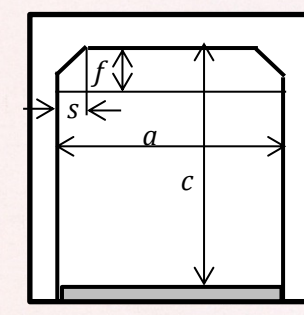


流速・流量表 (8割水深)

※斜字数字は $f < s$ の時です

流速・流量計算式(マンニング公式)



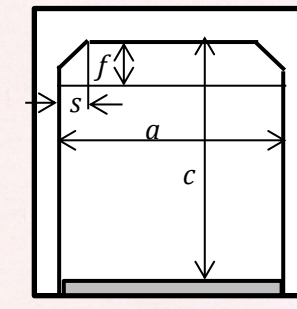
全断面積 $A_c = a \cdot c - s^2$ (m²)
 $f \geq s$ のとき
 通水断面積 $A = a(c-f)$ (m²)
 潤辺 $P = a + 2(c-f)$ (m)
 現場打ち部 $P_1 = a$ (m)
 $f < s$ のとき
 通水断面積 $A = a(c-s) + (s-f)(a-s+f)$ (m²)
 潤辺 $P = 2(c-s) + 2\sqrt{2}(s-f)$ (m)
 現場打ち部 $P_1 = a$ (m)

潤辺 $P = P_1 + P_2$ (m)
 粗度係数 $n = \left\{ \frac{1}{49} (P_1 \cdot n_1^{1.49} + P_2 \cdot n_2^{1.49}) \right\}^{0.25}$ (m)
 プレキャスト部 $n_1 = 0.013$
 現場打ち部 $n_2 = 0.015$
 径深 $R = A/P$ (m)
 流速 $V = 1.49 R^{2/3} / n$ (m/s)
 流量 $Q = A \cdot V$ (m³/s)

