

Caída de presión por metro lineal de cañería, calculada según la fórmula lineal de Renouard para gas con densidad relativa G=0.6 y expresada en milibar por metro de longitud equivalente: $(P_1 - P_2)/L_e$

Q [Nm ³ /hr]	D _{nom} [plg]									
	D _{int} [mm]									
	1/8 6.00	1/4 8.75	3/8 12.25	1/2 16.45	3/4 21.95	1 27.70	1 1/4 36.05	1 1/2 42.05	2 53.40	2 1/2 68.00
1	2.67	0.43	0.09	0.02	0.01	0.00	0.00	0.00	0.00	0.00
2	9.43	1.53	0.30	0.07	0.02	0.01	0.00	0.00	0.00	0.00
3	19.73	3.20	0.63	0.15	0.04	0.01	0.00	0.00	0.00	0.00
4	33.30	5.40	1.07	0.26	0.06	0.02	0.01	0.00	0.00	0.00
5	49.99	8.11	1.60	0.39	0.10	0.03	0.01	0.00	0.00	0.00
6	69.66	11.30	2.23	0.54	0.13	0.04	0.01	0.01	0.00	0.00
7	92.22	14.96	2.96	0.71	0.18	0.06	0.02	0.01	0.00	0.00
8	117.59	19.08	3.77	0.91	0.23	0.07	0.02	0.01	0.00	0.00
9	145.71	23.64	4.67	1.13	0.28	0.09	0.03	0.01	0.00	0.00
10	176.50	28.64	5.66	1.37	0.34	0.11	0.03	0.01	0.00	0.00
11	209.94	34.06	6.73	1.63	0.40	0.13	0.04	0.02	0.01	0.00
12	245.96	39.91	7.88	1.90	0.47	0.15	0.04	0.02	0.01	0.00
13	284.53	46.17	9.12	2.20	0.55	0.18	0.05	0.02	0.01	0.00
14	325.62	52.83	10.44	2.52	0.63	0.20	0.06	0.03	0.01	0.00
15	369.18	59.90	11.83	2.86	0.71	0.23	0.07	0.03	0.01	0.00
16	415.20	67.37	13.31	3.21	0.80	0.26	0.07	0.03	0.01	0.00
17	463.63	75.23	14.86	3.59	0.89	0.29	0.08	0.04	0.01	0.00
18	514.46	83.48	16.49	3.98	0.99	0.32	0.09	0.04	0.01	0.00
19	567.66	92.11	18.20	4.39	1.09	0.36	0.10	0.05	0.02	0.00
20	623.20	101.12	19.98	4.82	1.20	0.39	0.11	0.05	0.02	0.01
21	681.07	110.51	21.83	5.27	1.31	0.43	0.12	0.06	0.02	0.01
22	741.25	120.27	23.76	5.74	1.43	0.47	0.13	0.06	0.02	0.01
23	803.71	130.41	25.76	6.22	1.55	0.50	0.14	0.07	0.02	0.01
24	868.44	140.91	27.84	6.72	1.67	0.55	0.15	0.07	0.02	0.01
25	935.42	151.78	29.98	7.24	1.80	0.59	0.16	0.08	0.02	0.01
26	1,004.63	163.01	32.20	7.78	1.94	0.63	0.18	0.08	0.03	0.01
27	1,076.06	174.60	34.49	8.33	2.07	0.68	0.19	0.09	0.03	0.01
28	1,149.70	186.55	36.85	8.90	2.22	0.72	0.20	0.10	0.03	0.01
29	1,225.52	198.85	39.28	9.49	2.36	0.77	0.22	0.10	0.03	0.01
30	1,303.51	211.51	41.78	10.09	2.51	0.82	0.23	0.11	0.03	0.01
31	1,383.67	224.51	44.35	10.71	2.67	0.87	0.24	0.12	0.04	0.01
32	1,465.98	237.87	46.99	11.35	2.83	0.92	0.26	0.12	0.04	0.01
