.7	617.8	0.1437	1.2969
− 69	4.08	21.6•	59.61	44.28	−30.7	585.9	− .0757	1.5029	21	49.28	34.6	5.789	40.38	65.8	618.0	.1460	1.2951
− 68	4.23	21.3•	57.69	44.24	−29.6	586.3	− .0730	1.4999	22	50.36	35.7	5.671	40.34	66.9	618.3	.1483	1.2933
− 67	4.38	21.0•	55.85	44.19	−28.6	586.7	− .0703	1.4970	23	51.47	36.8	5.556	40.29	68.0	618.6	.1505	1.2915
− 66	4.53	20.7•	54.08	44.15	−27.5	587.1	− .0676	1.4940	24	52.59	37.9	5.443	40.25	69.1	618.9	.1528	1.2897
− 65	4.69	20.4•	52.37	44.11	−26.5	587.5	−0.0650	1.4911	25	53.73	39.0	5.334	40.20	70.2	619.1	0.1551	1.2879
− 64	4.85	20.0•	50.73	44.07	−25.4	588.0	− .0623	1.4883	26	54.90	40.2	5.227	40.15	71.3	619.4	.1573	1.2861
− 63	5.02	19.7•	49.14	44.03	−24.4	588.4	− .0596	1.4854	27	56.08	41.4	5.123	40.10	72.4	619.7	.1596	1.2843
− 62	5.19	19.4•	47.62	43.99	−23.3	588.8	− .0570	1.4826	28	57.28	42.6	5.021	40.06	73.5	619.9	.1618	1.2825
− 61	5.37	19.0•	46.15	43.95	−22.2	589.2	− .0543	1.4797	29	58.50	43.8	4.922	40.01	74.6	620.2	.1641	1.2808
− 60	5.55	18.6•	44.73	43.91	−21.2	589.6	−0.0517	1.4769	30	59.74	45.0	4.825	39.96	75.7	620.5	0.1663	1.2790
− 59	5.74	18.2•	43.37	43.87	−20.1	590.0	− .0490	1.4741	31	61.00	46.3	4.730	39.91	76.8	620.7	.1686	1.2773
− 58	5.93	17.8•	42.05	43.83	−19.1	590.4	− .0464	1.4713	32	62.29	47.6	4.637	39.86	77.9	621.0	.1708	1.2755
− 57	6.13	17.4•	40.79	43.78	−18.0	590.8	− .0438	1.4686	33	63.59	48.9	4.547	39.82	79.0	621.2	.1730	1.2738
− 56	6.33	17.0•	39.56	43.74	−17.0	591.2	− .0412	1.4658	34	64.91	50.2	4.459	39.77	80.1	621.5	.1753	1.2721
− 55	6.54	16.6•	38.38	43.70	−15.9	591.6	−0.0386	1.4631	35	66.26	51.6	4.373	39.72	81.2	621.7	0.1775	1.2704
− 54	6.75	16.2•	37.24	43.66	−14.8	592.1	− .0360	1.4604	36	67.63	52.9	4.289	39.67	82.3	622.0	.1797	1.2686
− 53	6.97	15.7•	36.15	43.62	−13.8	592.4	− .0334	1.4577	37	69.02	54.3	4.207	39.63	83.4	622.2	.1819	1.2669
− 52	7.20	15.3•	35.09	43.58	−12.7	592.9	− .0307	1.4551	38	70.43	55.7	4.126	39.58	84.6	622.5	.1841	1.2652
− 51	7.43	14.8•	34.06	43.54	−11.7	593.2	− .0281	1.4524	39	71.87	57.2	4.048	39.54	85.7	622.7	.1863	1.2635
− 50	7.67	14.3•	33.08	43.49	−10.6	593.7	−0.0256	1.4497	40	73.32	58.6	3.971	39.49	86.8	623.0	0.1885	1.2618
− 49	7.91	13.8•	32.12	43.45	− 9.6	594.0	− .0230	1.4471	41	74.80	60.1	3.897	39.44	87.9	623.2	.1908	1.2602
− 48	8.16	13.3•	31.20	43.41	− 8.5	594.4	− .0204	1.4445	42	76.31	61.6	3.823	39.39	89.0	623.4	.1930	1.2585
− 47	8.42	12.8•	30.31	43.37	− 7.4	594.9	− .0179	1.4419	43	77.83	63.1	3.752	39.34	90.1	623.7	.1952	1.2568
