

TABLE No. 1.

Showing the working velocity of these wheels under different heads.

Ft. of head.	1	1½	2	2½	3	3½	4	4½	5	5½	6	7	8
2	145	96	72	58	48	41	36	32	29	26	24	20	18
3	176	118	88	70	59	50	44	39	35	32	29	25	22
4	203	136	101	81	67	58	51	45	40	37	34	29	25
5	228	151	114	91	75	64	57	50	45	41	38	32	28
6	250	168	124	99	83	71	62	56	50	45	42	35	31
7	269	180	134	108	89	77	67	60	54	49	45	38	33
8	285	192	144	114	96	83	71	64	58	53	48	41	36
9	305	203	151	122	102	88	76	68	61	56	51	44	38
10	322	212	161	129	107	92	80	71	64	59	53	46	40
11	338	226	169	135	112	97	84	75	67	62	56	48	42
12	353	236	176	141	118	101	88	79	70	64	59	50	44
13	367	245	183	147	122	105	91	82	73	67	61	52	46
14	378	252	189	153	126	109	94	84	75	69	63	54	48
15	392	263	195	159	131	113	98	88	78	72	66	56	50
16	406	271	203	163	135	117	101	91	81	74	68	58	51
17	419	279	208	167	140	120	104	93	84	76	70	60	53
18	432	288	216	172	144	124	108	96	86	78	72	62	54
19	444	296	222	177	148	127	111	99	88	80	73	64	56
20	455	305	229	183	151	130	115	101	91	83	76	65	57
21	466	311	233	187	155	134	118	104	93	85	77	67	58
22	475	318	238	192	159	137	122	106	95	87	79	68	60
23	488	325	242	196	163	140	124	109	97	89	81	70	61
24	499	332	247	200	167	143	126	111	99	91	83	71	62
25	509	339	253	203	171	146	129	113	102	93	85	73	63
26	520	345	259	206	174	149	131	115	104	95	87	74	64
27	530	352	264	209	178	152	134	117	106	99	89	76	65
28	540	359	270	213	182	154	137	120	108	98	90	77	67
29	550	366	275	217	185	157	140	123	110	99	91	79	68
30	560	372	280	221	187	160	142	125	112	101	93	80	69
31	570	380	284	226	189	163	144	127	114	103	94	82	70
32	579	386	289	230	192	165	146	129	116	105	96	83	72
33	588	391	294	234	196	168	147	131	118	107	98	84	73
34	596	398	298	238	198	170	149	133	119	108	99	85	74
35	605	404	302	241	201	173	151	135	122	109	102	86	75
36	616	410	306	245	204	175	153	136	124	111	104	87	76
37	628	415	310	249	207	177	155	138	126	113	105	88	77
38	638	421	315	251	210	179	157	140	128	114	106	90	78
39	647	426	319	254	213	182	159	141	129	116	107	91	79
40	653	432	323	258	216	185	161	143	130	117	108	92	80
41	668	437	327	261	218	187	163	145	131	119	109	93	81
42	684	442	331	265	221	189	165	147	132	120	110	95	83
43	671	447	335	268	223	191	168	149	134	122	112	96	84
44	679	452	339	271	226	194	170	151	136	123	113	97	85
45	686	457	343	274	229	197	172	153	137	124	114	98	86
46	694	462	347	277	231	199	174	154	139	125	115	99	87
47	703	467	350	280	234	200	175	156	140	128	117	100	88
48	709	472	354	283	236	202	177	158	142	129	118	101	89
49	716	477	358	286	238	204	179	159	143	130	119	102	90
50	723	482	361	289	241	206	181	160	145	131	120	103	91

TABLE No. 2.
Showing square inches of water required to give a single horse power under different heads.

Fall in feet. Inches of water.

2	83.00
3	42.00
4	27.00
5	20.00
6	14.40
7	11.80
8	9.60
9	7.80
10	6.70
11	5.80
12	5.10
13	4.60
14	4.10
15	3.70
16	3.30
17	3.00
18	2.76
19	2.57
20	2.38
21	2.21
22	2.05
23	1.92
24	1.80
25	1.75
26	1.69
27	1.61
28	1.42
29	1.35
30	1.28
31	1.22
32	1.16
33	1.11
34	1.06
35	1.01
36	0.97
37	0.94
38	0.90
39	0.87
40	0.85
41	0.82
42	0.79
43	0.76
44	0.73
45	0.71
46	0.69
47	0.67
48	0.65
49	0.63
50	0.61

TABLE No. 3.
Showing the speed of water. Feet per second.

11.31
13.75
16.00
17.88
19.59
21.16
22.62
24.00
25.31
26.53
27.71
28.81
29.93
30.98
32.00
32.98
33.94
34.87
35.77
36.66
37.52
38.35
39.19
40.00
40.79
41.56
42.33
43.08
43.71
44.54
45.25
45.95
46.64
47.32
48.00
48.66
49.31
49.75
50.39
51.22
51.84
52.45
53.06
53.66
54.25
54.84
55.42
56.00
56.56

TABLE No. 4.
Showing amount of water used on each Wheel.

Size of Wheel.	Cubic Inches Water.
feet.	Inches, Inches.
1	10 to 20
1½	25 " 40
2	40 " 70
2½	70 " 110
3	110 " 150
3½	150 " 225
4	225 " 310
4½	310 " 400
5	400 " 500
5½	500 " 650
6	650 " 800
7	800 " 1,000
8	1,000 " 1,300

Explanation of Table of Velocity.—Find the diameter of the wheel in feet, top line; the head or fall in feet in the left hand column, and in a line with each will be found the number of revolutions of the wheel per minute.