



Free-Flow Discharge of Thompson Parshall Measuring Flumes. Formulas used to compute this table are shown at the bottom of page 7. Do not run flumes full. Allow 3" freeboard. Follow installation instructions.

GAGE READING		DISCHARGE IN CUBIC FEET PER SECOND FOR VARIOUS THROAT WIDTHS																	GAGE READING		
Feet	Inches	3 Inch	6 Inch	9 Inch	1 Foot	1½ Feet	2 Feet	2½ Feet	3 Feet	4 Feet	5 Feet	6 Feet	7 Feet	8 Feet	10 Feet	12 Feet	15 Feet	20 Feet	25 Feet	Feet	Inches
.10	1 1/8	.028	.05	.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	1 1/8
.11	1 1/8	.033	.06	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.11	1 1/8
.12	1 1/8	.037	.07	.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.12	1 1/8
.13	1 1/8	.042	.08	.14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.13	1 1/8
.14	1 1/8	.047	.09	.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.14	1 1/8
.15	1 1/8	.053	.10	.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.15	1 1/8
Write for a separate free-flow discharge table for 1", 2" and 3" throat width Thompson Parshall Measuring Flumes.																					
.16	1 1/8	.058	.11	.19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.16	1 1/8
.17	2 1/8	.064	.12	.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.17	2 1/8
.18	2 1/8	.070	.14	.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.18	2 1/8
.19	2 1/4	.076	.15	.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.19	2 1/4
.20	2 3/8	.082	.16	.26	.35	.51	.66	.81	.97	1.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.20	2 3/8
.21	2 1/2	.089	.18	.28	.37	.54	.71	.88	1.04	1.36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.21	2 1/2
.22	2 5/8	.095	.19	.30	.40	.58	.77	.94	1.12	1.47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.22	2 5/8
.23	2 3/4	.102	.20	.32	.43	.63	.82	1.01	1.20	1.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.23	2 3/4
.24	2 7/8	.109	.22	.35	.46	.67	.88	1.08	1.28	1.69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.24	2 7/8
.25	3	.117	.23	.37	.49	.71	.93	1.15	1.37	1.80	2.22	2.63	.....	.....	.....	.....	.....	.....	.....	.25	3
.26	3 1/8	.124	.25	.39	.51	.75	.99	1.23	1.46	1.91	2.36	2.80	.....	.....	.....	.....	.....	.....	.....	.26	3 1/8
.27	3 1/4	.131	.26	.41	.54	.80	1.05	1.30	1.55	2.03	2.50	2.97	.....	.....	.....	.....	.....	.....	.....	.27	3 1/4
.28	3 3/8	.138	.28	.44	.58	.85	1.11	1.38	1.64	2.15	2.65	3.15	.....	.....	.....	.....	.....	.....	.....	.28	3 3/8
.29	3 1/2	.146	.29	.46	.61	.90	1.18	1.45	1.73	2.27	2.80	3.33	.....	.....	.....	.....	.....	.....	.....	.29	3 1/2
.30	3 5/8	.154	.31	.49	.64	.94	1.24	1.53	1.82	2.39	2.96	3.52	4.08	4.62	.....	.....	.....	.....	.....	.30	3 5/8
.31	3 3/4	.162	.32	.51	.68	.99	1.30	1.61	1.92	2.52	3.12	3.71	4.30	4.88	.....	.....	.....	.....	.....	.31	3 3/4
.32	3 11/8	.170	.34	.54	.71	1.04	1.37	1.69	2.02	2.65	3.28	3.90	4.52	5.13	.....	.....	.....	.....	.....	.32	3 11/8
.33	3 13/8	.179	.36	.56	.74	1.09	1.44	1.78	2.12	2.78	3.44	4.10	4.75	5.39	.....	.....	.....	.....	.....	.33	3 13/8
.34	4 1/8	.187	.38	.59	.77	1.14	1.50	1.86	2.22	2.92	3.61	4.30	4.98	5.66	.....	.....	.....	.....	.....	.34	4 1/8
.35	4 1/4	.196	.39	.62	.80	1.19	1.57	1.95	2.32	3.06	3.78	4.50	5.22	5.93	.....	.....	.....	.....	.....	.35	4 1/4
.36	4 1/8	.205	.41	.64	.84	1.24	1.64	2.03	2.42	3.19	3.95	4.71	5.46	6.20	.....	.....	.....	.....	.....	.36	4 1/8
.37	4 3/8	.213	.42	.67	.88	1.30	1.72	2.12	2.53	3.34	4.13	4.92	5.70	6.48	.....	.....	.....	.....	.....	.37	4 3/8
