



High Pressure Flow of Natural Gas in DriscoPlex® Pipe

Inlet Pressure: 2 psig
Pressure Drop: 1 psig

Length (ft)	Calculated Flow (Natural Gas) (Cubic Feet of Gas Per Hour)								
	CTS		IPS						
Nom OD	1/2	1	3/4	1	1-1/4	1-1/2	2	3	4
DR	7	11.5	11	11	10	11	11	11.5	11.5
ID	0.436	0.918	0.848	1.062	1.308	1.534	1.917	2.855	3.670
10	634	4498	3651	6599	11429	17372	31241	89007	172376
20	436	3092	2510	4536	7855	11940	21472	61174	118473
30	350	2483	2015	3642	6308	9588	17243	49125	95138
40	300	2125	1725	3117	5399	8206	14758	42045	81426
50	266	1883	1529	2763	4785	7273	13079	37263	72166
60	241	1706	1385	2503	4335	6590	11851	33763	65388
70	221	1570	1274	2303	3989	6063	10903	31062	60156
80	206	1460	1185	2143	3711	5640	10143	28897	55963
90	193	1370	1112	2010	3482	5292	9517	27113	52509
100	183	1294	1051	1899	3289	4999	8989	25611	49599
125	162	1147	931	1683	2915	4430	7967	22699	43959
150	147	1039	844	1525	2641	4014	7219	20567	39830
175	135	956	776	1403	2430	3693	6641	18921	36643
200	125	890	722	1305	2260	3436	6178	17602	34089
250	111	788	640	1157	2003	3045	5476	15601	30213
300	101	714	580	1048	1815	2759	4961	14135	27375
350	93	657	533	964	1670	2538	4564	13004	25185
400	86	611	496	897	1553	2361	4246	12098	23429
450	81	574	466	842	1458	2215	3984	11351	21983
500	76	542	440	795	1377	2093	3763	10722	20765
600	69	491	399	720	1247	1896	3410	9715	18815
700	64	452	367	663	1148	1744	3137	8938	17309
800	59	420	341	617	1068	1623	2918	8315	16103
900	56	394	320	578	1002	1523	2738	7802	15109
1000	53	372	302	546	946	1438	2587	7369	14272
1500	42	299	243	439	760	1155	2077	5918	11461
2000	36	256	208	376	650	989	1778	5065	9809

1. Average ID used in all calculations. It equals the nominal OD minus 2.12 times the minimum wall thickness.
2. For flow in BTU/hr at sea level multiply flow by 1000. Heat value of Natural Gas is 1000 BTU/scf at sea level.
3. Calculations used high pressure (>1.5 psi) equation from Chapter 12, National Fuel Gas Code (2002).

$$Q = \frac{2284 D^{2.63}}{C_R^{0.541}} \cdot \left[\frac{(p_1 + 14.7)^2 - (p_2 + 14.7)^2}{L} \right]^{0.541}$$

Q = Flow (cubic ft per hr), D = ID (in), Cr = 0.6094 (natural gas), p1 = upstream pressure (psi), p2 = downstream pressure (psi), L = equivalent length (ft)

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