

Wave Equation Tables for SO422 (9/05)

d/L	d/L _o	2πd/L	tanh (2πd/L)	sinh (2πd/L)	n	H/H _o '
0.010	0.0006	0.063	0.063	0.063	0.999	2.825
0.0125	0.0010	0.079	0.078	0.079	0.998	2.528
0.015	0.0014	0.094	0.094	0.094	0.997	2.310
0.0175	0.0019	0.110	0.110	0.110	0.996	2.141
0.020	0.0025	0.126	0.125	0.126	0.995	2.005
0.0225	0.0032	0.141	0.140	0.142	0.993	1.893
0.025	0.0039	0.157	0.156	0.158	0.992	1.799
0.0275	0.0047	0.173	0.171	0.174	0.990	1.718
0.030	0.0056	0.188	0.186	0.190	0.988	1.648
0.0325	0.0065	0.204	0.201	0.206	0.986	1.586
0.035	0.0076	0.220	0.216	0.222	0.984	1.532
0.0375	0.0087	0.236	0.231	0.238	0.982	1.484
0.040	0.0098	0.251	0.246	0.254	0.980	1.440
0.0425	0.0111	0.267	0.261	0.270	0.977	1.401
0.045	0.0124	0.283	0.275	0.287	0.974	1.365
0.0475	0.0138	0.298	0.290	0.303	0.971	1.332
0.050	0.0152	0.314	0.304	0.319	0.969	1.303
0.0525	0.0167	0.330	0.318	0.336	0.965	1.275
0.055	0.0183	0.346	0.332	0.352	0.962	1.250
0.0575	0.0199	0.361	0.346	0.369	0.959	1.227
0.060	0.0216	0.377	0.360	0.386	0.956	1.205
0.0625	0.0234	0.393	0.374	0.403	0.952	1.185
0.065	0.0252	0.408	0.387	0.420	0.948	1.167
0.0675	0.0270	0.424	0.400	0.437	0.945	1.150
0.070	0.0289	0.440	0.413	0.454	0.941	1.134
0.0725	0.0309	0.456	0.426	0.471	0.937	1.119
0.075	0.0329	0.471	0.439	0.489	0.933	1.105
0.0775	0.0350	0.487	0.452	0.506	0.929	1.092
0.080	0.0371	0.503	0.464	0.524	0.925	1.079
0.0825	0.0393	0.518	0.476	0.542	0.921	1.068
0.085	0.0415	0.534	0.488	0.560	0.916	1.057
0.0875	0.0438	0.550	0.500	0.578	0.912	1.047
0.090	0.0461	0.565	0.512	0.596	0.907	1.037
0.0925	0.0484	0.581	0.524	0.614	0.903	1.028
0.095	0.0508	0.597	0.535	0.633	0.898	1.020
0.0975	0.0532	0.613	0.546	0.652	0.894	1.012
0.100	0.0557	0.628	0.557	0.670	0.889	1.005
0.110	0.0659	0.691	0.599	0.748	0.870	0.980
0.115	0.0711	0.723	0.618	0.787	0.861	0.969
0.120	0.0765	0.754	0.638	0.827	0.851	0.960
0.125	0.0820	0.785	0.656	0.869	0.841	0.952
0.130	0.0875	0.817	0.673	0.911	0.832	0.945
0.135	0.0932	0.848	0.690	0.954	0.822	0.939
0.140	0.0989	0.880	0.706	0.998	0.812	0.934
0.145	0.1046	0.911	0.722	1.042	0.803	0.929
0.150	0.1105	0.942	0.736	1.088	0.793	0.925
0.155	0.1163	0.974	0.750	1.135	0.783	0.922
0.160	0.1222	1.005	0.764	1.183	0.774	0.920

