

Formula To Estimate Gas Loss Through a Hole or Break

Q = Thousands of Cubic Feet Per Hour (MCF)

P = Pressure Absolute (Gage Pressure + 14.4 PSIA)

D2 = Diameter of Hole

If a long break, estimate the approximate diameter of a round hole.

Example: 26 PSI with 1/4" round hole in pipe

Solution: $Q = (26 + 14.4) \times (1/4)^2$
 $= 39.4 \times 1/16$

Answer: 2.4625 or round off to 2.5 MCF = 2500 Cubic Feet Per Hour

Pipe Size	Diameter Squared
3/4"	.6790
1"	1.1004
1-1/4"	1.9044
1-1/2"	2.5921
2"	4.2725
3"	9.4126
4"	16.2087
6"	36.7842

Temperature and Wind

Estimated wind speed in MPH	Actual Temperature Reading (F)									
	50	40	30	20	10	0	-10	-20	-30	
	Equivalent Temperature (F)									
Calm	50	40	30	20	10	0	-10	-20	-30	
5	48	37	27	16	6	-5	-15	-26	36	
10	40	28	16	4	-9	-1	-33	-46	-56	
15	16	22	9	-5	-18	-36	-45	-58	-72	
20	32	18	4	-10	-25	-39	-53	-67	-82	
25	30	16	0	-15	-29	-44	-59	-74	-94	
30	28	13	-2	-18	-33	-48	-63	-79	-94	
35	27	11	-4	-20	-35	-49	-67	-82	-98	
40	26	10	-6	-21	-37	-53	-69	-85	-100	