サイズ	700×400	700×500	700×600	700×700	700×800	700×900	700×1000	700×1100	700×1200	700×1300	700×1400	700×1500	700×1600	700×1700	700×1800	700×1900	700×2000	700×2100	700×2200	700×2300	700×2400																						
a = P ₂	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700																						
c	0.400	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000	2.100	2.200	2.300	2.400																						
s	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070																						
f = c(1-0.8)	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.240	0.260	0.280	0.300	0.320	0.340	0.360	0.380	0.400	0.420	0.440	0.460	0.480																						
p ₁ = 2(c-f) or ...	0.640	0.800	0.960	1.120	1.280	1.440	1.600	1.760	1.920	2.080	2.240	2.400	2.560	2.720	2.880	3.040	3.200	3.360	3.520	3.680	3.840																						
n ₁	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013																						
n ₂	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015																						
全断面積 A _c (m ²)	0.2751	0.3451	0.4151	0.4851	0.5551	0.6251	0.6951	0.7651	0.8351	0.9051	0.9751	1.0451	1.1151	1.1851	1.2551	1.3251	1.3951	1.4651	1.5351	1.6051	1.6751																						
通水断面積 A(m ²)	0.2240	0.2800	0.3360	0.3920	0.4480	0.5040	0.5600	0.6160	0.6720	0.7280	0.7840	0.8400	0.8960	0.9520	1.0080	1.0640	1.1200	1.1760	1.2320	1.2880	1.3440																						
潤辺 P(m)	1.3400	1.5000	1.6600	1.8200	1.9800	2.1400	2.3000	2.4600	2.6200	2.7800	2.9400	3.1000	3.2600	3.4200	3.5800	3.7400	3.9000	4.0600	4.2200	4.3800	4.5400																						
径深 R(m)	0.1672	0.1867	0.2024	0.2154	0.2263	0.2355	0.2435	0.2504	0.2565	0.2619	0.2667	0.2710	0.2748	0.2784	0.2816	0.2845	0.2872	0.2897	0.2919	0.2941	0.2960																						
粗度係数 n	0.0141	0.0140	0.0139	0.0138	0.0137	0.0137	0.0136	0.0136	0.0135	0.0135	0.0135	0.0135	0.0134	0.0134	0.0134	0.0134	0.0134	0.0134	0.0133	0.0133	0.0133																						
R ^{2/3}	0.3035	0.3266	0.3447	0.3593	0.3713	0.3814	0.3899	0.3973	0.4037	0.4093	0.4143	0.4187	0.4227	0.4263	0.4296	0.4326	0.4353	0.4378	0.4401	0.4422	0.4442																						
I(‰)	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q																					
20.0	0.14142	3.052	0.6836	3.311	0.9271	3.517	1.1818	3.686	1.4449	3.826	1.7142	3.945	1.9885	4.047	2.2666	4.136	2.5478	4.214	2.8316	4.282	3.1175	4.343	3.4052	4.398	3.6945	4.448	3.9850	4.492	4.2766	4.533	4.5692	4.570	4.8626	4.604	5.1568	4.636	5.4516	4.665	5.7470	4.692	6.0429	4.717	6.3392
10.0	0.10000	2.158	0.4834	2.341	0.6555	2.487	0.8357	2.606	1.0217	2.706	1.2121	2.790	1.4060	2.862	1.6027	2.925	1.8016	2.980	2.0023	3.028	2.2044	3.071	2.4079	3.110	2.6124	3.145	2.8178	3.176	3.0240	3.205	3.2309	3.232	3.4384	3.256	3.6464	3.278	3.8548	3.298	4.0637	3.318	4.2730	3.335	4.4825
9.5	0.09747	2.103	0.4711	2.282	0.6389	2.424	0.8145	2.540	0.9958	2.637	1.1814	2.719	1.3704	2.790	1.5621	2.851	1.7560	2.904	1.9516	2.951	2.1486	2.993	2.3469	3.031	2.5462	3.065	2.7464	3.096	2.9474	3.124	3.1491	3.150	3.3513	3.173	3.5540	3.195	3.7572	3.215	3.9608	3.234	4.1648	3.251	4.3690
9.0	0.09487	2.047	0.4586	2.221	0.6219	2.359	0.7928	2.473	0.9692	2.567	1.1499	2.647	1.3339	2.715	1.5205	2.775	1.7091	2.827	1.8995	2.873	2.0913	2.914	2.2843	2.950	2.4783	2.983	2.6732	3.013	2.8688	3.041	3.0651	3.066	3.2619	3.089	3.4593	3.110	3.6570	3.129	3.8552	3.147	4.0537	3.164	4.2525
8.5	0.09220	1.989	0.4456	2.158	0.6044	2.293	0.7704	2.403	0.9419	2.494	1.1175	2.572	1.2963	2.639	1.4776	2.696	1.6610	2.747	1.8460	2.792	2.0324	2.832	2.2199	2.867	2.4085	2.899	2.5979	2.929	2.7880	2.955	2.9787	2.979	3.1700	3.002	3.3618	3.022	3.5540	3.041	3.7466	3.059	3.9395	3.075	4.1327
8.0	0.08944	1.930	0.4323	2.094	0.5863	2.225	0.7474	2.331	0.9138	2.420	1.0842	2.495	1.2576	2.560	1.4335	2.616	1.6114	2.665	1.7909	2.708	1.9717	2.747	2.1537	2.782	2.3366	2.813	2.5203	2.841	2.7048	2.867	2.8898	2.890	3.0754	2.912	3.2614	2.932	3.4479	2.950	3.6347	2.967	3.8218	2.983	4.0093
7.5	0.08660	1.869	0.4186	2.028	0.5677	2.154	0.7237	2.257	0.8848	2.343	1.0497	2.416	1.2177	2.479	1.3880	2.533	1.5602	2.580	1.7340	2.622	1.9091	2.660	2.0853	2.693	2.2624	2.724	2.4403	2.751	2.6189	2.776	2.7980	2.799	2.9777	2.820	3.1579	2.839	3.3384	2.857	3.5193	2.873	3.7005	2.888	3.8820
7.0	0.08367	1.805	0.4044	1.959	0.5485	2.081	0.6992	2.181	0.8548	2.264	1.0141	2.334	1.1764	2.394	1.3409	2.447	1.5073	2.493	1.6752	2.533	1.8444	2.570	2.0146	2.602	2.1857	2.631	2.3575	2.658	2.5301	2.682	2.7032	2.704	2.8767	2.724	3.0508	2.743	3.2252	2.760	3.3999	2.776	3.5750	2.790	3.7503
6.5	0.08062	1.740	0.3897	1.888	0.5285	2.005	0.6737	2.101	0.8237	2.181	0.9773	2.249	1.1336	2.307	1.2921	2.358	1.4525	2.402	1.6143	2.441	1.7773	2.476	1.9413	2.507	2.1062	2.535	2.2718	2.561	2.4380	2.584	2.6048	2.605	2.7721	2.625	2.9398	2.643	3.1079	2.659	3.2763	2.675	3.4450	2.689	3.6139
6.0	0.07746	1.672	0.3744	1.813	0.5078	1.927	0.6473	2.019	0.7914	2.096	0.9389	2.161	1.0891	2.217	1.2414	2.285	1.3955	2.308	1.5509	2.346	1.7075	2.379	1.8651	2.409	2.0235	2.436	2.1827	2.460	2.3424	2.483	2.5026	2.503	2.6633	2.522	2.8245	2.539	2.9859	2.555	3.1477	2.570	3.3098	2.583	3.4721
5.5	0.07416	1.600	0.3585	1.736	0.4862	1.844	0.6197	1.933	0.7577	2.007	0.8989	2.069	1.0428	2.122	1.1886	2.169	1.3361	2.210	1.4849	2.246	1.6348	2.278	1.7857	2.306	1.9374	2.332	2.0897	2.356	2.2427	2.377	2.3961	2.397	2.5500	2.414	2.7042	2.431	2.8588	2.446	3.0137	2.460	3.1689	2.473	3.3243
5.0	0.07071	1.526	0.3418	1.655	0.4635	1.759	0.5909	1.843	0.7224	1.913	0.8571	1.973	0.9942	2.024	1.1333	2.068	1.2739	2.107	1.4158	2.141	1.5588	2.172	1.7026	2.199	1.8472	2.224	1.9825	2.246	2.1383	2.266	2.2846	2.285	2.4313	2.302	2.5784	2.318	2.7258	2.332	2.8735	2.346	3.0214	2.358	3.1696
4.8	0.06928	1.495	0.3349	1.622	0.4542	1.723	0.5790	1.806	0.7078	1.875	0.8398	1.933	0.9741	1.984	1.1104	2.026	1.2482	2.064	1.3782	2.098	1.5273	2.128	1.6682	2.155	1.8099	2.179	1.9522	2.201	2.0951	2.221	2.2384	2.239	2.3822	2.256	2.5263	2.271	2.6707	2.285	2.8154	2.298	2.9604	2.311	3.1056
4.6	0.06782	1.464	0.3278	1.588	0.4446	1.687	0.5668	1.768	0.6929	1.835	0.8221	1.892	0.9536	1.941	1.0870	1.984	1.2219	2.021	1.3580	2.054	1.4951	2.083	1.6331	2.109	1.7718	2.133	1.9111	2.154	2.0510	2.174	2.1913	2.192	2.3320	2.208	2.4731	2.223	2.6145	2.237	2.7561	2.250	2.8981	2.262	3.0402
4.5	0.06708	1.448	0.3243	1.571	0.4397	1.668	0.5606	1.748	0.6854	1.815	0.8131	1.871	0.9432	1.920	1.0751	1.962	1.2085	1.999	1.3432	2.031	1.4788	2.060	1.6152	2.086	1.7524	2.110	1.8902	2.131	2.0286	2.150	2.1673	2.168	2.3065	2.184	2.4461	2.199	2.5859	2.213	2.7260	2.225	2.8664	2.237	3.0070
4.4	0.06633	1.431	0.3206	1.553	0.4348	1.650	0.5543	1.729	0.6777	1.795	0.8040	1.851	0.9327	1.898	1.0631	1.940	1.1950	1.976	1.3281	2.009	1.4623	2.037	1.5972	2.063	1.7329	2.086	1.8691	2.107	2.0059	2.126	2.1431	2.144	2.2808	2.160	2.4187	2.174	2.5570	2.188	2.6956	2.201	2.8344	2.212	2.9734
4.2	0.06481	1.398	0.3133	1.517	0.4248	1.612	0.5416	1.689	0.6621	1.753	0.7856	1.808	0.9112	1.855	1.0387	1.895	1.1676	1.931	1.2976	1.962	1.4286	1.990	1.5605	2.015	1.6930	2.038	1.8261	2.059	1.9598	2.077	2.0939	2.094	2.2283	2.110	2.3631	2.124	2.4982	2.138	2.6336	2.150	2.7692	2.161	2.9050
4.0	0.06325	1.365	0.3057	1.481	0.4146	1.573	0.5285	1.648	0.64																																		

