



"Steam Loss Thru An Orifice"

		Steam Pressure - psig							
Size	Diameter	15	30	60	100	150	250	400	600
#60	0.0400	1.92	2.89	4.83	7.41	10.64	17.11	26.80	39.73
3/64"	0.0469	2.64	3.97	6.63	10.18	14.62	23.49	36.81	54.56
1/16"	0.0625	4.69	7.05	11.79	18.10	25.99	41.76	65.43	96.99
5/64"	0.0781	7.32	11.02	18.42	28.28	40.60	65.26	102.24	151.54
3/32"	0.0938	10.54	15.87	26.52	40.72	58.47	93.97	147.22	218.22
#38	0.1015	12.36	18.60	31.08	47.73	68.54	110.15	172.57	255.79
7/64"	0.1094	14.35	21.60	36.10	55.42	79.58	127.90	200.38	297.03
1/8"	0.1250	18.74	28.21	47.14	72.39	103.95	167.06	261.73	387.95
9/64"	0.1406	23.72	35.70	59.67	91.62	131.56	211.43	331.25	491.00
5/32"	0.1563	29.29	44.08	73.66	113.11	162.42	261.03	408.95	606.17
11/64"	0.1719	35.44	53.34	89.13	136.86	196.52	315.84	494.83	733.47
3/16"	0.1875	42.17	63.48	106.08	162.88	233.88	375.88	588.89	872.89
7/32"	0.2188	57.40	86.40	144.38	221.69	318.33	511.62	801.54	1188.10
1/4"	0.2500	74.98	112.84	188.58	289.56	415.78	668.23	1046.91	1551.81
9/32"	0.2813	94.89	142.82	238.67	366.47	526.23	845.73	1324.99	1964.01
5/16"	0.3125	117.15	176.32	294.66	452.44	649.66	1044.11	1635.79	2424.70
11/32"	0.3438	141.75	213.35	356.53	547.45	786.09	1263.38	1979.31	2933.88
3/8"	0.3750	168.70	253.90	424.30	651.51	935.51	1503.53	2355.54	3491.56
7/16"	0.4375	229.62	345.59	577.53	886.78	1273.34	2046.47	3206.15	4752.41
1/2"	0.5000	299.91	451.38	754.32	1158.24	1663.14	2672.93	4187.63	6207.23
9/16"	0.5625	379.57	571.28	954.68	1465.89	2104.91	3382.93	5299.97	7856.02
5/8"	0.6250	468.61	705.28	1178.62	1809.75	2598.65	4176.46	6543.17	9698.79
11/16"	0.6875	567.02	853.39	1426.13	2189.79	3144.37	5053.52	7917.24	11735.54
3/4"	0.7500	674.80	1015.60	1697.22	2606.04	3742.06	6014.10	9422.17	13966.26
7/8"	0.8750	918.47	1382.35	2310.10	3547.10	5093.36	8185.86	12824.62	19009.63
1-1/16"	1.0625	1354.28	2038.26	3406.22	5230.17	7510.10	12069.97	18909.77	28029.51
1-1/8"	1.1250	1518.29	2285.11	3818.74	5863.58	8419.63	13531.73	21199.88	31424.08
1-1/4"	1.2500	1874.44	2821.12	4714.49	7238.99	10394.60	16705.84	26172.69	38795.16
1-17/32"	1.5313	2813.01	4233.72	7075.15	10863.71	15599.42	25070.84	39277.96	58220.79
1-5/8"	1.6250	3167.80	4767.70	7967.49	12233.89	17566.88	28232.87	44231.85	65563.83
1-7/8"	1.8750	4217.48	6347.52	10607.61	16287.72	23387.86	37588.14	58888.56	87289.12

Answers are in pounds per hour, rounded down to nearest whole number.