d/L	d/L _o	2πd/L	tanh (2πd/L)	sinh (2πd/L)	n	H/H _o '
0.165	0.1281	1.037	0.777	1.233	0.765	0.917
0.170	0.1341	1.068	0.789	1.283	0.756	0.916
0.175	0.1401	1.100	0.800	1.335	0.747	0.915
0.180	0.1460	1.131	0.811	1.388	0.738	0.914
0.185	0.1520	1.162	0.822	1.442	0.730	0.913
0.190	0.1580	1.194	0.832	1.498	0.721	0.913
0.195	0.1640	1.225	0.841	1.556	0.713	0.913
0.200	0.1700	1.257	0.850	1.614	0.705	0.913
0.220	0.1939	1.382	0.881	1.867	0.675	0.917
0.230	0.2058	1.445	0.895	2.003	0.661	0.919
0.240	0.2176	1.508	0.907	2.148	0.648	0.922
0.250	0.2293	1.571	0.917	2.301	0.636	0.926
0.260	0.2409	1.634	0.927	2.464	0.625	0.929
0.270	0.2524	1.696	0.935	2.636	0.614	0.933
0.280	0.2639	1.759	0.942	2.818	0.604	0.937
0.290	0.2752	1.822	0.949	3.012	0.595	0.941
0.300	0.2865	1.885	0.955	3.217	0.587	0.944
0.310	0.2976	1.948	0.960	3.435	0.579	0.948
0.320	0.3087	2.011	0.965	3.667	0.572	0.952
0.330	0.3197	2.073	0.969	3.913	0.566	0.955
0.340	0.3306	2.136	0.972	4.175	0.560	0.959
0.350	0.3415	2.199	0.976	4.453	0.554	0.962
0.360	0.3523	2.262	0.979	4.749	0.549	0.965
0.370	0.3630	2.325	0.981	5.063	0.544	0.967
0.380	0.3736	2.388	0.983	5.398	0.540	0.970
0.390	0.3842	2.450	0.985	5.754	0.536	0.973
0.400	0.3948	2.513	0.987	6.132	0.533	0.975
0.410	0.4053	2.576	0.988	6.535	0.530	0.977
0.420	0.4157	2.639	0.990	6.963	0.527	0.979
0.430	0.4261	2.702	0.991	7.420	0.524	0.981
0.440	0.4365	2.765	0.992	7.905	0.522	0.983
0.450	0.4469	2.827	0.993	8.421	0.520	0.984
0.460	0.4572	2.890	0.994	8.971	0.518	0.986
0.470	0.4674	2.953	0.995	9.557	0.516	0.987
0.480	0.4777	3.016	0.995	10.180	0.514	0.988
0.490	0.4879	3.079	0.996	10.843	0.513	0.989
0.500	0.4981	3.142	0.996	11.549	0.512	0.990
0.550	0.5489	3.456	0.998	15.825	0.507	0.994
0.600	0.5994	3.770	0.999	21.677	0.504	0.997
0.650	0.6496	4.084	0.999	29.685	0.502	0.998
0.700	0.6998	4.398	1.000	40.647	0.501	0.999
0.750	0.7499	4.712	1.000	55.654	0.501	0.999
0.800	0.7999	5.027	1.000	76.200	0.500	1.000
0.850	0.8500	5.341	1.000	104.328	0.500	1.000
0.900	0.9000	5.655	1.000	142.837	0.500	1.000
0.950	0.9500	5.969	1.000	195.561	0.500	1.000
1.000	1.0000	6.283	1.000	267.745	0.500	1.000

$$L = (g T^2 / (2 \pi)) * \tanh(2 \pi D / L)$$

$$D / L_{\infty} = D / L * \tanh(2 \pi D / L)$$

$$u_{\max} = \pi H / (T \sinh(2\pi d/L))$$

$$K_R = \sqrt{(\cos \alpha_{\infty} / \cos \alpha)}$$

$$C_1 \sin \alpha_{\infty} = C_{\infty} \sin \alpha_1$$

$$V = 1.18 * \sin(\alpha_b) \cos(\alpha_b) * (\sqrt{gH_b})$$

$$V = 0.58 * \sin(2\alpha_b) * (\sqrt{gH_b})$$

$$H/D = 0.78$$

$$\Phi = -\log_2(Dia \text{ mm}/1mm)$$

$$\log_x(a) = \log_y(a) / \log_y(x)$$

$$(Mean - Median) / Std Dev$$

Normal Distribution: 1 σ from Mean at 16%
and 84%