流速・流量表 (8割水深)

流速・流量計算式 (マニング公式)



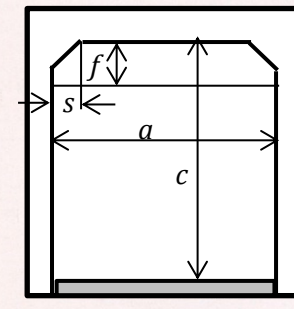
全断面積 $A = a \cdot c - s^2$ (m²)
 $f \geq s$ のとき
 通水断面積 $A = a(c-f)$ (m²)
 潤辺 $P = P_1 + P_2 = 2(c-f)$ (m)
 現場打ち部 $P_2 = a$ (m)
 $f < s$ のとき
 通水断面積 $A = a(c-s) + (s-f)(a-s+f)$ (m²)
 潤辺 $P = P_1 + P_2 = 2(c-s) + 2\sqrt{2}(s-f)$ (m)
 現場打ち部 $P_2 = a$ (m)

潤辺 $P = P_1 + P_2$ (m)
 粗度係数 $n = \left\{ \frac{1}{P} (P_1 \cdot n_1^{1.49} + P_2 \cdot n_2^{1.49}) \right\}^{0.49}$ (m)
 プレキャスト部 $n_1 = 0.013$
 現場打ち部 $n_2 = 0.015$
 径深 $R = A/P$ (m)
 流速 $V = 1.49 \cdot R^{2/3} \cdot I^{1/2}$ (m/s)
 流量 $Q = A \cdot V$ (m³/s)