Napier's Formula: $\frac{(A_O \times P_A)}{70} \times 3600$

A_O = Area of Orifice

P_A = Absolute Pressure

Adjusted steam loss multiply by .66

Armstrong International, Inc., 816 Maple Street, Three Rivers, MI 49093, Ph:(269) 273-1415

www.armstronginternational.com



"Dollar Loss Thru An Orifice per Day"

		Steam Pressure - psig							
Size	Diameter	15	30	60	100	150	250	400	600
#60	0.0400	0.20	0.30	0.50	0.76	1.10	1.76	2.76	4.09
3/64"	0.0469	0.27	0.41	0.68	1.05	1.51	2.42	3.79	5.62
1/16"	0.0625	0.48	0.73	1.21	1.86	2.68	4.30	6.74	9.99
5/64"	0.0781	0.75	1.13	1.90	2.91	4.18	6.72	10.53	15.60
3/32"	0.0938	1.09	1.63	2.73	4.19	6.02	9.68	15.16	22.47
#38	0.1015	1.27	1.92	3.20	4.91	7.06	11.34	17.77	26.34
7/64"	0.1094	1.48	2.22	3.72	5.71	8.19	13.17	20.63	30.58
1/8"	0.1250	1.93	2.90	4.85	7.45	10.70	17.20	26.95	39.94
9/64"	0.1406	2.44	3.68	6.14	9.43	13.55	21.77	34.11	50.55
5/32"	0.1563	3.02	4.54	7.58	11.65	16.72	26.88	42.11	62.41
11/64"	0.1719	3.65	5.49	9.18	14.09	20.23	32.52	50.95	75.52
3/16"	0.1875	4.34	6.54	10.92	16.77	24.08	38.70	60.63	89.87
7/32"	0.2188	5.91	8.90	14.87	22.83	32.78	52.68	82.53	122.33
1/4"	0.2500	7.72	11.62	19.42	29.81	42.81	68.80	107.79	159.77
9/32"	0.2813	9.77	14.70	24.57	37.73	54.18	87.08	136.42	202.21
5/16"	0.3125	12.06	18.15	30.34	46.58	66.89	107.50	168.42	249.65
11/32"	0.3438	14.60	21.97	36.71	56.37	80.94	130.08	203.79	302.07
3/8"	0.3750	17.37	26.14	43.69	67.08	96.32	154.80	242.53	359.49
7/16"	0.4375	23.64	35.58	59.46	91.30	131.10	210.70	330.11	489.31
1/2"	0.5000	30.88	46.47	77.66	119.25	171.24	275.21	431.16	639.10
9/16"	0.5625	39.08	58.82	98.29	150.93	216.72	348.31	545.68	808.86
5/8"	0.6250	48.25	72.62	121.35	186.33	267.56	430.01	673.69	998.59
11/16"	0.6875	58.38	87.86	146.83	225.46	323.74	520.31	815.16	1208.29
3/4"	0.7500	69.48	104.57	174.75	268.32	385.28	619.21	970.11	1437.97
7/8"	0.8750	94.57	142.33	237.85	365.21	524.41	842.82	1320.42	1957.23
1-1/16"	1.0625	139.44	209.86	350.70	538.50	773.24	1242.72	1946.95	2885.92
1-1/8"	1.1250	156.32	235.27	393.18	603.71	866.89	1393.23	2182.74	3235.42
1-1/4"	1.2500	192.99	290.46	485.40	745.33	1070.23	1720.03	2694.74	3994.35
1-17/32"	1.5313	289.63	435.90	728.46	1118.53	1606.12	2581.29	4044.06	5994.41
1-5/8"	1.6250	326.16	490.88	820.33	1259.60	1808.69	2906.86	4554.11	6750.45
1-7/8"	1.8750	434.23	653.54	1092.16	1676.98	2408.01	3870.07	6063.17	8987.29

Answers are in pounds per hour, rounded down to nearest whole number.

Napier's Formula: $\frac{(A_O \times P_A)}{70} \times 3600$

A_O = Area of Orifice

P_A = Absolute Pressure

Adjusted steam loss (multiply by .66) taken into account

Based on \$6.50 per 1000#

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