− 46	8.68	12.2•	29.45	43.33	− 6.4	595.2	− .0153	1.4393	44	79.38	64.7	3.682	39.29	91.2	623.9	.1974	1.2552
− 45	8.95	11.7•	28.62	43.28	− 5.3	595.6	−0.0127	1.4368	45	80.96	66.3	3.614	39.24	92.3	624.1	0.1996	1.2535
− 44	9.23	11.1•	27.82	43.24	− 4.3	596.0	− .0102	1.4342	46	82.55	67.9	3.547	39.19	93.5	624.4	.2018	1.2519
− 43	9.51	10.6•	27.04	43.20	− 3.2	596.4	− .0076	1.4317	47	84.18	69.5	3.481	39.14	94.6	624.6	.2040	1.2502
− 42	9.81	10.0•	26.29	43.16	− 2.1	596.8	− .0051	1.4292	48	85.82	71.1	3.418	39.10	95.7	624.8	.2062	1.2486
− 41	10.10	9.3•	25.56	43.12	− 1.1	597.2	− .0025	1.4267	49	87.49	72.8	3.355	39.05	96.8	625.0	.2083	1.2469
− 40	10.41	8.7•	24.86	43.08	0.0	597.6	0.0000	1.4242	50	89.19	74.5	3.294	39.00	97.9	625.2	0.2105	1.2453
− 39	10.72	8.1•	24.18	43.04	1.1	598.0	.0025	1.4217	51	90.91	76.2	3.234	38.95	99.1	625.5	.2127	1.2437
− 38	11.04	7.4•	23.53	42.99	2.1	598.3	.0051	1.4193	52	92.66	78.0	3.176	38.90	100.2	625.7	.2149	1.2421
− 37	11.37	6.8•	22.89	42.95	3.2	598.7	.0076	1.4169	53	94.43	79.7	3.119	38.85	101.3	625.9	.2171	1.2405
− 36	11.71	6.1•	22.27	42.90	4.3	599.1	.0101	1.4144	54	96.23	81.5	3.063	38.80	102.4	626.1	.2192	1.2389
− 35	12.05	5.4•	21.68	42.86	5.3	599.5	0.0126	1.4120	55	98.06	83.4	3.008	38.75	103.5	626.3	0.2214	1.2373
− 34	12.41	4.7•	21.10	42.82	6.4	599.9	.0151	1.4096	56	99.91	85.2	2.954	38.70	104.7	626.5	.2236	1.2357
− 33	12.77	3.9•	20.54	42.78	7.4	600.2	.0176	1.4072	57	101.8	87.1	2.902	38.65	105.8	626.7	.2257	1.2341
− 32	13.14	3.2•	20.00	42.73	8.5	600.6	.0201	1.4048	58	103.7	89.0	2.851	38.60	106.9	626.9	.2279	1.2325
− 31	13.52	2.4•	19.48	42.69	9.6	601.0	.0226	1.4025	59	105.6	90.9	2.800	38.55	108.1	627.1	.2301	1.2310
− 30	13.90	1.6•	18.97	42.65	10.7	601.4	0.0250	1.4001	60	107.6	92.9	2.751	38.50	109.2	627.3	0.2322	1.2294
− 29	14.30	0.8•	18.48	42.61	11.7	601.7	.0275	1.3978	61	109.6	94.9	2.703	38.45	110.3	627.5	.2344	1.2278
− 28	14.71	0.0	18.00	42.57	12.8	602.1	.0300	1.3955	62	111.6	96.9	2.656	38.40	111.5	627.7	.2365	1.2262
− 27	15.12	0.4	17.54	42.54	13.9	602.5	.0325	1.3932	63	113.6	98.9	2.610	38.35	112.6	627.9	.2387	1.2247
− 26	15.55	0.8	17.09	42.48	14.9	602.8	.0350	1.3909	64	115.7	101.0	2.565	38.30	113.7	628.0	.2408	1.2231
− 25	15.98	1.3	16.66	42.44	16.0	603.2	0.0374	1.3886	65	117.8	103.1	2.520	38.25	114.8	628.2	0.2430	1.2216
− 24	16.24	1.7	16.24	42.40	17.1	603.6	.0399	1.3863	66	120.0	105.3	2.477	38.20	116.0	628.4	.2451	1.2201
− 23	16.88	2.2	15.83	42.35	18.1	603.9	.0423	1.3840	67	122.1	107.4	2.435	38.15	117.1	628.6	.2473	1.2186