サイズ	800×400	800×500	800×600	800×700	800×800	800×900	800×1000	800×1100	800×1200	800×1300	800×1400	800×1500	800×1600	800×1700	800×1800	800×1900	800×2000	800×2100	800×2200	800×2300	800×2400																						
a = P ₂	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800																						
c	0.400	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000	2.100	2.200	2.300	2.400																						
s	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080																						
f = c(1-0.8)	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160																						
p ₁ = 2(c-f) or ...	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480																						
n ₁	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013																						
n ₂	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015																						
全断面積 A ₀ (m ²)	0.3136	0.3936	0.4736	0.5536	0.6336	0.7136	0.7936	0.8736	0.9536	1.0336	1.1136	1.1936	1.2736	1.3536	1.4336	1.5136	1.5936	1.6736	1.7536	1.8336	1.9136																						
通水断面積 A(m ²)	0.2560	0.3200	0.3840	0.4480	0.5120	0.5760	0.6400	0.7040	0.7680	0.8320	0.8960	0.9600	1.0240	1.0880	1.1520	1.2160	1.2800	1.3440	1.4080	1.4720	1.5360																						
潤辺 P(m)	1.4400	1.6000	1.7600	1.9200	2.0800	2.2400	2.4000	2.5600	2.7200	2.8800	3.0400	3.2000	3.3600	3.5200	3.6800	3.8400	4.0000	4.1600	4.3200	4.4800	4.6400																						
径深 R(m)	0.1778	0.2000	0.2182	0.2333	0.2462	0.2571	0.2667	0.2750	0.2824	0.2889	0.2947	0.3000	0.3048	0.3091	0.3130	0.3167	0.3200	0.3231	0.3259	0.3286	0.3310																						
粗度係数 n	0.0141	0.0140	0.0139	0.0139	0.0138	0.0137	0.0137	0.0136	0.0136	0.0135	0.0135	0.0135	0.0135	0.0135	0.0134	0.0134	0.0134	0.0134	0.0134	0.0134	0.0134																						
R ^{2/3}	0.3182	0.3420	0.3624	0.3790	0.3928	0.4044	0.4143	0.4229	0.4304	0.4370	0.4429	0.4481	0.4529	0.4571	0.4610	0.4646	0.4678	0.4708	0.4736	0.4762	0.4785																						
I(‰)		V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q																						
I ^{1/2}																																											
20.0	0.14142	3.165	0.8102	3.450	1.1041	3.680	1.4132	3.870	1.7337	4.029	2.0629	4.165	2.3989	4.282	2.7405	4.384	3.0886	4.474	3.4363	4.554	3.7891	4.626	4.1446	4.690	4.5022	4.748	4.8618	4.801	5.2230	4.849	5.5856	4.893	5.9495	4.933	6.3145	4.971	6.6805	5.005	7.0474	5.037	7.4150	5.067	7.7833
10.0	0.10000	2.238	0.5729	2.440	0.7807	2.602	0.9993	2.736	1.2259	2.849	1.4587	2.945	1.6963	3.028	1.9378	3.100	2.1825	3.164	2.4298	3.220	2.6793	3.271	2.9306	3.316	3.1835	3.357	3.4378	3.394	3.6932	3.428	3.9496	3.460	4.2069	3.488	4.4650	3.515	4.7238	3.539	4.9832	3.562	5.2432	3.583	5.5037
9.5	0.09747	2.181	0.5584	2.378	0.7609	2.536	0.9740	2.667	1.1949	2.777	1.4217	2.870	1.6534	2.951	1.8888	3.022	2.1273	3.084	2.3683	3.139	2.6115	3.188	2.8564	3.232	3.1029	3.272	3.3507	3.309	3.5997	3.342	3.8496	3.372	4.1004	3.400	4.3520	3.426	4.6042	3.450	4.8571	3.472	5.1104	3.492	5.3643
9.0	0.09487	2.123	0.5435	2.315	0.7406	2.469	0.9480	2.596	1.1630	2.703	1.3838	2.794	1.6093	2.872	1.8384	2.941	2.0705	3.001	2.3051	3.055	2.5418	3.103	2.7803	3.146	3.0202	3.185	3.2614	3.220	3.5037	3.253	3.7469	3.282	3.9910	3.309	4.2359	3.334	4.4814	3.358	4.7275	3.379	4.9741	3.399	5.2212
8.5	0.09220	2.063	0.5282	2.249	0.7198	2.399	0.9213	2.523	1.1302	2.627	1.3448	2.715	1.5639	2.792	1.7866	2.858	2.0122	2.917	2.2402	2.969	2.4702	3.016	2.7019	3.057	2.9351	3.095	3.1695	3.130	3.4050	3.161	3.6414	3.190	3.8786	3.216	4.1166	3.240	4.3551	3.263	4.5943	3.284	4.8340	3.303	5.0741
8.0	0.08944	2.002	0.5124	2.182	0.6983	2.328	0.8938	2.447	1.0965	2.548	1.3047	2.634	1.5172	2.708	1.7333	2.773	1.9521	2.830	2.1733	2.888	2.3965	2.926	2.6212	2.966	2.8474	3.003	3.0748	3.036	3.3033	3.067	3.5326	3.094	3.7628	3.120	3.9936	3.144	4.2251	3.166	4.4571	3.186	4.6897	3.205	4.9226
7.5	0.08660	1.938	0.4961	2.113	0.6761	2.254	0.8654	2.370	1.0617	2.467	1.2633	2.550	1.4691	2.622	1.6782	2.685	1.8901	2.740	2.1043	2.789	2.3204	2.833	2.5380	2.872	2.7570	2.907	2.9772	2.940	3.1984	2.969	3.4205	2.996	3.6433	3.021	3.8668	3.044	4.0909	3.065	4.3156	3.085	4.5407	3.103	4.7663
7.0	0.08367	1.872	0.4793	2.041	0.6532	2.177	0.8361	2.289	1.0257	2.384	1.2204	2.464	1.4192	2.533	1.6213	2.594	1.8260	2.647	2.0329	2.694	2.2417	2.737	2.4520	2.775	2.6635	2.809	2.8763	2.840	3.0899	2.868	3.3045	2.895	3.5198	2.919	3.7357	2.941	3.9522	2.961	4.1693	2.980	4.3868	2.998	4.6047
6.5	0.08062	1.804	0.4619	1.967	0.6294	2.098	0.8057	2.206	0.9883	2.297	1.1760	2.374	1.3676	2.441	1.5623	2.499	1.7596	2.551	1.9590	2.598	2.1601	2.637	2.3628	2.674	2.5667	2.707	2.7716	2.737	2.9775	2.764	3.1843	2.789	3.3917	2.812	3.5998	2.834	3.8085	2.853	4.0176	2.872	4.2272	2.889	4.4372
6.0	0.07746	1.733	0.4437	1.890	0.6047	2.016	0.7740	2.120	0.9496	2.207	1.1299	2.281	1.3140	2.345	1.5010	2.401	1.6906	2.451	1.8821	2.494	2.0754	2.534	2.2701	2.569	2.4660	2.600	2.8629	2.829	2.8607	2.656	3.0594	2.680	3.2587	2.702	3.4586	2.723	3.6591	2.741	3.8600	2.759	4.0614	2.775	4.2631
5.5	0.07416	1.660	0.4249	1.809	0.5790	1.930	0.7411	2.029	0.9091	2.113	1.0818	2.184	1.2580	2.246	1.4371	2.299	1.6186	2.346	1.8020	2.388	1.9870	2.426	2.1734	2.459	2.3610	2.490	2.5495	2.517	2.7389	2.543	2.9291	2.566	3.1199	2.587	3.3114	2.607	3.5033	2.625	3.6957	2.642	3.8885	2.657	4.0816
5.0	0.07071	1.582	0.4051	1.725	0.5520	1.840	0.7066	1.935	0.8668	2.015	1.0314	2.082	1.1995	2.141	1.3703	2.192	1.5433	2.237	1.7182	2.273	1.8946	2.313	2.0723	2.345	2.2501	2.374	2.4309	2.400	2.6115	2.424	2.7928	2.446	2.9747	2.467	3.1572	2.485	3.3402	2.503	3.5237	2.519	3.7075	2.534	3.8917
4.8	0.06928	1.550	0.3969	1.690	0.5409	1.803	0.6923	1.896	0.8493	1.974	1.0106	2.040	1.1792	2.098	1.3426	2.148	1.5121	2.192	1.6834	2.231	1.8563	2.266	2.0304	2.298	2.2056	2.326	2.3818	2.352	2.5587	2.375	2.7364	2.397	2.9146	2.417	3.0935	2.435	3.2728	2.452	3.4525	2.468	3.6326	2.482	3.8130
4.6	0.06782	1.518	0.3885	1.655	0.5295	1.765	0.6777	1.856	0.8314	1.932	0.9893	1.997	1.1505	2.054	1.3143	2.103	1.4803	2.146	1.6480	2.184	1.8172	2.218	1.9877	2.249	2.1592	2.277	2.3316	2.302	2.5048	2.325	2.6788	2.346	2.8533	2.366	3.0283	2.384	3.2038	2.400	3.3798	2.416	3.5561	2.430	3.7328
4.5	0.06708	1.501	0.3843	1.637	0.5237	1.746	0.6703	1.836	0.8224	1.911	0.9785	1.976	1.1379	2.031	1.2999	2.080	1.4641	2.122	1.6300	2.160	1.7973	2.194	1.9659	2.225	2.1356	2.252	2.3061	2.277	2.4775	2.300	2.6495	2.321	2.8221	2.340	2.9952	2.358	3.1688	2.374	3.3429	2.389	3.5172	2.404	3.6920
4.4	0.06633	1.484	0.3800	1.618	0.5179	1.726	0.6629	1.815	0.8132	1.890	0.9676	1.953	1.1252	2.008	1.2854	2.056	1.4477	2.099	1.6118	2.136	1.7773	2.170	1.9440	2.200	2.1117	2.227	2.2804	2.252	2.4498	2.274	2.6199	2.295	2.7906	2.314	2.9618	2.331	3.1334	2.348	3.3055	2.363	3.4779	2.377	3.6507
4.2	0.06481	1.450	0.3713	1.581	0.5060	1.686	0.6476	1.773	0.7945	1.846	0.9453	1.909	1.0993	1.962	1.2559	2.009	1.4144	2.050	1.5747	2.087	1.7364	2.120	1.8993	2.149	2.0632	2.176	2.2279	2.200	2.3935	2.222	2.5596	2.242	2.7264	2.261	2.8937	2.278	3.0614	2.294	3.2295	2.308	3.3980	2.322</	