.38	4 1/2	.222	.45	.70	.92	1.36	1.79	2.21	2.64	3.48	4.31	5.13	5.95	6.76	.....	.....	.....	.....	.....	.38	4 1/2
.39	4 5/8	.231	.47	.73	.95	1.41	1.86	2.30	2.75	3.62	4.49	5.35	6.20	7.05	.....	.....	.....	.....	.....	.39	4 5/8
.40	4 3/4	.241	.48	.76	.99	1.46	1.93	2.40	2.86	3.77	4.68	5.57	6.46	7.34	9.09	10.79	13.34	17.60	21.85	.40	4 3/4
.41	4 11/8	.250	.50	.78	1.03	1.52	2.01	2.49	2.97	3.92	4.86	5.80	6.72	7.64	9.45	11.22	13.88	18.31	22.74	.41	4 11/8
.42	5 1/8	.260	.52	.81	1.07	1.58	2.09	2.59	3.08	4.07	5.05	6.02	6.98	7.94	9.83	11.67	14.43	19.03	23.63	.42	5 1/8
.43	5 3/8	.269	.54	.84	1.11	1.64	2.16	2.68	3.20	4.22	5.24	6.25	7.25	8.24	10.20	12.11	14.98	19.78	24.54	.43	5 3/8
.44	5 1/4	.279	.56	.87	1.15	1.70	2.24	2.78	3.32	4.38	5.43	6.48	7.52	8.55	10.59	12.57	15.55	20.50	25.46	.44	5 1/4
.45	5 3/8	.289	.58	.90	1.19	1.76	2.32	2.88	3.44	4.54	5.63	6.72	7.80	8.87	10.97	13.03	16.11	21.25	26.39	.45	5 3/8
.46	5 1/2	.299	.61	.94	1.23	1.82	2.40	2.98	3.56	4.70	5.83	6.96	8.08	9.19	11.37	13.50	16.69	22.01	27.34	.46	5 1/2
.47	5 5/8	.309	.63	.97	1.27	1.88	2.48	3.08	3.68	4.86	6.03	7.20	8.36	9.51	11.77	13.97	17.27	22.78	28.29	.47	5 5/8
.48	5 3/4	.319	.65	1.00	1.31	1.94	2.57	3.19	3.80	5.03	6.24	7.44	8.65	9.84	12.17	14.45	17.86	23.56	29.26	.48	5 3/4
.49	5 7/8	.329	.67	1.03	1.35	2.00	2.65	3.29	3.92	5.20	6.45	7.69	8.94	10.17	12.58	14.93	18.46	24.35	30.24	.49	5 7/8
.50	6	.339	.69	1.06	1.39	2.06	2.73	3.39	4.05	5.36	6.66	7.94	9.23	10.51	12.99	15.42	19.07	25.15	31.24	.50	6
.51	6 1/8	.350	.71	1.10	1.44	2.13	2.82	3.50	4.18	5.53	6.87	8.20	9.53	10.85	13.41	15.92	19.68	25.96	32.24	.51	6 1/8
.52	6 1/4	.361	.73	1.13	1.48	2.19	2.90	3.61	4.31	5.70	7.09	8.46	9.83	11.19	13.83	16.42	20.30	26.78	33.26	.52	6 1/4
.53	6 3/8	.371	.76	1.16	1.52	2.26	2.99	3.72	4.44	5.88	7.30	8.72	10.14	11.54	14.26	16.93	20.93	27.61	34.29	.53	6 3/8
.54	6 1/2	.382	.78	1.20	1.57	2.33	3.08	3.83	4.57	6.05	7.52	8.98	10.45	11.89	14.69	17.44	21.57	28.45	35.33	.54	6 1/2
.55	6 5/8	.393	.80	1.23	1.62	2.40	3.17	3.94	4.70	6.23	7.74	9.25	10.76	12.24	15.13	17.96	22.21	29.30	36.38	.55	6 5/8
.56	6 3/4	.404	.82	1.26	1.66	2.46	3.26	4.05	4.84	6.41	7.97	9.52	11.07	12.60	15.57	18.49	22.86	30.16	37.45	.56	6 3/4
.57	6 7/8	.415	.85	1.30	1.70	2.52	3.35	4.16	4.98	6.59	8.20	9.79	11.39	12.96	16.02	19.02	23.52	31.02	38.52	.57	6 7/8
.58	6 11/8	.427	.87	1.33	1.75	2.60	3.44	4.28	5.11	6.77	8.43	10.07	11.71	13.33	16.47	19.56	24.18	31.90	39.61	.58	6 11/8
.59	7 1/8	.438	.89	1.37	1.80	2.66	3.53	4.39	5.25	6.96	8.66	10.35	12.03	13.70	16.93	20.10	24.85	32.78	40.71	.59	7 1/8
.60	7 1/4	.450	.92	1.40	1.84	2.73	3.62	4.51	5.39	7.15	8.89	10.63	12.36	14.08	17.39	20.64	25.53	33.67	41.82	.60	7 1/4
.61	7 3/8	.462	.94	1.44	1.88	2.80	3.72	4.63	5.53	7.34	9.13	10.92	12.69	14.46	17.85	21.20	26.21	34.57	42.93	.61	7 3/8
.62	7 5/8	.474	.97	1.48	1.93	2.87	3.81	4.75	5.68	7.53	9.37	11.20	13.02	14.84	18.33	21.76	26.90	35.49	44.07	.62	7 5/8
.63	7 7/8	.485	.99	1.51	1.98	2.95	3.91	4.87	5.82	7.72	9.61	11.49	13.36	15.23	18.89	22.32	27.60	36.41	45.21	.63	7 7/8
.64	7 11/8	.497	1.02	1.55	2.03	3.02	4.01	4.99	5.97	7.91	9.85	11.78	13.70	15.62	19.28	22.89	28.30	37.33	46.36	.64	7 11/8
.65	7 3/4	.509	1.04	1.59	2.08	3.10	4.11	5.11	6.12	8.11	10.10	12.08	14.05	16.01	19.76	23.46	29.01	38.27	47.52	.65	7 3/4



Note: To convert to gallons per minute, multiply figures shown by 448.8. To convert to Miners' Inches multiply figures shown by: 38.4 for Colorado; 40 for California, Arizona, Montana, and Oregon; 50 for New Mexico, Nebraska, Utah, Idaho and Washington.