− 22	17.34	2.6	15.43	42.31	19.2	604.3	.0448	1.3818	68	124.3	109.6	2.393	38.10	118.3	628.8	.2494	1.2170
− 21	17.81	3.1	15.05	42.26	20.3	604.6	.0472	1.3796	69	126.5	111.8	2.352	38.05	119.4	628.9	.2515	1.2155
− 20	18.30	3.6	14.68	42.22	21.4	605.0	0.0497	1.3774	70	128.8	114.1	2.312	38.00	120.5	629.1	0.2537	1.2140
− 19	18.79	4.1	14.32	42.18	22.4	605.3	.0521	1.3752	71	131.1	116.4	2.273	37.95	121.7	629.3	.2558	1.2125
− 18	19.30	4.6	13.97	42.13	23.5	605.7	.0545	1.3729	72	133.4	118.7	2.235	37.90	122.8	629.4	.2579	1.2110
− 17	19.81	5.1	13.62	42.09	24.6	606.1	.0570	1.3708	73	135.7	121.0	2.197	37.84	124.0	629.6	.2601	1.2095
− 16	20.34	5.6	13.29	42.04	25.6	606.4	.0594	1.3686	74	138.1	123.4	2.161	37.79	125.1	629.8	.2622	1.2080

* From National Bureau of Standards *Circular* No. 142 (1945) and *Circular* No. 472 (1948).
• Inches of mercury below one standard atmosphere. ** Based on 0 for the saturated liquid at −40 F. † Standard cycle temperatures.

Table 21 .... Refrigerant 717 Properties of Liquid and Saturated Vapor* (Concluded)

Temp F	Pressure psia	Pressure psig	Volume cu ft/lb Vapor v_g	Density lb/cu ft Liquid $1/v_f$	Enthalpy** Btu/lb Liquid h_f	Enthalpy** Btu/lb Vapor h_g	Entropy** Btu/(lb) (°R) Liquid s_f	Entropy** Btu/(lb) (°R) Vapor s_g	Temp F	Pressure psia	Pressure psig	Volume cu ft/lb Vapor v_g	Density lb/cu ft Liquid $1/v_f$	Enthalpy** Btu/lb Liquid h_f	Enthalpy** Btu/lb Vapor h_g	Entropy** Btu/(lb) (°R) Liquid s_f	Entropy** Btu/(lb) (°R) Vapor s_g
75	140.5	125.8	2.125	37.74	126.2	629.9	0.2643	1.2065	100	211.9	197.2	1.419	36.40	155.2	633.0	0.3166	1.1705
76	143.0	128.3	2.089	37.69	127.4	630.1	.2664	1.2050	101	215.2	200.5	1.397	36.34	156.4	633.1	.3187	1.1691
77	145.4	130.7	2.055	37.64	128.5	630.2	.2685	1.2035	102	218.6	203.9	1.375	36.29	157.6	633.2	.3207	1.1677
78	147.9	133.2	2.021	37.58	129.7	630.4	.2706	1.2020	103	222.0	207.3	1.354	36.23	158.7	633.3	.3228	1.1663
79	150.5	135.8	1.988	37.53	130.8	630.5	.2728	1.2006	104	225.4	210.7	1.334	36.18	159.9	633.4	.3248	1.1649
80	153.0	138.3	1.955	37.48	132.0	630.7	0.2749	1.1991	105	228.9	214.2	1.313	36.12	161.1	633.4	0.3269	1.1635
81	155.6	140.9	1.923	37.43	133.1	630.8	.2769	1.1976	106	232.5	217.8	1.293	36.06	162.3	633.5	.3289	1.1621
82	158.3	143.6	1.892	37.37	134.3	631.0	.2791	1.1962	107	236.0	221.3	1.274	36.01	163.5	633.6	.3310	1.1607
83	161.0	146.3	1.861	37.32	135.4	631.1	.2812	1.1947	108	239.7	225.0	1.254	35.95	164.6	633.6	.3330	1.1593