流速・流量表 (8割水深)

流速・流量計算式(マニング公式)



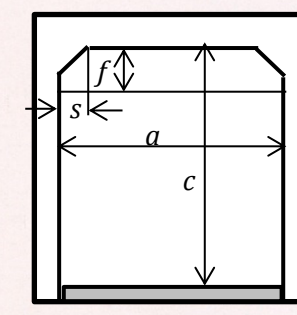
全断面積 $A_c = a \cdot c - s^2$ (m²)
 $f \geq s$ のとき
 通水断面積 $A = a(c-f)$ (m²)
 側面積 $P = 2(c-f)$ (m)
 現場打ち部 $P_1 = a$ (m)
 $f < s$ のとき
 通水断面積 $A = a(c-s) + (s-f)(a-s+f)$ (m²)
 側面積 $P = 2(c-s) + 2\sqrt{2}(s-f)$ (m)
 現場打ち部 $P_2 = a$ (m)

調辺 $P = P_1 + P_2$ (m)
 粗度係数 $n = \left[\frac{1}{P} (P_1 n_1^{1/3} + P_2 n_2^{1/3}) \right]^{3/2}$ (m)
 フレキヤス部 $n_1 = 0.013$ (m)
 現場打ち部 $n_2 = 0.015$ (m)
 径深 $R = A/P$ (m)
 流速 $V = 1.49 R^{2/3} / n$ (m/s)
 流量 $Q = A \cdot V$ (m³/s)

