T300E Gas Calculation Tables

Table 1. The Vapor Pressure of Fresh Water in mm Hg as a Function of Temperature

Temp (°C)	0.0°	0.1°	0.2°	0.3°	0.4°	0.5°	0.6°	0.7°	0.8°	0.9°
0°	4.58	4.62	4.65	4.68	4.72	4.75	4.79	4.82	4.86	4.89
1°	4.93	4.96	5.00	5.04	5.07	5.11	5.14	5.18	5.22	5.26
2°	5.29	5.33	5.37	5.41	5.45	5.49	5.53	5.57	5.60	5.64
3°	5.68	5.73	5.77	5.81	5.85	5.89	5.93	5.97	6.02	6.06
4°	6.10	6.14	6.19	6.23	6.27	6.32	6.36	6.41	6.45	6.50
5°	6.54	6.59	6.64	6.68	6.73	6.78	6.82	6.87	6.92	6.97
6°	7.01	7.06	7.11	7.16	7.21	7.26	7.31	7.36	7.41	7.46
7°	7.51	7.57	7.62	7.67	7.72	7.78	7.83	7.88	7.94	7.99
8°	8.05	8.10	8.16	8.21	8.27	8.32	8.38	8.44	8.49	8.55
9°	8.61	8.67	8.73	8.79	8.85	8.91	8.97	9.03	9.09	9.15
10°	9.21	9.27	9.33	9.40	9.46	9.52	9.59	9.65	9.72	9.78
11°	9.85	9.91	9.98	10.04	10.11	10.18	10.24	10.31	10.38	10.45
12°	10.52	10.59	10.66	10.73	10.80	10.87	10.94	11.01	11.09	11.16
13°	11.23	11.31	11.38	11.46	11.53	11.61	11.68	11.76	11.83	11.91
14°	11.99	12.07	12.15	12.23	12.30	12.38	12.46	12.55	12.63	12.71
15°	12.79	12.87	12.96	13.04	13.12	13.21	13.29	13.38	13.46	13.55
16°	13.64	13.73	13.81	13.90	13.99	14.08	14.17	14.26	14.35	14.44
17°	14.53	14.63	14.72	14.81	14.91	15.00	15.10	15.19	15.29	15.38
18°	15.48	15.58	15.68	15.78	15.88	15.97	16.08	16.18	16.28	16.38
19°	16.48	16.59	16.69	16.79	16.90	17.00	17.11	17.22	17.32	17.43
20°	17.54	17.65	17.76	17.87	17.98	18.09	18.20	18.31	18.43	18.54
21°	18.66	18.77	18.89	19.00	19.12	19.24	19.36	19.47	19.59	19.71
22°	19.83	19.96	20.08	20.20	20.32	20.45	20.57	20.70	20.82	20.95
23°	21.08	21.20	21.33	21.46	21.59	21.72	21.85	21.99	22.12	22.25
24°	22.39	22.52	22.66	22.79	22.93	23.07	23.21	23.34	23.48	23.63
25°	23.77	23.91	24.05	24.19	24.34	24.48	24.63	24.78	24.92	25.07
26°	25.22	25.37	25.52	25.67	25.82	25.98	26.13	26.28	26.44	26.59
27°	26.75	26.91	27.07	27.23	27.39	27.55	27.71	27.87	28.03	28.20
28°	28.36	28.53	28.69	28.86	29.03	29.20	29.37	29.54	29.71	29.88
29°	30.06	30.23	30.41	30.58	30.76	30.94	31.12	31.30	31.48	31.66
30°	31.84	32.02	32.21	32.39	32.58	32.77	32.95	33.14	33.33	33.52
31°	33.71	33.91	34.10	34.29	34.49	34.69	34.88	35.08	35.28	35.48
32°	35.68	35.89	36.09	36.29	36.50	36.70	36.91	37.12	37.33	37.54
33°	37.75	37.96	38.18	38.39	38.61	38.82	39.04	39.26	39.48	39.70
34°	39.92	40.14	40.37	40.59	40.82	41.05	41.28	41.51	41.74	41.97
35°	42.20	42.43	42.67	42.91	43.14	43.38	43.62	43.86	44.10	44.35
36°	44.59	44.84	45.08	45.33	45.58	45.83	46.08	46.33	46.59	46.84
37°	47.10	47.35	47.61	47.87	48.13	48.40	48.66	48.92	49.19	49.46
38°	49.72	49.99	50.27	50.54	50.81	51.09	51.36	51.64	51.92	52.20
39°	52.48	52.76	53.04	53.33	53.62	53.90	54.19	54.48	54.78	55.07
40°	55.36	55.66	55.96	56.25	56.55	56.86	57.16	57.46	57.77	58.07

Source: *Computation of Dissolved Gas Concentrations in Water as Functions of Temperature, Salinity, and Pressure.* American Fisheries Society Special Publication No. 14.