84	163.7	149.0	1.831	37.26	136.6	631.3	.2833	1.1933	109	243.3	228.6	1.235	35.90	165.8	633.7	.3351	1.1580
85	166.4	151.7	1.801	37.21	137.8	631.4	0.2854	1.1918	110	247.0	232.3	1.217	35.84	167.0	633.7	0.3372	1.1566
86†	169.2	154.5	1.772	37.16	138.9	631.5	.2875	1.1904	111	250.8	236.1	1.198	35.78	168.2	633.8	.3392	1.1552
87	172.0	157.3	1.744	37.11	140.1	631.7	.2895	1.1889	112	254.5	239.8	1.180	35.72	169.4	633.8	.3413	1.1538
88	174.8	160.1	1.716	37.05	141.2	631.8	.2917	1.1875	113	258.4	243.7	1.163	35.67	170.6	633.9	.3433	1.1524
89	177.7	163.0	1.688	37.00	142.4	631.9	.2937	1.1860	114	262.2	247.5	1.145	35.61	171.8	633.9	.3453	1.1510
90	180.6	165.9	1.661	36.95	143.5	632.0	0.2958	1.1846	115	266.2	251.5	1.128	35.55	173.0	633.9	0.3474	1.1497
91	183.6	168.9	1.635	36.89	144.7	632.1	.2979	1.1832	116	270.1	255.4	1.112	35.49	174.2	634.0	.3495	1.1483
92	186.6	171.9	1.609	36.84	145.8	632.2	.3000	1.1818	117	274.1	259.4	1.095	35.43	175.4	634.0	.3515	1.1469
93	189.6	174.9	1.584	36.78	147.0	632.3	.3021	1.1804	118	278.2	263.5	1.079	35.38	176.6	634.0	.3535	1.1455
94	192.7	178.0	1.559	36.73	148.2	632.5	.3041	1.1789	119	282.3	267.6	1.063	35.32	177.8	634.0	.3556	1.1441
95	195.8	181.1	1.534	36.67	149.4	632.6	0.3062	1.1775	120	286.4	271.7	1.047	25.26	179.0	634.0	0.3576	1.1427
96	198.9	184.2	1.510	36.62	150.5	632.6	.3083	1.1761	121	290.6	275.9	1.032	35.20	180.2	634.0	.3597	1.1414
97	202.1	187.4	1.487	36.56	151.7	632.8	.3104	1.1747	122	294.8	280.1	1.017	35.14	181.4	634.0	.3618	1.1400
98	205.3	190.6	1.464	36.51	152.9	632.9	.3125	1.1733	123	299.1	284.4	1.002	35.08	182.6	634.0	.3638	1.1386
99	208.6	193.9	1.441	36.45	154.0	632.9	.3145	1.1719	124	303.4	288.7	0.987	35.02	183.9	634.0	.3659	1.1372
									125	307.8	293.1	0.973	34.96	185.1	634.0	.3679	1.1358

Table 22 .... Refrigerant 717 (Ammonia) Properties of Superheated Vapor*

Temp F	Abs Pressure 5.0 psi, Gage Press. 19.8 in. Vac (Sat Temp −63.11 F)			Abs Pressure 6.0 psi, Gage Press. 17.7 in. Vac (Sat Temp −57.64 F)			Abs Pressure 7.0 psi, Gage Press. 15.7 in. Vac (Sat Temp −52.88 F)			Abs Pressure 8.0 psi, Gage Press. 13.6 in. Vac (Sat Temp −48.64 F)			Abs Pressure 9.0 psi, Gage Press. 11.6 in. Vac (Sat Temp −44.38 F)		
t	v	h	s	v	h	s	v	h	s	v	h	s	v	h	s
(At Sat)	(49.31)	(588.3)	(1.4857)	(41.59)	(590.6)	(1.4703)	(35.01)	(592.5)	(1.4574)	(31.79)	(594.2)	(1.4462)	(28.48)	(595.7)	(1.4363)
−50	51.05	595.2	1.5025	42.44	594.6	1.4803	36.29	594.0	1.4611	....	....	....	....	....	....