GAGE READING		DISCHARGE IN CUBIC FEET PER SECOND FOR VARIOUS THROAT WIDTHS															GAGE READING		
Feet	Inches	3 Inch	6 Inch	9 Inch	1 Foot	1½ Feet	2 Feet	2½ Feet	3 Feet	4 Feet	5 Feet	6 Feet	7 Feet	8 Feet	10 Feet	12 Feet	15 Feet	Feet	Inches
.66	7 1/8	.522	1.07	1.63	2.13	3.17	4.20	5.23	6.26	8.31	10.34	12.38	14.40	16.41	20.25	24.05	29.74	.66	7 1/8
.67	8 1/8	.534	1.10	1.66	2.18	3.24	4.30	5.36	6.41	8.51	10.59	12.68	14.75	16.81	20.75	24.63	30.46	.67	8 1/8
.68	8 3/8	.546	1.12	1.70	2.23	3.32	4.40	5.48	6.56	8.71	10.85	12.98	15.10	17.22	21.24	25.22	31.19	.68	8 3/8
.69	8 1/2	.558	1.15	1.74	2.28	3.39	4.50	5.61	6.71	8.91	11.10	13.28	15.46	17.63	21.75	25.82	31.93	.69	8 1/2
.70	8 3/4	.571	1.17	1.78	2.33	3.47	4.60	5.74	6.86	9.11	11.36	13.59	15.82	18.04	22.25	26.42	32.67	.70	8 3/4
.71	8 1/2	.584	1.20	1.82	2.38	3.54	4.70	5.86	7.02	9.32	11.62	13.90	16.18	18.45	22.76	27.03	33.42	.71	8 1/2
.72	8 5/8	.597	1.23	1.86	2.43	3.62	4.81	5.99	7.17	9.53	11.88	14.22	16.55	18.87	23.28	27.64	34.18	.72	8 5/8
.73	8 3/4	.610	1.26	1.90	2.48	3.70	4.91	6.12	7.33	9.74	12.14	14.53	16.92	19.29	23.80	28.26	34.94	.73	8 3/4
.74	8 7/8	.623	1.28	1.94	2.53	3.78	5.02	6.25	7.49	9.95	12.40	14.85	17.29	19.71	24.32	28.88	35.71	.74	8 7/8
.75	9	.636	1.31	1.98	2.58	3.85	5.12	6.39	7.65	10.16	12.67	15.17	17.66	20.14	24.85	29.50	36.48	.75	9
.76	9 1/8	.649	1.34	2.02	2.63	3.93	5.23	6.52	7.81	10.38	12.94	15.49	18.04	20.57	25.38	30.14	37.26	.76	9 1/8
.77	9 1/4	.662	1.36	2.06	2.68	4.01	5.34	6.65	7.97	10.60	13.21	15.82	18.42	21.01	25.92	30.77	38.05	.77	9 1/4
.78	9 3/8	.675	1.39	2.10	2.74	4.09	5.44	6.79	8.13	10.81	13.48	16.15	18.81	21.46	26.46	31.42	38.85	.78	9 3/8
.79	9 1/2	.689	1.42	2.14	2.80	4.18	5.55	6.92	8.30	11.03	13.76	16.48	19.20	21.91	27.00	32.06	39.65	.79	9 1/2
.80	9 3/4	.702	1.45	2.18	2.85	4.26	5.66	7.06	8.46	11.25	14.04	16.81	19.59	22.36	27.55	32.72	40.46	.80	9 3/4
.81	9 3/4	.716	1.48	2.22	2.90	4.34	5.77	7.20	8.63	11.48	14.32	17.15	19.99	22.81	28.11	33.37	41.26	.81	9 3/4
.82	9 1/2	.730	1.50	2.27	2.96	4.42	5.88	7.34	8.79	11.70	14.60	17.49	20.39	23.26	28.67	34.03	42.09	.82	9 1/2
.83	9 5/8	.744	1.53	2.31	3.02	4.51	6.00	7.48	8.96	11.92	14.88	17.83	20.79	23.72	29.22	34.70	42.91	.83	9 5/8
.84	10 1/8	.757	1.56	2.35	3.07	4.59	6.11	7.62	9.13	12.15	15.17	18.17	21.18	24.18	29.79	35.37	43.74	.84	10 1/8
.85	10 1/8	.771	1.59	2.39	3.12	4.67	6.22	7.76	9.30	12.38	15.46	18.52	21.58	24.64	30.36	36.04	44.57	.85	10 1/8
.86	10 3/8	.786	1.62	2.44	3.18	4.76	6.33	7.91	9.48	12.61	15.75	18.87	21.99	25.11	30.93	36.73	45.42	.86	10 3/8
.87	10 1/2	.800	1.65	2.48	3.24	4.84	6.44	8.05	9.65	12.84	16.04	19.22	22.40	25.58	31.51	37.41	46.27	.87	10 1/2
.88	10 3/4	.814	1.68	2.52	3.29	4.92	6.56	8.19	9.82	13.07	16.33	19.57	22.82	26.06	32.09	38.10	47.12	.88	10 3/4
.89	10 5/8	.828	1.71	2.57	3.35	5.02	6.68	8.34	10.00	13.31	16.62	19.93	23.24	26.54	32.68	38.80	47.98	.89	10 5/8
.90	10 3/4	.843	1.74	2.61	3.41	5.11	6.80	8.49	10.17	13.55	16.92	20.29	23.66	27.02	33.27	39.50	48.84	.90	10 3/4
.91	10 7/8	.858	1.77	2.66	3.46	5.19	6.92	8.63	10.35	13.79	17.22	20.65	24.08	27.50	33.86	40.20	49.71	.91	10 7/8
.92	11 1/8	.872	1.81	2.70	3.52	5.28	7.03	8.78	10.53	14.03	17.52	21.01	24.50	27.99	34.46	40.91	50.59	.92	11 1/8
.93	11 1/8	.887	1.84	2.75	3.58	5.37	7.15	8.93	10.71	14.27	17.82	21.38	24.93	28.48	35.06	41.63	51.47	.93	11 1/8