33	1,550.42	251.57	49.70	12.00	2.99	0.97	0.27	0.13	0.04	0.01
34	1,636.99	265.62	52.47	12.67	3.16	1.03	0.29	0.14	0.04	0.01
35	1,725.67	280.01	55.31	13.36	3.33	1.08	0.30	0.14	0.05	0.01
36	1,816.46	294.74	58.22	14.06	3.50	1.14	0.32	0.15	0.05	0.02
37	1,909.34	309.81	61.20	14.78	3.68	1.20	0.34	0.16	0.05	0.02
38	2,004.29	325.22	64.24	15.51	3.86	1.26	0.35	0.17	0.05	0.02
39	2,101.32	340.96	67.35	16.27	4.05	1.32	0.37	0.18	0.06	0.02
40	2,200.41	357.04	70.53	17.03	4.24	1.38	0.39	0.18	0.06	0.02
41	2,301.56	373.45	73.77	17.82	4.44	1.45	0.41	0.19	0.06	0.02
42	2,404.74	390.19	77.08	18.61	4.63	1.51	0.42	0.20	0.06	0.02
43	2,509.97	407.27	80.45	19.43	4.84	1.58	0.44	0.21	0.07	0.02
44	2,617.21	424.67	83.89	20.26	5.04	1.64	0.46	0.22	0.07	0.02
45	2,726.48	442.40	87.39	21.10	5.26	1.71	0.48	0.23	0.07	0.02
46	2,837.75	460.45	90.96	21.97	5.47	1.78	0.50	0.24	0.08	0.02
47	2,951.03	478.83	94.59	22.84	5.69	1.85	0.52	0.25	0.08	0.02
48	3,066.30	497.54	98.29	23.73	5.91	1.93	0.54	0.26	0.08	0.03
49	3,183.55	516.56	102.04	24.64	6.14	2.00	0.56	0.27	0.08	0.03
50	3,302.79	535.91	105.87	25.57	6.37	2.07	0.58	0.28	0.09	0.03
51	3,423.99	555.58	109.75	26.50	6.60	2.15	0.60	0.29	0.09	0.03
52	3,547.16	575.56	113.70	27.46	6.84	2.23	0.63	0.30	0.09	0.03
53	3,672.29	595.86	117.71	28.43	7.08	2.31	0.65	0.31	0.10	0.03
54	3,799.37	616.48	121.78	29.41	7.32	2.39	0.67	0.32	0.10	0.03
55	3,928.40	637.42	125.92	30.41	7.57	2.47	0.69	0.33	0.10	0.03
56	4,059.36	658.67	130.12	31.42	7.82	2.55	0.72	0.34	0.11	0.03
57	4,192.25	680.23	134.38	32.45	8.08	2.63	0.74	0.35	0.11	0.03
58	4,327.07	702.11	138.70	33.49	8.34	2.72	0.76	0.36	0.11	0.04
59	4,463.81	724.30	143.08	34.55	8.60	2.80	0.79	0.37	0.12	0.04
60	4,602.46	746.79	147.52	35.63	8.87	2.89	0.81	0.39	0.12	0.04
61	4,743.03	769.60	152.03	36.71	9.14	2.98	0.84	0.40	0.13	0.04
62	4,885.49	792.72	156.60	37.82	9.42	3.07	0.86	0.41	0.13	0.04
63	5,029.85	816.14	161.22	38.93	9.69	3.16	0.89	0.42	0.13	0.04
64	5,176.10	839.87	165.91	40.07	9.98	3.25	0.91	0.43	0.14	0.04
65	5,324.24	863.91	170.66	41.21	10.26	3.34	0.94	0.45	0.14	0.04
66	5,474.26	888.25	175.47	42.37	10.55	3.44	0.97	0.46	0.15	0.05
67	5,626.15	912.90	180.34	43.55	10.84	3.53	0.99	0.47	0.15	0.05