−40	52.36	600.3	.5149	43.55	599.8	.4928	37.25	599.3	.4739	32.52	598.8	1.4573	28.85	598.3	1.4426
−30	53.67	605.4	.5269	44.64	604.9	.5049	38.19	604.5	.4861	33.36	604.1	.4697	29.59	603.6	.4551
−20	54.97	610.4	.5385	45.73	610.0	.5166	39.13	609.6	.4979	34.19	609.3	.4816	30.34	608.9	.4672
−10	56.28	615.4	.5498	46.82	615.1	.5280	40.07	614.7	.5094	35.01	614.4	.4932	31.07	614.0	.4788
0	57.55	620.4	1.5608	47.90	620.1	1.5391	41.00	619.8	1.5206	35.83	619.5	1.5044	31.80	619.2	1.4902
10	58.84	625.4	.5716	48.98	625.2	.5499	41.93	624.9	.5314	36.64	624.6	.5154	32.53	624.3	.5012
20	60.12	630.4	.5821	50.05	630.2	.5605	42.85	629.9	.5421	37.45	629.7	.5261	33.26	629.4	.5119
30	61.41	635.4	.5925	51.12	635.2	.5708	43.77	635.0	.5525	38.26	634.7	.5365	33.98	634.5	.5224
40	62.69	640.4	.6026	52.19	640.2	.5810	44.69	640.0	.5627	39.07	639.8	.5467	34.70	639.5	.5327
50	63.96	645.5	1.6125	53.26	645.2	1.5910	45.61	645.0	1.5727	39.88	644.8	1.5568	35.42	644.6	1.5427
60	65.24	650.5	.6223	54.32	650.3	.6008	46.53	650.1	.5825	40.68	649.9	.5666	36.13	649.7	.5526
70	66.51	655.5	.6319	55.39	655.3	.6104	47.44	655.2	.5921	41.48	655.0	.5763	36.85	654.8	.5623
80	67.79	660.6	.6413	56.45	660.4	.6199	48.36	660.2	.6016	42.28	660.1	.5858	37.56	659.9	.5718
90	69.06	665.6	.6506	57.51	665.5	.6292	49.27	665.3	.6110	43.08	665.2	.5952	38.27	665.0	.5812
100	70.33	670.7	1.6598	58.58	670.6	1.6384	50.18	670.4	1.6202	43.88	670.3	1.6044	38.98	670.1	1.5904
110	71.60	675.8	.6689	59.64	675.7	.6474	51.09	675.5	.6292	44.68	675.4	.6135	39.70	675.3	.5995
120	72.87	680.9	.6778	60.70	680.8	.6563	52.00	680.7	.6382	45.48	680.5	.6224	40.40	680.4	.6085
130	74.14	686.1	.6865	61.76	685.9	.6651	52.91	685.8	.6470	46.27	685.7	.6312	41.11	685.6	.6173
140	75.41	691.2	.6952	62.82	691.1	.6738	53.82	691.0	.6557	47.07	690.9	.6399	41.82	690.7	.6260
150	76.68	696.4	1.7038	63.87	696.3	1.6824	54.73	696.2	1.6643	47.87	696.1	1.6485	42.53	695.9	1.6346
160	77.95	701.6	.7122	64.93	701.5	.6909	55.63	701.4	.6727	48.66	701.3	.6570	43.24	701.2	.6431

Temp F	Abs Pressure 10.0 psi, Gage Press. 9.6 in. Vac (Sat Temp −41.34 F)			Abs Pressure 11.0 psi, Gage Press. 7.5 in. Vac (Sat Temp −38.14 F)			Abs Pressure 12.0 psi, Gage Press. 5.5 in. Vac (Sat Temp −35.16 F)			Abs Pressure 13.0 psi, Gage Press. 3.5 in. Vac (Sat Temp −32.37 F)			Abs Pressure 14.0 psi, Gage Press. 1.4 in. Vac (Sat Temp −29.76 F)		
(At Sat)	(25.81)	(597.1)	(1.4276)	(23.61)	(598.3)	(1.4196)	(21.77)	(599.4)	(1.4124)	(20.20)	(600.5)	(1.4057)	(18.85)	(601.4)	(1.3996)
−30	26.58	603.2	1.4420	24.12	602.7	1.4300	22.07	602.3	1.4190	20.33	601.8	1.4088	....	....	....