.94	11 1/4	.902	1.87	2.79	3.64	5.46	7.27	9.08	10.89	14.51	18.13	21.75	25.36	28.97	35.67	42.35	52.36	.94	11 1/4
.95	11 3/8	.916	1.90	2.84	3.70	5.55	7.39	9.23	11.07	14.76	18.44	22.12	25.79	29.47	36.27	43.07	53.25	.95	11 3/8
.96	11 1/2	.931	1.93	2.88	3.76	5.64	7.51	9.38	11.26	15.00	18.75	22.49	26.22	29.97	36.89	43.80	54.16	.96	11 1/2
.97	11 5/8	.946	1.97	2.93	3.82	5.73	7.63	9.54	11.44	15.25	19.06	22.86	26.66	30.48	37.50	44.52	55.06	.97	11 5/8
.98	11 3/4	.961	2.00	2.98	3.88	5.82	7.75	9.69	11.63	15.50	19.37	23.24	27.10	30.98	38.12	45.26	55.97	.98	11 3/4
.99	11 7/8	.977	2.03	3.02	3.94	5.91	7.88	9.85	11.82	15.75	19.68	23.62	27.55	31.49	38.75	46.01	56.89	.99	11 7/8
1.00	12	.992	2.06	3.07	4.00	6.00	8.00	10.00	12.00	16.00	20.00	24.00	28.00	32.00	39.38	46.75	57.81	1.00	12
1.01	12 1/8	1.01	2.09	3.12	4.06	6.09	8.12	10.16	12.19	16.25	20.32	24.38	28.45	32.52	40.01	47.50	58.73	1.01	12 1/8
1.02	12 1/4	1.02	2.12	3.17	4.12	6.18	8.25	10.31	12.38	16.51	20.64	24.77	28.90	33.04	40.64	48.26	59.67	1.02	12 1/4
1.03	12 3/8	1.04	2.16	3.21	4.18	6.28	8.38	10.47	12.57	16.76	20.96	25.16	29.36	33.56	41.28	49.01	60.61	1.03	12 3/8
1.04	12 1/2	1.05	2.19	3.26	4.25	6.38	8.50	10.63	12.76	17.02	21.28	25.55	29.82	34.08	41.92	49.77	61.55	1.04	12 1/2
1.05	12 5/8	1.07	2.22	3.31	4.31	6.47	8.63	10.79	12.96	17.28	21.61	25.94	30.28	34.61	42.57	50.55	62.50	1.05	12 5/8
1.06	12 3/4	1.09	2.26	3.36	4.37	6.57	8.76	10.95	13.15	17.54	21.94	26.34	30.74	35.14	43.23	51.32	63.46	1.06	12 3/4
1.07	12 7/8	1.10	2.29	3.40	4.43	6.66	8.88	11.10	13.34	17.80	22.27	26.74	31.20	35.68	43.88	52.09	64.42	1.07	12 7/8
1.08	12 5/8	1.12	2.32	3.45	4.50	6.76	9.01	11.27	13.54	18.07	22.60	27.13	31.67	36.22	44.53	52.87	65.38	1.08	12 5/8
1.09	13 1/8	1.13	2.36	3.50	4.56	6.85	9.14	11.44	13.74	18.34	22.93	27.53	32.14	36.76	45.19	53.66	66.35	1.09	13 1/8
1.10	13 1/8	1.15	2.40	3.55	4.62	6.95	9.27	11.60	13.93	18.60	23.26	27.94	32.62	37.30	45.86	54.45	67.33	1.10	13 1/8
1.11	13 3/8	.....	2.43	3.60	4.68	7.04	9.40	11.77	14.13	18.86	23.60	28.35	33.10	37.84	46.54	55.26	68.33	1.11	13 3/8
1.12	13 1/2	.....	2.46	3.65	4.75	7.14	9.54	11.93	14.33	19.13	23.94	28.76	33.58	38.39	47.21	56.05	69.31	1.12	13 1/2
1.13	13 5/8	.....	2.50	3.70	4.82	7.24	9.67	12.10	14.53	19.40	24.28	29.17	34.06	38.94	47.88	56.85	70.30	1.13	13 5/8
1.14	13 3/4	.....	2.53	3.75	4.88	7.34	9.80	12.27	14.73	19.67	24.62	29.58	34.54	39.50	48.55	57.64	71.28	1.14	13 3/4
1.15	13 7/8	.....	2.57	3.80	4.94	7.44	9.94	12.43	14.94	19.94	24.96	30.00	35.02	40.06	49.26	58.48	72.32	1.15	13 7/8
1.16	13 5/8	.....	2.60	3.85	5.01	7.54	10.07	12.60	15.14	20.22	25.31	30.41	35.51	40.62	49.93	59.28	73.30	1.16	13 5/8
1.17	14 1/8	.....	2.64	3.90	5.08	7.64	10.20	12.77	15.34	20.50	25.66	30.83	36.00	41.18	50.64	60.12	74.34	1.17	14 1/8
1.18	14 1/4	.....	2.68	3.95	5.15	7.75	10.34	12.94	15.55	20.78	26.01	31.25	36.50	41.75	51.31	60.92	75.33	1.18	14 1/4
1.19	14 1/2	.....	2.71	4.01	5.21	7.85	10.48	13.12	15.76	21.05	26.36	31.68	37.00	42.32	52.01	61.76	76.37	1.19	14 1/2
1.20	14 3/8	.....	2.75	4.06	5.28	7.95	10.61	13.29	15.96	21.33	26.71	32.10	37.50	42.89	52.72	62.60	77.41	1.20	14 3/8



(Continued): Free-Flow Discharge
of Thompson Parshall Measuring Flumes. Formulas used to
compute this table are shown at the bottom of page 7.

