

Parshall Flume Sizes

REFUGE COPY

Percy Flume 9" Lost 9" North 24"
 Middle Flume 24" House 6"
 Thomas " 12" Walter 3" South 24"



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	1 1/2 Feet	2 Feet	2 1/2 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 3/16	.028	.05	.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	1 3/16
.11	1 1/8	.033	.06	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.11	1 1/8
.12	1 1/4	.037	.07	.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.12	1 1/4
.13	1 1/2	.042	.08	.14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.13	1 1/2
.14	1 5/8	.047	.09	.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.14	1 5/8
.15	1 3/4	.053	.10	.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.15	1 3/4
.16	1 7/8	.058	.11	.19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.16	1 7/8
.17	2 1/16	.064	.12	.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.17	2 1/16
.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 7/8	.170	.34	.54	.71	1.04	1.37	1.59	2.02	2.65	3.28	3.90	4.52	5.13	.....	.....	.....	.....	.....	.32	3 7/8
.33	3 1/2	.179	.36	.56	.74	1.09	1.44	1.78	2.12	2.78	3.44	4.10	4.75	5.39	.....	.....	.....	.....	.....	.33	3 1/2
.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 3/8	.205	.41	.64	.84	1.24	1.64	2.03	2.42	3.19	3.95	4.71	5.46	6.20	.....	.....	.....	.....	.....	.36	4 3/8
.37	4 1/2	.213	.42	.67	.88	1.30	1.72	2.12	2.53	3.34	4.13	4.92	5.70	6.48	.....	.....	.....	.....	.....	.37	4 1/2
.38	4 5/8	.222	.45	.70	.92	1.36	1.79	2.21	2.64	3.48	4.31	5.13	5.95	6.76	.....	.....	.....	.....	.....	.38	4 5/8
.39	4 3/4	.231	.47	.73	.95	1.41	1.86	2.30	2.75	3.62	4.49	5.35	6.20	7.05	.....	.....	.....	.....	.....	.39	4 3/4
.40	4 7/8	.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 7/8
.41	4 1/2	.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 1/2
.42	5 1/16	.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 1/16
.43	5 1/8	.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	19.76	24.54	.43	5 1/8
.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	7 1/16	.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	7 1/16
.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	17.33	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 1/2	.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 1/2
.63	7 5/8	.485	.99	1.51	1.98	2.95	3.91	4.87	5.82	7.72	9.61	11.49	13.36	15.23	18.80	22.32	27.60	36.41	45.21	.63	7 5/8
.64	7 3/4	.497	1.02	1.55	2.03	3.02	4.01	4.99	5.97	7.91	9.85	11.76	13.70	15.62	19.28	22.89	28.30	37.33	46.36	.64	7 3/4
.65	7 7/8	.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	29.31	38.27	47.52	.65	7 7/8

Write for a separate free-flow discharge table for 1", 2" and 3" throat width Thompson Parshall Measuring Flumes.



House 6"
lost 9"
Middle 24"
North 24"
Percy 9"
South 24"
Thomas 12"
Walter 3"

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	
		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		
Feet	Inches																		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	39.22	.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	40.18	.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	41.14	.68	8 3/8
.69	8 1/4	.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	42.11	.69	8 1/4
.70	8 3/8	.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	43.09	.70	8 3/8
.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	44.08	.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	45.08	.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	46.09	.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	47.10	.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	48.12	.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	49.15	.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	50.19	.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	51.24	.78	9 3/8
.79	9 1/2	.689	1.42	2.14	2.83	4.18	5.55	6.92	8.30	11.03	13.76	16.48	19.20	21.91	27.00	32.06	39.65	52.29	.79	9 1/2
.80	9 5/8	.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	53.36	.80	9 5/8
.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	54.43	.81	9 3/4
.82	9 1/8	.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	55.51	.82	9 1/8
.83	9 1/8	.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	56.59	.83	9 1/8
.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	57.69	.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	58.79	.85	10 1/8
.86	10 1/8	.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	59.90	.86	10 1/8
.87	10 1/8	.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	61.02	.87	10 1/8
.88	10 1/8	.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	62.14	.88	10 1/8
.89	10 1/8	.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	63.28	.89	10 1/8
.90	10 1/8	.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	64.42	.90	10 1/8
.91	10 1/8	.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	65.57	.91	10 1/8
.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	66.73	.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	67.89	.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	69.07	.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	70.24	.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	36.83	43.80	54.16	71.43	.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	72.62	.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	73.93	.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	75.04	.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	76.25	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	77.47	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	78.71	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	79.94	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	81.18	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	82.44	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	83.71	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	84.97	1.07	12 7/8
1.08	13	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	86.24	1.08	13
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	87.52	1.09	13 1/8
1.10	13 1/4	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	88.81	1.10	13 1/4
1.11	13 1/8	.....	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	90.13	1.11	13 1/8
1.12	13 3/8	.....	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	91.42	1.12	13 3/8
1.13	13 1/2	.....	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	92.72	1.13	13 1/2
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	94.02	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	95.39	1.15	13 7/8
1.16	14	.....	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	96.69	1.16	14
1.17	14 1/8	.....	2.64	3.90	5															