T300E Gas Calculation Tables

Table 2. Bunsen Coefficients for Oxygen as a Function of Temperature (partial pressure of oxygen = 760 mm Hg, salinity = 0.0 ppt)

Temp (°C)	0.0°	0.1°	0.2°	0.3°	0.4°	0.5°	0.6°	0.7°	0.8°	0.9°
0°	.04910	.04896	.04883	.04869	.04856	.04843	.04829	.04816	.04803	.04790
1°	.04777	.04764	.04751	.04738	.04725	.04713	.04700	.04687	.04675	.04662
2°	.04650	.04638	.04625	.04613	.04601	.04589	.04576	.04564	.04552	.04540
3°	.04529	.04517	.04505	.04493	.04482	.04470	.04458	.04447	.04435	.04424
4°	.04413	.04401	.04390	.04379	.04368	.04357	.04346	.04335	.04324	.043'3
5°	.04302	.04291	.04280	.04270	.04259	.04248	.04238	.04227	.04217	.04206
6°	.04196	.04'86	.04175	.04165	.04155	.04145	.04135	.04124	.04114	.04104
7°	.04095	.04085	.04075	.04065	.04055	.04045	.04036	.04026	.04017	.04007
8°	.03998	.03988	.03979	.03969	.03960	.03951	.03941	.03932	.03923	.03914
9°	.03905	.03896	.03887	.03878	.03869	.03860	.03851	.03842	.03833	.03824
10°	.03816	.03807	.03798	.03790	.03781	.03773	.03764	.03756	.03747	.03739
11°	.03730	.03722	.03714	.03706	.03697	.03689	.03681	.03673	.03665	.03657
12°	.03649	.03641	.03633	.03625	.03617	.03609	.03601	.03594	.03586	.03578
13°	.03570	.03563	.03555	.03548	.03540	.03533	.03525	.03518	.03510	.03503
14°	.03495	.03488	.03481	.03473	.03466	.03459	.03452	.03445	.03438	.03430
15°	.03423	.03416	.03409	.03402	.03395	.03388	.03382	.03375	.03368	.03361
16°	.03354	.03348	.03341	.03334	.03327	.03321	.03314	.03308	.03301	.03295
17°	.03288	.03282	.03275	.03269	.03262	.03256	.03250	.03243	.03237	.03231
18°	.03224	.03218	.03212	.03206	.03200	.03194	.03187	.03181	.03175	.03169
19°	.03163	.03157	.03151	.03145	.03140	.03134	.03128	.03122	.03116	.03110
20°	.03105	.03099	.03093	.03088	.03082	.03076	.03071	.03065	.03059	.03054
21°	.03048	.03043	.03037	.03032	.03026	.03021	.03016	.03010	.03005	.03000
22°	.02994	.02989	.02984	.02978	.02973	.02968	.02963	.02958	.02952	.02947
23°	.02942	.02937	.02932	.02927	.02922	.02917	.02912	.02907	.02902	.02897
24°	.02892	.02887	.02882	.02878	.02873	.02868	.02863	.02858	.02854	.02849
25°	.02844	.02840	.02835	.02830	.02826	.02821	.02816	.02812	.02807	.02803
26°	.02798	.02794	.02789	.02785	.02780	.02776	.02771	.02767	.02762	.02758
27°	.02754	.02749	.02745	.02741	.02736	.02732	.02728	.02724	.02719	.02715
28°	.02711	.02707	.02703	.02698	.02694	.02690	.02686	.02682	.02678	.02674
29°	.02670	.02666	.02662	.02658	.02654	.02650	.02646	.02642	.02638	.02634
30°	.02630	.02627	.02623	.02619	.02615	.02611	.02607	.02604	.02600	.02596
31°	.02592	.02589	.02585	.02581	.02578	.02574	.02570	.02567	.02563	.02560
32°	.02556	.02552	.02549	.02545	.02542	.02538	.02535	.02531	.02528	.02524
33°	.02521	.02517	.02514	.02511	.02507	.02504	.02500	.02497	.02494	.02490
34°	.02487	.02484	.02480	.02477	.02474	.02471	.02467	.02464	.02461	.02458
35°	.02455	.02451	.02448	.02445	.02442	.02439	.02436	.02433	.02429	.02426
36°	.02423	.02420	.02417	.02414	.02411	.02408	.02405	.02402	.02399	.02396
37°	.02393	.02390	.02387	.02384	.02381	.02379	.02376	.02373	.02370	.02367
38°	.02364	.02361	.02359	.02356	.02353	.02350	.02347	.02345	.02342	.02339
39°	.02336	.02334	.02331	.02328	.02326	.02323	.02320	.02318	.02315	.02312
40°	.02310	.02307	.02304	.02302	.02299	.02297	.02294	.02292	.02289	.02286

Source: *Computation of Dissolved Gas Concentrations in Water as Functions of Temperature, Salinity, and Pressure.* American Fisheries Society Special Publication No. 14.