GAGE READING		DISCHARGE IN CUBIC FEET PER SECOND FOR VARIOUS THROAT WIDTHS														GAGE READING		
Feet	Inches	9 Inch	1 Foot	1½ Feet	2 Feet	2½ Feet	3 Feet	4 Feet	5 Feet	6 Feet	7 Feet	8 Feet	10 Feet	12 Feet	15 Feet	20 Feet	Feet	Inches
1.21	14½	4.11	5.34	8.05	10.75	13.46	16.17	21.61	27.06	32.53	38.00	43.47	53.43	63.44	78.45	103.47	1.21	14½
1.22	14⅝	4.16	5.41	8.15	10.89	13.63	16.38	21.90	27.42	32.96	38.50	44.05	54.14	64.28	79.49	104.84	1.22	14⅝
1.23	14¾	4.22	5.48	8.25	11.03	13.81	16.60	22.18	27.78	33.39	39.00	44.64	54.85	65.12	80.53	106.22	1.23	14¾
1.24	14⅞	4.27	5.55	8.36	11.17	13.98	16.81	22.47	28.14	33.82	39.51	45.22	55.86	65.96	81.57	107.59	1.24	14⅞
1.25	15	4.32	5.62	8.46	11.31	14.16	17.02	22.75	28.50	34.26	40.02	45.80	56.27	66.81	82.61	108.96	1.25	15
1.26	15⅛	4.37	5.69	8.56	11.45	14.34	17.23	23.04	28.86	34.70	40.54	46.38	56.99	67.65	83.65	110.33	1.26	15⅛
1.27	15¼	4.43	5.76	8.67	11.59	14.51	17.44	23.33	29.22	35.14	41.05	46.97	57.72	68.54	84.75	111.79	1.27	15¼
1.28	15⅓	4.48	5.82	8.77	11.73	14.69	17.66	23.62	29.59	35.58	41.57	47.57	58.45	69.38	85.79	113.16	1.28	15⅓
1.29	15½	4.53	5.89	8.88	11.87	14.87	17.88	23.92	29.96	36.02	42.09	48.17	59.18	70.27	86.89	114.60	1.29	15½
1.30	15⅝	4.59	5.96	8.99	12.01	15.05	18.10	24.21	30.33	36.47	42.62	48.78	59.93	71.15	87.99	116.05	1.30	15⅝
1.31	15¾	4.64	6.03	9.09	12.16	15.23	18.32	24.50	30.70	36.92	43.14	49.38	60.64	72.00	89.03	117.43	1.31	15¾
1.32	15⅞	4.69	6.10	9.20	12.30	15.41	18.54	24.80	31.07	37.37	43.67	49.99	61.39	72.98	90.13	118.87	1.32	15⅞
1.33	15⅘	4.75	6.18	9.30	12.44	15.60	18.76	25.10	31.44	37.82	44.20	50.60	62.13	73.77	91.22	120.32	1.33	15⅘
1.34	16	4.80	6.25	9.41	12.59	15.78	18.98	25.39	31.82	38.28	44.73	51.22	62.88	74.66	92.32	121.77	1.34	16
1.35	16⅛	4.86	6.32	9.52	12.74	15.96	19.20	25.69	32.20	38.74	45.26	51.84	63.63	75.55	93.42	123.22	1.35	16⅛
1.36	16⅓	4.92	6.39	9.63	12.89	16.15	19.42	25.99	32.58	39.20	45.80	52.46	64.42	76.48	94.58	124.75	1.36	16⅓
1.37	16⅕	4.97	6.46	9.73	13.03	16.33	19.64	26.30	32.96	39.66	46.35	53.08	65.17	77.37	95.68	126.19	1.37	16⅕
1.38	16⅗	5.03	6.53	9.84	13.18	16.52	19.87	26.60	33.34	40.12	46.89	53.70	65.91	78.26	96.77	127.64	1.38	16⅗
1.39	16⅘	5.08	6.60	9.95	13.33	16.71	20.10	26.90	33.72	40.58	47.44	54.33	66.70	79.19	97.93	129.17	1.39	16⅘
1.40	16⅙	5.14	6.68	10.06	13.48	16.90	20.32	27.21	34.11	41.05	47.99	54.95	67.45	80.08	99.03	130.62	1.40	16⅙
1.41	16⅚	5.19	6.75	10.18	13.63	17.08	20.55	27.52	34.50	41.52	48.54	55.58	68.24	81.08	100.18	132.14	1.41	16⅚
1.42	17	5.25	6.82	10.29	13.78	17.27	20.78	27.82	34.89	41.99	49.09	56.22	69.02	81.95	101.34	133.67	1.42	17
1.43	17⅛	5.31	6.89	10.40	13.93	17.46	21.01	28.14	35.28	42.46	49.64	56.86	69.77	82.84	102.44	135.12	1.43	17⅛
1.44	17¼	5.37	6.97	10.51	14.08	17.65	21.24	28.45	35.67	42.94	50.20	57.50	70.56	83.78	103.60	136.64	1.44	17¼
1.45	17⅓	5.42	7.04	10.63	14.23	17.85	21.47	28.76	36.06	43.42	50.76	58.14	71.35	84.71	104.75	138.17	1.45	17⅓
1.46	17½	5.48	7.12	10.74	14.38	18.04	21.70	29.07	36.46	43.89	51.32	58.78	72.14	85.65	105.91	139.69	1.46	17½
1.47	17⅝	5.54	7.19	10.85	14.54	18.23	21.94	29.38	36.86	44.37	51.88	59.43	72.92	86.58	107.06	141.22	1.47	17⅝
1.48	17⅞	5.59	7.26	10.97	14.69	18.42	22.17	29.70	37.26	44.85	52.45	60.08	73.71	87.52	108.22	142.74	1.48	17⅞