サイズ	900×500	900×600	900×700	900×800	900×900	900×1000	900×1100	900×1200	900×1300	900×1400	900×1500	900×1600	900×1700	900×1800	900×1900	900×2000	900×2100	900×2200	900×2300	900×2400																					
a = P ₂	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900																					
c	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000	2.100	2.200	2.300	2.400																					
s	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090																					
f = c(1-0.8)	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.240	0.260	0.280	0.300	0.320	0.340	0.360	0.380	0.400	0.420	0.440	0.460	0.480																					
p ₁ = 2(c-f) or ...	0.800	0.960	1.120	1.280	1.440	1.600	1.760	1.920	2.080	2.240	2.400	2.560	2.720	2.880	3.040	3.200	3.360	3.520	3.680	3.840																					
n ₁	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013																					
n ₂	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015																					
全断面積 A ₀ (m ²)	0.4419	0.5319	0.6219	0.7119	0.8019	0.8919	0.9819	1.0719	1.1619	1.2519	1.3419	1.4319	1.5219	1.6119	1.7019	1.7919	1.8819	1.9719	2.0619	2.1519																					
通水断面積 A(m ²)	0.3600	0.4320	0.5040	0.5760	0.6480	0.7200	0.7920	0.8640	0.9360	1.0080	1.0800	1.1520	1.2240	1.2960	1.3680	1.4400	1.5120	1.5840	1.6560	1.7280																					
側面積 P(m)	1.7000	1.8600	2.0200	2.1800	2.3400	2.5000	2.6600	2.8200	2.9800	3.1400	3.3000	3.4600	3.6200	3.7800	3.9400	4.1000	4.2600	4.4200	4.5800	4.7400																					
径深 R(m)	0.2118	0.2323	0.2495	0.2642	0.2769	0.2880	0.2977	0.3064	0.3141	0.3210	0.3273	0.3329	0.3381	0.3429	0.3472	0.3512	0.3549	0.3584	0.3616	0.3646																					
粗度係数 n	0.0141	0.0140	0.0139	0.0138	0.0138	0.0137	0.0137	0.0137	0.0136	0.0136	0.0136	0.0135	0.0135	0.0135	0.0135	0.0135	0.0134	0.0134	0.0134	0.0134																					
R ^{2/3}	0.3553	0.3778	0.3963	0.4118	0.4249	0.4361	0.4459	0.4545	0.4621	0.4688	0.4749	0.4804	0.4853	0.4899	0.4940	0.4978	0.5013	0.5045	0.5075	0.5103																					
I(%)		V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q																				
I ^{1/2}		V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q																				
20.0	0.14142	3.569	1.2850	3.821	1.6506	4.030	2.0310	4.207	2.4230	4.358	2.8241	4.490	3.2327	4.605	3.6473	4.707	4.0670	4.798	4.4910	4.879	4.9185	4.953	5.3492	5.020	5.7825	5.080	6.2181	5.136	6.6558	5.187	7.0952	5.234	7.5383	5.277	7.9787	5.317	8.4224	5.355	8.8671	5.389	9.3129
10.0	0.10000	2.524	0.9086	2.702	1.1671	2.849	1.4361	2.974	1.7133	3.082	1.9969	3.175	2.2858	3.256	2.5790	3.328	2.8758	3.393	3.1756	3.450	3.4779	3.502	3.7824	3.549	4.0888	3.592	4.3969	3.631	4.7064	3.667	5.0171	3.701	5.3289	3.731	5.6418	3.760	5.9555	3.786	6.2700	3.811	6.5852
9.5	0.09747	2.460	0.8856	2.633	1.1376	2.777	1.3998	2.899	1.6699	3.004	1.9464	3.094	2.2280	3.174	2.5137	3.244	2.8030	3.263	3.3899	3.414	3.6867	3.459	3.9853	3.501	4.2856	3.540	4.5872	3.575	4.8901	3.607	5.1940	3.637	5.4989	3.665	5.8047	3.690	6.1113	3.714	6.4185		
9.0	0.09487	2.394	0.8620	2.563	1.1072	2.703	1.3624	2.822	1.6254	2.924	1.8945	3.012	2.1685	3.089	2.4467	3.158	2.7282	3.219	3.0126	3.273	3.2995	3.323	3.5883	3.367	3.8790	3.408	4.1713	3.445	4.4648	3.479	4.7596	3.511	5.0555	3.540	5.3523	3.567	5.6499	3.592	5.9483	3.615	6.2473
8.5	0.09220	2.327	0.8377	2.491	1.0760	2.627	1.3240	2.742	1.5796	2.841	1.8411	2.927	2.1074	3.002	2.3778	3.069	2.6514	3.128	2.9278	3.181	3.2065	3.229	3.4872	3.272	3.7697	3.312	4.0537	3.348	4.3391	3.381	4.6255	3.412	4.9130	3.440	5.2015	3.466	5.4907	3.491	5.7807	3.513	6.0713
8.0	0.08944	2.257	0.8127	2.416	1.0439	2.549	1.2845	2.660	1.5324	2.756	1.7861	2.840	2.0445	2.913	2.3068	2.977	2.5722	3.035	2.8203	3.086	3.1108	3.133	3.3831	3.175	3.6572	3.213	3.9327	3.248	4.2095	3.280	4.4874	3.310	4.7664	3.337	5.0462	3.363	5.3268	3.387	5.6081	3.409	5.8900
7.5	0.08660	2.186	0.7869	2.340	1.0108	2.468	1.2437	2.576	1.4838	2.669	1.7294	2.749	1.9796	2.820	2.2335	2.883	2.4905	2.938	2.7501	2.988	3.0120	3.033	3.2757	3.074	3.5410	3.111	3.8078	3.145	4.0758	3.176	4.3449	3.205	4.6150	3.231	4.8859	3.256	5.1576	3.279	5.4300	3.300	5.7030
7.0	0.08367	2.112	0.7602	2.260	0.9765	2.384	1.2015	2.489	1.4334	2.578	1.6708	2.656	1.9125	2.724	2.1578	2.785	2.4061	2.839	2.6569	2.887	2.9098	2.930	3.1646	2.970	3.4210	3.005	3.6787	3.038	3.9376	3.068	4.1976	3.096	4.4585	3.122	4.7203	3.146	4.9827	3.168	5.2459	3.188	5.5096
6.5	0.08062	2.035	0.7325	2.178	0.9410	2.297	1.1578	2.398	1.3813	2.485	1.6100	2.560	1.8429	2.625	2.0793	2.684	2.3186	2.735	2.5602	2.782	2.8040	2.824	3.0495	2.882	3.2965	2.896	3.5449	2.928	3.7944	2.957	4.0449	2.984	4.2963	3.008	4.5485	3.031	4.8015	3.053	5.0550	3.072	5.3092
6.0	0.07746	1.955	0.7038	2.093	0.9040	2.207	1.1124	2.304	1.3271	2.387	1.5468	2.459	1.7706	2.522	1.9977	2.578	2.2276	2.628	2.4598	2.673	2.8940	2.713	2.9299	2.749	3.1672	2.783	3.4058	2.813	3.6455	2.841	3.8862	2.867	4.1278	2.890	4.3701	2.912	4.6131	2.933	4.8667	2.952	5.1009
5.5	0.07416	1.872	0.6738	2.004	0.8656	2.113	1.0651	2.206	1.2706	2.285	1.4810	2.354	1.6952	2.415	1.9127	2.468	2.1328	2.516	2.3551	2.559	2.5793	2.597	2.8051	2.632	3.0324	2.664	3.2608	2.693	3.4903	2.720	3.7208	2.744	3.9520	2.767	4.1841	2.788	4.4167	2.808	4.6500	2.826	4.8837
5.0	0.07071	1.785	0.6425	1.910	0.8253	2.015	1.0155	2.103	1.2115	2.179	1.4121	2.245	1.6163	2.303	1.8237	2.354	2.0335	2.399	2.2455	2.440	2.4593	2.476	2.6746	2.510	2.8913	2.540	3.1091	2.568	3.3279	2.593	3.5476	2.617	3.7681	2.638	3.9893	2.659	4.2112	2.677	4.4336	2.695	4.6565
4.8	0.06928	1.749	0.6295	1.872	0.8086	1.974	0.9950	2.061	1.1870	2.205	1.3835	2.245	1.5837	2.256	1.7868	2.306	1.9924	2.351	2.2001	2.390	2.4096	2.426	2.6206	2.459	2.8328	2.489	3.0463	2.516	3.2607	2.541	3.4759	2.564	3.6920	2.585	3.9087	2.605	4.1261	2.623	4.3440	2.640	4.5624
4.6	0.06782	1.712	0.6162	1.832	0.7916	1.933	0.9740	2.017	1.1620	2.090	1.3544	2.153	1.5503	2.209	1.7492	2.257	1.9505	2.301	2.1538	2.340	2.3588	2.375	2.5654	2.407	2.7732	2.436	2.9821	2.463	3.1920	2.487	3.4028	2.510	3.6143	2.531	3.8264	2.550	4.0392	2.568	4.2525	2.585	4.4663
4.5	0.06708	1.693	0.6095	1.812	0.7829	1.911	0.9634	1.995	1.1493	2.067	1.3396	2.130	1.5334	2.184	1.7301	2.233	1.9292	2.276	2.1303	2.315	2.3331	2.349	2.5373	2.381	2.7429	2.410	2.9495	2.436	3.1571	2.460	3.3656	2.482	3.5748	2.503	3.7846	2.522	3.9951	2.540	4.2061	2.556	4.4175
4.4	0.06633	1.674	0.6027	1.792	0.7742	1.890	0.9526	1.973	1.1365	2.044	1.3246	2.106	1.5163	2.160	1.7107	2.208	1.9076	2.250	2.1065	2.289	2.3070	2.323	2.5090	2.354	2.7122	2.383	2.9166	2.409	3.1218	2.433	3.3280	2.455	3.5348	2.475	3.7423	2.494	3.9504	2.512	4.1591	2.528	4.3682
4.2	0.06481	1.636	0.5888	1.751	0.7564	1.847	0.9307	1.928	1.1103	1.997	1.2942	2.057	1.4814	2.110	1.6714	2.157	1.8637	2.199	2.0580	2.236	2.2540	2.270	2.4513	2.300	2.6499	2.328	2.8495	2.353	3.0501	2.377	3.2514	2.398	3.4535	2.418	3.6563	2.437	3.8596	2.454	4.0634	2.470	4.2677
4.0	0.06325	1.598	0.5747	1.709	0.7382	1.802	0.9083	1.881	1.0836	1.949	1.2630	2.008	1.4457	2.060	1.6311	2.105	1.8188	2.146	2.0084	2.182	2.1996	2.215	2.3922	2.245	2.5860	2.272	2.7808	2.297	2.9766	2.320	3.1731	2.340	3.3703	2.360	3.5682	2.378	3.7666	2.395	3.9655	2.410	4.1649
3.8	0.06164	1.556	0.5601	1.665	0.7195	1.757	0.8853																																		