T300E Gas Calculation Tables

Table 3. The Vapor Pressure of Seawater in mm Hg as a Function of Temperature (salinity = 35 ppt)

Temp (°C)	0.0°	0.1°	0.2°	0.3°	0.4°	0.5°	0.6°	0.7°	0.8°	0.9°
0°	4.50	4.53	4.56	4.60	4.63	4.66	4.70	4.73	4.77	4.80
1°	4.84	4.87	4.91	4.94	4.98	5.01	5.05	5.08	5.12	5.16
2°	5.20	5.23	5.27	5.31	5.35	5.38	5.42	5.46	5.50	5.54
3°	5.58	5.62	5.66	5.70	5.74	5.78	5.82	5.86	5.90	5.94
4°	5.99	6.03	6.07	6.11	6.16	6.20	6.24	6.29	6.33	6.38
5°	6.42	6.47	6.51	6.56	6.60	6.65	6.69	6.74	6.79	6.84
6°	6.88	6.93	6.98	7.03	7.08	7.12	7.17	7.22	7.27	7.32
7°	7.37	7.42	7.48	7.53	7.58	7.63	7.68	7.74	7.79	7.84
8°	7.90	7.95	8.00	8.06	8.11	8.17	8.22	8.28	8.34	8.39
9°	8.45	8.51	8.56	8.62	8.68	8.74	8.80	8.86	8.92	8.98
10°	9.04	9.10	9.16	9.22	9.28	9.34	9.41	9.47	9.53	9.60
11°	9.66	9.73	9.79	9.86	9.92	9.99	10.05	10.12	10.19	10.25
12°	10.32	10.39	10.46	10.53	10.60	10.67	10.74	10.81	10.88	10.95
13°	11.02	11.10	11.17	11.24	11.31	11.39	11.46	11.54	11.61	11.69
14°	11.77	11.84	11.92	12.00	12.07	12.15	12.23	12.31	12.39	12.47
15°	12.55	12.63	12.71	12.80	12.88	12.96	13.04	13.13	13.21	13.30
16°	13.38	13.47	13.55	13.64	13.73	13.82	13.90	13.99	14.08	14.17
17°	14.26	14.35	14.44	14.54	14.63	14.72	14.81	14.91	15.00	15.10
18°	15.19	15.29	15.38	15.48	15.58	15.68	15.77	15.87	15.97	16.07
19°	16.17	16.28	16.38	16.48	16.58	16.69	16.79	16.89	17.00	17.11
20°	17.21	17.32	17.43	17.53	17.64	17.75	17.86	17.97	18.08	18.19
21°	18.31	18.42	18.53	18.65	18.76	18.88	18.99	19.11	19.23	19.34
22°	19.46	19.58	19.70	19.82	19.94	20.06	20.19	20.31	20.43	20.56
23°	20.68	20.81	20.93	21.06	21.19	21.32	21.44	21.57	21.70	21.84
24°	21.97	22.10	22.23	22.37	22.50	22.64	22.77	22.91	23.04	23.18
25°	23.32	23.46	23.60	23.74	23.88	24.03	24.17	24.31	24.46	24.60
26°	24.75	24.90	25.04	25.19	25.34	25.49	25.64	25.79	25.94	26.10
27°	26.25	26.41	26.56	26.72	26.87	27.03	27.19	27.35	27.51	27.67
28°	27.83	27.99	28.16	28.32	28.49	28.65	28.82	28.99	29.16	29.32
29°	29.50	29.67	29.84	30.01	30.18	30.36	30.53	30.71	30.89	31.07
30°	31.24	31.42	31.60	31.79	31.97	32.15	32.34	32.52	32.71	32.89
31°	33.08	33.27	33.46	33.65	33.84	34.04	34.23	34.43	34.62	34.82
32°	35.01	35.21	35.41	35.61	35.81	36.02	36.22	36.42	36.63	36.84
33°	37.04	37.25	37.46	37.67	37.88	38.10	38.31	38.52	38.74	38.96
34°	39.17	39.39	39.61	39.83	40.06	40.28	40.50	40.73	40.95	41.18
35°	41.41	41.64	41.87	42.10	42.34	42.57	42.80	43.04	43.28	43.52
36°	43.76	44.00	44.24	44.48	44.73	44.97	45.22	45.47	45.71	45.96
37°	46.22	46.47	46.72	46.98	47.23	47.49	47.75	48.01	48.27	48.53
38°	48.79	49.06	49.32	49.59	49.86	50.13	50.40	50.67	50.95	51.22
39°	51.50	51.77	52.05	52.33	52.61	52.89	53.18	53.46	53.75	54.04
40°	54.33	54.62	54.91	55.20	55.50	55.79	56.09	56.39	56.69	56.99

Source: *Computation of Dissolved Gas Concentrations in Water as Functions of Temperature, Salinity, and Pressure.* American Fisheries Society Special Publication No. 14.