1.49	17⅘	5.65	7.34	11.08	14.85	18.62	22.41	30.02	37.66	45.34	53.02	60.74	74.54	88.45	109.43	144.34	1.49	17⅘
1.50	18	5.71	7.41	11.19	15.00	18.81	22.64	30.34	38.06	45.82	53.59	61.40	75.32	89.43	110.57	145.87	1.50	18
1.51	18⅛	5.77	7.49	11.31	15.16	19.01	22.88	30.66	38.46	46.31	54.16	62.06	76.15	90.41	111.80	147.47	1.51	18⅛
1.52	18¼	5.83	7.57	11.42	15.31	19.21	23.12	30.98	38.87	46.80	54.74	62.72	76.94	91.35	112.96	148.99	1.52	18¼
1.53	18⅓	5.89	7.64	11.53	15.47	19.40	23.36	31.30	39.28	47.30	55.32	63.38	77.77	92.33	114.17	150.59	1.53	18⅓
1.54	18½	5.94	7.72	11.65	15.62	19.60	23.60	31.63	39.68	47.79	55.90	64.04	78.55	93.27	115.33	152.12	1.54	18½
1.55	18⅝	6.00	7.80	11.77	15.78	19.80	23.84	31.95	40.09	48.28	56.48	64.71	79.38	94.25	116.54	153.72	1.55	18⅝
1.56	18⅞	6.06	7.87	11.89	15.94	20.00	24.08	32.27	40.51	48.78	57.06	65.38	80.21	95.23	117.76	155.32	1.56	18⅞
1.57	19	6.12	7.95	12.00	16.10	20.20	24.32	32.60	40.92	49.28	57.65	66.06	81.03	96.21	118.97	156.92	1.57	19
1.58	19⅛	6.18	8.02	12.12	16.26	20.40	24.56	32.93	41.33	49.78	58.24	66.74	81.86	97.19	120.19	158.52	1.58	19⅛
1.59	19¼	6.24	8.10	12.24	16.42	20.60	24.80	33.26	41.75	50.28	58.83	67.42	82.69	98.18	121.40	160.13	1.59	19¼
1.60	19⅓	6.30	8.18	12.36	16.58	20.80	25.05	33.59	42.17	50.79	59.42	68.10	83.51	99.16	122.62	161.73	1.60	19⅓
1.61	19⅝	.....	8.26	12.48	16.74	21.01	25.30	33.92	42.59	51.30	60.02	68.79	84.38	100.19	123.89	163.40	1.61	19⅝
1.62	19⅞	.....	8.34	12.60	16.90	21.21	25.54	34.26	43.01	51.81	60.62	69.48	85.21	101.17	125.10	165.01	1.62	19⅞
1.63	19⅘	.....	8.42	12.72	17.06	21.42	25.79	34.60	43.43	52.32	61.22	70.17	86.03	102.15	126.31	166.61	1.63	19⅘
1.64	19⅙	.....	8.49	12.84	17.22	21.62	26.04	34.93	43.86	52.83	61.82	70.86	86.90	103.18	127.59	168.28	1.64	19⅙
1.65	19⅚	.....	8.57	12.96	17.38	21.83	26.29	35.26	44.28	53.34	62.42	71.56	87.73	104.16	128.80	169.89	1.65	19⅚
1.66	19⅘	.....	8.65	13.08	17.55	22.03	26.54	35.60	44.70	53.86	63.03	72.26	88.59	105.19	130.07	171.56	1.66	19⅘
1.67	20	.....	8.73	13.21	17.72	22.24	26.79	35.94	45.13	54.38	63.64	72.96	89.46	106.22	131.34	173.24	1.67	20
1.68	20⅛	.....	8.81	13.32	17.88	22.45	27.04	36.28	45.56	54.90	64.25	73.66	90.33	107.24	132.62	174.92	1.68	20⅛
1.69	20¼	.....	8.89	13.44	18.04	22.66	27.30	36.62	46.00	55.42	64.86	74.37	91.15	108.23	133.83	176.52	1.69	20¼
1.70	20⅓	.....	8.97	13.57	18.21	22.87	27.55	36.96	46.43	55.95	65.48	75.08	92.02	109.25	135.10	178.20	1.70	20⅓
1.71	20½	.....	9.05	13.69	18.38	23.08	27.80	37.30	46.86	56.48	66.10	75.79	92.89	110.28	136.37	179.87	1.71	20½
1.72	20⅝	.....	9.13	13.81	18.54	23.29	28.06	37.65	47.30	57.00	66.72	76.50	93.79	111.36	137.70	181.63	1.72	20⅝
1.73	20⅞	.....	9.21	13.93	18.71	23.50	28.32	38.00	47.74	57.53	67.34	77.22	94.66	112.39	138.98	183.31	1.73	20⅞
1.74	20⅘	.....	9.29	14.06	18.88	23.71	28.57	38.34	48.17	58.06	67.96	77.94	95.52	113.42	140.25	184.98	1.74	20⅘
1.75	21	.....	9.38	14.19	19.04	23.92	28.82	38.69	48.61	58.60	68.59	78.66	96.33	114.44	141.52	186.66	1.75	21



Note: To convert to gallons per minute, multiply figures shown by 448.8. To convert to Miners' Inches multiply figures shown by: 38.4 for Colorado; 40 for California, Arizona, Montana, and Oregon; 50 for New Mexico, Nebraska, Utah, Idaho and Washington.