−20	27.26	608.5	.4542	24.74	608.1	.4423	22.64	607.7	.4314	20.86	607.2	.4213	19.33	606.8	1.4119
−10	27.92	613.7	.4659	25.35	613.3	.4542	23.20	613.0	.4434	21.38	612.6	.4334	19.82	612.2	.4241
0	28.58	618.9	1.4773	25.95	618.5	1.4656	23.75	618.2	1.4549	21.90	617.9	1.4450	20.30	617.6	1.4358
10	29.24	624.0	.4884	26.55	623.7	.4768	24.31	623.4	.4661	22.41	623.1	.4563	20.78	622.8	.4472
20	29.90	629.1	.4992	27.15	628.9	.4876	24.86	628.6	.4770	22.92	628.3	.4672	21.26	628.0	.4582
30	30.55	634.2	.5097	27.74	634.0	.4982	25.41	633.7	.4877	23.43	633.5	.4779	21.73	633.2	.4688
40	31.20	639.3	.5200	28.34	639.1	.5085	25.95	638.9	.4980	23.93	638.6	.4883	22.20	638.4	.4793
50	31.85	644.4	1.5301	28.93	644.2	1.5187	26.49	644.0	1.5082	24.43	643.8	1.4985	22.67	643.6	1.4896
60	32.49	649.5	.5400	29.52	649.3	.5286	27.03	649.1	.5182	24.94	648.9	.5085	23.14	648.7	.4996
70	33.14	654.6	.5497	30.10	654.4	.5383	27.57	654.3	.5279	25.43	654.1	.5183	23.60	653.9	.5094
80	33.78	659.7	.5593	30.69	659.6	.5479	28.11	659.4	.5375	25.93	659.2	.5279	24.06	659.0	.5191
90	34.42	664.8	.5687	31.28	664.7	.5573	28.65	664.5	.5470	26.43	664.4	.5374	24.53	664.2	.5285
100	35.07	670.0	1.5779	31.86	669.8	1.5666	29.19	669.7	1.5562	26.93	669.5	1.5467	24.99	669.4	1.5378
110	35.71	675.1	.5870	32.44	675.0	.5757	29.72	674.8	.5654	27.42	674.7	.5558	25.45	674.5	.5470
120	36.35	680.3	.5960	33.03	680.1	.5847	30.26	680.0	.5744	27.92	679.9	.5649	25.91	679.7	.5560
130	36.99	685.4	.6049	33.61	685.3	.5936	30.79	685.2	.5833	28.41	685.1	.5737	26.37	684.9	.5649
140	37.62	690.6	.6136	34.19	690.5	.6023	31.33	690.4	.5920	28.90	690.3	.5825	26.83	690.1	.5737
150	38.26	695.8	1.6222	34.77	695.7	1.6109	31.86	695.6	1.6006	29.40	695.5	1.5911	27.29	695.4	1.5824
160	38.90	701.1	.6307	35.35	700.9	.6194	32.39	700.8	.6092	29.89	700.7	.5997	27.74	700.6	.5909
170	39.54	706.3	.6391	35.93	706.2	.6278	32.92	706.1	.6176	30.38	706.0	.6081	28.20	705.9	.5993

* From National Bureau of Standards Circular No. 142 (1945).