Table 4. Bunsen Coefficients for Oxygen as Functions of Temperature and Salinity 33-37 ppt (partial pressure of oxygen = 760 mm Hg)

Temp.	Salinity, parts per thousand (ppt)								
(°C)	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0
0°	.03919	.03905	.03892	.03879	.03865	.03852	.03839	.03826	.03813
1°	.03819	.03806	.03793	.03780	.03767	.03755	.03742	.03729	.03717
2°	.03723	.03711	.03698	.03686	.03674	.03661	.03649	.03637	.03624
3°	.03632	.03620	.03608	.03596	.03584	.03572	.03560	.03548	.03536
4°	.03545	.03533	.03521	.03510	.03498	.03486	.03475	.03463	.03452
5°	.03461	.03450	.03438	.03427	.03416	.03405	.03393	.03382	.03371
6°	.03381	.03370	.03359	.03348	.03337	.03326	.03316	.03305	.03294
7°	.03305	.03294	.03283	.03273	.03262	.03252	.03241	.03230	.03220
8°	.03231	.03221	.03211	.03200	.03190	.03180	.03170	.03159	.03149
9°	.03161	.03151	.03141	.03131	.03121	.03111	.03101	.03091	.03081
10°	.03094	.03084	.03074	.03064	.03055	.03045	.03035	.03026	.03016
11°	.03029	.03020	.03010	.03001	.02991	.02982	.02972	.02963	.02954
12°	.02967	.02958	.02949	.02940	.02930	.02921	.02912	.02903	.02894
13°	.02908	.02899	.02890	.02881	.02872	.02863	.02854	.02845	.02837
14°	.02851	.02842	.02834	.02825	.02816	.02807	.02799	.02790	.02782
15°	.02796	.02788	.02779	.02771	.02762	.02754	.02745	.02737	.02729
16°	.02744	.02736	.02727	.02719	.02711	.02703	.02694	.02686	.02678
17°	.02694	.02685	.02677	.02669	.02661	.02653	.02645	.02637	.02629
18°	.02645	.02637	.02629	.02622	.02614	.02606	.02598	.02590	.02583
19°	.02599	.02591	.02583	.02576	.02568	.02560	.02553	.02545	.02538
20°	.02554	.02547	.02539	.02532	.02524	.02517	.02509	.02502	.02494
21°	.02511	.02504	.02497	.02489	.02482	.02475	.02467	.02460	.02453
22°	.02470	.02463	.02456	.02449	.02441	.02434	.02427	.02420	.02413
23°	.02430	.02423	.02416	.02409	.02402	.02396	.02389	.02382	.02375
24°	.02392	.02386	.02379	.02372	.02365	.02358	.02351	.02345	.02338
25°	.02356	.02349	.02342	.02336	.02329	.02322	.02316	.02309	.02303
26°	.02321	.02314	.02307	.02301	.02294	.02288	.02281	.02275	.02269
27°	.02287	.02280	.02274	.02268	.02261	.02255	.02248	.02242	.02236
28°	.02254	.02248	.02242	.02235	.02229	.02223	.02217	.02211	.02204
29°	.02223	.02217	.02211	.02204	.02198	.02192	.02186	.02180	.02174
30°	.02193	.02187	.02181	.02175	.02169	.02163	.02157	.02151	.02145
31°	.02164	.02158	.02152	.02146	.02140	.02134	.02129	.02123	.02117
32°	.02136	.02130	.02124	.02119	.02113	.02107	.02101	.02096	.02090
33°	.02109	.02104	.02098	.02092	.02087	.02081	.02075	.02070	.02064
34°	.02084	.02078	.02072	.02067	.02061	.02056	.02050	.02045	.02039
35°	.02059	.02053	.02048	.02042	.02037	.02032	.02026	.02021	.02015
36°	.02035	.02030	.02024	.02019	.02014	.02008	.02003	.01998	.01992
37°	.02012	.02007	.02001	.01996	.01991	.01986	.01981	.01975	.01970
38°	.01990	.01985	.01980	.01975	.01969	.01964	.01959	.01954	.01949
39°	.01969	.01964	.01959	.01954	.01949	.01944	.01938	.01933	.01928
40°	.01949	.01944	.01939	.01934	.01929	.01924	.01919	.01914	.01909

Source: *Computation of Dissolved Gas Concentrations in Water as Functions of Temperature, Salinity, and Pressure.* American Fisheries Society Special Publication No. 14.