GAGE READING		DISCHARGE IN CUBIC FEET PER SECOND FOR VARIOUS THROAT WIDTHS														GAGE READING		
Foot	Inches	1 Foot	1½ Feet	2 Feet	2½ Feet	3 Feet	4 Feet	5 Feet	6 Feet	7 Feet	8 Feet	10 Feet	12 Feet	15 Feet	20 Feet	Foot	Inches	
1.76	21½	9.46	14.31	19.21	24.14	29.08	39.04	49.05	59.13	69.22	79.38	97.30	115.52	142.85	188.41	1.76	21½	
1.77	21¼	9.54	14.43	19.38	24.35	29.34	39.39	49.50	59.67	69.85	80.10	98.16	116.55	144.12	190.09	1.77	21¼	
1.78	21⅝	9.62	14.56	19.55	24.57	29.60	39.74	49.94	60.20	70.48	80.83	99.07	117.62	145.45	191.85	1.78	21⅝	
1.79	21½	9.70	14.68	19.72	24.78	29.87	40.10	50.38	60.74	71.11	81.56	99.93	118.65	146.72	193.52	1.79	21½	
1.80	21⅝	9.79	14.82	19.90	25.00	30.13	40.45	50.83	61.29	71.75	82.29	100.84	119.73	148.05	195.28	1.80	21⅝	
1.81	21¾	9.87	14.94	20.07	25.21	30.39	40.80	51.28	61.83	72.39	83.03	101.75	120.80	149.38	197.03	1.81	21¾	
1.82	21⅞	9.95	15.07	20.24	25.43	30.65	41.16	51.73	62.38	73.03	83.77	102.65	121.88	150.71	198.78	1.82	21⅞	
1.83	21⅞	10.04	15.19	20.42	25.65	30.92	41.52	52.18	62.92	73.68	84.51	103.56	122.95	152.04	200.54	1.83	21⅞	
1.84	22	10.12	15.32	20.59	25.87	31.18	41.88	52.64	63.46	74.33	85.25	104.46	124.03	153.37	202.29	1.84	22	
1.85	22	10.20	15.45	20.76	26.09	31.45	42.24	53.09	64.01	74.98	86.00	105.37	125.10	154.70	204.05	1.85	22	
1.86	22	10.29	15.58	20.93	26.31	31.71	42.60	53.55	64.57	75.63	86.75	106.27	126.18	156.03	205.80	1.86	22	
1.87	22	10.38	15.71	21.10	26.53	31.98	42.96	54.00	65.13	76.28	87.50	107.18	127.25	157.36	207.55	1.87	22	
1.88	22	10.46	15.84	21.28	26.75	32.25	43.32	54.46	65.69	76.93	88.25	108.12	128.38	158.75	209.38	1.88	22	
1.89	22	10.54	15.97	21.46	26.97	32.52	43.69	54.92	66.25	77.58	89.00	109.03	129.45	160.08	211.14	1.89	22	
1.90	22	10.62	16.10	21.63	27.19	32.79	44.05	55.39	66.81	78.24	89.76	109.97	130.57	161.46	212.97	1.90	22	
1.91	22	10.71	16.23	21.81	27.42	33.06	44.42	55.85	67.37	78.90	90.52	110.88	131.65	162.79	214.72	1.91	22	
1.92	23	10.80	16.36	21.99	27.64	33.33	44.79	56.32	67.93	79.56	91.28	111.83	132.77	164.18	216.55	1.92	23	
1.93	23	10.88	16.49	22.17	27.87	33.60	45.16	56.78	68.50	80.23	92.05	112.77	133.89	165.57	218.38	1.93	23	
1.94	23¼	10.97	16.62	22.35	28.09	33.87	45.53	57.25	69.06	80.90	92.82	113.69	134.97	166.90	220.13	1.94	23¼	
1.95	23½	11.06	16.75	22.53	28.32	34.14	45.90	57.72	69.63	81.57	93.59	114.62	136.09	168.28	221.96	1.95	23½	
1.96	23½	11.14	16.89	22.70	28.55	34.42	46.27	58.19	70.20	82.24	94.36	115.57	137.21	169.67	223.79	1.96	23½	
1.97	23⅝	11.23	17.02	22.88	28.77	34.70	46.64	58.67	70.80	82.91	95.14	116.51	138.33	171.06	225.62	1.97	23⅝	
1.98	23⅝	11.31	17.15	23.06	29.00	34.97	47.02	59.14	71.35	83.58	95.92	117.46	139.46	172.45	227.45	1.98	23⅝	
1.99	23⅞	11.40	17.29	23.24	29.23	35.25	47.40	59.61	71.92	84.26	96.70	118.40	140.58	173.83	229.28	1.99	23⅞	
2.00	24	11.49	17.42	23.43	29.46	35.53	47.77	60.08	72.50	84.94	97.48	119.35	141.70	175.22	231.11	2.00	24	