流速・流量表 (8割水深)

流速・流量計算式 (マンニング公式)



全断面積 $A = a \cdot c - s^2$ (m²)
 $f \geq s$ のとき
 通水断面積 $A = a(c-f)$ (m²)
 潤辺 $P = 2(c-f)$ (m)
 現場打ち部 $P_2 = a$ (m)
 $f < s$ のとき
 通水断面積 $A = a(c-s) + (s-f)(a-s+f)$ (m²)
 潤辺 $P = 2(c-s) + 2\sqrt{2}(s-f)$ (m)
 現場打ち部 $P_2 = a$ (m)

調辺 $P = P_1 + P_2$ (m)
 粗度係数 $n = \left\{ \frac{1}{P} (P_1 \cdot n_1^{1.487} + P_2 \cdot n_2^{1.487}) \right\}^{0.037}$ (m)
 フレキヤスト部 $n_1 = 0.013$ (m)
 現場打ち部 $n_2 = 0.015$ (m)
 径深 $R = A/P$ (m)
 流速 $V = 1.49 R^{4/3} / n$ (m/s)
 流量 $Q = A \cdot V$ (m³/s)

サイズ	1000×400	1000×500	1000×600	1000×700	1000×800	1000×900	1000×1000	1000×1100	1000×1200	1000×1300	1000×1400	1000×1500	1000×1600	1000×1700	1000×1800	1000×1900	1000×2000	1000×2100	1000×2200	1000×2300	1000×2400
a = P ₂	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
c	0.400	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700	1.800	1.900	2.000	2.100	2.200	2.300	2.400
s	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
f = c(1-0.8)	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.240	0.260	0.280	0.300	0.320	0.340	0.360	0.380	0.400	0.420	0.440	0.460	0.480
p ₁ = 2(c-f) or ...	0.657	0.800	0.960	1.120	1.280	1.440	1.600	1.760	1.920	2.080	2.240	2.400	2.560	2.720	2.880	3.040	3.200	3.360	3.520	3.680	3.840
n ₁	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
n ₂	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
全断面積 A ₀ (m ²)	0.3900	0.4900	0.5900	0.6900	0.7900	0.8900	0.9900	1.0900	1.1900	1.2900	1.3900	1.4900	1.5900	1.6900	1.7900	1.8900	1.9900	2.0900	2.1900	2.2900	2.3900
通水断面積 A(m ²)	0.3196	0.4000	0.4800	0.5600	0.6400	0.7200	0.8000	0.8800	0.9600	1.0400	1.1200	1.2000	1.2800	1.3600	1.4400	1.5200	1.6000	1.6800	1.7600	1.8400	1.9200
潤辺 P(m)	1.6566	1.8000	1.9600	2.1200	2.2800	2.4400	2.6000	2.7600	2.9200	3.0800	3.2400	3.4000	3.5600	3.7200	3.8800	4.0400	4.2000	4.3600	4.5200	4.6800	4.8400
径深 R(m)	0.1929	0.2222	0.2449	0.2642	0.2807	0.2951	0.3077	0.3188	0.3288	0.3377	0.3457	0.3529	0.3596	0.3656	0.3711	0.3762	0.3810	0.3853	0.3894	0.3932	0.3967
粗度係数 n	0.0142	0.0141	0.0140	0.0140	0.0139	0.0138	0.0137	0.0136	0.0135	0.0134	0.0133	0.0132	0.0131	0.0130	0.0129	0.0128	0.0127	0.0126	0.0125	0.0124	0.0123
R ^{2/3}	0.3339	0.3669	0.3914	0.4117	0.4287	0.4432	0.4558	0.4667	0.4763	0.4849	0.4925	0.4994	0.5056	0.5113	0.5164	0.5212	0.5255	0.5295	0.5332	0.5367	0.5399
I(‰)		V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q
I ^{1/2}		V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q
20.0	0.14142	3.320	1.0609	3.672	1.4689	3.943	1.8928	4.170	2.3353	4.363	2.7926	4.530	3.2616	4.675	3.7403	4.803	4.2289	4.917	4.7201	5.018	5.2190
10.0	0.10000	2.347	0.7502	2.597	1.0387	2.788	1.3384	2.949	1.6513	3.085	1.9746	3.203	2.3063	3.306	2.6448	3.396	2.9888	3.477	3.3376	3.548	3.6904
9.5	0.09747	2.288	0.7312	2.531	1.0124	2.718	1.3045	2.874	1.6095	3.007	1.9246	3.122	2.2479	3.222	2.5778	3.310	2.9132	3.389	3.2531	3.459	3.5969
9.0	0.09487	2.227	0.7117	2.463	0.9854	2.645	1.2697	2.797	1.5666	2.927	1.8733	3.039	2.1879	3.136	2.5090	3.222	2.8355	3.298	3.1663	3.366	3.5010
8.5	0.09220	2.164	0.6916	2.394	0.9576	2.571	1.2339	2.719	1.5224	2.845	1.8205	2.953	2.1263	3.048	2.4383	3.131	2.7556	3.205	3.0771	3.271	3.4024
8.0	0.08944	2.099	0.6710	2.323	0.9290	2.494	1.1971	2.637	1.4770	2.760	1.7662	2.865	2.0628	2.957	2.3655	3.038	2.6733	3.110	2.9853	3.174	3.3008
7.5	0.08660	2.033	0.6497	2.249	0.8995	2.415	1.1591	2.554	1.4301	2.672	1.7101	2.774	1.9973	2.863	2.2904	2.941	2.5884	3.011	2.8905	3.073	3.1960
7.0	0.08367	1.964	0.6277	2.173	0.8690	2.333	1.1198	2.467	1.3816	2.581	1.6521	2.680	1.9296	2.766	2.2128	2.842	2.5006	2.909	2.7924	2.969	3.0876