Ejemplo: En una cañería de diámetro nominal 3/8" por la que circula un caudal normal de gas de 9m³/hr, la caída de presión $\Delta P = P_1 - P_2$ expresada en mbar será igual a 4.67 (cuatro punto sesenta y siete milésimas de bar) por metro lineal de cañería.

Nota: El diámetro interno indicado para cada diámetro nominal responde a lo especificado en UNIT 134

Valores de ΔP^2 por metro lineal de cañería, calculados según la fórmula cuadrática de Renouard para gas con densidad relativa $G=0.6$ y expresados en milibara² por metro de longitud equivalente: $(P_1^2 - P_2^2)/L_e$

Q [Nm ³ /hr]	D _{nom} [pulg]									
	D _{int} [mm]									
	1/8 6.00	1/4 8.75	3/8 12.25	1/2 16.45	3/4 21.95	1 27.70	1 1/4 36.05	1 1/2 42.05	2 53.40	2 1/2 68.00
1	5,486	890	176	42	11	3	1	0	0	0
2	19,371	3,143	621	150	37	12	3	2	1	0
3	40,516	6,574	1,299	314	78	25	7	3	1	0
4	68,394	11,098	2,192	529	132	43	12	6	2	1
5	102,658	16,657	3,291	795	198	64	18	9	3	1
6	143,056	23,212	4,585	1,107	276	90	25	12	4	1
7	189,386	30,730	6,070	1,466	365	119	33	16	5	2
8	241,487	39,184	7,740	1,869	465	152	43	20	6	2
9	299,220	48,551	9,591	2,316	577	188	53	25	8	2
10	362,468	58,814	11,618	2,806	699	228	64	30	10	3
11	431,126	69,954	13,819	3,337	831	271	76	36	11	4
12	505,102	81,958	16,190	3,910	974	317	89	42	13	4
13	584,314	94,811	18,729	4,523	1,126	367	103	49	16	5
14	668,686	108,501	21,434	5,176	1,289	420	118	56	18	6
15	758,151	123,017	24,301	5,868	1,461	476	134	64	20	6
16	852,644	138,350	27,330	6,600	1,643	535	150	72	23	7
17	952,109	154,489	30,518	7,370	1,835	598	168	80	25	8
18	1,056,490	171,426	33,864	8,178	2,036	663	186	89	28	9
19	1,165,738	189,152	37,366	9,023	2,247	732	206	98	31	10
20	1,279,806	207,661	41,022	9,906	2,467	804	226	107	34	11
21	1,398,648	226,944	44,831	10,826	2,696	878	247	117	37	12
22	1,522,225	246,995	48,792	11,783	2,934	956	268	128	40	13
23	1,650,495	267,808	52,904	12,776	3,181	1,036	291	139	44	14
24	1,783,421	289,377	57,165	13,805	3,437	1,120	315	150	47	15
25	1,920,969	311,695	61,573	14,869	3,702	1,206	339	161	51	16
26	2,063,103	334,758	66,129	15,969	3,976	1,296	364	173	55	17
27	2,209,793	358,560	70,831	17,105	4,259	1,388	390	186	59	18
28	2,361,006	383,096	75,678	18,275	4,551	1,483	416	198	63	20
29	2,516,714	408,361	80,669	19,481	4,851	1,580	444	211	67	21
30	2,676,888	434,351	85,803	20,720	5,159	1,681	472	225	71	22
31	2,841,500	461,061	91,080	21,995	5,477	1,784	501	239	75	24
32	3,010,526	488,487	96,497	23,303	5,803	1,891	531	253	80	25
33	3,183,940	516,625	102,056	24,645	6,137	1,999	562	267	85	26
34	3,361,716	545,471	107,754	26,021	6,479	2,111	593	282	89	28
35	3,543,833	575,021	113,592	27,431	6,830	2,225	625	298	94	29
36	3,730,268	605,271	119,567	28,874	7,190	2,342	658	313	99	31
37	3,920,998	636,219	125,681	30,351	7,557	2,462	692	329	104	32
38	4,116,002	667,861	131,932	31,860	7,933	2,585	726	346	109	34
39	4,315,261	700,192	138,318	33,402	8,317	2,710	761	362	115	36
40	4,518,753	733,211	144,841	34,977	8,710	2,838	797	379	120	37
41	4,726,461	766,913	151,499	36,585	9,110	2,968	834	397	125	39
42	4,938,365	801,297	158,291	38,225	9,518	3,101	871	415	131	41
43	5,154,447	836,358	165,217	39,898	9,935	3,237	909	433	137	43
44	5,374,689	872,094	172,277	41,603	10,359	3,375	948	451	143	44
45	5,599,074	908,503	179,469	43,340	10,792	3,516	987	470	149	46
46	5,827,586	945,581	186,794	45,108	11,232	3,660	1,028	489	155	48
47	6,060,208	983,327	194,250	46,909	11,681	3,806	1,069	509	161	50
48	6,296,925	1,021,736	201,837	48,741	12,137	3,954	1,111	529	167	52
49	6,537,720	1,060,807	209,556	50,605	12,601	4,105	1,153	549	174	54
50	6,782,579	1,100,538	217,404	52,501	13,073	4,259	1,196	570	180	56
51	7,031,487	1,140,926	225,383	54,427	13,553	4,416	1,240	590	187	58
52	7,284,429	1,181,968	233,490	56,385	14,040	4,574	1,285	612	193	60
53	7,541,392	1,223,663	241,727	58,374	14,535	4,736	1,330	633	200	62
54	7,802,362	1,266,008	250,092	60,394	15,038	4,900	1,376	655	207	65
55	8,067,325	1,309,000	258,585	62,445	15,549	5,066	1,423	677	214	67
56	8,336,268	1,352,639	267,205	64,527	16,067	5,235	1,470	700	221	69
57	8,609,178	1,396,921	275,953	66,639	16,593	5,406	1,518	723	229	71
58	8,886,043	1,441,845	284,827	68,782	17,127	5,580	1,567	746	236	74
59	9,166,850	1,487,409	293,828	70,956	17,668	5,756	1,617	770	243	76
60	9,451,587	1,533,610	302,955	73,160	18,217	5,935	1,667	794	251	78
61	9,740,242	1,580,447	312,207	75,394	18,773	6,117	1,718	818	259	81
62	10,032,804	1,627,918	321,585	77,659	19,337	6,300	1,769	842	266	83
63	10,329,261	1,676,021	331,087	79,954	19,909	6,486	1,822	867	274	86
64	10,629,602	1,724,754	340,714	82,279	20,488	6,675	1,875	893	282	88
65	10,933,816	1,774,116	350,465	84,633	21,074	6,866	1,928	918	290	91
66	11,241,892	1,824,104	360,340	87,018	21,668	7,060	1,983	944	298	93
67	11,553,820	1,874,717	370,338	89,432	22,269	7,255	2,038	970	307	96

Ejemplo: En una cañería de diámetro nominal 3/8" por la que circula un caudal normal de gas de 9m³/hr, la diferencia $\Delta P^2 = P_1^2 - P_2^2$ expresado en mbara² será igual a 9,591 (nueve mil quinientos noventa y una milésimas de bar absoluto al cuadrado) por metro lineal de cañería.

Nota: El diámetro interno indicado para cada diámetro nominal responde a lo especificado en UNIT 134