2.10	25	12.37	18.79	25.27	31.79	38.35	51.59	64.92	78.37	91.84	105.41	129.07	153.25	189.50	249.95	2.10	25	
2.20	26	13.28	20.18	27.15	34.18	41.25	55.52	69.90	84.41	98.94	113.57	139.03	165.07	204.13	269.24	2.20	26	
2.30	27	14.21	21.61	29.09	36.63	44.22	59.56	75.01	90.61	106.23	121.98	149.27	177.23	219.15	289.06	2.30	27	
2.40	28	15.16	23.06	31.09	39.14	47.27	63.69	80.25	96.97	113.74	130.62	159.78	189.71	234.59	309.42	2.40	28	
2.50	30	16.13	24.56	33.11	41.71	50.39	67.93	85.62	103.46	121.41	139.49	170.57	202.52	250.43	330.32	2.50	30	
2.60	31	.....	.....	.....	44.34	53.58	72.22	91.30	110.14	129.28	148.54	181.64	215.66	266.68	351.74	2.60	31
2.70	32	.....	.....	.....	47.03	56.84	76.71	96.94	116.98	137.34	157.82	192.94	229.08	283.27	373.63	2.70	32
2.80	33	.....	.....	.....	49.77	60.18	81.18	102.72	123.96	145.57	167.33	204.51	242.82	300.27	396.04	2.80	33
2.90	34	.....	.....	.....	52.57	63.58	85.81	108.60	131.09	153.89	177.02	216.29	256.80	317.55	418.84	2.90	34
3.00	36	.....	.....	.....	55.42	67.04	90.51	114.62	138.36	162.57	186.94	228.38	271.15	335.30	442.25	3.00	36
3.10	37	.....	.....	.....	.....	.....	95.33	120.74	145.80	171.33	197.06	240.66	285.74	353.33	466.04	3.10	37
3.20	38	.....	.....	.....	.....	.....	100.22	127.00	153.36	180.26	207.36	253.18	300.60	371.72	490.29	3.20	38
3.30	39	.....	.....	.....	.....	.....	105.20	133.36	161.09	189.36	217.89	265.98	315.80	390.51	515.07	3.30	39
3.40	40	.....	.....	.....	.....	.....	110.27	139.84	168.94	198.63	228.58	279.01	331.27	409.64	540.31	3.40	40
3.50	42	.....	.....	.....	.....	.....	115.44	146.42	176.93	208.07	239.49	292.24	346.98	429.07	565.93	3.50	42
3.60	43	.....	.....	.....	.....	.....	120.67	153.14	185.06	217.67	250.56	305.71	362.97	448.84	592.01	3.60	43
3.70	44	.....	.....	.....	.....	.....	126.02	159.94	193.32	227.42	261.86	319.41	379.24	468.95	618.54	3.70	44
3.80	45	.....	.....	.....	.....	.....	131.42	166.92	201.72	237.36	273.31	333.31	395.74	489.36	645.46	3.80	45
3.90	46	.....	.....	.....	.....	.....	136.91	173.90	210.24	247.60	284.96	347.48	412.57	510.17	672.91	3.90	46
4.00	48	.....	.....	.....	.....	.....	142.50	181.04	218.90	257.66	296.77	361.86	429.63	531.27	700.74	4.00	48
4.20	50	320.99	391.23	464.51	574.40	757.62	4.20	50
4.40	52	345.89	421.43	500.37	618.74	816.10	4.40	52
4.60	55	371.49	452.54	537.30	664.41	876.34	4.60	55
4.80	57	397.76	484.39	575.12	711.18	938.03	4.80	57
5.00	60	424.77	517.11	613.97	759.22	1001.4	5.00	60
5.20	62	653.71	808.36	1066.2	5.20	62
5.40	64	694.38	858.65	1132.5	5.40	64
5.60	67	736.03	910.16	1200.5	5.60	67
5.80	69	778.53	962.71	1269.8	5.80	69
6.00	72	821.91	1016.4	1340.6	6.00	72

Formulas used to compute this table:

Throat Widths	Formulas
3"	$Q = 0.992 H \alpha^{1.547}$
6"	$Q = 2.06 H \alpha^{1.58}$
9"	$Q = 3.07 H \alpha^{1.53}$
12" to 8'	$Q = 4W H \alpha^{1.522} W^{0.026}$
10' to 50'	$Q = (3.6675W + 2.5) H \alpha^{1.6}$