6.5	0.08062	1.892	0.6048	2.094	0.8374	2.248	1.0791	2.377	1.3313	2.488	1.5920	2.582	1.8594	2.665	2.1323	2.738	2.4097	2.803	2.6909	2.861	2.9753
6.0	0.07746	1.818	0.5811	2.011	0.8046	2.160	1.0367	2.284	1.2791	2.390	1.5296	2.481	1.7865	2.561	2.0486	2.631	2.3151	2.693	2.5853	2.749	2.8585
5.5	0.07416	1.741	0.5564	1.926	0.7703	2.068	0.9926	2.187	1.2247	2.288	1.4644	2.376	1.7104	2.452	1.9614	2.519	2.2166	2.578	2.4752	2.632	2.7369
5.0	0.07071	1.660	0.5305	1.836	0.7345	1.972	0.9464	2.085	1.1677	2.182	1.3963	2.265	1.6308	2.338	1.8701	2.402	2.1134	2.458	2.3601	2.509	2.6095
4.8	0.06928	1.626	0.5198	1.799	0.7196	1.932	0.9273	2.043	1.1441	2.138	1.3681	2.219	1.5979	2.290	1.8323	2.353	2.0707	2.409	2.3124	2.458	2.5568
4.6	0.06782	1.592	0.5088	1.761	0.7045	1.891	0.9077	2.000	1.1200	2.093	1.3393	2.173	1.5642	2.242	1.7938	2.304	2.0271	2.358	2.2637	2.407	2.5029
4.5	0.06708	1.575	0.5032	1.742	0.6968	1.870	0.8978	1.978	1.1077	2.070	1.3246	2.149	1.5471	2.218	1.7742	2.278	2.0050	2.332	2.2389	2.380	2.4756
4.4	0.06633	1.557	0.4976	1.722	0.6890	1.850	0.8878	1.956	1.0954	2.047	1.3098	2.125	1.5298	2.196	1.7543	2.253	1.9826	2.306	2.2139	2.354	2.4479
4.2	0.06481	1.521	0.4862	1.683	0.6731	1.807	0.8674	1.911	1.0702	2.000	1.2797	2.076	1.4947	2.142	1.7140	2.201	1.9370	2.253	2.1630	2.300	2.3916
4.0	0.06325	1.485	0.4745	1.642	0.6569	1.763	0.8465	1.865	1.0444	1.951	1.2489	2.026	1.4596	2.091	1.6727	2.148	1.8903	2.199	2.1109	2.244	2.3340
3.8	0.06164	1.447	0.4625	1.601	0.6403	1.719	0.8250	1.818	1.0179	1.902	1.2173	1.975	1.4217	2.038	1.6303	2.094	1.8424	2.143	2.0574	2.187	2.2749
3.6	0.06000	1.408	0.4501	1.558	0.6232	1.673	0.8030	1.769	0.9908	1.851	1.1848	1.922	1.3838	1.984	1.5869	2.038	1.7933	2.086	2.0026	2.129	2.2142
3.5	0.05916	1.389	0.4438	1.536	0.6145	1.650	0.7918	1.745	0.9769	1.825	1.1682	1.895	1.3644	1.956	1.5647	2.009	1.7682	2.057	1.9746	2.099	2.1833
3.2	0.05657	1.328	0.4244	1.469	0.5876	1.577	0.7571	1.668	0.9341	1.745	1.1170	1.812	1.3046	1.870	1.4961	1.921	1.6907	1.967	1.8880	2.007	2.0876
3.0	0.05477	1.286	0.4109	1.422	0.5689	1.527	0.7331	1.615	0.9045	1.690	1.0816	1.754	1.2632	1.811	1.4486	1.860	1.6371	1.904	1.8281	1.944	2.0213
2.8	0.05292	1.242	0.3970	1.374	0.5496	1.475	0.7082	1.560	0.8738	1.633	1.0449	1.695	1.2204	1.749	1.3995	1.797	1.5815	1.840	1.7661	1.878	1.9528
2.6	0.05099	1.197	0.3825	1.324	0.5296	1.422	0.6825	1.504	0.8420	1.573	1.0069	1.633	1.1760	1.686	1.3486	1.732	1.5240	1.773	1.7019	1.809	1.8817
2.5	0.05000	1.174	0.3751	1.298	0.5193	1.394	0.6692	1.474	0.8257	1.543	0.9873	1.602	1.1532	1.653	1.3224	1.698	1.4944	1.738	1.6688	1.774	1.8452
2.4	0.04899	1.150	0.3675	1.272	0.5088	1.366	0.6557	1.445	0.8090	1.512	0.9674	1.569	1.1299	1.620	1.2957	1.664	1.4642	1.703	1.6351	1.738	1.8079
2.2	0.04690	1.101	0.3519	1.218	0.4872	1.308	0.6278	1.383	0.7745	1.447	0.9262	1.502	1.0818	1.551	1.2405	1.593	1.4019	1.631	1.5655	1.664	1.7309
2.0	0.04472	1.050	0.3355	1.161	0.4645	1.247	0.5985	1.319	0.7385	1.380	0.8831	1.433	1.0314	1.478	1.1828	1.519	1.3366	1.555	1.4926	1.587	1.6504
1.8	0.04243	0.996	0.3183	1.102	0.4407	1.183	0.5678	1.251	0.7006	1.309	0.8378	1.359	0.9785	1.403	1.1221	1.441	1.2681	1.475	1.4160	1.505	1.5657
1.6	0.04000	0.939	0.3001	1.039	0.4155	1.115	0.5354	1.180	0.6605	1.234	0.7899	1.281	0.9225	1.322	1.0579	1.359	1.1955	1.391	1.3350	1.419	1.4761
1.5	0.03873	0.909	0.2906	1.006	0.4023	1.080	0.5184	1.142	0.6396	1.195	0.7648	1.241	0.8932	1.280	1.0243	1.315	1.1576	1.347	1.2927	1.374	1.4293
1.4	0.03742	0.878	0.2807	0.972	0.3886	1.043	0.5008	1.103	0.6179	1.154	0.7388	1.199	0.8629	1.237	0.9896	1.271	1.1183	1.301	1.2488	1.328	1.3808
1.2	0.03464	0.813																			